

# **Butterflies of North America**

## **3.4 Butterflies of Kern and Tulare Counties, California (Revised)**



**Contributions of the  
C.P. Gillette Museum of Arthropod Diversity  
Colorado State University**

# **Lepidoptera of North America. 3.4 Butterflies of Kern and Tulare Counties, California (Revised)**

**\*Annotated Checklist of Butterflies of Kern and Tulare Counties,  
California**

**\*Field Collecting and Sight Records for Butterflies of Kern and Tulare  
Counties, California**

**\*Butterflies of Sequoia and Kings Canyon National Parks, Tulare  
and Fresno Counties, California**

by

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**Contributions of the  
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Colorado State University**

**Cover illustration:** San Emigdio Blue (*Plebejus emigdionis*) near Onyx, Kern County, California, May 23, 2002. This is a very uncommon lycaenid butterfly endemic to a small area of southern California (see text).  
The type locality is in Kern County.

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# **Annotated Checklist of Butterflies of Kern and Tulare Counties, California**

## **INTRODUCTION**

The information presented here incorporates data from collecting, scientific papers, published articles on butterflies, field guides and books, letters from lepidopterists and butterfly watchers. My purpose is to give an updated and annotated checklist of the butterflies occurring in Kern and Tulare Counties, California. This revised publication now includes specific records for all the species and subspecies known to occur in the region. The records section is comprehensive but not a complete listing of all known records. The purpose of these records is both for scientific documentation of distributions of the butterflies for these two counties and to serve as a guide for visitors seeking to find the butterflies of the region.

Early and late flight periods are given with the note many taxa undoubtedly fly earlier or later than current records indicate. Flight periods may vary greatly from year to year depending on weather, temperature and rainfall patterns.

Many butterflies in Kern and Tulare Counties occur only in California and some only in this region. The names used in this publication are most often those believed by the author to be the most correct names though many butterflies are currently controversial in terms of names status. Such issues are mentioned under **Taxonomic notes**. Taxonomic order in general follows **A CATALOGUE/CHECKLIST OF THE BUTTERFLIES OF AMERICA NORTH OF MEXICO**, Clifford D. Ferris, Editor. Type localities given but not cited are taken from the previous checklist with the same title by Lee D. Miller and F. Martin Brown, 1981. The taxonomic order in Lycaenidae follows the recent checklist by Paul Opler and Andrew Warren (2002) -- **SCIENTIFIC NAMES LIST FOR BUTTERFLY SPECIES OF NORTH AMERICA, NORTH OF MEXICO**. Actual names used in the annotated checklist most often follow the names of the Opler/Warren checklist. Currently, the names list most in use by serious lepidopterists' is **A CATALOGUE OF THE BUTTERFLIES OF THE UNITED STATES AND CANADA** by Jonathan P. Pelham (2008).

Common names used usually follow those most traditionally used, with several newer names for subspecies taken from The International Lepidoptera Survey list of standardized common names (TILS web site). Alternate names are often mentioned with species level names given priority over the names of subspecies. It is only in recent years that both common and scientific names have gained acceptance for joint use in helping all interested in Lepidoptera to understand just what butterflies are being considered. With correct scientific names of butterflies going through frequent changes recently and at present (or with correct names being debated), common names do serve a valuable purpose in identification and in communicating with governmental agencies and the general public when conservation issues arise. Many possible butterflies with potential conservation issues occur within the region covered by this paper. It should be noted that scientific rules of nomenclature do not apply with common names and that common names given here are English names mostly used only in North America north of Mexico whereas scientific names are the same worldwide.

## **KERN COUNTY**

In 1983, I published **Geographic Distribution and Checklist of the Butterflies of Kern County, California** in the Journal of the Lepidopterists' Society (Davenport, 1983). I listed 126 species known to occur within the county at that time. A later article (Davenport, 1988) added *Philotes sonorensis* to the list. Other additions have been published in the annual Season Summaries of the Lepidopterists' Society and taxonomic revisions have added others. Our knowledge of ranges and taxonomy has greatly increased since 1983. Many butterflies were described from Kern and Tulare County localities and that information is now provided here. Many of these type localities were taken from Miller and Brown (1981) or Thomas C. Emmel (1998). The current list totals 145 species in Kern County and many important geographic subspecies. Kern County embraces the southern Sierra Nevada and several entire mountain ranges, the southern San Joaquin Valley and part of the western Mojave Desert. [See Brock (2001) for a worthwhile

discussion of the southern Sierra Nevada (includes Kern and Tulare Cos.) including good localities, a map and photographs].

## **TULARE COUNTY**

There are 155 species currently known from Tulare County, but several additions are expected from the High Sierra Nevada. Most of the High Country of this region is not accessible by road and can be reached only by trail. National Park regulations prohibit collecting without authorization within Kings Canyon and Sequoia National Parks. The author spent several days over several seasons collecting within these parks under permit from the National Park Service. This county includes a portion of the southern San Joaquin Valley and the southern Sierra Nevada with desert species straying into the county from the south.

The first edition of this publication was the first time that a Tulare County Checklist had been published, but such information for both counties at the species-level was included in the 1993 **ATLAS OF WESTERN USA BUTTERFLIES** by Ray E. Stanford and Paul A. Opler (1993).

## **GEOGRAPHICAL REGIONS WITHIN KERN AND TULARE COUNTIES**

**San Joaquin Valley:** An arid lowland Valley which is heavily used for agricultural purposes though recent development is impacting the use of land. Citrus and alfalfa (*Medicago sativa* L) are among the most commonly grown crops in the region. Rainfall is normally 6 inches or less at Bakersfield but becomes twice or more that amount northward into Tulare County. What plants grow in remnant natural habitats are adapted to low annual rainfall and very long, hot, and dry summers. There are other riparian areas along the Kern, Tule, Kaweah and Kings rivers, and Poso Creek that support butterflies normally found in more montane areas. The Coast Ranges (represented by the Temblor Range) are the western border of the Valley in Kern County, but in Tulare County the boundaries do not reach nearly as far west, being replaced by Kings County that fills this void.

What butterflies occur in this region are species common and widespread in the western United States. Many of these butterflies have adapted to cities, residential areas, gardens, parks and agricultural fields. Natural habitats in the San Joaquin Valley have largely disappeared with dams being built upstream and the building of levees and conversion of former swamps and riparian grasslands to agriculture, residential areas or cities. Bakersfield now has a population of close to 500,000 and Delano and Tulare are other major cities in the Valley.

What is unusual is that many species in the southern San Joaquin Valley are species more normally expected to occur in the Mojave Desert. Most of these are limited to Kern County and include *Hesperopsis libya joaquina*, *Pontia beckerii*, *Anthocharis cethura morrisoni* and *Danaus gilippus thersippus*. Another, *Copaeodes aurantica*, was found commonly along the Tule River at Porterville in Tulare County in 1987 and 1988. Most of these occur away from the cities and agricultural areas in saltbush covered wastelands and alkali flats, in ravines or swampy areas in otherwise dry country. One exception is *Pyrgus scriptura* which benefits from man's influence and occurs on the edges of agricultural fields and canal banks that the alkali mallow host plant colonizes on the west side of the valley. Another highlight of the region is *Cupido (Everes) comyntas sissona* which reaches its southern limits in the riparian areas of Tulare County, but occasionally occurs transiently as far south as the Kern River near Bakersfield.

**Western Mojave Desert:** The portion which lies in Kern County east and south of the mountain ranges receives less than ten inches of rain most years. There is no portion of the Mojave Desert in Tulare County though the desert influence is high in the southeast corner of that county adjacent to the desert and arid east slope of the Sierra Nevada. Rainfall occurs in the winter and spring and only rarely do summer thunderstorms occur. Vegetation is generally very sparse with plants adapted to highly arid conditions, high summer temperatures and sandy soils. Some common plants of the region include creosote bush (*Larrea divaricata* Cav.), several varieties of rabbitbrush (*Chrysothamnus* spp.), saltbush (*Atriplex* spp), buckwheats (*Eriogonum* spp), Joshua Tree (*Yucca brevifolia* Engelm in Wats.) and several kinds of Cacti. Many kinds of wildflowers can occur in the region in years of favorable winter rains.

The Kern County desert is generally flat and unremarkable and few butterfly species can be expected. Much better conditions can be expected in wetter years where the desert and mountain regions meet. A great variety of desert and more montane species meet in the arid southern Sierra Nevada from Walker Pass and the south end of the Kern Plateau southward to Butterbrecht Peak, Jawbone Canyon and the canyons just

north of Highway 14 in the Cinco-Cantil region. Kelso Valley on the east side of the Piute Mountains has close to eighty species of butterflies, many of them flying in April and May. The Tehachapi Mountains also have interesting populations of desert butterflies off Hwy 58 west of Mojave and along the Oak Creek and Willow Springs Roads. Desert Mountains (Red Rock Canyon, El Paso Mountains, Rand Mountains) are good places for desert pierids and blues. In very wet years with winter and summer rainfall, notable strays reach the area from Arizona and Mexico. *Polygonus leo arizonensis*, *Papilio polyxenes coloro*, *Phoebis sennae marcellina*, *Chlorostrymon simaethis* and *Libytheana carinenta streckeri* are among those butterflies which stray into the region in the deserts. *Papilio polyxenes coloro* is also an uncommon permanent resident in the arid Sierra Nevada but is more common there in wet years. Most species of the Mojave Desert fly in the spring months but some species fly through the summer or in the fall months.

Two "rare" and highly sought species in the region are *Pseudocopaodes eunus* and *Plebejus emigdionis*, the latter a California endemic. Neither is common in the deserts and they are both highly localized in their occurrence. The author found *eunus* in some numbers on the edge of an alfalfa field at the west end of Koehn Dry Lake at Cantil. Gordon Pratt has found *eunus* in some numbers at West Rosamond Dry Lake on Edward's Air Force Base, not open to the public. *Plebejus emigdionis* is known from near Rosamond and along Cache Creek (especially off Hwy. 58 at the Cameron Road crossing near the railroad tracks) on the desert side of the Tehachapi Mountains. Fortunately, both species are often common at various places in the Kern River Valley at Weldon and Onyx in the Kern River Valley where the Sierran and desert influence meets.

Still, the Mojave Desert fauna lacks the rich desert fauna found in the Sonoran Desert of southeast Arizona. Visitors come to this region to see *Hesperopsis libya*, *Megathymus yuccae martini*, *Pontia beckerii*, *Anthocharis cethura*, *Philotiella speciosa speciosa*, *Euphilotes mojave mojave*, *Apodemia mejicanus deserti*, *Chlosyne acastus neuwoegeni* and *Chlosyne leanira alma*. In some years, *Phoebis sennae marcellina* and *Abaeis nicippe* establish large breeding populations at the southern edge of the Sierra Nevada where *Cassia armata* Watson grows profusely on the hills north of Hwy 14. *Zerene cesonia* also occurs there in low numbers in association with *Dalea*. A few other great rarities occasionally reach the region, including numbers of *Chlorostrymon simaethis* at the west end of Koehn Dry Lake in 1992.

**Montane areas:** Mountains ring the southern San Joaquin Valley on three sides and separate the Valley from the Mojave Desert. These include the Coast Ranges to the west, the Transverse Ranges including the Tehachapi Mountains, Frazier Park and Mt. Pinos to the south and southeast, and the southern Sierra Nevada including the Greenhorn and Piute subranges to the east of the San Joaquin or Central Valley.

The mountainous region is the richest area in Kern and Tulare Counties for butterflies. About 120 species have been found in a radius of about 25 miles from Lake Isabella in the Kern River Valley, which is bordered by the Kern Plateau of the Sierra Nevada proper and the Greenhorns and Piute subranges to the west and south respectively. Strays from the southeastern deserts, resident desert species and montane species make this an extremely interesting area. The very arid southern Sierra Nevada includes Kelso Valley just south of the east fork of the Kern River, about 80 species occur there with an incredible mix of desert and montane species flying in the same desert washes or on the arid slopes of the bordering east slope of the Piutes or southern extremity of the Sierra Nevada which includes the unexplored Scodie Mountains. The "High Sierra" with many peaks up to 14,000' or more do not reach southward to Kern County, but do make up an extensive area in northern Tulare County inside Sequoia and Kings Canyon National Parks.

In the southern mountains of Kern County one can find many different species of conifers, including incense cedar (*Calocedrus decurrens* (Torr)), ponderosa pine (*Pinus ponderosa* Lawson), Jeffrey Pine (*Pinus jeffreyi* Grev. & Balf), in A. Murr), sugar pine (*Pinus lambertiana* Dougl.), some lodgepole pine (*Pinus contorta murrayana* Grev & Balf), digger pine (*Pinus sabiniana* Dougl.), white fir (*Abies concolor* (Gord. & Glend.), red fir (*Abies magnifica* Murr.), and California juniper (*Juniperus californica* Carr.). Along streams or in the mountain canyons are found white alder (*Alnus rhombifolia* Nutt.), sycamore (*Platanus racemosa* Nutt.), cottonwoods (*Populus* spp.) and several kinds of willows (*Salix* spp.). A number of oaks (*Quercus*) and buckwheats (*Eriogonum*) grow on the drier slopes. Many varieties of wildflowers and grasses are found in these several mountain ranges.

**(1) Transverse Ranges or Tehachapi Mountains:** In this paper I included Frazier Park and Mt. Pinos as being in the Tehachapi Mountains but others may place them in separate areas including the Coast

Ranges and Tejon Mountains. This is an interesting area where there is a mixing of Sierra Nevada and more coastal species. Tehachapi Mountain Park is a well-known collecting site but one will have to take a two hour hike to climb to the top of Mt. Tehachapi (7994'), the type locality for *Speyeria egleis tehachapina*, last seen there in 1998 to the author's knowledge. Mt. Pinos (8831') is the other notable high peak of the range. The summit of Mt. Pinos is actually in Ventura County but is included here as also being within Kern County because an extensive portion of that mountain lies in both counties and whatever butterflies occur there are found in both counties. This is a rich area for California endemics or near endemics including *Colias harfordii*, *Lycaena heteronea clara*, *Plebejus emigdionis*, *Euphilotes (battoides) glaucomstocki*, *Plebejus lupini chlorina*, *Plebejus neurona*, *Speyeria coronis hennei*, and the legendary and now believed extinct *Speyeria adiate atossa*.

(2) **Temblor Range:** This is one of the Coast Ranges and has two important areas for butterflies in Kern County. This includes the Hwy. 58 summit area west of McKittrick and the Cottonwood Pass area northwest of Lost Hills on Hwy. 41. This is a low and dry mountain region on the west side of the San Joaquin Valley. Few butterflies occur in much of the range but those that do include *Hesperia colorado tildenii*, *Hesperia lindseyi lindseyi*, *Satyrium auretorum auretorum*, *Callophrys siva mansfieldi*, *Callophrys muiri* ssp., *Plebejus icarioides atascadero* and *Apodemia mormo* "Coast Range segregate" that shows a tendency towards the endangered *langei* from Antioch. A rarity which may turn up in this area is *Euphydryas editha editha* which has been found just west of the Kern County line near Cholame in San Luis Obispo County by the author.

(3) **Sierra Nevada:** The highest mountain in the continental United States is Mt. Whitney (14,494') and the high country in Tulare County essentially all lies within Sequoia and Kings Canyon National Parks. No roads enter most of this region so the serious lepidopterists must hike for days or weeks to reach this vastly unexplored area (for butterflies). There is a difficult but paved road to Mineral King Valley at 7,800' where day hikes to the high country are possible. Poor access and legal restrictions to collecting have contributed to our having very little knowledge of the arctic-alpine fauna in these mountains. We do know that *Hesperia miriamae miriamae*, *Parnassius behrii*, *Colias behrii* and *Euphydryas chalcedona irelandi* reach their southern limits in this region. It should be noted that collecting records cited in this paper were from lepidopterists with collecting permits from the National Parks or who collected Mineral King before it became part of the National Park System. It should also be noted that several miles of prime collecting is possible in what was once National Forest between Sequoia and Kings Canyon National Parks. This area is now National Monument but as of this writing (2014), collecting is still permissible in the region as the area goes under National Forest Service guidelines and is not administered by the Department of the Interior. Those wishing to collect in that region would check with authorities since laws could change in the future.

Moving south, much of the range becomes much more accessible through Mountain Home State Forest, many small groves of Giant Sequoias and the Kern Plateau area. The Sherman Pass Road starts at about 3,700' elevation at the Kern River at the west end of the road eastward to 9,200' feet elevation at Sherman Pass in only fourteen road miles on a well paved road. Butterfly counts have been as high as seventy species in a single day by only two participants, three years after a major forest fire. The road winds down east of the pass by Bald Mountain Lookout at 9,400' and the Kennedy Meadows region. The region is known for *Parnassius clodius baldur*, *Papilio indra phyllisae*, *Poladryas arachne monache*, *Euphydryas chalcedona olancha*, *Chlosyne palla australomontana*, *Callophrys siva* near *chalcosiva*, *Philotes sonorensis* and *Plebejus neurona*. Many species reach the southern limits of their ranges on this plateau, isolated from the subranges to the south by low elevation desert terrain including Walker Pass at 5,250'.

South of Walker Pass is the Scodies and a number of very dry peaks east of Kelso Valley. Here the range meets the Mojave Desert and there is an extensive mixing of the montane and desert faunas. The Bird Spring Pass area is a good location for *Hesperopsis alpheus oricus*, *Megathymus yuccae martini*, *Callophrys siva juniperaria*, *Apodemia virgulti davenporti* and *Plebejus neurona*. Butterbredt Peak at 6,000' supports populations of *Papilio indra phyllisae* and smaller numbers of *Papilio polyxenes coloro*. Wind turbines have recently been erected on many adjacent hills and ridges near Butterbredt Peak, which may have negatively impacted populations in that area. Many of the species found at Bird Spring Pass also occur there. From there, the range drops into the Mojave Desert in Jawbone Canyon down to Cinco and Cantil.

(4) **Greenhorn Mountains:** A subrange of the Sierra Nevada found on the west side of the Kern River and the Kern River Valley. Herein, I include the Kern River Canyon and Breckenridge Mountain as part of

the range. This decision is rather arbitrary and Hooper Hill (4,460') east above Clear Creek then divides the Greenhorns from the adjacent Piute Range. The best known area in the range is Shirley Meadows in the Greenhorn Mountains, the type locality for *Speyeria hydaspe viridicornis*. The highest point in the range is Sunday Peak at 8,295'. Other areas to the north of Alta Sierra along the Tiger Flat Road and NE to Baker Ridge have turned up many desirable species including *Boloria epithore sierra*, *Speyeria callippe laurina*, *Parnassius clodius baldur*, *Papilio indra phyllisae*, *Euchloe hyantis*, *Plebejus lupini chlorina*, *Plebejus neurona*, *Euphilotes (battoides) glaucon comstocki*, members of the *Apodemia mormo* complex, and *Chlosyne leanira wrighti*. Several choice species are found along the Sawmill and the Old State Rds.

The range has seen many recent faunal changes and discoveries. *Speyeria egleis egleis* and *Epargyreus clarus californicus* may have recently moved into the area following a major forest fire in 1990 which destroyed accumulated brush that had built up on the forest floor. The fire opened up the region and created the rebirth of habitat for butterflies. *Cercyonis pegala australosierra* and perhaps two members of the *Apodemia mormo* complex have recently been discovered in the range. This is also an area ideal for taxonomic research since the ranges of the *Euphilotes battoides* complex, *Plebejus lupini* complex, and *Apodemia mormo* complex overlap. Four members of the *Apodemia mormo* complex may occur along a five mile stretch of Old State Road west above Wofford Heights. The ranges of so-called subspecies of the other groups also appear to meet and overlap on these roads.

(5) **Piute Mountains:** This is the range lying south of Lake Isabella and is accessible largely by unpaved roads except for a paved road south of Bodfish to Havilah. Fortunately, that small area is good for many species including *Hesperia lindseyi*, *Anthocharis lanceolata*, *Callophrys siva juniperaria*, *Plebejus neurona* and *Chlosyne leanira wrighti*. Those same species also occur along Erskine Creek east of Lake Isabella but a high clearance vehicle is recommended there because of the many creek crossings. The highest peaks are Piute Peak (8,432') and Piute Mountain Vista or Lookout (8,326') accessible by a fairly good dirt road and these are areas for *Euphydryas editha* near *augustinus*, *Papilio indra phyllisae* and *Speyeria egleis tehachapina*. The east side of the range drops into Kelso Valley and many choice species also occur there, including *Philotes sonorensis*, which also occurs on the south-facing slope of Laura Peak above Erskine Creek.

## SOURCES OF INFORMATION

The collecting of Ken Davenport and Jim Brock is the basis for much of the information incorporated in this checklist. John F. Emmel has provided very important information regarding records and localities and taxonomic issues for nearly thirty years. Other individuals also made important discoveries, reported records or provided taxonomic information. Records within published articles and books were utilized. Voucher specimens are in several personal collections or deposited in the Natural History Museum of Los Angeles County [LACM](in Los Angeles, California) or at Sequoia/Kings Canyon National Parks at the Ash Mountain facility.

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 Wallis, Mike. The first collector I know of in Bakersfield who motivated several of us to collect and study butterflies.

\*Deceased

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## Annotated Checklist

### THE SKIPPERS: HESPERIIDAE.

#### 1. SILVER-SPOTTED SKIPPER *Epargyreus clarus californicus* MacNeill.

**Kern County:** 1 June to 15 July. **Tulare County:** 12 May to 8 August.

**Distribution:** A classic locality for this skipper is at Balch Park with records from nearby Camp Nelson and Camp Wishon. It occurs in both Kings Canyon and Sequoia National Parks. It has recently colonized and expanded its range into the Greenhorn Mountains, which are recovering from a major 1990 forest fire. It was first collected in Kern County about 1 mi. south of Tiger Flat in the Greenhorn Mountains, July 15, 2000 by the author. Ray Stanford collected a specimen near Marshall Meadow (the only west slope record in that range) on July 6, 2002. The species may have moved into the Greenhorn Mountains following the

"Big Stormy" forest fire of 1990. Heavy underbrush and climax forest was removed in that fire. Habitat created in the regrowth appears favorable for *E. clarus*. This species was locally common south of Tiger Flat in 2001. Will it disappear again as the forest re-establishes itself? Only time will tell.

This species has also just recently colonized the area west of Sherman Pass in the Sierra Nevada where it was first found at Alder Creek at 6,800' on July 3, 2005, also following a major forest fire in July 2002. Since then, *E. clarus* has expanded its distribution there and occurs as low as Cherry Hill Rd. at Alder Creek at 5,680' and ranges as high as 8,000'. There remains the question as to whether plant succession may eventually eliminate this population as well.

This species is associated with *Lotus crassifolius* (Bentham) in much of the region, but it is likely that other plants are also utilized in the Greenhorns and elsewhere. Adults frequent wet spots where adults tend to perch on taller vegetation or flutter rapidly over mud.

## **2. ARIZONA HAMMOCK SKIPPER *Polygonus leo arizonensis* (Skinner).**

**Kern County:** 22 August to 23 September. **Tulare County:** No records.

**Distribution:** Rare stray from Mexico and Arizona with records from 5 mi E of Caliente in the Tehachapi Mountains, Cinco and Cantil (both in Mojave Desert) near Koehn Dry Lake. I took more than 20 adults in alfalfa fields following major tropical storms in 1983. Adults appeared to be collectively moving into the region with individuals nectaring in close proximity to each other and rarely seen as singletons. There were reports of strays taken between Mt. Abel and Valle Vista Camp in mountains at the south end of the San Joaquin Valley by Art Strong reported in Lorquin Entomological Society Minutes for Sept. 23, 1983. A stray male was taken in the southern Sierra Nevada in the Kern River Valley at Weldon on August 22, 2006 by the author.

## **3. LONG-TAILED SKIPPER *Urbanus proteus proteus* (Linnaeus).**

**Kern County:** No records. **Tulare County:** Lindsay in "the Fall of 1910."

**Distribution:** Not found in region except as a single stray at Lindsay (in San Joaquin Valley near Porterville) earlier in the 1900's when it was a transient "resident" established in Los Angeles. It is now very rare in the state.

## **4. NORTHERN CLOUDYWING *Thorybes pylades indistinctus* Austin & J. Emmel.**

**Kern County:** 28 May to 22 July. **Tulare County:** 9 May to 22 July.

**Distribution:** Common in Greenhorn and Piute Mountains, Breckenridge Mountain and Balch Park areas, common on the Kern Plateau west of Sherman Pass within a few years after the 2002 "McNally Fire" after being found very sparingly prior to the fire. This species is very scarce in the Tehachapi Mountains and in the Frazier Park area. In the region, the species is closely associated with *Lotus crassifolius*, the larval host in the region. I have seen some very small individuals at Squirrel Meadow on Breckenridge Mountain (Kern Co.) that resemble *Thorybes diversus* Bell. Adults are often found at wet spots and visiting flowers.

## **5. NEVADA CLOUDYWING *Thorybes mexicana nevada* Scudder.**

**Kern County:** No records. **Tulare County:** 22 May to 8 August.

**Distribution:** Found in Sequoia National Park and vicinity south to the Sherman Pass area above 8000', Bald Mountain and Big Meadow (Kern Plateau). It occurs at high elevations where it generally replaces the previous species, but it occasionally co-occurs with *T. pylades* even to 9,400'. Adults favor rocky terrain and outcrops and wet spots.

## **6. SLEEPY DUSKYWING *Erynnis brizo lacustra* (W. G. Wright).**

**Kern County:** 3 April to 30 June. **Tulare County:** 7 March to 20 June.

**Distribution:** Uncommon to common and highly localized in scrub oak habitats in Frazier Park area, east side of Greenhorn Mountains and in upper Kern Canyon, Brush Creek and rarely Bald Mountain (9,400', probably HIGH for the species), common SE to Lamont Peak at south end of Kern Plateau. This species is also known from Tehachapi (Sand Canyon) and Piute Mountains (Hooper Hill).

## **7. PROPETIUS DUSKYWING *Erynnis propertius* (Scudder & Burgess).**

**Kern County:** 10 February to 7 August (usually April-July).

**Tulare County:** 1 February to 8 August (usually April-July).

**Distribution:** This is the most common duskywing in the region, occurring in the foothills and mountains with oaks from 1,500' to 9,400' on Bald Mountain Lookout. Adults frequent flowers and wet spots.

**8. MOURNFUL DUSKYWING *Erynnis tristis tristis*** (Boisduval).

**Kern County:** 10 March to 24 September. **Tulare County:** 28 February to 21 October.

**Distribution:** Favors lower oak woodland in the San Joaquin Valley (both in the cities and along the Kern River) and in the western foothills of the Greenhorn Mountains around Glennville. Common at Gateway to Sequoia National Park. Rare or absent elsewhere.

**9a. DYAR'S PACUVIUS DUSKYWING *Erynnis pacuvius lilius*** (Dyar).

**Kern County:** 28 May to 31 July. **Tulare County:** 9 May to 29 July.

**Distribution:** This subspecies occurs in the Transition and Canadian life zones in the southern Sierra Nevada as far south as the Piute Mountains and Breckenridge Mountain. The butterfly flies on ridges and in forest openings when the *Ceanothus* host plant comes into bloom. Adults also come to mud.

**9b. ARTFUL DUSKYWING *Erynnis pacuvius callidus*** (Grinnell).

**Kern County:** 31 May to 1 August. **Tulare County:** No records, replaced by *lilius*.

**Distribution:** This subspecies occurs in southern California mountain ranges. Locally common on Mt. Pinos, Frazier Mountain and at Frazier Park.

**10. FUNERAL DUSKYWING *Erynnis funeralis*** (Scudder & Burgess).

**Kern County:** 9 March to 24 November. **Tulare County:** 28 February to 2 October.

**Distribution:** San Joaquin Valley, Mojave Desert and in the mountains up to about 6,000' elevation. This butterfly is widely distributed in the region, but rarely common. It is sometimes very abundant in the Caliente Creek drainage upstream from Caliente.

**11. PERSIUS DUSKYWING *Erynnis persius*** (Scudder).

**Kern County:** 12 July to 20 July. **Tulare County:** 9 May to 27 August.

**Distribution:** Status in Kern County uncertain. There are two records: Delano (July 12, 1955 by Jerry Powell) and the Greenhorn Mountains (South of Tiger Flat, July 20, 2009). A record of a duskywing previously reported as a *persius* from the Tiger Flat area June 20, 1987 by the author is actually a small *E. propertius* (genitalia examined by Paul Opler). In Tulare County it occurs commonly on the Sherman Pass Rd. from 6,000' to 8,500' on both west and east slopes. Alder Creek at 6,800' west of Sherman Pass is a classic locality for this duskywing and *persius* has fully recovered there from the major forest fire of 2002. Collected at Stony Creek (now in Sequoia Nat'l Monument just outside Sequoia Nat'l Park) June 11, 1990 by Kevin Davenport. *Erynnis persius* is often confused with *E. pacuvius lilius* which often flies with it.

**12. TWO-BANDED CHECKERED SKIPPER *Pyrgus ruralis ruralis*** (Boisduval).

**Kern County:** No records but possible in Greenhorns and south end of the Kern Plateau.

**Tulare County:** 31 May to 22 July.

**Distribution:** Taken early in the season in Sequoia National Park, Stony Creek, Camp Nelson, the Kern Plateau at Big Meadow and around the Black Rock Ranger Station. Generally scarce but widely distributed east of Sherman Pass, including the meadow just east of the Pass.

**13a. SMALL CHECKERED SKIPPER *Pyrgus scriptura scriptura*** (Boisduval).

**Kern County:** 27 February to 3 October. **Tulare County:** 14 July to 23 August.

**Distribution:** Known from alkaline soils on west side of San Joaquin Valley including Buttonwillow, Lost Hills, Alpaugh and Tipton. This beautiful species is usually scarce, local and easily overlooked because of its very small size. It is best sought at the edges of agricultural fields or on canal banks where the larval host Alkali mallow (*Sida hederacea* (Douglas)) grows.

**13b. DESERT SMALL CHECKERED SKIPPER *Pyrgus scriptura apertorum*** Austin.

**Kern County:** Specific date unavailable. **Tulare County:** Not in range of this subspecies.

**Distribution:** There is one record for Edward's Air Force Base (N. of Leuman Ridge, Bissell Hills) taken by Gordon Pratt. No others have been reported in the regions Mojave Desert areas. It may occur in areas little collected within Kern County deserts.

**14. CHECKERED SKIPPER *Pyrgus communis* (Grote).**

**Kern County:** 24 April to 4 November. **Tulare County:** 10 April to 4 November.

**Distribution:** General in Tulare County where it largely replaces the closely related *P. albescens* north of the Kern County line. Genitalic examination confirmed *P. communis* have been taken in Kern County in the Temblor Range (determined by John F. Emmel) and from Delano to Hwy. 43 (confirmed by Julian Donahue). Two males taken in a well-watered pasture near Greenfield south of Bakersfield on July 17, 2005 by the author were determined as *P. communis* by Paul Opler. Other Kern County locations for confirmed genitalic records by Opler include Bakersfield and the Kern River Valley. The species appears to be in the Tiger Flat area in the northern Greenhorns (females only have been collected at the latter locality to date so these cannot be positively confirmed as *P. communis*).

**15. WHITE CHECKERED SKIPPER *Pyrgus albescens* Plötz.**

**Kern County:** 13 February to 2 December. **Tulare County:** Likely March to 21 October.

**Distribution:** Common in Mojave Desert, lower mountains and southern San Joaquin Valley. Occurs along the Kern/Tulare County line where its range with *Pyrgus communis* overlaps. Long considered a subspecies of *P. communis*, *albescens* differs only by male genitalia and by being slightly lighter in color but the latter character is not reliable.

**16. NORTHERN or LARGE WHITE SKIPPER *Heliopetes ericetorum* (Boisduval).**

**Kern County:** 30 March to 13 November. **Tulare County:** 10 April to 19 November.

**Distribution:** General and often common in valleys, desert and mountains to 7,500'. Adults are frequent flower visitors and are also frequently found near water.

**17. COMMON SOOTYWING *Pholisora catullus* (Fabricius).**

**Kern County:** 6 March to 11 September. **Tulare County:** 23 March to 18 September.

**Distribution:** Local on floor of San Joaquin Valley near Lamont, Tule Elk Reserve, Kern Wildlife Refuge and Porterville. This species occurs commonly in desert washes near Sageland and the Kelso Valley region and Havilah. It is common in upper Kern River Canyon near Limestone and Johnsondale up to 4,400' off the Sherman Pass Rd. in side canyons, along small streams and along roadsides. In some areas, the spring brood is the only flight observed while in other areas fall flights are regularly seen.

**18a. MOJAVE SOOTYWING *Hesperopsis libya libya* (Scudder).**

**Kern County:** 31 May to 28 June; 20 September. **Tulare:** No valid records but could stray in to county.

**DISTRIBUTION:** Branch Park to Buckhorn Dry lake inside Edward's Air Force Base, discovered in Kern County by Gordon Pratt. It may also occur in Kern County around Rosamond. Some workers view the more common and well-known eastern Kern County desert *libya* populations as closest to this subspecies.

**18b. SAN JOAQUIN VALLEY MOJAVE SOOTYWING *Hesperopsis libya joaquina* J. Emmel, T. Emmel & Mattoon.**

**Taxonomic note:** The TL is McKittrick, Kern County, California (J. Emmel, T. Emmel & Mattoon, 1998e).

**Kern County:** 28 April to 28 June. Small second brood: 9 to 12 September.

**Tulare County:** No records but possible western edge of county near Alpaugh.

**Distribution:** Formerly common locally in western portion of San Joaquin Valley around Taft, McKittrick, Maricopa, Buttonwillow and Lost Hills. This subspecies is very scarce in recent years. It has been taken in the Temblor Range and sparingly around Oildale, occasionally straying across the Kern River to Hart Park, Bakersfield. This subspecies can be very scarce or even apparently absent some years for reasons not well understood. Rainfall patterns from year to year are likely one factor, but a dropping water table, disease and predation may be others.

**18c. MOJAVE SOOTYWING *Hesperopsis libya*** (Scudder) (Great Basin subspecies).

**Taxonomic note:** Previously referred as *lena* (W. H. Edwards) which has a TL of Miles City, Montana. The eastern Kern County Mojave Desert population individuals are smaller and different. Many individuals have extensive white scaling on the HW below. Some believe that these populations are actually a blend zone between nominotypical *libya* and Great Basin populations occurring in the Owens Valley just to the NE.

**Kern County:** 30 April to 30 September.

**Tulare County:** A reported record published in the annual Season Summary from Nine Mile Canyon in "Tulare County" taken June 8, 1975 by Jim Brock was actually collected in Inyo County.

**Distribution:** Locally common in the Mojave Desert in saltbush habitats. Localities include Walker Pass, Homestead, El Paso Mountains, Cinco and Cantil including Koehn Dry Lake. Actual flights and number of adults may vary from one year to the next based on rainfall and other factors related to weather conditions. In some years, these populations may fly continuously late spring to fall. In others, they are sharply double-brooded, not surprising with a desert species.

**19. SALTBUSH SOOTYWING *Hesperopsis alpheus oricus*** (W. H. Edwards).

**Kern County:** 13 April to 15 June.

**Tulare County:** No records but possible southeast end Kern Plateau.

**Distribution:** One of the states rarer butterflies, this rare and highly prized species (to those who like skippers) occurs near *Atriplex canescens* (Pursh) Nuttall. in desert mountains but not in most places where the hostplant grows. Most records are from Butterbrecht Peak and Canyon but it was recently discovered at Birdspring Pass and on the microwave hill nearby. At these localities, the species can be quite abundant. The species is either very scarce or absent at many places in the SE Sierra Nevada (including Nine Mile Canyon in Inyo County just east of Tulare County line and portions of the Kelso Valley region), and east slope of the Piute Mountains (west of Sageland) where the host plant occurs and conditions appear favorable for this species. Adults tend to zip rapidly just above the ground from one saltbush to another up steep canyons or along roads cuts and this makes the species difficult to net or photograph.

**20. JULIA'S SKIPPER *Nastra julia*** (H. A. Freeman).

**Kern County:** One record: Bakersfield in late summer of 1962 (Ken Davenport).

**Tulare County:** No records.

**Distribution:** The one record may be a stray but a "resident" population could occur on the floor of the San Joaquin Valley. The individual has been examined by both John F. Emmel and Jim Brock. It is also possible that it could be an aberrant *Lerodea eufala*.

**21. ORANGE SKIPPERLING *Copaeodes aurantiaca*** (Hewitson).

**Kern County:** 30 April to 22 October. **Tulare County:** 18 June to 21 October.

**Distribution:** Sporadic in the Mojave Desert, east of Walker Pass and Kelso Valley in Kern County. This species occasionally flies in dry canyons of the southern Sierra Nevadas (Sherman Pass Rd. and Chimney Peak Rd. near Lamont Meadows). Found commonly along the Tule River in Porterville (Tulare Co.) in 1987-88 (in southern San Joaquin Valley).

**22. FIERY SKIPPER *Hylephila phyleus phyleus*** (Drury).

**Taxonomic note:** The name *muertovalle* Scott previously applied to Kern County populations may apply to eastern Mojave Desert populations (Scott, 2008a). A majority of a long series of this species collected in the Mojave Desert city of Ridgecrest in Kern County by the author on September 10, 2013 closely resembles *muertovalle*.

**Kern County:** 23 March to 12 December. **Tulare County:** 8 July to 14 November.

**Distribution:** Common in San Joaquin Valley, cities of the Mojave Desert and montane valleys where Bermuda grass grows. Occasionally flies in the Kern River Valley at Kernville, Lake Isabella, Onyx and Weldon. Also flies in Tehachapi Valley and lower montane canyons bordering the San Joaquin Valley.

**23a. ALKALINE SKIPPER** *Pseudocopaodes eunus eunus* (W. H. Edwards).

**Taxonomic note:** The TL is bottoms of the Kern River near Bakersfield, Kern County, California.

**Kern County:** 12 April to 30 August. **Tulare County:** No recent records.

**Distribution:** Apparently extirpated from lowlands of the Kern River and around Tulare Lake because of human development and the building of Lake Isabella Dam. Still occurs sparingly on the Audubon Kern River Preserve at Weldon and more commonly on grazed saltgrass pastures at Onyx. The hostplant is Desert Saltgrass (*Distichlis spicata* (L.) Greene). Numbers and flight periods vary with weather conditions, periodic floodings, grazing and drought.

**23b. YELLOW ALKALINE SKIPPER** *Pseudocopaodes eunus flavus* Austin & J. Emmel.

**Kern County:** 5 May to 28 June; 20 September. **Tulare County:** No records.

**Distribution:** Mojave Desert: west end Koehn Dry Lake at Cantil and on Edward's Air Force Base at Buckhorn Dry Lake and West Rosamond Dry Lake.

**24. JUBA SKIPPER** *Hesperia juba* (Scudder).

**Kern County:** 29 March to 27 June; 7 September to 7 November.

**Tulare County:** 30 March to 5 November.

**Distribution:** Common in drier mountain ranges east side of the San Joaquin Valley including the Kern River Valley, southern Sierra Nevada, Greenhorns, Piutes, Kelso Valley region and Walker Pass. Oddly, seems absent from the coastal mountains west and south of the Valley including the Frazier Park- Mt. Pinos region and Temblor Range.

**25a. HARPALUS SKIPPER** *Hesperia colorado idaho* (W. H. Edwards).

**Taxonomic note:** This species was previously viewed as the **COMMON BRANDED SKIPPER** (*H. comma* (Linnaeus)) in North America has now been separated into three or more species (Layberry, Hall & Lafontaine 1998). At the subspecies level, this is the entity long known as "*harpalus*" (W. H. Edwards). That name now applies to the following subspecies long known as *yosemite* (Leussler). James A. Scott (1998) revised the application of subspecies names for the Sierra Nevada populations. This entity overlaps ranges with a fall flying entity in the southern Sierra Nevada previously referred to as *tildeni* H. A. Freeman. Whether these are subspecies or separate sibling species remains to be determined. We do know that the two entities do not always occur at the same geographic localities. Similarities with the two also make it impossible to arbitrarily fix dates for flight periods within the complex and the two may overlap flights on the Sherman Pass Road. A very localized population recently found on the west slope of Piutes may be closer to southern California *leussleri* Lindsey but this is difficult to assess based on the short series of mostly only males available to examine.

**Kern County:** 27 May to 4 July. **Tulare County:** 25 May to 26 August.

**Distribution:** Upper Kern River Canyon and area west of Sherman Pass, Bald Mountain., Kennedy Meadows region, Kern River Valley, Kern Plateau and Walker Pass south to Kelso Valley and Butterbredt Peak.

**25b. YOSEMITE SKIPPER** *Hesperia colorado harpalus* (W. H. Edwards).

**Taxonomic note:** This is the skipper long known as "*yosemite*." It occurs on the Sierra Nevada west slope in the Transition and Canadian Life Zones. It is possible that the early flying members of the *H. comma* complex on the Sherman Pass Rd. are closer to *harpalus* than *idaho*.

**Kern County:** No records. **Tulare County:** 11 June to 13 September.

**Distribution:** Locally common at Stony Creek and in Sequoia (Mineral King area) and Kings Canyon National Parks. Also flies in Freeman Creek Grove of Giant Sequoias area NE of Johnsondale.

**25c. TILDEN'S SKIPPER** *Hesperia colorado tildeni* H. A. Freeman .

**Taxonomic note:** The TL for *tildeni* is Cherry Flat Reservoir, Santa Clara County, California. The name *tildeni* was previously applied by this author to populations on the west slope of the Sierra Nevada which fly in the fall. Recent studies (Shapiro & Forister, 2005) suggest these are actually separate entities.

**Kern County:** 17 August to 9 October.

**Tulare County:** Not in county. References to *tildeni* in county refer to entity below.

**Distribution:** May be limited in region to Temblor Range on west side of San Joaquin Valley. Populations in the Mt. Pinos-Frazier Park and Tehachapi Mountains have historically been viewed as a blend zone between *tildeni* and Sierra Nevada *H. colorado idaho* (formerly *harpalus*), but this no longer appears to be the case.

**25d. SIERRA NEVADA BRANDED SKIPPER *Hesperia colorado*** (Scudder): Fall flying segregate.

**Taxonomic note:** The status of this entity as a possible sibling species of *H. colorado* or not, requires additional research (Shapiro & Forister, 2005). See the preceding reference for a discussion of the issues involving this skipper elsewhere on the west slope of the Sierra Nevada further north. This entity flies in many areas where *idaho* and *harpalus* do not fly.

**Kern County:** 1 July to 9 October. **Tulare County:** 11 July to 2 October.

**Distribution:** Found in the southern Sierra Nevada (including Piute and Greenhorn subranges), Populations in Tehachapi Mountains, Frazier Park, Lake of the Woods and on Mt. Pinos may be this entity. The fall flying population that occurs west of Sherman Pass had a good flight following the 2002 McNally Fire on vegetation that survived the July fire on road cuts but had been relatively scarce in years since then. It reappeared in good numbers in 2012.

**26. COLUMBIAN SKIPPER *Hesperia columbia*** (Scudder).

**Taxonomic note:** There may be subspecies within *columbia*. Sierra Nevada populations seem to have better developed spotting on the HW below than those from the Mt. Pinos area and the Coast Ranges. This issue needs further study.

**Kern County:** 31 March to 29 June; 12 September to 9 October.

**Tulare County:** 7 April to 21 May: (High elevation 2-4 July) 15 September to 7 November.

**Distribution:** Associated with scrub-oak hillsides in the chaparral zone and often sympatric with *Erynnis brizo lacustra*. Rarely observed or collected and limited to California and southern Oregon, *H. columbia* has been taken sparingly (but commonly at times) at Frazier Park, Mt. Pinos, Hooper Hill, south of Bodfish, east side of Greenhorns NW of Kernville, upper Kern Canyon (Roads End to Limestone) and on the upgrade to Johnsondale. Until recently, this species was unknown in the Sierra Nevada. The easternmost records are from Chimney Peak Rd. near Lamont Peak and from east of Sherman Pass near Bald Mountain.

The adult males are most frequently taken on hilltops and ridges and females are rarely found. An exception to this is in the upper Kern River area from Roads End to Johnsondale where adults of both sexes can often be taken on roadside flowers. The males are also found at wet spots along small streams and the usual hilltops there. The species was collected in some numbers within seven weeks after a major wildfire in that region (upper Kern River/Sherman Pass area) in 2002 and seemed to become more common in the region following the fire. Jim Brock and the author have taken *columbia* as high as 8,000' on the Sherman Pass Rd. and Ray Stanford has taken it even higher on the summit of Mt. Pinos.

**27. LINDSEY'S SKIPPER *Hesperia lindseyi lindseyi*** (Holland).

**Taxonomic note:** John F. Emmel states (pers. comm.) that southern California *lindseyi* are lighter than nominotypical *lindseyi*. Temblor Range populations may be closest to those from the Coast Ranges. Until I can examine and study more collected material and can sort out the distributions of these entities, I combine them here. I concur that Coast Range *lindseyi* (that I have from Parkfield Grade in Monterey and Fresno counties) is different than those from the Tehachapi and Piute mountains.

**Kern County:** 13 May to 12 July. **Tulare County:** 14 and 15 June.

**Distribution:** Very local at Lebec, around Tehachapi (including Cummings Creek where it can be common) and in the Piutes south of Bodfish (including saddle of Hooper Hill). Should be found more commonly on west slope of Greenhorns but there are no recent records (though no one likely looks for it there). This subspecies is common in Temblor Range in 1987. Limited as a species to just California and southern Oregon and is highly prized by skipper enthusiasts. Easily overlooked or misidentified. The Tulare County records are limited to the Greenhorn Mountains from near Poso (Paul Opler), but this species should be found at many localities in the Sierran Nevada foothills north to the Sequoia National Park region.

This species is often confused with *H. colorado* but the location of the spotting on the hind wings below is more separated and detached in *lindseyi*. The spotting below in *lindseyi* also tends to be less well

developed and is often cream or yellow colored. The dark markings above are also notably reduced in *lindseyi* (as compared to *idaho*), though the fall flying members of the *H. colorado* complex in the late summer and early fall (long after *lindseyi* has completed its annual flight) can closely resemble *lindseyi* in this respect. In this region, the only known places where the two species could occur together at the same time are in Erskine Creek Canyon east of Lake Isabella and possibly in the Piute Mountains at MP 6 near Bald Eagle Peak (I took a female *Hesperia* there that could be a *lindseyi*, but more likely is an atypical *H. colorado idaho* which was common there). Adults of *lindseyi* are often found fluttering slowly through oat grass habitat in the lower oak belt of the Upper Sonoran Life Zone, visiting flowers (especially thistles) and contrary to what has been written; they will fly on ridges as on Hooper Hill easily accessible by trail from the road summit of the Bodfish/Havilah Road. In Erskine Creek Canyon, adults also visit wet mud at stream crossings and congregate in oak grass at the base of steep grassy hills.

**28. SIERRA SKIPPER or MIRIAM'S SKIPPER** *Hesperia miriamae miriamae* MacNeill.

**Kern County:** No records, no suitable habitat exists in area.

**Tulare County:** Only records from 19-28 July, but should fly through August in region.

**Distribution:** Must be widely distributed in the arctic-alpine zone on Sierra Nevada Peaks in Sequoia and Kings Canyon National Parks, reaching southernmost limit at Olancha Peak (John F. Emmel, pers. comm.). Lack of accessibility and legal restrictions hinder collecting in this region. This is a most difficult butterfly to find and is usually only encountered after a long strenuous hike into its rocky habitat above timberline. This subspecies is limited to the SierraNevadas, another recently described subspecies occurs in the White Mountains of east-central California and western Nevada.

**29. NEVADA SKIPPER** *Hesperia nevada sierra* Austin, J. Emmel, T. Emmel & Mattoon.

**Kern County:** No records but possible on Owens Peak.

**Tulare County:** No dates available. The only record was from "Sequoia National Park" by Tom Blevins. Usually flies June to early August in Sierra Nevada.

**Distribution:** Should be common at high elevations along the Sierra Nevada Crest but lack of accessibility and collecting restrictions within Sequoia National Park boundaries prevent securing vouchers.

**30. FIELD SKIPPER or SACHEM SKIPPER** *Atalopedes campestris campestris* (Boisduval).

**Kern County:** 28 March to 20 November. **Tulare County:** 13 April to 21 October.

**Distribution:** San Joaquin, Kern River and Tehachapi Valleys, Kelso Valley region, Greenhorn Mountains near Glennville, Tehachapi Mountains and Frazier Park area. Also recorded for the Mojave Desert in cities and cultivated areas. Most common late summer and early fall. Late fall flying individuals at Frazier Park, Kern River Valley, and Lake of the Woods can be very dark.

**31a. SANDHILL SKIPPER** *Polites sabuleti sabuleti* (Boisduval).

**Kern County:** 11 April to 20 November. **Tulare County:** 13 April to 22 October.

**Distribution:** San Joaquin Valley, Kern River Valley, Kern River at Democrat Hot Springs, Glennville, Tehachapi, Lamont Meadows on Kern Plateau. Populations from the southern San Joaquin Valley have some individuals which resemble *chusca*.

**31b. CHUSCA SKIPPER** *Polites sabuleti chusca* (W. H. Edwards).

**Kern County:** 4 April to 8 July; 8 to 27 October. **Tulare County:** No records.

**Distribution:** Few records from Mojave Desert: Koehn Dry Lake and Buckhorn Dry Lake (Edwards AFB) appear to have populations. A population of *sabuleti* near Sageland in the Kelso Valley region is near *chusca* and occurred in numbers there in October of 2008. Strays are taken elsewhere.

**31c. TECUMSEH SKIPPER** *Polites sabuleti tecumseh* (Grinnell).

**Taxonomic note:** The TL is Crabtree Meadow nr. Mt. Whitney, Tulare County, California. This skipper may warrant species status.

**Kern County:** 10 June to 22 July. (these records may or may not be technically in Tulare County). Since *tecumseh* is common in a meadow north of Meadow Camp at the Kern/Tulare County line, it would be expected that some individuals will stray across the county line. I published records of *tecumseh* for Kern

County in the annual Season Summary for 1996. It is often difficult to determine exactly where the Kern-Tulare county line is. This subspecies is also common at Pine Flat on the Kern Plateau also bordering the Kern County line. **Tulare County:** 26 May to 14 August.

**Distribution:** High elevation meadows (including meadows near Mt. Whitney) in Sierra Nevada including the Kern Plateau (southern limit, Pine Flat) and Greenhorn Mountains south to Kern/Tulare County line, where it is common.

**32. SONORA SKIPPER** *Polites sonora sonora* (Scudder).

**Kern County:** 10 June to 7 August. **Tulare County:** 25 May to 1 October.

**Distribution:** Often common in wet meadows and along streams in Sierra Nevada including the Greenhorn Mountains. Rare, possibly extirpated in the Tehachapi Mountains

**33a WOODLAND SKIPPER** *Ochlodes sylvanoides sylvanoides* (Boisduval).

**Kern County:** 28 June to 22 October. **Tulare County:** 3 July to 5 November.

**Distribution:** Occurs (often commonly) in all the regional mountain ranges. Some populations in the SE Sierra Nevada may refer to the next subspecies but material examined from near Walker Pass, Kelso Creek woodlands and hills near Butterbrecht Peak seems to suggest those are nearest this subspecies.

**33b. GREAT BASIN WOODLAND SKIPPER** *Ochlodes sylvanoides omnigena* Austin.

**Kern County:** No verified records. **Tulare County:** 3 August to 22 September.

**Distribution:** May occur as far south as extreme northern Kern County on the east side of the Sierra Nevada. Nine Mile Canyon populations in nearby Inyo County are *omingena*. Collections of a few *sylvanoides* on the SE Kern Plateau also seem to be *omnigena*. This subspecies should fly July to early October.

**34a. RURAL SKIPPER** *Ochlodes agricola agricola* (Boisduval).

**Kern County:** 2 June to 28 June. **Tulare County:** Replaced by other subspecies.

**Distribution:** This coastal subspecies occurs very sparingly in the Frazier Park-Mt. Pinos region. The species also occurs very locally in the Tehachapi Mountains near Tehachapi. This appears to be a blend zone between Coast Range *agricola*, *nemorum* and *verus*, probably closer to the latter. Inner Coast Range populations of this species in Santa Barbara, San Luis Obispo, Monterey and Fresno counties actually become more lightly marked and paler than strictly coastal *agricola* and can resemble *nemorum* found in the Sierra Nevada or may merit description as an unrecognized subspecies.

**34b. VERUS SKIPPER** *Ochlodes agricola verus* (W. H. Edwards).

**Taxonomic note:** The TL is Havilah, Kern County, California (Miller & Brown, 1981).

**Kern County:** 22 April to 25 July. **Tulare County:** 21 April to 24 June.

**Distribution:** A subspecies of very limited range in southern Tulare, extreme SW Inyo and Kern counties. Best localities near Sageland along Kelso Valley Road, Havilah and in the Piute Mountains, rare in the Tehachapi Mountains. This skipper favors ravines and roadside flowers. This rarity was uncollected for over 50 years until rediscovered in desert washes in the Kelso Valley region in 1978. It was also found commonly along Piute Mountain. Rd. south of Lake Isabella at 6000' that same year. It is now known to be widely distributed in the region, including Erskine Creek east of Lake Isabella. There is a blend zone with *nemorum* in the Kern River Valley and the south end of the Kern Plateau.

**34c. FOREST SKIPPER** *Ochlodes agricola nemorum* (Boisduval).

**Kern County:** 4 May to 21 July. **Tulare County:** 8 May to 24 July (one record for 23 October 2002, south of Corral Creek, upper Kern Canyon, Tulare County).

**Distribution:** This subspecies occurs on the west slope of the Sierra Nevada and Greenhorn Mountains to the Piutes (as a blend zone with *verus*) and the Kern River Canyon west to Lucas Creek. This form blends with *verus* in the Kern River Valley and on the Kern Plateau.

**35. YUMA SKIPPER** *Ochlodes yuma sacramentorum* Austin.

**Kern County:** No records: species may once have occurred along Canebrake Creek near Walker Pass before the host plant (*Phragmites australis* (Cav.) Trim. ex. Steud.) was extirpated apparently by grazing. The host also grows in the Erskine Creek drainage at Lake Isabella (town). **Tulare County:** 26 May to 5 September.

**Distribution:** This rare species was formerly abundant along the Tule River where the host plant grew abundantly. This subspecies was common when first discovered 2 mi N of Tipton off Hwy 99 and in Porterville with dozens easily collected on lantana in 1987-1988. Conservation planning indicated that *Phragmites* was not a native plant of the region and eradication efforts were made. The butterfly disappeared with the plant. Hopefully, it survives in adjacent Kings County near Corcoran where the host plant may still occur in a reservoir. There was an unexpected male collected along the upper Kern River at Limestone Camp July 9, 2005, but there is no known larval hostplant growing there. That individual may or may not represent the nominotypical race which occurs in the Owens Valley to the NE in Inyo County.

**36. UMBER SKIPPER** *Poanes melane melane* (W. H. Edwards).

**Kern County:** 14 May to 21 June; 10 August to 26 September.

**Tulare County:** 13 April to 29 June; 4 September to 19 November.

**Distribution:** In Kern County occurs along Clear Creek at Miracle Hot Springs (=Hobo Camp), Kernville, Erskine Creek Canyon east of Lake Isabella and at Weldon and Canebrake on Preserves. In Tulare County, this subspecies is common at Gateway to Sequoia and Ash Mountain (inside the National Park). First found commonly along upper Kern River Canyon from Roads End to Limestone in 2005 following the 2002 fire and a wet winter. This subspecies is usually an uncommon and a very localized skipper in the Sierra Nevada. Adults are partial to shade or small openings in moist habitats but visit a variety of nectar sources.

**37. EUFALA SKIPPER** *Lerodea eufala* (W. H. Edwards).

**Kern County:** 23 March to 12 December. **Tulare County:** 14 July to 21 October.

**Distribution:** San Joaquin and Kern River Valleys, Mojave Desert and in lower mountains including the Tehachapi Mountains. Found just west of Sequoia Nat'l Park (Gateway to Sequoia). Adults are commonly seen in city gardens and in alfalfa fields in the San Joaquin Valley.

**38. YUCCA GIANT SKIPPER** *Megathymus yuccae martini* D. Stallings & Turner.

**Kern County:** 12 March to 25 May. **Tulare County:** Stray near Lamont Peak, 10 April 1985.

**Distribution:** Walker Pass, Bird Spring Pass, Kelso Valley, Butterbrecht Peak and ridges to the south, Tehachapi Mountains east of Oak Creek Pass. Found commonly (and reliably) late March and April in the Kelso Valley region, it is usually found in canyons and deep washes or hillsides in association with its Joshua Tree host plant. This "jet" of the insect world has been reported to fly at speeds of up to sixty miles per hour. I have observed a number of aerial battles of females of this species with males of *P. indra phyllisae* in the Butterbrecht Peak region and male *martini* "battling" with each other. But females are almost never seen except on ridges with the host. I collected one male in a canyon 11.5 mi. south of Weldon north of Kelso Valley April 11, 2005 visiting a flower in a desert wash in the southern Sierra Nevada. Since adults reportedly never feed, the individual involved was likely perching. Adults are interesting to observe and difficult to track visually as they fly away at fast speeds, often returning to nearly the same spot on light colored rocky ground or "cow chip." Males frequently perch on rock or dead vegetation, taking wing when disturbed.

**THE SWALLOWTAILS AND PARNASSIANS PAPILIONIDAE.**

**39a. BALDUR CLODIUS PARNASSIAN** *Parnassius clodius baldur* W. H. Edwards.

**Kern County:** 23-24 June. Strays have been seen in the Greenhorn Mountains and below Lake Isabella Dam. A possible colony may exist on rocky slopes within Kern County in the Greenhorns or at the south end of the Kern Plateau. **Tulare County:** 9 June to 11 September.

**Distribution:** Common around Mineral King and in the National Parks, usually at higher elevations than the following member of the genus. Very lightly marked populations occur west of Sherman Pass, Poison Meadow on the Kern Plateau 4 to 5 mi N of Big Meadow and on the north slope of Baker Ridge in the

Greenhorn Mountains. Baker Ridge and NE of Horse Meadow in a canyon with a small stream are the southernmost colony sites for this boreal species in the Sierra Nevada and were recently discovered.

**39b. SEQUOIA CLODIUS PARNASSIAN** *Parnassius clodius* Menetries. (Undescribed Sequoia and Kings Canyon segregate).

**Taxonomic note:** Occurs in region around Sequoia and Kings Canyon National Parks and adjacent Sequoia National Monument on granite domes in vicinity of Big Meadow, often with *Euphydryas chalcedona irelandi*. Host plant is *Dicentra nevadensis* Eastw. This species rivals Sierra Nevada west slope *sol* Bryk & Eisner in size. Generally larger in size than *baldur*.

**Kern County:** No records. **Tulare County:** 12 June to 2 August.

**Distribution:** Granite domes around Big Meadow just south of Kings Canyon National Park are a classic locality to observe this butterfly. It occurs inside Kings Canyon and Sequoia National Parks as well. The preceding subspecies, *baldur*, occurs at higher elevations. While these parnassians tend to be larger than *baldur*, smaller sized individuals are found fairly frequently.

**40. SIERRA NEVADA or BEHR'S PARNASSIAN** *Parnassius behrii* W. H. Edwards.

**Taxonomic note:** Formerly considered a subspecies of *Parnassius phoebus* (Fabricius).

**Kern County:** No records. **Tulare County:** 3 July to 19 August.

**Distribution:** Most records are from the John Muir Trail (=Pacific Crest Trail) in the Arctic-alpine zone in the Forester Pass region in Kings Canyon and Sequoia National Parks but this species is also known from Mt. Whitney and the Mineral King regions in Sequoia National Park. The change of status adds this species to the list of California endemics and *behrii* is highly valued by collectors or watchers. Relatively few have found this highly localized species even to the north in the Yosemite region where it is more commonly encountered.

**41. PIPEVINE SWALLOWTAIL** *Battus philenor philenor* (Linnaeus).

**Kern County:** 24 April to 21 October. **Tulare County:** 24 June to 29 June.

**Distribution:** A rare stray to the region with possibility a record from 13 miles west of Shafter (seen, June 30, 1957 (Paul A. Opler) and the west end of Baker Ridge in the Greenhorn Mountains (June 29, 1997, seen, Ken Davenport) may have represented subspecies *hirsuta* Skinner. There are capture records for Edison (September 20, 1984) in the southern San Joaquin Valley and from Cantil near Koehn Dry Lake (July 8, 1992) by the author. Other sightings of this species exist for Kennedy Meadows, Hwy. 14 near Cantil, the canyon south of Butterbrecht Peak and near Sageland along Kelso Creek. Susan Steele photographed a worn example of *philenor* in her yard at Inyokern in the Mojave Desert on October 14, 2007. This swallowtail was also seen once in Bakersfield and in the Piutes on rare occasions by various individuals.

**42. DESERT BLACK SWALLOWTAIL** *Papilio polyxenes coloro* W. G. Wright.

**Taxonomic note:** Formerly known as **RUDKIN'S** or **WRIGHT'S SWALLOWTAIL** (*P. rudkini* F and R Chermock) but the name *coloro* has priority. DNA for *coloro* and *polyxenes* is the same (Felix Sperling on TILS leps talk post) but many believe *coloro* may actually warrant species status. Similar yellow and black swallowtails occur in southern Texas within the range of black *P. polyxenes asterius* Stoll. Other arguments for species status include habitat and host plant differences and lack of blend zones with *asterius*. There is a black form "*clarki*" F & R Chermock.

**Kern County:** 18 March to 8 July; 14 September to 3 October. **Tulare County:** 26 May to 24 July.

Records exist for Baker Lookout (7,753') in the Greenhorn Mountains (fresh individuals: July 4 and 24, 1995) and at Bald Mountain Lookout at 9,400' (June 20, 1992, 2 individuals) and again (one individual, June 20, 1999). At the latter locality, worn *coloro* sometimes fly with fresh *P. zelicaon*. The worn condition of these individuals suggests they are strays from the desert or "flyups" from lower elevations.

**Distribution:** Appears to be an established resident in the arid southern Sierra Nevada (Davenport, 1998b) where it flies with the **INDRA SWALLOWTAIL** (*P. indra phyllisae*) and utilizes the same host plant, *Tauschia parishii* (Coulter & Rose). In very wet years, it may occur in numbers on the floor of the Mojave Desert. It was particularly common in alfalfa fields in the Cinco-Cantil region on September 20, 1984. There is one record for Bakersfield, May 14, 1973. It turns up regularly on Butterbrecht Peak and Tom's

Hill in May but there are also fall records from those localities (September 14, 1998) and Tom's Hill with other records from Walker Pass, Jawbone Canyon and the Tehachapi Mountains. This butterfly was taken in small numbers in Erskine Creek Canyon east of Lake Isabella in May of 2001. The yellow form predominates in our region, with black "clarki" seen at Frazier Park and east side of the Piute Mountains (see Davenport, 1998, for discussion of status in the southern Sierra Nevadas).

**43. ANISE SWALLOWTAIL *Papilio zelicaon* Lucas.**

**Taxonomic note:** See Pelham (2008). The Rocky Mountain. "*nitra*" is no longer recognized as a valid subspecies. Hence, a trinomial name is no longer used.

**Kern County:** 4 February to 7 November (usually late February-early October).

**Tulare County:** 28 February to 18 September.

**Distribution:** Common locally in cities, orange groves, and in the mountains where suitable hostplants grow. Absent from the Mojave Desert, where it is replaced by the preceding species which also closely resembles *zelicaon*. Usually, locality will separate the two species but both may occur together in montane habitats bordering the desert. Abdominal markings or spots, lighter yellow ground color of *coloro*, shape of wing margin spots and of the yellow bands usually separate the two.

**44a. INDRA SWALLOWTAIL *Papilio indra* Reakirt. (Sierra Nevada subspecies similar to *indra*).**

**Taxonomic notes:** Populations of this species in most of the Sierra Nevada have traditionally been viewed as nominotypical *indra*. The TL for nominotypical *indra* is actually Pike's Peak, Colorado. Several have noted problems assigning that name to Sierra Nevada populations that appear similar.

**Kern County:** All known populations are *phyllisae*. **Tulare County:** 29 June to 22 July.

**Distribution:** There are very few records from Sequoia National Park and vicinity with sight records from the Jct. of Stony and Woodward Creeks, Mineral King on limestone peaks, and Timber Gap Trail but this rarely seen butterfly should be more widely distributed on drier mountains in that region.

**44b. PHYLLIS'S SWALLOWTAIL *Papilio indra phyllisae* J. Emmel.**

**Taxonomic note:** The TL is Butterbredt Peak, Kern County, California. (J. Emmel, 1981).

**Kern County:** 29 March to 30 July (mostly late April-May).

**Tulare County:** 22 May to 14 August.

**Distribution:** In Kern County, most records are from Butterbredt Peak and the hills and ridges running to the southwest. There are relatively few records from Piute Peak, Piute Mountain Vista, the east slope of the Piutes and the microwave hill near Bird Spring Pass where the butterfly was recently found by Jack Levy. In Tulare County, it occurs at Baker Ridge Lookout (7,530') in the Greenhorn Mountains, Alder Creek at 6800' and other localities west of Sherman Pass, Bald Mountain, Pine Mountain area and around XYZ Creek.

This distinctive butterfly usually patrols rocky or brushy slopes below a hilltop. Rattlesnakes, uncertain footing and cliffs make this species a hazardous insect to collect or observe. Butterbredt Peak itself is a classic locality for *phyllisae* and this swallowtail can often be observed in numbers in relative safety. The population on Bald Mountain was formerly thought to blend with the *indra* found further north, but John and Thomas Emmel examined my long series from Bald Mountain and concluded they are best considered *phyllisae*. Elsewhere, this butterfly is only known from east side of Sierra Nevadas from Nine Mile Canyon north to Mt. Whitney region in Inyo County. This subspecies differs from *indra* populations to the north by larger size, wider yellow bands and longer tails on the hind wings. I have taken a few individuals that resemble *martini* T. Emmel & J. Emmel and *calcicola* J. Emmel & Griffin.

**45. WESTERN TIGER SWALLOWTAIL *Papilio rutulus rutulus* Lucas.**

**Kern County:** 15 February to 6 November (usually April to early Sept.).

**Tulare County:** 28 February to 15 September.

**Distribution:** City parks and gardens in older residential areas, streamsides in valleys and mountains. Absent from Mojave Desert. Adults patrol riparian canyons and along the Kern River.

**46. PALE SWALLOWTAIL *Papilio eurymedon* Lucas.**

**Taxonomic note:** Coastal and Sierra Nevada populations differ and both phenotypes occur in Kern County (with the Coast Range phenotype in the Mt. Pinos region). Before formal differences are recognized, further

collections and study are needed. Series from the Coast Ranges and Sierra Nevada I have examined since learning of this issue show that Coast Range populations tend to more frequently exhibit a light yellow or cream ground color while the Sierra Nevada populations tend to have a more white ground color with less frequent cream or “light yellow” colored individuals and have broader black “tiger” stripes. An individual with extremely wide black bands (form “albanus”) has been taken in the Sherman Pass area. J. Emmel, T. Emmel & Mattoon (1998c) restricted the TL for *eurymedon* (and *albanus* Lucas, a synonym of *eurymedon*) to “Queen Lily Campground near Beldon, North Fork Feather River 2,400’ elev., Plumas County, California.”

**Kern County:** 24 April to 7 August. One record for 20 August. **Tulare County:** 14 April to 8 August.

**Distribution:** This beautiful white and black striped swallowtail is commonly distributed in forested areas in the Upper Sonoran, Transition and Canadian life zones in most of the regions mountain ranges. Absent from the Mojave Desert, Temblor Range and lower valleys. Adults favor well watered canyons, mixed coniferous forests and coniferous forest openings and hilltops.

#### **47. TWO-TAILED TIGER SWALLOWTAIL *Papilio multicaudata pusillus* Austin & J. Emmel.**

**Taxonomic note:** Michael S. Fisher (2012) proposed that the subspecies *pusillus* be considered a form of nominotypical *multicaudata* W. F. Kirby based on several factors, including the fact that the early spring brood of subspecies *multicaudata* tends to be small and similar to *pusillus*. While this may be possibly true that the two are biologically the same, the rarity of second brood flights in California make it extremely difficult to compare those few California August and September specimens with the much more abundant summer and fall specimens from Arizona (TL: “Mexique”, phenotype similar to Arizona populations, Austin & J. F. Emmel, 1998). This author believes more study is needed before Fisher's proposal can be accepted.

**Kern County:** 27 March to 28 August. **Tulare County:** 7 April to 24 July; 8 August to 30 August.

**Distribution:** One of the largest butterfly species in North America, this beautiful swallowtail is rarely seen in our region. The California subspecies is smaller in size than those populations that fly in Arizona. In Kern County it occurs in the Frazier Park area, Tehachapi Mountain Park and Water Canyon below the Park, Breckenridge Mountain (possibly extirpated there), Greenhorn Mountains (Cedar and Alder Creeks, possibly extirpated there) and around Kernville (rare). James R. Mori reports a record for the floor of the San Joaquin Valley at the edge of the Sierra Nevada foothills: “Glennville Hwy. at Poso Creek”, March 27, 1977. In Tulare County it had been seen but not collected in the upper Kern River region until taken west of Sherman Pass at Alder Creek at 6,800’ on July 3, 2005 by the author. Collection records include California Hot Springs, Jack Flat Rd. and at Gateway to Sequoia near the National Park. It is observed regularly along the “General's Highway” near Potwisha in Sequoia National Park.

This swallowtail seems to be much scarcer at many locations now than it was in the 1960's and 1970's. It seems that the existence of this species in specific localities is tied in with periodic fires and plant succession. *P. multicaudata* is no longer seen with regularity in the adjacent canyon at Oak Flat at Tehachapi Mountain Park as it was in the 1960's and 1970's (It did return there in 2007!) It still occurs in Water Canyon. But it is now scarce or absent at the Breckenridge Mountain locality near Havilah where it was common in 1979 and at Cedar Creek in the Greenhorn Mountains where it was common in 1975. The habitat at these sites has changed due to plant succession and tree growth. Conversely, the species has moved into the Sherman Pass area or has become more common there since the 2002 “McNally” fire. Maybe not coincidentally, the Alder Creek locality for *P. multicaudata pusillus* was among the hardest hit by the fire. I had seen an individual or two there over the preceding thirty years, but not in the numbers (about ten in 2 hours) there that Steve Summers and I witnessed on July 3, 2005. This butterfly is evidence that butterfly populations are continually changing due to natural or unnatural changes within a faunal system. Past records (as in this publication) may not always be a reliable guide to where the butterflies are now. Major changes in the Greenhorn Range and Sherman Pass region have taken place in just a few years.

#### **48. GIANT SWALLOWTAIL *Papilio cresphontes cresphontes* Cramer.**

**Kern County:** Sight records in San Joaquin Valley near Bakersfield 21 June 1983 (E of Edison, seen Richard P. Meyer) and 17 May 1984 (W of Bakersfield, seen Richard P. Meyer). No capture records.

**Tulare County:** Larvae only, no records of adults. I find old published agricultural reports of *cresphontes* larvae to be highly questionable (because of likely larval confusion with *P. zelicaon*).

**Distribution:** May colonize citrus groves of southern San Joaquin Valley. Could potentially become a "resident." Past transient colonies apparently died out.

#### **SULPHURS, WHITES AND ORANGE-TIPS PIERIDAE.**

**49a. PINE WHITE** *Neophasia menapia menapia* C. Felder & R. Felder.

**Kern County:** 11 July to 3 August. **Tulare County:** 11 July to 26 September.

**Distribution:** Sierra Nevada Ponderosa Pine forests in the National Parks south to Greenhorn Mountains and possibly the Piute Mountains where Art Douglas reported finding this species in mid-July in the 1970's (fide Chuck Sekerman). Few records available for the nominotypical subspecies in Kern County. Very abundant in Sequoia National Park and at Stony Creek in Tulare County. Numbers vary from year to year: some years it may be very scarce or not seen at all at some localities, but subject to population explosions in other years.

**49b. TEHACHAPI PINE WHITE** *Neophasia menapia tehachapina* J. Emmel, T. Emmel & Mattoon.

**Taxonomic note:** The TL is in a canyon on the N slope of Double Mountain in the Tehachapi Mountains, Kern County, California (J. Emmel, T. Emmel & Mattoon, 1998f).

**Kern County:** 9 July to 27 August. **Tulare County:** Only ssp. *menapia* occurs in county.

**Distribution:** Limited to Tehachapi Mountain Park and vicinity. May occur in the Piute Mountains, but collection records lacking or have not been located and examined. This Kern County endemic is rarely seen because of its tendency to stay high in the pine trees. This butterfly is most frequently seen on flowers, rarely seen in flight.

**50. BECKER'S WHITE** *Pontia beckerii* (W. H. Edwards).

**Kern County:** 27 January to 24 November (usually March-October). **Tulare County:** 17 May to 24 July (actual late date is probably October, few visit region in late summer so such occurrences are not reported).

**Distribution:** Common western edge of Mojave Desert, eastern Sierra Nevada and locally in southern San Joaquin Valley (where the species was common in 1981, *beckerii* may only be transiently established there). Also drier montane or desert Kelso Valley region and Tehachapi Valley west to Frazier Park area. Strays regularly to drier slopes in the regions mountain ranges. Scarce in Tulare County with records from around Kennedy Meadows, summit of Nine Mile Canyon, upper Kern River, Lamont Meadows and Bald Mountain.

**51. CHECKERED WHITE** *Pontia protodice* (Boisduval & LeConte).

**Kern County:** 25 January to 26 November. **Tulare County:** 1 February to 26 November.

**Distribution:** Favors lowland wastelands and drier montane habitats but also occurs above timberline on peaks around Mineral King in Sequoia National Park. I had expected *P. occidentalis* to occur there. Some heavily patterned individuals of this species come close to looking like *occidentalis*, a species occasionally reported on the Kern Plateau. Form "vernalis" is common in the early spring and late fall.

**52. WESTERN WHITE** *Pontia occidentalis occidentalis* (Reakirt).

**Kern County:** No records. **Tulare County:** 28 to 31 July 1954 (likely June to August).

**Distribution:** Sequoia National Park: published records are from Tyndale Creek (11,000') and Bighorn Plateau (11,500') by S. H. Erichsen but may be widespread in the high country.

**53. SPRING WHITE or CALIFORNIA WHITE** *Pontia sisymbrii sisymbrii* (Boisduval).

**Kern County:** 21 February to 30 May. **Tulare County:** 14 February to 22 July.

**Distribution:** Desert hills, Sierra Nevada foothills, Kern Plateau and open slopes in the high Sierra Nevada. Also occurs in the Greenhorn, Piute and Tehachapi Ranges west to Frazier Park and vicinity. Adults "hilltop." Often common.

**54. CABBAGE WHITE** *Pieris rapae* (Linnaeus).

**Kern County:** All months. **Tulare County:** 14 February to 12 November.

**Distribution:** General but local (most common in city gardens) but scarce in Mojave Desert. This species is common at several riparian locations at high elevation west of Sherman Pass.

**55a. LARGE MARBLE** *Euchloe ausonides ausonides* (Lucas).

**Kern County:** No records but has been taken a few miles west of Kern County line in San Luis Obispo County near Cholame. **Tulare County:** 8 May to 3 July.

**Distribution:** Until 2007, there were just two records for this subspecies in the region: 8.6 miles SE of Hwy. 198 on Mineral King Rd. just outside Sequoia National Park (May 8, 2002, Ken Davenport) and Sherman Pass Rd. at 4,200' (May 22, 2002, Paul Opler). The author found that there is an apparent "blend zone" with larger nominotypical *ausonides* at the Sherman Pass Rd. turnoff to Big Meadow (=Cherry Hill Rd.) occurring from 5700' to 6,300' (May 9 and 15, 2007) with notable intergradation with smaller *transmontana* taking place above 6,300'.

**55b. MONTANE LARGE MARBLE** *Euchloe ausonides transmontana* Austin & J. Emmel.

**Kern County:** No records. **Tulare County:** 15 May to 23 July.

**Distribution:** Locally common along Timber and Farewell Gap Trails in Mineral King area in Sequoia National Park. Common on Kern Plateau along Sherman Pass Rd. from Alder Creek area at 6,700' to 8,700'. Also found east of Sherman Pass and at the Big Meadow on the Kern Plateau. Local elsewhere in the Sierra Nevadas.

**56. PEARLY MARBLE or CALIFORNIA MARBLE** *Euchloe hyantis* (W. H. Edwards) complex.

**Taxonomic Note:** This species is currently under study by Paul Opler. Collected material of *hyantis* from the Kern Plateau is much more heavily marbled than material from Baker Ridge in the Greenhorns or upper Kern Canyon (Roads End to Limestone) in Tulare County. The relationship of the **DESERT MARBLE** (*Euchloe hyantis lotta* or *E. lotta*) with *hyantis* is also under study. Both occur on the Kern Plateau and there appears to be some intermediacy between the two in many individuals. More species may be hidden within what we now call nominotypical *hyantis*. At Lamont Meadows, (Chimney Peak Road NE of Lamont Peak), I have taken *lotta* with both the heavily and lightly marbled *hyantis* phenotypes, but the latter is quite scarce there.

**Kern County:** "Mt. Pinos block": 11 April to 8 June. Collected material is similar to that found on the Kern Plateau of Tulare County. **Tulare County:** 5 April to 24 July.

**Distribution:** Baker Ridge/Greenhorn Mountains, upper Kern River Canyon from Roads End to Limestone, Bald Mountain Lookout (less common there since the 2002 McNally Fire). Scarce in the Sequoia National Park region (Buckeye Flat, Mineral King, Woodward and Stony Creeks and Big Meadow near Kings Canyon National Park. In Kern County, *E. hyantis* occurs in Frazier Park-Lake of Woods area but is scarce or absent in dry years. It should occur on Split Mountain in the Greenhorns.

**57. DESERT MARBLE** *Euchloe lotta* Beutenmuller.

**Taxonomic note:** Status as a species or subspecies of *E. hyantis* has been under study by Paul Opler and Andrew Warren. Occurs with **Pearly Marble** (*E. hyantis*) at Kennedy Meadows and Lamont Meadow region of Kern Plateau. Collected individuals in the region show mixed characters. Treated as a species in Opler/Warren checklist (1992) and in the Pelham Catalogue (2008).

**Kern County:** 12 February to 23 May. **Tulare County:** 10 April to 29 June.

**Distribution:** Mojave Desert (including Red Rock Canyon and Cantil area), Walker Pass, Kelso Valley region and arid southern Sierra Nevada (including eastern and southern slopes), including the SE portion of the Kern Plateau in Tulare County.

**58. DESERT ORANGE-TIP or FELDER'S ORANGE-TIP** *Anthocharis cethura* near *cethura* (C. Felder & R. Felder).

**Note:** A population in desert scrub and hills near Frazier Park above Cuddy Creek in Kern County is close to nominotypical *cethura* but show some influence with subspecies *morrisoni* and *hadromarmorata*. This colony is on the wing in the month of April but only in wetter years.

Andrew Warren (pers. comm.) believes *cethura* populations from the upper Kern River drainage and Kern County portion of the Mojave Desert are closer to nominotypical *cethura* than to *morrisoni* or *hadromarmorata*.

**58a. MARBLED DESERT ORANGE-TIP** *Anthocharis cethura near hadromarmorata* J. Emmel, T. Emmel & Mattoon.

**Taxonomic Note:** Andrew Warren (pers. comm.) believes the Kern County Mojave Desert populations are closer to nominotypical *cethura*.

**Kern County:** 7 February to 15 May. **Tulare County:** 29 April.

**Distribution:** Mojave Desert mountain ranges and hills including east side of Sierra Nevada. There are also records for the east side of Walker Pass and desert side of Tehachapi Mountains. Intermediates with *morrisoni* and *cethura* are found in the Kelso Valley area and the east slope of the Piutes. The Lamont Peak population at the south end of the Kern Plateau may prove to be intermediate with *morrisoni* and *cethura* when better known.

**58b. MORRISON'S DESERT ORANGE-TIP** *Anthocharis cethura morrisoni* W. H. Edwards.

**Taxonomic note:** The TL is the bottomlands of the Kern River nr. Bakersfield, Kern County, California (Miller & Brown, 1981). Females of this subspecies lack orange-tips. Some have a trace of yellow. Both this and the preceding ssp. are distinguished by heavy green marbling on the hindwings below. Andrew Warren (pers. comm.) believes only the larger populations on the floor of the San Joaquin Valley and inner Coast Ranges should be called *morrisoni*, and that the Sierra Nevada populations are closer to nominotypical *cethura*. John F. Emmel treated the Kern River drainage Sierra Nevada populations as *morrisoni* despite their smaller size because females usually lack the orange-tips.

**Kern County:** 1 February to 1 May. **Tulare County:** 1 February to 25 April.

**Distribution:** Upper Kern River Canyon (Tulare Co.) south to Kernville and east side of Greenhorns, hills east side Lake Isabella, Bodfish, Hooper Hill, Miracle Hot Springs (=Hobo Camp above Clear Crk.), west side of San Joaquin Valley including SW Bakersfield (but maybe extirpated there from recent development). Still occurred in Kern River bottomlands (Enos Lane and Hwy. 43) on March 13, 1992. Also in Temblor Range on Hwy 58 summit and in the lower hills bordering the San Joaquin Valley.

**59. SARA ORANGE-TIP or PACIFIC ORANGE-TIP** *Anthocharis sara sara* Lucas.

**Kern County:** 1 February to 21 June. **Tulare County:** 1 February to 9 July.

**Distribution:** Common in the regions mountain ranges in foothill woodlands and canyons and in desert scrub in the Kelso Valley region and Birdspring Pass. Also occurs at Lamont Peak on Kern Plateau. Rarely strays into San Joaquin Valley. Recently discovered on the east slope of the Sierra Nevadas in Nine Mile Canyon (Inyo County) just east of the Tulare County line.

**60a. GRAY MARBLE** *Anthocharis lanceolata lanceolata* Lucas.

**Taxonomic note:** Some smaller sized *lanceolata* populations in the southern Sierra Nevada have sometimes been called *australis* (Emmel & Emmel, 1973; Robert Langston, pers. comm.). Some such populations have included *lanceolata* from Miracle Hot Springs (now called Hobo Camp and Clear Creek), Walker Pass and elsewhere in Kern County. Similar populations on the Chimney Creek Rd. on the Kern Plateau in Kern and Tulare Cos. and Nine Mile Canyon (in adjacent Inyo County) resemble *australis* in size but are lighter than *australis*. These give the appearance of being intermediate between *australis* and larger size nominotypical *lanceolata*.

**Kern County:** 28 February to 24 June. **Tulare County:** 28 February to 24 July.

**Distribution:** Kern Plateau, east slope of Greenhorn Mountains, upper Kern River Canyon, Miracle Hot Springs (=Hobo Camp), west slope of Piute Mountains and west slope of Sequoia National Park. Often common prior to the 2002 forest fire along the Sherman Pass Rd. to 8,500', 9,400' on Bald Mountain. The species was much less common there for several years after the fire, but was largely repopulated there by 2010 from surviving populations. This species is of limited distribution occurring in California and southern Oregon. In Tulare County, it is often a common species.

**60b. GRINNELL'S GRAY MARBLE** *Anthocharis lanceolata australis* (Grinnell).

**Kern County:** 10 April to 25 April. **Tulare County:** True *australis* probably not in county but some populations near Lamont Peak at the south end of the Kern Plateau resemble it.

**Distribution:** True *australis* is probably limited in the region to Cuddy Creek near Frazier Park. Some authorities consider populations from Miracle Hot Springs (=Hobo Camp-Clear Crk.), the Piute Mountains, Bird Spring Pass and Walker Pass to be *australis*.

**61. CLOUDED SULPHUR or COMMON SULPHUR** *Colias philodice* Godart.

**Taxonomic note:** The name *eriphyle* W. H. Edwards is often applied to California populations. However, the TL for that subspecies is Lake Labache (=Lac la Hache), British Columbia, Canada (Guppy & Shepard, 2001) and those populations appear rather different. No trinomial is applied to *C. philodice* herein.

**Kern County:** No records.

**Tulare County:** Two records: Sierra Nevada: Troy Meadows July 14, 1985 (Tony Leigh, determined by John F. Emmel), and 4 mi E of Sherman Pass at 8,000', June 9, 2001 (Ken Davenport).

**Distribution:** The species appears to be a very scarce resident in the Kern Plateau region. It could also be easily confused with yellow forms of *C. eurytheme*.

**62. ORANGE SULPHUR** *Colias eurytheme* Boisduval.

**Kern County:** 12 February to 5 December. **Tulare County:** 14 February to 5 December.

**Distribution:** General, common in alfalfa fields in the San Joaquin Valley, the mountains and Mojave Desert. A very variable species, one yellow male collected by the author is known from Bakersfield.

**63. HARFORD'S SULPHUR** *Colias harfordii* Hy. Edwards.

**Taxonomic note:** The TL is Havilah, Kern County, California. Considered by some workers to be a subspecies of the **QUEEN ALEXANDRA SULPHUR** (*Colias alexandra* W. H. Edwards), *C. harfordii* lacks the greenish aspect of *alexandra* on the HW below and is routinely triple-brooded. Many workers including the author view this as a distinct species closely related to *alexandra*, endemic to Southern California.

**Kern County:** 8 April to 16 October (there are 3 broods: spring, summer and a small fall brood in September and early October). Taken in numbers in September some years!

**Tulare County:** One record of a larva: 2 mi W of Johnsondale reared to adult (John F. Emmel) 19 July 1985. Adults found along Sherman Pass Road at Alder Creek 6,800': July 3, 2005 and other dates (Ken Davenport) soon after the McNally Fire. This species appeared to have been using *Lotus crassifolius* as a host plant in Tulare County but the *harfordii* have disappeared there as plant succession has progressed.

**Distribution:** Most common Frazier Park-Mt. Pinos region with sporadic populations in the Tehachapi Mountains from the Mountain Park to Cummings Creek. Rarely seen or collected in the Piutes, Greenhorns, Erskine Creek Canyon E of Lake Isabella and Sageland-Kelso Valley region.

**64. SIERRA SULPHUR or BEHR'S SULPHUR** *Colias behrii* W. H. Edwards.

**Kern County:** No records and no suitable habitat.

**Tulare County:** Occurs in Kings Canyon and Sequoia National Parks in Hudsonian zone meadows (where the hostplant dwarf bilberry occurs) in July and August. Listed records available range from 3 July to 10 August but it surely flies at later into the Fall.

**Distribution:** There are old records for Mineral King (southern limit of range), Bubb's Creek, Tyndale Creek 11,000' and upper Bubb's Creek. There are several recent records for the John Muir (=Pacific Slope) Trail in the Arctic-alpine zone well above timberline.

**65. SOUTHERN DOGFACE or DOGFACE BUTTERFLY** *Zerene cesonia cesonia* (Stoll).

**Kern County:** 18 April to 30 June; 20 August to 1 September.

**Tulare County:** One record from July (no specific date) reported.

**Distribution:** Occurs in the region as a rare stray or transient "resident" which apparently utilizes *Dalea fremontii* Torrey as a larval host on the edge of the Mojave Desert. Specific records include Tiger Flat in the Greenhorn Mountains, Tehachapi Mountain Park, Caliente, Cinco-Cantil region, Koehn Dry Lake near

Saltdale, El Paso Mountains and Erskine Creek E of Lake Isabella. Never common in this region and usually taken as singletons.

**66. CALIFORNIA DOGFACE *Zerene eurydice*** (Boisduval).

**Kern County:** 4 June to 11 July; 24 August to 26 September. **Tulare County:** 4 July to 26 July.

**Distribution:** In Kern County, this species occurs sparingly in the Frazier Park-Mt. Pinos region, Mt. Abel, Temblor Range and Tehachapi Mountain Park. One possible sighting near Alder Creek (a different Alder Creek than the one on Sherman Pass Rd.) in Greenhorn Mountains in June (1995) suggests (along with the Baker Ridge sighting) that a small colony of this California endemic exists in the Greenhorns. In Kern and Tulare Counties, this species tends to be scarce, seen with regularity only in the Mt. Pinos region. Fred Heath found this species (an apparent stray) at Baker Ridge in the Greenhorn Mountains July 8, 2001 and flying on the Kern Plateau near the Cherry Hill Rd. near Poison Meadow on July 4, 2004. Bill Gendron took the only actual collected individual in Tulare County, a male on the Sherman Pass Rd., between 7-8,000' on July 8, 2000. The author observed a male *Zerene eurydice* off Cherry Hill Road nr. Poison Meadow July 26, 2004 and found False Indigo (*Amorpha californica* Nutt.) in canyons crossing that road, and a female at Alder Creek 6,800' July 15, 2006.

**67. CLOUDLESS SULPHUR *Phoebis sennae marcellina*** (Cramer).

**Kern County :** 10 March to 9 October. **Tulare County:** 24 June to 25 July.

**Distribution:** Until 1983, known from Kern County from a single record in Arvin (March 10, 1968) by Ed Sampson. In favorable years with good rainfall in the deserts, this migrant has moved into the Cinco and Cantil region off Highway 14 where *Cassia armata* Watson (larval host) grows abundantly. Hundreds of individuals were seen daily (summer of 1983) on dry slopes and desert canyons near the *Cassia* or nectaring or mud puddling in nearby alfalfa fields. Strays were taken in Tehachapi Mountains in Caliente Canyon and were common at Paris-Lorraine May 29 to June 13, 1992 and in the southern San Joaquin Valley including Bakersfield (June 20, 1983) and Edison (Sep. 19 and 20, 1984 and May 22, 1992). Tulare County records include Eshom Campground (July 9, 1983), Kennedy Meadows and the Greenhorn Mountains. The years 1983-84 and 1992 saw good flights for this migratory species, which is rare in this region.

**68. MEXICAN YELLOW *Eurema mexicana*** (Boisduval).

**Kern County:** 12 May to 10 June, rare migrant. **Tulare County:** No records but should stray into area.

**Distribution:** Records of strays from Weldon, Piute Mountains, Haviilah, Frazier Park and southern San Joaquin Valley. Jim Brock has many of the records for the region.

**69. SLEEPY ORANGE *Abaeis nicippe*** (Cramer).

**Taxonomic note:** Formerly known as *Eurema nicippe*.

**Kern County:** 25 January to 8 December. **Tulare County:** 8 June to 2 October.

**Distribution:** Breeding resident on *Cassia armata* in Cinco-Cantil region which strays into dry montane habitats in the southern Sierra Nevada and southern San Joaquin Valley (several taken in an alfalfa field at Edison in 1984 and one was collected in Tulare in the San Joaquin Valley in Tulare County September 16, 1984. Rare in Tulare County, strays into Kennedy Meadows area in early summer and as very rare strays to Tulare and the Sherman Pass region (October 2, 2012). Sometimes very abundant in the Mojave Desert in alfalfa fields, at water or on dry slopes in association with *Cassia* hostplants. Rare in dry years. Overwintering adults have been collected in Kern Canyon (Upper Richbar), Bodfish, and in the Cinco-Cantil region.

**70. DAINTY SULPHUR or DWARF YELLOW *Nathalis iole*** Boisduval.

**Kern County:** 13 April to 6 November. **Tulare County:** 10 April to 22 October.

**Distribution:** Rare strays or small transient populations found in Mojave Desert, Frazier Park region and in the southern San Joaquin Valley. Strays into southern Sierra Nevada north to Kennedy Meadows area and to Freeman Creek Grove of Giant Sequoia's. Potentially can turn up anywhere.

## HAIRSTREAKS, COPPERS AND BLUES LYCAENIDAE

### 71. TAILED COPPER *Lycaena arota arota* (Boisduval).

**Kern County:** 16 May to 11 September (mostly late May to early July).

**Tulare County:** 6 June to 22 September (mostly June-August).

**Distribution:** Montane habitats in the Upper Sonoran to Canadian Life Zones where gooseberries grow. This species is highly localized in the region and can be difficult to reliably find.

### 72. LUSTROUS COPPER *Lycaena cupreus lapidicola* J. Emmel & Pratt.

**Kern County:** No records. **Tulare County:** 6 June to 20 August.

**Distribution:** An early flier often gone before collectors arrive at their chosen habitats. Found in Sequoia National Park (Halstead Meadow, Lodgepole, Mineral King and in Silver City) south to Big Meadow on the Kern Plateau.

### 73. GREAT COPPER *Lycaena xanthoides xanthoides* Boisduval.

**Kern County:** 27 April to 5 September. **Tulare County:** 31 May to 23 August.

**Distribution:** All mountain ranges (except the Temblors) and the Kern River Valley and Kelso Valley region. Populations from Caliente and eastern Kern County tend towards the newly described subspecies *obsolescens* J. Emmel & Pratt. Sierra Nevada populations at Freeman Creek and on the Kern Plateau are atypical and difficult to characterize.

### 74. EDITH'S COPPER *Lycaena editha editha* (Mead).

**Kern County:** No records. **Tulare County:** 25 June to 24 August.

**Distribution:** Mineral King Valley in Sequoia National Park (common) south to Big Meadow on the Kern Plateau (possibly extirpated, no recent records). Also known from Monache Meadows. Should be much more widespread in the two national parks, which are poorly explored to date.

### 75a. GORGON COPPER *Lycaena gorgon gorgon* (Boisduval).

**Kern County:** 9 May to 18 July. **Tulare County:** 29 April to 15 July.

**Distribution:** Frazier Park, Lebec, Tehachapi and Piute Mountains, east side of Greenhorns north to upper Kern Canyon and Sherman Pass region. It also occurs along the Mineral King Road near Sequoia National Park. Adults often patrol overgrown dirt roads and flats or ravines and canyons near the *Eriogonum nudum* host.

### 75b. SMALL-SPOTTED GORGON COPPER *Lycaena gorgon micropunctata* J. Emmel & Pratt.

**Kern County:** 9 May to 29 June. **Tulare County:** 17 May to 6 July.

**Distribution:** Collections since this copper was described reveals material from Kernville, the east side of the Greenhorn Mountains and the Kern River Valley is a *gorgon-micropunctata* blend zone closer to this subspecies. Collected material from the Kelso Valley region (including east of Sageland), Butterbredt Peak, Walker Pass and the Lamont Peak area is this subspecies. Blending with nominate *gorgon* also occurs in the upper Kern River Canyon-Johnsondale region and lower Sherman Pass Rd. east of the Kern River.

### 76. RUDDY COPPER *Lycaena rubidus monachensis* (K. Johnson & Balogh).

**Taxonomic Note:** The TL is Monache Meadows, Tulare County, California (Johnson & Balogh, 1977).

**Kern County:** One dubious record reported from Monolith in 1950. No population has been found there since. Likely, the record is based on misidentified *L. gorgon* which does occur there.

**Tulare County:** 2 July to 24 August.

**Distribution:** Mineral King Valley and White Chief Trail in Sequoia National Park well west of the Sierra Nevada Divide. Adults are often found in Mineral King Valley in wet rocky areas. It should still be found in the Monache Meadows area.

### 77a. BLUE COPPER *Lycaena heteronea submaculata* J. Emmel & Pratt.

**Note:** Females of this population vary markedly in coloration, with many bluish like subspecies *clara*.

**Kern County:** No records. **Tulare County:** 12 June to 16 August.

**Distribution:** Common in Sequoia National Park (Lodgepole and Tokopah Falls Trail) and along confluence of Stony and Woodward Creeks in Sequoia National Monument. This butterfly is associated with a white flowered buckwheat, which has been called a variety of *Eriogonum nudum*.

**77b. BRIGHT BLUE COPPER** *Lycaena heteronea clara* Hy. Edwards.

**Taxonomic note:** The TL is "Colorado and mountains of California" but all the ST's are from Tehachapi in Kern County, California (Miller & Brown, 1981).

**Kern County:** 9 June to 3 August. **Tulare County:** 5 to 15 July.

**Distribution:** Populations are known from Lebec, Frazier Park, Lake of the Woods and Frazier Mountain. No recent records from Tehachapi. The butterfly is well established in the Piute Mountains overlooking the Kern River Valley (Piute Mountain. Rd. milepost 4.5 to 7 in July) and Piute Mountain Vista. This butterfly has been recommended for "threatened" status by some.

A *heteronea* population recently discovered on sagebrush covered slopes at Pine Flat at the south end of the Kern Plateau on the Kern/Tulare County line, a significant NE range extension if *clara*. The latter population has more bluish females than *clara* and phenotypically may be closer to *submaculata*, which would make it a major southern range extension for that subspecies.

**78. PURPLISH COPPER** *Lycaena helloides helloides* (Boisduval).

**Kern County:** 22 April to 20 November. **Tulare County:** 29 May to 22 October. The strongest flights for this species in the Kern River Valley are in October and early November.

**Distribution:** Spotty on the floor of the San Joaquin Valley and in the southern Sierra Nevada. Occurs in Glennville and Linn's Valley, Kern River Valley (a strong population is at Weldon), Havilah and Tehachapi Mountains (in valleys). It has been taken at Koehn Dry Lake in the Mojave Desert. One record available from Sequoia National Park in Halstead Meadow.

**79. LILAC-BORDERED COOPER or NIVALIS COPPER** *Lycaena nivalis nivalis* (Boisduval).

**Kern County:** No records. **Tulare County:** 2 June to 11 September.

**Distribution:** A dominant species in much of Sequoia National Park where this species occurs in huge numbers at such localities as Mineral King, Wolverton, Lodgepole, and Tokopah Falls Trail. Also occurs outside the Parks at Stony and Woodward Creeks and the Quaking Aspen area in Sequoia National Monument. The southernmost records are from south of Quaking Aspen in what is apparently an unnamed meadow informally called "Kuskas Meadow." It also occurs at Quaking Aspen itself in a wet meadow.

**80. MARIPOSA COPPER** *Lycaena mariposa mariposa* (Reakirt).

**Kern County:** No records. **Tulare County:** "July."

**Distribution:** John H. Masters (1979) reported this species occurs in Mineral King Valley commonly in an informal publication on butterflies of the region. I know of no other records.

**81. GOLDEN HAIRSTREAK or BOISDUVAL'S HAIRSTREAK** *Habrodais grunus grunus* (Boisduval).

**Kern County:** 25 June to 26 September. **Tulare County:** 26 June to 22 September.

**Distribution:** Oak woodland, usually in mixed coniferous forest. Good localities include Tehachapi Mountain Park, Cedar Creek in the Greenhorn Mountains and Lamont Peak at the south end of the Kern Plateau. Populations found at the summit of Nine Mile Canyon and in the Lamont Peak area in Tulare and adjacent Inyo Counties are very pallid below and not typical *grunus*. Adults there and most other places can be most frustrating to collect as the adults prefer to stay at the very tops of the huge oaks which are the larval hosts. Usually, it is difficult to net this hairstreak there even with an extension net. The exception is the trail above Tehachapi Mountain Park where the switchbacks on steep slopes make access to the crowns of such oaks an easier task. Adults are rarely found away from the oaks but occasionally go to mud.

**82. GREAT PURPLE HAIRSTREAK** *Atlides halesus corcorani* Clench.

**Kern County:** 6 March to 13 November. **Tulare County:** 17 April to 23 October.

**DISTRIBUTION:** This beautiful hairstreak is one of the most highly desired and sought after butterflies in the region but rarely found many years. Often at the butterfly counts in the Kern River Valley, this is the species visitors from other regions hope to observe. It occurs in cities, streamsides and lower montane riparian woodlands where hostplant mistletoes grow. Sometimes common in Kern County at Hart Park near Bakersfield, Richbar area in Kern Canyon and in Caliente Canyon. Most records from Tulare County are from Gateway to Sequoia/Ash Mountain area or Corral Creek in upper Kern Canyon. Adults are most often seen on yellow composites (especially rabbitbrush) in the late summer and fall. Otherwise they are rarely seen on the wing or high up in riparian woodlands, which is where they hang out. Adults will occasionally go to mud.

**83. SILVER-BANDED HAIRSTREAK or SIMAETHIS HAIRSTREAK** *Chlorostymon simaethis simaethis* (Drury).

**Taxonomic note:** The name *sarita* (Skinner) has been applied to California populations, but Andrew Warren states (pers. comm.) that *sarita* is a synonym of *simaethis*.

**Kern County:** 11 May to 24 May, 1992 only. **Tulare County:** No records.

**Distribution:** A rare stray from Baja California which was taken in alfalfa fields at Koehn Dry Lake, Cantil (May 11, 1992 by Ken Davenport and May 16, 1992 by Ken Davenport, Al and Tom Rubbert) There was one record for Sageland north of Kelso Valley on May 24, 1992 by Larry Muller.

**84. BEHR'S HAIRSTREAK** *Satyrium behrii behrii* (W. H. Edwards).

**Kern County:** 13 May to 10 July. **Tulare County:** 20 June to 5 August.

**Distribution:** Common Kennedy Meadows region and Bald Mountain Lookout to Walker Pass, Sageland area north of Kelso Valley, east side of the Tehachapi Mountains (Willow Springs Road, desert side of Oak Creek Pass) and Frazier Park.

**85a. CALIFORNIA HAIRSTREAK** *Satyrium californica californica* (W. H. Edwards).

**Kern County:** 13 May to 20 July. **Tulare County:** 14 May to 29 July.

**Distribution:** Foothill woodland and mixed coniferous forest in mountains below 6,000'. Adults frequent flowers and mud.

**85b. GREAT BASIN CALIFORNIA HAIRSTREAK** *Satyrium californica near cygnus* (W. H. Edwards).

**Kern County:** No records. **Tulare County:** 30 June to 29 July.

**Distribution:** Kennedy Meadows area and Spring, south of Kennedy Meadows at road turnout, adults visit willow buds along small stream; host unknown.

**86a. SYLVAN HAIRSTREAK** *Satyrium sylvinus sylvinus* (Boisduval).

**Taxonomic note:** Prior to the 2002 McNally Fire, populations on the Sherman Pass Rd. appeared darker like nominotypical *sylvinus* but after the fire the populations which recolonized, became lighter like *desertorum*. Lighter *desertorum* populations just to the south along the Kern River may have replaced nominate *sylvinus* populations destroyed in the fire. Another possibility is that the more open and warmer habitats since the fire have influenced the phenotype coloration of this species there.

**Kern County:** 24 June to 24 July. **Tulare County:** 14 May to 4 September.

**Distribution:** Freeman Creek, Kennedy Meadows, west slope of Greenhorns at Glennville and Poso Creek. Found sparingly on west slope of Sierra Nevada in and near Sequoia National Park. Adults of this and the other subspecies perch on the host willows and visit various flowers in numbers, especially milkweeds and other white flowers.

**86b. DESERT SYLVAN HAIRSTREAK** *Satyrium sylvinus desertorum* (Boisduval).

**Taxonomic note:** The TL is Oak Creek, Kern County, California.

**Kern County:** 4 May to 14 August. **Tulare County:** 25 May to 8 August.

**Distribution:** In Tulare County limited to upper Kern River Canyon north of Kernville and floor of San Joaquin Valley (Tule River-Porterville; Springville, Kaweah River and Elderwood on lower west side of Sierra Nevada. The exact northern limit of *desertorum* in the San Joaquin Valley/Sierran foothills is

unknown but appears to be south of the San Joaquin River in Fresno County where I took what appears to be nominotypical *syvlinus*. In Kern County found in Tehachapi Mountains, Democrat Hot Springs in lower Kern Canyon, Kern River Valley, Sageland north of Kelso Valley and lower west and east slopes of Greenhorns below 4000'. Some individuals from Tehachapi Mountain Park exhibit intermediate characteristics with *dryope*.

**86c. DRYOPE HAIRSTREAK** *Satyrium syvlinus dryope* (W. H. Edwards).

**Kern County:** 1 June to 15 September. **Tulare County:** Replaced by other subspecies.

**Distribution:** Frazier Park, Lake of the Woods and north side of Mt. Pinos near Pine Mountain Club. A hairstreak found along small streams in the California Coast Ranges.

**87a. GOLD-HUNTER'S HAIRSTREAK** *Satyrium auretorum auretorum* (Boisduval).

**Kern County:** 12 May to 14 June. **Tulare County:** 17 May to 5 August (one record 6 September 1999).

**Distribution:** Coast Ranges: Temblor Range along Hwy. 58 and Cottonwood Pass in Kern County. In the Sierra Nevada it replaces *spadix* from about Sherman Pass occurring northward to Ash Mountain in Sequoia National Park. This species is limited to California and extreme southern Oregon. Usually an extremely rare butterfly, but observed by the thousands in the Temblor Range (Hwy. 58) during May, 1987.

**87b. NUTBROWN HAIRSTREAK** *Satyrium auretorum spadix* (Hy. Edwards).

**Taxonomic note:** The TL is Tehachapi Pass, Kern County, California.

**Kern County:** 23 May to 30 July. **Tulare County:** 9 May to 12 July.

**Distribution:** Sierra Nevada: Lamont Peak area (near Lamont Meadows) at south end of Kern Plateau, Greenhorn Mountains where it can be common at mid-elevations on yellow flowered buckwheats along the Old State Road. Tehachapi Mountains: often common on a trail at the base of a hill in early June overlooking Cuddy Creek 1-2 miles east of Frazier Park. Also found at Keene beneath the Hwy. 58 bridge near the railroad tracks. This tends to be a rare and local butterfly anywhere else.

**88. MOUNTAIN MAHOGANY HAIRSTREAK** *Satyrium tetra* (W. H. Edwards).

**Kern County:** 2 June to 26 July. **Tulare County:** 4 June to 2 August.

**Distribution:** Sierra Nevada: road to Freeman Creek Grove, Sherman Pass Road, Kern River just south of Limestone, common on milkweeds (even 9 years after the fire), east slope of Greenhorn Mountains including Baker Ridge, Piute Mountains, Tehachapi Mountains west to Frazier Park. Limited range in California and southern Oregon. Populations of this species from 3600'-5000' exploded following the 2002 Sherman Pass forest fire when huge numbers of *tetra* were taken the year after the fire. Within 3 or 4 years, they again became uncommon there.

**89a. HEDGEROW HAIRSTREAK** *Satyrium saepium saepium* (Boisduval).

**Kern County:** No records. **Tulare County:** 14 May to 4 September.

**Distribution:** Sherman Pass Road north in the Sierra Nevada to Tule River drainage into Sequoia National Park where the butterfly was rather scarce with records from Ash Mountain and various points along the Mineral King Road mostly outside the Park.

**89b. SOUTHERN HEDGEROW HAIRSTREAK** *Satyrium saepium chalcis* (W. H. Edwards).

**Taxonomic note:** The TL of *fulvescens* (herein considered a synonym of *chalcis*) is "Lake Tahoe, Tehachapi Pass and Havilah, Kern County" (Pelham, 2008).

**Kern County:** 5 May to 5 August. **Tulare County:** 14 May to 16 August.

**Distribution:** Sherman Pass Rd. south on Kern Plateau, much of the Greenhorns, Kern Canyon, Piutes, Tehachapi Mountains and Frazier Park-Mt. Pinos. Collected material by the author from the region from where *fulvescens* was described were examined by John F. Emmel and found to be very similar to *chalcis*. This is the most common *Satyrium* in the region with adults frequently taken on *Eriogonum*, perching on the *Ceanothus* host plants or visiting yerba santa and other nectar sources.

**89c. DESERT HEDGEROW HAIRSTREAK** *Satyrium saepium subaridum* J. Emmel, T. Emmel & Mattoon.

**Kern County:** Few records 24 June (?) to 8 August. **Tulare County:** 21 June to 21 August.

**Distribution:** Probably common at Walker Pass where extensive stands of the *Ceanothus* host grows just SE of the road summit at 5,250'. Susan Steele found this species at Indian Wells Canyon June 20, 2002 which is likely *subaridum*. There is an exceptional record of *saepium* from an alfalfa field at Cinco in the Mojave Desert that is either this subspecies or *chalcis* (June 24, 1983, Ken Davenport). A population occurs in Tulare County in the summit area of Bald Mountain above 9000'. Future collecting should better establish distribution limits and flight and locality information in the region. This subspecies is so little known because it was recently described, flies relatively late in the season in desert habitats or arid montane areas.

**90. BRAMBLE HAIRSTREAK *Callophrys dumetorum*** (Boisduval)

**Taxonomic note:** The name *dumetorum* was recently returned to its prior use (Scott, Crispin, Pelham, Calhoun, Davenport, Fisher & Toliver 2010, ICNZ 2012) (setting aside the action of J. Emmel, T. Emmel & Mattoon 1998a) in which the name *dumetorum* was applied to what had been called *viridis* and the name *perplexa* (Barnes & Benjamin) became the name for what had been and is now called *dumetorum*. Similarly, the name *viridis* (W. H. Edwards) applies again to the **COASTAL GREEN HAIRSTREAK**, a sibling species.

The Tulare County west slope segregate using *Lotus* occurring further north in the Sequoia National Park region are probably closer to coastal *dumetorum*, but tend to have well developed HW spotting. A revision of the green *Callophrys* in California seems very much needed. Coast Range and more northern Sierra Nevada *dumetorum* are markedly different with variable green *Callophrys* populations in the southern Sierra Nevada and Piute Mountains. Some Tehachapi Mountains and Frazier Park populations may be close to the nominate subspecies. Those in the Tule River drainage and along the Mineral King Rd. probably use *Lotus* as hostplants and are considered below.

**Kern County:** 20 February to 22 May. **Tulare County:** (Extreme 1 February) 20 February to 22 May.

**Distribution:** Occurs in much of the west slope and arid southern Sierra Nevada below 6,000', sometimes higher. Records in region include the foothills of Sequoia National Park, Tehachapi Mountains (uncommon), east side of the Greenhorns near Kernville and Cuddy Creek at Frazier Park (formerly reported as common but now very rare or absent).

**90a. BRAMBLE HAIRSTREAK *Callophrys dumetorum*** (Boisduval). (Tulare County Sierra Nevada West Slope segregate).

**Taxonomic note:** These differ from populations along the upper Kern River.

**Kern County:** No records. **Tulare County:** 27 March to 20 April.

**Distribution:** Occurs along the Tule River east of Springville along the road to Camp Wishon and along the Mineral King Road outside Sequoia National Park. Most individuals have prominent white spotting underneath on the hindwing.

**90b. SUPERPERPLEXING HAIRSTREAK *Callophrys dumetorum superperplexa*** J. Emmel, T. Emmel & Mattoon.

**Taxonomic note:** Traditionally referred to as *C. dumetorum dumetorum* (or *C. perplexa* from 1998-2012) populations north of Kernville along the upper Kern River (especially Corral Creek and Ant Canyon north to the Sherman Pass Rd.) show strong tendencies towards subspecies *superperplexa* of the Sierra Nevada east slope or even to the *C. sheridanii* complex.

Upper Kern River populations of green *Callophrys* are almost always gray above and very green on the lower surface. Females rarely show brown. Spot banding varies from a white spot or two to a very well developed spot band on the hindwing below. Some individuals resemble this subspecies on the east slope of Sierra Nevada and in the Lamont Peak area in northern Kern County. Apparent intergrades with what have been called *C. dumetorum dumetorum* in the literature are found at the south end of the Kern Plateau and in the Kelso Valley region. It is possible that more than one green hairstreak species may be involved in the region. Additional studies are needed.

**Kern County:** 7 March to 15 May. **Tulare County:** 20 February to 30 May.

**Distribution:** See above. South end Kern Plateau, upper Kern River drainage. Populations to the south in the Sierra Nevada in the Kelso Valley region and Piute Mountains have mixed characters. Populations in the Tehachapi Mountains are rare and need to be assessed.

**91. LEMBERT'S HAIRSTREAK** *Callophrys sheridanii lemberti* Tilden.

**Taxonomic note:** Opler & Warren (2002) treat *lemberti* as a subspecies of *C. sheridanii* (W. H. Edwards) which may or may not be confirmed. Treated as *C. lemberti* in previous editions by me.

**Kern County:** No records. **Tulare County:** 23 May (?) to 21 June.

**Distribution:** Mineral King, Bald Mountain, 9,400'. Other possible valid records for *lemberti* include west side of Sherman Pass at 8,000' (June 21, 1982, Ken Davenport) and Kennedy Meadows area (May 23, 1970, John Lane). The latter records could also refer to *C. dumetorum superperplexa*.

**92. NELSON'S HAIRSTREAK** *Callophrys nelsoni nelsoni* (Boisduval).

**Taxonomic note:** Many regard *nelsoni* as being conspecific with *C. gryneus* but recent studies (Pratt, Ballmer & Wright, 2011) seem to reaffirm that *nelsoni* is a separate species which is consistently visually separable from brown *C. siva* populations.

**Kern County:** 21 May to 22 July. **Tulare County:** 22 May to 2 August.

**Distribution:** Greenhorn Mountains and Sierra Nevada where Incense Cedars (the larval host) grow. In the Greenhorns both *nelsoni* and *C. gryneus (siva) juniperaria* occur in close proximity on different hosts without blending. The species was formerly common at mid-elevations west of Sherman Pass but the 2002 McNally Fire destroyed the Incense Cedars and the *nelsoni* population there which remained absent until 2011-2012 when a few *nelsoni* began to reappear in places (Sherman Pass Rd. 7,200', lower Alder Creek Crossing 5,680' at Cherry Hill Rd. and Big Meadow Crk., Sherman Pass Rd. at 6,000' where those apparently dead Incense Cedars returned to life. The butterfly remains absent at the 6,800' Alder Creek Crossing at the upper Sherman Pass Rd. where the species was dominant prior to the fire.

**93. MUIR'S HAIRSTREAK** *Callophrys muiri* (Hy. Edwards) (Inner Coast Range Juniper feeding ssp).

**Taxonomic note:** DNA studies apparently support *muiri* (which utilizes the Sargent Cypress host along the California coast) is not the same species as *nelsoni*. Not so clear is if juniper feeding "*muiri*" actually belong with the *gryneus* (Hübner) (= *siva* (W. H. Edwards)) species. Recent allozyme studies (Pratt, Ballmer & Wright, 2011) suggests *muiri* is conspecific with *C. siva*.

**Kern County:** 4 March to 1 May. **Tulare County:** No records; *muiri* occurs in the Coast Ranges.

**Distribution:** Discovered at Cottonwood Pass in the Coast Ranges (Temblor Range) by Jim Mori, K. Coyle and R. E. Wells on 10 April 1987. Adults tend to perch on the crowns of tall California Junipers and visit yellow flowers or horehound.

**94a. JUNIPER HAIRSTREAK** *Callophrys siva juniperaria* (J. A. Comstock).

**Taxonomic note:** This species utilizes *Juniperus californica* Carriere as the larval host. Many scientists treat the *siva* group as conspecific with *C. gryneus* (Hübner) and many do not. See Pratt, Ballmer & Wright, 2011).

**Kern County:** 25 March to 30 July. **Tulare County:** 14 to 20 April 2002.

**Distribution:** Most records are from Kern County: east side of Greenhorn Mountains, Butterbrecht Peak, Bird Spring Pass and vicinity, Tehachapi Mountains, (Caliente Canyon and off Willow Springs Rd.), Frazier Park, Bodfish, Piute Mountains The only Tulare County records are from upper Kern Canyon south of Corral Creek. Adults perch high on the junipers or visit nearby flowers.

**94b. MANSFIELD'S HAIRSTREAK** *Callophrys siva mansfieldi* Tilden.

**Kern County:** 30 March to 21 August. **Tulare County:** Not in county, limited to Coast Ranges.

**Distribution:** Temblor Range (Hwy 58 west of McKittrick) and NW side of Mt. Pinos (Apache Canyon, actually in Ventura County). This butterfly was abundant in the Temblor Range during May, 1987, observed by the thousands. This subspecies is far more common than stated in the literature in both this region and eastern Santa Barbara County in the Sierra Madre Range (Santa Barbara and Dry Canyons).

**94c. GREAT BASIN JUNIPER HAIRSTREAK** *Callophrys siva* near *chalcosiva* (Clench).

**Taxonomic Note:** Andrew Warren (2005) recently presented evidence that the TL for what had been called **BARRY'S HAIRSTREAK** (*C. barryi* (K. Johnson)) is invalid and that the best available name for brown colored members of the *siva/nelsoni* group on junipers at present is near *chalcosiva* pending further study. The larval host is *Juniperus occidentalis* Hooker.

**Kern County:** No records but possible at south end of Kern Plateau or on Owens Peak.

**Tulare County:** 31 May to 10 July (should fly 1-2 weeks later).

**Distribution:** Sierra Nevada: Kennedy Meadows region, Pine Mountain area, Spring, 5-7 mi. south of Kennedy Meadows south to near the Chimney Peak Ranger Station. Adults frequently visit budding willows along small streams or various yellow or white flowers.

**95. THICKET HAIRSTREAK** *Callophrys spinetorum spinetorum* (Hewitson).

**Kern County:** 30 April to 17 September. **Tulare County:** 19 March to 9 October.

**Distribution:** Mineral King area in Sequoia National Park, west of Sherman Pass 8,500', common south of Kennedy Meadows at Spring, usually uncommon upper Kern River Canyon, Tehachapi Mts (Caliente Cyn., Tehachapi Mountain Park, Cameron Cyn.). While this butterfly has a wide distribution, it is rarely seen. Adults probably spend most of their lives in the tops of trees and are most often seen visiting mud, hilltops perching on vegetation or flowers.

**96. BROWN ELFEN or WESTERN ELFEN** *Callophrys augustinus iroides* (Boisduval).

**Taxonomic note:** Norbert Kondla and others believe *iroides* may be a distinct species.

**Kern County:** 15 February to 25 July. **Tulare County:** 14 February to 24 July.

**Distribution:** Common in montane woodlands and forests through three life zones. Occurs in all of the regional mountain ranges but is absent in the valleys and deserts.

**97. MOSS ELFEN** *Callophrys mossii windi* (Clench).

**Kern County:** No records.

**Tulare County:** Larvae collected Tule River east of Coffee Camp May 28, 1988 and reared to adult (Jim Brock). No records of adults to date.

**Distribution:** Rocky foothills bordering the Tule River drainage east of Porterville. The host plant occurs commonly along Mineral King Road outside park boundaries and is likely to occur there.

**98. WESTERN PINE ELFEN or WESTERN BANDED ELFEN** *Callophrys eryphon eryphon* (Boisduval).

**Kern County:** 6 June to 9 July. **Tulare County:** 28 April to 24 July.

**Distribution:** Pine zone in higher southern Sierra Nevada including Breckenridge Mountain, Piute and Greenhorn Mountains, Kern Plateau-Sherman Pass area and Kennedy Meadows region even at relatively lower elevations (even the top of Nine Mile Canyon and Pine Flat). Populations in the extreme SE corner of Tulare County on the Kern Plateau (Pine Flat) are lighter and may refer to another subspecies, perhaps *pallescens* Austin, described from the Great Basin. Adults often perch on smaller pines and nearby willows in wet drainages.

**99. GRAY HAIRSTREAK** *Strymon melinus pudica* (Hy. Edwards).

**Kern County:** 22 February to 3 December. **Tulare County:** 28 February to 28 October.

**Distribution.:** General below 8,000' elevation. This hairstreak is most common in cities of the San Joaquin Valley and alfalfa fields, often rare in most other areas.

**100. MALLOW HAIRSTREAK** *Strymon istapa clenchi* Austin & J. Emmel.

**Taxonomic note:** Until a recent revision, this butterfly was known as the **COLUMELLA HAIRSTREAK** (*S. columella* (Fabricius)) but our southwestern hairstreak is actually a different species.

**Kern County:** Two records: 10 September 2001, Hanning Flat, Lake Isabella (Sterling O. Mattoon) and Paul's Place at Weldon, 23 October 2013 by Stephen Randall, confirmed in the field by the author who was present.

**Tulare County:** No records.

**Distribution:** Could become transiently established at times in Kern River Valley. The alkali mallow host plant grows at Hanning Flat, but periodic flooding and freezing winter temperatures would likely make such an occurrence temporary.

**101. MARINE BLUE *Leptotes marina*** (Reakirt).

**Kern County:** 29 March to 14 November. **Tulare County:** 18 April to 3 September.

**Distribution:** Mojave Desert, lowlands (including San Joaquin Valley and Kern River Valley) and arid montane. Uncommon in foothills of Sequoia National Park (2 mi E of Potwisha and Mineral King Road). Numbers vary from year to year with this blue being more common following wetter years.

**102. WESTERN PIGMY BLUE *Brephidium exilis*** (Boisduval).

**Kern County:** 3 January to 13 December. **Tulare County:** 17 May to 19 November.

**Distribution:** Arid lowlands, wastelands and deserts straying into drier montane areas. Only one record inside Sequoia National Park: Halstead Meadow July 24, 1987. This is considered to be one of the world's smallest butterflies.

**103. EASTERN TAILED-BLUE *Cupido comyntas sissona*** (W. G. Wright).

**Taxonomic Note:** Long known as *Everes comyntas*. See Austin (2002) for name of California subspecies.

**Kern County:** 20 March to 13 October. **Tulare County:** 13 April to 15 September.

**Distribution:** Transient populations are found along the Kern River at Hart Park (Bakersfield) in favorable years but it is absent there most years. This blue is more common and regular in Tulare County along Tule River at Porterville and Kaweah River at Venida. Less common at Yokohl, Springville, 5 mi. south of Woodlake (Kaweah River) and Three Rivers.

**104. WESTERN TAILED-BLUE *Cupido amyntula amyntula*** (Boisduval).

**Taxonomic note:** Long known as *Everes amyntula*.

**Kern County:** 18 March to 5 July. **Tulare County:** 13 April to 6 May.

**Distribution:** Rare in Tulare County with records from south of Woodlake and Three Rivers. In Kern County most common from Tehachapi Mountains west to the Frazier Park area and the Coast Ranges (Temblors west of McKittrick north to Cottonwood Pass on the west side of the San Joaquin Valley). Scarce at Walker Pass in the southern Sierra Nevada. Also, two fresh females were collected at Koehn Dry Lake in Cantil in the Mojave Desert (May 26, 1992, Ken Davenport) in a very unlikely habitat!

**105a. ECHO AZURE *Celastrina echo echo*** (W. H. Edwards).

**Taxonomic note:** This butterfly had long been treated as a subspecies of the **SPRING AZURE** (*Celastrina ladon* or European *C. argiolus*). I follow Opler and Warren (2002) and Pelham (2008) based on recent evidence that these are different species.

**Kern County:** 1 March to 31 July. **Tulare County:** 28 February to 31 July.

**Distribution:** Found in moist foothill woodland, canyons and forests in montane habitats in most of our mountain ranges. Adults frequently visit mud.

**105b. CALIFORNIA DESERT AZURE *Celastrina echo*** (W. H. Edwards). (Eastern Mojave Desert and eastern Sierra Nevada population).

**Taxonomic note:** Recent study has shown that the *Celastrina* in North America north of Mexico are a complex of similar appearing species, until recently viewed as one variable species. I note consistent pattern differences (a more washed out appearance and reduced spotting below) with what material I have examined from Inyo and eastern San Bernardino Counties. Such populations were called *cinerea* (W. H. Edwards) by Emmel & Emmel (1973). At present, it appears unlikely that these populations are the same *cinerea* that occurs in Arizona. The eastern Sierra Nevada and Mojave Desert *Celastrina* may or may not be the same species as *echo*.

**Kern County:** West end of Koehn Dry Lake at Cantil in the Mojave Desert 16 May 1992 (Ken Davenport). The one female collected appears to be the same as the *Celastrina* from the eastern Mojave Desert mountain ranges. Much more sampling and study of eastern Kern County azures needs to be done, but no location for them there in numbers has yet been found.

**Tulare County:** No records but could occur in extreme SE portion of Kern Plateau.

**106a. ARROWHEAD BLUE *Glaucopsyche piasus piasus*** (Boisduval).

**Kern County:** 7 June to 3 July. **Tulare County:** 27 April to 16 July.

**Distribution:** Sherman Pass Road at higher elevations both west and east of the Pass, northern and SW Kern Plateau, Sequoia National Park (Halstead Meadow, Cabin Cove, Dorst Camp). Few records available from Greenhorn Mountains in Kern County. This subspecies occurs very close to *excubita* which occurs along the Kern River at Fairview near the Sherman Pass area and on the eastern Kern Plateau on different lupine hostplants.

**106b. BUSH LUPINE ARROWHEAD BLUE *Glaucopsyche piasus excubita*** J. Emmel, T. Emmel & Mattoon.

**Taxonomic note:** Recently described (J. Emmel, T. Emmel & Mattoon 1998i) with a TL of Bishop Creek, Inyo County. The range given includes the eastern Sierra Nevada including northern Kern County and Nine Mile Canyon in Inyo County which is adjacent to the SE Kern Plateau.

**Kern County:** 6 March to 1 June. **Tulare County:** 28 February to 20 June.

**Distribution:** The common name used here is based on the name of the larval host: *Lupinus excubitus* Jones. Occurs in region south end of Kern Plateau (Lamont Meadows) south to Sageland, Kelso Valley and Havilah. A population found at Fairview Camp along upper Kern River in Tulare County is best viewed as this subspecies per John F. Emmel who examined a series from there. Atypical populations that show blending to coastal *sagittigera* C. Felder & R. Felder occur at Frazier Park and Lake Of The Woods in western Kern County (Flight 11 April to 19 June) and adjacent eastern Ventura County. Subspecies *sagittigera* has recently been found in eastern Santa Barbara County in Santa Barbara and Dry Canyons by the author which helps explain why there is such a blend zone. This subspecies and nominotypical *piasus* can occur in close proximity both on the Sherman Pass Road and on the eastern Kern Plateau.

**107a. SILVERY BLUE *Glaucopsyche lygdamus*** (Doubleday). (Southeastern Sierra Nevada segregate).

**Kern County:** 12 March to 26 May. **Tulare County:** 22 May to 28 June.

**Distribution:** This undescribed subspecies which resembles eastern Mojave Desert populations occurs in the arid desert-like southeastern Sierra Nevada NW to Lamont Peak (some Kennedy Meadows records may be for this subspecies) and south to Kelso Valley and Butterbredt Peak.

**107b. SOUTHERN SILVERY BLUE *Glaucopsyche lygdamus australis*** F. Grinnell.

**Kern County:** 25 April to 14 July. **Tulare County:** Not in county.

**Distribution:** Limited range in region from Cottonwood Pass in the Temblor Range, Frazier Park, Lake of the Woods and Mt. Pinos. This is the most widely distributed southern California subspecies, but it is very scarce in this region.

**107c. SILVERY BLUE *Glaucopsyche lygdamus*** (Doubleday). (Southern Sierra Nevada west slope population).

**Taxonomic note:** The names *columbia* F.Grinnell and *incognita* Tilden have been applied to these lower elevation southern Sierra Nevada west slope populations. But populations in the southern Sierra Nevada differ from both *columbia* (TL: Fort Columbia, Washington) and *incognita* (TL: Alum Rock Park, Santa Clara Co., California.). At higher elevations at Alder Creek at 6,800' on the Sherman Pass Rd. another undescribed subspecies with smaller black spots underneath occurs which flies in late May to early July.

**Kern County:** 12 March to 6 June. **Tulare County:** 28 February to 6 June.

**Distribution:** Eastern side of Greenhorns through Kernville and lower west slope of the Kern Plateau and upper Kern Canyon north through Sequoia National Park. The west slope Piute Mountains populations show some intermediacy with both the SE Sierra Nevada "desert" entity and *australis* in terms of smaller black spots below than populations to the north and increased blue overscaling above in the females. Since a population in Caliente Canyon in the Tehachapi Mountains has larger black spots, this may not represent a blend zone with *australis*.

**107d. SILVERY BLUE *Glaucopsyche lygdamus*** (Doubleday) (Sierra Nevada high elevation ssp.).

**Taxonomic note:** The prominent black spots underneath are smaller than *incognita*.

**Kern County:** No records. **Tulare County:** 9 May to 23 July.

**Distribution:** Higher elevations in Sierra Nevada west of Sherman Pass 6,000-9,000' and at Balch Park in Tulare County. It should be widely distributed at higher elevations in Sequoia and Kings Canyon National Parks. In 2012 and 2013, it appeared that lower elevation *lygdamus* had moved upwards in elevation and were blending with this phenotype at Alder Creek (6,800') west below Sherman Pass.

**108. SONORAN BLUE *Philotes sonorensis sonorensis*** (C. Felder & R. Felder).

**Taxonomic note:** Only the Pleito Creek record from the Mt. Pinos region may be nominotypical *sonorensis*. Other populations are Sierra Nevada populations which show phenotypic differences (details not published) from coastal populations. J. Emmel, T. Emmel & Mattoon (1998h) separated these in their recent state checklist. The two entities are combined here pending a description of the differences between the two but separated in the records section.

**Kern County:** Pleito Creek, Mt. Pinos on 16 April 1981 by W. D. Patterson. Sierra Nevada populations: 22 February to 12 May. **Tulare County:** (extreme: 1 February); 21 February to 7 May.

**Distribution:** Kern County localities include Chimney Peak Rd. 3.7 miles NE of Hwy 178, the east side of the Piute Mountains 3-4 mi. west of Sageland and Laura Peak (a difficult climb) north above Erskine Creek east of Lake Isabella. This blue was discovered on the east slope of Sierra Nevada in Indian Wells Canyon at 6968' on February 23, 2002 by Susan Steele. Tulare County records are from Kern Plateau (Lamont Peak and Meadow region) and upper Kern Canyon from Fairview, Roads End, Limestone and Kern River crossing and canyons off the lower Sherman Pass Rd. to 4,900' east of Kern River up that road. See Davenport (1988) for specifics, many populations have been discovered since then. Strong populations of *sonorensis* in the upper Kern Canyon were severely impacted or eliminated by a major wildfire in 2002 but the nearby Kern River crossing area colony survived. Many of those populations that were apparently impacted are now recovering.

**109. SMALL BLUE *Philotiella speciosa speciosa*** (Hy. Edwards).

**Taxonomic note:** The TL is Havilah, Kern County, California. No populations are currently known from there.

**Kern County:** 30 March to 31 May.

**Tulare County:** Sherman Pass Road at 4,700'. One individual 14 June 1977 (Jim Brock).

**Distribution:** Most records are from various localities in Mojave Desert (Red Rock Canyon, Randsburg, El Paso Mountains). Few records are available from Kelso Valley and southern San Joaquin Valley (near Maricopa). This species is intensely local and only appears in years of favorable rainfall. Because of its small size, it is easily overlooked. It is best collected early in the day before the usual desert winds pick up in the afternoons.

**110. SQUARE-SPOTTED BLUE *Euphilotes battoides battoides*** (Behr).

**Taxonomic note:** This group appears to involve several biological species (Warren, 2005), not one as believed for many years. Also known as the **SQUARE-DOTTED BLUE**.

**Kern County:** No records. **Tulare County:** 23 June to 11 September.

**Distribution:** Limited to higher peaks of Sequoia and Kings Canyon National Parks and Monument (peaks above Mineral King including White Chief Trail at 10,000' and Alta Meadow). Also found on granite domes in Canadian zone near the Big Meadow adjacent to Kings Canyon National Park.

**111. COMSTOCK'S BLUE *Euphilotes glaucon comstocki*** Shields.

**Taxonomic Note:** Traditionally, *comstocki* (TL: Tehachapi, Kern County, California) has been viewed as a subspecies of *E. battoides*. Recent studies by Andrew Warren (2005) and others suggest that *glaucon* and related taxa on *Eriogonum umbellatum* are a different species than arctic-alpine *E. b. battoides*. Was formerly treated as a subspecies of *E. intermedia* Shields but Andrew Warren's studies suggest both *intermedia* and *glaucon* are the same species. Also see Davenport (2002a, b) for evidence that *comstocki* is a different species than *bernardino*.

**Kern County:** 20 June to 24 August. **Tulare County:** 12 June to 20 August.

**Distribution:** Described from the Tehachapi Mountains where *comstocki* is very rare. Now known to occur on Kern Plateau from Sherman Pass Rd. (serpentine rocky outcrops just west of the summit at about 9,000' down to 6,800') and Bald Mountain (9,000'-9,400') south to Pine Flat and SE to Kennedy Meadows region), the east side of the Greenhorn Mountains, Piute Mountains and two apparent records for Mt. Pinos. It is always associated with *Eriogonum umbellatum* Torrey. It has recently colonized the Alder Creek burn area off the Sherman Pass Rd. at 6,800'.

**112a. BERNARDINO BLUE** *Euphilotes bernardino bernardino* (Barnes & McDunnough).

**Taxonomic note:** See Davenport (2002a and b) for evidence that *bernardino* is rightfully considered a species. Both *E. bernardino* and *E. glaucon comstocki* overlap ranges widely in the southern Sierra Nevada and Tehachapi Mountains, yet they remain phenotypically separate on different buckwheat hostplants.

**Kern County:** 29 April to 26 July. **Tulare County:** 14 May to 9 July.

**Distribution:** Most typical in Frazier Park-Mt. Pinos region ranging east through Tehachapi Mountains, Piutes, Greenhorns, mouth of lower Kern Canyon NE to Kernville and upper Kern Canyon north of Kernville to Johnsondale and Sherman Pass Rd. in Tulare County. This species utilizes *Eriogonum fasciculatum* Benthams as its larval host. Populations from east of the Kern River begin to assume the characters of the following subspecies.

**112b. INYO MOUNTAINS BLUE** *Euphilotes bernardino inyomontana* Pratt & J. Emmel.

**Taxonomic note:** The TL is Panamint Range, S end; ridge just E above Wood Canyon, 1500-1700 m elev., 1.3 km north-northwest of Manly Peak, Inyo County, California (Pratt & J. Emmel, 1998). This newly described subspecies has a more orange aurora on the hindwing below and smaller Rs macules below than nominotypical *bernardino*. The reference cited also provides several Kern County records not included in the records section herein. Prior to the description of *inyomontana*, the Kern County Mojave Desert populations had frequently been referred to as *martini* (Mattoni) which occurs in the eastern Mojave Desert ranges.

**Kern County:** 21 April to 8 July. **Tulare County:** 20 June to 6 July.

**Distribution:** In Kern County this subspecies occurs at Walker Pass, the Kelso Valley region and elsewhere in the arid SE Sierra Nevada. This blue occurs in the Mojave Desert ranges including the El Paso and Randsburg Mountains, the desert side of Tehachapi Mountains near Oak Creek Pass and the south end of the Kern Plateau in the Chimney Peak region.

**113a. DOTTED BLUE** *Euphilotes enoptes enoptes* (Boisduval) or *enoptes* complex.

**Kern County:** No records. **TULARE COUNTY:** 17 May to 21 September.

**Distribution:** True *enoptes* is probably limited to the Sequoia/Kings Canyon National Parks region. Collected individuals from the Sherman Pass region (Tulare County) and higher elevations in the Greenhorn Mountains south of Tiger Flat (Kern Co.) are atypical and several unknown entities may be involved.

**113b. TILDEN'S BLUE** *Euphilotes enoptes tildeni* (Langston).

**Kern County:** 27 March to 9 October. **Tulare County:** 17 May to 1 October.

**Distribution:** Until recently, this subspecies was believed limited to the Coast Ranges. Gordon Pratt believes other populations which appear to biologically be this blue are found in the Tehachapi and Piute Mountains, southern Sierra Nevada (Chimney Peak and Sherman Pass Rds. and Canebrake area) and the desert ranges (per Gordon Pratt). This subspecies differs from other *E. enoptes* by being double brooded. Fall flying populations at Cache Creek in the Tehachapi Mountains had sometimes been called *E. e. dammersi* (J. A. Comstock & Henne) but are more lightly dotted with black spots below.

**113c. LANGSTON'S BLUE** *Euphilotes enoptes langstoni* (Shields).

**Kern County:** 29 April to 15 June. **Tulare County:** 8 June to 6 July.

**Distribution:** Locally common Lamont Peak region (south end of Kern Plateau), Bird Spring Pass, Sageland area north of Kelso Valley, Butterbredt Peak region and some desert mountains (per Gordon Pratt). Both *langstoni* and *tildeni* sometimes occur together in the same areas at the same time, a situation that may support the belief that two species are involved.

**114. MOJAVE BLUE *Euphilotes mojave mojave*** (Watson & P. Comstock).

**Taxonomic notes:** The TL is the Mojave Desert which undoubtedly includes Kern County, since many older records were taken in this region by John A. Comstock and others (Miller & Brown, 1981).

Overlapping ranges and flights with both *E. enoptes langstoni* (Kelso Valley-Butterbrecht Peak area in April and May) and with *E. enoptes tildeni* (Nine Mile Canyon, Inyo County in late March and early April) supports that *mojave* may merit species status and is not a subspecies of *E. enoptes*.

**Kern County:** 23 March to 29 May.

**Tulare County:** No records but has been taken just east of county line in Nine Mile Canyon (Inyo Co.) where this species is abundant. It may be expected near Chimney Peak.

**Distribution:** Mojave Desert and dry eastern and southern slopes of Sierra Nevada and Tehachapi Mountains. Localities include Walker Pass, Birdspring Pass, the Kelso Valley region, Butterbrecht Peak, El Paso Mountains and east of Oak Creek Pass on desert slopes of Tehachapi Mountains

**115. ELVIRA'S PALE BLUE *Euphilotes pallescens elvirae*** (Mattoni).

**Taxonomic note:** In the literature the distinctive subspecies *elvirae* has often been considered a subspecies of the **RITA BLUE** (*E. rita* (Barnes & McDunnough)), but Pratt treated this as a subspecies of *E. pallescens*.

**Kern County:** 9 June to 1 October. **Tulare County:** No records.

**Distribution:** East side of Walker Pass, Butterbrecht Peak and ridges to the SW at south end of Sierra Nevada and desert side of Tehachapi Mountains. It has recently also been found on Piute Mountain Rd. 2 mi. west of Sageland where adults patrol roadside drainages. Could stray to the SE portion of Kern Plateau or be a "resident" in eastern Kern River Valley west of Walker Pass. It would be expected there.

**116. CERAUNUS BLUE *Hemiargus ceraunus gyas*** (W. H. Edwards).

**Kern County:** 16 May to 3 November. **Tulare County:** 20 June to 16 July.

**Distribution:** Appears to be a resident at Koehn Dry Lake in the Mojave Desert, the Kern River Valley and in the southern San Joaquin Valley in and around Bakersfield (both in mesquite woodland west of Bakersfield along the Kern River and in alfalfa fields southeast of the city). This is either a regular stray, resident or transient to the drier mountains of the region. It has even been found at Freeman Creek Grove of Giant Sequoias in what is now a National Monument.

**117. REAKIRT'S BLUE *Echinargus isola*** (Reakirt).

**Taxonomic note:** Often placed in genus *Hemiargus*. Andrew Warren states (pers. comm.) that Mexican scientists now consider *alce* (W. H. Edwards) to be a synonym of *isola*.

**Kern County:** 22 April to 3 November. **Tulare County:** 25 May to 16 July.

**Distribution:** Records from west of Bakersfield in mesquite woodland along the Kern River, Lebec and Mt. Pinos, Temblor Range, Cantil, arid mountains, Kelso Valley area, Kern Plateau, Bald Mountain, south of Johnsondale, Baker Ridge in Greenhorns. This blue is never common, taken as strays or found as small transient populations.

**118. ANNA BLUE *Plebejus (Lycaeides) anna anna*** (W. H. Edwards).

**Taxonomic note:** Formerly considered a subspecies of the **NORTHERN BLUE** (*P. idas* (Linnaeus)).

**Kern County:** No records though host plant occurs in the Greenhorn Mountains within county boundaries.

**Tulare County:** 21 June to 4 September.

**Distribution:** Common in wet meadows of Sequoia and Kings Canyon National Parks south to Quaking Aspen and Double Bunk Meadows near Johnsondale. Not yet found on Kern Plateau south of Sherman Pass Road or in Greenhorns despite apparent favorable conditions for it.

**119. MELISSA BLUE or ORANGE-MARGINED BLUE *Plebejus (Lycaeides) melissa paradoxa*** W. H. Edwards.

**Taxonomic notes:** The TL is the Tehachapi Mountains, Kern County, California (Miller & Brown, 1981). Populations in the Sierra Nevada exhibit more extensive blue overscaling above in the females than those from the Tehachapi Mountains and the Frazier Park area. The name *inyoensis* Nabokov may apply to the Sierra Nevada populations though many females lack blue overscaling.

**Kern County:** 3 April to 11 November. **Tulare County:** 27 April to 6 November.

**Distribution:** Usually found at same locations with *G. piasus* on the same "bush" lupine host plants. This blue occurs in drier montane habitats including upper Kern Canyon (Tulare Co.) at Corral Creek, Calkin's Flat and Fairview, Kelso Valley-Sageland area, Lamont Meadows on Kern Plateau, Tehachapi Mountains including Frazier Park and Lake of the Woods. Old reports of this species inside the National Parks were not substantiated by my collecting; probably the Blevins records were actually the previous species.

**120. GREENISH BLUE *Plebejus saepiolus aehaja*** (Behr).

**Kern County:** 10 June to 7 August. **Tulare County:** 25 May to 22 September.

**Distribution:** Collected material from Sequoia-Kings Canyon National Parks is probably nominotypical *aehaja*. From there this species ranges south in wet meadows and riparian streambed habitats to the south end of the Kern Plateau at Pine Flat, the Greenhorn Mountains south to Black Mountain Saddle and isolated points in the Piute Mountains. Some individuals from populations (as at Marshall Meadow in the Greenhorns and at the south end of the Kern Plateau) are very large and suggestive of southern California subspecies *hilda* (Grinnell & Grinnell).

**121. SAN EMIGDIO BLUE *Plebejus emigdionis*** (F. Grinnell).

**Taxonomic note:** The TL is San Emigdio Canyon, Kern County, California (Miller & Brown, 1981). This area is now owned by a conservation group and additional studies are needed to confirm if populations still exist.

**Kern County:** 11 April to 23 October, a female collected at Weldon on 23 October 2013 by the author.

**Tulare County:** No records but possible.

**Distribution:** This rare species is limited to southern California (northern limit near Lone Pine, Inyo County east of Mt. Whitney) where the host plant *Atriplex canescens* occurs. There are also dependencies on ants which are in turn dependent on scale insects (Gordon Pratt, pers. comm.). Colonies are found in the Lake of the Woods area, Cache Creek/Cameron Road area, Sand Canyon (Tehachapi Mountains), the Weldon/Onyx area in the Kern River Valley and along Kelso Creek near Sageland. A colony in Nine Mile Canyon 2 miles east of the Tulare County line suggests this species will eventually turn up on the Kern Plateau in Tulare County as well. Some believe this species may warrant "threatened" or "endangered" status. The biggest threat seems to be human development. The species is often very abundant when found. Good flights seem to be tied in with rainfall or runoff from mountains.

**122a. BOISDUVAL'S BLUE *Plebejus (Icaricia) icarioides icarioides*** (Boisduval).

**Kern County:** This subspecies not in county. **Tulare County:** 7 May to 14 August.

**Distribution:** Sequoia/Kings Canyon National Parks south to Sherman Pass and higher elevations of Kern Plateau and northern Greenhorns. It blends with next subspecies in the southern Sierra Nevada and Greenhorns.

**122b. EVIUS BLUE *Plebejus icarioides evius*** (Boisduval).

**Kern County:** 29 March to 31 July (extreme 24 Aug). **Tulare County:** 25 May to 5 August.

**Distribution:** Greenhorn, Piute and Tehachapi Mountains, Frazier Park, Mt. Pinos, Sageland-Kelso Valley intermediate to *eosierra*. Upper Kern River Canyon and southern Kern Plateau populations intergrade into nominotypical *icarioides*.

**122c. EASTERN SIERRA BOISDUVAL'S BLUE *Plebejus icarioides eosierra*** (J. Emmel, T. Emmel & Mattoon).

**Kern County:** 3 April to 1 July. **Tulare County:** 25 May to 3 July.

**Distribution:** Walker and Bird Spring Passes, Butterbrecht Peak and vicinity. It also occurs in the Kennedy Meadows area.

**122d. ATASCADERO BLUE *Plebejus icarioides atascadero*** (J. Emmel, T. Emmel & Mattoon).

**Kern County:** 16 April to 13 May. **Tulare County:** Not in county, limited to Coast Ranges.

**DISTRIBUTION:** Found only at Cottonwood Pass in the region and is very uncommon. This newly described subspecies is limited to California Coast Ranges. It was formerly included with *pardalis* (Behr).

**123. SHASTA BLUE** *Plebejus shasta shasta* (W. H. Edwards).

**Kern County:** There is a reported record from the Tehachapi Mts: 22 August 1937 (W. A. Evans). Record is dubious. No recent records.

**Tulare County:** 26 July to 15 August, should fly early July through August. Few records to date.

**Distribution:** Shepherd Pass and White Chief Trail above Mineral King. This blue should occur commonly among the higher peaks of the two national parks. No records from south of Mineral King, but possible in Sherman Pass region where possible plant hosts occurs.

**124. ACMON BLUE** *Plebejus acmon acmon* (Westwood).

**Taxonomic notes:** There may be sibling species included in what we now call nominotypical *acmon*. One very large "*acmon*" with large black spots below is allied with buckwheats and legumes in the southern the Sierra Nevadas, flying in May and June. Another brown "*acmon*" (flying late May to early September) shows orange scaling even on the FW above (but lacks orange along the veins) and is similar in appearance to the **VEINED BLUE** (*P. neurona*). Both of these occur with smaller, paler and more lightly spotted *acmon*. Such forms gene exchange could occur with *P. neurona*, but such *acmon* have been taken on Black Mountain in SLO County and in the Sierra Nevadas at Methuselah Camp at Balch Park June 25, 2005 (Ken Davenport) where no *P. neurona* are known to occur. A third entity occurs at mid-elevations in the Sierra Nevada. Males are larger than typical *acmon* but have smaller black spots underneath. Females are large with blue overscaling and with bold orange aurora on HW above. The hostplant is unknown but buckwheats are not in the habitat. The latter also have yellow or orange scaling up the forewing inside black borders.

Paul Opler (2002) is currently studying this group to determine just how these unusual populations should be considered taxonomically. In the meantime, I treat herein as "forms" of *acmon*. It is possible choice of hostplants or leaf condition of host plants could be responsible for these differences in size and color pattern.

**Kern County:** 1 March to 26 November. **Tulare County:** 1 February to 19 November.

**Distribution:** Throughout the region up to 10,000'. Easily confused with the next species.

**125. LUPINE BLUE** *Plebejus lupini* (Boisduval) complex.

**Taxonomic notes:** The taxonomy of this complex is in flux and being studied by Paul Opler and John F. Emmel. Many of the described and undescribed subspecies in this complex may actually warrant species recognition. It was formerly considered nominate *lupini* occurred in Tulare County but it does not.

**125a. CLEMENCE'S BLUE** *Plebejus lupini monticola* (Clemence).

**Taxonomic Note:** The TL for *monticola* is Pasadena, Los Angeles County, California. The populations in SW Kern County in the Frazier Park and Mt. Pinos area differ from nominotypical *monticola* by having little blue overscaling over the brown on the upperside in females. The southern Sierra Nevada populations utilizing *Eriogonum fasciculatum* can also resemble *chlorina*. J. Emmel, T. Emmel and Mattoon (1998i) referred to such populations as "*argentata*." According to Paul Opler (pers. comm.), *argentata* is probably a synonym of *chlorina*, an entity which J. Emmel, T. Emmel and Mattoon (1998i) believed utilized both *Eriogonum fasciculatum* and *E. umbellatum* as larval hosts in the region. So what was called *argentata* can be probably be separated into both *monticola* and *chlorina*. Occasional females have orange spotting on the FW above which may suggest interbreeding with *P. neurona*.

To further confuse matters, as populations of the *monticola* group are examined north into coastal Ventura, Santa Barbara, San Luis Obispo, Monterey, and Fresno counties, *lupini* complex populations lose the blue overscaling in females which all become just "plain brown" blues. They are definitely not *monticola* (in the strict sense). These are also currently under study.

**Kern County:** 7 April to 16 July. **Tulare County:** 7 April to 4 July.

**Distribution:** True nominotypical *monticola* may not be in the region. Populations in the *monticola* group are locally common at Frazier Park, Lebec and on Mt. Pinos. Populations in the southern Sierra Nevadas

(Greenhorns, Piutes, Kern Canyon, Kern Plateau) have been traditionally treated as *monticola* in the literature. These may eventually be recognized as an undescribed subspecies.

**125b. SIERRAN LUPINE BLUE** *Plebejus lupini alpicola* (J. Emmel, T. Emmel & Mattoon).

**Kern County:** No records. **Tulare County:** 17 June to 27 July.

**Distribution:** Recently described, this subspecies is limited to higher elevations of the Sierra Nevada west slope and arctic-alpine zone. In Tulare County, *alpicola* occurs in the Sequoia/Kings Canyon National Parks region and at the Big Meadow found in Sequoia National Monument (not the Big Meadow on the Kern Plateau).

**125c. GREEN BLUE** *Plebejus lupini chlorina* (Skinner).

**Taxonomic note:** It is a strong possibility that *chlorina* is a full species within the *lupini* complex. Considerable confusion has existed over exactly what the name "*chlorina*" represents. It was long believed to just represent a form characterized by heavily cyanic blue or "green" overscaling. Then recently, it was recognized that true *chlorina* may be a different biological species than *monticola* which might be limited to only Tehachapi Mountains populations utilizing *Eriogonum umbellatum* as the larval host (also now known to be the host in the Sierra Nevadas) which flies from mid-June and the first three weeks of July. But collecting in recent years has shown that *chlorina* is far more common and widespread than previously believed.

The entity "*monticola*" usually flies at lower elevations than *chlorina* in association with *Eriogonum fasciculatum* earlier in the season with worn individuals overlapping with newly emerged *chlorina*. Frequently, females have orange spotting on the forewing above which may suggest gene flow with *P. neurona*. The Tehachapi Mountains *chlorina* originally was thought to differ from *monticola* by the lack of blue overscaling over the brown ground color of females, and the greenish cast of the blue in males. Rearing from the host plants and examination of museum specimens has since shown *chlorina* can and often does lack such blue overscaling. Since lepidopterist's did not recognize *chlorina* and *monticola* as two separate biological entities that use different host plants, these blues are poorly understood and their distributions are actually unknown.

A colony of *chlorina* from near McGill Camp on Mt. Pinos has considerable blue overscaling on the females just like the Sierra Nevada populations. Museum specimens examined by Paul Opler revealed the Tehachapi Mountain population often also have blue overscaling. Other "*lupini*"(=*monticola*) populations occur in all of these areas, usually at lower elevations.

Preliminary studies suggest that the entity known as *argentata* is actually a synonym of *chlorina*. One reason why the taxonomic understanding of "*lupini*" in the southern Sierra Nevada has been so confused because there appears to be at least three or more separate species in this complex in this area. It was not recognized that *chlorina* occurred there until very recently. Recent field work has established that *chlorina* is well established in this region, but was long overlooked or unrecognized.

**Kern County:** 13 June to 31 July. Usually found second half of June and first three weeks of July. **Tulare County:** (29 May) 12 June to 8 August.

**Distribution: Tehachapi-Tejon Mountains:** Higher slopes of the Tehachapi Mountains where *E. umbellatum* grows. Populations also occur in the Frazier Park area and in the McGill Campground area on Mt. Pinos. **Sierra Nevada and subranges:** Skinner Peak, Piute Mountains (Piute Mountain, Vista and Piute Mountain Rd. south of Lake Isabella between milepost 6 and 7) where adjacent populations with *P. lupini monticola* on July 5, 2002 were found on different hosts, Greenhorn Mountains at several sites including Old State Road (5.4 to 6.1 mi above Wofford Heights), 1 mi. south of Tiger Flat, 1-2 mi east of Black Mountain. Saddle and Baker Ridge, in southern Sierra Nevada and Kern Plateau along Sherman Pass Rd. from 4 mi. west of summit to area around Bald Mountain up to 9,300.' *Chlorina* first appeared at the Alder Creek Crossing at 6,800' July 5, 2009 and had a good colony. Common at Pine Flat at the south end of the Kern Plateau in early July.

**125d. DESERT RANGES LUPINE BLUE** *Plebejus lupini argentata* (J. Emmel, T. Emmel & Mattoon).  
**Taxonomic Note:** It appears that what has been referred to as *argentata* is not a valid subspecies. Recent collections of "*argentata*" have proven to be *monticola*, *chlorina* or a possible third entity. The name *argentata* is listed here, it should still apply to a member of the "*lupini*" group of the region.

**126. VEINED BLUE** *Plebejus neurona* (Skinner).

**Kern County:** 13 April to 15 September. **Tulare County:** 20 May to 24 July.

**Distribution:** This is another highly prized endemic limited to California. The northernmost records are in Tulare County from the the Sherman Pass Road as strays west of the Pass at lower elevation with a colony site 1 mi. NW of Bald Mountain at about 8,000', on medisedimentary rock outcrops where *Eriogonum wrightii* (adults visit *E. umbellatum* for nectar) is present. It is also on the NE side of Lamont Peak (Chimney Peak Rd. near Lamont Meadows) at the south end of the Kern Plateau. Kern County records include the Sageland-Kelso Valley region, Bird Spring Pass, Butterbrecht Peak, Piute Mountains including Hooper Hill and Erskine Crk., Tehachapi Mountains, Frazier Park, and Mt. Pinos. Often common near the *E. wrightii* host.

**127. SIERRA NEVADA BLUE** *Plebejus (Agriades) podarce cilla* (Behr).

**Taxonomic note:** This species has gone under a number of scientific and common names in the literature. A newly described species in this complex, the **HEATHER BLUE** (*Plebejus cassiope* (J. Emmel & T. Emmel)) likely occurs in the "High Sierra" of Tulare County.

**Kern County:** No records. No suitable habitat.

**Tulare County:** 4 June to 21 August.

**Distribution:** High elevation subalpine meadows with the "Shooting-stars" hostplant (= *Dodecatheon* species). Found in Kings Canyon and Sequoia National Parks south to Big Meadow on the Kern Plateau (there are two Big Meadows in Tulare County, the other is near Kings Canyon National Park). The species also occurs in Paloma Meadow and others in wet meadows off the road to Mosquito Meadow (west side of Sherman Pass) and about 1 mi. east of Sherman Pass. The flight length on the Kern Plateau east of Sherman Pass has lengthened in recent years for reasons not understood.

## THE METALMARKS FAMILY RIODINIDAE.

**THE MORMON METALMARK COMPLEX** *Apodemia mormo* complex

**Taxonomic note:** Recent research and collecting data strongly support that the "**MORMON METALMARK**" is actually a complex of closely related "biotypes" or "species". Gordon Pratt and Greg Ballmer (1991) published an article showing there are three biotypes in the southern Sierra Nevada and western edge of Mojave Desert. Other distinctive "*mormo*" populations in the region have been discovered since then. Some of those are rare and very local in occurrence and not well understood.

It appears that there are three to five species in the *A. mormo* complex in Kern County and two or three in Tulare County, though others may prefer to call them "biotypes." Sorting out populations is difficult because these metalmarks are extremely variable. It is very possible that there is some gene flow or ongoing hybridization. Based on biological grounds related to number of flights, egg size and time of development, there may be several species within the *virgulti* group. Such issues are currently under study by John Emmel and Gordon Pratt (Pratt, Emmel & Bernard, 2011).

In the Kern River Valley and other areas in the region there is overlap between what had been viewed as geographical or host plant subspecies and flight periods. At Kernville and on the east side of the Greenhorns there is a blackish member of the complex that flies within the geographical range of *davenporti* in the late spring. In late July or August through October *tuolumnensis* appears. In late September through October what appears to be an undescribed *A. virgulti* (Kernville-Greenhorn Mountains species or subspecies) has a second flight, flying with *A. mormo tuolumnensis* in many of the same places but on a different host. Similar areas of overlap within the complex occur east of Walker Pass, the desert side of the Tehachapi Mountains and central to western San Luis Obispo County.

These distinctive populations of *mormo*, *virgulti* and the *cythera/tuolumnensis* groups retain their distinctive pattern differences even when occurring in close proximity in Kern County. *Apodemia*

*mejicanus deserti* seems distinctive as well, limited to Mojave Desert Mountain ranges and desert slopes of the Sierra Nevada.

**128a. MORMON METALMARK** *Apodemia mormo* near *mormo* (C. Felder & R. Felder). Coast Range population.

**Taxonomic note:** This is the population which has sometimes been called "*mormonia*" (Boisduval), now considered a synonym of *mormo*. Some populations on the west side of the San Joaquin Valley and in the Coast Ranges show a strong tendency to look like the subspecies *langei* J. A. Comstock and utilize *Eriogonum indictum* Jepson as the host. Kern County populations have sometimes been viewed as a complex *mormo* X *langei* "blend zone" (Powel 1975). Recent unpublished studies suggest two taxa may be involved.

**Kern County:** 7 September to 19 September. Likely really flies late August into early October.

**Tulare County:** Coast Ranges *mormo* not in county.

**Distribution:** Temblor Range: Cottonwood Pass (actual records mostly west of Kern County line in SLO County), Ortega Grade (Davis Road accessible from Hwy 46 near Cholame, SLO Co.) and Annette Road (near junction with Davis Rd) on west side of the San Joaquin Valley. A classic locality for this entity and the *langei* phenotype is at Ortega Grade on the SLO-Kern County line on what appeared to be a barren rocky slope with no real plant life except *Eriogonum indictum*. Hundreds of adults were seen there on September 16, 1992 (Ken & Kevin Davenport).

**128b. TUOLUMNE CYTHERA METALMARK** *Apodemia mormo tuolumnensis* Opler & Powell.

**Taxonomic note:** I previously considered *cythera* (+ *tuolumnensis*) to be a full species separate from *mormo* based on separated ranges in the Coast Ranges and Sierra Nevada eastward, but Gordon Pratt, John F. Emmel and Gary Bernard (2011) now appear to regard *cythera* as conspecific with *mormo*. A few locations have recently been found where orange *cythera* and black *mormo* appear to blend, but such areas of overlap are very small. It is possible this may be hybridization rather than intergradation. Occasionally, black phenotypes or forms have been found flying with orange members of the *cythera* group. These are very rare in the region covered here but can be quite common in areas of contact between the orange *cythera* group and black Coast Ranges *mormo* in interior San Luis Obispo (=SLO) County.

There is a very orange entity (with reduced black markings) lumped here with *tuolumnensis* which uses *Eriogonum umbellatum* as a host at high elevations. It was common on Old State Road at 5.4 to 6.1 mi west of Wofford Heights on August 22, 2003. But there are also records of this entity for the Tiger Flat area (also in Greenhorns), Walker Pass (Jim Brock), Water Canyon in the Tehachapi Mountains and even on Mt. Pinos. It also almost certainly occurs in the Piute Mountains. The usual hosts in the region for *tuolumnensis* are *Eriogonum fasciculatum* and *wrightii*. However, nominotypical *cythera* from Whitney Portal in Inyo County is commonly associated with *E. umbellatum*.

**Kern County:** 12 July to 28 October. **Tulare County:** 14 August to 19 November. The flight of *tuolumnensis* is much longer than other members of the *mormo* complex.

**Distribution:** Sherman Pass Road below 5,000' south through upper Kern Canyon, Lamont Peak of the Kern Plateau, Walker Pass, Kern River Valley including Kernville and east slope of Greenhorns, Piutes, Miracle Hot Springs (=Hobo Camp), Kelso Valley region, Butterbredt Peak, Tehachapi Mountains including Sand and Cameron Canyons, Frazier Park and Mt. Pinos area.

**129a. BEHR'S METALMARK** *Apodemia virgulti* (Behr). Frazier Park population.

**Taxonomic note:** Collecting at Frazier Park (Kern County) in 2012 turned up a sizable single brooded population flying in April and May with no adults found at the colony site during the summer or fall months. Since nominotypical *virgulti* is multiple brooded, it seems unlikely this population is subspecies *virgulti*. In series, adults resemble the subspecies *virgulti*, *davenporti*, *mojavelimbus* and the Sierra Madre Mountains population found in eastern Santa Barbara County.

**Kern County:** Single brooded in the spring: 16 April to 12 May, probably flies to early June.

**Tulare County:** No records.

**Distribution:** Unclear since the description of *davenporti* and rarity of the spring flying *virgulti* complex in Tehachapi Mountains. Reported as "*Apodemia virgulti virgulti*" from Mt. Pinos area at Pleito Creek April 16, 1981 by W. D. Patterson. More study and collecting need to be done in these areas to properly

assess which *Apodemia* entity these records actually represent. A long series of these metalmarks collected on a steep hill and canyon at the north end of Frazier Park off Mt. Pinos Way on April 22 and May 12, 2012 have been invaluable in observing variation within this population.

**129b. DAVENPORT'S METALMARK** *Apodemia virgulti davenporti* J. Emmel, T. Emmel & Mattoon.

**Taxonomic Note:** Originally described as a subspecies of *A. mormo* (TL: Walker Pass 5,300', Kern County, California (J. Emmel, T. Emmel & Mattoon, 1998j) and treated as a subspecies of *A. virgulti* (which it closely resembles) in the original version of this publication. James Scott (Scott, 2008c) recently placed *davenporti* as a subspecies of *A. dialeuca* Opler & Powell based on the work of John F. Emmel & Gordon Pratt. However, Scott's proposal seemed based on incomplete information and it appears that the name *dialeuca* may not refer to a univoltine group within *virgulti* since *dialeuca* may be multi-brooded.

The taxonomic implication of the multiple-brooded mostly black *Apodemia virgulti* populations in the Kernville-Lake Isabella area which occurs near univoltine *davenporti* in the southern Sierra Nevada and Tehachapi Mountains is that the two should be different species. It would seem unlikely both are subspecies of *virgulti*. Other single-brooded spring flying members of the *virgulti* complex likely make up an as yet unrecognized species. More research and study is needed. Spring flying populations of *davenporti* in the Lamont Peak area closely resemble *A. mormo cythera* (+*tuolumnensis*), which flies in those same areas in the late summer and fall.

**Kern County:** 29 March to 6 June. **Tulare County:** 6 April to 13 June.

**Distribution:** Very spotty and local, but often common where found. In Kern County *davenporti* has populations south of Lamont Peak (Chimney Peak Road at the south end of Kern Plateau, on the east side of the Greenhorns, both west and east slopes of the Piutes (South of Bodfish and Piute Mountain. Rd. west of Sageland/Kelso Valley, Walker Pass south (including Bird Spring Pass) to Butterbredt Peak and Kelso Valley. It ranges at least as far SW as Sand Canyon in the Tehachapi's. In Tulare County, it occurs along upper Kern River (Calkin's Flat) up Sherman Pass Rd. to about 5,000' and in Lamont Peak area at south end of Kern Plateau area along Chimney Peak Road.

**129c. MOJAVE DESERT'S EDGE METALMARK** *Apodemia virgulti* similar to *mojavelimbus* J. Emmel, T. Emmel & Pratt.

**Taxonomic note:** This bivoltine population occurs in the region in lower Kern Canyon in the southern Sierra Nevada and on the Mojave Desert side of the Tehachapi Mountains along the Oak Creek and Willow Springs Roads. This separates this population from single brooded *davenporti* which flies only once in the late spring. The name *mojavelimbus* is tentatively applied to these populations since most individuals are blackish, though *mojavelimbus* from further south on the north slope of the San Bernardino Mountains are known to fly in only one brood in the spring.

**Kern County:** Kern Canyon populations 21 May to 1 June; 1 to 17 September. East side of Tehachapi Range: 7 May to 7 June; 29 September to 3 November.

**Tulare County:** A population of the complex in the Corral Creek area along the upper Kern River is associated with *Eriogonum nudum* and may be this entity. It has been taken only in early October.

**Distribution:** Kern Canyon in riparian side canyons from near the entrance to Kern Canyon east to Lucas Creek. Occurs on the Mojave Desert slope of the Tehachapi Mountains as mentioned above.

**Population from desert side of Tehachapi Mountains east of Oak Creek Pass.**

**Taxonomic Note:** Most individuals are black but a series shows individuals which resemble *virgulti* and *deserti*. This metalmark is placed with *virgulti* based on the likelihood it is using *Eriogonum fasciculatum* as the larval host and it is double brooded. It is found in desert washes and slopes with buckwheats east of Oak Creek Pass off Willow Springs and Oak Creek Roads.

**Lower Kern Canyon population:**

**Taxonomic note:** Very similar to the above population and may be the same entity. The difference is the *Eriogonum nudum* host plant and differences in timing of the fall flight. Black individuals from Hooper Hill may also belong here.

**129d. KERN RIVER BEHR'S METALMARK** *Apodemia virgulti* (Behr). Undescribed Kernville-east slope Greenhorn and Mountains Lake Isabella segregate.

**Descriptive note:** These populations appear to use *Eriogonum wrightii*, *E. fasciculatum* or *E. nudum* as the larval host. There are two flights: late May to mid-June and again late September into early November. The majority of individuals are black like typical *mormo* but an orange form also occurs. These Sierra Nevada orange forms lack much black scaling and tend to be larger than *davenporti* or *A. mormo tuolumnensis* adults. These orange forms occur in both broods.

**Taxonomic note:** Previously treated as a subspecies of *A. mormo* in the first edition of this publication. After review of the life histories, number of broods and examination of series of adults, John F Emmel & Gordon Pratt believe that this entity is best viewed as a member of the *A. virgulti* complex. Scott (2008c) suggested the possibility it may be allied with *deserti*. Some Kernville region individuals resemble *deserti*.

This butterfly overlaps fall flight periods and localities with *A. mormo tuolumnensis* in the Greenhorns and south of Kernville. The latter metalmark only flies in the late summer and fall, not in the spring and early summer. It is clear these must represent two different species.

**Kern County:** Kernville-east side of Greenhorns: 16 May to 3 July; 17 September to 12 November.

**Tulare County:** 27 September to 9 October. John F. Emmel believes the Corral Creek black metalmarks are allied with the Kernville entity. At Corral Creek, black *virgulti* are very rare and local in comparison with the far more abundant *A. mormo tuolumnensis*. The possibility these black Corral Creek metalmarks may be black forms of the *cythera* group cannot yet be ruled out.

**Distribution:** Jack Levy and the author located a robust population of this metalmark south of Kernville (dry hills west side of main road on west side of Lake Isabella 0.5 to 3 mi. south of Kernville) on May 20, 2000. Other localities include the east side of Greenhorns along Sawmill Road and the east side of Lake Isabella. Populations occur on barren rocky hills with buckwheats (*E. wrightii* and *E. fasciculatum*).

### **130. DESERT SONORAN METALMARK *Apodemia mejicanus deserti* Barnes & McDunnough.**

**Taxonomic note:** The Mojave Desert metalmark populations were allied with *deserti* in Pratt & Ballmer (1991) instead of with *A. mormo* near *mormo* as treated previously by various authors. Orange overscaling and placement of the white spots on the HW distinguish it from *A. mormo autumnalis* Austin, the entity occurring in the eastern Mojave Desert formerly treated as *A. mormo mormo*. *Apodemia mejicanus mejicanus* and *deserti* reportedly blend in western Arizona (Kilian Roever and Gordon Pratt, pers. comm.). Some populations of *A. virgulti* on the edge of the Mojave Desert and in the Kern River Valley can strongly resemble *deserti* and some authorities believe *deserti* is a *virgulti* subspecies.

**Kern County:** 9 March to 27 October. **Tulare County:** No records but could stray in from Nine Mile Canyon, Inyo County. Multiple brooded depending on rainfall.

**Distribution:** Occurs in the desert mountain ranges and arid eastern and southern slopes of the Sierra Nevada. The ranges of *davenporti* and *deserti* overlap slightly east of Walker Pass. In very favorable years such as 1983-1984, this species flew continuously in the Koehn Dry Lake/Cantil region where adults favored the edges of alfalfa fields. It also appears that *deserti* and the blackish member of the *A. virgulti* complex both occur on the desert slopes of the Tehachapi Mountains near Mojave. This situation needs study. Field marks alone are often not a reliable guide for identification.

### **131. PALMER'S METALMARK *Apodemia palmerii palmerii* (W. H. Edwards).**

**Kern County:** 31 May to 6 June; 20 September. **Tulare County:** No records.

**Distribution:** Buckhorn Dry Lake, Edward's AFB. Discovered on Edward's AFB by Gordon Pratt on May 31, 1994. Collecting was done there during a approved survey under special permit. Collecting cannot be done by civilians without a permit.

## **BRUSH-FOOTED BUTTERFLIES. FAMILY NYMPHALIDAE.**

### **132. WESTERN SNOOT BUTTERFLY *Libytheana carinenta streckeri* (Field).**

**Taxonomic note:** Many believe the name *bachmanii* (Kirtland) is the species which occurs in this region. (Pers. communication with Chris Durden & late George T. Austin).

**Kern County:** 16 September to 2 December. **Tulare County:** 28 October.

**Distribution:** This species appears to be a rare stray into the southern San Joaquin Valley, southern Sierra Nevada and the Mojave Desert. They are not found every year and only once (Koehn Dry Lake in 1984) were they found in numbers.

**133. GULF FRITILLARY** *Agraulis vanillae incarnata* (Riley).

**Kern County:** 13 April to 13 December. **Tulare County:** 1 April to November 19.

**Distribution:** Not native to the region, this species was likely introduced into the region with the larval host passion vines as an ornamental planting in city gardens. It occurs in the cities of San Joaquin Valley (most records for Bakersfield) where passion vines have been planted. Rarely common and in most years scarce. Very local in occurrence. There are two records for Caliente; seen once at Frazier Park. It has been collected in Tulare County in Tulare September 16, 1984 (several, Ken Davenport) and in Visalia (April-November 2012-2013, Stephen Randall).

**134. VARIEGATED FRITILLARY** *Euptoieta claudia* (Cramer).

**Kern County:** One fresh female collected September 20, 1984 in an alfalfa field at Cantil adjacent to Highway 14, in the Mojave Desert. A second record was a photographed individual in Grapevine Canyon on the east side of the Sierra Nevada October 2, 2008 by Susan Steele. **Tulare County:** No records

**Distribution:** Rare stray from the eastern Mojave Desert.

**135. HENNE'S CORONIS FRITILLARY** *Speyeria coronis hennei* (Gunder).

**Taxonomic note:** The TL is Mt. Pinos and Frazier Mountain Park, Ventura County, California (Miller & Brown, 1981). As noted earlier, both of these mountains are largely in Kern County as well. L. P. Grey wrote (pers. comm.) that Sequoia material was not typical *hennei* and may be described by someone else as a new subspecies.

**Kern County:** 31 May to 11 September. **Tulare County:** 13 June to 29 August.

**Distribution:** Populations are found at Frazier Park and Mountain, Mt. Pinos, Mt. Abel and the Tehachapi Mountains. Usually, this is a scarce butterfly. There are reported records from the Piutes, Greenhorn Mountains and Havilah, none of which the author has examined. Such records are questionable and likely are based on misidentifications of *S. callippe macaria* or *laurina*. There are many older records (based on actual specimens in Grey's collection at the time of his letter) from Sequoia groves in Kings Canyon and Sequoia National Parks. This species was far more common on Mt. Tehachapi in the late 1990's than it was 40 years ago. Shields (1987) listed this as an endemic subspecies of greatly limited range.

**136. ZERENE FRITILLARY** *Speyeria zerene monticola* (Behr).

**Taxonomic Note:** Tulare County populations had previously been referred to as nominotypical *zerene*, but see discussion by J. Emmel, T. Emmel & Mattoon (1998b, h). While those authors did not recognize *monticola* in their 1998 state checklist at that time, it is clear that southern Sierra Nevada populations are very different from nominotypical *zerene* and are so recognized here.

**Kern County:** Was once listed on a USGS survey but I know of no valid records. Since *zerene* is moving south in the Sierra Nevada since the McNally Fire, it may turn up here.

**Tulare County:** 2 June to 2 October.

**Distribution:** Until recently, the known southern limit of range in the Sierra Nevada was at Freeman Creek Grove where *zerene* is common. On August 27, 2005 this species was first collected west of Sherman Pass at Alder Creek at 6,800' with other individuals observed west of Sherman Pass 6,000' to 9,000' by the author. These records demonstrate that *zerene* has moved its range even further south, colonizing a region burned by a major forest fire in 2002. Also taken sparingly in the National Parks (Cedar Grove, General Sherman Tree, Huckleberry Meadows, east of Buena Vista Peak). Some individuals taken along Stony Creek (August 2, 1993) are very large. A single female was collected NE of Black Rock Ranger Station on the Kern Plateau on September 21, 2002 by the author, a range extension to the southeast.

**CALLIPPE FRITILLARY** (Boisduval).

**137a. MACARIA FRITILLARY** *Speyeria callippe macaria* (W.H. Edwards).

**Taxonomic note:** The TL is Havilah, Kern County, California (Miller & Brown, 1981).

**Kern County:** 13 May to 3 August. **Tulare County:** 13 May to 8 August.

**Distribution:** Frazier Park-Mt. Pinos region eastward through Tehachapi and Piute Mountains. Also is common in the southern Sierra Nevadas around Johnsondale and in Sherman Pass region 3,700-8,500'. A stray was taken on Baker Ridge in the Greenhorn Mountains among several *laurina*. Silvered *macaria* occurs at the north end of that range. Tulare County populations are somewhat more reddish-orange above

and are always silvered. This subspecies is less common now than it was 40 years ago. Kern County *macaria* populations are usually silvered but unsilvered examples are frequent.

**137b. UNSILVERED MACARIA FRITILLARY** *Speyeria callippe laurina* (W. G. Wright).

**Taxonomic note:** The TL is Greenhorn Mountains, Kern County, California (Miller & Brown, 1981). This subspecies differs from *macaria* by having smaller black maculation above and a higher percentage of the adults are unsilvered below. It has been stated in much of the published literature that *laurina* is part of an intergrade area between *macaria* and unsilvered *inornata* (now called *rupestris*, J. Emmel, T. Emmel & Mattoon, 1998b) but in actuality *laurina* is replaced to the north by the Tulare County phenotype of *macaria* which so far as known is always silvered (Davenport, 1998a).

**Kern County:** 14 May to 7 August. **Tulare County:** 14 May to 5 August.

**Distribution.** Most of the Greenhorn Mountains. A population on Breckenridge Mountain may be this subspecies or a blend zone with *macaria*.

**137c. PLAIN FRITILLARY** *Speyeria callippe rupestris* Behr.

**Taxonomic note:** Long known as subspecies *inornata* (W. H. Edwards).

**Kern County:** Not in county. **Tulare County:** 15 June to 10 July.

**Distribution:** Badger-Eshom Road and lower foothill woodland on western slopes bordering Kings Canyon-Sequoia National Parks. Mineral King Road populations may be intermediate to *macaria*. A *callippe* taken at high elevation (7,600') west of Big Meadow near Kings Canyon National Park on June 28, 2003 by the author had silvered spots. Ordinarily, this subspecies is ALWAYS unsilvered. It is possible that there is an unknown high elevation silvered subspecies of *callippe* in the Sierra Nevada, a similar record exists of a silvered *callippe* at high elevation in Fresno County.

**137d. COMSTOCK'S FRITILLARY** *Speyeria callippe comstocki* (Gunder).

**Kern County:** 16 May to 4 June. **Tulare County:** Not in county.

**Distribution:** There are two records from the Temblor Range west of McKittrick along Hwy. 58 by Richard P. Meyer and Ken Davenport in 1987. These were either a rare "resident" or stray from mountains further west.

**138a. GREAT BASIN FRITILLARY** or **EGLEIS FRITILLARY** *Speyeria egleis egleis* (Behr).

**Kern County:** 25 June to 7 August. **Tulare County:** 2 June to 1 October.

**Distribution:** Common in National Parks and higher forested areas of Sierra Nevada south through the Kern Plateau. Flies on open peaks on Baker and Tobias Peaks in the Greenhorns, Bald Mountain and Owens Peak. Barely reaches Kern County in the northern Greenhorns and south end of the Kern Plateau (including Owens Peak and Pine Flat). Once extremely rare in the Greenhorns, this fritillary had become very abundant on Sunday Peak north (common there July 31, 1995, Ken Davenport (1998a)) following a major forest fire in 1990. It has since become scarce or again disappeared there as the habitat has regrown.

**138b. TEHACHAPI FRITILLARY** *Speyeria egleis tehachapina* (J. A. Comstock).

**Taxonomic note:** The TL is Tehachapi Mountains, Kern County, California (Miller & Brown, 1981).

**Kern County:** 27 June to 4 August. **Tulare County:** Not in county.

**Distribution:** Very scarce or extirpated in the Piute Mountains and Tehachapi Mountains. It is or was limited to the highest forested ridges in those mountains. Two worn males were collected by the author on Tehachapi Mountain summit 7994' on August 1, 1998. The drying out of the Piutes and Tehachapi Mountains has adversely effected populations of this butterfly, evident by habitat change. Extensive search by Jack Levy on Tehachapi and Double Mountains since 1998 failed to turn up additional *tehachapina*.

**139. UNSILVERED FRITILLARY** *Speyeria adiaete atossa* (W. H. Edwards).

**Taxonomic note:** The TL is Tehachapi, Kern County, California (Miller & Brown, 1981).

**Kern County:** (Extreme 25 April). 30 May to 6 September. **Tulare County:** No records.

**Distribution:** Likely extinct, no collecting records since 1959. Formerly this butterfly was taken in Tejon Mountains, Mt. Pinos, Tehachapi and Piute Mountains (?) and in adjacent areas of other more coastal counties. Possible explanations for the reason this butterfly has disappeared include long term drought and

drying out of the habitat, fire suppression (fire necessary to keep violet host from being eliminated by plant succession) and introduction of non-native plants to the region which changed the habitat.

There are some interesting comments in L. P. Grey's notes provided to the author by John F. Emmel. The last time *atossa* was apparently seen was by Lloyd Martin at the summit of Mt. Pinos in 1960 per communication dated 1 August 1962. In those same notes, Lloyd Martin states "in 1934 Munroe Walton of Glendale and I took several females when collecting *tehachapina*...not common...approx. 7,600' ft on the saddle and sloping ground between Double Mountain, higher altitude and later in the season here than at the old Lebec collecting grounds. Hillside with small Mt. shrubs and grasses."

Also in letter dated 1 August 1962 sent by L. M. Martin to L. P. Grey, "In the first part of September 1931, Mr. Chris Henne and I collected over 70 females, no males. Mostly very poor and liberated. Taken right at Lebec, elev. app. 4800 ft. very few *atossa* ever seen here since then." Some of us have not given up hope that *atossa* may yet survive on some isolated mountain somewhere.

**140. GREENHORN HYDASPE FRITILLARY** *Speyeria hydaspae viridicornis* (J. A. Comstock).

**Taxonomic note:** The TL is Greenhorn Mountains, California (Miller & Brown, 1981). Previously, I considered both nominotypical *hydaspae* (TL restricted to Gold Lake, Sierra County, California, J. Emmel, T. Emmel & Mattoon, 1998a) and *viridicornis* to range into the region, however, nominotypical *hydaspae* differs greatly from populations in this region. So while populations in Tulare County vary somewhat, it seems best to treat all of the Kern and Tulare County populations as *viridicornis*.

**Kern County:** 2 June to 7 August. **Tulare County:** 26 May to 3 September.

**Distribution:** Greenhorn Mountains from Shirley Meadows and top of the ski slope (the classic localities) north along Greenhorn Crest to Portuguese Pass, Balch Park, Quaking Aspen, Camp Nelson and northward into Sequoia and Kings Canyon National Parks and the Yosemite region (Davenport 1998a). Often very abundant where found. Adults are easily observed at flowers.

**141. MORMON FRITILLARY** *Speyeria mormonia mormonia* (Boisduval).

**Taxonomic note:** Sierra Nevada populations formerly were known as subspecies *arge* (Strecker) (TL: Monache Meadows, Tulare County, California (Miller & Brown, 1981). That name is now considered a synonym of *mormonia*.

**Kern County:** No records. **Tulare County:** 27 June to 1 October.

**Distribution:** High elevation meadows of Sierra Nevada from National Parks south through Quaking Aspen, Sherman Pass Rd. (mostly east of Pass), Poison Meadow and Big Meadow on Kern Plateau. This butterfly is also common at Powell and Monache Meadows region north of Kennedy Meadows. No records from Greenhorns.

**142. WESTERN MEADOW FRITILLARY** or **PACIFIC FRITILLARY** *Boloria epithore sierra* (E. Perkins).

**Kern County:** 10 June to 15 July. **Tulare County:** 26 May to 7 August.

**Distribution:** Local but often common in moist meadows inside the National Parks, Stony Creek, Greenhorn Mountains south to lower slopes (=7,000') of Sunday Peak and Tiger Flat (the southern extremity of the range), Quaking Aspen, Balch Park. No records from Kern Plateau. This species is much more common and widespread in the Greenhorn Mountains since the 1990 forest fire.

**143. MONACHE ARACHNE CHECKERSPOT** *Poladryas arachne monache* (J. A. Comstock).

**Taxonomic note:** The TL is Monache Meadows, Tulare County, California (Miller & Brown, 1981).

**Kern County:** No records but possible in Scodies, Piutes or on Owens Peak.

**Tulare County:** 8 June to 7 August.

**Distribution:** Monache Meadows south to Pine Mountain, Kennedy Meadows region, Spring (turnout and small creek 5 to 7 mi. south of Kennedy Meadows, hilltops south to Chimney Peak region. This butterfly was formerly believed endemic to the southern Sierra Nevada as listed above. Very local on penstemon hostplant, sometimes common where found. Recently this butterfly was discovered in the Coso Mountains of Inyo County by Gordon Pratt. Shields (1996) states this is the most limited subspecies of *arachne*, and that it was limited to a dozen or so specific collecting localities. One of the most highly looked for butterflies in the state but few are those who have actually found it. Some of the colony sites were badly

burned in the recent major forest fire (2000) and this species has been extremely scarce or absent at localities known for it since.

Adults favor hilltops and ridges but also occur with the host on slopes below a hilltop. I have also seen adults at wet spots along small streams. Abundant rattlesnakes in the chaparral covered habitat make this a hazardous butterfly to look for.

**144a LEANIRA CHECKERSPOT** *Chlosyne leanira leanira* (C. Felder & R. Felder).

**Kern County:** True *leanira* (subspecies) not in the county. Kern County populations are a complex blend zone of *leanira*, *wrighti* and *alma* as noted by many reporting records and several authors (see references under *C. leanira wrighti* below. Smith & Brock (1988) stated this situation in their revision and also commented "The name *daviesi* is best assigned as a synonym of *T. l. leanira* unless further field work establishes that populations from the higher elevations of the Sierra Nevada Mountains are representatives of a legitimate taxon." **Tulare County:** 6 May to 1 July.

**Distribution:** Reported records are all from the National Parks region. Crystal Cave (July, 1943 by T. and H. Blevins), "Kings Canyon"(Peter Jump) and road to Mineral King (May 6, 1979 by John H. Masters). Kern River populations from Tulare County to the south are referable to the subspecies *wrighti*.

**144b. WRIGHT'S LEANIRA CHECKERSPOT** *Chlosyne leanira wrighti* W. H. Edwards.

**Taxonomic note:** Upper Kern Canyon populations in Tulare County show blending with nominotypical *leanira*. In the Lake Isabella region and surrounding mountains of the Kern River Valley, one finds a complex blend zone of *leanira*, *wrighti* and *alma* (Smith & Brock, 1988; Davenport, 1983 and Austin & Smith, 1998) About 70% of the individuals are *wrighti*, 25% resemble "*daviesi* (Wind)" or *leanira* and the remaining 5% resemble the brick red desert subspecies *alma*, formerly known as *cerrita* (Wright) in the region. The orange form ranges as far north as Johnsondale in Tulare County.

**Kern County:** 24 April to 19 June. **Tulare County:** (Extreme 22 March) 7 April to 18 June.

**Distribution:** The species occurs very locally but sometimes commonly where found near the larval hostplant, paintbrush. Populations found south of Johnsondale, Sherman Pass Road to 4900', upper Kern River Canyon, Kernville, east side of Greenhorns, south end of Kern Plateau north of Weldon, Bodfish, Piute Mountains and Havilah. A single female *leanira* from Butterbrecht Peak is *wrighti*, not *alma* as would be expected.

**144c. ALMA CHECKERSPOT** *Chlosyne leanira alma* (Strecker).

**Kern County:** 28 March to 21 May. **Tulare County:** 26 May to 19 June.

**Distribution:** East side of Walker Pass, Red Rock Canyon, El Paso Mountains, east of Owens Peak, desert slopes of Tehachapi Mountains (rare). The only known records from Tulare County were both taken in the Kennedy Meadows region. Unless the Mojave Desert receives good winter and spring rainfall, desert butterflies like *alma* are likely to forego emergence and fly in years with more favorable rainfall and larval host growth.

**145. CALIFORNIA PATCH** *Chlosyne californica* (W. G. Wright).

**Kern County:** The only regional record was a "sight record" of a stray on Tom's Hill on 13 April 1985 by Richard P. Meyer. **Tulare County:** No records.

**Distribution:** Found in the Colorado Desert and desert mountain ranges of the eastern Mojave Desert.

**146a. NORTHERN CHECKERSPOT** *Chlosyne palla* near *palla* (Boisduval).

**Taxonomic note:** Emmel, Emmel & Mattoon (1998d) assigned the populations below to their newly described subspecies *australomontana*. My assessment of them being near *palla* is based on Sierra Nevada southern west slope population males being much less heavily patterned. Females of the region are variable with many pattern and color forms. Many females resemble *Chlosyne gabbii* on the upperside and are likely responsible for reports of that species in Kern and Tulare Counties. Males and females in the Tehachapi-Frazier Park area which I previously placed with *palla* are more heavily patterned and might be better placed with *australomontana* or treated as a separate segregate.

**Kern County:** 13 April to 6 July. **Tulare County:** 7 April to 10 July. **Distribution:** Lower west slope of Sierra Nevada including Johnsondale, west side of Sherman Pass, upper Kern Canyon, Greenhorns and the

west slope of the Piute Mountains. Populations from lower elevations of the Sequoia National Park region are close to typical.

**146b. SOUTHERN MOUNTAINS NORTHERN CHECKERSPOT** *Chlosyne palla australomontana* J. Emmel, T. Emmel & Mattoon.

**Taxonomic note:** The TL is Kennedy Meadows Rd., 16-20 mi. W of Hwy. 395 (J. Emmel, T. Emmel & Mattoon, 1998d). See taxonomic comments under *Chlosyne palla* near *palla*.

**Kern County:** 13 April to 20 June. **Tulare County:** 7 May to 22 July.

**Distribution:** I apply the name *australomontana* to populations from Bald Mountain Lookout 9400' and the Kennedy Meadows region, upper Nine Mile Canyon in Tulare and Inyo Counties, Lamont Peak area, Walker Pass south to Sageland, Kelso Valley and the road summit just south of Sageland and the adjacent eastern slope of the Piutes. Material of this subspecies from the Kelso Valley region is often very lightly patterned, resembling *C. acastus neumoegei* which tends to fly a month earlier in some of the same washes. The flights of the two species are usually separated by just a few days but both have been found together on the same day on a few occasions. Populations from the Tehachapi Mountains and Frazier Park (and northern Los Angeles County on the Old Ridge Route) may or may not fit here.

**Northern Checkerspot** *Chlosyne palla*: Tehachapi Mountains segregate.

Collected material from the Tehachapi Mountains (Hart Flat and Tehachapi Mountain Park-Water Canyon area) and Frazier Park area is very heavily patterned and there appears to be some gene flow with *Chlosyne gabbii*. There may also be past gene flow with the Bay Area subspecies *eremita* (W. G. Wright).

**146c. HIGH SIERRA NORTHERN CHECKERSPOT** *Chlosyne palla altasierra* J. Emmel, T. Emmel & Mattoon.

**Taxonomic note:** Formerly known as *C. palla whitneyi*, a name properly applied to what was formerly known as *C. damoetas malcolmi* (J. Emmel, T. Emmel & Mattoon, 1998b, d). High elevation populations of *palla* from Sequoia and Kings Canyon National Parks and the adjacent high country are provisionally placed here.

**Kern County:** No records. **Tulare County:** 11 June to 30 July.

**Distribution:** Sequoia and Kings Canyon National Parks and vicinity: Kings Canyon Overlook, granite domes around Big Meadow (outside KCNP), Dorst Camp (SNP), Stony Creek (SNM), Halstead Meadow (SNP), Tokopah Falls Trail and Mineral King region (SNP) above 7,000'.

**147. GABB'S CHECKERSPOT** *Chlosyne gabbii gabbii* (Behr).

**Taxonomic note:** Some believe that this species may be conspecific with *C. palla*. There at least appears to be substantial gene flow between the two species in the Frazier Park-Frazier Mountain area in Kern and Ventura counties. Females of *palla* in the area often closely resemble *gabbii* in the patterning above and the band coloration on the HW below can be very close to "pearly white". Male *palla* in these populations have more extensive networks of black lines on the upper side but the bands on the HW below are more tan as in *palla*.

**Kern County:** 2 June to 28 June.

**Tulare County:** No valid records.

**Distribution:** The species has been reported from the Frazier Park area very rarely. I have at least three males from Kern County which appear to be this species: Mil Potrero Rd. near base of Mt. Pinos on downgrade to Pine Mountain Club, June 28, 2006 and Frazier Park along Cuddy Creek visiting yerba santa flowers with the more common *C. palla* there June 12, 2007 and June 2, 2012.

**148a. ACASTUS or SAGEBRUSH CHECKERSPOT** *Chlosyne acastus acastus* (W. H. Edwards).

**Kern County:** No records, subspecies *neumoegei* occurs.

**Tulare County:** There is one record of a female stray on the west slope of the Sierra Nevada taken 3 miles east of the Generals Hwy. on a granite dome near Big Meadow (near KCNP) June 23, 1997 (KD).

**Distribution:** Not in the region. Occurs in pinyon pine and chaparral on the east side of the Sierra Nevada in the Bishop Creek drainage in Inyo County up to 8,400' or more.

**148b. NEUMOEGEN'S CHECKERSPOT** *Chlosyne acastus neumoeegeni* (Skinner).

**Kern County:** 22 February to 9 May. Fall records: 4 October to 28 October.

**Tulare County:** No records.

**Distribution:** East side of Walker Pass (rare), Red Rock Canyon, Cache Creek crossing of Hwy. 58 near Mojave, south end of Sierra Nevada near Cantil, 11.5 to 17 miles south of Weldon, Sageland/Kelso Valley region with some records on lower east slope of Piutes west of Sageland in Pinyon Pine habitat.

**149. WHITNEY'S CHECKERSPOT** *Chlosyne whitneyi whitneyi* (Behr).

**Taxonomic note:** Formerly known as **MALCOLM'S CHECKERSPOT** (*C. damoetas malcolmi* (J. A. Comstock)). The name *whitneyi* was formerly applied to a subspecies of *C. palla* now named *altasierra* (J. Emmel, T. Emmel & Mattoon 1998b, d). The name **ROCKSLIDE CHECKERSPOT** has also been used, but has also been used for *C. damoetas* (Skinner) of the Rocky Mountains by those who believed the two are conspecific.

**Kern County:** No records and no suitable habitat.

**Tulare County:** Two specific records: Lower Vidette Lake on July 27, 1991 by John and Tom Emmel; White Chief Trail above Mineral King 9600-9800' on July 23, 1992 by Ken Davenport (under permit from NPS).

**Distribution:** Should occur commonly mid-July to early August in arctic-alpine zone of High Sierra Nevada in National Parks. Such locations are only accessible by trails far from road travel.

**150. HOFFMANN'S CHECKERSPOT** *Chlosyne hoffmanni hoffmanni* (Behr).

**Kern County:** No records. **Tulare County:** 18 July to 8 August.

**Distribution:** Sequoia and Kings Canyon National Parks: Alta Peak (July, 1943 by Tom Blevins), Crescent Meadow (August 8, 1944 in Sequoia and Grants Park (=Kings Canyon NP) July 18, 1929. Vouchers are in the Santa Barbara Museum of Natural History and at Ash Mountain Museum in Sequoia National Park. The collectors of the Santa Barbara Museum specimens are unknown. I encountered none in my own collecting in the parks but the species should still be there.

**151. TEXAN CRESCENT** *Anthanassa texana texana* (W. H. Edwards).

**Kern County:** 24 May 1992 collected at Sageland, N. of Kelso Valley by John Pasko.

**Tulare County:** No records

**Distribution:** A rare stray from Arizona or Mexico.

**152. FIELD CRESCENT** *Phyciodes pulchella* (Boisduval). Kern/Tulare County segregate.

**Taxonomic note:** Also known previously as *P. pratensis* (Behr) and *P. campestris* (Behr). Populations in the region are extremely variable and may resemble many of the described subspecies for California. These include nominotypical *pulchella*, *deltarufa* Scott and *montana* (Behr). Most individuals tend towards *montana* but individuals that resemble nominotypical *pulchella* are not unusual (30-35% of the population). All such "forms" can occur in just about any colony area in the two counties. Barriers between San Joaquin Valley *pulchella* break down with higher elevation Sierra Nevada *montana*. For that reason, I now believe it is unwise to assign names for material from the southern Sierra Nevada. John F. Emmel recently examined a large series of this species from the region and advised it best to call them Kern-Tulare County segregate. It is possible that true *montana* (Behr) occurs at high elevations in the northern portion of the National Parks but many I sampled in the Mineral King Basin and region at high elevation at the south end of Sequoia National Park were very blackish instead of orange.

**Kern County:** 11 April to 26 September. **Tulare County:** 12 April to 30 October. July and August for *montana* populations.

**Distribution:** Havilah, Greenhorn Crest and east slope of Greenhorn Mountains on Sawmill Road, Miracle Hot Springs (=Hobo Camp) in lower Kern Canyon, Weldon, Kernville, upper Kern Canyon and up the Sherman Pass Road to the Kern Plateau. From dry side canyons of Nine Mile Canyon (Tulare-Inyo County line), *pulchella* ranges NW through Quaking Aspen to Sequoia and Kings Canyon National Parks.

**153. MYLITTA CRESCENT** *Phyciodes mylitta mylitta* (W. H. Edwards).

**Kern County:** 15 March to 20 November. **Tulare County:** 28 February to 19 November.

**Distribution:** General in mountains; occasional in San Joaquin Valley and even in Mojave Desert plant community ravines and washes in the Sageland-Kelso Valley area in the arid southern Sierra Nevada. This butterfly favors riparian areas along streams, riparian woodlands and meadows in both dry and wet habitats.

**154a. CHALCEDON CHECKERSPOT** *Euphydryas chalcedona chalcedona* (Doubleday).

**Taxonomic note:** Often given the common name “Variable Checkerspot” based on the concept *anicia* and *colon* are conspecific with *chalcedona*. Most authorities now recognize at least *chalcedona* and *anicia* as separate or putative species. The TL for nominotypical *chalcedona* was not stated but was probably from the vicinity of San Francisco (Miller & Brown, 1981).

**Kern County:** 23 April to 25 July. **Tulare County:** Similar looking populations are treated on the west slope of the Sierra Nevada as being either a population of either the nominotypical *chalcedona* subspecies *sinecat* or intergrade populations with *olancha*.

**Distribution:** Most mountain areas with footbill-woodland or chaparral habitat. Nominotypical *chalcedona* may be limited in the region to parts of the Tehachapi Mountains, Frazier Park (the population there has larger yellow spotting) and the Coast Ranges. Populations from the west slope of the Sierra Nevada in the Tule River and Kaweah River drainages in northern Tulare County are very black *chalcedona*, but may have more orange-red on the forewing than *chalcedona* from the Coast Ranges. Some populations from Tehachapi's and southern Sierra Nevada has larger yellow spot development and may warrant a name or be nearer *olancha*.

**154b. OLANCHA CHECKERSPOT** *Euphydryas chalcedona olancha* (W. G. Wright).

**Taxonomic note:** The TL is Olancha Peak, Tulare and Inyo Counties, California (Miller & Brown, 1981).

**Kern County:** (Extreme: 3 April) 25 April to 27 May. **Tulare County:** 7 April to 30 July.

**Distribution:** Populations from Pine Mountain- Kennedy Meadows region, Lamont Peak and Sageland-Kelso Valley region are similar to those from Olancha Peak but differ from populations often called *olancha* collected at Big Pine Creek, Bishop Creek and Swall Meadow in western Inyo and Mono Counties. Those may warrant description as an undescribed subspecies. Some very reddish individuals taken around Kennedy Meadows resemble *sierra*, *irelandi* or *E. anicia wheeleri* (Hy. Edwards). It seems that populations from the upper Kern River drainage and the Kern Plateau are all nearer *olancha* than nominotypical *chalcedona* as they have been determined.

**154c. CHALCEDON CHECKERSPOT** *Euphydryas chalcedona sinecat* J. Scott.

**Taxonomic note:** James Scott (2008b) named the lower elevation blackish populations in much of the Sierra Nevada *sinecat* based on larval differences, but adults differ from nominate *chalcedona* by having more postmedian orange on the FW and the outer part of the upper HW tends to be darker. Pelham (2008) considered *sinecat* a synonym of nominotypical *chalcedona*.

**Kern County:** Not in county. **Tulare County:** 30 March to 9 July.

**Distribution:** The name *sinecat* does not apply to any of the Kern County *chalcedona* populations and applies best to populations in the foothills of Tulare County west of Sequoia and Kings Canyon National Parks. Populations in the foothills east of Porterville are blackish and do not match either Coast Range *chalcedona* or other *chalcedona* subspecies well.

**154d. IRELAND'S CHECKERSPOT** *Euphydryas chalcedona irelandi* Gunder.

**Taxonomic note:** The TL is Alta Peak, Sequoia National Park, Tulare County, California (Miller & Brown, 1981). I follow John Emmel's placement of *irelandi* with *chalcedona* rather than with *Euphydryas anicia* (Doubleday). There is some support among those studying the genus that *sierra* and *irelandi* may warrant species level recognition. This checkerspot is highly sought but rarely found by lepidopterists.

**Kern County:** A checkerspot seen on an unnamed peak at the south end of the Kern Plateau on June 9, 1994 may have been this butterfly. *Penstemon newberryi* Gray, the host plant was growing on that north facing slope. **Tulare County:** 23 June to 25 July.

**Distribution:** Junction of Woodward Creek and Stony Creek near Stony Creek Camp (first found there by James R. Mori and reported as *E. chalcadona sierra* (Wright) in the 1975 annual season summary). Found somewhat commonly on the granite domes west of Big Meadow near Kings Canyon NP. Very possible on Kern Plateau as noted above. Not found on Baker Ridge in the Greenhorns though host plant abundant is there. There are a few records from Sequoia National Park on Alta Peak and the Mineral King area where *irelandi* may reach its southern limit of distribution.

**155a. EDITH'S CHECKERSPOT** *Euphydryas editha* (Boisduval). Southern Sierra Nevada, lower elevation population.

**Taxonomic note:** The southern Sierra Nevada population was formerly known as nominotypical *editha*, a name now applied to what was known as the **BAY REGION CHECKERSPOT** (*E. editha bayensis* (Sternitzky)) (J. Emmel, T. Emmel & Mattoon 1998a). True *editha* does occur just west of the Kern County line near Cholame, San Luis Obispo County and may occur in Kern County in the Temblor Range. It flies in late March to early April. Contrary to what one might expect, such “near *bayensis*” populations can be locally abundant in Santa Barbara and San Luis Obispo Counties. The area where one such population occurs near Cholame is heavily grazed by cattle, but the butterfly seems to do well. Conservation authorities and scientists studying the endangered subspecies *bayensis* limit the application of that name to Bay Area populations, fortunate for homeowners in coastal San Luis Obispo County.

**Kern County:** 24 March to 3 June. **Tulare County:** 30 March to 12 June.

**Distribution:** Sierra Nevada: south of Johnsondale, upper Kern River Canyon south to Roads End and lower slopes west side of Sherman Pass, Walker Pass south to Bird Spring Pass Microwave Hill. Kern Canyon records SW of Lake Isabella are also likely this entity.

**155b. RUDDY CHECKERSPOT** *Euphydryas editha rubicunda* (Hy. Edwards).

**Kern County:** 8 May to 29 May. **Tulare County:** 5 April to 15 June.

**Distribution:** Kern County: Cedar and Alder Creeks drainage (Greenhorn Mountains). Tulare County: Mineral King Road, Buckeye Flat, Badger. Some *editha* taken west of Sherman Pass at mid-elevations may be *rubicunda*. This is generally a very local and uncommon butterfly in this region, but quite common in the Yosemite sector. This checkerspot is most common in this region near Sequoia National Park off the Mineral King Road just below the park boundaries.

**155c. CLOUD-BORN CHECKERSPOT** *Euphydryas editha nubigena* (Behr).

**Kern County:** Not in region.

**Tulare County:** Late June to mid-August in Arctic-alpine zone. Only records 2 July to 28 July.

**Distribution:** True *nubigena* occurs commonly on the higher peaks of Kings Canyon and Sequoia National Parks. There are specimens taken along the John Muir (=Pacific Coast) Trail and Shepherd Pass Trail 11,000-12,200' from the headwaters of Tyndall Creek in the McGuire Center and photographs from the High Sierra back country by Elise Larsen. However, an undescribed *editha* similar to *nubigena* but larger in size occurs in the Canadian life zone into the Arctic-alpine zone from southern Kings Canyon National Park south to Mineral King in Sequoia National Park. Problems with the application of names combined with little collecting in this region leave our knowledge of ranges and the undescribed *editha*'s status unclear. Some might treat the larger *editha* as a variant of *nubigena*.

**155d. EDITH'S CHECKERSPOT** *Euphydryas editha* (Boisduval): high elevation populations often reported as *nubigena*.

**Taxonomic note:** John F. Emmel has referred to this population as an undescribed subspecies. It tends to be larger than *nubigena*. Andrew Warren (pers. comm. and from photos identified on Butterflies of America website) believes these populations may refer to subspecies *aurilacus* Gunder, TL: Gold Lake, Sierra County (Pelham, 2008). This issue remains unresolved at this time.

**Kern County:** No records. **Tulare County:** 31 May to 23 July (undoubtedly flies to late August).

**Distribution:** This is the high elevation representative of the species common in the Sequoia and Kings Canyon National Parks and Sequoia National Monument (including Stony Creek) connecting the two parks. The high elevation populations on serpentine rocky outcrops west of Sherman Pass and on Bald Mountain are tentatively placed here. Flies with *E. chalcadona irelandi* on the granite domes west of Big Meadow

(near Kings Canyon National Park) and in the Mineral King area in Sequoia National Park. Occasionally, it can be difficult to separate this *editha* from *E. chalcedona irelandi* where both occur together. Generally, *editha* is much smaller than *irelandi* with a more well rounded wing shape. Abdominal spotting also differs between the two species.

**155e. EDITH'S CHECKERSPOT** *Euphydryas editha* near *augustinus* (W. H. Edwards). Kern Plateau and Piute Mountains high elevation meadows.

**Taxonomic note:** This entity is limited to high elevation meadows on the Kern Plateau and to high elevation serpentine outcrops at higher elevations in the Piute Mountains. Studies by Michael Singer (pers. comm.) show that the Piute Mountains populations are different from the *editha* at Walker Pass and are closely related to the *augustinus* from the San Bernardino Mountains. It does not include the preceding entity which is smaller in size.

**Kern County:** 24 May to 20 July. **Tulare County:** 21 May to 14 July.

**Distribution:** Occurs commonly at Big Meadow on the Kern Plateau and in many eastern high elevation mountains north of Kennedy Meadows in Tulare County. Recently found near Pine Flat on the Kern Plateau. Also occurs on serpentine outcrops in Piute Mountains of Kern County.

**156. SATYR ANGLEWING** *Polygonia satyrus* (W. H. Edwards).

**Taxonomic note:** The name *neomarsyas* dos Passos is sometimes applied to California populations.

**Kern County:** 19 January to 20 November. **Tulare County:** 26 January to 15 September.

**Distribution:** Sometimes common along mountain streams and in small sunny openings where nettle hostplant grows. Found near Cabin Cove and Buckeye Flat in Sequoia National Park. Most common Mt. Pinos, Tehachapi Mountain Park, Poso and Cedar Creek areas in Greenhorn Mountains and Methuselah Camp meadow near Balch Park. Occasional populations are found along streams and rivers in the southern San Joaquin Valley.

**157. GREEN COMMA or RUSTIC ANGLEWING** *Polygonia faunus rusticus* (W. H. Edwards).

**Kern County:** No records, but the azalea hostplant does occur in Greenhorn Mountains in deep canyons draining Black Mountain. The butterfly may eventually be found there.

**Tulare County:** 30 May to 16 October. Possibly double-brooded, overwintering adults appear as the winter snows melt and are rarely seen or collected in July or August. Overwintering adults are usually worn when lepidopterists arrive in the localities where they occur.

**Distribution:** First taken in region by John and Tom Emmel on May 30, 1955 at Quaking Aspen. First found in Stony Creek region along creek adjacent to and below campground by the author June 26, 1987. The Green Comma is usually uncommon but reliable and sometimes common at Stony Creek in June and September. This rare butterfly is far more common in the Yosemite and Sequoia regions than is generally believed. It is usually missed by collectors and butterfly watchers who visit its favored localities in the Canadian life zone in the summer months of July and August, when few surviving adults remain.

**158. ZEPHYR ANGLEWING or HOARY COMMA** *Polygonia gracilis zephyrus* (W. H. Edwards).

**Taxonomic notes:** Long considered a full species, *zephyrus* is now considered by many to be a subspecies of *Polygonia gracilis* (Grote & Robinson). Some very dark individuals found along cool streams at high elevation in the Sierra Nevada (Sequoia-Kings Canyon National Parks and Sherman Pass areas in this region) can resemble *P. oreas* (W. H. Edwards). Some believe a second unrecognized cryptic species may be included in what is recognized as *zephyrus*. Such dark forms are likely the basis for "*Polygonia oreas*" records in the Yosemite and Sequoia regions.

**Kern County:** 15 February to 7 August; (1 September). **Tulare County:** 1 February to 30 October.

**Distribution:** In Kern County *zephyrus* flies in the Greenhorn and Piute Mountains and Mt. Pinos high elevation forests. In Tulare County it is common and widespread throughout the higher elevation Sierra Nevada forests and streambeds. An unusual stray was collected patrolling a desert wash 1 mile east of Sageland near Kelso Valley (Kern Co.) on April 1, 2000. This butterfly was common west of Sherman Pass above 7,600' on roadside flowers in September and October, 2005. In early spring, adults often turn up at elevations below 3,000'. They may overwinter at lower elevations than their normal habitats above 6,000' elevation.

**159. CALIFORNIA TORTOISESHELL** *Nymphalis californica californica* (Boisduval).

**Kern County:** 1 February to 24 July; 1 October to 10 November. **Tulare County:** 9 January to 24 August; 1 October to 14 November. Adults are most active from March to early June. Usually few adults fly in the fall.

**Distribution:** Potentially anywhere in the mountains with occasional records in the southern San Joaquin Valley. Cyclic: sometimes extremely abundant, some years rarely observed. Seen commonly crossing desert terrain in the area north of Kelso Valley 11.5 miles south of Weldon, Kern County in early February, 2003 and 24 March 2006. Those adults were seen commonly along small streams and canyons, apparently crossing from the dry eastern ridges of the Sierra Nevada west to the Piute Mountains. The 2003 movement was noted for a two week period. The two ranges are separated by no more than 5-7 air miles.

**160. MOURNING CLOAK** *Nymphalis antiopa* (Linnaeus).

**Taxonomic note:** No trinomial is applied because of doubts that California populations are much different than those from the TL: Sweden (Miller & Brown, 1993).

**Kern County:** All months but there are very few fall records. Adults normally appear in mid to late January and fly to mid-July. **Tulare County:** 19 January to 1 October.

**Distribution:** Cities, mountain streams and wet meadows with willows in general, including Kern River Valley. This butterfly is occasionally seen even in the Mojave Desert.

**161. MILBERT'S TORTOISESHELL** *Aglais milberti subpallida* (Cockerell).

**Kern County:** 1 February to 28 July.

**Tulare County:** 19 January to 7 August (several found 1 September once).

**Distribution:** Sequoia and Kings Canyon National Parks, Bald Mountain Lookout, Sherman Pass, Big Meadow (Kern Plateau), Johnsondale (scarce), Greenhorn, Piute and Tehachapi Mountains, rare on Mt. Pinos. A transient colony occurred along Kern River at Hart Park (Bakersfield) late March-early April, 1972. This butterfly is occasionally common in the Kern River Valley. Usually considered a rare species, *milberti* tends to be relatively common in the region, often in wet meadows or riparian canyons with the nettle host.

**162. AMERICAN PAINTED LADY** *Vanessa virginiensis* (Drury).

**Kern County:** 12 February to 26 November. **Tulare County:** 2 April to 5 November.

**Distribution:** Rare in southern San Joaquin Valley, more common in mountains, especially Greenhorn Crest in the Tiger Flat area late in the summer. Also common along the Sherman Pass Rd. west of the Pass from late August into early October.

**163. PAINTED LADY** *Vanessa cardui* (Linnaeus).

**Kern County:** All months. **Tulare County:** 28 February to 14 November.

**Distribution:** Found in entire region, sometimes overwinters in canyons at south end of Sierra Nevada on Mojave Deserts edge, in the Cinco-Cantil region. Sometimes migrates through the region in huge numbers. In the fall of 2005, *cardui* spent two months (September and October) commonly in the Sherman Pass area above 7000' while the species was far less common at lower elevations.

**164. WEST COAST LADY** *Vanessa annabella* (Field).

**Kern County:** All months. **Tulare County:** 14 February to 19 November.

**Distribution:** Throughout the region below 9,000', especially in city parks and gardens. An exception was in October and November 2005 and in 2012 when the species was abundant west of Sherman Pass 7000' to 9000' visiting fall flying composites.

**165. RED ADMIRAL** *Vanessa atalanta rubria* (Frühstorfer).

**Kern County:** All months. **Tulare County:** 16 January to 19 November.

**Distribution:** Shaded city parks and gardens, orchards, montane streams with nettles. Occasional in desert and Kelso Valley region, "hilltops" in arid southern Sierra Nevada at times.

**166. BUCKEYE BUTTERFLY** *Junonia coenia grisea* Austin & J. Emmel.

**Kern County:** 25 February to 22 November. **Tulare County:** 18 April to 19 November.

**Distribution.** Most of region below 9,000'. The species is well known from lowland localities and valleys, but can also be abundant in drier montane meadows, even at high elevation. The species can become less common following heavy winter freezes.

**167a. LORQUIN'S ADMIRAL** *Limenitis lorquini lorquini* (Boisduval).

**Taxonomic note:** Populations in the southern Sierra Nevada often favor the *powelli* phenotype. Eventually, that name may be applied to southern Sierra Nevada populations.

**Kern County:** 9 April to 30 October. **Tulare County:** 13 April to 9 October.

**Distribution:** Streams and rivers with willows on floor of San Joaquin Valley including Hart Park near Bakersfield, Kern Canyon, Piutes, Kern River Valley and drainage, southern Sierra Nevada north to Sequoia-Kings Canyon National Parks. Individuals taken in the Mt. Pinos (south end of San Joaquin Valley) and Havilah areas (Piute Mountains) show blending with *powelli*. The population north of Chimney Peak Ranger Station south of Kennedy Meadows shows blending to *pallidafacies* Austin & Emmel.

**167b. POWELL'S ADMIRAL** *Limenitis lorquini powelli* (Field).

**Kern County:** 15 May to 20 September. **Tulare County:** Replaced by Sierra Nevada *lorquini*.

**Distribution:** Fairly common Tehachapi Mountain Park and vicinity. *L. lorquini* I have examined from Frazier Park and Lake of the Woods seem to be *powelli*. This subspecies seems to blend with nominate *lorquini* north into the Sierra Nevada as far north as the Yosemite area.

**168. CALIFORNIA SISTER** *Adelpha californica* (Butler).

**Taxonomic note:** This butterfly has long been known as *A. bredowii californica*, but recent research (Andrew Warren (2005) and Prudic, Warren & Llorente-Bousquets, 2008) recognized *californica* as a full species from both *bredowii* Geyer and *eulalia* (Doubleday & Hewitson).

**Kern County:** 12 April to 20 November **Tulare County:** 8 May to 19 November.

**Distribution:** Riparian canyons in foothill oak woodland and mixed coniferous forests, straying into Canadian zone and montane valleys. Absent from San Joaquin Valley and Mojave Desert, except for occasional strays. This species often visits mud at wet spots. In the fall season, adults are also frequently seen visiting rabbitbrush and other yellow composites for nectar.

**169. CALIFORNIA RINGLET** *Coenonympha californica californica* Westwood.

**Taxonomic notes:** I differ from Opler & Warren (2002) by accepting *californica* as a species different from Eurasian *tullia* Müller.

**Kern County:** 25 February to 3 November. **Tulare County:** 28 February to 7 November.

**Distribution:** Occasional but very rare on floor of San Joaquin Valley. The California Ringlet is much more common at Bird Spring Pass and Sageland-Kelso Valley areas in Mojave Desert plant community in the arid southern Sierra Nevada, foothill woodland in montane habitats, regularly occurring up to the Transition Zone to at least 8,000'. It is common in most lower montane habitats. There are some very dark populations (more orange in spring brood than normal *C. californica* in region) on the east side of the Piute Mountains which fly in May. The usual lighter version flies there in the summer.

**170. SOUTHERN SIERRA COMMON WOOD-NYMPH** *Cercyonis pegala australosierra* J. F.

Emmel, T. Emmel & K. Davenport.

**Taxonomic note:** This newly named subspecies (Emmel, Emmel & Davenport, 2008) occurs as a disjunct population in the Greenhorn Mountains in both Kern and Tulare counties. This subspecies is characterized by larger size in comparison to other Californian *C. pegala* populations, very prominent eyespots on the forewings, and a pale grayish-brown aspect ventrally. Males can resemble *ariane* (Boisduval) by having several ocelli on the HW below but many lack ocelli at all. Females usually lack ocelli and may resemble *boopis* (Behr) but differ by having considerable white scaling on the HW outside a prominent mesial band on the HW below. The type locality is Tulare County, north end of Linn's Valley, west-southwest of Posey, ca. 3,250 feet elevation. This butterfly went undiscovered for many years despite heavy collecting in this mountain range since the 1920's until 1997. It is intensely local and often occurs on private land,

overlooked by lepidopterists visiting the more well known and lucrative looking places for butterflies in the Greenhorns.

**Kern County:** 15 July to 10 September. **Tulare County:** 5 July to 10 September.

**Distribution:** Greenhorn Mountains (Glennville-Linn's Valley area), probably other localities in the southern Sierra Nevada in the Kaweah River drainage and Tule River drainages. This is the southernmost locality for the species in the Sierra Nevada and a surprising addition to the southern California fauna. The first capture of *australsierra* was a fresh male collected near Glennville, Kern County, on July 21, 1997, while the author was looking for examples of *Cercyonis sthenele* on the west slope of the Greenhorns. A colony site was located in Tulare County the same year on August 4, 1997. Several females were collected that August but fresh males were not collected until the following July.

#### **GREAT BASIN WOOD-NYMPH**

**171a. SYLVAN SATYR** *Cercyonis sthenele silvestris* (W. H. Edwards).

**Kern County:** Status questionable, possible populations on west slope of Greenhorns may be *silvestris*. Collected material from Tehachapi region may resemble *behrii* or *silvestris* in series. Subspecies *silvestris* differs from *behrii* by having a more "scrawled" and indistinct pattern below. Subspecies *behrii* has a more distinctly banded appearance below and is the widely distributed taxon in southern California (Hawks & J. Emmel, 1998), often incorrectly referred to as "*silvestris*" in southern California in published literature. Subspecies *silvestris* occurs from the Sequoia National Park region (possibly further south on west slope of Greenhorns) northward on the west slope of the Sierra Nevada.

**Tulare County:** 26 May to 12 August (undoubtedly flies into September).

**Distribution:** Extremely abundant in the Badger-Eshom area and meadowlands below Hartland in western foothills of Kings Canyon National Park. This butterfly is either rare or the relative abundance is unknown along Mineral King Road and foothills of Sequoia National Park.

**171b. BEHR'S WOOD-NYMPH** *Cercyonis sthenele behrii* (F. Grinnell).

**Kern County:** 18 May to 18 September. **Tulare County:** 31 May to 6 October.

**Distribution: Tulare County:** Foothills south of Johnsondale, Sherman Pass Rd. to 5000' upper Kern River, Chimney Peak Rd.-Lamont Meadows. **Kern County:** Walker Pass, Bird Spring Pass south through Kelso Valley to Butterbredt Peak, east side of Greenhorns and Breckenridge Mountain, Piute Mountains, Sand Canyon and most if not all of Tehachapi Mountains (but with some blending to *silvestris*), Frazier Park, Lake of the Woods.

**171c. LITTLE WOOD-SATYR** *Cercyonis sthenele paulus* (W. H. Edwards).

**Kern County:** True *paulus* not in the county. There is some blending between *behrii* and *paulus* in the Walker Pass and Bird Spring Pass areas. **Tulare County:** 30 June to 22 September.

**Distribution:** This is the subspecies known to occur on the east slope of the Sierra Nevada from the Kennedy Meadows region northward, blending southward with *behrii* in Nine Mile Canyon area and on the eastern Kern Plateau. Populations of the species just a few miles to the west near Lamont Peak are fairly typical *behrii*.

**172. IVALLDA CHRYXUS ARCTIC** *Oeneis chryxus ivallda* (Mead).

**Kern County:** Not in the county. **Tulare County:** 12 July to 11 September.

**Distribution:** Higher peaks of Sequoia and Kings Canyon National Parks. This arctic is known from Alta Peak, and Mineral King (Timber Gap and Farewell Gap Trails). James R. Mori has a record for Chicken Spring Lake above Cottonwood Pass at 11,400' (July 19, 1973) and there is also a record for Shepherd Pass by S. Johnson. The inaccessibility of the arctic-alpine region (reached only by lengthy trails far from roads) and collecting restrictions inside National Parks explain the few records in Tulare County. This species favors rocky slopes and ridges above timberline in the Arctic-alpine zone.

**173. MONARCH BUTTERFLY** *Danaus plexippus plexippus* (Linnaeus).

**Kern County:** All months. **Tulare County:** 28 February to 19 November.

**Distribution:** Found throughout the region, sometimes overwintering in the San Joaquin Valley and lower foothill canyons in the southern Sierra Nevada and Tehachapi Mountains. Large summer populations can

be found in association with *Asclepias fascicularis* Decaisne in the Lake Isabella-Weldon areas of the Kern River Valley. These can remain very abundant there until at least mid-November. Other milkweed species are utilized in the region's mountains and in the San Joaquin Valley.

**174. STRIATED QUEEN *Danaus gilippus thersippus* (Bates).**

**Taxonomic note:** This subspecies was long known as *strigosus* (Bates) (Austin, 1998).

**Kern County:** 29 March to 13 November. **Tulare County:** 12 May to 1 September.

**Distribution:** Mojave Desert, arid montane canyons in the Tehachapi Mountains, Caliente Canyon, Havilah, Kern River Valley (very common in Lake Isabella-Weldon areas May to mid-November most years) and regularly strays into the southern San Joaquin Valley, establishing transient populations on *Asclepias fascicularis*. This butterfly strays to Kennedy Meadows and Lamont Meadow region on Kern Plateau as far north as Fairview along Kern River and Freeman Creek Grove of Giant Sequoias. One sight record for Coffee Camp east of Springville.

## DOUBTFUL RECORDS

**DREAMY DUSKYWING *Erynnis icelus* (Scudder & Burgess).**

This species was formerly reported from Kern County on the USGS list. I believe any such records are probably misidentifications of *E. brizo* which resembles this species. This species may possibly occur in the southern Sierra Nevada as far south as Tulare County, perhaps at Quaking Aspen and vicinity.

**MEADOW SKIPPER *Ochlodes pratincola* (Boisduval).**

This "species" probably does not exist (J. Emmel, T. Emmel & Mattoon, 1998a). Lightly colored skippers from the Tehachapi region in late May and June are likely misidentified **RURAL SKIPPERS** (*O. agicola*) or **WOODLAND SKIPPERS** (*O. sylvanoides*). John F. Emmel has examined material of this "species" from the region which he identified as *O. sylvanoides*. J. W. Tilden told me this "species" occurred at the Tehachapi Loop and Tehachapi. All such skippers I encountered were determined to be *O. agicola*.

**ZABULON SKIPPER *Poanes zabulon* (Boisduval & LeConte).**

Emmel & Emmel (1973) report a specimen from Havilah (Kern Co.) in the USNM. The specimen is likely mislabeled as this species does not occur in California.

**BAIRD'S SWALLOWTAIL *Papilio machaon bairdii* W. H. Edwards.**

Status of *bairdii* as a species or subspecies of *machaon* remains controversial. A single female that may be this swallowtail was collected in Erskine Creek Canyon east of Lake Isabella, Kern County on 20 May 2001 by the author. The individual in question is a fresh female which appears to be yellow form "brucei" W. H. Edwards. The specimen has the yellow abdomen and black pupil on the HW characteristic of *bairdii* but the ground color of the yellow band in this individual is light yellow and the banding ocellate in shape which is typical of *P. polyxenes coloro* which was also present in that same canyon that same day. John F. Emmel suggests that the record needs confirmation with a collection of the black form of *bairdii*, which I agree.

**QUEEN ALEXANDRA SULPHUR *Colias alexandra edwardsii* W. H. Edwards.**

There are possible sightings of a male *edwardsi* from near Bird Spring Pass in Kern County by the author and a female observed at Government Springs in Tulare County June 28, 2008 on an NABA field trip. Yellow sulphurs collected in the Sageland-Kelso Valley region to date have all been *C. harfordii*. It is possible that at least some of these Sierra Nevada sulphurs may be *alexandra* and not *harfordii*.

**VICEROY *Limenitis archippus* (Cramer).**

Barbara Beck of Canada reported that when she lived in the wetlands along the Kaweah River region in the 1950's that this species was frequently seen in the Visalia region east to the Sierra Nevada. Prior to habitat development and heavy use of insecticides because of agricultural use, conditions would

have appeared favorable for this species. This is an intriguing possibility. It seems unlikely these would have been subspecies *obsoleta* (W. H. Edwards).

**GREAT ARCTIC *Oeneis nevadensis nevadensis*** (C. Felder & R. Felder).

Tilden and Smith (1986) stated the range of this species is south to Tulare County in their Western Butterfly Field Guide. This may prove to be true because the author observed what appeared to be a female *O. nevadensis* flying among fallen trees just below 9,000' near Timber Gap above Mineral King in Sequoia National Park on 22 July 1991. Because this would be such an incredible southern range extension and needs collecting verification the species is left off the regional list

**LIKELY ADDITIONS TO THE REGIONAL CHECKLIST**

**WESTERN CLOUDYWING *Thorybes diversus*** Bell.

Should occur further south than Madera County, perhaps in the Camp Nelson region in Tulare County.

**DREAMY DUSKYWING *Erynnis icelus*** (Scudder & Burgess).

May occur in the Camp Nelson-Quaking Aspen region of Tulare County.

**AFRANIUS DUSKYWING *Erynnis afranius*** (Lintner).

May enter the region in the Tehachapi Mountains in southern Kern County. It occurs as a "resident" in Los Angeles County just to the south.

**ROADSIDE SKIPPER *Amblyscirtes vialis*** (W. H. Edwards).

Could occur at mid-elevations on the west slope of the Sierra Nevada in Tulare County.

**MARGINED WHITE *Pieris marginalis castoria*** Reakirt=*microstriata* J. A. Comstock.

Could enter the Sierra Nevada foothills in Tulare County where suitable habitat would seem to occur. Should range south of Fresno County. Coastal subspecies *venosa* Scudder has been collected at Navajo Camp in San Luis Obispo County just a few miles west of the Kern County line. Long known as the **Veined White** (*Pieris napi* (Linnaeus)).

**AMERICAN COPPER *Lycaena phlaeas shields*** Kemal & Kocak.

This butterfly should occur in the Arctic-alpine zone, within the National Parks inside Tulare County boundaries.

**ANCILLA BLUE *Euphilotes ancilla*** (Barnes & McDunnough).

This species or similar sibling species in the *enoptes/ancilla/dammersi* complex may occur in the region since individuals resembling *E. glaucon comstocki* have genitalia that do not match those of the *battoides* group.

**HEATHER BLUE *Plebejus (Agriades) cassiope cassiope*** (J. Emmel & T. Emmel).

Newly described as a species distinct from the **SIERRA NEVADA BLUE** (*P. (Agriades) podarce*) by J. and T. Emmel in 1998. This butterfly occurs in the Arctic-alpine zone and utilizes White Heather (*Cassiope mertensiana* (Bong) G. Don) as the larval host. It is sometimes sympatric with *P. podarce* which utilizes a different hostplant (*Dodecatheon* or Shooting stars) as in the Tioga Pass region just outside Yosemite National Park. Since the southern limit of White Heather is 'high up in the National Parks', the butterfly should occur there as well.

**IRENE'S FRITILLARY *Speyeria hesperis irene*** (Boisduval).

A species of the Sierra Nevada Canadian life zone. The absence of records for this species in the region is puzzling.

**ORSEIS CRESCENT** or **SIERRA NEVADA CRESCENT** *Phyciodes orseis herlani* Bauer.

Found along small streams in the Canadian and Hudsonian zones in the Sierra Nevada further north. May range south into Tulare County.

**SMALL WOOD-NYMPH** *Cercyonis oetus oetus* (Boisduval).

Occurs on the east slope of the Sierra Nevada as far south as along the Bishop Creek drainage. This species could range south into the Monache-Kennedy Meadows region.

**RIDING'S SATYR** *Neominois ridingsii pallidus* Austin.

Could occur in high elevation sagebrush hillsides in Tulare County.

**GREAT ARCTIC** *Oeneis nevadensis nevadensis* (C. Felder & R. Felder).

Expected to occur in Mineral King region. See above comments under questionable records.

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# FIELD COLLECTING AND SIGHT RECORDS FOR BUTTERFLIES OF KERN AND TULARE COUNTIES, CALIFORNIA.

**Abstract:** The following collecting or sight records cover the butterflies occurring in Kern and Tulare Counties, California. The author recognizes 174 species and 68 or more additional subspecies (many undescribed or unnamed) for the region. There are a total of 240 taxa (or entities) recognized in this records section. Likely there will be other species recognized or added to the region in the future. Taxonomic issues and problems with current nomenclature were discussed in the revised text in **Butterflies of North America 3. Butterflies of Kern and Tulare Counties, California.**

## CODES FOR COLLECTORS OR OBSERVERS:

JPB: Jim Brock  
NC: No collectors name known  
JAC: John A. Comstock  
KD: Ken Davenport  
JFE: John F. Emmel.  
JTE: John and Tom Emmel  
KCH: Keith and Jan Hughes  
JHM: John H. Masters  
SOM: Sterling O. Mattoon  
RPM: Richard P. Meyer  
PN: Phil Nordin  
PAO: Paul Opler  
KMR: Kelly Richers  
RES: Ray Stanford  
AOS: Oakley Shields  
SS: Susan Steele  
AR: Al Rubbert

## OTHER CODES:

Sequoia NP or SNP: Sequoia National Park  
Kings Canyon NP or KCNP: Kings Canyon National Park  
Sequoia NM or SNM: Sequoia National Monument.  
Sequoia National Forest: SNF.

Years dating in the 1900's are listed using two digits. Those from 2000 and on are listed with four digits.

Note: Ken Davenport collected in the National Parks under permit from the National Park Service and those vouchers are at the Los Angeles County Museum of Natural History or at the NPS collection site at Ash Mountain near Three Rivers. Sequoia National Monument was formerly National Forest and at present (2013), collecting is still permitted within the monument. It is administered by the United States Forest Service rather than the Department of the Interior.

## FAMILY HESPERIIDAE: SKIPPERS and GIANT SKIPPERS

### 1. *Epargyreus clarus californicus* MacNeill.

**Kern County:** Greenhorn Mts: 1-1.3 mi S of Tiger Flat 15 July 2000 (KD); 11 and 17 June 2001 (KD) ; seen near Black Mountain Saddle 8 July 2001 (Wanda Dameron); lower end Greenhorn Mountain Park on Old State Rd. 1 June 2003 (SS) and 2 July 2005 (KD); Shirley Meadows 11 June 2006 (KD).

**Tulare County:** Sierra Nevada: W of Sherman Pass at Alder Crk 6800' 3 and 9 July 2005 and 22 May 2012 (KD); Cherry Hill Rd. at Alder Crk. 5680' 22 and 29 May 2012 (KD); Balch Park 26 June 72 ; 29 July 77 and 25 June 2005 (all KD); Camp Nelson 30 May 87 and 26 May 97 (both KD); Jack Flat Camp 26 May 88 (KD); Eshom Camp 26 May 94 (KD); 2 mi W of Eshom Camp 23 June 97 (KD); Camp Wishon 26

May 97 (KD); Boulder Crk E of Big Meadow (nr KCNP) 28 June 2003 (KD); Trail to 100 Giants (Sequoia Grove) 23 June 2002 (SS). Greenhorn Mts: Marshall Meadow 6 July 2002 (RES). **Sequoia NP**: 2 mi W of Cabin Cove near Mineral King 5 July 85 (KD). **Kings Canyon NP**: Buena Vista Peak Trailhead 23 June and 10 July 89 (KD).

**2. *Polygonus leo arizonensis*** (Skinner).

**Kern County**: Mojave Desert: Cantil near Randsburg Cutoff; collected 14 individuals 25 August 83 (KD); 3 individuals at Cantil 23 September 83 (KD); 5 individuals at Cinco 23 September 83 (KD). Tehachapi Mts: 5 mi E of Caliente 6 Sep 73 (JPB); N of Mt Abel near Valley Vista Camp 5 and 11 Sep 83 (Art Strong). Sierra Nevada: Kern River Valley at Weldon near south fork of Kern River 22 August 2006 (KD). **Tulare County**: No records.

**3. *Urbanus proteus proteus*** (Linnaeus).

**Kern County**: No records. **Tulare County**: San Joaquin Valley: Lindsay "Fall of 1910." (NC).

**4. *Thorybes pylades indistinctus*** Austin and J. Emmel.

**Kern County**: Sierra Nevada: S end of Kern Plateau at Fay Crk 20 June 80 (KD). Greenhorn Mountains near Shirley Meadows 6 July 75 and 13 June 77 (both KD); Old State Rd at Greenhorn Mountain Park 19 June 93 (KD); 1 to 1.3 mi S of Tiger Flat 15 and 22 July 2000 (KD); Black Mountain Saddle 18 June 93 (KD); Breckenridge Mountain 10 June 85 and 30 June 89 (both KD) and Squirrel Meadow 7 June 2003 (KD). Piute Mts: many locations at high elevations along Piute Mt Rd. 28 May 2001 (KD). Tehachapi Mts: Tehachapi Mt Park 21 June 71(KD); near Frazier Park 29 May 81 (KD).

**Tulare County**: Sierra Nevada: Balch Park 26 June 72 (KD); Sherman Pass Rd at Alder Crk 6800' 18 June 83 and 9 July 2005 (both KD); W of Sherman Pass 7700' 20 June 99 (KD); 5880'-6300' 9 and 15 May 2006 (KD); Bald Mountain Lookout 9400' 20 June 99 (KD); Freeman Crk 12 June 81 (KD); 6 mi S of Freeman Crk (Needlerock area) 25 June 82 (KD); Buck Rock near Big Meadow (near KCNP) 12 June 90 (RPM); Greenhorn Mts: 2 mi W of Baker Ridge 17 June 96 and 14 June 97 (both KD).

**5. *Thorybes mexicana nevada*** Scudder.

**Kern County**. No records. **Tulare County**: Big Meadow (Kern Plateau) 15 June 76 and 12 July 78 (both KD); Bald Mountain. Lookout 9400' 10 July 82 and 20 June 92 (both KD); W of Sherman Pass 8700 to 9200' 25 June 85, 5 July 86; 3 and 9 July 2005; 22 May 2012 (all KD); Mosquito Meadow Rd (SW of Sherman Pass) 4 July 2004 and 3 July 2005 (KD); Buck Rock/Big Meadow (near KCNP) 23 June 97 (KD); Sherman Peak 10,050' 19 June 2002 (KD); Stony Crk 11 June 90 (KD). **Sequoia NP**: Mineral King at Timber Gap 9000' 22 July 91 (KD); White Chief Trail 9000' 23 July 92 (KD); Farewell Gap Trail 19 July 93 (KD); Mineral King Valley 19 July 93 (KD); Tokopah Falls Trail 17 July 80 (PN); E of Timberline Lake 11,100' 5 July 2012 (Elise Larsen).

**6. *Erynnis brizo lacustra*** (W. G. Wright).

**Kern County**: Sierra Nevada: Ridge S of Lamont Peak Rd. summit 29 Apr 2001 (KD); Ridge 4,300' 1 July 2013 (KD). Piute Mts: Hooper Hill 25 Apr 80 (KD). Tehachapi Mts: Frazier Park in canyon above Mt. Pinos Way 22 Apr 2012; 2 mi E of Frazier Park on hilltop 29 April 88 (KD); hills bordering Sand Cyn NE of Monolith 13 May 2001(KD) and hills to NE 6 May 2002 (KD).

**Tulare County**: Sierra Nevada: Dam just N of Roads End along Kern River 2, 5 and 14 April 87 (KD); 9 March 88 (KD); Sherman Pass Rd area near Alder Creek Crossing 5680' 9 May 2007 (KD); W slope of Lamont Peak (S end of Kern Plateau off Chimney Peak Rd.) 30 April 87 (JFE & Gordon Pratt); ridge W of Lamont Peak 6900' 29 Apr 2001 (KD & June Preston); hilltop E of Goldledge Camp 19 March 96 (KD); Bald Mountain. Lookout 9400' HIGH 20 June 92 (KD); Durrwood Creek along Mountain. Hwy. 99 above South Falls 14 May 2010 (KD).

**7. *Erynnis propertius*** (Scudder & Burgess).

**Kern County**: Tehachapi Mts: Tehachapi Mt Park 21 June 71 and 18 June 79 (both KD); Water Cyn below Mountain Park 9 June 96 (KD); Cummings Crk 9 and 11 June 82; 21 Apr 90 (KD); Tehachapi Loop 17 May 87 (KD); Mt Pinos 14 July 70 and 3 July 83 (both KD); Frazier Park 12 May 2012 (KD); N of Mt

Pinos on Mil Potrero Rd 22 June 89 (KD). Sierra Nevada: Fay Crk N of Weldon 14 June 80 (KD); Pine Flat 5 July 2003 (KD); Weldon 20 June 85 (KD). Greenhorn Mts: 2 mi S of Tiger Flat 20 June 87 and 25 June 95 (both KD); Alder Crk Camp 21 May 96 (KD); 1.5 mi S of Tiger Flat 11 and 17 June 2001 (KD); Old State Rd 2 July 2005 (KD); Kernville 30 Apr 83 (KD); Breckenridge Mountain 24 Mar 2000 (KD). Piute Mts: Erskine Crk Cyn 20 and 23 May 2001 (KD); 2-4 mi S of Bodfish 8 to 21 May 76 (KD); Piute Mountains Crest 21 July 78 (KD). Temblor Range: Hwy 58 W of McKittrick 13 May and 4 June 87 (KD). **Tulare County:** Sierra Nevada: Balch Park 26 June 72 and 29 July 77 (both KD); 1 mi E of Sherman Pass 8 August 80 (KD); 2-4 mi S of Johnsondale, 6 to 18 June 83 (KD); Freeman Crk 16 and 29 July 83 (KD); Sherman Pass Rd. E of Kern River 5000' 18 June 83 (KD); Bald Mountain Lookout 9400' 10 July 82 (KD); S of Kennedy Meadows at Spring 25 June 82 (KD); Stony Crk Camp 27-29 June 87 and 16 July 92 (both KD); Kings Cyn Overlook 23 June 89 (KD); Mineral King Rd at 2500', 18 Mar 92 (KD); upper Kern River at Goldledge Camp 19 Mar 96 (KD). Greenhorn Mts: Baker Ridge 7000+' 11 and 26 June 81 (KD); N of Portuguese Pass 26 June and 11 July 81 (KD). **Sequoia NP:** Mineral King Valley 5 July 85 (KD); Silver City and Cabin Cove 5 July 85 (both KD); Potwisha Camp and Buckeye Flat 17 May 85 and 28 February 86 (KD); Halstead Meadow 24 July 87 (KD); Tokopah Falls Trail 12 June 90 and 2 Aug 93 (KD); Ash Mountain 16 July 92 (KD). **Kings Canyon NP:** Buena Vista Peak 28 June 87 (KD).

**8. *Erynnis tristis tristis*** (Boisduval)

**Kern County:** San Joaquin Valley: Bakersfield 10 June 63 (KD); Kern River at Hart Park nr. Bakersfield 21 June 79; 23-24 Sep 82; 3 Sep 85; 6 June 92 and 7 Apr 2004 (all KD). Kern River Valley: Weldon 20 June 85 (KD). Greenhorn Mts: Glennville 21 July and 4 Aug 97 (KD); N end Linn's Valley 5 and 11 Aug 97 (KD). Piute Mts: Hooper Hill ridges 10 Sep 79 and 25 Apr 80 (KD).

**Tulare County:** San Joaquin Valley: Woodlake 2 Sept 79 (PN); Tule River 2 mi N. of Tipton (Hwy. 99) 22 Aug 87 (KD); Porterville 5 Sept 87 (AR) and 21 Oct 88 (KD). Sierra Nevada: Three Rivers 4 Sep 91 (KD); Gateway to Sequoia 27 July and 6 Sep 85; 28 Feb and 15 Aug 86 (KD); 15 Sept 87 and 12 Aug 92 (both KD). Greenhorn Mts: W of Glennville, N end Linn's Valley and Poso Crk area 4-11 Aug 97 (KD). 4 mi E of White River 15 June 57 (PAO). **Sequoia NP:** Ash Mountain 17 May 85 (KD).

**9a. *Erynnis pacuvius lilius*** (Dyar).

**Kern County:** Sierra Nevada: Pine Flat and Cannell VABM 6 June 86 and 9 June 94 (KD). Piute Mts: Ridges and Piute Mountain Vista 21 July 78; 19 June 81 and 28 May 2001 (all KD). Greenhorn Mts: summit of Sunday Peak 8395' 31 July 95 and 11 June 96 (KD); Sunday Peak trail 26 June 81 and 11 June 96 (KD); N of Tiger Flat to Tulare County line 26 June 81 (KD); 10 to 24 June 96 and 3 July 2004 (KD); Breckenridge Mountain summit area 10 June 85 and 7 June 2003 (both KD).

**Tulare County:** Sierra Nevada: Bald Mountain Lookout 9400' 10 July 82 and 21 June 85 (both KD); 4 mi W of Sherman Pass 25 June and 13 July 81 (KD); Sherman Pass Rd 21 June 82 and 4 July 2004 (KD); Sherman Peak 10,050' 19 June 2002 (KD); Freeman Crk 12 June 81 (KD); Quaking Aspen 4 July 66 (KCH); Buck Rock and Big Meadow (near KCNP) 12 June 90 (RPM); Stony Crk 27-29 June 90 (KD); Kings Cyn Overlook 23 June 89 (KD); Balch Park 25 June 2005 (KD); Kings Cyn Overlook 23 June 89 (KD). Greenhorn Mts: Baker Ridge 7753' 11 June 81, 4 and 24 July 95 (all KD); Portuguese Pass area 11 and 26 June 81 and 10 to 24 June 96 (KD); N end of range W of Johnsondale 25 June 97 (KD). **Sequoia NP:** Tokopah Falls Trail 12 June 1990 (KD); Silver City and 2 mi W of Cabin Cove 5 July 85 (KD); Mineral King Valley 19 July 93 (KD).

**9b. *Erynnis pacuvius callidus*** (Grinnell).

**Kern County:** Tehachapi Mts: Mt. Tehachapi, ridge at 7500' 22 June 75 (KD); Mt Pinos 14 July 70; 3 July 73; 28 June 79; 18 July 98 (all KD); McGill Camp area 23 and 30 June 2003 (both KD); N side of Mt Pinos on Mil Potrero Rd 11 June 87 and 22 June 89 (KD); Frazier Park 5 and 12 June 2007 (KD).

**Tulare County:** Not in county, replaced by Sierra Nevada *lilius*.

**10. *Erynnis funeralis*** (Scudder and Burgess).

**Kern County:** San Joaquin Valley: Bakersfield 10 June 63 (KD); 23 Mar and 24 Nov 84 (KD); 10 and 19 May 93 and E of Bakersfield 18 May 92 (both KD); Edison 23 Sep 92 (KD). Tehachapi Mts: Caliente Cyn 25 Mar 88 (KD); N side of Mt Pinos 22 June 89 (KD); Cuddy Cyn 1 mi E of Frazier Park 28 Mar 2004

(KD). Greenhorn Mts: Breckenridge Mountain, Squirrel Meadow 7 June 2003 (KD); Kern Cyn at Miracle Hot Springs (=Hobo Camp) along Clear Crk 16 Mar 78 (KD); 2 mi. S of Kernville 19 and 21 Apr 2006 (KD). Piute Mts: Erskine Crk Cyn 6 June 83 and 17 Mar 87 (both KD); Bald Eagle Peak 21 June 78 (KD). Mojave Desert: 4 mi W of Mojave 4 Mar 84 (KD); Cantil 16 May 92 (KD); Cinco 4 and 6 July 83 (KD). **Tulare County:** Sierra Nevada: California Hot Springs 30 Aug 62 (Michael Davenport); Coffee Camp E of Springville 6 and 28 Apr 89 (KD); ridge W of Lamont Peak 29 Apr 2001 (KD); upper Kern River at Calkin's Flat 21 Sep 2002 (KD); W of Sherman Pass 7600' 2 Oct 2012 (KD). **Sequoia NP:** Redwood Crk 5 July 85 (KD); Potwisha Camp 28 Feb and 18 Apr 85 (KD); Hospital Rock 15 Aug 86 (KD).

**11. *Erynnis persius*** (Scudder).

**Kern County:** San Joaquin Valley: Delano 12 July 55 (Jerry Powell); Greenhorn Mountains 1 mi. S Tiger Flat 20 July 2009 (KD).

**Tulare County:** Sierra Nevada: Sherman Pass Rd at Alder Crk 6800' 8 Aug 80; 5 Aug 82; 18 June 83; 21 June 85; 12 and 20 June 99; 3 July to 27 Aug 2005 (all KD); 2 mi E of Sherman Pass 8 Aug 80 (KD); Black Rock Ranger Station 23 June 94 (KD); Big Meadow (Kern Plateau) 20 June 80 (KD); near Quaking Aspen 13 July 83 (seen, KD); Stony Crk Camp 11 June 90 (Kevin Davenport). Greenhorn Mountains road near Marshall Meadow 6 July 2002 (SOM); ridge N of Cannell Meadow 10 June 2006, southern limit in Sierra Nevada (KD); Common 3-4 mi. W of Sherman Pass, 7,300-8,000', 1 July 2013 (KD).

**12. *Pyrgus ruralis ruralis*** (Boisduval).

**Kern County:** No records but possible in Greenhorns.

**Tulare County:** Sierra Nevada: Big Meadow near Salmon Crk (Kern Plateau) 15 June 76; 12 July 78 and 20 June 80 (all KD); 1 mi E of Sherman Pass in subalpine meadows 3 July 78; 4 July 2004 and 3 July 2005 (all KD); 3.5 mi E of Sherman Pass 4 June 2001 (KD); Powell Meadow 23 June 94; Troy Meadow 23 June 94 and Black Rock Ranger Station 23 June 94 (all KD); Stony Crk 11 June 90 (KD); Big Meadow and Buck Rock (nr. KCNP) 12 June 90 (RPM); Balch Park, Methuselah Meadow 25 June 2005 (KD). **Sequoia NP:** Halstead Meadow 7 July 79 (PN); Tokopah Falls Trail 12 June 90 (seen, KD); Mineral King, Timber Gap Trail 22 July 91 (KD).

**13a. *Pyrgus scriptura scriptura*** (Boisduval).

**Kern County:** San Joaquin Valley: Hwy 58, 19 mi W of Bakersfield 2 Sep 80 (KD); Hwy 58, 4 mi W of Buttonwillow near jct of Lokern Rd. (on mallows along canal bank) 2 and 12 Sep 80; 3 Oct 80 and 27 Aug 82 (all KD); Buttonwillow 13 June 57 (PAO); 27 Feb 82 (KD); Lost Hills 15 July 57 (PAO); 2 mi E of Lost Hills 13 Aug 81 and 11 Aug 84 (KD).

**Tulare County:** 6.3 mi S of Alpaugh (Rowlee Rd.) 23 Aug 84 (KD); roadside just S of Tule River, 2 mi N of Tipton 22 Aug 87 and 14 July 88 (KD).

**13b. *Pyrgus scriptura apertorum*** Austin.

**Kern County:** Edward's AFB, N. of Leumann Ridge, Bissell Hills, no date given (Gordon Pratt). Collections were made May-September there.

**14. *Pyrgus communis*** (Grote).

**Kern County:** Temblor Range: Hwy 58 E of road summit 4 June 87 (KD, determined by JFE). San Joaquin Valley: W of Delano on Hwy 43 at Cecil Ave., just S of Tulare County line 4 Nov 94 (KD, determined by Julian Donahue); Delano 26 Sep 95 (KD); Greenfield (in rural area in moist pastureland) 17 July 2005 (KD, determined by Paul Opler); east Bakersfield in sump 22 Aug 2009 (KD, det. by P. Opler). Greenhorn Mts: N of Mt. Meadow Camp 10-11 June 96 (Kern/Tulare County line; no males, determination based on elevation, KD). Tehachapi Mountains: Cummings Creek 27 Sep 1990 (KD, determined by Paul Opler).

**Tulare County:** Sierra Nevada: Balch Park 29 July 77 and 25 June 2005 (KD); 1 mi E of Sherman Pass 8400' 25 June 85 and 3 July 2005 (both KD); Big Meadow (Kern Plateau) 2 and 24 Aug 85 and 6 June 86 (KD); Quaking Aspen 10 Aug 2002 (KD); Stony Crk Camp 4 and 13 Sep 91 and 16 July 92 (both KD); Three Rivers 4 Sep 91 (KD, determined by JFE); Hwy 198 1.5 mi W of Sequoia NP entrance 12 Aug 92 (KD). Greenhorn Mts: meadow just S of Portuguese Pass 10-11 June 96 (KD). San Joaquin Valley: 6 mi S

of Alpaugh 11 and 23 Aug 84 (KD); Earlimart 23 Aug 84 (KD); Tulare 16 Sep 84 (KD); Tipton and Pixley 22 Aug 87 (KD); Porterville 5 Sep 87; 14 July 88 and 21 Oct 88 (KD); 10 Mar 89 (KD, determined by JFE). John Burns determined many San Joaquin Valley region *Pyrgus* collected from the region by the author as *communis*. Other montane records that should be this species (genitalic confirmation needed) include Johnsondale 13 June 74 (KD) and Lamont Peak near Lamont Meadows 10 Apr and 25 May 85 (KD). **Sequoia NP**: Halstead Meadow 15 Sep 87 (KD, determined by JFE).

**15. *Pyrgus albescens* Plötz.**

**Kern County**: Sierra Nevada: Kelso Crk Rd N of Sageland 24 May 2005 (KD); Hanning Flat edge of Lake Isabella 16 and 22 Sep 2001(KD). San Joaquin Valley: Bakersfield 14 Sep 90 and 7 Nov 92 (both KD); Buttonwillow 2 Sep to 3 Oct 80 (KD); W of Lamont 7 Aug 91 (KD); Edison 23 Sep and 7 Oct 92 (both KD); W of Delano on Hwy 43 at Cecil Av just S of county line 4 Nov 94 (KD, determined by Julian Donahue). Sierra Nevada: Lake Isabella at Hanning Flat 16 and 22 Sep 2001 (KD); E side Lake Isabella 1 Apr 2000 (KD). Tehachapi Mts: Cummings Crk 7 mi S of Tehachapi 27 Apr 90 (KD); 4 mi S of Tehachapi 5 Sep 2005 (KD); Bealville 14 Sep 90 (KD); Frazier Park 2 July 86 (KD). Mojave Desert: Cinco 9 Oct 82 (KD); Koehn Dry Lake and Cantil 11 and 16 May 92 (KD).

**Tulare County**: San Joaquin Valley NW of Delano, just N of Kern County line 4 Nov 94 (KD, determined by Julian Donahue). Greenhorn Mts: W of Poso and Linn's Valley at Arrastre Crk 27 Apr 98 (determined by PAO).

**16. *Heliopetes ericetorum* (Boisduval).**

**Kern County**: San Joaquin Valley: Bakersfield 23 May and 24 Aug 92 (KD); Oildale 11 May 87 (KD); Edison 30 Aug 91 (KD); Hart Park 17 Sep 82 (KD). Mojave Desert: Cinco 4 and 6 July 83 (KD); Cantil 29 Apr and 16 May 92 (KD). Sierra Nevada: Kernville 28 Oct 2000 (KD); Kelso Valley 26 May 78 (KD); Short Cyn 12 Nov 2001(SS). Piute Mts: S of Bodfish 21 and 29 May 79 (KD); Piute Mt Rd at MP 6: 4 and 17 July 2000 (KD). Greenhorn Mts: Cedar Crk 6 and 11 July 75 and 15 Aug 78 (KD); Old State Rd 22 Aug 2003 and 2 July 2005 (KD); Kern Cyn, Richbar 6 June 77 and 10 Sep 92 (KD). Tehachapi Mts: Tehachapi Mt Park 26 June 2005 (KD); Water Cyn below Park 5 Sep 2005 (KD); Caliente Cyn 3 Sep 88 (KD); Mt Pinos 24 Sep 2005 (KD). Temblor Range: Hwy 58: 27 Aug 82 (KD).

**Tulare County**: San Joaquin Valley: E of Alpaugh 11 Aug 84 (KD). Sierra Nevada: upper Kern River at Goldlege Camp 9 May 81 (KD); Roads End 14 May 72, 29 June 78 and 6 Nov 2005 (all KD); Chico Flat 19 Nov 2005 (KD); Limestone Camp 21 Apr 97 (KD); Chimney Peak area and Kennedy Meadows 10 July 82 (KD); Bald Mountain Lookout 9400' 10 July and 8 Aug 82 (KD); Sherman Pass Rd. at 6800' 5 Aug 82 (KD); Lamont Peak area 4 and 6 July 83 (KD); Badger and Eshom Camp 9-10 July 83 (KD); S of Kennedy Meadows at Spring 8 June 85 (KD); Pine Flat 2 Aug 85 (KD); Stony Crk 4 Sep 91 (KD); Gateway to Sequoia 27 July and 6 Sep 85 (KD); 12 Aug.92 (KD); lower Mineral King Rd 8 May 93 (KD). Greenhorn Mts: Baker Ridge 4 and 24 July 95 and 4 July 98 (all KD). **Sequoia NP**: Ash Mountain 27 July 85 (KD); Potwisha Camp 18 Apr, 17 May and 6 Sep 85 (all KD); Cabin Cove and Redwood Crk, 27 July 85 (KD); near Crescent Meadow 18 Aug 89 (KD); Generals Hwy many locations 4 Sep 91 (KD). **Kings Canyon NP**: Wilsonia 18 Aug 89 (KD).

**17. *Pholisora catullus* (Fabricius).**

**Kern County**: San Joaquin Valley: Tule Elk Reserve nr. Tupman 20 Aug and 5 Sep 81 (KD); Kern Wildlife Refuge 23 Aug 84 (seen, KD); S of Alpaugh and Tulare County line 23 Aug 84 (KD); SW of Lamont 12 Sep 86 (KD). Sierra Nevada: 1 mi S of Sageland (N of Kelso Valley) 15 May 76 (JPB & KD); 3 and 5 Apr 77; 29 Apr 92 (all KD) and 6 Mar 2003 (KD, EARLY); Cyn 1.5 mi E of Butterbredt Peak 25 May 76 (KD). Greenhorn Mts: Breckenridge Mountain W of Havilah 6 June 79 (KD). Piute Mts :2-3 mi S of Bodfish 8 to 30 May 76 (KD); Havilah 5 to 12 Sep 76 (KD), E side Piute Mountains 3 mi. W of Sageland, 16 Apr 2010 (KD).

**Tulare County**: Sierra Nevada: 2-3 mi S of Johnsondale 6 June 83 and 21 Apr 97 (KD); Sherman Pass Rd at 4200-4800' 17 May 84; 2 and 14 Apr 87; 21 Mar 2002 (all KD); N of Roads End; Limestone 14 Apr 87 and 21 Apr 97 (KD); E of Ant Canyon 6 and 21 Apr 2006 (KD); Cherry Hill Rd. at Alder Creek 5680' 21 May 2010 (KD). San Joaquin Valley: Alpaugh and vicinity 11 and 23 Aug 84 (KD); NW of Pixley 22 Aug 87 (KD); Porterville along Tule River 5 Sep 87; 14 July 88 and 12 Sep 95 (KD).

**18a. *Hesperopsis libya libya*** (Scudder).

**Kern County:** Mojave Desert: Edward's Air Force Base at Branch Park and Buckhorn Dry Lake 31 May, 28 June and 20 Sep 94 (Gordon Pratt). Buckhorn Dry Lake 6 June 95 (Gordon Pratt & KD).

**Tulare County:** Not in county.

**18b. *Hesperopsis libya joaquina*** J. Emmel, T. Emmel & Mattoon.

**Kern County:** San Joaquin Valley: McKittrick, 11 May 54 (common, Truxal & LM Martin); 28 Apr 77 and 13 May 87 (KD); 9 Sep 89 (JGP); 8 mi E of Buttonwillow 12 May 80 (KD); 4 mi W of Buttonwillow (nr Lokern Road) 12 Sep 80 (KD); Maricopa 12 May 80 (KD); Poso Crk, 8 mi N of Oildale 18 May 81 (KD); Hart Park nr. Bakersfield 10 May 87 and 21 June 83 (KD); 5 mi E of Oildale 5 May 77 (JPB); Round Mountain Rd nr Oildale and along Kern River 11 May 87 and 15 May 92 (KD); Gordon's Ferry on Oildale side of Kern River 28 May 91 (KD). Temblor Range: E of Hwy 58 summit 4 June 87 (KD).

**Tulare County:** No records. Could occur at western edge of county in San Joaquin Valley.

**18c. *Hesperopsis libya*** (Scudder) "Great Basin."

**Kern County:** Mojave Desert and edges of Sierra Nevada: Hwy 14 nr Homestead 29 Aug and 18 Sep 78; 21 Aug 79; 30 Aug 86 (all KD); Hwy 14 nr Ridgecrest Turnoff 29 Aug 75 (KD); Jawbone Cyn midway Butterbredt Peak and Hwy 14: 6 and 26 May 78; 21 Aug 79 (KD); 6 Sep 2006 (KD); Cinco-Cantil area 24 June to 23 Sep 83 (KD); 16 May and 16 Sep 92 (both KD); Koehn Dry Lake 11 May 92 (KD); Mesquite Springs (El Paso Mountains) 3 May 86 and 11 May 92 (both KD); E of Walker Pass 30 Aug 76 (KD).

**Tulare County:** No records. Record from Nine Mile Canyon was actually taken in Inyo County.

**19. *Hesperopsis alpheus oricus*** (W. H. Edwards).

**Kern County:** Sierra Nevada: Kelso Valley 15 June 75 (JPB); hill S of Butterbredt Peak 15 May 76 (KD); Butterbredt Peak 21 May 88 and 23 May 2005 (KD); Cyn 1.5 mi S of Butterbredt Peak 26 May 78; 9 May 86 and 21 and 27 May 88 (all KD); Bird Spring Pass and nearby Microwave Hill 13 May 2000 (KD).

**Tulare County:** No records but possible.

**20. *Nastra julia*** (H. A. Freeman).

**Kern County:** San Joaquin Valley: Bakersfield in late summer of 1962 (KD).

**Tulare County:** No records.

**21. *Copaeodes aurantiaca*** (Hewitson).

**Kern County:** San Joaquin Valley: Bakersfield 17 June 50 (Tom Rubbert). Sierra Nevada: E of Walker Pass 8 Aug 77 (KD); ridge above Walker Pass summit 21 May 83 (SOM); 1 mi S of Sageland 15 Aug 78 and 30 Apr 84 (both KD). Mojave Desert: Homestead 18 Sep 78 (KD); 1 mi S of Sageland 15 Aug 78 (common, KD); 30 Apr 84 (common, KD); Cantil 25 Aug to 23 Sep 83; 20 Sep to 3 Oct 84 (all KD). Tehachapi Mts: Caliente Cyn 22 Oct 78 (AR).

**Tulare County:** Sierra Nevada: Sherman Pass Rd nr Brush Crk 4600' 18 June 83 (AR) and 25 June 85 (KD); Cyn N of Lamont Peak W of Lamont Meadows 20 June 92 (KD). San Joaquin Valley: Porterville along Tule River on lantana in nearby yards 5 Sep 87 (KD & AR); 2 Sep and 21 Oct 88 (both KD).

**22. *Hylephila phyleus phyleus*** (Drury).

**Kern County:** San Joaquin Valley: Bakersfield 25 July 77; 11 June 79; 13 Sep 82 and 1 July to 8 Sep 2005 (all KD); Hart Park 21 June 70 (KD); Edison 20 Sep 84, 1 Oct 89 and 22 Sep 92 (all KD); 4 mi W of Buttonwillow 2 Sep to 3 Oct 80 (KD); Bear Mountain Rd E of Greenfield 15 Sep 89 (KD). Tehachapi Mountains Tehachapi 22 Sep 88 (KD); Caliente Cyn 23 Aug 73 and 4 Sep 99 (KD); Bealville 14 Sep 90 (KD). Sierra Nevada: Weldon 4 to 21 Aug 81 (KD); Kernville 14 and 21 June 98 and 2 July 2005 (KD). Greenhorn Mts: Glennville 4 Aug 97 (KD). Piute Mts: Havilah Knolls 5 to 12 Sep 75 (KD). Temblor Range: E of Cottonwood Pass 7 Sep 92 (KD). Mojave Desert: Mojave 10 Sep 69 (KD); Cinco 4 and 6 July 83 (KD) and W end of Koehn Dry Lake at Cantil 11 and 16 May 92 (KD). Common on lantana in Ridgecrest residential areas, with majority of individuals resembling *muertovalle* Scott, the Death Valley subspecies 10 Sep 2013 (KD).

**Tulare County:** San Joaquin Valley: Tulare 18 July 82; 8 July 83; 16 Sep 84 (all KD); Alpaugh 11 and 23 Aug 84 (KD); Earlimart 23 Aug 84 (KD); Venida 6 Sep 85 (KD); Woodlake 6 Sep 85 (KD); 2 mi N of Tipton 22 Aug 87 (KD); Porterville 5 Sep 87 and 21 Oct 88 (KD). Sierra Nevada: Gateway to Sequoia 27 July and 6 Sep 85; 16 Aug 86 (all KD); upper Kern River at Calkin's Flat 5 Oct 2002 (KD); Sherman Pass Rd at 7800' 21 Sep 2002 (KD); Three Rivers 4 and 13 Sep 91 (KD). **Sequoia NP:** Ash Mountain 16 July and 12 Aug 92; 2 Aug 93 (all KD).

**23a. *Pseudocopaodes eunus eunus*** (W. H. Edwards).

**Kern County:** Originally described from the lowlands of the Kern River from Bakersfield (there are records from Panama in LACM), including 18 Aug 29 (CM Dammers). Since the Lake Isabella Dam was built and the original saltgrass habitat is now farmland, it is unlikely that San Joaquin Valley populations remain. Sierra Nevada records: Weldon 13-14 June 81 (Ron Leuschner); 4 to 21 Aug 81; 14 May, 28 June and 26 Aug 83; 25 May, 12 July and 24 Aug 85 (all KD); Onyx 4 and 21 Aug 81 (KD); 10 July 84; 29 May and 16 Aug 85; 30 Aug 86; 17 June 87; 25 Apr 2004 and 23 Apr 2005 (all KD); Kelso Valley along edge of meadow near jct of Kelso Valley and Jawbone Cyn Rds 1 Aug 92 (JFE).

**Tulare County:** Some old records exist for the old Tulare Lake prior to building Lake Isabella and human development. No recent records.

**23b. *Pseudocopaodes eunus flavus*** Austin & J Emmel.

**Kern County:** Mojave Desert: W end of Koehn Dry Lake, Cantil 11 and 16 May 92 (KD); Edward's Air Force Base, Buckhorn Dry Lake 31 May 94 (Gordon Pratt) and West Rosamond Dry Lakes 5 and 31 May 94; 28 June 94 and 20 Sep 94 (all Gordon Pratt).

**Tulare County:** No records.

**24. *Hesperia juba*** (Scudder).

**Kern County:** Sierra Nevada: S end of Kern Plateau at Fay Crk 20 June 80 (KD); Walker Pass 30 Aug 86 and 29 Apr 93 (both KD); Lamont Peak area 22 May 82 and 6 Oct 2001 (both KD); Kernville 26 Sep 2000 and 20 Oct 2001 (both KD); Butterbrecht Peak 22 May 81 (KD); Kelso Valley 23 Apr 79 and 30 Apr 91 (KD); NW of Birdspring Pass 22 Apr 2000 (KD). Greenhorn Mts: Black Mountain Saddle 21 May 96 (KD); Old State Rd 3 and 17 May 2005 (KD); Breckenridge Mountain 6 June 79 (KD). Piute Mts: 2-4 mi S of Bodfish 6 to 21 May 76 (KD); Erskine Crk E of Lake Isabella 20 and 23 May 2001 (KD). Tehachapi Mts: 7 mi S of Tehachapi at Cummings Crk 9 and 11 June 82 (KD).

**Tulare County:** Sierra Nevada: Lamont Peak area 22 May and 25 June 82 (KD); 6 Oct 2001 (KD); Sherman Pass (3 mi W) 11 Sep 81 (KD); W of Sherman Pass at 7800' 1 to 30 Oct 2005 (KD); upper Kern River: Goldledge Crk 9 May 81 (KD); Calkin's Flat 15 Sep 2002 (KD); Fairview 15 Sep to 30 Oct 2002 and 5 Nov 2005 (KD); Big Meadow (Kern Plateau) 20 June 80 and 24 Aug 85 (KD); Lamont Meadows 30 Aug 86 (KD); Kennedy Meadows 26 May 2001 (KD); Bald Mountain Lookout 9400' 26 May 2001 (KD); S of Johnsondale 7 Apr 97 (KD); Gateway to Sequoia 6 Sep 85 (KD); 2 mi W of Mineral King entrance 8 May 93 (KD). **Sequoia NP:** Huckleberry Meadow 14 Sep 75 (PN).

**25a. *Hesperia colorado idaho*** (W. H. Edwards).

**Kern County:** Sierra Nevada: Weldon 20 June 85 (KD) and Paul's Place 13 June 99 (Bill Gendron); Sageland, N of Kelso Valley 15 June 80 (KD); Bird Spring Pass 1 July 2000 (KD); E of Walker Pass 4 June 2004 (KD); Chimney Peak Rd 31 May 77 (Mike Smith). Piute Mts: Piute Mountain Vista 4 July 2000 (KD); Piute Mt Rd at MP 6-7 above Bodfish-Havilah Rd summit 4 and 10 June 2004 (KD).

**Tulare County:** 2-3 mi S of Johnsondale 6 June 83 and 31 May 86 (KD); Sherman Pass Rd at 4900' 12 June 99 (KD); Big Pine Mountain 3 Aug 81 (KD); Kennedy Meadows 10 July 82 (KD); Spring, S of Kennedy Meadows 4 July 83 and 8 June 85 (KD); Lamont Peak area 25 June 82; 4 and 6 July 83 (KD); W of Sherman Pass at Alder Crk 6800' 18 June 83 and at 7600' 27 Aug 2005 (KD); Bald Mountain Lookout 9400' 10 July 82 and 21 June 85; 23 June 94 and 4 July 2003 (KD); Chimney Crk 26 Aug 83 (KD); Sherman Pass Rd just W of Bald Mountain 19 June 2002 (KD); Fish Camp Meadows 2 July 83 (JGP).

**25b. *Hesperia colorado harpalus*** (W. H. Edwards).

**Kern County:** No records.

**Tulare County:** Sierra Nevada: Freeman Crk 25 July 80; 16 and 29 July 83 (KD); Stony Crk Camp and downstream to Slide 27-29 June 87; 11-12 June 90; 13 Sep 91; 10 and 16 July 92 (all KD); Big Meadow 5 mi E of Generals Hwy nr KCNP 10 July 88 (KD). **Sequoia NP:** Mineral King along Monarch Lakes Trail 8500' 26 July 85 (KD); Timber Gap 22 July 91 (KD); White Chief Trail 9200' 23 July 92 (KD); Tokopah Falls Trail 12 June 90 (KD).

**25c. *Hesperia colorado tildeni*** H. A. Freeman.

**Kern County:** Temblor Range: summit area on Hwy 58: 27 Aug 82; 28 Aug 87; 17 Aug 89 and 1 Sep 94 (all KD).

**Tulare County:** References to *tildeni* in county refer to entity below.

**25d. *Hesperia colorado*** (Scudder). (Fall Flying Sierra Nevada/Tehachapi Mountains segregates).

**Kern County:** Sierra Nevada: Hills and ridges W of Butterbrecht Peak 21 Aug 78 and 26 Aug 88 (KD). Piute Mts: Hooper Hill 10 Sep 79 (KD); 2-4 mi S of Bodfish 10 Sep 79 (KD); E side of Piute Mts W of Sageland 13 Aug 2005 and 25 Sep 2009 (KD). Greenhorns Mts: Cedar Crk 24 Aug 85 (KD); Old State Rd. on E side of Greenhorns 22 Aug 2003 (KD). **Tehachapi Mts:** top of Water Cyn and Tehachapi Mt. Park 28 Aug 95 and 5 Sep 2005 (KD); ridge above Tehachapi Loop 24 Aug 90(KD); Cummings Crk 20 Sep 93 (KD); Frazier Park 28 Aug 2002 (KD); Lake Of Woods 26 Aug 2002 and 24 Sep 2005 (KD); Mt Pinos (McGill Camp) 24 Sep 2005 and 5 Sep 2006 (KD); Mil Potrero Rd., Valle Vista Camp 5 Sep 2006 (KD). Populations in Tehachapi's and Mt. Pinos may be different than the Sierra Nevada populations.

**Tulare County:** Sierra Nevada: upper Kern River at Fairview 25 Aug and 15 Sep 2002 (KD); Limestone Camp 25 Aug 2002 (KD); Calkin's Flat 15 Sep 2002 (KD); Goldledge 25 Aug 89 (KD); Sherman Pass Rd. 7000-8000' 6 Sep 99 and 21 Sep 2002 (both KD). Greenhorn Mts: Posey 4 Aug 97 (KD).

**26. *Hesperia columbia*** (Scudder).

**Kern County:** Greenhorn Mts: E slope W of Kernville 12 Sep 32 (NC, data from William McGuire). Piute Mts: 3.2 mi S of Bodfish on Bodfish-Havilah Rd 31 Mar 72 (R Wells); 4 mi S of Bodfish 11 May 75 (JPB); 15 May 75 (NC, data from W McGuire). Sierra Nevada: S end of Kern Plateau, below summit on Chimney Peak Rd. 6 Oct 2001 (KD). Tehachapi Mts: Summit of Mt Pinos 29 June 63 (RES); hill overlooking Cuddy Crk 2 mi E of Frazier Park 29 Apr 88 (KD).

**Tulare County:** Sierra Nevada: Sherman Pass Rd at 4500' 21 May 90 and 29 Apr 2001 (KD); 4700' common 3 Oct 2006 (KD); hilltop off Sherman Pass Rd Heliport 28 Oct 2003 and 9 Oct 2005 (both KD); E of Sherman Pass near Bald Mountain. on serpentine outcrop approx. 8000' 2 July 2010 (KD); upper Kern River: Fairview 27 Apr 64 (RL Langston) 1 mi N of Roads End 7 Apr 97; 14 Apr 2001 and 5 Nov 2005 (all KD); Limestone 21 and 29 Apr 97; 22, and 30 Oct and 5 Nov 2005 (all KD); Calkin's Flat 15 and 21 Sep 2002 (KD); E of Ant Canyon 19-21 Apr and 3 Oct 2006 (KD); 2 mi S of Johnsondale 29 Apr 97 and 30 Oct 2005 (KD). Greenhorn Mts: Baker Ridge 7753' 4 July 98 (KD).

**27. *Hesperia lindseyi lindseyi*** (W. Holland). (includes Southern California segregate).

**Kern County:** Piute Mts: 1-3 mi S of Bodfish 14 and 21 May 76 (KD); Hooper Hill 30 May 79 (KD); ridges to summit of Hooper Hill 30 May 2002 (KD); Kern Cyn at Lucas Crk 17 May 96 (KD); Erskine Crk Cyn 23 May 2001; 10 May 2002; and 5 June 2005 (all KD). Tehachapi Mts: Cummings Crk 9 and 11 June 82 (KD); nr. turnoff to Tehachapi Mt Park 11 June 82 (KD); Tehachapi Loop E of Keene 5 May 97 (KD); Lebec 10 July 22 (JAC). Temblor Range: Hwy 58 E of road summit 13 May and 4 June 87; 25 May 96 (KD).

**Tulare County:** Greenhorn Mts: White River 3-4 mi E. 14-15 June 57 (PAO).

**28. *Hesperia miriamae miriamae*** MacNeill.

**Kern County:** No records.

**Tulare County: Sequoia NP:** Mt. Silliman 10,900' 17 July 1981 (Derham Giuliani); Alta Peak 11,200' 19 July 81 (Derham Giuliani); Vandevere Mt., 4 mi. S Mineral King 11,947' 28 July 82 (Derham Giuliani); Sierra Nevada Crest, Shepherd Pass 26-28 July 66 (S. Johnson). There are also records for Olancho Peak (per JFE, no records available).

**29. *Hesperia nevada sierra*** (Scudder).

**Kern County:** No records.

**Tulare County:** "Sequoia National Park", but there are no specific localities or dates (Tom & H. Blevins).

**30. *Atalopedes campestris campestris*** (Boisduval).

**Kern County:** San Joaquin Valley: Bakersfield 22 June 76 and 26 Aug 77 (both KD); Hart Park along Kern River 23 Sep to 5 Oct 82 (KD); Edison 1 Oct 89 (KD); S of Greenfield 21 Sep 79 (KD). Greenhorn Mts: Breckenridge Mountain 29 May and 6 June 79 (KD); Kernville 3 July 2004 (KD). Piute Mts: 2-4 mi S of Bodfish 8 to 21 May 76 (KD); Havilah 5 to 12 Sep 75 (KD). Tehachapi Mts: Tehachapi 22 Sep 88 and 17 Aug 90 (KD); Cummings Crk 14 May 90 (KD); Hart Flat 25 Sep 93 (KD); 5 mi S of Tehachapi 5 Sep 2005 (KD); Caliente 22 Sep 88 (KD); Frazier Park and Lake Of The Woods, form "*tenebricosus*" common 16 Oct 2012 (KD). Mojave Desert: W end of Koehn Dry Lake at Cantil 11 and 16 May 92 (KD); Cinco 9 Oct 82 (KD); West Rosamond Dry Lake 20 Sep 94 (Gordon Pratt). Kern River Valley: Common at Weldon 23 Oct 2013 (including dark form "*tenebricosus*").

**Tulare County:** San Joaquin Valley: Hwy 43 and Av 24: 23 Aug 84 (KD); Tulare 16 Sep 84 (KD); Pixley 22 Aug 87 (KD); 2 mi N of Tipton 22 Aug 87 (KD); Porterville 5 Sep 87 and 21 Oct 88 (KD); Kaweah River: Dry Crk Rd 25 May 85 (KD); Lemon Cove 13 Apr 90 (KD). Greenhorn Mts: Linn's Valley 4 Aug 97 (KD); Sierra Nevada: Lamont Meadows 16 Aug 84 and 30 Aug 86 (KD & AR); Three Rivers 13 Sep 91 (KD).

**31a. *Polites sabuleti sabuleti*** (Boisduval).

**Kern County:** San Joaquin Valley: Bakersfield 10 Aug 63 (KD); Hart Park nr Bakersfield 20 June 78, 17 Sep 82, 8 Sep 86 and 29 July 91 (all KD); Kern River at Gordon's Ferry, Oildale 28 May 91 (KD); Poso Crk 8 mi N of Oildale 19 May 91 (KD); 8 mi S of Greenfield 30 Aug 79 (KD). Sierra Nevada: Weldon 4 and 21 Aug 81; 2 Oct-20 Nov 2012 (KD); Onyx 4 and 21 Aug 81 (KD); Piute Mts: Havilah Knolls 30 May 79 (KD). Tehachapi Mts: Tehachapi 22 Sep 88 (KD).

**Tulare County:** San Joaquin Valley: 6.4 mi S of Alpaugh 11 Aug 84 (KD); Venida 6 Sep 85 (KD); Porterville 5 Sep 87 (KD); 14 July and 21 Oct 88 (KD); Kaweah River below Lake Kaweah 13 Apr 90 (KD). Sierra Nevada: Lamont Meadow 20-21 May 83 (SOM); 25 May and 16 Aug 85 (KD); Three Rivers 13 Sep 1991 (KD).

**31b. *Polites sabuleti chusca*** (W. H. Edwards).

**Kern County:** Mojave Desert: Koehn Dry Lake at Cantil 11, 16 and 26 May 92 (KD); 29 April 93 (KD) Cinco 8 Oct 83 (KD); Edwards AFB: Branch Park to Buckhorn Dry Lake 28 June 94 (Gordon Pratt); West Rosamond Dry Lake 28 June 94 (Gordon Pratt). N of Kelso Valley 0.7 mi. E of Sageland in saltgrass pasture above Kelso Creek 15 May 76 (KD); 13 and 21 Oct 2008 (KD).

**Tulare County:** No records.

**31c. *Polites sabuleti tecumseh*** (Grinnell).

**Kern County:** Greenhorn Mts in meadow just S of Portuguese Pass 10-17 June 96 (KD). Locality is right on Kern/Tulare County line. It is not confirmed that any individuals were actually taken in Kern County, but some must stray across the county line. Pine Flat records at the south end of the Kern Plateau also suggests this species enters Kern County.

**Tulare County:** Sierra Nevada: Salmon Crk, Big Meadow (Kern Plateau) 12 July 78 and 6 June 86 (both KD); 1 mi E of Sherman Pass 3 Aug 81 and 4 July 2004 (both KD); Poison Meadow (Kern Plateau) 27 Aug 2005 (KD); Stony Crk Camp 11-12 June 90 (KD); Eshom Camp 26 May 94 (KD); Pine Flat in wet meadows 2 July 2011 (KD). Greenhorn Mts: S of Portuguese Pass 10-24 June 96 (KD); Poison Meadow S of Tobias Peak 19 June 66 (KCH); 7 Aug 95 and 10 June 96 (both KD). **Sequoia NP:** Mineral King, Monarch Crk 9000' 26 July 85 (KD); White Chief Trail 10,000' 23 July 92 (KD); Timberline Lake 11100' 5 July 2012 (Elise Larsen). **Kings Canyon NP:** SE of Buena Vista Peak 10 July 89 (KD).

**32. *Polites sonora sonora*** (Scudder).

**Kern County:** Tehachapi Mts: Tehachapi Mt Park at pond 5 July 71 (KD). Sierra Nevada at S end of Kern Plateau: Pine Flat 5 July 2003 (KD). Greenhorn Mts: Tiger Flat area 26 June 81; 20 June 87; 31 July 95; 11 June 96 and 2 July 2005 (all KD).

**Tulare County:** Sierra Nevada: Big Meadow (Kern Plateau) 15 June 76; 20 June 80; 2 and 24 Aug 85 (all KD); Spring S of Kennedy Meadows 10 July 82 and 26 Aug 83 (KD); Balch Park 29 July 77 (KD); Quaking Aspen 13 July and 3 Sep 83 (KD); E of Sherman Pass 8 Aug 80; 3 Aug 81 and 13 July 82 (KD); Sherman Pass Rd at Alder Crk 6800' 5 Aug 82 (KD); Eshom Camp 9-10 July 83 (KD); Kennedy Meadows 21 June 85 (KD); Chimney Crk N of Lamont Peak 20 June 92 (KD); Kings Cyn Overlook 23 June 89 (KD). Greenhorn Mts: N of Portuguese Pass 10 to 24 June 96 (KD); Poison Meadow 7 Aug 95 (KD). **Sequoia NP:** Silver City 5 July 85 (KD); Mineral King: Monarch Crk 9000' 26 July 85 (KD); White Chief Trail 9400' 23 July 92 (KD); Halstead Meadow and Wolverton 15 Sep 87(KD); Dorst Camp 16 July 92 (KD). **Kings Canyon NP:** SE of Buena Vista Peak 10 July 89 (KD).

**33a. *Ochloides sylvanoides sylvanoides*** (Boisduval).

**Kern County:** Sierra Nevada: S of Butterbredt Peak 21 Aug 79 (KD). Greenhorn Mts: Cedar Crk 15 Aug 78 and 24 Aug 85 (KD); Greenhorn Mt Park 15 July 92 (KD); Old State Rd 22 Aug 2003 (KD). Piute Mts: 2-4 mi S of Bodfish 5 to 23 Sep 75 (KD); Havilah 5-12 Sep 75 (KD). Tehachapi Mts: Tehachapi Mt Park 24 July 79 and 24 Aug 90 (KD); Caliente Cyn 17 Aug 90 (KD); Mt Pinos 24 Sep 2005 (KD). Temblor Range: Hwy 58 W of McKittrick 27 Aug 82 and 17 Aug 89 (KD); West of Walker Pass, 22 Aug 2006 (KD); N of Kelso Valley: Wooded thicket above Kelso Crk W of Sageland 25 Sep 2009 (KD).

**Tulare County:** Sierra Nevada: Balch Park 29 July 77 (KD); 4 mi W of Sherman Pass 11 Sep 81 and 24 Aug 85; 21 Sep 82 and 22 Oct 2005 (all KD); Johnsondale area 11 Sep 81 and 22 Oct 2005 (KD); Limestone 1 Oct to 5 Nov 2005 (KD); Roads End 3 Aug 81 and 5 Nov 2005 (KD); Calkin's Flat 15 Sep to 23 Oct 2002 (KD); Stony Creek 4 Sep 1991 (KD); Gateway to Sequoia 27 July and 6 Sep 85 (KD). Greenhorn Mts: Posey 4 and 11 Aug 97 (KD). **Sequoia NP:** Silver City 26-27 July 85 (KD); Ash Mountain and Potwisha, 6 Sep 85; Giant Forest Village and rd to Crystal Cave 15 Aug 86 (KD); General's Hwy 2000 to 6000' 15 Sep 87 (KD); Halstead Meadow 18 Aug 89 (KD); Mineral King Rd. at entrance to Park 19 July 1993 (KD). **Kings Canyon NP:** Wilsonia 18 Aug 89 (KD).

**33b. *Ochloides sylvanoides omnigena*** Austin.

**Kern County:** Sierra Nevada: Populations at Walker Pass and the Kelso Valley-Butterbredt Peak area seem closer to nominotypical *sylvanoides*.

**Tulare County:** Sierra Nevada: Spring 5 mi S of Kennedy Meadows 3 Aug 81 and 22 Sep 2001 (KD).

**34a. *Ochloides agricola*** near *agricola* (Boisduval).

**Kern County:** N. side of Mt. Pinos (near Pine Mountain.) 28 June 2006 (KD); seen Cuddy Crk at Frazier Park 2 June 2012.

**Tulare County:** Limited to Coast Ranges, not in county.

**34b. *Ochloides agricola verus*** (W. H. Edwards).

**Kern County:** Sierra Nevada: Chimney Peak Rd S of Lamont Peak 5 June 99 and 18 May 2003 (KD); Fay Crk N of Weldon 14 June 80 (KD); 0.7 mi SW of Sageland, N of Kelso Valley 26 May and 14 and 29 June 78 (KD); Rocky Point 26 May and 14 June 78 (KD); NW of Bird Spring Pass 13 May 2000 and 28 Apr 2012 (KD). Greenhorn Mts: Kern Cyn, Miracle Hot Springs (=Hobo Camp) 14 May 88 (KD). Piute Mts: Bald Eagle Peak 21 July 78 (KD); Piute Mt Rd near Bald Eagle Peak (KD) and above Bodfish/Havilah Rd summit 4 and 10 June 2004 (KD); E side of Piutes 4 mi W of Sageland 24 May 2005 (KD); Erskine Crk Cyn E of Lake Isabella 20 and 23 May 2001; 5 June 2005 (KD). Tehachapi Mountains: top of Water Cyn. below Tehachapi Mountain. Park 9 June 96 and 26 June 2005 (KD); Banducci Rd. E of Cummings Crk. 11 June 82 (KD).

**Tulare County:** Chimney Peak Rd 1 air mi N of Lamont Peak 25 June 82 and 14 June 86 (KD); Lamont Peak 25 June 82 (KD) and 20 June 92 (Kevin Davenport).

**34c. *Ochlodes agricola nemorum*** (Boisduval).

**Kern County:** Greenhorn Mts: Cedar Crk 6 to 21 July 75 (KD); Kernville 19 May 80 (KD); Old State Rd 20 June 2002 and 2 July 2005 (KD); Wofford Heights 11 June 81 (KD); Sawmill Rd on E slope 4 May and 2 June 2002 (KD); Kern Cyn: Democrat Hot Springs 9 June 71 (KD); Lucas Crk 1 June 93 (KD).

**Tulare County:** Sierra Nevada: 1-3 mi S of Johnsondale 29 June 78 (KD); Sherman Pass Rd at 4600' 18 June 83; 17 May 84 and 25 June 85 (all KD); Needlerock 25 June 82 (KD); S end of Kern Plateau at True Meadow 20 June 80 (KD); upper Kern River at Roads End 29 June 78; 21 Apr 97 (both KD) and S of Corral Crk 23 Oct 2002 (KD, rare fall record); S of Badger 26 May 94 (KD); Mineral King Rd 15 June 93 (KD). Greenhorn Mts: Baker Point Lookout 24 July 95 (KD). **Sequoia NP:** Ash Mountain and Potwisha Camp 17 May 85 and 25 May 85 (all KD); Buckeye Flat 17 May 85 (KD).

**35. *Ochlodes yuma sacramentorum*** Austin.

**Kern County:** No records.

**Tulare County:** San Joaquin Valley: Tule River 2 mi N of Tipton (at Hwy. 99) 22 Aug 87 (KD); Porterville along Tule River 5 Sep 87 (KD & AR); 26 May, 14 July and 2 Sep 88 (all KD). Sierra Nevada: One unusual capture of this species (subspecies undetermined) along the upper Kern River; a male at Limestone Camp seen 3 July and captured 9 July 2005 (KD). The latter individual may have been an accidental import. No hostplant grows at the site.

**36. *Poanes melane melane*** (W. H. Edwards).

**Kern County:** Sierra Nevada: Kernville 14 and 21 June 98 (KD); Weldon Audubon Preserve 26 Sep 98 (KD); Canebrake 23 Apr 2005 (seen, KD). Greenhorn Mts: Miracle Hot Springs along Clear Crk 14 May 72; 21 May and 10 Aug 76; 17 May 84 (all KD). Piute Mts: Erskine Crk Cyn E of Lake Isabella 23 May 2001 (KD); 2 June 2002; 2 June 2003 and 31 May 2004 (last three records JPB).

**Tulare County:** Sierra Nevada: Gateway to Sequoia 6 Sep 85; 14 Sep 87 and 12 Aug 92 (KD); Three Rivers 13 Apr 90 (KD); Bear Crk on road below Balch Park 25 June 2005 (KD); upper Kern River from N of Roads End to Limestone 1 Oct to 19 Nov 2005 (KD); Sherman Pass Rd. 4900' 3 Oct 2006 (KD).

**Sequoia NP:** 1.8 rd miles above Hospital Rock 29 June 79 (PN); Buckeye Flat 23 May 81 (PN); 17 May and 6 Sep 85 (both KD); Crystal Cave 20 May 2013 (photo, William Yake).

**37. *Lerodea eufala*** (W. H. Edwards).

**Kern County:** San Joaquin Valley: Bakersfield 6 Apr and 14 Sep 90; 25 Aug to 8 Sep 2005 (all KD); Hart Park 17 Sep 82 and 8 Aug 84 (both KD); Edison 19-20 Sep 84 and 22 Sep 92 (KD); Greenfield 30 Sep 2001 (KD); Buttonwillow 2 Sep to 3 Oct 80 (KD). Sierra Nevada: Weldon 4 to 21 Aug 81 (KD); 3 Oct 2013 (KD). Tehachapi Mts: Bealville 14 Sep 90 (KD); Hart Flat 8 Aug 84 and 25 Sep 93 (KD); Caliente Cyn 2 Aug 86 and 4 Sep 99 (both KD); Lake Of Woods 26 Aug 2002 (KD). Mojave Desert: Cinco 9 Oct 82 (KD).

**Tulare County:** San Joaquin Valley: Dinuba 21 Sep 80 (PN); Hwy 43 SE of Alpaugh 11 and 23 Aug 84 (KD); Earlimart 23 Aug 84 (KD); Tulare 16 Sep 84 (KD); 5 mi S of Woodlake 6 Sep 85 (KD); Tipton 22 Aug 87 (KD); Porterville 5 Sep 87 (KD); Lake Success 5 Sep 87 (KD); Porterville 14 July and 21 Oct 88 (KD). Sierra Nevada: Three Rivers 4 and 13 Sep 91 (KD); 1.5 mi W of SNP on Hwy 198: 12 Aug 92 (KD); Three individuals taken at Quaking Aspen 7,200', 3 Sep 2007 (KD).

**38. *Megathymus yuccae martini*** D Stallings & Turner.

**Kern County:** Sierra Nevada: Walker Pass summit 10 and 12 May 76 (KD); Kelso Valley region 13 mi S of Hwy. 178 at Weldon to 1 mi S of Sageland 23 Apr 79; 13 Apr 84; 10 Apr 85; 29 Mar 86; 30 Apr 91; 29 Apr 92; 5 and 11 Apr 2005 (all KD); 2 mi N of Birdspring Pass 14 and 22 Apr 2000 (KD); E side of Piute Mts 14 Apr 2000 (KD); ridges S of Butterbredt Peak 25 May 76; 23 Apr 81; 14 Apr 87 and 29 Apr 92 (KD); Cyn 1.5 mi SE of Butterbredt Peak 11 Apr 93 (KD). Tehachapi Mountains 4.7 mi SE of Oak Crk Pass off Willow Springs Rd 28 and 30 Apr 98 (KD).

**Tulare County:** Sierra Nevada: Cyn NE of Lamont Peak nr Lamont Meadows 10 Apr 85 (seen, KD). Individual likely strayed from suitable habitat just to the south in Kern County.

**PAPILIONIDAE: SWALLOWTAILS and PARNASSIANS.**

**39a. *Parnassius clodius baldur* W. H. Edwards.**

**Kern County:** Greenhorn Mountains seen N of Tiger Flat 24 June 61 (RES); seen below Lake Isabella Dam 23 June 95 (John L. Richards).

**Tulare County:** Sierra Nevada: W of Sherman Pass at 8200' 8 Aug 80; 25 June and 13 July 81; 10 and 24 July 82; 21 June 85 (all KD); 3 July 2005 (abundant, KD); W of Sherman Pass at 7800' 25 June 85 and 3 July 2005 (both KD); Alder Crk at 6800' 20 June 99; 3 and 9 July 2005 (both KD); 5 mi W of Siretta Peak (nr Poison Meadow) 16 June 74 (JPB); Poison Meadow area, 4 mi N of Big Meadow (Kern Plateau) 4 July 2003 (Fred Heath) and 5 July 2003 (vouchers collected, KD); NE of Horse Meadow in canyon with stream 15 July 2006 (KD & RPM); SOUTH range extension for Sierra Nevada. Greenhorn Mts: N side of Baker Ridge 7000-7500' 4 and 24 July 95; 10 and 17 June 96 and 25 June 97 (all KD). **Sequoia NP:** Mineral King, Farewell Gap Trail 28 Aug 83 (PN); Timber Gap Trail 11 Sep 83 (PN & Gary Pavlik) and 22 July 91(KD); Mineral King Valley 5 and 26 July 85 (KD); Monarch Lakes Trail 26 July 85 (KD); White Chief Trail 9500' 23 July 92 (KD); Silver City 9 June 88 (KD); Alta Peak 12 and 18 July 60 (JH Gerdes).

**39b. *Parnassius clodius* Ménériés. Sequoia segregate on *Dicentra nevadensis*.**

**Kern County:** Not in county.

**Tulare County:** Sierra Nevada in SNF, now SNM: Stony Crk and Woodward Crk at 6800' 3 July 75 (JPB & James R. Mori); 13 June 90 (KD); Buck Rock 12 June 90 (RPM); Big Meadow (nr KCNP) 23 June and 10 July 89; 23 June 97 and 28 June 2003 (all KD); Boulder Crk E of Big Meadow (nr KCNP) 28 June 2003 (KD). **Sequoia NP:** Tokopah Falls Trail 30 July 83 (PN and Gary Pavlik); 12 June 90 (KD); Lodgepole and Tokopah Falls Trail 2 Aug 93 (KD). **Kings Canyon NP:** Buena Vista Peak 28 June 87 (KD).

**40. *Parnassius behrri* W. H. Edwards.**

**Kern County:** Not in county.

**Tulare County:** Sierra Nevada: **Sequoia NP:** Mt Whitney 14 July 48 LACM; Mineral King above 10,000' (No dates given, JHM) and Mineral King: White Chief Trail 15 Aug 79 (Wayne Dawes). Shepherd Pass Trail, West Head Tyndall Creek 11,000-12,200' 28 July 66 (Scott Ellis & S.Johnson). **Kings Canyon NP:** Forester Pass 12,000-12,500' 25 July 2007 (Steve Fratello); John Muir Trail, Forester Pass to Tyndall Crk. 11850-12300', 3 July 2012 (Elise Larsen).

**41. *Battus philenor philenor* (Linnaeus).**

**Kern County:** San Joaquin Valley: seen 13 mi W of Shafter 30 June 57 ( PAO); seen in Bakersfield in July of 1962 (KD); Edison 20 Sep 84 (KD). Mojave Desert: seen between Cinco and Cantil 24 June 83 (KD); Cantil at W end of Koehn Dry Lake in alfalfa field 8 July 92 (KD); Inyokern 14 Oct 2007 (photo, Susan Steele). Sierra Nevada: Cyn 1.5 mi S of Butterbredt Peak 28 June 83 (seen, KD); 0.9 mi. E of Sageland above Kelso Creek 21 Oct 2008 (seen, KD).

**Tulare County:** Sierra Nevada: seen near Kennedy Meadows 24 June 73 (JPB and Charles A. Sekerman). Greenhorn Mts: Baker Ridge 29 June 97 (seen, KD).

**42. *Papilio polyxenes coloro* W. G. Wright.**

**Kern County:** San Joaquin Valley: Bakersfield 14 May 73 (KD). Mojave Desert: hilltop near Red Rock Cyn 5 Apr 74 (JPB); Cinco 4 and 6 July 83 (KD); Cinco and Cantil in alfalfa fields 20 and 27 Sep and 3 Oct 84 (KD); W end of Koehn Dry Lake, Cantil 16 May 92 (KD & Tom Rubbert) Sierra Nevada: Butterbredt Peak and nearby hills and ridges 21 May 88; 18 Mar 85; 18 Mar 96; 14 Apr 97; 14 Sep 98 and 23 May 2005 (all KD); Cyn 1.5 mi S of Butterbredt Peak 26 May 78 (KD); hilltop E of Walker Pass "April, 1992" (RPM); N of Kelso Valley in Sageland area 29 May 95 (seen, KD); seen Jawbone Cyn 29 Apr 96 (KD). Piute Mts: E side of range: Piute Mt Rd W of Sageland at rocky outcrop entrance to SNF 28 May 2001 (yellow form collected; black form "clarki" seen, KD); 4 mi above Bodfish/Havilah Rd summit 4 June 2004 (seen, KD); Erskine Crk Cyn E of Lake Isabella 20 and 23 May 2001(KD); Hooper Hill summit 15 May 2005 (M. Stangeland, K. Davis & W. Bouton). Tehachapi Mountains: Stallion Springs 23 May 82 (KMR).

**Tulare County:** Greenhorn Mountains: Baker Ridge Lookout 7753' 4 and 24 July 95 (KD). Sierra Nevada: Bald Mountain Lookout 9400' 20 June 92; 20 June 99 and 26 May 2001; (all KD). W of Sherman Pass at Alder Crk 6800' 3 July 2005 (KD).

**43. *Papilio zelicaon* Lucas.**

**Kern County:** San Joaquin Valley: Bakersfield 4 Apr 62; 14 May 73; 23 June 88 and 28 Aug 91; 13 to 28 May 92 (all KD); Edison (thousands in alfalfa field bordering citrus groves) 19 and 20 Sep 84 (KD); Sandcut Hill along railroad tracks 4 Mar 95 and 18-24 Feb 97 (KD). Tehachapi Mts: Summit of Mt Tehachapi 8 July 2000 (KD); Caliente Cyn 23 Aug 73 (KD). Sierra Nevada: Fay Crk 20 June 80 (KD); ridges S of Pine Flat 6 June 86 (KD). Greenhorn Mts: top of ski lift at Shirley Meadows 6 July 75 (KD); Sunday Peak 31 July 95 (KD). Piute Mts: ridges and Piute Mt Vista 21 July 78 (KD); Hooper Hill 25 Apr 80 (KD). Temblor Range: Hwy 58 summit area 27 Mar 80 (KD).

**Tulare County:** San Joaquin Valley: Woodlake 2 Sep 79 (PN); Lindcove 28 Feb and 6 Sep 86 (KD); Earlimart 23 Aug 84 (KD); Kaweah River at Lemon Cove 17 May 85 (KD). Sierra Nevada: Big Meadow (Kern Plateau) 15 June 76 (KD); Bald Mountain. Lookout 9400' 10 and 24 July 82; 21 June 85; 20 June 92 and 20 June 99 (all KD); W of Sherman Pass at 9000' 13 July and 3 Aug 81 (KD); 24 July 82; on rocky outcrops just W of Pass 3 and 9 July 2005 (all KD); Sherman Pass Rd at Alder Creek 6800' 18 June 83 (KD); Big Meadow (near KCNP) 23 June 89 and 28 June 2003 (KD); Three Rivers 13 Sep 91 (seen, KD). Greenhorn Mts: Tobias Peak 8284' 10 June 96 (KD); W of Lamont Peak 29 Apr 2001 (KD); Stony Crk area 27 June 87 and 11-12 June 90 (KD). **Sequoia NP:** Silver City 26 July 85 (KD); 1 mi W of Hospital Rock and Potwisha 28 Feb 86 (KD); Halstead Meadow 18 Aug 89 (KD); Tokopah Falls Trail 12 June 90 (KD); Timber Gap above Mineral King 9800' 22 July 91 (KD).

**44a. *Papilio indra* Reakirt** (Sierra Nevada populations previously known as nominotypical **indra**).

**Kern County:** Not in county, replaced by *phyllisae*.

**Tulare County:** Sierra Nevada: Stony Crk and Woodward Crk at Slide 29 June 87 (seen, KD). **Sequoia NP:** "July, 1943" (Tom Blevins). "Mineral King" no dates given (JHM); seen Mineral King off Timber Gap Trail 22 July 91 (KD). **Kings Canyon NP:** Big Baldy 8211' 23 July 2011 (photo, Paul Johnson II).

**44b. *Papilio indra phyllisae* J. Emmel.**

**Kern County:** Piute Mts: Piute Peak 8432' 3 July 72 (JPB); Piute Mountain. Lookout 8326' 8-9 June 74 (JPB); 21 July 78 (seen, KD) and 17 July 2010 (KD); rocky outcrops on E side of Piutes off Piute Mt Rd W of Sageland at SNF entrance 28 May 2001 and 23 May 2005 (both KD); hilltop W of Kelso Valley summit S of Sageland 1 May 81 (KD). Sierra Nevada: Butterbreed Peak 6000' 19 May 73 and 18 May 76 (both JFE); 21 May 88 (KD, AR and RPM) and 23 May 2005 (KD); hills and ridges to the west: 15 May 76 (JPB & KD); 13 and 20 Apr 77 (KD); 6 May 78 (KD & C Sekerman); 1 May 81; 30 July 82; 29 Mar 86; 29 Apr 92; 29 Apr 96 and 14 Apr 97 (all KD); Bird Spring Pass Microwave Hill 5700' 7 May 2001 (Jack Levy).

**Tulare County:** Sierra Nevada: XYZ Creek 19-26 June 1951 (Chris Henne & C. Ingham); Pine Mountain N of Kennedy Meadows 3 July 78 (seen, KD); Below Bald Mountain. Lookout 9400' and ridges to the SE 10 July 82 (KD); 21 June (KD) and 14 July 85 (JGP); 23 June 94; 31 May 86; 2 June 97; 12 and 20 June 99; 24 June 2000; 9 June 2001; 4 July 2004 and 14 Aug 2010 (LATE, all KD); W of Sherman Pass near rocky outcrop 3 July 2010 and 12 June 2012 (KD); W of Sherman Pass at Alder Creek 6700' 3 July 2011 (Darin Andrade) and in side canyon at 4900' 2 July 2011 (KD & Paul Levine); Pine Flat 2 July 2011 (seen KD & Paul Levine). Greenhorn Mts: Baker Ridge Lookout 7753' 25 June 97 (seen, KD); actual captures 4 July 98 (KD) and 3 July 2004 (KD & Bill Gendron).

**45. *Papilio rutulus rutulus* (Lucas).**

**Kern County:** San Joaquin Valley: Bakersfield 29 June 70; 27 July 76 and 26 Aug 77 (all KD); Hart Park along Kern River 20 Aug 71 (KD). Greenhorn Mts: Cedar Crk 6 and 11 July 75 (KD); Glennville 5 Aug 97 (KD); Poso Crk W of Glennville 21 July 97 (KD); Kern Cyn at Democrat Hot Springs 27 June 63 (KD). Piute Mts: E side of range west of Sageland 24 May 2005 (KD); Clear Crk at Havilah 13 Aug 77 (KD). Sierra Nevada: Kern River at Kernville 3 July 2005 (KD); Weldon and Canebrake 23 Apr 2005 (KD). Tehachapi Mts: Tehachapi Mt Park 20 June 62 and 18 July 75 (KD); Tehachapi 22 Sep 88 (KD); Frazier Park 5 July 71 (KD).

**Tulare County:** San Joaquin Valley: Pixley Vernal Pools 4 Apr 81 (PN); Earlimart 23 Aug 84 (KD); Lindcove 28 Feb 86 (KD); Tule River 2 mi N of Tipton 22 Aug 87 (KD). Sierra Nevada: Johnsondale 6 and 18 June 83 (KD); 25 July 80 (KD); Sherman Pass area 8 Aug 80 and 3 Aug 81 (KD); Sherman Pass Rd at Alder Crk 6800' 18 June 83 and 3 July 2005 (both KD); upper Kern River at Corral Crk 4 June 2003 (KD); Kennedy Meadows 25 June 82 (KD); Stony Crk 16 July 92 and 2 Aug 93 (KD); Gateway to Sequoia 27 July and 6 Sep 85 (KD); lower Mineral King Rd 12 Aug 92 (KD). **Sequoia NP:** Ash Mountain and Buckeye Flat 17 May 85 (KD); Cabin Cove 5 July 85 (KD); Crystal Cave 15 Aug 86 and 27 June 87 (KD); Tokopah Falls Trail 12 June 90 and 2 Aug 93 (KD); Mineral King Valley 22 July 91 (KD). **Kings Canyon NP:** Wilsonia 10 July 89 (KD).

**46. *Papilio eurymedon eurymedon*** (Lucas).

**Kern County:** Greenhorn Mts: Shirley Meadows 6 July 75; Cedar Crk 6 and 11 July 75; 1 June 76 and 6 June 77 (all KD); Alta Sierra 11 June 2006 (KD); Breckenridge Mountain 29 May and 6 June 79 (KD); Tiger Flat Rd 25 June 95 (KD); 10 to 24 June 96 (KD). Piute Mts: Piute Mt Crest 19 June 81 and 8 July 82 (KD); Erskine Crk E of Lake Isabella 20 and 23 May 2001 (KD). Tehachapi Mountains: Tehachapi Mt Park 20 June 62 (KD); 20-21 July 62 (JTEI); 21 and 23 July 74 (KD); Mt Tehachapi summit 11 July 79 and 13 July 77 (KD); Frazier Park 2 June 2012 (KD); Mt Pinos 14 July 70 and 5 July 73 (KD); N side of Mt Pinos on Mil Potrero Rd 11 June 87; 22 June 89 and 3 July 99 (all KD); summit Mt. Abel 12 May 2012 (KD).

**Tulare County:** Sierra Nevada: Johnsondale 10 June 62 (KD); Pine Mountain area 10 July 83 (KD); Bald Mountain Lookout 9400' 10 July 82 and 21 June 85 (KD); Sherman Pass area 10 and 24 July 82 (KD); form "albanus" among normal *eurymedon* 20 June 99; 3 July 2005; Sherman Pass Rd at Alder Creek 6800' 18 June 83 and 3 July 2005 (all KD); Freeman Crk 12 and 25 June 81 (KD); Balch Park 26 June 72 and 25 June 2005 (KD); Big Meadow (Kern Plateau) 15 June 76; 12 July 78 and 20 June 80 (all KD); Stony Crk 27-29 June 87 (KD); Kings Cyn Overlook 23 June 89 (KD). Greenhorn Mts: Baker Ridge 26 June 81 and 24 July 95 (KD); N of Portuguese Pass 10 to 24 June 96 (KD); Tobias Peak 7 Aug 95 (KD); Marshall Meadow 6 July 2002 (KD, RES & SOM); Gateway to Sequoia 18 Apr 86 (KD). **Sequoia NP:** Ash Mountain 28 Apr 59 (R.C. Burns) and 17 May 85 (KD); Buckeye Flat 17 May 85 and 25 May 89 (KD); Mineral King Valley 5 July 85 and 19 July 93 (KD); Silver City 5 and 27 July 85 (KD); Potwisha 25 May 89 (KD); Tokopah Falls Trail 12 June 90 (KD). **Kings Canyon NP:** Grant Grove 30 June 71 (M. Scott); Visitor Center (Grant Grove) 23 June 89 (KD); Generals Hwy N boundary 2 Aug 93 (KD).

**47. *Papilio multicaudata pusillus*** Austin & J. Emmel.

**Kern County:** Tehachapi Mts: Tehachapi Mt Park 20 June 62 (KD); 20-21 July 62 (JTEI); 21 and 23 June 71; 23 June 74; 11 and 18 July 75; 16 June 77; 20 July 88 (all KD); Frazier Park 5 July 65 (RES) and 5 July 71 (seen, KD); Cuddy Cyn 2 mi E of Frazier Park 28 Aug 99 (seen, KD). Greenhorn Mts: Cedar Crk 6 and 11 July 75; 7 July 76 and 4 July 77 (all KD); Breckenridge Mountain near Havilah 29 May and 6 June 79 (KD). Piute Mts: Piute Mt Rd at MP 4 above Bodfish-Havilah summit 4 June 2004 (seen, JFE & KD). San Joaquin Valley: Poso Crk 8 mi N of Oildale 27 Mar 77 (JR Mori).

**Tulare County:** Sierra Nevada: 4 mi E of White River 15 June 57 (PAO) California Hot Springs 30 Aug 62 (Michael Davenport); Sherman Pass Rd at 6800' seen 25 June 85 (KD) but no actual captures for region until 3 and 9 July 2005 (KD); Gateway to Sequoia 15 Aug 86 and 24 July 87 (KD); Jack Flat Camp 26 May 88 and 28 Apr 89 (KD); seen 0.6 mi N of Roads End (upper Kern River) 7 Apr 97 (KD). **Sequoia NP:** Potwisha Camp area 17 May 85; 18 Apr 86; along Kaweah River 25 May 89 (all KD); turnout 0.8 road mi below Amphitheater Point 8 Aug 79 (PN).

**48. *Papilio cresphontes cresphontes*** (Cramer).

**Kern County:** Sight records only: E of Edison nr Comanche Rd 21 June 83 (RPM); W of Bakersfield, Hwy 65 and James Rd 17 May 84 (RPM); Interstate 5, 5 mi. N Laval Rd., probable sight record 18 June 2012 (JFE).

**Tulare County:** Larvae reportedly found at Orange Cove in 1961.

**FAMILY PIERIDAE: WHITES, MARBLES, ORANGE-TIPS and SULPHURS.**

**49a. *Neophasia menapia menapia*** (C & R Felder).

**Kern County:** Greenhorn Mts: S of Tiger Flat 11 July 81 (KD); 25 seen on butterfly count, Greenhorn Mt Park and Alta Sierra 11 July 81 (Rick Hewitt & PN).

**Tulare County:** Sierra Nevada: Balch Park 29 July 77 (KD); Sherman Pass Rd at Alder Crk 6800' 5 Aug 82 (KD); 3 mi W of Sherman Pass 13 July 81 and 5 Aug 82 (KD); Quaking Aspen 22 July 61 (RES) and 27 July 89 (KD); Monache Meadows 7-25 Aug 17 (JAC); Troy Meadows 11 July 85 (JGP); Stony Crk area 18 Aug 89; 4 and 13 Sep 91 (all KD). **Sequoia NP:** Redwood Crk 26 July 85 (KD); Giant Forest Village 15 Aug 86 (KD); Generals Hwy nr Crystal Cave Jct. 15 Aug 89 (KD); Silver City 26 July 85 (KD); Cabin Cove 27 July 85 (KD); Four Guardsmen 24 July 87 (KD); Crescent Meadow 18 Aug 89 (KD). **Kings Canyon NP:** Grant Grove 18 Aug 89 (KD).

**49b. *Neophasia menapia tehachapina*** J. Emmel, T. Emmel & Mattoon.

**Kern County:** Tehachapi Mts: Cyn N slope of Double Mountain 18 July 35 and 19 July 36 (both Chris Henne); "Tehachapi Mts" 9 July 18 (JAC); Oak Cyn 23 July 32 (Flock & LM Martin); Tehachapi 20 July 18 (collection of RH Reid); Tehachapi Mt Park 20-21 July 62 (JTE); 20 Aug 62; 24 July 79; 27 Aug 83; 20 July 88; 23 July 96; 28 July 97; 18 to 25 July 99 (all KD). Tehachapi Mountain 16 July 32 (Monroe Walton); trail to Mt Tehachapi 25 July 98 (KD).

**Tulare County:** No records.

**50. *Pontia beckerii*** (W. H. Edwards).

**Kern County:** Tehachapi Mts: Tehachapi 20 Aug 62 (KD & Weldon Kirk); Frazier Park 6 July 69 (JPB); 19 July 70 (JPB) and 5 July 71 (KD); E of Monolith N side of Hwy 58 at Cameron Rd offramp 27 Apr 89 (KD); Caliente 3 Nov 80 (KD); Caliente Cyn 5 mi E of Caliente 7 Sep 73 (JPB); 17 Mar 90 (KD); Bealville 7 July 91 (KD). Sierra Nevada: Walker Pass 10 and 12 May 76 (KD); 15 May 82 (AR); Grapevine Cyn 4 Feb 2006 (SS). Piute Mts: 2-4 mi S of Bodfish 6 to 30 May 76 (KD); Havilah 27 Aug 76 (KD); Erskine Crk Cyn E of Lake Isabella 20 to 28 May 2001 (KD). San Joaquin Valley: 8 mi N of Oildale at Poso Crk 18 May to 26 June 81 (KD); SE edge of Hart Park in adjacent hills 20 June 72 and 6 to 16 June 81 (KD); Glennville-Woody Rd 8 to 16 mi N of Oildale 26 June 81 (KD). Mojave Desert: Mojave 26 Apr 70 (KD); Cyn N of Hwy 14, Cinco-Cantil area 30 Jan 95; 27 Jan 98; 11 May 92 and 18 Apr 2005 (all KD); Last Chance Cyn 18 Mar 73 (JPB). Temblor Range: 1 to 2 mi E of Hwy 58 summit 16 May 87 (AR).

**Tulare County:** Sierra Nevada: Lloyd Meadows 4 July 66 (KCH); Kennedy Meadows 24 July 82 (Bob Iwashasi); Lamont Meadows 14 June 86 (KD); road summit Nine Mile Canyon 26 May 2001 (KD); Spring S of Kennedy Meadows and Bald Mountain. Lookout 9400' 26 May 2001 (KD); upper Kern River near entrance to SNF 5 July 2003 (KD), dam N of Roads End 17 May 2008 (KD).

**51. *Pontia protodice*** (Boisduval & LeConte).

**Kern County:** San Joaquin Valley: Bakersfield 17 July 75 and 5 Mar 93 (KD); Edison 2 Oct 89 (KD); SW of Lamont 30 Sep 89 (KD); hills above Hart Park 13 Feb 77 (KD); Buttonwillow 2 and 12 Sep 80 (KD); Sandcut Hill 27 Feb 87 (KD). Sierra Nevada: S of Lamont Peak 30 Sep 89 (KD); Butterbrecht Peak 21 May 88 (KD); Onyx 17 June 97 and 13 Nov 2005 (KD); Canebrake 13 Nov 2005 (KD). Greenhorn Mts: Linn's Valley 5 and 11 Aug 97 (KD); Old State Rd 2 July 2005 (KD). Piute Mts: Hooper Hill 31 Aug 79 (KD); 2-3 mi. S Bodfish 8 to 30 May 1976 (KD); Havilah 27 Aug 76 (KD). Tehachapi Mts: Tehachapi 20 Aug 62 (KD & Weldon Kirk); Tehachapi Mt Park 5 Sep 2005 (KD); Bealville 15 July to 6 Nov 92 (KD); Frazier Park 22 June 79 (KD). Mojave Desert: Cantil 11 and 16 May 92 (KD); Cinco 1 Mar 2005 (KD).

**Tulare County:** Sierra Nevada: Johnsondale area 6 and 18 June 83 (KD); Badger-Eshom Rd 9-10 July 83 (KD); Balch Park 29 July 77 (KD); Big Meadow (Kern Plateau) 2 and 24 Aug 85 (KD); Bald Mountain. Lookout 9400' 10 July and 5 Aug 82 (KD); Freeman Crk 25 July 80 (KD); 16 and 29 July 83 (KD); Lamont Peak 22 May and 25 June 82 (KD); Pine Mountain 3 Aug 81 (KD); Quaking Aspen 22 July 61 (RES); Stony Crk 4 Sep 91 (KD); Three Rivers 4 Sep 91 (KD). San Joaquin Valley: Alpaugh area 23 Aug 84 (KD); Pixley and Tipton 22 Aug 87 (KD); Porterville 21 Oct 88 (KD). Greenhorn Mts: Baker Ridge 24 July 95 (KD); Posey 4 and 11 Aug 97 (KD). **Sequoia NP:** Silver City 5 and 27 July 85 (KD); Mineral King

Valley 5 July 85 (KD); Timber Gap 9000' 22 July 91 (KD); Mineral King Rd at park entrance 22 July 91 (KD).

**52. *Pontia occidentalis occidentalis*** (Reakirt).

**Kern County:** No records.

**Tulare County: Sequoia NP:** Tyndale Crk 11,000' 29 July 54 (CH Ericksen); Bighorn Plateau 11,500' 31 July 54 (CH Ericksen).

**53. *Pontia sisymbrii sisymbrii*** (Boisduval).

**Kern County:** Tehachapi Mts: Cuddy Crk Cyn 2-3 mi E of Frazier Park 11 Apr 86 (KD); 23 and 25 Apr 95 (KD); Caliente Cyn 25 Feb 88 and 12 Apr 91 (KD). Sierra Nevada: Walker Pass 29 Apr 93 (KD); ridges S of Butterbrecht Peak 15 May 76 and 23 Apr 81 (KD); Kelso Valley 11 to 17.5 mi S of Weldon 13 Apr 84 and 10 Apr 85 (KD). Greenhorn Mts: Kern Cyn: Upper Richbar 21 Mar and 3 Apr 73 (KD); Miracle Hot Springs (=Hobo Camp) 11 Mar 81 (KD); E side of range 2 mi S of Kernville 24 Mar 2000 (KD). Piute Mts: Piute Mt Rd above Bodfish-Havilah road summit 29 May 79 and 14 May 88 (KD); Piute Mt Rd W of Sageland 6 Apr 2002 (KD). Mojave Desert: hills N of Red Rock Cyn 4 to 23 Apr 76 (KD); hills N of Hwy 14 Cinco/Cantil area 1 Mar 2005 (KD).

**Tulare County:** Sierra Nevada: Kennedy Meadows 22 May 82 and 25 May 85 (KD); Bald Mountain Lookout 9400' 10 July 82 and 21 June 85 (KD); Big Meadow (Kern Plateau) 15 June 76 and 20 June 80 (KD); N of Kernville E of Kern River 6 Mar 78 (KD); N of Roads End 2 Apr and 14 June 87 (KD); 9 Mar 88 (KD); Goldledge 2 Apr 87 (KD); S of Hospital Flat 14 Feb 2002 (KD); Pine Mountain. 22 May 82 (KD); Sherman Pass Rd at 4600' 2 Apr and 14 June 87 (KD); Sherman Peak 10,050' 19 June 2002 (KD); ridge W of Lamont Peak 29 Apr 2001 (KD). **Sequoia NP:** Mineral King 7000-10,000' (no dates, JHM); Timber Gap above Mineral King Valley 9800' 22 July 91 (KD).

**54. *Pieris rapae*** (Linnaeus).

**Kern County:** San Joaquin Valley: Bakersfield 9 Mar 63; 2 Sep 73 and 14 Feb 81 (all KD); Oildale at Gordon's Ferry 28 May 91 (KD); Edison 10 May 88 (KD); Buttonwillow 2 Sep to 3 Oct 80 (KD). Sierra Nevada: Kernville 6 June 99 and 23 Oct 2003 (KD); Weldon 23 Apr to 13 Nov 2005 (KD); Lake Isabella 28 Oct 2003 (KD). Greenhorn Mts: Glennville 21 July and 4 Aug 97 (KD); Sawmill Rd 2 June 2002 (KD). Piute Mts: Havilah 29 May and 6 June 79 (KD). Tehachapi Mts: Tehachapi Mt Park 26 June 2005 (KD); top of Water Cyn below Mt Park 5 Sep 2005 (KD); Cuddy Crk, Frazier Park 5 July 71 (KD); Lake Of Woods and Cuddy Valley 26 Sep 99 (KD). Mojave Desert: Cantil 8 July 92 (KD).

**Tulare County:** Sierra Nevada: Quaking Aspen 13 July and 3 Sep 83 (KD); Johnsondale 6 and 18 June 83 (KD); Badger Eshom Rd. 9-10 July 83 (KD); Camp Nelson 13 July 83 (KD); Freeman Crk 25 July 80; 16 and 29 July 83 (all KD); Kennedy Meadows 22 May, 25 June and 10 July 82 (KD); Gateway to Sequoia 27 July 85 (KD); Stony Crk 26-29 June 87 (KD); upper Kern River at Limestone 3 July to 19 Nov 2005 (KD); Three Rivers 13 Sep 91 (KD). Greenhorn Mts: Posey 4 and 11 Aug 97 (KD); Balance Rock 4 Aug 97 (KD). San Joaquin Valley: Tulare 16 Sep 84 (KD); Earlimart 23 Aug 84 (KD); Alpaugh 11 Aug 84 (KD); Tule River at Porterville 26 May 88 (KD). **Sequoia NP:** Mineral King Valley 5 July 85 (KD); Silver City 5 July 85 (KD); Giant Forest Village 15 Aug 86 (KD); Halstead Meadow 24 July 87 and 18 Aug 89 (KD); Potwisha 25 May 89 (KD); Dorst Camp 16 July 92 (KD); Lodgepole 16 July 92 (KD). **Kings Canyon NP:** North Boundary 10 July 89 (KD).

**55a. *Euchloe ausonides ausonides*** (Lucas).

**Kern County:** No records but possible in Coast Ranges.

**Tulare County:** Sierra Nevada: Mineral King Rd 8.6 mi SE of Hwy 198 just outside SNP 8 May 2002 (KD); E of Kern River on Sherman Pass Rd at 4200' 22 May 2002 (PAO); several collected W of Sherman Pass 5680' to 6300' 9 and 15 May 2007 (KD). Two *ausonides* taken higher up the Sherman Pass Rd. at Alder Crk 6800' 3 July 2005 are as large as the nominotypical subspecies. It appears *ausonides* and *transmontana* intergrade between 6000' and 6800'.

**55b. *Euchloe ausonides transmontana*** Austin & J. Emmel.

**Kern County:** No records but possible at south end of Kern Plateau.

**Tulare County:** Big Meadow (Kern Plateau) 25 June 72 (JPB); 15 June 76 and 12 July 78 (KD); W of Sherman Pass Rd at Alder Crk 6800' 25 June 81; 21 June 82; 18 June 83; 31 May 86; 20 June 99 and 3 July 2005 (all KD, see note under nominotypical *ausonides*); Sherman Pass Rd. 7600-9000' 31 May 86 and 20 June 99 (KD) and E of Pass 2 June 97 and 9 June 2001 (KD); Monache Meadows Trailhead 4 July 2003 (KD); Stony and Woodward Crks 13 June 90 (KD); Big Meadow and Buck Rock (nr KCNP) 12 June 90 (RPM). **Sequoia NP:** Kern River nr Mineral King "July 1943" (T and H Blevins); Mineral King: Timber Gap Trail at 9000' 22 July 91 (KD); White Chief Trail 23 July 92 (KD); Mineral King Valley and Farewell Gap Trail just S of Valley 19 July 93 (KD); Tokopah Falls Trail 12 June 90 (KD).

**56. *Euchloe hyantis*** (W. H. Edwards) complex.

**Kern County:** (Mt. Pinos block segregate). **Heavily marbled population:** Frazier Park 5 May 62 (JFE) and 28 May 74 (KD); Cuddy Valley 5675' 11 May 81 (Tom Dimock); Cuddy Cyn 2-3 mi E of Frazier Park 11 Apr 86; 15 Apr 93; 23-25 Apr 95 (all KD); hill E of Lake Of Woods 29 May 81 (KD).

**Tulare County: Lightly marbled populations:** Greenhorn Mts: Baker Ridge and Lookout 7753' 7 July 77(JPB); 11 June 81; 4 and 24 July 95 and 4 July 98 (all KD). Sierra Nevada: upper Kern River: 0.6 mi N of Roads End 5 Apr 87 (RPM); 7 to 21 Apr 87 and 14 Apr 2001 (KD); Limestone area 7 and 21 Apr 97 (KD); Sherman Pass Rd. E Kern River at 5000' 5 Apr 1987 (Richard P. Meyer); Jct Hwy 190 and Camp Wishon roads 6 Apr 1989 (KD); Jct Woodward and Stony Crks 13 June 90 (KD); Big Meadow (nr KCNP) 23 June 97 (KD). S end of Kern Plateau E end of Lamont Meadows 19 Apr 2003 (KD). **Heavily marbled populations:** Bald Mountain Lookout 9400' 10 July 82; 21 June 85; 31 May 86 and 26 May 2001(all KD); 1 mi N of Lamont Peak 10 Apr 85 and 29 Apr 2001 (KD); E end of Lamont Meadows 29 Apr 2001 and 12 to 27 Apr 2003 (KD, sympatric with *Euchloe lotta*); Sherman Peak 10,050' 19 June 2002 (KD); Stony Creek 16 June 2006 (KD). **Sequoia NP:** (not sorted to marbling below) Buckeye Flat 18 Apr 86 and 13 April 90 (KD); Mineral King (no date JHM).

**57. *Euchloe lotta*** Beutenmüller.

**Kern County:** Mojave Desert: Mojave 21 Mar 64 (KD); hills near Soledad Mountain 15 Mar 95 (KD); hills N of Hwy 14 S of Cantil 10 Apr 92; 7 Mar 2003 and 1 Mar 2005 (all KD); N of Red Rock Cyn 1 Apr 69 (RL Langston); 4 April to 1 May 76 and 29 Mar 91 (all KD); hills off Randsburg Rd 10 Apr 92 (KD). Tehachapi Mts: E of Cameron Rd. (off Hwy 58) 28 Mar 71 (KD); 4.7 mi S of Oak Crk Pass 28 Apr 98 (KD). Sierra Nevada: Butterbredt Peak area 15 May 76 (KD & JPB) and 23 May 2005 (KD); Bird Spring Pass 1 May 81 (KD); Kelso Valley region 11.5 mi S of Weldon 29 Mar 86; 5 and 11 Apr 2005 (all KD). Piute Mts: 1 to 3 mi W of Sageland; ridges along Piute Mt Rd up E side of range 6 Apr 2002 and 5 Mar 2003 (KD).

**Tulare County:** Sierra Nevada: Kennedy Meadows area 22 May and 25 June 82 (KD); 10 mi S of Kennedy Meadows 8 and 26 June 75 (JPB); Lamont Peak (N slope) 10 Apr 85 and 27 Apr 2003 (KD); Bald Mountain Lookout 9400' 26 May 2001 (KD); E side of Lamont Meadows 19 and 27 Apr 2003 (KD).

**58a. *Anthocharis cethura*** near *hadromarmorata* J. Emmel, T. Emmel & Mattoon.

**Kern County:** Mojave Desert: N of Red Rock Cyn State Park 1 Apr 69 (R Langston); 4 to 23 Apr 76 and 10 Apr 92 (all KD); S of Red Rock Cyn State Park off Randsburg Rd 10 Apr 92 (KD); hills N of Hwy 14 S of Cantil 12 Feb 88; 23 Feb and 1 Mar 2005 (all KD); hills S of Koehn Dry Lake (Cantil) 28 Mar 91(KD); Soledad Mountain S nr Mojave 13 Mar 95 (KD). Tehachapi Mts: E slope hilltop 4.7 mi S of Oak Crk Pass off Willow Springs Rd 28 Apr 98 (KD). Sierra Nevada: 3 mi E of Walker Pass 23 Apr 76 and 29 Apr 93 (both KD); ridges nr Butterbredt Peak 15 May 76 and 23 Apr 81 (both KD); Chimney Peak Rd. 19 Mar 2008 (KD).

**Tulare County:** Lamont Peak area; ridge to west 6900' 29 Apr 2001 (KD).

**58b. *Anthocharis cethura morrisoni*** W. H. Edwards.

**Note:** Andrew Warren believes the Sierra Nevada populations are closer to nominate *cethura*. Females in the southern Sierra Nevada are like *morrisoni* in lacking orange tips on the FW in most individuals and are smaller in size.

**Kern County:** Temblor Range: Hwy 58 summit 3258' 25 Apr 92 (KD); hills off Hwy 58 above McKittrick 7 Apr 80 and 17 Mar 89 (both KD). San Joaquin Valley: foothills between Lokern Rd W of Buttonwillow and 2 mi W of McKittrick 3 to 22 Mar 80 (KD); W of Lost Hills 17 Mar 80 (William L Swisher) Tule Elk

Reserve 27 Feb and 13 Mar 82 (KD); Buena Vista Lake 7 Mar 80 (KD); Kern River W of Bakersfield 13 Mar 92 (KD); Bakersfield (nr Old River Rd and Campus Park Dr) 5 and 15 Mar 93; 4 Mar 94 (all KD).

***Anthocharis cethura cethura X morrisoni.***

**Kern County:** Cuddy Cyn 1-3 mi E of Frazier Park 23 and 25 Apr 95; 28 Mar 2004 (all KD). Sierra Nevada: Dry hills E side of Lake Isabella 2-3 mi S of Kernville 24 Mar and 1 Apr 2000; 1 Feb 2003 (all KD) Greenhorn Mts: Kern Cyn: W facing slopes above Clear Crk at Miracle Hot Springs (Hobo Camp area) 26 and 28 Feb 72 (JPB); 4 Mar 77; 7 and 16 Mar 78 (all KD); E slope of range 2 mi SW of Kernville 24 Apr 2000 (KD). Piute Mts: Hooper Hill ridges 14 Mar 72 (JPB) and 25 Apr 80 (KD); Bodfish 7 Mar 78 (KD); E side of range 6 Apr 2002 and 5 Mar 2003 (both KD).

**Tulare County:** Sierra Nevada: Upper Kern River Cyn, Goldledge Crk 25 Apr 76 (JPB and Mike Smith); hills E of Goldledge Camp 19 Mar 96; 2 Apr 87 and 14 Feb 2002 (all KD); 0.6 mi N of Roads End 31 Mar 2000 (KD); N of Kernville at SNF Entrance 14 and 21 Feb 2002 (KD) and 1 Feb 2003 (already common! KD); dry hills with sagebrush E above Salmon Crk crossing of upper Kern Cyn Rd 9 Mar 2002 (KD). San Joaquin Valley: 4 mi. SW of Alpaugh 23 Mar 80 (W Swisher).

**59. *Anthocharis sara sara* Lucas.**

**Kern County:** Sierra Nevada: Lamont Peak area 22 May 82 and 21 Mar 2003 (KD); SE of Kernville 24 Mar 2000 (KD); 11.5 mi S of Weldon 21 Feb 2003 (KD); 2 mi NW of Bird Spring Pass 14 and 22 Apr 2000 (KD). Greenhorn Mts: Kern Cyn, Upper Richbar 25 Feb 73 (KD); Miracle Hot Springs 15 Mar 76 (KD). Piute Mts: E of Lake Isabella, Erskine Crk 25 May 2001 (KD); Havilah 19 Apr 76 (KD). Tehachapi Mountains: Tehachapi Mt Park 20 June 62 and 21 June 71 (both KD); lower end Water Cyn nr Tehachapi 10 Mar 97(KD); SE slopes of Tehachapi Mts (Willow Springs Rd) 13 May 2001 (KD); 1-3 mi E of Frazier Park, Cuddy Crk Cyn 11 Apr 86; 23 and 25 Apr 95; 13 June 98 and 28 Mar 2004 (all KD). Temblor Range: Hwy 58 W of McKittrick 30 Mar and 17 Apr 80 (KD); Cottonwood Pass 20 Apr 87 and 5 Mar 88 (KD). San Joaquin Valley: Hart Park nr Bakersfield 23 Apr 83 (KD); Sandcut Hill E of Edison 6 and 27 Feb 87; 25 and 28 Apr 91 (all KD).

**Tulare County:** Sierra Nevada: Johnsondale 10 June 62 and 6 June 83 (both KD); Big Meadow (Kern Plateau) 20 June 80 (KD); N of Lamont Peak area nr Lamont Meadows 10 Apr 85 and 29 Apr 2001 (both KD); upper Kern River N of Roads End 2 and 14 Apr 87 (KD); 17 Mar 97 (KD); Limestone 28 Apr 2001 (KD); S of Hospital Flat 14 Feb 2002 (KD) Corral Crk 1 Feb 2003 (KD); Sherman Pass Rd at 4600' 17 May 84; 2 and 14 Apr 87; 28 Apr 2001 (all KD) and Alder Crk 6800' 3 July 2005 (KD); Alder Creek at Cherry Hill Rd. 5680' 22 May 2012 (KD); lower Mineral King Rd 18 Mar 92; 8 May 93 and 27 Mar 2004 (KD). **Sequoia NP:** Potwisha Camp 17 May 85 and 28 Feb 86 (KD); Ash Mountain and Buckeye Flat 28 Feb and 18 Apr 86 (KD).

**60a. *Anthocharis lanceolata lanceolata* (Lucas).**

**Kern County:** Sierra Nevada: Pine Flat and Cannell VABM S end of Kern Plateau 6 June 86 and 9 June 94 (KD); Walker Pass summit 12 May 76 (KD); Chimney Peak Rd S of Lamont Peak 12 Apr 2005 (KD); Bird Spring Pass Microwave Hill 1 May 81(KD). Piute Mts: Erskine Crk E of Lake Isabella 24 Apr 81; 2 to 3 mi S of Bodfish 3 Apr to 21 May 76 and 21 May 79 (both KD); Piute Mountain Rd above Bodfish-Havilah Rd summit 30 May 79 (KD) and 4 June 2004 (JFE & KD). Greenhorn Mts: E slope of range at Kernville 24 Apr 81; Kern Cyn at Miracle Hot Springs 31 Mar 69 (R Langston); 15 Mar 76 and 16 Mar 84 (KD).

**Tulare County:** Sierra Nevada: Sherman Pass Rd from Kern River to 7600' 25 June 85 (KD); Alder Creek Crossing 6800' W of Sherman Pass, common 22 May 2012 (KD) and Alder Creek Crossing at Cherry Hill Rd. 5680' 22 and 29 May 2012 (KD); Brush Crk 4600' 17 May 84 and 14 Apr 87 (KD) and at 8300' 7 July 97 (KD); Bald Mountain Lookout 9400' 23 June 94 (KD); Cyn S side Chimney Peak Rd 1 mi air mi N of Lamont Peak 10 Apr 85; 13 Apr 94 and 12 Apr 2005 (all KD); E of Coffee Camp 6 Apr 89 (KD); Camp Nelson 30 May 97 (KD); Balch Park at Methuselah Camp 25 June 2005 (KD); Rd to Camp Wishon 28 Apr 89 (KD); Mineral King Rd below SNP 18 Mar 92 and 8 May 93 (KD); upper Kern River N of Roads End 14 Apr 87; Limestone 7 to 21 Apr 97 (KD); Corral Crk 7 to 20 Apr 2002 (KD); E of Ant Canyon 6 and 19 Apr 2006 (KD); Blue Ridge 26 May 88 (KD); Gateway to Sequoia 28 Feb 86 (KD). Greenhorn Mts: Baker Ridge 11 June 81; 4 and 24 July 95; 10 June 96 (all KD); **Sequoia NP:** Buckeye Flat 18 Apr and 17 May 85 (KD); 2 mi W of Hospital Rock 28 Feb 86 (KD); Ash Mountain. 28 Feb 86 (KD); Potwisha 18 Apr 86 (KD); Mineral King Rd checking station 8 May 93 (KD).

**60b. *Anthocharis lanceolata australis*** (Grinnell).

**Kern County:** Tehachapi Mts: Cuddy Crk Cyn 2-3 mi E of Frazier Park 11 Apr 86; 23 and 25 Apr 95 (KD).

**Tulare County:** Records for "australis" are likely based on confusion with smaller and lighter *lanceolata* of the region.

**61. *Colias philodice*** Godart. Southwestern population.

**Kern County:** No records.

**Tulare County:** Sierra Nevada: Troy Meadows 14 July 85 (Tony Leigh); 4 mi E of Sherman Pass 8000' 9 June 2001(KD).

**62. *Colias eurytheme*** Boisduval.

**Kern County:** San Joaquin Valley: Bakersfield 1 Apr to 20 Oct 61; yellow male 10 Apr 70 (KD); 20 to 28 July 77; 28 July 88 (all KD); Edison 12 Apr 91; 8 Aug 85 and 20 Sep 84 (all KD); Buttonwillow 2 Sep to 3 Oct 80 (all KD). Sierra Nevada: Weldon 4 to 21 Aug 81 (KD); Kernville 6 June 99 (KD). Greenhorn Mts: Tiger Flat 15 July to 4 Aug 2000 (KD); Old State Rd 2 July 2005 (KD). Piute Mts: 2-4 mi S of Bodfish 8 to 21 May 79 (KD); E side of range W of Sageland 13 Aug 2005 (KD); Erskine Crk 5 June 2005 (KD).

Tehachapi Mts: Tehachapi Mt Park 20 July 88 and 27 Aug 83 (KD); Frazier Park 28 Aug 70 (KD); Mt Pinos 24 Sep 2005 (KD). Mojave Desert: Cinco and Cantil 20 June to 23 Sep 83 (KD) and Koehn Dry Lake 11 to 8 July 92 (KD). Temblor Range: Hwy 58 summit 4 June 87 (KD); Cottonwood Pass 7 Sep 92 (KD).

**Tulare County:** San Joaquin Valley: Tulare 16 Sep 84 (KD); Alpaugh 11 and 23 Aug 84 (KD); Earlimart 23 Aug 84 (KD). Sierra Nevada: Johnsondale 6 and 18 June 83 (KD); Big Meadow (Kern Plateau) 20 June 80 and 2 Aug 85 (both KD); Kennedy Meadows 8 July 88 (KD); Balch Park 29 July 77 (KD); Stony Crk area 26-29 June 87; 4 and 13 Sep 91 (all KD); upper Kern River: Roads End 21 June 82 (KD); Limestone 3 July to 19 Nov 2005 (KD). **Sequoia NP:** Buckeye Flat 17 May 85 (KD); Mineral King Valley 5 July 85 (KD); Monarch Lakes Trail 26 July 85 (KD); Timber Gap Trail 22 July 91 (KD); White Chief Trail 23 July 92 (KD); Farewell Gap Trail 19 July 93 (KD); Giant Forest Village 15 Aug 86 (KD); Crystal Cave 15 Aug 86 (KD); Halstead Meadow and Wolverton 24 July 87 (KD); Dorst Camp 16 July 92 (KD); Lodgepole 16 July 92 (KD).

**63. *Colias harfordii*** Hy. Edwards.

**Kern County:** Tehachapi Mts: Cummings Crk S of Tehachapi 27 Apr and 21 June 90 and 30 Sep 93 (all KD); Tehachapi 7 July 18 (JAC); Tehachapi Mt Park 30 Sep 93 and 26 June 2005 (both KD); top of Water Cyn below Mt Park 5 Sep 2005 (KD); Cameron Rd E of Hwy 58: 22 Sep 88 (KD); Frazier Park 28 May 74; 22 June 79; 15 Apr 93; 11 June and 18 July 88 (all KD); Mt Pinos 14 July 70; 4 July 73; 2 July 86; 22 June 89 and 25 June 93 (all KD); Mil Potrero Rd N side of Mt Pinos 11 June 87 and 25 June 93 (both KD); Lebec 18 July 98 (KD). Piute Mts: near Liebel Peak 21 July 78 (KD); 4 mi. W of Sageland 25 Sep 2009 (KD). Sierra Nevada: Kelso Wash 0.7 mi. SW Sageland 21 June 78 (seen, KD), ravine 1 mi. SW Sageland N of Kelso Valley in desert-montane scrub 11 Apr, 14 and 21 Sep 2011 (several collected, KD).

**Tulare County:** Sierra Nevada: 2 mi W of Johnsondale; larvae collected 19 July 85 (JFE) reared to adult. Adults W of Sherman Pass at Alder Crk 6800' 3 July 2005 (KD & Steve Summers) and 15 July 2006 (KD).

**64. *Colias behrii*** W. H. Edwards.

**Kern County:** Not in county, no suitable habitat.

**Tulare County:** Sierra Nevada: Lower Vidette Lake 27 July 91 (JTE). **Kings Canyon NP:** Bubb's Creek 11,000' 10 Aug 53 (W. McDonald); Upper Bubb's Creek 29 July 54 (CH Ericksen); Bubb's Crk and Kings River 10,500' 9 July 10 (Victor Clemence) and 16 July 15 (JAC); Tyndall Crk 11,000' 29 July 54 (CH Ericksen); Bubb's Crk-Forester Pass Trail 11,500' 25 July 2007 (Steve Fratello). **Sequoia NP:** "Mineral King", no specific data (JHM). Bighorn Plateau 11400' 4 July 2012 (Elise Larsen); John Muir Trail, Forester Pass to Tyndall Crk. 11800' 3 July 2012 (Elise Larsen).

**65. *Zerene cesonia cesonia*** (Stoll).

**Kern County:** Mojave Desert: Koehn Dry Lake at Saltdale 18 Apr 78 (KD); Cinco 24 June 83 (KD); seen in Jawbone Cyn 6 May 78 (KD & C Sekerman); desert scrub on slopes above Hwy 14 Cinco-Cantil 29 Apr

92 (KD); El Paso Mts 20 Apr 92 (JPB) and at Mesquite Springs 11 May 92 (seen, KD). Sierra Nevada: Butterbrecht Peak area 6 May 78 (seen, KD & C Sekerman). Greenhorn Mts: Tiger Flat 30 June 96 (two individuals, Ron Royer). Piute Mts: mouth of Erskine Crk Cyn 6 June 83 (KD). Tehachapi Mts: 20 Aug 62 (Weldon Kirk); Caliente 1 Sep 85 (KMR).

**Tulare County:** Sierra Nevada: There is one record reported from the Kern Plateau, but specific data is not available.

**66. *Zerene eurydice*** (Boisduval).

**Kern County:** Greenhorn Mts: Alder Crk Camp (probable sighting of a female, but could have been *P. sennae*) 23 June 95 (KD). Tehachapi Mts: Tehachapi Mt Park 20 June 62 (seen, KD); "July 63" (Eddie Moran); 4 July 69 and 23 June 74 (KD). Mt Pinos: 4 July 73; 30 June 75 and 28 June 79 (all KD). near Mt Pinos on Mil Potrero Rd 11 June 87; 22 June 89 and 3 July 99 (all KD); Pine Mountain. 28 June 2006 (KD); Mt. Abel 11 June 87 and 24 Aug 2011 (KD); Frazier Park 29 Apr 2006 (KD). Temblor Range: (along Hwy 58) 4 June 87 (KD).

**Tulare County:** Greenhorn Mountains, Baker Ridge 8 July 2001 (seen, Fred Heath). Sierra Nevada: Kern Plateau, Cherry Hill Rd near Poison Meadow 4 mi N of Big Meadow 4 July 2004 (seen, Fred Heath) and 24 July 2004 (male seen, KD); female seen Alder Creek 6800' on Sherman Pass Rd 15 July 2006 (KD & RPM). The only collected individual was a male on the Sherman Pass Rd. 7-8000' 8 July 2000 by Bill Gendron.

**67. *Phoebis sennae marcellina*** (Cramer).

**Kern County:** San Joaquin Valley: Arvin 10 Mar 68 (Ed Sampson); Bakersfield 20 June 83 and E of Bakersfield 22 May 92 (KD); Edison 19 and 20 Sep 84 and 22 May 92 (all KD). Mojave Desert: Cinco-Cantil area, very common in alfalfa fields and on slopes with *Cassia armata* 24 June to 23 Sep 83 (KD); 19 Sep to 9 Oct 84 (KD, thousands); Koehn Dry Lake, Cinco and Cantil 10 April 92 (migration wave arrived while KD there!) 11 to 26 May 92 (KD); 6 mi NE of Mojave 3 Oct 84 (KD). Tehachapi Mts: Paris-Lorraine 29 May to 13 June 92 (KD); Caliente 13 June 92 (KD).

**Tulare County:** Sierra Nevada: Eshom Camp just W of KCNP 9 July 83 (KD); seen Kennedy Meadows 24 July 95 (RPM). Greenhorn Mts: N of Portuguese Pass 25 July 95 (seen, KD).

**68. *Eurema mexicana*** (Boisduval).

**Kern County:** San Joaquin Valley: Lakeview 16 May 66 (Ed Sampson). Piute Mts: Weldon "late May 80" (C. Sekerman); 2.5 mi S of Bodfish 2 June 73 (JPB); 3.5 mi S of Bodfish 18 May 92 (JPB).

**Tulare County:** No records, but expected.

**69. *Abaeis nicippe*** (Cramer).

**Kern County:** Sierra Nevada: upper Kern River N of Kernville at Tulare County line 15 Mar 80 (KD); Walker Pass 8 Aug 77 (KD); E of Walker Pass 18 June 85 (Floyd & June Preston); Weldon 28 Oct and 6 and 20 Nov 2012 (KD & RPM). Greenhorn Mts: Kern Cyn at Richbar 25 Jan 85 (KD). Piute Mts: Bodfish 7 Mar 78 (KD); 1-2 mi S of Bodfish 6 to 21 May 76 and 30 May 79 (both KD). Mojave Desert: Jawbone Cyn 9 Oct 82 (KD); Cinco-Cantil 26 May and 30 July 82 (KD) and thousands in alfalfa fields 24 June to 9 Oct 83 (KD); overwintering adults common 9 Mar 84 (KD) and thousands in alfalfa fields and desert scrub with *Cassia* 19 Sep to 9 Oct 84 (KD); overwintering adults in hills and desert scrub above Hwy 14 (W of Jawbone Cyn (Cinco-Cantil) 21 Nov 97 to 27 Jan 98 (KD); Ridgecrest in residential area on lantana 10 Sep 2013 (KD); San Joaquin Valley: 6 mi S of Greenfield 25 Aug 84 (KD); Edison 19 and 20 Sep 84 (KD); seen Bakersfield 8 Dec 84 (KD).

**Tulare County:** San Joaquin Valley: Tulare 16 Sep 84 (KD). Sierra Nevada: Kennedy Meadows 8 June 85 and 30 June 88 (seen, KD); upper Kern River just N Mountain. Rd. 99 and turnoff to Salmon Falls 2 Oct 2012 (KD) and Sherman Pass Rd. E of Kern River 5400' 2 Oct 2012 (KD).

**70. *Nathalis iole*** Boisduval.

**Kern County:** Tehachapi Mts: Tehachapi Mt Park 12 June 73 (KD); Frazier Park 19 May 73 (KD); Cuddy Cyn E of Frazier Park 29 May 2002 (KD); Lake Of Woods 13 June 2002 (KD); Cuddy Valley 26 Sep 99 (KD). Sierra Nevada: Kelso Valley 21 May 88 (RPM). Weldon 6 Nov 2012 (KD). Mojave Desert: Cinco

24 June 83 and 11 May 92 (KD); Cantil 4 July 83 (KD). San Joaquin Valley: Bakersfield 19 Aug 52 (AR); 7 mi S of Greenfield 22 June 73 (JPB); Edison 25 June 73 (seen, JPB); 22-23 Sep 92 (several, KD).  
**Tulare County:** Sierra Nevada: Freeman Crk 31 July 83 (PN & Gary Pavlik); Kennedy Meadows 24 June 73 (JPB); Fish Crk Meadow 24 June 73 (JPB); upper Kern River at Goldledge Crk 10 Apr 77 (JPB); Cannell Crk just N of Kern County line 22 Oct 2005 (KD).

**FAMILY LYCAENIDAE: COPPERS, HAIRSTREAKS and BLUES:**

**71. *Lycaena arota arota*** (Boisduval).

**Kern County:** Sierra Nevada: S end of Kern Plateau at Pine Flat 6 June 86 (KD). Greenhorn Mts: Kern Cyn at Miracle Hot Springs 1 June 76 (KD); Democrat Hot Springs 23 May 61 and 9 June 71 (KD); S of Tiger Flat 17 June 2001 (KD); Breckenridge Mountain 29 May and 6 June 79 (KD). Piute Mts: 2-3 mi S of Bodfish 8 to 21 May 76 and 30 May 2002 (KD); Hooper Hill 31 May 77 (Mike Smith); Havilah 11 Sep 95 (KD). Tehachapi Mts: Tehachapi Mt Park 20-21 June 62 (JTE); Tehachapi Loop 9 June 90 (KD); Keene 22 May 87; 25 May and 9 June 90 (KD); Frazier Park 1 July 62 (JFE) and 5 July 71 (KD). Temblor Range: Hwy 58 summit 4 June 87 (KD).

**Tulare County:** Sierra Nevada: Badger-Eshom Rd 8-9 July 83 (KD); Sherman Pass Rd at 6800' 24 July 82 and 3 July 2005 (both KD); W of Sherman Pass in ravine 7600' 3 July 2011 (KD); N of Kennedy Meadows 9 July 88 (KD); 5-7 mi S of Kennedy Meadows 26 Aug 83 and 9 Aug 88 (KD); N side Troy Meadows 14 July 85 (JGP); Lamont Meadows 30 Aug 86 (AR); Stony Crk 4 Sep 91 (KD). Greenhorn Mts: Baker Ridge 26 June 81 (KD). **Sequoia NP:** Tokopah Falls Trail 8 Aug 79 (PN); Tokopah Valley 13 Aug 60 (JH Gerdes); 3 mi W of Cabin Cove 5 July 85 (KD); Kern River 0.4 mi. S Limestone Camp 1 Jul 2013 (KD).

**72. *Lycaena cupreus lapidicola*** J. Emmel & Pratt.

**Kern County:** No records or suitable habitat.

**Tulare County:** Monache Meadows 20 Aug 17 (JAC); Big Meadow (Kern Plateau) 13 June 72 (JPB & C Sekerman); 25 June 72; 23 June 73 and 16 June 74 (all JPB) and 6 June 86 (KD); Stony Creek 16 June 2006 (KD). **Kings Canyon NP:** John Muir Trail 10,800-11000' 2 July 2012 (Elise Larsen). **Sequoia NP:** Halstead Meadow 3 July 81 (PN) and 13 June 90 (KD); Lodgepole 11 June 90 (KD); Silver City 9 June 88 (KD); Mineral King Valley 9 June 88 and 19 July 93 (KD); Mineral King at Timber Gap 9000' 22 July 91 (KD) and White Chief Trail at 9500' 23 July 92 (KD); E of Timberline Lake 11100' 5 July 2012 (Elise Larsen); Bighorn Plateau 11400' 4 July 2012 (Elise Larsen).

**73. *Lycaena xanthoides xanthoides*** (Boisduval).

**Kern County:** Tehachapi Mts: Tehachapi 2 and 5 July 18 (JAC) top of Water Cyn below Mt Park 25 July 98 (KD); Tehachapi Mt Park 11 and 18 July 75 (KD); Oak Crk Pass 5 July 78; 9 June 82 and 27 Apr 89 (all KD); Cummings Crk S of Tehachapi 11 June 82 (KD); Caliente Cyn 28 May 92 (KD); Lebec 29 May 2002 (KD); Lake Of Woods 18 July 98 and 3 Aug 99 (KD). Sierra Nevada: Weldon 13 June 99 and 18 June 2005 (KD); Onyx 18 June 2005 (KD); Kernville (town) 14 and 21 June 98 (KD); below Lake Isabella Dam 2 and 7 June 2003 and 10 June 2004 (both KD). Greenhorn Mts: Wofford Heights 24 June 95 (KD); Kernville (E side of Greenhorns) 6 June 99 and 27 May 2000 (KD). Piute Mts: 2-3 mi S of Bodfish 14 to 21 May 76 (KD); Erskine Crk E of Lake Isabella 17 June 2001 and 5 June 2005 (both KD).

**Tulare County:** Sierra Nevada: Freeman Crk 25 July 80 (KD); 16 and 29 July 83 (KD); 2-4 mi S of Johnsondale 18 June 83 and 13 June 74 (both KD); Sherman Pass Rd at Brush Creek 18 June 83 (KD); Chimney Peak Rd/Lamont Peak area 4 and 6 July 83 and 14 June 86 (all KD); Spring S of Kennedy Meadows 10 July 82; 8 June 85 and 30 June 88 (all KD); Kennedy Meadows 30 June, 8 and 29 July 88 (both KD), N of Chimney Peak Ranger Station 22 July 2008 (KD).

**74. *Lycaena editha editha*** (Mead).

**Kern County:** No records.

**Tulare County:** Sierra Nevada: Big Meadow (Kern Plateau) 25 June 72 (JPB). **Sequoia NP:** Mineral King Valley 11 and 24 Aug 80 (PN); 5 July 85 and 22 July 91 (KD); E Timberline Lake 11100' 5 July 2012 (Elise Larsen).

**75a. *Lycaena gorgon gorgon*** (Boisduval).

**Kern County:** Greenhorn Mts: Democrat Hot Springs 9 June 71 (KD); Old State Rd 4-5 mi W of Hwy 155: 20 June 2002 and 2 July 2005 (both KD); Kern Cyn at Lucas Crk 1 June 93 (KD). Piute Mts: 2-4 mi S of Bodfish 14 to 21 May 76 and 30 May 79 (all KD); Hooper Hill 30 May 2002 and 25 May 2004 (both KD). Tehachapi Mts: top of Water Cyn below Mt Park 9 June 96 (KD); E of Tehachapi Loop 17 June 89 (KD); W of Lebec 13 June 98 (KD); Cuddy Cyn E of Frazier Park 11 June 88; 29 June 90 and 18 July 98 (all KD).

**Tulare County:** Sierra Nevada: 2-4 mi S of Johnsondale 20 June 80 and 18 June 83 (KD); 4 mi W of Sherman Pass 21 June 82 (KD); Sherman Pass Rd at Brush Crk 18 June 83; 17 May 84; 25 June 85 and 31 May 86 (all KD); upper Kern River at Roads End 29 June 78 and 21 June 82 (KD); Chico Flat 29 Apr 97 (KD); E of Ant Canyon 9 & 15 May 2007 and 22 May 2012 (KD).

**75b. *Lycaena gorgon micropunctata*** J. Emmel & Pratt.

**Kern County:** Sierra Nevada: S of Kernville (blend zone with nominotypical *gorgon*) 21 June 98 (KD); 23 May to 6 June 99; 27 May 2000 and 22 May 2002 (all KD); Chimney Peak Rd S of Lamont Peak 4 and 6 July 83 (KD); 6 and 13 June 99 (KD & B Gendron); Cyn 1.5 mi S of Butterbrecht Peak 9 May 86 and 1 mi S of Sageland, Kelso Valley 27 May 93 (both KD). Piute Mts: E side of range W of Sageland 24 May 2005 (KD).

**Tulare County:** Sierra Nevada: N of Lamont Peak 4 and 6 July 83 and 14 June 86 (KD).

**76. *Lycaena rubidus monachensis*** (K. Johnson & Balogh).

**Kern County:** There is one doubtful 1950 record for Monolith near Tehachapi.

**Tulare County:** Sierra Nevada: Monache Meadows 2 July to 17 August 17 (JAC). **Sequoia NP:** Mineral King Valley 24 Aug 80 and 18 July 81 (both PN); 5 July 85 and 19 July 93 (both KD); White Chief Trail 9000' 15 Aug 79 (Wayne Dawes) and at 9500' 23 July 92 (KD); S end of Mineral King Valley, Farewell Gap Trail at 8500' 19 July 93 (KD).

**77a. *Lycaena heteronea submaculata*** J. Emmel & Pratt.

**Kern County:** No records.

**Tulare County:** Sierra Nevada: hillside above Stony and Woodward Crks 29 June 87; 16 July 92 and 2 Aug 93 (all KD); Trail to Slide 29 June 87 (KD). **Sequoia NP:** Silver City and 2 mi W of Cabin Cove 5 July 85 (KD); Lodgepole and Tokopah Falls Trail 16 Aug 57 (PAO); 8 Aug 75 (PN); 3 July and 1 Aug 81(PN) and 2 Aug 93 (KD); 13 mi. S of Johnsondale 12 July 2007 (Steve Spomer).

**77b. *Lycaena heteronea clara*** Hy. Edwards.

**Kern County:** Tehachapi Mts: 9 July 18 (JAC); Lebec 1 July 27 (JAC); Frazier Park 5 July 71; 30 June 75; 30 June 77; 22 June 79; 2 July 86 (all KD); Lake Of Woods 18 July and 3 Aug 98; 12 July 2003 (all KD); Cuddy Valley 22 June 89 (KD). Sierra Nevada: South end of Kern Plateau at Pine Flat 5 July 2003 and 15 July 2006 (KD). Piute Mts: Piute Mountain Lookout (= Vista) 11 July 76 (JPB); 4 July 2000 (KD); Piute Mt Rd 4.5 to 7 mi SE above Bodfish-Havilah rd summit 4 and 17 July 2000 and 5 July 2002 (KD).

**Tulare County:** Sierra Nevada: S end of Kern Plateau at Pine Flat 5 July 2003 and 15 July 2006 (KD). (Pine Flat is on Kern/Tulare County line). Identification with *clara* is tentative.

**78. *Lycaena helloides helloides*** (Boisduval).

**Kern County:** San Joaquin Valley: SW of Lamont 12 Sep 86 (KD); S of Bear Mt Rd on Adobe Rd 15 Sep 89 (common, KD); Hart Park Lake nr Bakersfield 5 Oct 82 (KD); Poso Crk 8 mi N of Oildale 26 May 81 (KD); Taft Hwy W of Old River 20 Aug 82 (KD); Lost Hills 11 Aug 84 (KD); Buttonwillow 12 Sep 80 (KD). Tehachapi Mts: Caliente and Caliente Cyn 22 Sep 85 and 14 July 92 (KD); Frazier Park 5 July 71 (KD); Lake Of Woods 16 July 93 (KD). Kern River Valley (Sierra Nevada): Weldon 13 to 14 June 81 (R Leuschener); 4 and 21 Aug 81 (KD); Onyx 11 Apr to 13 Nov 2005 (KD); Wofford Heights 8 July 2001 (KD). Greenhorn Mts: Glennville 4 Aug 97 (KD). Piute Mts: Havilah Knolls 29 May 79 (KD). Mojave Desert: Cinco 23 Sep 83 and 13 Aug 87 (KD); Koehn Dry Lake at Cantil 27 Sep 84 (KD).

**Tulare County:** San Joaquin Valley: NW of Pixley 22 Aug 87. Sierra Nevada: California Hot Springs 30 Aug 62 (Michael Davenport); Big Meadow (Kern Plateau) 16 June 74 (JPB); Kennedy Meadows 26 May

2001 (KD); upper Kern River at Brush Crk 22 Oct 97 and 28 Sep 2011 (KD). Greenhorn Mts: N end Linn's Valley 4 and 11 Aug 97 (KD). **Sequoia NP:** Halstead Meadow 15 Sep 87 (KD); Crystal Cave "July, 1943" (Tom & H Blevins).

**79. *Lycaena nivalis nivalis*** (Boisduval).

**Kern County:** No records.

**Tulare County:** Sierra Nevada: hillside above Stony and Woodward Crks 29 June 87; 13 June 90; 16 July 92 and 2 Aug 93 (all KD); Big Meadow (nr KCNP) 23 June 97 (KD); Quaking Aspen 10 Aug 2002 (KD, near southern limit of range); 2 Jun 2013 (KD); Boulder Crk E of Big Meadow (nr KCNP) 28 June 2003 (KD).

**Sequoia NP:** Mineral King: Mineral King Valley 5 July 85 and 19 July 93 (KD); S end of Mineral King Valley 19 July 93 (KD); Farewell Gap Trail 28 Aug 83 (PN); Timber Gap Trail 11 Sep 83 (PN); Monarch Lakes Trail 26 July 85 (KD); 2 mi E of Lodgepole 16 Aug 57 (PAO); Alta Meadow 18 July 60 (JH Gerdes); Tokopah Falls Trail 8 Aug 75 and 19 July 80 (both PN); Wolverton 24 July 87 (KD).

**80. *Lycaena mariposa mariposa*** (Reakirt).

**Kern County:** No records.

**Tulare County: Sequoia NP:** Mineral King Valley 8000-9000' "July" (no specific dates, JHM).

**81. *Habrodais grunus grunus*** (Boisduval).

**Kern County:** Tehachapi Mts: Tehachapi Mt Park 20-21 July 62 (JTE); 20 Aug 62 (KD); 13 July 77; 24 July 79; 25 July and 1 Aug 98; 26 Sep 2004 (all KD); 1 mi W of Frazier Park 3 and 6 July 69 (JPB); 11 July 70 and 19 July 75 (both JPB). Sierra Nevada: S end of Kern Plateau at Pine Flat 5 July 2003 and 15 July 2006 (KD). Greenhorn Mts: Black Mountain 13 July 73 (JPB); Cedar Crk 15 July 92 (KD); Old State Rd 2 July 2005 (seen, KD). Piute Mts: E slope of range 11 July 76 (JPB).

**Tulare County:** Sierra Nevada: Chimney Peak Rd N side of Lamont Peak 4 and 6 July 83 (KD); 16 Aug 85 (KD); 5 mi S of Freeman Crk 16 and 29 July 83 (KD); Sherman Pass Rd at Alder Crk 6800' 5 Aug 82 (KD) (population destroyed in 2002 fire); lower Alder Creek Crossing at Cherry Hill Rd. 1 Jul 2012 (KD); Balch Park 29 July 77 (KD); Badger/Eshom area 9-10 July 83 (KD); summit of Nine Mile Cyn Rd 17 July 2001 (JPB); Mineral King Rd MP 5: 12 Aug 92 (KD). Greenhorn Mts: Portuguese Pass 26 June and 11 July 81 (KD); Baker Lookout 7753' 24 July 95 and 25 June 97 (KD). **Sequoia NP:** Redwood Crk 5 July 85 (KD); Potwisha Camp 27 July 85 (KD); Crystal Cave 27 June 87 (KD).

**82. *Atlides halesus corcorani*** Clench.

**Kern County:** San Joaquin Valley: Bakersfield 7 July 61; 10 to 15 Mar 77; 6 and 8 Mar 82 and 3 Mar 88 (all KD); Kern River at Hart Park 7 June 76; 21 June 79; 15 Mar 81 and 1 Oct 82 (all KD). Sierra Nevada: Weldon 20 June 85 and 6 Nov 2012 (KD); Canebrake 13 Nov 2005 (KD). Greenhorn Mts: Shirley Meadows 4 July 73 (JPB); Sawmill Rd 2 June 2002 (KD); Kern Cyn at Democrat Hot Springs 30 Mar 76 (JPB); Richbar 10 Apr 72 and 2 Oct 2005 (KD). Piute Mts: Piute Mountain Rd at 5500' 14 May 84 (KD). Tehachapi Mts: Tehachapi Mt Park 30 July 81 (KD); Caliente and Caliente Cyn 23 Aug and 2 Oct 73; 22 Sep to 22 Oct 88; 15 Sep 89; 10 Oct 95 and 4 Sep 99 (all KD); Temblor Range: Hwy 58 summit 27 Mar 77 (JPB); E of summit 30 Mar and 7 Apr 80 (KD); 23 May 95 (KD); 9 Sep 2001 (M Smith). Mojave Desert: El Paso Mts: Last Chance Cyn 13 Oct 73 (JPB).

**Tulare County:** Sierra Nevada: Holey Meadow 27 June 2008 (Steve Summers); California Hot Springs 30 Aug 62 (Michael Davenport); Gateway to Sequoia 18 Apr 86 (KD); upper Kern River at Limestone 29 Apr 97 (KD); Fairview 23 Oct 2002 (KD); S of Corral Crk 5 and 23 Oct 2002; 9 Oct 2005 (all KD). **Sequoia NP:** Ash Mt 17 Apr 59 and 24 May 62 (both RC Burns); Potwisha 24 Sep 77 (PN); Mineral King Rd at 5000' (no date, JHM).

**83. *Chlorostrymon simaethis sarita*** (Skinner).

**Kern County:** Mojave Desert: Koehn Dry Lake at Cantil 11 (seven individuals, KD) and 16 May 92 (five individuals, KD, Al & Tom Rubbert). Sierra Nevada: Sageland, Kelso Valley 24 May 92 (one individual, Larry Muller).

**Tulare County:** No records. Could stray into south end of county.

**84. *Satyrium behrii behrii*** (W. H. Edwards).

**Kern County:** Sierra Nevada: Walker Pass 4 June 2004 (KD); 1 mi S of Sageland N of Kelso Valley 14 June 78 and 14 June 80; 27 May 93 (both KD). Tehachapi Mts: E slope of range 4.7 mi E of Oak Crk Pass off Willow Springs Rd 22 May to 6 June 95 and 13 May 2001 (KD); Frazier Park 11 June 87 and 29 June 90 (both KD).

**Tulare County:** Sierra Nevada: N side of Lamont Peak 4 and 6 July 83; and 20 June 92 (all KD); N of Kennedy Meadows 10 July 82 (KD & AR); Bald Mt Lookout 9400' 10 July 82 (KD & AR); 5 Aug 82 and 21 June 85 (KD); 2 mi W of Bald Mt 6 July 92 (KD); 5 to 7 mi S of Kennedy Meadows 10 July 82 (KD & AR); Kennedy Meadows 8 and 29 July 88 (KD); Lloyd Meadows 4 July 66 (KCH); Freeman Crk 24 July 83 (PN & Gary Pavlik).

**85a. *Satyrium californica californica*** (W. H. Edwards).

**Kern County:** Tehachapi Mts: Tehachapi Loop and Keene 17 May 87 (KD); Hart Flat 14 May 90 (KD); N side of Mt Pinos 22 June 89 (KD). Greenhorn Mts: Hwy 155 between Glennville and Cedar Crk 11 July 75 (KD); Old State Rd at 4500' 2 July 2005 (KD); S of Tiger Flat 17 June 2001 (KD). Piute Mts: Piute Mt Rd SE above Bodfish/Havilah summit 19 June 81 and 9 July 83 (KD); Havilah 7 June 2003 (KD). Temblor Range: Hwy 58 summit 13 May and 4 Jun 87 (KD).

**Tulare County:** Sierra Nevada: 4 mi E of White River 15 June 57 (PAO); 4 mi S of Johnsondale 21 June 82 and 21 May 86 (KD); Needlerock 25 June 82 (KD); Sherman Pass Rd at 6800' 24 July 82 and 8 July 88 (KD); at lower elevations at 4600' to 6000' 20 June 80, 25 June 81 and 18 June 83 (all KD); Lamont Peak area 4 and 6 July 83 (KD); Roads End 14 May 72 (KD); Badger-Eshom Rd 9 and 10 July 83 (KD); Balch Park 29 July 77 (KD); Camp Nelson 13 July 83 (KD). **Sequoia NP:** Potwisha 25 May 89 (KD); Mineral King Rd at Redwood Crk 5 July 85 (KD).

**85b. *Satyrium californica* near *cygnus*** (W. H. Edwards).

**Kern County:** No records.

**Tulare County:** Spring S of Kennedy Meadows 30 June 92 (common, KD); 10 July 82 (scarce, KD & AR); Kennedy Meadows 8 and 29 July 88 (KD).

**86a. *Satyrium sylvinus sylvinus*** (Boisduval).

**Kern County:** Greenhorn Mts: Poso Crk 5 mi N of Glennville 26 June 96 and 10 July 98 (KD); Glennville 24 and 26 June 96 (KD).

**Tulare County:** Sierra Nevada: Freeman Crk 16 and 25 July 80 (KD); 25 June 81 (KD); Johnsondale 20 June 80 and 6 June 83 (KD); Sherman Pass Rd at 6800' 24 July and 5 Aug 82; 9 July 2005 (KD); Kennedy Meadows 25 June, 10 and 29 July 82 (KD); Spring 7 mi. S of Kennedy Meadows 22 July 2008 (KD); Lloyd Meadows 4 July 66 (KCH); Stony Crk 4 Sep 91 and 2 Aug 93 (KD); Mineral King Rd MP 5: 15 June 93 (KD). **Sequoia NP:** Mineral King Rd 5 mi below Cabin Cove 5 July 85 (KD).

**86b. *Satyrium sylvinus desertorum*** (Boisduval).

**Kern County:** Tehachapi Mts: Tehachapi 9 July 18 (JAC); Oak Crk Pass 3 and 7 July 67 (KCH & N LaDue) and 5 July 78 (KD); Cummings Crk 9 and 11 June 82 (KD); One form "dryope" and many more tailed individuals at Tehachapi Mt Park 14 Aug 85 (KD); Tehachapi Crk nr Tehachapi below railroad tracks 17 June 89 (KD); Keene 5 June 86 (KD) Paris-Lorraine 28 May 92 (KD). Sierra Nevada: Kernville 14 and 21 June 98 (KD); Canebrake 18 June 2005 (KD); Sageland. Kelso Crk 14 June 80 (KD). Greenhorn Mts: Sawmill Rd 2 June 2002 (KD); Wofford Heights 24 June 95 (KD); Kern Cyn at Democrat Hot Springs 23 June 63 (KD); Lucas Crk E of Richbar 21 June 82 (KD). Piute Mts: Havilah 29 May 79 (KD).

**Tulare County:** San Joaquin Valley along western edge of Sierra Nevada: Springville 30 May 87 (KD); Tule River at Porterville 26 May 88 (KD); Kaweah River off Dry Crk Rd 25 May 89 and Elderwood 26 May 94 (both KD); upper Kern River at Roads End 14 May 72 and 21 June 82 (KD).

**86c. *Satyrium sylvinus dryope*** (W. H. Edwards).

**Kern County:** Tehachapi Mts: N slope of Mt Pinos (Mil Potrero Hwy) 22 June 89 and 29 June 90 (KD); Cuddy Crk at Frazier Park 22 June 89 (KD); Lake Of Woods 4 July 77 (Bruce O'Hara); 18 July to 28 Aug 98 (KD).

**Tulare County:** Not in county, a subspecies of the Coast Ranges.

**87a. *Satyrium auretorum auretorum*** (Boisduval).

**Kern County:** Temblor Range: Thousands seen E of Hwy 58 summit on oaks or visiting horehound in oak/juniper woodland 13 May to 4 June 87 (KD); Cottonwood Pass 12 May 94 (KD).

**Tulare County:** Sierra Nevada: Balch Park 29 July 77(KD); Sherman Pass Rd at Alder Crk 6800' (probably a blend zone with *spadix*) 5 Aug 82 and 6 Sep 99 (both KD); Sherman Pass Rd at 4200 to 4500' 8 July 88 and 6 July 2003 (both KD). **Sequoia NP:** Ash Mountain 1700' 17 May 85 (KD).

**87b. *Satyrium auretorum spadix*** (Hy. Edwards).

**Kern County:** Tehachapi Mts: Tehachapi Mt Park 11 July 75 (KD); Keene/Tehachapi Loop area 11 June 82 (KD); 23 and 27 May 88 (KD); Hart Flat 25 May 90 (KD); Cuddy Crk 2 mi E of Frazier Park 11 June 87; 3 July 99 and 29 June 90 (all KD). Greenhorn Mts: E side Alta Sierra 4 July 74; 6 July 75 and 20 June 87 (all KD); Black Mountain summit 13 July 73 (JPB); Old State Rd 19 June 93 (KD); hundreds 8 July 2001 and 3 July 2004 (KD).

**Tulare County:** Sierra Nevada: N slope Lamont Peak 4 July 83 (KD); summit of Nine Mile Cyn Rd 12 July 99 (JPB); Upper Kern River-Ant Cyn 9 May 2007 (KD). Greenhorn Mts: 3-4 mi E of White River 14-15 June 57 (PAO).

**88. *Satyrium tetra*** (W. H. Edwards).

**Kern County:** Sierra Nevada: Walker Pass 4 June 2004 (KD); Kernville 2 July 2005 (KD). Greenhorn Mts: Wofford Heights 24 June 95 (KD); E of Alta Sierra on Hwy 155: 20 June 87 (KD); Old State Rd 3500-5000' 20 June 87; 19 June 93; 7 July 2001; 3 July 2004 and 2 July 2005 (all KD). Piute Mts: Piute Mt Rd 2-4 mi above Bodfish-Havilah Rd summit 19 June 81 and 8 July 82 (both KD); Havilah 10 June 85 (KD). Tehachapi Mts: Tehachapi Loop 6 July 90 (KD).

**Tulare County:** Sierra Nevada: Badger/Eshom Rd 8-9 July 83 (KD); 2-4 mi S of Johnsondale 29 June 78 (KD); Lloyd Meadows 4 July 66 (KCH); Sherman Pass Rd at 4600 to 6000' 25 June 85 (KD); 20 June 92 (KD); 4 July 2000 and 9 June 2001 (KD); road to Freeman Crk 16 and 29 July 83 (KD); upper Kern River at Corral Crk 4 June 2003 (KD); Calkin's Flat 3 July 2005 (KD & Steve Summers). Greenhorn Mts: Baker Ridge Lookout 24 July 95 and 3 July 2004 (KD). **Sequoia NP:** Generals Hwy at Amphitheater Point 16 July 92 and 2 Aug 93 (KD); Mineral King Rd MP 5 to 12 (inside and outside Park) 15 June and 19 July 93 (KD).

**89a. *Satyrium saepium saepium*** (Boisduval).

**Kern County:** Not in county. Species represented by other subspecies.

**Tulare County:** Sierra Nevada: Balch Park 29 July 77 (KD); Sherman Pass Rd 4500-9000' 20 June and 8 Aug 80 (KD); Freeman Crk 20 June 80 (KD); 16 and 29 July 83 (KD); Badger-Eshom Rd 9-10 July 83 (KD); Kennedy Meadows 10 July 82 (KD & AR); 8 June 85 (KD) above Tule River E of Coffee Camp 26 May 97 (KD); Mineral King Rd below SNP 15 June and 19 July 93 (KD). **Sequoia NP:** Ash Mountain 25 May 89 (KD), Mineral King Rd above Park entrance 19 July 93 (KD).

**Note:** John A. Comstock illustrated "*fulvescens*" from Monache Meadows collected 17 and 23 Aug 1917 (JAC). Since *fulvescens* is likely a synonym of *chalcis* and newly described *subaridum* is to the east and nominotypical *saepium* occurs just to the west, I refrain from assigning those to subspecies.

**89b. *Satyrium saepium chalcis*** (W. H. Edwards).

**Kern County:** Sierra Nevada: S of Lamont Peak 4 and 6 July 83 (KD); Pine Flat 2 Aug 85 (KD); Lake Isabella 7 May 96; Weldon 20 June 85 and Kernville 6 June 99 (all KD). Greenhorn Mts: Hwy 155 NW of Cedar Crk 23 and 25 June 95 (KD); Sunday Peak 8295' 11 June 96 (KD); 2 mi S of Tiger Flat 17 June 2001 (KD); Old State Rd, hundreds 8 July 2001 and 2 July 2005 both (KD); Democrat Hot Springs 23 June 63 (KD); Old Kern Cyn Rd 1 mi E of main Hwy 1 July 2000 (KD). Piute Mts: 2 mi S of Bodfish 8 to 21 May 76 (KD); Erskine Crk Cyn 20 and 23 May 2001(KD); Havilah 7 June 2003 (KD). Tehachapi Mts: top of Water Cyn below Tehachapi Mt Park 9 June 96 and 26 June 2005 (both KD); Tehachapi Loop 9 June 90 (KD); Hart Flat 25 May 90 (KD); Keene 22 May 87 (KD); Frazier Park 5 July 71 (KD); Cuddy Cyn E of

Frazier Park 11 June 87 and 29 June 90 (KD). Mojave Desert: A *saepium* taken in an alfalfa field at Cinco 24 June 83 could be this ssp.

**Tulare County:** Sierra Nevada: upper Kern River at Roads End 14 May 72 and 21 June 82 (KD); Fairview and Calkin's Flat 12 June 99 (KD) and 3 July 2005 (KD & S Summers); Lamont Peak area 4 and 6 July 83; 16 Aug 85 (all KD); Spring S of Kennedy Meadows 10 July 82 (KD & AR) and 8 June 85 (KD). Greenhorn Mts: Portuguese Pass 26 June 81 (KD); Baker Lookout 11 and 26 June 81; 24 July 82 and 24 July 95 (all KD).

**89c. *Satyrium saepium subaridum*** J. Emmel, T. Emmel & Mattoon.

**Kern County:** Sierra Nevada: Walker Pass 8 Aug 77 (KD); Indian Wells Cyn 20 June 2002 (SS, seen). Mojave Desert: A single individual taken in alfalfa field at Cinco 24 June 83 (KD), but may be referable to *chalcis*.

**Tulare County:** 3-4 miles N of Chimney Peak Ranger Station 22 Jul 2008 (KD); Bald Mountain. Lookout, 9350'; 24 July 82; 21 June 85; 14 Aug 2010 (KD) and 21 Aug 2010 (Jim Snyder).

**90a. *Callophrys dumetorum*** (Boisduval) Southern Sierra Nevada-Tehachapi Mountains

**Kern County:** Tehachapi Mts: Caliente Cyn E of Caliente 20 and 25 Mar 88 (blend zone?, KD); Bealville on tunnel hilltop 12 Apr 91 (KD); Cuddy Crk at Frazier Park 14 Apr 79 (Glenn Gorelich & AOS); Cummings Crk S of Tehachapi 21 Apr 90 (KD); 4.7 mi S of Oak Creek Pass off Willow Springs Rd 28 Apr 98 (KD). Sierra Nevada: Greenhorn Mts: Kern Cyn: Richbar 24 Mar 79 (KD); 2 mi, S of Kernville 21 Apr 2006 (KD).

**Tulare County: Sequoia NP:** Ash Mountain 17 Apr 59 (RC Burns); W of Potwisha Camp 17 May 85; 18 Apr 86 and 13 Apr 90 (all KD); Buckeye Flat 18 Apr 86 (KD). Records from the upper Kern River are now listed under *superperplexa*.

**90b. *Callophrys dumetorum*** Tulare County west slope of Sierra Nevada segregate with well developed spotting below.

**Note:** Referred to as "*pseudodumetorum*" J. Emmel, T. Emmel & Mattoon in the original publication.

**Kern County:** Similar phenotypes occur within nominotypical *perplexa* populations, or in southern Sierra Nevada where the species blends into *superperplexa*. See records under *superperplexa*. Some Lotus feeding populations may occur in the Kern River drainage.

**Tulare County:** Sierra Nevada: Tule River Jct Hwy 190 and Camp Wishon Rd and vicinity 30 and 31 Mar and 6 Apr 89 (all KD); 3.5 mi E of Coffee Camp 6 Apr 89 (KD) and 2 mi W of Camp Wishon 20 Apr 93 (KD); Mineral King Rd at 3000' 27 Mar 2004 (KD).

**90c. *Callophrys dumetorum*** near *superperplexa* J. Emmel, T. Emmel & Mattoon.

**Kern County:** Many individuals taken in Sand Cyn on E side of the Sierra Nevada 2 mi W of Hwy 14 just S of Inyo County line 14 Apr 79 by Glenn Gorelick & AOS resemble this subspecies. Hill near Butterbredt Peak 5000' 29 Mar 86 (KD); Canyon and wash 13.5 mi. S of Hwy. 155 at Weldon in Kelso Valley 13 Apr 84, 29 Mar 86 and 1 Apr 2000 (KD); 1 mi. E of Sageland (Kelso Valley) 7 Mar 94, 1 Apr 2000 and 5 Apr 2005 (KD); Chimney Peak Rd. 1 air mi. S. of Lamont Peak 7 Apr 97, 28 and 31 Mar 2003 (KD); Kern River Cyn: Miracle Hot Springs along Clear Crk. 11 Mar 81 and 28 Mar 87 (KD). Piute Mts: Erskine Creek Cyn 20 and 28 Mar 87 (KD). Tehachapi Mountains 20 and 25 Mar 88 (KD). These records may represent a blend zone between *dumetorum* and *superperplexa*.

**Tulare County:** Sierra Nevada: Chimney Peak Rd N side of Lamont Peak 22 May 82 and 10 Apr 85 (KD). A green *Callophrys* taken at 8,000' W of Sherman Pass 21 June 82 (KD) may be this subspecies or *Callophrys sheridanii lemberti*; and another taken at the Aler Creek Crossing on the Sherman Pass Rd. at 6,800' 2 June 2013 (KD) may be this subspecies or *Callophrys sheridanii lemberti*. Sherman Pass Rd. 4600' 2 and 14 Apr 87 (KD); Brush Crk. 17 May 84 (KD); Goldledge Creek 24 Apr 81 and 2 Apr 87 (KD); S of Corral Creek 15 Mar 2005 and 16 Mar 2006 (KD); E. of Ant Canyon 6 to 21 Apr 2006 (KD, many specimens appear similar to *C. sheridanii*); Upper Kern River 0.6 mi. N of Roads End 2 and 14 Apr 87 (KD); 9 Mar 88 (KD), 23 Mar 2006 (KD); Fairview Camp 23 Mar 2006 (KD).

**91. *Callophrys sheridanii lemberti*** Tilden.

**Kern County:** No definite records, but it is possible that some regional records of *Callophrys perplexa* may be this species.

**Tulare County:** Sierra Nevada: Reported from Kennedy Meadows area 23 May 70 (John Lane); a possible record from W of Sherman Pass at 8000' 21 June 82 (worn individual which could be *dumetorum*, KD); definite records from Bald Mountain Lookout 9400' 12 and 20 June 99 (KD); 5 June 2002 (JPB). **Sequoia NP:** Mineral King (no dates, JHM).

**92. *Callophrys nelsoni nelsoni*** (Boisduval).

**Kern County:** Greenhorn Mts: Cedar Crk 6 June 77 (KD); Alta Sierra 20 June 87 and 25 June 95 (KD); Greenhorn Crest nr Tiger Flat 20 to 30 June 87 (KD); 10-24 June 96 and 17 June 2001 (KD).

**Tulare County:** Sierra Nevada: Sherman Pass Rd at Alder Crk 6800' 30 May 96; 24 July 82 and 18 June 83 (all KD); Alder Crk Crossing on Cherry Hill Rd. and Sherman Pass Rd. along Big Meadow Crk. at 6000' 22 May 2012, KD-reappearing after 2002 fire destroyed the population); Freeman Crk 25 July 80 (KD); Eshom Camp 10 July 83 (KD); Balch Park 29 July 77 and 25 June 2005 (KD); Quaking Aspen area 30 May 87 (KD); Stony Crk Camp W to Slide 27-29 June 87 (KD); Jack Flat Camp 26 May 88 (KD); Camp Wishon 26 May 97 (KD); Greenhorn Mts: Crest area N of Portuguese Pass 26 June 81; 10 to 24 June 96 and 25 June 97 (KD); Baker Ridge 11 June 81 (KD). **Sequoia NP:** Mineral King Rd: Redwood Crk 5 July 85 (KD); Silver City 5 July 85 (KD); Lodgepole and Tokopah Falls Trail 2 Aug 93 (KD). **Kings Canyon NP:** Buena Vista Peak Trailhead 23 June 89 (KD).

**93. *Callophrys muiri*** (Hy. Edwards). (Inner Coast Range Juniper feeding subspecies).

**Kern County:** Temblor Range: Cottonwood Pass 10 Apr 87 (James R Mori & Ralph Wells); 20 Apr 87 (KD); 4 Mar (RPM) and 19 Mar 88; 20 Apr 98 and 21 Apr 99 (all KD).

**Tulare County:** Not in county.

**94a. *Callophrys siva juniperaria*** (J. A. Comstock).

**Kern County:** Piute Mts: Bodfish 8 to 27 Apr and 8 May 76 (KD); 2-3 mi S of Bodfish 14-30 May 76 (KD); Piute Mt Rd above Bodfish-Havilah road summit 21 May 79 and 4 June 2004 (KD). Greenhorn Mountains: Old State Rd 3000-4000' 9 May 81 and 5 May 84 (KD). Sierra Nevada: Butterbrecht Peak and ridges to the west 20 Apr 77; 7 May 78; 30 July 82 and 29 Apr 92 and 29 Apr 96 (all KD). 2 mi NW of Birdspring Pass 14 and 22 Apr 2000 (KD); 28 Apr 2012 (KD and Paul Levine). Tehachapi Mts: 7 mi E of Caliente (Caliente Cyn) 25 Mar 88 (KD); E side of range 4.7 mi SE of Oak Crk Pass 19 May 99 and 13 May 2001 (KD); Cuddy Crk E of Frazier Park 11 June 87 and 28 Mar 2004 (KD); Lebec 29 May 2002 (KD).

**Tulare County:** Sierra Nevada: upper Kern River 0.6 to 0.7 mi N of Hospital Flat (south of Corral Creek) 14 and 20 Apr 2002 (KD).

**94b. *Callophrys siva mansfieldi*** Tilden.

**Kern County:** Temblor Range: Hwy 58 W of McKittrick: 20 Mar 72 (JPB & JR Mori); scarce 30 Mar and 7 and 17 Apr 80 (KD) and 21 Aug 83 (PN), taken following heavy summer rains; hundreds in juniper woodland on horehound along road 13 May and 4 June 87 (KD); several 25 Apr 92 (KD); Cottonwood Pass 10 Apr 87 (James R Mori & Ralph Wells). One specimen was taken at Cottonwood Pass among numerous *Callophrys muiri*.

**Tulare County:** This coastal subspecies not in county.

**94c. *Callophrys siva*** near *chalcosiva* Clench.

Formerly known as *Callophrys barryi* (K. Johnson).

**Kern County:** No records but may occur at S end of Kern Plateau or on Owens Peak.

**Tulare County:** Sierra Nevada: Pine Mt area N of Kennedy Meadows 3 July 78 (KD); 25 June 82 (KD); 10 July 82 (KD & AR); 8 July 88 (KD); Spring S of Kennedy Meadows 31 May 77 (M Smith); 25 June 82; 10 July 82 (KD & AR); 8 June 85 (KD); 30 June and 8 July 88 (KD); N of Chimney Peak Ranger Station 18 June 2005 (KD); Fish Crk-Pine Mountain area 18 June 2007 (common, KD); Chimney Peak Rd N side of

Lamont Peak 4 July 83 (KD); below Bald Mountain Lookout at 9300' on *Juniperus occidentalis* 20 June 92 (KD).

**95. *Callophrys spinetorum spinetorum*** (Hewitson).

**Kern County:** San Joaquin Valley: Stray taken at Hart Park near Bakersfield 17 Sep 73 (Gary File). Tehachapi Mts: Tehachapi Mt Park, 7 Sep 70; 30 Apr and 1 July 76 and common at mud 30 July 81 (all KD); hilltop SE of Sand Cyn 6 May 2002 (KD); Cameron Rd SW of Hwy 58: 15 Sep 2001 (KD); 5 to 12 mi E of Caliente 6 to 16 Sep 73; 25 Aug and 15 Sep 74; 14 Sep 75 and 29 Aug 76 (all JPB). Sierra Nevada: W of Homestead off Hwy 14: 2 Sep 89 (JGP). Greenhorn Mts: Alta Sierra 13 July 73 (JPB); Old State Rd at 3500' 22 Aug 2003 (KD); E slope Piute Mts: W of Sageland 3 May 2005 (KD); Havilah 31 Aug 75 (JPB).

**Tulare County:** Sierra Nevada: Spring S of Kennedy Meadows 25 June 82 (KD); 10 July 82 (KD & AR); 25 May 85 (KD) and 14 July 85 (JGP); 3 mi W of Sherman Pass 5 July 86 and 3 July 2005 (KD); N side of Lamont Peak 20 June 92 (KD); upper Kern River 3 mi N of Riverkern 8 Sep 74 (JPB); Goldledge Camp 22 May 75 (JPB); hilltop E of Goldledge 19 Mar 96 (KD); Hospital Flat 25 Aug 89 (KD). **Sequoia NP:** Mineral King Rd:6000' "July 1979" (JHM); Redwood Crk 5 July 85 (KD).

**96. *Callophrys augustinus iroides*** (Boisduval).

**Kern County:** Tehachapi Mts: Cummings Crk 7 mi S of Tehachapi 27 Apr 90 (KD); Caliente Cyn 25 Mar 2000 (KD); Frazier Park 28 Mar to 28 Apr 2004 (KD); N side of Mt Pinos 22 June 89 (KD). Sierra Nevada: S of Lamont Peak 21 Mar 2003 (KD). Greenhorn Mts: S of Tiger Flat 20 June 87 and 17 June 2001 (KD); Hwy 155 NW of Cedar Crk 23 and 25 June 95 (KD); Kern Cyn at Lucas Crk 19 Mar 2001 (KD); Breckenridge Mountain at Squirrel Meadow 10 June 85 (KD). Piute Mts: Erskine Crk Cyn 14 Apr 87 (KD); 2 mi S of Bodfish 3 Apr to 8 May 76 (KD). 2 mi. SW of Birdspring Pass in desert habitat 28 Apr 2012 (KD). Temblor Range: Hwy 58 W of McKittrick 30 Mar to 17 Apr 80 (KD).

**Tulare County:** Sierra Nevada: Sherman Pass Rd 4500-9000' 17 May 84; 21 June and 24 July 82; 18 June 83 (all KD); Balch Park 26 June 72 and 25 June 2005 (KD); Big Meadow (Kern Plateau) 20 June 80 and 6 June 86 (both KD); Lamont Peak area 22 May and 25 June 82 (both KD); upper Kern River at Roads End 2 Apr 87 and 21 Mar 99 (KD); Stony Crk Camp 27-29 June 87 (KD); Fairview 21 Feb 2002 (KD); E of Coffee Camp 31 Mar 89 (KD); lower Mineral King Rd 18 Mar 92 (KD). **Sequoia NP:** Buckeye Flat 17 May 85 and 18 Apr 86 (KD); Potwisha 28 Feb and 18 Apr 86; 25 May 89 (KD); Mineral King Valley; Timber Gap Trail 8200' 22 July 91; Redwood Crk, and Silver City 5 July 85 (all KD); Ash Mountain 28 Feb and 18 Apr 86; and 25 May 89 (all KD); Crystal Cave 27 June 87 (KD); Wolverton 24 July 87 (KD); Tokopah Falls Trail 12 June 90 (KD). **Kings Canyon NP:** Buena Vista Peak 28 June 87 (KD). Kings Cyn. Overlook 23 June 89 (KD).

**97. *Callophrys mossii windi*** (Clench).

**Kern County:** No records.

**Tulare County:** Larvae collected on Sedum along Tule River drainage E of Coffee Camp near turnout to Camp Wishon 28 May 88 and reared to adult (JPB).

**98. *Callophrys eryphon eryphon*** (Boisduval).

**Kern County:** Sierra Nevada: Cannell VABM nr Pine Flat, S end of Kern Plateau 9 June 94 (KD & RPM); Pine Flat 10 June 2006 (KD). Greenhorn Mts: Alta Sierra 4 July 74 (KD); N of Shirley Meadows 6 July 75 and 13 June 77 (KD); N of Tiger Flat 20 June 87; 10 to 24 June 96 and 4 July 95 (all KD); Breckenridge Mountain at edge of Squirrel Meadow 10 June 85 (KD). Piute Mts: Piute Mt Rd at high elevation N of Piute Peak 19 June 81 and 8 July 82 (both KD).

**Tulare County:** Sierra Nevada: Balch Park 26 June 72 (KD); Big Meadow along Salmon Crk (Kern Plateau) 15 June 76 and 20 June 80 (both KD); Freeman Crk 12 and 25 June 81 (KD); Sherman Pass area 25 June 81; 21 June and 10 July 82; and 4 July 2004 and 22 May 2012 (all KD); Sherman Pass Rd at Alder Crk 6800' 12 June 99 (KD); Stony Crk 27 June 87 and 11 to 12 June 90 (KD); Pine Mountain area 10 July 82 (KD); Spring S of Kennedy Meadows 31 May 77 (M Smith); 25 June and 10 July 82 (KD); Jack Flat 28 Apr 89 (KD). Greenhorn Mts: Portuguese Pass 10 to 24 June 96 and 2 July 2005 (KD); N end of range W of Johnsondale 25 June 97 (KD); nr Baker Ridge 11 June 81 (KD); Poison Meadow S of Tobias Peak 2

July 2005 (KD). **Sequoia NP:** Little Baldy Saddle 9 June 60 (JH Gerdes); Tokopah Falls Trail 12 June 90 (KD).

**99. *Strymon melinus pudica*** (Hy. Edwards).

**Kern County:** San Joaquin Valley: Bakersfield 21 Mar to 20 Sep 62 (KD); Hart Park 17 Sep 82 (KD); Greenfield 7 and 30 Aug 79 (KD); Oildale 28 May 91 (KD). Tehachapi Mts: Tehachapi Mt Park and Water Cyn 5 Sep 2005 (KD); Bealville 14 May 90 (KD); E of Oak Crk Pass 14 Oct 2003 (KD); Mt Pinos 30 June 2003 (KD). Greenhorn Mts: Tiger Flat Rd 4 Aug 2000 (KD); Kern Cyn at Miracle Hot Springs 12 Sep 88 (KD); Richbar 21 Mar 74 (KD). Piute Mts: 2-4 mi S of Bodfish 2-30 May 76 (KD). Temblor Range: Hwy 58 W of McKittrick 4 June 87 (KD); Cottonwood Pass 4 Apr 88 (KD). Mojave Desert: Cantil 11 and 16 May 92 (KD).

**Tulare County:** San Joaquin Valley: Alpaugh 11 and 23 Aug 84 (KD); Earlimart 23 Aug 84 (KD); Venida 6 Sep 85 (KD); Pixley and Tipton 22 Aug 87 (KD); Porterville 5 Sep 87 (KD). Sierra Nevada: Big Meadow (Kern Plateau) 12 July 78 and 20 June 80 (both KD); Quaking Aspen 13 July and 3 Sep 83 (KD); Kennedy Meadows 10 July 82 and 26 Aug 83 (both KD); upper Kern River at Goldledge 19 Mar 96 (KD); Sherman Pass Rd at 7000' 21 Sep 2002 (KD); Jack Flat 28 Apr 89 (KD). Greenhorn Mts: Tiger Flat Rd 15 July to 4 Aug 2000 and 2 July 2005 (KD); Old State Rd 2 July 2005 (both KD); Baker Lookout 4 and 24 July 95 (KD). **Sequoia NP:** Potwisha 6 Sep 85 and 25 May 89 (both KD); Buckeye Flat 13 Apr 90 (KD).

**100. *Strymon istapa clenchi*** Austin & J. Emmel.

**Kern County:** Lake Isabella at Hanning Flat near Weldon 10 Sep 2001 (SOM); Paul's Place at Weldon, 23 Oct 2013 (KD). The alkali mallow hostplant grows commonly at Hanning Flat and this desert migrant may become transiently established here.

**Tulare County:** No records.

**101. *Leptotes marina*** (Reakirt).

**Kern County:** San Joaquin Valley: Bakersfield 10 Sep 61; 7 July and 7 Aug 92 (all KD); Hart Park 17 Sep 91 (KD); Buttonwillow 12 Sep 80 (KD); Edison 1 Oct 89; 22 Sep and 15 Oct 92 (all KD). Sierra Nevada: 0.7 mi S of Sageland N of Kelso Valley 22 Apr 2000 (KD); Kernville Golf Course 2 July 2005 (KD).

Greenhorn Mts: Kern Cyn at Richbar 21 May 89 and Democrat Hot Springs 12 June 2005 (both KD). Piute Mts: 2 mi S of Bodfish 23 May 86 and E side of range W of Sageland 24 May 2005 (KD). Tehachapi Mts: Tehachapi Mt Park 1 July 76 (KD); Water Cyn below Mt Park 9 June 96 (KD); Frazier Park 5 July 71 (KD) and Mt Pinos 12 July 2003 (KD). Mojave Desert: Cantil at W end of Koehn Dry Lake 11 to 26 May 92 (KD); Jawbone Cyn 21 Aug 79 (KD); West Rosamond Dry Lake 31 May 94 (Gordon Pratt).

**Tulare County:** San Joaquin Valley: Kaweah River, Dry Crk Rd 25 May 89 (KD). Sierra Nevada: Freeman Crk 25 July 80 and 16 July 83 (KD); Quaking Aspen 3 Sep 83 (KD); Sherman Pass Rd 4500-7000' 25 June 81; 21 June 82 and 9 July 2005 (all KD); Badger-Eshom area 9-10 July 83 (KD); Balch Park 29 July 77 (KD); Big Meadow (Kern Plateau) 20 June 80 (KD); W of Camp Nelson 13 July 83 (KD); Kennedy Meadows area 25 June 82 and 9 July 88 (KD); Lloyd Meadows 4 July 66 (KCH); upper Kern River at Roads End 21 June 82 (KD); E of Ant Cyn. 22 May 2012 (KD). Greenhorn Mts: 2-4 mi E of White River 15 June 57 (PAO); Baker Lookout 4 and 24 July 95 (KD). **Sequoia NP:** 2 mi E of Potwisha 18 Apr 86 (KD).

**102. *Brephidium exilis*** (Boisduval).

**Kern County:** San Joaquin Valley: Bakersfield 1 Apr to 30 Oct 63 (KD); Hart Park 6 and 17 Sep 82 (KD); Buttonwillow area 2 Sep to 3 Oct 80 (KD); Lost Hills 13 Aug 81 and 11 Aug 84 (KD); Greenfield 7 Aug 79 (KD). Sierra Nevada: E of Sageland N of Kelso Valley 15 May 76 (KD); Weldon and Onyx 4 to 21 Aug 81 (KD); Hanning Flat 10 Aug 2002 (KD); Canebrake 23 Apr and 13 Nov 2005 (KD); Bird Spring Pass 13 May 2000 (KD). Greenhorn Mts: N end Linn's Valley 4 and 11 Aug 97 (KD); Old State Rd 22 Aug 2003 (KD). Piute Mts: E side of range W of Sageland 13 Aug 2005 (KD); Havilah 5 to 12 Sep 75 (KD). Tehachapi Mts: Caliente 30 June 86 (KD); Bealville 25 July and 8 Aug 90; 8 Sep 2001 (KD); Cameron Rd 26 Aug and 15 Sep 88 (KD); Oak Crk Pass area 29 Sep to 3 Nov 97 (KD); Frazier Park 5 July 71 (KD). Mojave Desert: Cinco 4 and 6 July 83 (KD); Randsburg 18 Apr 78 (KD).

**Tulare County:** San Joaquin Valley: Alpaugh 11 and 23 Aug 84 (KD); Earlimart 23 Aug 84 (KD); Venida 6 Sep 85 (KD); Pixley and Tipton 22 Aug 87 (KD); Porterville 5 Sep 87 and 21 Oct 88 (both KD); Kaweah River at Hwy 216: 6 Sep 85 (KD). Sierra Nevada: Big Meadow (Kern Plateau) 20 June 80 (KD); Lamont Meadows 25 May 85 (KD); Kennedy Meadows and summit of Nine Mile Cyn 26 May 2001 (KD); upper Kern River at Roads End 29 Jun 78 (KD); Calkin's Flat 25 Aug to 15 Sep 2002 (KD); Sherman Pass Rd at 4600' 17 May 84 (KD); Quaking Aspen 30 May 87 (KD); Three Rivers 4 and 13 Sep 91 (KD). and Hwy 198 just W of SNP 12 Aug 92 (KD). **Sequoia NP:** Halstead Meadow 24 July 87 (KD).

**103. *Cupido (Everes) comyntas sissona*** (W. G. Wright).

**Kern County:** San Joaquin Valley: Kern River at Hart Park near Bakersfield 4 Aug 70 (KD); 8 Aug to 13 Oct 85 (KD) and 20 Mar to 24 May 86 (KD). Transient, not found in region most years.

**Tulare County:** San Joaquin Valley: Venida and S side of Kaweah River at Road 216: 5 mi S of Woodlake 6 Sep 83 (KD); Tule River at Porterville 5 Sep 87 (KD & AR); 26 May 88 (KD); Yokohl 15 Sep 87 (KD); Springville 28 May 89 (KD). Sierra Nevada: Kaweah River at Three Rivers 13 Apr 90 (KD).

**104. *Cupido (Everes) amyntula amyntula*** (boisduval).

**Kern County:** Mojave Desert: Koehn Dry Lake at Cantil 26 May 92 (two females, KD). Tehachapi Mts: Tehachapi Mt Park 6 June 70; 30 Apr 76 and 26 June 2005 (all KD); Cummings Crk 7 mi S of Tehachapi 9 June 82; 21 Apr to 14 May 90 and 19 May 99 (all KD). Tehachapi Crk E of Keene 13 May 90 (KD); Oak Crk Pass 9 June 82 (KD); Frazier Park 5 July 71 (KD); Cuddy Cyn E of Frazier Park 11 June 87 and 15 Apr 93 (KD); Lake Of Woods 13 June 98 (KD). Temblor Range: Hwy 58 W of McKittrick 13 May and 4 June 87 (KD); Cottonwood Pass 20 Apr 87; 20 Apr 88 and 21 Apr 99 (all KD). Sierra Nevada: Walker Pass 29 Apr 93 (KD).

**Tulare County:** Sierra Nevada foothills: Dry Creek Rd 5 mi S of Woodlake 6 May 79 (PN); Three Rivers 13 Apr 90 (KD).

**105a. *Celastrina echo echo*** (W. H. Edwards).

**Kern County:** Sierra Nevada: N of Kernville 1 Mar 2002 (KD); Pine Flat 6 June 86 and 10 June 2006 (KD). Greenhorn Mts: Shirley Meadows 6 July 75 (KD); Cedar Crk 6 July 75 and 4 May 84 (KD); Old State Rd at 5000' 20 June 87 (KD); S of Tiger Flat 19 June 93 ; 31 July 2000 and 2 July 2005 (KD); Kern Cyn nr Richbar 1 Mar 2002; Lucas Crk 1 June 93 (KD). Tehachapi Mountains Tehachapi Mt Park 21 June 74 and 26 July 99 (KD); Water Cyn 22 Mar 76 (KD); Caliente Cyn 25 Feb 88 (KD). Piute Mts: Havilah 29 May 79 (KD); 2-4 mi S of Bodfish 6 to 21 May 76 (KD); Erskine Crk E of Lake Isabella 20 to 27 May 2001 (KD).

**Tulare County:** Sierra Nevada: Sherman Pass Rd at Alder Crk 6700' 18 June 83 and 3 July 2005 (both KD); Freeman Crk 12 June 81 (KD); Johnsondale 14 May 72 (KD); Quaking Aspen 4 July 66 (KCH); Pine Flat 6 June 86 (KD); Roads End 2 and 14 Apr 87 and 17 Mar 97 (KD); Greenhorn Mts: N of Tiger Flat 26 June and 11 July 81 (KD); Baker Ridge 4 and 24 July 95 and 3 July 2004 (KD). **Sequoia NP:** Ash Mountain 17 Apr 59 (RC Burns); 17 May 85 and 28 Feb 86 (KD); Potwisha and Hospital Rock 28 Feb and 18 Apr 86 (KD); Buckeye Flat 28 Feb and 18 Apr 86 (both KD); Cabin Cove and Silver City 5 July 85 (KD); Four Guardsmen 29 June 87 (KD); Crystal Cave 27 June 87 (KD); Tokopah Falls Trail 12 June 90 (KD); Giant Forest Village 27 June 87 (KD).

**105b. *Celastrina echo*** (W. H. Edwards). Mojave Desert population.

**Kern County:** Koehn Dry Lake at Cantil 16 May 92 (KD). The individual collected has the same phenotype as those collected on the E side of the Mojave Desert and eastern Sierra Nevada.

**Tulare County:** No records.

**106a. *Glaucopsyche piasus piasus*** (Boisduval).

**Kern County:** Greenhorn Mts: Cedar Crk 18 June 77 (KD); near Shirley Meadows 3 July 2004 (observer unknown). Sierra Nevada: Pine Flat 10 June 2006 (KD).

**Tulare County:** Sierra Nevada: Big Meadow 20 June 80 (KD); W of Sherman Pass 6700-8000' 21 June 82; 9 July 88; 12 and 20 June 99 and 3 July 2005 (all KD); 4 X 4 Rd. to Sherman Peak below Alder Crk. 29 May 2012 (KD); Black Rock Ranger Station 23 June 94 (KD); Little Troy Meadow 15 July 72 (JPB); Pine

Mt area 25 June 82 (KD); Stony Crk 11 June 90 (KD). **Sequoia NP:** Halstead Meadows 30 June 79 (PN); Cabin Cove 9 June 88 (KD); Dorst Camp 16 July 92 (KD).

**106b. *Glaucopsyche piasus excubita*** J. Emmel, T. Emmel & Mattoon.

**Kern County:** Sierra Nevada: 1 mi S of Sageland, Kelso Valley 3 to 23 Apr 77; 23 Apr 79; 29 Mar 86; 30 Apr 91; 11 Apr 93; 20 Mar 95 (all KD, a strong colony). Piute Mts: Havilah 1 June 77 (one individual, KD); Piute Mt Rd 1 mi W of Sageland 6 Mar 2003 (a large colony, KD). Tehachapi Mts: Cameron Canyon 13 and 25 Apr 2006; abundant Oak Creek Pass 7 May 2006 (KD); 4.7 mi. S of Oak Creek Pass 7 May 2006 (KD).

**Tulare County:** Sierra Nevada: upper Kern River at Fairview 27 Apr 64 (Robert Langston); 17 Mar 97; 21 Mar and 5 May 99 and 28 Feb 2002 (all KD); Brush Crk E of Kern River 7 Apr 97 (KD); N of Roads End 30 Mar 2002 (KD); Lamont Meadows 13 Apr 94 and 25 May 85 (both KD); Spring S of Kennedy Meadows 8 June 85 and 20 June 92 (both KD). The population occurring near the above spring, appears intermediate with nominotypical *piasus*.

***Glaucopsyche piasus excubita* X *sagittigera*** (C & R Felder) (blend zone).

**Kern County:** Tehachapi Mts: Frazier Park 16 May 77; 25 Apr 87 and 15 Apr 93 (all KD); Cuddy Cyn E of Frazier Park 15 Apr 93; 23 and 25 Apr 95; 1 May 98 (all KD); Lake of the Woods 18 June 88; 13 and 19 June 98 (all KD).

**107a. *Glaucopsyche lygdamus*** ssp. (Southeastern Sierra Nevada segregate).

**Kern County:** Sierra Nevada and Kelso Valley region Sageland area 15 May 76; 26 Apr 79; and 1 Apr 2000 (all KD); 2 mi NW of Birdspring Pass 14 and 22 Apr 2000(KD); Cyn 1.5 SE of Butterbrecht Peak 25 May 76 and 21 May 88 (both KD); ridge S of Butterbrecht Peak 18 Apr 80 (KD); E of Walker Pass 19 Apr 89 (JFE); 29 Apr and 9 May 93 (KD).

**Tulare County:** Sierra Nevada: Lamont Peak 22 May 82 (KD); Spring S of Kennedy Meadows 18 June 2005 (KD); 11 mi S of Kennedy Meadows 28 June 75 (JPB).

**107b. *Glaucopsyche lygdamus australis*** Grinnell.

**Kern County:** Tehachapi Mts: Mt Pinos 14 July 70 (KD); Seymour Cyn Rd 23 May 76 (JPB); Frazier Park 25 Apr 87 (KD);. Temblor Range: Cottonwood Pass 12 May 1994 (KD).

**Tulare County:** Not in county, replaced by other subspecies.

**107c. *Glaucopsyche lygdamus*** (Doubleday). (Southern Sierra Nevada population).

**Kern County:** Sierra Nevada: Kern River N of Kernville 14 Apr 2002 (KD). Greenhorn Mts: E slope of range at Kernville 24 Apr 81 and 30 Apr 83 (KD); Wofford Heights 25 Apr 96 (KD), near Democrat Hot Springs, Kern Canyon 15 Apr 2010 (KD). Piute Mts: 2-4 mi S of Bodfish 3 Apr to 14 May 76 and 25 Apr 80 (KD); Erskine Crk Cyn 24 Apr 81 (KD); Tehachapi Mountains: Caliente Canyon 7 mi. E of Caliente 25 Mar 88 and 8 Apr 2012 (both KD).

**Tulare County:** Sierra Nevada: upper Kern River at Hospital Flat 24 Apr 81; Goldledge Crk 24 Apr 81 and 19 Mar 96 (both KD); N of Roads End 17 Mar; 2 and 14 Apr 87 (KD); Limestone 21 Apr 97 (KD); E of Ant Canyon 6 to 21 Apr 2006 (KD); Gateway to Sequoia 28 Feb 86 and 13 Apr 90 (KD); Jack Flat 28 Apr 89 (KD); Mineral King Rd 2000' to nr park entrance 18 Mar 92; 8 May 93; and 27 Mar 2004 (all KD).

**Sequoia NP:** Ash Mountain 28 Feb 86 (KD); Potwisha 28 Feb and 18 Apr 86 (KD); Hospital Rock 28 Feb 86 (KD); Buckeye Flat 18 Apr 86 (KD).

**107d. *Glaucopsyche lygdamus*** ssp. (Sierra Nevada high elevation subspecies).

**Kern County:** No records.

**Tulare County:** Sierra Nevada: Sherman Pass Rd at Alder Crk 6800' 9 June 2001, 12, 20 June and 12 July 99; 3 July 2005 (all KD); Balch Park 25 June 2005 (KD). **Sequoia NP:** Mineral King, White Chief Trail 9500' 23 July 92 (KD).

**108a. *Philotes sonorensis sonorensis* (C & R Felder).**

**Kern County:** Tehachapi Mts: Pleito Crk and Cyn S end of San Joaquin Valley 16 Apr 81 (William D. Patterson II).

**Tulare County:** Replaced by Sierra Nevada population.

**108b. *Philotes sonorensis* ssp. Sierra Nevada population.**

**Kern County:** Sierra Nevada: Chimney Peak Rd 3.7 mi NE of Hwy 178: 21-28 Mar (KD) and 27 Apr 2003 (Kenn Kaufman); summit of Chimney Peak Rd in nearby cyn 28 Mar 2003 (KD); E slope of Sierra in Indian Wells Cyn at 6968' 23 Feb 2002 (SS); hills NW of Walker Pass 21 Mar 2003 (M. J. Smith). Piute Mts: Laura Peak above Erskine Crk E of Lake Isabella 28-29 Mar and 14 Apr 87 (KD); E side of range 4 mi W of Sageland 12 May 2005 (William Bouton, Mike Stangeland & Kim Davis); 16 Apr 2010 (KD & David Horner, 5 males).

**Tulare County:** Sierra Nevada: N side of Lamont Peak in cyn just W of Lamont Meadows 10 Apr 85 (KD); 13 Apr 94 (KD) and 27 Apr 2003 (Leroy Koehn & Denni Carruthers); 0.8 mi. E Chimney Peak Camp 15 Apr 94 (KD); Sherman Pass Rd at 4600' 3.5 mi above Kern River (KD) and 5 Apr 87 (RPM) 14 Apr 87 (KD & KMR) and 7 Apr 97 (KD); upper Kern River in rocky cyn 0.6 mi N of Roads End (at Dam) 2 Apr 87; 9 Mar 88; 7 Mar 94 and 13 Apr 94 (all KD); Limestone 24 Mar and 1 Apr 2001; 1 Feb 2005 (all KD), Fairview (upper Kern River), off Mountain. 99: 1 Apr 2001 (KD).

**109. *Philotiella speciosa speciosa* (Hy. Edwards).**

**Kern County:** Mojave Desert: 20-24 mi E of Mojave 15-18 Apr 23 and 12 May 24 (both JAC) N boundary of Red Rock Cyn 11 Apr 71 (M Smith); 14 and 22 Apr 73 (JPB & AOS); near Cantil 20 Apr 58 (FT Thorne); Randsburg 26 Apr 30 (CM Dammers); 26 Apr 36 (JW Tilden); 15 Apr 52 (D Mays); 21 Apr 74 (JPB); 28 Apr 76 (JPB); 13 May 80 (KD); Butte Av 1.3 mi S of Randsburg 1 May 76 (JPB); Oakley Shields (1974) provided many records without specific dates: near Cantil "April" (AM, FT, OS, RL); Johannesburg "1915" (Haskin) ; 22 mi E of Mojave off Randsburg Rd "March" (John Lane); and 25.5 mi E of Mojave "April" (John S. Garth). Sierra Nevada: just E of Walker Pass 31 May 2003 (SS). Piute Mts: (E slope) near Sageland 22 Apr 84 (JGP).

**Tulare County:** Sierra Nevada: Sherman Pass Rd at 4700' 14 June 77 (JPB).

**110. *Euphilotes battoides battoides* (Behr).**

**Kern County:** No records.

**Tulare County:** Sierra Nevada: Granite Domes and ridges W of Big Meadow (near KCNP) 23 June 89 (KD). **Kings Canyon NP:** John Muir Trail 10300-10500' 2 July 2012 (Elise Larsen). **Sequoia NP:** Mineral King 8 July 15 (JAC); Timber Gap above Mineral King 11 Sep 83 (PN); White Chief Trail at 10,000' 23 July 1992 (KD), Alta Meadow 18 July 60 (JH Gerdes). Oakley Shields reports the species occurs at Monarch Lake (above Mineral King) in July.

**111. *Euphilotes glaucon comstocki* Shields.**

**AKA *Euphilotes intermedia comstocki*.** See Warren (2005) regarding species issues with this group.

**Kern County:** Tehachapi Mts: 22 July 18 (JAC). Piute Mts: Piute Mt Vista 6 July 74 (JPB); 21 July 78 (KD); Piute Mt Rd MP 6-7 above Bodfish-Havilah road summit 5 and 17 July 2000 and 5 July 2002 (KD, Michael Klein & Claude Edwards), sympatric with *E. bernardino* same day. Greenhorn Mts: 1 mi S of Tiger Flat 22 July to 4 Aug 2000 (KD); Old State Rd.(crk where Upper Sonoran and Transition zones meet: 5.4 to 6.1 mi W of Wofford Heights) 8 July 2001 and 20 June 2002 (both KD); 1 mi E of Black Mt Saddle 23 July 2001 (KD). Sierra Nevada: Indian Wells Cyn 28 July 97 (Gordon Pratt & JFE). A possible record from McGill Camp on Mt Pinos 11 July 2002 (KD) needs genitalic confirmation.

**Tulare County:** Sierra Nevada: 16.7 mi up from US 395 at high point of road, just SE Pine Meadow 6 July 74 (James Scott); Bald Mt Lookout 24 July and 5 Aug 82; 21 June and 5 July 85 (all KD); 2 mi W of Bald Mt on Sherman Pass Rd 6 July 92 and 24 June 2000 (KD); rocky outcrop just W of Sherman Pass 9000' 3 July 2005 (KD); Alder Crk. 6800' 5 July 2009 and 1 July 2012 (KD). Greenhorn Mts: Baker Ridge 7 July 2002 and 3 July 2004 (KD).

**112a. *Euphilotes bernardino bernardino*** (Barnes & McDunnough).

**Kern County:** Tehachapi Mts: top of Water Cyn below Tehachapi Mt Park 9 June 96 (KD); Tehachapi Loop 5 June 86; 17 June 89 and 9 June 90 (KD); Frazier Park 5 July 71 and 22 June 79 (KD); Caliente Cyn 28 May 92 (KD); Mt Pinos 14 July 70 and 4 July 73 (both KD); Sierra Nevada: Fay Crk N of Weldon 14 June 80 (KD). Greenhorn Mts: 1 mi E of mouth of Kern Cyn 31 May 2002 (KD); Old State Rd 20 June 2002 (KD); Lucas Crk 1 June 93 (KD); Richbar 21 May 89 and 1 June 93 (KD); Kernville 20 (KD & Jack Levy) and 27 May 2000 (KD & JGP). Piute Mts S of Bodfish 29 May 79 (KD); Piute Mt Rd at MP 5-6 above Bodfish-Havilah summit 5 July 2002 (KD) sympatric with *E. glaucon comstocki* same day! Hooper Hill 30 May 2002 (KD).

**Tulare County:** Sierra Nevada: upper Kern River: Roads End 14 May 72 and 21 June 82 (KD); Hospital Flat 17 May 84 (KD); Calkin's Flat 12 June 99 (KD); Corral Crk 4 June 2003 (KD); 2-4 mi S of Johnsondale 12 June 81 (KD); 6 and 18 June 83 (KD); Sherman Pass Rd at 5400' 18 June 83 and 9 July 88 (KD); Alder Crk 6800' 18 June 83 (KD); E of Ant Canyon 22 May 2012 (KD).

**112b. *Euphilotes bernardino inyomontana*** Pratt & J. Emmel.

**Kern County:** Sierra Nevada: Chimney Peak Rd S of Lamont Peak 31 May 77 (Mike Smith) 25 June 82 and 4 July 83; 5 and 13 June 99 (all KD); Sageland area N of Kelso Valley 14 and 26 May 78 (KD) and 17 June 97 (KD); road summit S of Sageland 17 June 97 (KD); Birdspring Pass 28 May 2006 (KD); Butterbrett Peak 8 July 82 (KD); Walker Pass 31 May 97 (Mike Smith). Tehachapi Mts: 4.5 mi S of Oak Crk Pass 26 June 98 (M Smith); 19 May 99 and 13 May 2001 (both KD). Mojave Desert: Jawbone Cyn 26 May 78 (KD); Rand Mts SW of Randsburg 4 May 36 (Chris Henne); Randsburg 3 May 86 (KD); S end of Sierra N of Hwy 14 at Cinco 11 May 92 (KD).

**Tulare County:** Sierra Nevada: Chimney Peak Rd, N of Lamont Peak 25 June 82 (KD); 4 and 6 July 83 and 20 June 92 (KD).

**113a. *Euphilotes enoptes enoptes*** (Boisduval).

**Kern County:** No records.

**Tulare County:** Sierra Nevada: hillside above Woodward and Stony Crks 29 June 87 (KD); 16 July 92 (KD); Big Meadow (nr KCNP) and Boulder Crk 28 June 2003 (KD); 5 mi S of Kennedy Meadows 25 June 82 (KD). **Sequoia NP:** Ash Mountain 17 May 85 (KD); Timber Gap Trail above Mineral King 11 Sep 83 (PN); Elk Crk along middle fork 19 May 79 (PN); Timber Gap Trail at Mineral King 22 July 91 (KD); White Chief Trail at Mineral King 23 July 92 (KD).

***Euphilotes enoptes* complex**

**Kern County:** Greenhorn Mts: S of Tiger Flat 15 to 29 July 2000 (KD); Black Mountain Saddle 24 June 96 and 20 June 2002 (KD); Sawmill Rd 3 mi W of Hwy 155: 27 May and 11 Sep 2000; 28 Apr 2002 (all KD); Old State Rd 24 June 95 and 20 June 2002 (KD).

**Tulare County:** Sierra Nevada: Johnsondale area 6 and 18 June 83; 21 May 90 (KD); Sherman Pass Rd 4000 to 9000' 20 June 80; 18 June 83; 8 July 88; 12 June 99; 1 Sep 2003; 3 and 9 July; 27 Aug and 1 Oct 2005 (all KD); Needlerock 25 June 81 (KD); upper Kern River at Roads End 21 June 82 and S of Corral Crk 4 June 2003 (KD). Greenhorn Mts: Baker Ridge 26 June 81; 17 June 96 and 3 July 2004 (all KD).

**113b. *Euphilotes enoptes tildeni*** (Langston).

**Kern County:** Temblor Range: Hwy 58 summit 27 Mar 77 (JPB); 27 Aug and 22 Sep 82 (KD); Ortega Grade and Annette Rd 7 and 16 Sep 92 (KD); Cottonwood Pass 3 and 16 Sep 92 (KD). Sierra Nevada: Chimney Pk Rd S side of Lamont Pk 6 Oct 2001 (KD); Greenhorn Mts: Kern Cyn at Lucas Crk 1 June 93 and 31 May 2002 (both KD); 6 to 12 Sep 92 (KD). Piute Mts: Hooper Hill 31 Aug to 10 Sep 79; 27 Aug 82 and 25 May 2004 (all KD); Erskine Crk E of Lake Isabella 11 Sep 2000 (KD); E side of range W of Sageland 3 and 30 May 2005 (KD), 25 Sep and Oct 1 2009 (KD). Tehachapi Mts: Mt Tehachapi 8 July 2000 (KD); Water Cyn below Tehachapi Mt Park 25 June 96; 17 Aug 2002 and 26 Sep 2004 (all KD); Cache Crk off Cameron Rd at Hwy 58: 15 and 22 Sep 88 (KD, near *dammersi* phenotype); Cameron Cyn 12 Aug 89; 19 May 99; 4 Sep 2000 and 15 Sep 2001 (all KD).

**Tulare County:** It is likely some *enoptes* records under *E. enoptes* complex are referable to *tildeni*.

**113c. *Euphilotes enoptes langstoni*** (Shields).

**Kern County:** Sierra Nevada: Chimney Peak Rd S of Lamont Peak 25 June 82; 4 July 83 and 5 to 13 June 99 (all KD); Cyn 11.5 mi S of Weldon 30 Apr 91 (KD); Cyn 1.5 mi S of Butterbredt Peak 26 May 78; 21 May 88; 15 Apr 89 and 23 May 2005 (all KD); bases of hills to west of Butterbredt Peak 22 May 81 (KD). Piute Mts: 2 mi W of Sageland off Piute Mt Rd 21 Apr 2002 (KD). Tehachapi Mts: Cameron Rd Cyn N of Hwy 58: 27 Apr 89 (KD).

**Tulare County:** Sierra Nevada: Chimney Peak Rd N side of Lamont Peak 4 and 6 July 83 (KD); ravine 10 mi. S of Kennedy Meadows 7 June 2008 (KD).

**114. *Euphilotes mojave mojave*** (Watson & P. Comstock).

**Kern County:** Sierra Nevada: Kelso Valley 13 mi S of Weldon at Hwy. 178 S to 1 mi S of Sageland 2 and 4 May 76 (JPB); 26 Apr 79; 25 Apr 80; 22 May 81; 29 Apr 92; 11 Apr 93 (all KD); Butterbredt Peak in lower cyns and slopes 13 and 20 Apr 77; 15 Apr 89 (all KD); 2 mi NW of Birdspring Pass 13 May 2001(KD). Tehachapi Mts: 4.7 mi E of Oak Crk Pass off Willow Springs Rd. 13 May 2001, 25 Apr and 7 May 2006 (all KD). Mojave Desert: Randsburg 21 Apr 74 (JPB); Rand Mts: 24 mi NE of Mojave 3 May 74 (JPB); El Paso Mts: Last Chance Cyn 4 Apr 71; 18 Mar 72; 7 to 22 Apr 73 (all JPB); N of Red Rock Cyn State Park 4 April to 1 May 76 (KD).

**Tulare County:** No records yet, but has been taken in Nine Mile Cyn (Inyo County, 26 May 2001, KD) within a hundred yards of county line.

**115. *Euphilotes pallescens elvirae*** (Mattoni).

**Kern County:** Tehachapi Mts: 4.7 mi S of Oak Crk Pass in wash off Willow Springs Rd 14 and 28 Aug 95 and 30 Sep 97 (both KD). Sierra Nevada: 2-4 mi E of Walker Pass 8-9 Aug 77; 29 Aug 78, 21 Aug 81; 30 Aug 86 and 25 Aug 89 (all KD); cyns and lower slopes around Butterbredt Peak and hills and ridges to the west 21 Aug 79 and 14 Sep 98 (KD). Piute Mts: Harris Grade SE side of range 5 Sep 79 (JFE); E side of Piute Mountains 3 mi. W Sageland, Piute Mt. Rd. 25 Sep and 1 Oct 2009 (KD).

**Tulare County:** No records, but occurs in adjacent Nine Mile Cyn in Inyo County.

**116. *Hemiargus ceraunus gyas*** (W. H. Edwards).

**Kern County:** San Joaquin Valley: Hart Park NE of Bakersfield 23 Sep 82 (KD); Kern River Basin 8 mi WSW of Bakersfield 23 Aug to mid-Sep 84 (RPM); 1 mi E of Bakersfield in alfalfa field 21 July 88 (KD); Edison, several in alfalfa field 22 Sep 92 (KD). Kern River Valley (Sierra Nevada) at Onyx 30 Aug 86 (KD); Wofford Heights 8 July 2001 (KD); breeding in numbers at Hanning Flat E side Lake Isabella 16 and 22 Sep 2001 (KD). Piute Mts: 2 mi S of Bodfish 21 May 79 and 10 Sep 88 both (KD); E side Piute Mountains 3 mi. W Sageland 25 Sep 2009 (KD). Mojave Desert: Cinco 24 June; 6 July and 23 Sep 83; 20 and 23 Sep and 3 Oct 84 (all KD); Cantil at W end of Koehn Dry Lake 27 Sep 84; 16 and 26 May and 8 July 92 (all KD).

**Tulare County:** Sierra Nevada: Freeman Crk 16 July 83 (KD); Chimney Peak Rd N side of Lamont Peak nr Lamont Meadows on road cuts 6 July 83 and 20 June 92 (both KD); ridge 7 mi. S of Kennedy Meadows 18 June 2007 (KD); Sherman Pass Rd., Alder Creek 6800' 11 July 2007 (KD).

**117. *Echinargus isola*** (Reakirt).

**Kern County:** San Joaquin Valley: Hwy 58: 3 mi E of Interstate 5 nr Buttonwillow 2 Sep 80 (KD); Kern River Basin 8 mi WSW of Bakersfield 25 Apr to mid -Sep 84 (RPM). Sierra Nevada at Jct of Kelso Valley and Jawbone Cyn Rds 22 Apr 84 (JGP); Weldon near Paul's Place 20 Sep 2008 (KD). Tehachapi Mts: Lebec 14 June 98 (KMR); Mt Pinos 13 June and 31 Aug 98 (KD). Mojave Desert: Cinco 27 Sep and 3 Oct 84 (both KD); Cantil and W end of Koehn Dry Lake on mesquite 27 Sep 84 and 26 May 92 (KD).

**Tulare County:** Sierra Nevada: 2-4 mi S of Johnsondale 6 June 83 (KD); Chimney Peak Rd N side of Lamont Peak nr Lamont Meadows on road cuts 6 July 83 (KD), Lamont Meadow 25 May 85 (KD); Bald Mountain Lookout 9400' 14 July 85 (JGP); Kennedy Meadows 30 June 88 (KD). Greenhorn Mts: Baker Lookout 4 July 98 (KD); W Sherman Pass 9000' 2 July 2006 (KD).

**118. *Plebejus anna anna*** (W. H. Edwards).

**Kern County:** No records though the host plant grows in the Greenhorn Mountains

**Tulare County:** Sierra Nevada: Double Bunk Meadow 24 July 83 (PN); Freeman Crk Grove 30 June 75 (JR Mori); 16 and 29 July 83 (KD); Quaking Aspen 3 Sep 83 and 10 Aug 2002 (KD); Stony Crk Camp downstream to Woodward Crk 27-29 June 87; 4 Sep 91; 10 and 16 July 92 (all KD); Boulder Crk E of Big Meadow (nr KCNP) 28 June 87 (KD). **Sequoia NP:** Clover Crk 28 June 72 (G Balogh); 2 mi W of Mineral King Valley and 2 mi W of Cabin Cove 5 July 85 (both KD); Tharpe's Log 3 July 76 (PN); Silver City 5 and 27 July 85 (KD); Halstead Meadow 30 June and 8 Aug 79 (PN) and 24 July 87 (KD); Wolverton 24 July 87 (KD); Dorst Camp 16 July 92 (KD); Giant Forest Village 15 Aug 86 and 27 June 87 (both KD); Lodgepole, Tokopah Falls Trail 2 Aug 93 (KD). **Kings Canyon NP:** Wilsonia 10 July 89 (KD); Village Meadow 23 June 89 (KD).

**119. *Plebejus melissa paradoxa*** W. H. Edwards.

**Kern County:** Sierra Nevada: 1 mi E of Sageland, Kelso Valley 15 May 76; 17 June 97 and 30 May 2005 (all KD); E slope of Sierra W of Homestead 2 Sep 89 (JGP). Piute Mts: E side of range W of Sageland 13 Aug 2005 (KD). Tehachapi Mts: Oak Crk Pass 5 July 78, 9 June 82, 27 Apr 89 and 7 May 2006 (all KD); Tehachapi Mt Park 9 June 82 (KD); Cameron Rd SE of Hwy 58: 19 May 99 and 4 Sep 2000 (both KD); Lake Of Woods 26 Sep 99; 29 May 2002 and 12 July 2003 (all KD); Mt Pinos 16 July 93 (KD).

**Tulare County:** Sierra Nevada: upper Kern River: Fairview 27 Apr 64 (RL Langston); 21 May 90; 25 Aug to 30 Oct 2002 (all KD); Calkin's Flat 28 Apr 2001 (KD) and 3 July 2005 (KD & Steve Summers); S end of Kern Plateau at Lamont Meadows 20-21 May 83 (SOM); 25 May and 16 Aug 85 (KD); 30 Aug 86 (KD & AR).

**120. *Plebejus saepiolus aehaja*** (Behr).

**Kern County:** Piute Mts: Landers Crk nr Sorrell Peak 11 July 76 (JPB); In meadows nr Piute Mt Vista 19 June 81 and 8 July 82 (both KD). Greenhorn Mountains meadow nr Black Mountain Saddle 19 June 93 (KD); N of Tiger Flat 25 June to 7 Aug 95 and 10-24 June 96 (all KD). Sierra Nevada: Fay Crk S end of Kern Plateau 20 June 80 (KD).

**Tulare County:** Sierra Nevada: Balch Park 26 June 72 (KD); Kennedy Meadows area 10 July 82 (KD & AR); 26 Aug 83 and 22 Sep 2001 (KD); Sherman Pass area 8 Aug 80 (KD) 10 and 24 July 82 (KD); meadow E of Sherman Pass 4 July 2004 (KD); Big Meadow (Kern Plateau) 15 June 76; 12 July 78 and 20 June 80 (KD); Big Meadow, near Kings Canyon NP 23 June 87 (KD); Freeman Crk Grove 25 July 80 (KD); Lloyd Meadows 4 July 66 (KCH); Pine Flat 6 June 86 (KD); Stony Crk 27-29 June 87 and 4 Sep 91 (KD). Greenhorn Mts: N of Portuguese Pass 26 June and 11 July 81 (KD); very large sized population at Marshall Meadow 6 July 2002 (RES, SOM and KD).

**Sequoia NP:** Mineral King Valley 5 July 85 and 22 July 91 (both KD); Farewell Gap Trail S of Mineral King Valley 19 July 93 (KD); Giant Forest Village 27 June 87 (KD); Tokopah Falls Trail 12 June 90 and 2 Aug 93 (KD). **Kings Canyon NP:** S of Buena Vista Peak 10 July 89 (KD).

**121. *Plebejus emigdionis*** (Grinnell).

**Kern County:** Sierra Nevada: Kelso Valley Rd 17 mi S of Weldon 15 June 75 (JPB); woodland edge above Kelso Creek along Kelso Valley Rd. 28 Apr 2012 (KD); Paul's Place at Weldon 14 June 80 ; 23 Apr 81; 11 Sep 81 and 23 Apr 2005, one female 23 Oct 2013 Late flight date for species (all KD); Onyx 25 Apr 2004 and 23 Apr 2005 (KD). Tehachapi Mts: Cache Crk off Cameron Rd 26 Aug and 15 Sep 88 (KD); Cache Crk N of Hwy 58: 25 Apr 89 (KD); Sand Cyn along Cache Crk 22 May 95 (KD); Lake Of Woods above Lockwood Crk 18 July 98; 12 June 2002 and 24 Sep 2005 (all KD).

**Tulare County:** No records but it likely occurs S of Lamont Meadows. Occurs in Nine Mile Cyn about 2 miles below Tulare County line.

**122a. *Plebejus icarioides icarioides*** (Boisduval).

**Kern County:** Not in county; replaced by *evius*.

**Tulare County:** Sierra Nevada: Big Meadow (Kern Plateau) 20 June 80 and 2 Aug 85 (both KD); Big Meadow (nr KCNP) 25 June 97 (KD); Sherman Pass Rd 6000-9000' 21 June 82; 12 June 99 and 3 July 2005 (KD); Pine Mountain 25 June 82 (KD); rd below Bald Mountain 5 Aug 82 (KD); Fish Crk Meadows 2 July 83 (JGP); Stony Crk S to Slide 27-29 June 87 (KD). Greenhorn Mts: Rd to Baker Ridge 29 June 97 (KD); N end of range west of Johnsondale 27 June 97 (KD). **Sequoia NP:** Alta Meadow 18 July 60 (JH)

Gerdes); Mineral King Valley 5 July 85 (KD), Timber Gap Trail 22 July 91 (KD); Farewell Gap Trail S end of Mineral King Valley 19 July 91 (KD); White Chief Trail 23 July 92 (KD); Silver City and Cabin Cove 5 July 85 (KD); Wolverton 24 July 87 (KD); Halstead Meadow 2 and 17 July 77 (PN) and 24 July 87 (KD); Little Baldy Saddle 24 July 87 (KD); Dorst Camp 16 July 92 (KD). **Kings Canyon NP:** Buena Vista Point 28 June 87 (KD); Kings Canyon Overlook 23 June 89 (KD).

**122b. *Plebejus icarioides evius*** (Boisduval).

**Kern County:** Sierra Nevada: Pine Flat 6 June 86 (KD). Greenhorn Mts at Shirley Meadows 6 July 75 and 11 July 81 (both KD); Tehachapi Mts: Tehachapi Mt Park 30 May 60 (JFE); top of Water Cyn below Mountain Park 9 June 96 and 19 May 99 (both KD); Cummings Crk S of Tehachapi 14 May 90 (KD); Cameron Rd E of Hwy 58: 13 May 2001 (KD); Mt Pinos 14 July 70 and 22 June 89 (both KD); Frazier Park 1 May 98 (KD); Lake Of Woods 13 June 98 (KD & KMR); Cuddy Cyn E of Frazier Park 23 Apr 95 (KD). Piute Mts: E side of range 28 May 2001 (KD); 23 May 2005 (KD, blending with *eosierra*).

**Tulare County:** Sierra Nevada: Pine Flat 6 June 86 and 2 July 2011 (KD). Collections from upper Kern River at Fairview and Limestone 21 Apr 97 (KD); lower Sherman Pass Rd 17 May 84 (KD) show blending with nominotypical *icarioides* but tend towards *evius*; upper Sherman Pass Rd 12 June 99 and 4 July 2004 (KD). Greenhorn Mts: N of Portuguese Pass 26 June and 11 July 81 (KD); W of Baker Ridge 10 and 17 June 96 (KD, blending between nominotypical *icarioides* and *evius*).

**122c. *Plebejus icarioides eosierra*** J. Emmel, T. Emmel & Mattoon.

**Kern County:** Sierra Nevada: 1 mi S of Sageland 15 May 76 (KD & JPB); 11 Apr and 3 May 2005 (KD); Walker Pass 9 May 93 (KD); Cyn S of Butterbreck Peak 25 May 76 and 11 May 98 (KD); Bird Spring Pass 13 May and 1 July 2000 (KD).

**Tulare County:** Sierra Nevada: Spring S of Kennedy Meadows 25 May and 8 June 85 (KD); Ridge 7 mi. S of Kennedy Meadows 8 June 2008 (KD), Pine Mountain. area 3 July 78 and 18 June 2007 (KD). Lamont Meadow 25 May 85 (KD); 8 June 2008 (KD).

**122d. *Plebejus icarioides atascadero*** J. Emmel, T. Emmel & Mattoon.

**Kern County:** Temblor Range: Cottonwood Pass 20 Apr 87; 12 May 94 and 23 May 95 (all KD).

**Tulare County:** This coastal subspecies not in county.

**123. *Plebejus shasta shasta*** (W. H. Edwards).

**Kern County:** Tehachapi Mts: 22 Aug 37 (WA Evans). Record considered dubious.

**Tulare County:** Sierra Nevada: Shepherd Pass 26-28 July 66 (S Johnson); Shepherd Pass Trail between Wright Lakes and Tyndall Crk 11,200-12,200' 27 July 99 (Scott Ellis & S Johnson). **Sequoia NP:** Mineral King, 26 July 33 G. H. Heid, Mineral King above 10,000' (JHM); White Chief Trail above Mineral King 15 Aug 79 (Wayne Dawes).

**124. *Plebejus acmon acmon*** (Westwood).

**Kern County:** San Joaquin Valley: Bakersfield 15 Apr to 30 Sep 62 (KD); Edison 20 Sep 84 (KD). Sierra Nevada: Kernville 20 and 27 May 2000 (KD); Weldon 4 and 21 Aug 81 (KD); Pine Flat 6 July 2003 (KD); N of Kelso Valley 1 mi S of Sageland 15 and 25 May 76 (KD). Piute Mts: 2 mi S of Bodfish 30 May 79 (KD); Hooper Hill 30 May 2002 (KD). Greenhorn Mts: Old State Rd 2 July 2005 (KD) and Tiger Flat 10 June 96 (KD). Tehachapi Mts: W of Lebec 19 May to 18 July 98 (KD); Mt Pinos 12 June to 12 July 2003 (KD); Tehachapi Mt Park 20 June 62 and 5 Sep 2005 (KD); Oak Crk Pass 23 Sep 2003 (KD). Temblor Range: Hwy 58 W of McKittrick 13 May and 4 June 87 (KD); Cottonwood Pass 20 Apr 87 (KD). Mojave Desert: Cinco 4 and 6 July 83 (KD); W side of Koehn Dry Lake and Cantil 11 to 26 May 92 (KD).

**Tulare County:** San Joaquin Valley: Woodlake 6 Sep 85 (KD); Porterville 5 Sep 87 and 21 Oct 88 (both KD). Sierra Nevada: Freeman Crk 25 July 80; 16 and 29 July 83 (KD); Corral Crk 4 June 2003 (KD); Kern River Trail S of Johnsondale 1 Feb and 15 Mar 2005 (KD); Johnsondale area 29 June 78; 6 and 18 June 83 (KD); Bald Mountain Lookout 9400' 10 July to 5 Aug 82 (KD); Balch Park 25 June 2005 (KD); Sherman Pass Rd from 3000 to 9200' 24 July 82 and 18 June 83 (both KD); Big Meadow (Kern Plateau) 24 July and 2 Aug 85 (KD). Greenhorn Mts: Poison Meadow S of Tobias Peak 19 June 66 (KCH) and Portuguese Pass area 26 June and 11 July 81 (KD). **Sequoia NP:** Ash Mountain 17 May 85 (KD); Potwisha 17 May and 27

July 85 (KD); Silver City 5 July 85 (KD); Cabin Cove 27 July 85 (KD); Mineral King Valley 19 July 93 (KD); Timber Gap 22 July 91 (KD); Mineral King on Monarch Lakes Trail 26 July 85 (KD); Giant Forest Village 15 Aug 86 (KD); Lodgepole and Tokopah Falls Trail 2 Aug 93 (KD). **Form** with orange up FW which resembles *P. neurona*: **Kern County**: Mt. Pinos 30 June and 12 July 2003; Lebec 18 July 98; Kern River Cyn at Upper Richbar 9 Sep 92 (all KD). **Tulare County**: Sierra Nevada: serpentine outcrop W of Sherman Pass 6 July 2003 (KD); Methuselah Camp, Balch Park 25 June 2005 (KD).

**125a. *Plebejus lupini* near *monticola*** (Clemence).

**Kern County**: Tehachapi Mts: Top of Water Cyn below Tehachapi Mt Park 9 June 96 (KD); Pacific Crest Trail S of Oak Crk Pass 24 May 99 (on *E. fasciculatum*, JFE); Frazier Park 5 July 71 (KD); 4.7 mi. S of Oak Creek Pass (Willow Springs Rd.) 29 May 2006 (KD); Lebec 9 June 57 (PAO, previously reported as *chlorina*); W of Lebec 19 May to 19 June 98; 13 June 99; 27 and 29 May 2002 (all KD).

**Tulare County**:

*Plebejus lupini* near *monticola* (Sierra Nevada segregate).

**Note**: Includes *lupini* complex feeding on *Eriogonum fasciculatum*, including some populations previously referred to as *argentata*.

**Kern County**: Sierra Nevada: Chimney Peak Rd S of Lamont Peak 5 and 13 June 99 (KD); 1 mi S of Sageland 15 May 76 (KD & JPB); 29 Apr 92 and 16 May 2005 (both KD). Piute Mts: 2-4 mi S of Bodfish 14-30 May 76 (KD); Piute Mt Rd nr Eagle Pk 6 June 2002 (KD); above Bodfish-Havilah summit 29 May 79 and 10 June 2004 (both KD); Hooper Hill 14 May 83 (KD); Erskine Crk Cyn E of Lake Isabella 5 May 84 and 23 May 2001 (KD); E side of Piutes W of Sageland 24 May 2005 (KD). Greenhorn Mts: Old State Rd 3 and 17 May 2005 (KD); Wofford Heights 25 Apr 96 (KD); Kernville 7 Apr 97 (KD); Kern Cyn at Lucas Crk 1 June 93 (KD).

**Tulare County**: Sierra Nevada: 2-4 mi S of Johnsondale 6 and 18 June 83 (KD); Sherman Pass Rd at 4600' 18 June 83 (KD); at 3800' 22 May 2002 (KD) Brush Crk 17 May 84 (KD); upper Kern River at Goldledge Crk 24 Apr and 9 May 81 (KD); Roads End 7 Apr 97 (KD); Calkin's Flat 5 May 99 and 20 Apr 2000 (KD); Limestone 29 Apr 97 (KD); Ant Cyn 9 and 15 May 2007 (KD).

**125b. *Plebejus lupini alpicola*** J. Emmel, T. Emmel & Mattoon.

**Kern County**: No records.

**Tulare County**: Sierra Nevada: granite domes and ridges W of Big Meadow (nr KCNP) 23 June 89; 23 June 97; and 28 June 2003 (all KD); Boulder Crk E of Big Meadow (nr KCNP) 23 June 2003 (KD).

**Sequoia NP**: "July 1943" (Tom & HM Blevins); Mineral King at Timber Gap 9000' 22 July 91 (KD) and White Chief Trail 9200-9400' 23 July 92 (KD). Trail between Wright's Lakes & Tyndall Crk. 11,200-12,200', 27 July 66 Scott Ellis & S. Johnson; Bighorn Plateau 11400' 4 July 2012 (Elise Larsen).

**125c. *Plebejus lupini chlorina*** (Skinner).

**Kern County**: Tehachapi Mts: Pacific Crest Trail S of Oak Crk Pass, 3<sup>rd</sup> to 4<sup>th</sup> instar larvae on *Eriogonum umbellatum* 24 May 99; emerged June and early July (JFE); Lake Of Woods 13 June 2002 (KD); Mt Pinos nr McGill Camp 18 and 31 July 98 (KD); 12 June to 12 July 2003 (KD). Scodie Mts: larvae collected 7 June 99, emerged late June-early July (females have more blue overscaling than those from Tehachapi Mts, JFE). Sierra Nevada: S end of Kern Plateau at Pine Flat 5 July 2003 (KD). Piute Mts: Piute Mountain Vista 6 July 74 (JPB); 4 July 2000 (KD); Piute Mt Rd MP 6-7 above Bodfish-Havilah Rd summit on *Eriogonum umbellatum* 4 and 17 July 2000 and 5 July 2002 (all KD). Greenhorn Mts: N of Tiger Flat 15 and 22 July 2000 (KD); Old State Rd 5.4 to 6.1 road mi above Wofford Heights 8 July 2001; 20 June 2002 and 2 July 2005 (KD).

**Tulare County**: Sierra Nevada: 7 mi S of Kennedy Meadows 30 June 88 (KD); Bald Mt on ridge to south 24 June 2000 (KD); 2 mi W of Bald Mountain 6 July 82; 24 June 2000 and 19 June 2002 (all KD); W of Sherman Pass at 8200' 7 July 97; 6 July 2003 and 4 July 2004 (all KD); Alder Creek, 6800' 1 July 2012 (KD); Poison Meadow and Pine Flat 5 July 2003 (KD). Greenhorn Mts: Baker Ridge 17 June 96 (rare, KD); 7 July 2002 and 3 July 2004 (very abundant on last two dates, KD).

**125d. *Plebejus lupini argentata*** (J. Emmel, T. Emmel & Mattoon).

**Taxonomic Note:** It appears that what has been referred to as *argentata* is NOT a valid subspecies. Recent collections of “*argentata*” have proven to be *monticola*, *chlorina* or a possible third entity. The name *argentata* is still listed here should that name still apply to a member of the “*lupini*” group in the region.

**126. *Plebejus neurona*** (Skinner).

**Kern County:** Sierra Nevada: Pacific Crest Trail N of Weldon 14 June 80 (KD); 1 mi S of Sageland, nr. Kelso Valley 14 June 78 and 27 May 93 (both KD); Bird Spring Pass 13 May 2000 (KD); S end of Kern Plateau at Pine Flat 5 July 2003 (KD). Greenhorn Mts: Sawmill Rd 2.5 to 4 mi W of Hwy 155: 27 May 2000 (KD) 22 May 2002 (PAO & KD) and 17 May 2005 (KD); Kern Cyn, Miracle Hot Springs 14 May and 2 June 74 (G. File). Piute Mts: 1 mi W of Bodfish 15 May 71 (JR Mori); 1.5-3 mi S of Bodfish 8 and 12 May 76; 4 May 81 (all KD) and 31 May 77 (Mike Smith); Piute Mt Rd at 5000' 14 May 88 (KD); Erskine Crk Cyn E of Lake Isabella 5 May 84; 20 and 23 May 2001; 4 May 2002; 12 May to 5 June 2005 (all KD). Tehachapi Mts: Tehachapi Mountain on ridge just below summit 11 July 75; 13 July 77; 10 July 84 and 8 July 2000(all KD); Tehachapi Mt Park 1 July 76 (KD); top of Water Cyn below Mt Park 5 Sep 2005 (KD); Frazier Park 6 May 80 (KD); 1.1 road mi NW Lake Of Woods 30 May 60 (JFE); Mt Pinos 8831' 26 Aug 74 (RL Langston); 19 July 71 (RL Scharf); lower areas of that Mountain including area nr McGill Camp 2 July 86; 28 June 79; 30 June and 12 July 2003, 5 Sep 2006 (all KD).

**Tulare County:** Sierra Nevada: S of Chimney Crk and W slope Lamont Peak 29 June 75 (JPB); Chimney Peak Rd N side of Lamont Peak just W of Lamont Meadows 4 and 6 July 83; 20 June 92 and 5 June 99 (all KD); Sherman Pass Rd 2 mi W of Bald Mountain 6 July 92 and 24 June 2000(KD); W of Sherman Pass at 4600' 20 May 99 (Jack Levy). Greenhorn Mts: Baker Point Lookout 7753' 24 July 95 (KD); Dam 0.6 mi. N Roads End 9 May 2007 (2 vagrants, KD)

**127. *Plebejus (Agriades) podarce cilla*** (Behr).

**Kern County:** Not in county.

**Tulare County:** Sierra Nevada: Lower Vidette Lakes 27 July 91 (JTE); Big Meadow (Kern Plateau) 13 June 72 (JPB & C Sekerman); 23 June 73 and 16 June 74 (both JPB) and 6 June 86 (KD); W of Big Meadow 23 June 97(KD); meadows 1 mi E of Sherman Pass 9 June 94; 9 June 2001; 23 June 94 and 4 July 2004 (all KD); wet meadows W side of Sherman Pass above rd to Mosquito Meadow 4 July 2004 (KD); Paloma Meadows 24 June 2000 (KD). **Sequoia NP:** Halstead Meadow 2 July 77 (PN); Mineral King, Monarch Crk 9600' 26 July 85 (KD); White Chief Trail 9300-10,000' 23 July 92 (KD); Mineral King Valley 19 July 93 (KD); Dorst Camp 16 July 92 (KD); Bighorn Plateau 11400' 4 July 2012 (Elise Larsen). **Kings Canyon NP:** Village Meadow 23 June 89 (KD) and Wilsonia 10 July 89 (KD).

#### **FAMILY RIODINIDAE. THE METALMARKS:**

**128a. *Apodemia mormo*** near *mormo* (C. Felder and R. Felder). (California Coast Ranges population).

**Kern County:** Temblor Range: Ortega Grade on Davis Rd and Annette Rd to SE 7 and 16 Sep 92 (KD). This population tends to resemble *langei* J. A. Comstock.

**Tulare County:** Not in county.

**128b. *Apodemia mormo tuolumnensis*** Opler and Powell.

**Kern County:** Sierra Nevada: Walker Pass 29 Aug 78 (KD); Chimney Peak Rd S of Lamont Pk 6 Oct 2001 (KD); E side of Lake Isabella just S of Kernville 26 Sep and 2 Oct 2000 (KD); Butterbrecht Peak area 30 July 82 and 26 Aug 88 (both KD). Greenhorn Mts: 1-2 mi S of Kernville 1 Sep to 28 Oct 2000 (KD) overlapping habitat with *A. virgulti* Kernville segregate, lower portion on *E. fasciculatum*, Old State Rd (normal individuals) 22 Aug 2003 (KD). Piute Mts: 2-5 mi S of Bodfish 25 Aug to 11 Sep 95 (KD); Piute/Havilah road summit 3 Sep 76 (KD); Hooper Hill 10 Sep 88 (KD); Erskine Crk Cyn 11 Sep 2000 (KD); E side of Piutes 3-4 mi. W of Sageland 25 Sep 2009 (KD). Tehachapi Mts: Sand Cyn hills and Cameron Rd 4 Sep 2000 (both KD); Frazier Park 28 Aug 70 (KD); Cuddy Cyn 2 mi E of Frazier Park 28 Aug 99 and 12 July 2003 (both KD); N slope of Mt Pinos 28 Aug 99 (KD). Very orange high elevation populations on *Eriogonum umbellatum*: Greenhorn Mts: 1.2 mi S of Tiger Flat 4 Aug 2000 (KD); Old State Rd 5.4 to 6.1 mi W of Wofford Heights 22 Aug 2003 (KD). Mt Pinos near McGill Camp 12 July 2003, 24

Sep 2005, 5 Sep 2006 (all KD). Tehachapi Mts: Water Cyn below Tehachapi Mt. Park 28 Aug 95 and 4 Sep 2000 (both KD); hills E side Sand Canyon 4 Sep 2000 (KD).

**Tulare County:** Sierra Nevada: Chimney Pk Rd/Lamont Peak 26 Aug 83 and 30 Aug 86 (both KD); Sherman Pass Rd 3500 to 4900' 6 Sep 99 and 1 Sep 2003 (both KD); Bald Mountain. Lookout 9350' 14 Aug 2010 (KD) and 21 Aug 2010 (Jim Snyder); Baker Ridge, Greenhorn Mountains 20 Aug 2010 (Jim Snyder); upper Kern River at Goldledge Crk 25 Aug 89 and 14 Oct 2000 (both KD); 3 mi N Riverkern 8 Sep 84 (KD); Limestone 6 Sep 99 and 25 Aug 2002 (both KD); S of Corral Crk 6 Sep 99; 5 Oct 2002; 9 Oct 2004; 1 and 10 Oct and 19 Nov 2005 (all KD); Fairview 15 Sep 2002 (KD).

**129a. *Apodemia virgulti*** (Behr) Frazier Park population.

**Kern County:** Pleito Creek near Mt. Pinos 16 Apr 81 (William D. Patterson II); N end Frazier Park on steep hill and canyon off Mt. Pinos Way, common 22 Apr (KD & RP Meyer) and 12 May 2012 (KD); Tehachapi Mountains, Cummings Creek 7 mi. S of Tehachapi 27 Apr 1982 (KD)

**129b. *Apodemia virgulti davenporti*** J. Emmel, T. Emmel & Mattoon.

**Kern County:** Sierra Nevada: Walker Pass 5300' 21 May 83 (SOM); 2 May 92 (Derham Giuliani); 29 Apr and 9 May 93 (overlapping ranges with *Apodemia mejicanus deserti*, KD); ridges S of Butterbredt Peak 15 (KD & JPB): 25 May 76 and 18 Apr 80 (both KD); Cyn 11.5 mi S of Weldon 29 Apr 92 (KD); Butterbredt Peak 21 May 88 (KD, RPM & AR) and 23 May 2005 (KD); Chimney Peak Rd S of Lamont Peak 7 May 97 (KD); 2 mi NW of Bird Spring Pass 22 Apr 2000 (KD); Bird Spring Pass and microwave hill 13 May 2000 (KD). Greenhorn Mts: S end of Lake Isabella near Jct of Hwy 155 and Keyes Rd 17 May 96 (KD); Old State Rd at 4500' 26 Apr 98 and 28 Apr 2002 (KD & SS). Piute Mts: 2-4 mi S of Bodfish 8 to 21 May 79 (KD); Bodfish/Havilah Rd summit 7 May 87 (KD); E side of range W of Sageland 14 Apr 2000; 6 and 21 April 2002 and 3 May 2005 (all KD). Tehachapi Mts: Cummings Creek 7 mi. S of Tehachapi 27 Apr 1982 (unclear if *virgulti* or *davenporti*, KD) hills E side of Sand Cyn 13 May 2001 (KD).

**Tulare County:** Sierra Nevada: Fairview 27 Apr 64 (RL Langston); upper Kern River: Goldledge Crk 9 May 81 and 17 May 94 (KD); 0.6 mi. N of Roads End 7 to 21 Apr 97 and 28 Apr 2001 (all KD); Calkin's Flat 5 May 99 (KD); E of Ant Canyon 6 and 21 Apr 2006 (KD); Sherman Pass Rd 4600' 17 May 84; 7 Apr 97; 28 Apr and 30 May 2001 (all KD); Chimney Pk Rd N side of Lamont Pk 13 June 99 (Kevin Davenport); Lamont Meadows 25 May 85 (KD).

**129c. *Apodemia virgulti*** similar to *mojavelimbus* J. Emmel, T. Emmel & Pratt.

**Kern County:** Tehachapi Mts: 4.7 mi SE of Oak Crk Pass off Willow Springs Rd 22 and 26 May 95 (KD); 29 Sep to 3 Nov 97; 19 May 98 and 14 Oct 2003 (all KD); Oak Crk Rd between Willow Springs Rd and Mojave 29 Sep 97 and 13 Oct 2005 (KD). Sierra Nevada: Kern Canyon populations on *Eriogonum nudum*: Lucas Crk Cyn on trail S side of Hwy 178: 6 to 12 Sep 92 (KD); 1 June 93 and 31 May 2002 (both KD); 0.5 mi E of mouth of Kern Cyn "June 1962" (Weldon Kirk); 21 May (PAO) and 31 May 2002 (KD).

**129d. *Apodemia virgulti*:** Undescribed Kernville-southern Sierra Nevada, Greenhorn Mountains segregate on *Eriogonum wrightii*, *E. nudum* or *E. fasciculatum*.

**Kern County:** Greenhorn Mts: 1 mi S of Kernville 6 June 99 (KD); 1-2 mi S of Kernville on dry brushy slopes along road 20 May (Jack Levy & KD) and 27 May 2000 (KD & JGP); 26 Sep to 28 Oct 2000; 6 Nov 2002 and 2 July 2005 (all KD); Old State Rd 22 Aug 2003(KD); Sawmill Rd (Isabella Highlands) 14 Oct 2000; 2 June and 30 Oct 2002 (KD). Sierra Nevada: E side of Lake Isabella 2-3 mi SE of Kernville 20 and 30 May 2001; 22 May and 14 Oct 2002 (all KD), hill above Sierra Hwy NW of Hanning Flat 20 May 2001(KD). Piute Mts: Hooper Hill up trail from Bodfish-Havilah Rd summit 3 Sep 76 (KD); 31 Aug and 10 Sep 79 (all KD).

**Tulare County:** Sierra Nevada: upper Kern River at Corral Crk Camp 5 Oct 2002; 9 Oct 2004 and 1 and 10 Oct 2005 (all KD). These may represent rare black forms of *A. mormo tuolumnensis*."

**130. *Apodemia mejicanus deserti*** Barnes & McDunnough.

**Kern County:** Sierra Nevada: lower slopes E of Walker Pass 29 Apr and 9 May 93 (KD). Mojave Desert and lower E slope of Sierra Nevada: Jawbone Cyn between Butterbredt Peak and Hwy 14: 6 (KD) and 26 May 78 (KD & C Sekerman); 21 Aug 79 (KD); hillsides and cyns N of Hwy 14 at Cinco 9 Mar 84 and 23

Sep 2003 (both KD); Homestead along Hwy 14: 29 Aug and 18 Sep 78 (KD); 30 Aug 86 (KD). Tehachapi Mts: E side of range off Oak Crk Rd 13 Oct 2005 (KD). Mojave Desert: Randsburg 13 May 80 (KD).  
**Tulare County:** No records.

**131. *Apodemia palmerii palmerii*** (W. H. Edwards).

**Kern County:** Mojave Desert: Edwards Air Force Base: Branch Memorial Park and Buckhorn Dry Lake 31 May and 20 Sep 94 (Gordon Pratt); 6 June 95 (KD & Gordon Pratt).

**Tulare County:** No records.

**FAMILY NYMPHALIDAE: BRUSH-FOOTED BUTTERFLIES.**

**132. *Libytheana carinenta streckeri*** (Field).

**Kern County:** San Joaquin Valley: Bakersfield "September, 1961" (Glen Broadwater); 6 Oct 63 (KD); seen 18 Oct 88 (KD). Mojave Desert: W side of Koehn Dry Lake at Cantil 27 Sep 84 (four individuals, KD); photographed at China Lake 5 Nov 2001(SS); Jawbone Canyon 6 Sep 2006 (KD). Sierra Nevada: Sierra Hwy. E side of Lake Isabella, 1.5 mi. NW of Hanning Flat 24 Oct 2006 (KD); 0.7 mi. SW of Sageland in Kelso Crk. 21 Oct 2008 (seen, KD); Weldon 27 Oct 2008 and 6 Nov 2012 (KD); Grapevine Cyn. E. side of Sierra Nevada 2 Dec 2008 (SS).

**Tulare County:** Sierra Nevada: upper Kern River at Chico Flat 28 Oct 2003 (KD).

**133. *Agraulis vanillae incarnata*** (Riley).

**Kern County:** San Joaquin Valley: Bakersfield 1 July to 1 Oct 60 (J Luttrell, W Kirk and M Wallis); 13 Aug 74; 17 Oct 83; 14 Sep 84; 21-29 Aug 90 and 19 Aug 93 (all KD). Buttonwillow 27 Aug 82 (KD). Tehachapi Mts: Caliente 3 Nov 80 (KD).

**Tulare County:** San Joaquin Valley: Tulare 16 Sep 84 (KD); Visalia 15 June to 19 November 2012; 1 April 2013 (all Stephen Randall). Sierra Nevada: possible sighting at Roads End along upper Kern River 2 June 97 (KD).

**134. *Euptoieta claudia*** (Cramer).

**Kern County:** Mojave Desert: One individual In alfalfa field off Hwy 14 at Cinco/Cantil 20 Sep 84 (KD); Grapevine Canyon on east side of Sierra Nevada 2 Oct. 2008 (photo, Susan Steele).

**Tulare County:** No records but likely strays in from the Mojave Desert.

**135. *Speyeria coronis hennei*** (Gunder).

**Kern County:** Tehachapi Mts: Tehachapi Mountain 7994' 11 July 75; 13 and 27 July 77; 10 July 84; 9 June 97 (both sexes already common!) and 1 Aug 98 (all KD); Tehachapi Mt Park 23 June 74 and 26 June 2005 (KD); top of Water Cyn below Mt Park 5 Sep 2005 (KD); Frazier Park 28 Aug 70; 30 June 75 and 11 June 87 (all KD); 1 mi E of Frazier Park in Cuddy Crk, very abundant at rabbitbrush 28 Aug 99 (KD); Lebec 20 June 38 (JAC); Mt Pinos 8000' 14 July 70; 4 July 73 and 28 June 79 (KD); W of McGill Camp 26 June 74 (L Orsak); Mil Potrero Rd N side of Mt Pinos near Pine Mountain. 11 June 87; 22 June 89 and 29 June 90 (all KD); Mt. Abel near camp 24 Aug 2011 (KD). Reports of this species from the Greenhorn and Piute Mts are considered doubtful and are unconfirmed by collections.

**Tulare County:** Sierra Nevada: Big Meadow 13 June 72 (identity needs confirmation, JPB); road summit S of Big Meadow 2 Aug 85 (identity needs confirmation, KD). **Sequoia NP:** Crescent Meadows 9 Aug 27 (JD Gunder); Wolverton Crk 2 and 22 Aug 39 (Mrs Cary); Huckleberry Meadows 7000' 22 Aug 39 (Mrs Cary); Halstead Meadow 8000' 29 Aug 39 (Mrs Cary); vicinity of General Sherman Tree 10 to 24 July 43 (Tom Blevins); NW of Moro Rock 4000' 16 Aug 57 (PAO) and Giant Forest Village, seen 27 June 87 (KD).

**136. *Speyeria zerene monticola*** (Behr).

**Kern County:** There is one dubious record, but *zerene* could stray into Kern County to the Kern Plateau or into the Greenhorns.

**Tulare County:** Sierra Nevada:Lloyd Meadows 4 July 66 (KCH) and 20 July 75 (JPB); Freeman Crk 30 June 75 (JR Mori); 25 July 80; 25 June 81; 16 and 29 July 83 (all KD); Stony Crk area 18 Aug 89 (Kevin

Davenport) and 2 Aug 93 (KD); stray 2 mi S of Powell Meadow NE of Black Rock Ranger Station and N of Kennedy Meadows 20 Sep 2002 (KD); Sherman Pass Rd at Alder Crk 6800' 27 Aug 2005 (KD), 2 to 22 July 2006 (KD & RPM); W of Sherman Pass 7900' 1 July and 2 Oct 2012 (KD). SOUTH for Sierra Nevada. **Sequoia NP:** Vicinity of General Sherman Tree 9 to 24 July 43 (Tom Blevins); Huckleberry Meadows 8000' 22 Aug 39 (Mrs Cary). **Kings Canyon NP:** "General Grant Nat'l Park, July 1940" (Tom Blevins); E of Buena Vista Peak 10 July 89 (KD).

**137a. *Speyeria callippe macaria*** (W. H. Edwards).

**Kern County:** San Joaquin Valley: Bakersfield 2 June 62 (KD, a rare stray). Tehachapi Mts: Tehachapi Mt Park 20 June 62 (KD) and 20-21 July 62 (JTE); 26 June 2005 (KD); top of Water Cyn below Tehachapi Mt Park 9 June 96 (KD); Tehachapi Mountain 7994' 11 July 75 and 13 July 77 (both KD); Cummings Crk 7 mi S of Tehachapi 9 and 11 June 82 (KD); ridges E of Caliente Cyn and W of Walker Basin 25 June 98 (KD); Mt Pinos 14 July 70; 11 June 87; 18 July 98 and 5 July 99 (all KD); Frazier Park 5 July 71 (KD). Sierra Nevada: Pine Flat on hilltops 5 July 2003 (KD). Piute Mts: Liebel Peak area 8 July 82 (KD); Havilah 1 June 77 and 7 June 2003 (both KD); Piute Mt Rd MP 2-7 above Bodfish-Havilah rd summit 4 July 2000 (JFE & KD) and 10 June 2004 (KD).

**Tulare County:** Sierra Nevada: Johnsondale area 10 June 62; 14 May 72; 31 May 86; 6 and 18 June 83 (all KD); 3 mi W of Sherman Pass at 8400' 24 July 82 (KD); Sherman Pass Rd at Alder Crk 6800' 18 June 83; 20 June 99 and 9 July 2005 (all KD); Freeman Crk 16 July 83 (AR); Needlerock 26 June 81 (KD); Pine Flat 5 July 2003 (KD). Greenhorn Mts: Baker Ridge Lookout 24 July 95 (KD, one stray among many *laurina*).

**137b. *Speyeria callippe laurina*** (W. G. Wright).

**Kern County:** Greenhorn Mts: top of ski slope above Shirley Meadows 6 July 75 (KD); Cedar Crk 6 and 11 July 75; 19 June 93 and 4 July 95 (all KD); Alder Crk Camp 21 May 96 (KD); Tiger Flat Rd N of Alta Sierra 17 June 2001 (KD); Old State Rd 19 June 2003 and 2 July 2005 (both KD); Rancheria Rd E of Bakersfield 23 June 95 (KD); Isabella Highlands (Sawmill Rd) 27 May 2000 (KD); 5 mi E of Glennville 6 June 77 and 24 June 95 (both KD); 1.5 mi S of Tiger Flat 11 and 17 June 2001 (KD); Sunday Peak Trail 25 June 95 (KD); Kern Cyn-Democrat Hot Springs 23 June 63 (KD); summit of Breckenridge Mountain 10 June 85 and 7 June 2003 (both KD).

**Tulare County:** Greenhorn Mts: Tiger Flat Rd N of Sunday Peak 19 June 93 (KD); 4 mi E of White River 15 June 57 (PAO); Baker Ridge Lookout 7753': 11 and 26 June 81; 19 June 93 and 24 July 95 (all KD); 2 mi N of Portuguese Pass 26 June 81; 2 and 24 July 96 (all KD); 4 mi W of Poso 28 May 86 (JR Mori) and 23 June 95 (KD); Tobias Peak Lookout 10 June 96 (KD); Balance Rock 23 June 95 (KD).

**137c. *Speyeria callippe rupestris*** Behr.

**Kern County:** Not in county, replaced by other subspecies.

**Tulare County:** Sierra Nevada: Badger-Eshom Rd. 9-10 July 83 (KD); 21 and 28 June 2003; 16 June 2006 (KD); Mineral King Rd below SNP 3 July 75 (JR Mori); Hwy 190, 4 mi W of Pierpoint Springs 4000' "July" (JR Mori, blend zone with *macaria*). **Sequoia NP:** Mineral King Rd MP 13: 3 July 75 (JR Mori); Mineral King "June" (JHM).

**Note:** A silvered *Speyeria callippe* similar to *juba* (Boisduval) was collected at very high elevation 0.5 mi W of Big Meadow near KCNP on 28 June 2003 (KD). Subspecies *rupestris* is virtually always unsilvered.

**137d. *Speyeria callippe comstocki*** (Gunder).

**Kern County:** Temblor Range: Hwy 58 E of Hwy 58 rd summit 16 May 87 (RPM) and 4 June 87 (KD).

**Tulare County:** A coast range subspecies, not in county.

**138a. *Speyeria egleis egleis*** (Behr).

**Kern County:** Sierra Nevada: S end of Kern Plateau at Pine Flat 2 Aug 85 and 5 July 2003 (both KD). Owens Peak 8300' 16 July 86 (Derham Giuliani). Greenhorn Mts: N of Tiger Flat 31 July and 7 Aug 95 (KD); along trail and summit of Sunday Peak 8295' 31 July 95 (KD); lower slope of Sunday Peak along road 31 July 95 and 25 June 97 (KD).

**Tulare County:** Sierra Nevada: Sherman Pass area 25 June to 3 Aug 81; 24 July 82; 1 Oct 2005 (all KD); Big Meadow (Kern Plateau) 12 July 78 (KD); Quaking Aspen 27 July 89 (KD); Stony Crk 29 June 87 and

11-12 June 90 (both KD); Kings Cyn Overlook 23 June and 10 July 89 (KD); Bald Mountain Lookout 9400' 2 June 97 and 10 July 82 (KD). Greenhorn Mts: Tobias Peak 7 Aug 95 and 10 June 96 (both KD); Baker Ridge and Lookout 7753' 4 and 24 July 95 (KD); Portuguese Pass 7 July 95 (KD); 2 mi N of Portuguese Pass 31 July and 7 Aug 95 (KD). **Sequoia NP:** Vicinity of General Sherman Tree 9 to 29 July 43 (Tom Blevins); Mineral King Valley 5 July 85 and 22 July 91 (KD); Monarch Lakes Trail 26 July 85 (KD); Timber Gap 22 July 91 (KD); White Chief Trail 23 July 92 (KD); Farewell Gap Trail 19 July 93 (KD); Little Baldy Saddle 24 July 87(KD); Wolverton 24 July 87 (KD); Halstead Meadow 15 Sep 87 and 18 Aug 89 (both KD); Lodgepole 2 Aug 93 (KD). **Kings Canyon NP:** S Boundary 10 July 89 (KD); Wilsonia 10 July 89 (KD).

**138b. *Speyeria egleis tehachapina*** (J. A. Comstock).

**Kern County:** Tehachapi Mts: 23 July 32 (LM Martin); Tehachapi Mt 7994'; 15 and 18 July 18 (JAC); 20-21 July 62 (JTE); 11 July 75; 13 July 77; 24 July 79; 10 July 84 and 1 Aug 98 (all KD). Piute Mts: Piute Peak 8432' 23 July 71; 1 and 3 July 72; 7 July 73; 6 July 74 and 6 July 96 (all JPB) 30 June 74 (common, Gary File); Liebel Peak 7 July 73 (JPB); Piute Mountain Lookout 8326' 11 July 76 and 6 July 96 (JPB).

**Tulare County:** Replaced by nominotypical *egleis*.

**139. *Speyeria adiate atossa*** (W. H. Edwards).

**Kern County:** Tehachapi Mts: Mt Tehachapi 23 July 32 (NC); Tehachapi 7, 9 and 16 July 18 (JAC); Tehachapi Mts 1 July 59 (Joe Wilson); 10 June 22 (NC); 13 and 21 June 23 (NC); 17 July 33 (LM Martin); Ridge Route 10 and 13 June 22 (JAC); 21 June 23 (JAC); Tejon Range 21 June 23 (CW Kirkwood and JAC) and Tejon region (Collin's Ranch) 12 Aug 23 (silvered individual, J. Gunder) ; Lebec 25 Apr and 24 June 30 (NC); 1 June 31(NC); 25 June 32 (JA Corcoran);30 May-June 1 and 29 June 34 (NC, in O Sette collection) 3 Sep 39 (RH Reid); 6 Sep 30 (NC); Fort Tejon 3 Sep 30 (NC); 25 June and 3 Sep 30 (Chris Henne); Tejon Range 21 June 23 (JAC) and 25 June 30 (Ringe & Chris Henne); Keene 4 July 44 (Tom Blevins) Mt Pinos, McGill Camp 5 June 59 (John S Garth); Mt Pinos at 7700' 10 July 32 (Chris Henne) and at 8000' 10 July 33 (Chris Henne). Many of these specimens were deposited at the LACM.

**Tulare County:** No records.

**140. *Speyeria hydaspe viridicornis*** (Boisduval).

**Kern County:** Greenhorn Mts: 3 July 32 (LM Martin); 2 July 39 (JAC); top of ski slope and Shirley Meadows 6 July 75 and 11 July 81 (both KD); Greenhorn Mt Park 6 July 75 and 15 July 92 (KD); Tiger Flat area 15 July 92 (KD); lower slopes of Sunday Peak 7000' 25 June 97 and 15 July 2000 (KD); Black Mountain Saddle 23 July 2001 (KD).

**Tulare County:** Sierra Nevada: Balch Park 26 June 72 and 29 July 77 (both KD); Freeman Crk and Lloyd Meadows 20 July 75 (JPB); 25 July 80 (KD); 16 and 29 July 83 (KD); Eshom Camp 9-10 July 83 (KD); Camp Nelson 13 July 83 and 26 May 87 (both KD); Quaking Aspen 3 Sep 83 and 10 Aug 2002 (KD); Camp Wishon 26 May 97 (KD); Trail W of Stony Crk 29 June 97 (KD); Boulder Crk E of Big Meadow nr KCNP 28 June 2003 (KD). Greenhorn Mts: 2 mi N of Portuguese Pass 26 June and 11 July 81(KD); Poison Meadow S of Tobias Peak 21 July 97 (KD); W of Portuguese Pass below Jct with Tiger Flat Rd 3 July 2004 (KD). **Sequoia NP:** Mineral King Valley 5 July 85 and 22 July 91(KD);Timber Gap Trail 8400' 22 July 91 (KD); Lodgepole 2 Aug 93 (KD); Giant Forest Village 15 Aug 85; 27 June and 24 July 87 (all KD); Halstead Meadow 24 July 87 (KD); Tokopah Falls Trail 12 June 90 (all KD); Redwood Crk 5 July 85; Cabin Cove 26 and 27 July 85 (KD); vicinity of General Sherman Tree 9 to 23 July 43 (Tom Blevins); **Kings Canyon NP:** North Boundary 10 July 89 (KD); Buena Vista Point 28 June 87 and 10 July 89 (both KD).

**141. *Speyeria mormonia mormonia*** (Boisduval).

**Kern County:** No records.

**Tulare County:** Sierra Nevada: Quaking Aspen 22 July 61 (RES); 27 July 89 and 3 Sep 83 (all KD); meadows E of Sherman Pass 8 Aug 80; 3 Aug 81 and 1 Oct 2005 (all KD); Poison Meadow 26 July 2004 (KD); Big Meadow (Kern Plateau) 12 July 78 (KD); Stony Crk Camp 24 July 87 and 18 Aug 89 (both KD); 1-2 mi S of Powell Meadow 21 Sept 2002 (KD). **Sequoia NP:** Vicinity of General Sherman Tree 11 to 23 July 43 (Tom Blevins); Mineral King Valley and Monarch Crk 26 July 85 (KD); Halstead Meadows 8000'

and Huckleberry Meadows 22 to 30 Aug 39 (both Mrs Cary); Farewell Gap Trail 19 July 93 (KD); Halstead Meadow, Wolverton, and Little Baldy Saddle 24 July 87 (KD); Dorst Camp 16 July 92 (KD). **Kings Canyon NP:** Wilsonia and meadow SE of Buena Vista Peak 18 Aug 89 (both KD).

**142. *Boloria epithore sierra*** (E. Perkins).

**Kern County:** Greenhorn Mts: Tiger Flat 24 June 61 (RES); N of Tiger Flat lower slopes of Sunday Peak along road 25 June 95 (KD); meadows nearby 10-24 June 96; 25 June 97 and 12 July 98 (all KD).

**Tulare County:** Sierra Nevada: Balch Park 26 June 72 (KD); Stony Crk 27-29 June 87 and 11 June 90 (KD); Boulder Crk E of Big Meadow near KCNP 28 June 87 (KD); Kings Cyn Overlook 23 June 89 (seen, KD); Quaking Aspen 27 July 89; 26 May 97 and 10 Aug 2002 (all KD); 2 mi E of Eshom Camp 23 June 97 (KD). Greenhorn Mts: Frog Meadow 19 June 67 (KCH); 2 mi N of Portuguese Pass 26 June and 11 July 81 (KD); Poison Meadow below Tobias Peak 7 Aug 95 and 10 June 96 (KD); Portuguese Pass area in meadows off rd at Kern/Tulare line and W slope of pass on rd to Sugarloaf 10 to 24 June 96 (KD); Marshall Meadow 6 July 2002 (RES, SOM & KD). **Sequoia NP:** Mineral King Valley 5 July 85 and 22 July 91 (KD); Farewell Gap Trail S end Mineral King 19 July 93 (KD); Silver City 5 July 85 (KD); vicinity of General Sherman Tree 7-9 July 43 (Tom Blevins); Giant Forest Village 23 June 89 (KD); Tokopah Falls Trail 12 June 90 (KD); Halstead Meadow 13 June 90 (KD); Little Baldy Saddle 24 July 87 (KD); Dorst Camp 16 July 92 (KD). **Kings Canyon NP:** Wilsonia and South Boundary 10 July 89 (KD).

**143. *Poladryas arachne monache*** (J. A. Comstock).

**Kern County:** No records but possible.

**Tulare County:** Sierra Nevada: Monache Meadows 3 and 7 Aug 17 (JAC); Pine Mountain area N of Kennedy Meadows 3 July 78 (KD); summit above Big Pine Meadows 28 June 75 (JR Mori); Big Pine Meadow 14 June 85 (JGP); Fish Crk Meadows 2 July 83 (JGP); Hill 1 mi. south of Fish Creek Camp 1 Jun 2013 (KD). Kennedy Meadows 2 July 83 (JGP); Spring S of Kennedy Meadows 30 June 88 (KD); hilltops and ridges 7 mi S of Kennedy Meadows 25 June 82; 10 July 83; 8 June 85 and 20 June 92 (all KD); summit above Nine Mile Cyn 5 July 75 (C Sekerman).

**144a. *Chlosyne leanira leanira*** (C. and R. Felder).

**Kern County:** No records of nominotypical *leanira*, though individuals in populations in the Kern River drainage often resemble it.

**Tulare County:** Sierra Nevada: E fork of Kaweah River along road to Mineral King 6 May 79 (JHM).

**Sequoia NP:** Crystal Cave "July 1943" (Tom Blevins). **Kings Canyon NP:** "Kings Canyon National Park in mid-June 1955" (Peter Jump).

**144b. *Chlosyne leanira wrighti*** W. H. Edwards.

**Kern County:** Sierra Nevada: S end of Kern Plateau at Fay Crk N of Weldon 9 May 81 (KD); Butterbredt Peak 21 May 88 (an unusual stray, KD). Piute Mts: Bodfish 8 May 76; 2-4 mi S of Bodfish 8 to 30 May 76; 21 to 30 May 79 and 14 May 88 (all KD); Havilah 6 May 79 (KD); Hooper Hill summit 25 Apr and 19 May 80 (KD); Erskine Crk Cyn E of Lake Isabella 20 to 30 May 2001 (KD). Greenhorn Mts: Old State Rd 3500 to 4000' 24 Apr and 9 May 81 (KD); 26 Apr 98 (KD); Sawmill Rd 3 mi W of Hwy 155: 28 Apr (KD) and 22 May 2002 (PAO & KD); base of Greenhorns at Kernville 24 Apr 81 and 23 May 99 (KD); Kern Cyn: Miracle Hot Springs 30 May 76 (KD).

**Tulare County:** Sierra Nevada: 2-4 mi S of Johnsondale 6 and 18 June 83; 21 May 90; 17 May 84 (all KD); Sherman Pass Rd nr Brush Creek 4200-4900' 18 June 83; 17 May 84 and 30 May 87 (all KD), hilltop above Heliport and Brush Crk. 29 May 2012 (all KD); upper Kern River 0.7 mi. N of Hospital Flat (=S of Corral Crk) 30 Mar to 20 Apr 2002 (KD); Fairview 11 Apr 59 (Chris Henne); 12 May 2001 (KD); 0.6 mi N of Roads End 7 and 21 Apr 97 (KD); Limestone 21 Apr 97 (KD); Goldledge hills and Crk 9 May 81 and 22 Mar 97 (both KD).

**144c. *Chlosyne leanira alma*** (Strecker).

**Kern County:** Tehachapi Mts: Stray seen in Tehachapi Mt Park 28 Mar 71 (KD). Mojave Desert: hills N of Red Rock Cyn 24 Apr 71 (JPB); 6 and 22 Apr 73 (JPB); 30 Apr 76 and 20 Apr 82 (both KD). El Paso Mts, Mesquite Cyn 8 Apr 74 (JPB). Sierra Nevada: S of Jawbone Cyn 28 Apr 73 (JFE & B Griffin); E of Walker

Pass 3 May 74 (JPB); 10 May 76; 29 Apr and 9 May 93 (all KD); E side of Sierra Nevada NW of Homestead 9 Apr 93 (JGP).

**Tulare County:** Sierra Nevada: Kennedy Meadows 19 June 76 (Doug Mullins) and 26 May 2001 (KD).

**145. *Chlosyne californica*** (W. G. Wright).

**Kern County:** Sierra Nevada at edge of Mojave Desert: seen on ridge W of Butterbrecht Peak 13 Apr 85 (RPM).

**Tulare County:** No records.

**146a *Chlosyne palla*** near *palla* (Boisduval).

**Kern County:** Sierra Nevada: 6 mi N of Weldon 14 June 80 (KD). Greenhorn Mts: Hwy 155 between Glennville and Cedar Crk 23 to 25 June 95 (KD); 2 mi S of Tiger Flat 17 June 2001 (KD); Old State Rd 17 May 2005 (KD); Isabella Highlands along Sawmill Rd 28 Apr 2002 (KD); Kern Cyn at Democrat Hot Springs 9 June 71 (KD). Piute Mts: 2-4 mi S of Bodfish 8 to 21 May 76 (KD); Havilah 30 May 79 (KD); .Erskine Crk E of Lake isabella 20 and 23 May 2001 (KD). **Tulare County:** Sierra Nevada: Freeman Crk 12 and 25 June 81 (KD); Johnsondale 14 May 72 and 6 June 83 (KD); Sherman Pass Rd 3700-5000' 15 June 76 (KD); Brush Crk 17 May 84 (KD); Alder Crk at 6800' 18 June 83 (KD); upper Kern River at Roads End 13 June 74 and 14 Apr 86 (KD); Limestone 21 Apr 97; N of Roads End 5 May 97 (KD); Three Rivers 13 Apr 90 (KD); Balch Park, Methuselah Meadows 25 June 2005 (KD); Mineral King Rd below SNP 8 May 2002 (KD). Greenhorn Mts: 4 mi E of White River 15 June 57 (PAO); Baker Ridge 4 July 95 and 17 June 96 (both KD). **Sequoia NP:** Ash Mountain 17 May 85 (KD); Buckeye Flat 17 May 85 and 13 Apr 90 (both KD); Potwisha 18 Apr 86 (KD).

**146b. *Chlosyne palla australomontana*** J. Emmel, T. Emmel & Mattoon.

**Kern County:** Sierra Nevada: 1 mi S of Sageland, Kelso Valley 15 May 76 (KD & JPB); 26 May 78; 1 May 81 and 27 May 93 (all KD); hills and cyns E of Kelso Valley Rd summit 1 May 81 and 27 May 93 (both KD). Chimney Peak Rd S of Lamont Peak 13 June 99 and 27 Apr 2003 (both KD); Bird Spring Pass 28 May 2006 (KD). Piute Mts: E side of range 3-4 mi W of Sageland 24 to 30 May 2005 (KD).

**Tulare County:** Sierra Nevada: Pine Mountain area 3 July 83 (KD); Kennedy Meadows 2 July 83 (JGP) and 26 May 2001 (KD); Fish Crk 2 July 83 (JGP); Spring S of Kennedy Meadows 22 May 82, 25 June and 10 July 82; 4 July 83; 25 May and 8 June 85; 24 June 2000 and 26 May 2001 (all KD); summit of Nine Mile Cyn 26 May 2001 (KD); Bald Mountain Lookout 9400' 10 July 82 and 31 May 86 (KD); Chimney Peak Rd N side of Lamont Pk 31 May 77 (M Smith); 22 May 82 and 25 May 85 (both KD).

**Tehachapi Mountains-Frazier Park segregate:** Tehachapi Mts: Tehachapi Mt Park 20 June 62 (KD); top of Water Cyn below Mt Park 9 June 96 (KD); Hart Flat 14 and 25 May 90 (one female resembles *C gabbii* above, KD); Frazier Park 22 June 79; 5 and 12 June 2007 and 17 June 2011 (KD).

**146c. *Chlosyne palla*** near *altasierra* J. Emmel, T. Emmel & Mattoon.

**Kern County:** No records.

**Tulare County:** Sierra Nevada: Granite Domes W of Big Meadow (nr KCNP) 23 June 97 and 23 June 2003 (both KD); Stony Crk and Woodward Crk 27 to 29 June 87 and 11-12 June 90 (both KD); Kings Cyn Overlook 23 June 89 (one female looks identical to *Chlosyne gabbii* above but underneath is clearly a *palla*, KD). **Sequoia NP:** Alta Peak "July 1943" (Tom Blevins); Tokopah Falls Trail 30 July 83 (Gary Pavlik); 12 July 90 and 2 Aug 93 (KD); Halstead Meadow 30 July 83 (Gary Pavlik); Silver City 5 July 85 (KD); Dorst Camp 16 July 92 (KD). **Kings Canyon NP:** Buena Vista Peak Trailhead 23 June 89 (KD).

**147. *Chlosyne gabbii gabbii*** (Behr).

**Kern County:** Mil Potrero Rd. near base of Mt. Pinos on downgrade to Pine Mountain. Club 28 June 2006 (KD); Frazier Park on Yerba santa near Cuddy Creek 12 June 2007 and 2 June 2012 (KD)

**Tulare County:** Reported records from National Parks and the southern Sierra Nevada are probably all misidentifications of *Chlosyne palla*.

**148a. *Chlosyne acastus acastus*** (W. H. Edwards).

**Kern County:** No records.

**Tulare County:** 3 miles east of Generals Hwy. on granite domes above Big Meadow (near KCNP) 23 June 1997 (KD).

**148b. *Chlosyne acastus neumogeni*** (Skinner).

**Kern County:** Sierra Nevada: Cyn 13 mi. S of Weldon at Hwy. 178, 14 Apr 2000 (KD); 11 and 23 Apr 2005 (KD); 1 mi S of Sageland 10 Apr 85 and 29 Mar 86 (KD); Cyn 1.5 mi S of Butterbredt Peak 29 Apr 92 (KD). Piute Mts: E side of range in Pinyon-Juniper woodland 2 mi W of Sageland 6 Apr 2002 (KD). Mojave Desert: 20 mi SE of Mojave 10 Apr 55 (N McFarland); hills and washes N of Red Rock Cyn 9 to 24 Apr 76 (KD); cyns N of Hwy 14 in Cinco-Cantil region W of Jawbone Cyn 10 Apr 92 (KD); Cache Crk at Hwy 58 (=Warren) at base of Tehachapi Mts nr Mojave 17 Apr 95 (KD); China Lake 4 Oct 2001 (SS); Sand Cyn E side of Sierra 28 Oct 2005 (SS).

**Tulare County:** No records, but could stray up from Nine Mile Canyon, Inyo County.

**149. *Chlosyne whitneyi whitneyi*** (Behr).

**Kern County:** No records.

**Tulare County:** Sierra Nevada: Lower Vidette Lake 27 July 91 (JTE) **Sequoia NP:** White Chief Trail above Mineral King 9600-9800' 23 July 92 (KD).

**150. *Chlosyne hoffmanni hoffmanni*** (Behr).

**Kern County:** No records.

**Tulare County:** **Sequoia NP:** Alta Peak "July 1943" (Tom Blevins); Crescent Meadow 8 Aug 44 (specimen in SBMNH). **Kings Canyon NP:** "Grants Park" 18 July 29 (specimen in SBMNH).

**151. *Anthanassa texana texana*** (W. H. Edwards).

**Kern County:** Sierra Nevada: A stray female collected at Sageland, Kelso Valley 24 May 92 by JGP. Mojave Desert: KD believes he saw a *texana* that year (11 May 92) in desert scrub above Hwy 14 in the Cinco/Cantil area, but was unable to capture it.

**Tulare County:** No records.

**152. *Phyciodes pulchella*** (Boisduval). (Southern Sierra Nevada segregate).

**Kern County:** Sierra Nevada: Weldon 8 Sep 74 (JPB); 12 July 85 and 11 Apr 2005 (KD); Onyx 30 June to 4 Aug 81 (KD); Canebrake 23 April 2005 (KD). Greenhorn Mts: Kern Cyn, Miracle Hot Springs 14 May 76 (KD); N of Tiger Flat 25 June 95 and 11 June 96 (KD); Old State Rd at stream 2 July 2005 (KD); Sawmill Rd 3.5 to 5 mi W of Hwy 155: 27 May 2000 (KD); Breckenridge Mt nr Havilah 31 May 86 (KD). Piute Mts: Havilah 5 to 12 Sep 75 and Havilah Knolls 29 May 79 (KD).

**Tulare County:** San Joaquin Valley: Kaweah River S of Woodlake 6 Sep 85 (KD). Sierra Nevada: Freeman Crk 25 June 81; 16 and 29 July 83 (all KD); Quaking Aspen 13 July and 3 Sep 83 (KD); Sherman Pass Rd 4300-9000' 8 Aug 80; 10 July; 5 Aug 82 and 18 June 83 (all KD); Lloyd Meadows 4 July 66 (KCH); Stony Crk 27-29 June 87 and 28 June 2003(KD); Kennedy Meadows 31 Aug 2002 (KD); Spring S of Kennedy Meadows 20 June 92 (KD). Big Meadow and Boulder Crk (nr KCNP) 28 June 2003 (KD). Greenhorn Mts: Baker Ridge 11 and 26 June 81 (KD); upper Kern River at Roads End 14 Apr 87(KD), Calkin's Flat 15 Sep 2002 (KD); S of Corral Crk 23 Oct 2002 and 9 Oct 2005 (KD). **Sequoia NP:** Mineral King Valley 5 July 85 and 22 July 91 (KD); Monarch Crk 8600 to 9200' 26 July 85 (KD); Farewell Gap Trail at S end of Mineral King 19 July 93 (KD); Giant Forest Village 27 June 87 (KD); Halstead Meadow 15 Sep 87 and 16 July 92 (KD); Tokopah Falls Trail 12 June 90 (KD); Dorst Camp 16 July 92 (KD); Lodgepole 2 Aug 93 (KD). **Kings Canyon NP:** Wilsonia 18 Aug 89 (KD).

**153. *Phyciodes mylitta mylitta*** (W. H. Edwards).

**Kern County:** Sierra Nevada: Weldon 4 to 21 Aug 81 (KD); Kernville 6 June 99 (KD); Jawbone Cyn in desert habitat 2 Sep 68 (JFE & AOS); Kelso Creek Spring 0.8 mi. S Sageland in dry wash and desert habitat! 1 Oct 2009 (KD). Greenhorn Mts: Greenhorn Mt Park 17 June 76 (KD); N of Tiger Flat 25 June 95 and 10 to 24 June 96 (all KD); Cedar Crk 6 and 11 July 75 (KD). Piute Mts: Erskine Crk Cyn 20 and 23 May 2001(KD); Landers Crk nr Piute Peak 28 May 2001(KD); Havilah 7 June 2003 (KD). Tehachapi Mts: Tehachapi Mt Park 21 and 23 June 74 (KD); Tehachapi 14 June 76 (KD); Cuddy Cyn E of Frazier Park 23

Apr 95 (KD); Mt Pinos 14 July 70 (KD); Lake Of Woods 26 Sep 99 (KD). San Joaquin Valley: SW of Lamont 12 Sep 86 (breeding colony, KD); Hart Park NE of Bakersfield 27 Sep 70 (stray, KD) and 1 Oct 82 (stray, KD).

**Tulare County:** San Joaquin Valley: Porterville 5 and 8 Sep 87(KD). Sierra Nevada: Sherman Pass Rd 4000-9000' 21 June 82 and 7 Apr 97 (KD); Big Meadow (Kern Plateau) 15 June 76; 20 June 80 and 12 July 78 (all KD); Balch Park 29 July 77 (KD); Johnsondale 6 and 18 June 83 (KD); Freeman Crk 16 and 29 July 83 (KD); Kennedy Meadows 25 June and 10 July 82 (KD); Stony Crk 27-29 June and 15 Sep 87 (KD). Greenhorn Mts: 2 mi N of Portuguese Pass 26 June and 11 July 81 (KD); Poison Meadow S of Tobias Peak 2 July 2005 (KD). **Sequoia NP:** Mineral King Valley 19 July 93 (KD); Silver City 5 and 27 July 85 (KD); Ash Mountain and Hospital Rock 28 Feb 86; Buckeye Flat 17 May 85 (KD); Giant Forest Village 15 Aug 86; Dorst Camp 16 July 92 (KD); Wolverton and Little Baldy Saddle 24 July 87 (KD); Tokopah Falls 12 June 90 and 2 Aug 93 (KD).

**154a. *Euphydryas chalcedona chalcedona*** (Doubleday).

**Kern County:** Tehachapi Mts: Frazier Park 5 July 71; 29 Apr 88; 5 and 12 June 2007 (all KD).

**Tulare County:** Sierra Nevada: Badger 9 July 83 and 23 June 97 (KD); Mineral King Rd below SNP 9 June 88 and 8 May 2002 (KD); E of Coffee Camp 30 May 87 (KD); Jack Flat 20 May 88 (KD).

***Euphydryas chalcedona* (southern Sierra Nevada).** Likely *Euphydryas chalcedona chalcedona* X *olancha* intermediates.

**Kern County:** Tehachapi Mts: Cummings Crk S of Tehachapi 9 and 11 June 82; 9 June 96 (all KD); Caliente Cyn 29 May and 13 June 92 (KD); top of Water Cyn below Mt Park 25 July 98 (very LATE, KD). Sierra Nevada: Kernville 30 Apr 83 and 6 June 99 (KD). Greenhorn Mts: Old State Rd 3000-4500' 9 May 81(KD) and rd between Glennville and Cedar Crk 23 and 25 June 95 (KD); Kern Cyn at Democrat Hot Springs 23 May 61 and 9 June 71 (KD); Miracle Hot Springs (=Hobo Camp) 14 May 72; 14 and 30 May 76 (KD); Richbar 23 Apr 72 (KD). Piute Mts: 2 mi S of Bodfish 6 to 21 May 76 (KD); Havilah 29 May 79 and 17 May 84 (KD); Erskine Crk Cyn 20 and 23 May 2001(KD).

**154b. *Euphydryas chalcedona* near *olancha*** (W. G. Wright).

**Kern County:** Sierra Nevada: 0.7 mi SW of Sageland in cyn N of Kelso Valley 1 May 81 (KD); Chimney Peak Rd S of Lamont Peak 7 May 87; 5 June 94; 13 June 99 and 18 May 2003 (all KD); Canebrake 25 Apr 2004 (KD).

**Tulare County:** Sierra Nevada: Pine Mountain area 3 July 78 (KD); Kennedy Meadows 8 (KD) and 21 June 85 (SOM); Spring S of Kennedy Meadows 10 July 82 (KD) 8 June 85 (AR) and 30 June 88 (KD); Chimney Peak Rd N side of Lamont Pk 22 May and 25 June 82; 25 May 85 and 13 June 99 (all KD); Bald Mountain and vicinity 28 May and 18 June 2007 (KD). ***E. chalcedona chalcedona* X *olancha*** blend zone populations which may have orange-red ground color include the following: Sierra Nevada: 2 mi S of Johnsondale 12 June 99 (KD); Big Pine Mountain 3 July 78 (KD); Kennedy Meadows 8 June 85 and 30 June 88 (both KD); Cyn N side of Lamont Peak 25 May 85 (KD); 2-4 mi S of Johnsondale 14 May 72; 6 and 18 June 83 (all KD); Sherman Pass Rd. 3000-6800' 15 June 76; 20 June 80 and 18 June 83 (all KD); upper Kern River Roads End 14 May 72 (KD); 14 Apr 87 and 7 Apr 97 (both KD); S of Corral Creek 6 to 20 Apr 2002 (KD); E of Ant Canyon 19 and 21 Apr 2006 (KD); Goldledge Crk 9 May 81(KD); Limestone 21 Apr 97 (KD); Needlerock 25 June 81(KD). Greenhorn Mts: 2-4 mi E of White River 14 June 57 (PAO).

**154c. *Euphydryas chalcedona sinecat*** J. Scott.

**Kern County:** Some may believe the Kern Canyon populations fit here but those are treated as *chalcedona-olancha* intergrades in this work.

**Tulare County: Sequoia NP:** Elk Crk along middle fork trail 26 May 79 (PN); Buckeye Flat 17 May 85 and 13 Apr 90 (KD); Ash Mountain 28 Apr 59 (RC Burns) and 17 May 85 (KD); Potwisha 17 May 85 and 18 Apr 86 (KD); Mineral King Rd above park entrance 9 June 88 and 8 May 93 (KD).

**154d. *Euphydryas chalcedona irelandi*** Gunder.

**Kern County:** No definite records, but a large orange *Euphydryas* that may have been *irelandi* was seen near Pine Flat on Cannell VABM on 9 June 94 (KD). *Euphydryas editha* has been taken at nearby Cannell

Meadow and Pine Flat. The record needs verification by an actual collection by an experienced lepidopterist. The host plant *Penstemon newberryi* occurs on the west facing slope of that unnamed peak. **Tulare County:** Sierra Nevada: N fork Kaweah River and Woodward Crks 6800' 25 July 75 (JR Mori); hillside above Stony and Woodward Crks 29 June 87 and 16 July 92 (both KD); 3 mi W of Big Meadow (nr KCNP) 23 June 1987; 23 June 97 and 28 June 2003 (all KD); 10 mi E of Wilsonia 30 June 79 (JHM). **Sequoia NP:** Alta Peak Trail 18 July 60 (JH Gerdes); Mineral King Basin 1 July 79 (JHM); Timber Gap above Mineral King 9000' 22 July 91(KD) and White Chief Trail above Mineral King 9000' 23 July 92 (SOUTH confirmed record for Sierra Nevada, KD).

**155a. *Euphydryas editha*** (Boisduval). (Southern Sierra Nevada, lower elevation population).

**Kern County:** Sierra Nevada: Walker Pass 5250' 3 May 75 (JPB); 10 and 12 May 76 (KD); 29 Apr 93 (KD); Walker Pass Trailhead 19 Apr 2003 (KD); 2-3 mi E of Walker Pass on desert hilltop 9 May 93 (KD); Bird Spring Pass Microwave Hill 5300' 13 May 2000'(KD). Piute Mountains: 2 mi S of Bodfish 28 Apr 72 (JPB). Greenhorn Mts: 4.9 mi W of Miracle Hot Springs 3 June 71 (JPB); Miracle Hot Springs 19 May 76 (JPB).

**Tulare County:** Sierra Nevada: 2-4 mi S of Johnsondale 6 June 83 and 12 June 99 (KD); nr Johnsondale 18 May 84 (Dick Young); Sherman Pass Rd at 4200' 14 Apr 87, 7 May 2010 (KD) and 21 May 2010 (RP Meyer); South Falls 21 Apr 97 (KD); upper Kern River at Dam, 0.6 mi N of Roads End 5 Apr 87 (RPM) and 14 Apr 87; 12 Mar 97; 7 and 21 April 97; 7 and 14 May 2010 (all KD); Kern River south of Limestone Camp 7 and 14 May 2010 (KD); Kern River Trail off Mountain. Rd. 99 and Sherman Pass Rd. Jct. 21 May 2010 (KD & RP Meyer)

**155b. *Euphydryas editha rubicunda*** (Hy. Edwards).

**Kern County:** Greenhorn Mts: Alder Crk Camp 29 May 78 (JPB); W of Alder Crk Camp/Cedar Crk 8 May 93 and 21 May 95 (JGP).

**Tulare County:** Sierra Nevada: Badger 12 May 74 (JPB); Mineral King Rd 6 May 79 (JHM); 8 May and 15 June 93; 8 May 2002 (all KD); Alder Crk at Cherry Hill Rd. 5680' 22 May and 12 June 2012 (KD) and W of Sherman Pass at Alder Crk 6800' 22 May 2012 (KD). **Sequoia NP:** 2 mi W of N fork of Kaweah River 3000' 22 May 73 (JHM); Buckeye Flat 18 Apr 86 and 13 Apr 90 (KD). The Alder Creek specimens are tentatively placed with *rubicunda*.

**155c. *Euphydryas editha nubigena*** (Behr).

**Kern County:** Not in county.

**Tulare County:** Shepherd Pass Trail W head Tyndall Creek 11,000-12,200' 12 and 28 July 66 (Scott Ellis & Steve Johnson), in McGuire Collection. **Kings Canyon NP:** John Muir (=Pacific Coast) Trail near Bullfrog Lake Trail Jct. 11400' 2 July 2012 (photo, Elise Larsen). **Sequoia NP:** High elevation trail along Sierra Crest 12,300' 3 July 2012; Bighorn Plateau 11400' 4 July 2012 and Guitar Lake 11,500, 5 July 2012 (all photos, Elise Larsen).

**155d. *Euphydryas editha*** (high elevation Sequoia and Kings Canyon National Parks ssp).

**Kern County:** Replaced by another undescribed subspecies at high elevations.

**Tulare County:** Sierra Nevada: Stony Crk. Camp 10-12 June 90 (KD); Stony Crk. 16 June 2006 (KD); granite domes and ridges W of Big Meadow (nr KCNP) 23 June 89; 23 June 97; 21 and 28 June 2003 (KD); Buck Rock and Big Meadow (nr KCNP) 17 July 78 (AR) and 12 June 90 (RPM); Kings Cyn Overlook 23 June 89 (KD); Bald Mt Lookout 9400' 31 May 86; 2 June 97 and 9 June 2001 (all KD); Sherman Peak 10,050' 19 June 2002 (KD); rocky outcrops W of Sherman Pass 3 and 9 July 2005 (KD). **Sequoia NP:** Alta Peak "July 1943" (Tom Blevins); Halstead Meadow 20 June 81(PN) and 16 July 92 (KD); Mineral King: Timber Gap 22 July 91 (KD); White Chief Trail 23 July 92 (KD); S end of Mineral King Valley 19 July 93 (KD).

**155e. *Euphydryas editha*** near *augustinus* (W. H. Edwards).

**Kern County:** Sierra Nevada: Cannell VABM 9 June 94 (seen, KD); Pine Flat 10 June 2006 RPM & KD). Piute Mountains: Woolstaf Meadows 24 and 27 May 34 (WN Burdick); Piute Peak 8 June 74 and 6 July 96 (both JPB); 1.3 mi. rd. miles from Piute Peak 7 July 73; rocky outcrops along crest of Piutes 19 June 81;

8 July 82 and 4 July 2000 (all KD); Piute Mt. Lookout area 6 June 77 (JPB) and very common 28 May 2001 (KD).

**Tulare County:** Sierra Nevada: Big Meadow (Kern Plateau) 15 June 76; 12 July 78; 6 June 86 and 23 June 97 (all KD); Cannell Meadow 13 June 72 (JPB); Horse Meadow 25 June 72 (JPB); Fish Crk Camp 24 June 73; 15 June 74 and 28 June 75 (all JPB); Troy Meadow 5 and 14 July 85 (JGP); 8 June 2008 (several observers, KD); Little Troy Meadows 24 June 73 (JPB); Lloyd Meadows at Freeman Crk 14 June 75 (JPB); near Jct. of Sherman Pass and Cherry Hill Rds. 21 May 2010 (KD & R. P. Meyer).

**156. *Polygonia satyrus*** (W. H. Edwards).

**Kern County:** Tehachapi Mts: Tehachapi Mt Park 18 July 75; 24 July 79 and 20 Nov 95 (all KD); Water Cyn below Mt Park 22 Mar 76 and 17 Mar 78 (both KD); Mt Pinos 14 July 70; 28 June 79 and 22 June 89 (all KD); Tehachapi Crk at Keene 13 May 90 (KD). Greenhorn Mts: Cedar Crk 15 July 92 (KD); Tiger Flat 25 June 95 (KD); Poso Crk N end of Linn's Valley 17 July 98; 23 July 2001 and 3 July 2004 (all KD); Kernville 14 June 98 (KD); Kern Cyn at Richbar 19 Jan 76 (KD); Breckenridge Rd W of Havilah 7 June 2003 (KD). Piute Mts: Havilah 29 May and 6 June 79 (KD); Erskine Crk 4 Feb 2006 and 25 Mar 2012 (KD). San Joaquin Valley: Bakersfield 7 May 74 (KD, stray); Kern River at Hart Park 25 July and 18 Aug 70 (KD); Kern River E of Lake Ming 12 Feb 91(KD).

**Tulare County:** San Joaquin Valley: Kaweah River at Lemon Cove 13 Apr 90 (KD). Sierra Nevada: Quaking Aspen 13 July 83 (KD); Camp Wishon Rd. 1.9 mi. N Hwy. 190, 26 Jan 2011 (Steve Summers); California Hot Springs 30 Aug 62 (KD); 25 Apr 65 (RES) and 19 Mar 93 (KD); Rd J37 to Balch Park 26 May 88 (KD); Balch Park, Methuselah Camp 25 June 2005 (KD); upper Kern River N of Roads End 19 Mar 96 (KD); S of Hospital Flat 14 Feb 2002 (KD); Jack Flat 26 May 88 (KD); Sherman Pass Rd at 4300' 28 Apr 2001 (KD); Alder Crk. on Cherry Hill Rd. 5680', two taken 22 May 2012 (KD). Greenhorn Mts: Portuguese Pass area 26 June 81; 4 July 95; 10 to 24 June 96 and 2 July 2005 (all KD); Poso Crk N end of Linn's Valley 10 Aug 98 and 15 Sep 99 (KD). **Sequoia NP:** 2 mi W of Cabin Cove 26 June 85 (KD); Buckeye Flat (no date, PN); Timberline Lake 11100' 5 July 2012 (Elise Larsen).

**157. *Polygonia faunus rusticus*** (W. H. Edwards).

**Kern County:** No records but possible in Greenhorns near Black Mountain where host grows.

**Tulare County:** Sierra Nevada: Quaking Aspen 30 May 55 (JTE); Stony Crk 26 June 87; 11-12 June 90; 1 June; 4 and 13 Sep 91 and 28 June 2003 (all KD); 16 Oct 2004 (Michael Leski); common 16 June 2006 (KD); Buck Rock E of Big Meadow (near KCNP) 12 June 90 (RPM).

**158. *Polygonia gracilis zephyrus*** (W. H. Edwards).

**Kern County:** Sierra Nevada: 1 mi S of Sageland in Kelso Valley (in desert terrain) 1 Apr 2000 (KD). Greenhorn Mts: Tiger Flat area 25 June and 4 July 95; 10 to 24 June 96 and 2 July 2005 (all KD); Kern Cyn at Richbar 1500' 12 Apr 77 and 15 Feb 85 (both KD). Piute Mts: Piute Mt Rd at high elevations 19 June 81 and 8 July 82 (both KD). Tehachapi Mts: Mt Pinos 14 July 70; 30 June 75; 17 July 78 and 28 June 79 (all KD).

**Tulare County:** Sierra Nevada: Quaking Aspen 13 July and 3 Sep 83; 10 Aug 2002 (all KD); W of Sherman Pass 6800-9000' 8 Aug 80; 13 July 81 and 3 July to 30 Oct 2005 (all KD); Big Meadow (Kern Plateau) 6 June 86 (KD); Stony Crk 26-29 June 87 and 15 Sep 87 (both KD); Spring S of Kennedy Meadows 13 Apr 94 (KD); Bald Mountain Lookout 9400' 31 May 86 (KD); upper Kern River N of Roads End 11 Mar 2000 (KD) and Fairview 22 Oct 2005 (KD); Gateway to Sequoia 28 Feb 86 (KD). Greenhorn Mts: Portuguese Pass area 26 June 81; 10 to 24 June 96 and 2 July 2005 (all KD); Poison Meadow below Tobias Peak 19 June 66 (KCH). **Sequoia NP:** Mineral King Valley and Cabin Cove 5 and 27 July 85 (KD); Monarch Lakes Trail above Mineral King 26 July 85 (KD); Potwisha and Hospital Rock 28 Feb 86 (KD); Tokopah Falls Trail 12 June 90 (KD); Silver City 5 and 27 July 85 (KD); Wolverton 24 July 87(KD); Halstead Meadow 15 Sep 87 and 16 July 92 (KD).

**159. *Nymphalis californica californica*** (Boisduval).

**Kern County:** San Joaquin Valley: Bakersfield 27 May 52 (AR); 4 Oct 61 and 4 Apr 72 (KD); 24 May 86, (KD, ten captured in one hour!); Kern River at Hart Park 6 Oct 71 (KD). Sierra Nevada: Kernville 7 Mar to 10 Apr 62 (KD), Kelso Valley Rd 4 to 18 mi S of Hwy 178 at Weldon and many captures in wet

streambed and canyon 13 mi S of Hwy 178: 24 Mar 2006 (KD). Greenhorn Mts: Cedar Crk 17 June 84 (KD); Old State Rd 2 July 2005 (KD); N of Tiger Flat 25 June 95 and 10-24 June 96 (KD); Breckenridge Mountain 6 June 79 and 10 June 85 (both KD), Kern Cyn at Miracle Hot Springs 24 Mar 2006 (KD). Piute Mts: Piute Mt Rd at high elevation 19 June 81 and 8 July 82 (both KD); Havilah Knolls 29 May and 6 June 79 (KD); Erskine Crk E of Lake Isabella 25 May 2005 and 4 Feb 2006 (KD). Tehachapi Mts: Tehachapi Mt Park 20 June 62; 28 Mar 71 and 12 June 73 (all KD); Mt Pinos 28 June 79 (KD). Temblor Range: Hwy 58 near summit 13 May and 4 June 87 (KD).

**Tulare County:** Sierra Nevada: Johnsondale area 14 May 72 and 18 June 83 (KD); Quaking Aspen 13 July 83 (KD); W of Sherman Pass 3 Aug 81; 18 June 83 and common 1 to 22 Oct 2005 (all KD); Freeman Crk 25 July 80 (KD); Big Meadow (Kern Plateau) 20 June 80 (KD); 24 Aug 85 (KMR); Balch Park 26 June 72 and 25 June 2005 (both KD); Lloyd Meadows 4 July 66 (KCH); Stony Crk 29 June 87 (KD); Kennedy Meadows 26 May 2001 (KD); upper Kern River N of Roads End 9 Jan 2002 (KD); Fairview 14 Feb 2002 and 22 Oct 2005 (KD); Greenhorn Mts: Baker Ridge 11 June 81 (KD) and Poison Meadow nr. Tobias Pk 19 June 66 (KCH); Mineral King Rd 2000' 18 Mar 92 (KD). **Sequoia NP:** Ash Mountain 21 Feb 59 (RC Burns); 17 May 85 and 28 Feb 86 (KD); Potwisha 28 Feb 86 (KD); Hospital Rock 28 Feb 86 (KD); Mineral King Valley and Cabin Cove 5 July 85 (KD); Monarch Crk 9500' 26 July 85 (KD); Buckeye Flat 28 Feb and 18 Apr 86 (KD); Tokopah Falls 12 June 90 (KD). **Kings Canyon NP:** E of Buena Vista Peak 18 Aug 89 (KD) and Generals Hwy 13 June 90 (KD).

**160. *Nymphalis antiopa*** (Linnaeus).

**Kern County:** San Joaquin Valley: Bakersfield 23 Apr and 18 May 77; 5 May 80 (all KD); Kern River at Hart Park 8 May 90 and E of Lake Ming 7 and 12 Feb 91; 28 Jan 2006 (all KD); Maricopa 12 May 80 (KD). Sierra Nevada: Weldon 20 June 85 (KD). Greenhorn Mts: Shirley Meadows 6 July 75 (KD); N of Tiger Flat 25 June 95 and 10-24 June 96 (KD); Cedar Crk 6 and 11 July 75 (KD). Piute Mts: Piute Mt Rd at high elevation 19 June 81 (KD); Havilah 29 May 79 (KD); Erskine Crk 4 Feb 2006 (KD). Tehachapi Mts: Tehachapi Mt Park 28 Mar 71 (KD); Mt Pinos 28 June 79 (KD).

**Tulare County:** Sierra Nevada: Quaking Aspen 13 July 83 (KD); Big Meadow (Kern Plateau) 15 June 76 and 2 Aug 85 (KD); Sherman Pass area 8 Aug 80 and Alder Crk 6800' 18 June 83 (KD); Eshom Camp 10 July 83 (KD); Johnsondale 14 May 72 (KD); Gateway to Sequoia 28 Feb 86 (KD); Stony Crk 27-29 June and 15 Sep 87 (KD); upper Kern River, Roads End 21 June 82 and 9 Mar 88 (KD); Mineral King Rd 2500' 18 Mar 92 (KD). **Sequoia NP:** Ash Mountain 5 Feb 61 (RC Burns); Buckeye Flat 17 May 85 and 13 Apr 90 (KD); Mineral King Valley 5 July 85 and 19 July 93(KD); White Chief Trail 9500' 23 July 92 (KD); 2 mi W Cabin Cove 5 and 27 July 85 (KD); Silver City 5 July 85 (KD); Potwisha 28 Feb 86 (KD); Halstead Meadow 15 Sep 87 (KD); Tokopah Falls 12 June 90 (KD). **Kings Canyon NP:** Wilsonia 18 Aug 89 (KD).

**161. *Aglais milberti subpallida*** (Cockerell).

**Kern County:** San Joaquin Valley: Kern River at Hart Park 31 Mar and 4 Apr 72 (KD), exceptional records, not normally found in valley. Tehachapi Mts: Tehachapi Mt Park 20 Aug 62; 28 Mar 71 and 23 July 97(all KD); Hwy 58 off ramp at Cameron Rd E of Monolith in desert cyn 27 Apr 89 (KD); Mt Pinos 19 July 71 (RL Scharf) and 28 June 79 (KD). Sierra Nevada: 6 mi N of Weldon 14 June 80 (KD); Weldon, Onyx and Canebrake 23 Apr 2005 (KD); Pine Flat 5 July 2003 (KD). Greenhorn Mts: Shirley Meadows 6 July 75 and 13 June 77(KD); Greenhorn Mt Park 1 June 76 (KD); N of Tiger Flat 10 to 24 June 96; 15 July 2000 and 3 July 2005 (all KD); Democrat Hot Springs 7 and 14 Feb 2002 (KD); Old State Rd at crk 2 July 2005 (KD) Piute Mts: Havilah 29 May 79 (KD); Piute Mt Rd, Liebel Peak to Piute Peak 19 June 81 and 8 July 82 (both KD). There are two sight records for a spring in Kelso Creek about one mile SW of Sageland in Mojave Desert habitat north of Kelso Valley, one of those records was of a fresh individual 18 May 2009 (KD).

**Tulare County:** Sierra Nevada: Bald Mountain Lookout 9400' 10 July 82 (KD & AR); 5 Aug 82 and 31 May 86 (both KD); W of Sherman Pass 6800-9000' 21 June to 24 July 82; 21 May 90; 1 Sep 2003 and 3 and 9 July 2003 (all KD); Big Meadow (Kern Plateau) 20 June 80 (KD); Johnsondale 10 Apr 62 (KD); Quaking Aspen 13 July 83 and 30 May 87 (KD); Spring S of Kennedy Meadows 25 May and 8 June 85 (KD); Sherman Pass Rd at 4200-4800' 14 Apr 87 and 28 Apr 2001(KD); upper Kern River at Limestone 19 Jan 2003 and 1 Feb 2005(KD); Camp Nelson 30 May 87 (KD); Buck Rock E of Big Meadow (nr KCNP) 12 June 90 (RPM); upper Kern River N of Roads End 9 Mar 88 (KD); Goldledge 19 Mar 96 (KD) and

Fairview 21 Feb 2002 (KD). Greenhorn Mts: 2 mi N of Portuguese Pass 26 June and 11 July 81 (KD); Tobias Peak Lookout 21 July 97 (KD); Poison Meadow S of Tobias Peak 19 June 66 (KCH) and 7 Aug 95 (KD); S of Portuguese Pass 10-24 June 96 (KD). **Sequoia NP**: 2 mi W of Hospital Rock 28 Feb 86 (seen, KD); Mineral King area, Timber Gap Trail 9000' 22 July 91(KD); Redwood Crk 7 May 2002 (both KD).

**162. *Vanessa virginiensis*** (Drury).

**Kern County**: San Joaquin Valley: Bakersfield 29 May 83 (KD); along Kern River at Bakersfield 7 June 76 (KD); Gordon's Ferry at Oildale 13 Mar 87 (KD); Hart Park 24 Apr 86 and 28 May 91 (both KD); Poso Crk 8 mi N of Oildale 26 May 81 (KD); 8 mi. S of Greenfield 13 Aug and 19 Sep 1983 (KD); Sandcut Hill 24 Feb 97 (KD). Kern Cyn at Richbar 10 Mar 79 (KD); Kernville 13 Nov 2005 (KD). Greenhorn Mountains: Greenhorn Mt Park 2 July 2005 (KD); 1.5 mi. S Tiger Flat 4 Aug 2000 (KD). Piute Mts: Piute Mt Rd 28 May 2001 (KD); Havilah 7 June 2003 (KD) Tehachapi Mts: Tehachapi Mt Park 26 June 2005 (KD); Keene 21 Oct 98 (KD); Mt Pinos (McGill Camp) 24 Sep 2005 (KD). Temblor Range: Hwy 58: 4 June 87 (KD). Mojave Desert: Jawbone Cyn 9 Oct 82 (KD).

**Tulare County**: San Joaquin Valley: Tipton 22 Aug 87 and 14 July 88 (both KD); Porterville 5 Sep 87 and 26 May 88 (KD). Sierra Nevada: 3 mi W of Sherman Pass 5 Aug 82; Sherman Pass Rd. E of Kern River 4200' 2 Apr 87 (both KD); Big Meadow (Kern Plateau) 20 June 80 (KD); Balch Park 29 July 77 (KD); Freeman Crk 25 July 80 (KD); Pine Mountain area 3 Aug 81 (KD); Chimney Peak Ranger Station 16 Aug 85 (KD); upper Kern River at Roads End 21 June 82 and Fairview 23 Oct 2002 (both KD); Stony Crk 26 June 87 (KD); Gateway to Sequoia 27 July 85 (KD). **Sequoia NP**: Ash Mountain 27 July 85 (KD); Giant Forest Village 15 Aug 86 (KD); Wolverton 24 July 87 (KD); Halstead Meadow 18 Aug 89 (KD); Amphitheater Point 16 July 92 and 2 Aug 93 (KD); Little Baldy Saddle 2 Aug 93 (KD); Lodgepole 2 Aug 93 (KD).

**163. *Vanessa cardui*** (Linnaeus).

**Kern County**: San Joaquin Valley: Bakersfield 14 Oct 73; 10 Mar 77; 26 Feb and 6 Mar 91 (KD); Edison 12 Apr 91 (KD); Sandcut Hill 12 Feb to 28 Apr 91(KD). Tehachapi Mts: Stallion Springs 11 June 82 (KD); Tehachapi Mt Park 26 June 2005 (KD). Sierra Nevada: Grapevine Cyn 4 Feb 2006 (SS). Greenhorn Mts: Mt Park 15 June 92 and Old State Rd 17 May 2005 (KD). Piute Mts, 2-4 mi S of Bodfish 6 June 79 (KD); Havilah 30 May 79 (KD); Erskine Crk 4 Feb 2006 (KD). Mojave Desert: Koehn Dry Lake 11-26 May 92 (KD); Cinco 9 Oct 92 (KD). Overwintering S end of Sierra Nevada at Mojave Desert edge above Hwy 14 at Cinco 24 Nov 97; 22 Dec 97 and 27 Jan 98; 3 Jan 2006 (all KD).

**Tulare County**: San Joaquin Valley: Alpaugh 23 Aug 84 (KD); Exeter 28 Feb 86 (KD); Porterville 21 Oct 88 (KD). Sierra Nevada: Quaking Aspen 3 Sep 83 (KD); Johnsondale 6 and 18 June 83 (KD); Lamont Peak area 4 and 6 July 83 (KD); Bald Mountain Lookout 9400' 10 July 82 (KD); W of Camp Nelson 13 July 83 (KD); Sherman Pass Rd 6700 to 9300' 13 July 81 (KD); abundant 22 Sep to 5 Nov 2005 (KD); Stony and Woodward Crks 29 June 87 and 4 Sep 91(KD); Kings Cyn Overlook 23 June 89 (KD). Greenhorn Mts: Portuguese Pass 11 July 81 (KD). **Sequoia NP**: Mineral King Valley 5 July 85 (KD); Timber Gap Trail 22 July 91 (KD); White Chief Trail 23 July 92 (KD); Buckeye Flat 18 Apr 86 and 13 Apr 80 (KD); Tokopah Falls 12 June 90 (KD). **Kings Canyon NP**: Buena Vista Peak trailhead 23 June 89 (KD).

**164. *Vanessa annabella*** (Field).

**Kern County**: San Joaquin Valley: Bakersfield 28 Apr 70; 8 Apr 88; 19 May 91 and Hart Park 7 Feb 91 (all KD); Buttonwillow 2 Sep to 3 Oct 80 (KD); Sandcut Hill 28 Apr 86 and 25 Apr 91 (KD). Mojave Desert: Cantil 20 Sep 84 and 8 May 95 (KD); California City 16 May 95 (KD); Cyns N of Hwy 14 at Cinco 3 Jan 2006 (KD). Sierra Nevada: Weldon 4 to 21 Aug 81 (KD); Canebrake 23 Apr and 13 Nov 2005 (KD). Greenhorn Mts: Old State Rd 22 Aug 2003; N of Tiger Flat 15 July to 4 Aug 2000 (KD); Shirley Meadows 6 July 75 (KD). Piute Mts: 2-4 mi S of Bodfish 8 to 24 May 76 (KD); Piute Mt Rd at all elevations 19 June 81 and 8 July 82 (KD); Havilah Knolls 29 May and 6 June 79 (KD). Tehachapi Mts: Bealville 14 May 90 (KD); top of Water Cyn below Tehachapi Mt Park 5 Sep 2005 (KD). Temblor Range: Along Hwy 58: 13 May and 4 June 87(KD).

**Tulare County**: San Joaquin Valley: Alpaugh 11 and 23 Aug 84 (KD); Earlimart 23 Aug 84 (KD); Pixley 22 Aug 87 (KD) and Porterville 21 Oct 88 (KD). Sierra Nevada: Lamont Peak 4 and 6 July 83 (KD); Sherman Pass Rd at 6800' 18 June 83 (KD); abundant 7600-9000' 22 Sep to 5 Nov 2005 (KD); Big

Meadow (Kern Plateau) 12 July 78 and 20 June 80 (both KD); upper Kern River at Goldledge Crk 9 May 81 (KD); Roads End 21 June 82 (KD) and Fairview 22 Sep to 5 Nov 2005 (KD); Stony Crk 2 Aug 93 (KD). Greenhorn Mts: Portuguese Pass and Baker Ridge 26 June and 11 July 81 (KD). **Sequoia NP**: Mineral King Valley 5 July 85 (KD); Timber Gap 22 July 91 (KD); Silver City 26 July 85 (KD); Ash Mountain 28 Feb 86 (KD). **Kings Canyon NP**: Village Meadow 23 June 89 (KD) and E of Buena Vista Peak 18 Aug 89 (KD).

**165. *Vanessa atalanta rubria*** (Frühstorfer).

**Kern County**: San Joaquin Valley: Bakersfield 28 May 77; 3 and 14 Apr 79; 22 Mar 91 and 7 Mar 95 (all KD); Kern River at Hart Park 8 May 90 (KD); Oildale 9 May 95 (KD); Sandcut Hill 13 Mar 93 (KD). Sierra Nevada in Kern River Valley: Weldon 5 Oct 98 (KD). Greenhorn Mts: N of Tiger Flat 25 June 95 and 10-24 June 96 (KD); Poso Crk N of Glennville 17 July and 7 Sep 98 (KD). Piute Mts: Havilah Knolls 29 May and 6 June 79 (KD). Tehachapi Mts: Tehachapi 15 July 63 (KD); Tehachapi Mt Park 20 Aug 62 and 28 Mar 71 (KD); Tehachapi Crk at Keene 25 May 90 (KD).

**Tulare County**: Sierra Nevada: Spring S of Kennedy Meadows 10 July 82 (KD); Quaking Aspen 8 Sep 83 (KD); Sherman Pass Rd at Alder Crk 6800' 18 June 83 (KD); Sherman Pass Rd at 4200' 14 Apr 87(KD); Kaweah River-Dry Crk Rd 13 Apr 90 (KD); California Hot Springs 19 Mar 93 (KD); 2-4 mi S of Johnsondale 6 June 83 (KD); E of Coffee Camp 16 Jan 79 (KD); upper Kern River N of Roads End 17 Mar 97 (KD); Corral Crk 15 Mar 2005 and Limestone 19 Nov 2005 (KD); Balch Park 25 June 2005 (KD). Greenhorn Mts: 4 mi E of White River 15 June 57 (PAO); Portuguese Pass area 10-24 June 96 (KD).

**166. *Junonia coenia grisea* Austin & J. Emmel.**

**Kern County**: San Joaquin Valley: Bakersfield 1 May 61 and 22 June 76 (KD); Hart Park 28 May and 29 July 91 (KD); Lake Ming 28 May 91(KD); Sandcut Hill 25 Apr 91 and 30 Mar 92 (both KD). Kern River Valley: Weldon 12 July 85 (KD); Hanning Flat 16 and 22 Sep 2001 (KD). Greenhorn Mts: Kern Cyn at Richbar 16 Mar 79 and 10 Sep 92 (KD); Old State Rd 22 Aug 2003 (KD). Piute Mts: 2-4 mi S of Bodfish 8 to 21 May 76 (KD); Havilah 29 May 79 (KD). Tehachapi Mts: top of Water Cyn below Mt Park 5 Sep 2005 (KD); Tehachapi Valley 5 Sep 2005 (KD); Caliente 25 July 90 KD).

**Tulare County**: San Joaquin Valley: Alpaugh 11 and 23 Aug 84 (KD); Tulare 16 Sep 84 (KD); 5 mi S of Woodlake 6 Sep 85 and Porterville 21 Oct 88 (both KD). Sierra Nevada: Freeman Crk 25 July 80 (KD); Sherman Pass Rd 4000-7600' 5 Aug 82 and 18 June 83 (both KD) ; Eshom Camp 9-10 July 83 (KD); Quaking Aspen 13 July 83 (KD); upper Kern River at Limestone 1 Oct to 5 Nov 2005 (KD); Three Rivers 4 Sep 91 (KD); Gateway to Sequoia 15 Aug 86 (KD); Stony Crk 11 June 90 and 2 Aug 93 (KD): Kings Cyn Overlook 23 June 89 (KD). **Sequoia NP**: Huckleberry Meadows 17 Aug 60 (JH Gerdes); Buckeye Flat 17 May 85 (KD); Potwisha 18 Apr 86 (KD); Halstead Meadow and Wolverton 24 July 87 (KD); Mineral King: White Chief Trail 23 July 92 (KD); Lodgepole 2 Aug 93 (KD). **Kings Canyon NP**: Buena Vista Peak Trailhead 23 June 89 (KD).

**167a. *Limenitis lorquini lorquini*** (Boisduval).

**Kern County**: San Joaquin Valley: Kern River E of Lake Ming 7 June 70 (KD); at Hart Park E of Bakersfield 26 July and 4 Aug 70; 29 July 91 (KD); Lake Ming 28 May 91 (KD). Sierra Nevada in Kern River Valley: Weldon 8 Aug 79 and 5 Oct 98 (KD); Hanning Flat 10 Aug 2002 (KD).Greenhorn Mts: Kern Cyn at Miracle Hot Springs 21 May 76 (KD); Democrat Hot Springs 23 June 63 (KD); N of Glennville along Poso Crk 24 July 99 (KD); Breckenridge Mountain 29 May 79 and 23 May 86 (KD). Piute Mts: 2-4 mi S of Bodfish 8 to 30 May 76 (KD); Havilah 26 July 77 (KD, blending with *powelli*).

**Tulare County**: San Joaquin Valley: Kaweah River, Dry Crk Rd 13 Apr 90 (KD). Sierra Nevada: Sherman Pass Rd 4600-9000' 24 July and 5 Aug 82 (KD); Balch Park 29 July 77(KD); Quaking Aspen 10 July 83 (KD); Stony Creek 27-29 June 87 and 4 Sep 91 (KD); Spring S of Kennedy Meadows 10 July 82 and 20 June 92 (KD); 1 mi N of Chimney Peak Ranger Station 18 June 2005 (KD); Lamont Meadows 16 Aug 85 (KD); Gateway to Sequoia 18 Apr 86 (KD). Greenhorn Mts: Portuguese Pass 24 June 96 (KD); Poison Meadow S of Tobias Peak 7 Aug 95 (KD). **Sequoia NP**: Mineral King Valley, Redwood Crk and 2 mi W of Cabin Cove 5 July 85 (all KD); Potwisha 27 July 85 (KD); Halstead Meadows 16 Aug 85 (KD); Buckeye Flat 17 May 85 (KD); Mineral King Rd park entrance 19 July 93 (KD); Little Baldy Saddle 2 Aug

93 (KD); Lodgepole and Tokopah Falls Trail 2 Aug 93 (KD). **Kings Canyon NP**: E of Buena Vista Peak 18 Aug 89 and Wilsonia 18 Aug 89 (both KD).

**167b. *Limenitis lorquini powelli*** (Field).

**Kern County**: Tehachapi Mts: Tehachapi Mt Park 10 July 84; 25 July 99; 17 Aug 2002; 26 June and 5 Sep 2005 (all KD); top of Water Cyn below Mt Park 17 Aug 2002 and 5 Sep 2005 (both KD); Tehachapi Crk at Keene 10 May 88 and 13 May 90 (both KD); Cuddy Crk at Frazier Park 22 June 89 and 2 June 2012 (KD); Lake Of The Woods, 15 Sep 2010 and 2 June 2012 (KD); Mt Pinos 14 July 70 and Mil Potrero Rd N side of Mt Pinos 22 June 89 (both KD, possible intermediate to nominotypical *lorquini*).

**Tulare County**: Replaced by nominotypical *lorquini*.

**168. *Adelpha californica*** (Butler).

**Kern County**: Tehachapi Mts: Tehachapi Mt Park 20 Aug 62; 14 Aug 73; 30 July 81; 20 July 88 and 5 Sep 2005 (all KD); Keene 2 May 90(KD); Tehachapi Crk E of Keene 13 May 90 (KD); Mt Pinos 14 July 70 (KD). Sierra Nevada (Kern River Valley): 4 mi N of Weldon 14 June 80 and Canebrake 13 Nov 2005 (both KD); Kelso Creek Spring 0.8 mi. S Sageland in Mojave Desert habitat! 1 Oct 2009 (KD). Greenhorn Mts: Democrat Hot Springs 23 May 61 (KD); Cedar Crk 6 to 11 July 75 and 4 July 77 (KD); Old State Rd 22 Aug 2003 and 3 July 2005 (KD); Kernville 19 May 80 (KD). Piute Mts: Erskine Crk Cyn 6 June 83 and 11 Sep 2000 (KD); 2-4 mi S of Bodfish 8 to 21 May 76 (KD); E slope Piute Mountains 3-5 mi. W Sageland 25 Sep & 1 Oct 2009 (KD). Temblor Range: Hwy 58 W of McKittrick 13 May and 4 June 87 (KD). Mojave Desert: Ridgecrest (rare stray) 2 Oct 2003 (SS).

**Tulare County**: Sierra Nevada: California Hot Springs 30 Aug 62 (KD); W of Camp Nelson 13 July 83 (KD); 2-4 mi S of Johnsondale 6 and 18 June 83 (KD); 5 Nov 2005 (KD); Balch Park 29 July 77 and 25 June 2005 (KD); Spring S of Kennedy Meadows 26 Aug 83 (KD); Eshom Camp 10 July 83 (KD); Freeman Crk 25 June 81 and 16 July 83 (both KD); Lloyd Meadows 4 July 66 (KCH); Big Meadow (Kern Plateau) 2 Aug 85 (KD); Lamont Meadows 16 Aug 85 (KD); Quaking Aspen 30 May 87 (KD); Stony and Woodward Crks 16 July 92 (KD); Mineral King Rd MP 5-6: 12 Aug 92 and 15 June 93 (KD). Greenhorn Mts: Balance Rock 1-30 Sep 60 (John Luttrell); Baker Lookout 26 June 81 (KD). **Sequoia NP**: General Sherman Tree and Giant Forest Village 27 June 87 (KD); Ash Mountain and Potwisha 17 May and 6 Sep 85 (KD); Buckeye Flat 17 May 85 and 15 Sep 87 (KD); Crystal Cave 15 Aug 86 and 27 June 87 (KD); Redwood Crk and Cabin Cove 5 and 27 July 85 (KD); Mineral King at Timber Gap 9600' 22 July 91 (stray, KD).

**169. *Coenonympha californica californica*** Westwood.

**Kern County**: San Joaquin Valley: Bakersfield 20 May 61 (stray, KD); Poso Crk 8 mi N of Oildale 4 May 81 (KD). Tehachapi Mts: Tehachapi Mt Park 26 Sep 2004 and 26 June 2005 (KD); Cummings Crk 9 and 11 June 82 (KD); 21 Apr 90 (KD); Caliente Cyn 15 Sep 89 (KD); Keene 2 and 13 May 90 (KD); Frazier Park 5 July 71 (KD). Sierra Nevada: Chimney Pk Rd 19 June 2005 (KD); Weldon 12 July 85 (KD); Bird Spring Pass 13 May 2000 and 18 Apr 2005 (KD). Greenhorn Mts: Cedar Crk 6 and 11 July 75 (KD); Old State Rd 2 July 2005 (KD); Breckenridge Mountain 6 June 79 (KD). Piute Mts: 2-4 mi S of Bodfish 8 to 30 May 76 (KD); E side of Piutes 4-5 mi W of Sageland 23 May to 30 May 2005 (very darkly marked, KD).

**Tulare County**: San Joaquin Valley: Kaweah River, Dry Crk Rd 13 Apr 90 (KD). Sierra Nevada: California Hot Springs 2 Oct 61 and 30 Aug 62 (KD); 2-4 mi S of Johnsondale 6 and 18 June 83 (KD); Freeman Crk 16 and 29 June 83 (KD); Badger-Eshom area 9-10 July 83 (KD); Lamont Meadows 16 Aug 85 (KD); Sherman Pass Rd 3500-6800' 18 June 83 (KD) and at 7600' 1 to 30 Oct 2005 (KD); Stony Crk 15 Sep 87 and 23 June 89 (KD); Roads End 14 May 72 and Limestone 22 Sep to 5 Nov 2005 (KD); Kennedy Meadows 26 May 2001 (KD); Gateway to Sequoia 18 and 28 Feb 86 (KD); lower Mineral King Rd 18 Mar and 12 Aug 92 (KD). Greenhorn Mts: Baker Ridge 11 July 81 (KD); Portuguese Pass 7200' 10-24 June and 9 Sep 96 (KD). **Sequoia NP**: Ash Mountain 17 May; 27 July and 6 Sep 85; 28 Feb 86 (all KD); Potwisha 17 May 85; 28 Feb and 18 Apr 86 (KD); Buckeye Flat 17 May and 6 Sep 85 (KD); Mineral King Rd inside SNP 8 May and 15 June 93 (KD). **Kings Canyon NP**: Wilsonia 18 Aug 89 (KD).

**170. *Cercyonis pegala australosierra*** J. F. Emmel, T. Emmel & K. Davenport.

**Kern County**: Greenhorn Mts: 1.5 mi N of Glennville 21 July 97 (KD); N end of Linn's Valley near Poso Crk 17 July and 7 Sep 98; 15 and 22 July 2000; 23 July 2001 (all KD).

**Tulare County:** Greenhorn Mts: N end of Linn's Valley 4 to 15 Aug 97; 21 July to 7 Sep 98; 24 July 99; 23 July 2001 and 5 July 2002 (all KD).

**171a. *Cercyonis sthenele silvestris*** (W. H. Edwards).

**Kern County:** No verified records but population at Tehachapi Mountain Park shows some intermediacy between *behrii* and *silvestris*. The species was common at Cedar Creek, Greenhorn Mountains 6 to 11 July 75 (KD) but no vouchers were collected. None have been found there in recent years. It is possible that *silvestris* is on the west slope of the Greenhorns, though *behrii* occurs on the east slope of that range.

**Tulare County:** Sierra Nevada: Badger-Eshom Rd 9-10 July 83; 23 June 97 and 21 June 2003 (all KD); 6 mi W of Hartland 23 June 97 (KD); Mineral King Rd no date (JHM); MP 5: 12 Aug 92 (KD); MP 8: 15 June 93 (seen, KD). **Sequoia NP:** Elk Crk along Middle Fork Trail 2125' 26 May 79 (PN).

**171b. *Cercyonis sthenele behrii*** (F Grinnell).

**Kern County:** Tehachapi Mts: Tehachapi Mt Park 20 June 62 (KD); 11 and 18 July 75 and 26 June 2005 (all KD); top of Water Cyn below Mt Park 28 Aug 95 and 25 June 96(KD); Tehachapi Loop E of Keene 5 June 86 (KD); Keene 22 May 87 (KD); Caliente Cyn (LOW 1500') 13 Aug 87 (KD); Frazier Park 5 July 71 and 22 June 79 (both KD). Sierra Nevada: Walker Pass 8 Aug 77 and 4 July 2004 (both KD); 31 May 97 (Mike Smith); Chimney Peak Rd S of Lamont Peak 4 and 6 July 83 and 13 June 99 (all KD); Bird Spring Pass 1 July 2000 (KD); Jawbone Cyn summit and ridge S of Butterbrecht Peak 28 June 83 (both KD); 0.9 mi. SW of Sageland 29 May 93 and 5 June 99 (both KD); Ravine near spring 1-1.3 mi. SW Sageland, common but worn 14 Sep 2011 (KD). Greenhorn Mts: Old State Rd 14 June 90; 19 June 93 and 22 Aug 2003 (all KD). Piute Mts: Piute Mt Rd above Bodfish-Havilah road summit 4 and 17 July 2000 (KD); E side of range W of Sageland 13 Aug 2005 and 21 Sep 2011 (KD).

**Tulare County:** Sierra Nevada: 2-4 mi S of Johnsondale 16 and 29 July 83 (KD); 31 May 86 (KD); Chimney Peak Rd nr Lamont Peak 4 and 6 July 83; 14 June 86 and 13 June 99 (all KD); Sherman Pass Rd at 4500' 25 June 85 (KD); upper Kern River at Corral Crk 4 and 6 June 2003 (KD). Greenhorn Mts: South Tobias Peak Meadow 19 June 66 (RES).

**171c. *Cercyonis sthenele* near *paulus*** (W. H. Edwards).

**Kern County:** Populations at Walker Pass show blending between *behrii* and *paulus*.

**Tulare County:** Sierra Nevada: Kennedy Meadows 30 June, 8 and 29 July 88 (all KD); 22 Sep 2001 (KD); Spring S of Kennedy Meadows 29 July 88 (KD).

**172. *Oeneis chryxus ivallda*** (Mead).

**Kern County:** No records and no suitable habitat.

**Tulare County:** Sierra Nevada: Shepherd Pass 12,000' 26 to 28 July 67 (S Johnson); Chicken Spring Lake above Cottonwood Pass at 11,400' 19 July 73 (JR Mori). **Sequoia NP:** Alta Peak 12 July 60 (JH Gerdes); Mineral King on Farewell Gap Trail 28 Aug 83 (PN) and Timber Gap Trail 9000' 11 Sep 83 (PN & Gary Pavlik).

**173. *Danaus plexippus plexippus*** (Linnaeus).

**Kern County:** San Joaquin Valley: 6 mi S of Greenfield 23 Sep 79 and 1 June 80 (KD); Edison 22 Sep 92 (KD); Bakersfield 14 Feb 81 and 17 Sep 91 (KD); Kern River at Lake Ming 7 Feb 91 and 28 Jan 2006 (KD, overwintering population). Sierra Nevada: Weldon 8 Aug 79 (KD); Lake Isabella below Dam 18 June and 16 Sep 2001 (KD); Chimney Peak Rd N of Hwy 178: 6 Oct 2001 (KD). Greenhorn Mts: N end of Linn's Valley 4 and 11 Sep 97(KD); Glennville 4 Aug 97 (KD); Kern Cyn at Miracle Hot Springs 10 Aug 76 (KD). Piute Mts: Havilah 5 to 12 Sep 75 (KD); E side of range 4 mi W of Sageland in wet meadows 13 Aug 2005 (KD). Tehachapi Mts: Cameron Rd SE of Monolith 17 Aug 90 (KD); Hart Flat 25 Sep 93 (KD); Tehachapi Mt Park 14 Aug 73 (KD); Mt Pinos 14 July and 28 Sep 70 (KD); Caliente and Caliente Cyn 22 Aug 73; 13 Oct 87 and 22 Oct 88 (all KD). Mojave Desert: Cinco and Cantil 20 Sep to 3 Oct 84 (KD).

**Tulare County:** San Joaquin Valley: Earlimart 23 Aug 84 (KD); Venida 6 Sep 85 and Lindcove 28 Feb 86 (KD). Sierra Nevada: California Hot Springs 30 Aug 62 (KD); Freeman Crk 16 July 83 (KD); Stony Crk 27-29 June 87 and 13 Sep 91 (KD); Johnsondale 6 and 18 June 83 (KD); Sherman Pass Rd at 6700' 18 June 83 (KD); Big Meadow 20 June 80 and 2 Aug 85 (both KD); Kennedy Meadows 3 Aug 81 and 26 Aug

83 (both KD); Quaking Aspen 27 July 84; upper Kern River at Limestone 3 and 9 July 2005 (KD); Chico Flat 14 Nov 2002 (KD); Gateway to Sequoia 27 Sep 85 and 15 Sep 87 (KD). Greenhorn Mts: 3 mi W of White River 14 June 57 (PAO) and Baker Ridge 11 June 83 (KD). **Sequoia NP**: Ash Mountain, Potwisha and Buckeye Flat 17 May 85 (all KD); Cabin Cove and Mineral King Valley 5 July 85 (KD); Timber Gap Trail 9000' 22 July 91 (KD); Mineral King Rd MP 5-10: 15 June 93 (KD); Giant Forest Village 15 Aug 86 (KD); Silver City 27 July 85 (KD). **Kings Canyon NP**: Generals Hwy inside Park 2 Aug 93 (KD).

**174. *Danaus gilippus thersippus*** (Bates).

**Kern County**: San Joaquin Valley: Bakersfield 12 Sep 60 and E of Bakersfield 28 May 92 (both KD); Hart Park nr Bakersfield 26 July, 18 Aug and 27 Sep 70 and 23 Sep 82 (KD); transient population at Tule Elk Reserve 20 Aug and 5 Sep 81 (KD); 8 mi S of Greenfield 21 Sep 79; 13 Aug to 19 Sep 83 and 25 Aug 84 (all KD); Edison 22 and 28 May 92 (KD). Mojave Desert: Cinco 20 Sep 84 and Cantil 4 July 83 (both KD); Ridgecrest 10 Nov 2001 (SS). Sierra Nevada: Fay Crk and Pacific Crest Trail 14 June 80 (KD); Chimney Peak Rd N of Hwy 178: 6 Oct 2001 (KD); Weldon 5 Oct 98 (KD); Lake Isabella in swamps below Dam 18 June and 16 Sep 2001; 1 Sep 2003 (all KD); Kernville 8 July 2001; 1 Sep 2003 (all KD); Kelso Crk 1 mi S of Sageland 28 May 2001 (common on *Baccharis*, KD). Greenhorn Mts: Kern Cyn at Miracle Hot Springs 10 Aug 76 and common 14 Sep 2011 (KD); 2 mi S of Kernville on E side of range 13 Nov 2005 (KD). Tehachapi Mts: Caliente 22 Aug 73 (KD); 4 mi E of Caliente 13 Oct 87; 22 Oct 88; 27 Sep 91 and 14 July 92 (all KD). Piute Mts: Havilah 27 Aug 76 (KD); Erskine Crk E of Lake Isabella 20 and 23 May 2001 (KD).

**Tulare County**: Sierra Nevada: Coffee Camp 13 July 83 (seen, KD); Freeman Crk Grove 16 July 83 (KD); Chimney Peak area 8 June 85 (RPM); W end of Lamont Meadows 16 Aug 85 and seen 20 June 92 (both KD); Kennedy Meadows 30 June 88 and seen 26 May 2001 (both KD); upper Kern River at Fairview 12 May 2001 (KD).

#### **Documentation of Records: Vouchers and Photographs.**

Collections were made of many of the butterflies reported in the text and collection records sections. Specimens collected in Sequoia and Kings Canyon National Parks by the author and others are held at the National Park Service Museum in Sequoia National Park at Ash Mountain near Three Rivers in Tulare County with a majority of collections at the Natural History Museum of Los Angeles County. The latter bear special labels and are entered in logs with full data as required by the National Park Service. Yearly reports and specimen logs were given to officials at Sequoia National Park. That information was included in this publication. Many of the butterflies from Kern and Tulare Counties are in the private collection of the author, Ken Davenport. Others are in the private collections of Jim Brock, Kelly Richers and Richard P. Meyer. Thousands of specimens from Kern and Tulare Counties were donated by the author to the Natural History Museum of Los Angeles County in Los Angeles (LACM) and an equal number are now at the C. P. Gillette Museum of Arthropod Diversity, Colorado State University at Fort Collins, Colorado. These include many of the type specimens for *Cercyonis pegala australosierra* collected as adults. Other specimens of *Erynnis duskywings* are at the Smithsonian Institution in Washington D.C. and others are now at the McGuire Center for Lepidoptera and Biodiversity in Gainesville, Florida. Yet many others have been sent to scientists for scientific study including John F. Emmel, Nick Grishin and others.

There are a few records given in this publication that are based on only sight records: butterflies that could not be collected or photographed. The region has become popular for collectors, butterfly photographers who have come to the area for butterfly counts and a even national meetings in 2007 and 2008. Fred Heath, an NABA Director, William Bouton, Paul Levine, Susan Steele, Mike Stangeland, Kim Davis, David Horner, and many others have such photographs

## Butterflies of Sequoia and Kings Canyon National Parks, Tulare and Fresno Counties, California

**SKIPPERS:** Hesperidae.

Spread-wing Skippers. Pyrginae.

- \_\_\_ Silver-spotted Skipper *Epargyreus clarus* (Cramer).
- \_\_\_ Northern Cloudywing *Thorybes pylades* (Scudder).
- \_\_\_ Mexican Cloudywing *Thorybes mexicana* (Herrich-Schäffer).
- \_\_\_ Propertius Duskywing *Erynnis propertius* (Scudder & Burgess).
- \_\_\_ Mournful Duskywing *Erynnis tristis* (Boisduval).
- \_\_\_ Pacuvius Duskywing *Erynnis pacuvius* (Lintner).
- \_\_\_ Funereal Duskywing *Erynnis funeralis* (Scudder & Burgess).
- \_\_\_ Two-banded Checkered Skipper *Pyrgus ruralis* (Boisduval).
- \_\_\_ Checkered Skipper *Pyrgus communis* (Grote).
- \_\_\_ Northern White Skipper *Heliopetes ericetorum* Billberg.

Grass Skippers. Hesperinae.

- \_\_\_ Fiery Skipper *Hylephila phyleus* (Drury).
- \_\_\_ The Juba Skipper *Hesperia juba* (Scudder).
- \_\_\_ Western Branded Skipper *Hesperia colorado* (Scudder).
- \_\_\_ Sierra Skipper *Hesperia miriamae* MacNeill.
- \_\_\_ Nevada Skipper *Hesperia nevada* (Scudder).
- \_\_\_ Sandhill Skipper *Polites sabuleti* (Boisduval).
- \_\_\_ Sonora Skipper *Polites sonora* (Scudder).
- \_\_\_ Woodland Skipper *Ochlodes sylvanoides* (Boisduval).
- \_\_\_ Rural Skipper *Ochlodes agricola* (Boisduval).
- \_\_\_ Umber Skipper *Poanes melane* (W. H. Edwards).

Parnassians: Subfamily Parnassinae

- \_\_\_ Clodius Parnassian *Parnassius clodius* Ménétriés.
- \_\_\_ Sierra Nevada Parnassian *Parnassius behrii* W.H. Edwards.

Swallowtails: Subfamily Papilioninae

- \_\_\_ Anise Swallowtail *Papilio zelicaon* Lucas.
- \_\_\_ Indra Swallowtail *Papilio indra* Reakirt.
- \_\_\_ Western Tiger Swallowtail *Papilio rutulus* Lucas.
- \_\_\_ Two-tailed Swallowtail *Papilio muticaudata* W.F. Kirby.
- \_\_\_ Pale Swallowtail *Papilio eurymedon* Lucas.

**WHITES AND SULPHURS:** Pieridae

Whites: Subfamily Pierinae

- \_\_\_ Pine White *Neophasia menapia* (C. and R. Felder).
- \_\_\_ Spring White *Pontia sisymbrii* (Boisduval).
- \_\_\_ Checkered White *Pontia protodice* (Boisduval and Leconte).
- \_\_\_ Western White *Pontia occidentalis* (Reakirt).
- \_\_\_ Cabbage White *Pieris rapae* Linnaeus.
- \_\_\_ Large Marble *Euchloe ausonides* Lucas.

- \_\_\_ Pearly Marble *Euchloe hyantis* (W.H. Edwards).
- \_\_\_ Sara Orangetip *Anthocharis sara* Lucas.
- \_\_\_ Gray Marble *Anthocharis lanceolata* (Lucas).

Sulphurs and Yellows: Subfamily Coliadinae

- \_\_\_ Orange Sulphur *Colias eurytheme* Boisduval.
- \_\_\_ Sierra Sulphur *Colias behrii* W.H. Edwards.

**HARVESTERS, COPPERS, HAIRSTREAKS, AND BLUES:** Lycaenidae.

Coppers: Subfamily Lycaeninae

- \_\_\_ Tailed Copper *Lycaena arota* (Boisduval).
- \_\_\_ Lustrous Copper *Lycaena cupreus* (W.H. Edwards).
- \_\_\_ Edith's Copper *Lycaena editha* (Mead).
- \_\_\_ Gorgon Copper *Lycaena gorgon* (Boisduval).
- \_\_\_ Ruddy Copper *Lycaena rubida* (Behr).
- \_\_\_ Blue Copper *Lycaena heteronea* Boisduval.
- \_\_\_ Purplish Copper *Lycaena helloides* (Boisduval).
- \_\_\_ Lilac-bordered Copper *Lycaena nivalis* (Boisduval).
- \_\_\_ Mariposa Copper *Lycaena mariposa* (Reakirt).

Hairstreaks: Subfamily Theclinae

- \_\_\_ Golden Hairstreak *Habrodais grunus* (Boisduval).
- \_\_\_ Great Purple Hairstreak *Atlides halesus* (Cramer).
- \_\_\_ California Hairstreak *Satyrium californica* (W.H. Edwards).
- \_\_\_ Sylvan Hairstreak *Satyrium sylvinus* (Boisduval).
- \_\_\_ Gold-hunter's Hairstreak *Satyrium auretteorum* (Boisduval).
- \_\_\_ Mountain-Mahogany Hairstreak *Satyrium tetra* (W.H. Edwards).
- \_\_\_ Hedgerow Hairstreak *Satyrium saepium* (Boisduval).
- \_\_\_ Bramble Hairstreak *Callophrys dumetorum* (Boisduval).
- \_\_\_ Sheridan's Hairstreak *Callophrys sheridanii* (W. H. Edwards).
- \_\_\_ Thicket Hairstreak *Callophrys spinetorum* (Hewitson).
- \_\_\_ Nelson's Hairstreak *Callophrys nelsoni* (Boisduval).
- \_\_\_ Brown Elfin *Callophrys augustinus* (W. Kirby).
- \_\_\_ Western Pine Elfin *Callophrys eryphon* (Boisduval).
- \_\_\_ Gray Hairstreak *Strymon melinus* Hübner.

Blues: Subfamily Polyommatainae

- \_\_\_ Western Pygmy-Blue *Brephidium exilis* Scudder.
- \_\_\_ Marine Blue *Leptotes marina* (Reakirt).
- \_\_\_ Echo Azure *Celastrina echo* (W. H. Edwards).
- \_\_\_ Square-spotted Blue *Euphilotes battoides* (Behr).
- \_\_\_ Dotted-Blue *Euphilotes enoptes* (Boisduval).
- \_\_\_ Arrowhead Blue *Glaucopsyche piasus* (Boisduval).
- \_\_\_ Silvery Blue *Glaucopsyche lygdamus* (Doubleday).
- \_\_\_ Anna Blue *Plebejus anna* (W. H. Edwards).
- \_\_\_ Greenish Blue *Plebejus saepiolus* (Boisduval).
- \_\_\_ Boisduval's Blue *Plebejus icarioides* (Boisduval).
- \_\_\_ Shasta Blue *Plebejus shasta* (W.H. Edwards).
- \_\_\_ Acmon Blue *Plebejus acmon* (Westwood & Hewitson).

- \_\_\_Lupine Blue *Plebejus lupini* (Boisduval).  
\_\_\_Sierra Nevada Blue *Plebejus podarce* (C. Felder and R. Felder).

#### BRUSHFOOT BUTTERFLIES: FAMILY NYMPHALIDAE

Longwings and fritillaries: Subfamily Heliconiinae.

- \_\_\_Coronis Fritillary *Speyeria coronis* (Behr).  
\_\_\_Zerene Fritillary *Speyeria zerene* (Boisduval).  
\_\_\_Callippe Fritillary *Speyeria callippe* (Boisduval).  
\_\_\_Great Basin Fritillary *Speyeria egleis* (Behr).  
\_\_\_Hydaspe Fritillary *Speyeria hydaspe* (Boisduval).  
\_\_\_Mormon Fritillary *Speyeria mormonia* (Boisduval).  
\_\_\_Western Meadow Fritillary *Boloria epithore* (W.H. Edwards).

Brushfoots: Subfamily Nymphalinae

- \_\_\_Leanira Checkerspot *Chlosyne leanira* (C. Felder and R. Felder).  
\_\_\_Northern Checkerspot *Chlosyne palla* (Boisduval).  
\_\_\_Rockslide Checkerspot *Chlosyne whitneyi* (Behr).  
\_\_\_Hoffmann's Checkerspot *Chlosyne hoffmannii* (Behr).  
\_\_\_Field Crescent *Phyciodes pulchella* (Behr).  
\_\_\_Mylitta Crescent *Phyciodes mylitta* (W.H. Edwards).  
\_\_\_Chalcedon Checkerspot *Euphydryas chalcedona* (Doubleday).  
\_\_\_Edith's Checkerspot *Euphydryas editha* (Boisduval).  
\_\_\_Satyr Anglewing *Polygonia satyrus* (W. H. Edwards).  
\_\_\_Hoary Comma *Polygonia gracilis* (Grote and Robinson).  
\_\_\_California Tortoiseshell *Nymphalis californica* (Boisduval).  
\_\_\_Mourning Cloak *Nymphalis antiopa* (Linnaeus).  
\_\_\_Milbert's Tortoiseshell *Aglais milberti* (Godart).  
\_\_\_American Painted Lady *Vanessa virginiensis* (Drury).  
\_\_\_Painted Lady *Vanessa cardui* (Linnaeus).  
\_\_\_West Coast Lady *Vanessa annabella* (Field).  
\_\_\_Red Admiral *Vanessa atalanta* (Linnaeus).  
\_\_\_Common Buckeye *Junonia coenia* Hübner.

Admirals and relatives: Subfamily Limenitidinae

- \_\_\_Lorquin's Admiral *Limenitis lorquini* (Boisduval).  
\_\_\_California Sister *Adelpha californica* Butler.

Satyrs and Woodnymphs: Subfamily Satyrinae

- \_\_\_Common Ringlet *Coenonympha tullia* (Müller).  
\_\_\_Great Basin Wood-Nymph *Cercyonis sthenele* (Boisduval).  
\_\_\_Chryxus Arctic *Oeneis chryxus* (Doubleday and Hewitson).

Royalty: Subfamily Danainae

- \_\_\_Monarch *Danaus plexippus plexippus* (Linnaeus).

#### **SPECIES LIKELY TO ALSO OCCUR IN SEQUOIA/KINGS CANYON NATIONAL PARKS: BASED ON ALREADY EXISTING RECORDS WITHIN ONE MILE OF PARK BOUNARIES:**

- \_\_\_Persius Duskywing *Erynnis persius* Scudder. Collected at Stony Creek.  
\_\_\_Sachem *Atalopedes campestris* Scudder. Collected at Three Rivers.

\_\_\_\_Eufala Skipper *Lerodea eufala* Scudder. Collected just outside boundary, Gateway to Sequoia.

\_\_\_\_Small Blue *Philotiella speciosa* (Hy. Edwards). Hume Lake record just outside boundaries.

\_\_\_\_Green Comma *Polygonia faunus* (W. H. Edwards). Well established along Stony Creek.