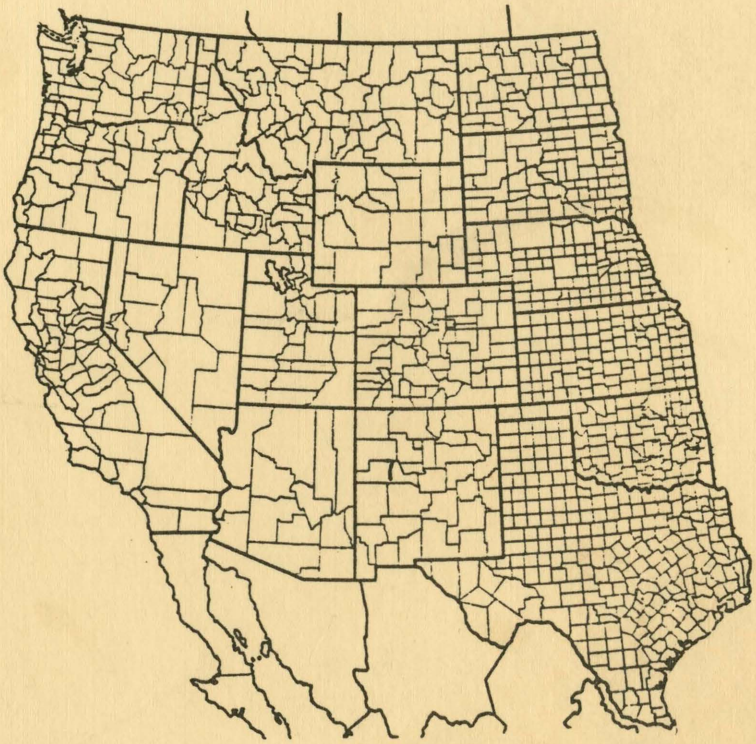
ATLAS OF WESTERN USA BUTTERFLIES

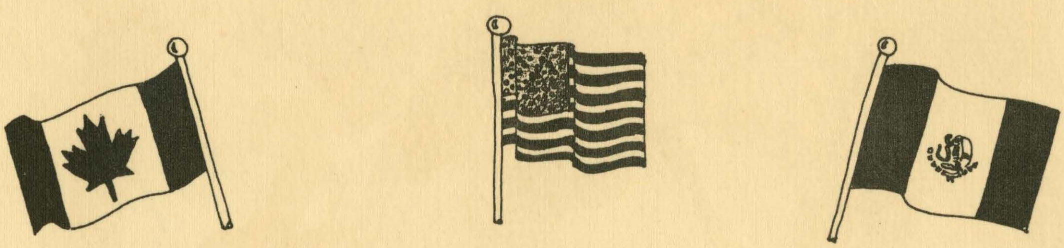
29 Sept 1994

Including Adjacent Parts of Canada and Mexico

Paul -
annotated copy, showing all 5653 additions on maps AND in front matter.
Cheers -
Ray



P.S. Index is NOT updated yet.



Ray E. Stanford
and
Paul A. Opler

Denver and Fort Collins, Colorado

January 1993

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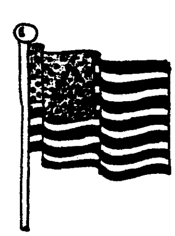
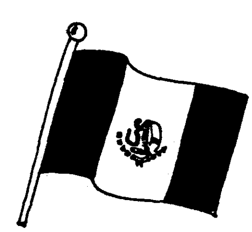
Canada and Mexico





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ATLAS OF WESTERN USA BUTTERFLIES INCLUDING ADJACENT PARTS OF CANADA AND MEXICO

Ray E. Stanford and Paul A. Opler

INTRODUCTION

HISTORY. The earliest available information about butterflies in this region is from the early 1800s (see various papers by F. M. Brown and others). Earlier information from First Americans (Indians) consists only of pictographs, not identifiable by today's standards and having no useable data. Moreover, no data seem to exist from the early Spanish explorations. The first species lists, by Reakirt, Boisduval, Say and others were by non-residents, and the data are almost without exception too sketchy for us to plot as county dots. Furthermore, almost none of their specimens exist today. Books are available, or in preparation, for nearly every State and Province in the West, and historical details will be found there now or we hope in the near future. Our maps are based almost entirely on information gathered since 1905, and only a few dots are from prior to 1957. The fossil record is of great interest, but is not used here. We became interested in Lepidoptera in the mid to late 1940s, and began keeping species lists independently soon thereafter. We are both Californians, and have lived in Colorado for many years; our travels have included all Western States, most others, all covered Provinces of Canada and States of Mexico; Alaska, Europe, Central America and South America. PAO has published county maps and books for the eastern USA, and RES for the Rocky Mtn States; each of us has also published scientific papers on species occurring in the region covered by these maps.

FORMAT. We have elected to use counties as the basis for the range maps in the USA, defined sectors in southern Canada, and only States in Mexico. It would be preferable in some ways to use metric grids, as has been done for Britain and much of Europe, but at present the data are not available for this to be done without losing more than 50% of the information presented. Only one dot is shown per county except for a few very large counties such as San Bernardino CA and a few in AZ and NV. Each single dot is in the center of the county because the scale is so small. Dots in Canada are for records within 100 miles of the USA border unless the dots are shown quite far northward. Those in Sin, Dgo and Tam are shown far north due to lack of space on the maps, but include all species which we confirm from these Mexican States. Confirmed records are shown as solid black dots, or open triangles in a few instances where species were added at the last minute, and dubious records as open circles where we believe they are of importance and in need of verification. "X" marks indicate a few additions from 1986 through 1989 where we found it easier to copy the rough maps rather than redraw them. Statistics below are based on only one record per county and do not include the open circles. Problems have arisen when counties have been obliterated (Washabaugh SD) or created anew (Denver CO, Cibola NM, La Paz AZ), but extensive research has been done to establish accurate lists for all current counties in the region.

CRITERIA FOR ACCEPTANCE OF RECORDS. Most records have been verified by examination of specimens by one or both of us, or published in peer-reviewed literature considered reliable by nearly everyone. Other records with full data have been accepted for most species, depending on the source, but we have insisted on examining material for many difficult taxa such as _Erynnis_, _Hesperia_, _Euphilotes_, _Speyeria_ and _Euphydryas_. Many individual specimens have been referred to accepted authorities for confirmation of identifications. Errors still arise occasionally, and we correct them as appropriate, but the maps are now at least 99% correct allowing for differences of opinion on taxonomy. We have declined to accept or plot records based on illegally collected specimens, although these are extremely few.

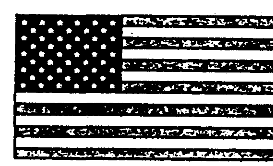
SPECIES ORDER AND NOMENCLATURE. The order is essentially that of the Miller/Brown list (1981), as modified by Ferris (1989) and other authors subsequently. The Mexican taxa are inserted according to the literature available, including Beutelspacher (1984), Brown et al (1992), de la Maza (1987), de Vries (1987), Evans (1951, 1952, 1953, 1955), Freeman (various), Higgins (1960, 1981), Hoffmann (1940), Llorente (1990), Miller (various), Robbins (in litt), Steinhauser (various), Tyler (1975), and personal communications from many individuals. The generic nomenclature is conservative, but many species-level taxa are "split" on the maps to preserve data. Readers may lump as they wish, but if we lumped on the maps, a lot of potentially useful information would be lost or unavailable. The names change frequently, so ours are up to date only through 15 Dec 1992. A monarch is a monarch is a monarch, but it has had 62 different scientific names since Linnaeus. We rest our case.

AUDIENCE. The maps will probably be most useful in the hands of field biologists, teachers and students, but are based on sufficiently sophisticated scientific research as to have potential application to libraries, universities, governmental and private conservation organizations, and professional scientists.

INTERPRETATION OF MAPS. Every reader will entertain his or her own conclusions, but the following brief comments are made in the hope that all interpretations will be made very carefully. There are very few gross errors, but many blanks are because most collectors/observers go into the field for certain species, not for new area records, so many portions of the covered area are nearly unknown. Notice that Scott County, Kansas, has 110 known bf spp, while the other western Kansas counties have about 30 or 40 each; the reason is that Mr. Calkins collected avidly in Scott City for 50 years! Hence Calkins' Law: If you wait and watch long enough, you will find 100 bf spp ANYWHERE!! Also note that Tamaulipas, MEX, has more known spp than TX, and nearly as many as the entire USA!! And that Coahuila, MEX, needs work, having fewer known species than the State of Delaware, Scott County, Kansas, or even the city of Denver, Colorado! Also, be aware that a dot in a county does not mean that the species occurs countywide. For example, look at <u>Boloria improba acrocnema</u> in Colorado: it would seem that it might occur over hundreds of square miles from the maps, but in fact it occurs in only a few acres in each county shown. Only one species, <u>Pontia protodice</u>, is known from all states and provinces in the West. None are known from all counties. Work is needed!

STATISTICS. County statistics are available only for the USA; State/Province statistics for Canada and Mexico appear at the end of this table. Data are current through 19 January 1993.

✓ = old projection is surpassed !

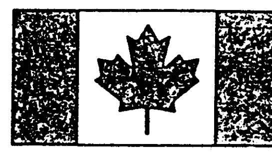


ST	Dots	Avg/Co	Known in 1996:	Proj/Co	% Kn	#Spp	Counties < 40 Spp
AZ	2137	142.47	~~148.53~~	147.73✓	96.44	326	None
CA	5982	103.14	106.52	107.00	96.39	250	None
CO	6707	106.46	116.65	113.00✓	94.21	266	None
ID	2630	59.77	64.43	79.89	74.82	160	11
KS	6571	62.58	62.91	72.20	86.68	183	05
MT	4203	75.05	81.52	109.57	68.50	187	09
ND	1660	31.32	34.91	58.53	53.51	143	38
NE	4160	44.73	49.27	62.71	71.33	197	50
NM	3566	108.06	113.91	122.82	87.98	318	None
NV	1807	106.29	107.18	110.29	96.37	207	None
OK	3004	39.01	43.91	62.90	62.03	162	50
OR	2716	75.44	78.67	84.11	89.70	159	Cs 35 Lc 33 Ti 36
SD	2507	38.00	41.35	60.48	62.80	170	45

Kn Sep '96

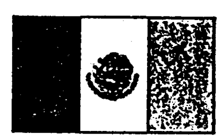
iv		Kn	Proj	% Kn		
TX	4927w	38.80w	39.61 69.87w	55.53w	423!	83w (western)
UT	3050	105.17	110.97 113.00	93.07	215	None
WA	2597	66.59	68.01 79.08	84.21	143	06
WY	2185	91.04	103.67 106.58	85.42	210	None
Avg	3548	75.97	91.75	82.80	220	17.71
TOT	60325	-	-	-	691	301/1062 = 28.34%

Canadian Provinces shown:



Prov	Dots	Spp	Spp Proj	% Kn
AB	351	159	176	90.34
BC	608	178	190	93.68
Sas	269	125	143	87.41
Man	241	124	140	88.57
Avg	367.3	146.5	162.3	90.00
TOT	1469	223	232	96.12

Mexican States shown:



State	Dots	Spp	Spp Proj	% Kn
BCN	145	145	157	92.36
BCS	115	115	137	83.94
Chh	149	149	311	47.91
Coa	96!	96!	267	35.96!
Dgo	154	154	319	48.28
NL	230	230	338	68.05
Sin	347	347	446	77.80
Son	307	307	353	86.97
Tam	449	449!	501!	89.62
Avg	221.3	221.3	314.3	70.10
TOT	1992	767	827	92.75

GRAND TOTAL DOTS: 63785

GRAND TOTAL SPECIES: 1047

ACKNOWLEDGMENTS

We have received data from over 320 individuals, reviewed over 300 books and scientific papers, and examined material in nearly every public and private collection in Western North America and a few major Eastern ones (see next paragraph). This research will continue. The following list includes only those who contributed over 10 data points, and major publication authors (see References). First, we wish to thank our family members who have provided support in many ways in addition to specific records: Katharine, Sandra (deceased), Nora, Timothy, Christian, Linda, Scott, Laura, Dwight, Maxine (deceased), Dorris (deceased), Gail, Margot, Bill, Winifred, and a few faithful dogs who mainly got in the way. And unnamed friends, students, birders, 4-H members ad infinitum. We thank all contributors, but especially the following observers, collectors, curators, and authors, some of whom are no longer living: J. K. Adams, B. K. Akey, C. Albright, C. C. Albright, R. J. Albright, V. Albu, D. E. Allen, R. L. Allen, A. C. Allyn Jr, G. G. Anweiler, R. A. Arnold, G. T. Austin, J. S. Bach, K. C. Bagdonas and his students, R. A. Bailowitz, J. H. Baker, N. W. Baker, G. J. Balogh, D. L. Barlow, D. L. Bauer, J. Belicek, E. L. Bell, P. F. Bellinger, L. D. Beutler, C. D. Bird, T. B. Blevins, J. J. Bowe, M. D. Bowers, D. E. Bowman, K. Bowman, G. Bowser, J. H. Brandt, R. W. Breedlove, R. Breitbach, J. Brewer, C. A. Bridges, B. B. Brinkman, J. P. Brock, F. M. Brown, J. W. Brown, K. S. Brown, K. W. Brown, J. M. Burns, G. W. .Busby, R. C. Busby, V. F. Calkins, C. J. Callaghan, S. J. Cary, R. Chehey, F. H. Chermock, R. L. Chermock, F. S. Chew, J. R. Christensen, J. Chu, H. H. Chuah, J. F. G. Clarke, H. K. Clench, T. D. A. Cockerell, J. J. Coleman, J. A. Comstock, P. J. Conway, K. R. Coolidge, C. V. Covell Jr., R. Coyle, L. Crabtree, F. C. Cross, C. R. Crowe, D. A. Currutt, N. S. Curtis, C. Dammers, N. E. Dankert, K. Davenport, W. R. Dawes, J. De Benedictis, T. S. Dickel, T. E. Dimock, Y-P. Dion, J. P. Donahue, E. J. Dornfeld, C. F. dosPassos, M. G. Douglas, M. M. Douglas, J. C. Downey, J. F. Doyle, W. L. Doyle, C. J. Durden, S. K. Dvorak, P. L. Eades, H. E. Edgecomb, W. H. Edwards, J. D. Eff, P. R. Ehrlich, D. L. Eiler, S. L. Ellis, M. J. Elrod, C. A. Ely and his associates, J. F. Emmel, T. C. Emmel, M. Epstein, P. Eriksson, T. Escalante, W. H. Evans, D. K. Faulkner, K. M. Fender, D. J. Ferguson, C. D. Ferris, G. H. Field, W. D. Field, M. S. Fisher, R. A. Fisher Jr, J. P. Fitter, G. S. Forbes, S. A. Fratello, H. A. Freeman, T. P. Friedlander, E. A. Froemel, L. F. Gall, R. C. Gardner, J. S. Garth, W. J. Gertsch, G. B. Gier, C. F. Gillette, C. P. Gillette, K. Goeden, C. Goodpasture, G. A. Gorelick, M. Graves, W. W.

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MUSEUM COLLECTIONS EXAMINED by one or both of us for Western records include the following (some several years ago, and we plan future visits; a few other collections were examined by others acknowledged above):

Allyn Museum, Sarasota, Florida
American Museum of Natural History, New York, New York
California Academy of Sciences, San Francisco, California
California Insect Survey, Univ of California, Berkeley
Canadian National Collection, Ottawa
C. P. Gillette Museum, Colo State Univ, Ft Collins, CO
Denver Museum of Natural History, Denver, Colorado
Field Museum of Natural History, Chicago, Illinois
Florida Museum of Natural History, Gainesville, Florida
Illinois Natural History Survey
Los Angeles Natural History Museum, Los Angeles, CA
Museum of Comp Zoology, Harvard Univ, Cambridge, MA
National Museum of Natural History, Washington DC
Nevada State Museums, Carson City and Las Vegas, NV
Ohio State University, Columbus, Ohio
Oregon State University, Corvallis, Oregon
Royal Ontario Museum, Toronto, Ontario
San Diego Natural History Museum, San Diego, California
University of Colorado Museum, Boulder, Colorado
University of Louisville, Louisville, Kentucky
University of North Dakota, Grand Forks, North Dakota
University of Wyoming, Laramie, Wyoming

REFERENCES

Space prohibits the listing of the more than 300 books and articles surveyed for Western North American butterfly records. All known books in the past 50 years covering all or part of the region have been examined, as well as most issues of the following periodicals since 1940, and a few strategic earlier works of historical value:

Agricultural Expt Station Univ Wyo Sci Monographs
Alberta Naturalist

American Museum Novitates
Annals of the Entomological Society of America
Biological Journal of the Linnaean Society
Blue Jay
Bulletin of the Allyn Museum
Bulletin of the British Museum of Natural History
Bulletin of the Brooklyn Entomological Society
Bulletin of the Grand Canyon Natural History Association
Bulletin of the Southern California Academy of Sciences
Bulletin of the University of Kansas
Canadian Entomologist
Canadian Journal of Zoology
Continental Lepidopterist
Ecology
Entomological News
Fort Hayes University Studies
Great Basin Naturalist
Journal of the Kansas Entomological Society
Journal of the Lepidopterists' Society
Journal of the New York Entomological Society
Journal of Research on the Lepidoptera
Kentucky Lepidopterist
Lepidopterists' News, and News of the Lepidopterists' Society including all Season Summaries
Lyman Entomological Museum and Laboratory Memoirs
Memoirs of the Lepidopterists' Society
Mid Continent Lepidoptera Series
Minot State University Science Monographs
Natural History Museum of Los Angeles County Science Series
North Dakota State University Science Series
Northwest Lepidopterists' Association Newsletter
Occasional Publications of the Nevada State Museum
Pan-Pacific Entomologist
Papilio, New Series
Plateau
Proceedings of the Entomological Society of Washington
Proceedings of the National Academy of Sciences
Psyche
Publicaciones Especiales del Museo de Zoologia, Universidad Nacional Autonoma de Mexico
Quaestiones Entomologicae
Revista de la Sociedad Mexicana de Lepidopterologia
Smithsonian Contributions to Zoology
Southern Lepidopterists' News
Southern Methodist University Studies
Texas Parks and Wildlife Department Publications
Time Magazine! (we didn't cover Pravda)
Transactions of the American Entomological Society
Transactions of the San Diego Society of Natural History
University of California Publications in Entomology
Utahensis, and Utah Lepidopterist
Wasmann Journal of Biology
Xerces Society publications: Wings, Atala, Fourth of

July Butterfly Count reports

Informal works, maps, regional lists: Austin, Bailowitz, Cary, Curtis, Ellis, Ely, Emmels, Freeman, Gillette, Hinchliff, Holland, Kendall, Kendall/McGuire, Kohler, Kondla, Marrone, Mattoon, McGuire/Rickard, Mullins, Opler, Pelham, Pyle, Rosche, Savage, Shepard, Spomer, Stanford, Toliver/Holland, Warren/Brock.

RES/PAO, 19 January 1993. Anyone wishing an update please send a SASE (3 stamps) to us as early as January 1994. There are still a few things to be learned!

Summary of new Bf records, W/USA/Canada/Mexico, 1991-1992 (USA counties; *STATE/PROVINCE)

State/Province	1991 (26 USA SRs)		1992 (22 USA SRs)		Combined (48 USA SRs	
Alb (Can)	* 1 PR	1 PR spp	* 0 PR	0 PR spp	* 1 PR	1 PR sp
AZ	11 CRs	11 CR spp	26 CRs	19 CR spp	37 CRs	30 CR spp
BC (Can)	* 4 PRs	4 PR spp	* 1 PR	1 PR sp	* 5 PRs	5 PR spp
BCN (Mex)	* 0 SRs	0 SR spp	* 11 SRs	11 SR spp	* 11 SRs	11 SR spp
BCS (Mex)	* 0 SRs	0 SR spp	* 3 SRs	3 SR spp	* 3 SRs	3 SR spp
CA	16 CRs	15 CR spp	47 CRs	37 CR spp	63 CRs	50 CR spp
Chh (Mex)	* 3 SRs	3 SR spp	* 0	0	* 3 SRs	3 SR spp
Coa (Mex)	* 5 SRs	5 SR spp	* 1 SR	1 SR sp	* 6 SRs	6 SR spp
CO	168 CRs	94 CR spp	139 CRs	79 CR spp	307 CRs!	140 CR spp
Dgo (Mex)	* 2 SRs	2 SR spp	* 1 SR	1 SR sp	* 3 SRs	3 SR spp
ID	14 CRs	13 CR spp	68 CRs	59 CR spp	82 CRs	68 CR spp
KS	1 CR	1 CR sp	117 CRs	63 CR spp	118 CRs	64 CR spp
Man (Can)	* 6 PRs	6 PR spp	* 0	0	* 6 PRs	6 PR spp
MT	43 CRs	14 CR spp	27 CRs	24 CR spp	70 CRs	34 CR spp
ND	219 CRs	76 CR spp	25 CRs	24 CR spp	244 CRs	79 CR spp
NE	245 CRs	98 CR spp	107 CRs	57 CR spp	352 CRs!	110 CR spp
NL (Mex)	* 14 SRs	14 SR spp	* 0	0	* 14 SRs	14 SR spp
NM	50 CRs	48 CR spp	45 CRs	42 CR spp	95 CRs	78 CR spp
NV	10 CRs	5 CR spp	19 CRs	14 CR spp	29 CRs	15 CR spp
OK	163 CRs	64 CR spp	379 CRs!	98 CR spp	542 CRs!	103 CR spp
OR	18 CRs	18 CR spp	25 CRs	23 CR spp	43 CRs	39 Cr spp
Sas (Can)	* 1 PR	1 PR sp	* 0	0	* 1 PR	1 PR sp
SD	131 CRs	70 CR spp	101 CRs	48 CR spp	232 CRs	81 CR spp
Sin (Mex)	* 54 SRs	54 SR spp	* 4 SRs	4 SR spp	* 58 SRs	58 SR spp
Son (Mex)	* 3 SRs	3 SR spp	* 0	0	* 3 SRs	3 SR spp
Tam (Mex)	* 5 SRs	5 SR spp	* 3 SRs	3 SR spp	* 8 SRs	8 SR spp
TX	27 CRs	23 CR spp	76 CRs	55 CR spp	103 CRs	73 CR spp
UT	86 CRs	57 CR spp	103 CRs	55 CR spp	189 CRs	94 CR spp
WA	10 CRs	10 CR spp	37 CRs	31 CR spp	47 CRs	37 CR spp
WY	20 CRs	18 CR spp	37 CRs	34 CR spp	57 CRs	51 CR spp
TOTALS:	1330 Rs	347 R spp	1402 Rs	317 R spp	2732 Rs	442 R spp

By Family:

Hesperiidae	393	119	351	91	744	148
Papilionidae	67	13	78	12	145	16
Pieridae	148	29	214	38	362	43
Lycaenidae	243	72	276	72	519	91
Riodinidae	12	9	2	2	14	10
Libytheidae	6	1	5	1	11	1
Nymphalidae	370	81	385	79	755	102
Satyridae	63	20	67	20	130	28
Danaidae	28	3	24	2	52	3
TOTALS:	1330	347	1402	317	2732	442

Isn't it marvelous that the TOTALS came out the same way added both ways?!

Zone 4 Subtotals, 1977-1993 (AB,MT,WY,UT,CO,NM):

1977: 260 Rs, 133 R spp
1978: 102 Rs, 79 R spp
1979: 279 Rs, 86 R spp
1980: 269 Rs, 103 R spp
1981: 265 Rs, 121 R spp
1982: 705 Rs, 175 R spp
1983: 412 Rs, 174 R spp
1984: 395 Rs, 159 R spp
1985: 1305 Rs, 248 R spp!
1986: 901 Rs, 239 R spp

1987: 266 Rs, 141 R spp
1988: 146 Rs, 101 R spp
1989: 115 Rs, 81 R spp
1990: 171 Rs, 121 R spp
1991: 363 Rs, 176 R spp
1992: 334 Rs, 155 R spp
1993:

TOTALS: 6288 Rs, 396 R spp
(of course the species total isn't the sum!)

R = record
Rs = records
CR = county record
PR = provincial rec
SR = state record
sp = species
spp = species plural
etc

RES, 19 Jan 1993

WNA Bf Spp with NEW Records. Feb 1993 - 8 Sep 1996. X = COMPLEX. RES.

araxes	2	zampa	4	prittwitzi	0	lunus	1	eurymedoi	13	phlaeas	5	xami	1	virginiens	1	definita	2	lorquini	1	patrobas	1
scylla	1	tamenund	6	lineola	3	frappenda	1	multicaud:	25	cuprea	5	mcfarlandi	2	nemesis	4	endeis	0	bredowii	11	ridingsii	14
amra	1	stigmaticu	1	phyleus	40	edwardsii	0	pilumnus	0	xanthoide:	4	augustinu:	14	perditalis	2	janais	1	fessonia	3	nevadensi:	2
palemon	1	ruptifascia	2	rhesus	27	simius	8	troilus	7	dione	19	fotis	0	wrighti	0	rosita	1	phylaca	1	macounii	2
clarus	51	trifasciatu:	1	carus	9	exoteria	0	palamede:	6	editha	5	mossii	10	rawsoni	1	marina	0	celerio	1	chryxus	12
leo	3	anacreon	1	eunus	1	cassus	0	anchisiad	0	gorgon	3	polios	8	arizonens	1	hippodrom	1	adrasta	1	uhleri	16
albofascia	4	asychis	1	morrisoni	2	aenus	3	garamas	2	hyllus	30	irus	2	ino	2	gorgone	29	edocla	0	alberta	5
zilpa	4	mithrax	1	uncas	27	linda	0	abderus	1	rubida	9	henrici	5	maria	1	nycteis	26	neaerea	1	jutta	5
asander	1	gesta	3	juba	33	oslari	21	marcellus	3	heteronea	4	niphon	2	pixe	1	harrisii	0	cyananthe	1	taygete	3
metophis	1	icelus	14	comma	12	texanae	6	philolaus	2	helloides	35	eryphon	25	cephise	1	palla	6	monima	1	melissa	5
octomacul	2	brizo	7	woodgatei	7	prenda	2	epidaus	1	"dorcas"	5	sito	1	zela	3	acastus X	16	tatila	0	polixenes	3
dorus	4	juvenalis	9	ottoe	7	aesculapii	3	charops	1	nivalis	9	jada	0	ares	1	neumoegei	0	agaea	1	plexippus	37
elwesi	1	telemachu	5	dacotae	1	nereus	3	nimbice	3	mariposa	4	hypocrita	1	emesia	0	gabbii	2	patelina	1	gilippus	26
alcaeus	1	propertius	1	leonardus	20	nysa	4	flisa	2	crysalus	3	m-album	5	poeas	1	whitneyi	2	asteria	1	eresimus	1
uvydixa	1	meridianu:	3	pahaska	14	eos	6	menapia	11	grunus	1	aufidena	1	rubina	1	hoffmanni	3	hyperia	3	simplex	1
melon	1	scudderi	4	columbia	1	elissa	1	terlootii	0	toxea	1	favonius X	4	inconspicu	1	elva	1	amymone	4		
arizonens	1	horatius	19	metea	1	hegon	1	drusilla	6	halesus	13	ilavia	1	mormo X	15	dymas	6	feronia	2	SUB-T	133
hyster	1	tristis	3	viridis	9	vialis	34	beckerii	13	telea	2	polingi	2	duryi	5	elada	3	februa	3		
proteus	4	martialis	8	attalus	2	celia	2	sisymbrii	16	simaethis	0	critola	0	multiplaga	1	texana	8	guatemalen	1	ADDENDA:	
viterboana	1	pacuvius	16	meskei	7	belli	4	protodice	40	alcestis	4	melinus	53	hepburni	1	tulcis	1	acheronta	1		
esta	1	zarucco	1	lindseyi	5	florus	2	occidenta	24	titus	20	bebrycia	1	palmerii	3	ptolyca	1	karwinskii	1		
belli	1	funeralis	30	miriamae	1	alternata	3	napi X	10	fuliginosui	4	rufofuscus	1	walkeri	0	argentea	2	blomfildia	2		
dorantes	2	baptisiae	16	nevada	11	brocki	1	rapae	41	behrii	12	yojoa	1	phyciodoi	0	drusilla	1	chiron	1		
tanna	1	afranius	17	campestri:	47	phylace	5	aripa	2	acadicum	18	albatus	1	nais	4	ardys	2	petreus	2		
procne	1	persius	45	peckius	25	fimbriata	2	costaricer	1	sylvinum	15	alea	1	hypoglauc	1	vesta	8	andria	25		
doryssus	1	centaurea	4	sabuleti	19	eufala	24	monuste	5	californicu	9	istapa	2	eudocia	1	phaon	12	troglodyta	1		
fulgerator	2	ruralis	3	mardon	1	arabus	0	josephina	3	edwardsii	3	cestri	0	carinenta	41	tharos X	40	glycerium	0		
alardus	1	xanthus	2	draco	12	maculata	4	howarthi	0	calanus	15	bazochii	1	charithoni:	5	tharos	59	pithyusa	1		
anaphus	1	scriptura	17	themistoc	54	ethlius	8	ausonides	18	caryaevon	3	megarus X	2	isabella	0	cocyta B	26	eurypyle	1		
cellus	0	comm X	42	origenes	16	panoquin	0	creusa	1	liparops	13	chonida	1	julia	2	batesii C	21	perenna	1		
pseudoce	1	communis	61	mystic	31	panoq'oide	1	hyantis X	13	kingi	4	ziba	1	phaetusa	1	pulchella	14	celtis	38		
cinctus	3	albescens	3	sonora	10	ocola	3	olympia	40	auretorum	2	miadora	1	moneta	5	orseis	4	leilia	0		
lyciades	4	adepta	2	vibex	5	sylvicola	0	lanceolata	3	tetra	1	lucagus	1	juno	2	pallescens	1	clyton	13		
casica	0	oileus	4	otho	13	evansi	1	cethura X	5	saepium	9	neora	1	vanillae	20	pictus	13	idyja	0		
albociliatu	1	philetas	5	egeremet	8	nyctelius	0	sara X	11	ocrisia	1	quaderna	1	claudia	42	pallidus	9	pavon	2		
toxeus	4	domicella	4	pompeius	0	macareus	1	midea	9	leda	7	carla	1	hegesia	10	mylitta	15	laure	1	TOTAL	5648
jalapus	2	ericetorum	8	verna	9	hesperiari:	2	eurytheme	29	clytie	1	bassania	1	cyb/leto X	25	griseobasa	2	demophon	1		
bathyllus	9	macaira	1	arogos	14	neumoege	0	philodice	41	azia	2	sangala	1	aphrodite	16	phaeton	2	peleides	1	TAXA	735
pylades	35	lavianus	5	logan	38	aryxna X	1	alexandra	40	comana	1	nubes	1	idalia	18	gillettii	1	portlandia	0		
diversus	2	nessus	8	byssus	1	evansi	0	harfordii	0	orasus	1	mathewi	1	diana	1	chalced X	7	anthedon	8	AVG	7.68
mexicanu:	5	catullus	35	sylvanoid	21	mariae	0	occidenta	6	echion	1	paetus	1	nokomis	1	chalcedon:	3	creola	1		
confusis	5	mejicanus	1	agricola	5	fieldi	2	christina X	12	zebina	1	exile	16	edwardsii	9	colon	5	eurydice	22		
drusius	0	libya	4	yuma	6	polingi	0	canadens	1	marius	2	cassius	5	coronis	19	anicia	21	undina	1		
potrillo	2	alpheus	6	snowi	5	alliae	1	meadii	6	stigira	2	marina	25	zerene	7	editha	8	themis	1		
fritzgaertn	0	gracielae	3	brocki	1	yuccae	19	scudderii	2	strophius	1	cyna	6	hydaspe	9	interrogatic	26	uncina	1		
similus	1	palaemon	4	hobomok	14	streckeri	8	gigantea	4	cecrops	12	ceraunus	16	callippe	15	comma	16	maculata	1		
clonius	2	pirus	14	zabulon	6	ursus	1	pelidne	3	isobeon	5	isola	42	atlantis X	7	satyrus	18	henshawi	1		
hippalus	0	polingii	1	taxiles	4	maculosu:	0	interior	2	dumet X	18	comyntas	41	atlantis	-	faunus	13	pertepida	3		
outis	4	roeveri	1	massasoit	0	clodius	6	behrii	0	perplexa	5	amyntula	15	hesperis	50	gracilis	15	gemma	3		
caicus	1	dardaris	1	aaroni	1	phoebus X	15	cesonia	13	affinis	15	ladon X	45	adiaste	1	oreas	17	diazi	1		
calchas	1	malitiosa	0	viator	3	alopius	1	eurydice	3	apama	10	neglecta X	9	egleis	8	progne	13	sosybius	8		
mysie	0	tyrtaeus	1	yehl	0	montezum	1	clorinde	9	sherid X	10	sonorensi:	0	mormonia	7	haroldi	0	areolata	1		
cleta	2	lherminier	5	melane	2	eracon	1	maerula	3	sheridanii	9	battoidesX	12	napaea	1	antiopa	42	cymela X	26		
enops	1	neamathla	5	eulogius	1	philenor	23	sennae	29	lemberti	3	bernardino	4	eunomia	1	vau-album	6	rubricata	8		
arina	1	julia	6	siblinga	2	polydama:	4	philea	4	comstocki	7	enoptes X	13	selene	12	californica	13	xicaque X	1		
bipuncta	1	odilia	1	balsa	1	polyxenes	47	agarithe	21	miserabili:	0	mojave	1	bellona	4	milberti	33	haydenii	2		
stator	1	inca	1	mulleri	1	coloro	2	intermedia	2	amyntor	0	rita X	13	frigga	1	atalanta	34	tullia X	22		
windi	2	chrysophn	1	aurora	1	machaon	20	statira	3	longula	3	spaldingi	3	freija	1	virginiensi:	48	inornata	18		
clytius	1	accius	10	gala	1	mach y	21	lyside	11	agricola	2	speciosa	2	improba X	2	cardui	34	ochracea	21		
orsines	1	liris	1	jonaverion	1	mach b	6	daira	3	spinetorun	16	piasus	10	kriemhild	0	annabella	37	ampelos	5		
pullata	1	fantasos	1	dion	2	zelic y	18	mexicana	17	johnsoni	3	lygdamus	31	epithore	1	coenia	45	california	0		
ceos	4	philetes	2	bayensis	1	zelic b	17	boisduvali	3	nelsoni X	11	emigdioni:	0	astarte	3	nigrosuffus	17	pegala	44		
mazans	1	cannae	1	dukesi	1	indra	10	salome	0	nelsoni	2	idas	4	titania X	5	evarete	3	oetus	6		
tierra	1	percosius	1	conspicua	1	thoas	0	proterpia	4	muiri	3	melissa	15	minuta X	6	jatrophae	2	sthenele	18		
hayhurstii	11	numitor	36	bimacula	6	cresphont	23	lisa	28	rosneri	3	saepiolus	14	minuta	1	fatima	2	meadii	9		
azteca	1	arene	1	vestris	39	ornythion	1	nise	7	byrnei	2	icarioides	12	arachne	4	stelenes	5	vidleri	0		
vulgata	1	powesheik	2	hianna	14	astyalus	1	dina	1	gryneus	14	acmon X	32	theona	8	epaphus	2	disa	0		
begga	2	garita	25	deva	0	androgeus	0	nicippe	26	siva	25	lupini	4	chinatiens	1	arthemis X	25	magdalena	3		
sallei	2	edwardsii	5	vierecki	4	alexiares	1	albula	1	barryi	17	neurona	0	leanira	11	arthemis	4	discoidalis	0		
emorsus	2	era	1	pittacus	0	glaucus	26	iole	43	loki X	2	shasta	13	fulvia	20	astyanax	22	theano	1		
erosus	1	aurantiacu	9	python	2	canadens	5	tarquinius	6	loki	2	glandon X	6	lacinia	4	archippus	62	epipsodea	6		
pulverulen	1	minima	2	cestus	0	rutulus	9	arota	7	thornei	1	borealis	0	californica	3	weidemeye	11	callias	0		
SUB-T	217	SUB-T	574	SUB-T	689	SUB-T	447	SUB-T	728	SUB-T	509	SUB-T	568	SUB-T	462	SUB-T	950	SUB-T	371	Print 6.	

~~add SJC 95~~ ~~FAO~~ " ~~FMEX, CAN add~~ ~~WA, OR~~, ~~AB book~~ ~~FSP~~ ~~SAS~~ RLL ~~GTH~~ ~~ADW~~ ~~RAR~~ ~~GSF~~ ~~1995 SS~~ ~~RES~~ ~~RLL~~ ~~TX clarification~~ current Sep 96 RES ~~4 Oct. 95~~

1995 SUPPLEMENT to Atlas of Western USA Butterflies. R. E. Stanford and P. A. Opler. Oct 1995.

This includes all material in the 1994 Supplement, and everything received since that time. There are additions, a few deletions (-), and corrections/comments. * = STATE record. Pg #s:

001 P. araxes Grt NM
JD TX
E. scylla *TAM MX
002 M. amystis [spelling]
003 P. palemon *NL MX
NEW M. amra *SIN MX
004 E. clarus Fre CA
48 + 111
Ben CO
Dol CO
Hin CO
KC CO
Lin CO
Mtz CO
Tel CO > Clr ID
Gem ID
Mad ID
Min ID
Chyn KS
*CHH MX
Dsn MT
Grt MT
Lib MT
Min MT
PR MT
Sti MT
Tre MT
Grf NE
Nan NE
Per NE
Oli ND
Alf OK Bec OK
Dew OK
Hrp OK
Log OK
Okl OK
Doug, HR OR >> Mal OR
Mar SD
Chk TX
Fan TX
Gre TX
Lav TX
Mor TX
RR TX
Rus TX
Tri TX
Walker TX > Ups TX
Too UT > Cac UT
-Fr WA
Lew WA
Thu WA
Lar WY
Nat WY
005 P. leo Ccn AZ
Cat NM Grm AZ
C. albofasciatus Kdy TX
*Dgo MX Kle TX
EP TX
C. zilpa JD TX
Kdy TX
Sta TX > Uva TX
006 A. asander *SON MX
006 A. metophis Starr TX

008 C. uvydoxa *SIN MX
009 C. hyster *SIN MX

D.C. col(s) 70 items: ~~13~~ 14 15 ~~16~~ ~~17~~ 18 ~~19~~ ~~20~~ 21 24 → 13/24 aug 96
1, 2, ..., 7, 3, 7, 11
.0 : NONE.

62 + ~~||||~~ 1

007 P. octomaculata *SC AZ
*SIN MX
008 Z. dorus Nav S AZ > SJ NM < LA CO
Z. elwesi *TAM MX *Kan UT
C. alcaeus *NL MX
C. melon C. arizonensis EP TX *SON MX
009 U. proteus Cor TX
010 U. belli *SIN MX Kle TX
NEW U. esta *SIN MX
010 U. dorantes *DGO MX *COA MX Tar TX
Tyl TX
011 U. tanna *SIN MX
U. procne Cch AZ
012 U. doryssus Dim TX
A. fulgerator Uva TX
013 A. alardus Camn TX zip Zap TX
013 A. anaphus 014 cellus pseudocellus *COA MX *NL MX
014 A. cinctus *TAM MX *DGO MX *CHH MX
015 A. lyciades Mur OK
Lamar TX > Rus TX
016 A. casica zip Ups TX
016 A. albociliatus *Uva TX
A. toxeus Kle TX
Wash TX
Zav TX > Zap TX
A. jalapus *SIN MX Uva TX
017 T. bathyllus Osa OK
9
Pus OK
Ang TX
Cook TX
Fan TX
Fay TX
Fre TX
Mtgu TX
Tar TX
T. pylades CC CO
28 + ~~||||~~ 11
Cos CO
Dol CO
Ecb CO > Hrf CO
Gla MT
Lib MT
Pra MT
Tre MT
Dsn NE
Grl NE
Wash NE
LA NM
Ben ND > Tao NM
Bil ND
Bur ND Mur OK
Des OR > Crk OR
Lin SD
Cook TX, Culb TX << Cald TX
Leon TX
Trin TX
Ups TX
Wash TX
BE UT, San UT >> Web UT
Doug WA
Joh WY

62 + ~~||||~~ ~~||||~~ ~~||||~~ 1 +

017 T. pylades Pla WY
Wes WY
T. diversus Sha CA
Jac OR
018 T. mexicanus *COAH MX NaS AZ
Esm NV Col CA
T. confusis *SIN MX Doug KS
Fay TX
Med TX
020 S. clonius *SIN MX Starr TX Tar TX
Tyl TX
T. drusius zip
C. potrillo SC AZ
019 C. fritz. zip
C. similis/stola *SIN MX Sta TX
020 C. hippalus zip
021 C. outis Okl OK
Lamar TX Wag OK
022 P. cleta *SIN MX
023 P. enops *SON MX VV TX
C. caicus *SIN MX ~~zip~~
C. mysie C. calchas starr TX ~~zip~~ zip
025 N. stator *TAM MX
W. windi *SIN MX > *Cch AZ
B. clytius *NL MX Pim AZ
026 B. orsines? *SON MX
027 S. ceos Mar AZ
027 B. pulvata *NL MX Cat NM
EP TX > Zap TX
S. mazans Wash TX
S. tierra *CHH MX
028 S. hayhurstii Fro NE
9 + 1
Tha NE Sew NE
024 P. arina *NL MX mur OK Jksn OK
024 N. bipuncta *SIN MX Now OK
Sem OK
Cald TX
Fan TX
Rus TX
Ups TX
S. azteca *Bre TX
S. vulgata *CHH MX
029 G. begga *SON MX
Sta TX
030 A. sallei *NL MX
*SIN MX
032 A. emorsus Cch AZ
033 A. erosus *COA MX *Hid NM
033 S. pulverulenta -Ot NM
Fri TX
034 S. zampa > Imp CA
S. Nav AZ = Nav S AZ *CHH MX
Sie NM
035 A. thraso Fan TX
6
Kle TX
Tar TX
Web TX > Tyl TX
*SON MX
036 G. stigmaticus *Cch AZ
T. ruptifasciatus Kle TX
T. trifasciatus *TAM MX
*COA MX

55 + ~~||||~~ + ~~||||~~ ~~||||~~ +

037 E. anacreon *SON MX
C. asychis Duv TX
038 G. gesta *SON MX
CamnTX
KinyTX
E. icelus Mes CO
13+1
Ada ID
Brd MT
Ctr MT
DL MT < Gra[Grt] MT
Clp OR > Til OR ^ Brk ND
037 C. mithrax *SIN MX
WashOR
Eme UT
Skt WA
Gos WY
Sub WY
E. brizo NavS AZ > SBb CA
7
SBdECA
Den CO
Hrf CO
Cim OK
CaldTX
E. juvenalis Cas NE
9
Nem NE
Sar NE
WashNE
Cad OK
-Mar SD
Rob SD
Lav TX
VZ TX
Arap CO > Cam WY
039 E. telemachus Bac CO
5
Den CO > Cos CO
Grd CO
E. propertius Pol OR
E. meridianus Col NM > Men TX < S.apa AZ = ApS AZ
E. scudderi Grm AZ > *CHH MX *COA MX *NL MX
040 E. horatius Ara CO
15+||||
Hrf CO
Phi CO
Buf NE > Lan NE
Sio NE
-Cha NM
-Gua NM
-Soc NM
Ctr OK > Lin NM
Lov OK > Hrp OK
Wdw OK Yan SD
Chk TX
Fan TX
Fay TX
Rus TX
Tri TX
Yng TX
E. tristis Sis CA
EP TX > Uva TX
E. martialis EP CO
7+1
Brn NE > Gil CO
anders, Hays, Lamar TX > Sew NE < *Col NM
E. pacuvius Tri CA
15+1
CC CO

62 + ~~||||~~ ~~||||~~ +

040 E. pacuvius Chf CO
EP CO
Grd CO
Hrf CO
Sum CO
Cbn MT
Cas MT
Sie NM
Bak OR
Uma OR
Uni OR
*SIN MX > Wal OR
Col WA
041 E. zarucco Tar TX
E. funeralis SBdECA
28+||
Sol CA
Tuo CA
Qua NM > Har NM
RM OK
Ang TX
Ara TX
CallTX
Chk TX
Clm TX
Cor TX
Duv TX
Ect TX
Gre TX
Ham TX
How TX
JksnTX
Iri TX
Men TX
Rus TX
TG TX > SJ TX
Ups TX
Vic TX
WalkTX
War TX
Wha TX
Zav TX > Zap TX
E. baptisiae Dsn NE
15
DougNE
Fro NE
Lan NE
Kio OK
LF OK
Log OK
Mur OK
Okl OK
Fay TX
HdinTX
Jfn TX
Lav TX
SJ TX
Lo CO > Smi TX
042 E. afranius SM CO
15+1
Cbn, McC MT > Mus MT
PR MT
Pra MT
Kim NE
Col NM

65 + ||||

042 E. afranius Har NM
LA NM
Soc NM
Gos WY
HS WY
Lar WY
Pla WY
E. persius -Cch AZ
41+1
Gil AZ
NaS AZ
Alp CA
SJ CA
Elb CO
Hin CO
Our CO
RB CO
Bla MT
Brd MT
Ctr MT
Dsn MT
Fal MT
Fla MT
Grf MT
GV MT
Jef MT
JB MT
Lib MT
Lin MT
Mad MT
Pet MT
PR MT
Pra MT
Sti MT
Tet MT
Too MT
Tre MT
Whe MT
Yel MT
Clk NV
-Ed NM
Lin NM
McK NM
Ote NM
SM NM
Sie NM
Col OR
BE UT > Cac UT
HS WY
Pla WY
WshkWY
P. centaureae Dol CO
Mad MT
Dag UT
WschUT
P. ruralis Ada ID
Jua UT > Sev UT
043 P. xanthus -Cch AZ
Elb CO
Chv NM
P. scriptura CcnSAZ
15+||
Stan CA > Crw CO
Hrf CO
> Log CO

59 + ||||

043 P. scriptura Mgn CO
Col NM
Har NM
Lin NM > Mor NM
BE UT
Dav UT
Kan UT
Mgn UT
Sev UT
Web UT
Lar WY
ADD P. adepta *EP TX
Hid TX
P. communis CPX Hin CO
35 + 卌 || SJ CO
Gdg ID
Pay ID
WashID
Pra MT > Grt MT
Rav MT
Grt NE
Sar ND > McP NE
Bec OK
Cad OK
Can OK
Cra OK
Grf OK
Grv OK
JksnOK
McClOK
Okf OK
MalSOR
Wal OR
Dew SD > Cor SD
Edm SD
Hns SD
Andw TX > Sul SD
Chk TX
Coc TX
Fan TX
Hnf TX Fre TX
Lam TX > Lip TX Pol TX
martin TX Rus TX
SS TX > Tar TX
Tri TX
Ups TX
P. c. communis Cch AZ
49 + 卌 || Grm AZ
CC CO
Gil CO
Hin CO
SJ CO
Gdg ID
Pay ID
WashID
*CHH MX
*SON MX
Pra MT > Grt MT
Rav MT
Wib MT
Grt NE
Sie NM > McP NE

66 + 卌 ||| +

> Sar ND
043 P. c. communis Bec OK
Cad OK
Can OK
Cra OK
Grf OK
Grv OK
JksnOK
Okf OK > McClOK
Cat NM
Grt NM
Lin NM
Ote NM
Soc NM
~~Okf OK~~
MalSOR
Wal OR
CM SD
Dew SD > Cor SD
Edm SD
Hns SD
andw TX > Sul SD
Chk TX
Cul TX
Fan TX
Hnf TX Fre TX
Lam TX > Lip TX > Pol TX
martin TX Rus TX
SS TX > Tar TX
Tri TX
Ups TX
044 P. albescens *LP CO
*COA MX
Edd NM
P. oileus *CHH MX
*D60 MX > Ang TX
Tyl TX
P. philetas Grn AZ
Duv TX
Ect TX
JH TX > Uva TX
H. domicella *NL MX
*Hid NM
EP TX > Lun NM
045 H. ericetorum Imp CA
8 SBdECA
Des OR
Grt OR
MalNOR
Sev UT > Grf UT
Grf WA
H. macaira Uva TX
H. lavianus *CHH MX
Nuec TX > Kle TX
Zav TX > Uva TX
046 C. nessus *SBdECA
7 + | Uni NM
Cad OK
Joh OK
Coke TX > Mur OK
Zav TX > Mas TX
047 P. catullus Imp CA
32 + ||| Nev CA

65 + 卌 卌 || +

047 P. catullus Sis CA
Cos CO
Gdg ID
Ctr MT
Dak NE
Jef NE
Nan NE
WashNE
Mor NM
AdmsND
Tra ND
Alf OK Can OK
Grv OK
Grr OK
Hug OK
Jef OK
HR OR > Lak OR
But SD
Cor SD
Edm SD
Lym SD > Sul SD
Coke, Cook TX > Ect TX
Fan TX
Lav TX
Fra WA > Thu WA
Fre WY
Nat WY
WshkWY
P. mejicanus ~~zip~~ *TAM MX
H. libya ED CA
4 San UT > Las CA
Uin WY
048 H. alpheus Gil AZ
Yav AZ > Las CA
5 + | LA CO
Hud TX
H. gracielae Em UT > Mar AZ
MojSAZ
Pin AZ
C. palaemon Boi ID
Jef MT
Lib MT
SB MT
P. pirus Chf CO
10 + |||| Eag CO
Hin CO
Mtz CO
Mgn CO > RB CO
Prk CO SJ CO
SM CO
Tel CO > Sum CO
051 D. dardanus *JD TX
*SIN MX San UT > Jua UT
049 P. polingii *NL MX -Ber NM
ADD P. roeveri *COA MX
052 Synapte spp. zip
055 M. tyrtaeus Sta TX
056 N. lherminier Hug OK
Fay TX
Tar TX
Tra TX
Ups TX

61 + 卌 卌 |||

056 N. julia MojSAZ
SBdECA
*SIN MX > *SON MX
Duv TX
RealTX

N. neamathla CaldTX
Fay TX
Nav TX
Smi TX
Wha TX

057 C. odilia Sta TX
058 V. inca *SIN MX
ADD Mnas. chrysophrus *SON MX
059 striga is Moeris
hyagnis is Moeris
060 L. accius Grv OK
10
Burn.TX > Ara TX
Chm TX
Chk TX
Ulan TX > Fre TX
L. ancillans lins Starr TX
Rus TX
SS TX > Smi TX
V. fantasos *Hid TX
062 P. philetes Starr TX *SON MX
063 Q. cannae *SON MX
064 D. percosius Nue TX
065 A. numitor *Cch AZ
31 + ||||| Ben CO KC CO
Ote CO Phi CO
Bla NE > Chs NE
Cus NE
Dak NE
Deu NE
Dix NE
Hal NE
Kei NE
Lou NE > Nan NE
Per NE
Sew NE
Thu NE
WashNE
Pierce ND > Ben ND > Sar ND > Stu ND
Bea OK
Cim OK
Lat OK
Tex OK
CM SD
ClaySD
Grg SD
Ham SD
Uni SD
Fan TX
Nue TX
Tri TX
Ups TX
A. arene ~~zip~~ Lun NM
O. poweshiek Sarg ND McP SD
O. garita Yav AZ
Lin CO
BH MT
Brd MT
Jef MT

62 + ||||| ||||| +

065 O. garita Lib MT
21 + ||||| − 1
Sti MT
Tet MT
Tre MT
Yel MT
Ben ND > Sie NM
Oli ND
Shdn, Stu ND > ~~McP SD OK~~
San UT > Ric UT
Whi WA
Cam WY
Gos WY
HS WY
Swe WY
Uin WY
WshkWY
Den CO
066 O. edwardsii Grn AZ
NavSAZ
Cat NM
*SIN MX > Cul TX
O. era *CHH MX
C. aurantiacus Har NM
9
Lea NM
Hrm OK
CaldTX
Fan TX
Lamp, SS, Sterl. TX >>> Fre TX
C. minimus Lamp, SS TX ~~zip~~
067 A. prittwitzi zip
T. lineola Mof CO
Rou CO
*HS WY
H. phyleus ApaSAZ
34 + ||||| 1
Grn AZ
Col CA > DN CA
Hum CA
Sha CA
Bac CO
KC CO
Pue CO
ChynKS
*CHH MX
Tha NE
Cur NM
DB NM
Alf OK Coa OK
Dew OK Okm OK
Grt OK ClaySD
Maj OK Brn TX
anders.TX austin TX > Chk TX
Cul TX < Cook TX
Duv TX
EP TX > Ect TX
Fay TX > Fan TX
Hous TX > Grg TX < King TX
Kle TX
Mor TX
Nac TX
Rus TX
Ups TX
NavSAZ
Y. rhesus
23 + ||||

65 + ||||| ||||| +

067 Y. rhesus AdmsCO
arch CO > Bdr CO
ChynCO
Crw CO
KC CO
Lin CO
Log CO
Mes CO
Tel CO
WashCO
*Ctr MT
ChynNE
Kim NE
Cha NM = Chv > Cat NM
Sie, Soc NM > SF NM
McK ND > AdmsND
*Cim OK
Cor SD
Per SD
Con WY
Lar WY
068 Y. carus CcnSAZ
8 + 1
Mar AZ
*Bac CO
Lin NM > ~~Chv NM~~ < Co NM
Uni NM < Si NM
arch TX > *Cim OK
P. eunus SBdWCA
~~SBdECA~~
S. morrisoni Ala CO
Soc NM
H. uncas Gil AZ
21 + ||||| 1
Pim AZ
Log CO
Phi CO
RB CO
Rou CO
Sum CO > Rus KS
Bla MT
Brd MT
Jef MT
Lib MT
PR MT
SG MT
Tet MT
Ban NE
Mrl ~~Mor~~ NE > Gdn NE
San UT, Wash UT, Cbn WY >> Oli ND < Dewey SD
HS WY
Prk WY
Swe WY
WshkWY
069 H. juba NavNAZ
30 + |||
Col CA
Imp CA
Lak CA
Ven CA
Ad CO > EP CO
Gil CO
LP CO > Rou CO
Ada ID
But ID

63 + ||||| |||| +

069 H. juba
Gem ID
Pay ID
WashID
Cbn MT
DL, Fla MT >> Grt MT
Min MT
Pet MT
Pow MT
PR MT
SB MT > San MT
*Lin NE
RA NM
But SD SJ NM
Ben WA
PO WA
Ste WA > Nat WY

H. comma
9 + |||
AdmsCO
Sed CO
BL ID
Can ID
WashID < Ben ND
But SD Oli ND
JksnSD
San UT > BE UT < Grd UT

H. woodgatei
7
NavSAZ
Edd NM
Mor NM
RA NM
SM NM
Tao NM > SF NM

H. ottoe
7
AdmsCO
ShdnMT
Roc NE
Sar NE
Tha NE
CM SD
Day SD

070 H. dacotae
Moo SD

H. leonardus (incl pawnee)
18 + ||
ChynCO
CC CO
Fre CO
Hrf CO
Kio CO
ChynKS
Cas MT
Art NE
BB NE
Cus NE > Chs NE
Grt NE
Mor NE
Per NE
Stu ND > Oli ND
Hnd SD
JksnSD
Uni SD
Alb WY

H. pahaska
13
Ben CO
Grd CO
Hrf CO
KC CO
Lin CO
Log CO

68 + |||| |

070 H. pahaska
Min CO
Ote CO
Yum CO > WashCO
Ctr MT > -Gla MT
ChynNE
Kim NE
Nat WY

H. columbia
Hum CA
-Lnn OR

071 H. metea
Clv OK

H. viridis
9
Ara CO
KC CO
Log CO
WashCO
Yum CO
LA NM > Chs NE
Nuec TX > MtguTX

H. attalus
Cad OK
Brn TX

072 H. meskei
7
*Ang TX
Bastr TX > Fre TX
Leo TX
Lim TX
Tar TX
Tyl TX

H. lindseyi
*Yum AZ
Las CA
Riv CA
Sac CA
SBdECA

H. miriamae
Alp CA

H. nevada
10 + |
Cos CO
DougCO
Rou CO
-Grf MT
Tet MT
Sum UT > LA NM
Ben WA
Cam WY
Lar WY
WshkWY
Wes WY

073 A. campestris
45 + ||
CcnNAZ
Gil AZ
Grn AZ
LP AZ
NavSAZ
Sie CA
Tri CA
Ven CA
Art NE
Deu NE
Fra NE
Grt NE
McP NE
Sew NE
Cat NM > Yor NE
Ato OK
Bec OK
Can OK
Ell OK JksnOK
Lnn OR
> Mor OR

64 + |||

073 A. campestris
WashOR
Yam OR
*SIN MX
McP SD
Ban TX
Cook TX Chk TX
Donl TX Coc TX
GrayTX Fre TX
Hnf TX Rus TX
Hem TX Ups TX
Lip TX Kan UT
Lov OK > Och TX Ben WA
Fre WA > Gos WY
Nio WY
Pla WY
~~Cat NM~~

P. peckius
21 + ||||
Phi CO
Sed CO
McP KS
Jef MT
L&C MT
Chs NE
ChynNE
Deu NE
Dun NE
Grl NE
Mad NE
McP NE
Ben ND > Sew NE
Cav > Bak OR
Sarg > Uni OR
But SD Pie ND
Cam SD Lar WY
Wes WY Nio WY
Kei NE

P. sabuleti
19
ApaSAZ
Col CA
SBdECA
Bdr CO
Con CO
Jef CO
Boi ID
Elm ID
Gem ID
*Fla MT > Gdg ID
Cac UT
Dav UT
Jua UT
Sum UT
Uta UT
WschUT
Lin, Whit WA >> -Kin WA

P. mardon
Sis CA

074 P. draco
9 + |||
NavSAZ
Del CO > DougCO
Ban ID
Cas MT
Mis MT
Bea UT
Dag UT
Piu UT
Uta, Wash UT >> HS WY

72 + |||| +

074 P. themistocles Grm AZ
47 + ||||| ||
NavSAZ
Ala CO
CC CO
Con CO
Lin CO > Dol CO
Phi CO
RB CO
Sed CO
WashCO
Brd MT
Grt MT > Fal MT
Lak MT > Jef MT
Rav MT > PR MT
Pow MT
Chs NE
Deu NE
Grl NE
Log NE
McP NE
Per NE
Thu NE
Ben ND > Art NE
Stu ND > Oli ND
Ato OK
Ctr OK > Can OK
Grv OK
Grr OK
Lov OK > Lin OK
Now OK
*Ben OR
Bru SD
CM SD
Cod SD
Hns SD
Moo SD
Tod SD
Fan TX
Rus TX
Gos WY SJ TX
Nio WY Smi TX
Trin TX > Ups TX
Rich UT > Ups TX

P. origenes Den CO
12 + |||| *Ctr MT
Fal MT
Fur NE > Fro NE
Grl NE
Ctr OK > Oli ND
Mur OK > LF OK
Cam SD > Okf OK
Tod SD
Ang TX
Pla WY > Ups TX

P. mystic EP CO
25 + ||||| |
KC CO
Log CO
Prk CO
Phi CO
Bea MT > WashCO
BH MT
Grt MT > Brd MT < crtr MT
Lak MT > Jef MT

71 + ||||| ||||| +

074 P. mystic
Rav MT > Mad MT
Bla NE
Chs NE
Deu NE
Dun NE
Per NE
Cav ND > Pie ND
Shdn ND > Sar ND
Cam SD > Bea SD
Lin WA > Lak SD
Pla WY > Moo SD < Stan SD

075 P. sonora !Ala CA
10
RB CO
BL ID
Brd MT
Jef MT
Mad MT
Pow MT
Jos OR
Uni OR
Duc UT

P. vibex arch TX > Duv TX
Kle TX
Ora TX
Ups TX < Ctr OK

W. otho *DGO MX > Grf OK
13
Lat OK
Log OK
Okf OK < Mur OK
Paw OK
Chm TX
Fan TX
Rus TX
Ups TX
WalkTX

W. egeremet Lan NE
8
Tha NE
Lat OK
Log OK
Sem OK
Rus TX
Tar TX
Ups TX

7 076 P. pompeius zip

076 P. verna >> Sew NE
9 Jef, Ric NE
Yan SD
HdinTX
Ora TX
Tri TX
Tyl TX
Ups TX

A. arogos ChynKS
13 + |
Gea KS
*Ctr MT
Fal MT
Hal NE
Ctr OK > Clv OK
Ell OK
Hrp OK
Mur OK
Okf OK
Osa OK
WallTX

65 + ||||| |||

076 A. arogos Pla WY
077 A. logan *ApaSAZ
33 + |||||
NavSAZ
KC CO
Phi CO
Pro CO
Sed CO
BH MT
Chs NE
Dak NE
Deu NE
Dun NE
Nan NE
RW NE > Per NE
Ric NE
Har NM
Sar ND
Stu ND
Ctr OK > Cim OK
Hug OK
Lov OK > McI OK
Paw OK
Dew SD > Ben SD
Hns SD
Stan SD > Kin SD
Tod SD
Ang TX
Cml TX
Cul TX
Nav TX
Uva TX
You TX
Fre WY
Lar WY

P. byssus Ups TX
078 O. sylvanoides Stan CA > Fre CO < Elb CO
19 + ||
Gil CO
Hin CO
Gem ID
Pay ID
WashID
Bea MT
Ctr MT
Cus MT
DL MT
Fal MT
Mad MT
Jef MT
PR MT
SB MT
Cam WY Tre MT
MalNOR

O. agricola Way UT > Cal CA
DN CA
Mod CA
SJ CA
JksnOR

O. yuma Mtz CO > Lak CA
6
SJ NM > SM CO
Juab UT > *HS WY

P. snowi Ala CO
CC CO

66 + |||||

078 P. snowi Fre CO
Gil CO
Sie NM
079 puxillius is Polites
pupillus is Polites
P. hobomok EC AB > Hrf CO
10 + |||| LA CO
Phi CO
Yum CO
Chs NE
Grl NE
Jef NE > Hal NE
Lin NM > Tho NE < Ben ND
Union " Gos WY
P. zabulon -SM NM
6 Can OK
*SIN MX ! > Mur OK < Blanco TX
Rus TX
Tar TX
080 P. taxiles Prk CO > Mgn CO
4 SM CO
Gos WY
081 Q. sidlinga *SIN *SON
P. massasoit zip
P. viator Ora TX
Rus TX
Tar TX
P. yehl zip
ADD P. aaroni Jfn TX
081 P. melane Hum CA
081 Q. eulogius Starr TX *CHH MX
082 mexicana is Quasimellana
mulleri is Quasimellana
balsa is Quasimellana
082 ADD ?. aurora *SIN MX
Q. balsa *SON MX
helva is "Mellana"
gala is "Mellana"
"M". gala? *SON MX
E. dion Lat OK
082 H. fonarerioruм *DGO MX Rus TX
ADD E. bayensis Jfn TX
083 E. dukesii Tyl TX
E. conspicua Sta NE ~~zip~~
E. bimacula Bdr CO
KC CO
*ChynKS
Bla NE
Hal NE
Kno NE
E. vestris Hum CA
32 + |||| || Den CO > Dol CO
Grd CO > KC CO
Phi CO
RB CO
SM CO
BH MT
Cus MT
Bla NE
ChynNE
Dak NE
Dun NE
Per NE
Sew NE
52 + |||| |||| |||

onespa brocki *SIN MX
where to put it?

083 E. vestris Cav ND > Har NM
Oli ND
Dew OK
Coo OR
Des OR
DougOR
Lin OR
Pol OR
JksnSD
Burn. TX > Chm TX
Lamp, Lla TX >> MtguTX
SS TX > Rus TX
Ups TX
Kan UT
Lew WA
Pie WA
Cbn WY
Gos WY
084 A. hianna Yum CO
12 + || *Ctr MT
Cus MT
Dsn MT
Fal MT
Pra MT
Ric MT
art NE >> Wib MT
Cim OK Tul OK
Cus SD
JksnSD
Wes WY
A. deva zip
A. vierecki MojSAZ
Ber NM
Col NM
Pre TX
085 A. pittacus zip
A. python EP TX > Gil AZ
A. cestus -Bre TX
-JD TX
A. lunus DA NM
086 A. edwardsii zip
"A". simius Ben CO
8 Hrf CO
LA CO
ADD A. frappenda *COA MX Ote CO
Cat NM
SM NM > McK NM
*Grf MT
A. exoteria zip
087 A. cassus -Tor NM
A. aenus Hrf CO
LA NM
Cul TX
A. linda zip
A. oslari CC CO
20 + | Crw CO
Elb CO
Hrf CO
KC CO
Lin CO
WashCO
Cho MT
55 + |||| ||||

087 A. oslari PR MT
Ric MT
Wib MT
Yel MT
Col NM
Ote NM
Soc NM > Qua NM
Val NM
Med TX
Uva TX
Con WY
6 Pla WY
088 A. texanae Lea NM EP TX > Lun NM
A. tolteca How TX 1 Ster TX 1 -BCS MX
A. prenda TG TX 1 SIN MX *BCS MX
089 A. aesculapius Lib TX
Rus TX
WalkTX
A. nereus Nav S AZ > Lun NM
Pre TX
A. nysa Mur OK Bosq TX >> Den TX
VV TX
A. eos Elb CO
Hrf CO Jef CO
Lin CO
huec TX > Ect TX
090 A. elissa Cch AZ
A. hegon * EC SAS ~~zip~~
A. vialis *CcnSAZ
30 + |||| Ad, Ap CO > Gil CO
Hrf CO
Sed CO
Wallace KS > Yum CO
Grt MT > Ctr MT
Pow MT
WashNE
Mor NM > SM NM
SF NM
Uni NM
Oli ND
Can OK
Lin OK
Mur OK
Sem OK
Tex OK
Clp OR > Pol OR
Wal OR
Rus TX
Ups TX
WalkTX
Linc, SKam, WW WA >> Grf UT
Pla WY
Wes WY
A. celia Kendall TX > FB TX
091 A. belli Labette KS > Cad OK
Mur OK > Den TX
"A". florus *SIN MX *SON MX
A. alternata Mur OK > Okl OK
~~092~~ 091 A. brocki *EP SJ TX
092 A. phylace *CHH MX Den CO
5 Pue CO > Cat NM
Sie NM
67 + |||| + |||| +

092 A. phylace Val NM
A. fimbriata *SIN MX> *COA MX
L. eufala CC CA
20 + |||| Lou NE > *CHH MX
Alf OK > Bec OK
Dew OK Cmch OK
Ell OK Grv OK
Grt OK Hrm OK
Hrp OK Jef OK
Maj OK Kio OK
Wdw OK Log OK
Nob OK
Ang TX
Chk TX < Lamp TX
092 L. arabus zip
Nav TX << SS, Ster TX
093 O. maculata Ang TX
Chm TX
Hdin TX
Tri TX
C. ethlius Calh TX
9 − |
Chm TX
Hdin TX
Hrs TX
Jksn TX
always ~~Kle TX~~
Lib TX
Neu TX
*Kan UT
094 P. panoquin zip
P. panoquinoides Hid TX
P. ocola *Wdw OK Tar TX
VV TX
095 P. sylvicola zip
P. evansi *SON MX
096 N. nyctelius zip
T. macareus *SON MX
098 A. hesperiaris *SIN MX *SON MX
A. neumoegeni CPX zip
099 A. aryxna CPX Yum AZ
A. mariae CPX zip
A. fieldi *SIN MX *SON MX
100 A. polingi zip
A. alliae MojNAZ
101 M. yuccae CPX Lar CO
16 + ||| Dec, Grt, Nor KS > Lin CO
Chs NE
Val NM
Cad OK
Can OK
Kio OK
Lin OK
Log OK
Okl OK
Pay OK
Pit OK
Pot OK
Sem OK < JD TX
Tyl TX
M. streckeri CPX Ote CO
Ctr MT
Cas MT
Fal MT

65 + ~~||||~~ ~~||||~~ +

101 M. streckeri CPX art NE > Roc NE
Okl OK
Sev UT
M. ursus CPX *SIN MX ~~zip~~
102 S. maculosus CPX zip
P. clodius Ker CA
6
Ada ID
Pow ID
WSco OR > San UT
~~Grt WA~~ error
Uin WY
P. phoebus CPX Hum CA
12 + ||| Den CO > Mtz CO
RB CO
SM CO
Wel CO
Fra ID
Pow ID
*Mrt ND!
*SW SAS > Grt OR
Mea SD < Em UT
103 P. alopius *SIN MX
San UT < Pla WY
103 P. montezuma *NL MX
104 B. philenor Ven CA
22 + |
Dol CO
Mtz CO
Wel CO
Cur NM
Gua NM
Ato OK
Can OK
Wdw OK Brn TX
Call TX
Dls TX
Fal TX
Fan TX
Ham TX
How TX
Mils TX > Pkr TX
Reag TX
Sch TX
War TX
Wash TX
Wis TX
B. polydamas arans TX > Kdy TX
Kle TX
104 B. eracon *SIN MX
Wcy TX
105 P. polyxenes Apa NAZ
43 + ||||
Ben CO
Kio CO
Phi CO
Log KS Chs NE
Fil NE
Hrl NE > Gdn NE
KP NE
Kim NE
Pie NE
Yor NE
Ben ND > Dew OK
Jksn OK
Kio OK
Log OK

64 + ~~||||~~ ~~||||~~

105 P. polyxenes Nob OK
Okf OK
Osa OK
Sem OK
McP SD
Pen SD > Pot SD
Uni SD
Bks TX
Call TX
Clm TX
Duv TX
Ect TX
Fan TX
Ham TX
Hrdm TX
Hrt TX
Hays TX > Jack TX
JW TX
Mls TX
Moo TX
Rus TX
Sch TX
Wlb TX
Win TX
Wis TX
You TX
Lar WY
P. p. coloro(bk) Wash UT
P. p. coloro (yel) Mno CA
P. machaon (all) Ara CO
17 + |||.
Doug CO
EP CO
KC CO
Our CO > Lin CO
RB CO < Cus. RW NE
Hil, Val MT >> -DA NM
-Lin NM
-Ote NM
McH ND
Grt OR
Mul OR
BE UT
Grf WA
Pie WA
Cam WY
Nio WY
Wes WY
106 P. machaon (bk) SC AB
(=bairdii) Doug CO
6
KC CO
Mof CO
Our CO > RB CO
-DA NM
-Lin NM
-Ote NM < Ap S.
P. machaon (yel) Ara CO
(=brucei etc) Con CO
18 + |||
EP CO
Lin CO
RB CO
Hil, Val MT > Mtz CO < Cus NE RW NE
McH ND

60 + ~~||||~~ ||

106 P. machaon (yel) (=brucei etc)
Grt OR
Mul OR
BE UT
WashUT
Grf WA
Pie WA
Cam WY
Nio WY
Wes WY

P. zelicaon (blk) 15+||
ApaNAZ
*LA CA
Ven CA
Ara CO
Leg CO > Rou CO
Wel CO > *Clr ID
*BCN MX
Tre MT
ChynNE
LA NM
McK NM
RA NM
Sdv NM
Cam WY
Wes WY

107 P. zelicaon (yel) 18
MohNAZ
LP CO
Ben ID
Can ID
Clr ID
Elm ID
BH MT
Ctr MT
Mus MT
PR MT
Ric MT
Tre MT
Wib MT
— Dsn NE ERROR
Grf WA
Pla WY Skt WA
Cam WY
HS WY

P. indra 9+|
CC CO > Val ID
ClkENV
Bea UT
Cbn UT
Duc UT
Grf UT
Mgn UT
Web UT
Wes WY

P. thoas zip

P. cresphontes 13+ 𝍸 𝍸
CcnSAZ
Grn AZ
LP AZ
Ora CA
Wel CO
Brn NE > Yum CO
Nuc NE
Paw NE > Yor NE
Gza TX
Erath, Bosque, EP TX, Lamp TX > Mls TX

61 + 𝍸 ||

107 P. cresphontes
Robertson, SS, Sterl TX, Palo Pinto TX > Pan TX
Ups TX
WalkTX
108 P. ornythion Sta TX
P. astyalus Wey TX ~~zip~~
P. androgeus zip
P. alexiares(?) CamnTX
109 P. glaucus CPX 20 + 𝍸 |
Elb CO
Lin CO
Ban NE
ChynNE
SB NE > Sew NE
Yor NE
Oli ND
Sioux ND > Ato OK
Osa OK
Edm SD
Mar SD
McC SD
Arch TX > CamnTX
Chm TX
Cooke TX > Fal TX
Fan TX
Lamp TX > Tit TX
Tyl TX
Waller TX > Fer WA
Oka WA

P. canadensis 5
Sio NE > *ChryNE
Oli ND
Fer WA
Oka WA

P. rutulus 9
Ala CO
Ote CO
Gem ID
WashID
PR MT
Ros MT
Shrm OR > HS WY
WshkWY

P. eurymedon 10+|||
Imp CA
SJ CA
Arap, Den CO > Min CO
*ChryNE?
SF NM
Des OR
San UT > BE UT
DougWA
Grt WA
Lar WY

110 P. multicaudatus 23+|
ApaSAZ
Col CA
DN CA
Gle CA > Fre CA
SBdECA
*COA MX > Con CO
Sum CO
*DGO MX > Gem ID
ChynKS
error > BH MT
Cho MT
Grt MT > PR MT
Kim NE
Doug, Jos OR > Per NE

66 + 𝍸 𝍸 +

110 P. multicaudatus
JksnSD
CrocTX
Cam WY
Gos WY
Uin WY

P. troilus 7
Dewitt TX > Fan TX
Fre TX
Gonz TX, Guad TX > Lib TX
Tar TX

P. palamedes
Grg TX
JksnTX
Kdy TX
Rus TX
Tit TX
*SIN MX > Tri TX

P. anchisiades zip

112 P. garamas USA **CamnTX
P. abderus *SON MX
113 E. marcellus Mur OK > Ctr OK
Lib TX
113 E. epidaus *COA MX
E. philolaus *COA MX Hid TX
114 C. nimbice *DGO MX **Hid TX ~~zip~~ *SIN MX
N. menapia 7+||| *SW AB
Hin CO Lak CO
Min CO Sum CO
Ada ID
114 C. flisa *DGO MX
114 P. charops *SIN MX
Bea MT
HR OR > Mad MT Ir, San UT
115 N. terlootii zip
A. drusilla *CHH MX
Nem NE
Ric NE
*Okl OK
Brew TX > Jfn TX

P. beckerii 13
Imp CA
Ben CO
Crw CO
EP CO
Grd CO
Gem ID
Pay ID
Val ID
Col NM
HR OR
Joh WY
Nat WY
Uin WY

P. sisymbrii 15+|
NavS AZ > DN CA
AdmsCO
Ada ID
Ban ID
Can ID
Ctr MT
Cus MT
GV MT
PR MT
Val MT > Ros MT
Uni NM
*Cim OK
WW WA > Wes WY

116 P. protodice 34+ 𝍸 |
DN CA
SBdECA
Gem ID
Gdg ID

66 + 𝍸 𝍸 +

116 P. protodice
Jer ID
Pay ID
WashID
Hil MT
Jef MT
Min MT
Pon MT
Rav MT
Fal MT
SB MT
McK ND > Fil NE
Ato OK
Wdw OK JksnOR
Jef OR > MalNOR
Whe OR
Spi SD
Andws TX > Chk TX
Coc TX
Cooke tx > Fan TX
GrayTX Fay TX
Hnf TX Fre TX < Martin TX
JH TX > Och TX Rus TX
Ups TX
Zav TX > WalkTX
Col WA
-Oka WA

P. occidentalis
24
Col CA
Hum CA
Dol CO
LA CO
Log CO
Min CO
Phi CO
Sed CO
Yum CO
Gem ID
WashID
Ban NE
ChynNE
Kim NE
Gua NM
Mor NM
Jos OR
MalSOR
SC Sas > JksnSD
WashUT
SJ WA
Nio WY
Wes WY

P. napi CPX
7 + |||
Ala CO
~~Dou~~ > Ctr MT
Lib MT
Ben ND >> PR MT
Cav " Des OR
Rans " BE UT
Klick WA > ApaSAZ

P. rapae
38 + |||
SBdECA
Bnv ID
Gem ID
Pay ID
WashID
*CHH MX

67 + |||| |||| +

116 P. rapae
Jef MT
Art NE
Grl NE
Mer NE
Cha NM
DB NM
Pierre ND > GV ND
Chk OK
Lin OK
Lov OK > Log OK
Coo OR
Jos OR
MalSOR
Pol OR
Bea SD
But SD Dew SD
Zie SD
Chk TX
Cook TX > Coc TX
Crk TX
Ect TX
GrayTX Fan TX
Hnf TX Ker TX
Kim TX
Rus TX
Smi TX
Ups TX
Cam WY

117 L. aripa **Hid TX > *NL MX
ADD H. costaricensis *SON MX
H. avivolans ?-SON MX
118 A. monuste *Brn SD!
orange, Hardin, Jasp TX >> *CHH MX
G. josephina *DGO MX > *NL MX
*SON MX
G. howarthi zip

119 E. ausonides
17 + |
VI BC
SLO CA
RG CO
Can ID
Gem ID
Pay ID
WashID
Ctr MT
Cus MT
Mus MT
PR MT
Tre MT
Dun ND
Slo ND
*WashOK!
Uni OR
Cam WY
HS WY

E. creusa ~~zip~~ NC SASK

120 E. hyantis CPX
14 − |
Grn AZ
Imp CA
Ban ID
Cat NM, Ote NM >> L&C MT
Des OR
shrm OR > Sev UT
Alb WY
HS WY
Prk WY

67 + |||| ||| +

120 E. hyantis CPX ~~Ote NM~~
WshkWY

E. olympia
37 + |||
Ben CO
ChynCO
CC CO
Crw CO
Gil CO
Ote CO
Tel CO
Gla, McC MT > PR MT
Pra MT > Ros MT
Tet, Val MT > Chs NE
Hal NE
Per NE
WashNE
Col, SM NM > AdmsND
Brk ND > GV ND
McH ND
Can OK
Grv OK
Joh OK
Kay OK
Lin OK
Log OK
Mur OK
Pot OK
Sem OK
Cam SD
Dew SD
Per SD
Rus TX
VZ TX
Joh WY
She WY

A. cethura Ccn AZ, Imp CA Mno CA
A. pima Sie NM > Grn AZ

121 A. sara CPX
10 + |
Nav S AZ > DN CA
SBdECA
Bac CO
Cus CO
Our CO
Gem ID
Cur OR > BH MT
Joh WY
WshkWY

A. midea
8 + |
Log OK
Mur OK
Bow TX
Duv TX
Fan TX
Leon TX > Sta TX
Tri TX
VZ TX

A. lanceolata
Imp CA
SBdECA
SF CA

122 C. philodice
37 + ||||
Ben ID
Gem ID
Gdg ID
Pay ID
Pow ID
WashID

71 + |||| +

122 C. philodice Art NE
(41) Grl NE
Nan NE
AdmsND
Alf OK GV ND
Bea OK Grv OK
Dew OK Lan OR
Ell OK Aur SD
Grt OK Clk SD
Hrp OK Dav SD
Kay, Log OK >> Maj OK Kin SD
Ncb OK Lak SD
Sul SD
Arm TX < Bre TX
Coc TX
Ect TX
Fre TX
Moo TX
Nac TX < Pre TX
Tar TX
Clm WA
Lew WA > Jef WA
C. eurytheme Gem ID
24 + 𝍸 Gdg ID
Pay ID
WashID
Jef MT
HR OR > MalSOR
*SIN MX > Clk SD
andrws TX > Chm TX
BrzsTX
Cot TX > Coc TX
DW TX
Fre TX
GrayTX Kdy TX
Hnf TX Kle TX
Och TX Lav TX
Martin TX > Rus TX
Ups TX
Wha TX
122 C. canadensis SW AB Mas WA ~~GR~~ > Wcy TX < Zav TX
123 C. occidentalis(y) DN CA
6 -Las CA
Clr ID
Jef MT
JB MT
Des OR
MalNOR
-Skt WA
-Thu WA
-Wha WA
C. christina CPX SC AB Bea MT
12 Fla MT
Gla MT
JB MT
Lak MT
Pow MT
Tet MT
Yel MT
*Sio NE
-JksnSD
Jua UT

73 + 𝍸 +

123 C. christina CPX Tet WY
C. alexandra SW AB > AdmsCO
37 + ||| Nev CA Ala CO
Ara CO
Den CO
DougCO
KC CO
Lin CO
Log CO > RG CO
WashCO
Boi ID
Elm ID
Fra ID
Ida ID
Lem ID
Val ID
WashID
Mis MT > Pon MT
Whe MT
Bil ND
Un NM > ChynNE
*SW Sas >> Clk OR
SC Sas JksnSD
Ste WA
Crk WY
Gos WY
HS WY
Joh WY
Lin WY
Prk WY
Sub WY
Tet WY
Wes WY
YNP WY
C. harfordii zip
124 C. meadii Ala CO
Pon MT
WschUT
Alb WY
Cbn WY
Lin WY
C. scudderii Ala CO
WschUT
C. gigantea Bea MT > DL MT
L&C MT
SB MT
125 C. pelidne Boi ID
Mad MT
SB MT
C. interior What WA > Col WA
C. behrii zip
126 Z. cesonia McP KS
13 *SC AB Chs NE
Per NE
WashNE
-LA NM
Cad OK
Dew OK
Osa OK
Law SD
Uni SD
Aus TX

66 + |||

126 Z. cesonia Coc TX
SJ TX
Z. eurydice SCr CA
Tuo CA
Yub CA
A. clorinde Ara CO
9 Cul TX
Duv TX
Fay TX
JH TX
Med TX
Sta TX
ColoTX
*NL MX
A. maerula *CHH MX
Brewst TX > *NL MX
127 P. sennae WashCO
25 + |||| CmchKS Hal NE
Alf OK Hrl NE
Ell OK How NE
Grt OK Sew NE
Hrp OK Chv NM
Wdw OK Uni NM
Coa OK
Hug OK
Kay OK
Lin OK
Log OK
Lan OR
Coke TX -DougOR
EP TX >> Fal TX
Fan TX
How TX > Pan TX
Ster TX > Alb WY
Cbn WY
Lar WY
P. philea *DGO MX > *CHH MX
*TAM MX
Sta TX
P. agarithe Ara CO
18 + || EP CO
Sed CO
*DGO MX > *CHH MX
DA NM > Har NM
Cad OK
Ctr OK
Hrm OK
Ang TX
EP TX > Cul TX
Jasp TX > FtB TX
Med TX
Rusk TX MtgyTX
Nue TX
128 P. rurina intermedia *SIN MX Pol TX
" P. statira *DGO MX WalkTX
128 K. lyside *DGO MX Nac TX Starr TX DougCO
8 + ||| WashCO
*NL MX
Cur NM > SF NM
Okl OK
CaldTX
Cul TX

72 + 𝍸
|| +

128 K. lyside — EP TX; Howd TX > Fan TX

129 E. daira — *CHH MX; *NL MX; Sta TX

E. boisduvaliana — *CHH MX; *NL MX; Hid NM

E. mexicana 15 + ||
Bac CO
WashCO
Brn NE > Chs NE
Guad NM > Har NM
Quay NM RA NM > Bea OK
Grv OK
Pit OK
Cul TX
Fan TX
Pot TX
SJ way UT >> HS WY

129 E. salome Zip

130 E. proterpia — *NL MX; EP TX > JD TX; Wcy TX

E. lisa 25 + |||
EP CO
*CHH MX
Dak NE
Hal NE
Ham NE
Sta NE
Tho NE
Thu NE
Qua NM
Alf OK
Sdv NM
Dew OK
Edm SD
Ell OK (Log OK >)
Aus TX
Maj OK
BrzsTX
Wdw OK
Coc TX
Cook TX > DW TX
Pan TX
Rus TX
Ster TX > Trl TX
Ups TX
VV TX

E. nise 7
Riv CA
*DGO MX > SBdWCA
*NL MX
Lun NM > *Fur NE* < Wash UT

130 E. idina *COA MX

131 E. nicippe 16 + ||||| |||||
Cro CO
Log CO
Ote CO
Wel CO
Dew OK
Grf OK
Grt OK
Kay OK > Hrp OK
andrws TX > Maj OK
Chk TX
Donley TX > Coc TX < Cook TX
Fan TX < Pre TX
Martin TX ⟶ Hays TX Lamp TX > Rus TX < SS TX
Ster TX Sut TX > Ups TX
Alb WY
Cos CO
Min CO

insert albula

N. iole 33 + ||||| |||||

74 + ||||| || +

131 N. iole
RB CO
SJ CO
SM CO
Can ID
Ban NE > Art NE
ChynNE
Per NE
Alf OK
Ato OK
Grt OK
Grv OK < Ctr OK
Hug OK
Log OK > McI OK
Now OK
Edm SD > Ben SD
Tri SD > Pen SD < Andrws TX
Chk TX
Coc TX < Cook TX
GrayTX
Fan TX
Hnf TX
JH TX < martin TX
Lip TX
Rus TX
Mills TX > Och TX
Ups TX
ShrmTX
Duc UT
Tay TX
WschUT
Nio WY
Fre WY

E. albula USA **Sta TX

132 F. tarquinius 6
Tha NE
WashNE
Lin OK
Chm TX
Fan TX
Grg TX

133 L. arota 7 5 + ||
LA CO Sol CA > Col CA << Lak CO, San, Sev UT, way UT

L. phlaeas 5
Lea KS > WashNE
BH WY *Col NM
Sub WY

L. cuprea 5
Mrp CA
Sha CA > Val ID
WschUT
WshkWY

L. xanthoides
DN CA
Mad CA > Nev CA
Lan OR

L. xan. dione 16 + |||
LA CO
BH MT
Tet MT
Dun NE
Lou NE > Grl NE
*Uni NM
Oli ND
ShdnND
Brn SD Dew SD > Yan SD
Fre WY
Gos WY
HS WY
Lar WY
Nat WY
Prk WY
WshkWY

134 L. editha
RB CO
Owy ID
WashID
Dag UT

70 + ||||| ||||| +

134 L. editha — Duc UT

L. gorgon
Kin CA
Nev CA
DougOR

L. hyllus=thoe 24 + ||||
LA CO
Ote CO
Rav MT > Chs NE
Deu NE
Dix NE
Grl NE
Kim NE
Mad NE
Brk ND > Per NE
Brl ND
Sarg ND Stu ND >> Oli ND
Cad OK
Can OK
But SD
Lin OK < Cam SD
Cam WY
Hut SD
Crk WY
Lar WY
Wes WY
Nio WY
Prk WY
Sub WY

L. rubida 9
ED CA
Fre CA
Dol CO
Mtz CO
Jef MT
Rav MT
Ben SD
Jua UT
Mil UT

135 L. heteronea
Col CA > WashID
Min MT
Swe WY

L. helloides 32 + |||
Ala CO
ChynCO
Con CO
Cos CO
Eag CO
Fre CO
Gun CO
LA CO
Our CO
RG CO
Sag CO
SM CO
Gem ID
Pay ID
WashID
Chs NE
ChynNE
Dun NE
SB NE > McP NE
Col NM
LA NM
Mor NM
RA NM
Sdv NM
SM NM
SF NM
Tao NM

67 + |||||

135 L. helloides Brl ND
Ran, Stu ND >> Dew SD
FR SD
Nio WY
ShdnWY
L. "dorcas" Dol CO
5
LA CO
-LA NM
-Sdv NM
-SJ NM
Chn UT > Jua UT
HS WY
136 L. nivalis Lar CO > SM CO < Eag CO
7+||
Owy ID
JB MT
HR OR > Whe OR
Too UT > Duc UT
L. mariposa Bla ID
Jef MT
Kli WA > Aso WA
H. crysalus Hin CO
*DGO MX
Dag UT
137 H. grunus *Skm WA
E. toxea *NL MX
138 A. halesus NavSAZ
9+|||| Mad CA Men CA
Dol CO
LP CO
SM CO
Jos OR > Okl OK < *TAM MX
Lamp, SS TX >> EP TX < Sev UT
139 C. telea *SON MX
*TAM MX
C. simaethis zip
P. alcestis MohSAZ
Lin NM
Howd TX > Cad OK
140 S. titus Plu CA
17+~~||||~~ ala CO > CC CO
Dol CO
Hin CO
JKsn CO > Fra ID
WashID
ChynKS
Jef NE > Ros MT
Nem NE > Kno NE
ShrmNE
Sta NE
WashNE
Hrp OK
Maj OK
JksnOR
aso WA > Uni OR
Nat WY
S. behrii Hin CO
8+~~||||~~ JKsn CO > Min CO < Lak CO
SM CO < Prk CO
Sum CO > Ban ID
Boi ID
LA NM
Mor NM
Linc WA > Arm TX
62+~~||||~~ ~~||||~~ +|||+

140 S. fuliginosum Lar CO > WashID
4
Sto NV
Grf WA
S. acadicum ChynKS
17+1
Bla NE
Brn NE
Chs NE
Dun NE
How NE
Kno NE
Per NE
ShrmNE
Tha NE
WashNE
SC Sas > Sul SD
Marsh SD > Fre WY
HS WY
Lar WY
Prk WY
141 S. californicum CC CO < Mes CO
8+1
~~See~~ JKsn CO > RB CO
SM CO
Uin UT
WschUT
-Grt WA
Nat WY
Pla WY
S. sylvinum Ala CO
12+~~||||~~
Cha CO > Hin CO
Jef CO
Lak CO > RG CO
Ban ID
Car ID
Gem ID
Owy ID
DL MT
Pon MT
SB MT
Cla WA > -Ote NM
Linc WA > Skt WA
Ben, McK ND > Whi WA
S. edwardsii Mar SD
142 S. calanus CPX Cos CO
10+~~||||~~
Buf NE
DougNE
Grl NE
Jef NE > How NE
Ben ND > Cad OK
Cav ND > Hrp OK
Sarg ND
Lov OK
Stan SD > Sem OK
HdinTX
S. caryaevorum DougKS
*DougNE
Sew NE
-Law SD
S. liparops CC CO
10+|||
Grd CO
Mtz CO
Ban NE > SM CO < see
Stu ND < Brk ND
-Bru SD
Grl NE
60+~~||||~~ ~~||||~~ ~~||||~~ +

142 S. liparops Sew NE
Tyl TX
alb WY > Prk WY
Pla WY
S. kingi *HdinTX
Jsp TX
Sab TX
Tyl TX
143 S. auretorum Cal CA
Tri CA
S. tetra Fre CA ~~zip~~
S. saepium CC CO
9
Bnv ID > Ban ID
DL MT
HR OR
Platte WY > SJ UT < San Sev UT
O. ocrisia *SON MX
144 M. leda *LP CO
7
Soc > Ber NM
Lun, Quay, NM >> Sie NM
EP TX >
M. clytie Uva TX
M. azia Nue TX
145. M. echion *NL MX RealTX
145 ADD T. comana *SON MX
ADD T. orasus *SON MX
146 R. zebina *SON MX
R. marius *TAM MX
*Hid TX
ADD R. stigira *SIN MX
*TAM MX
147 A. strophius *TAM MX
C. cecrops Grv OK
10+||
Mur OK
Fan TX
Fay TX
Fre TX > Lav TX
Leon TX > Rus TX
Tar TX
Ups TX
VZ TX
WashTX
C. isobeon SS TX > Rus TX
5
Tyl TX
Zav TX > Ups TX
148 C. dumetorum CPX Imp CA
17+1
Yub CA
AdmsCO
Cro CO
Den CO
Hue CO
Lin CO
WashCO
*SON MX
Bea MT > ChynNE
Des OR
Lin OR > Yam OR < Way UT
Ben WA > Grf WA
-Kin WA
Skm WA
C. perplexa Imp CA
5
Nap CA > Des OR
Lin OR > Yam OR
66+~~||||~~ + ~~||||~~ +

148 C. perplexa -Crk OR
-Gil OR
-Kin WA
149 C. affinis Lar CO
14+1 Bea MT > Crk OR
Gil OR
Way UT > Lak OR
Ben WA
Che WA
DougWA
Grf WA
KittWA
Kli WA
Oka WA
Skm WA
Yak WA
C. apama AdmsCO
9+1 Cro CO
Den CO
Hue CO
Lin CO
WashCO
*SON MX
ChynNE
Platte WY > Eme UT
C. sheridanii CPX DN CA
9+1 Teh CA
Pit CO > Elb CO
Boi ID
Daw, Fla, McC MT > Dun ND
Uma OR
C. sheridanii Pit CO > Elb CO
8+1 Boi ID
Daw, Fla, McC MT > Dun ND
Uma OR
Way UT
150 C. lemberti DN CA
Iny CA
Teh CA
-Chu NV
-Hum NV
-Lan NV
-Per NV
C. comstocki Grf CO
7 Chu NV
ElkNNV
Eur NV
Hum NV
Lan NV
Per NV
C. miserabilis zip
C. amyntor -Bre TX
151 C. longula Cch AZ
C. agricola (?det) SC AZ
*DGO MX Bre TX
152 M. spinetorum Alp CA
13+111 Hum CA
Riv CA
Con CO
LA CO > DougCO < Grf CO
SM CO > RG CO
Mor NM > Jef MT
Val NM >
62 + ||||| ||| -1

152 M. spinetorum SL UT
Sev UT
Aso WA
~~Kin WA~~ OK
Skm WA
M. johnsoni Hum CA
Skm WA > Jos OR
153 M. nelsoni CPX Iny CA
9+11 Cle ID
Ida ID
Owy ID
Min MT
Gil OR
Whe OR
Pierce WA > Aso WA
WW WA > Whi WA
M. nelsoni Col CA
Lak CA
OK Was OR
Whe OR
M. muiri But CA Yub CA ~~zip~~ > Teh CA
M. rosneri Whe OR
154 M. barryi Iny CA!
(most "siva" in Tul CA!
E WA, E OR, SW Ida ID
ID and NE CA be- Owy ID
long here, re- Gil OR < Har OR
gardless of tax- Jef OR
onomy) Kla OR
13+1111 Lak OR
WscoOR < Mal S OR
Whe OR
Ktt, Kli WA >> Aso WA
Whi WA
WW WA
M. byrnei Cle ID
Min MT
M. siva AdmsCO
23+1 Ara CO
Lin CO
Log CO
Rou CO
Sum CO > SM CO
WashCO
Bea MT
Ctr MT
Fla MT
GV MT
Min MT
Mus MT
PR MT
Fur NE
Lin NE
Ber NM
Bow ND
-all OR
Har SD
-all WA
Fre WY
Prk WY Lar WY
WshkWY
M. loki CPX Imp CA
60 + ||||| ||

154 M. loki CPX Ora CA
155 M. loki Imp CA
Ora CA
M. nr thornei Ora CA
156 M. grynea XCOA MX > Tha NE
9 + ||||| WashNE
Can OK
Che OK
AndnTX
Ang TX
Chk TX
Lamp, SS, Sterl TX, Mills TX, >>>> Jfn TX
Ups TX
X. xami Mar AZ
S. mcfarlandi *LA CO
I. augustinus Val NM ? ~~Imp CA~~
9 + ||||| Nav S AZ ? Arc CO
CC CO
LA CO > One ID
*SON MX
Jef MT
Co NM > Coo OR
LincOR
Jua UT > Til OR < WW WA
157 I. fotis zip
I. mossii Ara CO
8+11 Elb CO
Jef MT
Cur OR
JksnOR
Lan OR
LincOR
Pie WA > Che WA
-Thu WA < what
I. polia *DN CA
8 Cos CO
Hil MT > Jef MT
mea MT > Cur OR < LA NM
Uni OR
I. irus Grv OK
Tri TX
158 I. henrici WashNE
Mur OK
HrsnTX
Lim TX
Sab TX
I. niphon Bow TX
Tri TX
I. eryphon SC AB > Gil AZ
24+1 Ala CA
CC CA
Bac CO
Con CO
Hue CO
Min CO
Bnv ID
Pay ID
WashID
Ctr MT
Fal MT
Jef MT
PR MT
64 + ||||| ||||| +

158 I. eryphon Kim NE
Coo OR
Mar OR > Aso WA
Grf WA
ADD P. aufidena *SIN MX
Grt WA
Pie WA
Wah WA > Skm WA < Cam WY
A. sito *SIN MX
159 A. jada zip
ADD A. hypocrita *TAM MX
160 P. m-album Mur OK
Pot OK
Fan TX
Jfn TX
Uva TX
161 Fixsenia = Satyrium (RKR)
S. favonius CPX Pim AZ
Lin NM
Ote NM
Duv TX
S. polingi EP TX **CHH MX
H. critola zip
162 S. melinus Alp CA
41 + 𝍸𝍸 ||
Min CO
SM CO
Sum CO
Boi ID
Owy ID > Gem ID
Pay ID
WashID
*COA MX
Grt MT
Art NE
Deu NE
Hal NE
Per NE
WashNE
McH ND
Ran ND > Oli ND
Bec OK
Dew OK Grr OK
Hrp OK Hug OK < Log OK
Mur OK > Coo OR
Cur OR
Jac SD
Tri SD < Andrws TX
Chk TX
Fish TX > Donley TX Coc TX < Cook TX
GrayTX JH TX << Lamp TX, Jones TX
How'd TX > Hnf TX Lav TX
Och TX Rus TX < SS TX
Rich UT > Ups TX
Pie WA
S. yojoa *SIN MX
S. albatus *DGO MX
Gos WY
Prk WY
ShdnWY
WshkWY
S. bebrycia Bre TX ~~zip~~
163 S. rufofuscus Sta TX
S. alea Uva TX
164 S. columella Cml TX
VV TX
67 + 𝍸𝍸 +

164 S. cestri zip
S. bazochii *NL MX
ADD S. megarus CPX *SIN MX
ADD S. chonida *SIN MX *SON MX
165 S. ziba? *SON MX
165 I. miadora *SIN MX
ADD Caerofethra lucagus *SON MX
ADD Brangas neora *SIN MX
E. quaderna *COA MX ~~zip~~
ADD E. carla *SIN MX
166 "endymion" = canus
"cyphara" = sangala
E. sangala *SON MX
167 bassania is in Contrafacia
168 paetus is in Aubergina
169 B. exile Nav N AZ > SBdECA
14 + ||
Sis CA
Gun CO > Grd CO
SM CO
NEW E. matthewi *SIN MX
(166) E. nubes *SIN MX
Elm ID
ChynKS
*NL MX
*TAM MX
Crk OR
Whe OR
Cbn UT
Grf UT
Coc TX
JH TX
L. cassius *NL MX
*SON MX
*TAM MX
Cml TX
Fan TX
170 L. marina Alp CA
21 + ||||
Las CA
Mad CA
Mod CA
CC CO
Dol CO
Hin CO
Prk CO
Phi CO
SJ CO
SM CO
Tel CO
WashCO
Hrl NE > Grl KS < *TAM MX
Per NE
Sar NE
*Jef OR
Okla OK > DougOR
Don TX
Smi TX
Kin UT > Ups TX
Z. cyna *NL MX
Lun NM
Csn TX
Duv TX
Gua TX
Kim TX
H. ceraunus Grn AZ
8 + 𝍸 ||| ala CA > SBdWCA
56 + 𝍸𝍸 |||

170 H. ceraunus *Dol CO
*CHH MX
Blanco TX *TAM MX < Linc NM
Cald TX SM NM
Guad TX Bea UT < EP TX
JH TX >>
Stonew TX > Nav TX
H. isola Hin CO
29 + 𝍸𝍸 ||| RB CO
RG CO
Bla ID
*NL MX
ChynNE
167 C. bassania *SIN MX RW NE > Grl NE
Sew NE
Yor NE
168 A. paetus *SIN MX Ato OK
Bec OK
Ctr OK > Dew OK
Grv OK
Grt OK Lin OK
Log OK > Sem OK
andrws TX > Coc TX
Cook TX > Don TX
Duv TX
Fan TX
Hutch TX GrayTX JksnTX
Lamp TX > Hnf TX Lav TX < Martn TX
SS TX > Och TX Ups TX
Duc UT
*KTT WA ShrmTX Cbn UT << Ju ws UT
171 E. comyntas ED CA
34 + 𝍸 mrpa CA Kin CA
|| ~~Mod CA~~ error Ben CO
Cro CO
Hue CO
LA CO
Phi CO
Ote CO
*CHH MX
Chyn NE > Art NE
Holt NE > Deu NE
Knx NE < RW NE
Cat NM > Stu ND
Gre OK
Hrp OK
Maj OK
Wdw OK Bak OR
Cur OR
Jef OR
MalNOR
Cam SD
Dew SD > Ham SD
McC SD
Cook TX > Tri SD
Fan TX
Fay TX
Fre TX
Lamar TX > Rus TX
Ups TX
-Wah WA
DA NM
Edd NM
McK NM
70 + 𝍸𝍸 +

171 E. amyntula Sie CA > Con CO
13 + ||
Elb CO
Min CO
Elm ID > Mad ID < *Son MX
-DA NM
—Hid NM —> -Edd NM
McK ND > Lun NM
delete ~~Cur OR~~ misdet.
Des OR
Pol OR
Ben WA
Pac WA
Joh WY
WshkWY

C. ladon CPX Alp CA
41 + ||||
Hue CO
LA CO
Min CO
RG CO
Ben ID
*COA MX > Ctr MT
Cus MT
Daw, McC MT >> Mus MT
PR MT
Sti MT
Bla NE
Sew NE
Oli ND
Stu ND
Ato OK
McL OK
Pot OK
Ben SD
CM SD
Cod SD
Edm SD
FR SD
Grt SD
Grg SD
Hns SD
ColwTX
EP TX > Fan TX
Fay TX
Fre TX
Nav TX
Rus TX
Tyl TX
WschUT
Ben WA >> Gos WY < Cam WY
Linc WA
Sti MT
HS WY
NEW C. neglecta Yel MT
Joh WY
6 BH, Sh WY
San, Sev UT
WshkWY
7 { 172 C. "humulus" AdmsCO
3 Elb CO > EP CO

P. sonorensis zip

E. battoides CPX Imp CA
12
Bac CO
Ben CO
LA CO
Min CO
Ote CO
Pro CO

66 + ~~||||~~ ||| -1

172 E. battoides CPX Cat NM
Col NM
Uni NM
MalNOR
-Yam OR
WschUT

E. bernardino Imp CA
Esm NV Min NV
WP NM

173 E. enoptes(spr) But CA
10 + ||
Our CO > DL MT
JB MT
SB MT
Ban NE > Yel MT
Clk NV
NyS NV
Gil OR > Lan OR
Uni OR

E. enoptes(fall) Imp CA

E. mojave **BCN MX

E. rita CPX Las CA
12 + |
Bac CO
Ben CO
Crw CO
Hue CO
LA CO
Mof CO
Ote CO
Pue CO
Qu NM > Hum NV
Uni NM
Gos WY

174 E. spaldingi ApaSAZ
Cat NM > Mil UT

P. speciosa SBb CA
*Kla OR >

G. piasus AdmsCO
9 + |
Mrn CA
Cos CO
Lin CO
Our CO
RB CO
Min MT
-RA NM
BH WY
HS WY
Nat WY

G. lygdamus Nav S AZ > Imp CA
25 + ~~||||~~ |
Crw CO
Lin CO
Min CO
RB CO
Owy ID > Can ID
WashID
Grf MT > Ctr MT
PR MT
Pra MT
Chyn NE > Chs NE
Har NM
Ote NM
AdmsND < Ben ND
GV ND
Wdw OK > Cur OR << Sar, Stu ND
Cam SD

-67 + ~~||||~~ ||||

174 G. lygdamus Dew SD
Edm SD > Per SD
WW WA
HS WY
WshkWY

175 P. emigdionis zip

L. idas SC AB > WashID
4
SL UT
Uta UT

176 L. melissa Tri CA
12 + |||
Plac CA
Hin CO
WashID
Hoo NE
WashNE
Cur NM
Lea NM
Ben ND > AdmsND
Div ND
GV ND
HR OR > Cur OR
Ala CO < Bre TX

P. saepiolus Ala CO
13 + |
Wel CO
Ban ID
Dsn MT
GV MT
PR MT
Pra MT
Ros MT
Tre MT
Div ND
McK ND > Cbn UT
Uta UT
Jef WA

P. icarioides WashCO
12
Can ID
WashID
GV MT
Mus MT
Pra MT
Ros MT
Tre MT
LA NM
Pol OR
Ben WA
Pla WY

P. shasta ?*CcnNAZ
9 + ||||
Dol CO
LP CO > Jef CO
Log CO
Rou CO > Jef MT
ChynNE
Ccur Cbn, Duc UT >>> Crk WY
Wes WY

177 P. acmon CPX Hue CO
28 + ||||
Phi CO
RB CO
WashID < Fol S
*NL MX > Cus MT < Ctr MT
Dsn MT
Fal MT
JB MT
Pon MT

62 + ~~||||~~ || ~~||||~~

177 P. acmon CPX Ric MT
(28)+||||
Ros. MT
SB MT
Tre MT
Wib MT
Yel MT
Chs NE
ChynNE
Fur NE
Log NE
Per NE
Hrp OK
Per SD
San UT > EP TX
Pot TX
Cbn UT
HS WY
Swe WY
Wes WY
P. lupini CPX Hum CA
(major revision *Boi ID
of this group is WP NV
in the works). *Yak WA
P. neurona zip
P. glandon CPX But CA
Den CO > Elb CO
Jef MT
Uta UT
HS WY
178 C. borealis zip
C. virginiensis ~~zip~~ Tyl TX
C. nemesis MX Lun NM > Sie NM
*CHIH
JH TX
C. perditalis Bks TX
JH TX
179 C. wrighti zip
C. rawsoni Pec TX
C. arizonensis *CHH MX
181 C. ino JW TX
182 L. maria *SIN MX Zap TX
184 E. zela *SIN MX Cat NM < Nav S AZ
E. ares *SIN MX ~~zip~~
E. emesia zip
186 A. mormo CPX Mrn CA
12+|||
Sha CA
Ben CO
186 E. poeas *SIN MX Bou CO < Con CO
E. conspicua *TAM MX Ote CO
M. cephise *COA MX Boi ID
183 S. rubina *SIN MX Cus ID
One ID
182 M. pixe Starr TX Owy ID
SM NM < Un NM
Val NM > Uma OR
186 A. durfyi ☐ Web UT
187 A. multiplaga *SON MX
A. hepburni *SIN MX ~~zip~~
A. palmeri Ker CA
SBd W CA > Ber NM
188 A. walkeri zip
A. phyciodoides zip
A. nais Prk CO
*CHIH MX < DA NM 5
Ed NM < Ot NM
Hud TX

188 A. nais RG CO
Tel CO
189 A. hypoglauca *SIN MX
Col NM
190 L. carinenta CPX NavSAZ
40+||-|
Yum AZ
SBdWCA
AdmsCO
Ben CO
190 A. eudocia *SIN MX
Crw CO
Elb CO
Hue CO
KC CO
Log CO
Phi CO
WashCO
ChynKS
Chs NE
Deu NE
Hal NE
How NE
WashNE
DB NM
Har NM
~~RA NM~~
SM NM
Tao NM
Ato OK
Cad OK
Hrm OK
Hrp OK
Jef OK
Lat OK
McL OK
Aus TX
Chk TX
Fan TX
Hou TX
Lamar TX > Hud TX < King TX
Rus TX
Smi TX
Ups TX
Gos WY
Pla WY
H. charitonius Lar CO
*DGO MX > Pue CO < EP TX < VV TX
191 E. isabella zip
D. julia *DGO MX > LO TX
192 D. phaetusa Lav TX
D. moneta *CHH MX
*COA MX > Kdy TX
Nue TX
RealTX
D. juno *DGO MX > *TAM MX
D. vanillae Grn AZ
16+||||
Pin AZ
Mer CA > Elb CO
McP KS
*NL MX < Cur NM
Quay NM > Sie NM
Uni NM
Grv OK
Log OK

192 D. vanillae Coke TX > Osa OK
Cul TX
EP TX > Fay TX
Gri TX
JW TX
Wcy TX
193 E. claudia LP AZ
30+卌卌||
NavNAZ
Ven CA
Ala CO
RG CO
Brd MT
Cho MT
Pow MT
SB MT
Fil NE > Paw NE
Sew NE
Pie ND
Ram ND
Hrp OK Hug OK
Log, Lov OK > Osa OK < Andw TX
Burnet TX > Chk TX
Cott, Cook TX > Coc TX
Lamp TX > Fan TX
GrayTX New TX
Hnf TX Ups TX
Martn TX, Mills TX > Och TX VZ TX
SS TX Bea UT
Dav UT
Iron UT > WschUT
Uin WY
Moo SD
E. hegesia *Bla ID
9+|
*CHH MX
*COA MX > *DGO MX
Bks TX
Duv TX
JW TX
Kdy TX
Kle TX
Tar TX
S. cybele Dol CO
19+卌|
DougCO
Hal NE
Brk, Shdn ND > Sal NE
Sarg ND > LeF OK
Osa OK
Ben SD
CM SD
Edm SD
Sul SD
S. c. leto (grp) Cal CA
(incl.) Col CA > DN CA
Lak CA > Ban ID
NP ID
TF ID
Coo OR < Pac WA
HR OR > HS WY
Nat WY
S. aphrodite Dol CO
15+|
Hin CO
Ote CO

55+卌卌卌卌+ 66+卌||| 67+卌卌+

193 S. aphrodite (15)+1
RB CO
SM CO
Sarg ND > Brk ND
Stu ND
But SD
Edm SD
Grt SD
Yan SD
Gos WY
HS WY
Nat WY
Wes WY

194 S. idalia 13 + ~~||||~~
Elb CO < Linc CO
Fil NE > Chs NE
Oto NE < RW NE
Ben ND > Oli ND
Stu ND > But SD
Dew SD
Edm SD
Hak SD
Hnd SD
JksnSD
Mel SD
Crk WY
Lar WY

S. diana
LeF OK

S. nokomis
-Grf CO
Mtz CO

S. edwardsii 9
Ben CO
Kio CO
Pro CO
Yum CO
Brn NE
ChynNE
Kim NE
Tao NM
War ND

195 S. coronis 17 + ||
Col CA
Stan CA > SF CA
AdmsCO
Jksn CO > Wel CO
WashID
Fal MT > Ctr MT
JB MT
HR OR > Uma OR
But SD
Way, UT Sno WA >> Sum UT
Cam WY
Swe WY

S. zerene 7
VI BC
-Hue CO
Pow ID
WashID
PR MT
-all NM!
Coo OR
MalNOR
Joh WY

S. hydaspe 8+1
Yub CA
RB CO
Ban ID
Pow ID

64 + ~~||||~~ |||| − 1

195 S. hydaspe
Mad MT
SB MT
-Col NM
(need TL chg)
-Sdv NM
-SM NM
-SF NM
Pac WA > BE UT
WshkWY

S. callippe 9 + ~~||||~~ |
Den CO >> Pow ID
Sag CO
BH MT
Ctr MT
Fal MT
Brl ND
ShdnND <<< Cbn, Duc, Em UT
Stu ND > DougWA
Lew WA
Swe WY

196 S. egleis 7+1
Gle CA
Lar CO > Grd CO
Ban ID
Mad ID
Pow ID
Jef MT
HS WY

S. adiaste
SBb CA

S. atlantis CPX 7
Iny CA
Ala CO
Den CO
Wel CO
Ban ID
PR MT
SB MT

S. hesperis etc. 47 + |||
Iny CA
Ala CO
Arc CO
Cost CO > CC CO
~~Cost~~
Del CO
Den CO
Dol CO
Gil CO
Grf CO
Hin CO
LP CO
Mes CO
Min CO
Mof CO
Mtr CO
Mtz CO
Our CO
RB CO
Rou CO
SJ CO
SM CO
Wel CO
*Ban ID
BL ID
Bla ID
Boi ID
Cus ID
Fra ID
Lem ID
Val ID

TRUE atlantis
:

58 + ~~||||~~ ~~||||~~

196 S. hesperis etc.
*Bea MT
Col NM
Tao NM
*Duc UT
Em UT > Jua UT
SL UT
Sev UT
Sum UT
Too UT
Uin UT
Uta UT
Way UT > WschUT
Web UT
Lin WY
Sub WY
Tet WY
WshkWY

197 S. mormonia 7
Cal CA
Ala CO
Den CO
Ban ID
SC Sas > Ben ID
-Har SD
Ste WA

B. napaea ~~Ysw~~ WC AB ~~zip~~

B. eunomia
Grd CO

B. selene 7 + ~~||||~~
LP CO > Pit CO
Boi ID
PR MT < KP NE
Brk, ND > Pie ND < Sa
Shdn ND > Mar SD
Dav UT
Mor UT

198 B. bellona
Tet MT > Lib MT < Brk N.
Uni SD

B. frigga Bea MT ~~zip~~

B. freija
Mad MT

199 B. improba CPX *WC AB > SJ CO

B. kriemhild
zip

B. epithore Col CA ~~zip~~

200 B. astarte
*Che WA
Oka WA
Wha WA

B. titania CPX 5
Ala CO
Jef CO > Mea MT
Back on ~~delete~~ ~~Skm WA~~ wrong Co.
WshkWY

P. minuta CPX 6
Iny CA
Den CO
Sum CO > Rou CO
Wel CO
*NL MX

P. minuta
*NL MX

201 P. arachne
Iny CA
Sum CO > Rou CO
Wel CO

T. theona 7+1
Mo S AZ
EP TX > Duv TX
JH TX > Hud TX
Kim TX
Zav TX > Pec TX

T. chinatiensis
Ter TX

62 + ~~||||~~ ~~||||~~ ~~||||~~ +

202 T. leanira Alp CA
10+1 Cal CA
Imp CA
Lak CA
Nap CA
Nev CA
Sbt CA
*Owy ID > Lak OR
Grf UT > Eme UT
T. fulvia Grn AZ
15 + |||| Ara CO
Ben CO
Elb CO
KC CO
Lin CO
Sed CO
Fin, Gray KS > WashCO
Jew KS < Shmn, Walc KS
*SON MX > Cha NE
Ber NM
Lin NM
Val NM
Ect TX
War TX
C. lacinia Gil AZ
WP NV
Dls TX
WashTX
203 C. californica Gil AZ
Yum AZ
*SON MX
C. definita -Roo NM
Lin NM -Tar TX
Ter TX
C. janais Kle TX
C. endeis zip
204 C. hippodrome *SIN MX
205 C. gorgone Cos CO
26 + ||| Boi ID
GV MT
204 C. rosita *SIN MX Pet MT
C. marina zip Art NE
LA NM
Tao NM
AdmsND
GV ND
Stu ND > Bec OK
Grf OK
Kio OK
Maj OK
Dew SD
Per SD
BordTX
Cml TX > ColwTX
Fan TX
Lamar TX > Fre TX
Leo TX
210 P. ardys *SIN MX VZ TX
Joh WY
Nat WY
Prk WY
WshkWY

61 + |||| ||||

205 C. gorgone Wes WY
C. nycteis LA CO > Dol CO
19 + |||| || RB CO
Chyn NE > SM CO < Sum CO
Dak NE
Fil NE
Grl NE
ShdnNE
Thu NE
WashNE
Cav ND > Tra ND
Lat OK
Lin OK
Osa OK
Chk TX
ColoTX
Hays TX > Fay TX
Pol TX
Rusk TX > Rea TX < SS TX
Ups TX
206 C. harrisii zip
C. palla PrK CO > RB CO
5+1 Ada ID
DL MT
Mgn UT > SB MT
C. acastus Nays AZ ? Grd CO
16 Owy ID
Ctr MT
JB MT
PR MT
Ros MT
Tre MT
DA, Ed, Hid, Ot NM > Har SD
JksnSD
Grf WA
BH WY
C. neumoegeni zip
C. gabbii Fre, Imp CA ~~zip~~
207 C. whitneyi Fre CA
(=damoetas) Mtz CO
C. hoffmannii Mod CA < Mad CA
3 HR OR
M. elva *CHH MX
D. dymas Grn AZ
6 Coke, EP TX > KinyTX
Sterl TX > Tay TX
208 T. elada Cul TX, Ster TX > Trl TX
P. texana LP AZ
7+1 Ara CO
Pay OK
Duv TX
208 P. ptolyca *SIN MX Fan TX
Fay TX
Sterl TX > Lav TX
P. tulcis Uva TX
209 P. argentea *TAM MX
P. drusilla *SIN MX *Hid TX
210 P. vesta CC CO < Burnet TX
8 Log CO > CaldTX < Lamp TX
JH TX > Nav TX < SS TX
P. phaon Pro CO
8 + |||| Dsn NE

59 + |||| |||| |||| 1 +

210 P. phaon DB NM
Uni NM
Ato OK
Burn, EP TX > Hug OK
Fan TX
Lamp TX > MtguTX < SS TX
P. tharos CPX Val ID, Fil NE > Pra MT
32 + |||| ||| Per NE
ala, Jksn CO, Sew NE
Yor NE
Cur NM
AdmsND
GV ND
Oli ND
Sar ND
Alf OK
Nob OK > Aur SD
Cam SD
Cor SD
Edm SD
Hns SD
Burn TX > Ang TX
Coc TX
Cock TX > ColoTX
Cor TX
EP TX > Dew TX
Fal TX
Leon TX Fre TX
Hnf TX LampTX
LLa TX > Lip TX Lav TX
Och TX Rus TX
Kli WA > Ups TX
211 P. tharos Ben CO
46 + |||| |||| ||| ChynCO < Crw CO
CC CO > Fre CO
Hue CO
KC CO
Mes CO
Mtr CO
Ote CO
Phi CO
Pro CO
Cbn MT
Fil NE > Per NE
Sew NE
Yor NE
Col NM
Cur NM
Lin NM
SM NM
-Tor NM
AdmsND
Cass ND > GV ND
Oli ND
Tra ND
Alf OK
Nob OK > Aur SD
Cam SD
Cor SD
Edm SD
Hns SD
McC SD

67 + |||| + ||||

211 P. tharos — Mnh SD
(46 + ~~||||~~ ~~||||~~ 11) Burn TX > Ang TX
Coc TX
Cook TX > Colo TX
Cor TX
DeW TX
EP TX > Fal TX
Fre TX
Hnf TX
Lamp TX
Lav TX
Leon TX > Lip TX
Lla TX > Och TX
Rus TX
Ups TX
Em, Way UT, SJ UT >>> Alb WY
Gos WY

P. cocyta=selenis — Ala CO
23 + |||
Arc CO
Del CO > Con CO
Elb CO < LA CO
Jksn CO > Mtr CO
Our CO
RB CO
RG CO
Val ID
Tor NM
Oli ND
Sar ND
Shdn ND
Stu ND
Deu SD
Grt SD
Mea SD > Mnh SD
Kli WA
Nat WY
Pla WY
Swe WY
Wshk WY

P. batesii=Type C — Ccn S AZ
12 + ~~||||~~ ||||, Delta CO >> Grf CO
SW AB — Ros MT < Grd CO, Ea CO, Mr CO
-Lin NE
SC Sas > Mil UT
Sev, San, Duc, Way, Em, Cbn UT >>>>>> *BH WY
Cbn WY
Sher WY > -Gos WY
Wes WY

212 P. campestris =pulchella — Ben CO
15 − |
KC CO
Ote CO
Can ID
Gem ID
Pay ID
Wash ID
Kim NE
-Shdn NE
Sto NV
Har NM
SJ WA > Skm WA
Gos WY
Pla WY

66 + ~~||||~~ ~~||||~~ | +

212 P. campestris — ~~Wes WY~~ error

P. orseis — Mad CA > Cal CA
4
Mod CA
Teh CA

P. pictus — Dol CO
9 + ||||
Doug CO
Hue CO
Jef CO
Log CO
SM CO

NEW P. pallescens *SIN MX
Cur, SF NM >> -Dsn NE < Comanche KS
Ect TX < Coke TX
War TX < Sterl. TX

P. pallidus — Elb CO
9
Rou CO
SM CO
Sum CO
BH MT
-Che WA
Lin WA > -Grf WA
HS WY
Pla WY
Wshk WY

213 P. mylitta — Bac CO
13 + ||
Cus CO
LA CO
Ote CO
Ban ID
Bnv ID
Gem ID
Wash ID
*COA MX > DL MT
*Buf NE!
Col NM
Uni NM < Way UT

214 P. griseobalis *COA MX *SIN MX — Tet WY

214 E. phaeton — Lvn KS < Collin TX

E. gillettii — SB MT

215 E. chalc/colon CPX — Imp CA
7
Cam ID
Wash ID
NyS NV
Cac UT
*Wash UT
Thu WA

E. chalcedona — Imp CA
NyS NV
*Wash UT

E. colon — Cam ID
Wash ID
Cac UT
Clk WA
Thu WA

E. anicia — Gil AZ
21
Mar AZ
Ara CO
CC CO
Gil CO
SM CO
Wel CO
Ban ID
Bnv ID

61 + ~~||||~~ ~~||||~~ |

215 E. anicia — Can ID
Ctr MT
Fal MT
Grt MT
Mus MT
PR MT
Tre MT
Yel MT
Mor NM > NyS NV < Ben WA
-Spo WA
HS WY

216 E. editha — Nev CA
6 + ||
Lar CO > Ban ID
Dav UT
Uta UT
Isl WA > Cow WA
-PO WA
Thu WA
-Lar WY

P. interrogationis
21 + ~~||||~~ Doug CO > Wash CO < EC AB
Hrl NE
Per NE
Pie NE
Ta NM > Bea OK
Dew OK
Ell OK
Jef OK
Osa OK
Edm SD
Fau SD
Hyd SD
Chk TX
Cul TX
Fan TX
Hay TX
Hnf TX
Lamar TX > Kdy TX
Lip TX
Red Rvr TX > Rus TX
Ups TX

P. comma — Adms CO
12 + ||||
Den CO > Wash CO
Chyn NE
Hal NE
Roc NE
Tha NE
Thu NE
McK ND > Pie ND
Ram ND
Sarg ND > Del OK
Cus SD
Rusk TX > *Alb WY

P. satyrus — Cal CA
17 + |
DN CA
Sie CA > Ala CO
Lin CO
RG CO
Bnv ID
Gem ID
Gdg ID
Pay ID

60 + ~~||||~~ ~~||||~~

216 P. satyrus
(17)
WashID
Ban NE
Esm NV
Jef OR
Til OR
Cus SD
Gos WY
Uin WY

217 P. faunus
13 ÷ 0
Mllo CA > Yub CA
Hin CO
-Sio NE
> Coo OR
Sev UT
Wayne UT > DougWA
Jef WA
Wah WA
Whi WA
Crk WY
Joh WY
Wes WY

[P. f. silvius Nap CA]

P. gracilis
14 + 1
Ala CO
RG CO
Sed CO! > Ban ID
Clk ID
Elm ID
Owy ID
WashID
*Ell KS
-Ros MT
DA NM > MalNOR
But SD
Cam WY
Pla WY
Wes WY

P. progne
10 + lll
Cust MT, PR MT, Too MT > Grl NE
How NE
Mad NE
Thu NE
Ben ND > Oli ND
Ram ND
Mar SD
Cam WY
Joh WY

incl.
P. progne/oreas PR MT

218 P. oreas
12 + ~~||||~~
Col CA
Hum CA
Las CA
Sol CA
Chf CO > Tri CA < Fre CO
Gun CO > Grd CO
LP CO < Prk CO
Jos OR > Mar OR
Uni OR
Nat WY < FO WA
WshkWY

P. haroldi zip

N. antiopa
39 + lll
LP AZ
Yum AZ
Lew ID
Pay ID
WashID
Pra MT > BarbKS

64 + ~~||||~~ ||||

218 N. antiopa
Wib MT
Bla NE
Boo NE
Brt NE
But NE
Hal NE
Hay NE
How NE
Jef NE > Joh NE
Log NE
Nan NE
Sew NE
Thu NE
Way NE
Yor NE
Ben ND > GV ND
Oli ND
Sar ND
Jos OR
Aur SD
Bea SD
Cod SD
Dew SD
DougSD
Edm SD
Grt SD
Grg SD
Hns SD
Spi SD
Sta SD
Chk TX
Nacogd. TX > Fan TX

N. vau-album
*SM CA
Ban ID
Wal OR
Mar SD
Uta UT
Crk WY

219 N. californica
12 + |
SE AB
Imp CA
Ada ID
Pay ID
WashID
DL MT
Col, Mor NM > *Dod NE!
Ram ND
SJ WA > Pol OR
Sub WY

N. milberti
25 + ~~||||~~ lll
Nav SAZ? > Cal CA
DN CA
Sol CA
Ven CA
Lin CO
LP CO
Min CO
Mtz CO
Ote CO
WashCO
Ada ID
Gem ID
Owy ID
Pay ID
WashID

65 + ||||

219 N. milberti
Gov KS < Chyn NE
~~Ben, Brk ND~~ > Brl ND
Ben, Brk ND > Ram ND
Jos OR > Pol OR
Mor ND
But SD
MCH ND
Edm SD
Stu ND
FR SD
JksnSD
Thu WA > Wes WY

V. atalanta
28 + ~~||||~~ |
Alp CA
Cal CA
Col CA
Imp CA
RB CO
Clr ID
Gem ID
Lew ID
Pay ID
WashID
*DGO MX
*SIN MX
Cus MT
Grl NE
~~Ben Brk ND~~
Brk, Shdn ND >> GV ND
~~Mor, MCH ND~~ >> Sar ND
Stu ND > Grt OK
Hrm OK
Hrp OK
JksnOK
Lin OK
McI OK
SC Sas > Aur SD
Lin SD
Ups TX
Zav TX > Zap TX
SKm, Ste WA >> Lew WA

V. virginiensis
42 + ~~||||~~ |
Yum AZ
Imp CA
Arc CO
Lak CO
Ote CO
Our CO > Pit CO
RG CO
Rou CO
Val ID
*SIN MX
Art NE
Cus NE
Dak NE
Grf NE
Hal NE
Lou NE
Per NE
Sew NE
Sta NE
WashNE
Val NM
Ran ND > Ato OK
Cad OK
Can OK
Grf OK
Log OK > Coo OR

71 + ~~||||~~ +

219 V. virginiensis Des OR
(42) Uma OR
+ ~~||||~~ Mer, Rob SD >> Tod SD
Bor TX
Chk TX
Cook TX > Fan TX
Hou TX
Rus TX
WalkTX
Jua UT
Too UT
-GH WA
Ktt WA
PO WA
Crk WY
Lar WY
Wes WY

220 V. cardui NavNAZ
31 + ||| Ben ID
Gem ID
Gdg ID
WashID
Fil NE
Grl NE
Joh NE
Way NE
AdmsND
GV ND
Shdn ND > Sar ND
Grt OK
Hrp OK
Lin OK
Coo OR
Shrm OR > Bru SD
DougSD
Ham SD
Hut SD
Lin SD
McC SD
Coc TX
Donley TX > GrayTX
Hnf TX
Hays TX > Lip TX
Och TX
Rus TX
ShrmTX
Ups TX

V. annabella NavSAZ
36 + 1 Ben CO
CC CO
Dol CO
Grf CO
Gil CO
Phi, Wash CO >> Hin CO
Bla ID
Gem ID
WashID
DL MT > BarbKS
ChryNE
Chv NM
DB NM
Gua NM

65 + ~~||||~~ |

220 V. annabella Brl ND
*Cim OK
Jef OR
JksnSD
Law SD
Hnf TX
Och TX
ShrmTX
Lin WA > Pie WA
SKm WA > Cam WY < BH WY
Gos WY
Joh WY
Nio WY
Pla WY
Swe WY
Wes WY

J. coenia Yum AZ
38 + ~~||||~~ || SBdECA
Gil CO
LP CO
Mtz CO < Mtr CO
Wel CO
Owy ID
*COA MX > Ham KS
*SIN MX
Ban NE
Oto NE
Col NM
DB NM
Gua NM
Har NM
SM NM
Val NM
Stu ND > Cad OK
Ell OK
Grf OK
Grv OK
Hrm OK
Hrp OK
Kio OK
Log OK > Maj OK
Sem OK
Wds OK
Stan SD > Jef OR
Cook TX > Coc TX
Cul TX
EP TX > Fan TX
Fre TX
Hnf TX
JackTX
Lav TX
SS TX > Och TX
ShrmTX

J. nigrosuffusa Ccn AZ
16 Gil AZ
Grn AZ
NavSAZ
Yum AZ
Mtz CO
Cib NM > Edd NM
Lin, ~~Bue~~ NM >> Gua NM
Cote
SM NM
SF NM
Taos NM >

70 + ~~||||~~ |||

J. evarete *COA MX
*SON MX
TX: Terrell

220 J. nigrosuffusa Val NM
221 Culb TX > Duv TX
221 A. jatrophae ⟹ ~~zip~~ Live Oak TX Nueces
A. fatima *SON MX
Sta TX

222 S. stelenes *NL MX
*DGO MX
Bks TX
LO TX
Nue TX
S. epaphus *SIN MX *NL MX
B. arthemis CPX LP AZ
20 + ~~||||~~ mis MT > Cas MT
Cus NE > Hal NE
Nan NE
Sew NE
Cav, Pierce, Sarg >>> Sie NM
Can OK
Coa OK
*SIN MX > Cod SD
Edm SD
Chm TX
Chk TX
Fan TX
Pan TX
Rus TX
She TX
Tyl TX
Ups TX
Cav, Pierce, Sarg ND
WalkTX

B. arthemis Cas MT
223 B. astyanax LP AZ
*mis MT > Hal NE
20 + || Cus NE > Nan NE
Sew NE
Sie NM
Brl ND
Can OK
Coa OK
*SIN MX > Cod SD
Edm SD
Chm TX
Chk TX
Fan TX
Pan TX
Rus TX
She TX
Tyl TX
Ups TX
WalkTX

B. archippus Ala CO
54 + ~~||||~~ ||| Bac CO
ChynCO
Hue CO
LA CO
Phi CO
Bin ID
Elm ID
Grl KS
*BCN MX
Cas MT
Art NE
Deu NE

64 + ~~||||~~ ~~||||~~ |||

223 B. archippus Hal NE
(54) + 卌 |||
Hit NE
Per NE
Yor NE
Cur NM > Col NM
SM NM
Tao NM
Cav ND > Uni NM
Oli ND
Sar ND
Alf OK
Ato OK
Grt OK
JksnOK
Mur, Ncb OK > Log OK
Wds OK
MalNOR
Aur SD
Dew SD > Cus SD
Mel SD
Spi SD
Tri SD
Bks TX
Chm TX
Cot TX
Fan TX
Hut TX
McL TX
Moo TX
Sterl TX > Nav TX
Ups TX
Uva TX
Wha TX
Dav UT < Juab UT
San UT > Too UT
WschUT
Kli, Lin WA >> Grf WA
HS WY
Nat WY
B. weidemeyerii AdmsCO
9 + ||
Ara CO
Mgn CO > Lin CO
Ote CO
JB MT
PR MT
*EP TX → Ros MT
BH WY
HS WY
B. lorquini *BCS MX
224 A. bredowii Alp CA
8 + |||
LA CO > LA NM
Lak OR
Lamp TX > Cul TX
SS TX > Pot TX
Sch TX
Tar TX
Pie WA!
224 A. phylaca *SIN MX
A. fessonia *SON MX < *DGO MX
Sta TX
225 A. celerio *~~DGO~~ MX
226 E. adrasta *SIN Sta TX
227 M. cyananthe *Ote NM
E. monima *NL MX
226 P. edocla *SIN MX
P. nearia *SIN MX
66 + 卌 卌 +

? placement
anicore patelina
*NL MX

229 D. asteria *SIN MX
228 E. tatila zip
D. agaea Uva TX
230 M. amymone *CHH MX
Chv NM
Bla TX
Wis TX
B. hyperia *CHH MX
Duv TX
Uva TX
231 H. feronia *COA MX *NL MX
H. februa LS TX
Nuec TX > Sta TX
H. guatemalena Sta TX
233 H. acheronta *SIN MX
S. blomfildia *DGO MX DeW TX
234 M. chiron *NL MX
M. petreus *NL MX
Duv TX
235 A. andria Grm AZ
23 + ||
Elb CO
Hue CO
karwinskii ** Camn TX
Hal NE
Tho NE
Col, SM NM > Ell OK
Log OK
Ang TX
Fan TX
Fre TX
How TX
Iri TX
JksnTX
Lip TX
Men TX
Mit TX
Nav TX
ReagTX
New A. [Memphis] perenna *TAM MX
Rus TX
Sch TX
Tay TX
Ups TX
Upt TX
A. aidea EP TX ~~zip~~
A. glycerium zip
236 A. pithyusa CamnTX
237 A. eurypyle *SIN MX
238 A. celtis Mo N AZ
28 + 卌 卌
Ben CO
Gil CO
KC CO
Lin CO
Fil NE > Chs NE
Grl NE
Hal NE
Nan NE
Yor NE
Lea NM > Col NM
Mor NM
Ran ND > Ram ND
Ctr OK > Hug OK
Okm OK
Lym SD > Edm SD
McC SD
60 + 卌 卌 卌 +

238 A. celtis Ang TX
Arch, Burn TX > Chk TX
Cook TX > Don TX
Lamp TX > Fan TX
Pol TX
SS TX > Rus TX
Smi TX
Ups TX
WalkTX
WashTX
IronUT
A. leilia zip
A. clyton Dak NE
9 + ||||
Hrl, Nem NE >> Hrp OK
Lin SD
Cook TX > Chk TX
239 P. (A.) demophon SIN MX
Cul TX
JH TX > Fan TX
240 M. pelevides *HID. TX
Pan TX
Rus TX
238 A. idyja zip
WashTX
239 D. pavon Camn TX, Sta TX
D. laure Sta TX
241 E. portlandia zip
E. anthedon Ric NE < EC AB
7 + |
Ben, McH ND >> Okm OK
Cav, Sarg ND >> CM SD
E. creola HdinTX
S. eurydice Phi CO
21 + |
Yum CO
Bla NE
Kno NE
Per NE
ShrmNE
Oli ND
Sar ND
Aur SD
Bea SD
CM SD
Cod SD > Clk SD
Dav SD
DougSD
Grt SD
Grg SD
Hns SD
243 V. themis *SIN MX
NEW V. undina *SIN MX
Spi SD
*Gos WY
Lar WY
Pla WY
245 M. maculata *SON MX
C. henshawi *SON MX
C. pyracmon zip
246 C. pertepida Pin AZ
Min CO < Jua UT
NEW C. diazi *SIN MX
247 C. gemma Sta TX
Tar TX
Ups TX
H. sosybius Can OK
8
Car OK
Grv OK
Lat OK
Mur OK
65 + 卌 卌 +

247 H. sosybius Pit OK
(8) Chk TX
Ups TX
N. areolata Ang TX
248 M. cymela CPX KC CO
21 + 卌 Phi CO
Chs NE
Grl NE > Hal NE
Per NE
Sew NE
Web NE
Oli ND
Cad OK
Now OK
Sem OK
Tex OK
Edm SD
Grt SD
Anders. TX > Pen SD
Fan TX
Fay TX
HdinTX
Hays, Lamar, Red R. TX >> Rus TX
Ups TX
*Lar WY
M. rubricata Lun NM
7 + 1 Soc NM
Uni NM
Bec OK
Bla OK
Maj OK
Sterl TX > Tex OK
249 P. xicaque CPX ~~zip~~ *CCA MX
C. haydenii SB MT
Tet MT
C. tullia CPX Na S AZ
16 + 卌 1 Jen CO > One ID
Ctr MT
Lib MT
Roc NE
Cat NM
LA NM
AdmsND
Div ND
Pie ND
Rol, Sar, Shdn ND >> Stu ND
Brown SD > Tra ND
Edm SD > Dew SD
Grt SD
HS WY
Pla WY
C. inornata BH MT
13 + 卌 Ctr MT
Lib MT
Roc NE
AdmsND
Div ND
Pie ND
Rol, Sar, Shdn ND >> Stu ND
Brown SD > Tra ND
Edm SD > Dew SD
Grt SD

61 + 卌 卌 卌 +

249 C. inornata FR SD
Prk WY
250 C. ochracea Na S AZ
20 + 1 CC CO
Jen CO > Gil CO
Bla ID
Cus ID
One ID
Gla MT
Lib MT
Tet MT
Clk NV
Cat NM
LA NM
BE UT
Iro UT
Jua UT
Mil UT
Too UT
Crk WY
HS WY
Pla WY
C. ampelos Fra ID
Gem ID
Mad ID
One ID
WashID
C. california zip
C. pegala VI BC
38 + 卌 1 Cal CA?
RB CO
Gem ID
WashID
*NL MX
Fil NE
WashNE
Gua NM
LA NM
Cav, Pemb ND > Alf OK
Dew OK
Grt OK
Hug OK
JksnOK
Log OK
McI OK
HR OR > Bea SD
BH SD
Sul SD
Arch TX > Ang TX
Arm TX
Chk TX
CrosTX
Don TX
Real TX > Fan TX < SS TX
Smi TX
Sterl TX > Sut TX
Ups TX
Grf UT
Jua UT
Ric UT
Jef WA
Fre WY

62 + 卌 1

250 C. pegala Nat WY
Swe WY
Uin WY
251 C. oetus Gem ID
6 WashID
Fal MT
Mar OR
Ben WA
Nio WY
C. sthenele Sol CA > Dol CO
15 + 111 Grd CO < Rou CO
Ada ID > Gla MT < Gal MT
Lin MT >> Mgn UT
Roo MT Web UT
Columb WA > Cbn WY
Fre WY
HS WY
Nat WY
Prk WY
Uin WY
C. silvestris [spelling]
C. meadii *Riv CA! < Chf (
9 Elb CO > ~~Grf CO?~~
BH MT
~~Roo MT~~ > SF NM
Bow ND
Cac UT?
Nat WY
Nio WY
E. vidleri zip
252 E. disa zip
E. magdalena *WC AB > Dol CO
Rou CO
E. discoidalis zip
253 E. theano Grd CO
E. epipsodea Ala CO
Mof CO
RB CO
BH MT
HS WY
Swe WY
E. callias zip
G. patrobas *SIN MX ~~zip~~
254 N. ridingsii Las CA
13 + 1 KC CO
Ote CO
Sum CO
Cus ID
Owy ID
Ctr MT
Fal MT
Ban NE > Tet MT
ChynNE
Gua NM
San UT
Gos WY
O. chryxus CC CO
11 + 1 Gil CO
Mof CO
Bnv ID
Tet ID
BH MT

62 + 卌 111

254 O. chryxus — Jef MT
(11)+1 BE UT > -Ote NM
SJ UT
Lar WY
Swe WY
WshkWY
O. ivallda — zip
O. nevadensis — Sie CA
Cur OR
-Fer WA
255 O. macounii SC AB > SC MAN
O. uhleri — Elb CO
16 BH MT
Ctr MT
PR MT
Ros MT
Tre MT
AdmsND
Bar ND
Div ND
Ric ND
Edm SD
Per SD
Zie SD
Cbn WY
ShdnWY
WshkWY
O. alberta — Na S AZ
5 Cas MT
Tet MT > L&C MT
-Mor NM
McH ND
O. jutta Lar CO, Rou CO, SC AB > WshkWY < Nad MT
4+1
33+|||

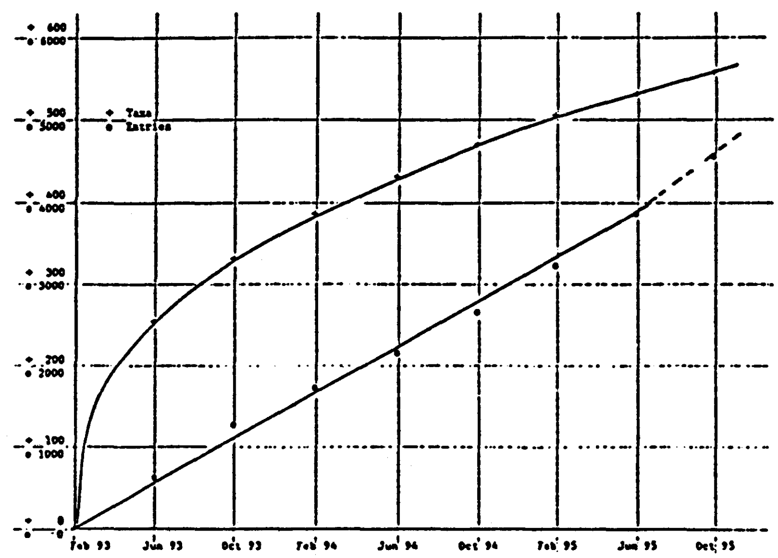
3 *WC AB *SE BC
256 O. taygete Sag CO > -RG CO
O. melissa VI BC > Ala CO
5 Dol CO
Rou CO
YNP WY
O. polixenes * SE BC > Hin CO?
Pit CO
257 D. plexippus — Mo S AZ
36+1 AdmsID
Ban ID
Gem ID
Pay ID
Fla MT
Sta NE
Way NE
Pie ND
Bea OK
Bla OK
Dew OK
Ell OK
Grl OK
Hrp OK
Jef OK
Lin OK
Maj OK
WashOR
But SD
Edm SD
Mel SD
Cook TX > Dlm TX
EP TX
Hnf TX
Hrt TX
36+||

257 D. plexippus >Hud TX Och TX
Pot TX
ShrmTX
Wis TX
Sno, Thu WA >> Joh WY
Nio WY
D. gilippus — Ala CO
20 + ||||| | Crw CO
Elb CO
Gil CO
Lin CO
Mtz CO
Ote CO
Prk CO
ChynKS
Chs NE
Per NE
Uni NM
Alf OK
Andrws TX > Osa OK
Burnet TX > Bks TX
Coc TX
Fan TX How TX
Lamp TX > Pot TX
Martin TX > Eme UT
Sterl TX
Web UT
D. eresimus — Wcy TX
L. cleobaea — zip
258 D. klugii — zip
P. cotytto [spelling]
261 M. amystis [spelling]
264 P. cotytto [spelling]
273 C. silvestris [spelling]
30 + ||||| |

TOTALS of above data: Entries ~~4590~~ 4929, which include ~~4366~~ 4705 net additions (mostly CRs).
Taxa ? ~~559,~~ which include ~~518~~ 565 species with net additions.

GRAND TOTALS: Entries 68,151+ total CR dots, an increase of 6.85% in 3 years. + later
Taxa 1061+ [species + complexes], increase of 14 or 1.34%. + later

The new data are shown in the following graph. New data continue to come in on at least a linear basis, but of course new species come in less frequently and will level off at a number near 1000 within 100 years.



"poor" columns: <62
Pg-col.
2-3 60+1
~~7-1~~ ~~57~~ ~~60~~
~~7-2~~ ~~58~~ 64 44
~~14-2~~ ~~60~~ 64
~~18-2~~ ~~59~~ 65

(over)

 No longer true

SUMMARY STATISTICS:

There have been 222 STATE/PROVINCE records since Feb 1993: 0 CAN, 77 USA, 145 MEX. USA breakdown: AZ 8, CA 5, CO 5, ID 4, KS 2, MT 5, NE 8, NV 0, NM 4, ND 1, OK 7, OR 2, SD 1, TX 11, UT 5, WA 3, WY 6. We request more Canadian records; most will come from Saskatchewan. All 9 MEX states have new records, espec. SIN, SON, TAM. ADD species are mostly MEX, but 3 from TX are EUSA spp new for our mapped region. Two new MEX spp [S. polingi, E. mojave] are southward range extensions from the USA, but all others are well-known further south in MEX.

Avg spp/co for USA: AZ 148, CA 106, CO 115, ID 65, KS 64, MT 81, NE 49, NV 107, NM 112, ND 32, OK 45, OR 78, SD 41, TX 41, UT 109, WA 67, WY 104. This is nearly 90% of projection, at last!

NOMENCLATURAL CHANGES:

Name changes for genera and species appear above in Atlas Page order, up to date Oct 1995. A few serious taxonomic revisions have been published or are in preparation, including Mellana, Amblyscirtes, the Neotropical Theclinae, Chlosyne, Phyciodes, the acmon blue CPX, Euphydryas, and the Speyeria atlantis CPX. We will include revised maps for these taxa in the next Supplement if definitive papers are published by that time. A monarch is still a monarch to us!

COUNTY ABBREVIATIONS:

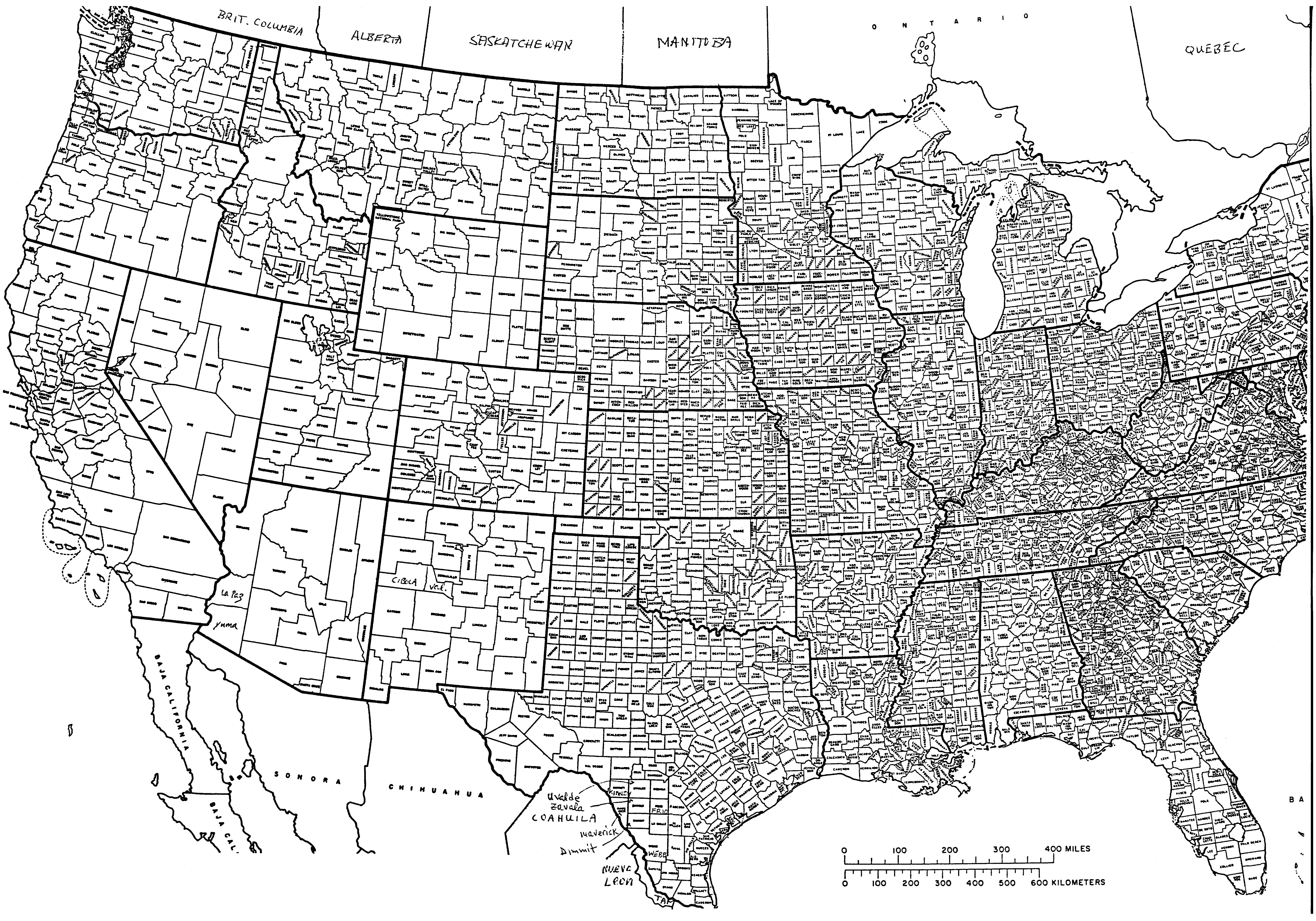
By many requests, we have modified the abrvs to make them more "user friendly" and to eliminate redundancies. We acknowledge C. F. Gillette for establishing county abrvs, but have made them longer, less rigid, and hopefully more useful to readers. Most abrvs are the first 3 letters of the county name, or the first 4 if necessary [Call=Callahan; Calh=Calhoun]. Two-word names use the first letter of each word, in caps [CC=Clear Creek or Contra Costa]. A few two-word names require additional letters [SCl=Santa Clara; SCr=Santa Cruz]. We often add an extra letter to make things easier [FtB=Fort Bend; LeF=Le Flore; SLO=San Luis Obispo]. Arbitrarily, Wash always = Washington, so other "Wash" counties are different [Wshk;Wsch]. Also, Lin is always Lincoln [Linn OR = Lnn]. Jackson is always Jksn [Jack TX is Jack]. Here are the remaining "toughies", in alphabetical order by abbreviation. Please let us know of any redundancies.

Adms=Adams. Andn=Anderson. Andw=Andrews.
Bdr=Boulder. Bdy=Boundary. Bks=Brooks/Brookings. Bnv=Bonneville. Brd=Broadwater. Brk=Burke. Brl=Burleigh. Brn=Brown. Brt=Burt. Brza=Brazoria. Brzs=Brazos.
Cal=Calaveras. Cald=Caldwell. Cam=Campbell/Camas. Camn=Cameron. Car=Caribou. Cass=Cass. Cast=Castro. Cbn=Carbon. Chf=Chaffee. Chk=Cherokee. Chl=Chelan. Chm=Chambers. Chry=Cherry. Chs=Chase. Chv=Chaves. Chyn=Cheyenne. Clk=Clark. Clkm=Clackamas. Clm=Clallam. Clr=Clearwater. Clv=Cleveland. Cmch=Comanche. Cml=Comal. Cmp=Camp. Coln=Collin. Colo=Colorado. Colw=Collingsworth. Crk=Creek/Crook. Croc=Crockett. Crs=Crosby/Cross. Crw=Crowley. Csn=Carson. Ctr=Carter. Clp=Clatsop
Dlm=Dallam. Dls=Dallas. Dsn=Dawson. Dws=Dawes. Ccn=Coconino, Cch=Cochise
Gdg=Gooding. Gdn=Garden. Gray=Gray. Grd=Grand. Grf=Garfield. Grg=Gregg/Gregory. Grl=Greeley. Grm=Graham. Grn=Greenlee. Grr=Greer. Grt=Grant/Granite. Grv=Garvin. Gsn=Grayson. Gza=Garza.
Har=Harding. Hdin=Hardin. Hnd=Hand. Hnf=Hansford. Hns=Hanson. Hrdm=Hardeman. Hrl=Harlan. Hrm=Harmon. Hrp=Harper. Hrs=Harris. Hrsn=Harrison. Hrt=Hartley.
Joh=Johnson/Johnston.
Kdy=Kenedy/Kennedy. Kiny=Kinney. Ktp=Kitsap. Ktt=Kittitas.
Mgn=Morgan. Mls=Mills. Mnh=Minnehaha. Mno=Mono. Mnr=Miner. Mrl=Morrill. Mrn=Marin. Mrp=Mariposa. Mrs=Morris. Mrt=Morton. Mtgu=Montague. Mtgy=Montgomery. Mtr=Montrose. Mty=Monterey. Mtz=Montezuma.
Pkr=Parker. Pmr=Parmer. Prk=Park.
Sdv=Sandoval. Shdn=Sheridan. Shrm=Sherman. Skm=Skamania. Skt=Skagit
Wcy=Willacy. Wds=Woods/Woodson. Wdw=Woodward. Wlb=Wilbarger. Wlms=Williams/Williamson. Wlsn=Wilson. Wsch=Wasatch. Wsco=Wasco. Wshk=Washakie. Wsho=Washoe.
XYZ: We'll use em if we need em!

FINAL COMMENTS:

Those who cannot remember the past are condemned to repeat it. George Santayana [1863-1952].
To remain silent when they know they should speak out makes cowards of men. A. Lincoln.
By nature, good people desire to know. Leonardo da Vinci.
Go for it! Go for more CRs and new information anywhere, anyhow, anytime! R. E. Stanford.

* * * God bless us, everyone! Tiny Tim; Dickens. * * *



BRIT. COLUMBIA
ALBERTA
SASKATCHEWAN
MANITOBA
O N T A R I O
QUEBEC
BAJA CALIFORNIA
BAJA CAL
S O N O R A
C H I H U A H U A
CIBOLA Vcl.
La Paz
Yuma
Uvalde
Zavala
COAHUILA
Maverick
Dimmit
Nueve Leon
WEBB
BA
0 100 200 300 400 MILES
0 100 200 300 400 500 600 KILOMETERS

x = new record received 1993–1996 (see previous workbook for data sources). RES.

x = new record oct 1996 — (source indicated)

Pyrrhopyge chalybea

Pyrrhopyge araxes

Elbella scylla

Jemadia hospita

Jemadia hewitsonii

Myscelus ~~amyntis~~ amystis

Mysoria affinis

Mysoria amra Δ

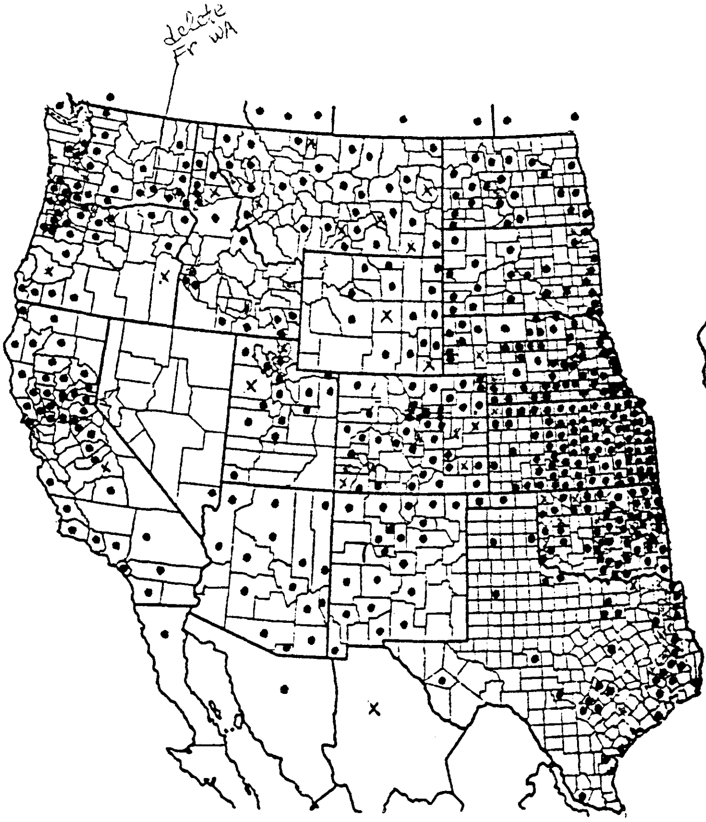
Phocides pigmalion

Phocides belus

Phocides palemon (=polybius)

Phocides urania

Proteides mercurius



Epargyreus clarus (incl huachuca)

Epargyreus exadeus COMPLEX

Epargyreus clavicornis orizaba

Epargyreus spina

Polygonus leo (=lividus)

Polygonus manueli

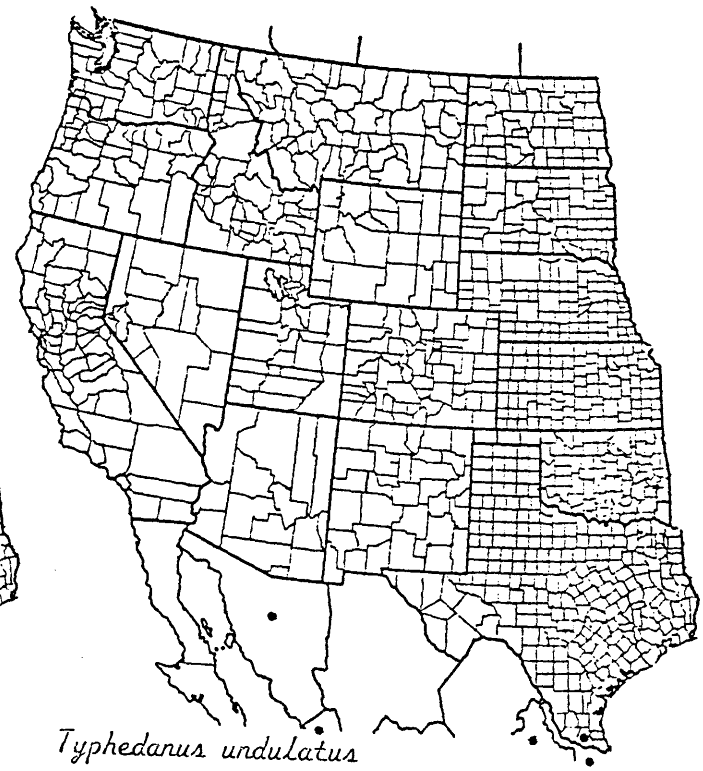
Chioides albofasciatus

Chioides zilpa

Aguna asander

Aguna claxon

Aguna metophis



Typhedanus undulatus

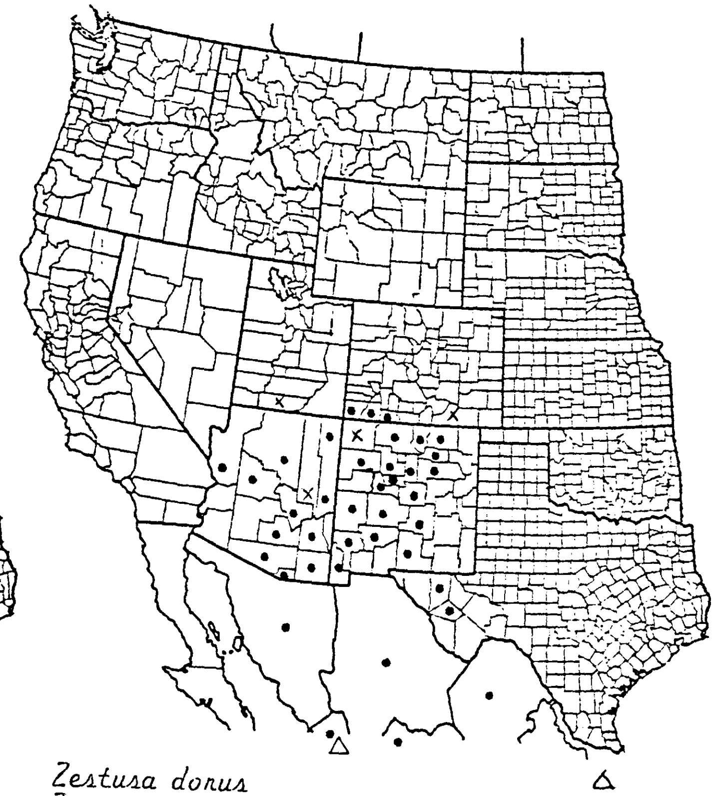
Typhedanus ampyx

Polythrix octomaculata
Polythrix procerus △

Polythrix asine

Polythrix mexicanus

Polythrix caunus



Zestusa dorus
Zestusa elwesi △

Codatractus alcaeus
Codatraxus uvyd xa △

Codatractus arizonensis
Codatractus melon △

Codatractus hyster
Codatractus bryaxis △

Urbanus proteus

Urbanus viterboana
Urbanus esta △

Urbanus pronus
Urbanus pronta △

Urbanus belli

Urbanus prodicus (=hubbellus)

Urbanus esmeraldus

Urbanus dorantes

Urbanus teleus

Urbanus tanna

Urbanus simplicius

Urbanus procne

Urbanus chales

Urbanus doryssus

Astraptes fulgerator (incl azul)

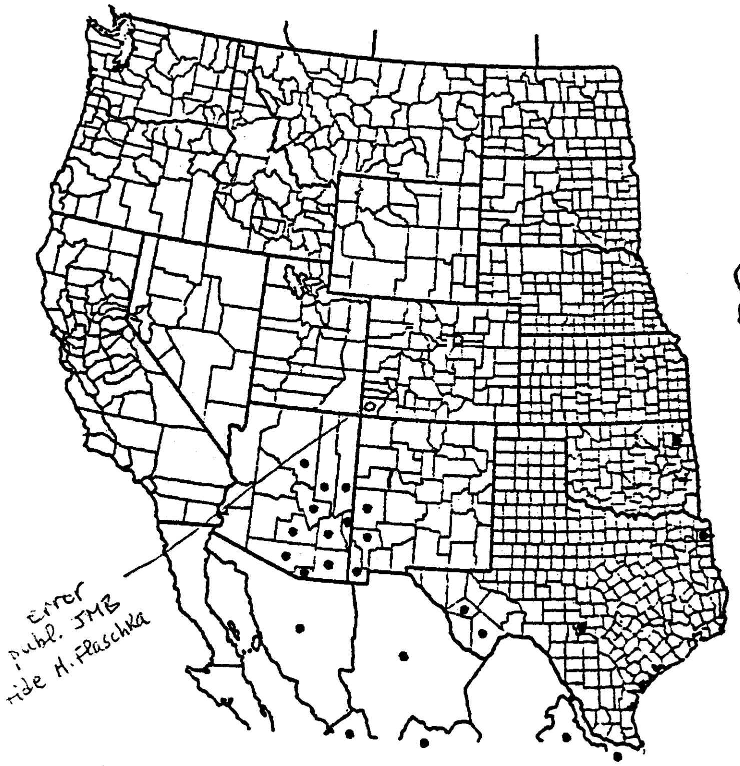
Astraptes egregius

Astraptes alardus (incl grullus)

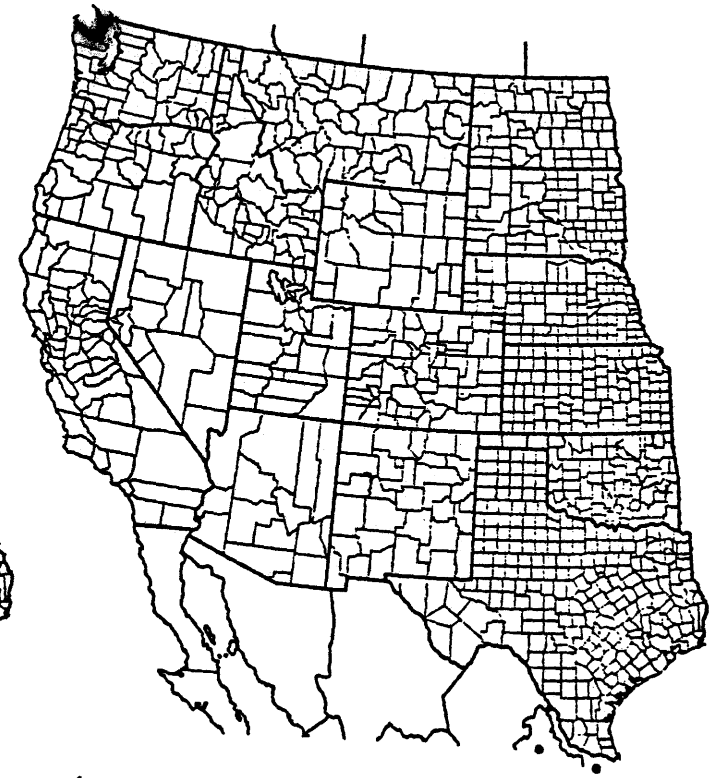
Astraptes gilberti (=alecton)
(hoppferi W, alector E)

Astraptes anaphus

Astraptes chiriquensis



Autochton cellus



Autochton siermadror

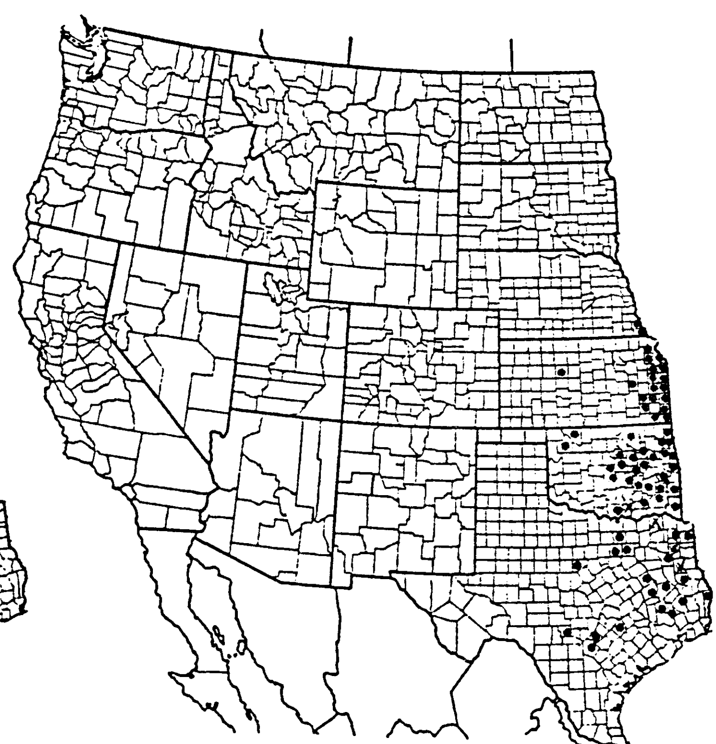
Autochton pseudocellus

Autochton cinctus

Autochton vectilucis

Autochton neis

Autochton zarex



Achalarus lyciades

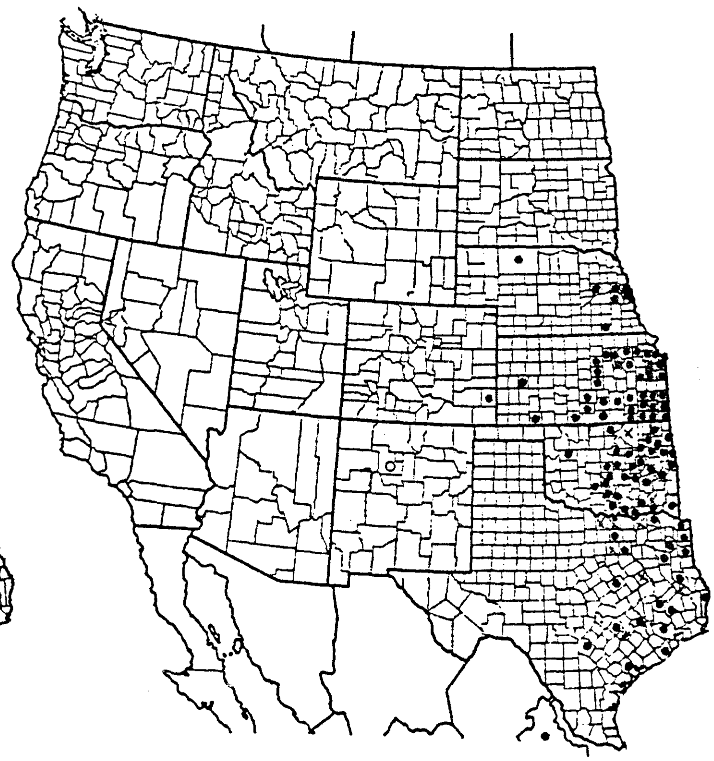
Achalarus casica

Achalarus albociliatus

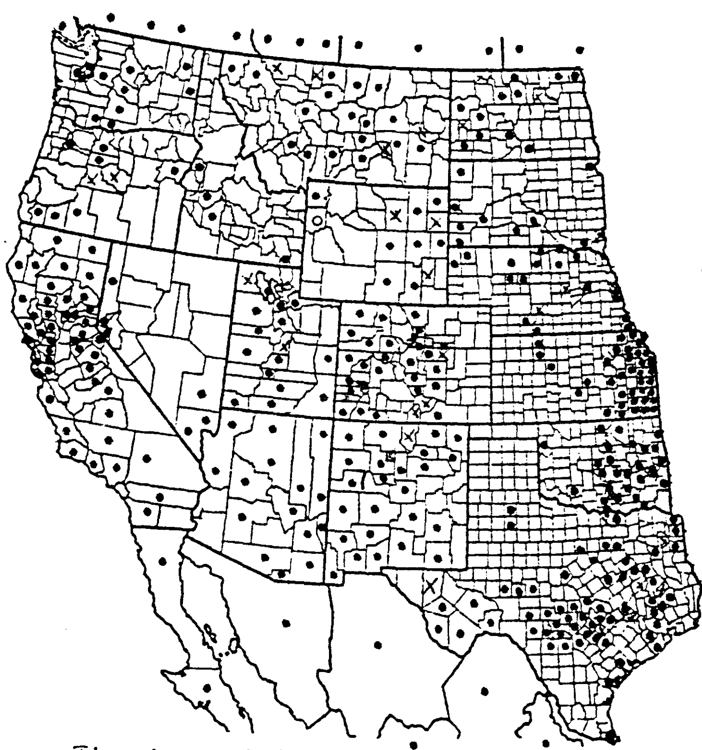
Achalarus toxeus

Achalarus (Thessia) jalapus

Achalarus tehuacana

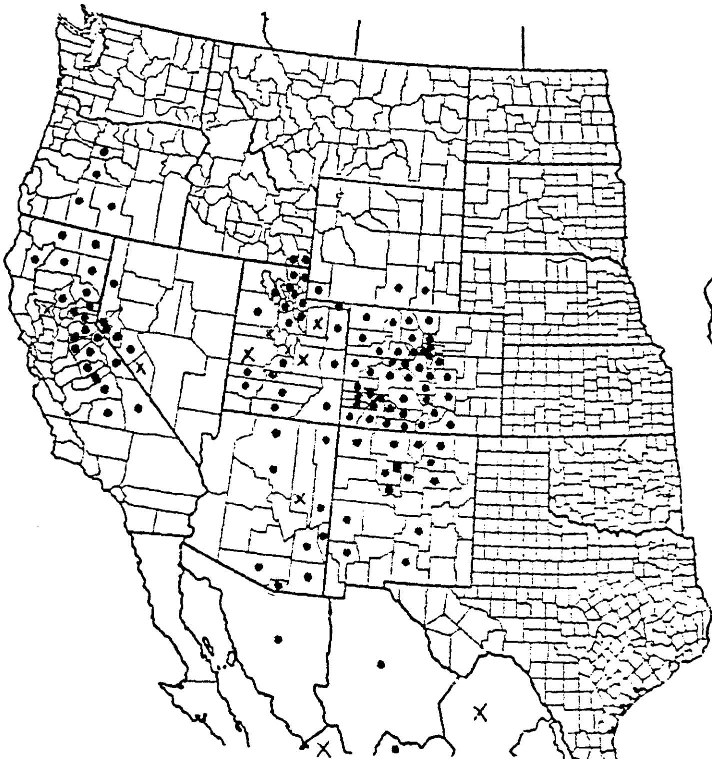


Thorybes bathyllus (=daunus)

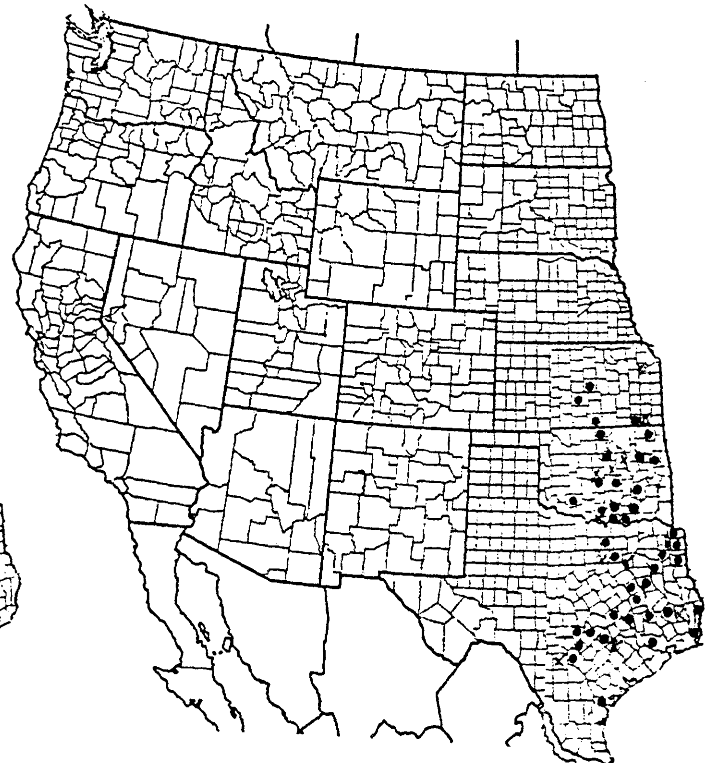


Thorybes pylades

Thorybes diversus



Thorybes mexicanus



Thorybes confusis

Thorybes drusius

Cabares potrillo

Nascus phocus

Celaenorrhinus fritzgaertneri

Celaenorrhinus stallingsi

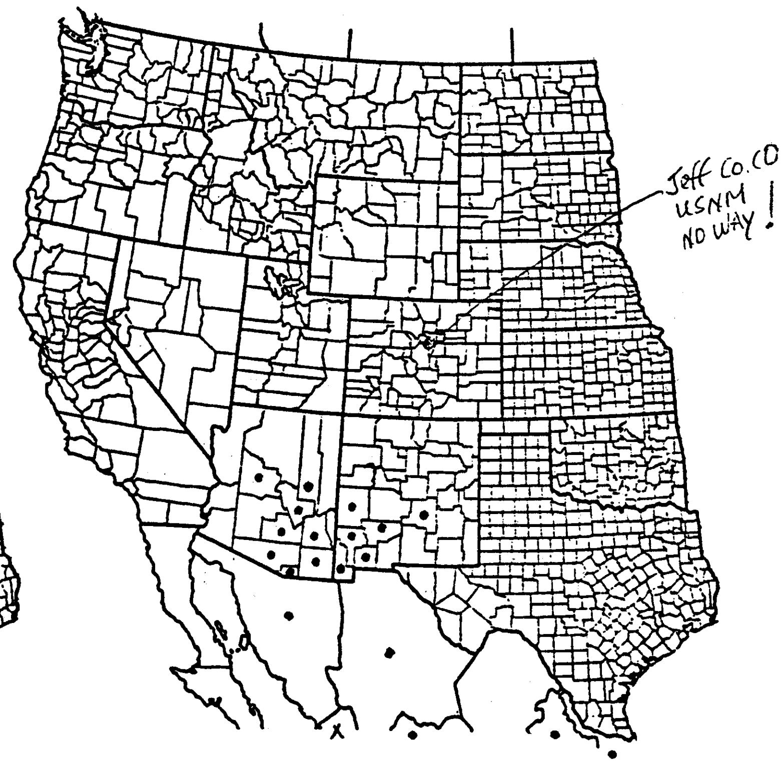
Celaenorrhinus similis (incl stola)

Dyscophellus euribates

Spathilepia clonius

Cogia hippalus (incl hiska)

Cogia outis



Cogia caicus

Cogia calchas

~~Cogia~~ mysie (=valerianus)

Codatractus by genitalia JMB '95

Telemiades megallus

Anteurotia tractipennis

cleta
(ADW)

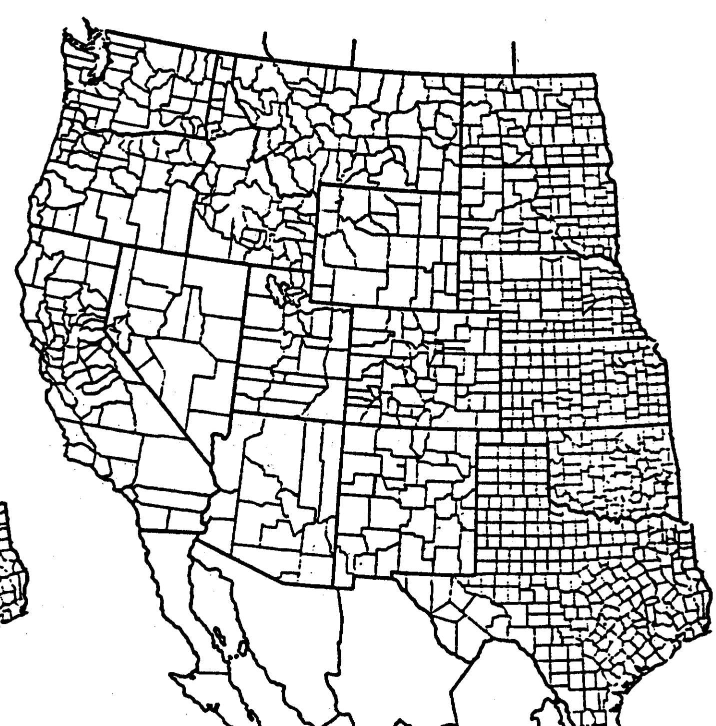
Polycton polycton

Polycton cleta

Polyctor enops

Nisoniades rubescens

Nisoniades godma

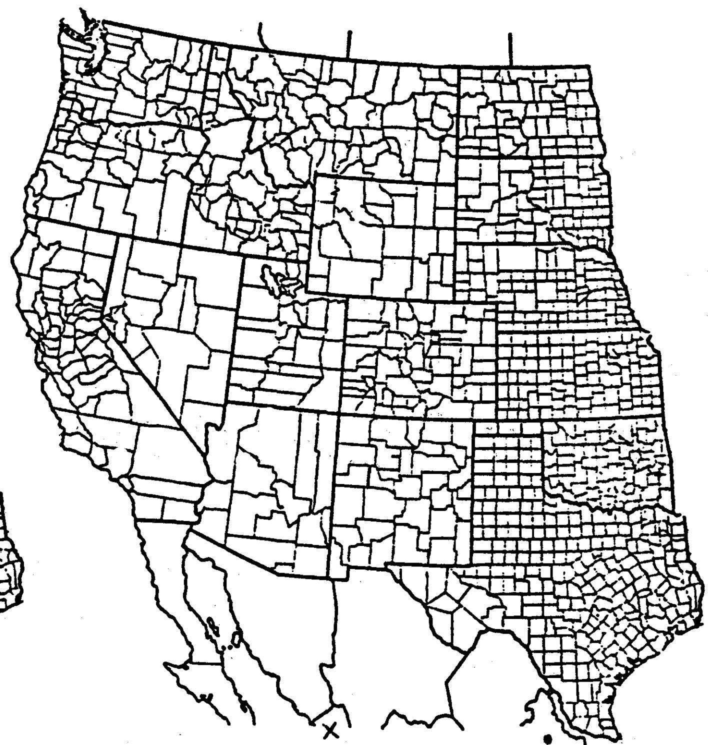


Nisoniades ephora

Pellicia arina (=costimacula)

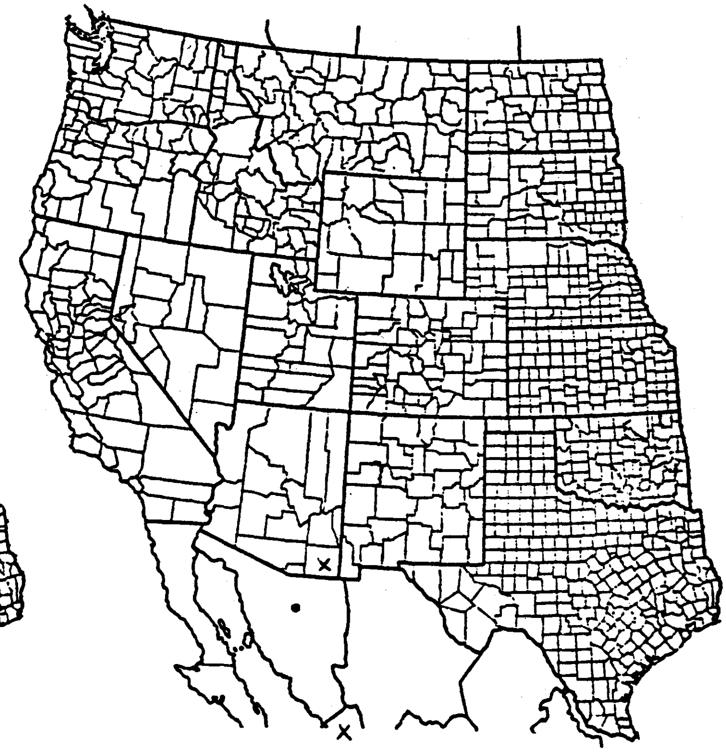
Pellicia angra

Pellicia dimidiata



Noctuana bipuncta

Noctuana staton



Windia windi

Bolla brennus

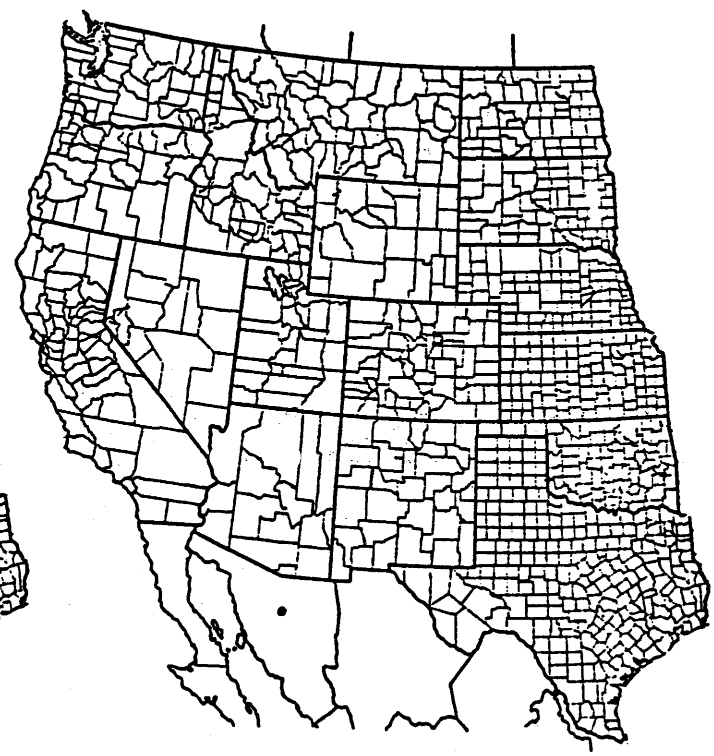
Bolla clytius

Bolla cupreiceps

Bolla orsines

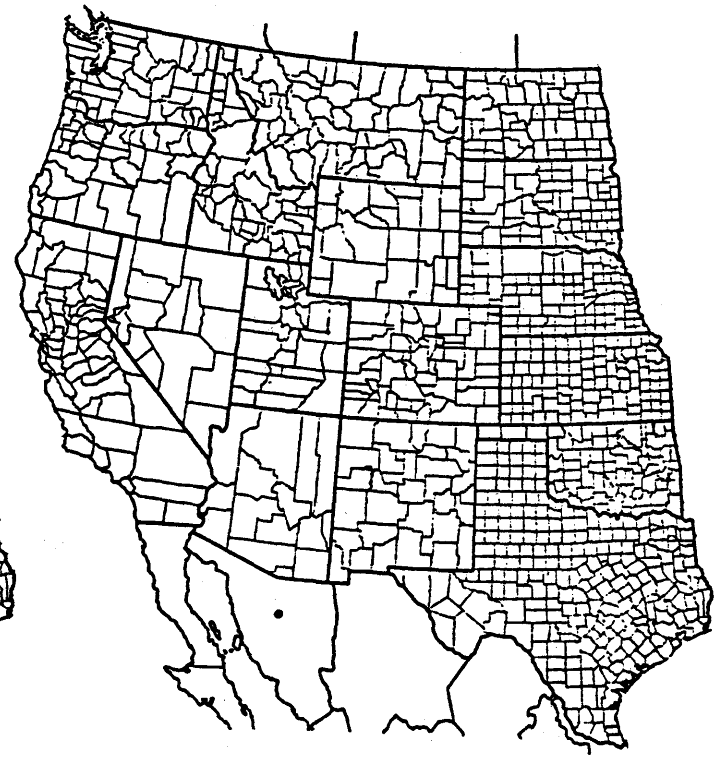
JPB 95
? det

Bolla eusebius



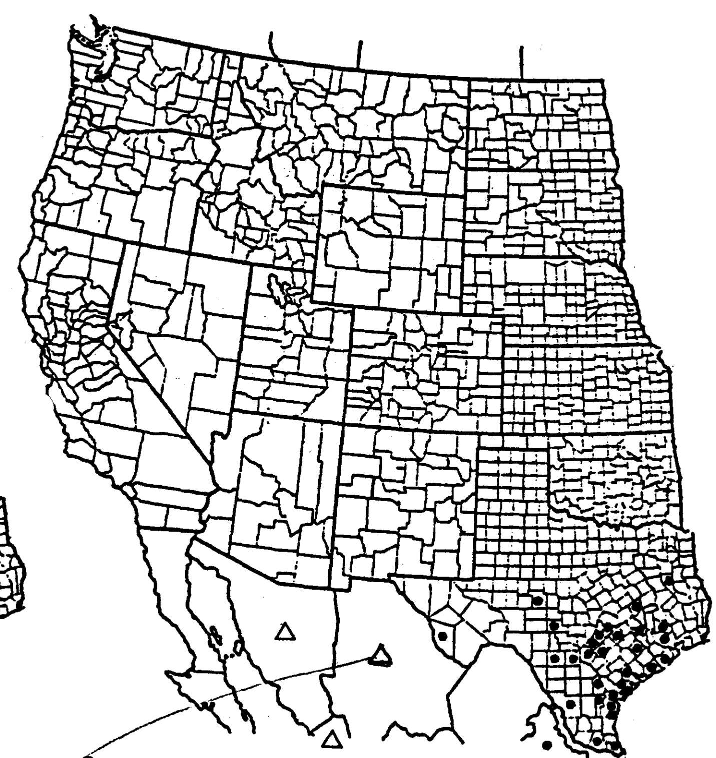
Bolla ziza (?=Staphylus iguala)

Bolla pullata



Bolla subapicatus

Staphylus ceos



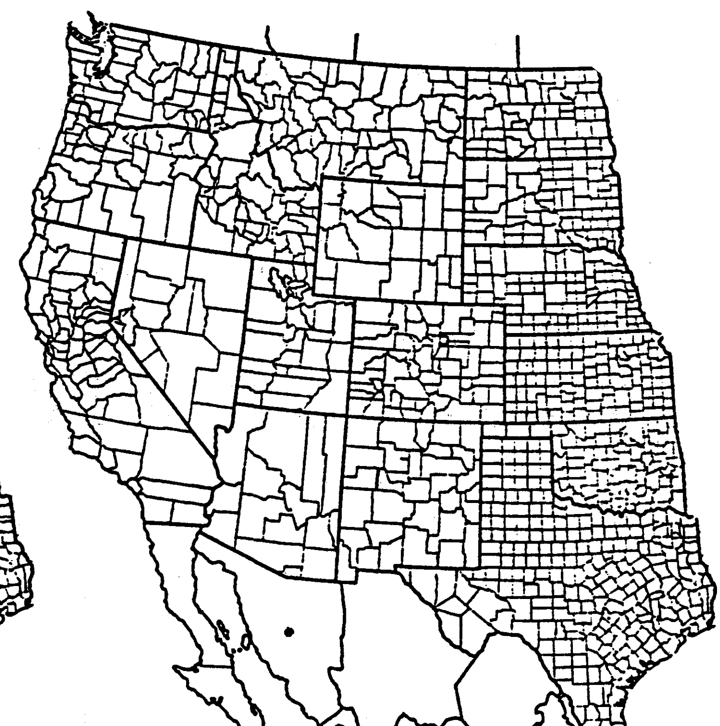
Staphylus mazans
Staphylus tierra △

RES 94
det JAS 95

Staphylus hayhurstii

Staphylus azteca

Staphylus vulgata



Staphylus semitincta (= Bolla clytius)

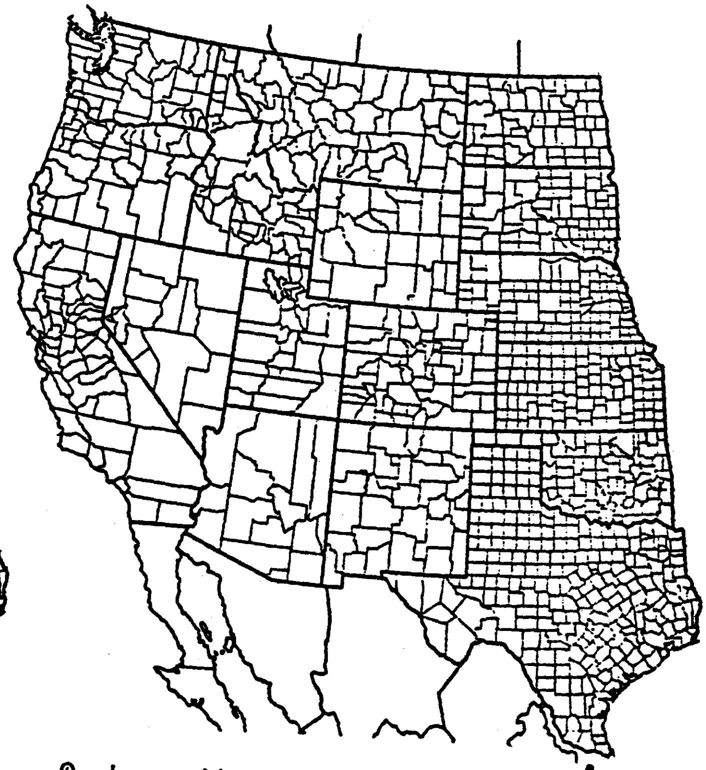
Gorgythion begga

Zena hyacinthinus

Quadrus cerealis

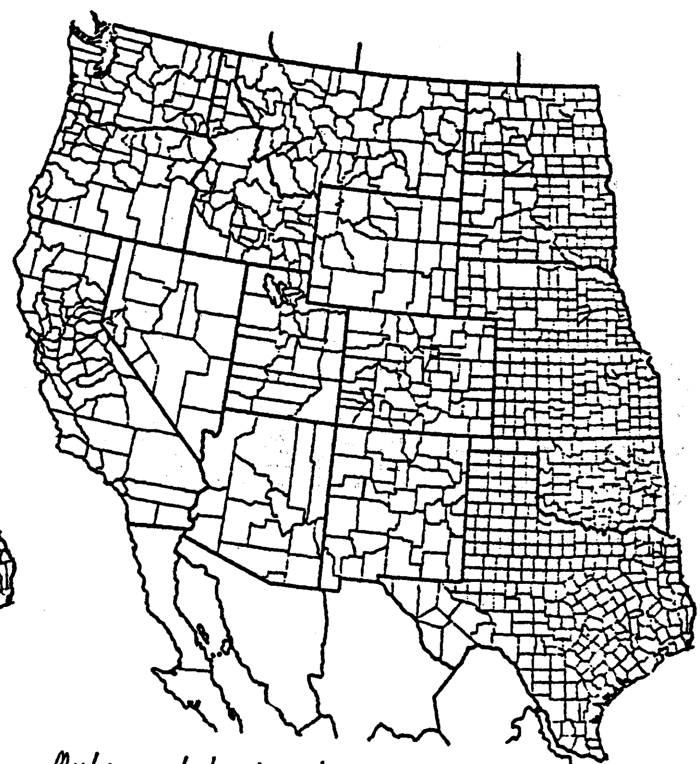
Quadrus lugubris

Sostrata bifasciata nordica



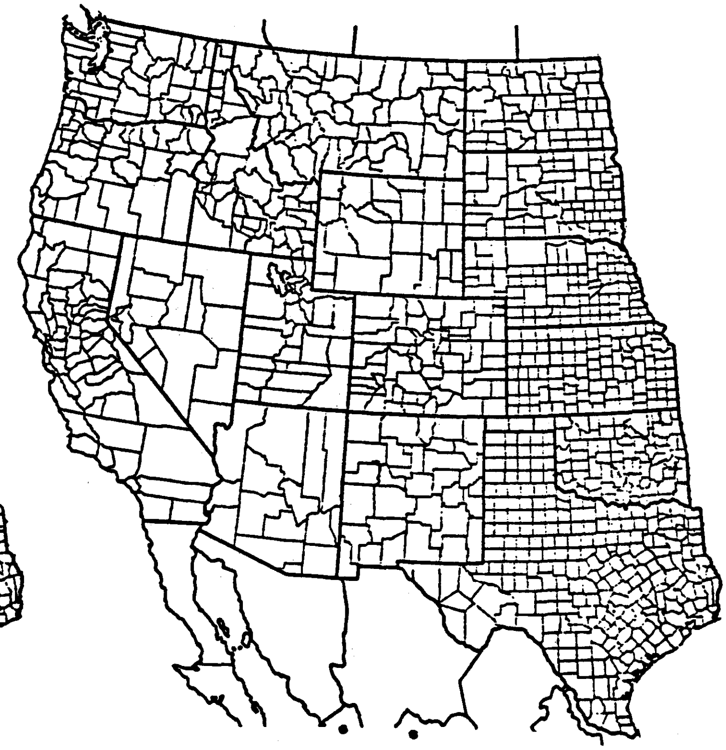
Paches polla

Atarnes sallei



Mylon pulcherius lassia

Mylon menippus



Mylon pelopidas

Carrhenes canescens

Carrhenes fuscescens

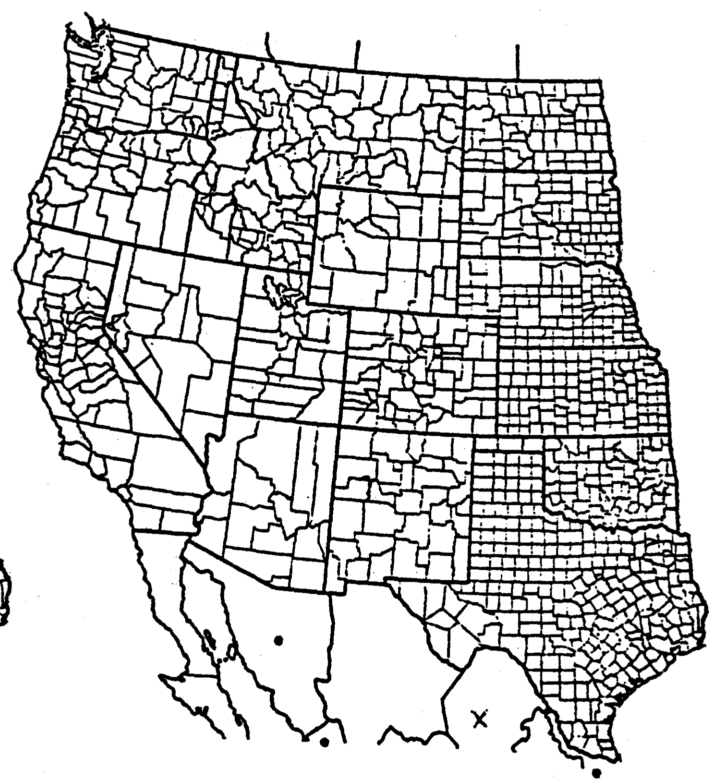
Clito clito

Xenophanes tryxus (=trixus)

Orenses hyalophora

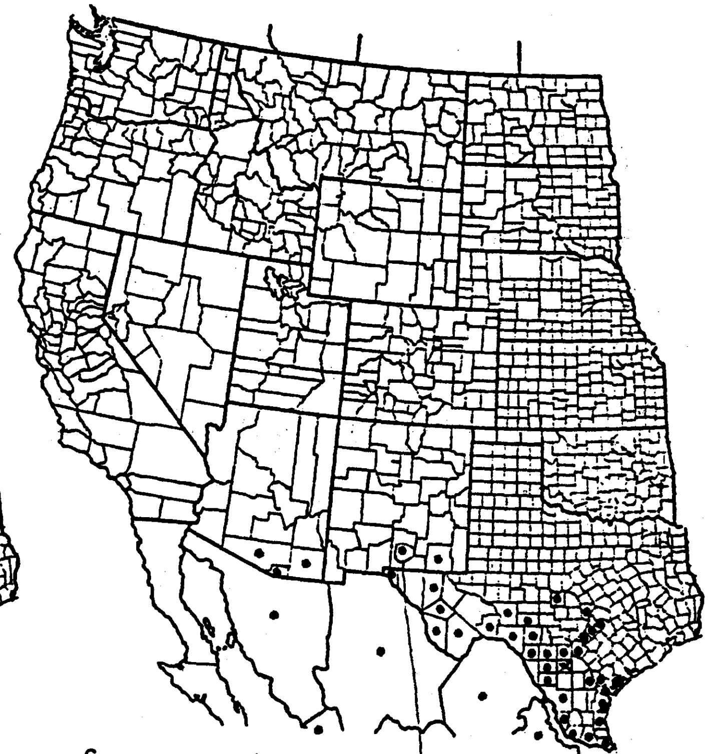
Antigonus emorsus

Antigonus nearchus



Antigonus erosus

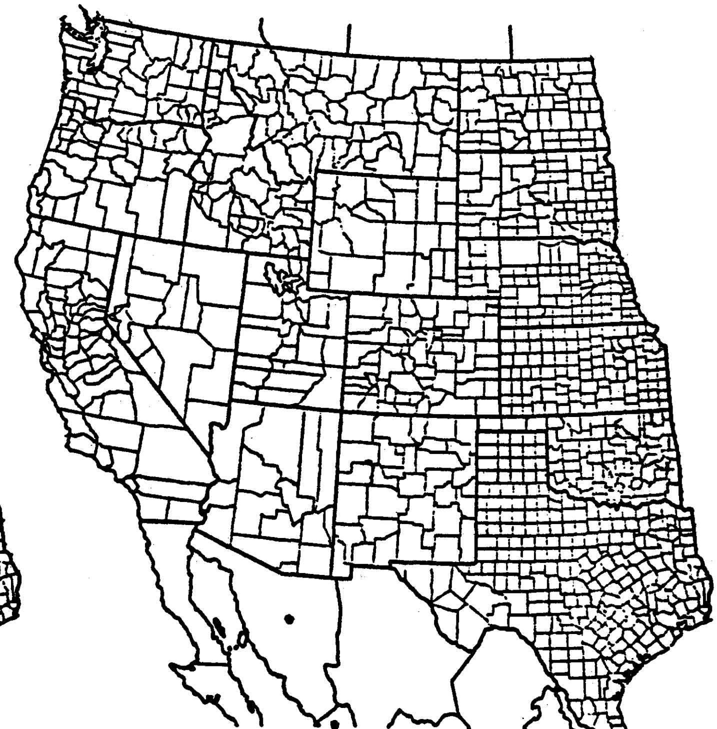
Antigonus funebris



Systasea pulverulenta

delete
misdet.

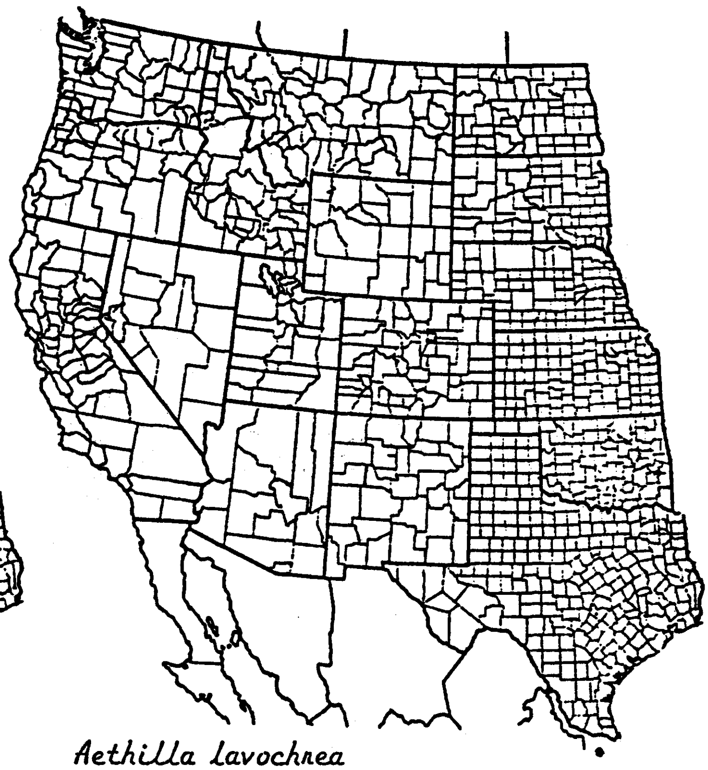
Systasea zampa (=evansi)



Zopyrion sandace

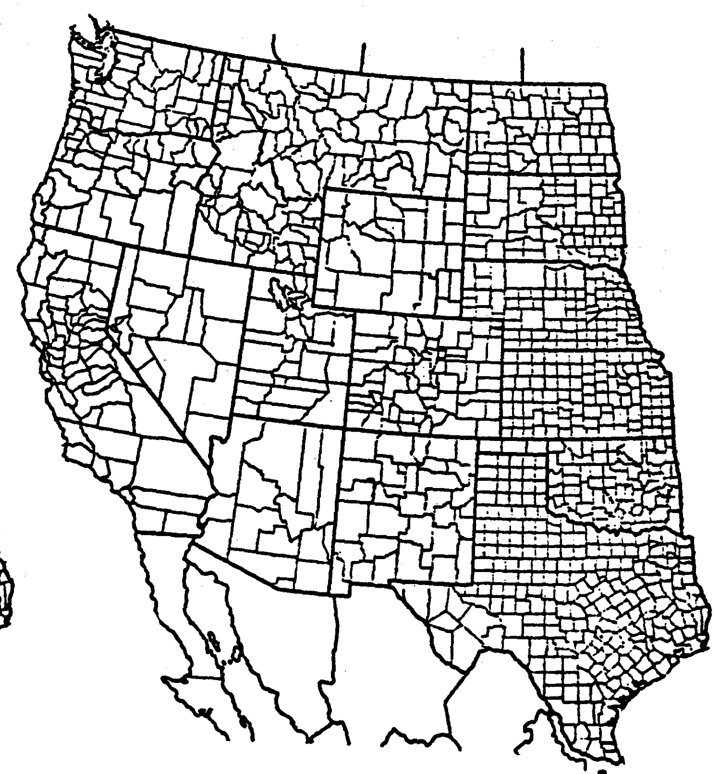
Aethilla echina

ADW
sez
dubious



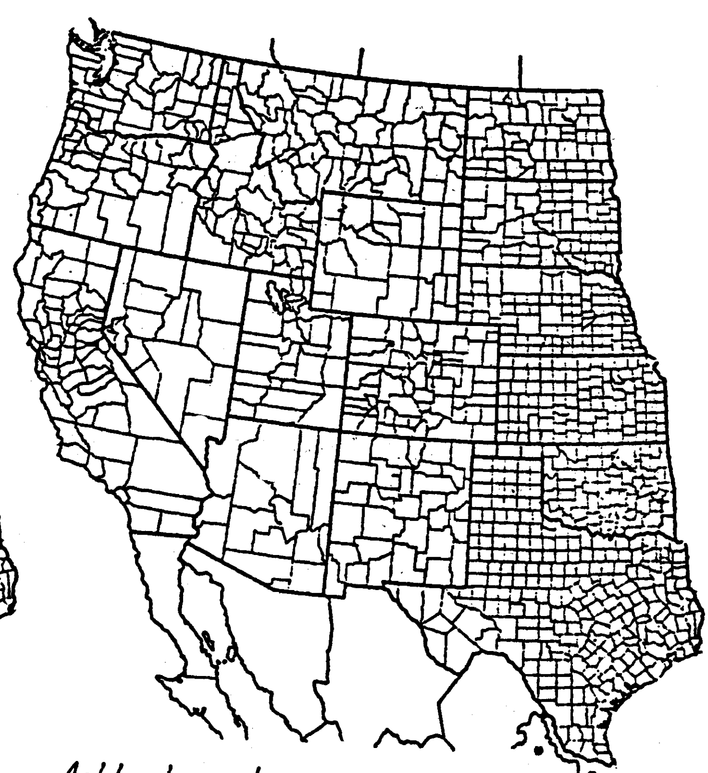
Aethilla lavochrea

Achlyodes thraso (=mithridates)



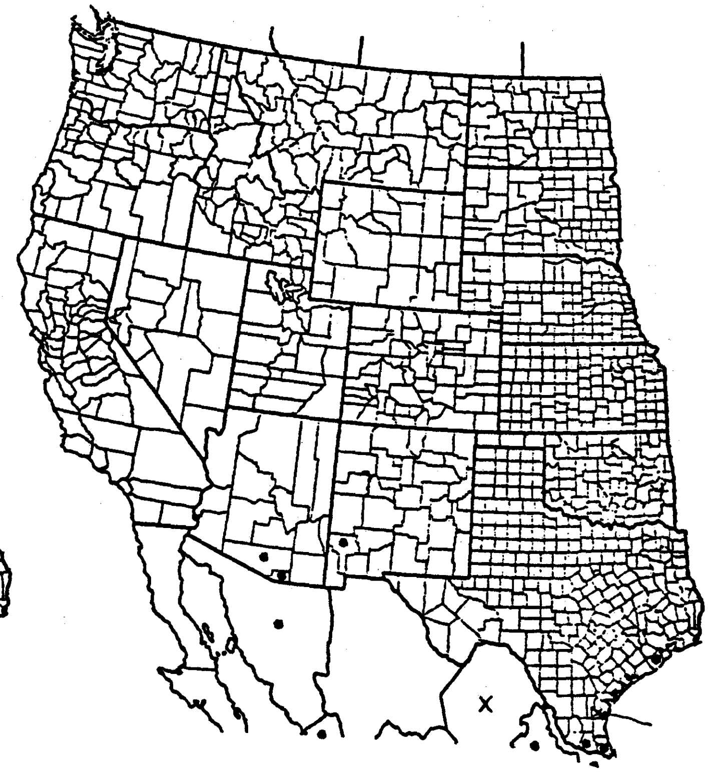
Achlyodes busirus

Achlyodes pallida



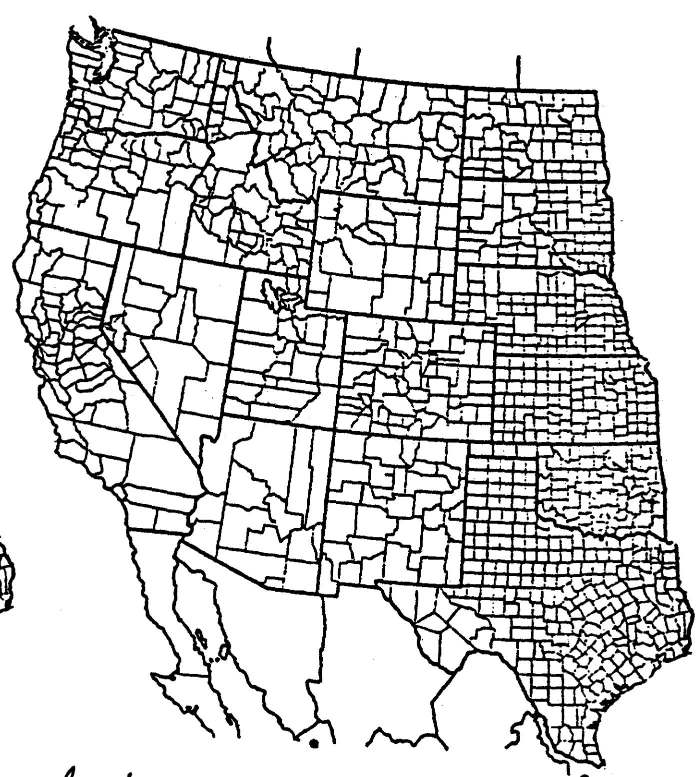
Achlyodes selva

Grais stigmaticus



Timochares ruptifasciatus

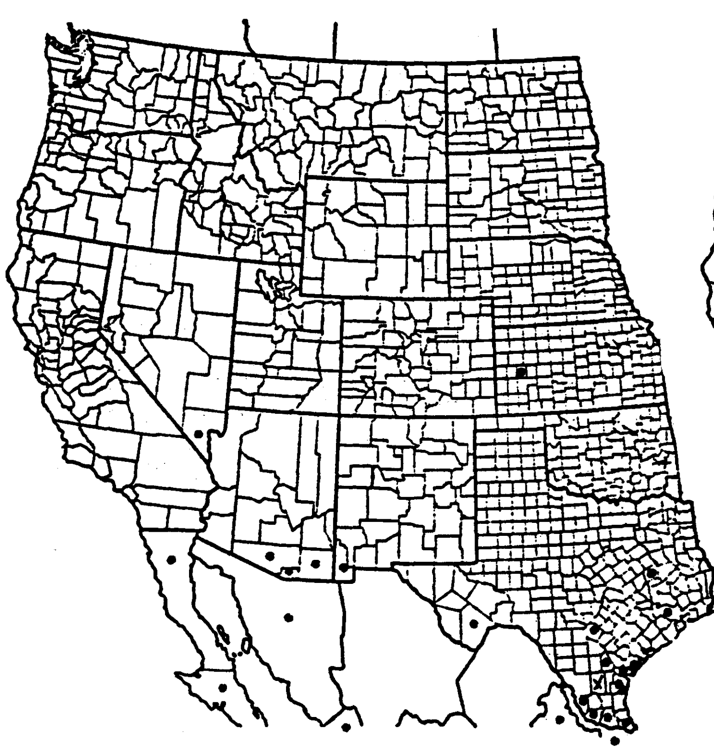
Timochares trifasciatus



Anastrus sempiternus

Ebrietas anacreon

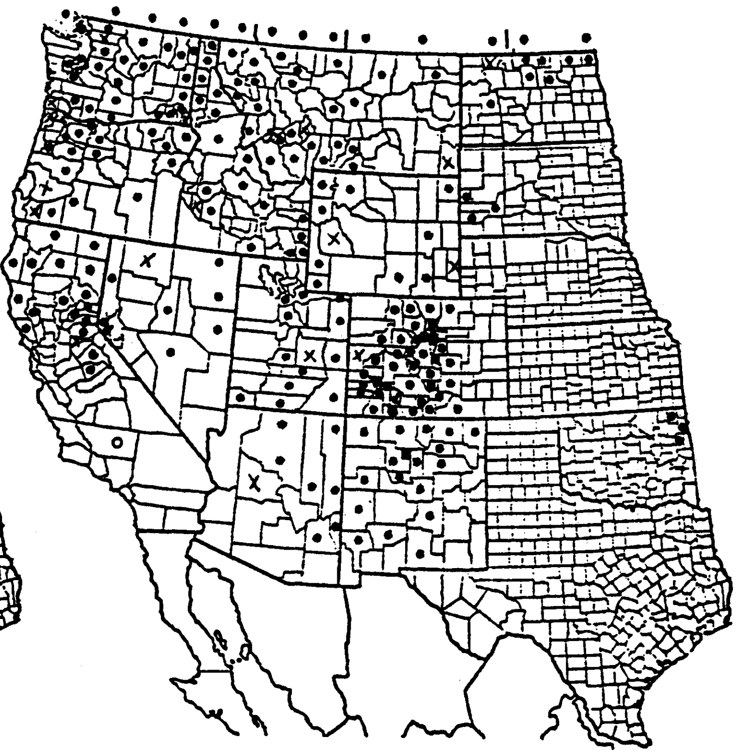
Cycloglypha thrasibulus



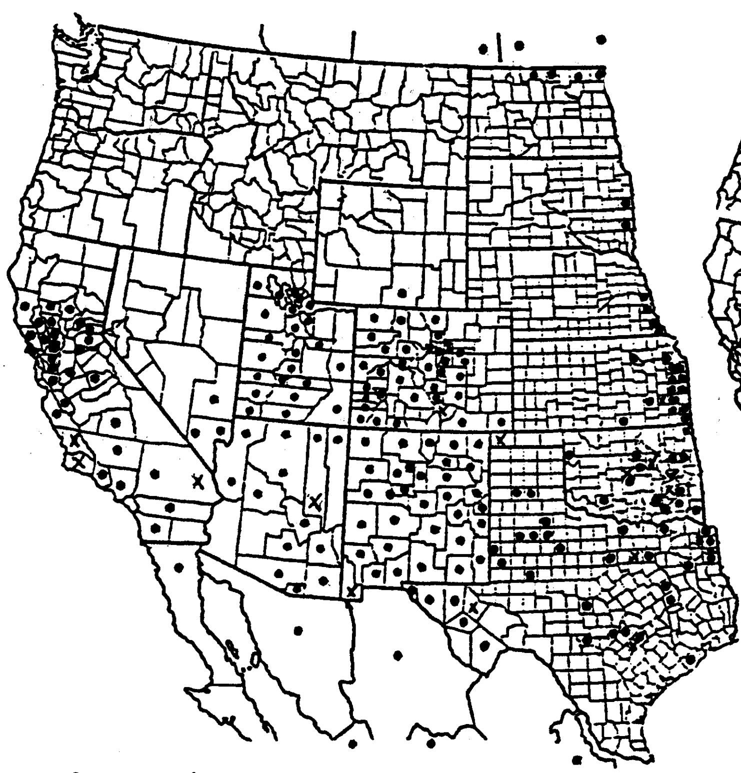
Chiomara asychis

Chiomara mithrax

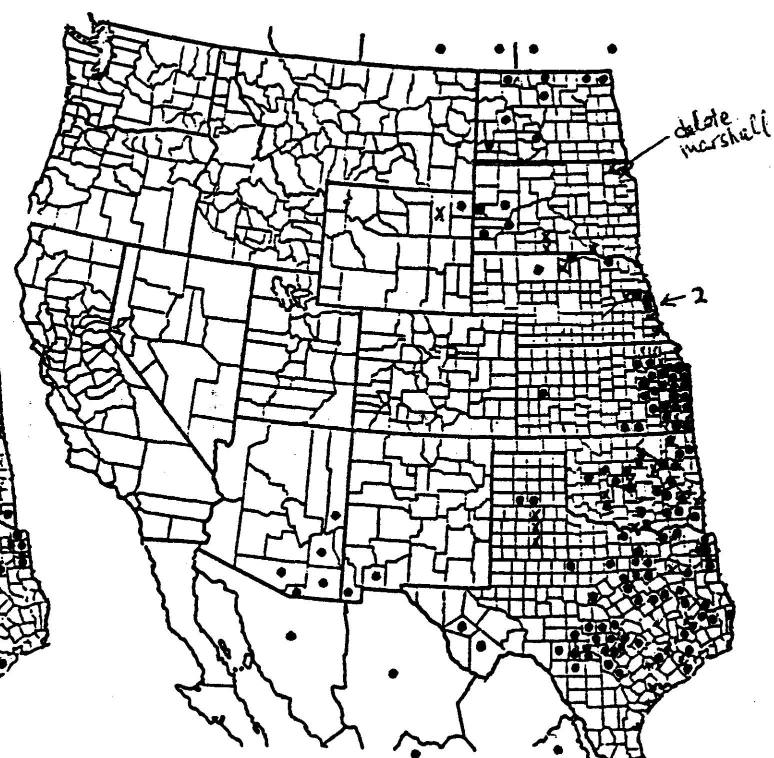
Gesta gesta



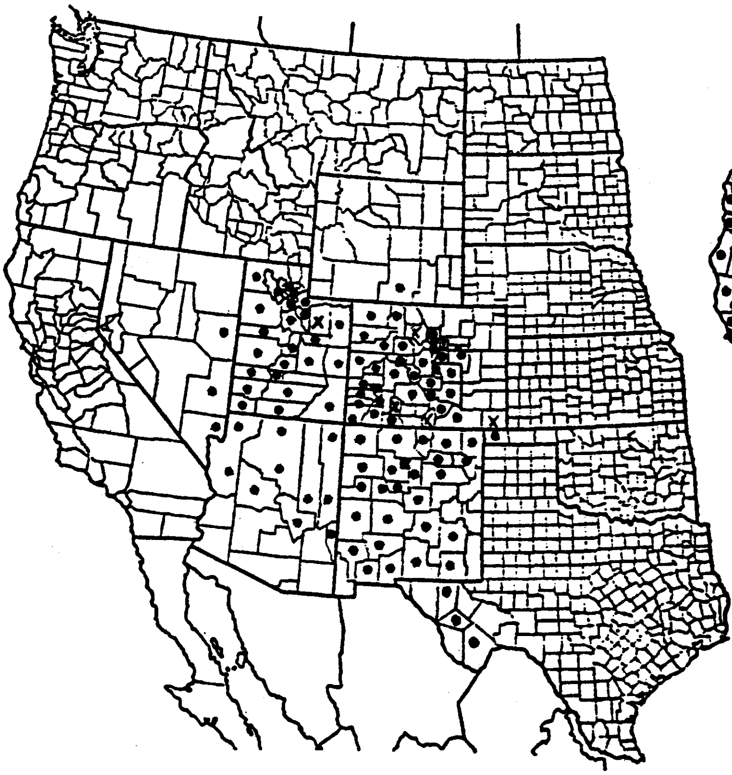
Erynnis icelus



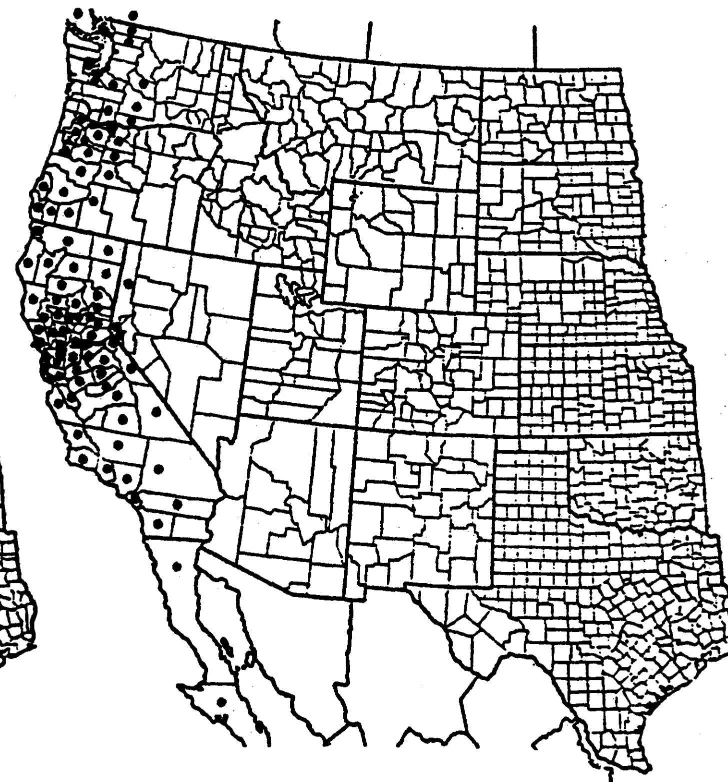
Erynnis brizo



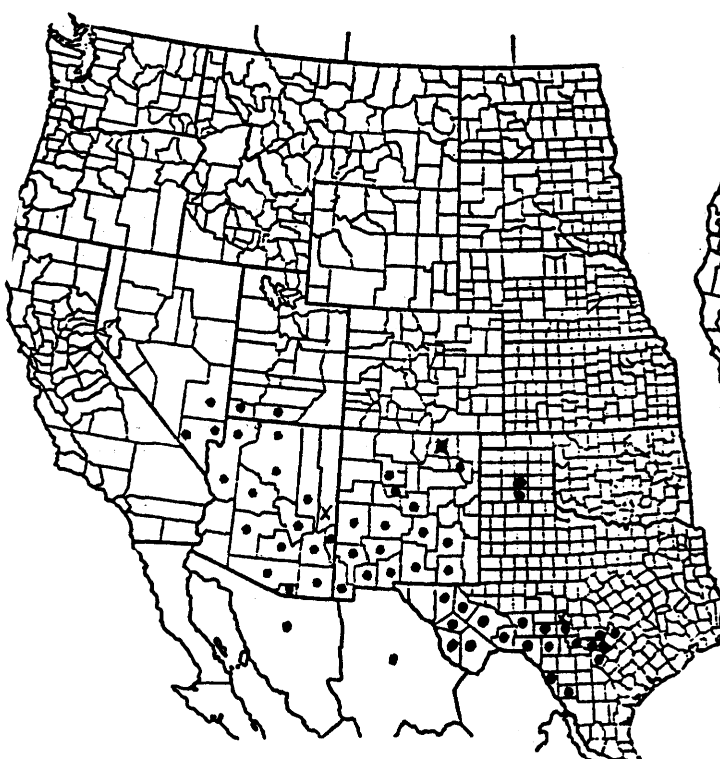
Erynnis juvenalis



Erynnis telemachus

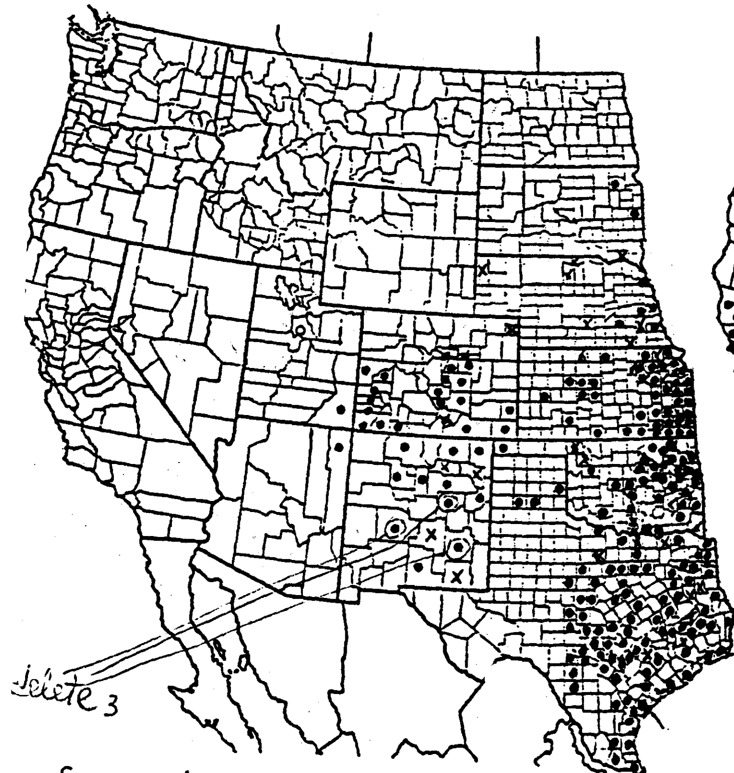


Erynnis propertius

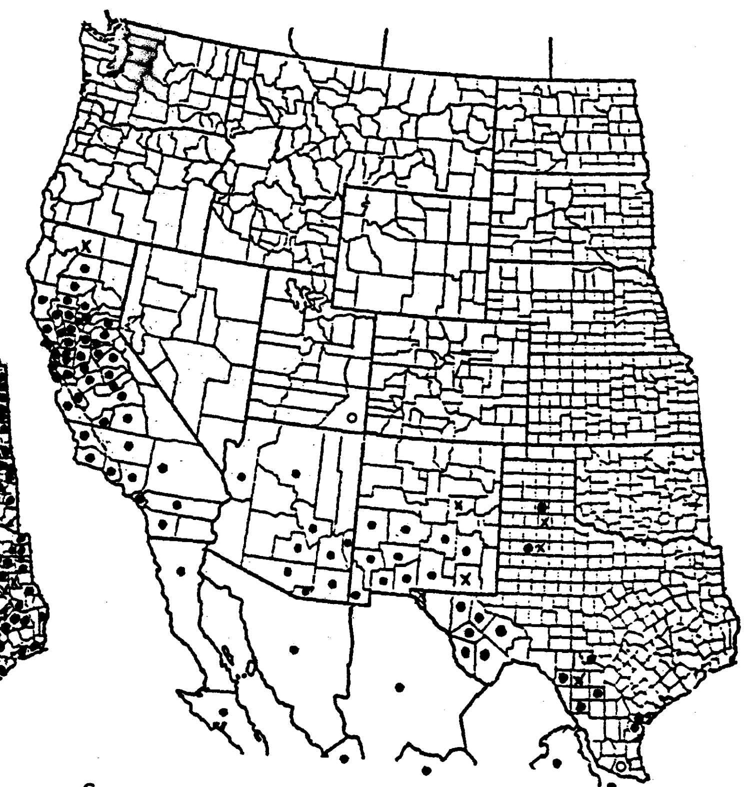


Erynnis meridianus

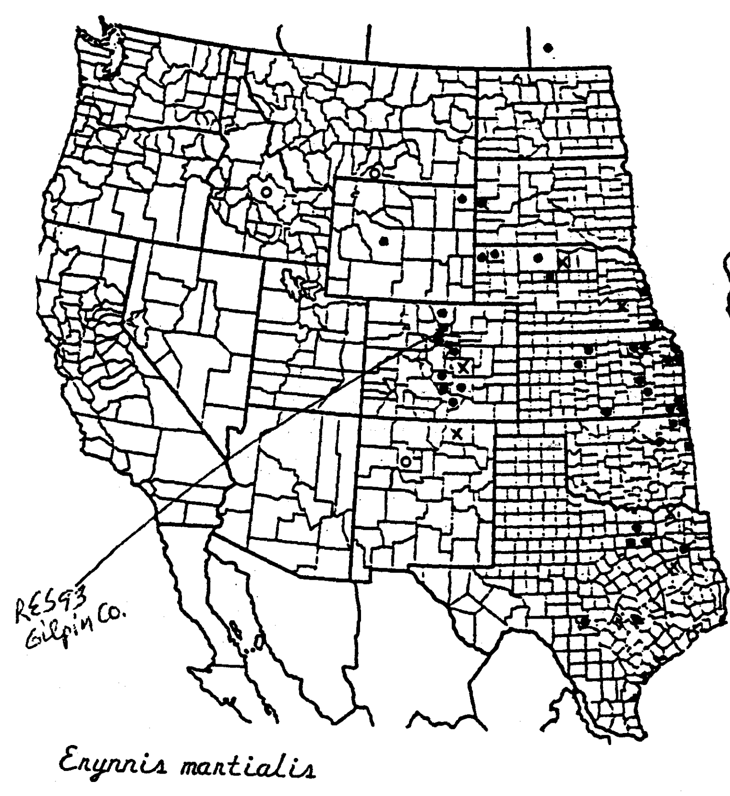
Erynnis scudderi



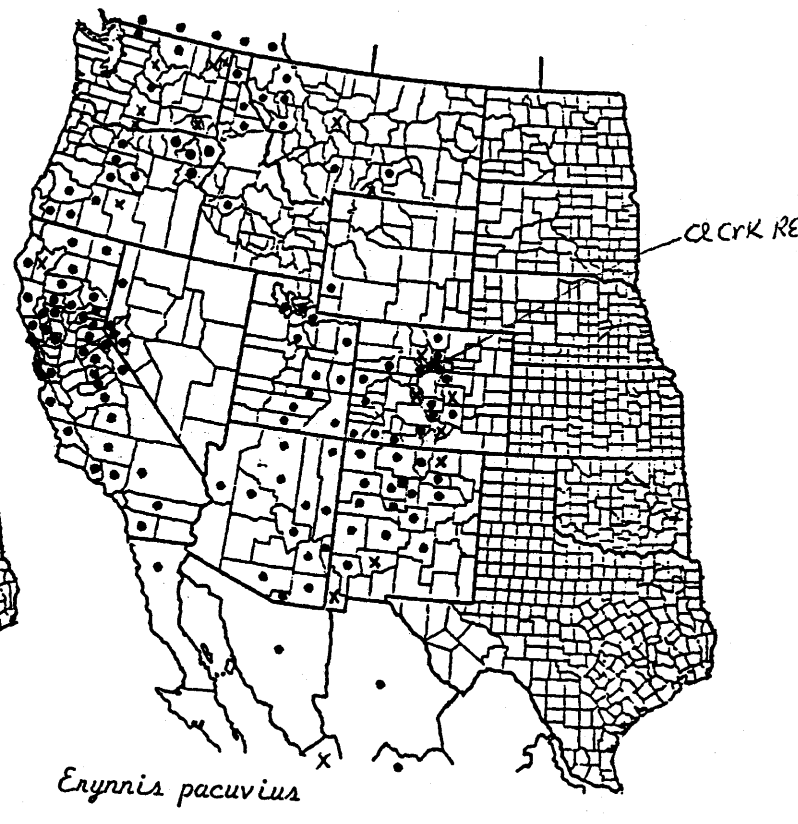
Erynnis horatius



Erynnis tristis

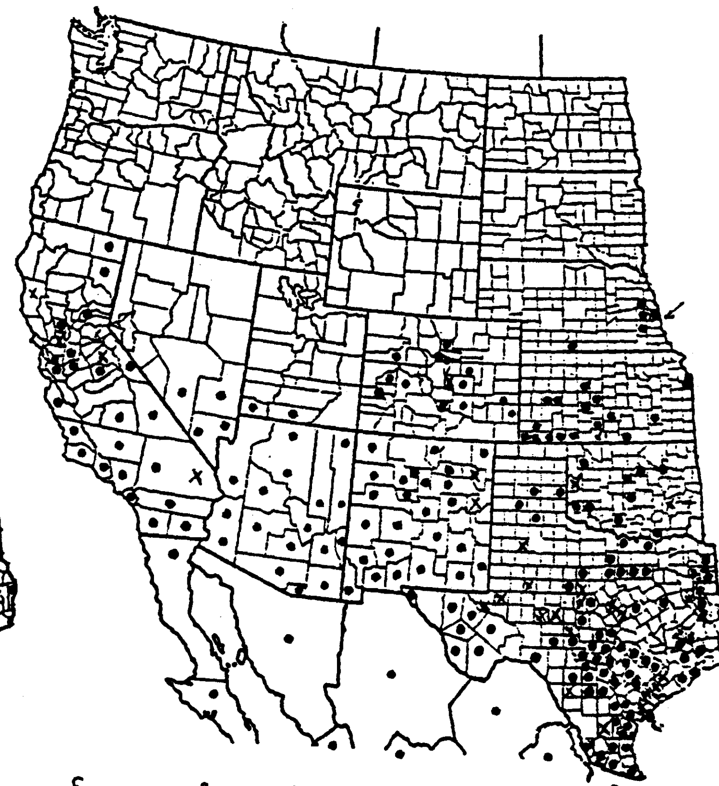


Erynnis martialis



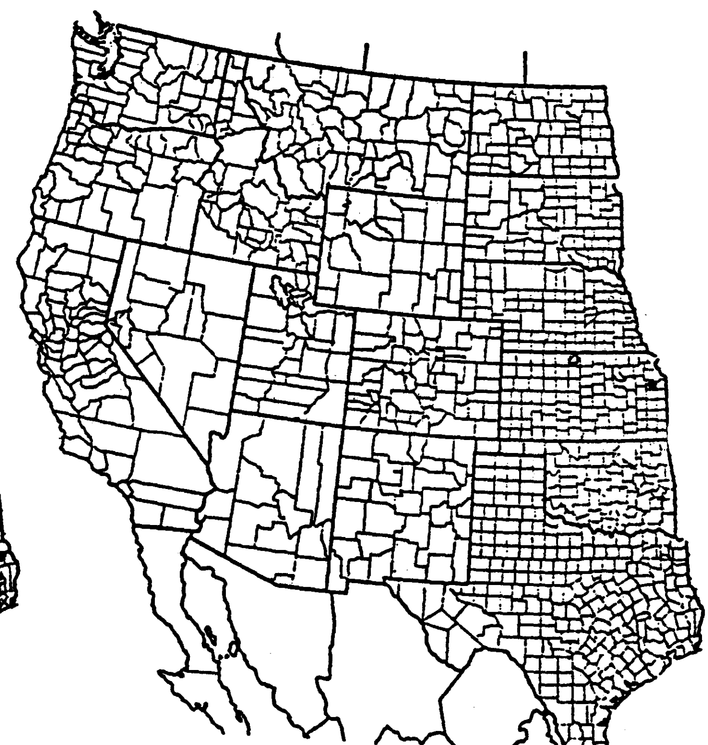
Erynnis pacuvius

Erynnis zarucco

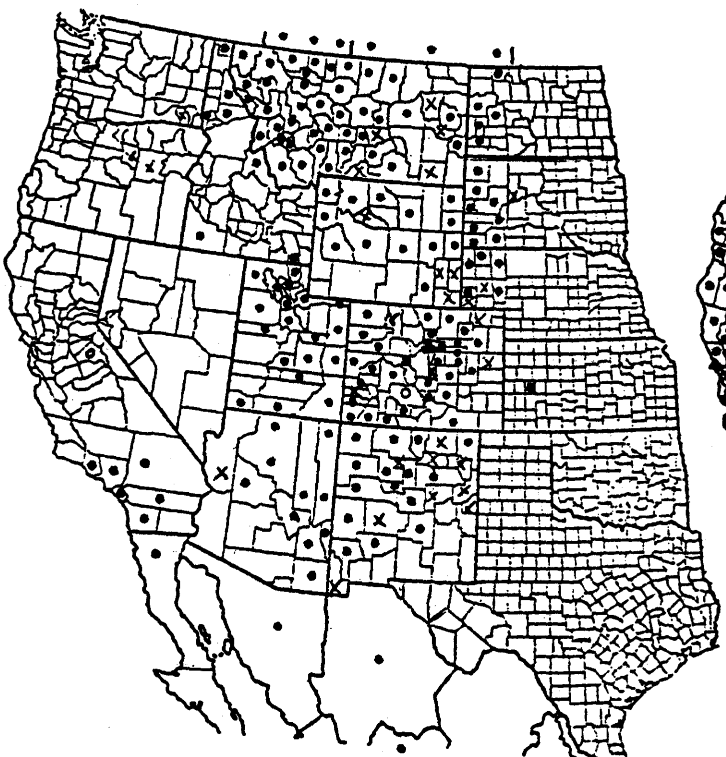


Erynnis funeralis

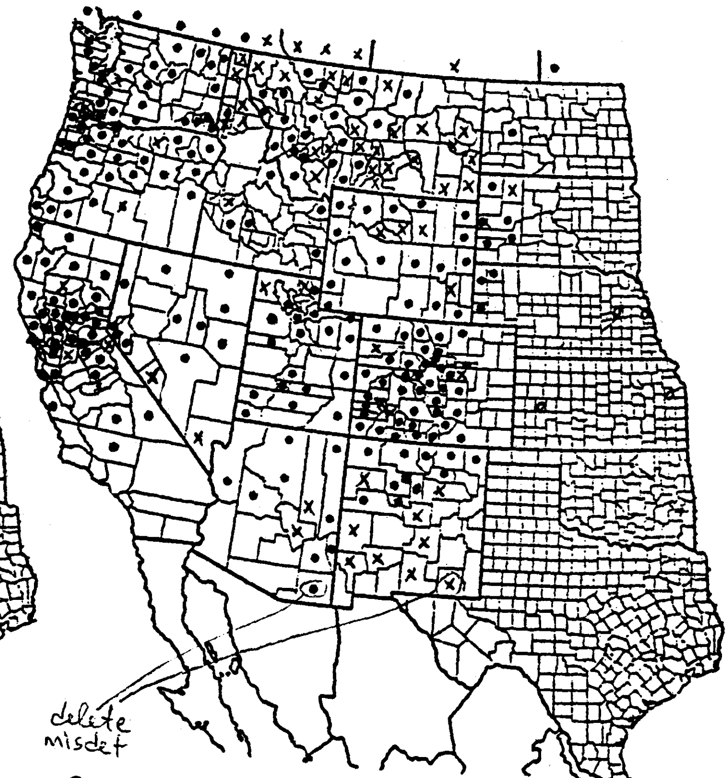
Erynnis baptisiae



Erynnis lucilius

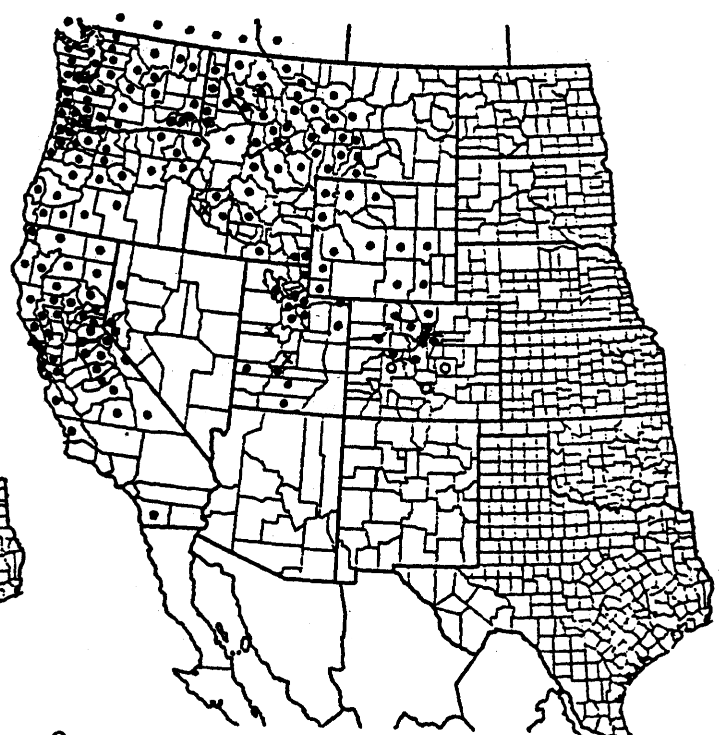


Erynnis afranius

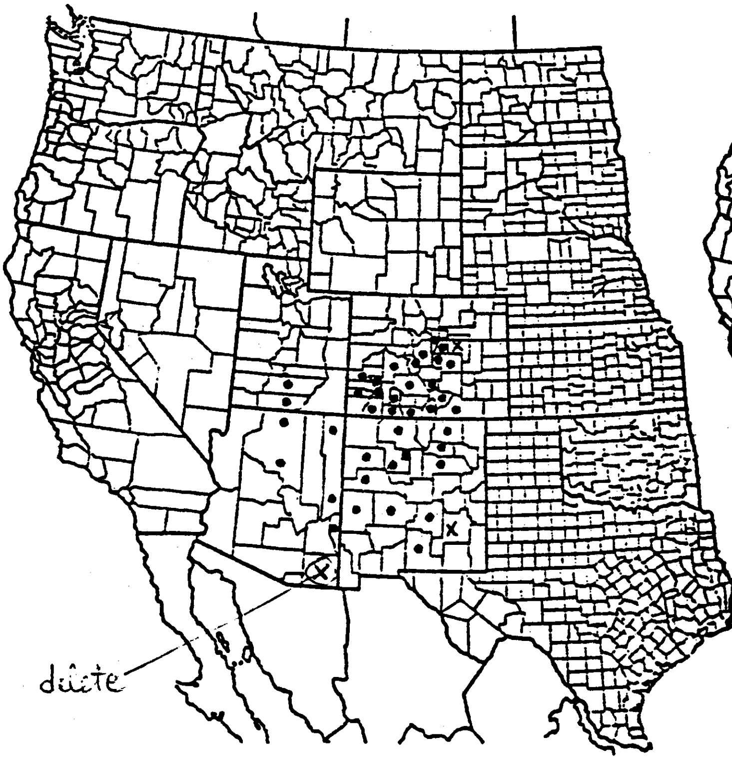


Erynnis persius

Pyrgus centaureae



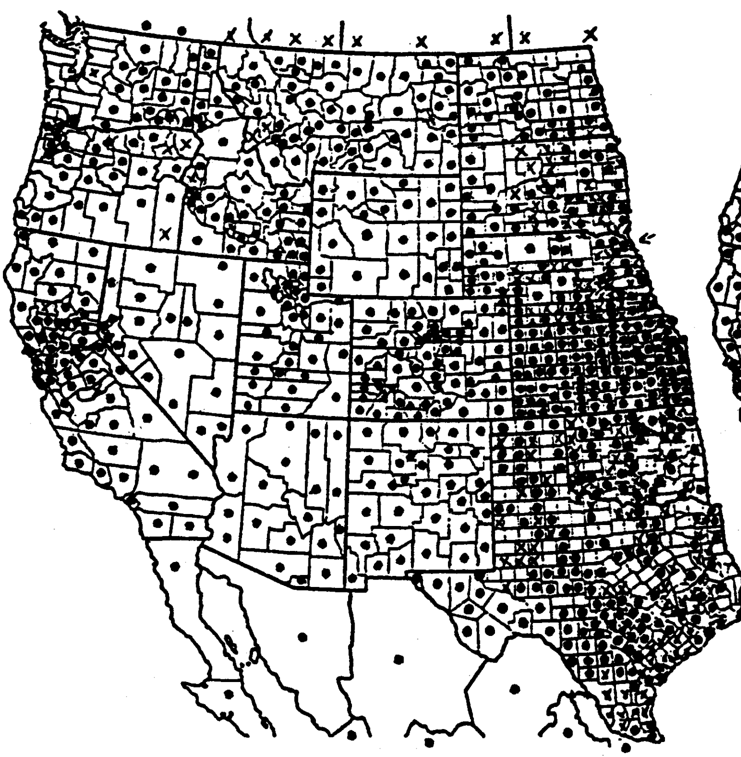
Pyrgus ruralis



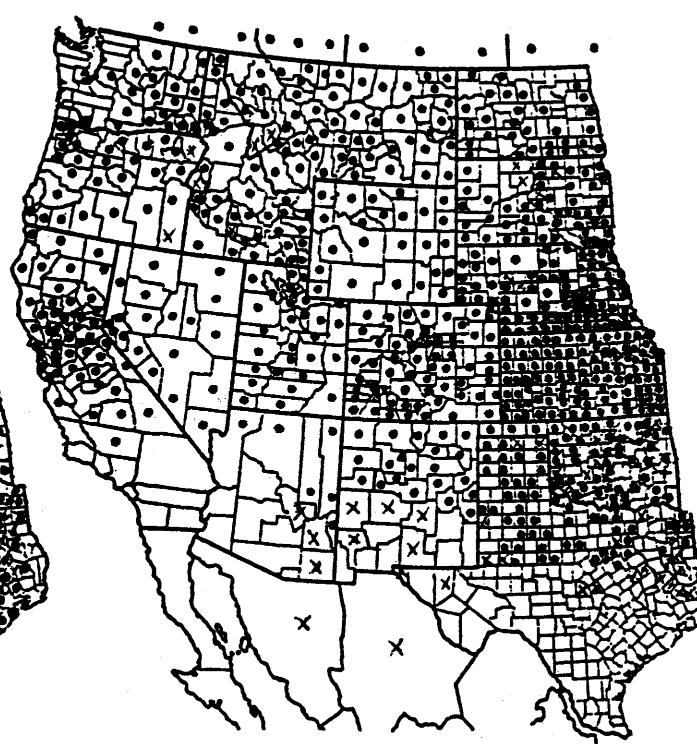
Pyrgus xanthus

Pyrgus scriptura

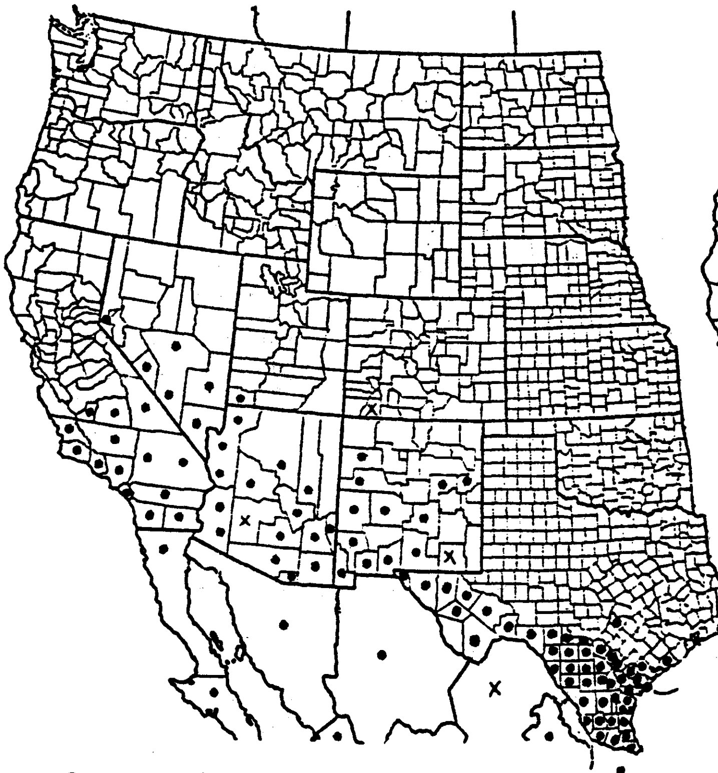
Pyrgus adepta - see page 259



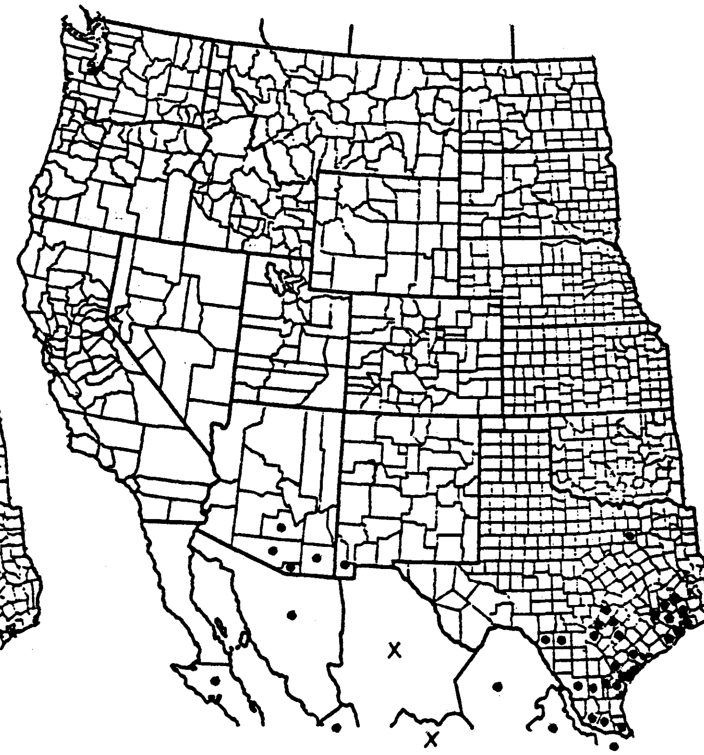
Pyrgus communis COMPLEX



Pyrgus communis communis

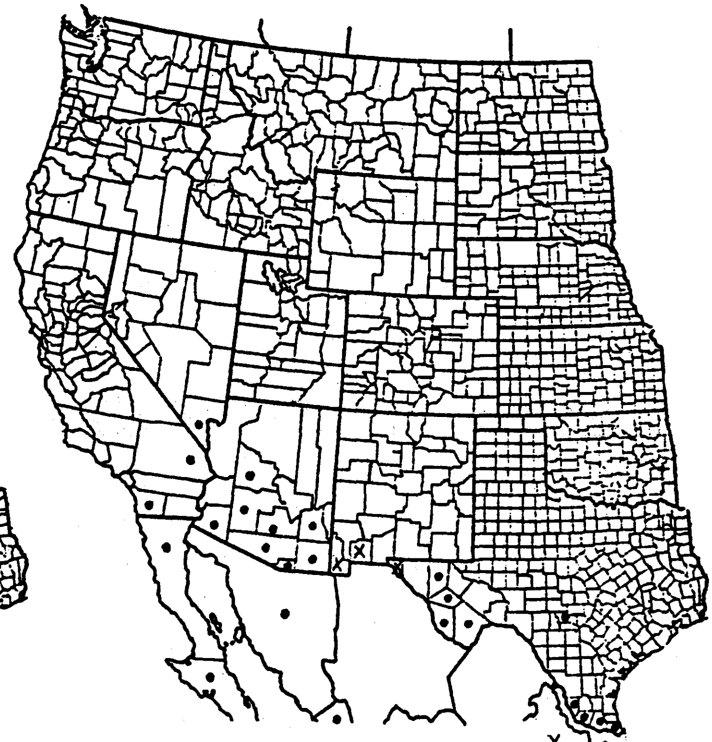


Pyrgus albescens

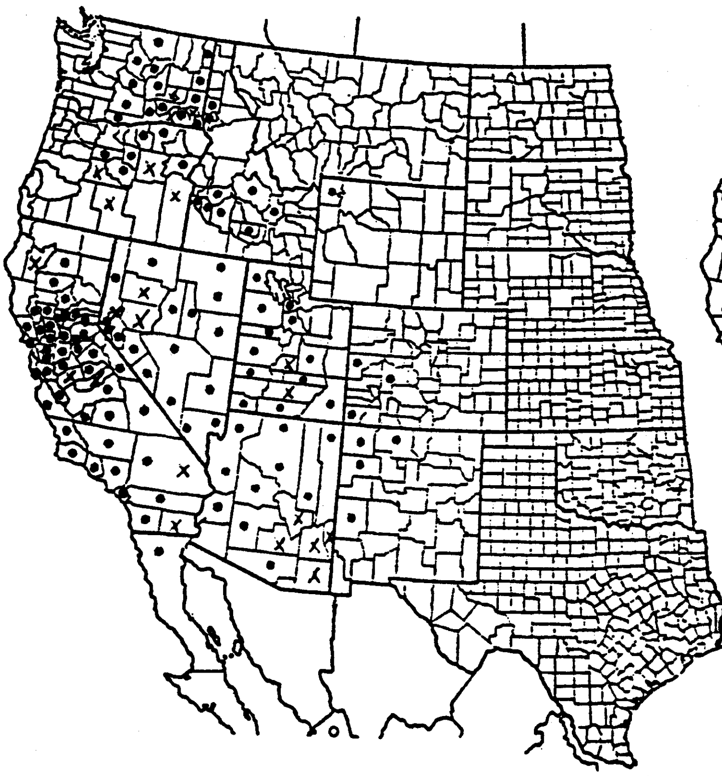


Pyrgus oileus

Pyrgus philetas



Heliopetes domicella



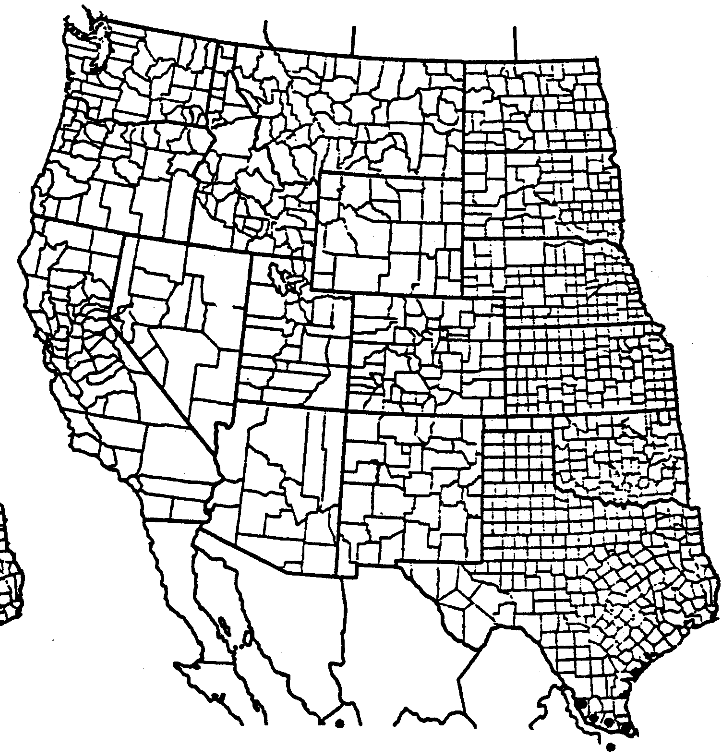
Heliopetes ericetorum

Heliopetes macaira

Heliopetes laviana

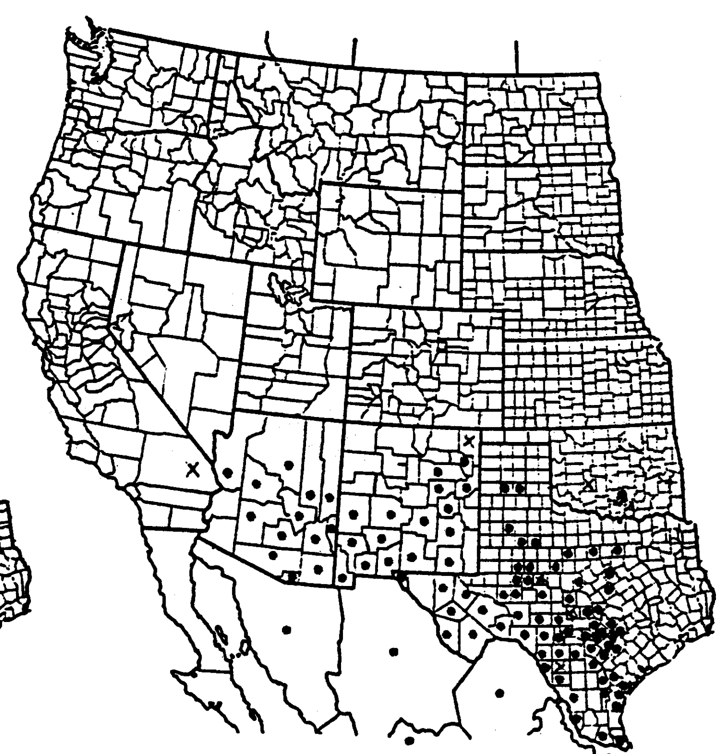
Heliopetes cnemus

Heliopetes sublinea



Heliopetes arsalte

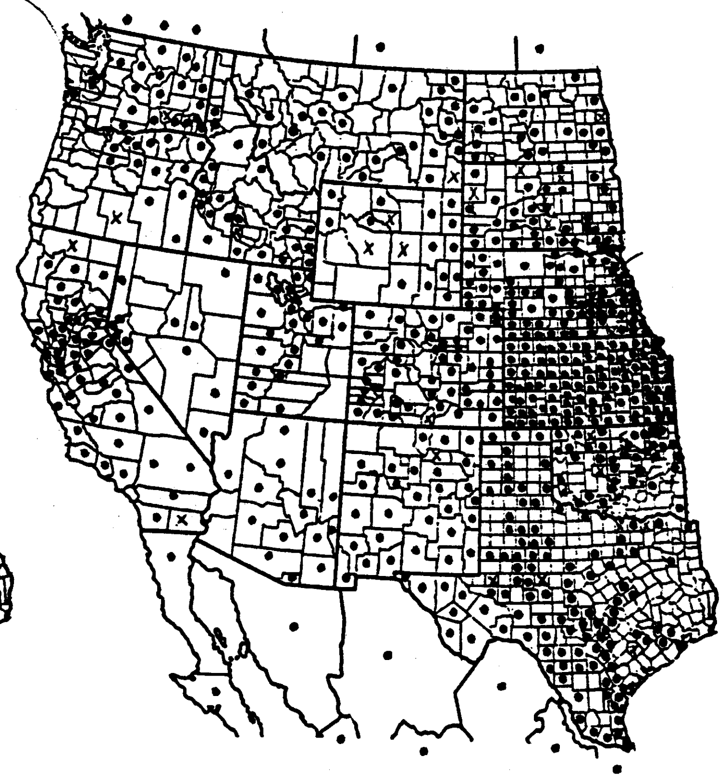
Heliopetes alana



Celotes nessus

delete per JH

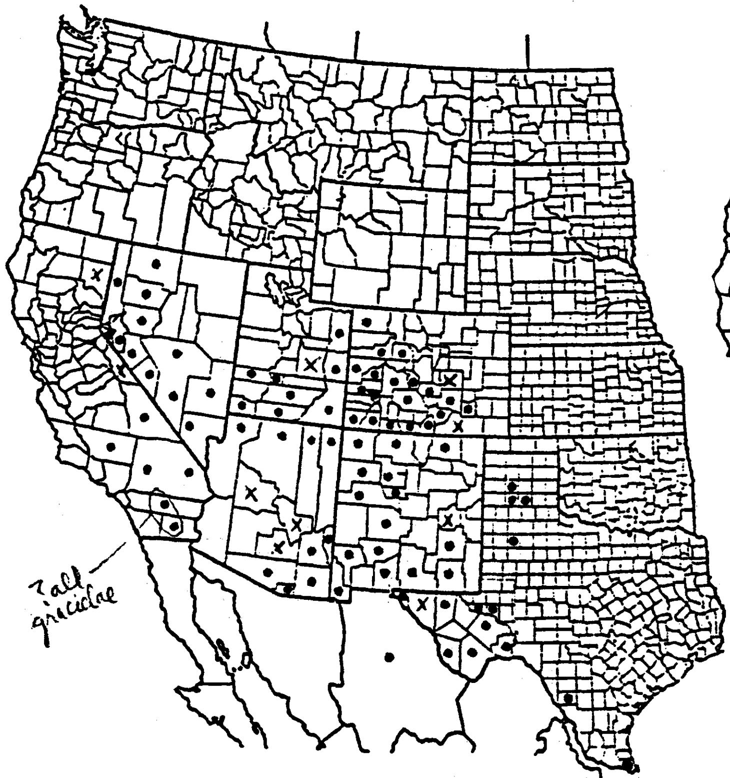
Celotes limpia



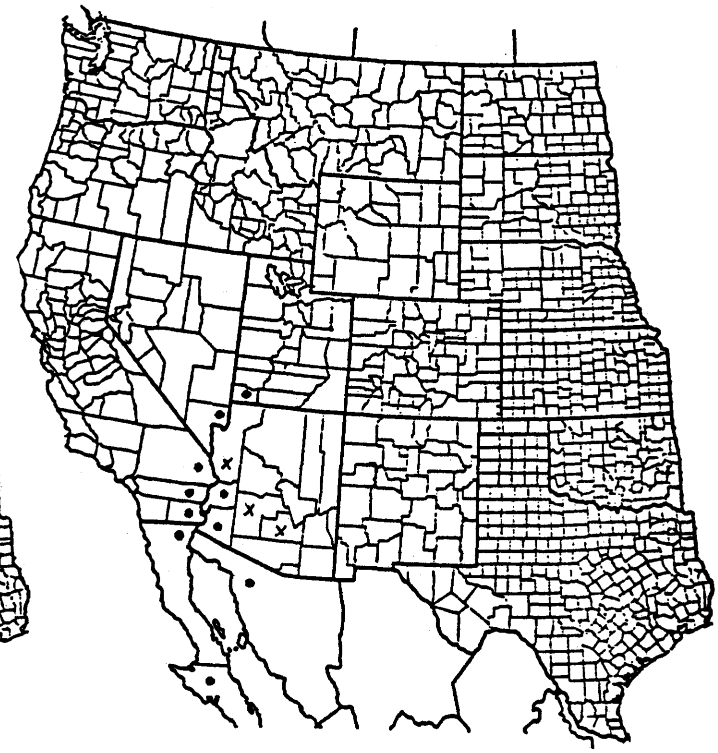
Pholisora catullus

Pholisora mejicanus

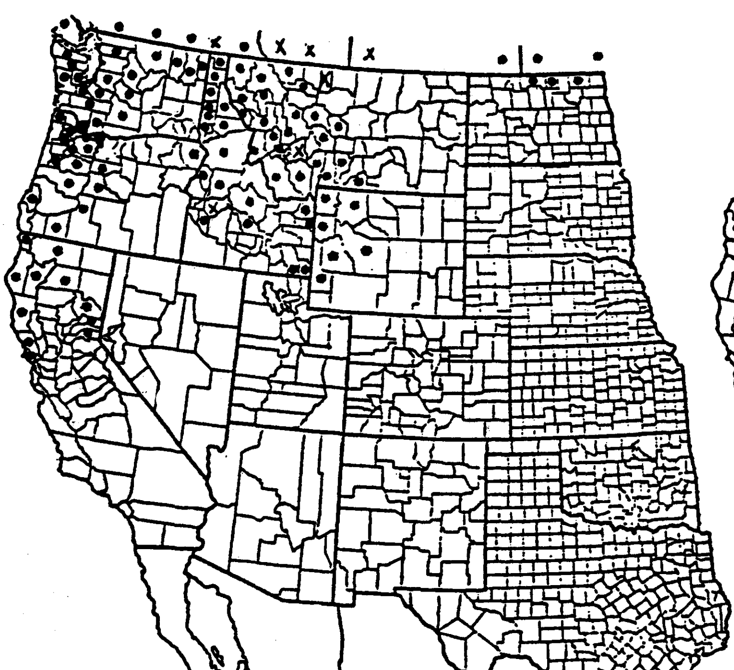
Hesperopsis libya



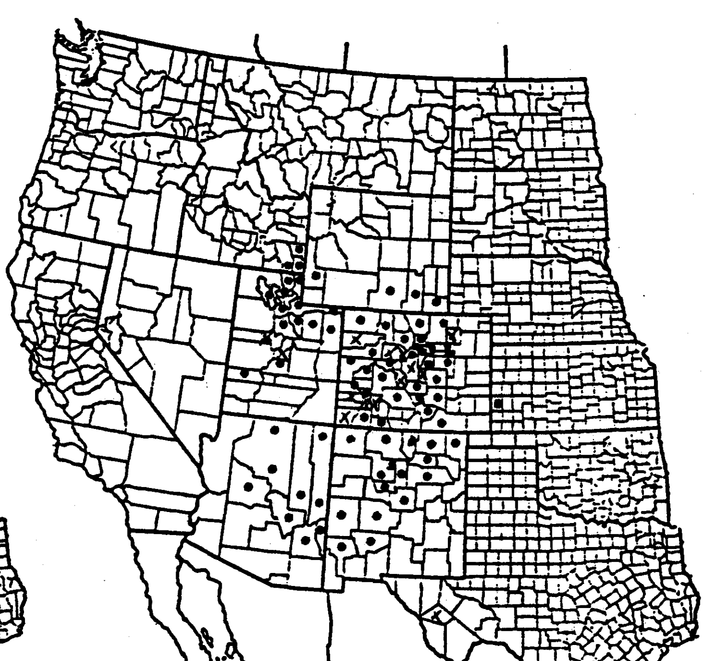
Hesperopsis alpheus



Hesperopsis gracielae



Carterocephalus palaemon



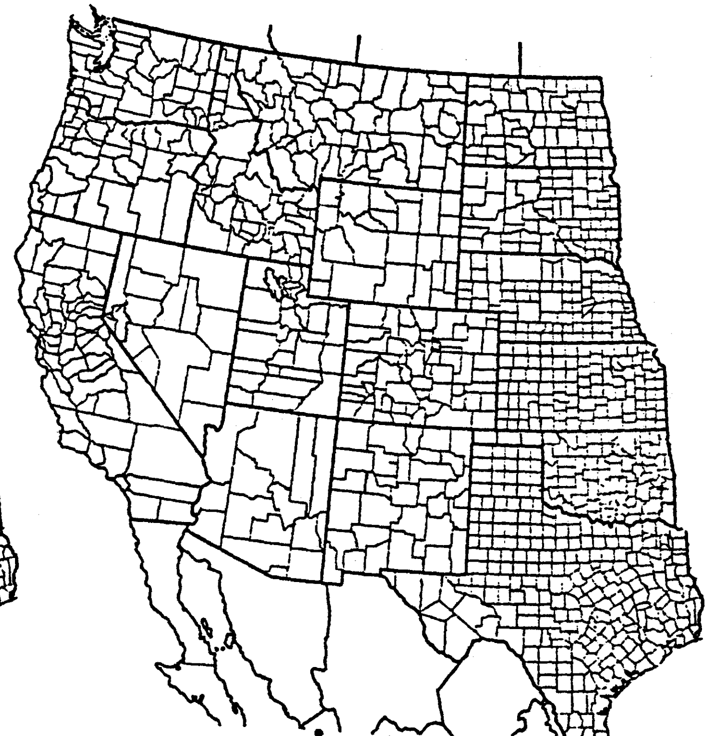
Piruna pirus

Pinuna cyclosticta

Pinuna brunnea
Pinuna aea △

Pinuna polingii

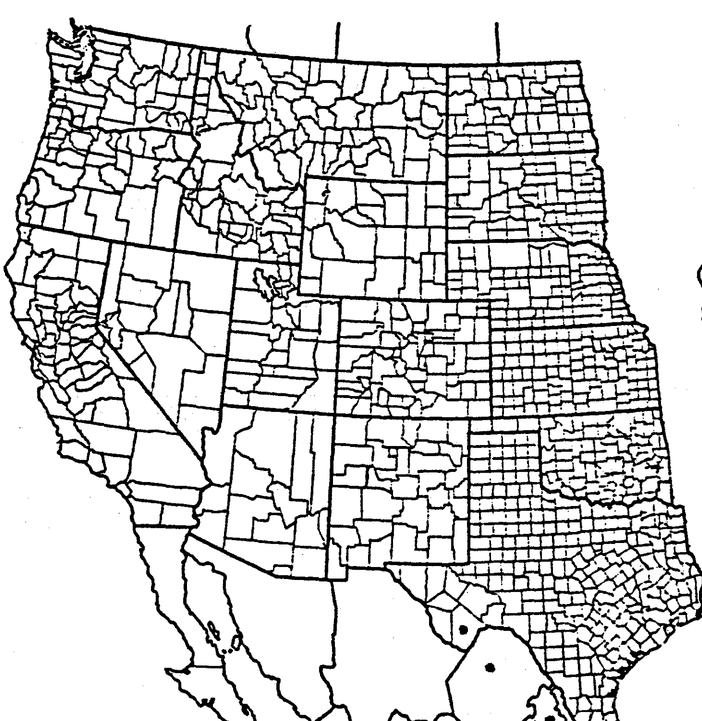
B. Weber
delete



Pinuna maculata

Piruna cingo (=mexicana)

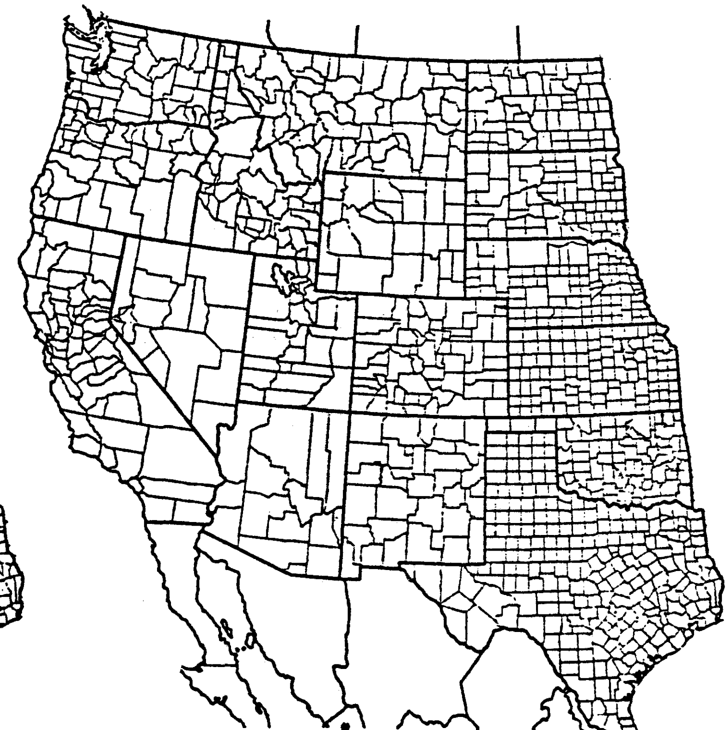
Piruna microsticta



Piruna haferniki

Piruna sina

"Piruna" inimica ? Poanes - see p. 81
Piruna millerorum △

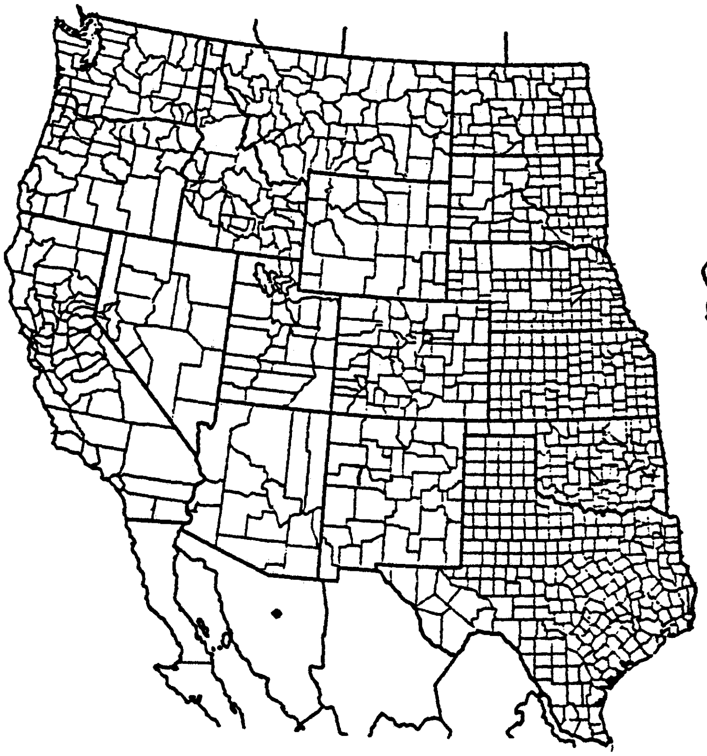


Piruna gyrans

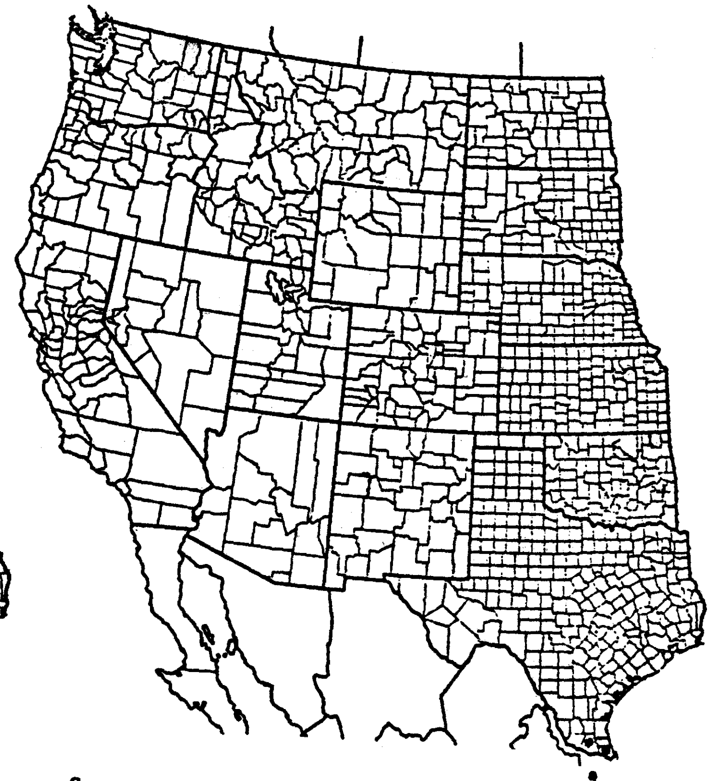
Dardarina dardaris

Piruna roeveri - TL COAH (fide HAF '93)

Dalla faula

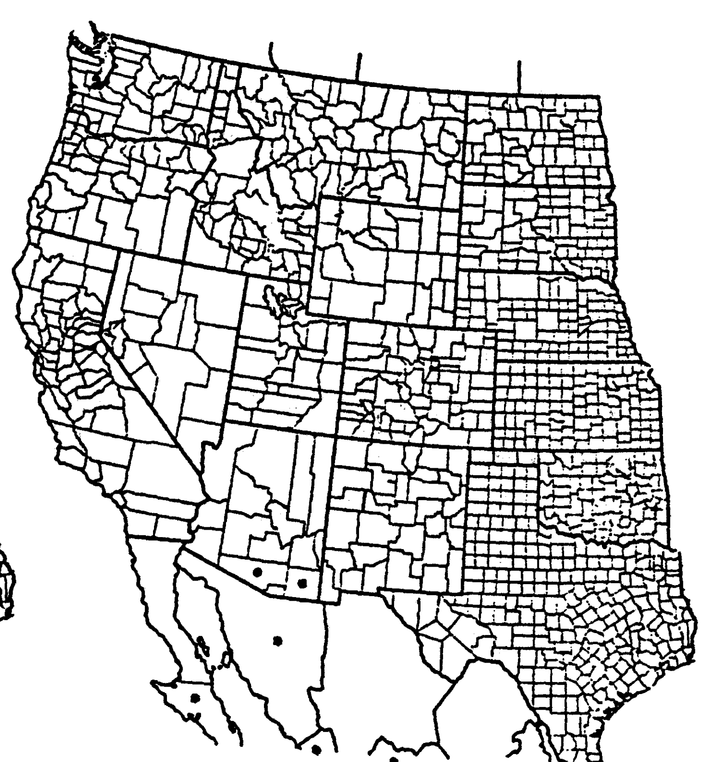


Dalla dividuum



Synapte malitiosa

Synapte salenus



Synapte syraces (incl shiva)

ADW sez plot them separately.
Both: SIN, NAY, COL, MICH.

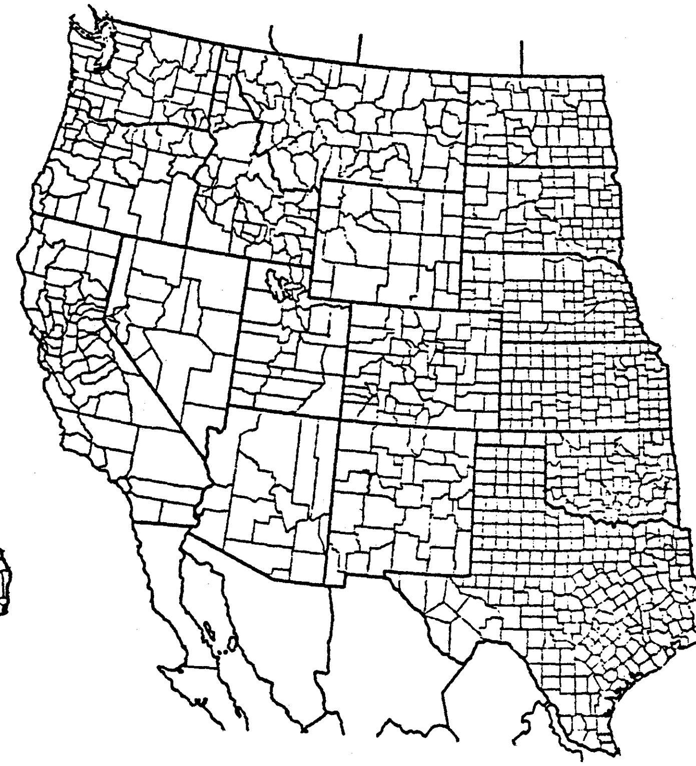
Anthoptus epictetus

Corticea corticea

Vinius tryhana

Phenaeus covadonga

Callimormus saturnus

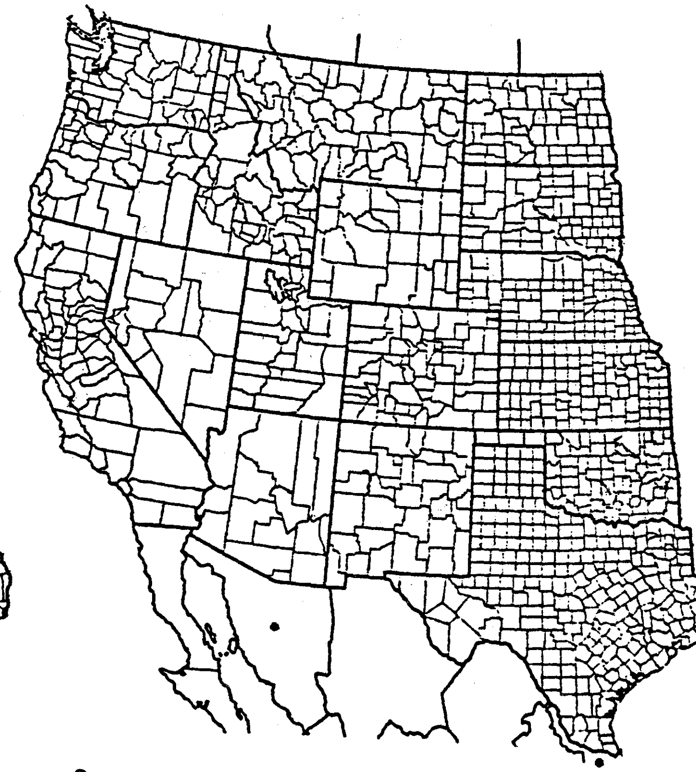


Virga clenchi

Eprius veleda

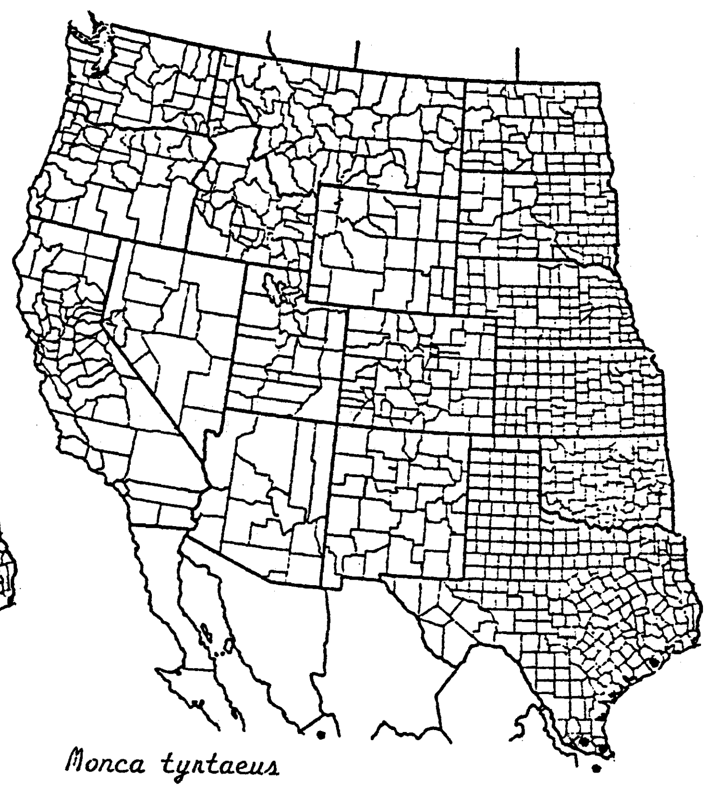
Mnasicles geta

Methionopsis ina



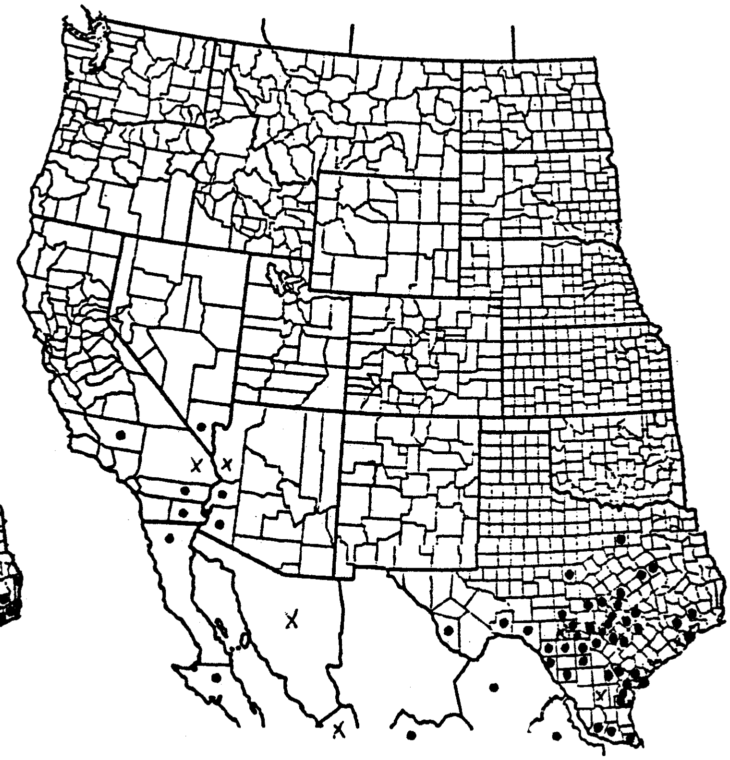
Repens repta (see "Amblyscirtes" florus)

Vidius perigenes



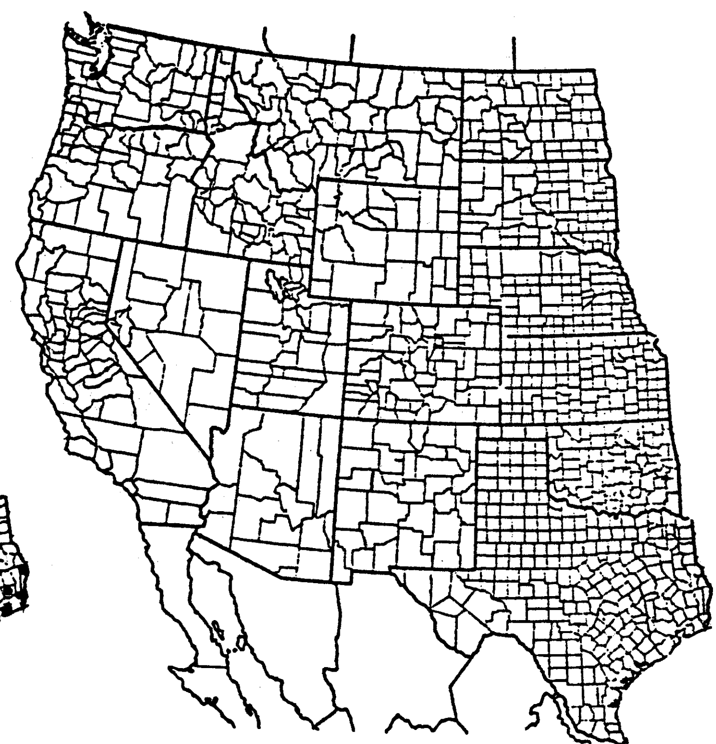
Monca tyrtaeus

Nastra l'herminier



Nastra julia

Nastra neamathla

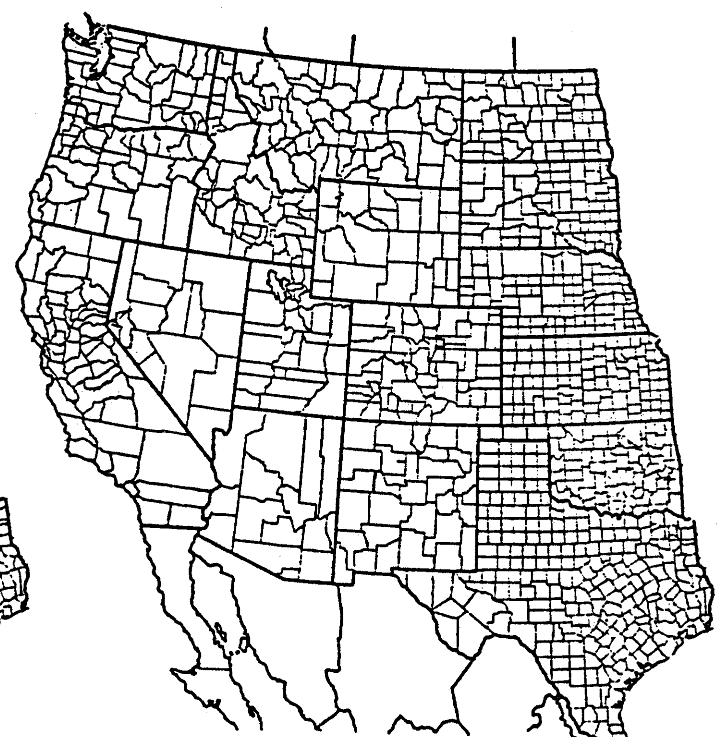


Nastra leucone
Nastra hoffmanni △
(not north of Guerrero - ADW)

~~Nastra~~ (Anthoptus) insignis

Cymaenes odilia trebius

Cymaenes fraus



Vehilius illudens

Vehilius inca

Mnasilus allubitus
mnasitheus chrysophrus (Mabille) △

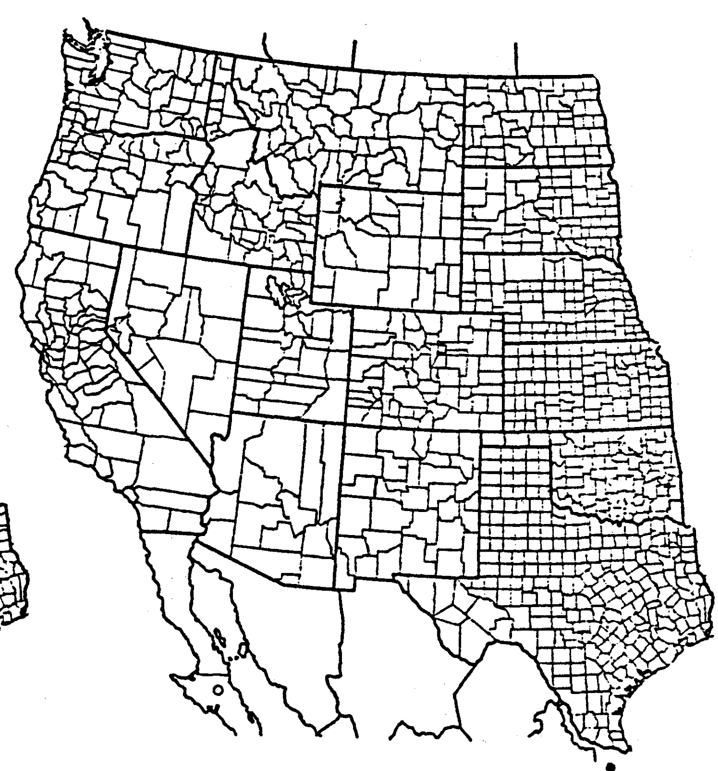
Remella (=~~Moeris~~) remus

Remella (=~~Moeris~~) vopiscus

~~Remella~~ Moeris striga stroma

Remella (=~~Moeris~~) rita

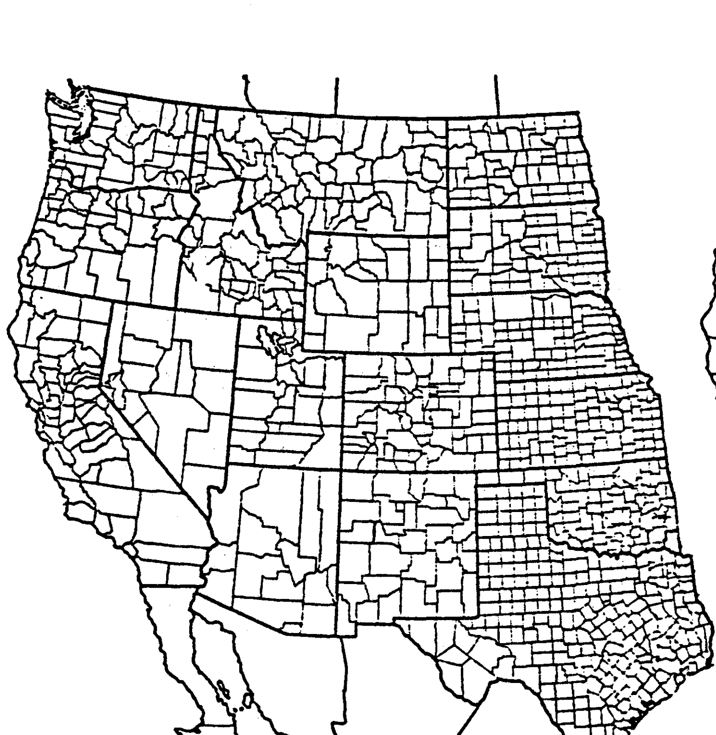
~~Remella~~ Moeris hyagris



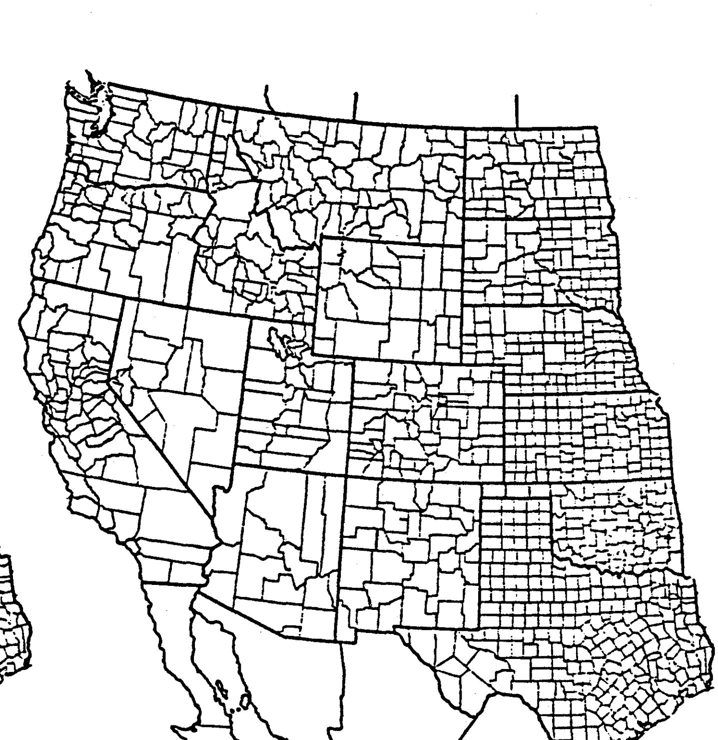
Parphorus decorus

Lerema accius

Lerema ancillaris (incl liris)

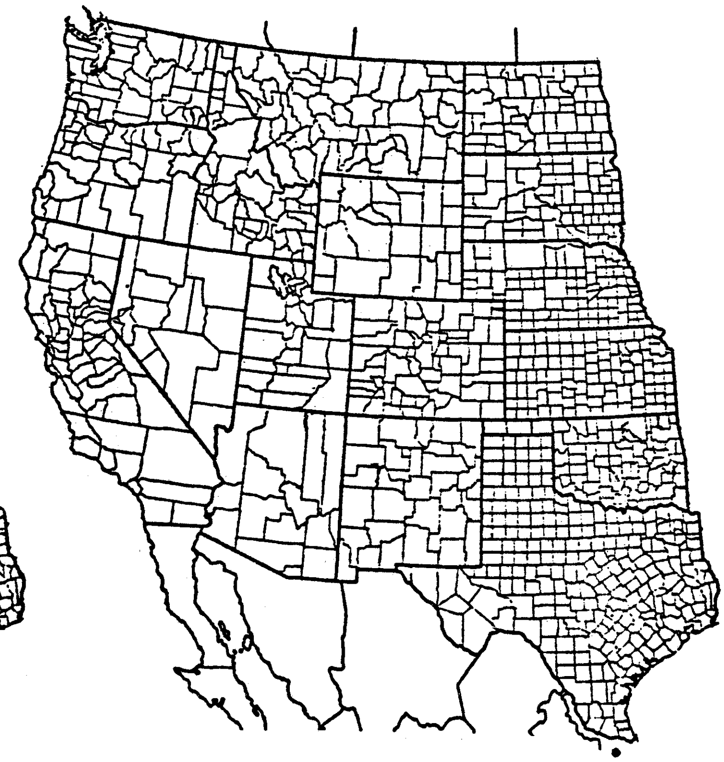


Monys valda



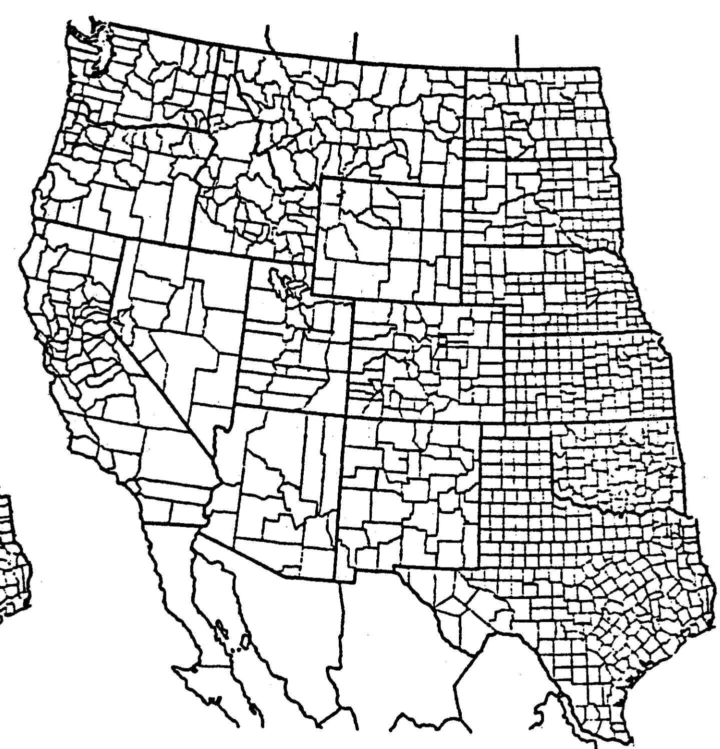
Vettius fantasos

Vettius onaca [= fantasos fide ADW]



Thoon modius

Naevolus naevolus

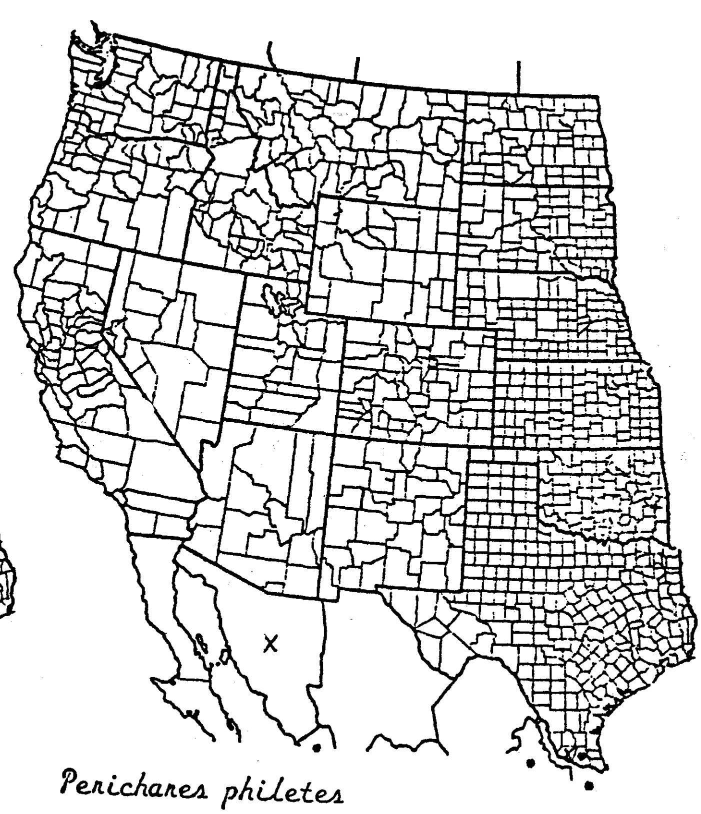


Naevolus orius

Tromba xanthura

Synale cynaxa

Carystoides lila



Perichares philetes

Orses cynisca

Lycas argentea

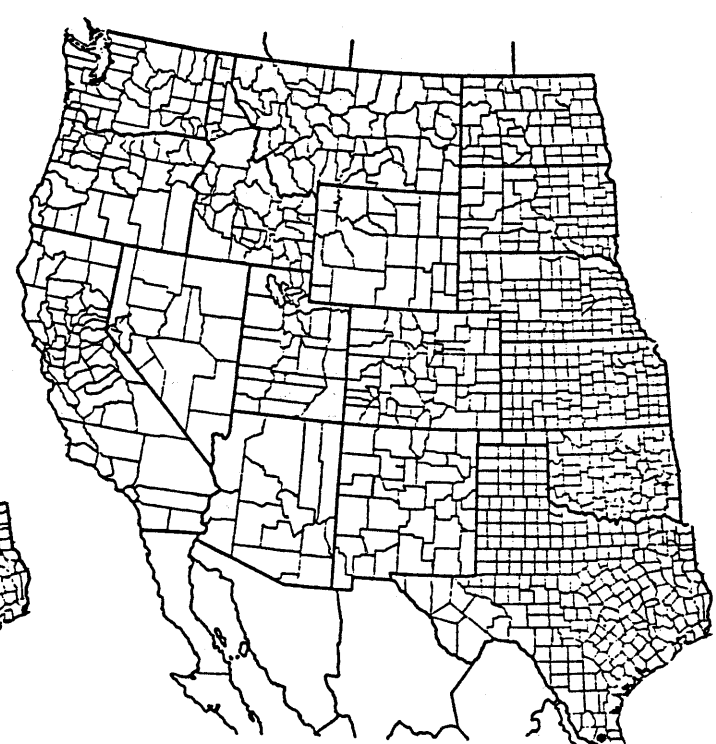
Quinta cannae

Rhinthon cubana osca

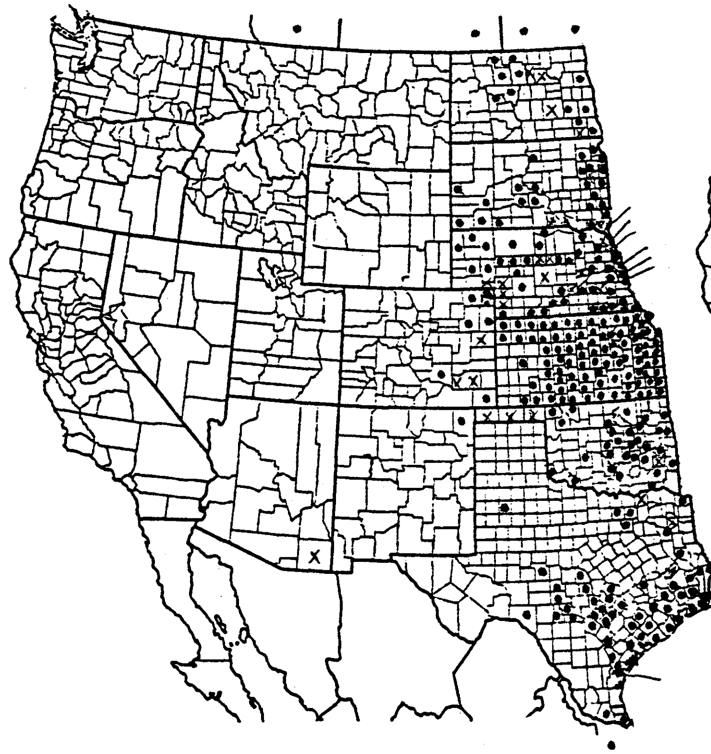
Decinea percosius

Decinea denison huasteca

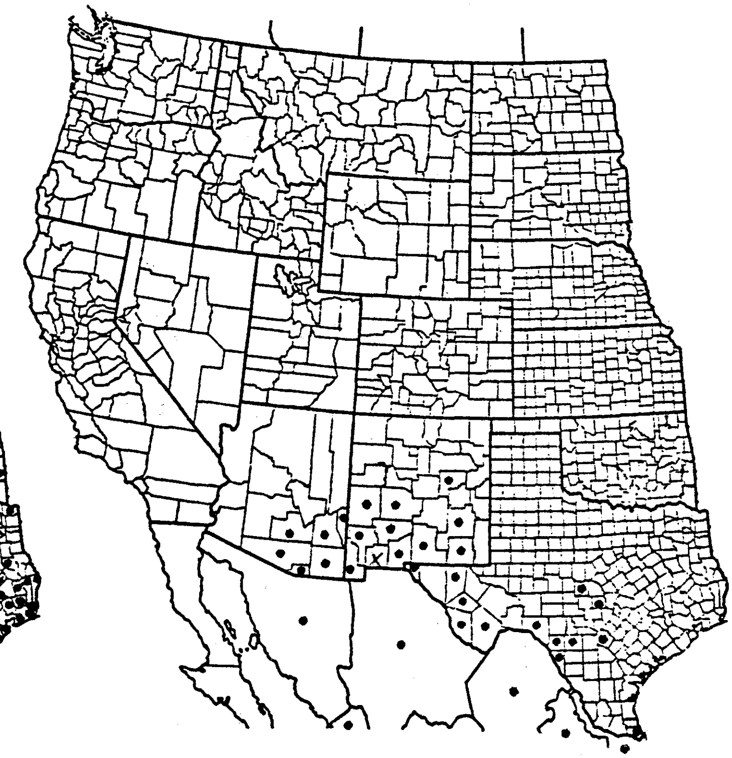
Orthos lycortas



Conga chydaea

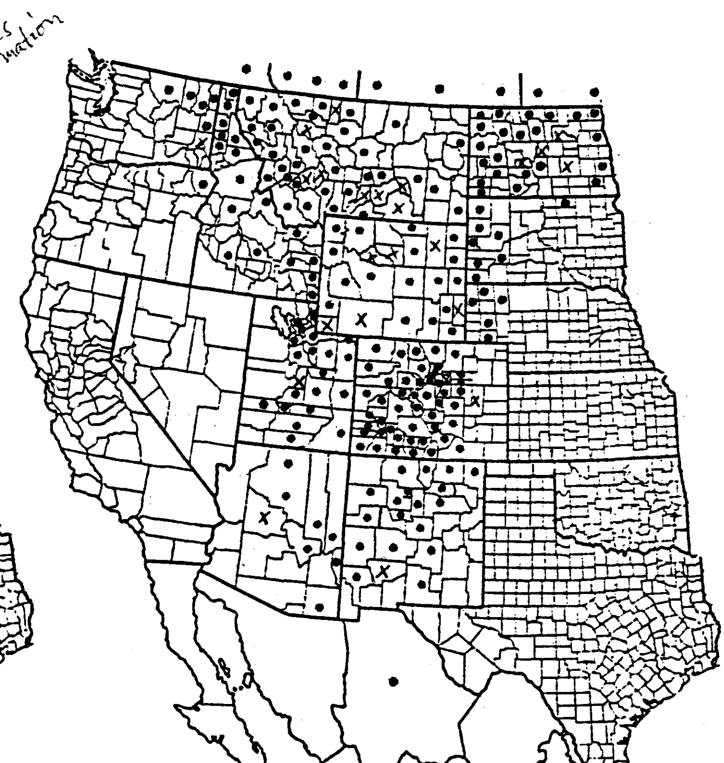


Ancyloxypha numitor

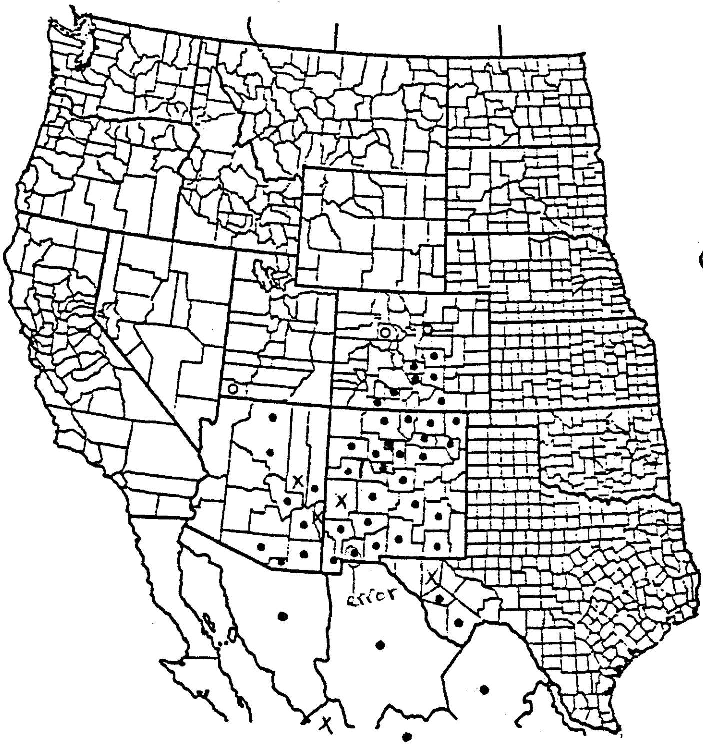


Ancyloxypha arene

Oarisn powesheik



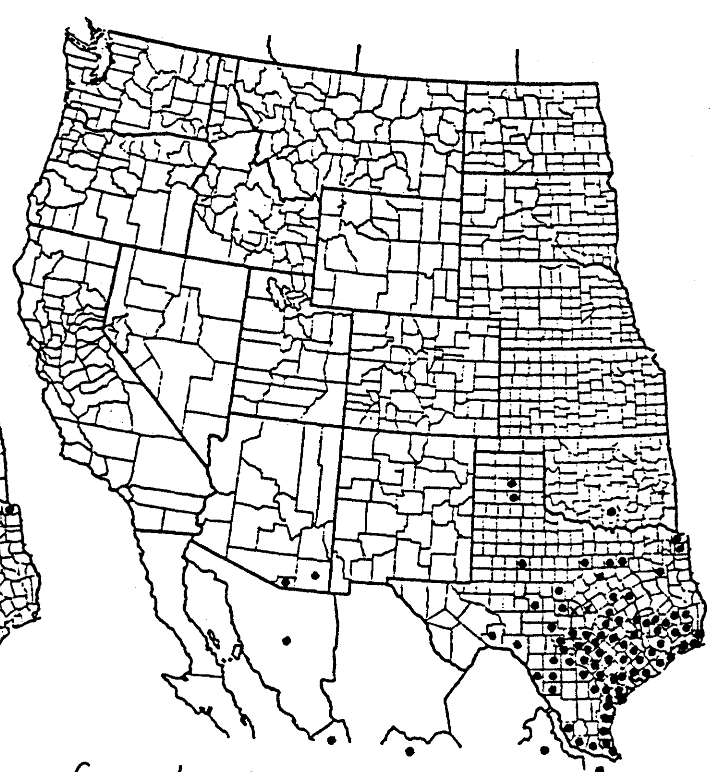
Oarisma garita



Oarisma edwardsii

Oarisma era

Copaeodes aurantiacus

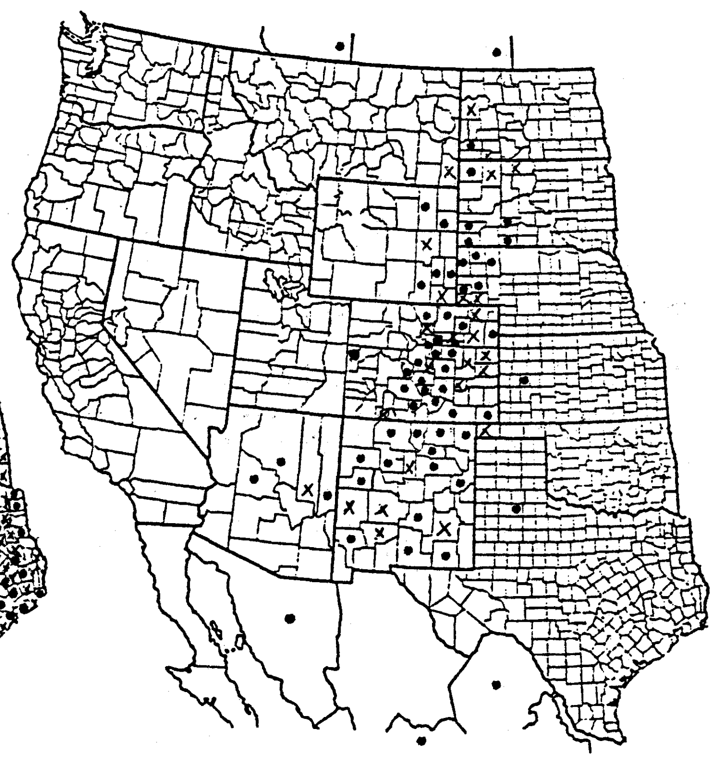


Copaeodes minimus

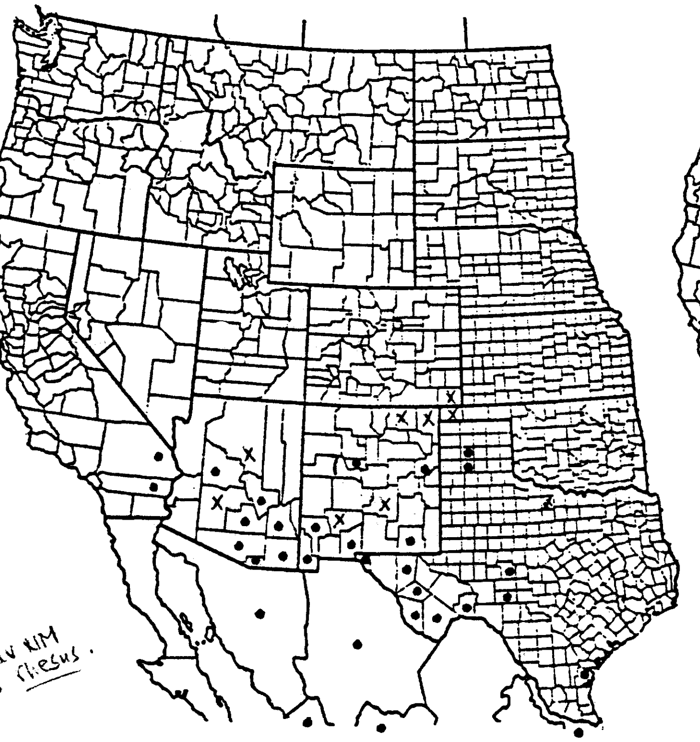
Adopaeoides prittwitzi

Thymelicus lineola

Hylephila phyleus

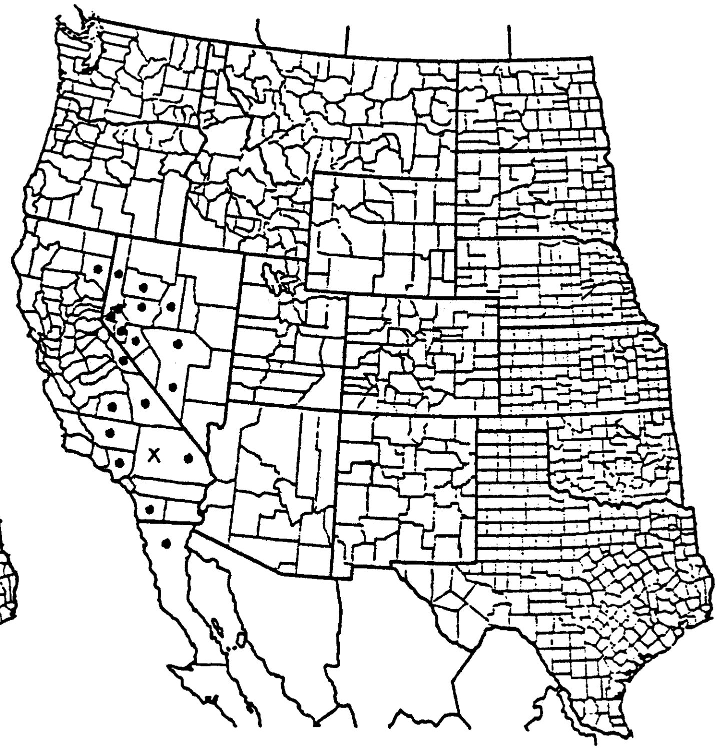


Yvretta rhesus



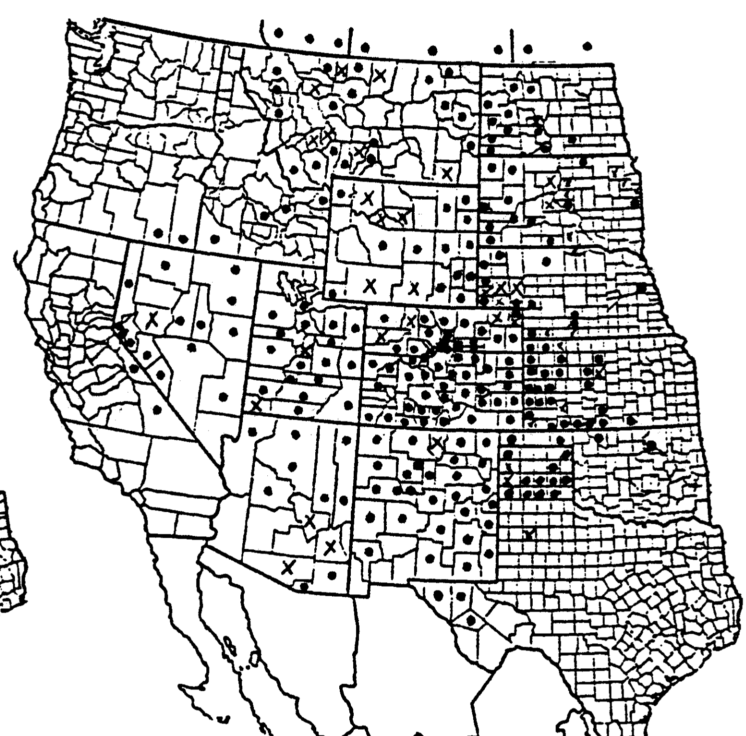
Chav NM is rhesus.

Yvretta carus (incl subreticulata)



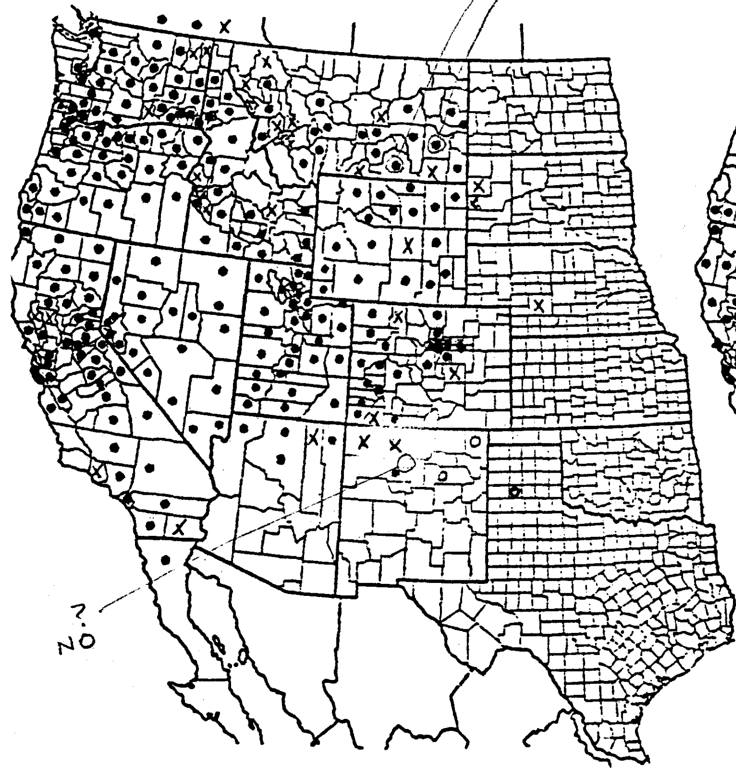
Pseudocopaeodes eunus

Stinga morrisoni

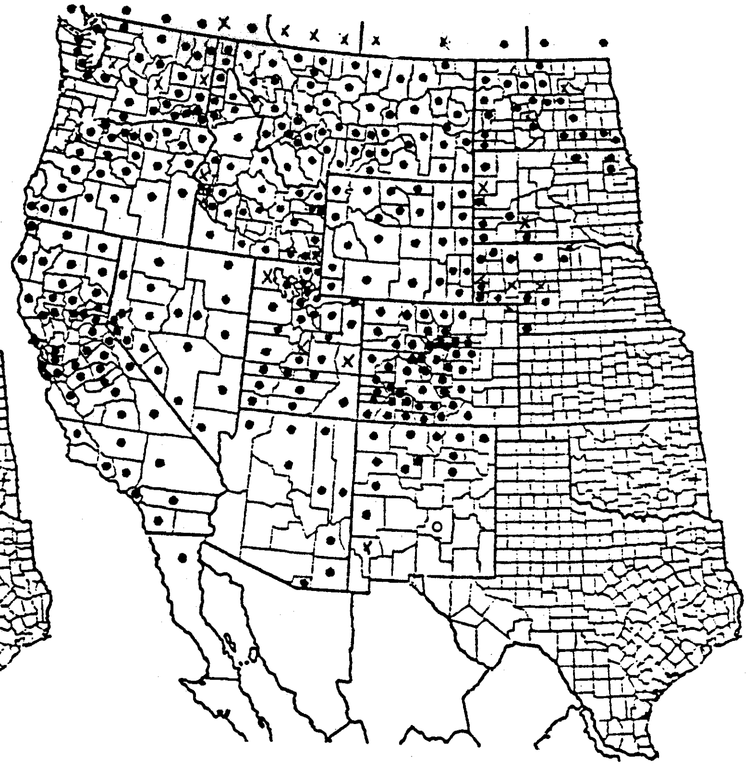


Hesperia uncas

misdets (comma)
[but both will be confirmed!]

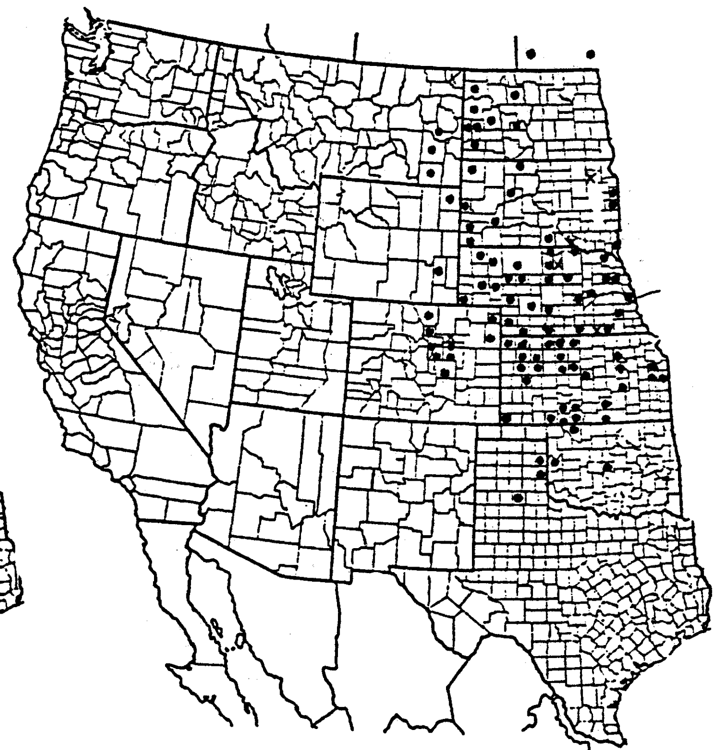


Hesperia juba



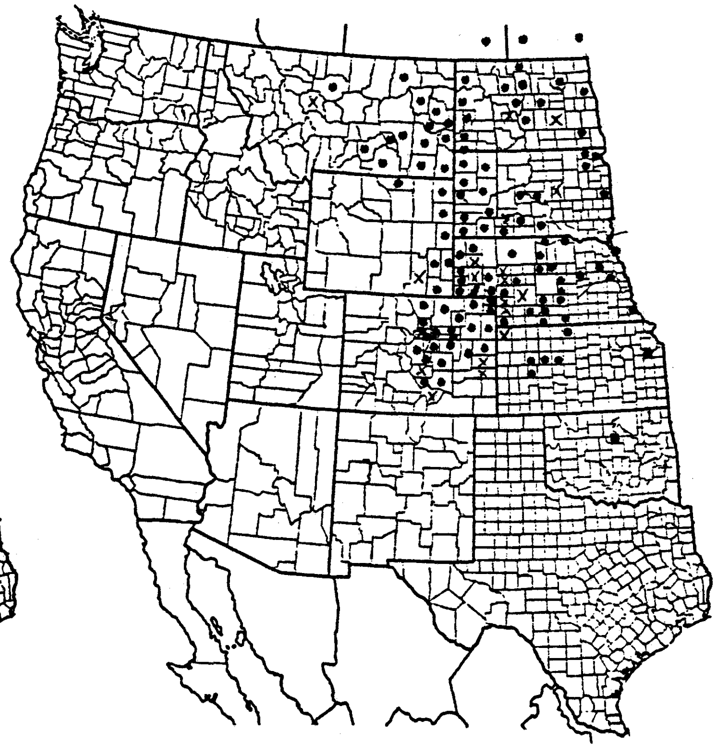
Hesperia comma COMPLEX

Hesperia woodgatei

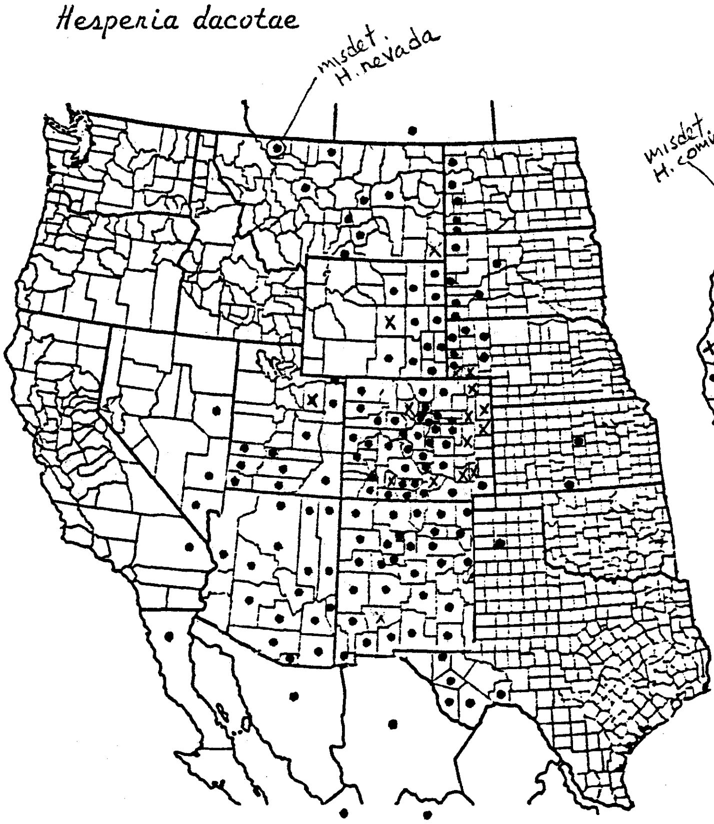


Hesperia ottöe

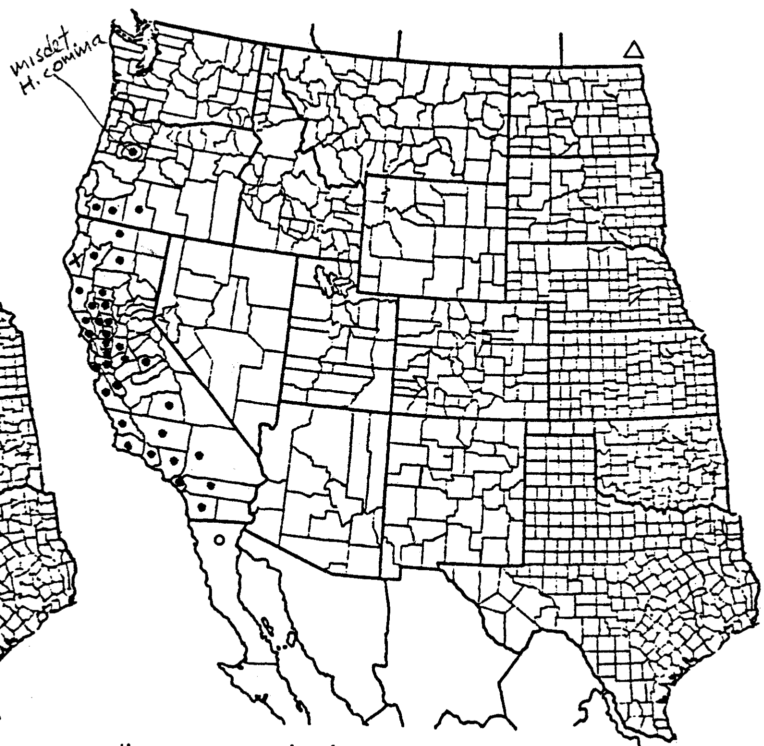
Hesperia dacotae



Hesperia leonardus (incl pawnee)



Hesperia pahaska



Hesperia columbia
Hesperia sassacus △

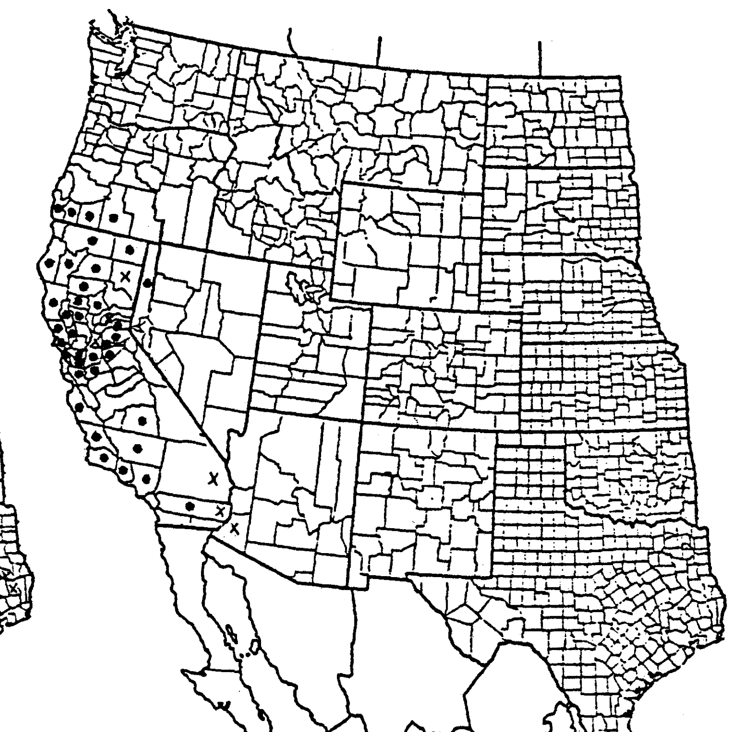
Hesperia metea

Hesperia viridis

Hesperia powelli

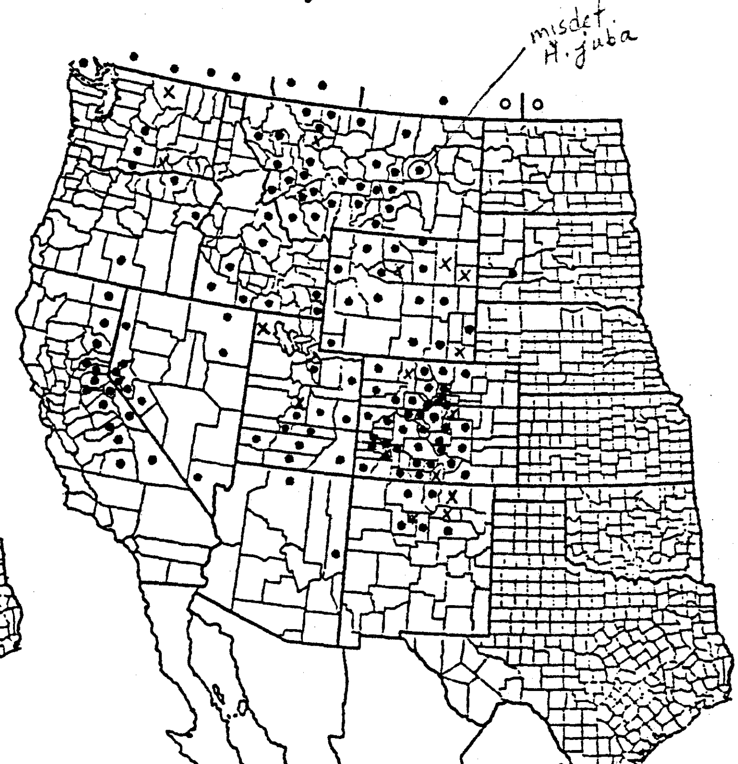
Hesperia attalus

Hesperia meskei

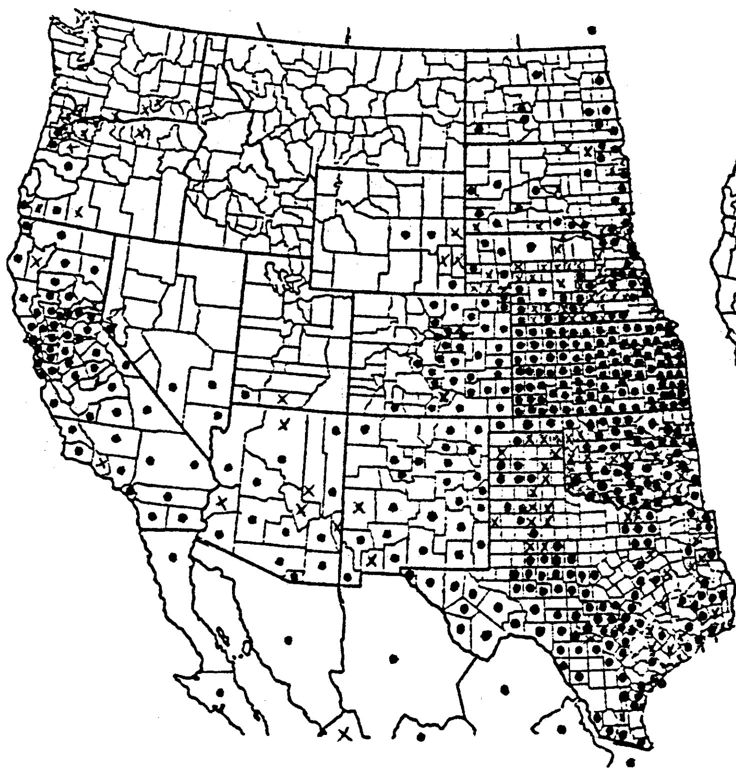


Hesperia lindseyi

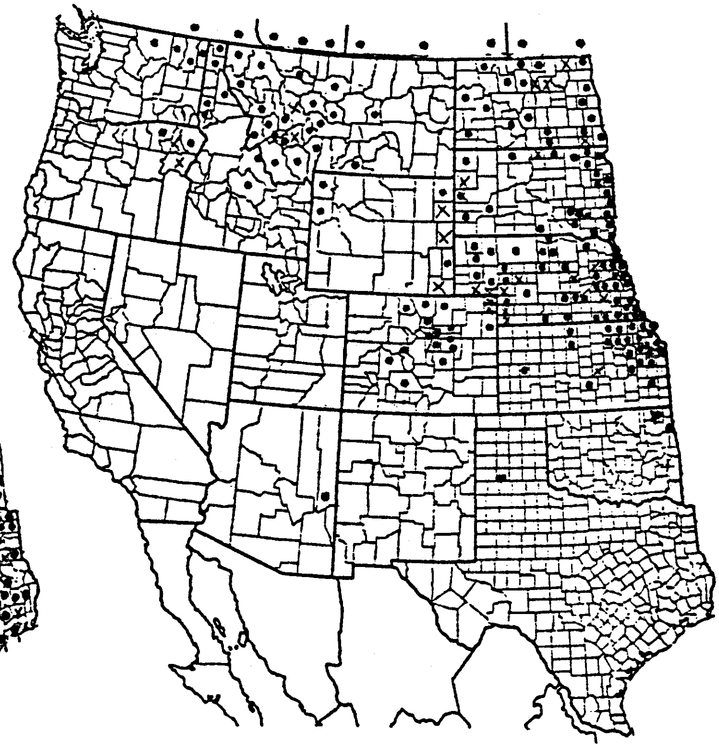
Hesperia miriamae



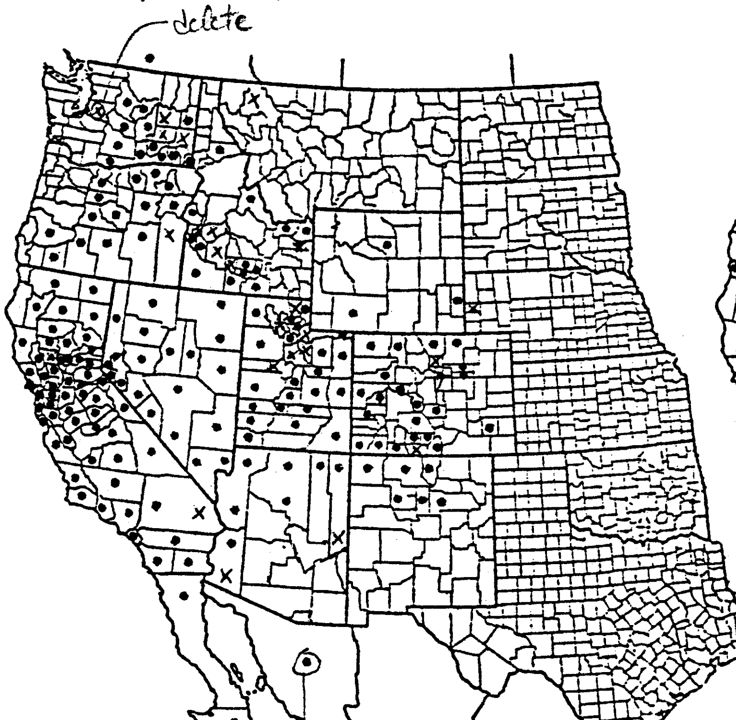
Hesperia nevada



Atalopedes campestris

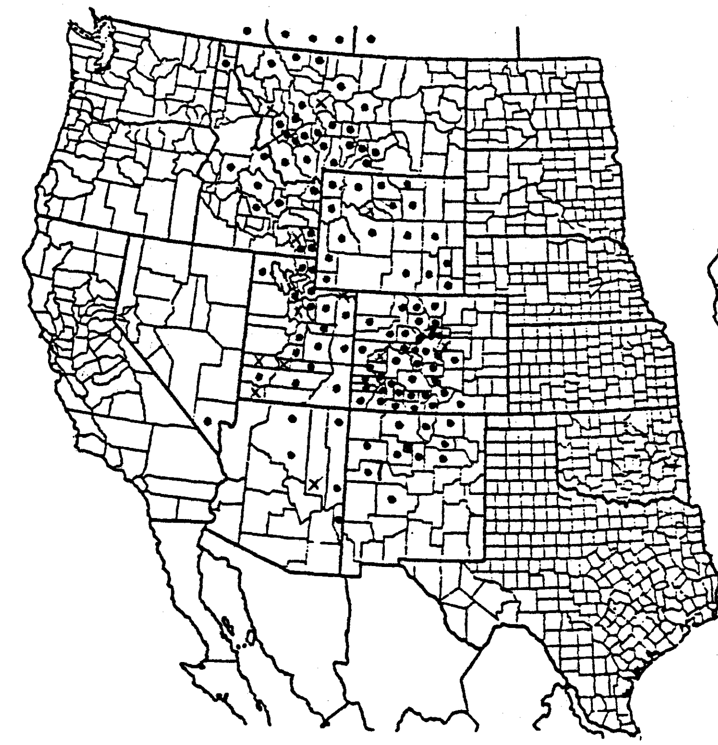


Polites peckius (=coras)

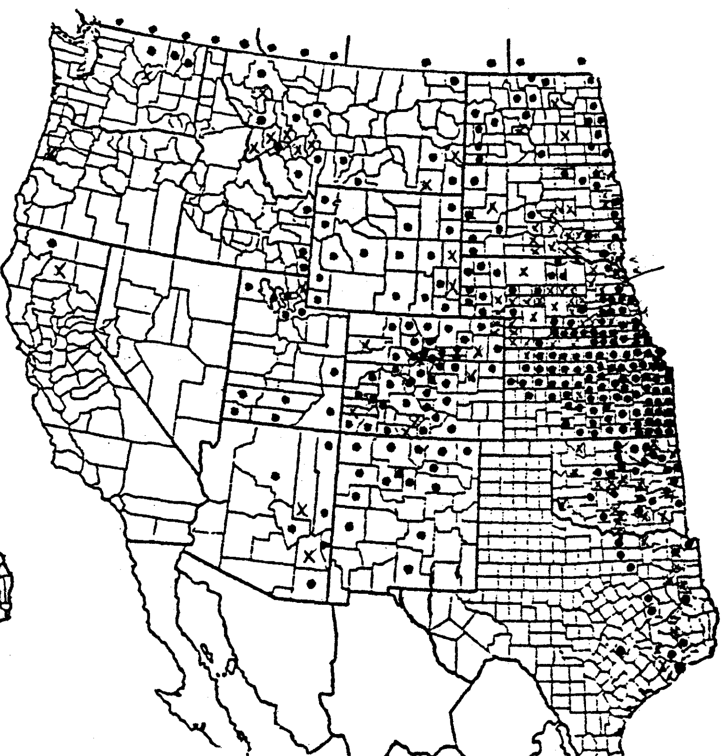


Polites sabuleti

Polites mardon



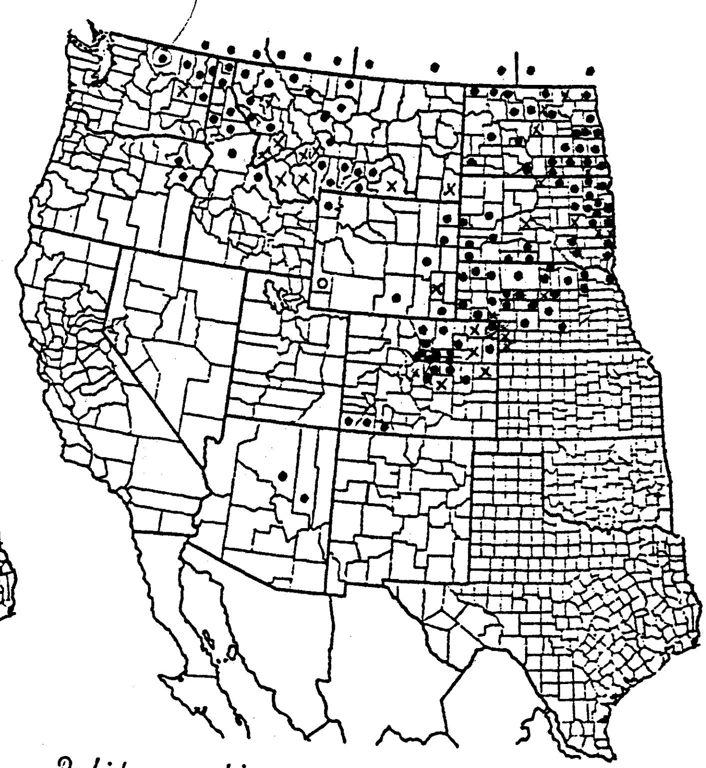
Polites draco



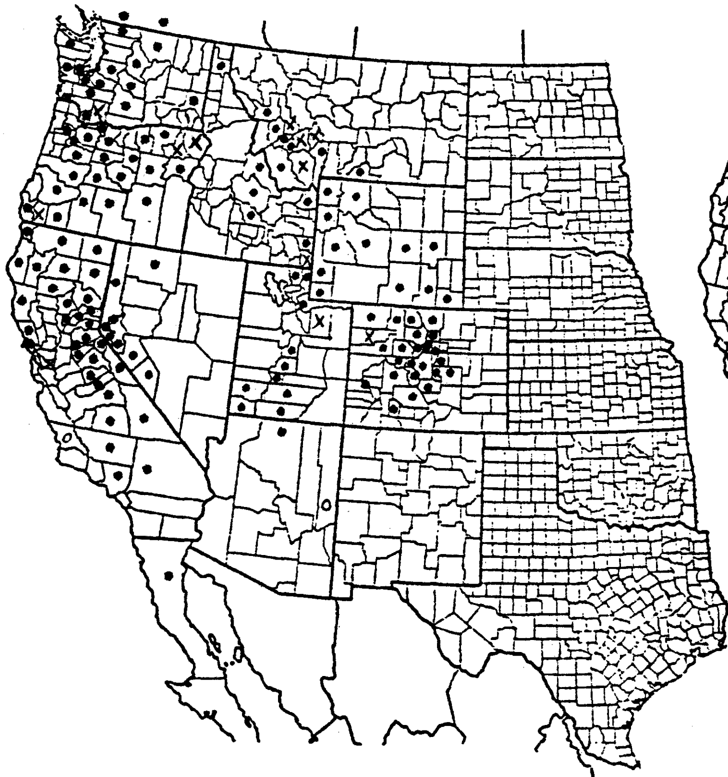
Polites themistocles

del-sonora f. JH.

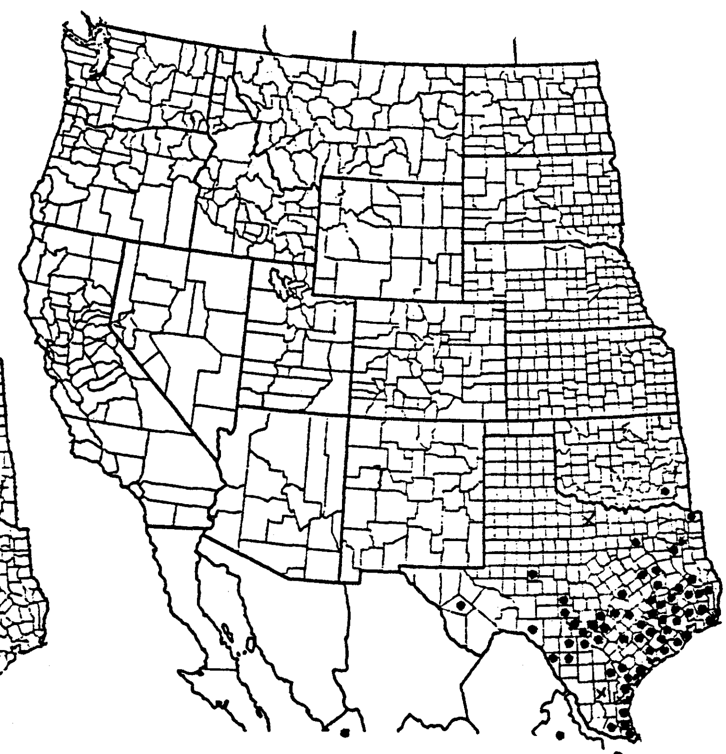
Polites origenes



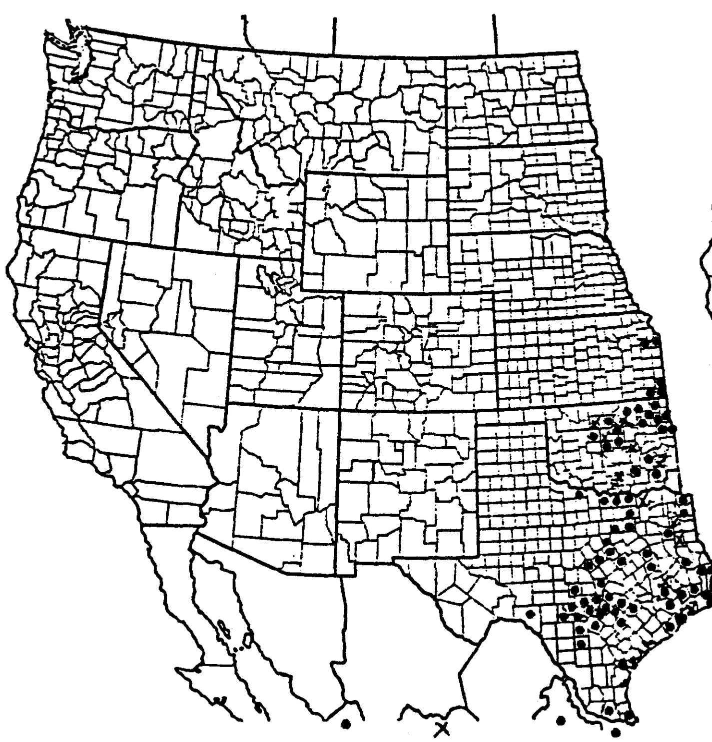
Polites mystic



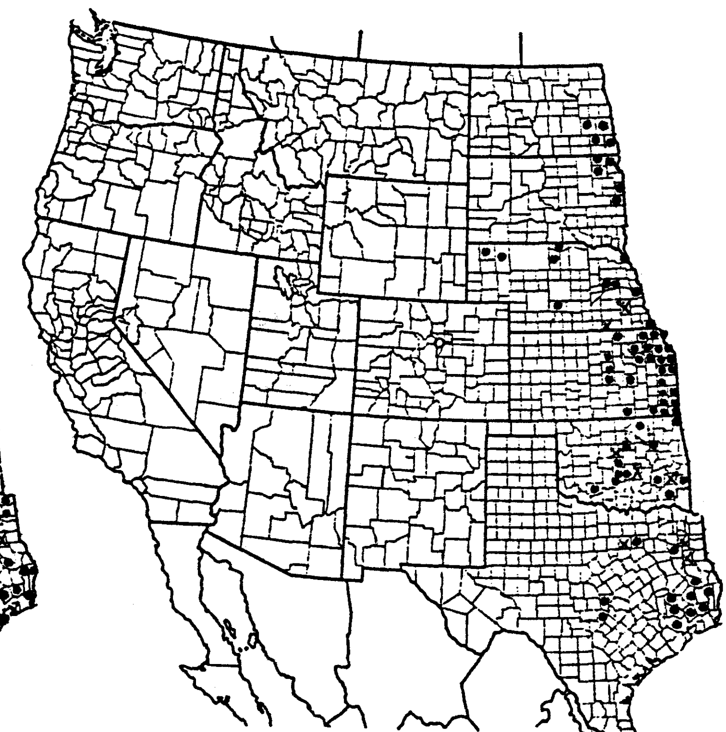
Polites sonora



Polites vibex

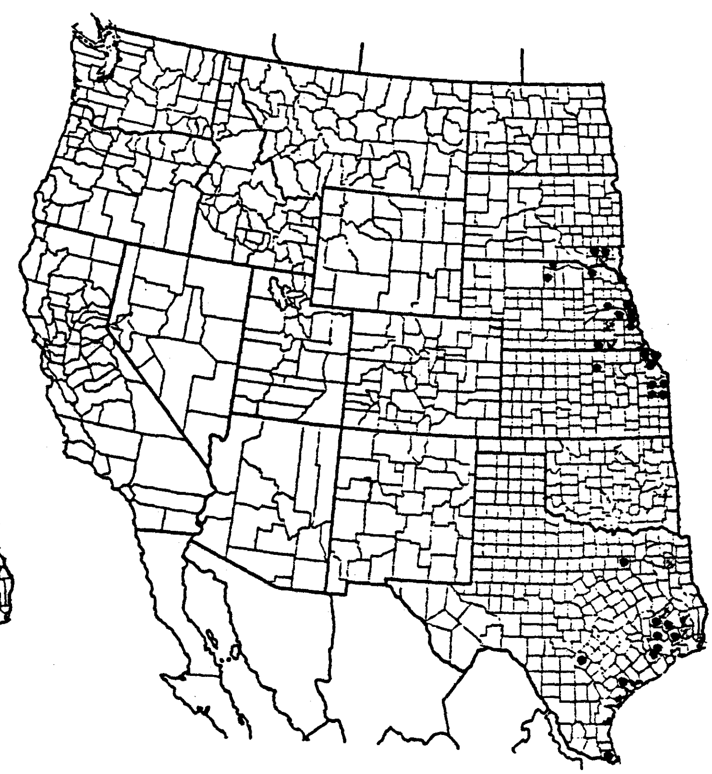


Wallengrenia otho COMPLEX
[excl. egeremet]



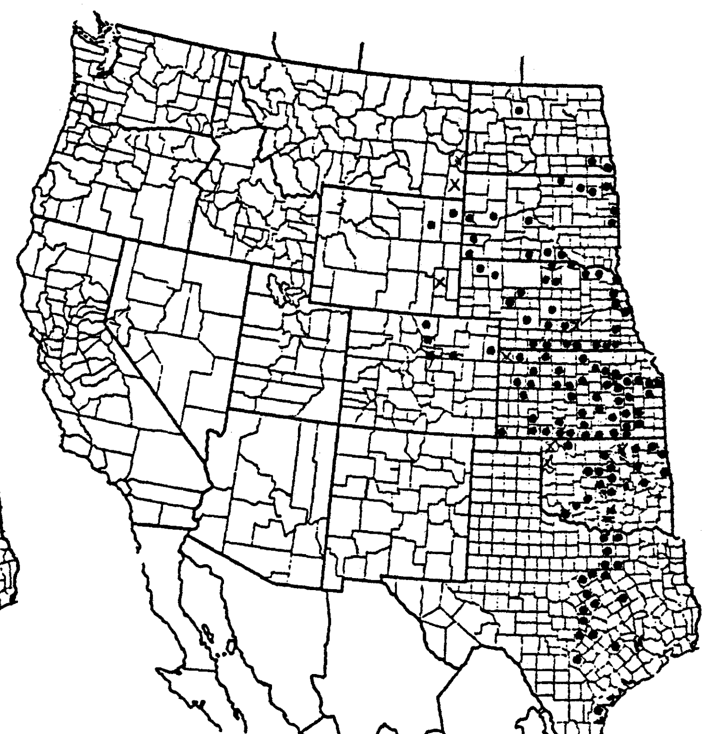
Wallengrenia egeremet

Pompeius pompeius

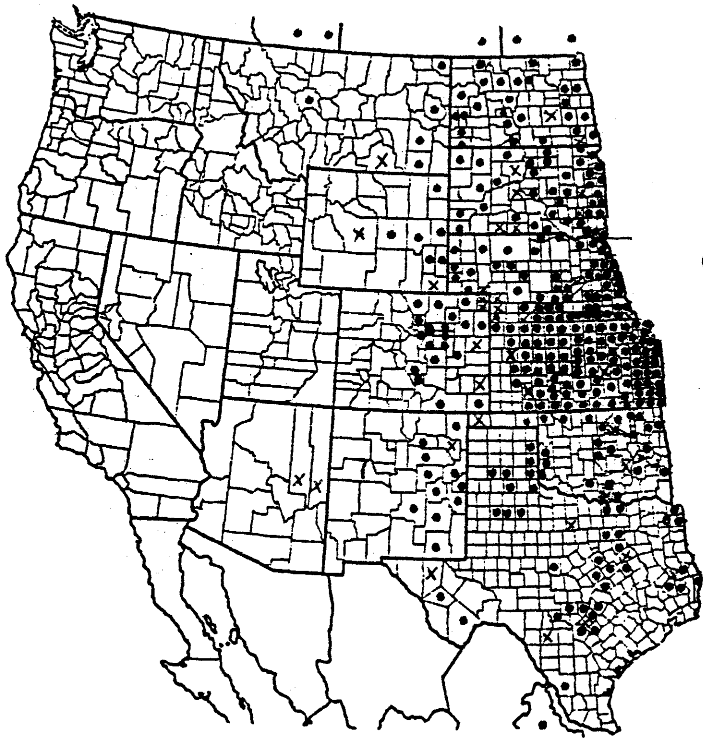


Pompeius verna

Pompeius amblyspila



Atrytone arogos

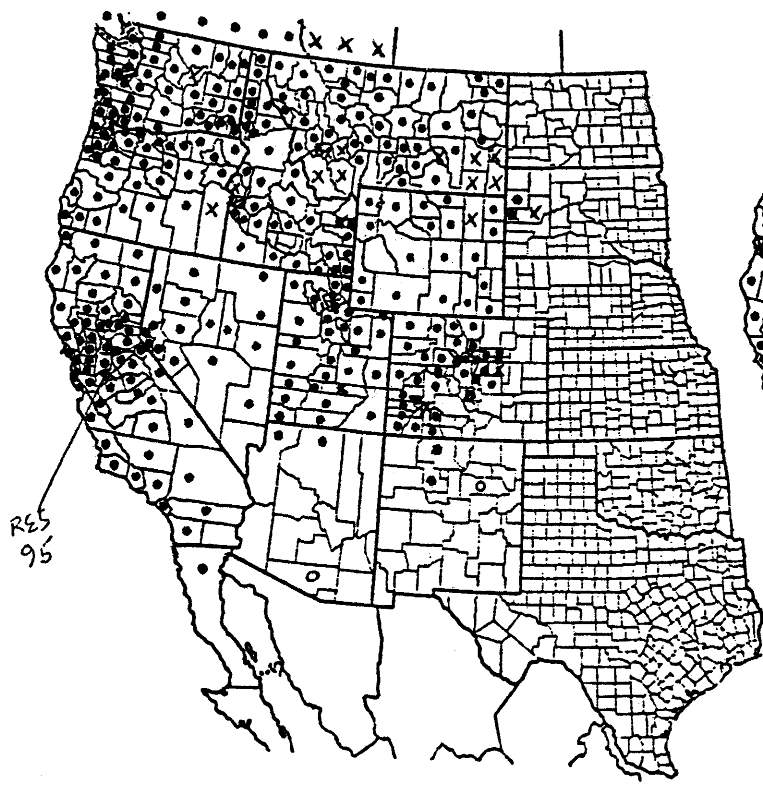


Anatrytone logan (=delaware)

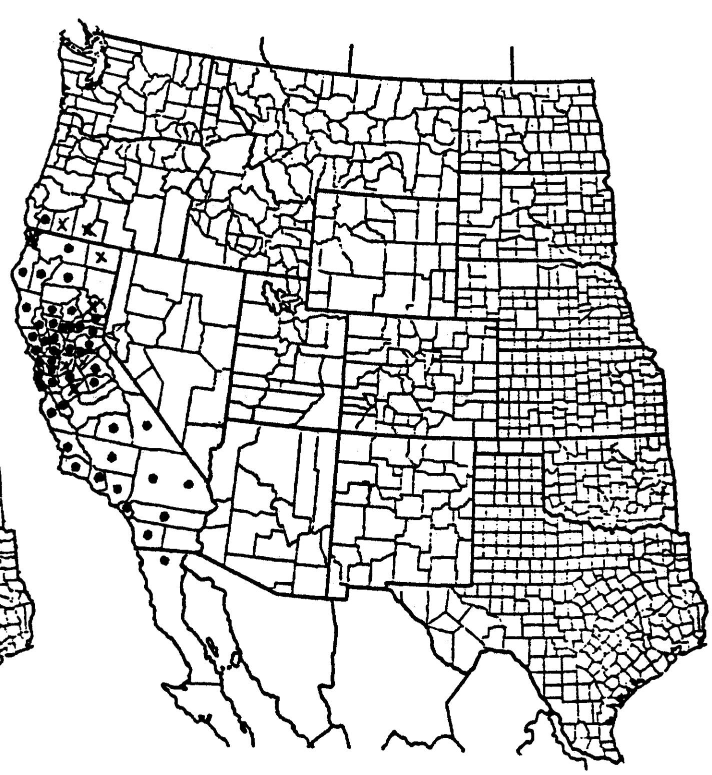
"Atrytone" mazai

"Atrytone" potosiensis

Problema byssus



Ochlodes sylvanoides



Ochlodes agricola

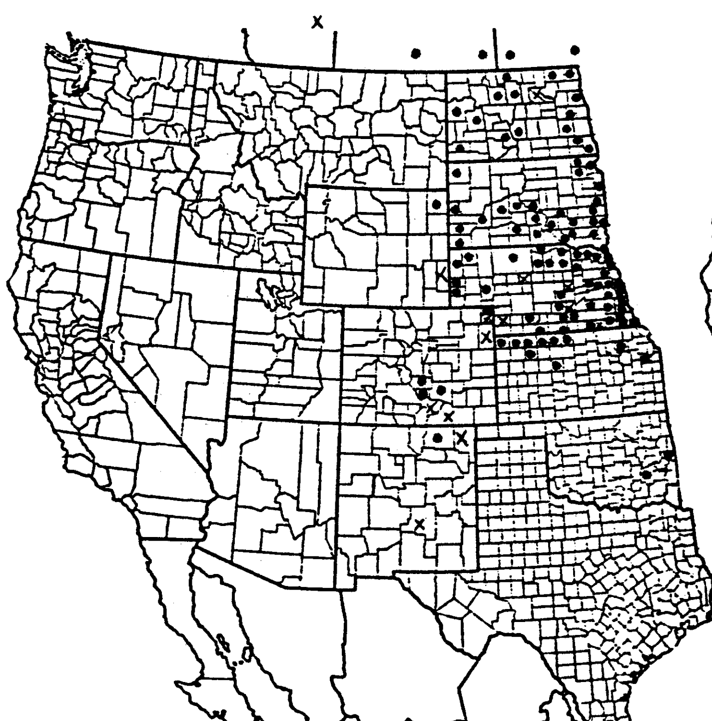
Ochlodes yuma

Paratrytone snowi
Paratrytone sp. nov. △

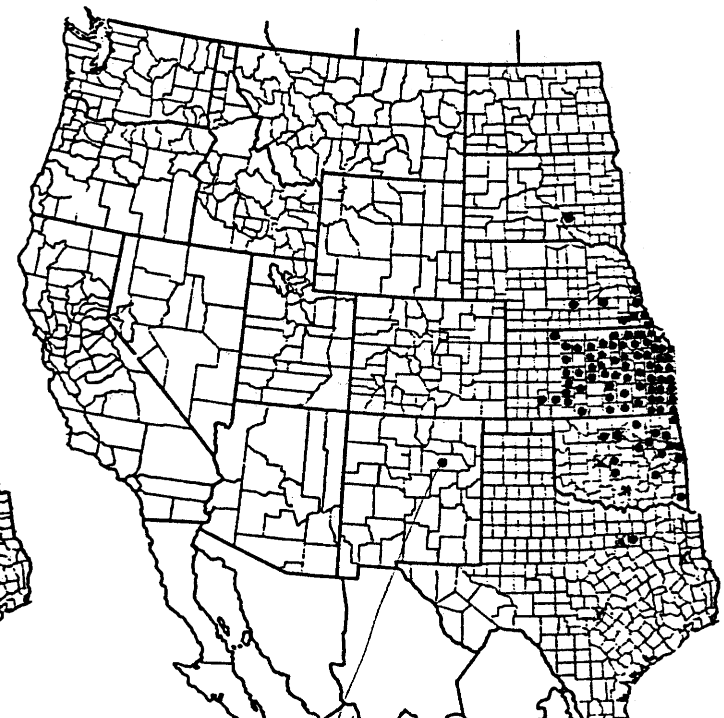
Polites
~~Poanopsis~~ puxillius

See Burns paper 1995

Polites
~~Poanopsis~~ pupillus

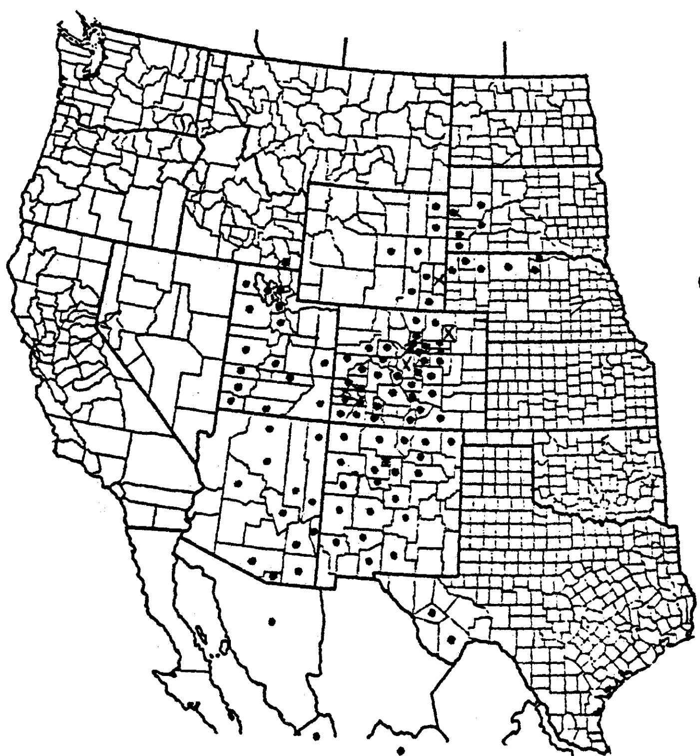


Poanes hobomok

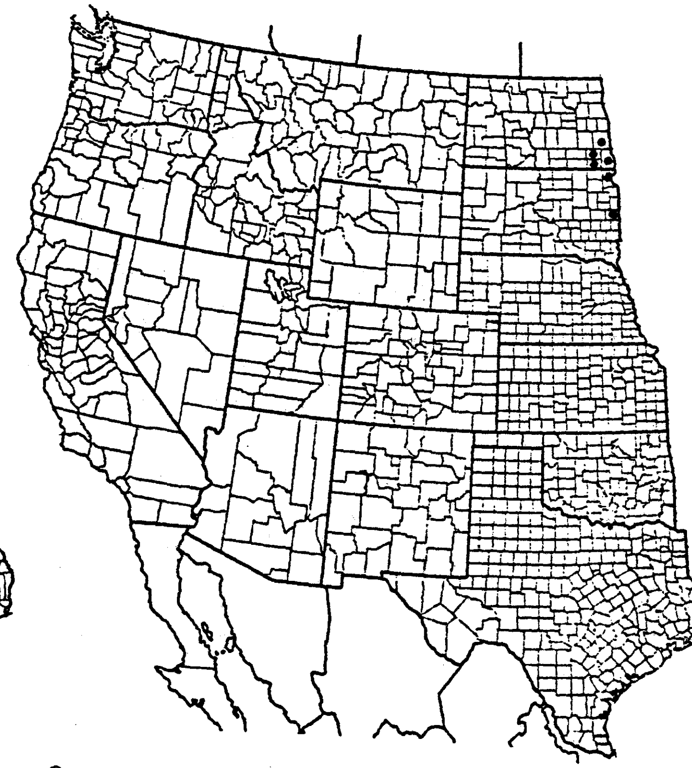


Poanes zabulon

delete. (o)
prob. mislabel.
(det. RES)



Poanes taxiles



Poanes massasoit

P. aaroni (TX)

Poanes viator

Poanes yehl

Onespa brocki Steinhauser (mss.)
SIN, MEX fide ADW

Poanes inimica

Poanes melane (see Burns 1992)

Paratrytone rhexenor (? det)
(? genus placement)

Quasimellana
~~Mellana~~ eulogius

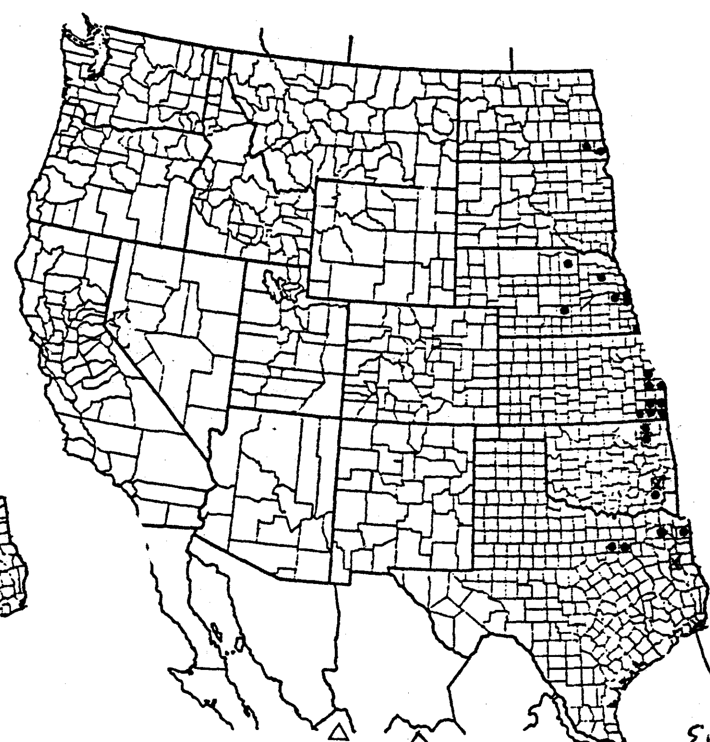
Q. siblinga Burns △

Quasimellana
~~Mellana~~ mexicana
~~Mellana~~ mulleri △
Quasimellana

Q. aurora *
See Burns 1994

"Mellana" helva
~~Mellana~~ balsa △
Quasimellana

"Mellana" gala
Libnita libnita △

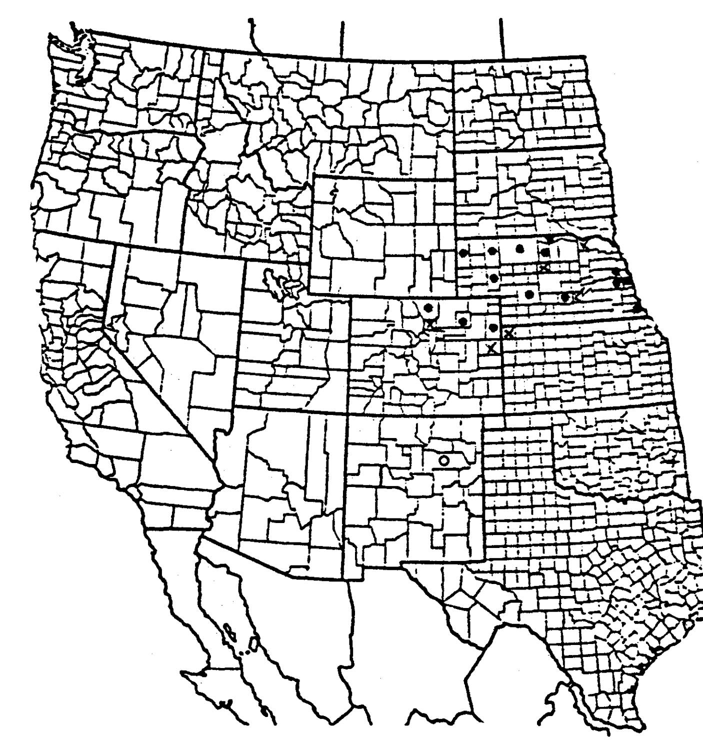


Euphyes bayensis

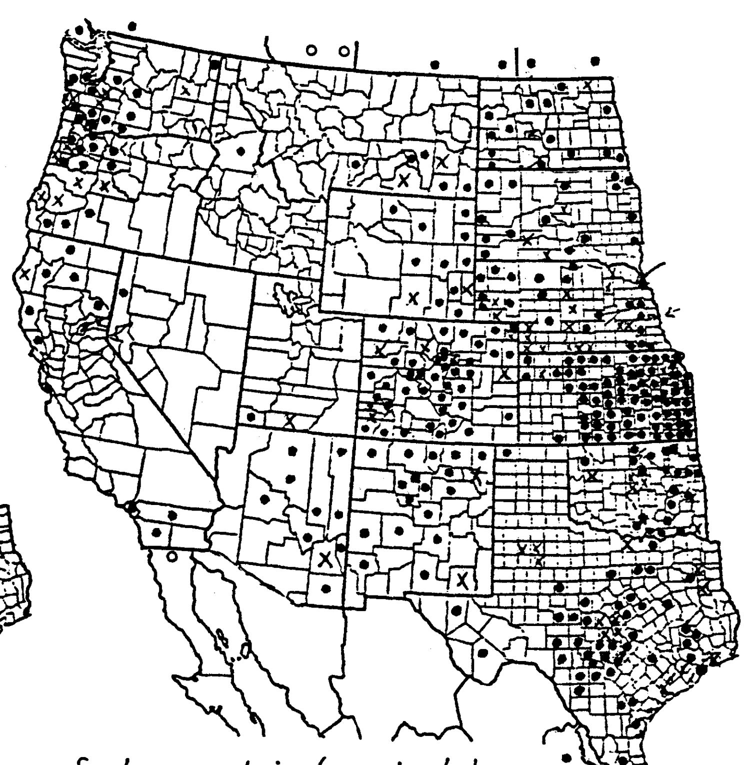
Euphyes dion (incl macguirei)
Halotus jonaveriorum ("angellus") △

Euphyes dukesi

Euphyes conspicua

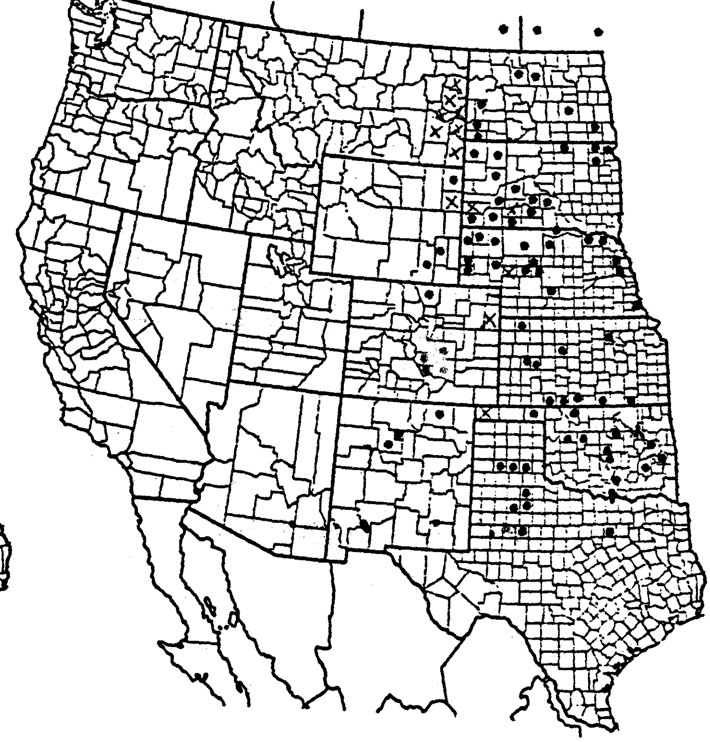


Euphyes bimacula



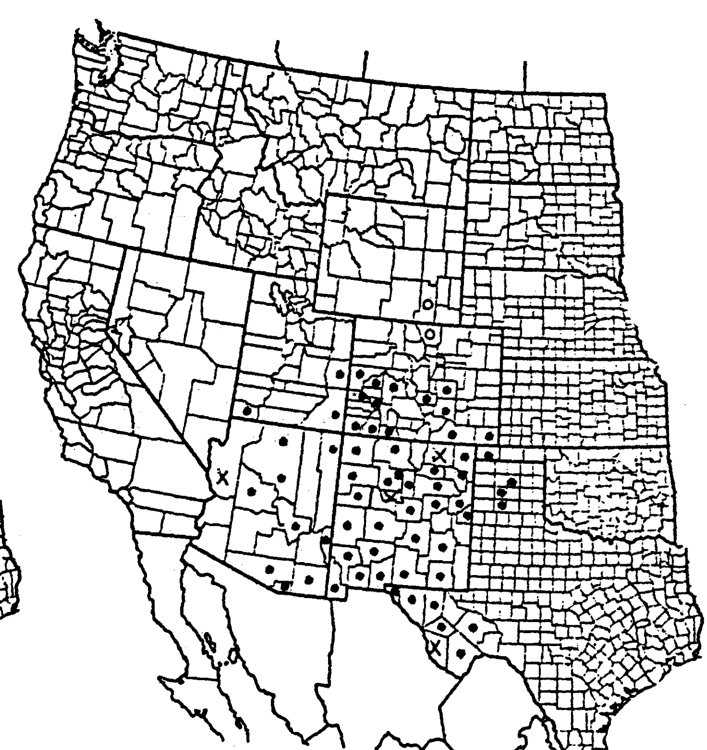
Euphyes vestris (=ruricola)

Euphyes donahuei



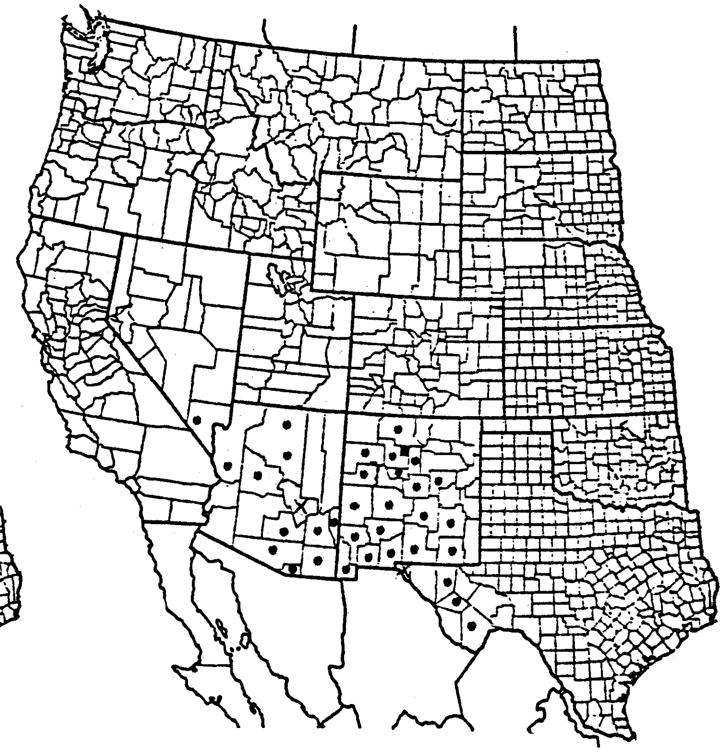
Atrytonopsis hianna

Atrytonopsis deva



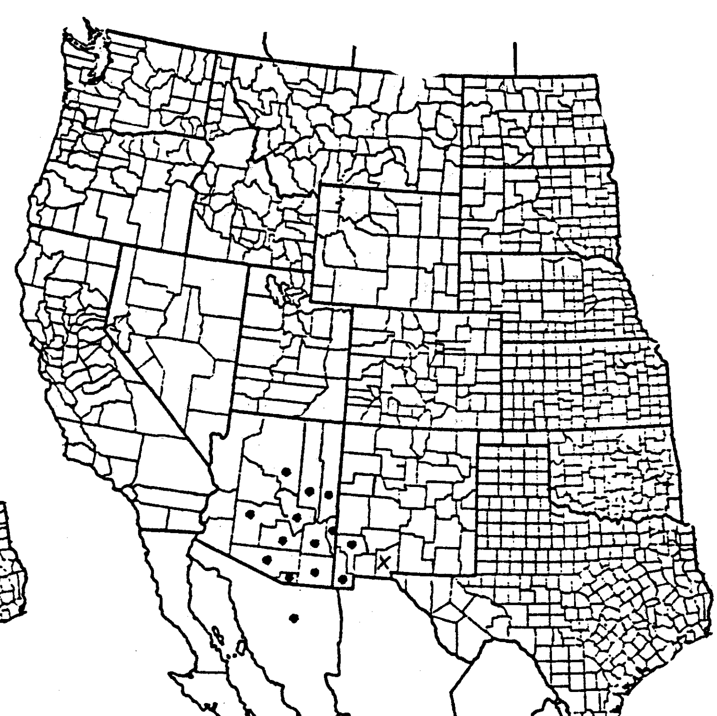
Atrytonopsis vierecki

Atrytonopsis pittacus



Atrytonopsis python

Atrytonopsis cestus



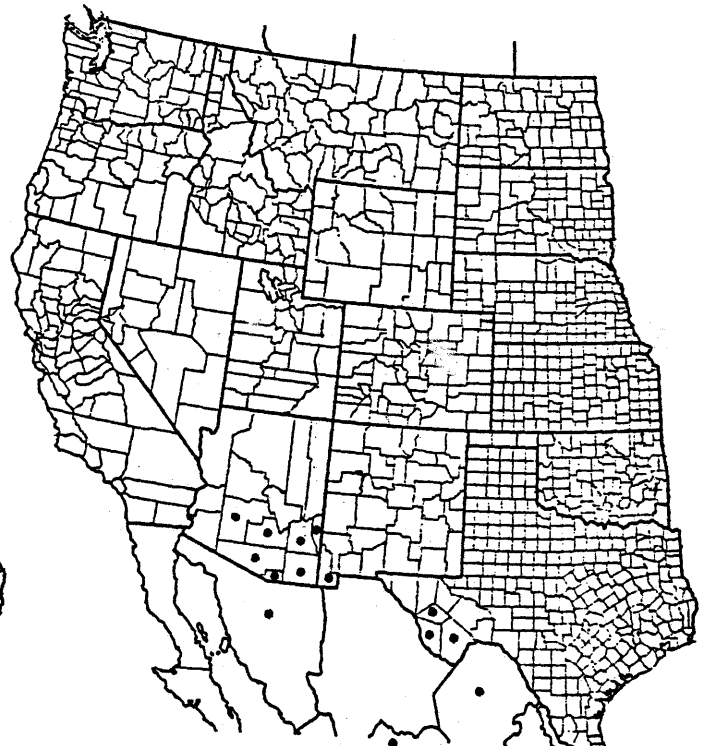
Atrytonopsis lunus

(TX "margarita")

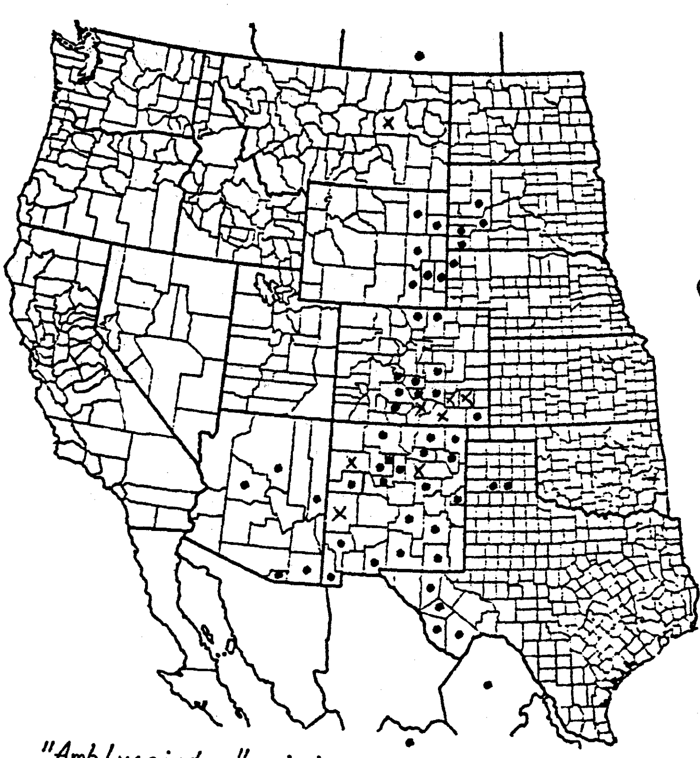
Atrytonopsis frappenda – COAH [J. Kemner]

Atrytonopsis frappenda COAH MEX, det. PAO
6 Jul 88 J. Kemner

Atrytonopsis zweifeli

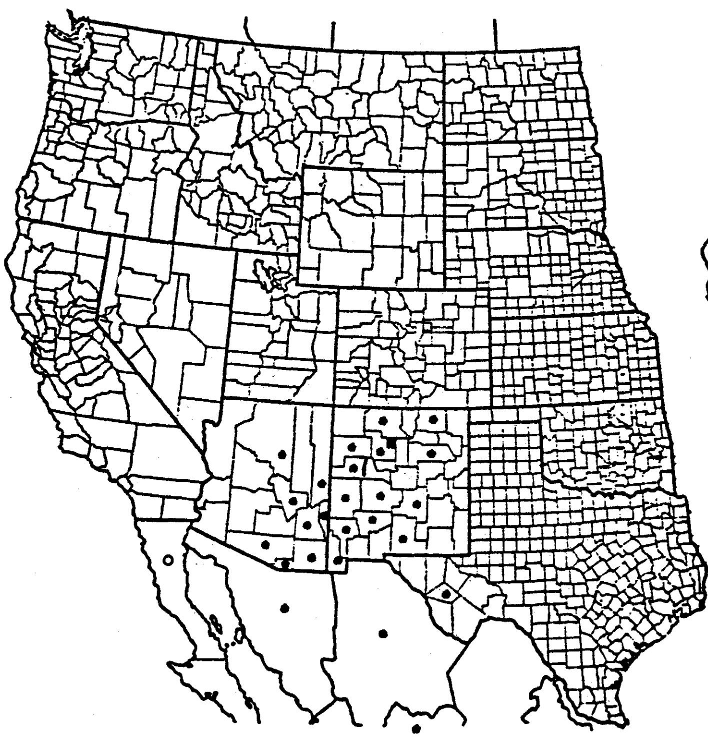


Atrytonopsis edwardsi



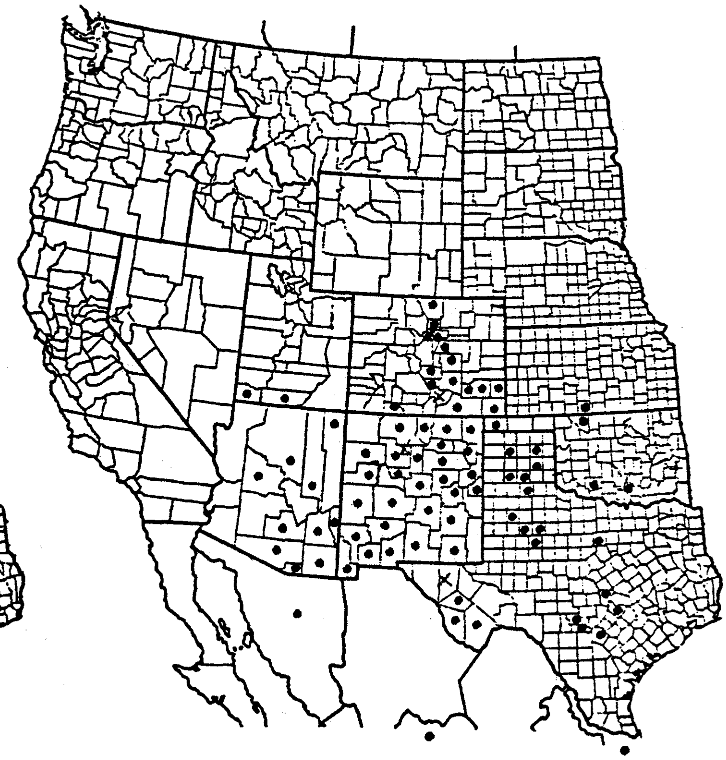
"Amblyscirtes" simius

Amblyscirtes exoteria



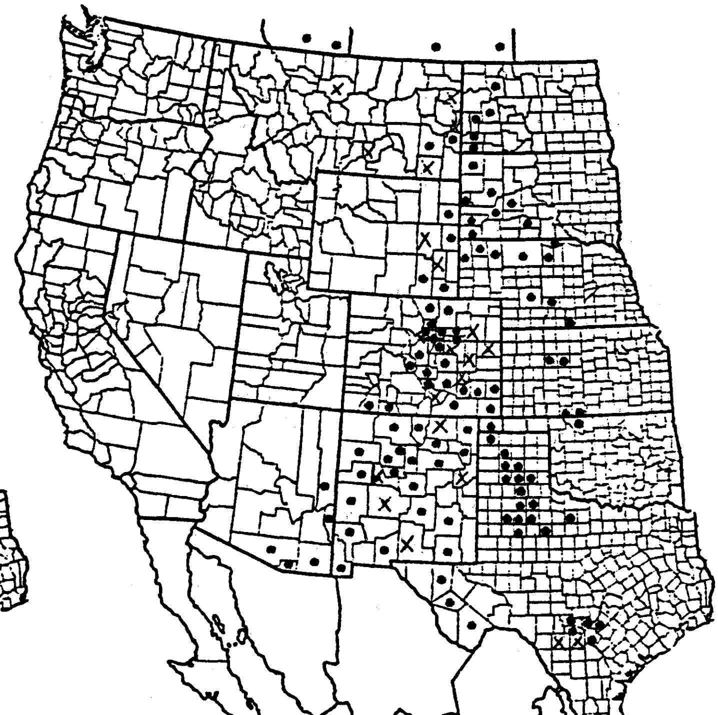
Amblyscirtes cassus

del. TO NM - misdet.



Amblyscirtes aenus (incl erna)

Amblyscirtes linda



Amblyscirtes oslari

Amblyscirtes texanae

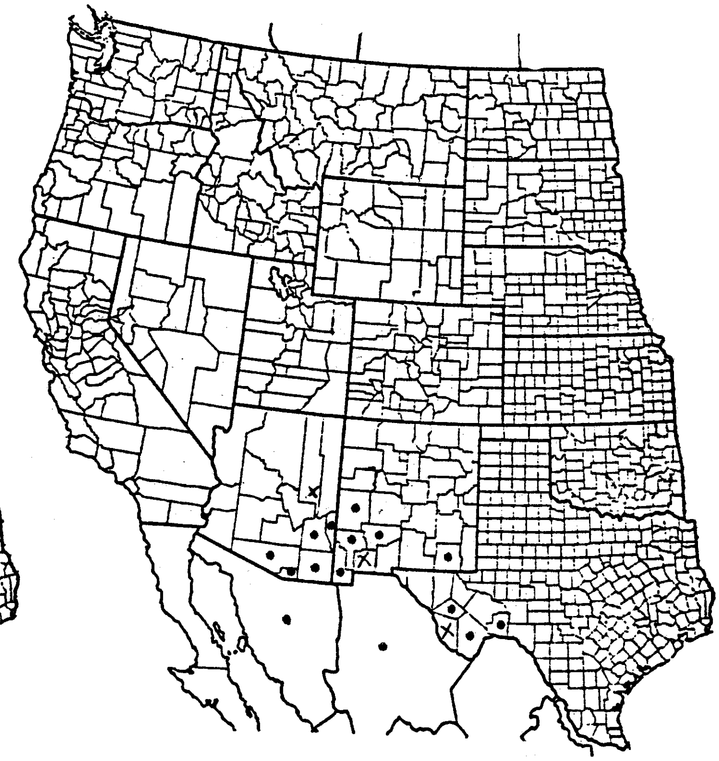
Amblyscirtes fluonia

Amblyscirtes tolteca

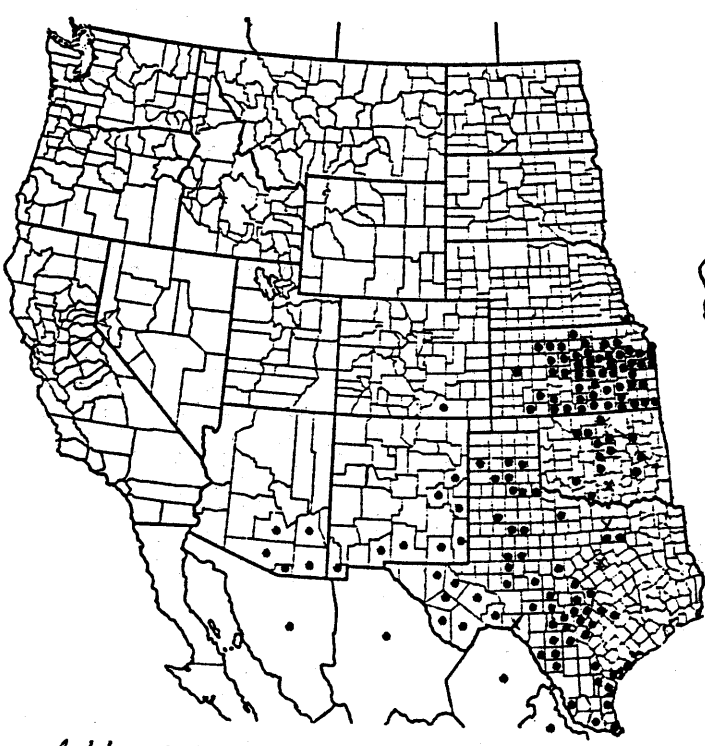
W. Mexico are prenda (HAF/ADW)

Amblyscirtes prenda

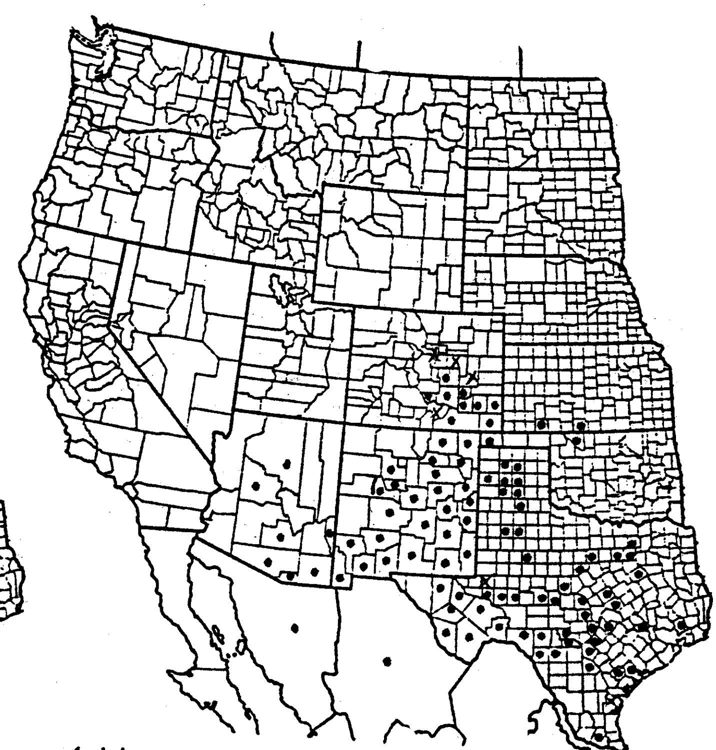
Amblyscirtes aesculapius



Amblyscirtes nereus



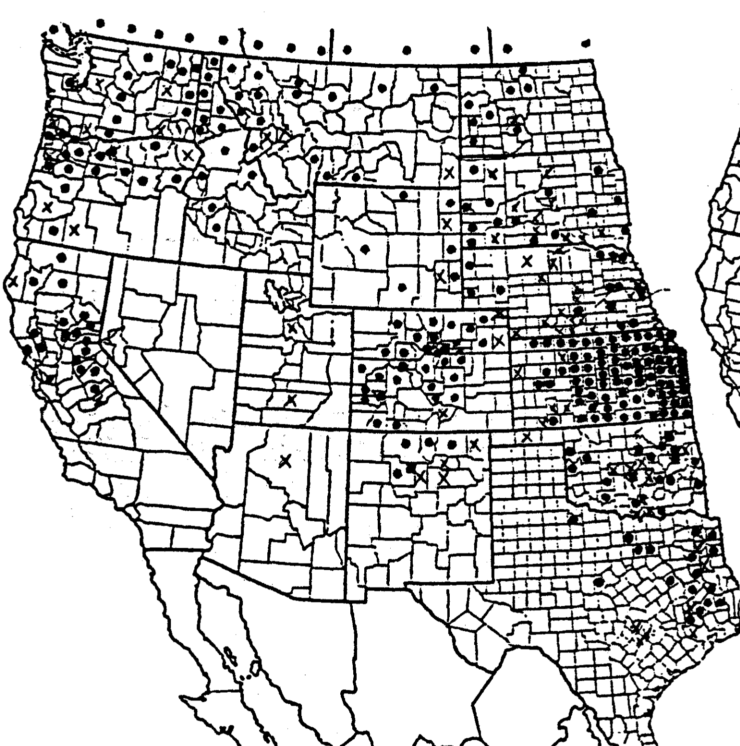
Amblyscirtes nysa



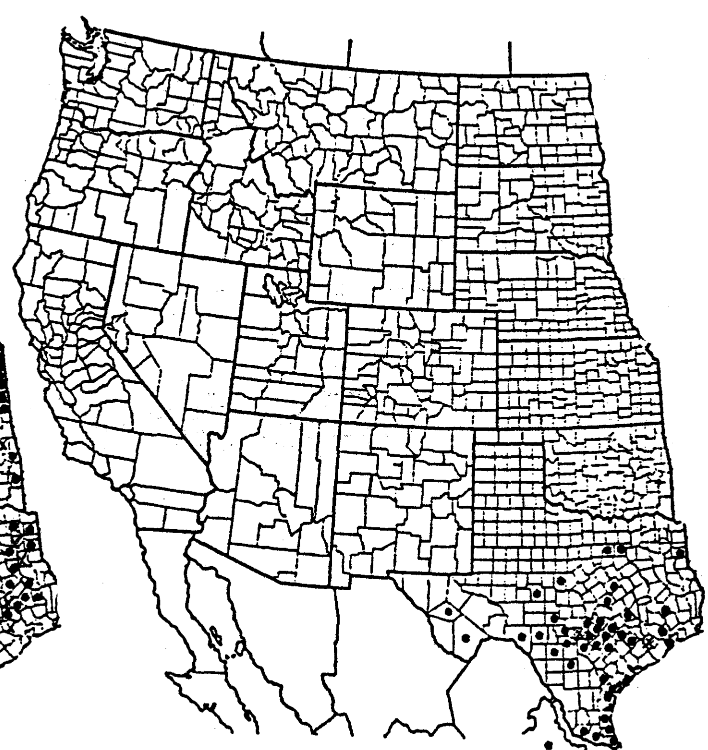
Amblyscirtes eos

Amblyscintes elissa

Amblyscintes hegon (=samoset)



Amblyscintes vialis

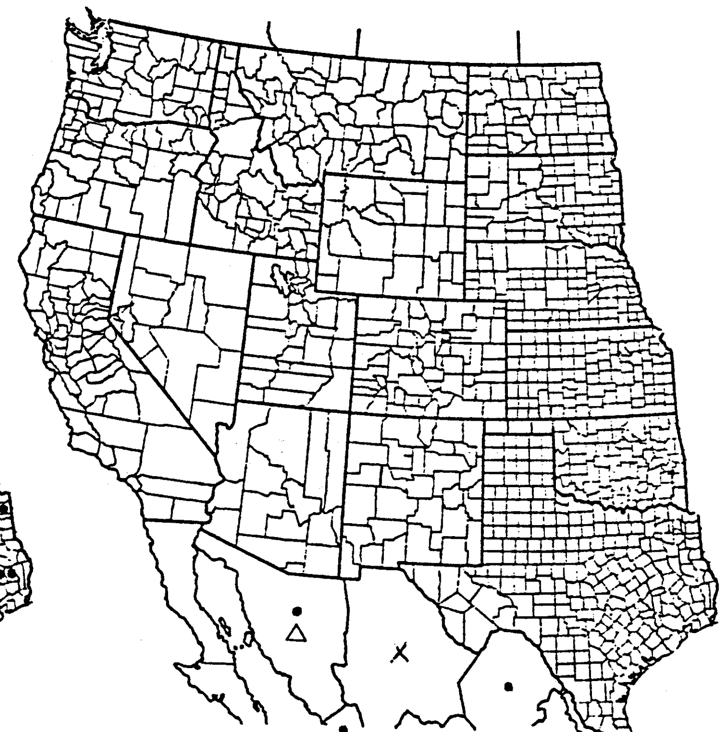


Amblyscintes celia

Amblyscirtes belli

"Amblyscirtes" florus

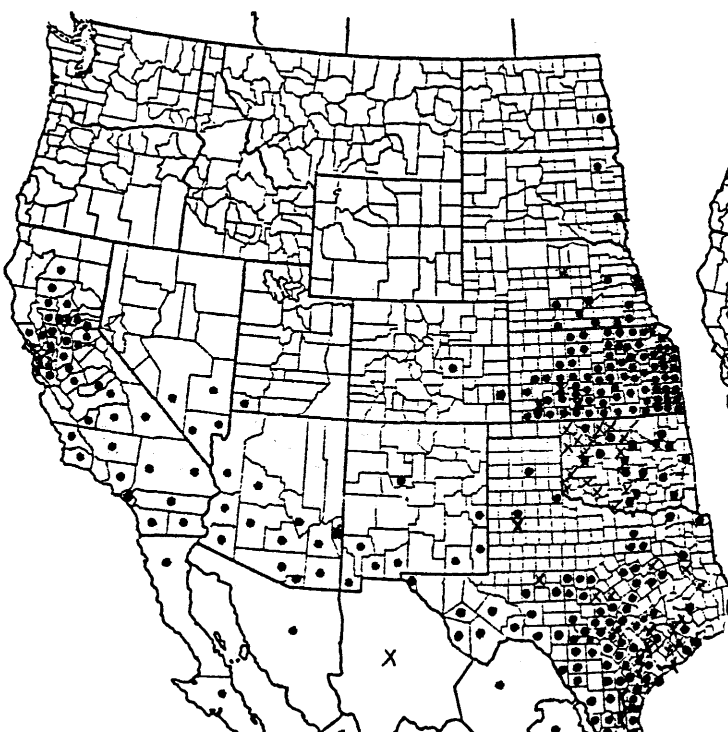
Amblyscirtes alternata



Amblyscirtes brocki
Amblyscirtes folia △

Amblyscirtes phylace

Amblyscirtes fimbriata



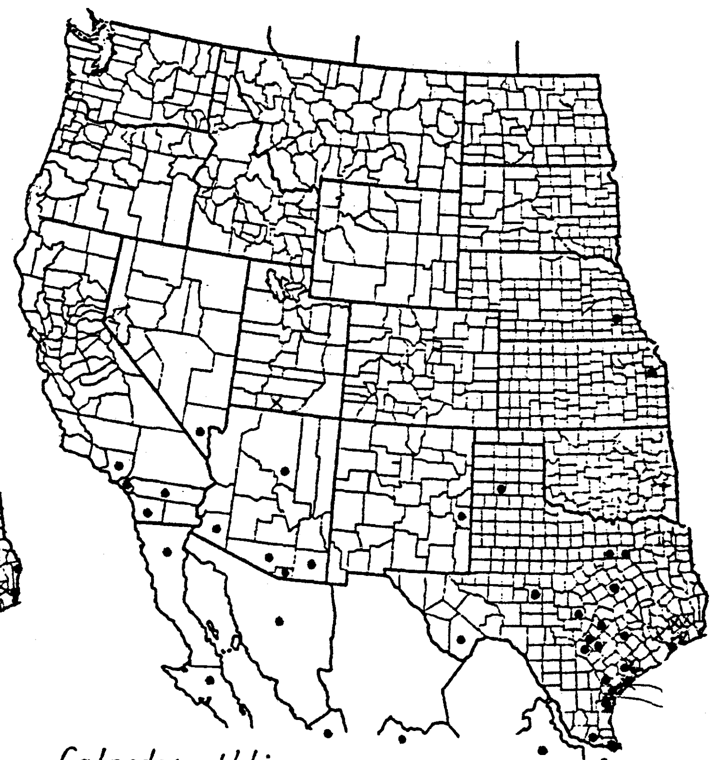
Lerodea eufala

Lerodea arabus

Lerodea dysaules

Lerodea adata (?status)

Oligoria maculata

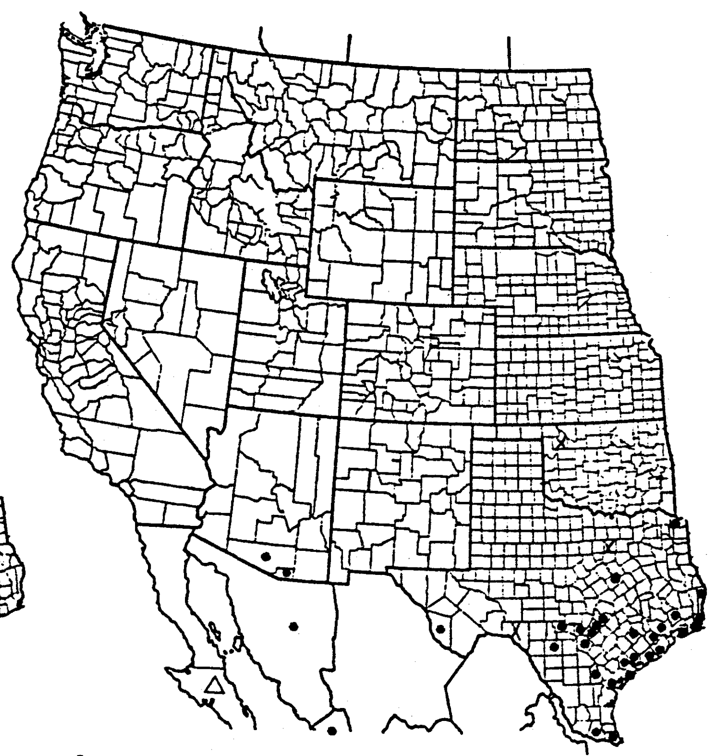


Calpodes ethlius

Panoquina panoquin

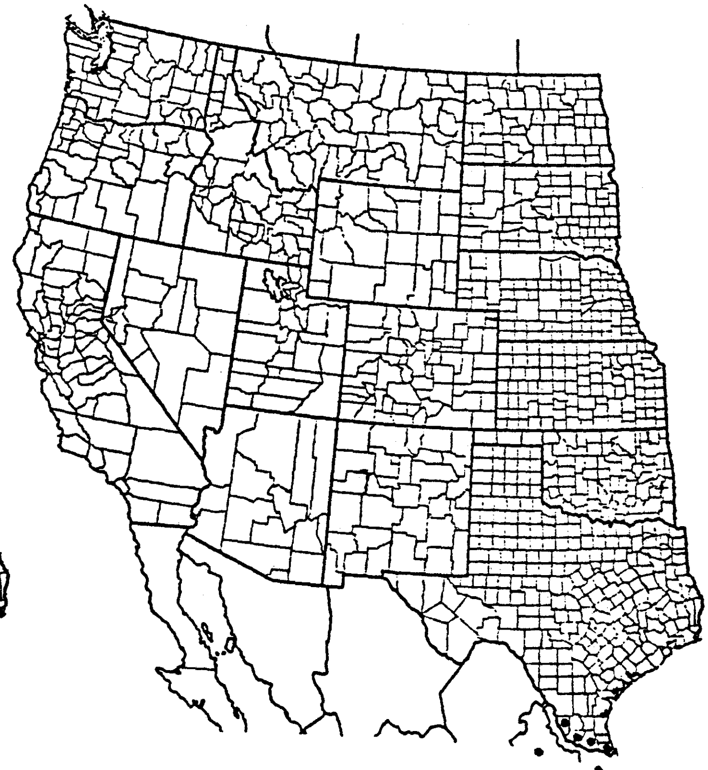
Panoquina panoquinoides

Panoquina errans



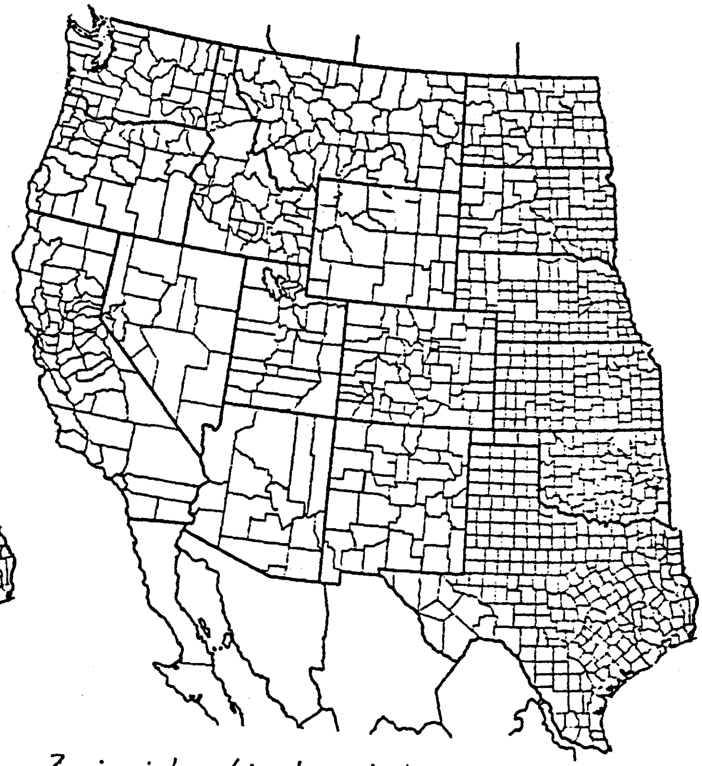
Panoquina ocola
Panoquina peraea californica △

Panoquina sylvicola



Panoquina hecebola

Panoquina evansi



Zenis jebus (incl janka)

Nyctelius nyctelius

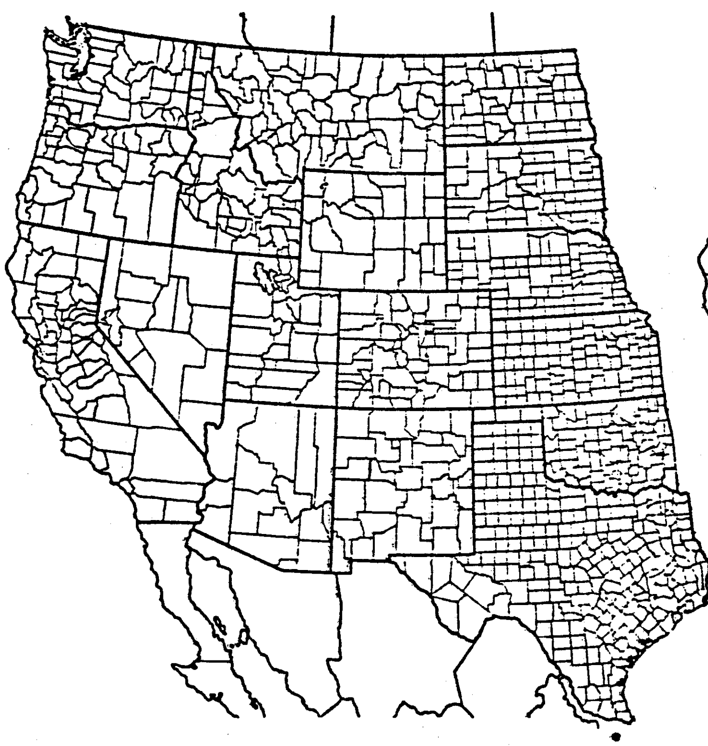
Thespieus macareus

Thespieus aspernatus

Thespieus dalman

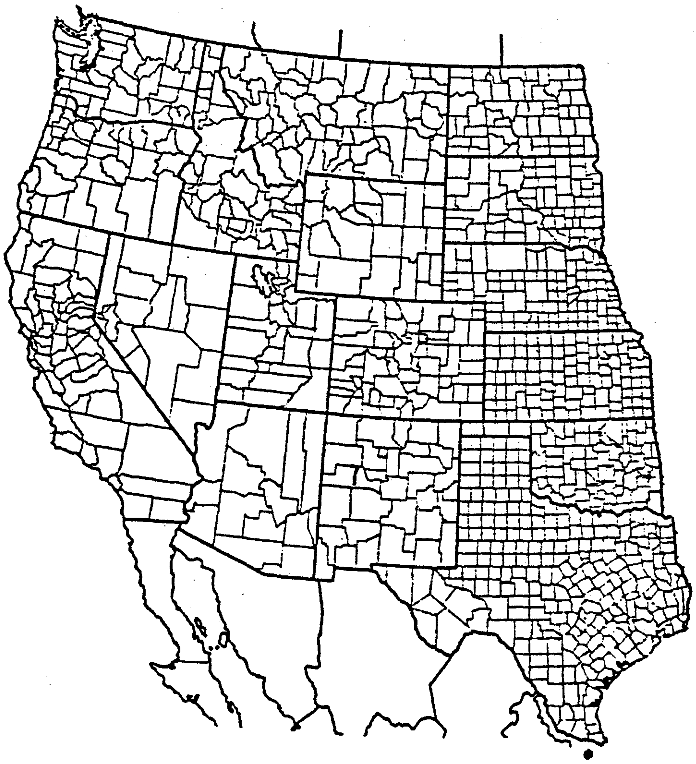
Vacerra bonfilius (incl aeas)

Oxynthes corusca

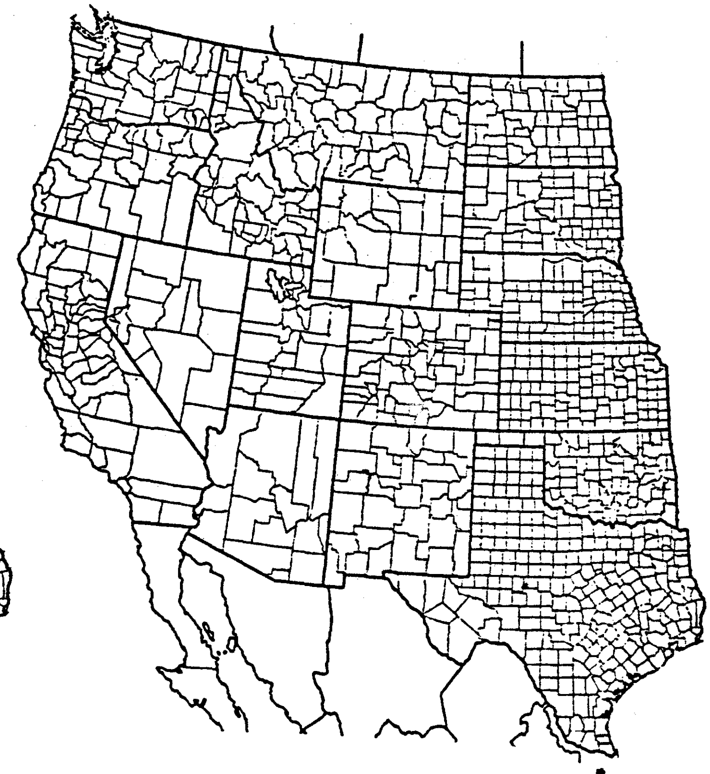


Niconiades xanthaphes

Niconiades nikko

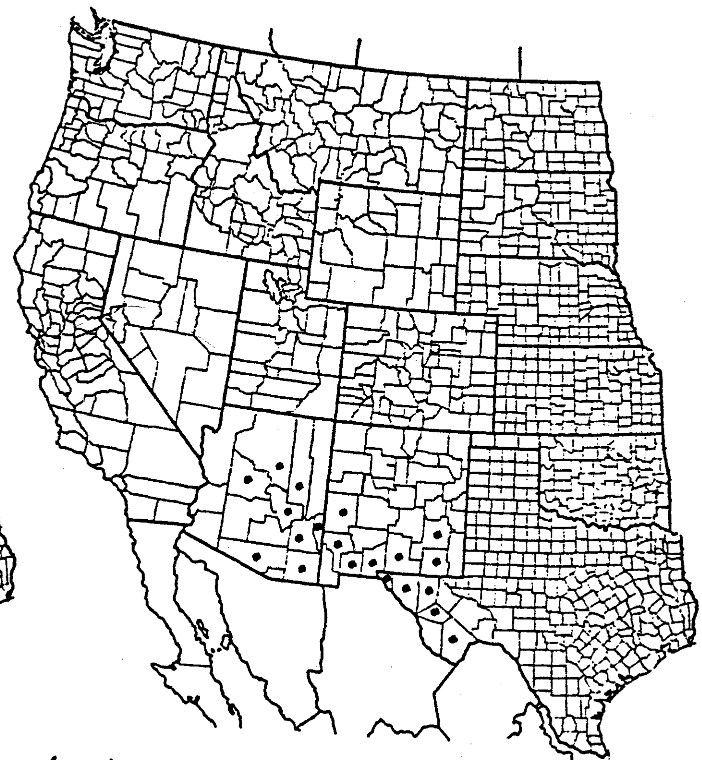


Xeniades orchamus



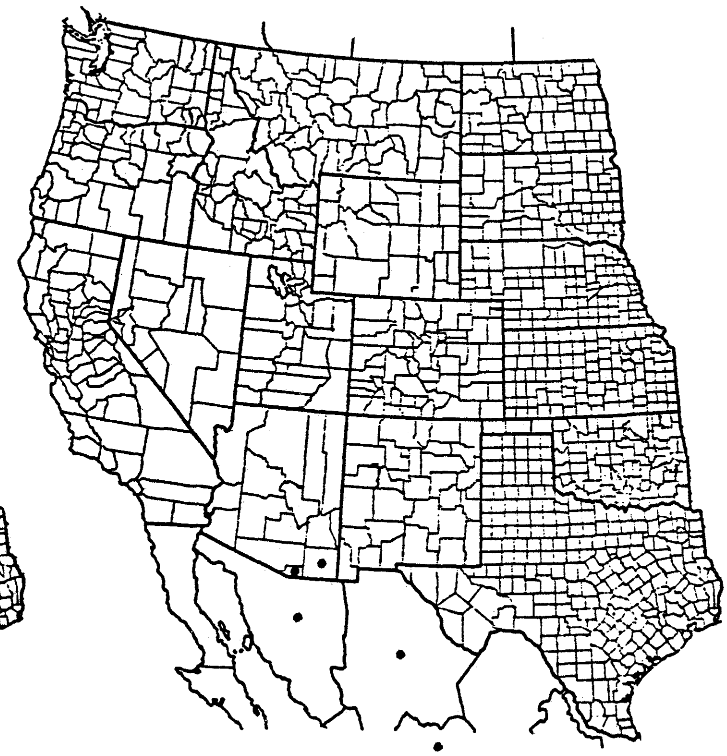
Neoxeniades molion

Aegiale hesperiaris



Agathymus neumoegeni COMPLEX (incl *chisosensis*)

Agathymus aryxna COMPLEX (incl baueri)
(incl. freemani and gentryi)



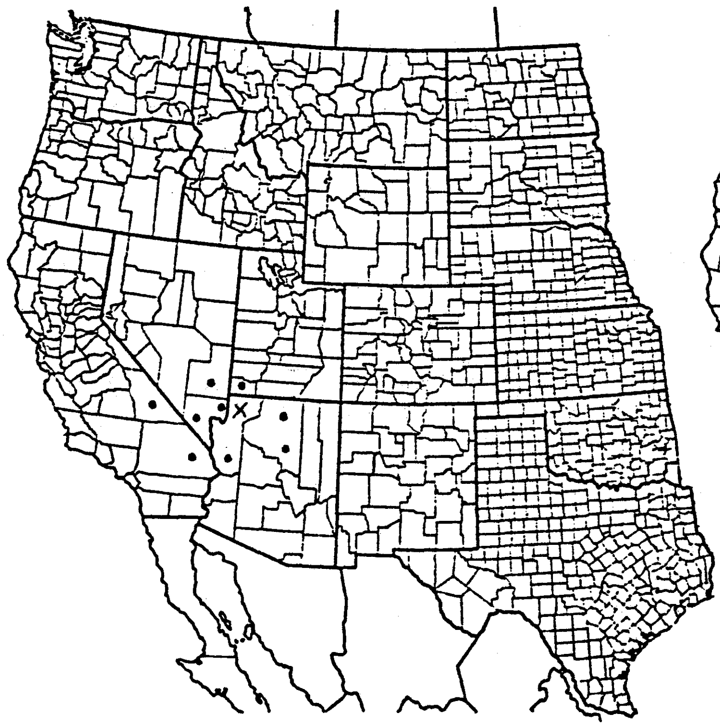
Agathymus evansi COMPLEX

Agathymus mariae COMPLEX (incl gilberti)

Agathymus remingtoni COMPLEX (incl
estellae and fieldi)

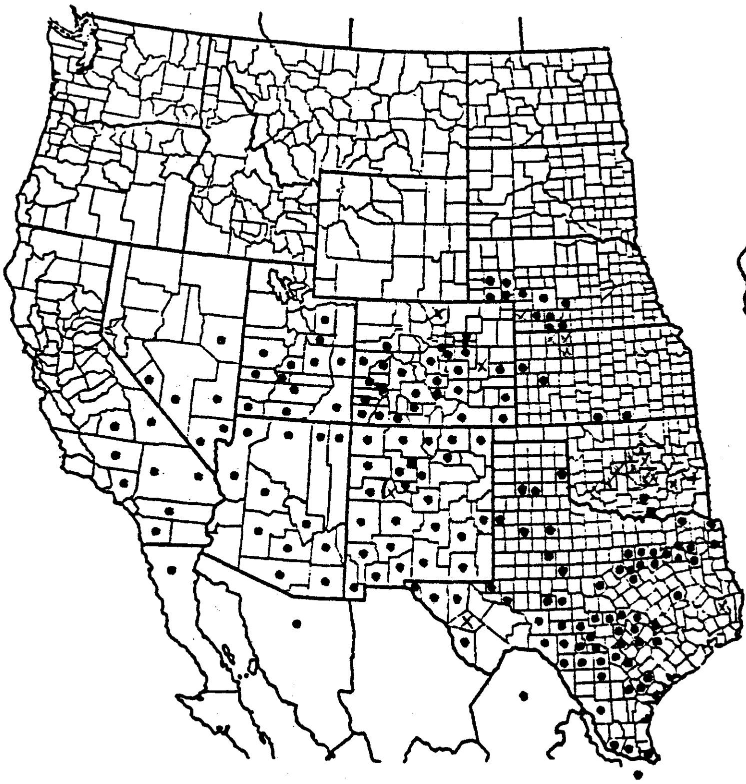
Agathymus stephensi COMPLEX
Agathymus UNDESCRIBED COMPLEX △

Agathymus polingi

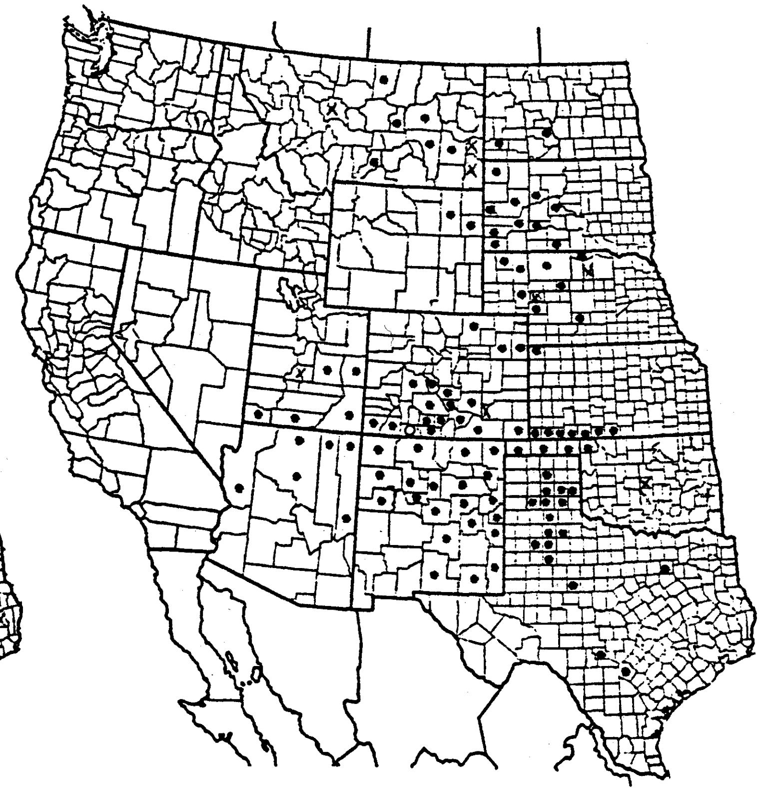


Agathymus alliae

Turnerina mejicanus



Megathymus yuccae (incl coloradensis)

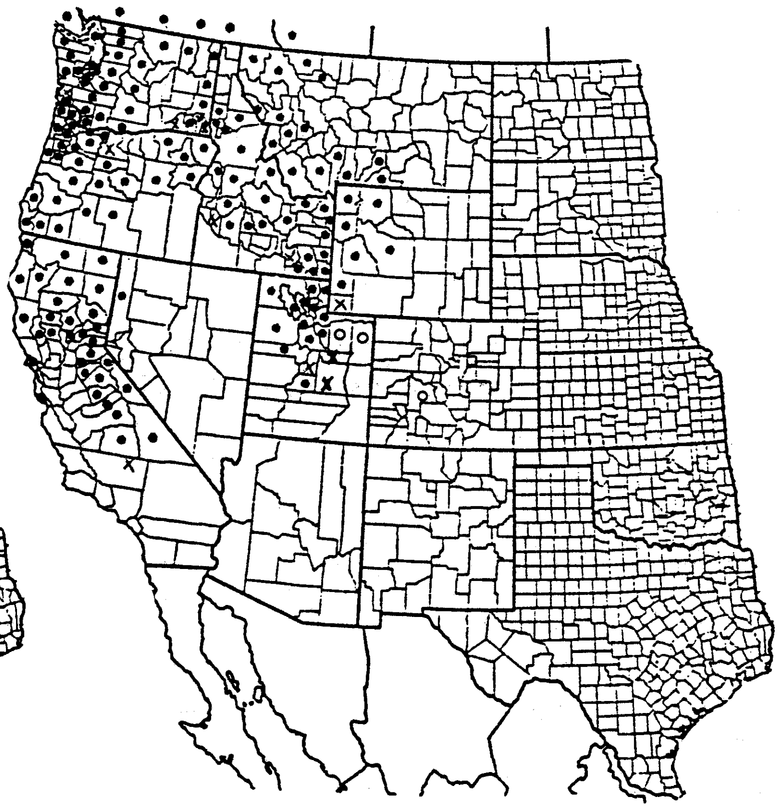


Megathymus streckeri (incl texanus)

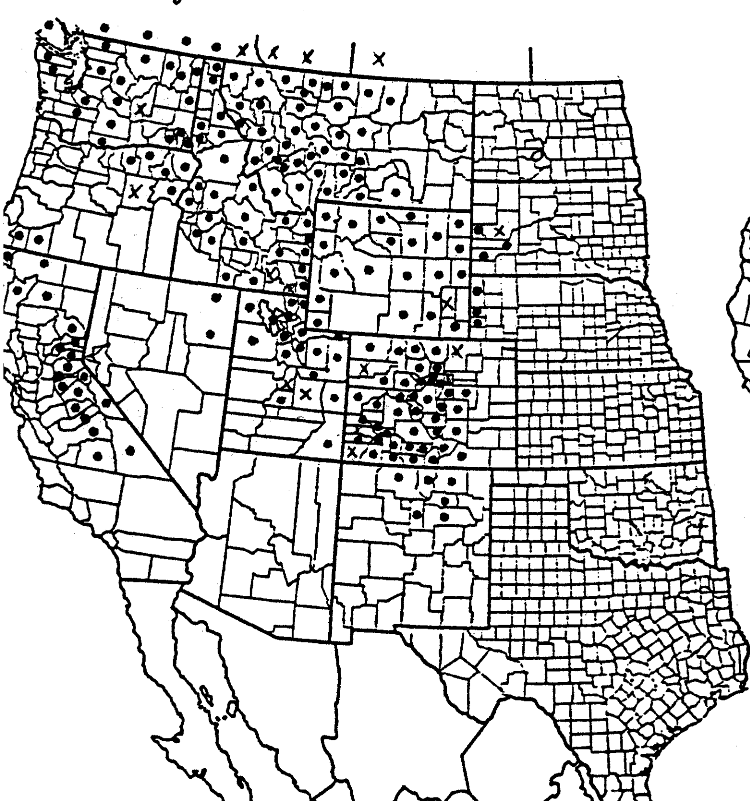
Megathymus ursus (incl violae)

Megathymus gayleae

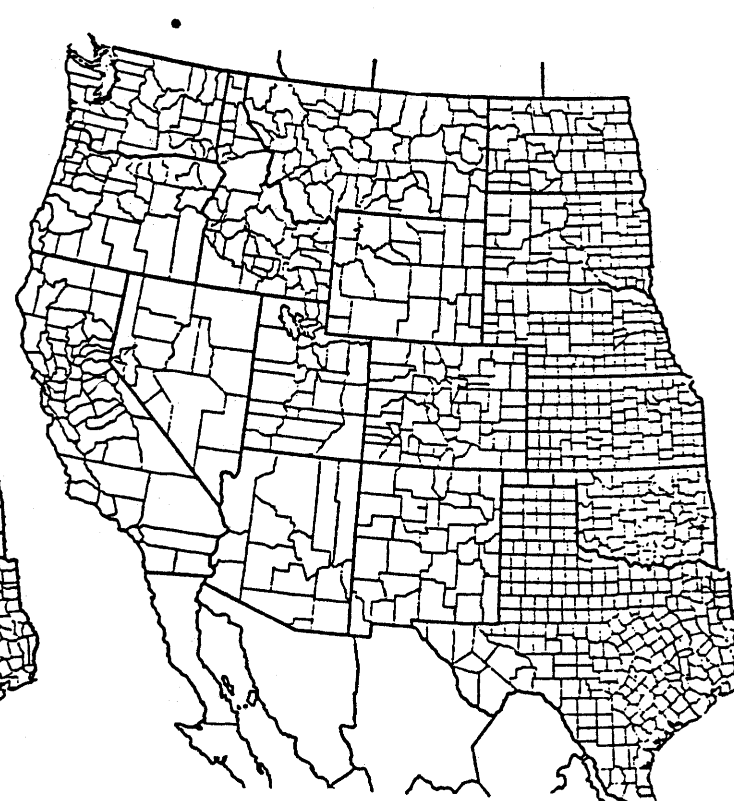
Stallingsia maculosus
Stallingsia smithi △



Parnassius clodius



Parnassius phoebus

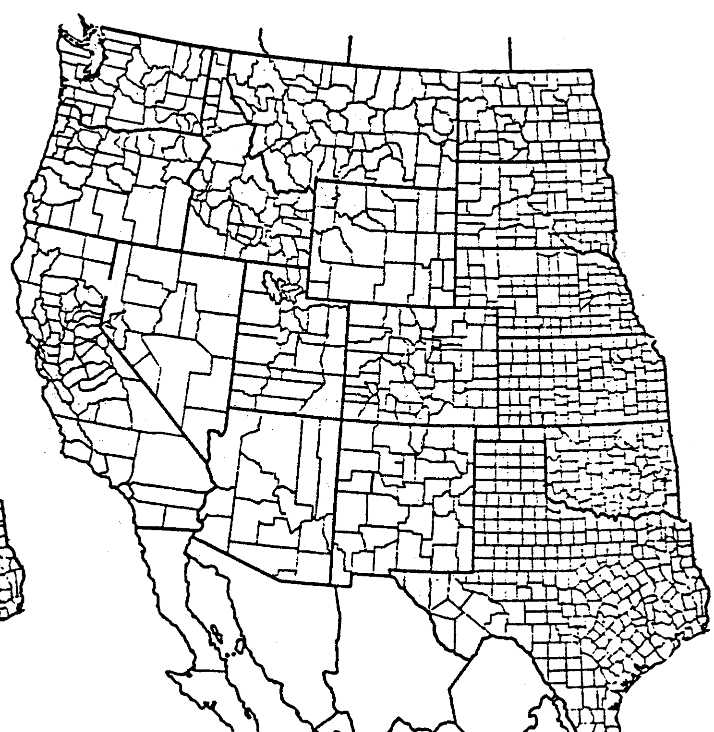


Parnassius eversmanni

Parides alopius

Parides montezuma

Parides photinus



Parides polyzelus

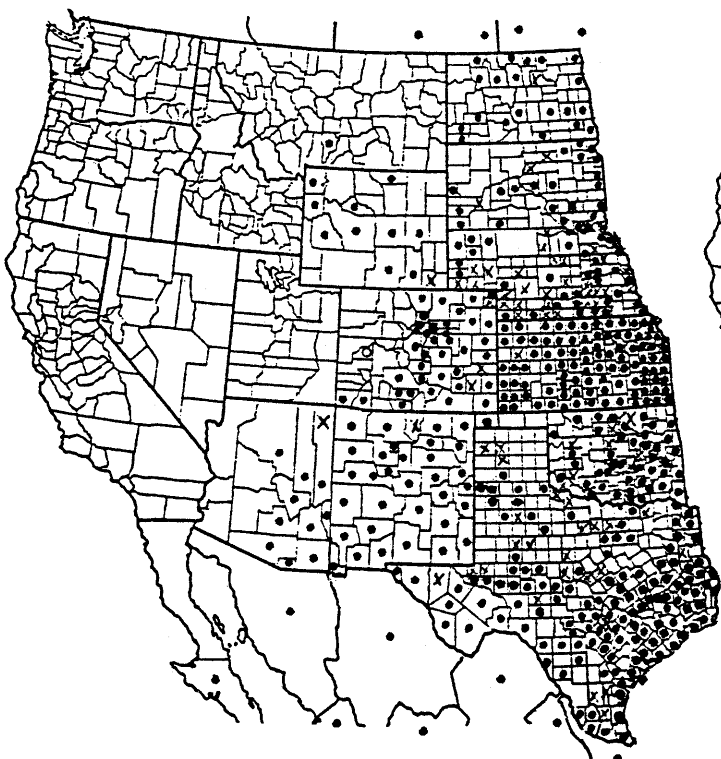
Parides eurimedes (=arcas)

Battus philenor

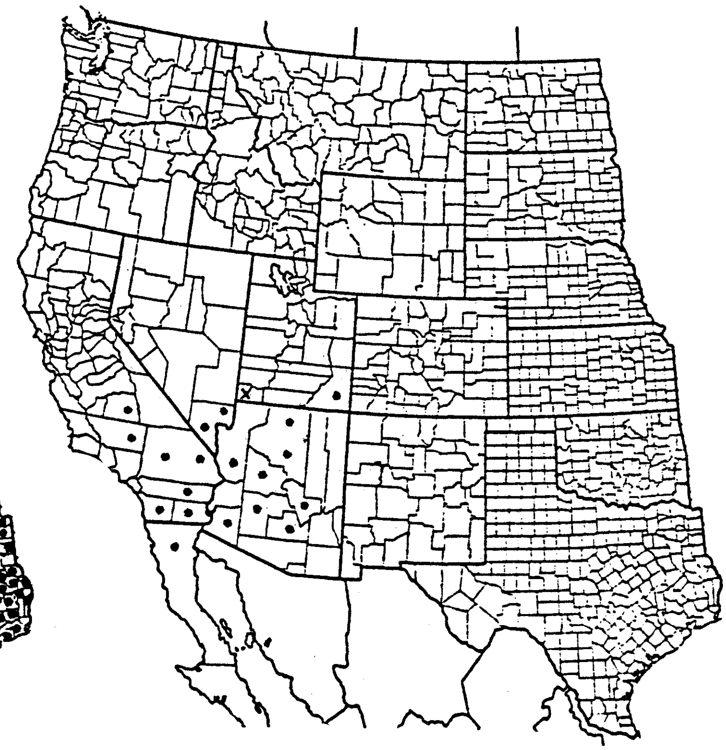
Battus polydamas

Battus laodamas

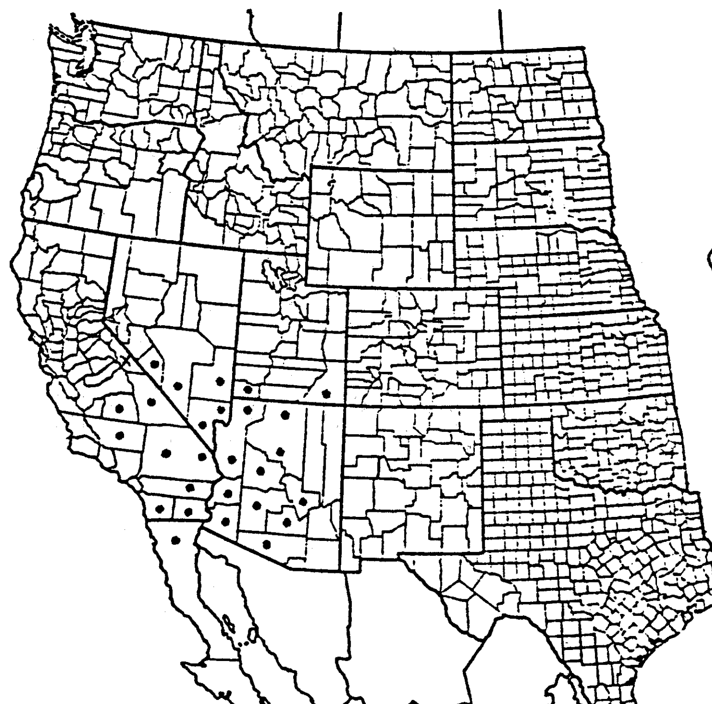
Battus eracon △



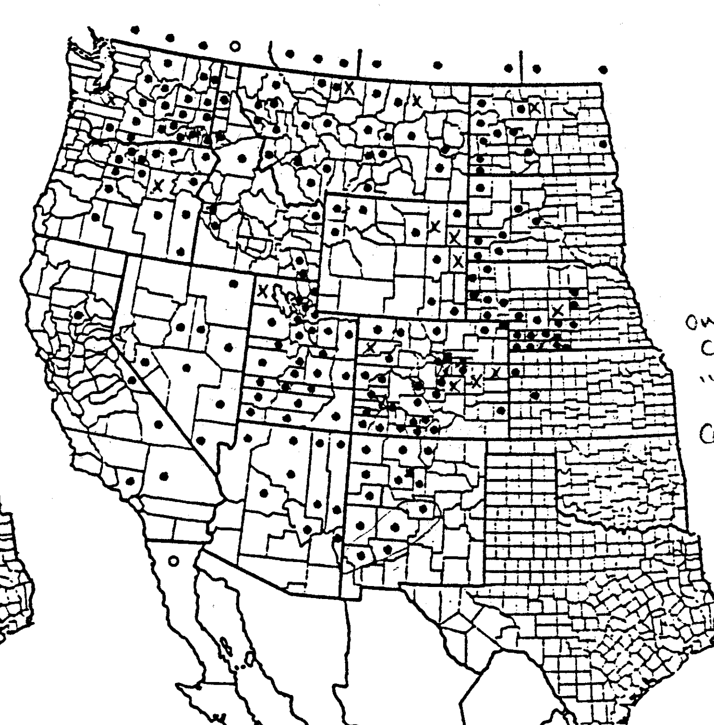
Papilio polyxenes (excl coloro)



Papilio polyxenes coloro (=rudkini), black form clarki.



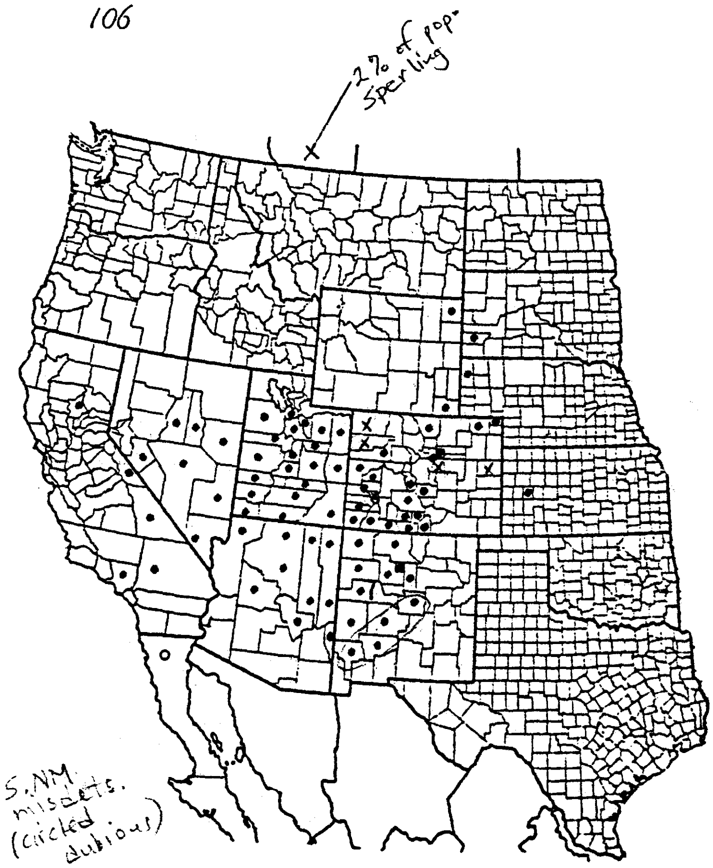
Papilio polyxenes coloro (=rudkini), yellow and black forms



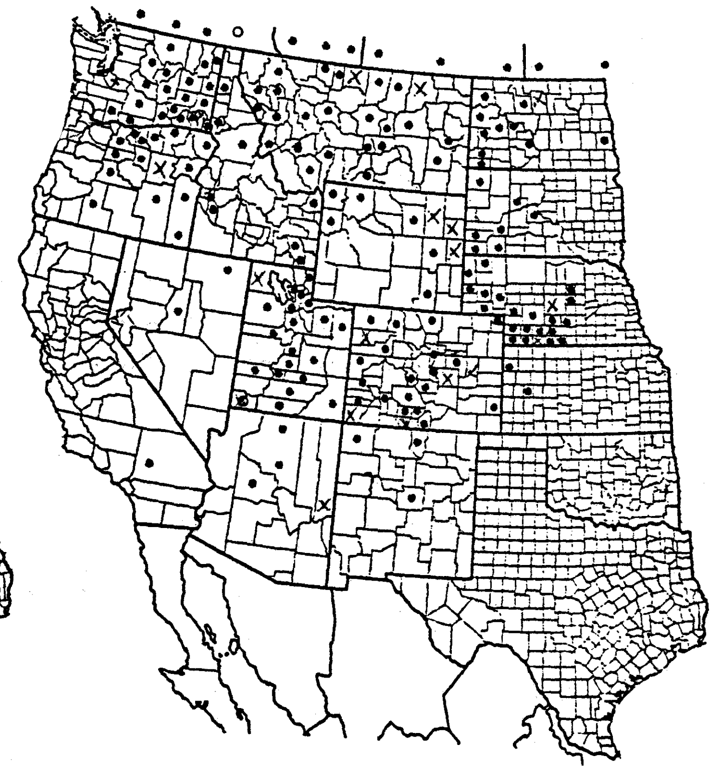
Ouray CO "close" call it !

Papilio bairdii (all records)

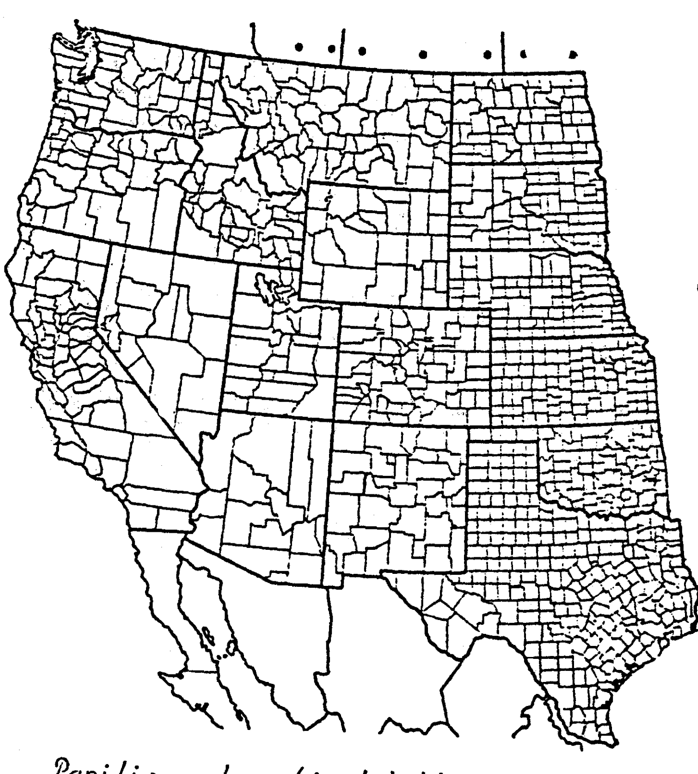
S:NM misdets. (circled dubious)



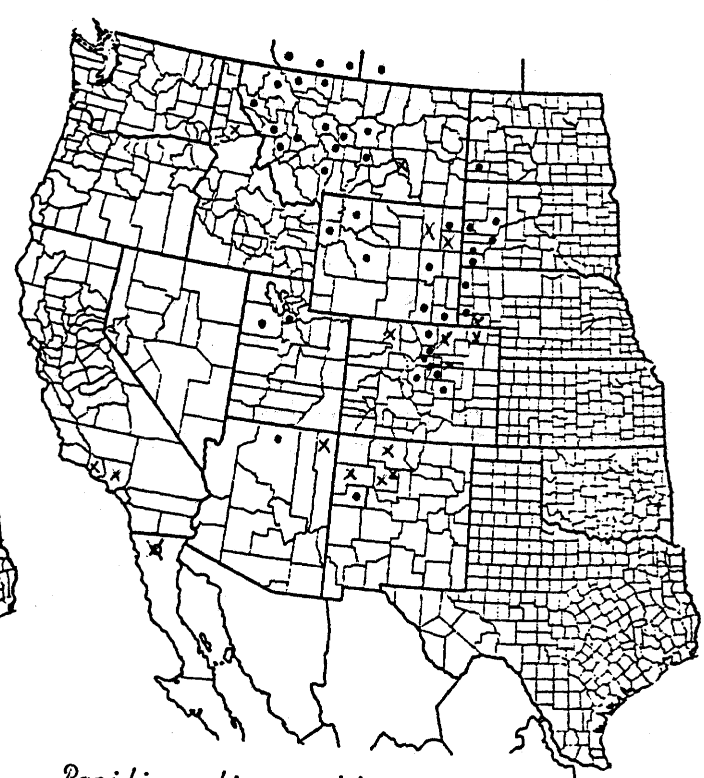
Papilio bairdii, black form



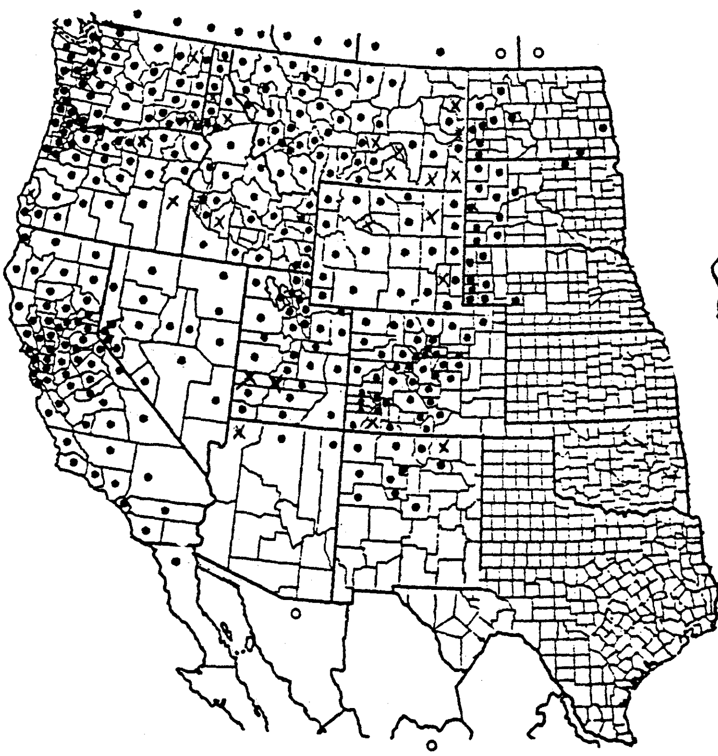
Papilio bairdii, all yellow forms (incl oregonius, dodi, machaon blends)



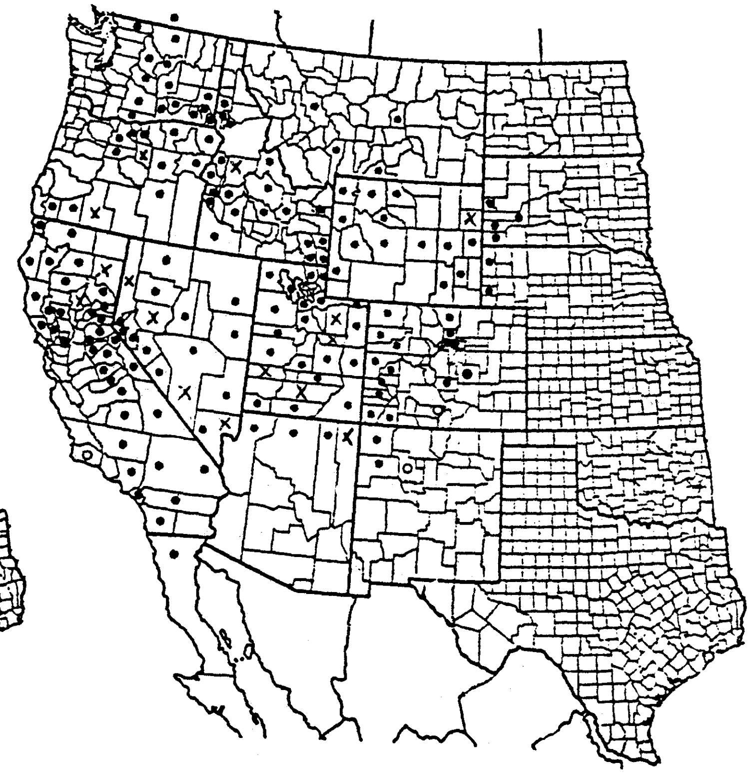
Papilio machaon (incl kahli)



Papilio zelicaon, black (=nitra)

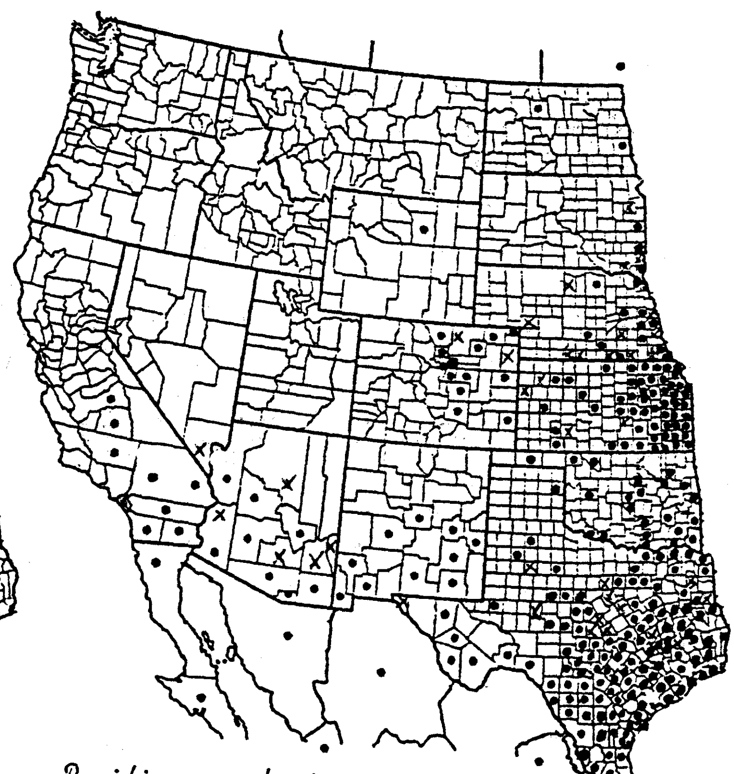


Papilio zelicaon, yellow (incl gothica)



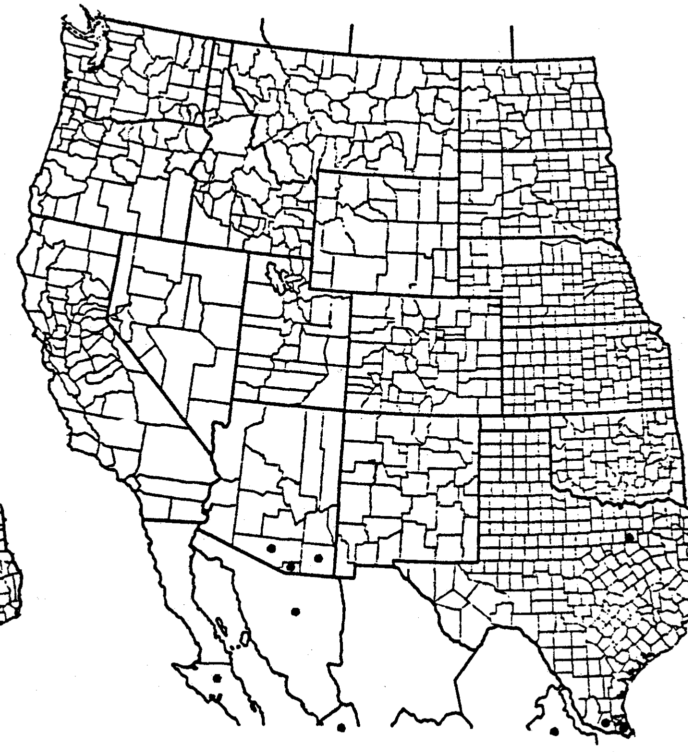
Papilio indra

Papilio thoas



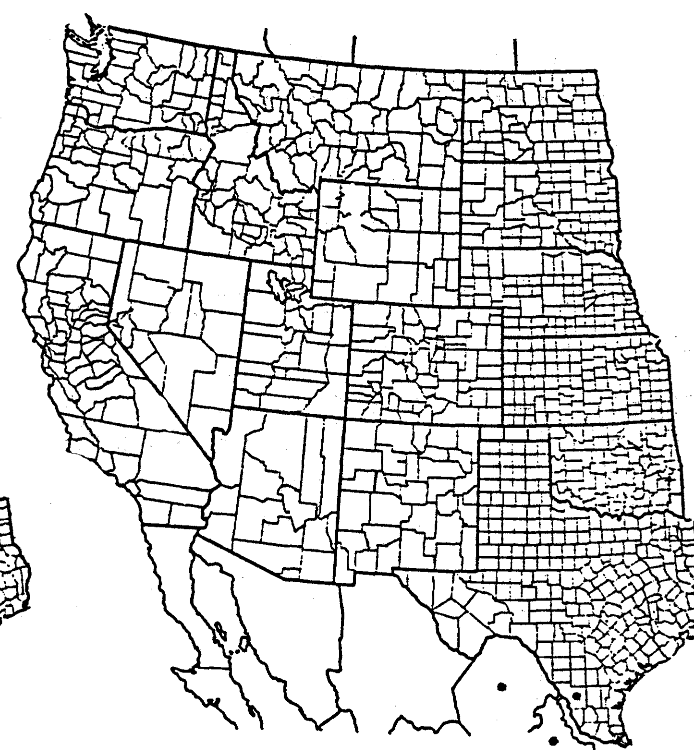
Papilio cresphontes

Papilio ornythion

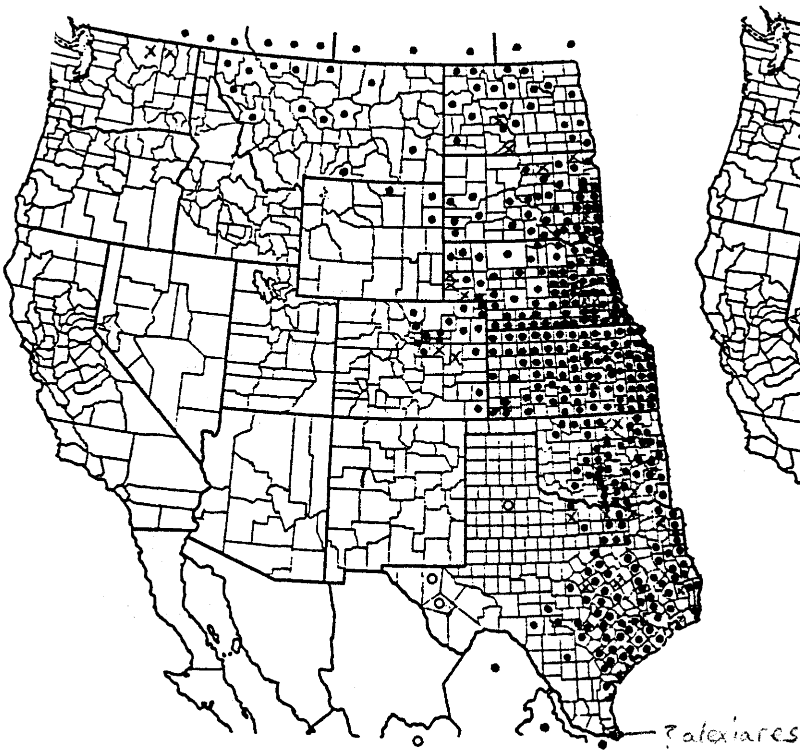


Papilio astyalus

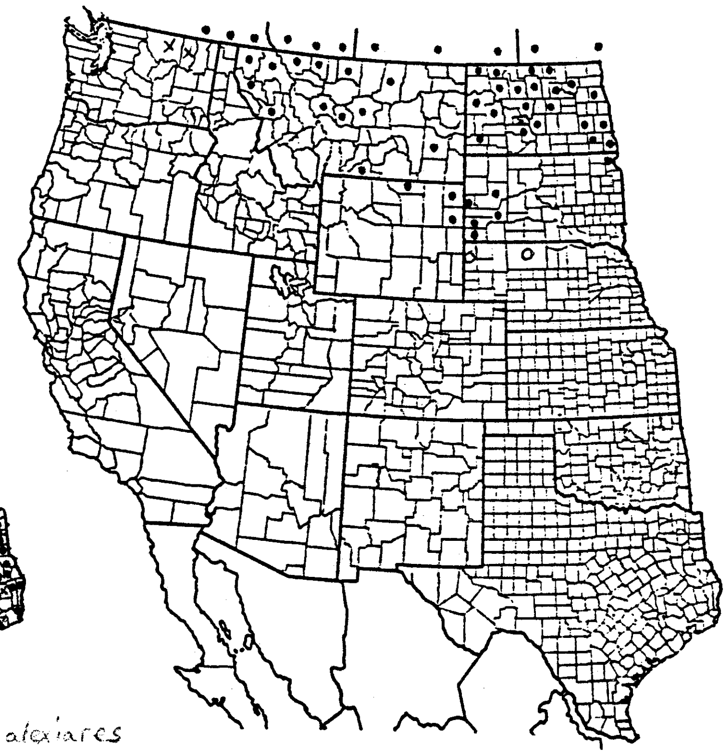
Papilio androgeus



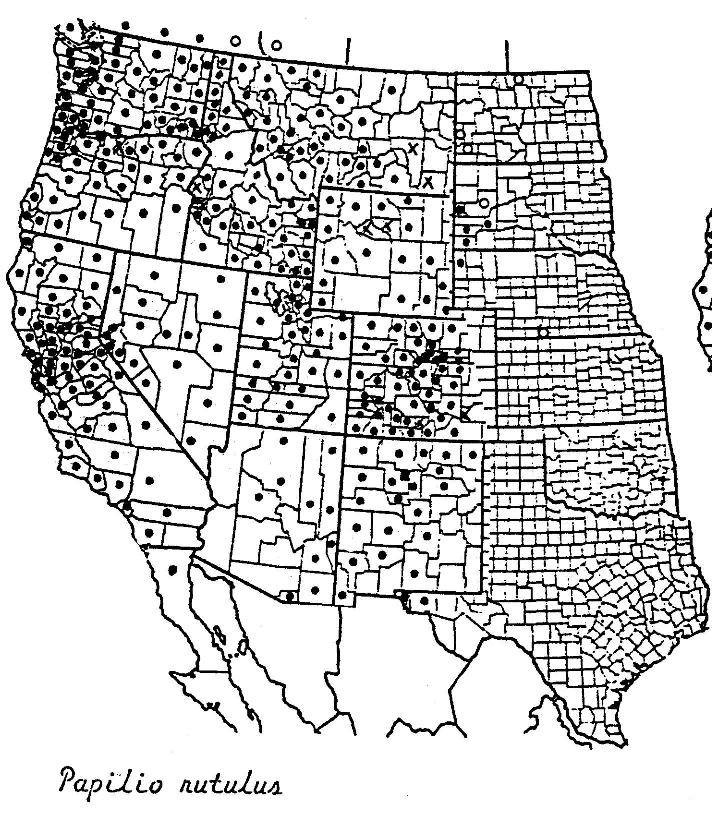
Papilio alexiares



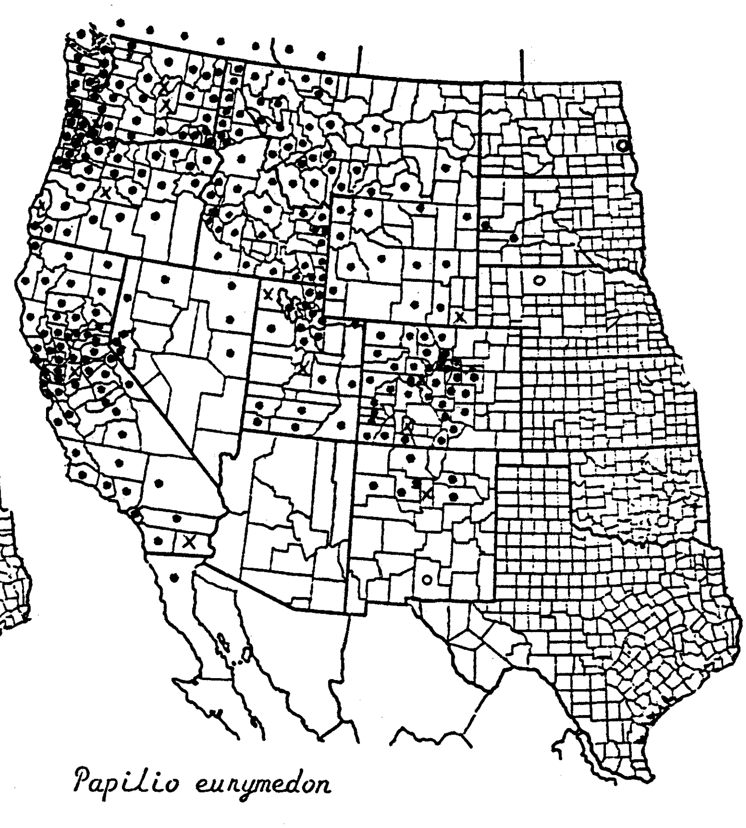
Papilio glaucus (incl canadensis)



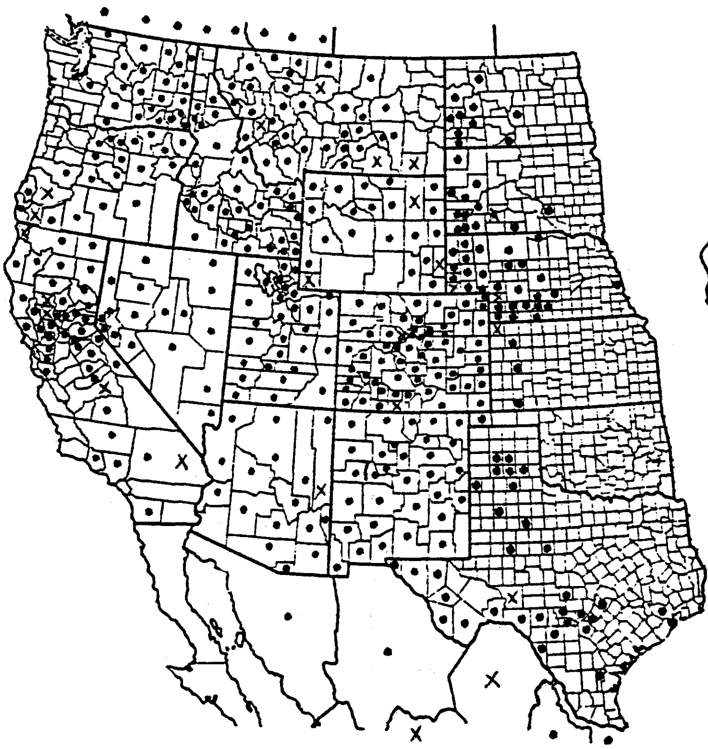
Papilio canadensis



Papilio rutulus



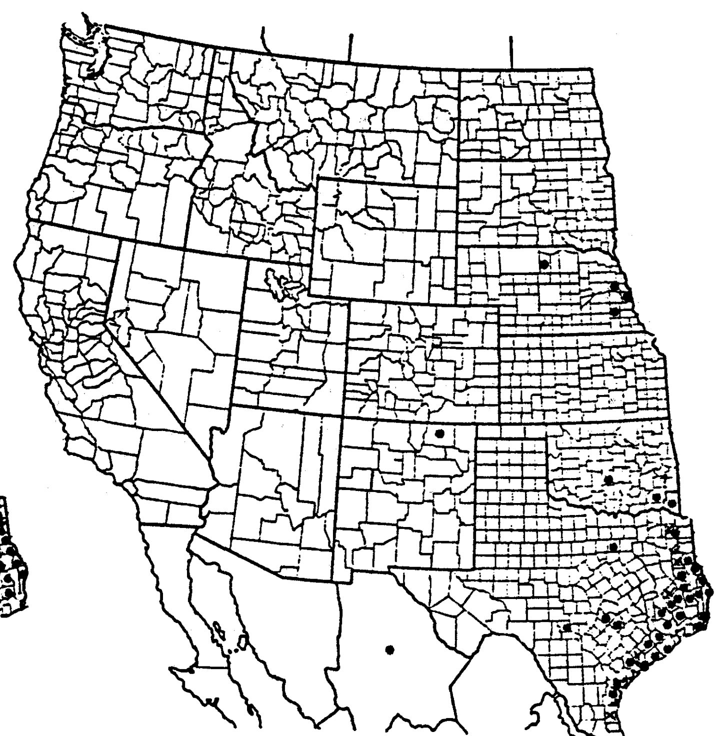
Papilio eurymedon



Papilio multicaudatus

Papilio pilumnus

Papilio troilus



Papilio palamedes

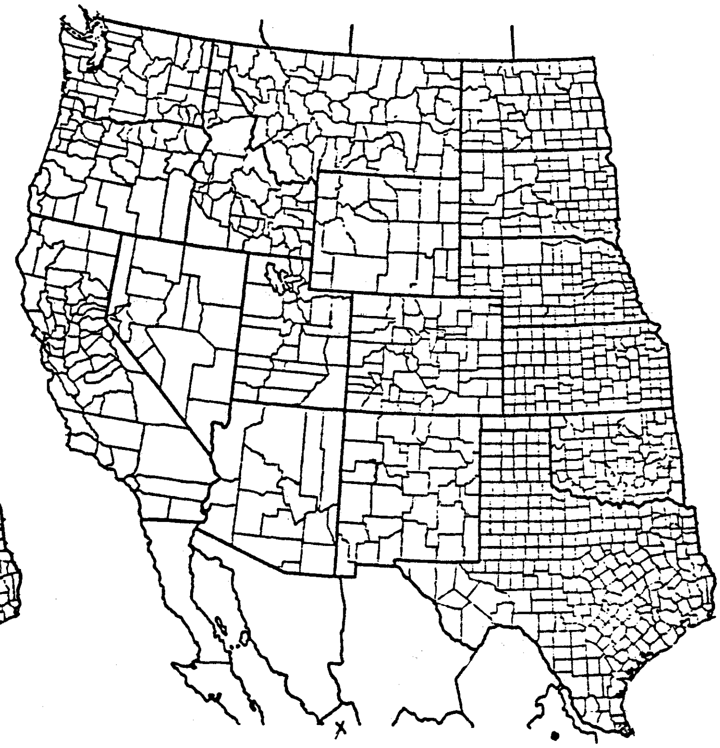
Papilio anchisiades

Papilio pharnaces

Papilio erostratinus

Papilio torquatus (incl tolus)

Papilio victorinus



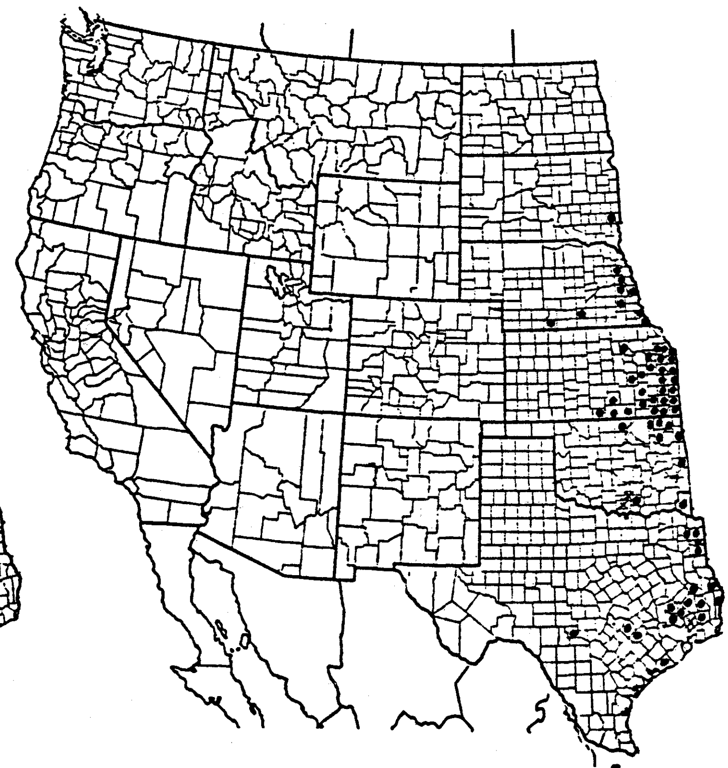
Papilio garamas

Papilio abderus

prob. garamas ADW

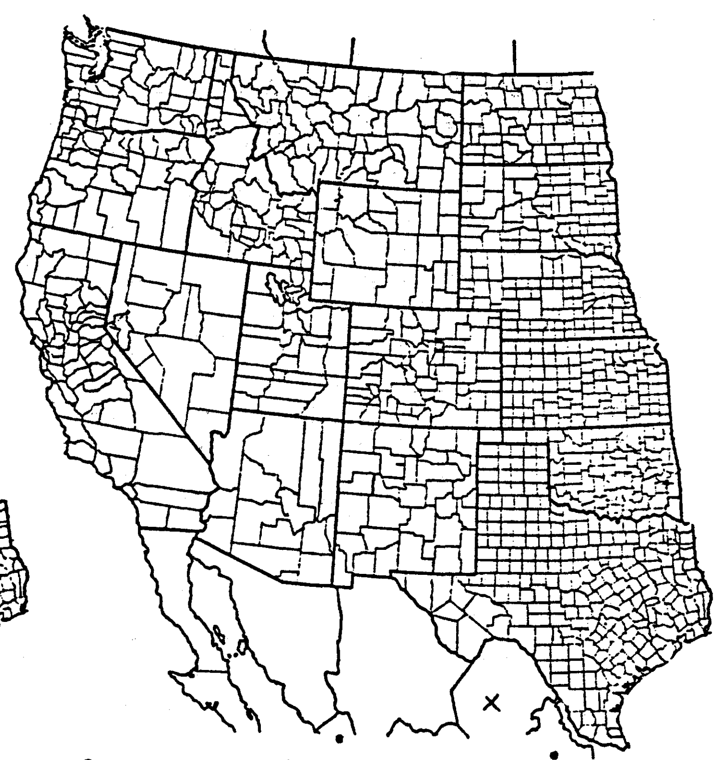
Eurytides phaon

Eurytides thymbraeus



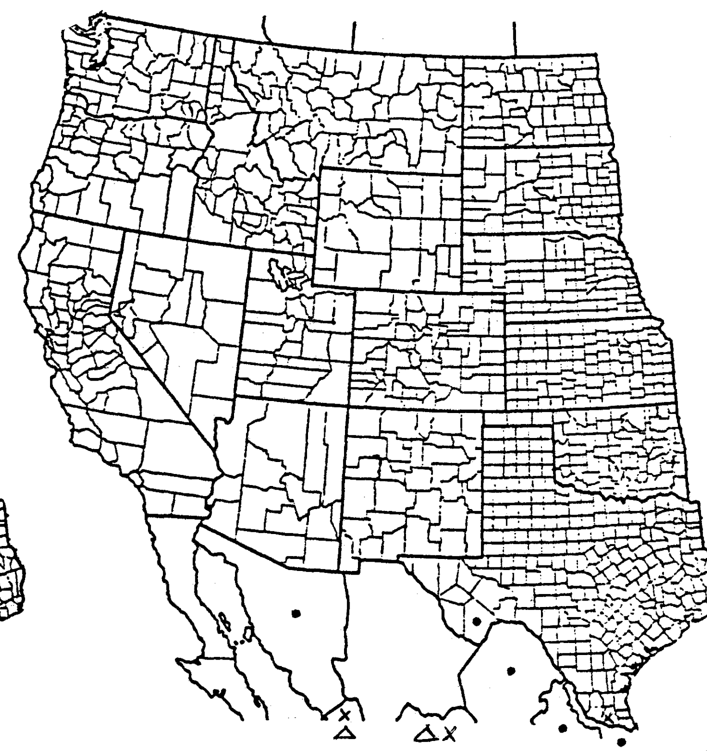
Eurytides marcellus

Eurytides philolaus



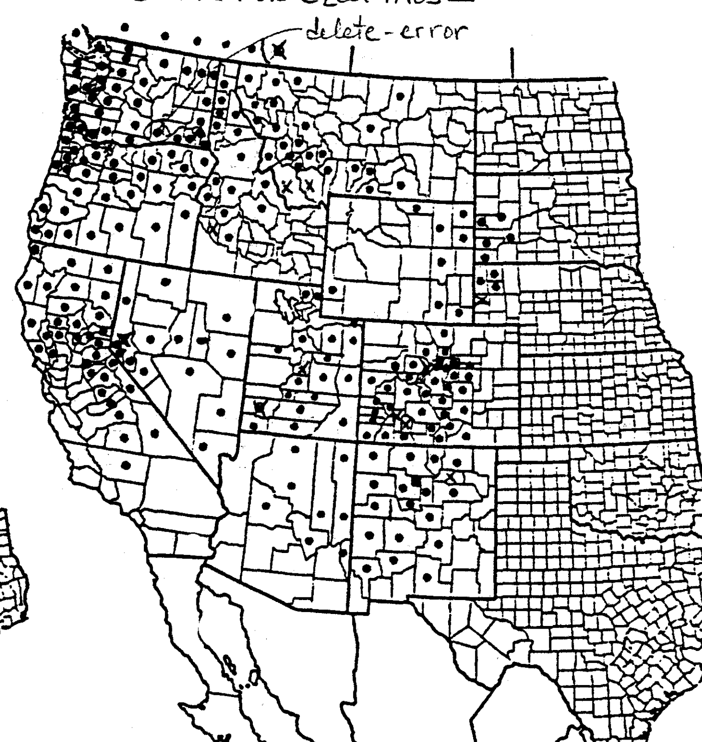
Eurytides epidaus

Eurytides agesilaus



Catasticta nimbice
Catasticta flisa [det PAO] △

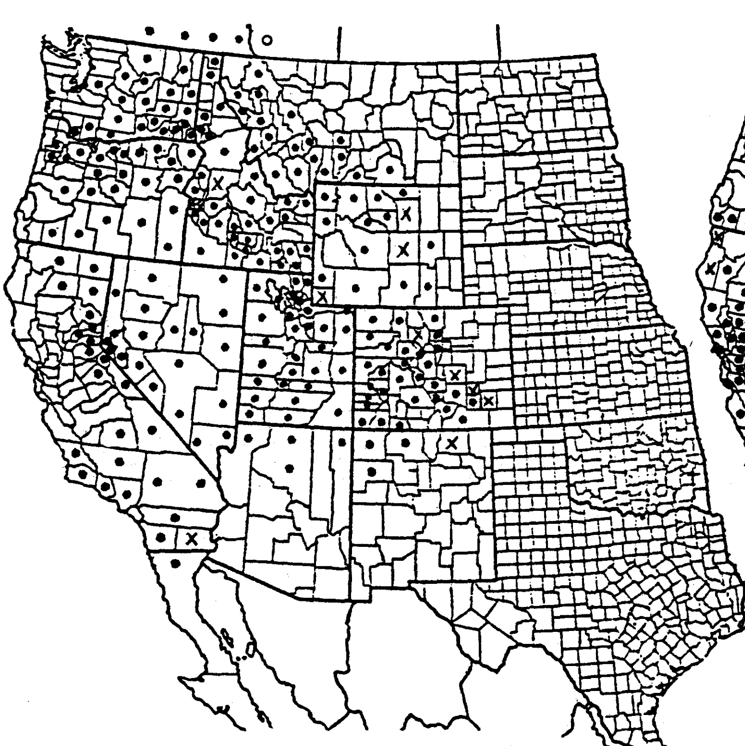
Eucheira socialis
Pereute charops △



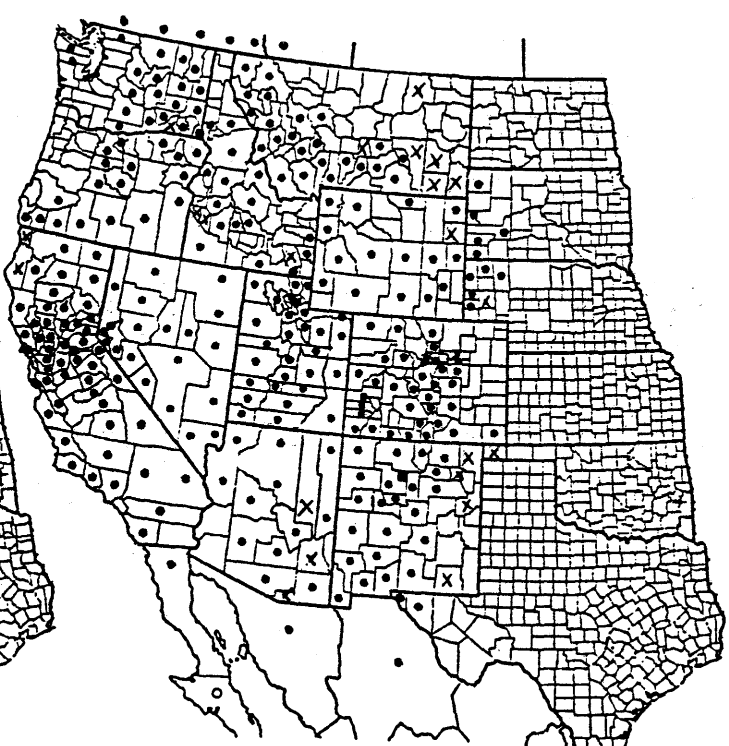
Neophasia menapia

Neophasia terlootii

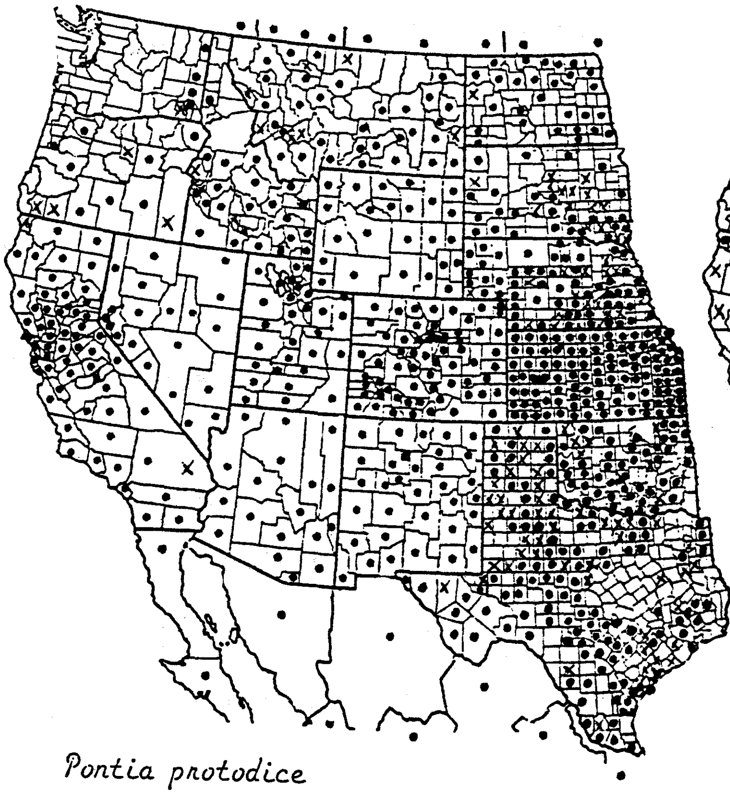
Appias drusilla



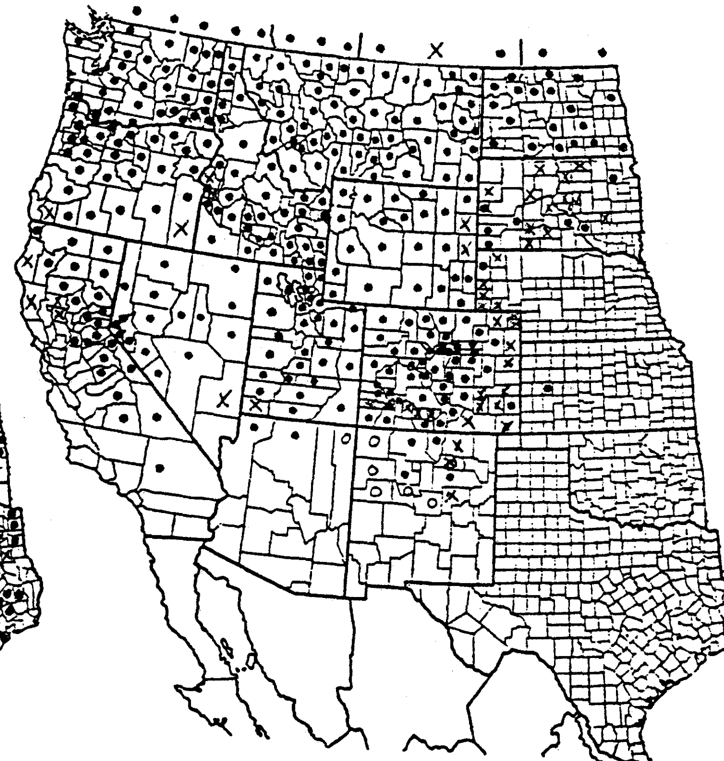
Pontia beckerii



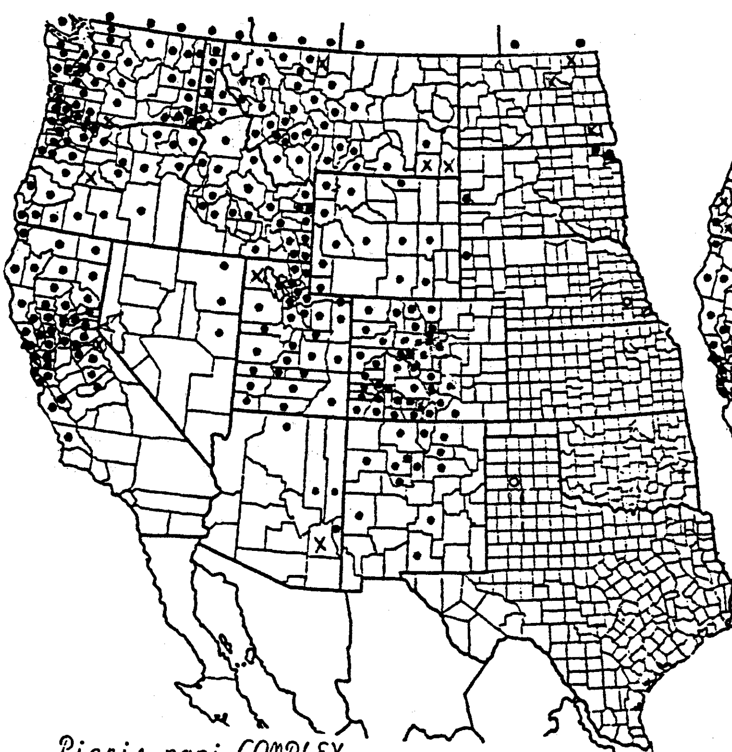
Pontia sisymbrii



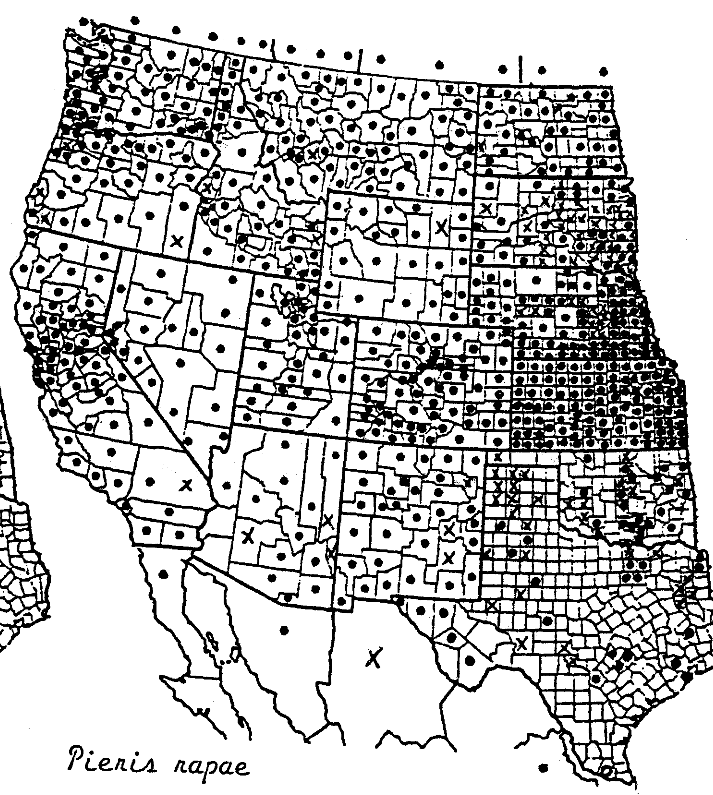
Pontia protodice



Pontia occidentalis



Pieris napi COMPLEX



Pieris rapae

Pseudopieris nehemia

Leptophobia aripa

Hesperocharis ~~avivolans/crocea~~
costaricensis [fide PAD]

Itaballia amathonte

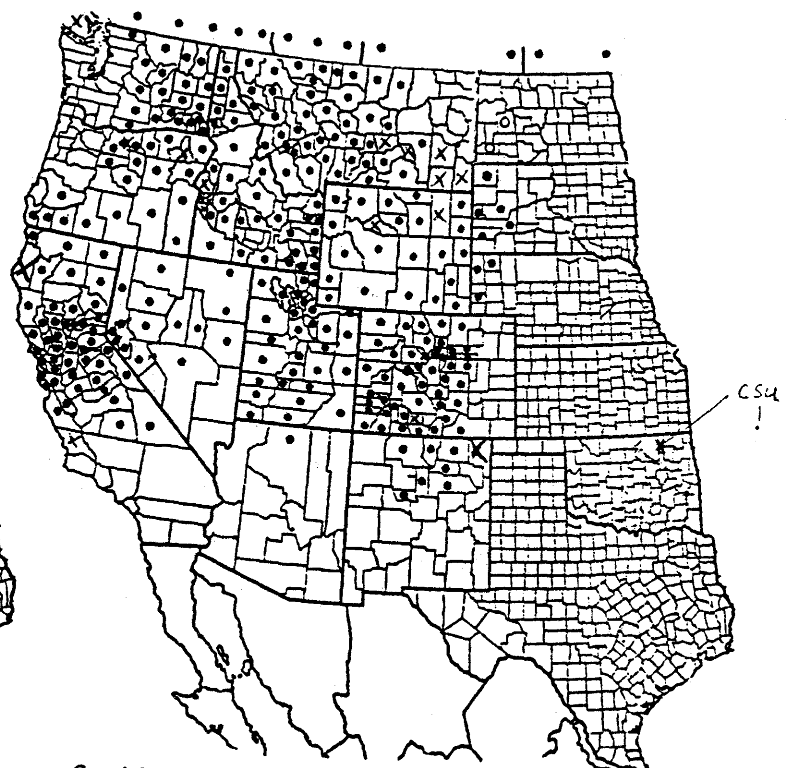
Pieriballia viardi

Ascia monuste

Ganyra josephina

Ganyra howarthi (=kuschei)

Melete isandra

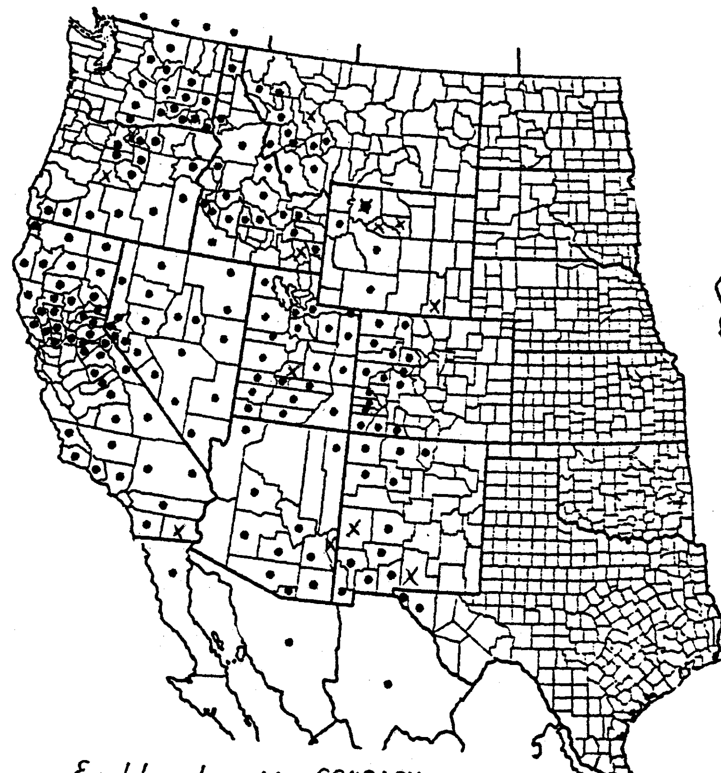


Euchloe ausonides

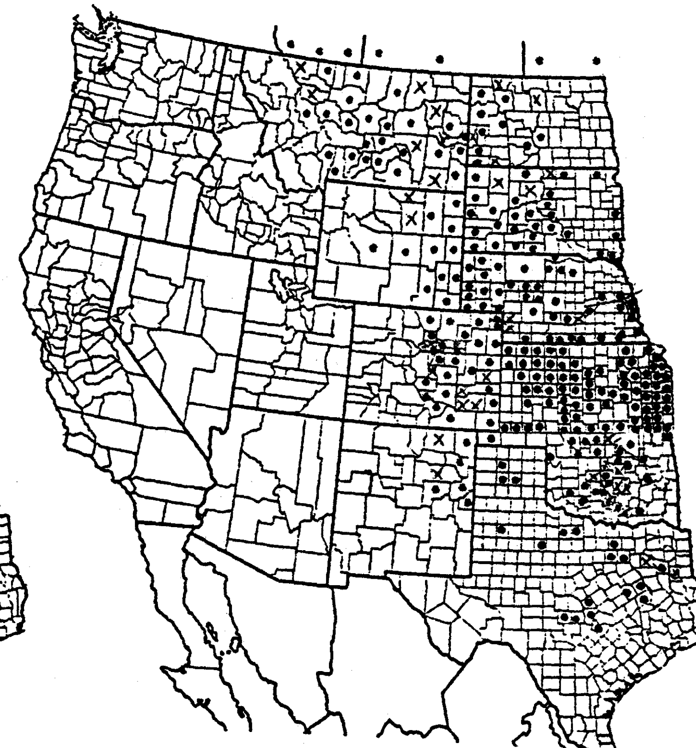
18

Euchloe guaymasensis

Euchloe creusa



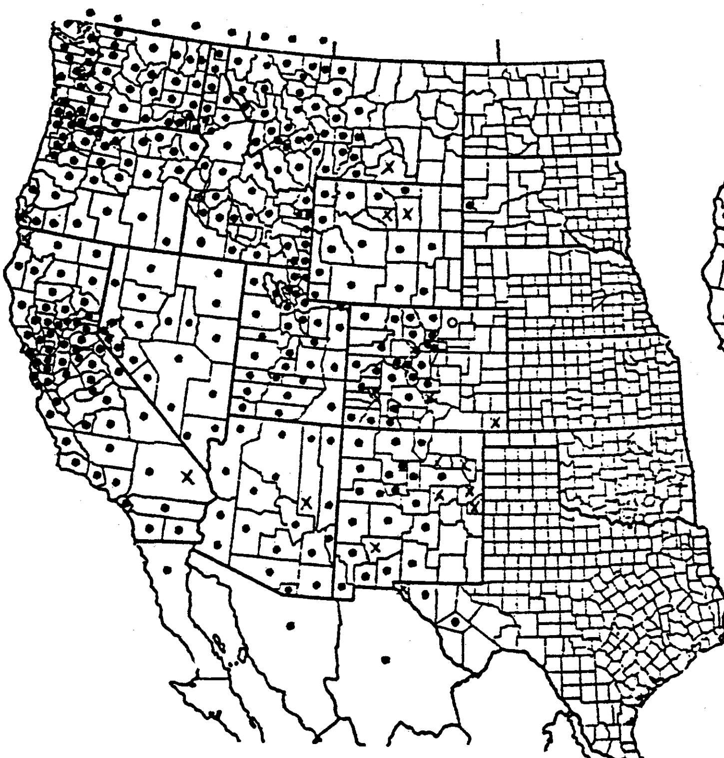
Euchloe hyantis COMPLEX



Euchloe olympia

Anthocharis cethura

Anthocharis pima

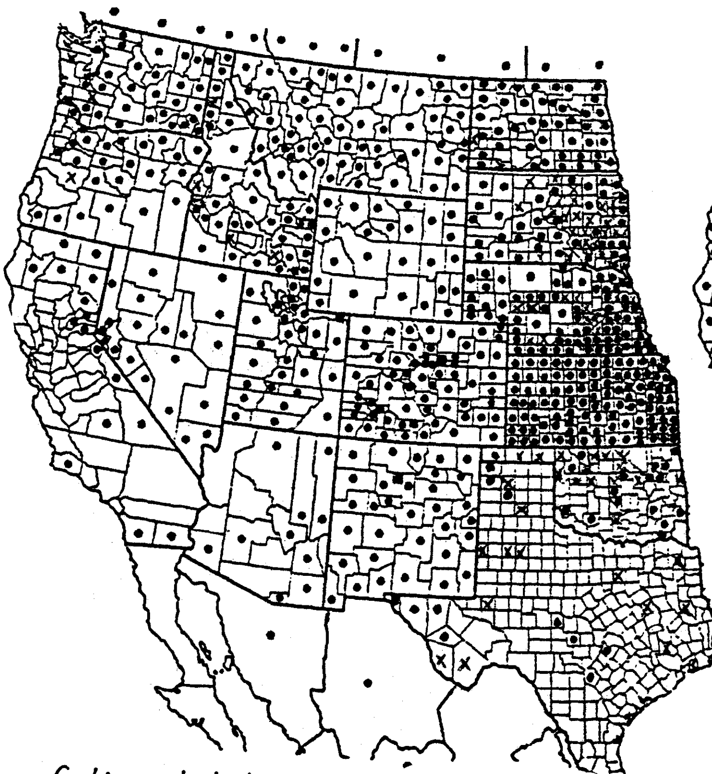


Anthocharis sara COMPLEX

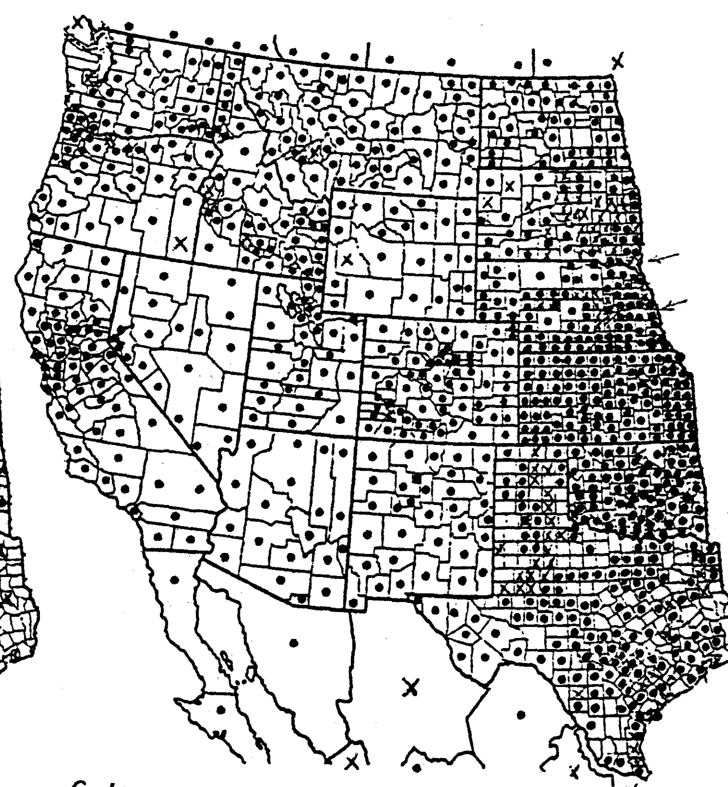
Anthocharis midea

Anthocharis lanceolata

Anthocharis limonea

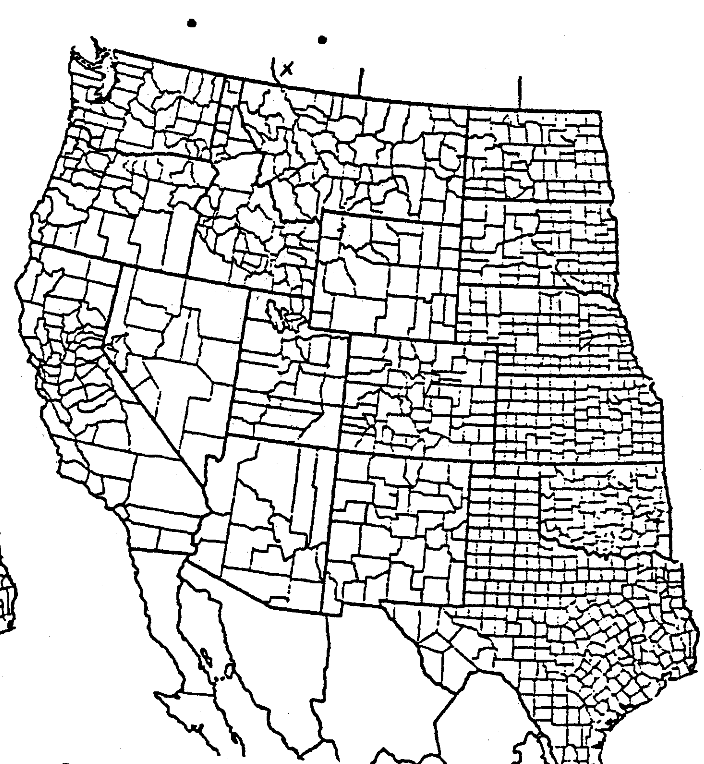


Colias philodice



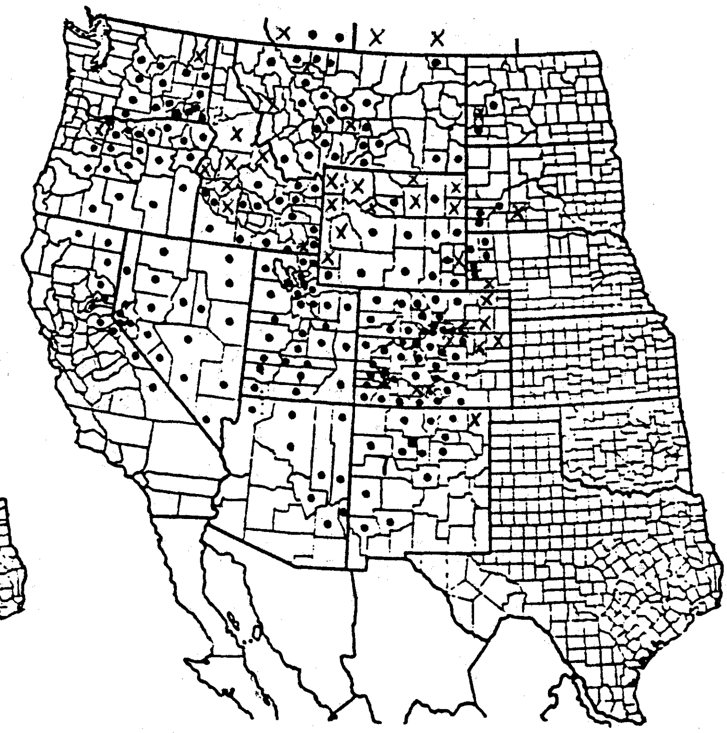
Colias eurytheme

Colias hecla COMPLEX

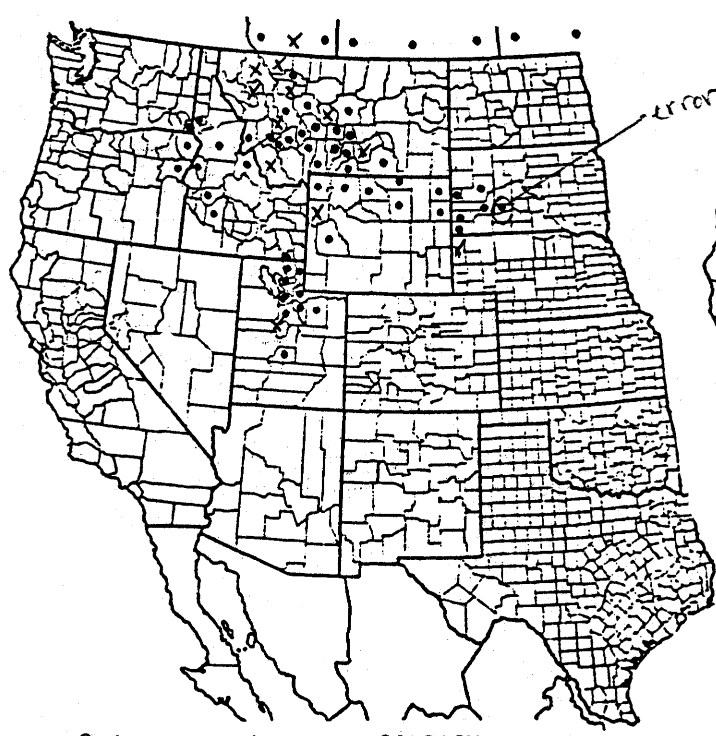


Colias canadensis

Colias occidentalis, yellow morphs

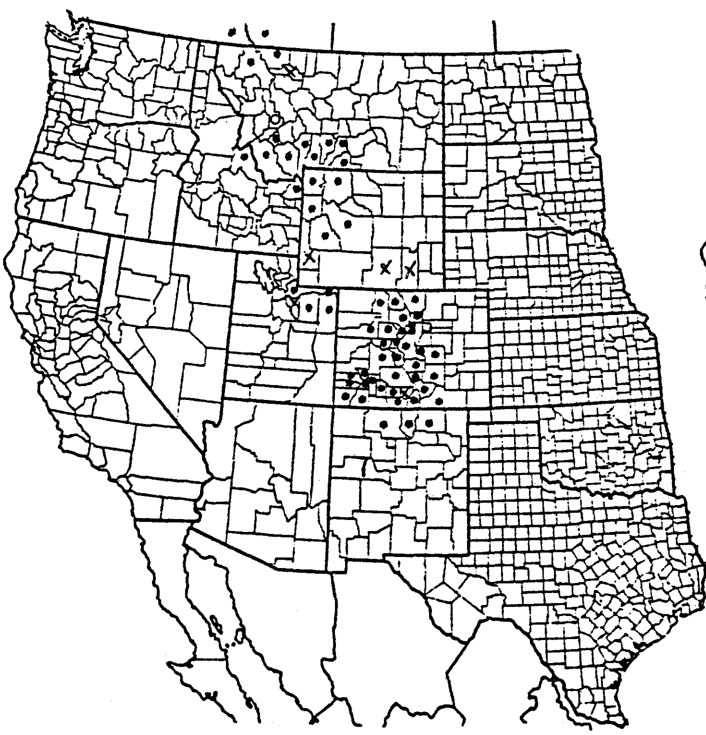


Colias alexandra, yellow morphs



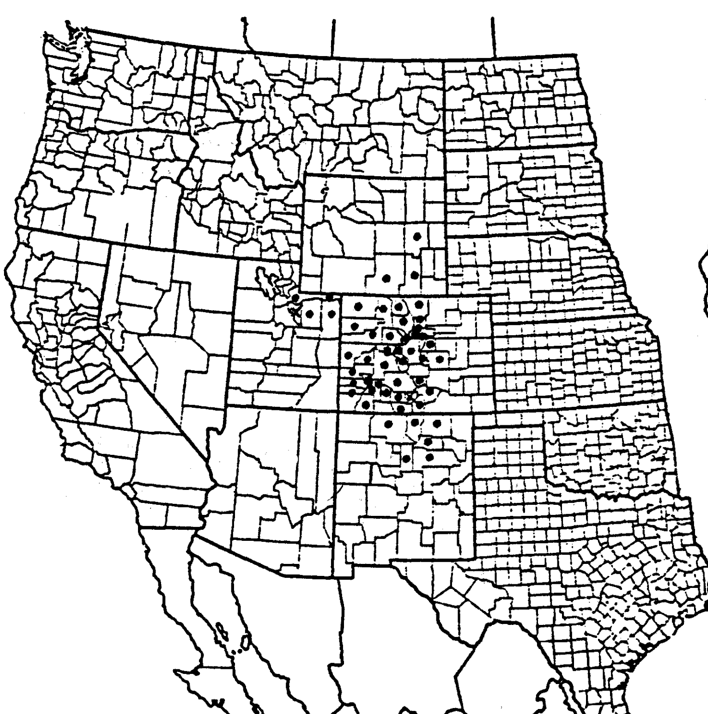
Colias occidentalis COMPLEX, orange or partially orange morphs, including astraea, christina, krauthii, pseudochristina and wasatchia

Colias harfordii



Colias meadii

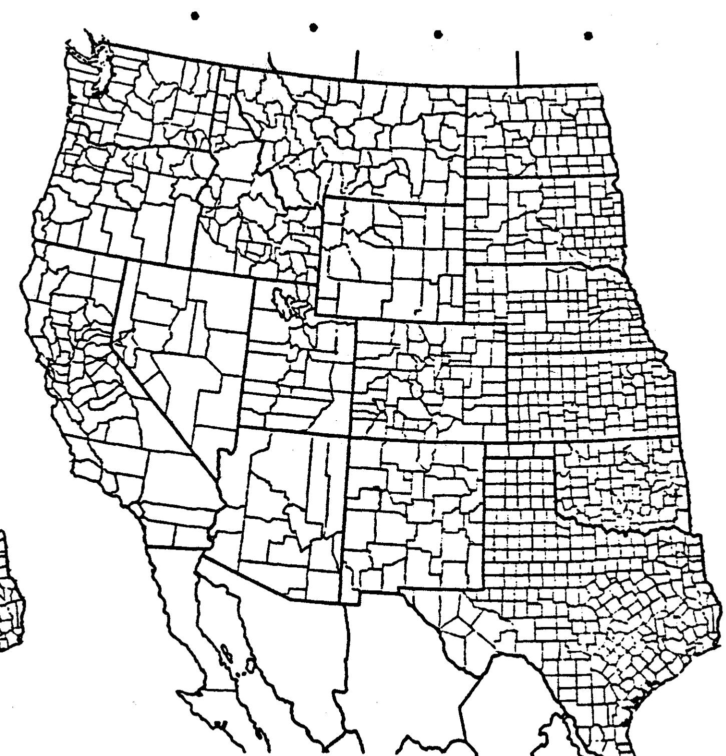
Colias nastes



Colias scudderi

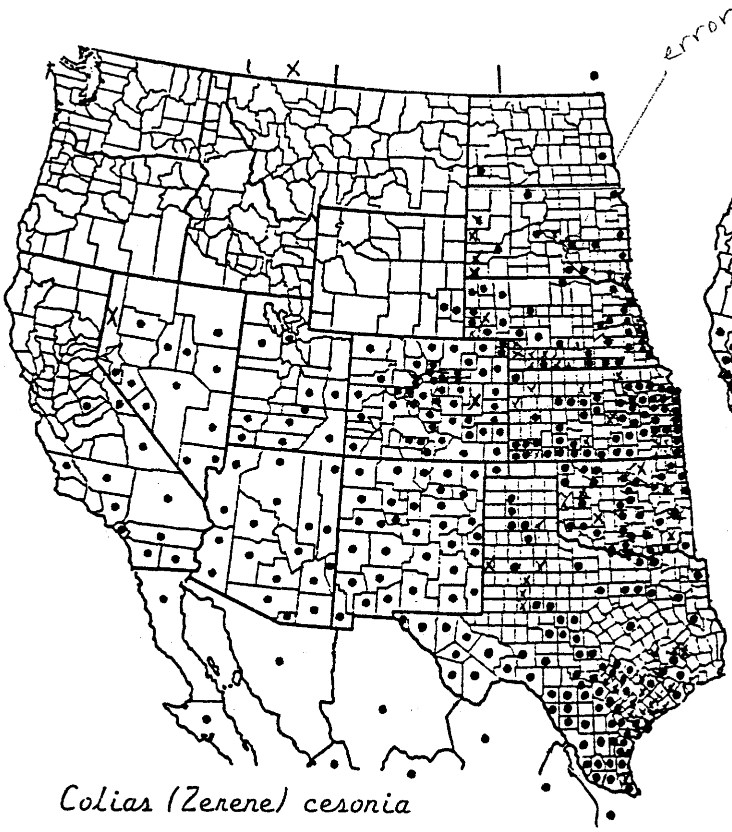
Colias gigantea


Colias pelidne

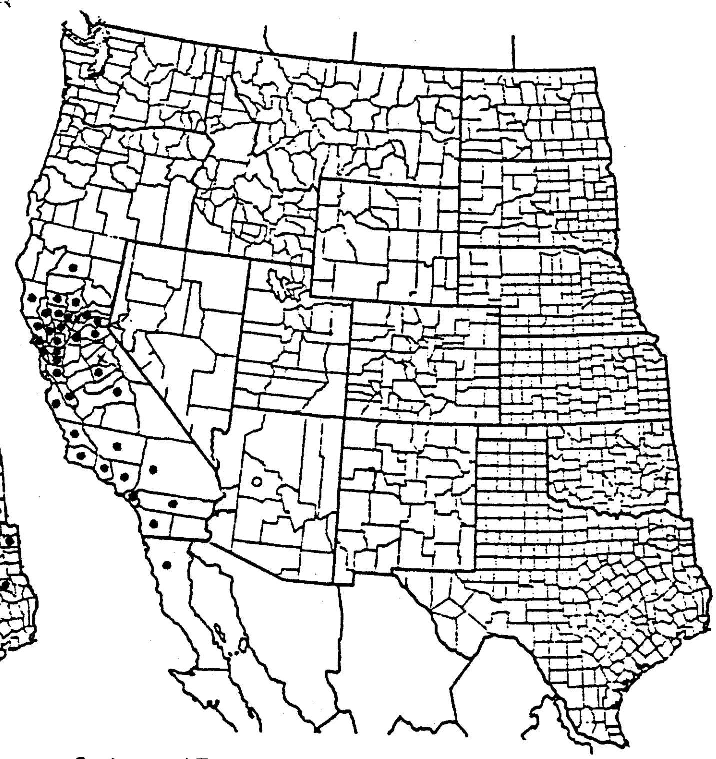

Colias palaeno


Colias interior


Colias behrii



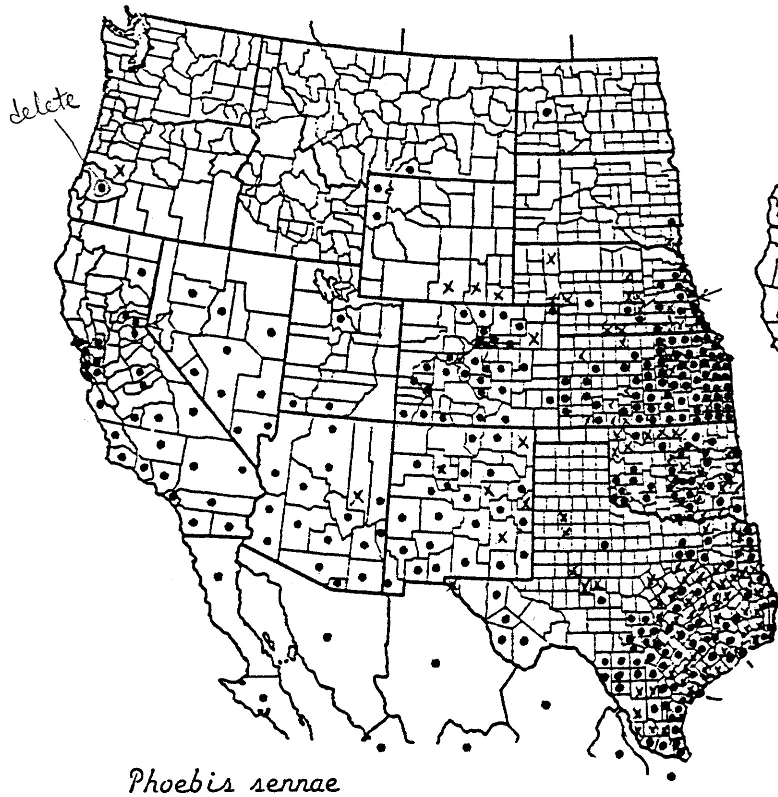
Colias (Zerene) cesonia



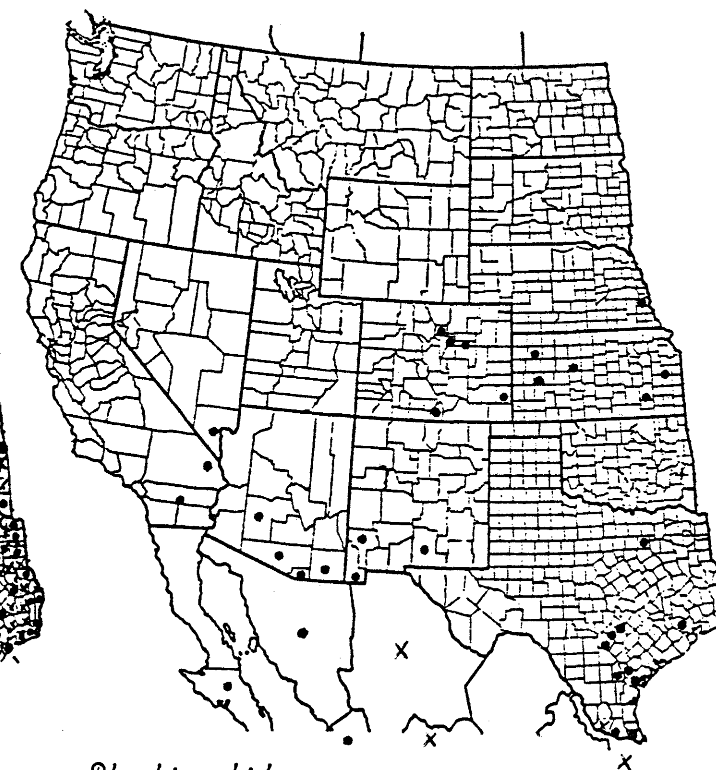
Colias (Zerene) eurydice

Anteos clorinde

Anteos maerula

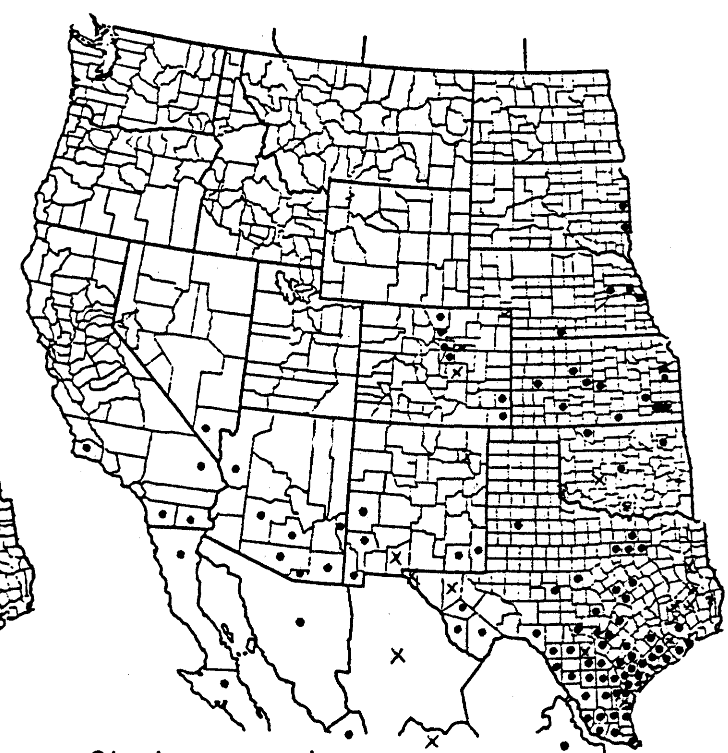


Phoebis sennae



Phoebis philea

Phoebis argante



Phoebis agarithe

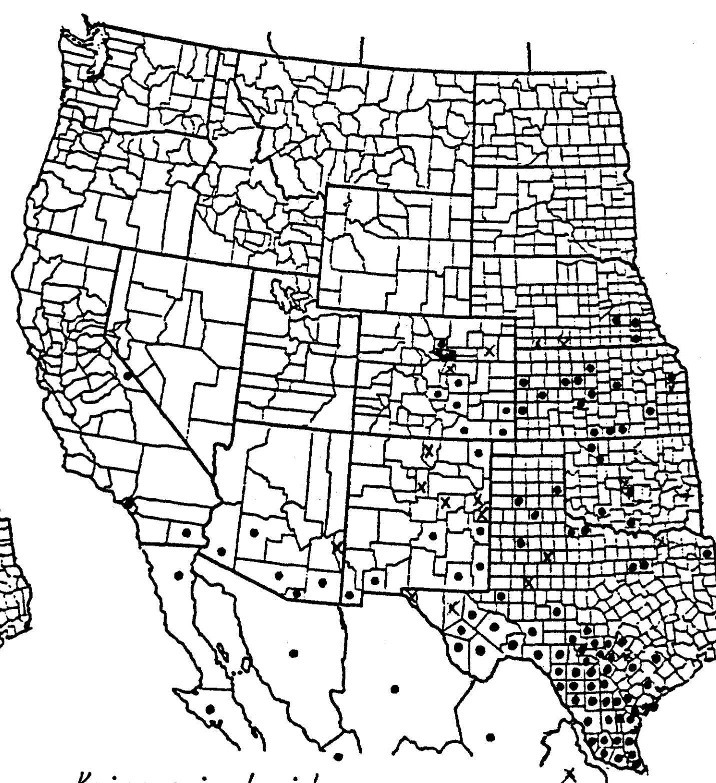
Phoebis rurina intermedia (=neocypris)

P. neocypris virgo [det ADW] △

Phoebis (Aphrissa) statira

Prestonia clarki

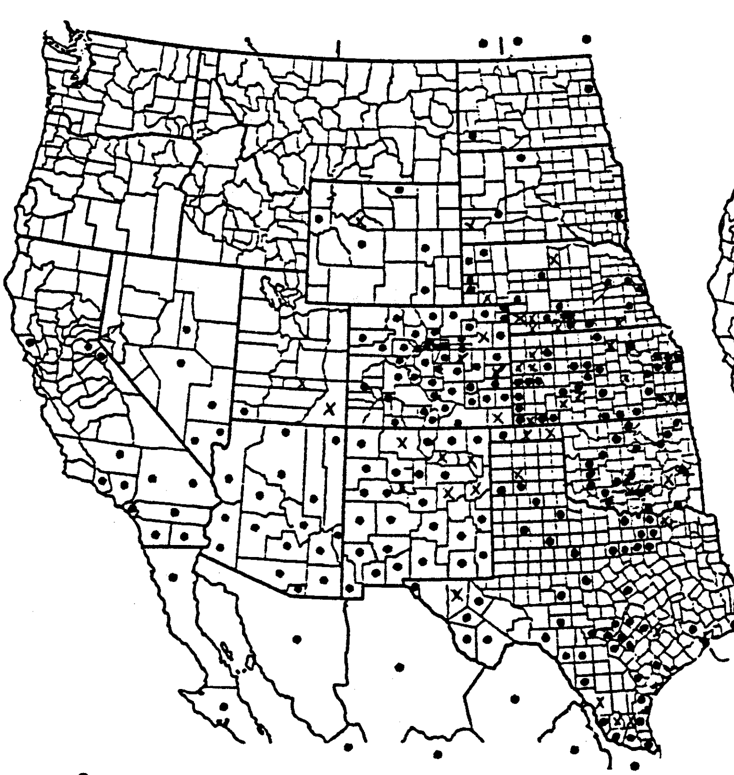
dubious
fide ADW



Kricogonia lyside

Eurema daira

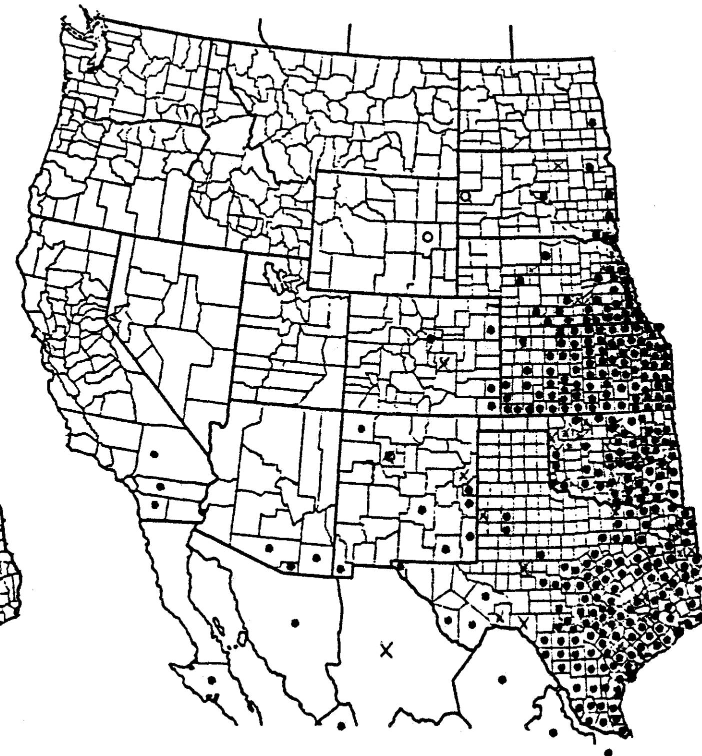
Eurema boisduvaliana



Eurema mexicana

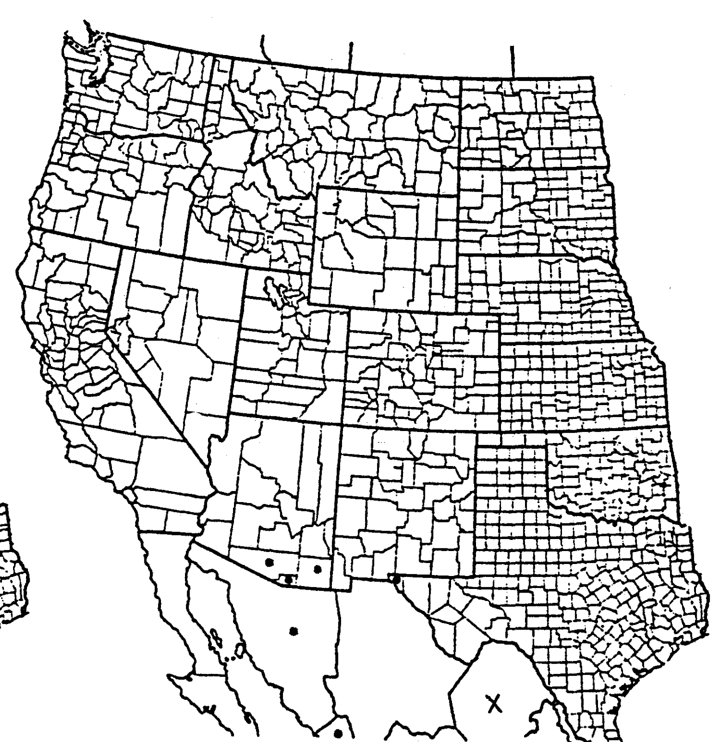
Eurema salome

Eurema proterpia

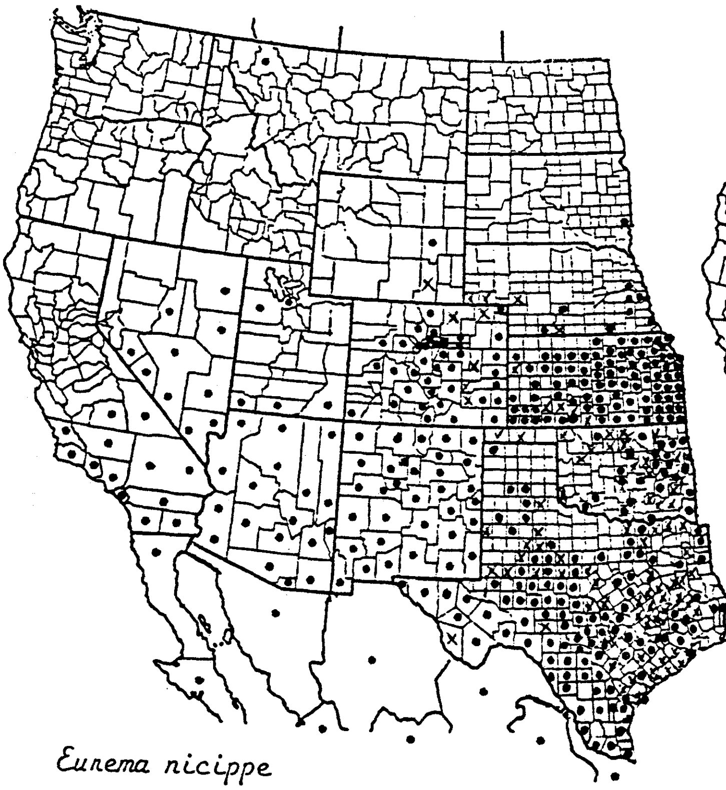


Eurema lisa

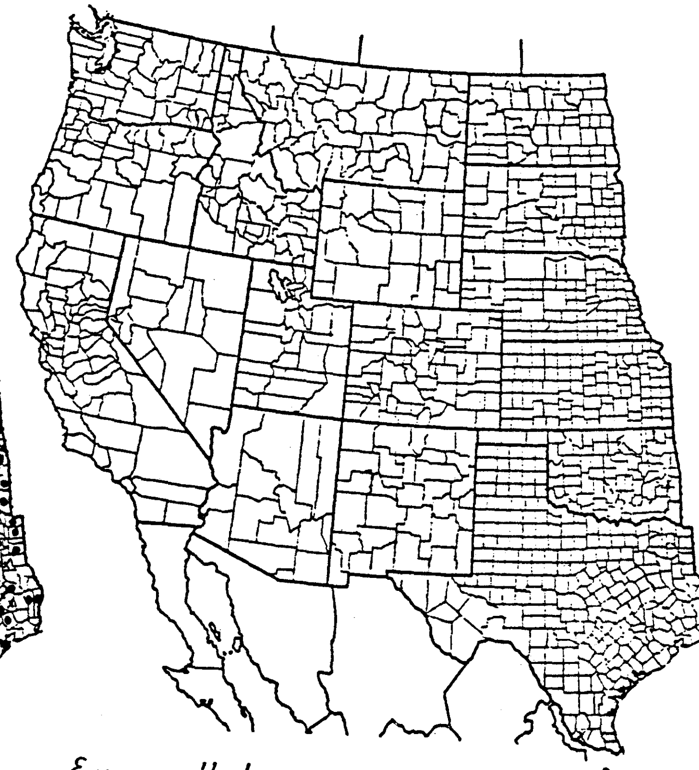
Eurema nise



Eurema dina

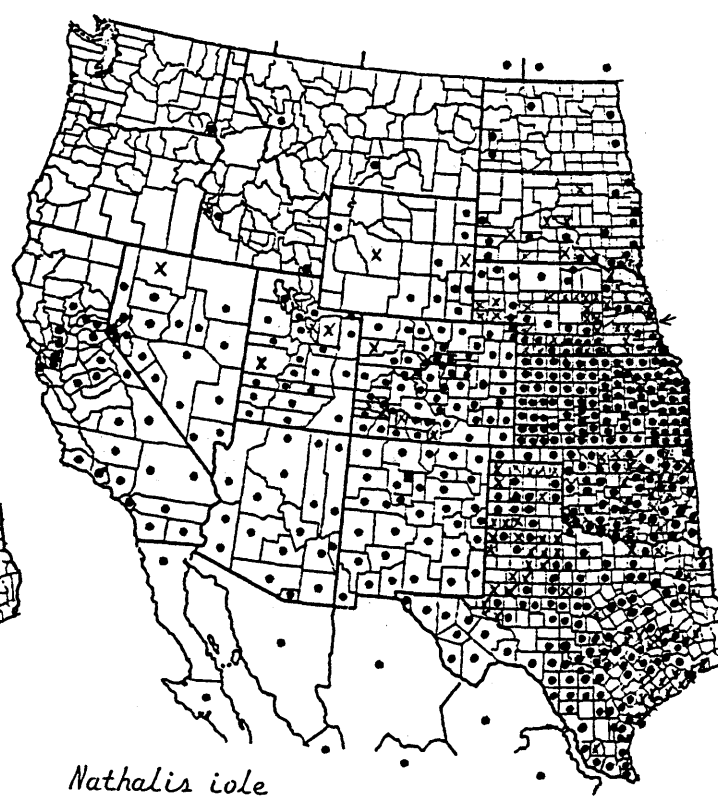


Eurema nicippe

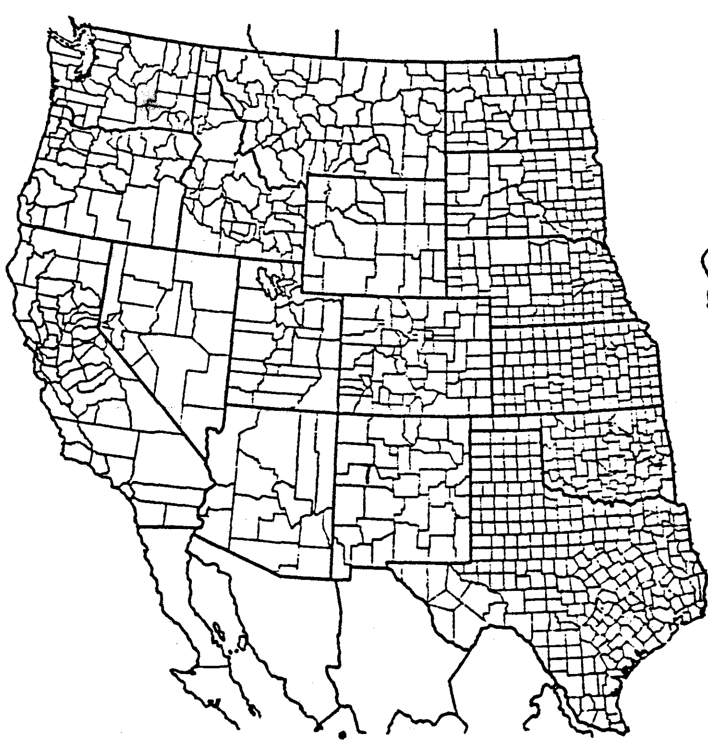


Eurema albula

Eurema sidonia



Nathalis iole

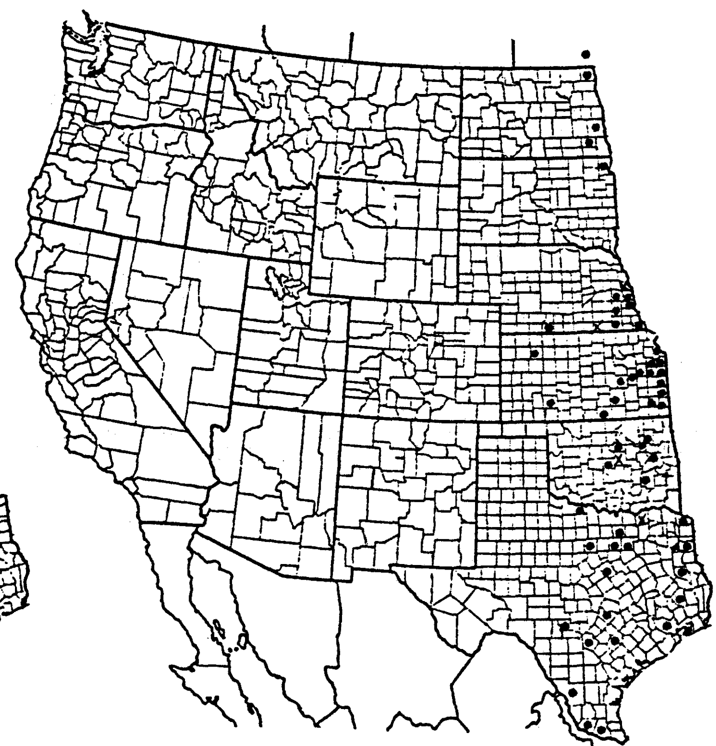


Dismorphia amphiona praxinoe

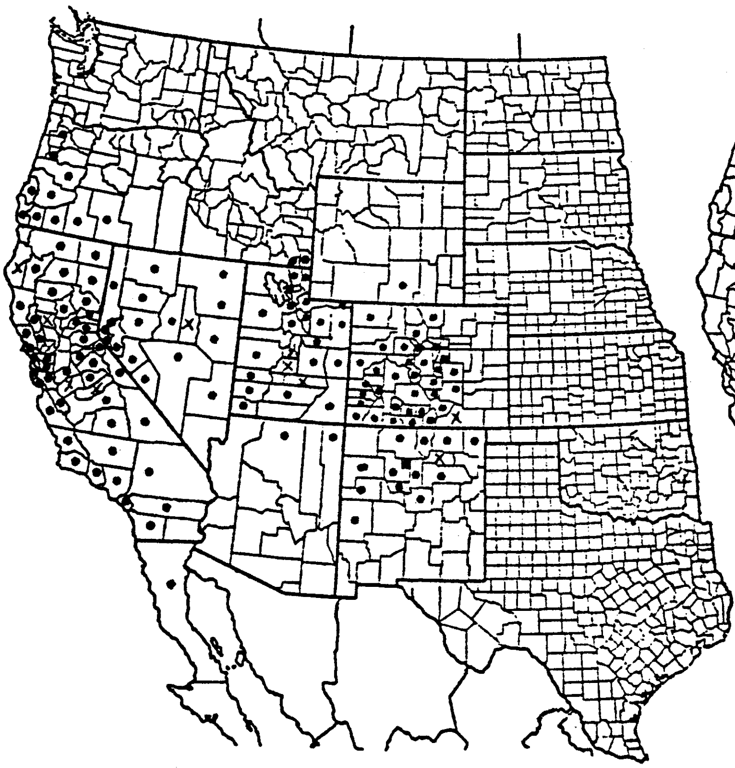
Dismorphia cornelia

Enantia albania (=melite)

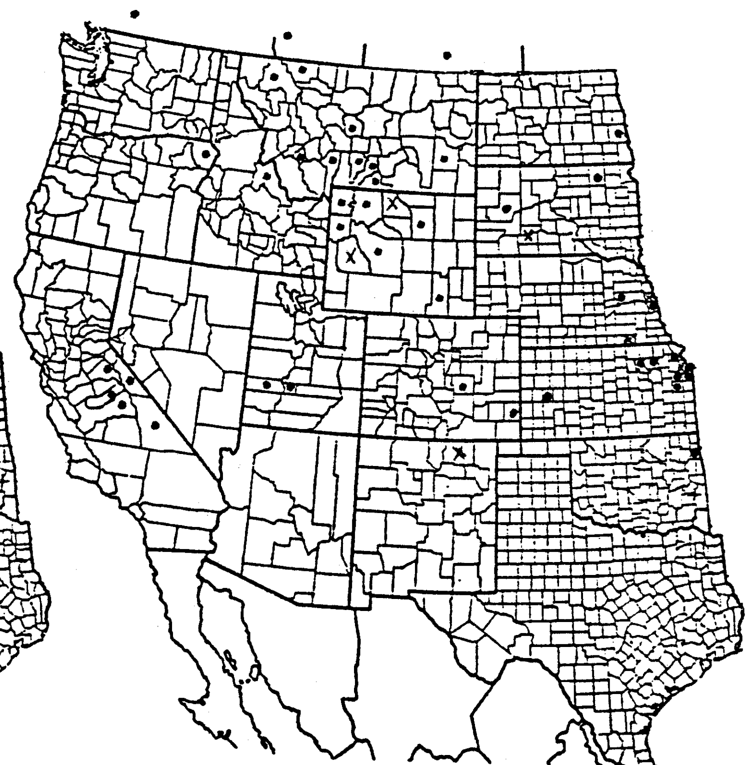
? = mazai diazi fide ADW



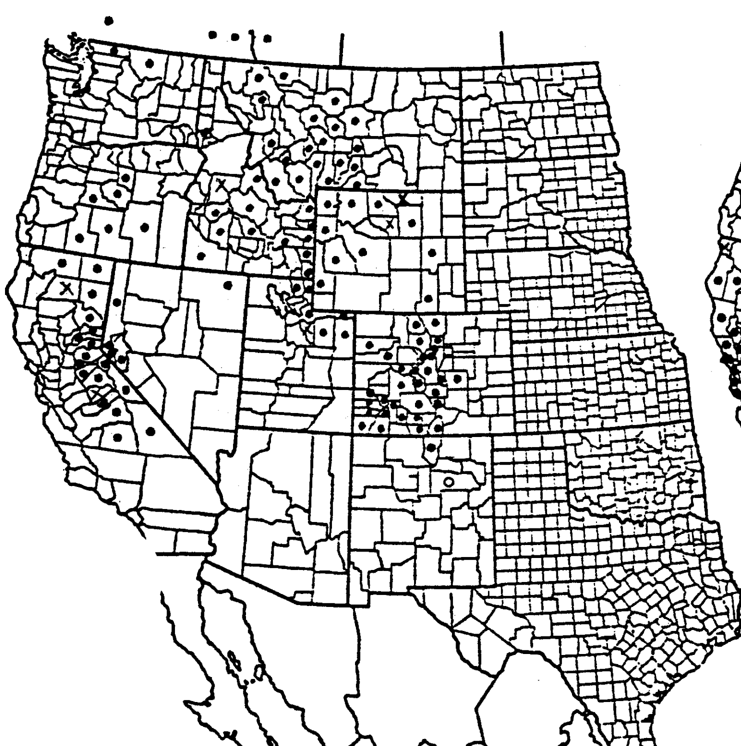
Feniseca tarquinius



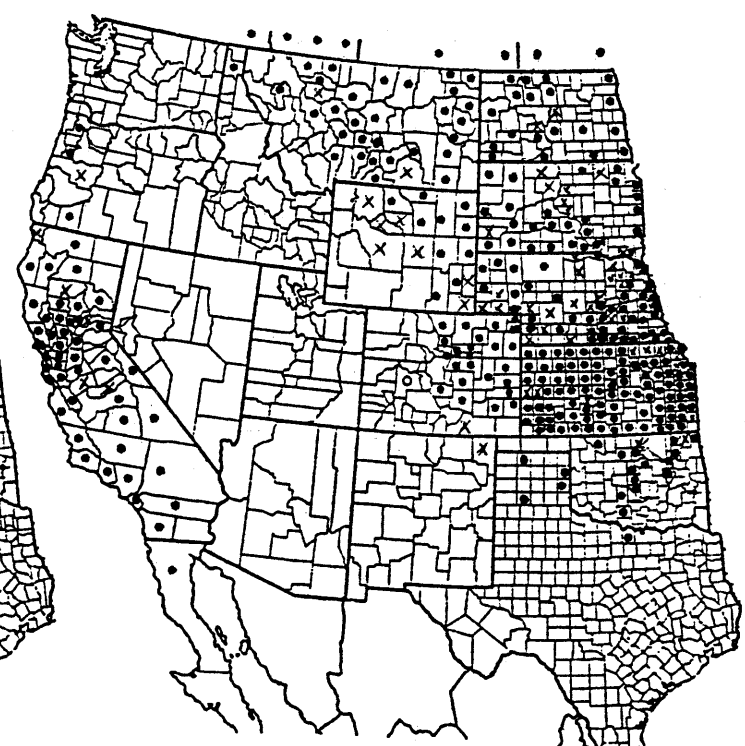
Lycaena (Tharsalea) arota



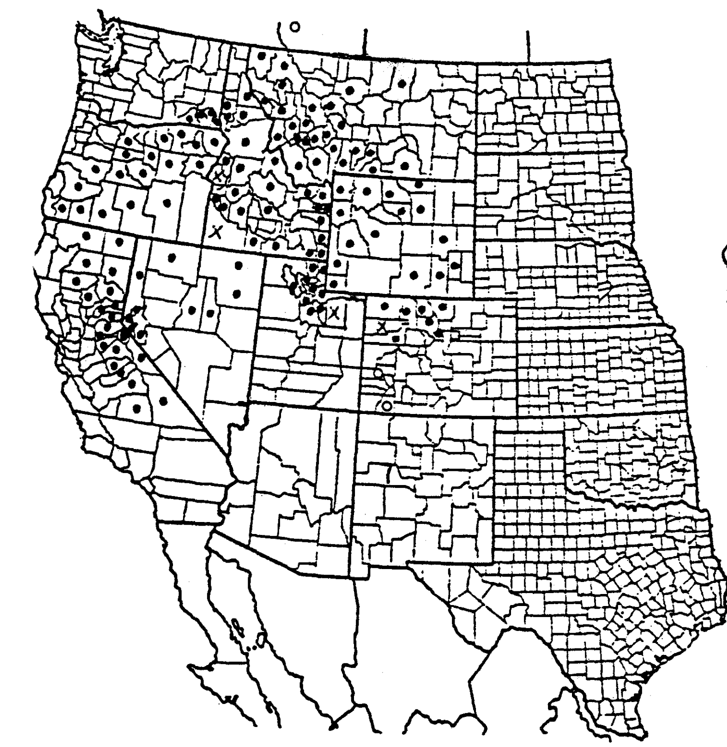
Lycaena phlaeas



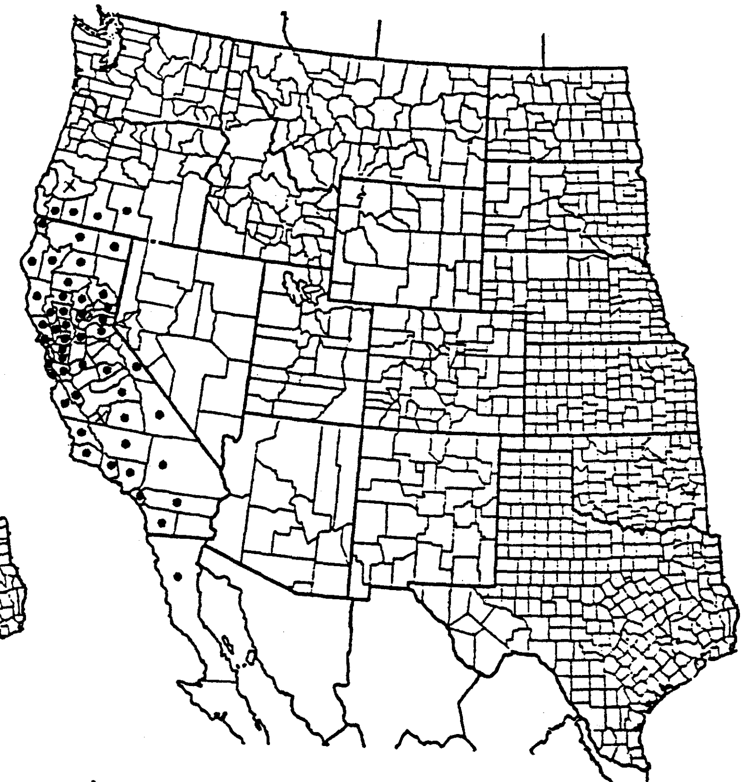
Lycaena cuprea



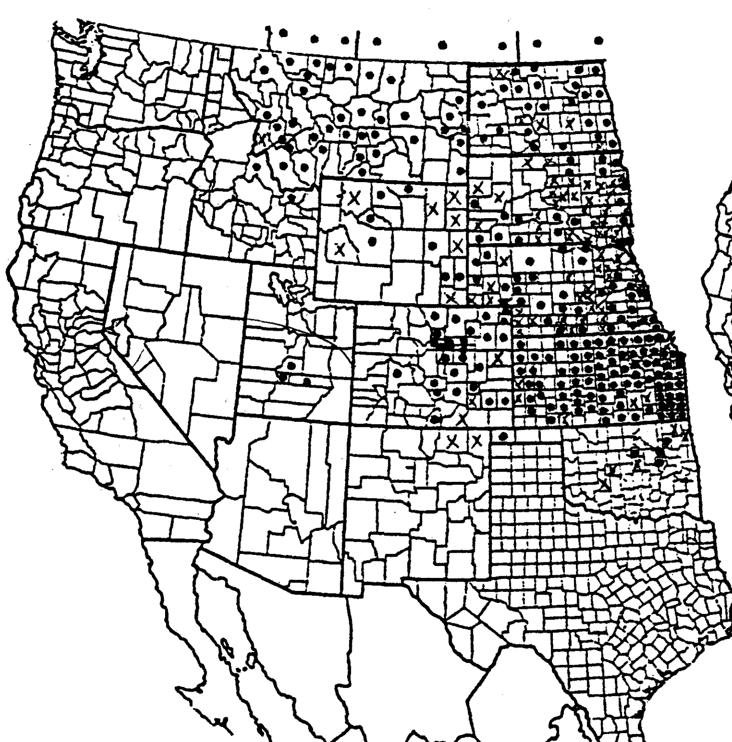
Lycaena xanthoides COMPLEX, excluding editha



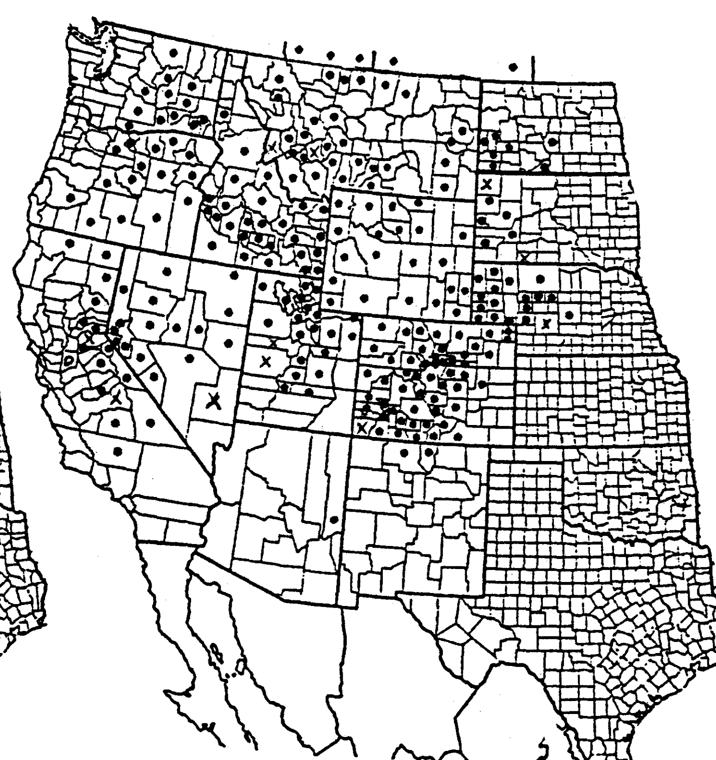
Lycaena editha



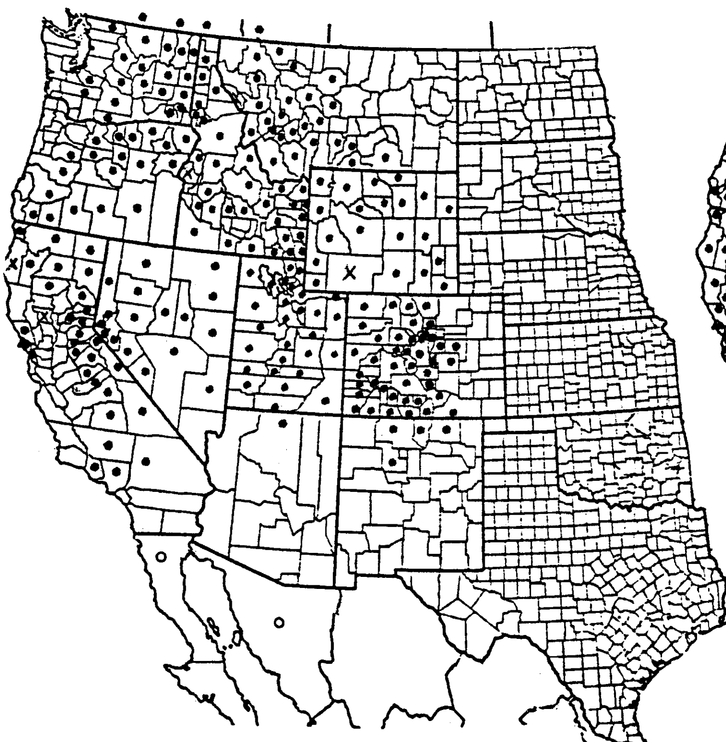
Lycaena gorgon



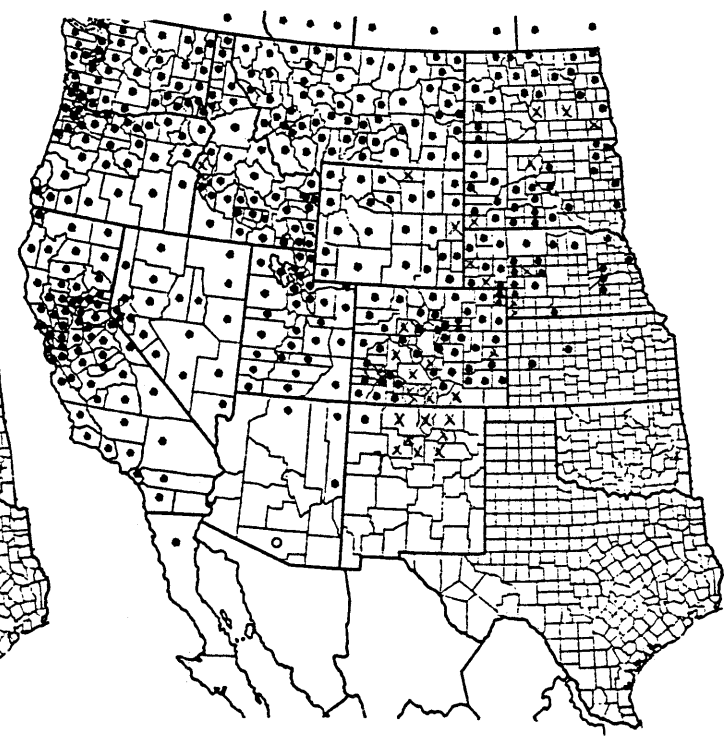
Lycaena hyllus



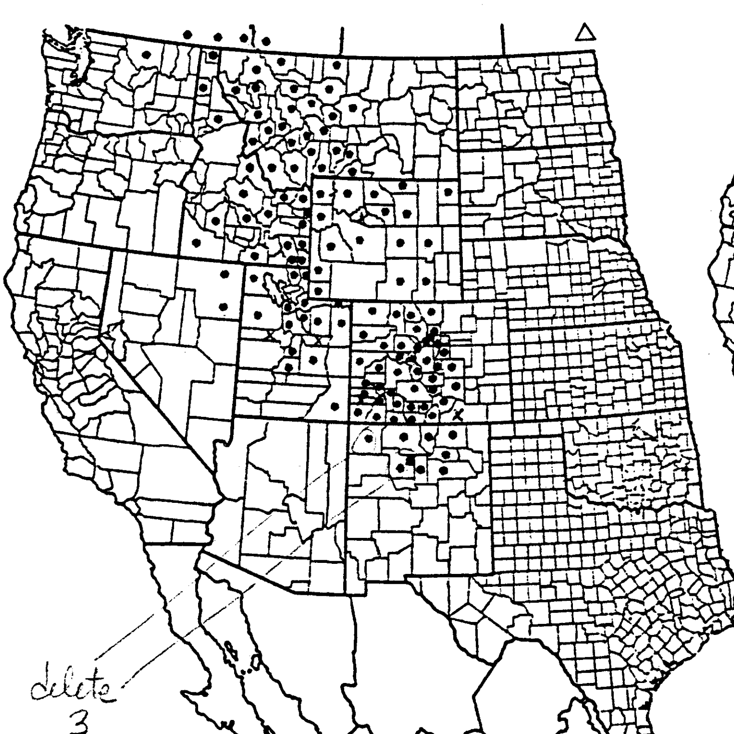
Lycaena rubida (incl ferrisi)



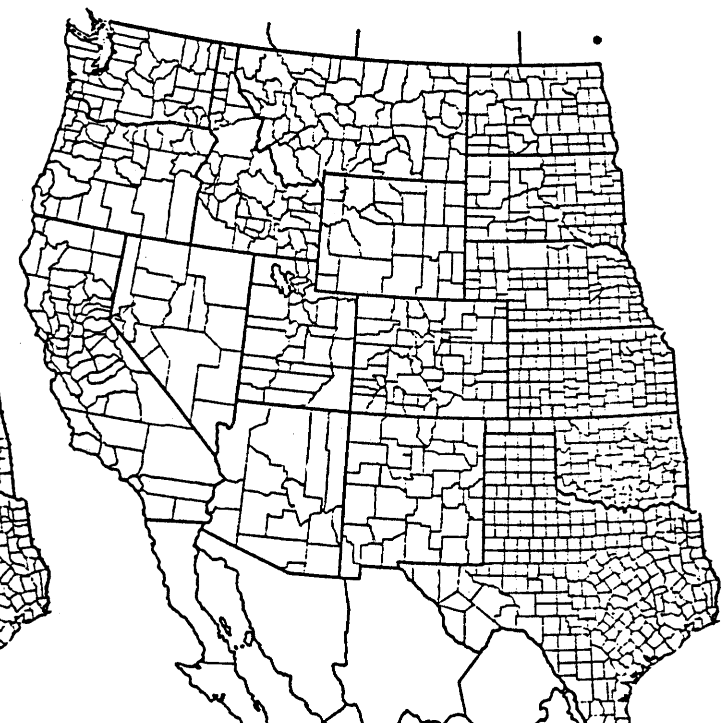
Lycaena heteronea



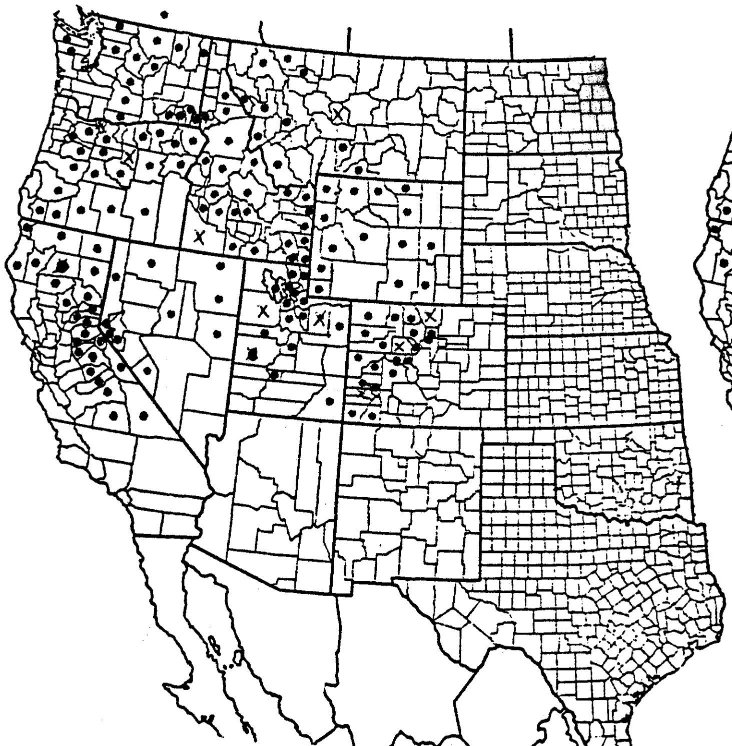
Lycaena helloides



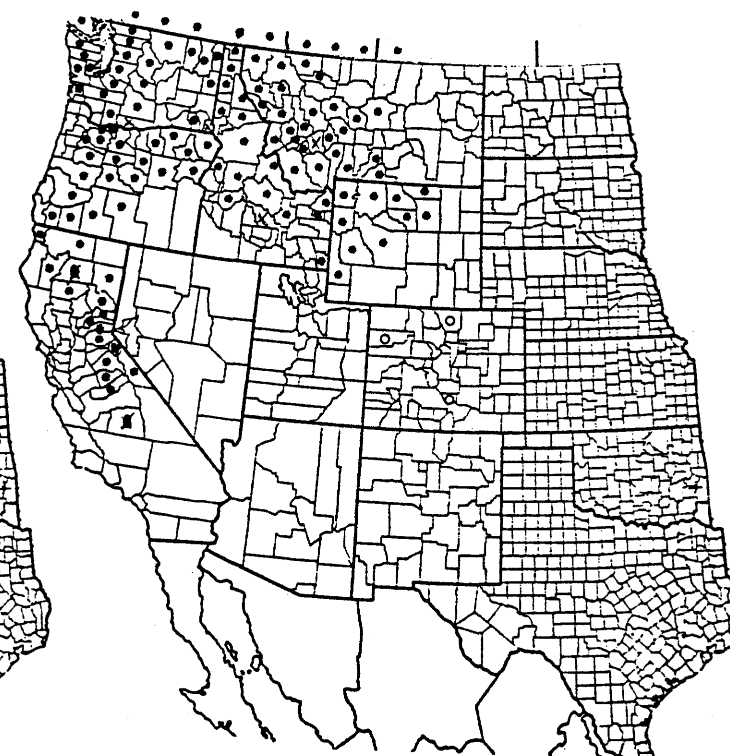
Lycaena dorcas (sensu Ferris)
Lycaena dorcas dorcas △



Lycaena epixanthe

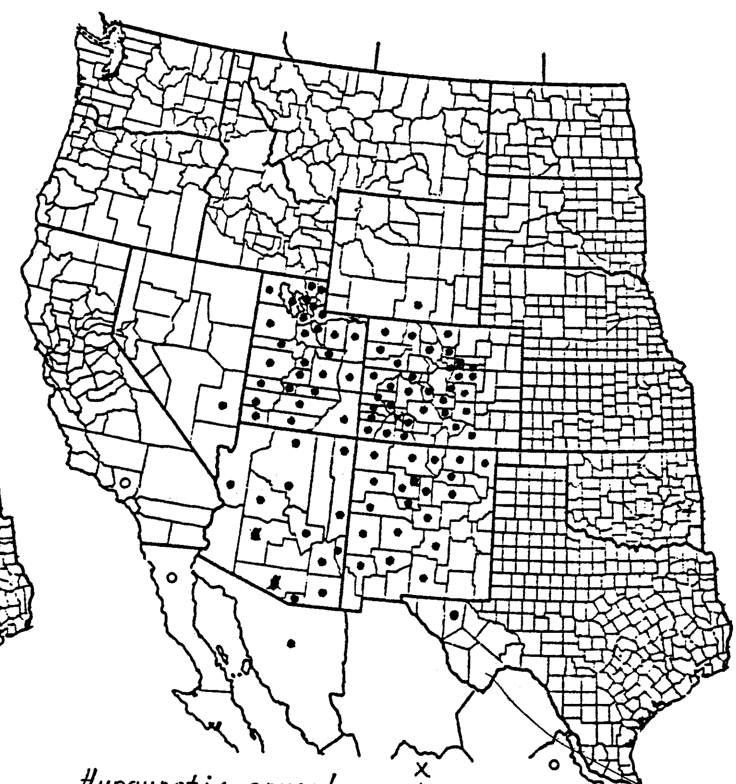


Lycaena nivalis



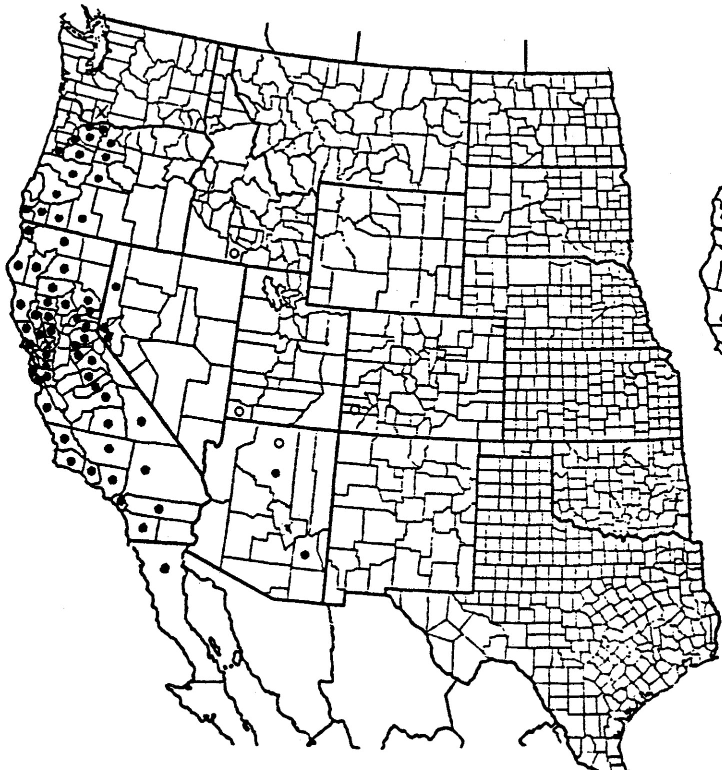
Lycaena mariposa

Lycaena (Hermelycaena) hermes



Hypaurotis crysalus

JAP verify!

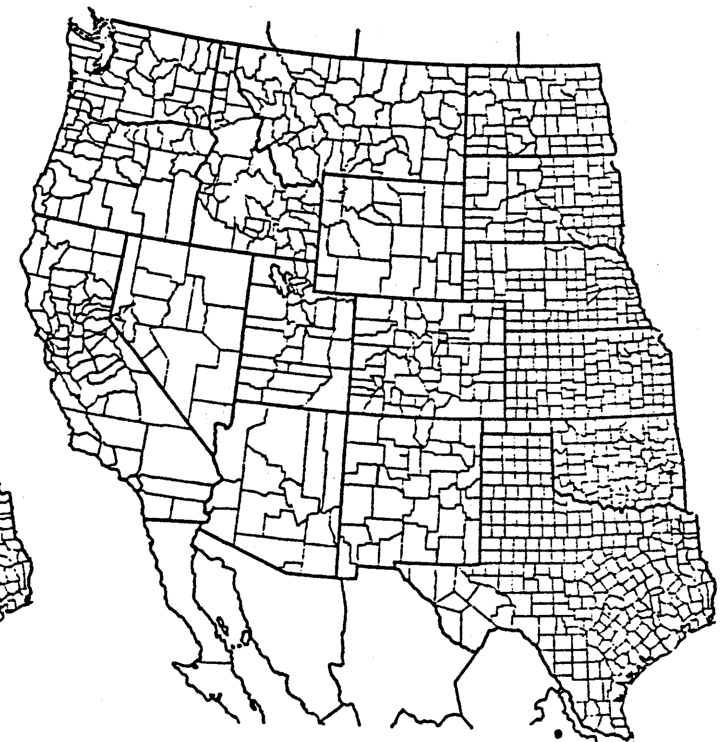


Habrodais grunus

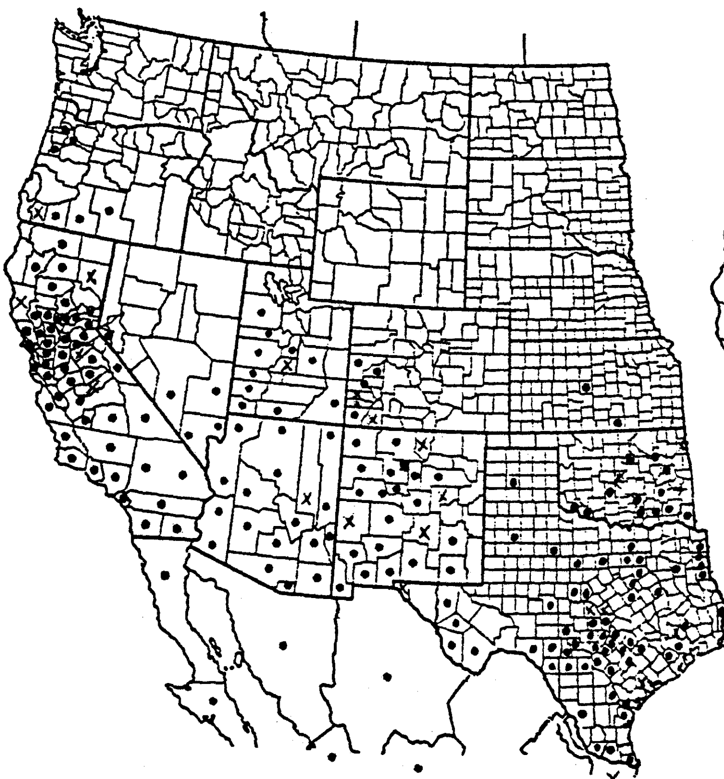
Habrodais poodiae

Eumaeus toxea (="minijas")

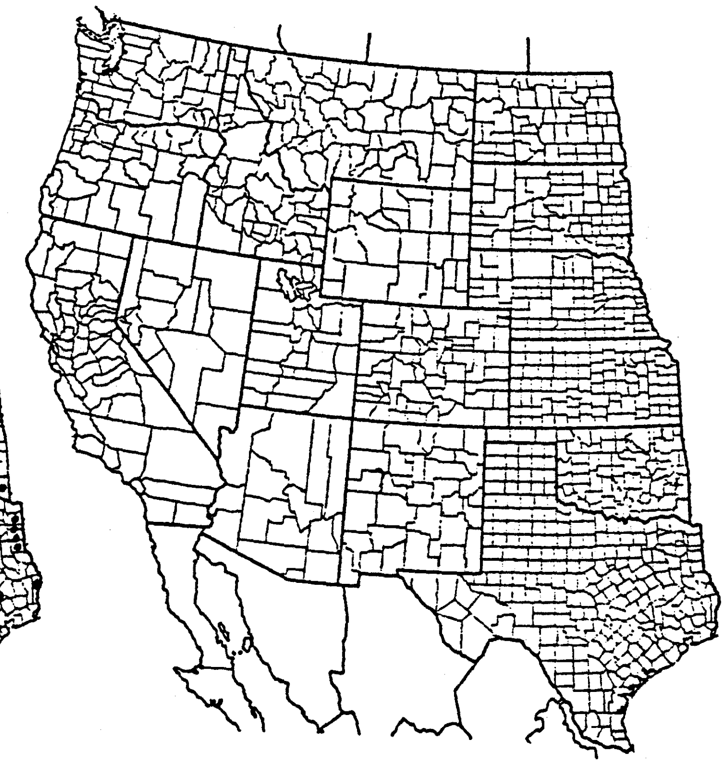
diff. sp. f. RKR



Eumaeus childrenae (= debora)

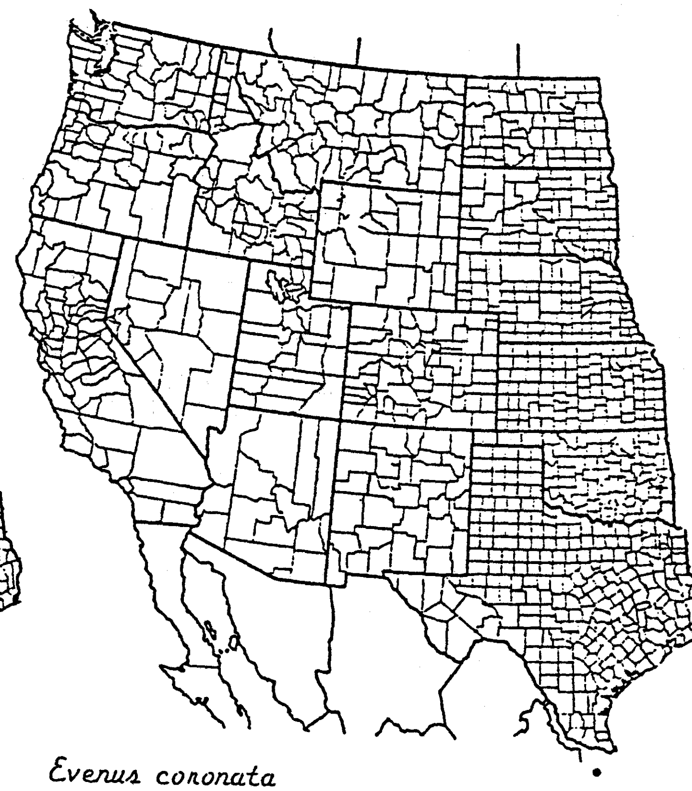


Atlides halesus (Sin and Dgo material probably represents several spp. incl. gaumeri, polybe, carpasia)



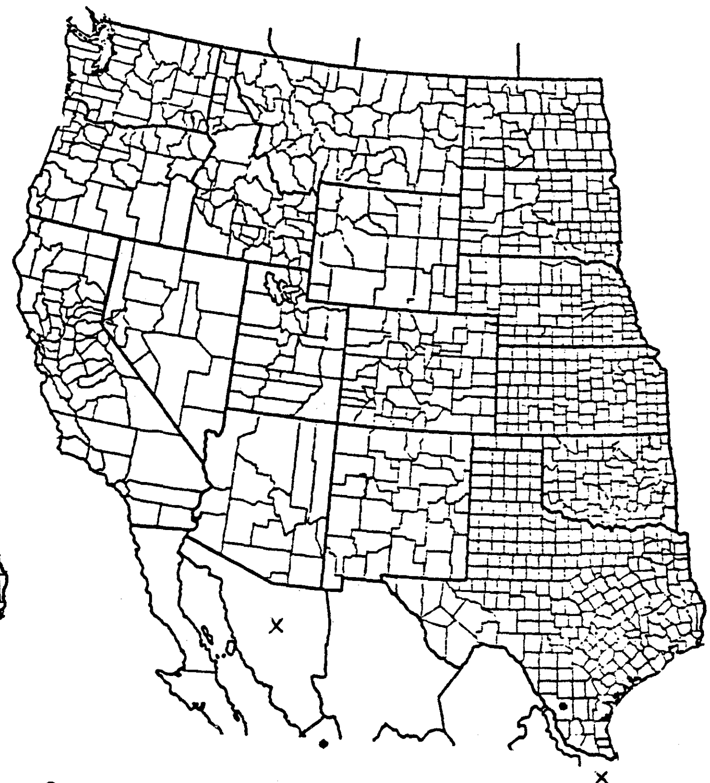
Arcas cypria

Evenus regalis



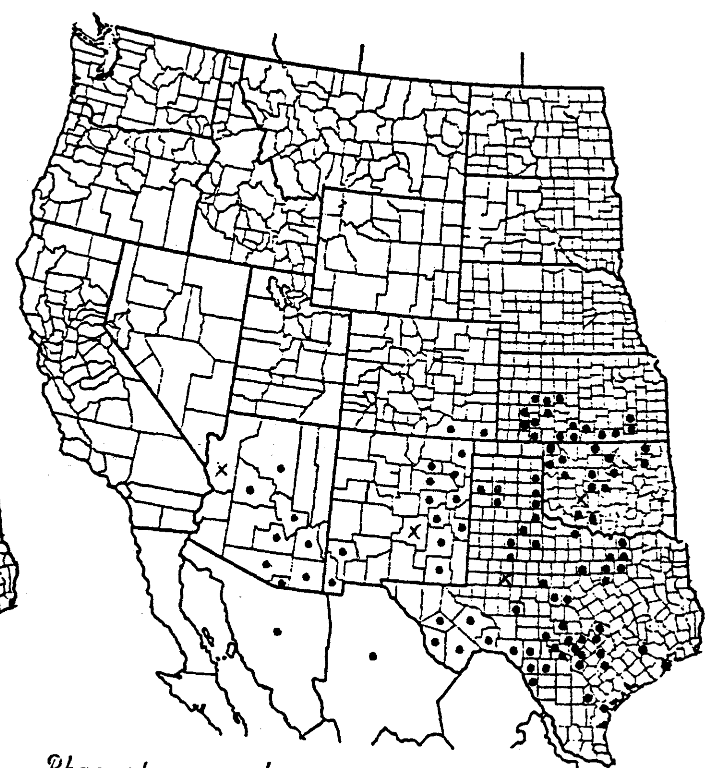
Evenus coronata

Pseudolycaena ~~marsyas~~ damo
RKR

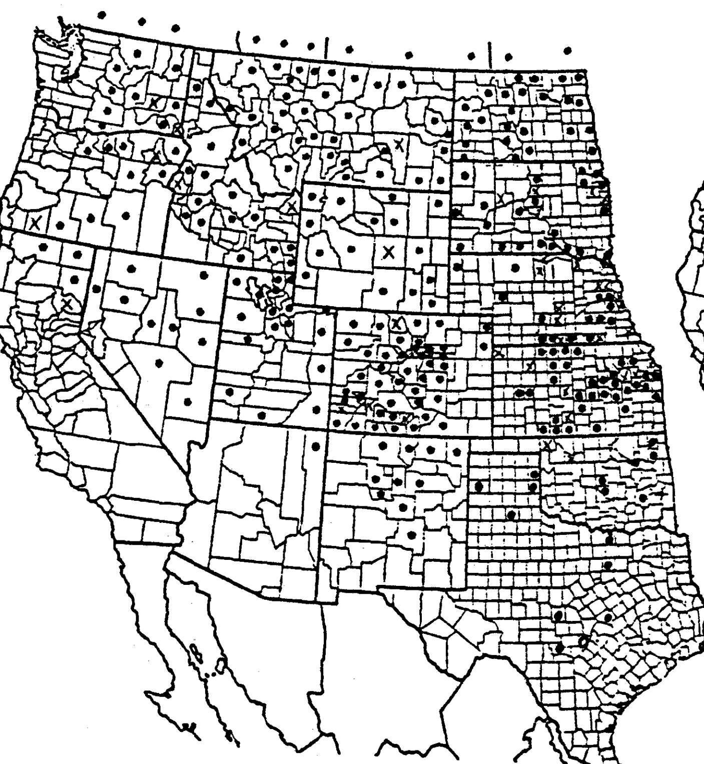


Chlorostrymon telea

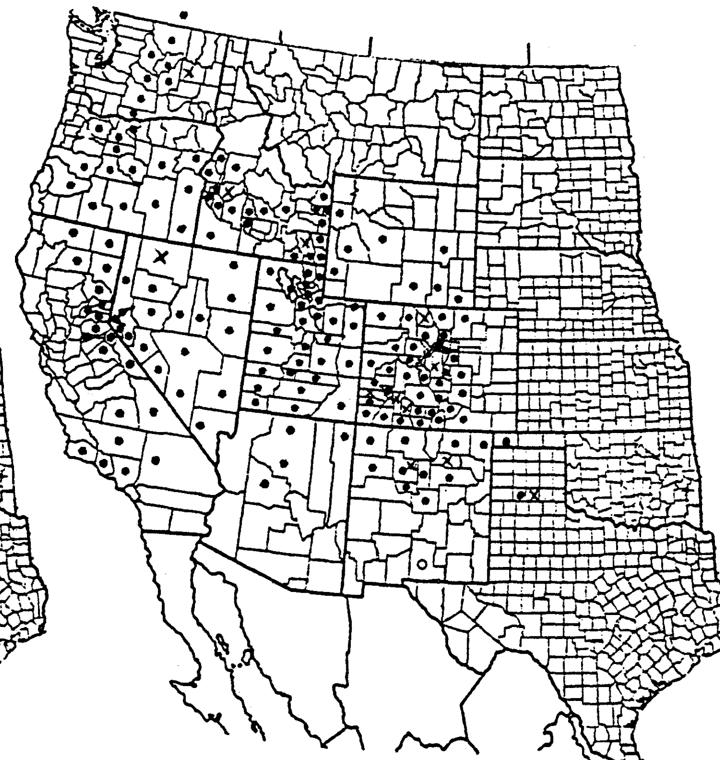
Chlorostrymon simaethis



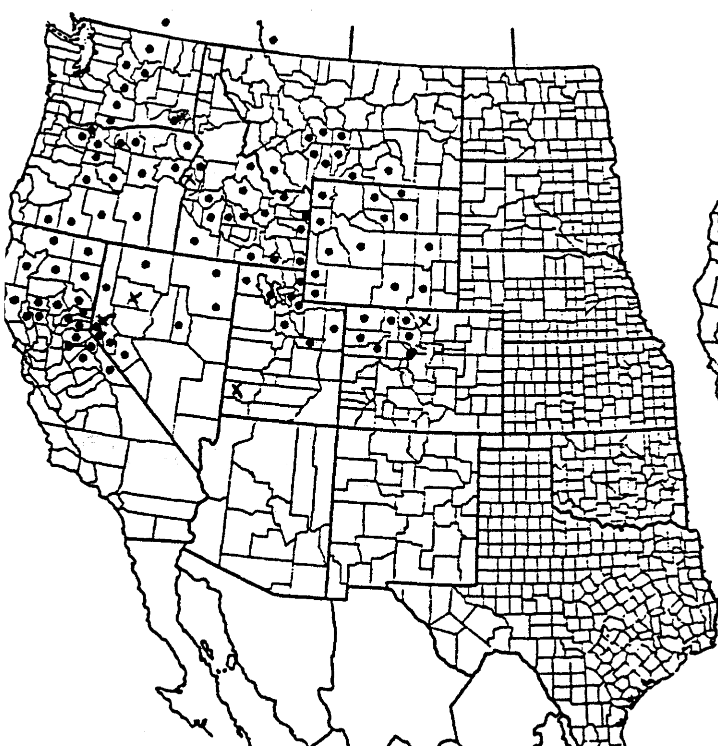
Phaeostrymon alcestis



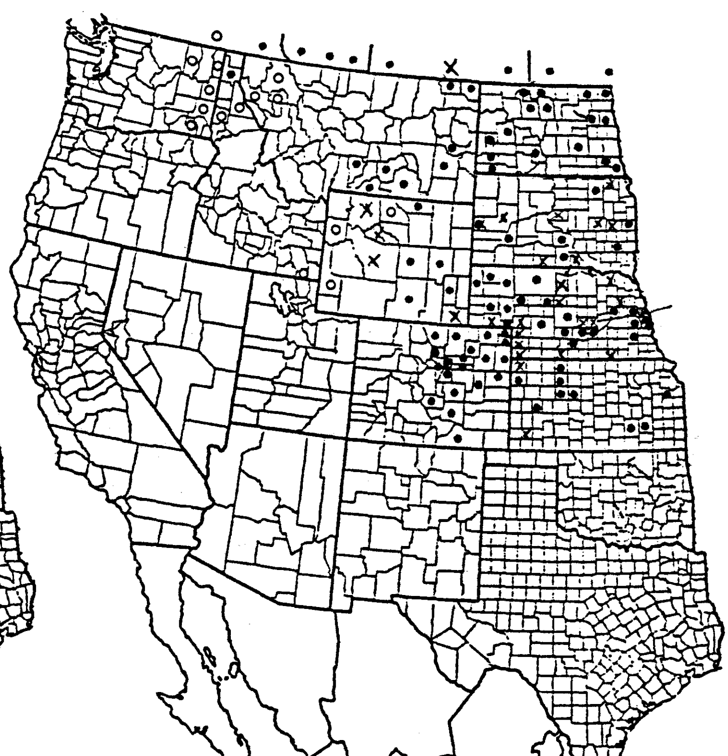
Satyrium titus



Satyrium behrii

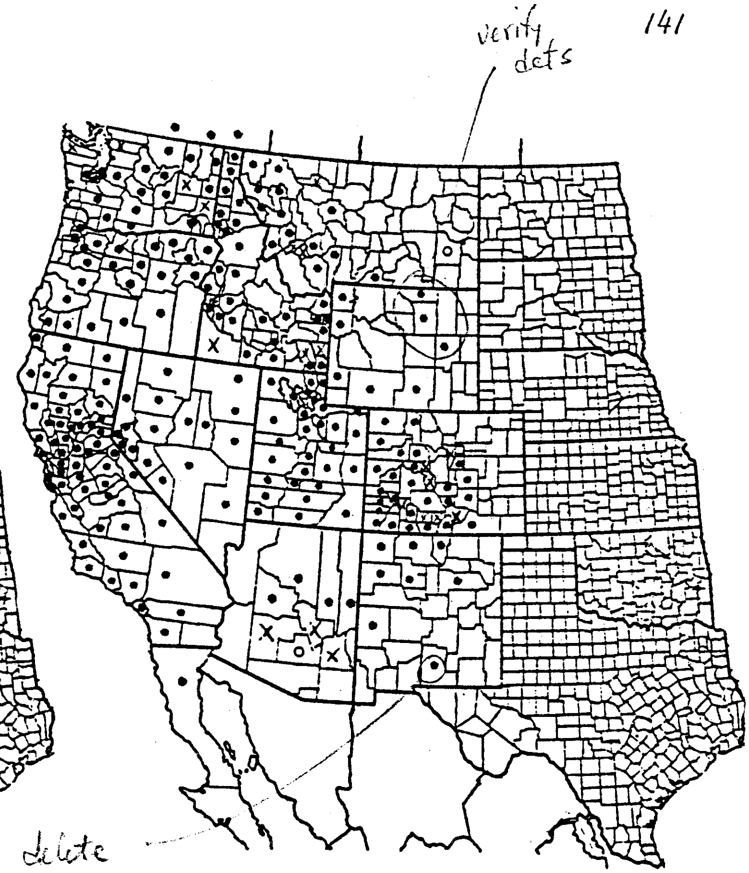


Satyrium fuliginosum



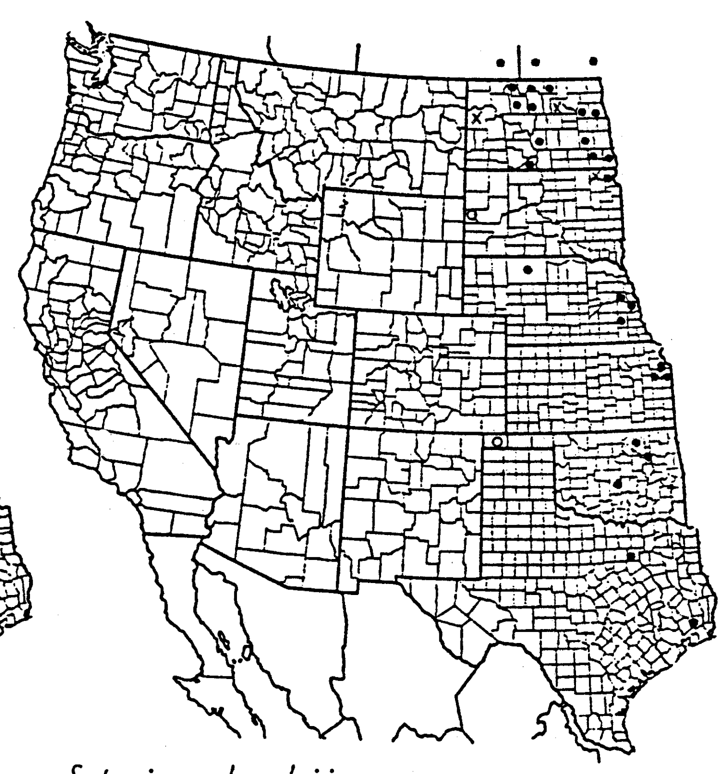
Satyrium acadicum

Satyrium californicum

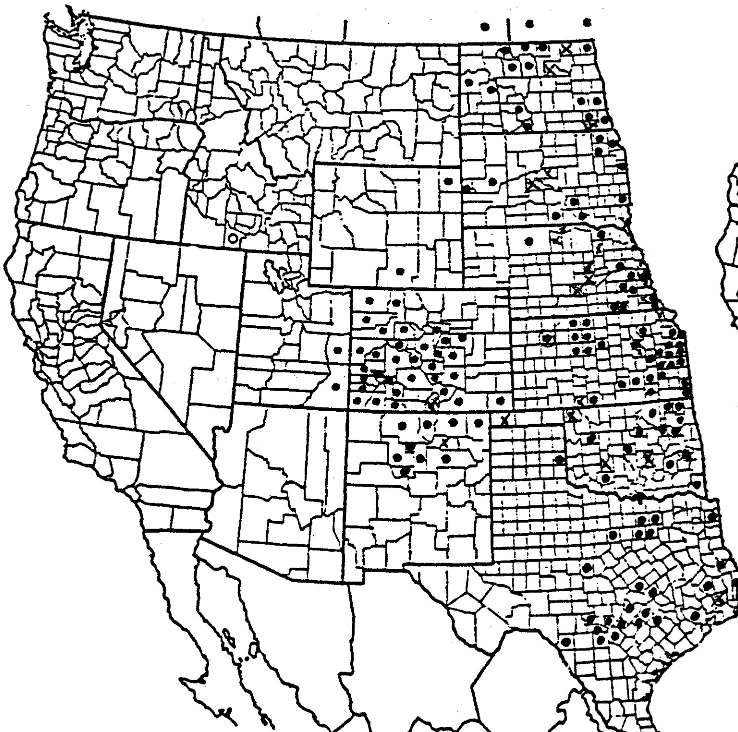


Satyrium sylvinum COMPLEX (incl dryope)

Satyrium dryope

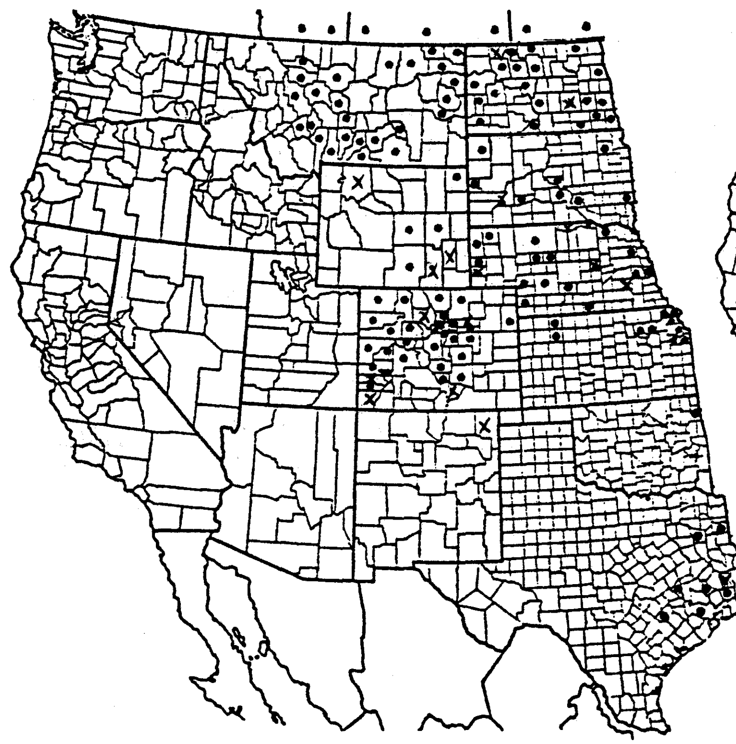


Satyrium edwardsii

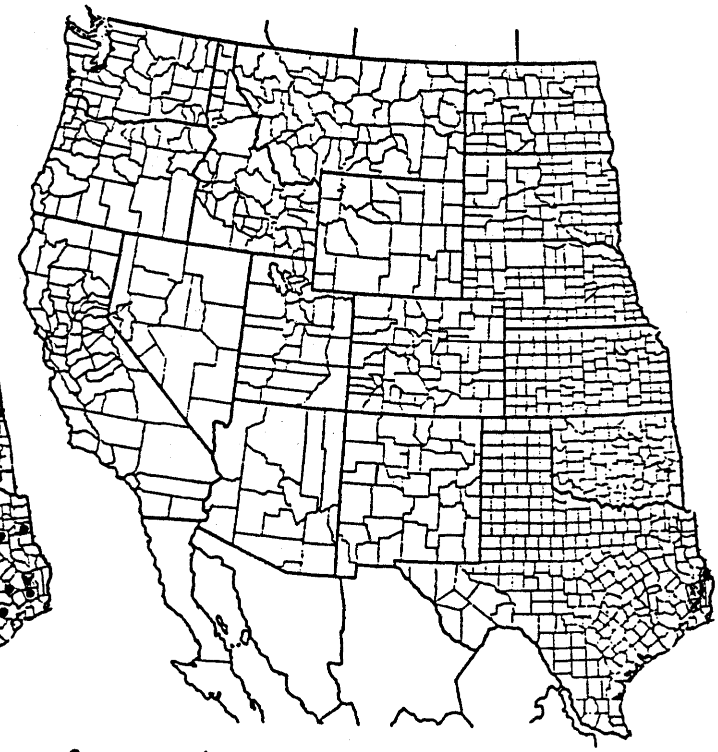


Satyrium calanus

Satyrium caryaevorum

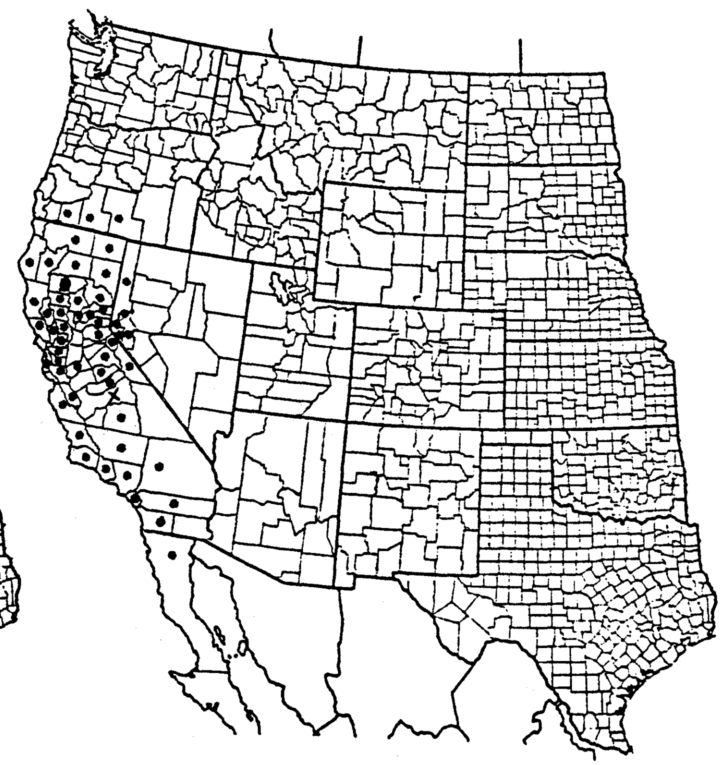


Satyrium liparops

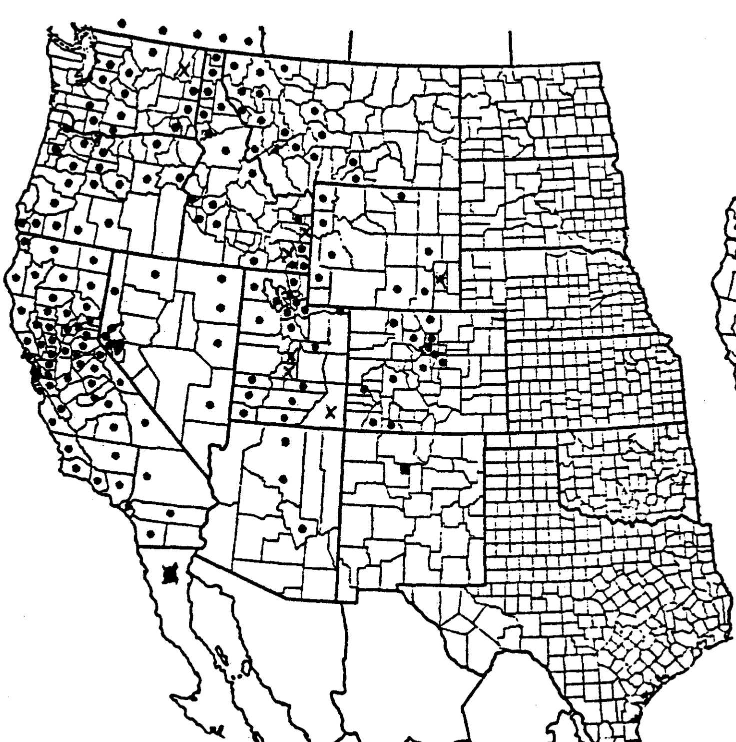


Satyrium kingi

Satyrium auretorum



Satyrium tetra (=adenostomatis)



Satyrium saepium

Ocaria ocrisia

Ministrymon leda (incl ines)

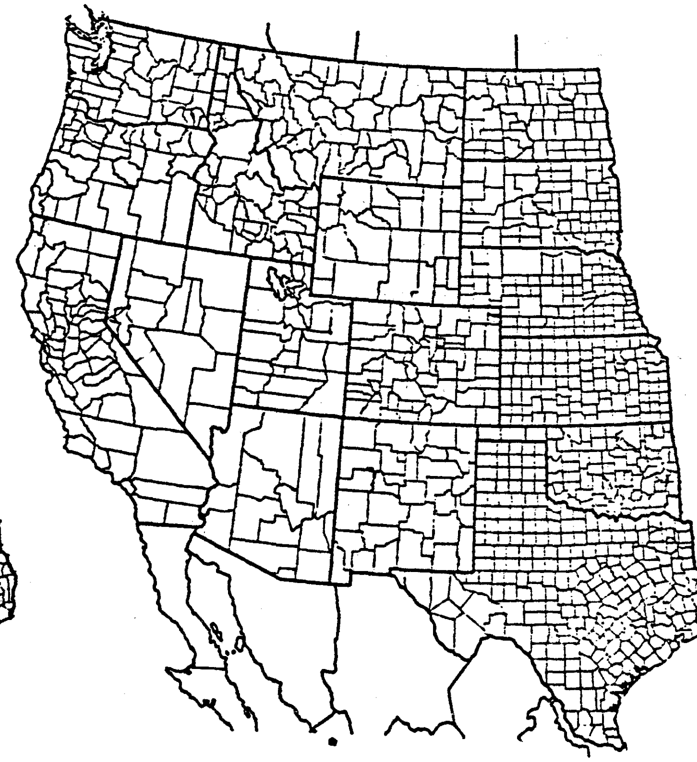
Ministrymon clytie

Ministrymon (Tmolus) azia

Ministrymon phrutus

T. comana SON MX fide JPB
T. orasus " " " "

Thereus cithonius (= cambes)



Thereus oppia

Tmolus echion

Oenomaus ortygnus

Rekoa zebina

Rekoa meton

Rekoa marius (= brescia) (=spurina)

RHR '91

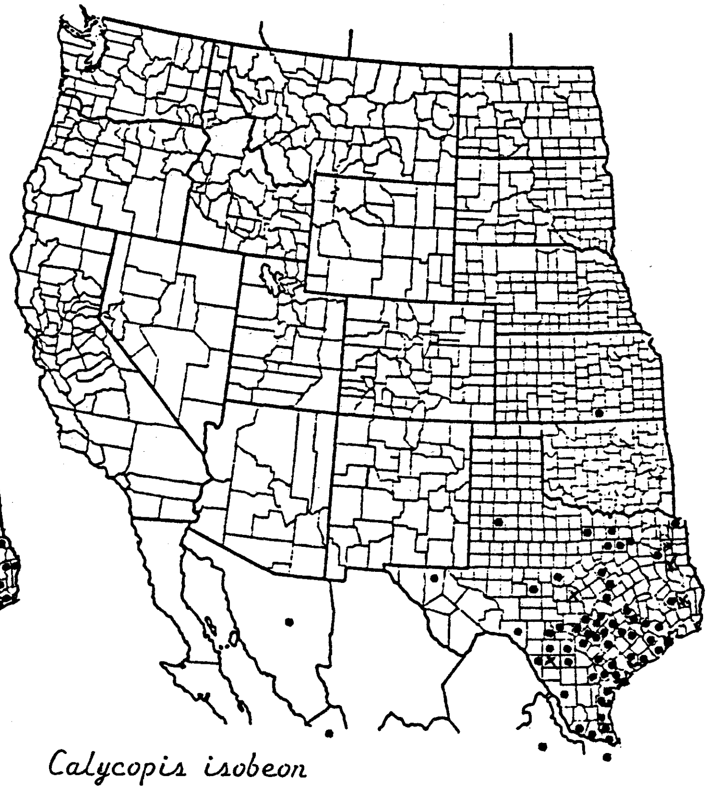
Rekoa palegon

Rekoa stigira (=erenea, timaea, volana, lydia, thoana, carioca); Tam → SA
sinaloa (PAO) det RKR

Chalybs hassan

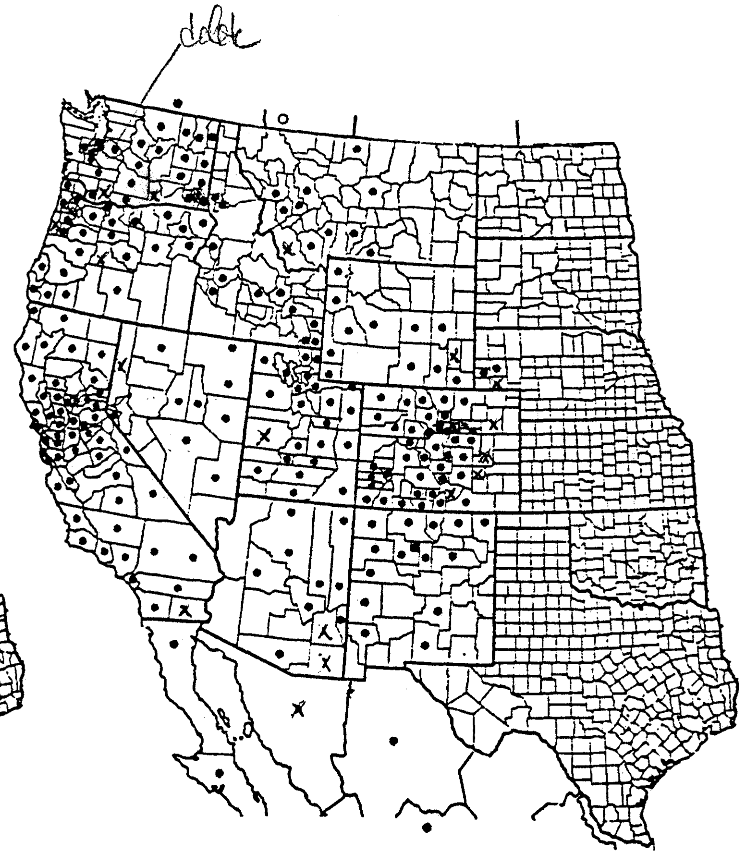
Allosmaitia pion (= strophius)
RKR

Calycopis cecrops



Calycopis isobeon

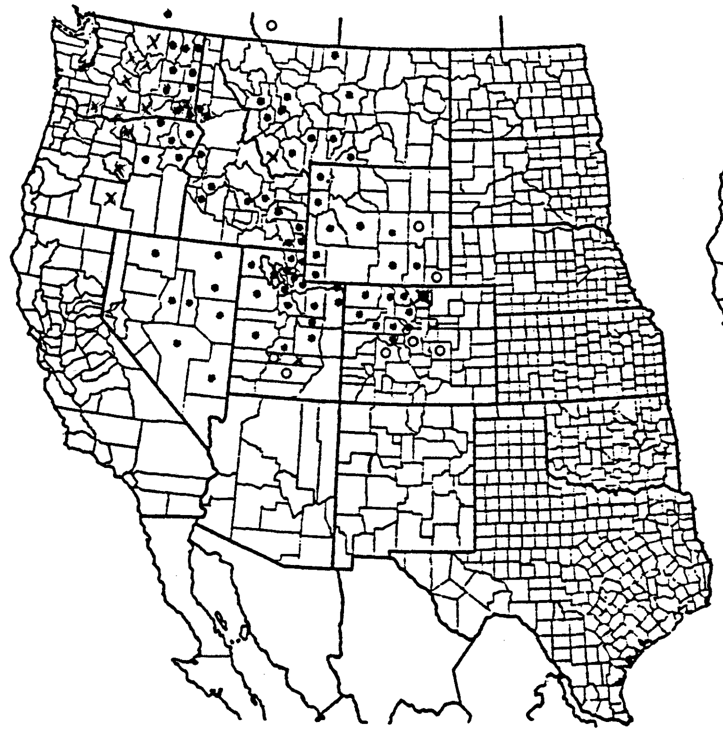
Calycopis drusilla



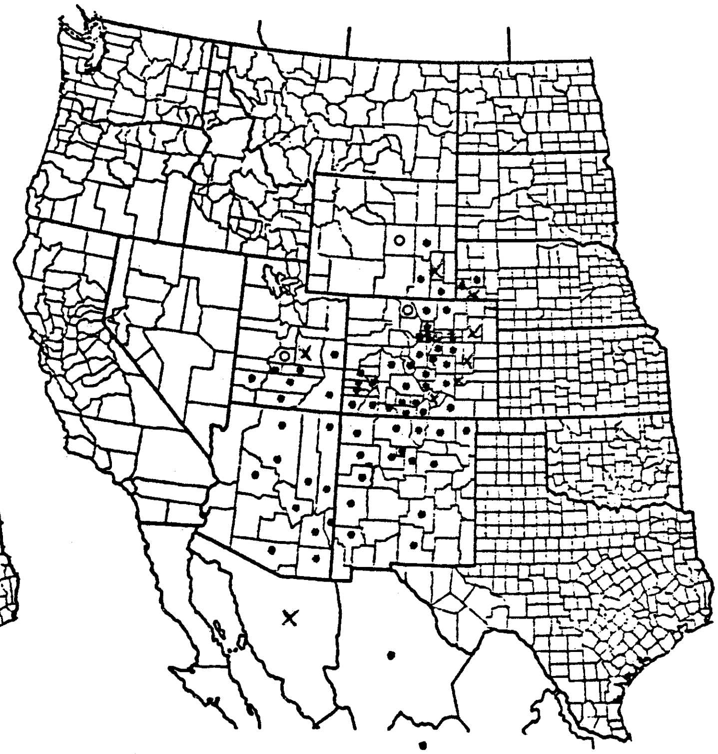
Callophrys dumetorum COMPLEX

Callophrys dumetorum (= viridis)

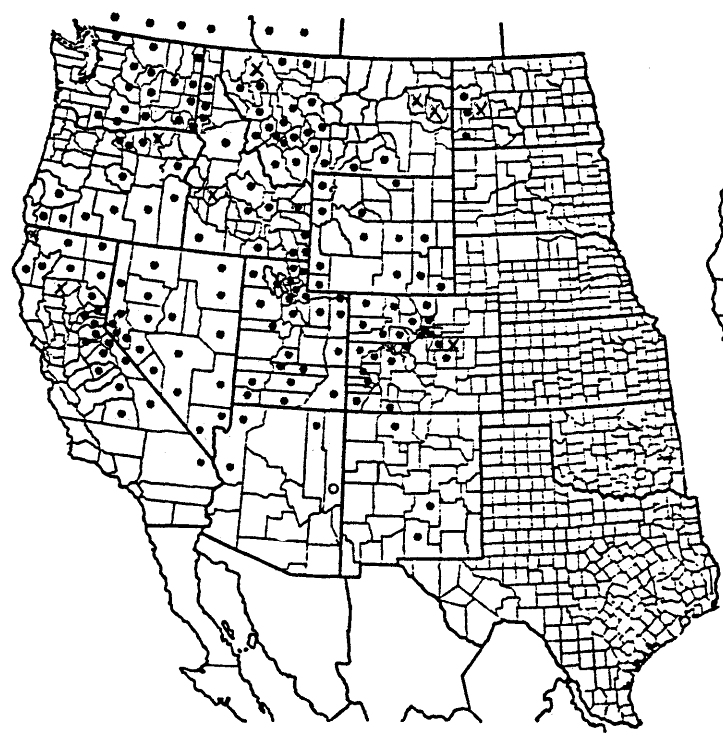
Callophrys perplexa (= "dumetorum")



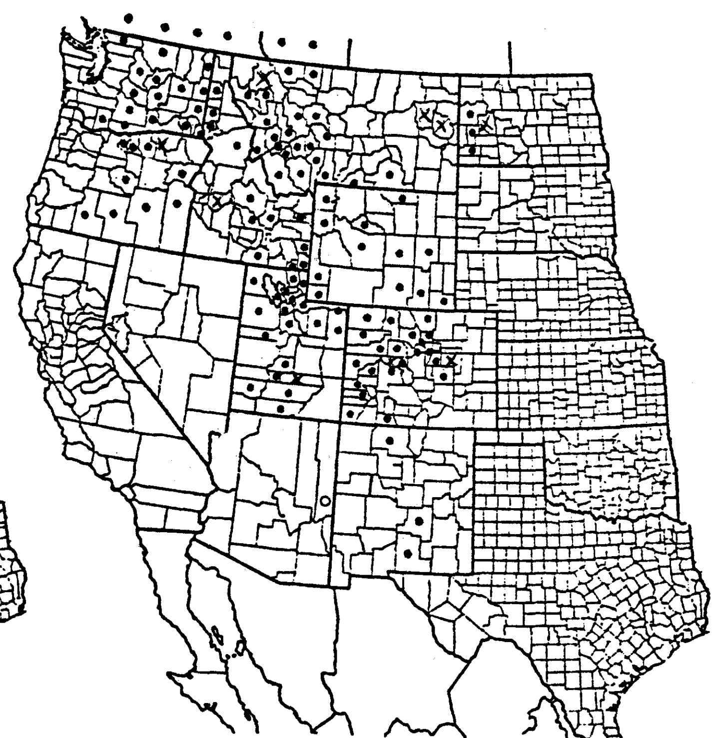
Callophrys affinis



Callophrys apama



Callophrys sheridanii COMPLEX



Callophrys sheridanii (strict sense)

comstocki GTA

Callophrys lemberti

Callophrys comstocki (incl paradoxa)

Cyanophrys miserabilis

Cyanophrys amynton

delete (longula)

Cyanophrys agricolor (Butler + Druce 1872) SIN MX fide ADW

~~Cyanophrys "pastor" (prob. longula)~~
Cyanophrys fusius △

Cyanophrys herodotus

Cyanophrys goodsoni

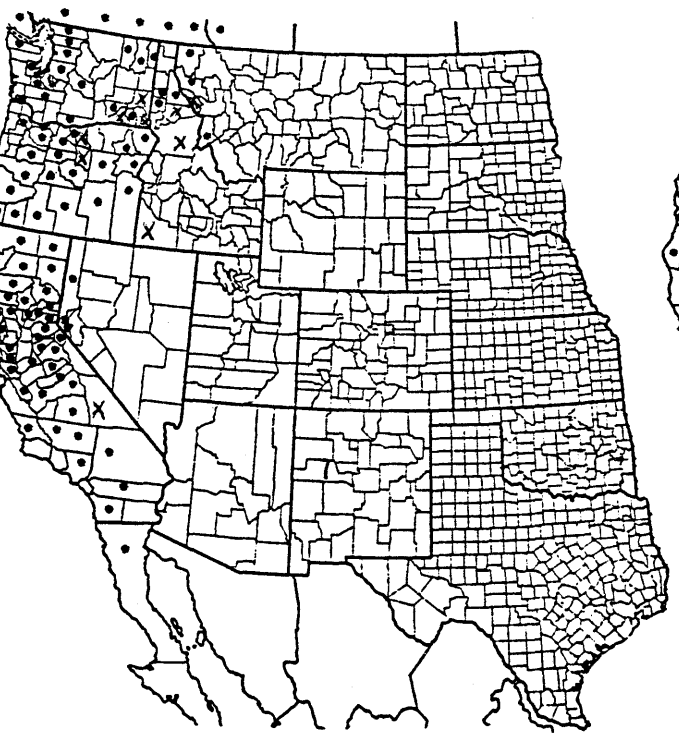
Cyanophrys longula

Mitoura spinetorum (incl millerorum)

Mitoura dospassosi

Mitoura estela

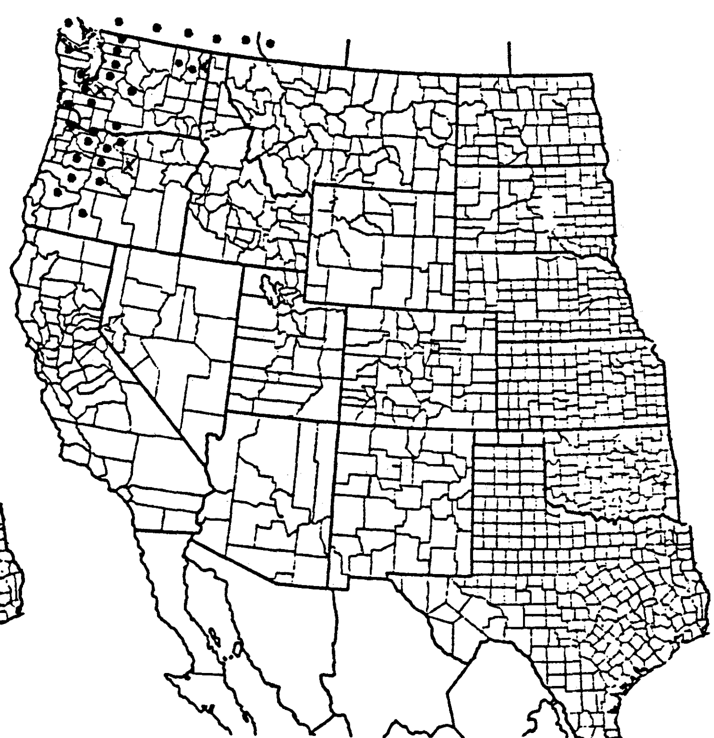
Mitoura johnsoni



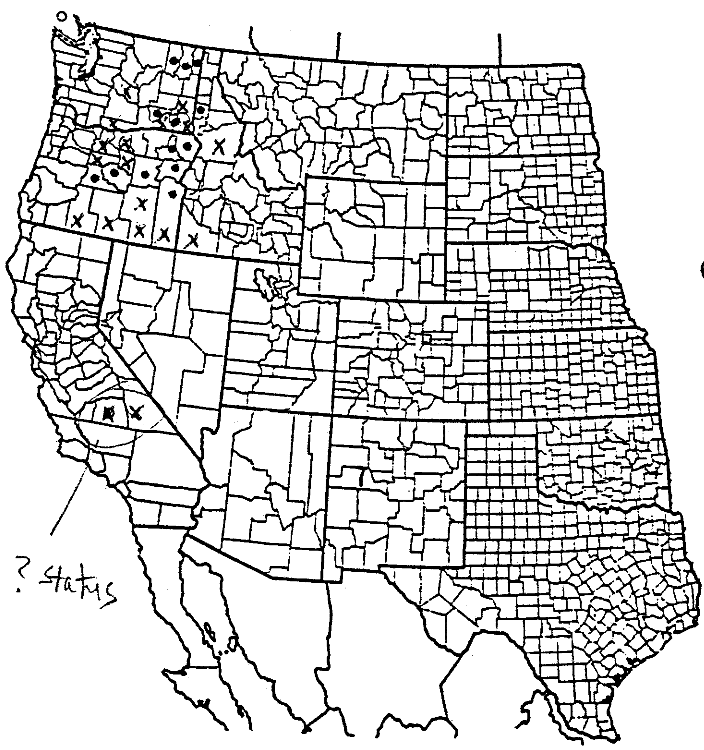
Mitoura nelsoni COMPLEX

Mitoura nelsoni (S, S,)

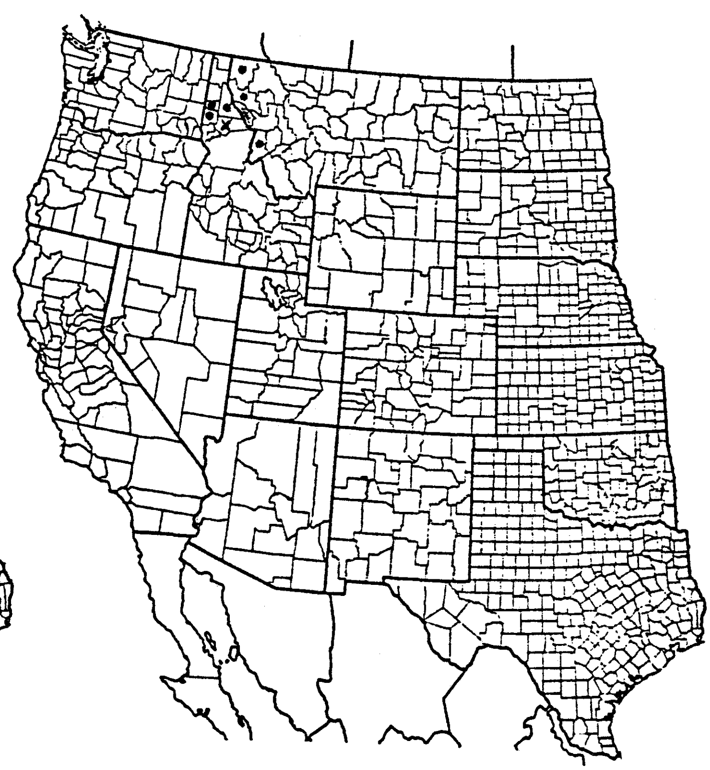
Mitoura muiri



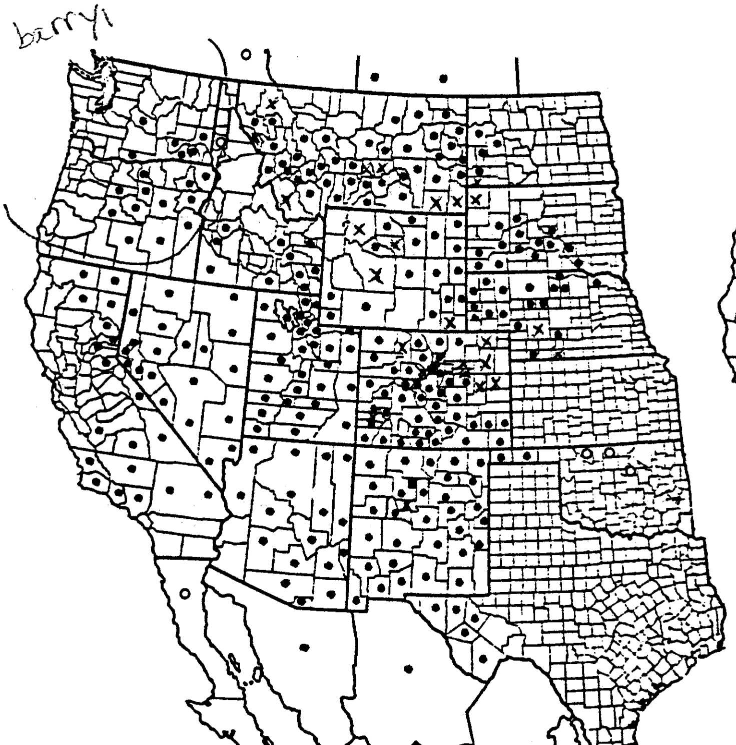
Mitoura rosneri



Mitoura barryi

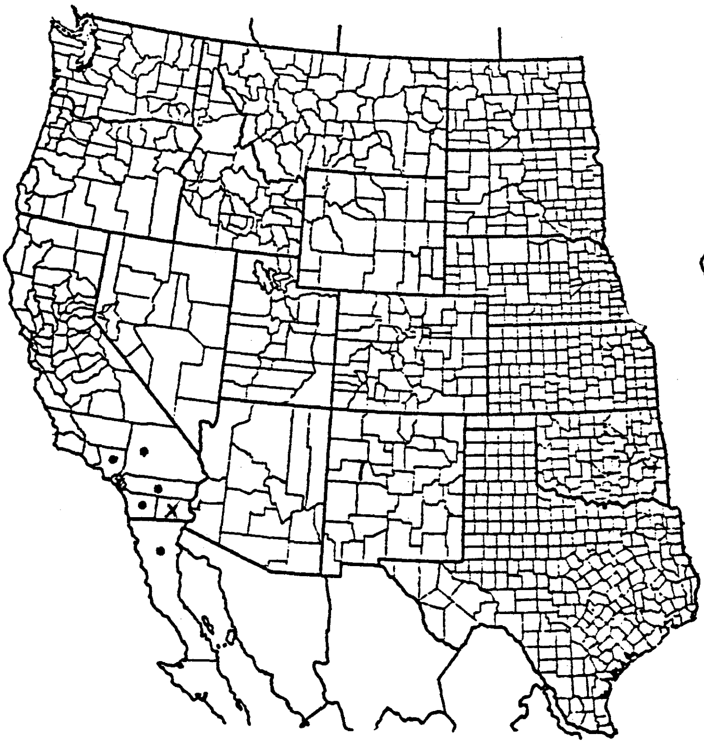


Mitoura byrnei



Mitoura siva

Mitoura loki COMPLEX

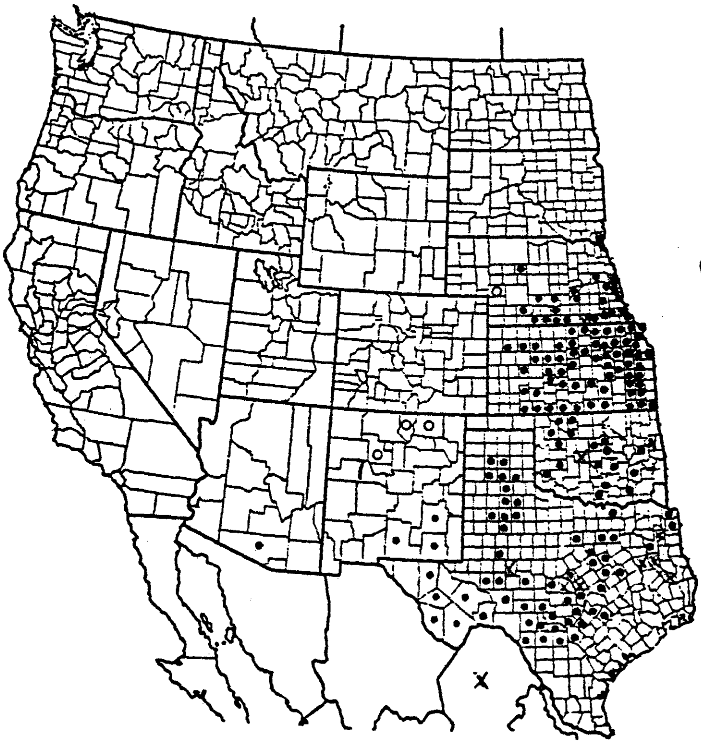


Mitoura loki

Mitoura thornei

Mitoura cedrosensis

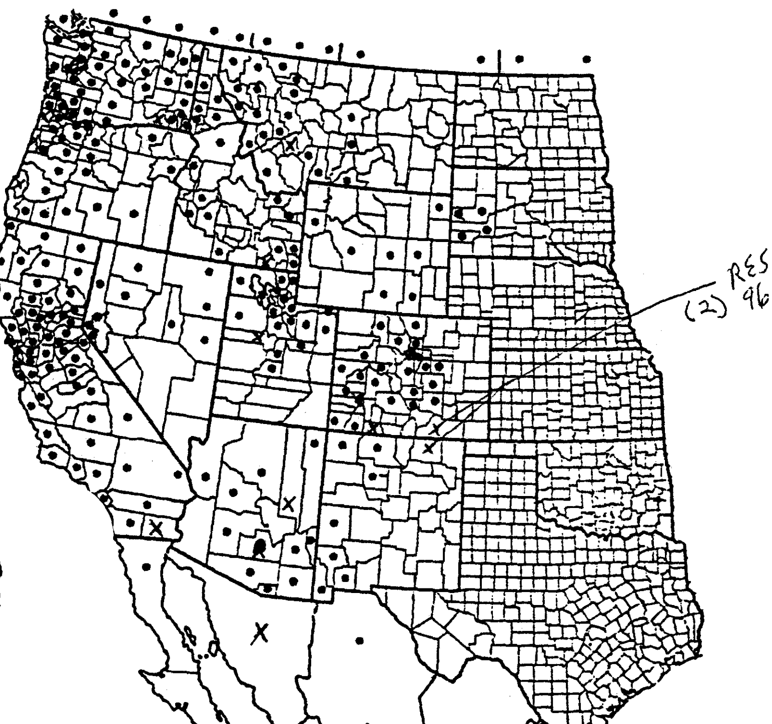
Mitoura turkingtoni



Mitoura grynea

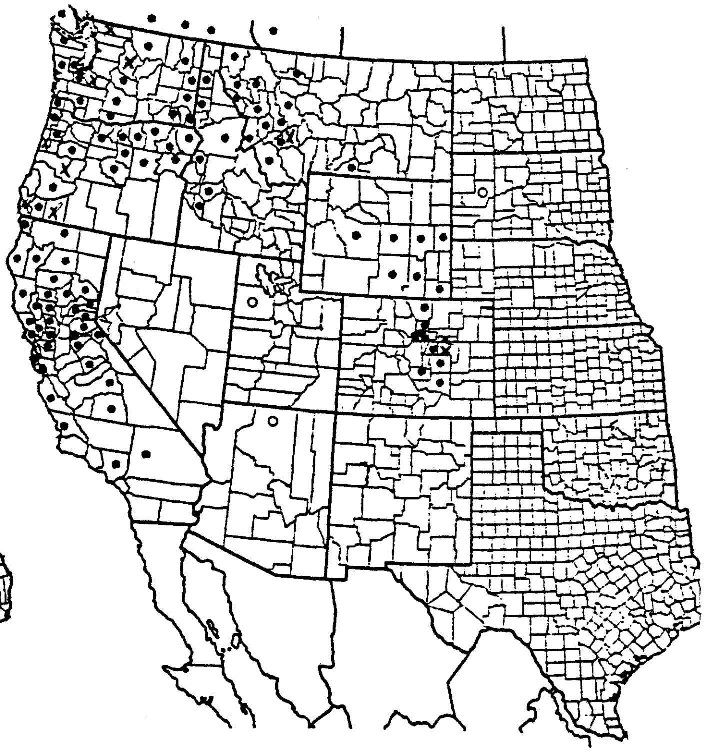
Xamia xami

Sandia mcfarlandi



Incisalia augustinus

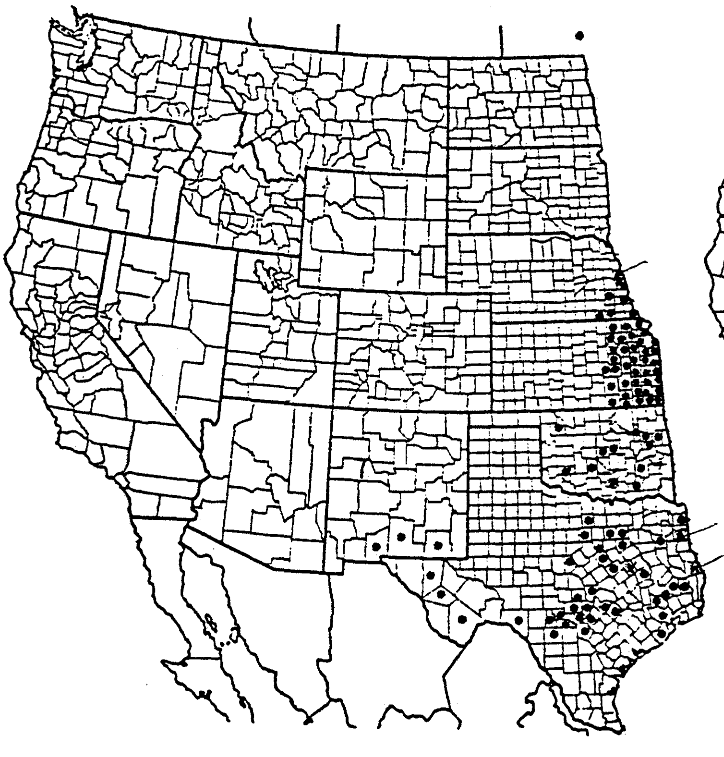
Incisalia fotis



Incisalia mossii

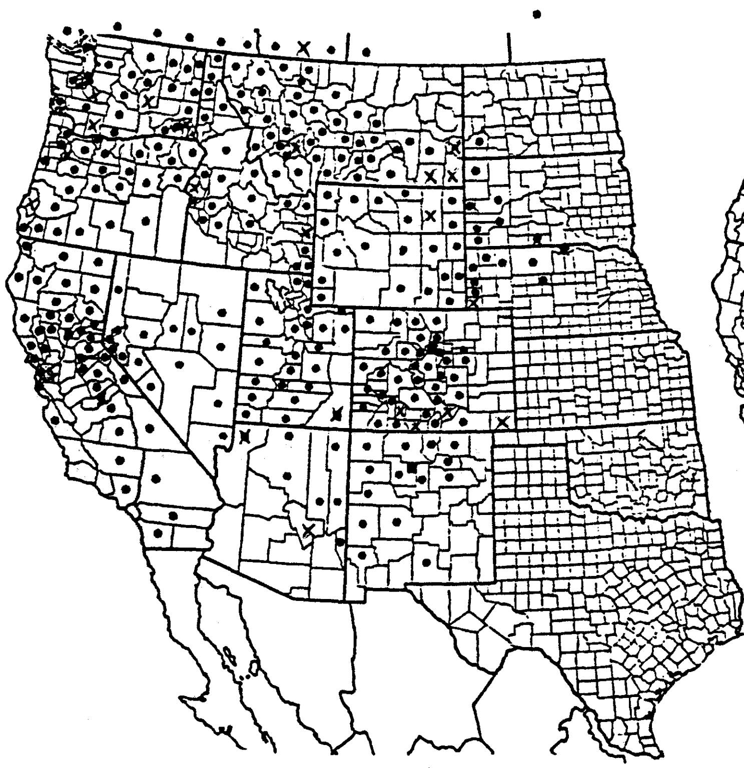
Incisalia polia

Incisalia irus



Incisalia henrici

Incisalia niphon



Incisalia eryphon

Arawacus sito (incl phaea)
phaenna

Arawacus hypocrita – Tam MEX, leg. JKA, det. RKR

Arawacus (Dolymorpha) jada

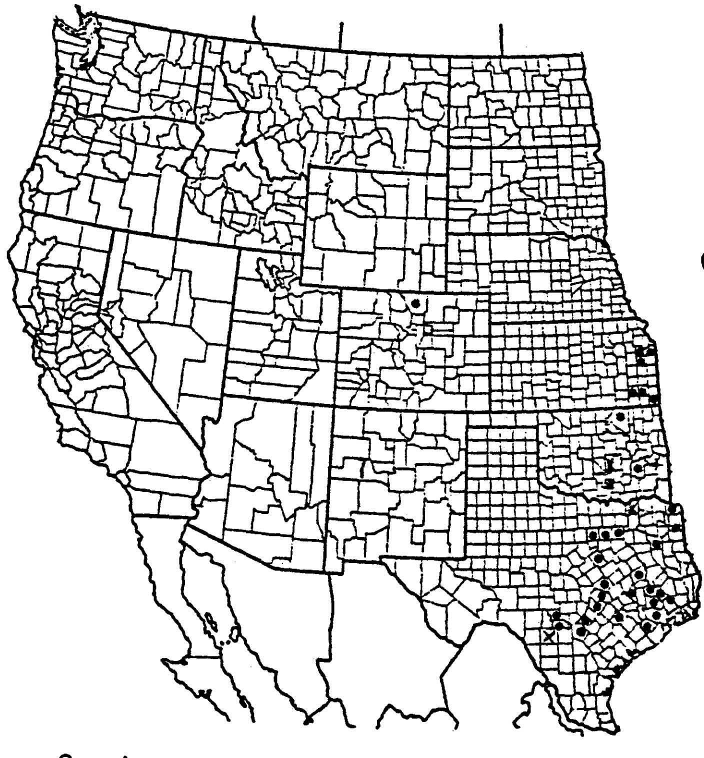
Panthiades bathilda (=bathildis, battus)

Panthiades ochus

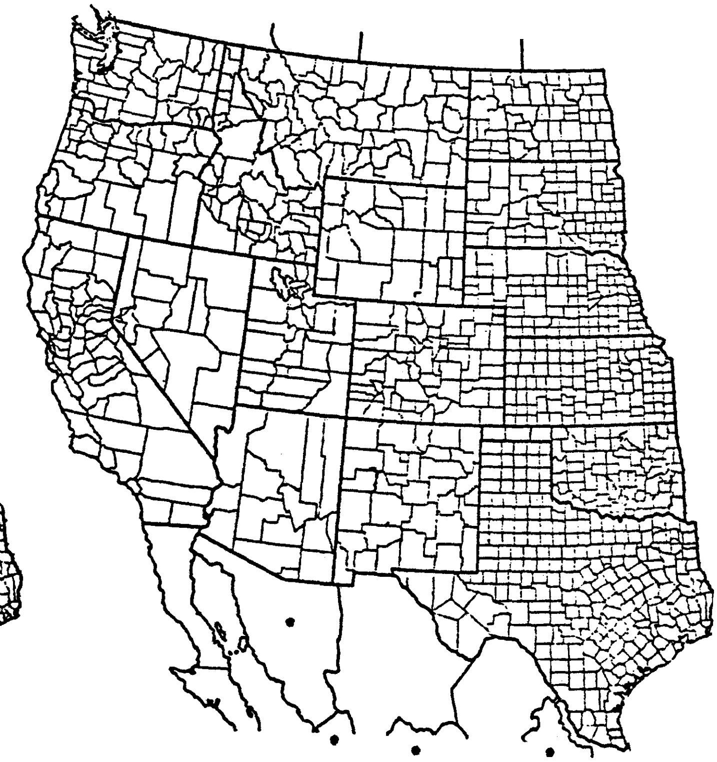
Panthiades bitias

Panth. aufidena

ADW



Parrhasius m-album

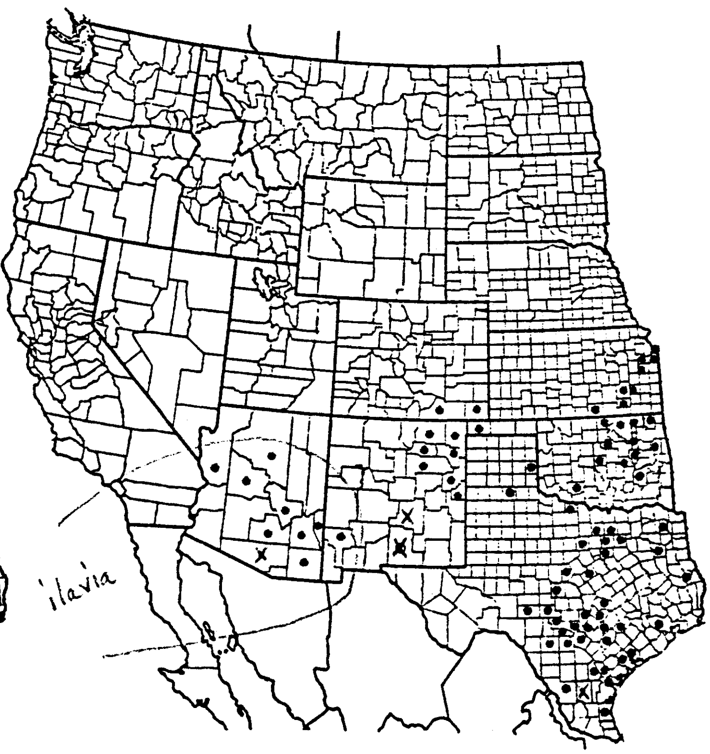


Parrhasius moctezuma

Parrhasius polibetes

Michaelus vibidia

Michaelus hecate

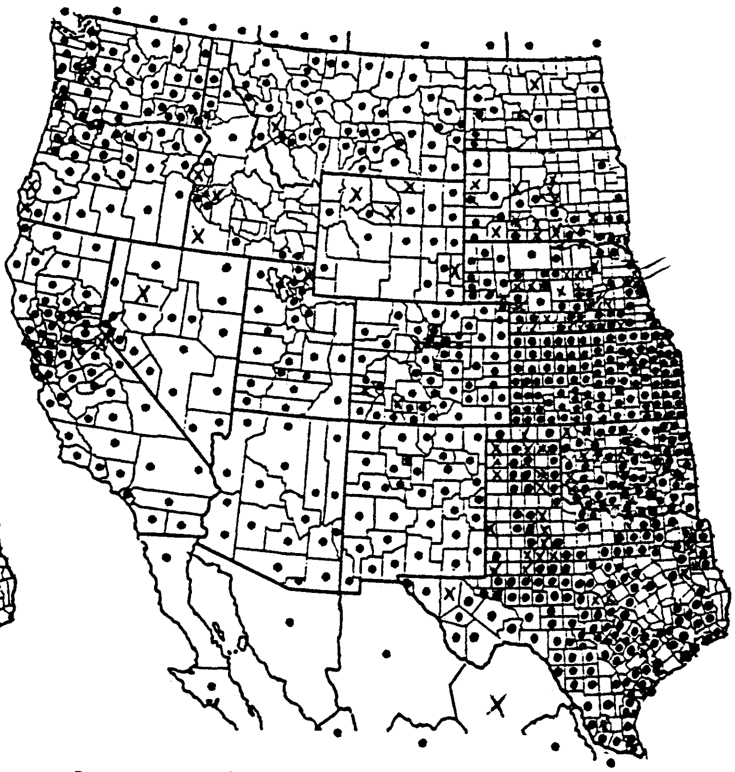


Fixsenia favonius COMPLEX (incl ontario)

Fixsenia polingi

Hypostrymon critola (= festata)

Hypostrymon margaretae



Strymon melinus

Strymon avalona

Strymon bebrycia (= buchholzi)

Strymon rufofuscus

Strymon yojoa

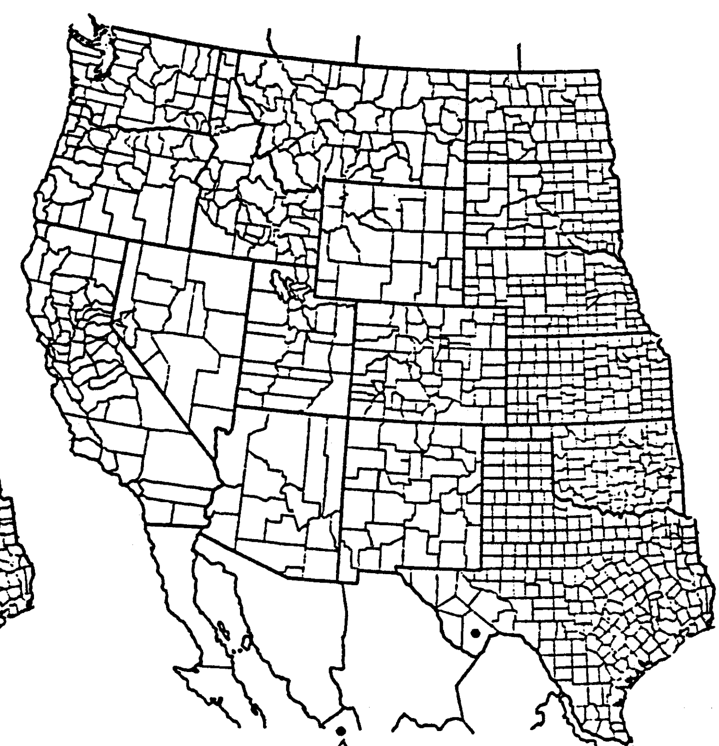
Strymon albatus

Strymon alea

Strymon ~~columella~~ istapa
fide RKR

Strymon cestri

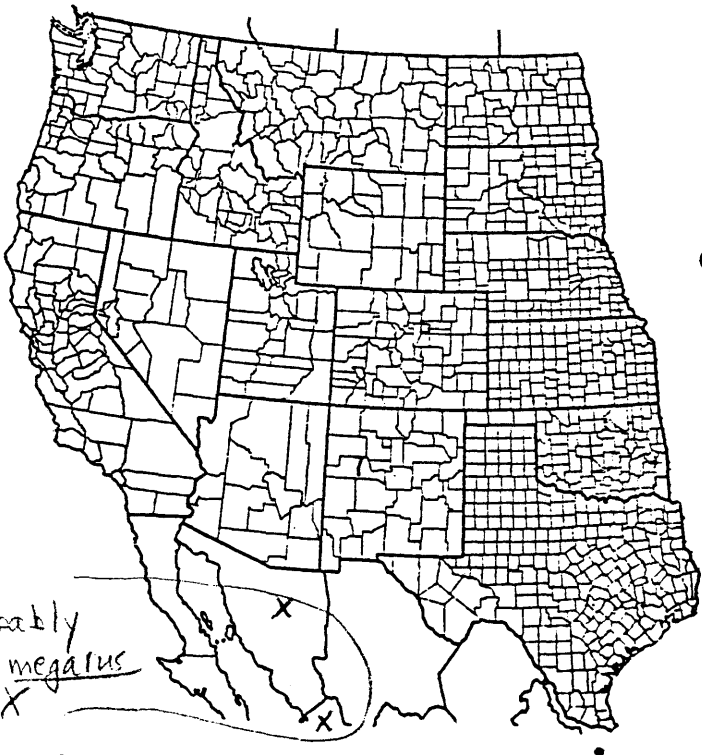
Strymon bazochii



Strymon serapio

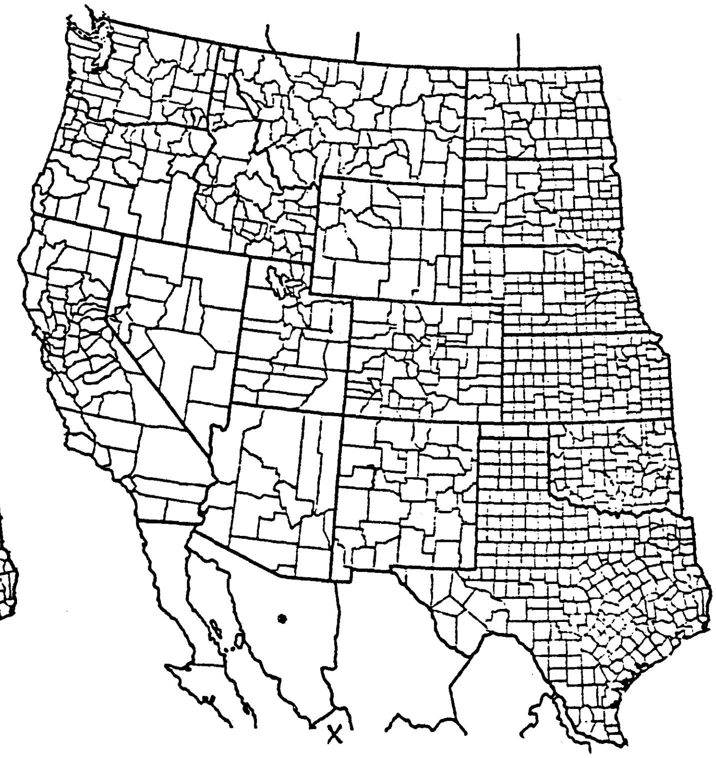
Strymon chonida Δ
ADW

Strymon megarus CPX (= basilides) Sin MEX det RKR CU museum '93



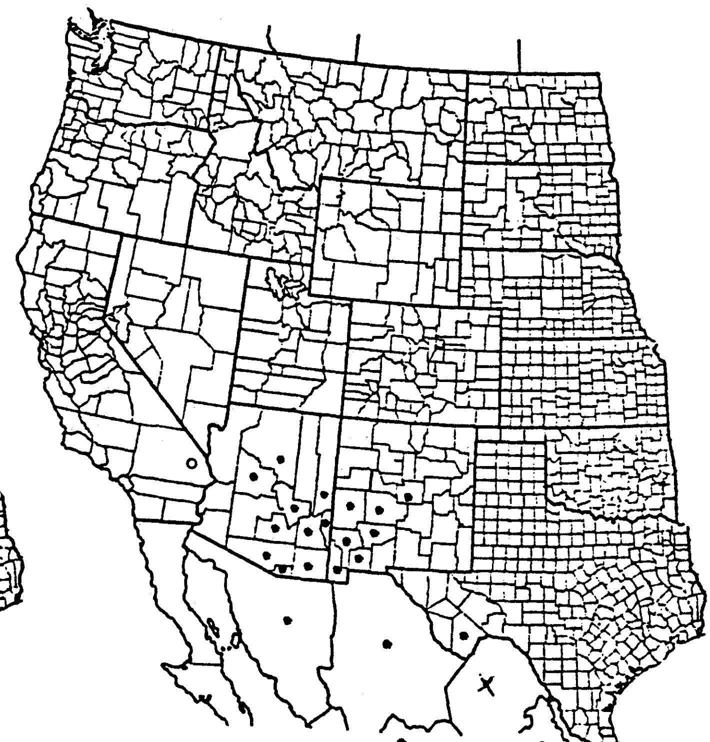
probably all megarus CPX

Strymon ziba (= basilides)



Ipidecla miadora

Siderus tephraeus



Erora quaderna

Brangas neora - SIN (PAO det. RKR)

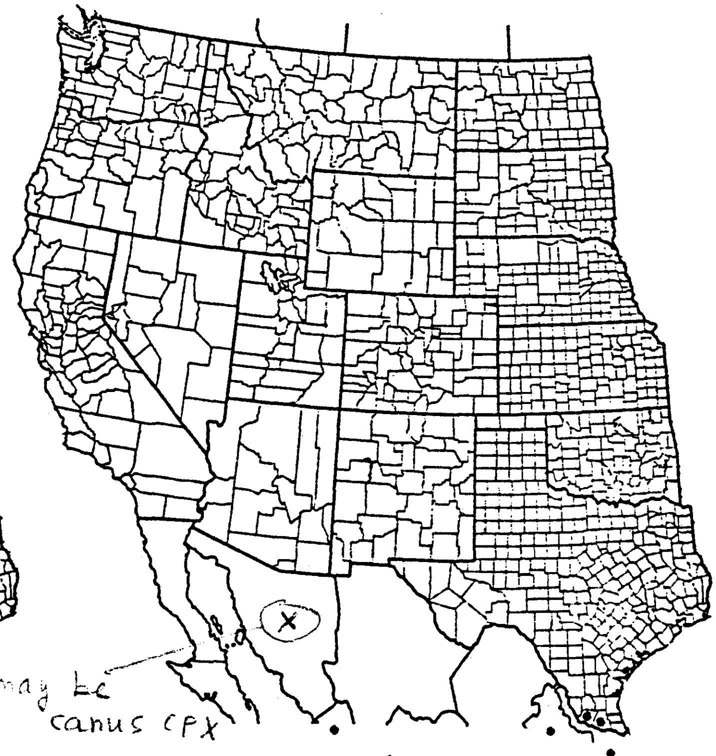
Erora carla SIN (PAO, det. RKR)

Electrostrymon mathewi [Hewit. 1874]
SIN MX (JPB)

166

Electrostrymon nubes SIN MX [ADW '96]

Electrostrymon ~~endymion/cyphara/autoclea/~~ canus COMPLEX homonyms – RKR

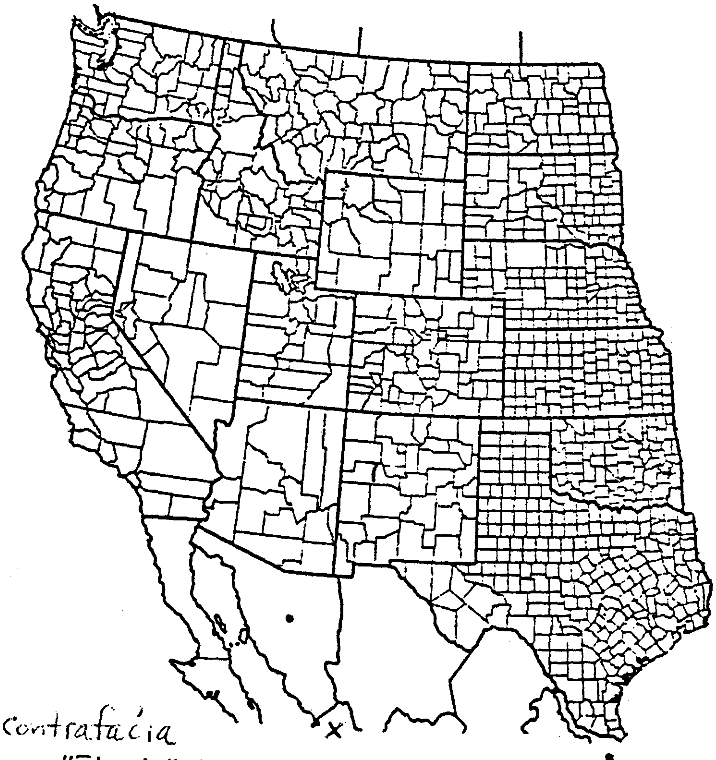


Electrostrymon ~~cyphara~~ sangala = autoclea RKR

"Thecla" minthe [gadira CPX – RKR]

"Thecla" sethon

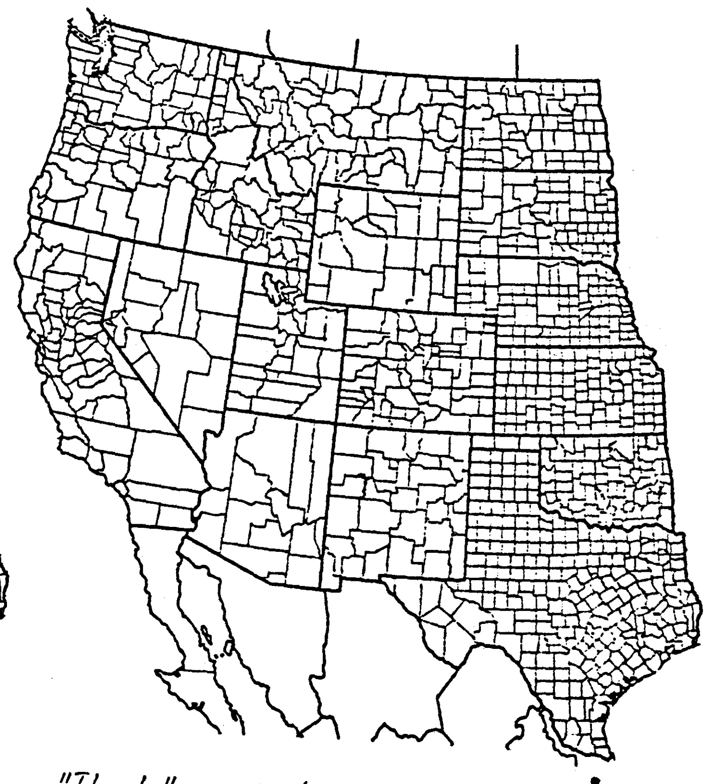
Caerofethra lucagus – SON MEX ?det RKR



contrafacia

~~"Thecla"~~ bassania

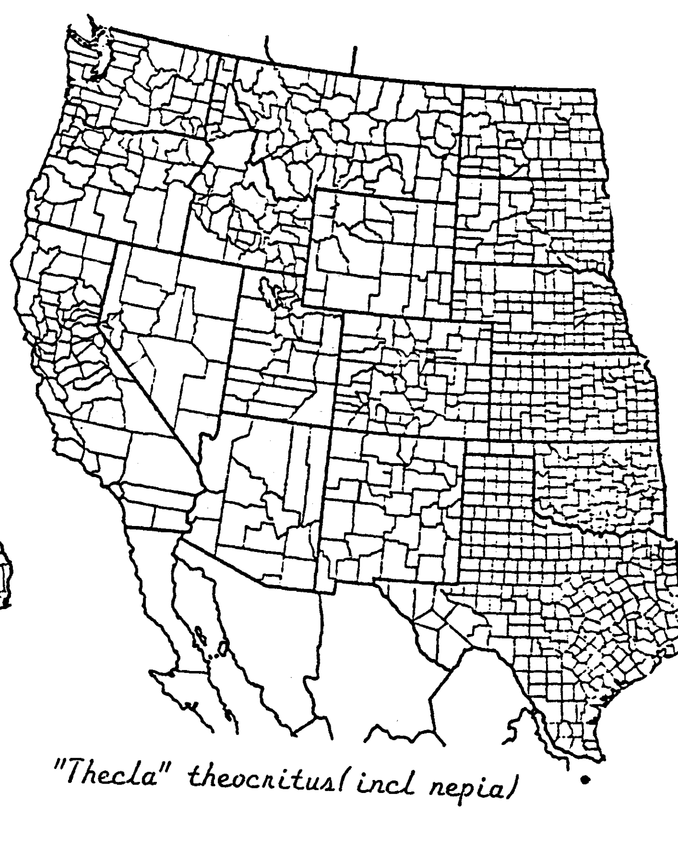
RKR



"Thecla" grosia (= nugar)

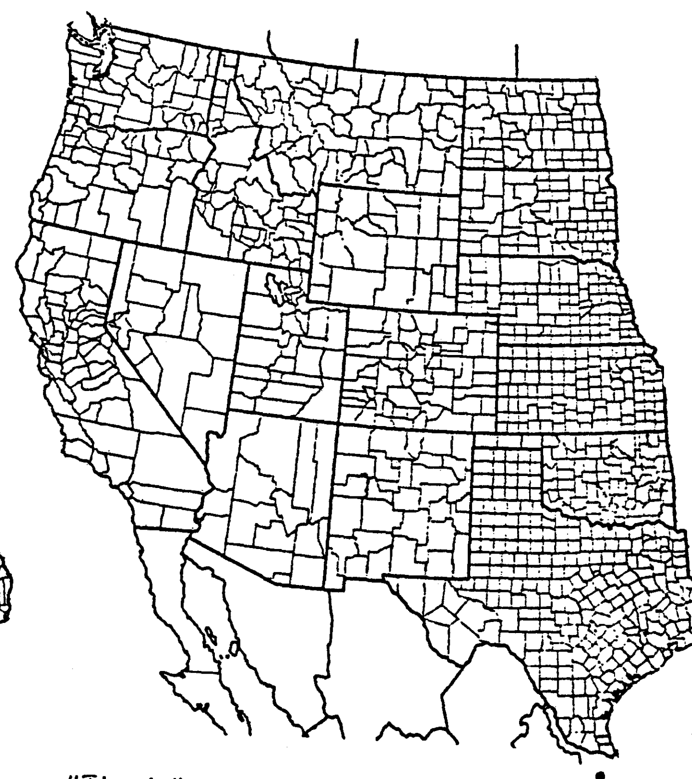
"Thecla" ~~parthenia~~

umbratus incl. parthenia – RKR



"Thecla" theocritus (incl nepia)

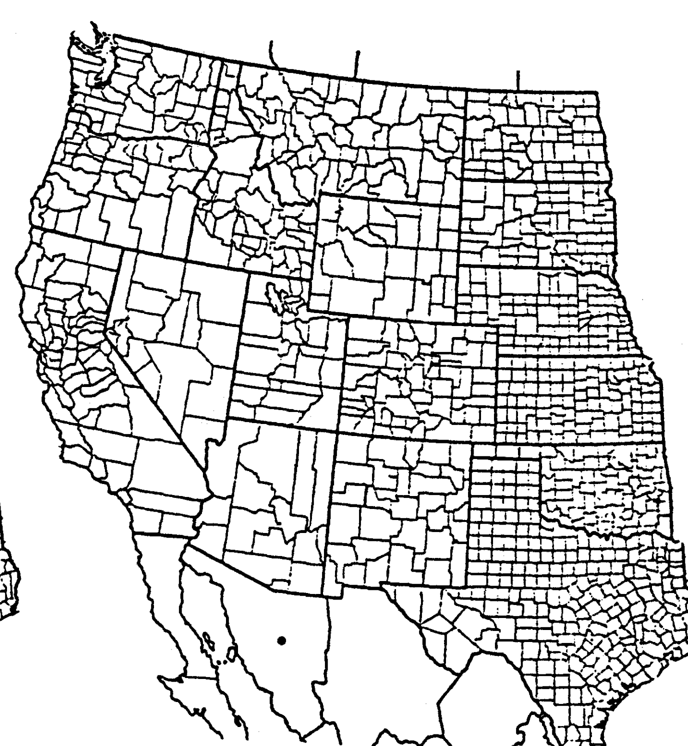
"Thecla" mycon



"Thecla" phoebe (=phobe)

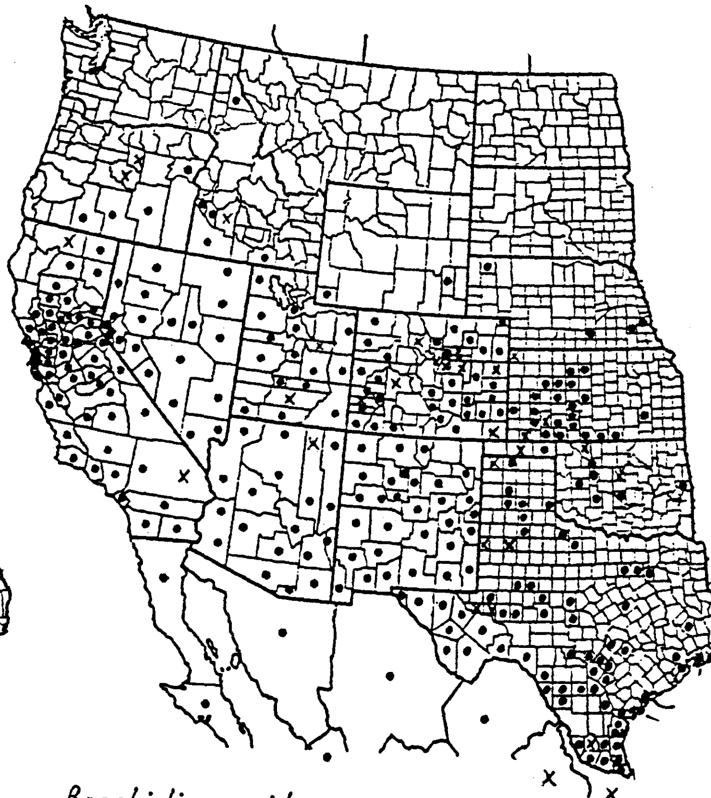
aubergina
~~"Thecla"~~ paetus

RKR



"Thecla" guzunta

"Thecla" syllis



Brephidium exile

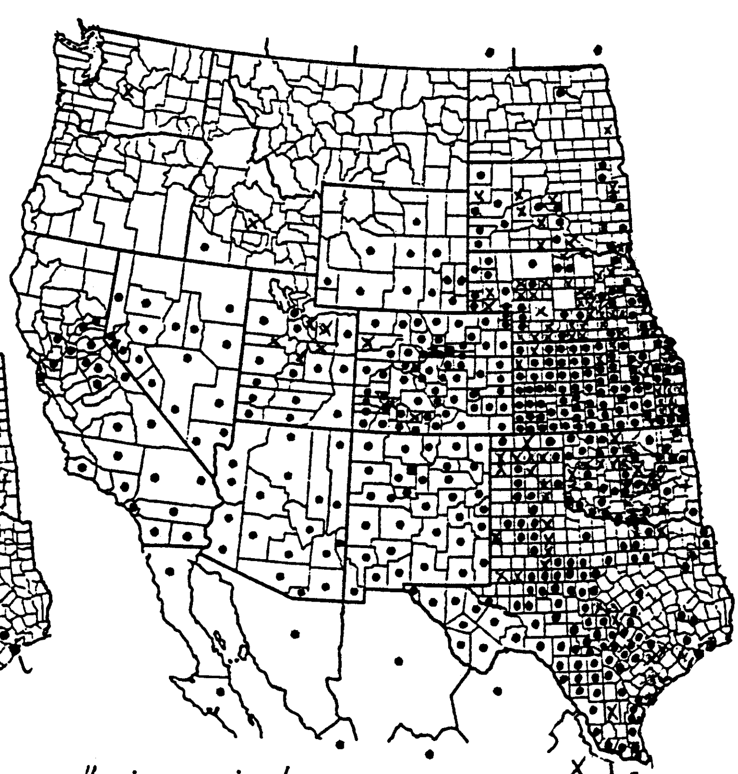
Brephidium isophthalma

Leptotes cassius

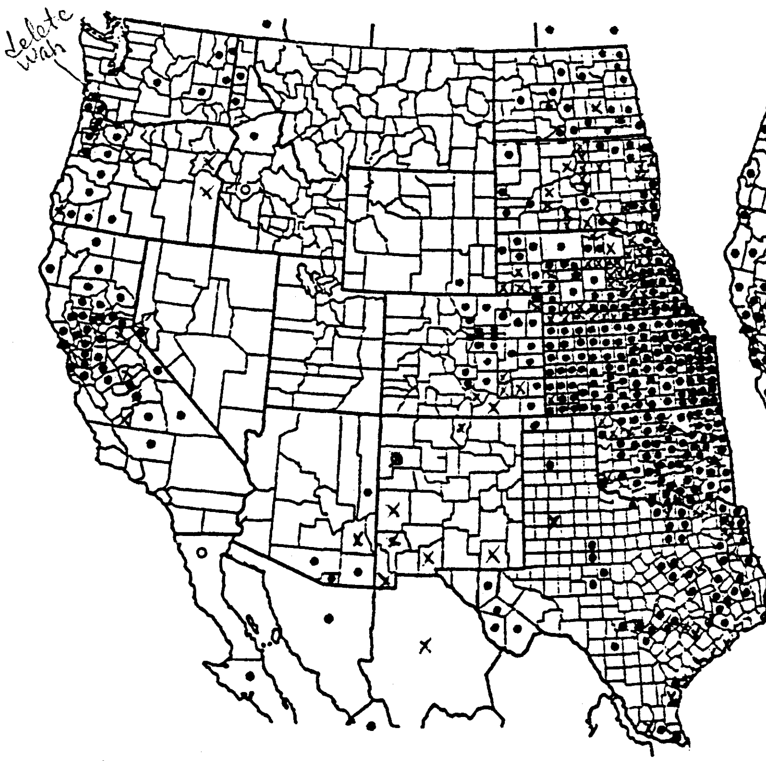
Leptotes marina

Zizula cyna

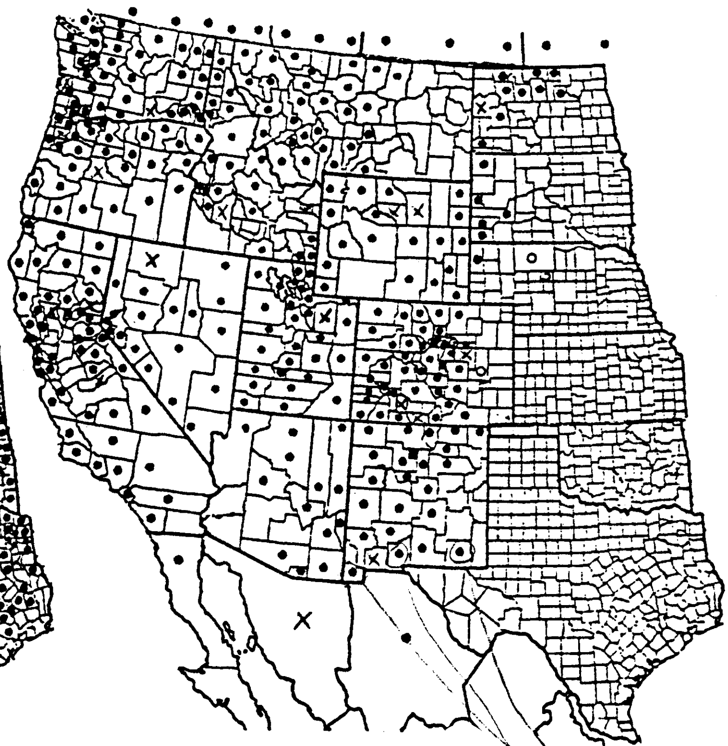
Hemiargus ceraunus



Hemiargus isola



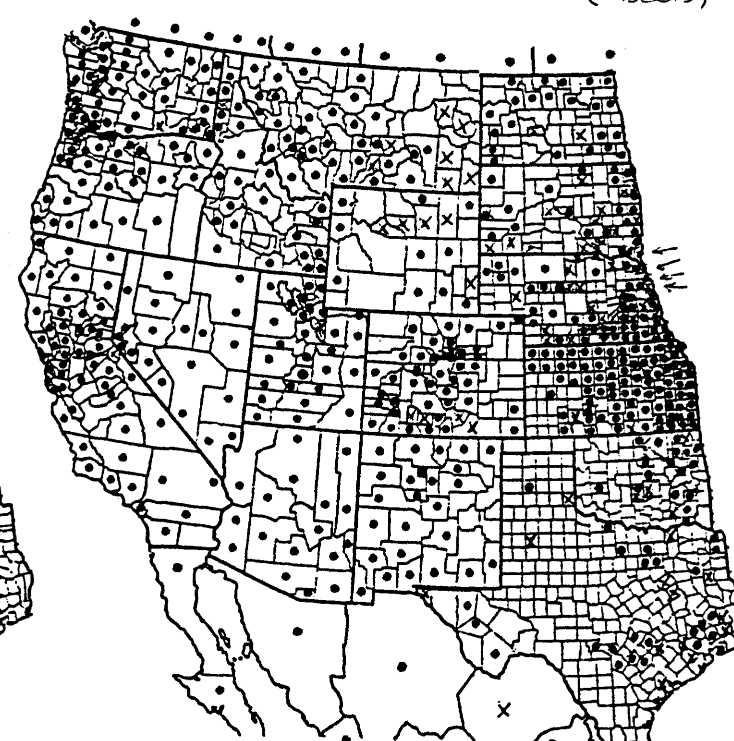
Everes comyntas



Everes amyntula (incl herrii)

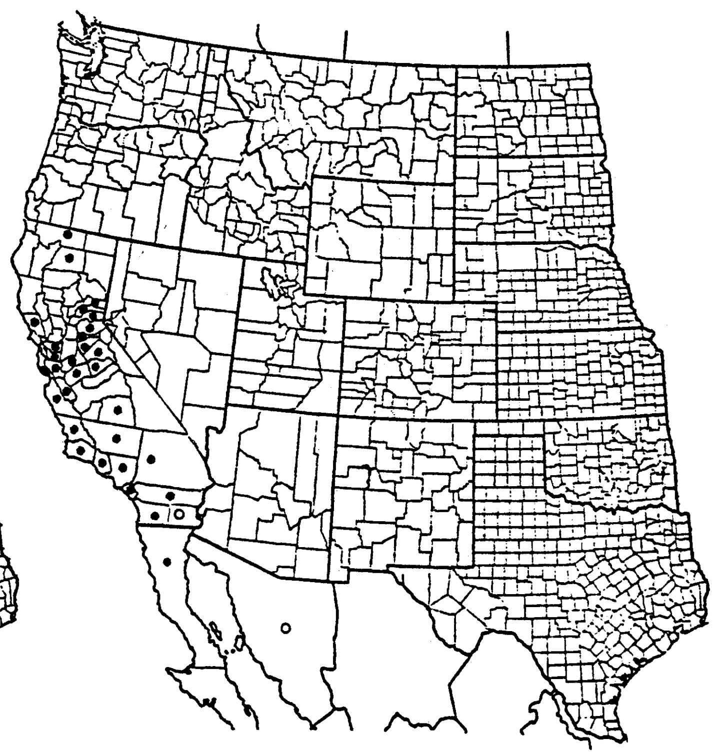
delete 3
(misdets)

Everes ~~tuttiola (=Zizula cyna)~~
Sp. nov. (Clench mss. ?TL)



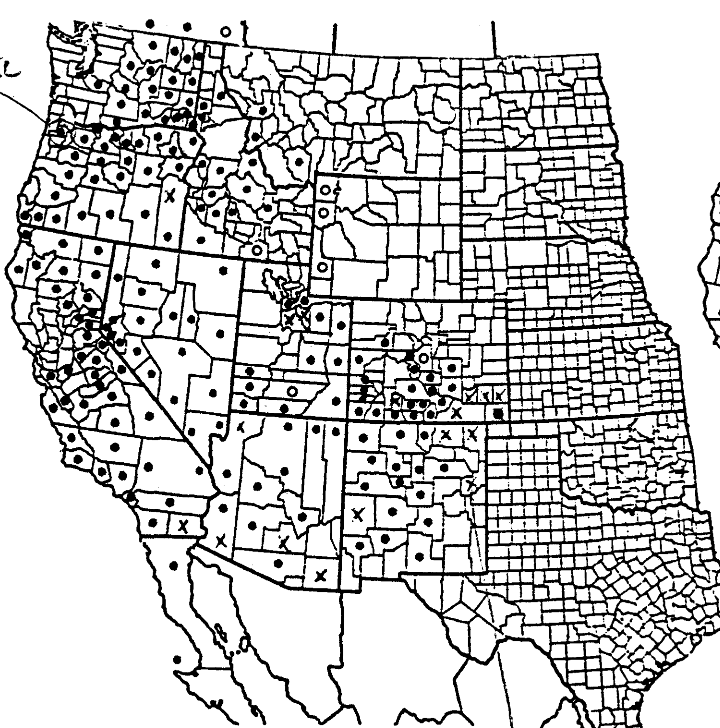
Celastrina argiolus (ladon) COMPLEX
(incl echo, lucia)

Celastrina neglecta-~~major~~ COMPLEX (incl Colorado undescribed entity)



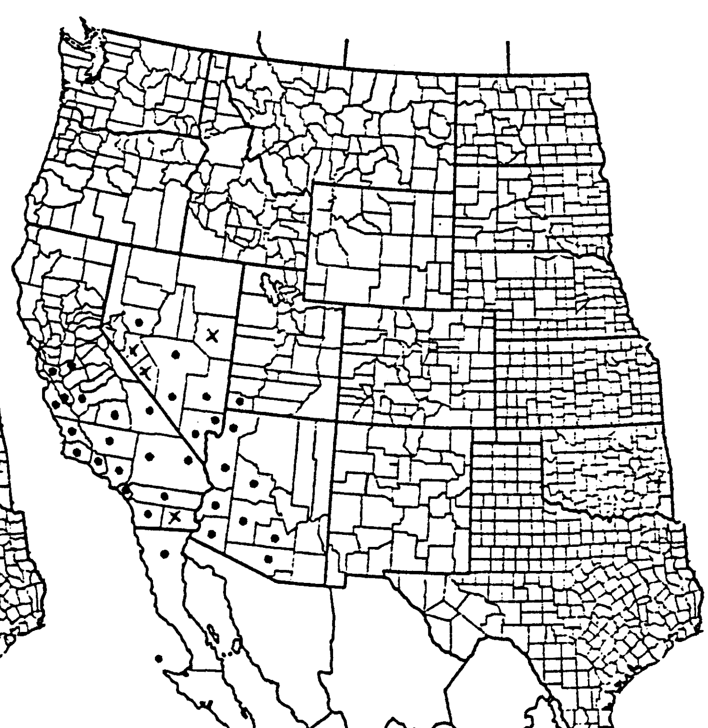
Philotes sonorensis

lete



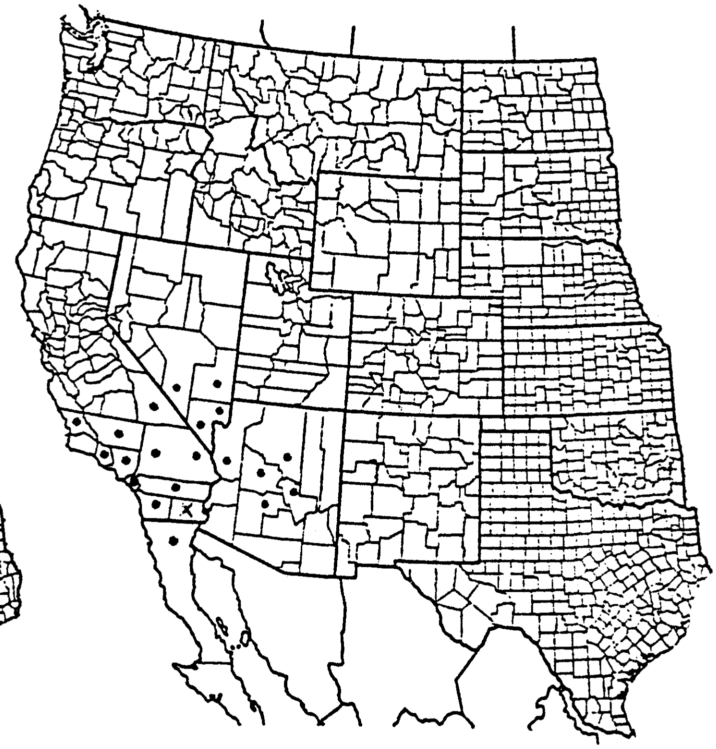
Euphilotes battoides COMPLEX

? SJC stuff
[E. jamesii common]

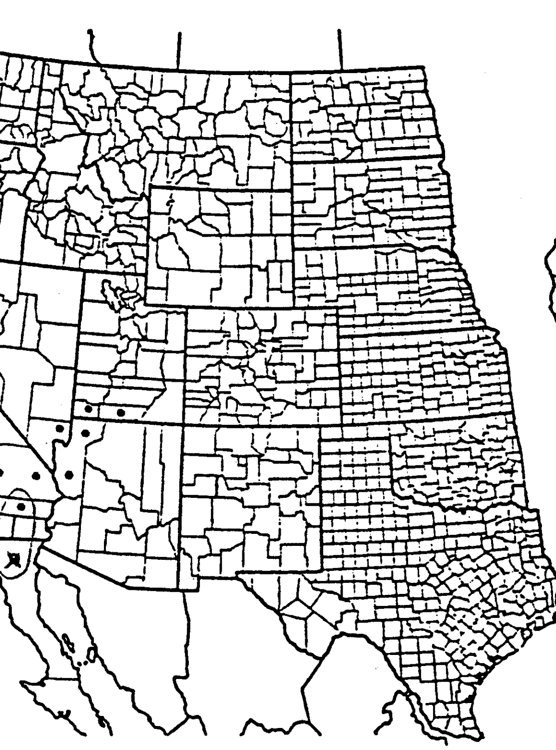


Euphilotes bernardino

Euphilotes enoptes (spring-flying)

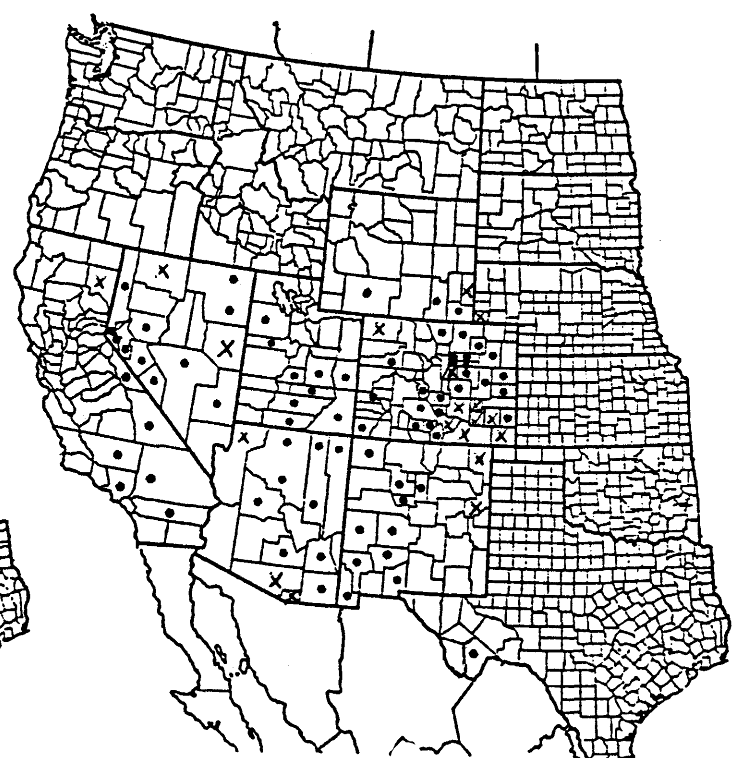


Euphilotes enoptes (fall-flying)

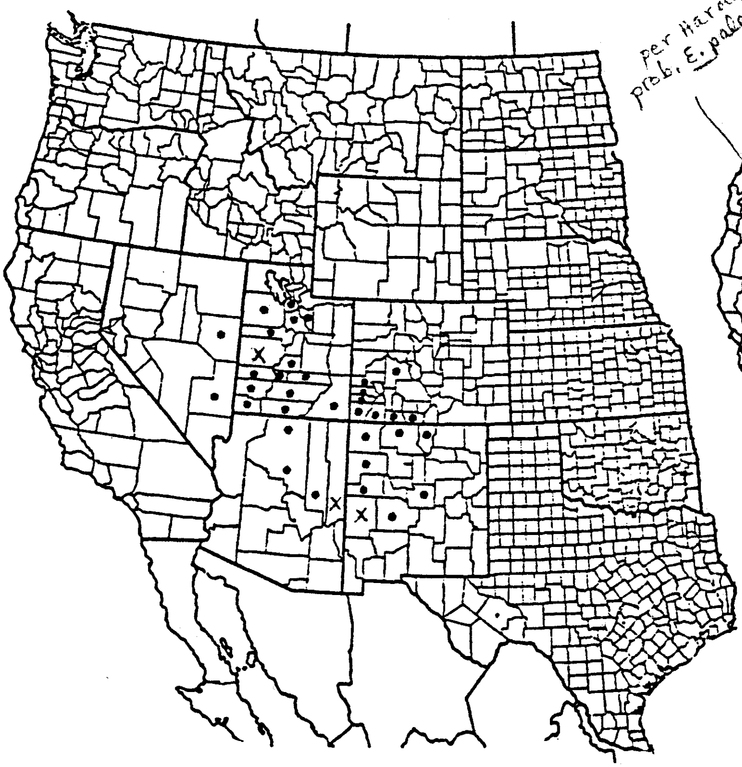


Spr.-fl.
enoptes
ssp
[Emmel]
vs. mojave
ssp

Euphilotes mojave



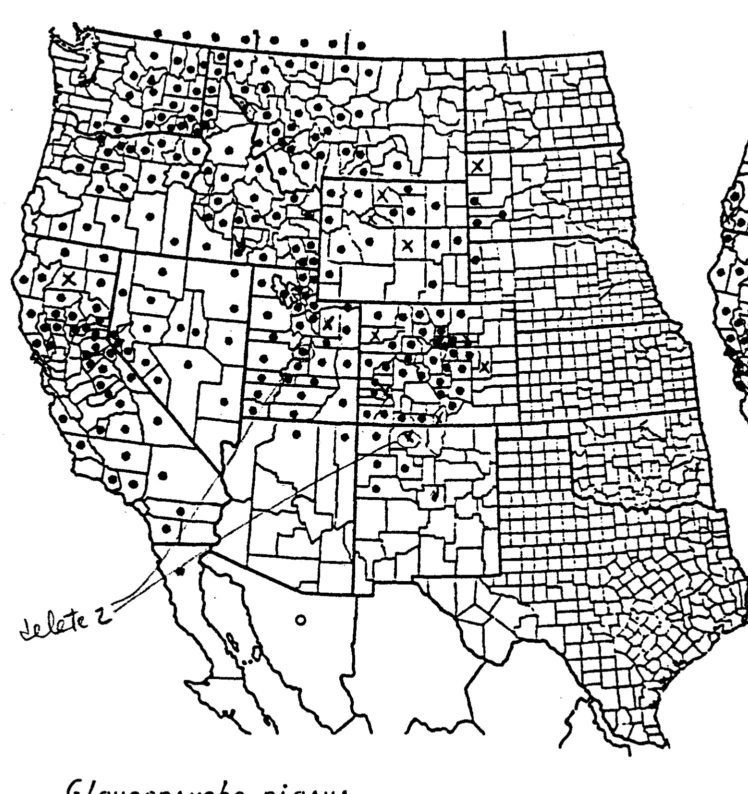
Euphilotes rita (incl pallescens)



Euphilotes spaldingi

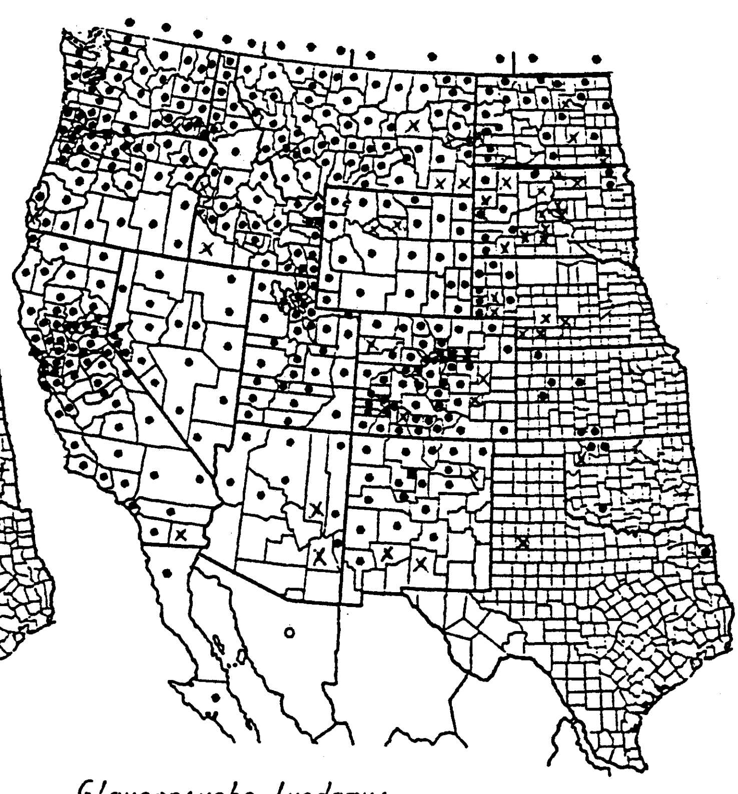
per Harold Rice
prob. E. palescens ricei ?.

Philotiella speciosa



delete 2

Glaucopsyche piasus

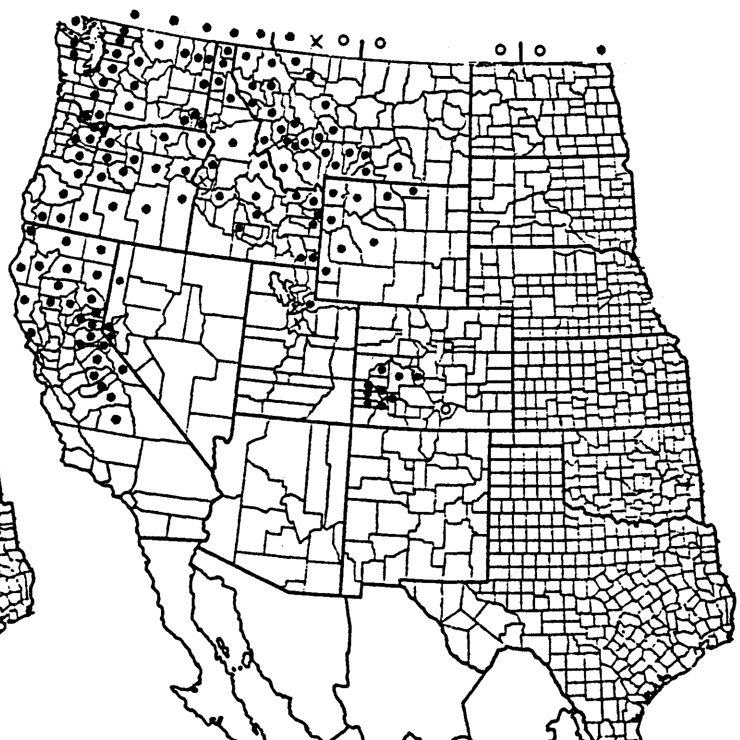


Glaucopsyche lygdamus

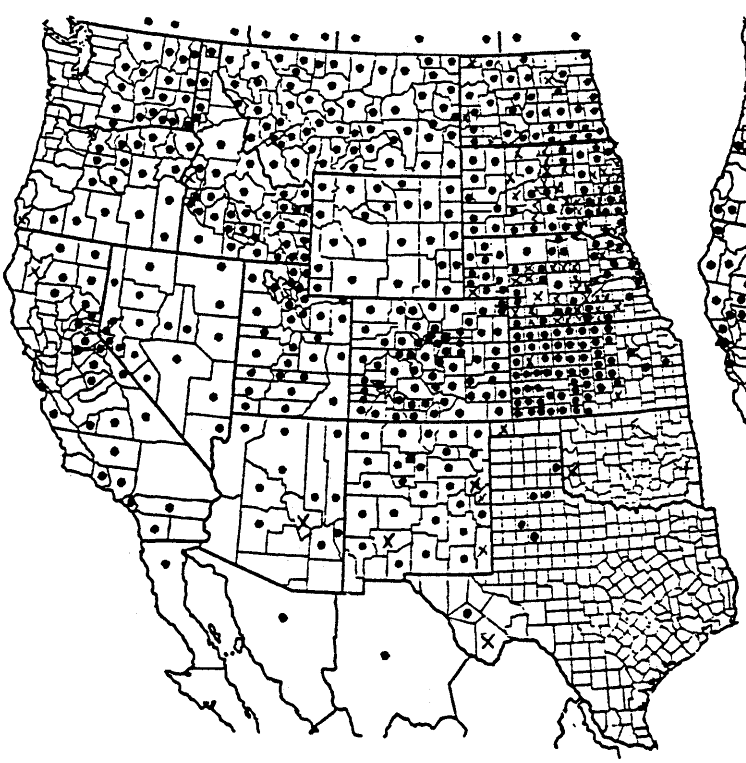
Glaucopsyche xerces

Vacciniina optilete

Plebulina emigdionis

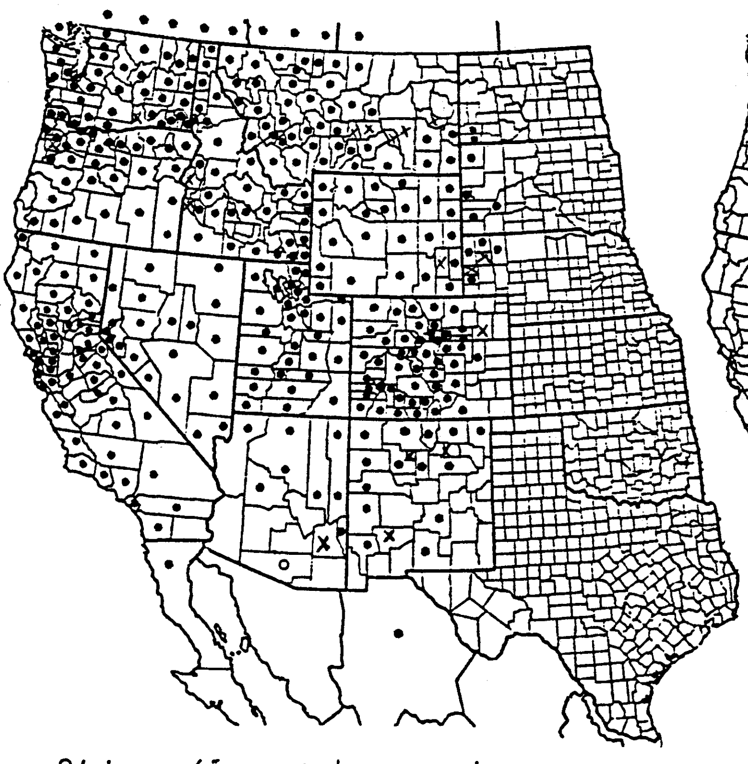


Lycaeides idas (= argyrognomon)



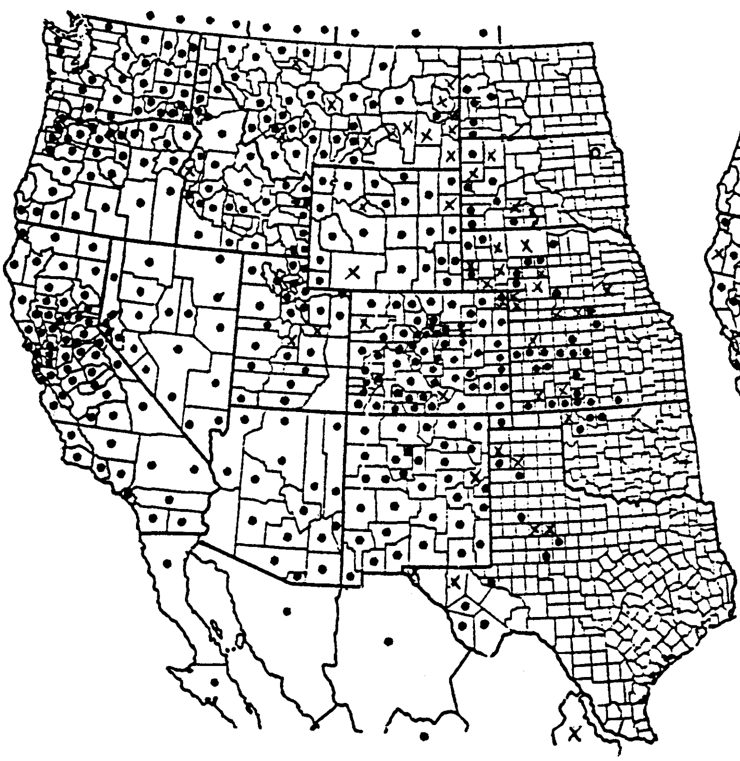
Lycaeides melissa

Plebejus saepiolus



Plebejus (Icaricia) icarioides

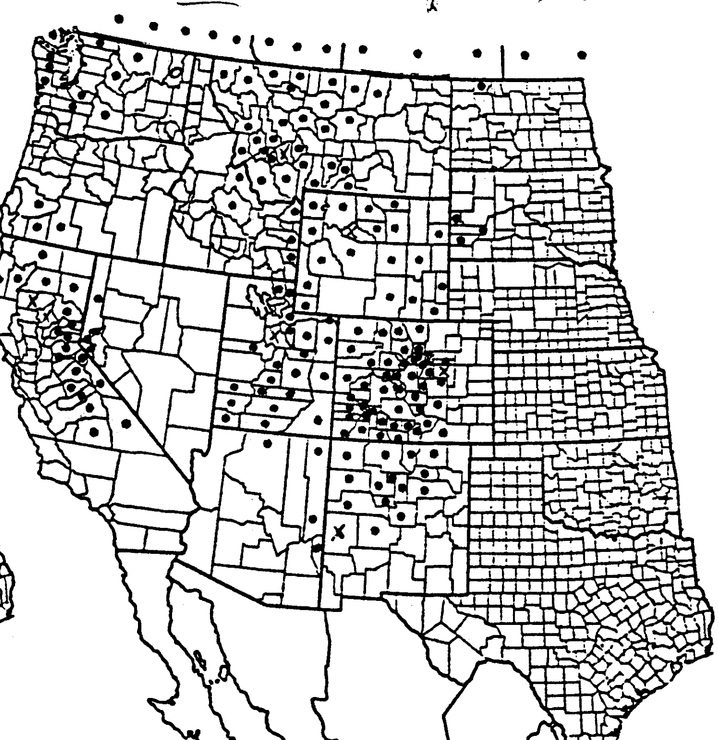
Plebejus (Icaricia) shasta



Plebejus (Icaricia) acmon

Plebejus (Icaricia) lupini [I believe that all "acmon" E of CA is lupini !]

Plebejus (Icaricia) neurona

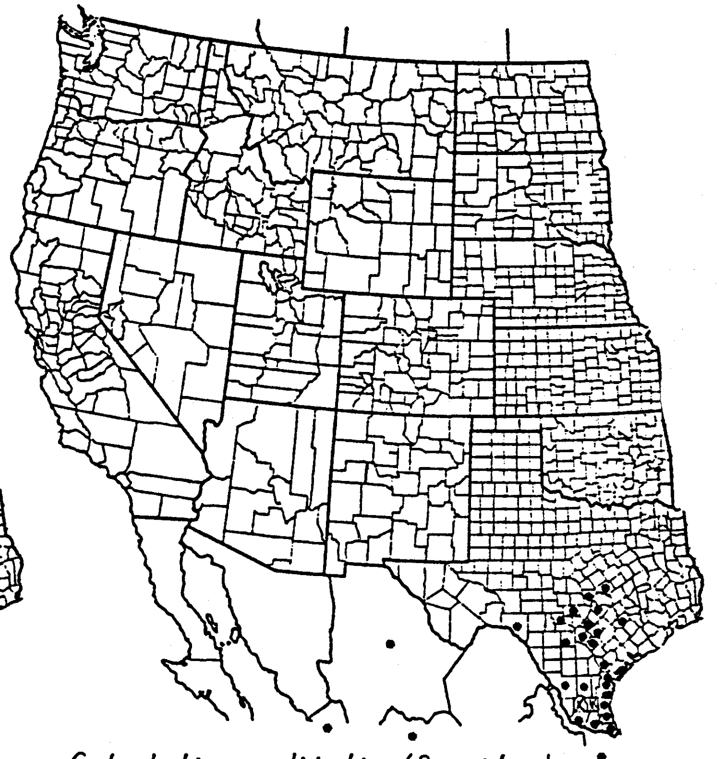


Agriades glandon COMPLEX (incl *aquilo, franklinii, rusticus, podarce*)

Calephelis borealis

Calephelis virginiensis

Calephelis nemesis (incl guadeloupe)



Calephelis perditalis (?= nilus)

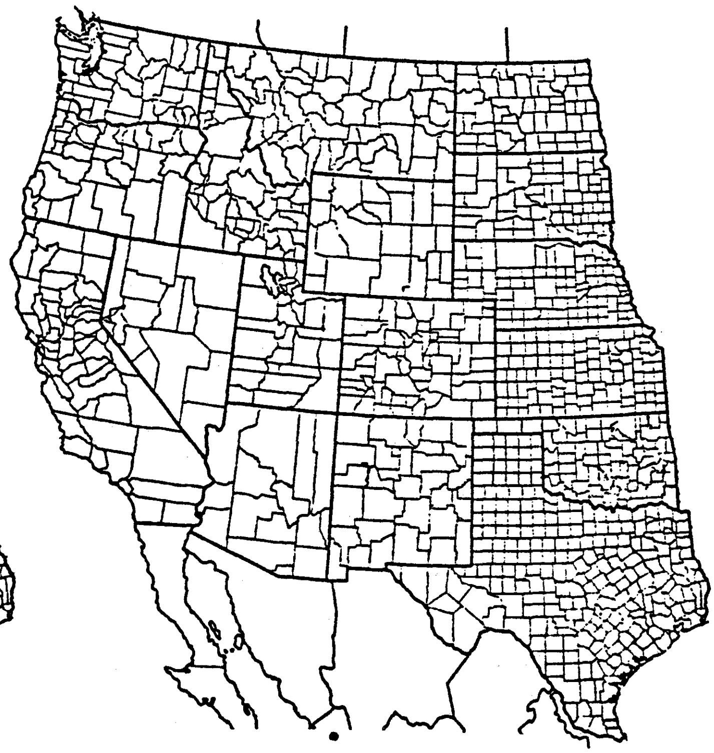
Calephelis wrighti

Calephelis rawsoni

Calephelis freemani

Calephelis arizonensis
(?ssp. of rawsoni)

Calephelis dreisbachi



Calephelis mexicana

Calephelis stallingsi

Calephelis azteca

Calephelis sinaloensis

Calephelis fulmen

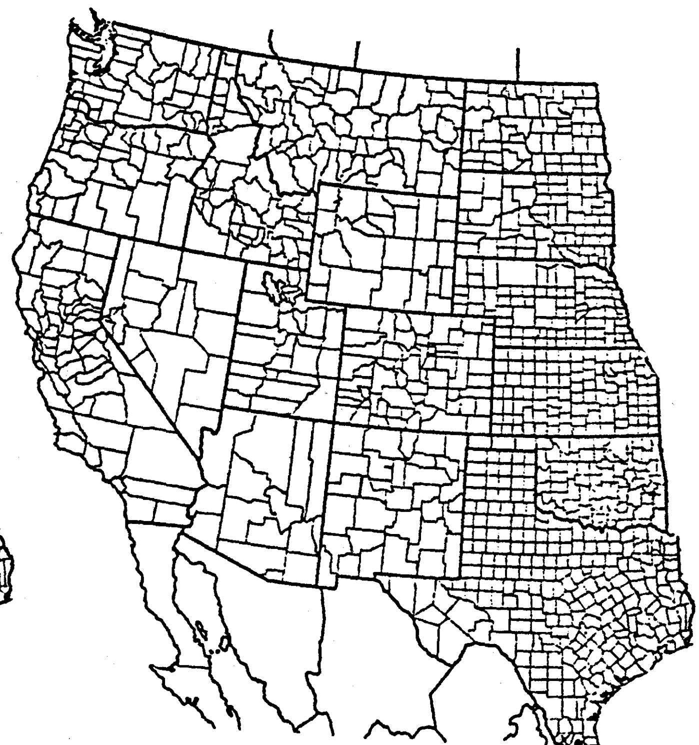
Calephelis montezuma

Caria ino

Lasaia sula

Lasaia maria

Lasaia agesilas callaina



Melanis pixe

Symmachia rubina SIN F. ADW '96

Melanis cephise (incl acroleuca)

Mesosemia telegone

Anteros carausius

Anteros medusa

Calydna hegias
Calydna sinulata △

Emesis zela

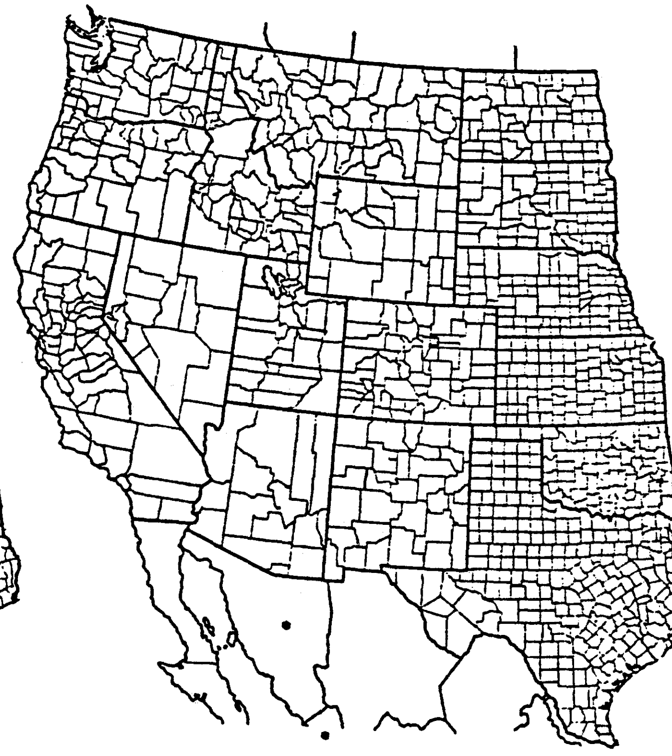
Emesis ares

Emesis emesia

Emesis mandana

Emesis tegula

Emesis tenedia



Emesis vulpina

Emesis poeas

Euselasia hieronymi

Euselasia inconspicua △

Apodemia duryi •

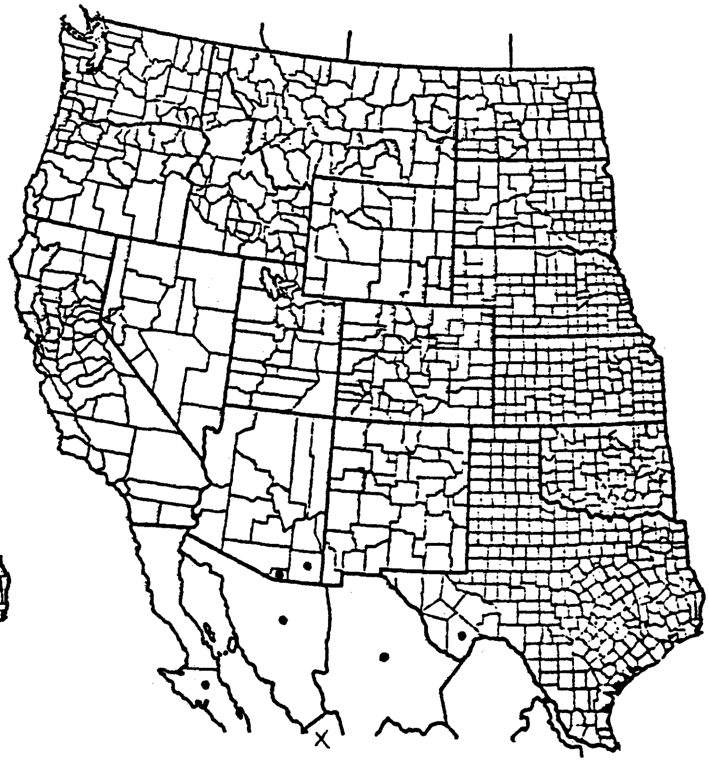
? duryi only

Apodemia mormo

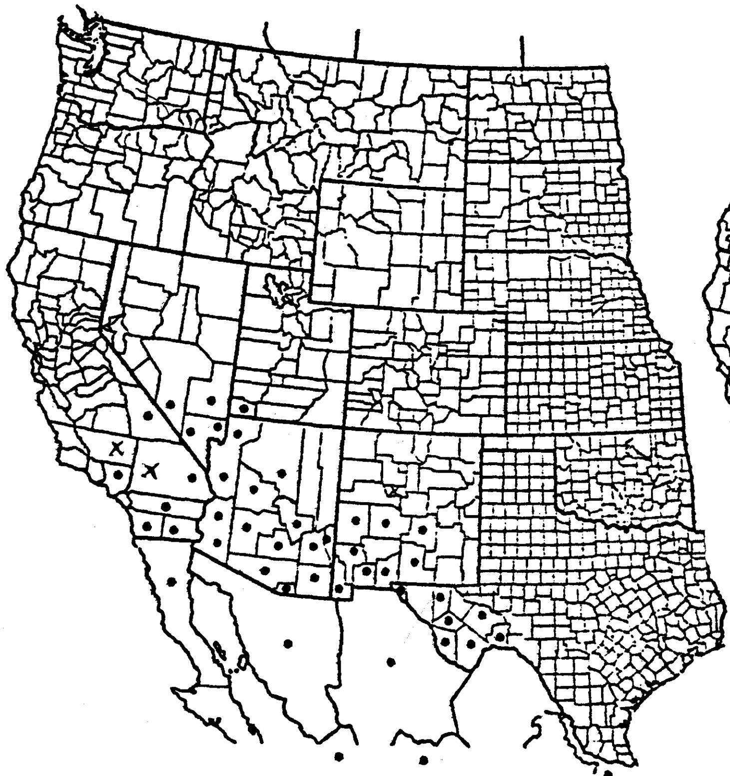
TX: mormo or duryi ?

← Apodemia duryi: CHIH, MX
(all RH)
TX: Huds
NM: Eddy, DA, Otero

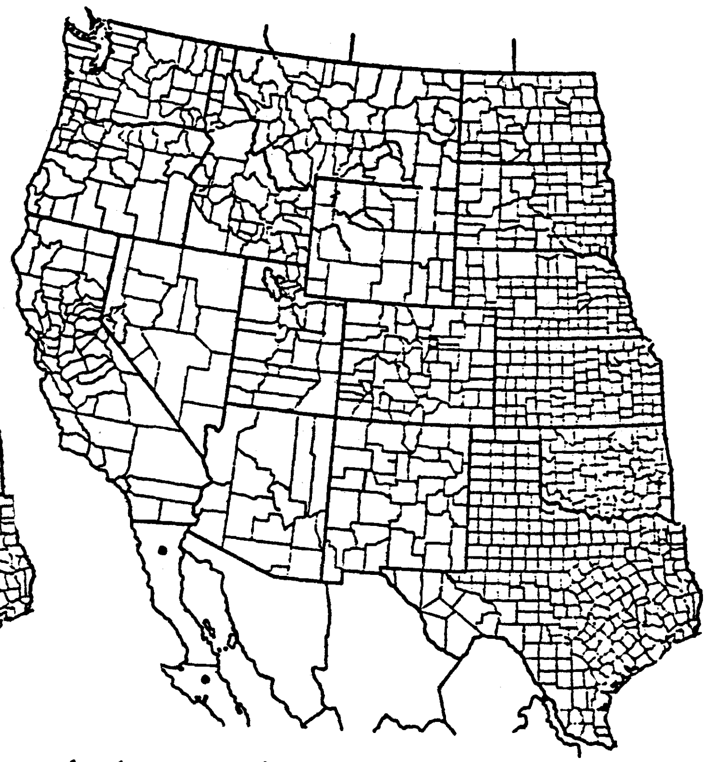
Apodemia multiplaga



Apodemia hepburni

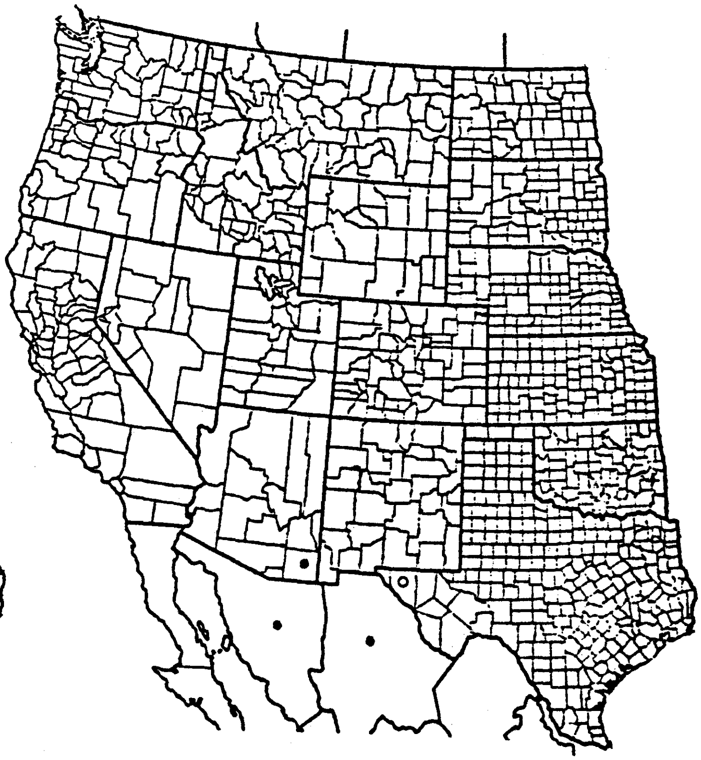


Apodemia palmerii

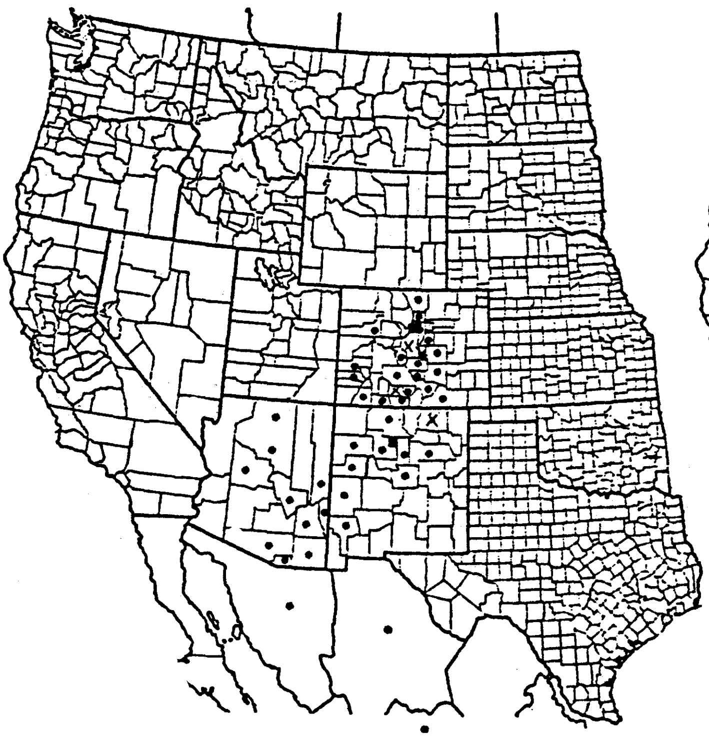


Apodemia murphyi

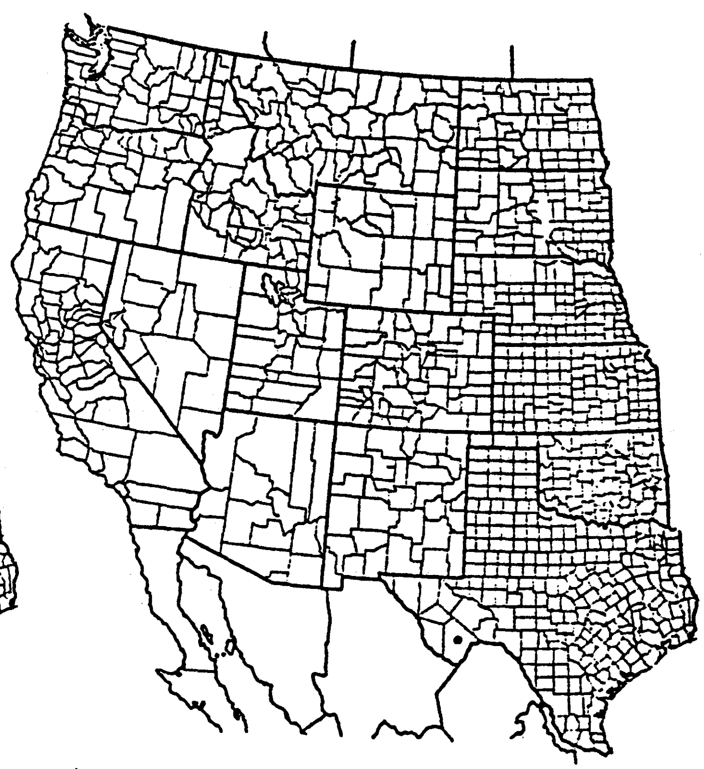
Apodemia walkeri



Apodemia phyciodoides



Apodemia nais



Apodemia chisosensis

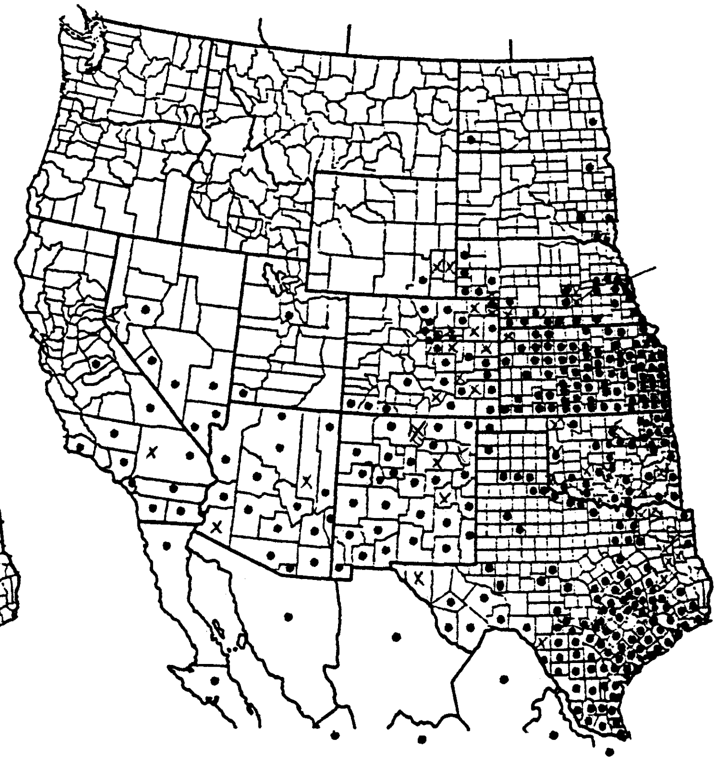
Apodemia hypoglauca

Thisbe lycorias

Baeotis hisbon zonata

Rhetus arcius

Adelotypa eudocia



Libytheana carinenta COMPLEX (incl *bachmanii*)

Heliconius charitonius

Heliconius erato

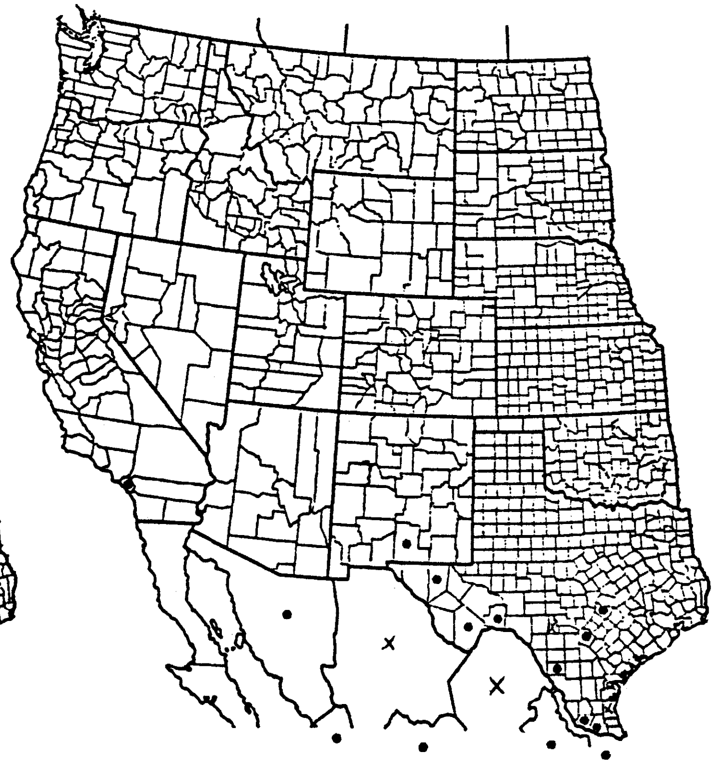
Heliconius ismenius

Eueides isabella (="cleobaea" p.257)

Philaethria dido

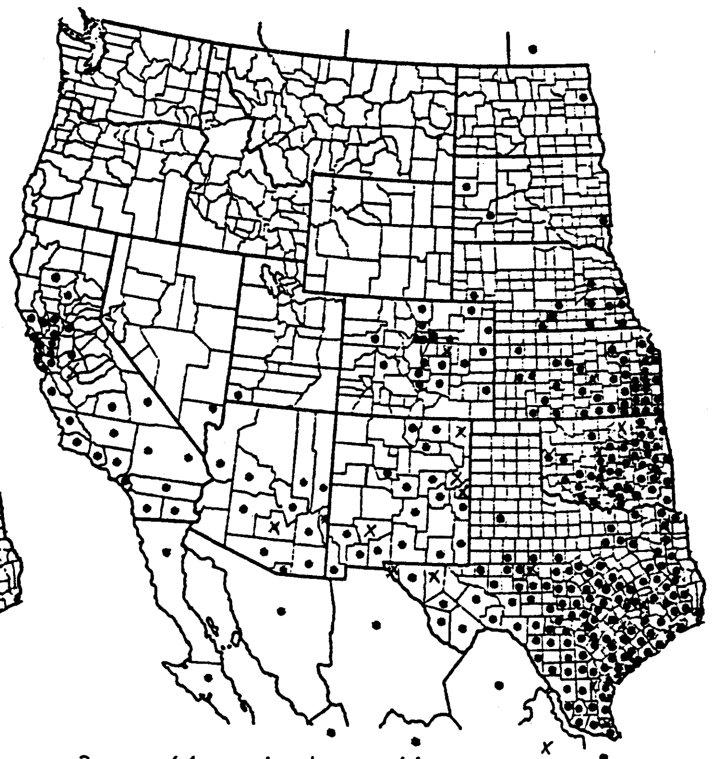
Dryas julia (= iulia)

Dryadula phaetusa (incl stupenda)

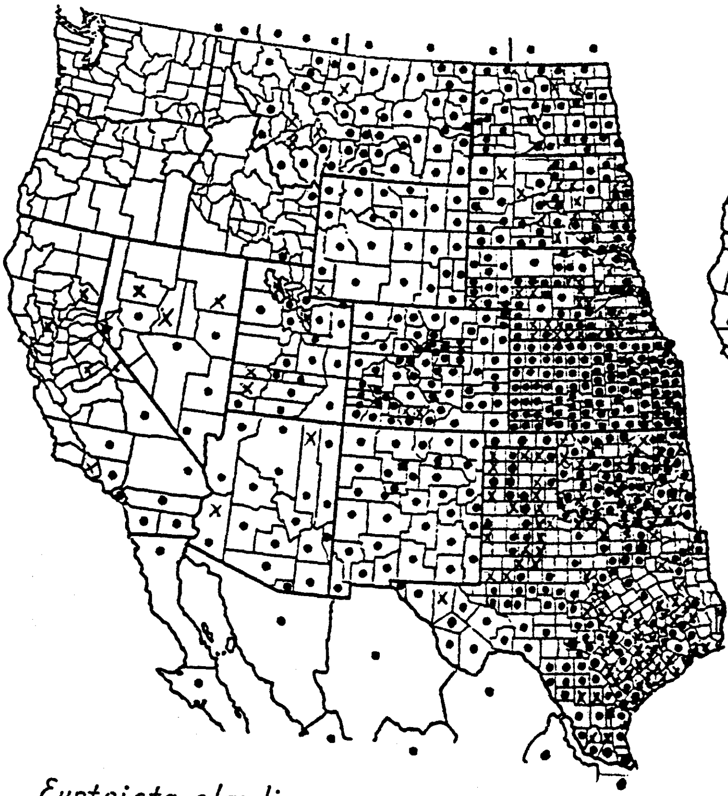


Dione moneta

Dione juno

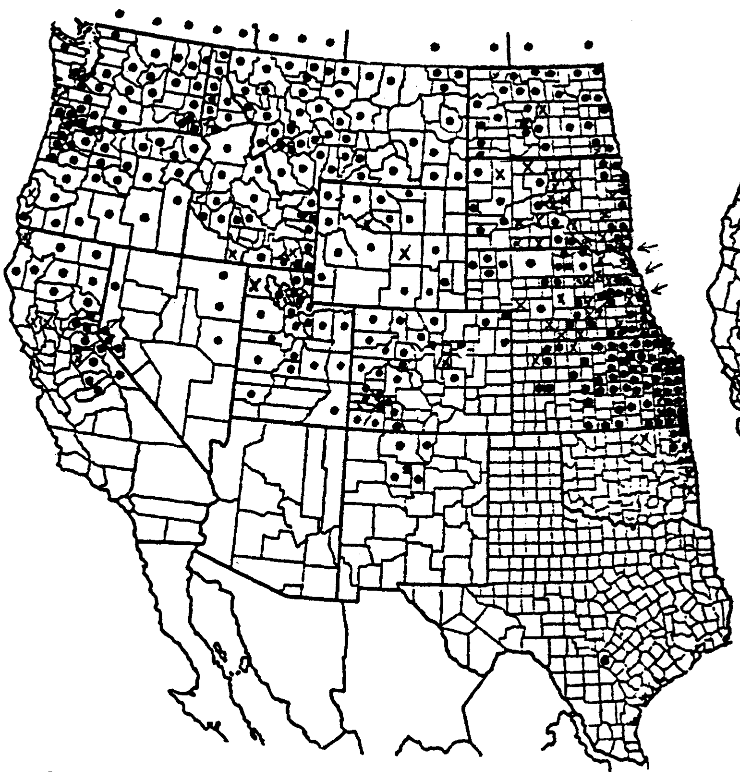


Dione (Agraulis) vanillae

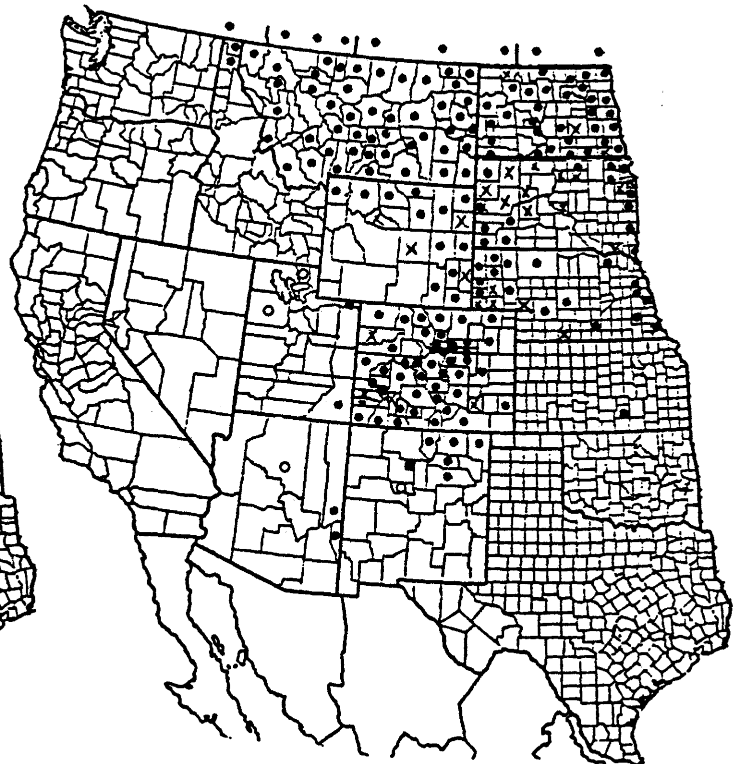


Euptoieta claudia

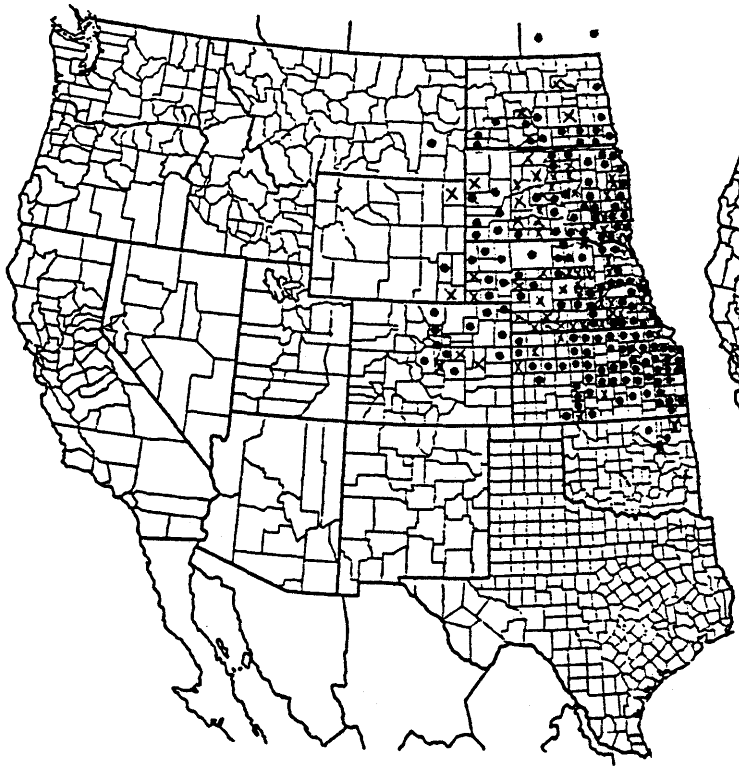
Euptoieta hegesia



Speyeria cybele (incl leto)



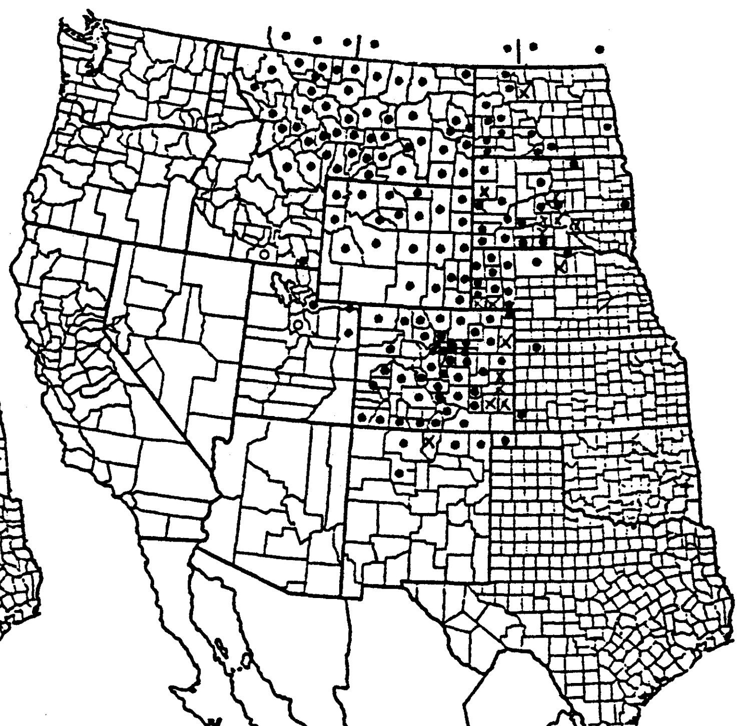
Speyeria aphrodite



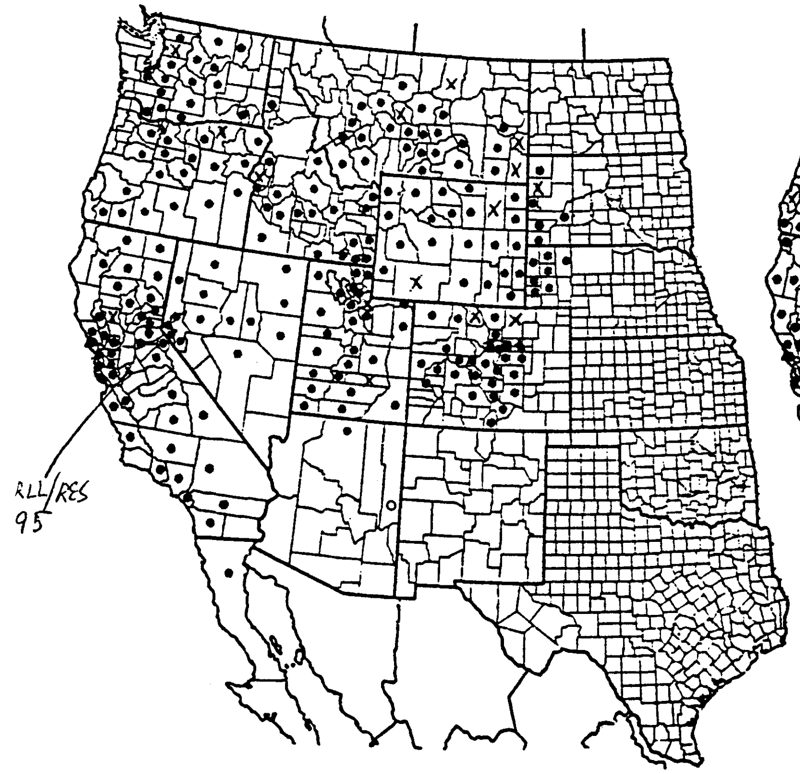
Speyeria idalia

Speyeria diana

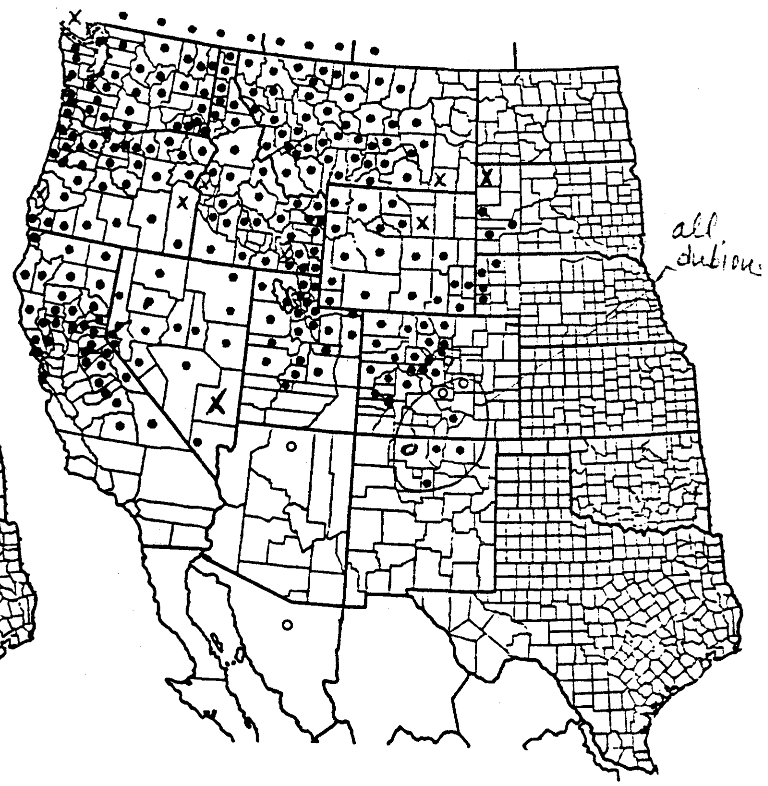
Speyeria nokomis



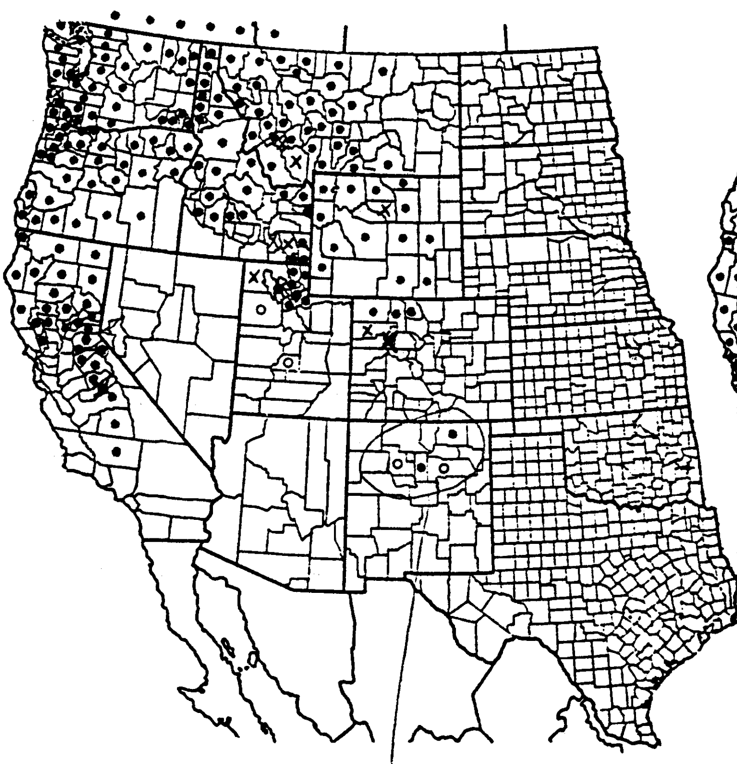
Speyeria edwardsii



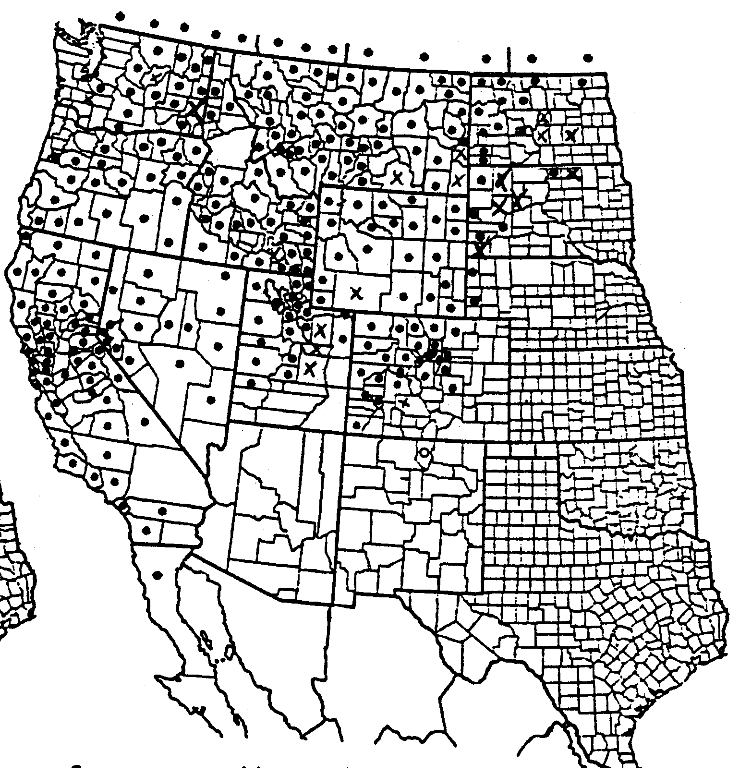
Speyeria coronis



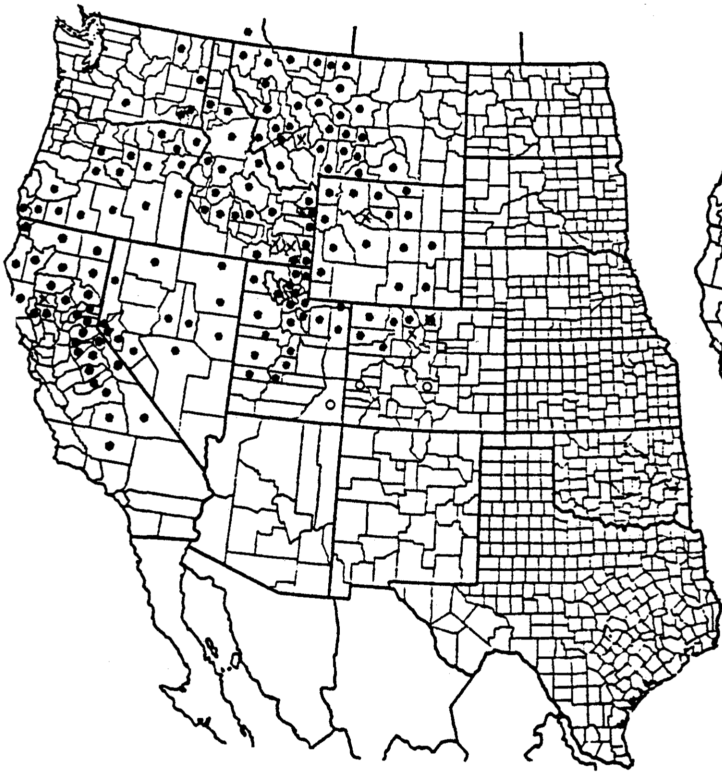
Speyeria zerene



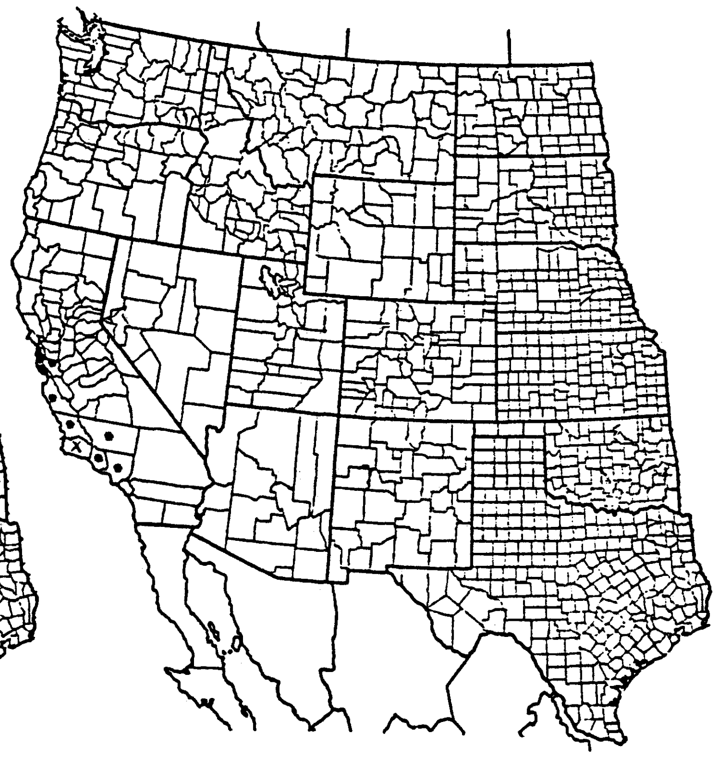
Speyeria hydaspe



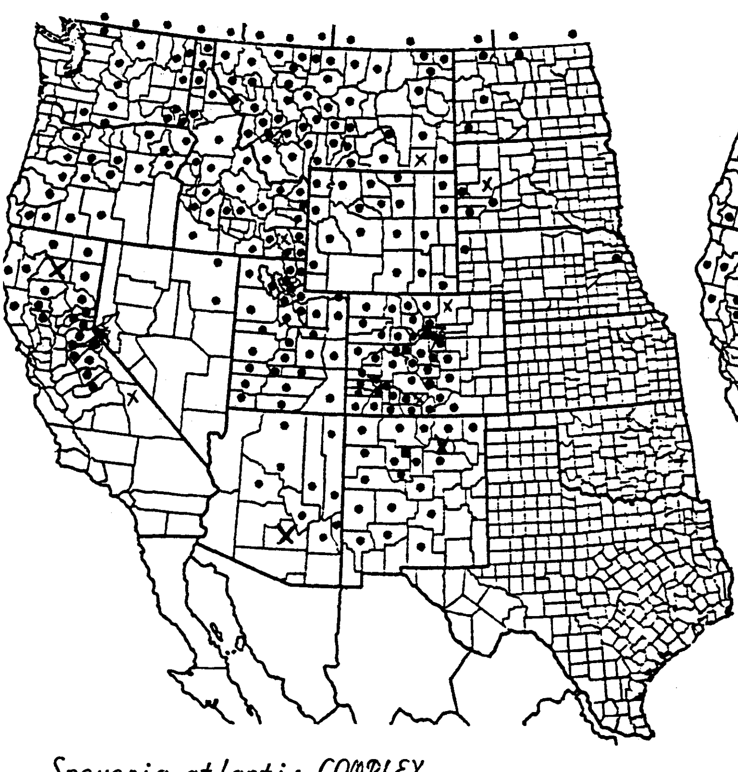
Speyeria callippe (incl nevadensis)



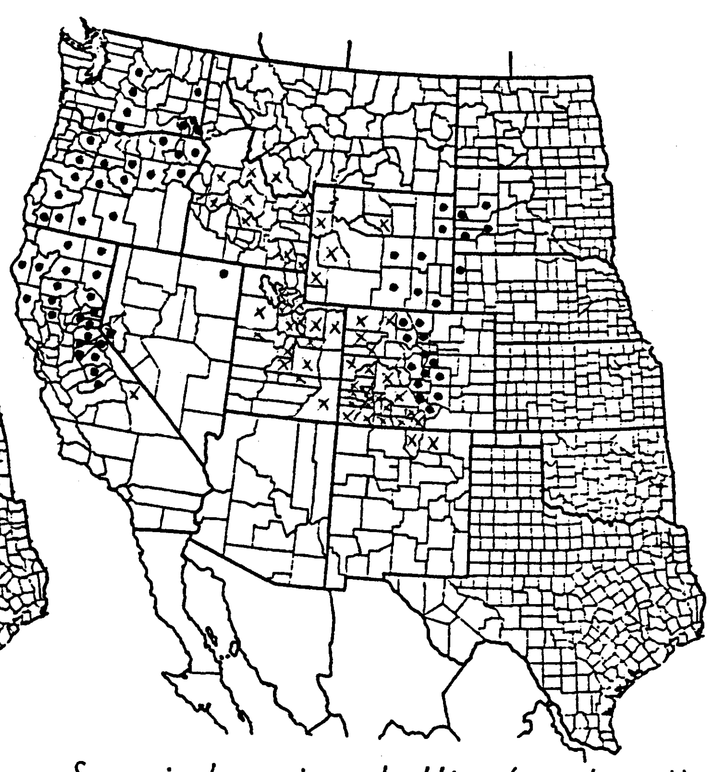
Speyeria egleis



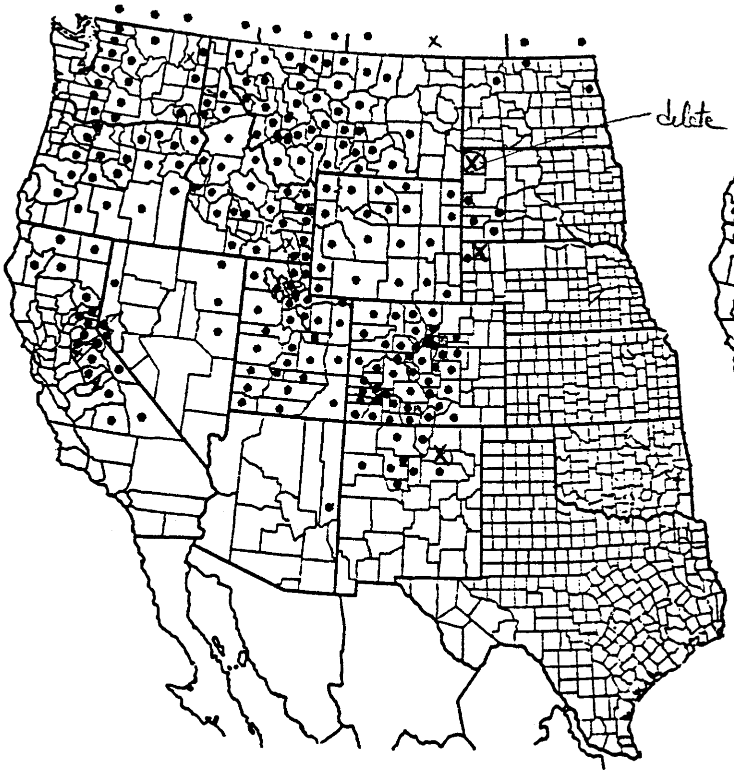
Speyeria adiaste



Speyeria atlantis COMPLEX

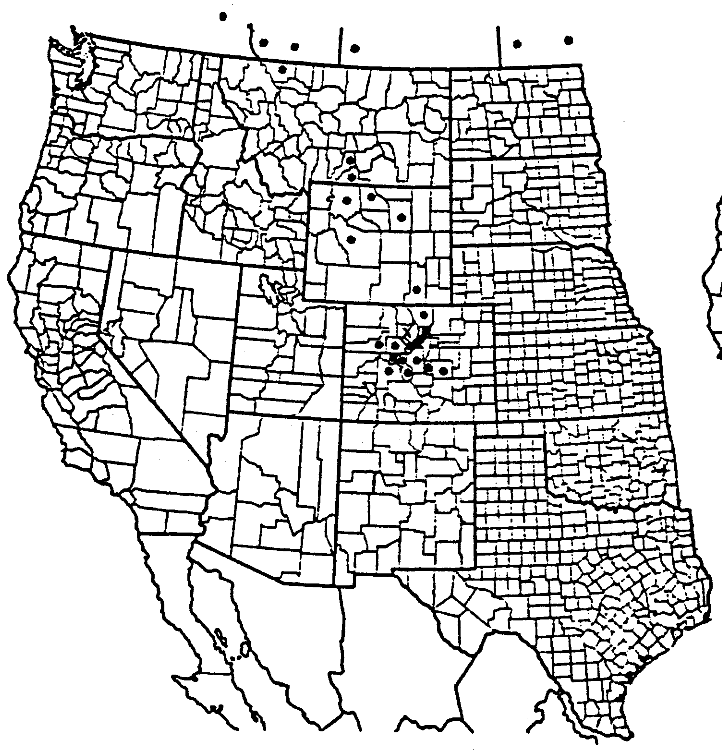


Speyeria hesperis and allies ~~(unsilvered)~~ (variable)

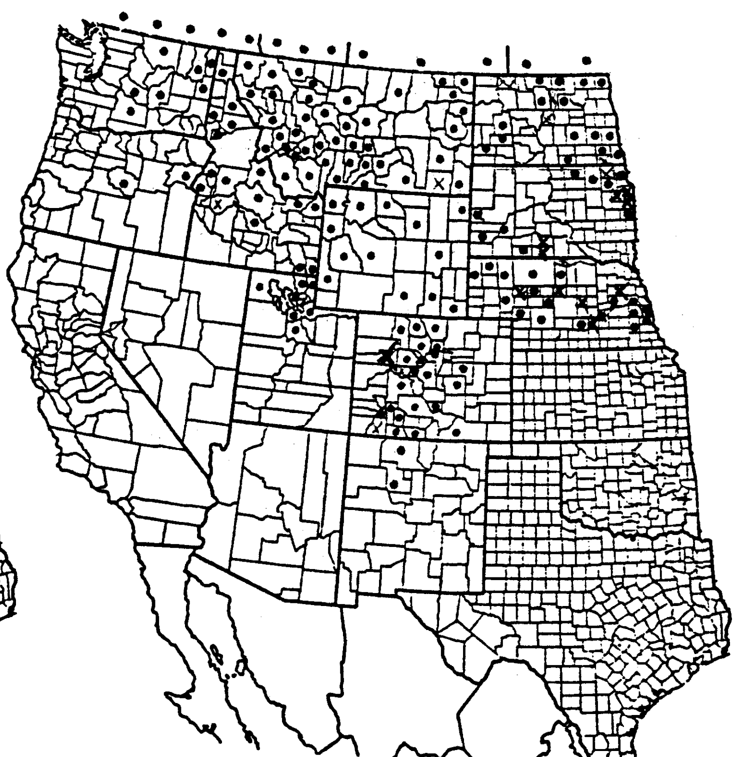


Speyeria mormonia

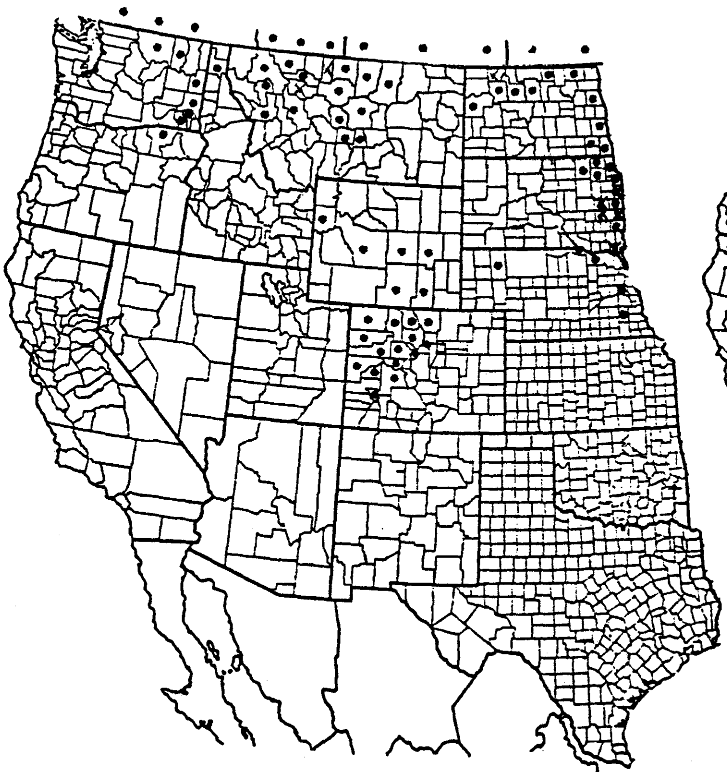
Boloria napaea



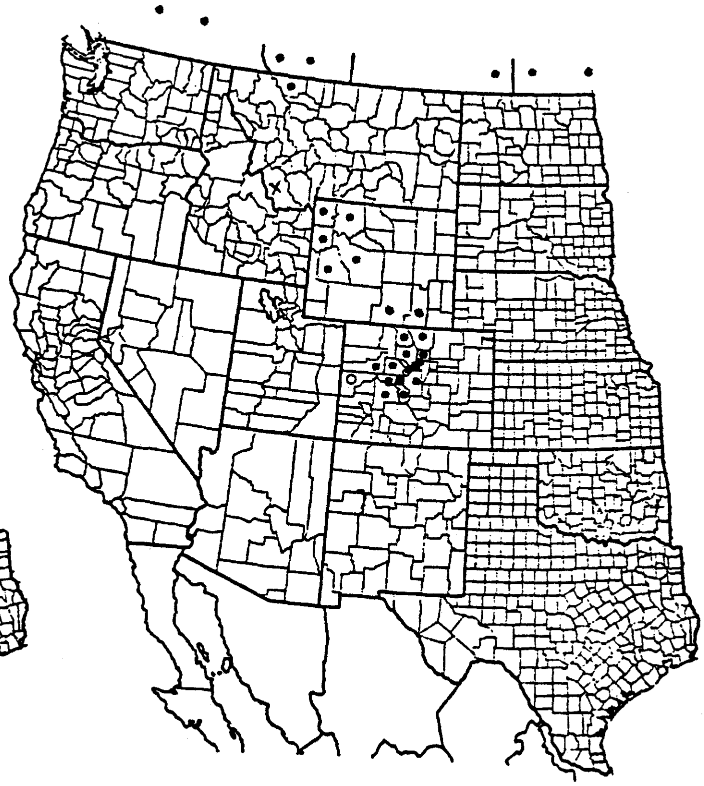
Boloria eunomia



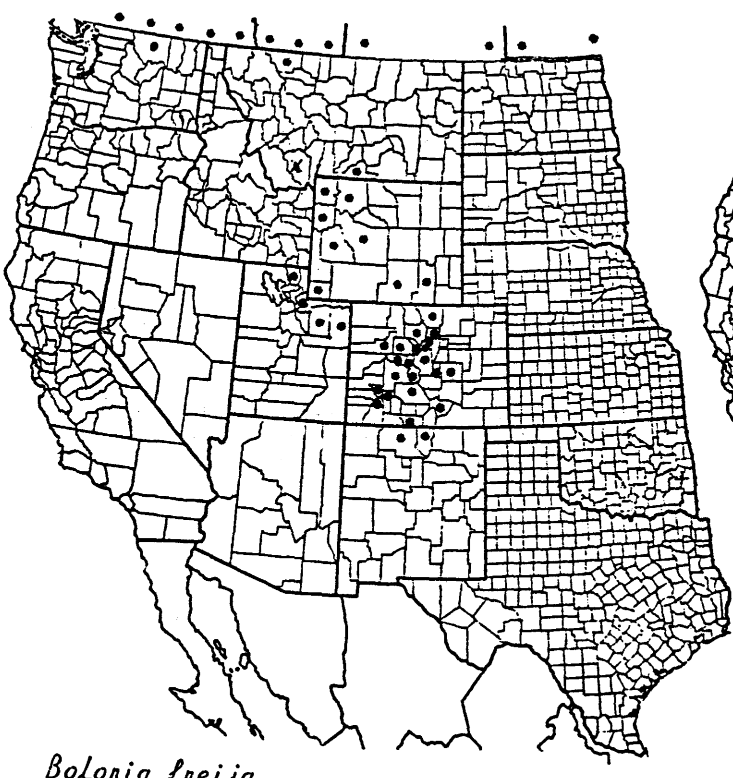
Boloria selene



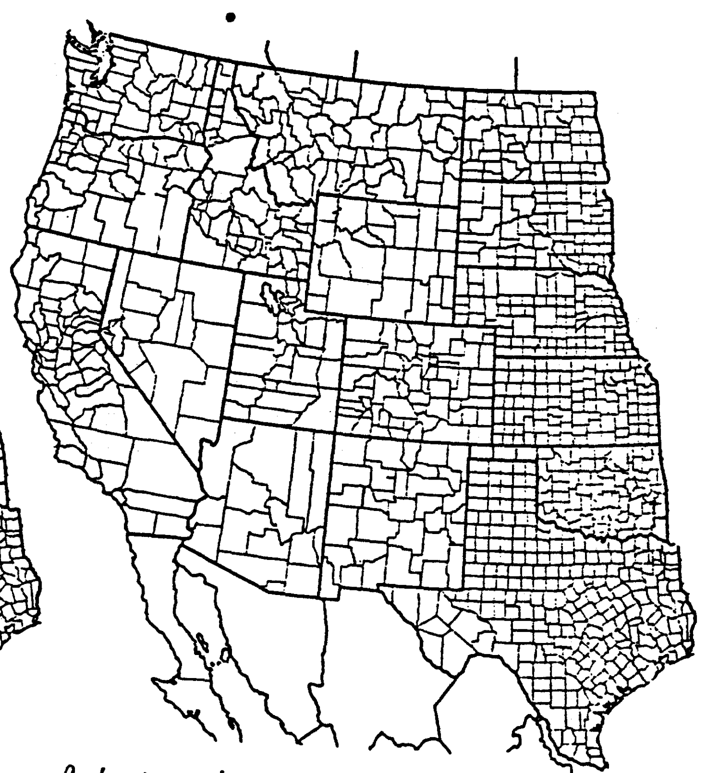
Boloria bellona



Boloria frigga

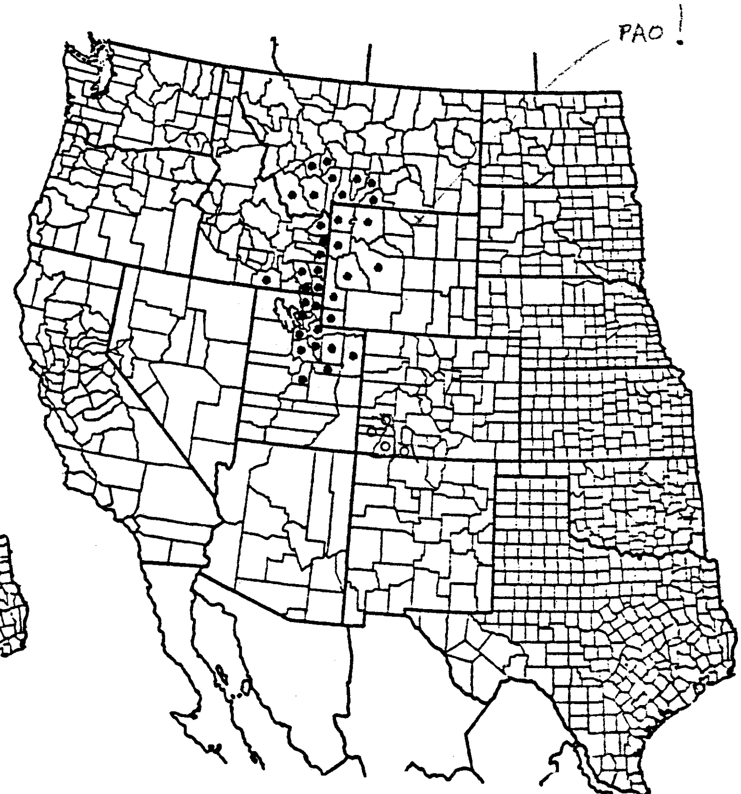


Boloria freija

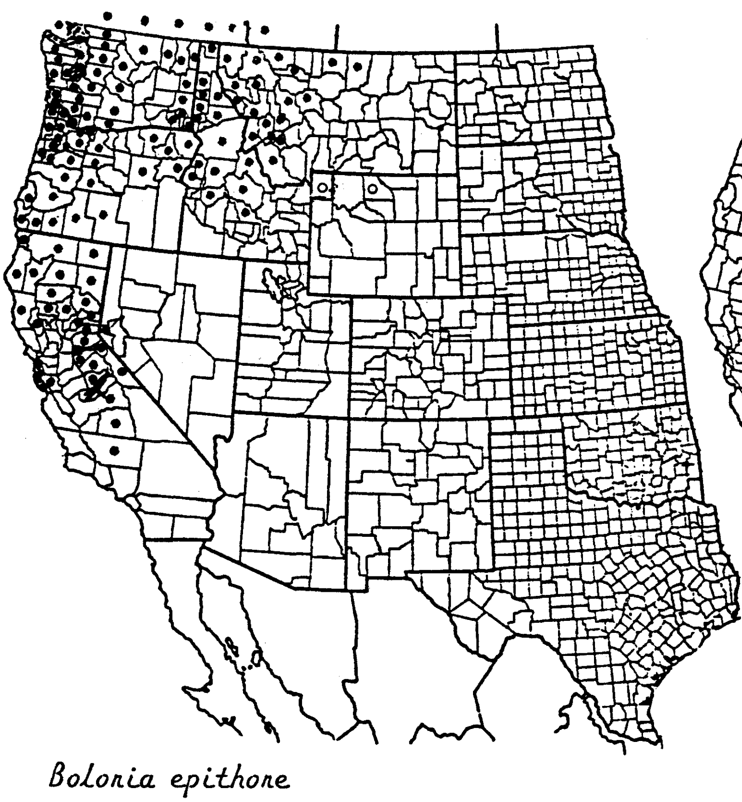


Boloria polaris

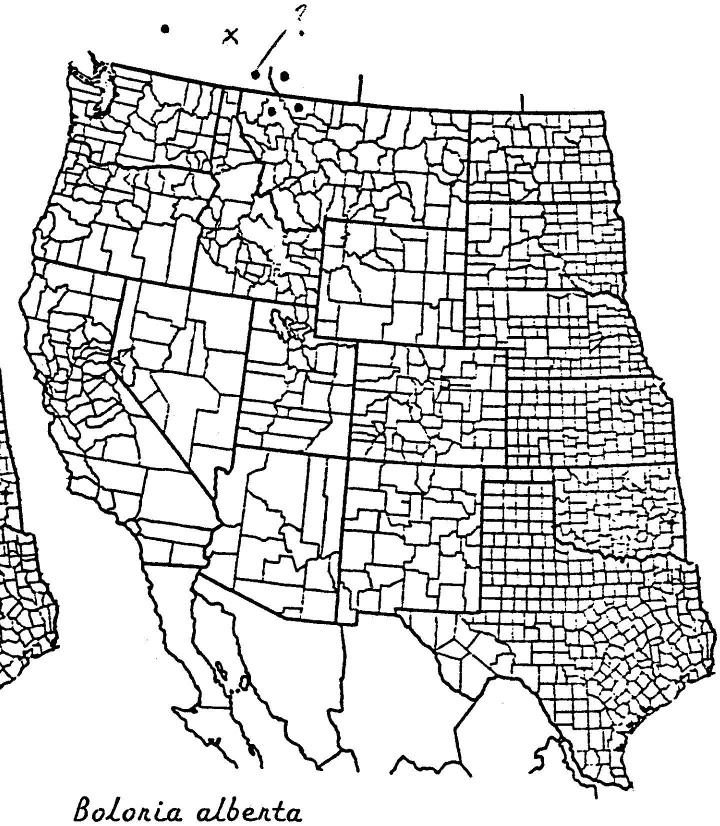
Boloria improba (incl acrocnema)



Boloria kriemhild

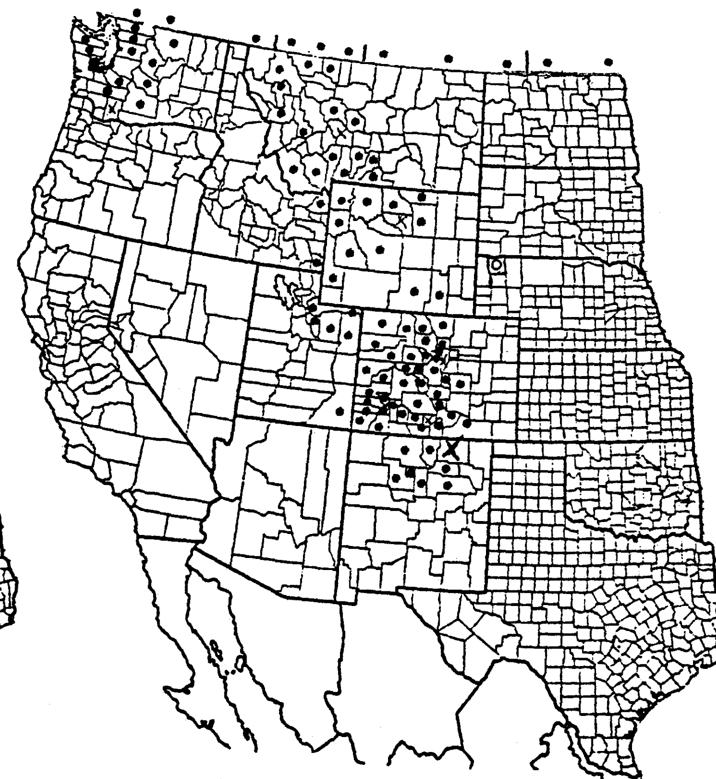


Boloria epithore

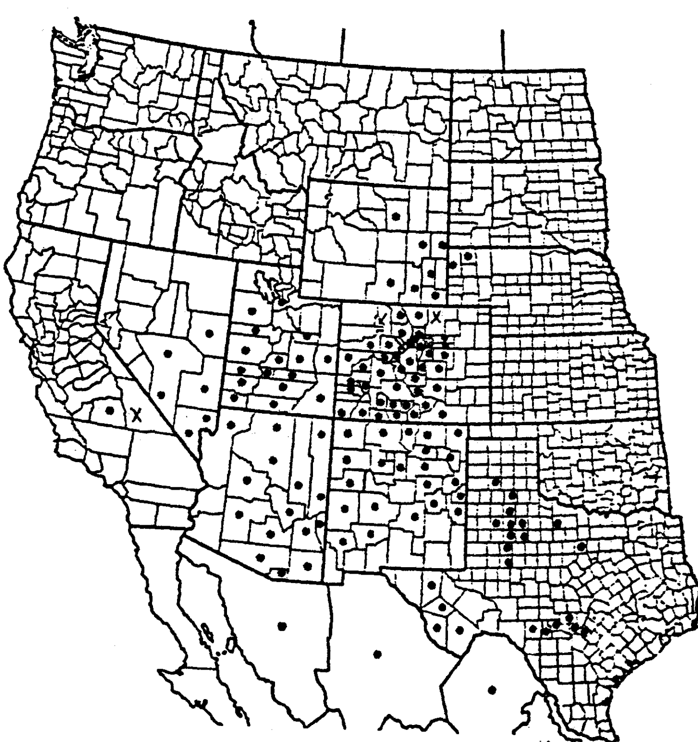


Boloria alberta

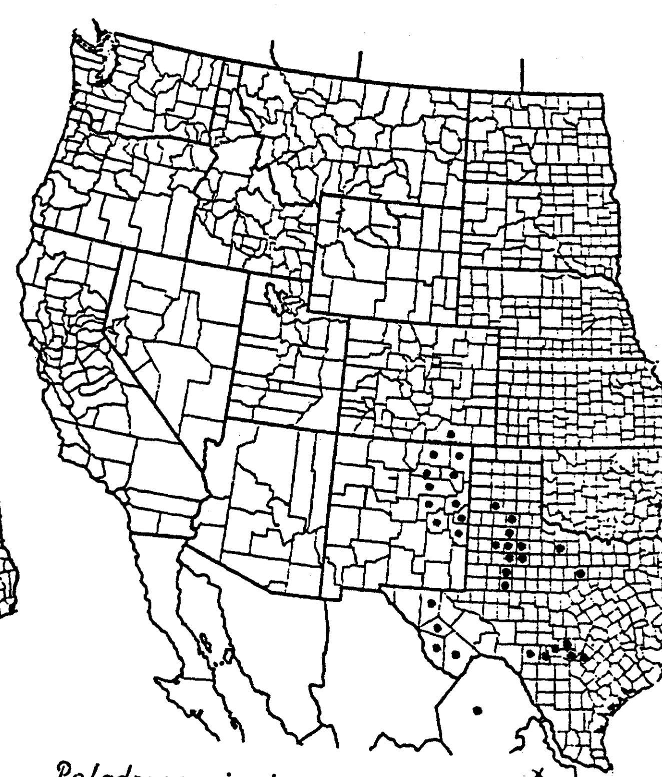
Boloria astarte



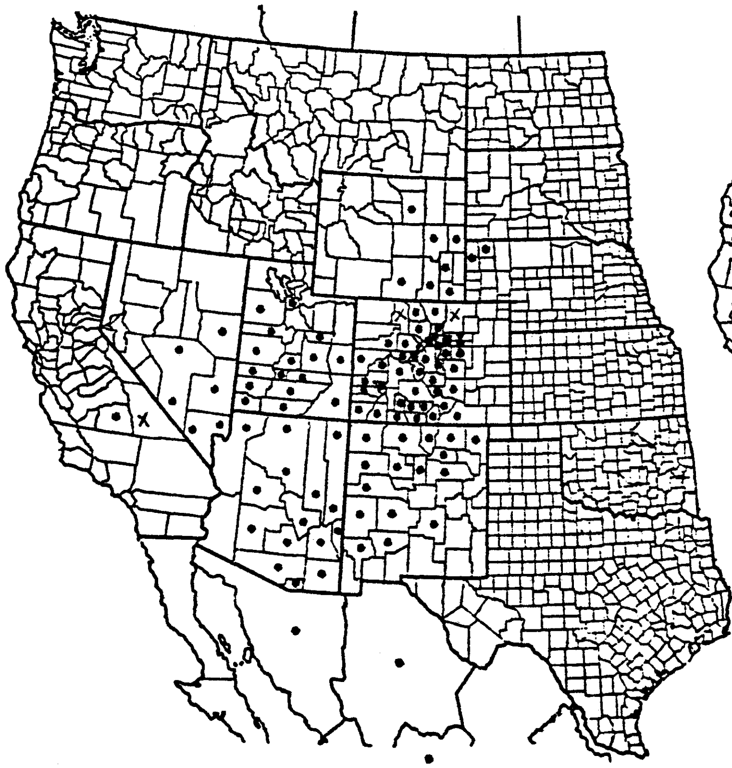
Boloria titania



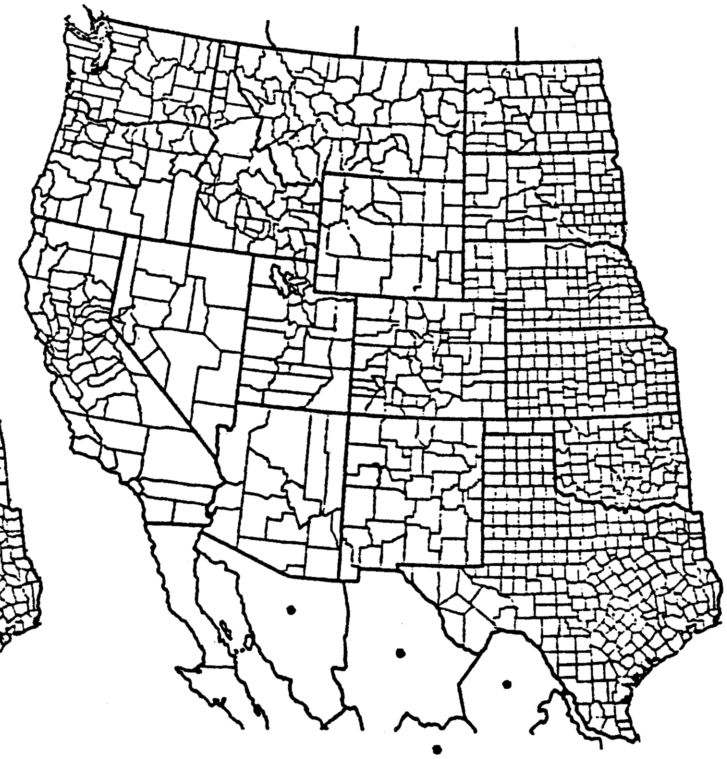
Poladryas minuta COMPLEX



Poladryas minuta



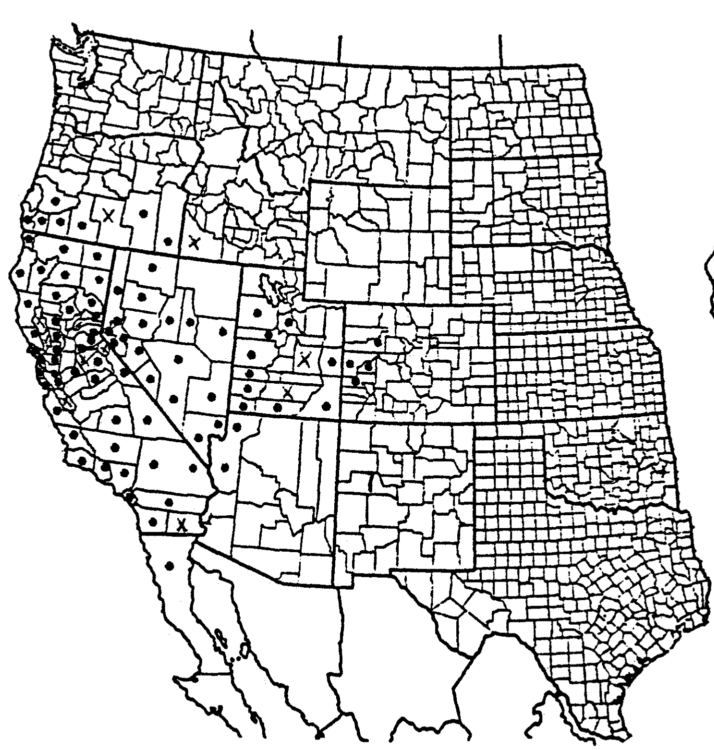
Poladryas arachne



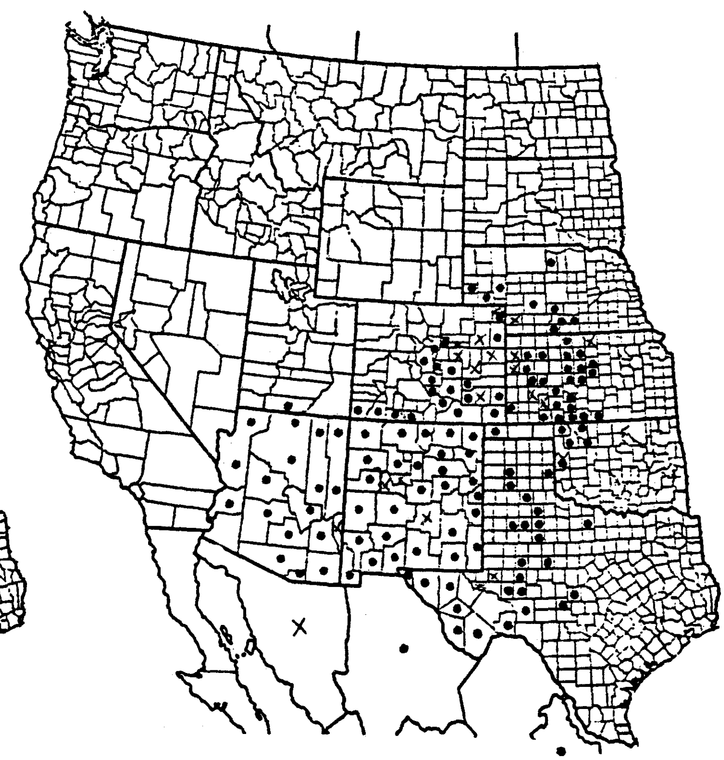
Poladryas nympha

Thessalia theona

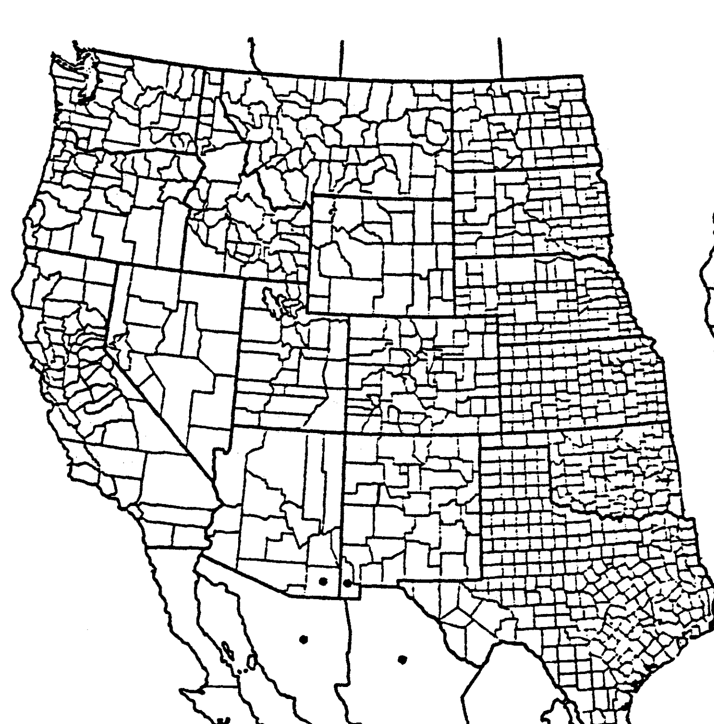
Thessalia chinatiensis
[ssp. theona f. MJS]



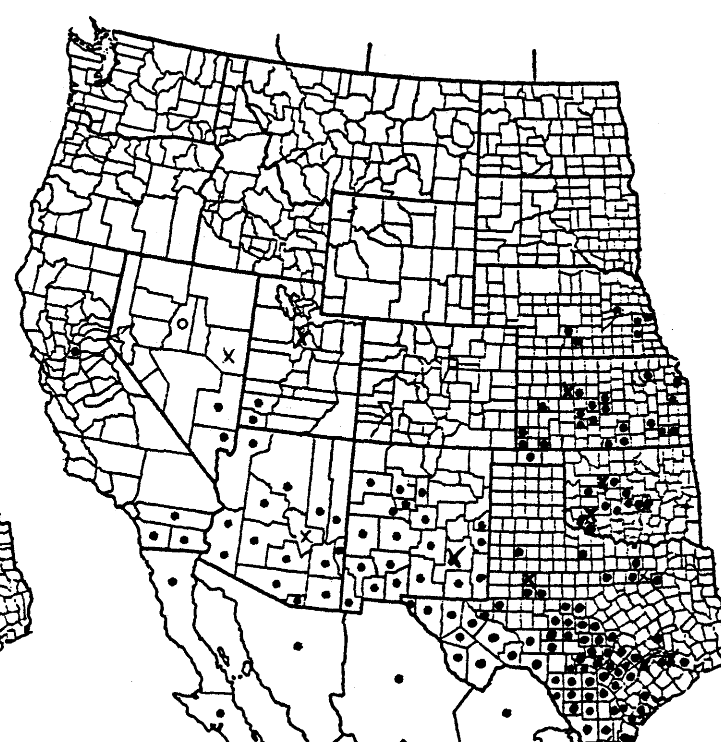
Thessalia leanira (incl alma)



Thessalia fulvia

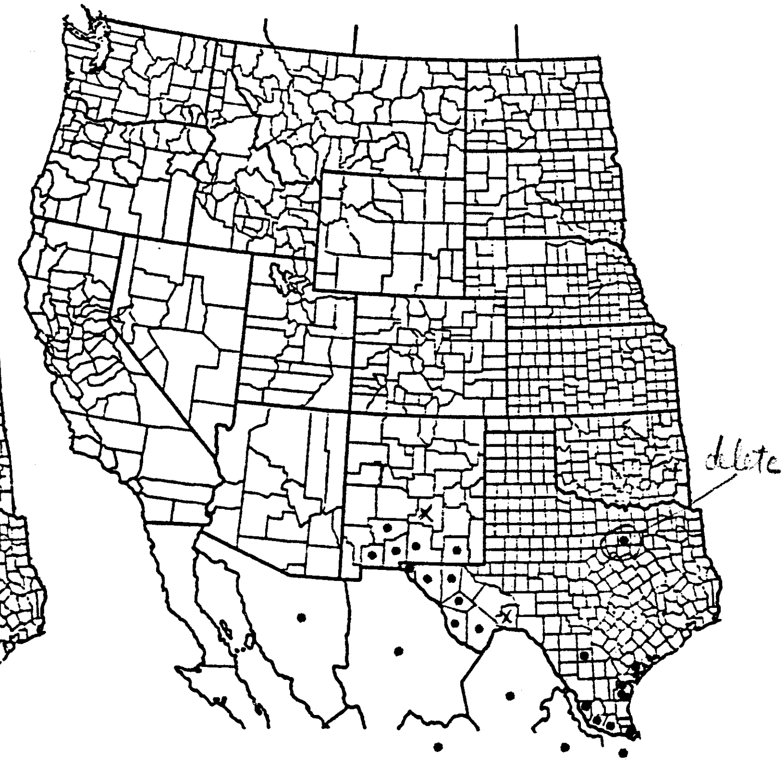


Thessalia cyneas



Chlosyne lacinia

Chlosyne californica



Chlosyne definita (incl anastasia)

Chlosyne endeis (incl pardelina)

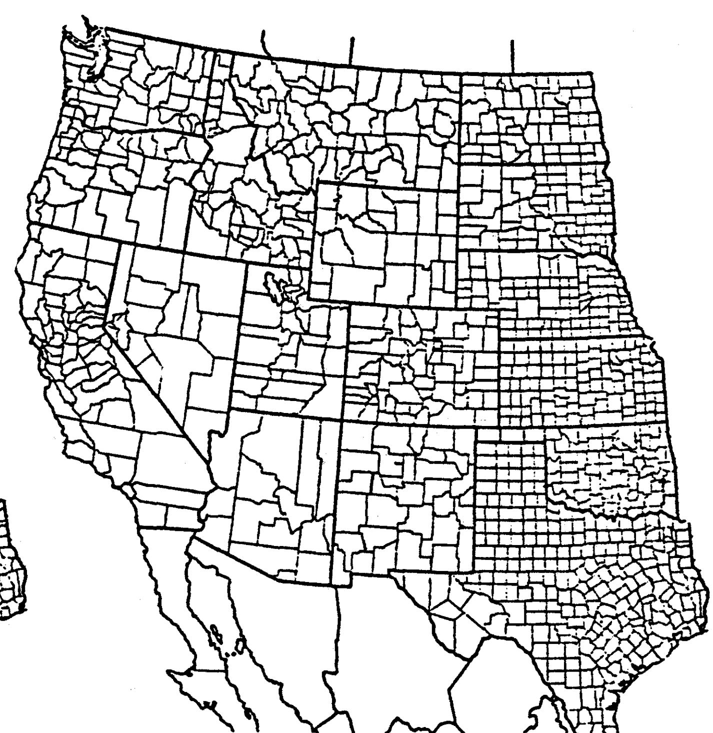
Chlosyne janais

Chlosyne hippodrome - S/N [JRM]

Chlosyne rosita

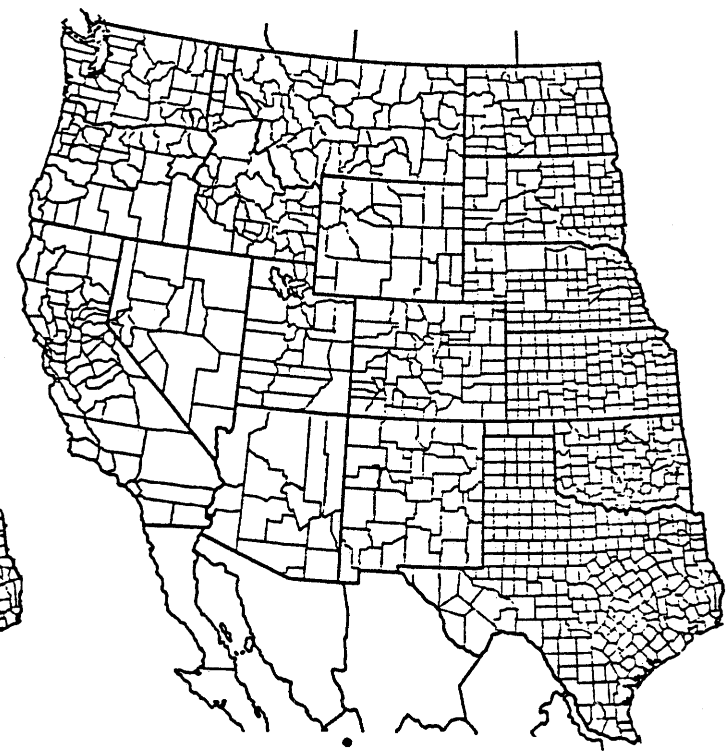
Chlosyne marina (incl eumeda and melitaeoides)

Chlosyne melanarge

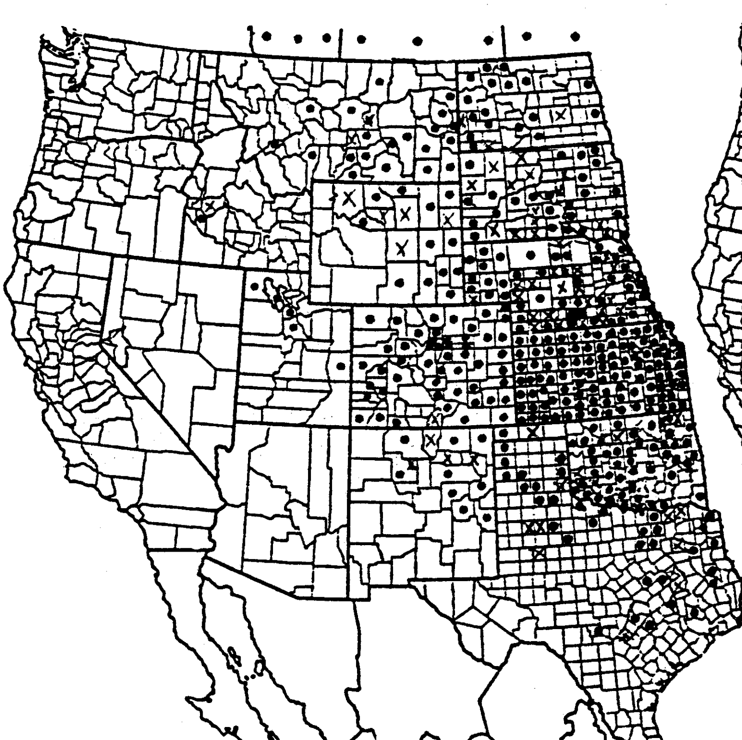


Chlosyne gloriosa

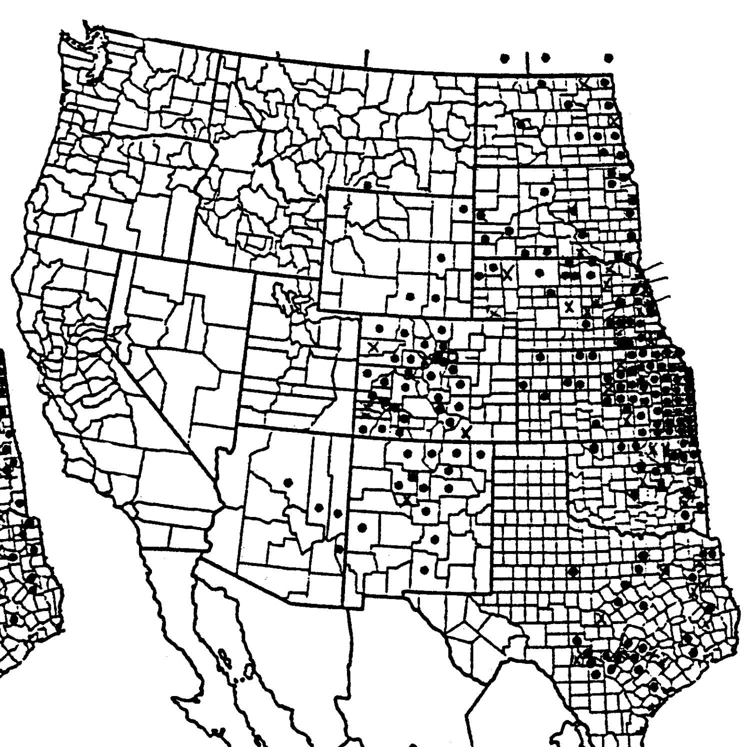
Chlosyne hylaeus



Chlosyne ehrenbergii

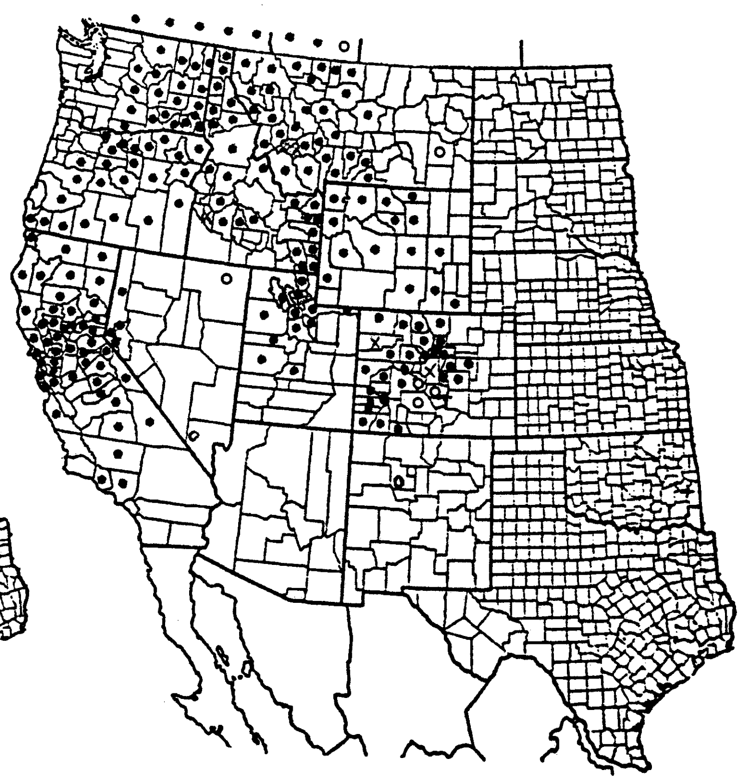


Chlosyne gorgone

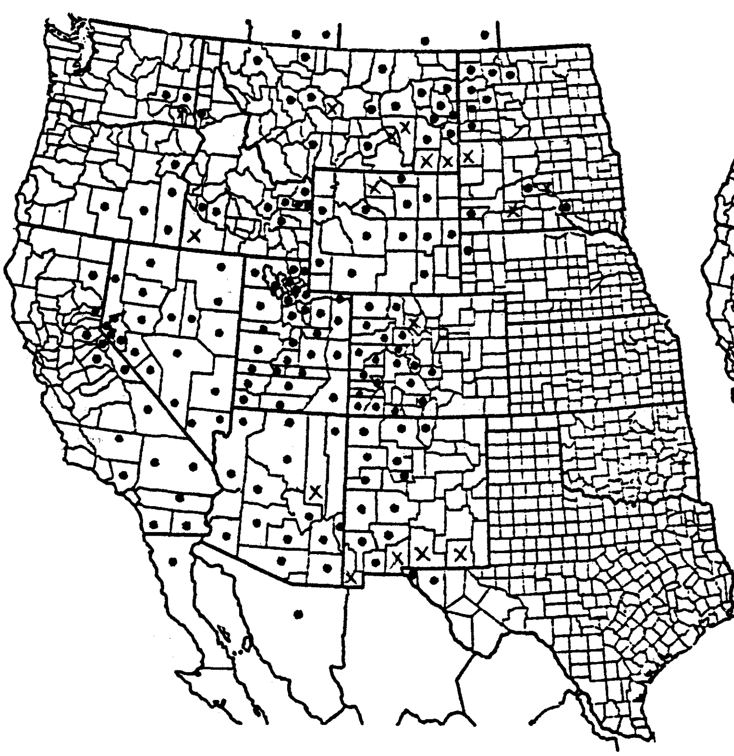


Chlosyne nycteis

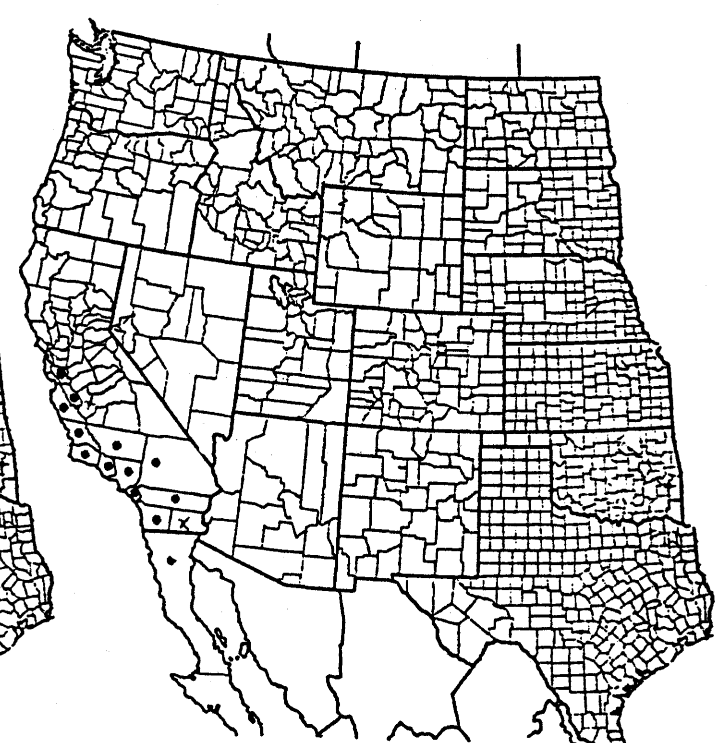
Chlosyne harrisii



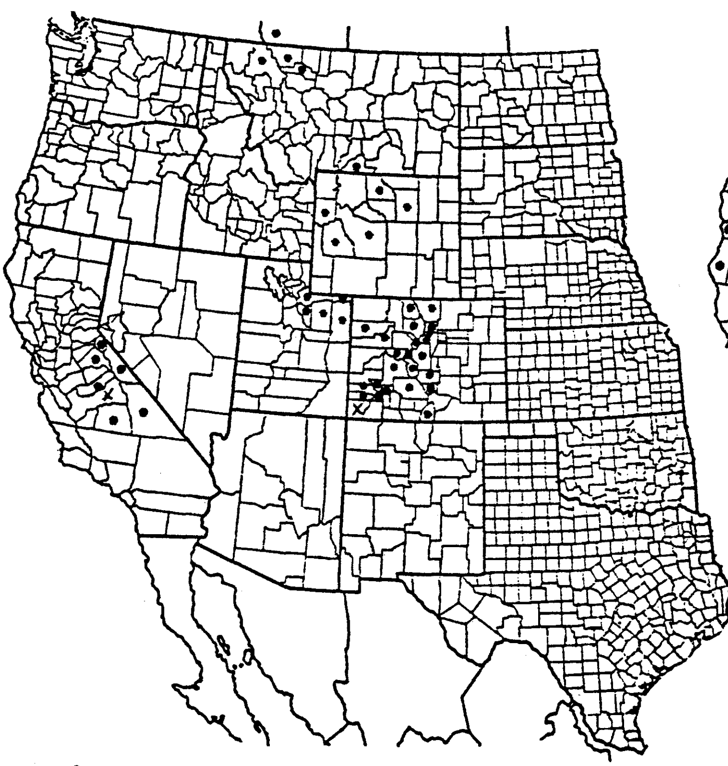
Chlosyne palla (incl sterope)



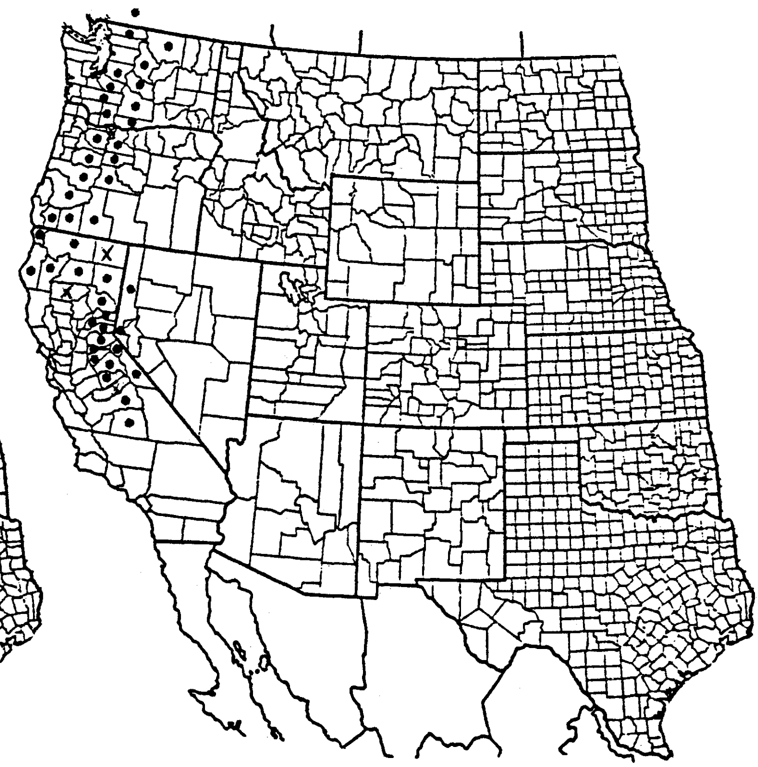
Chlosyne acastus COMPLEX (incl neumoegeni)



Chlosyne gabbii

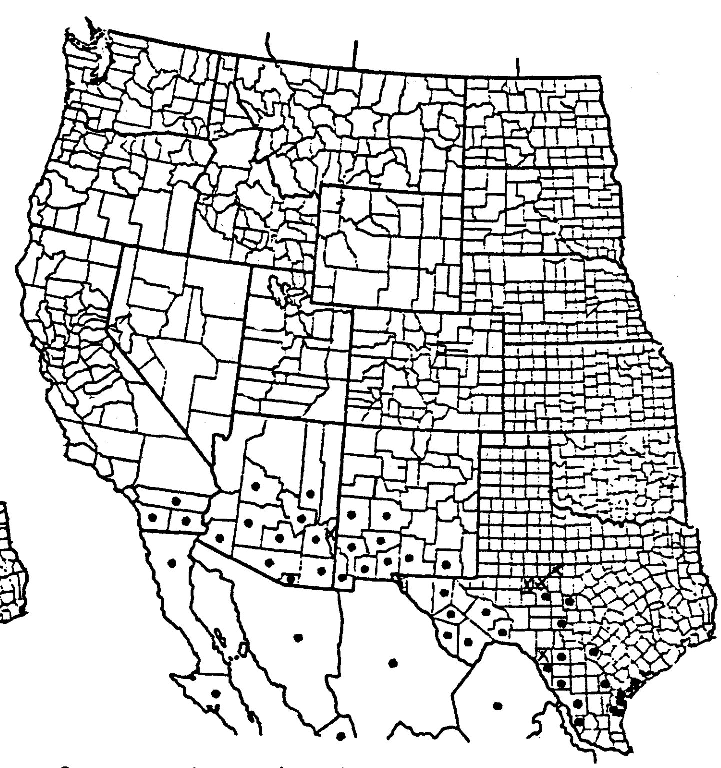


Chlosyne damoetas (? whitneyi)

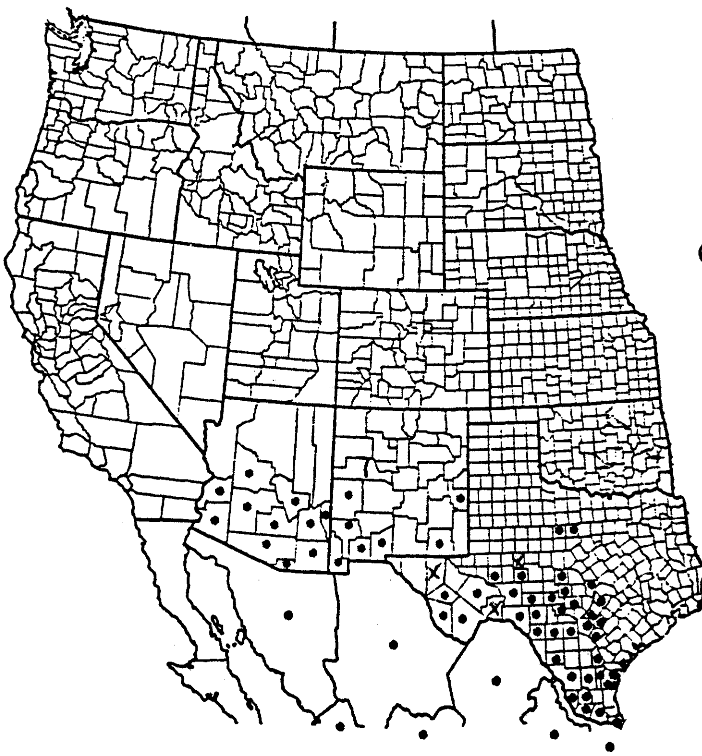


Chlosyne hoffmanni

Microtia elva

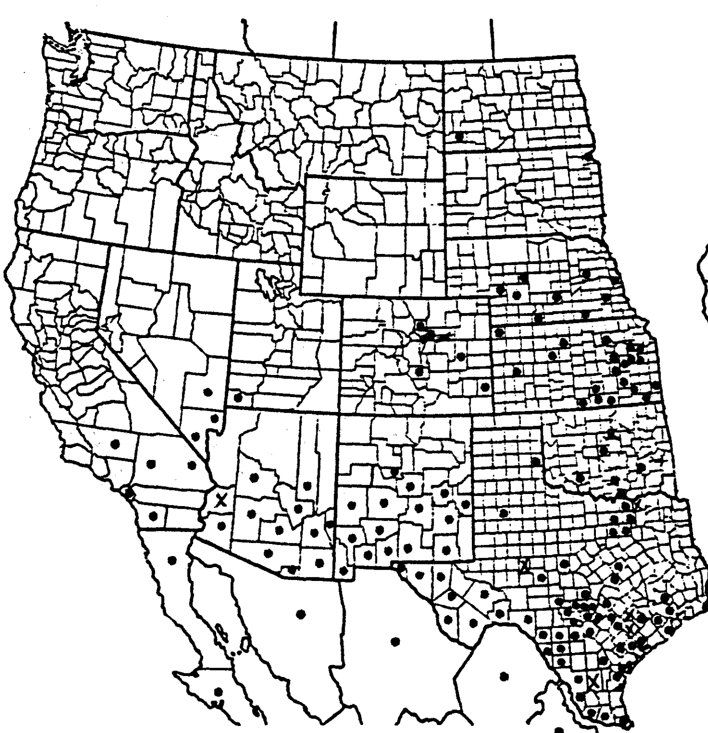


Dymasia dymas (incl chara)

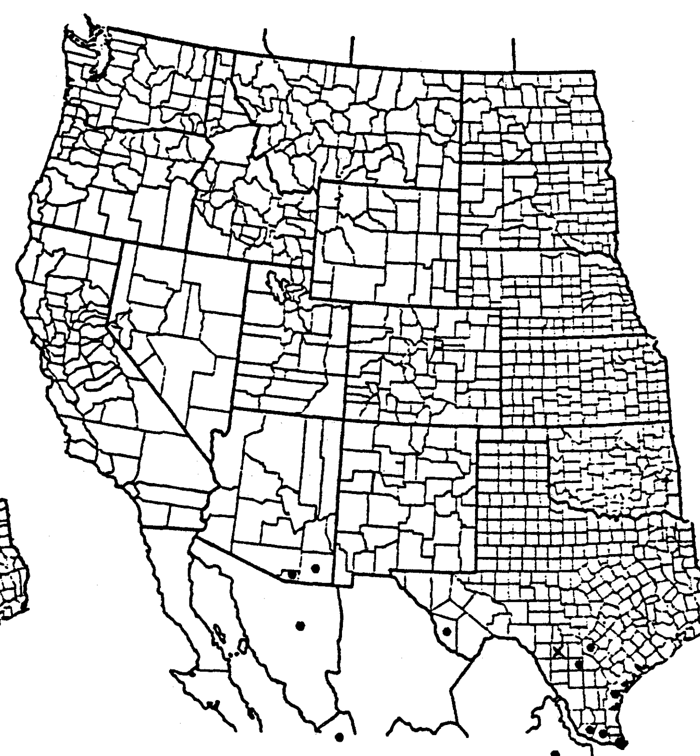


Texola elada

Texola hepburni

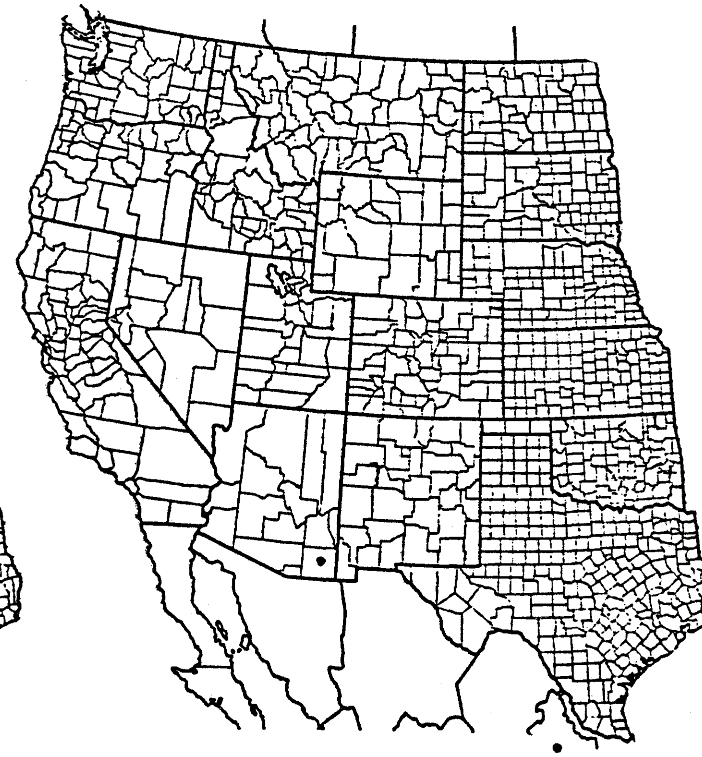


Phyciodes texana



Phyciodes tulcis

Phyciodes ptolyca



Phyciodes nebulosa (= alexon, subconcolor)

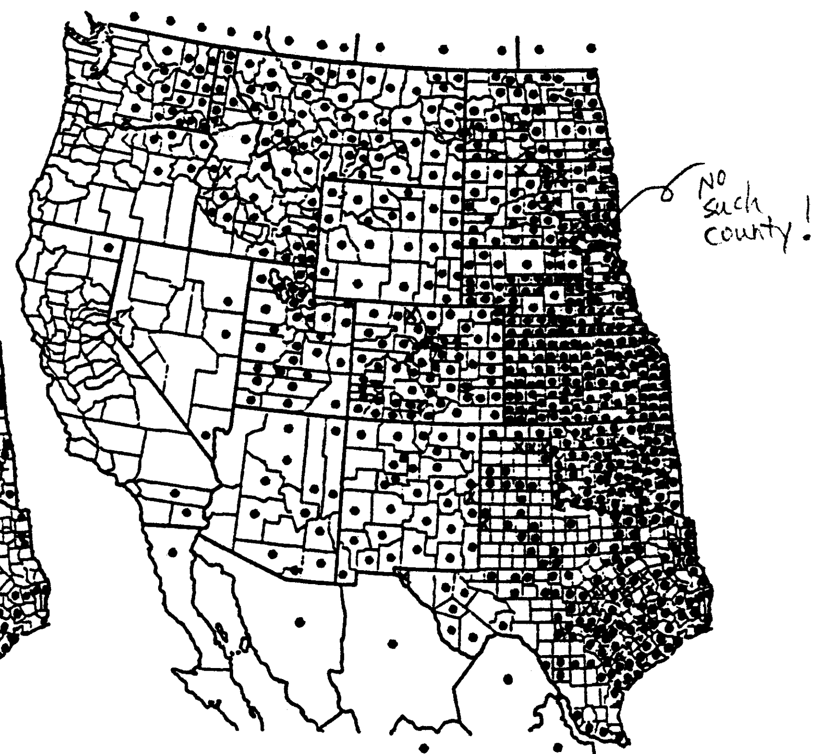
Phyciodes argentea
(? = atronia fide ECK)

Phyciodes alethes
P. [Anthanassa] drusilla lelex △
SIN ADW 76

Phyciodes ardys (incl subota)

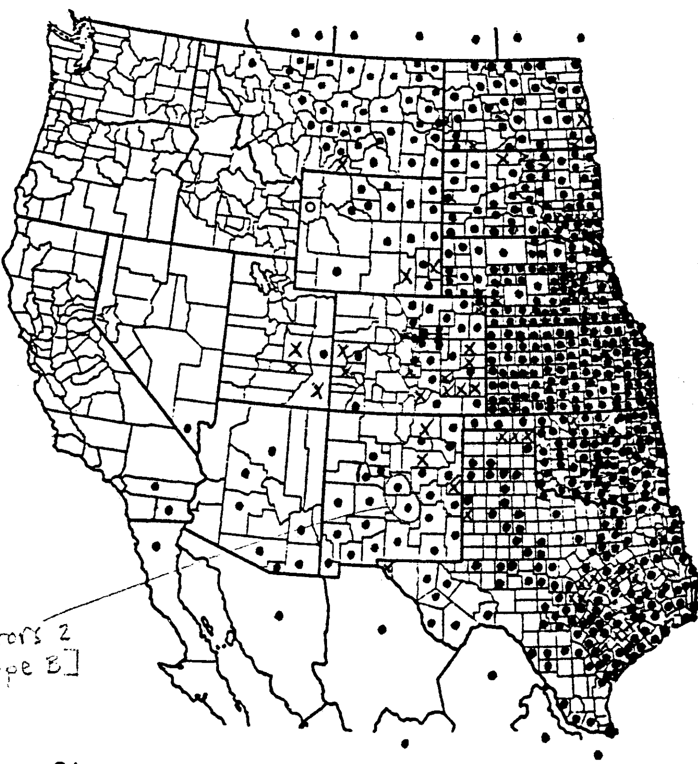
Phyciodes vesta

Phyciodes phaon

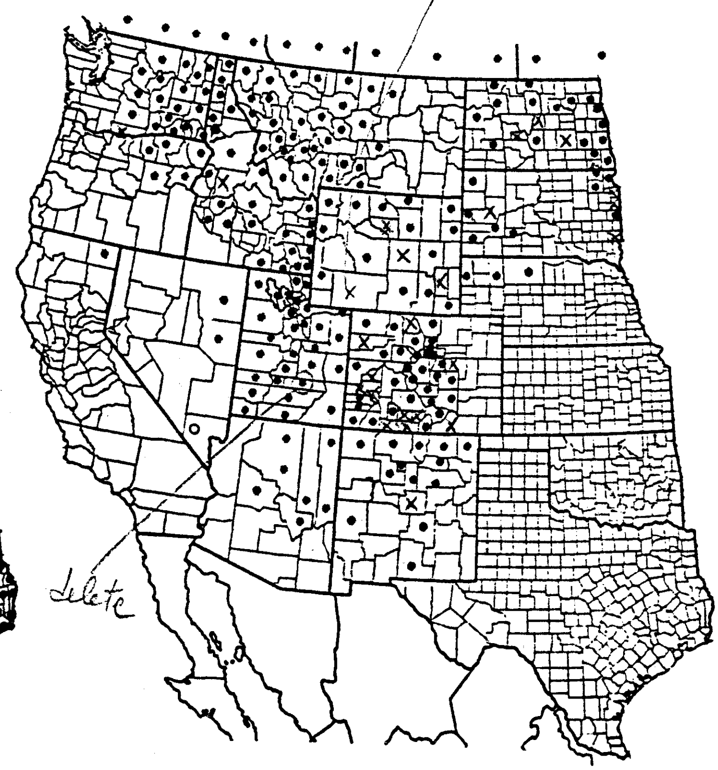


Phyciodes tharos COMPLEX

prob. Type A TRS

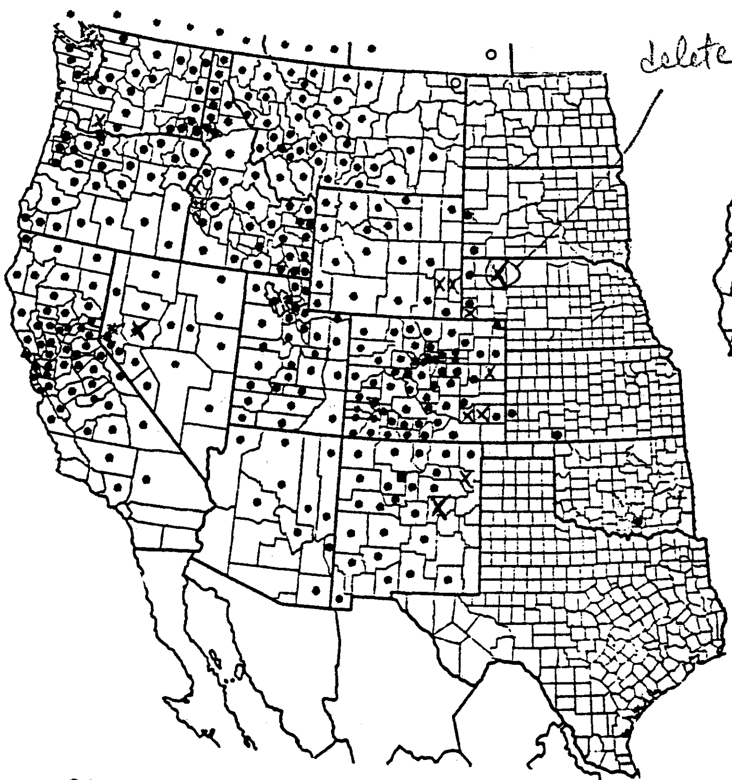


Phyciodes tharos (strict sense)

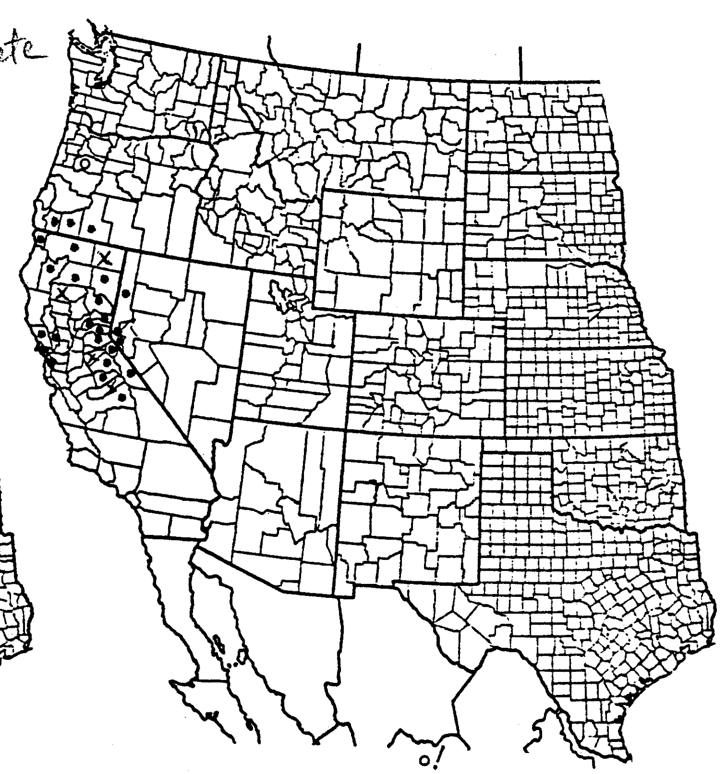


Phyciodes selenis (pascoensis, type B)

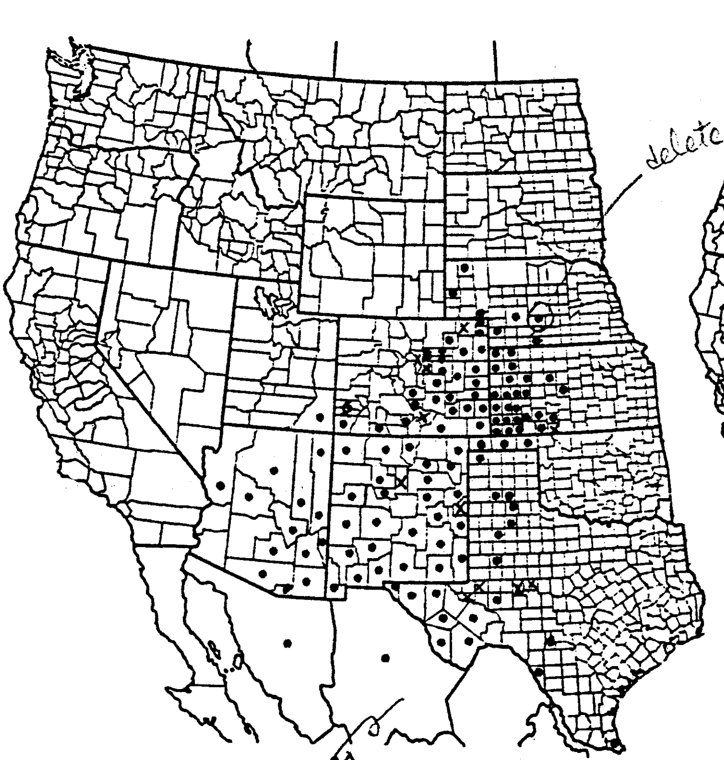
Phyciodes undescr. sp. (type C) ⟶ = ⟶ Phyciodes batesii



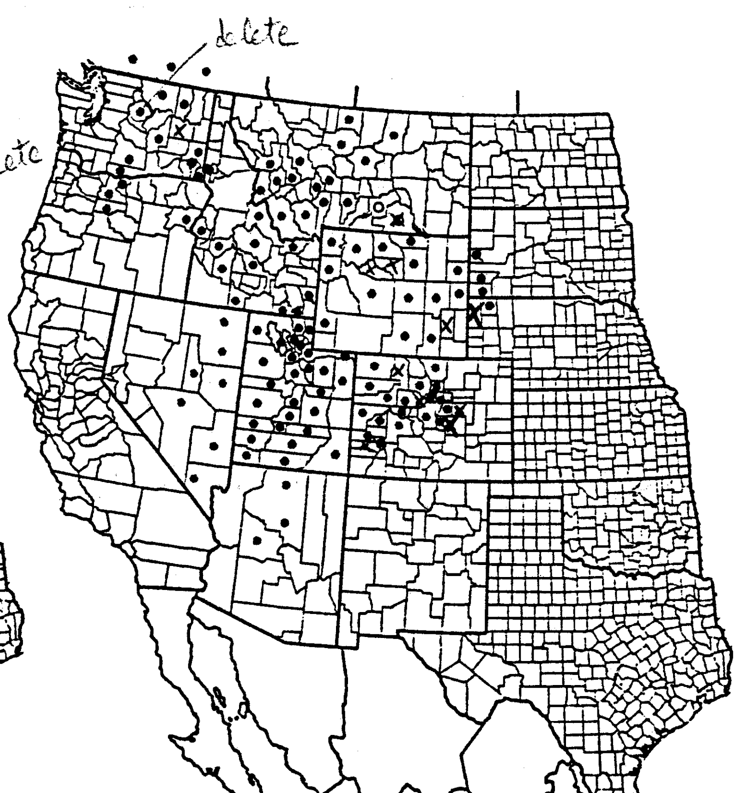
Phyciodes campestris (= pratensis)



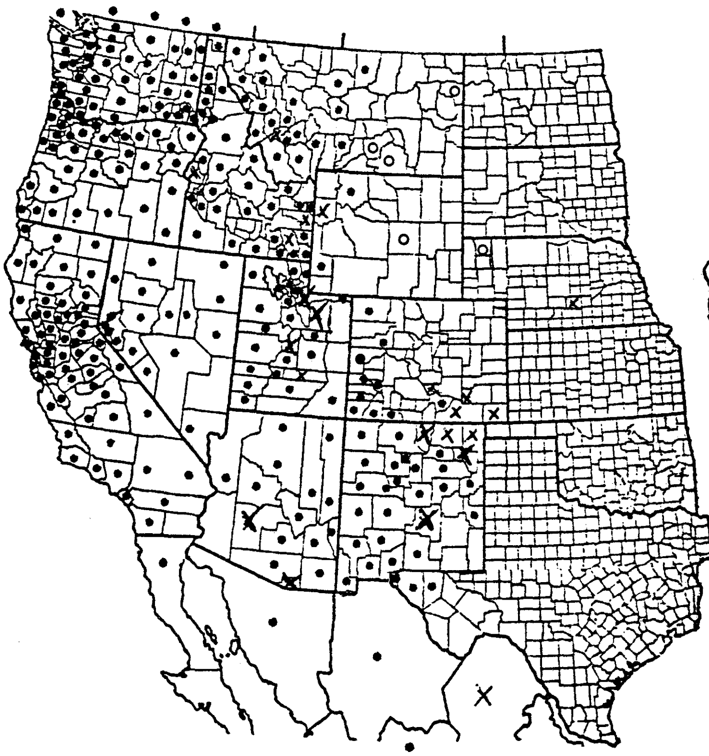
Phyciodes orseis



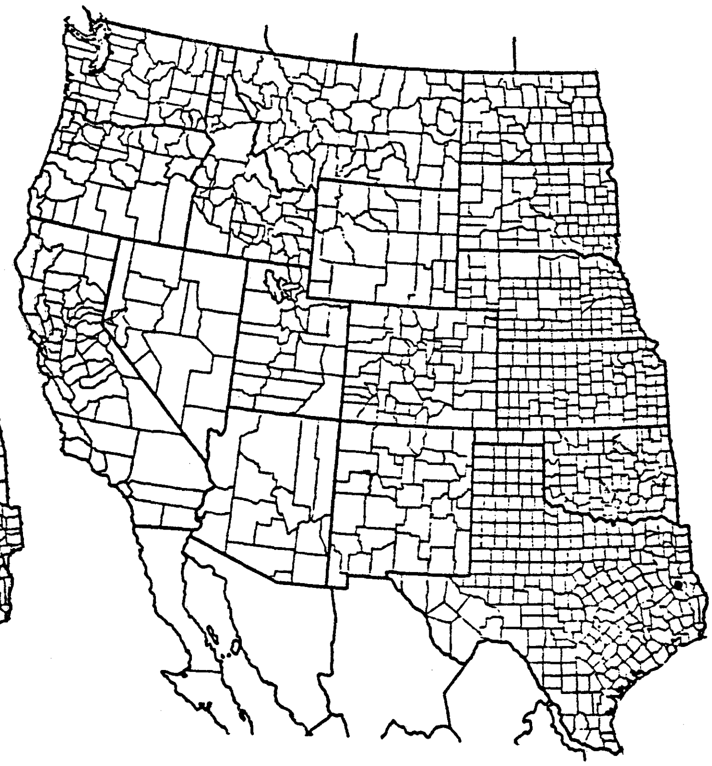
Phyciodes pictus
Phyciodes pallescens △



Phyciodes pallidus

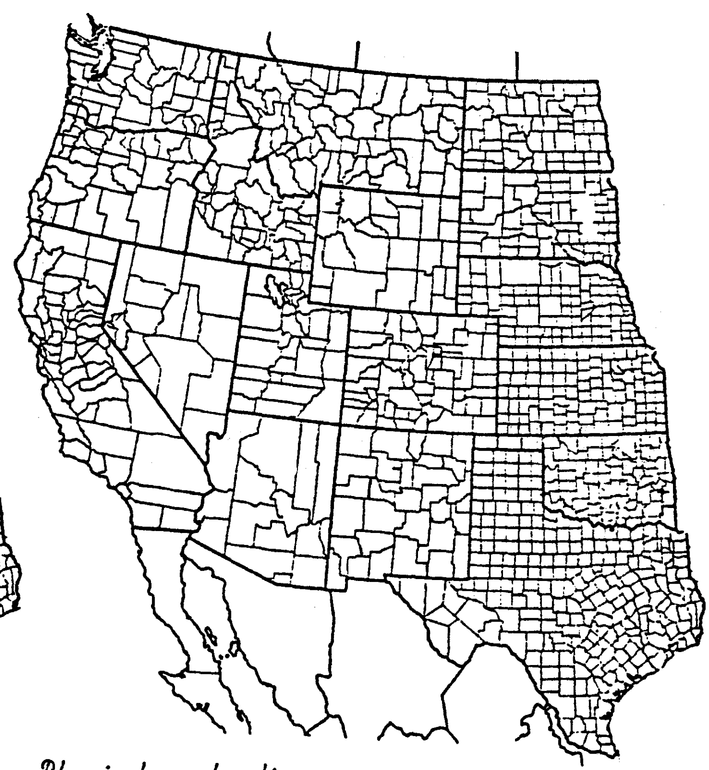


Phyciodes mylitta



Phyciodes anieta

Phyciodes guatemalena



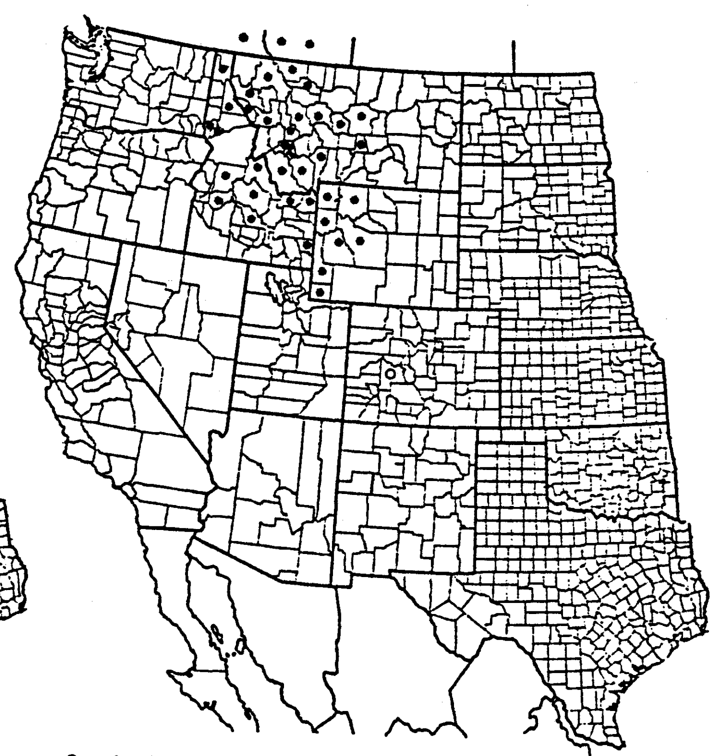
Phyciodes claudina

Phyciodes luka

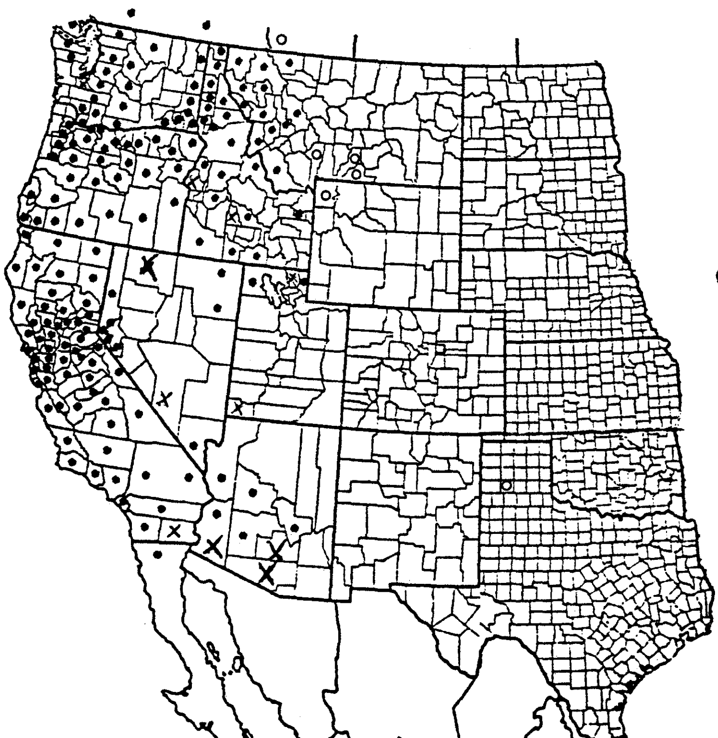
error f. ADW

Phyciodes myia
P. [castilia] griseobasalis Δ

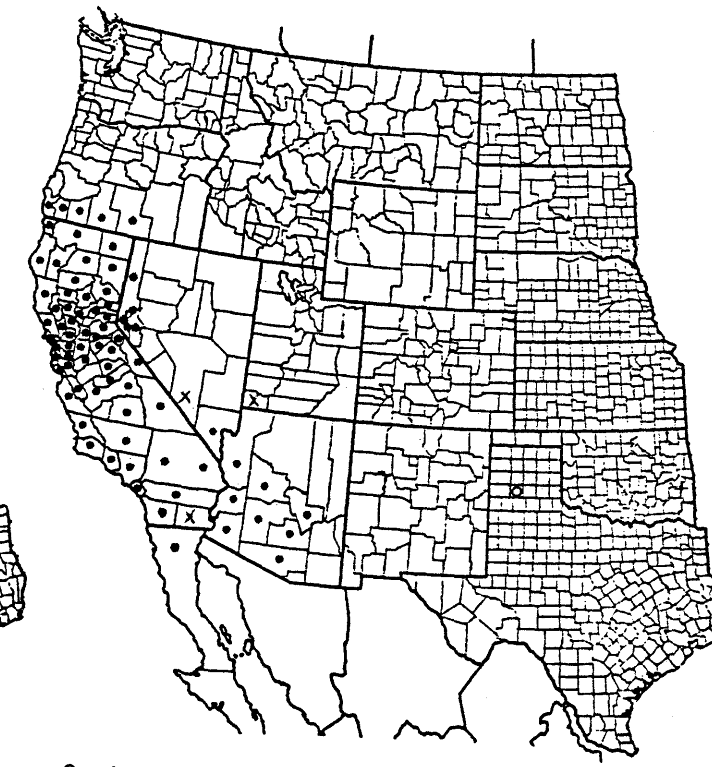
Euphydryas phaeton



Euphydryas gillettii

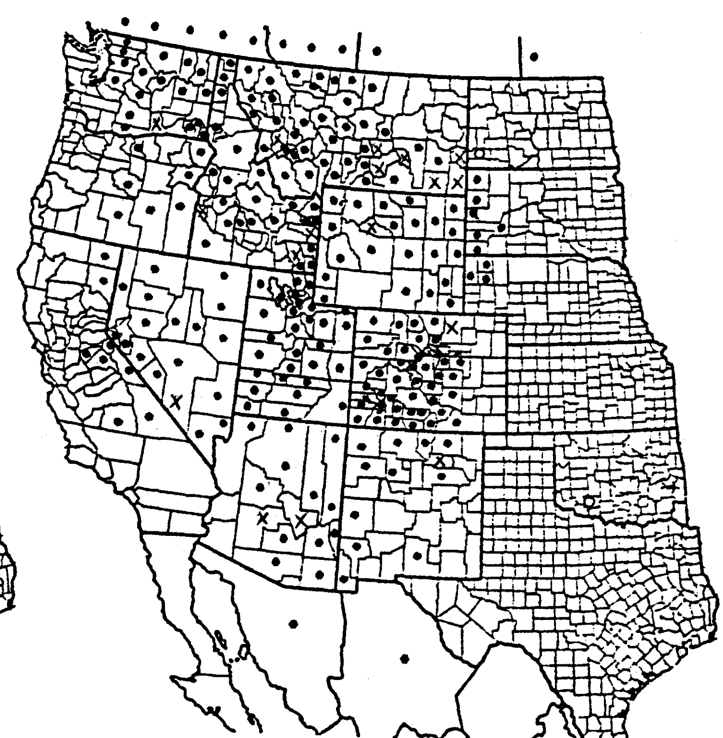


Euphydryas chalcedona/colon COMPLEX



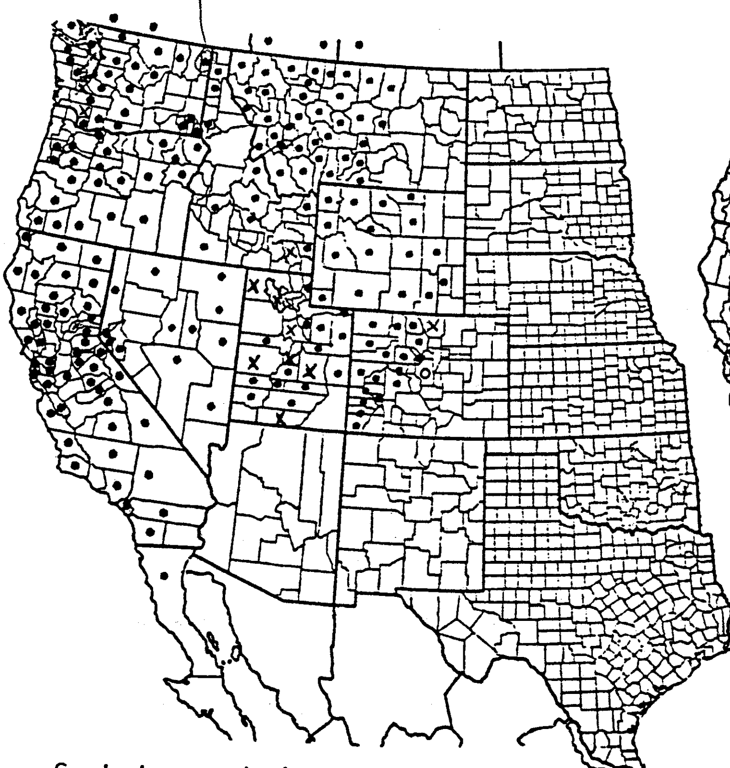
Euphydryas chalcedona

Euphydryas colon

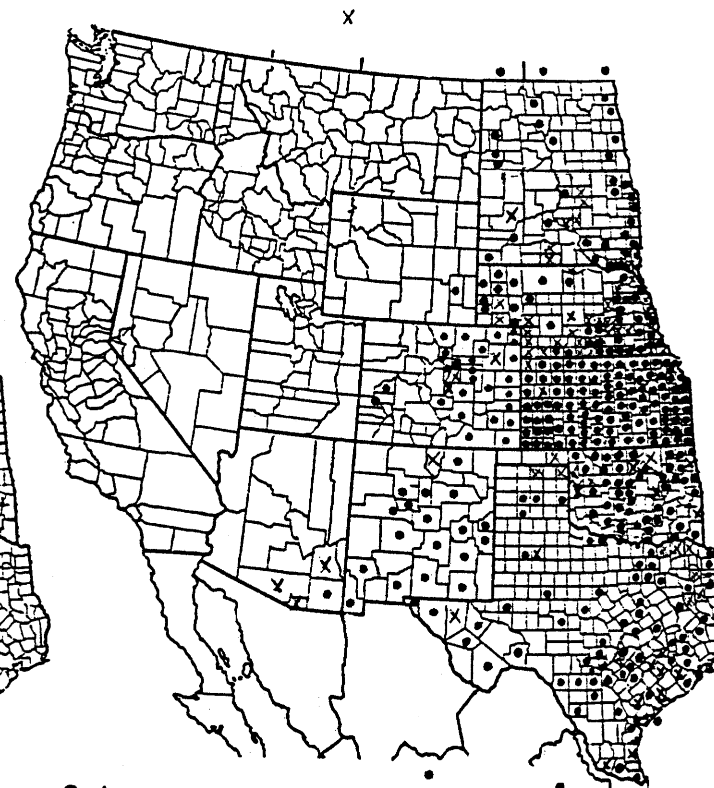


Euphydryas anicia

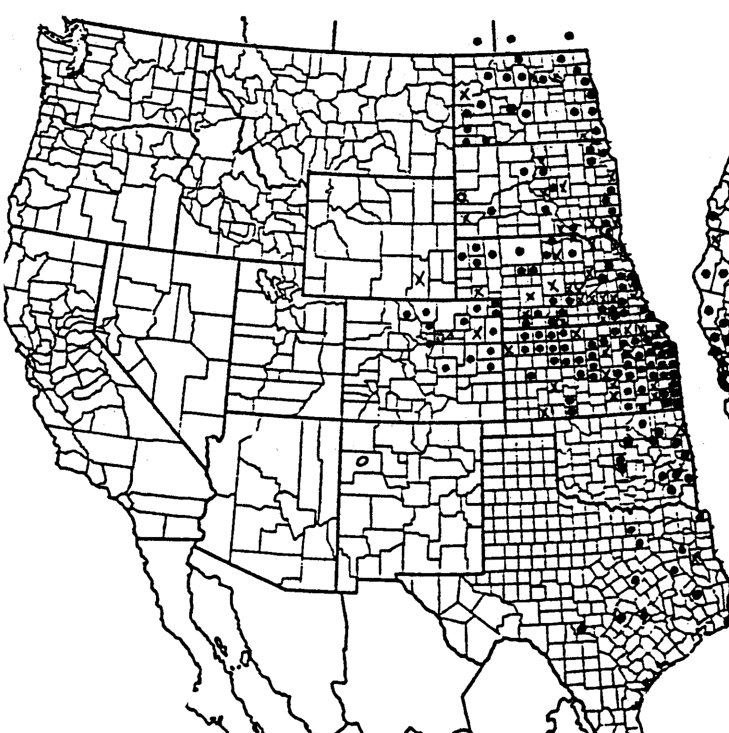
delete
misdet



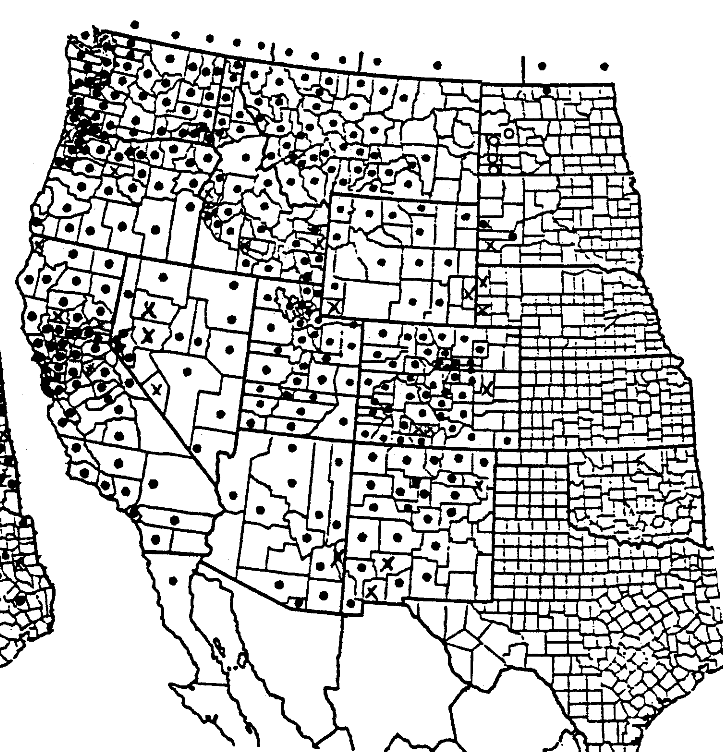
Euphydryas editha



Polygonia interrogationis

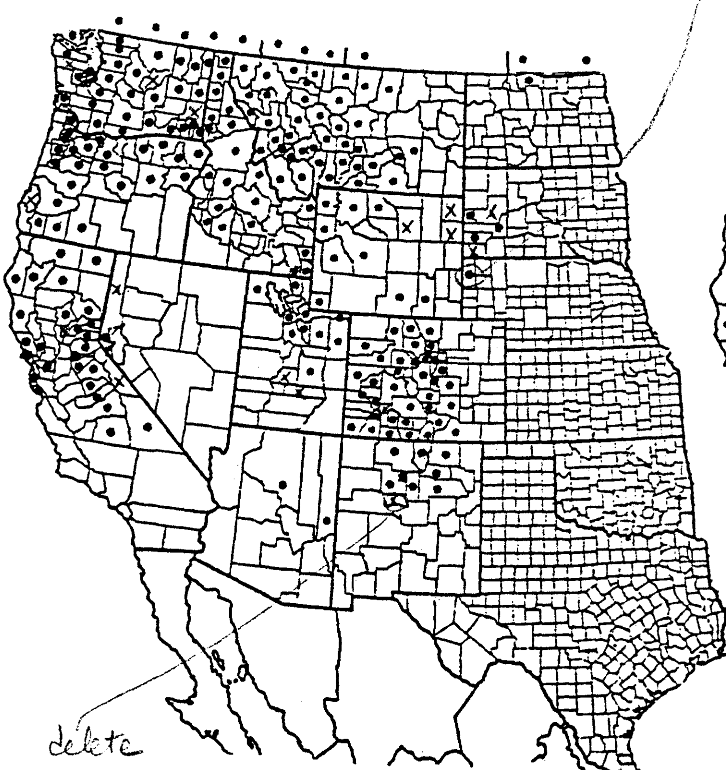


Polygonia comma



Polygonia satyrus

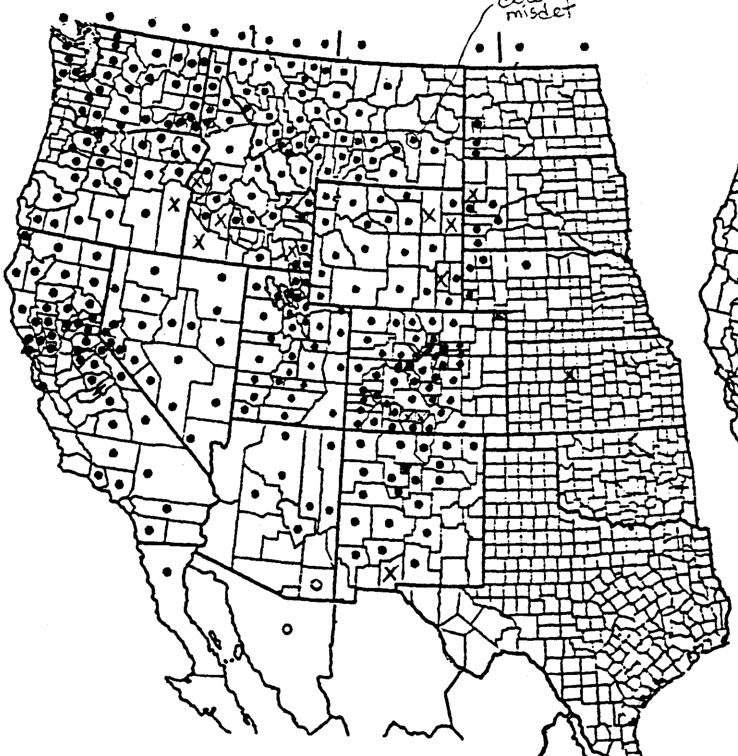
delete
misdet.
(progne)



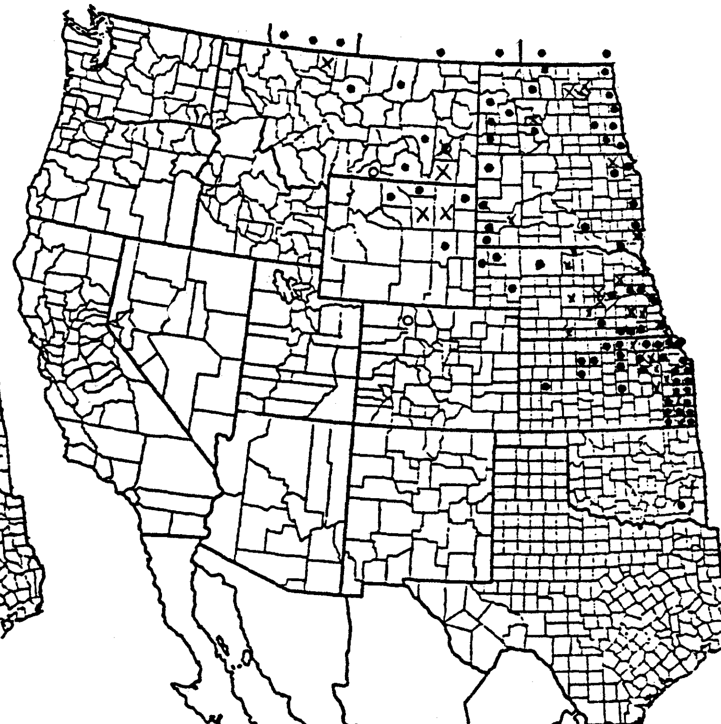
Polygonia faunus COMPLEX (incl hylas and silvius)

[Polygonia silvius] = faunus rusticus

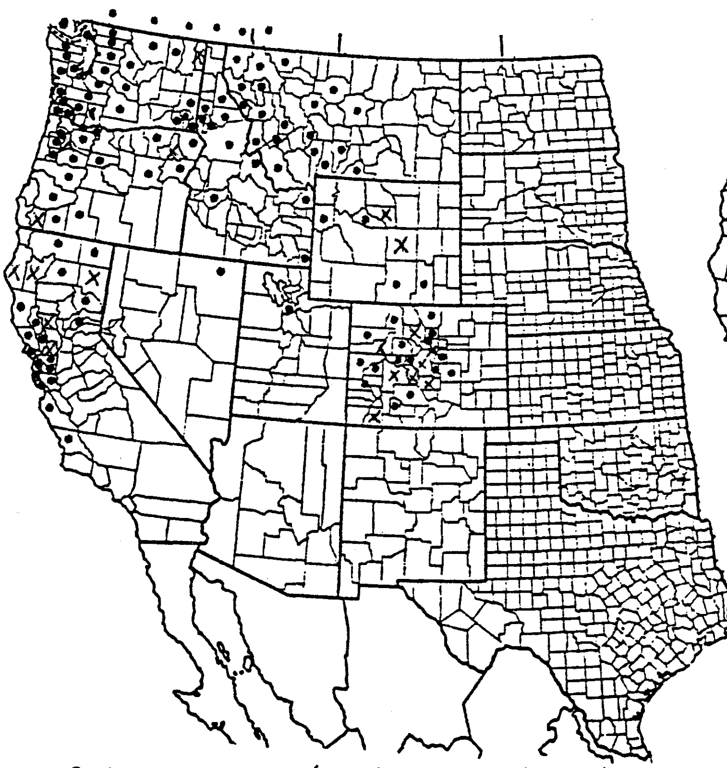
delete, RES
misdet



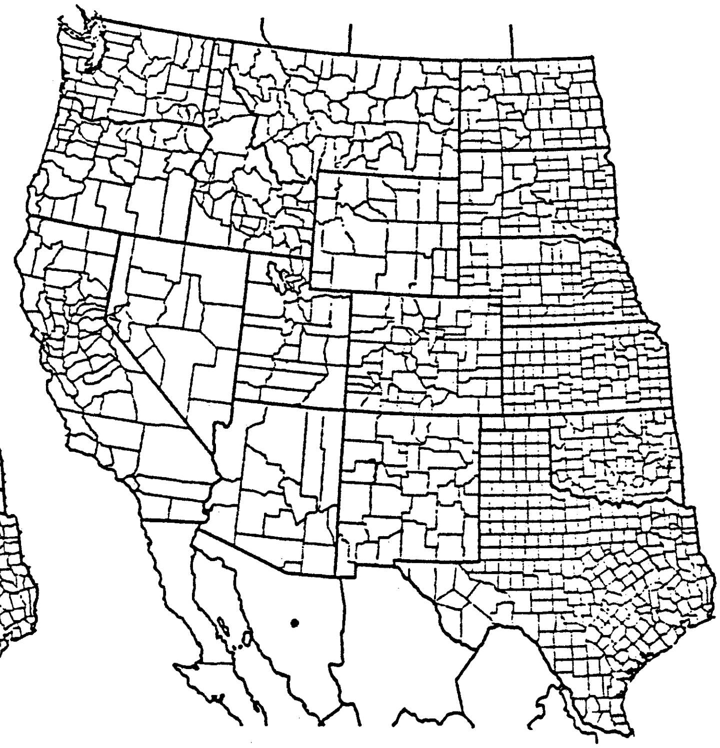
Polygonia gracilis (incl zephyrus)



Polygonia progne (strict sense)

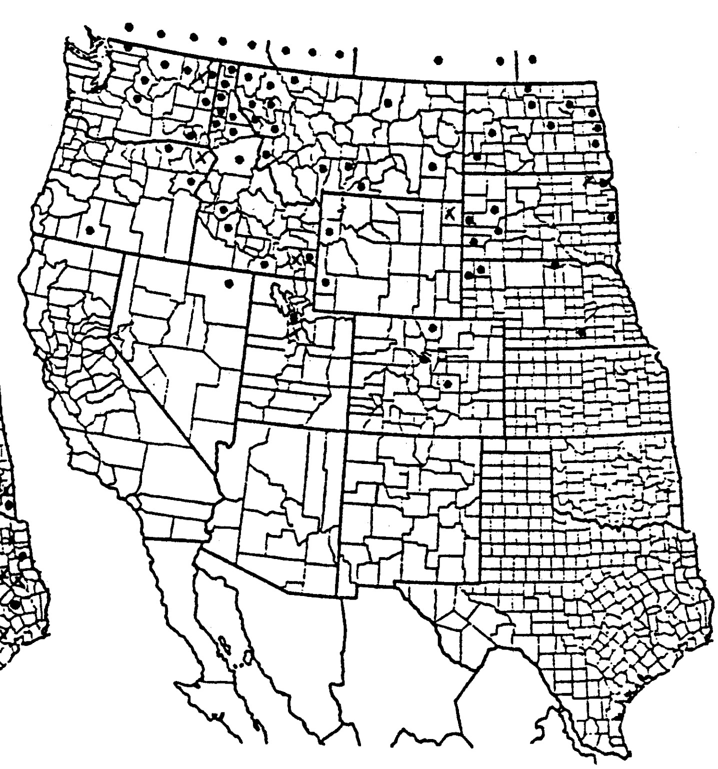


Polygonia oreas (incl nigrozephyrus)

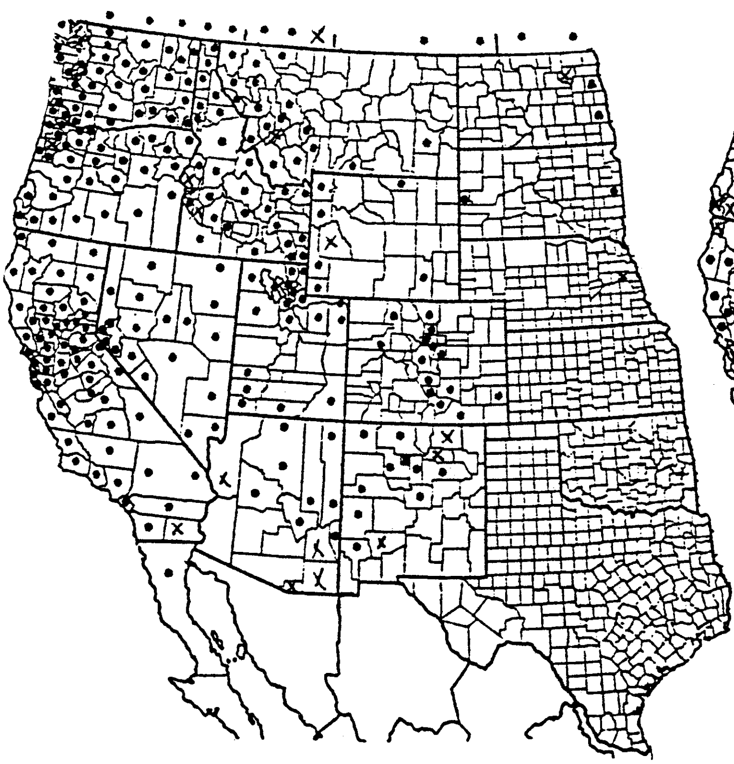


Polygonia haroldi

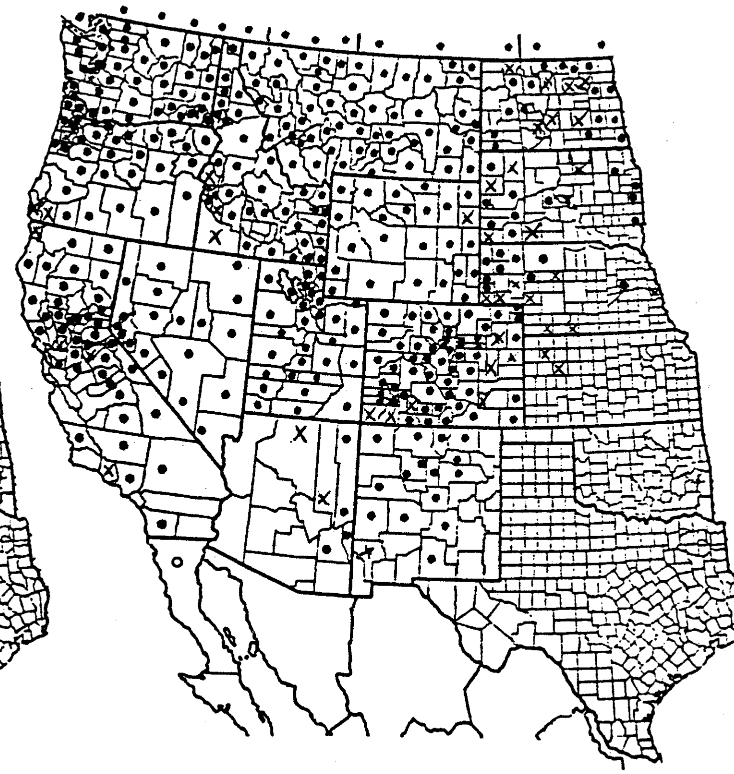
Nymphalis antiopa



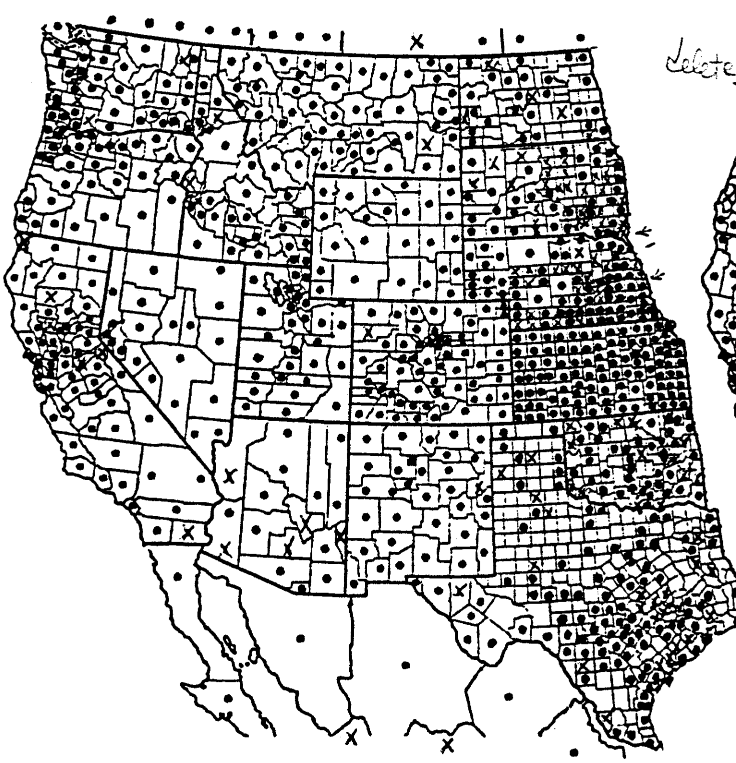
Nymphalis vau-album



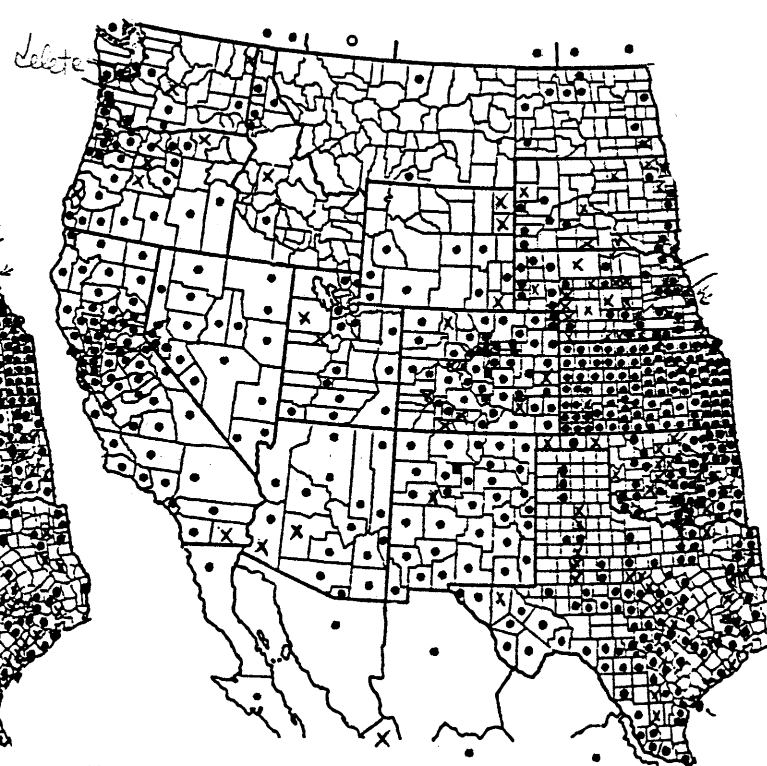
Nymphalis californica



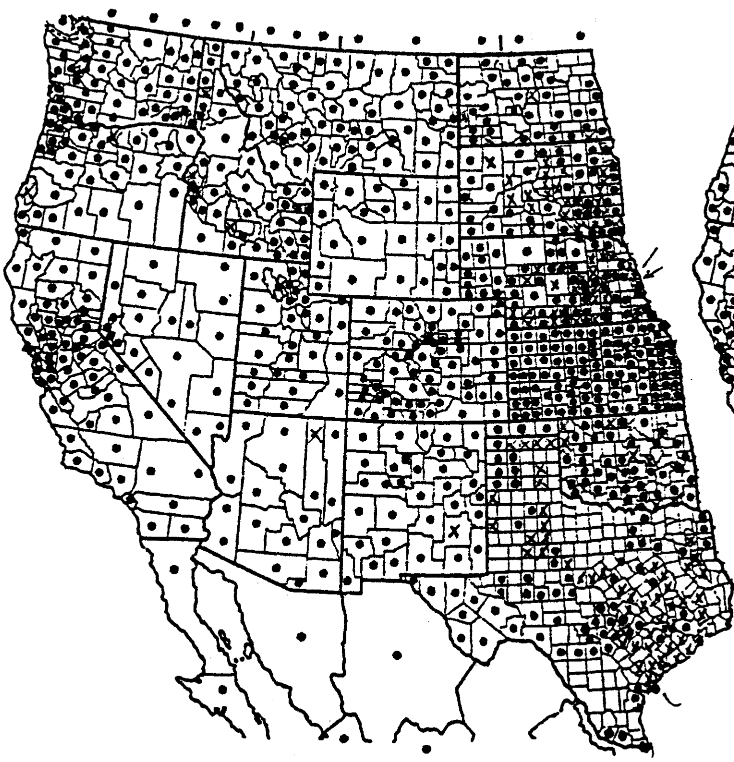
Nymphalis (Aglais) milberti



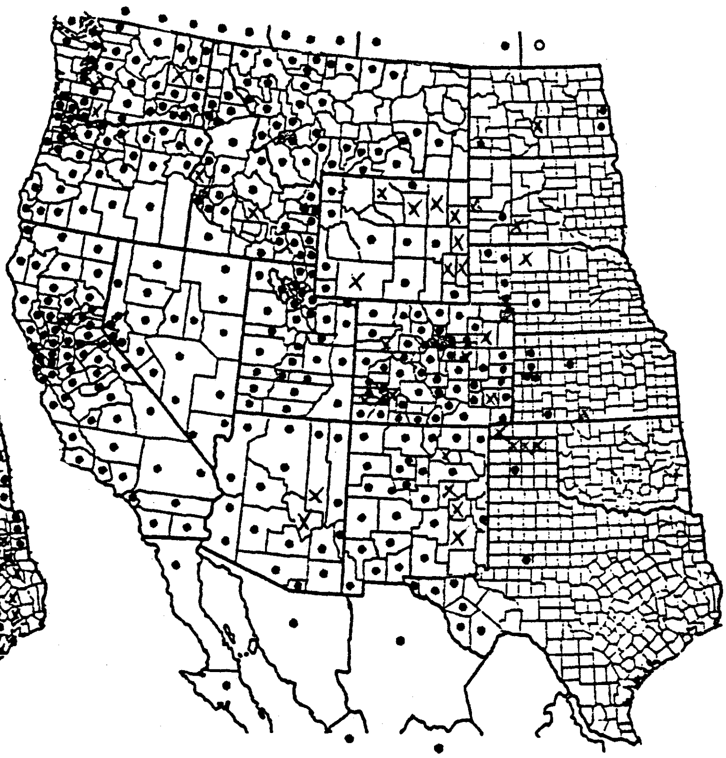
Vanessa atalanta



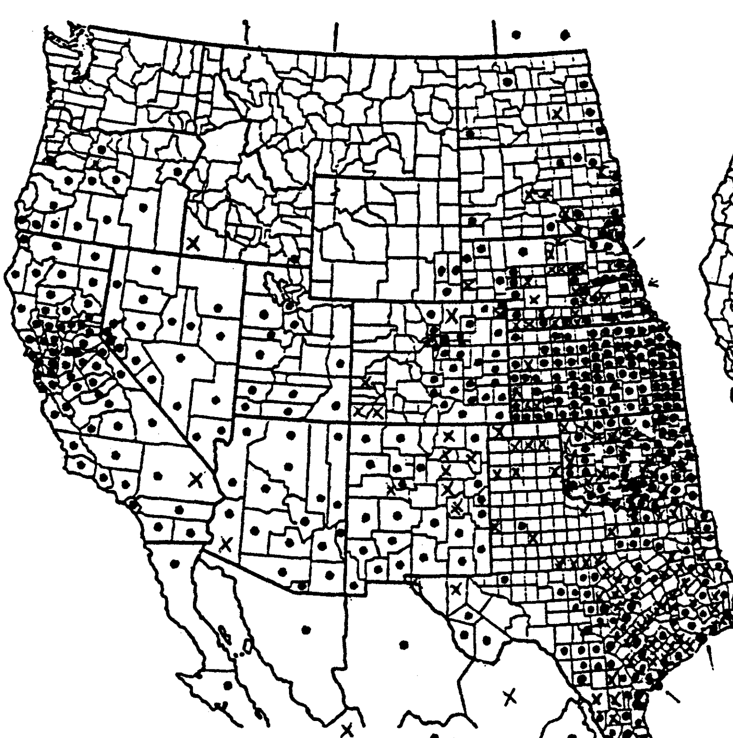
Vanessa virginiensis



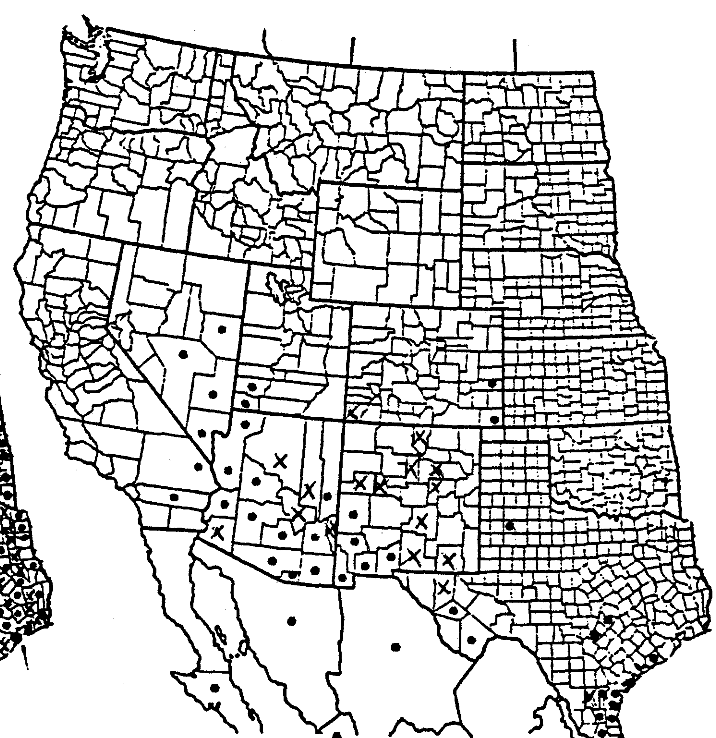
Vanessa cardui



Vanessa annabella

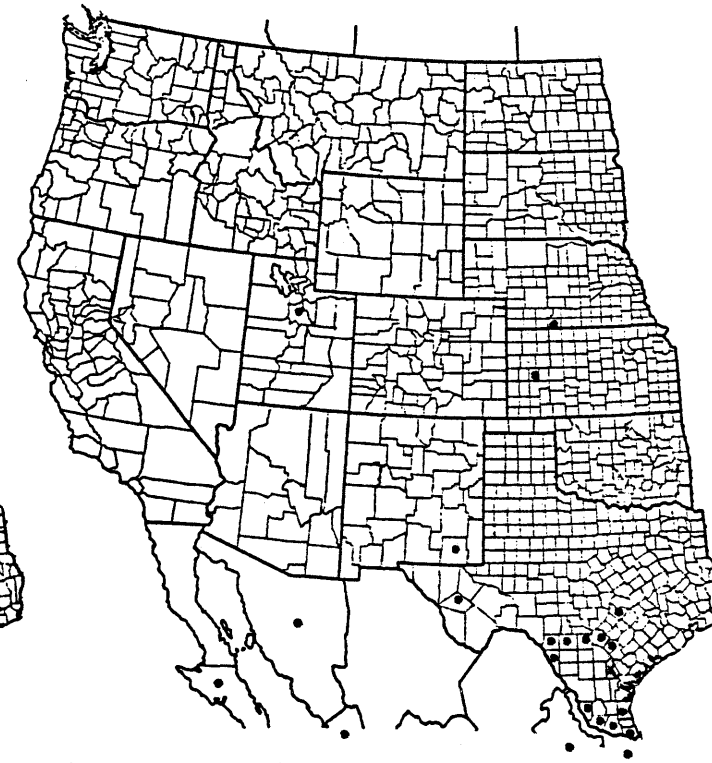


Junonia coenia



Junonia nigrosuffusa (species affiliation still uncertain)

Junonia evarete/genoveva (excl
nigrosuffusa)



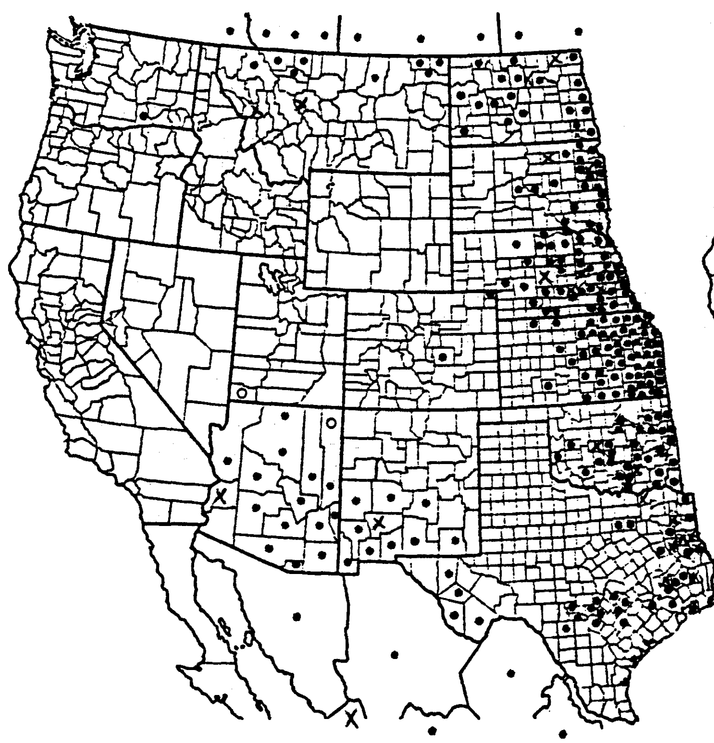
Anartia jatrophae

amathea
Anartia fatima

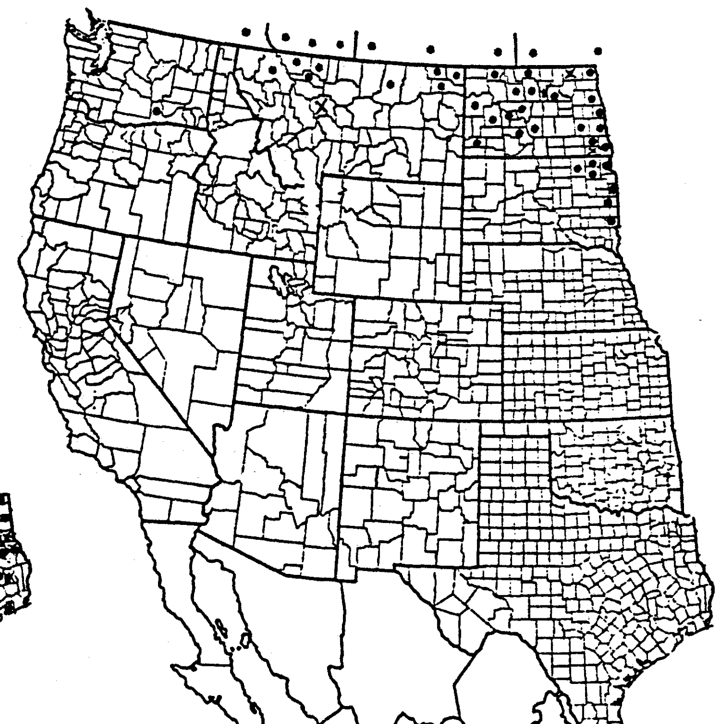
Anartia warreni (mss, sp vs form)

Siproeta stelenes

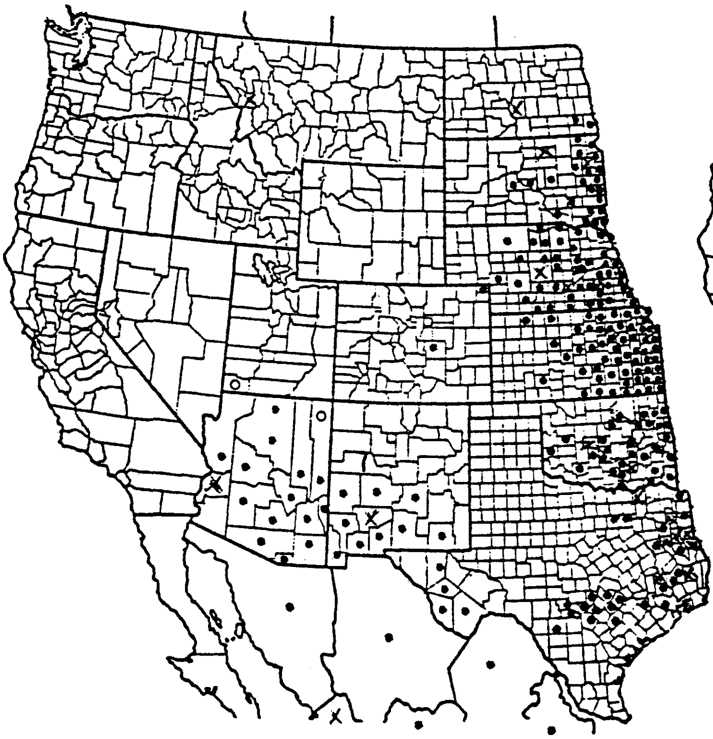
Siproeta epaphus



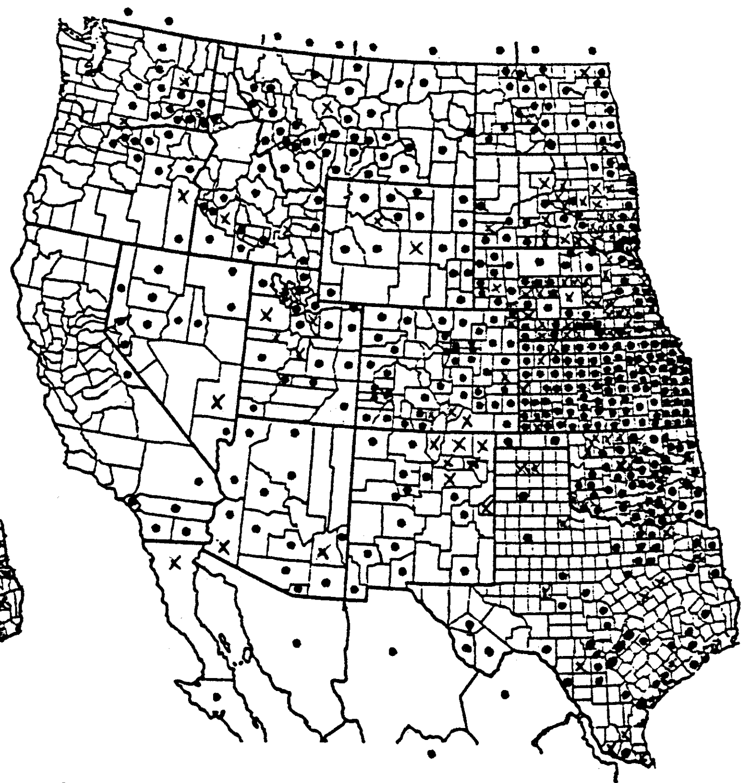
Basilarchia arthemis COMPLEX



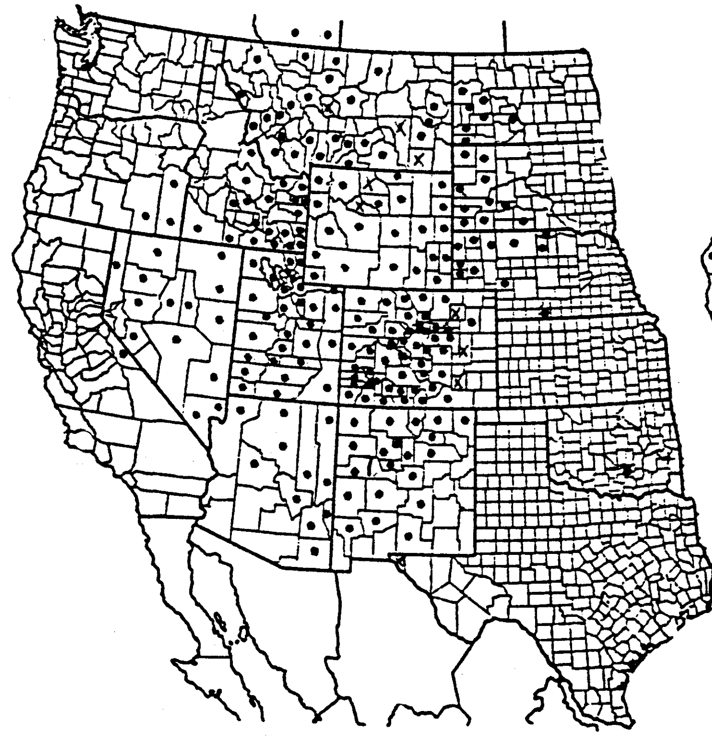
Basilarchia arthemis (white-banded)



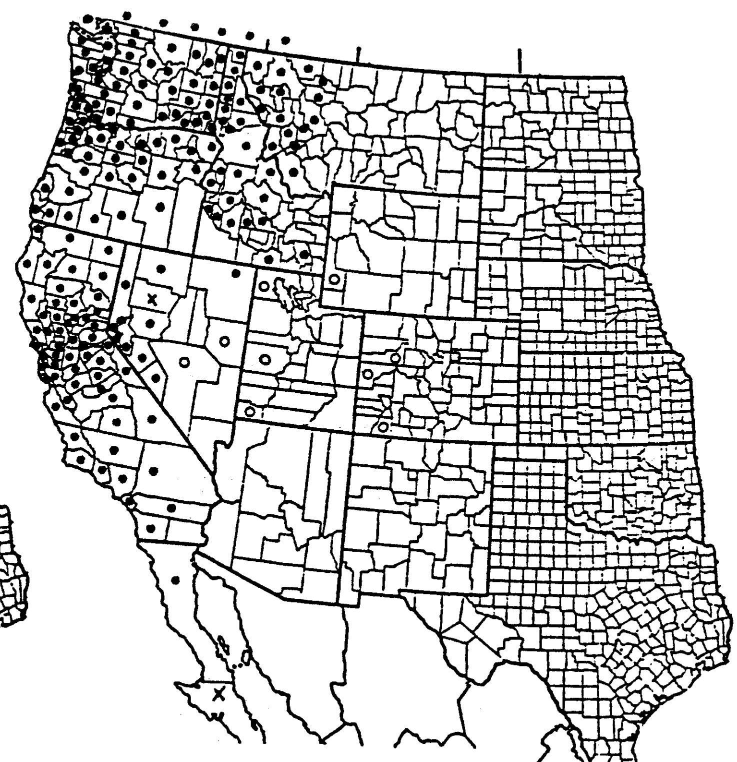
Basilarchia astyanax (incl arizonensis)



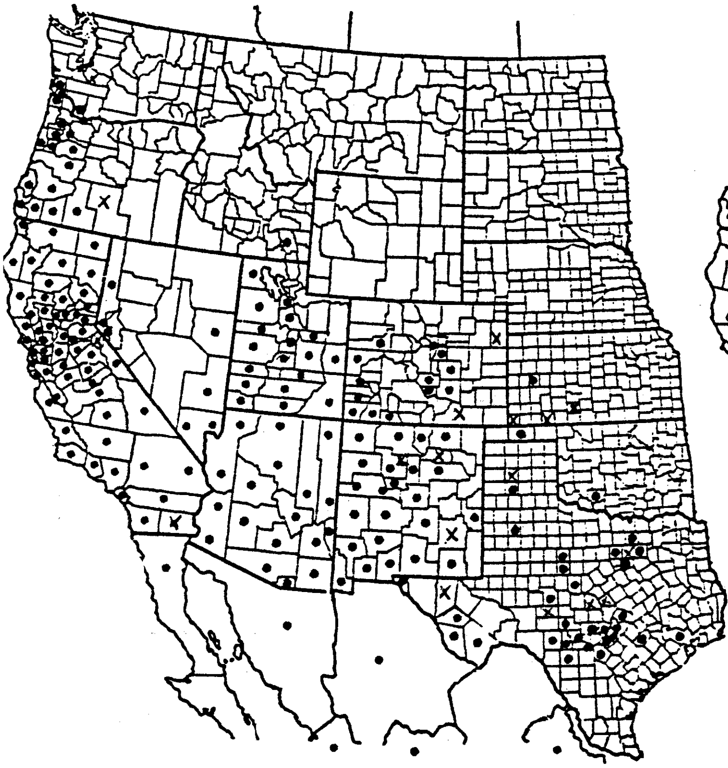
Basilarchia archippus



Basilarchia weidemeyerii



Basilarchia lorquini



Adelpha bredowii

Adelpha fessonia

Adelpha melanthe
Adelpha phylaca Δ

Adelpha massilia

Adelpha basiloides

Adelpha iphicla

Adelpha celerio

Temenis laothoe

Epiphile adrasta

Pyrrhogyra edocla ~~(= neaerea)~~ paradisea
P. hessia △
hypsenor

Catonephele mexicana

Catonephele numilia

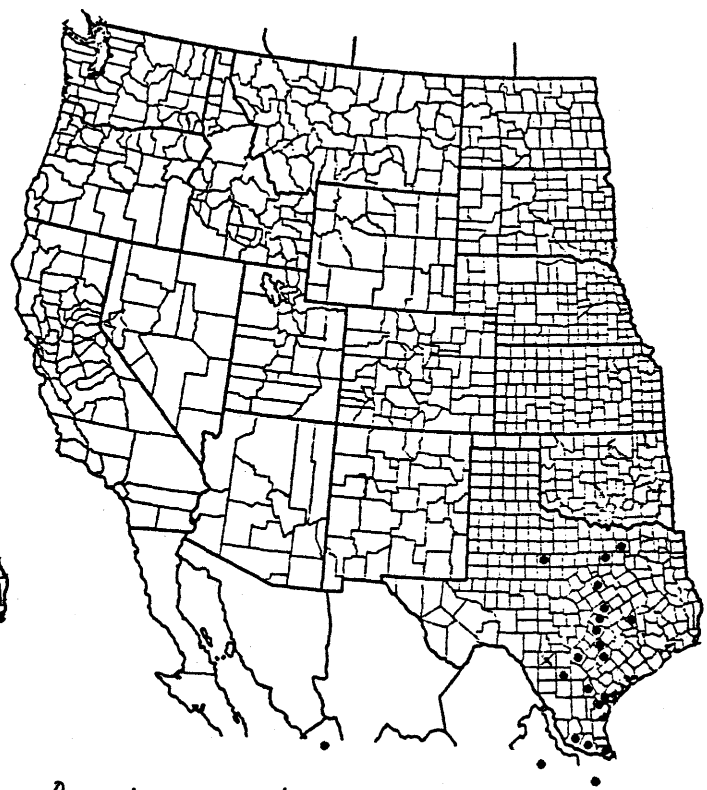
Myscelia ethusa

Myscelia cyananthe (incl skinneri and streckeri)

Myscelia cyaniris

Eunica monima

Eunica tatila



Dynamine agaea (incl dyonis)

Dynamine mylitta

Dynamine tithia

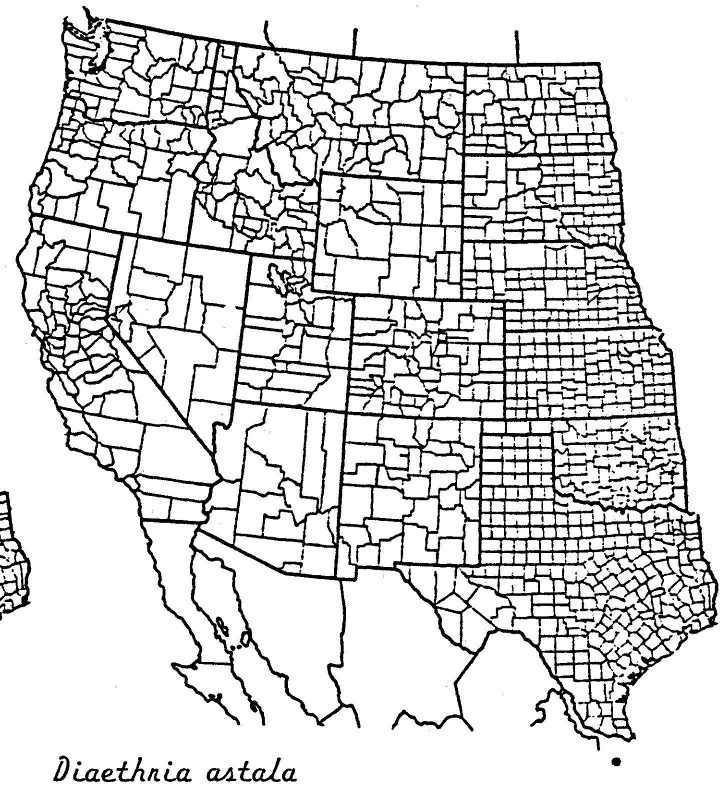
Callicore patelina - NL [J. Kemner]

Cyclogramma pandama

Diaethria asteria

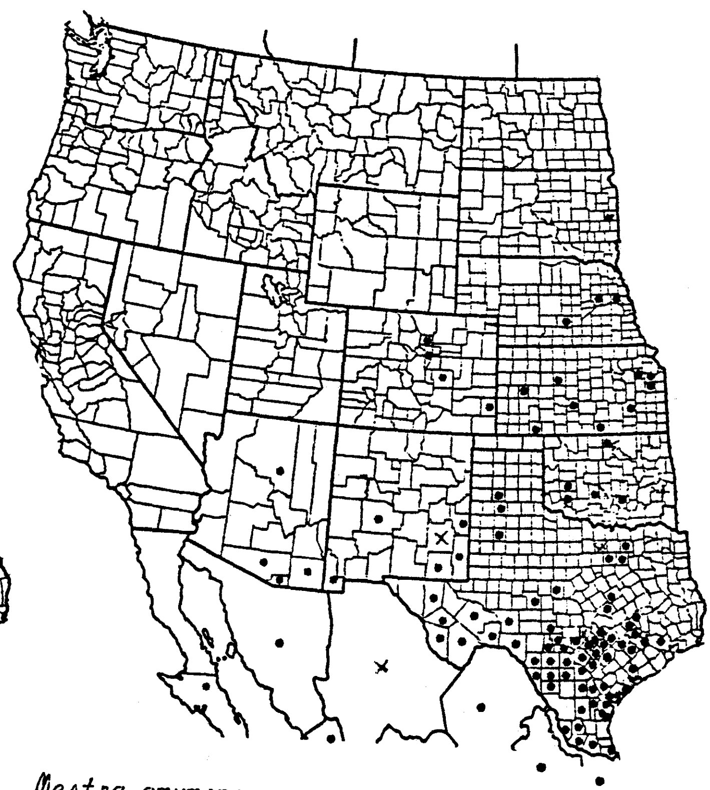
Diaethria anna

probably
asteria
f. ADW



Diaethria astala

Bolboneura sylphis



Mestra amymone

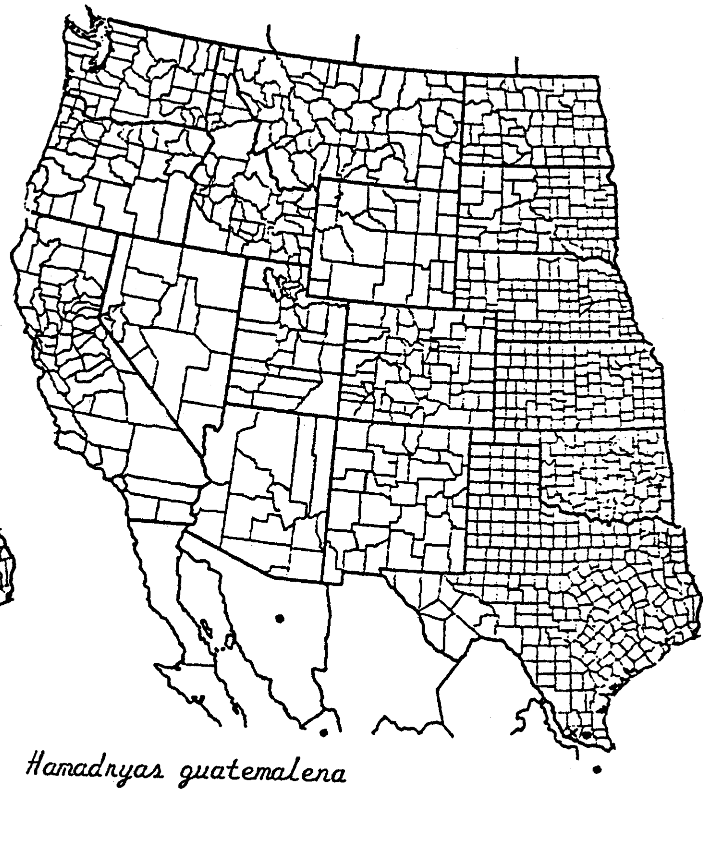
Biblis hyperia

Hamadryas fornax

Hamadryas feronia

Hamadryas februa

Hamadryas atlantis



Hamadryas guatemalena

Hamadryas iphthime

Hamadryas amphinome

Hamadryas glauconome

Historis odius

Historis acheronta

Smyrna karwinskii

Smyrna blomfildia

Colobura dirce

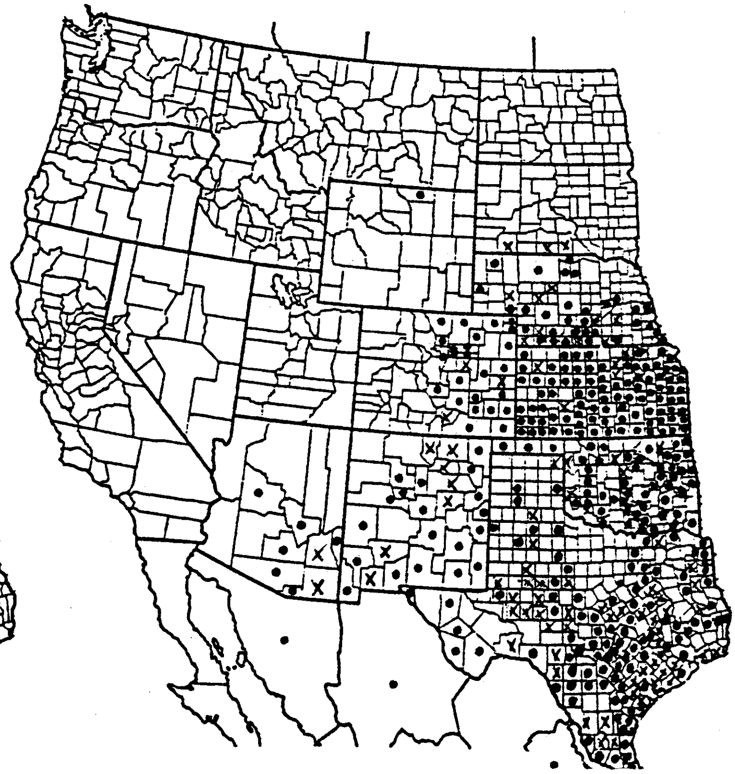
Marpesia zerynthia (= coresia)

Marpesia chiron

Marpesia petreus

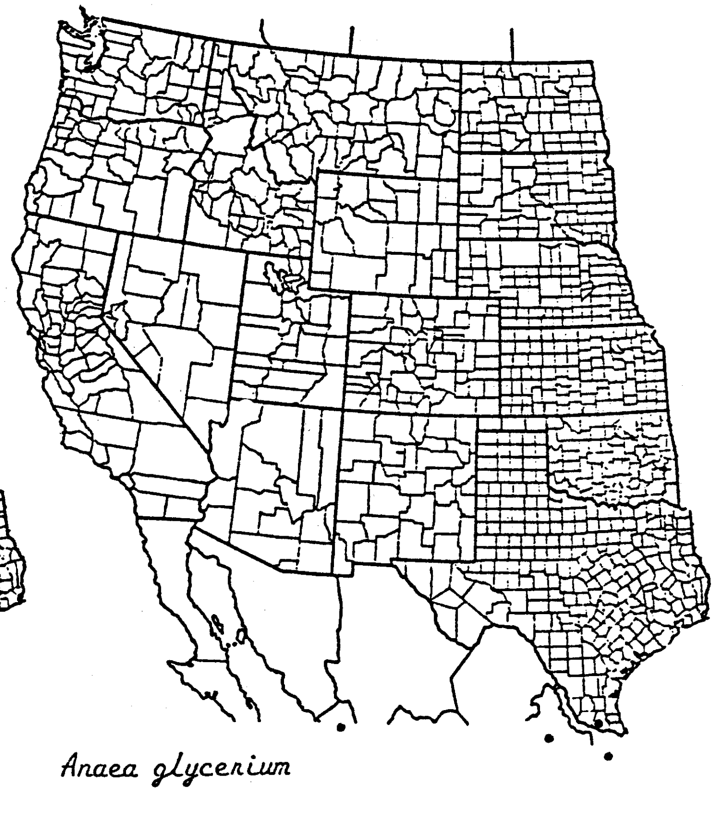
Siderone galanthis

Zaretis callidryas (=callydrias)



Anaea andria

Anaea troglodyta (incl aidea)



Anaea glycerium

Anaea pithyusa

Anaea echemus

Anaea fabius

Anaea electra

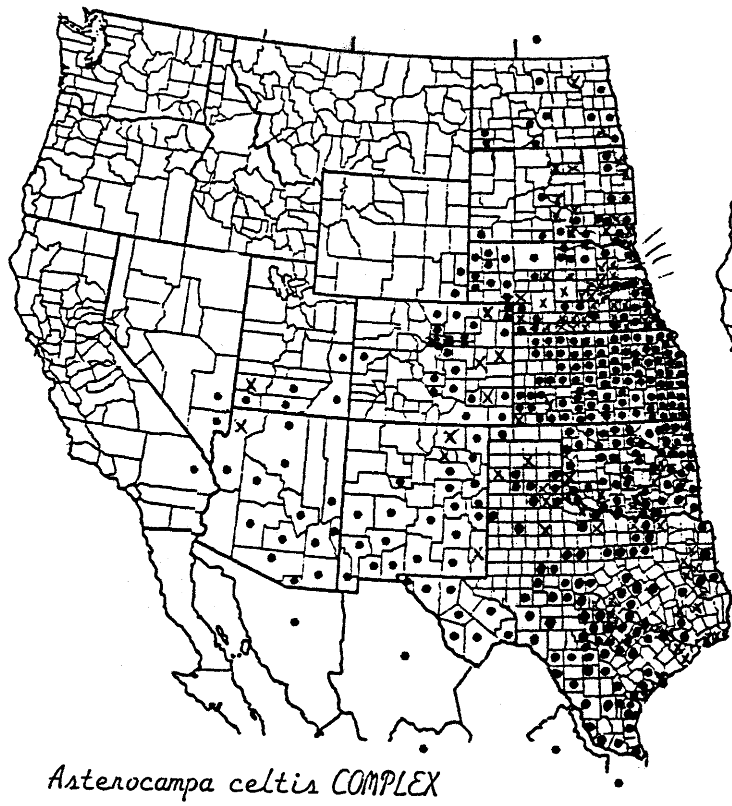
Anaea (Memphis) perenna -TAM [J. Kemner]

Anaea eurypyle
= Fountainea euripyle glanzi Rotger et al. '65

Anaea appiciata [= aidea fide ADW '96]

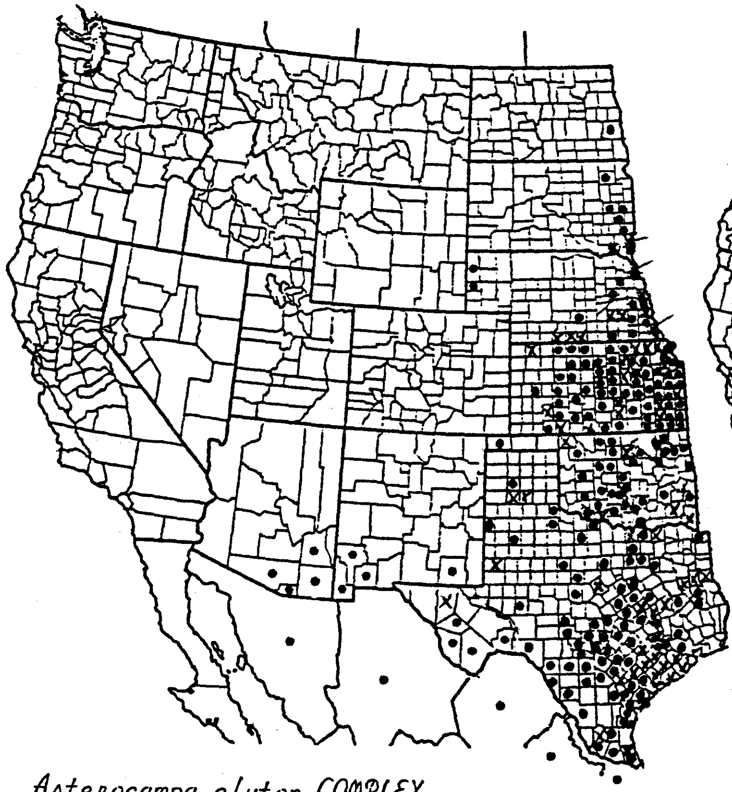
Anaea forreri
[memphis]

Anaea oenomais



Asterocampa celtis COMPLEX

Asterocampa leilia



Asterocampa clyton COMPLEX

Asterocampa idyja (incl argus)

Doxocopa pavon

Doxocopa laure

Prepona sp (perhaps more than one)
[SIN is Archaeprepona demophon, fide ADW]

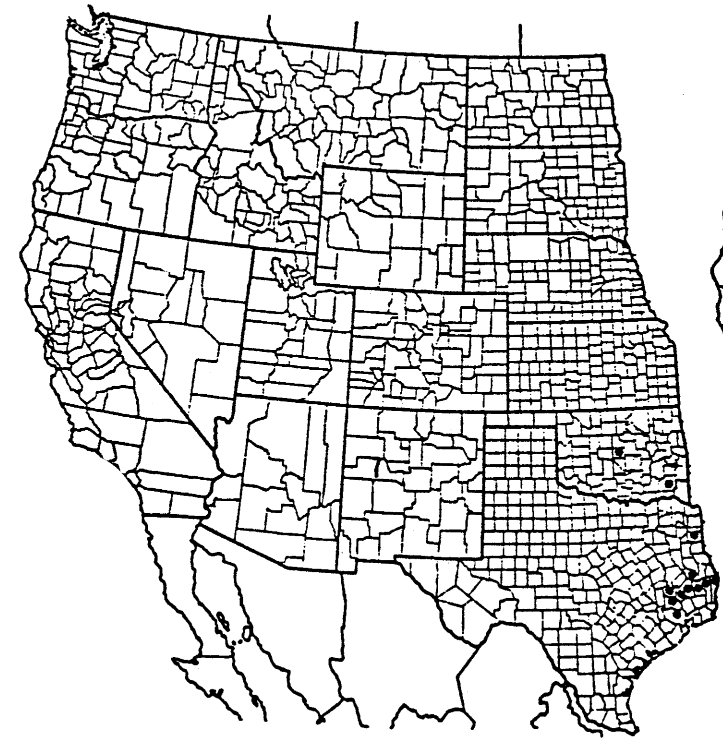
Opsiphanes cassina (incl boisduvalii)

Opsiphanes tamarindi

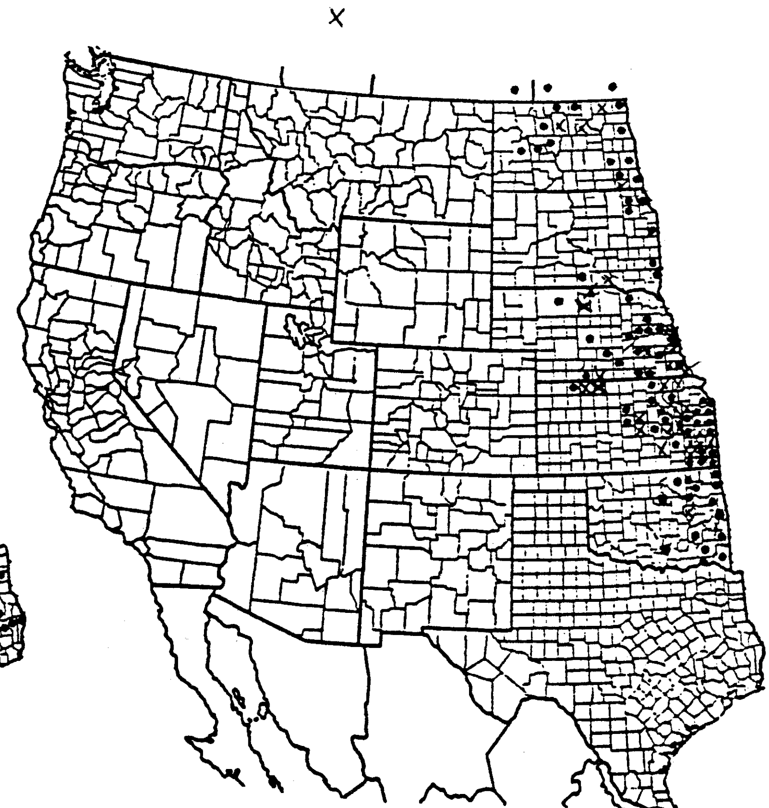
Eryphanis aesacus

Morpho polyphemus

Morpho peleides

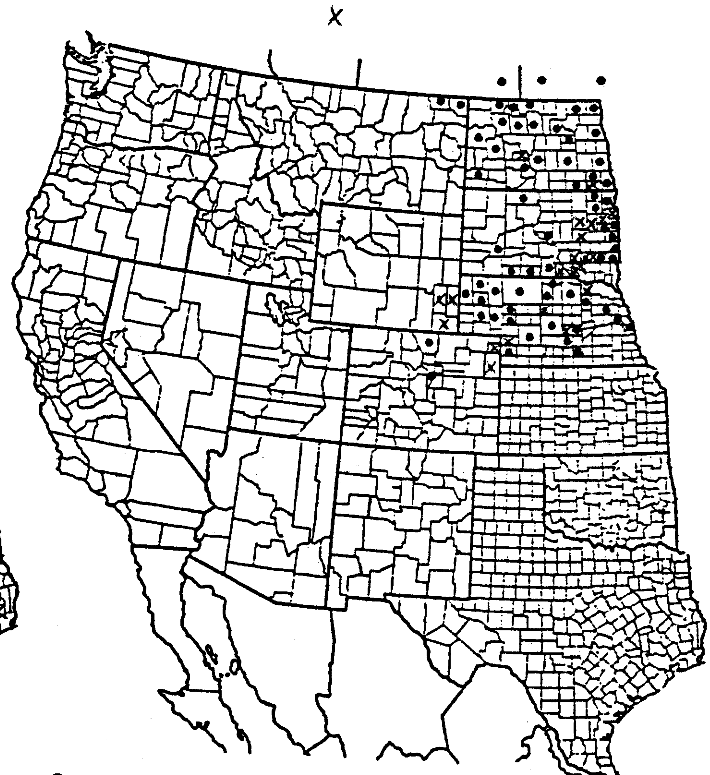


Enodia portlandia



Enodia anthedon

Enodia creola



Satyrodes eurydice (incl fumosus)

Dioriste tauropolis

Cissia pellonia

Cissia rufostriata/similis

? Vareuptychia

Euptychia westwoodi

Euptychia fetna

Euptychia rubrofasciata

Splendeuptychia kendalli

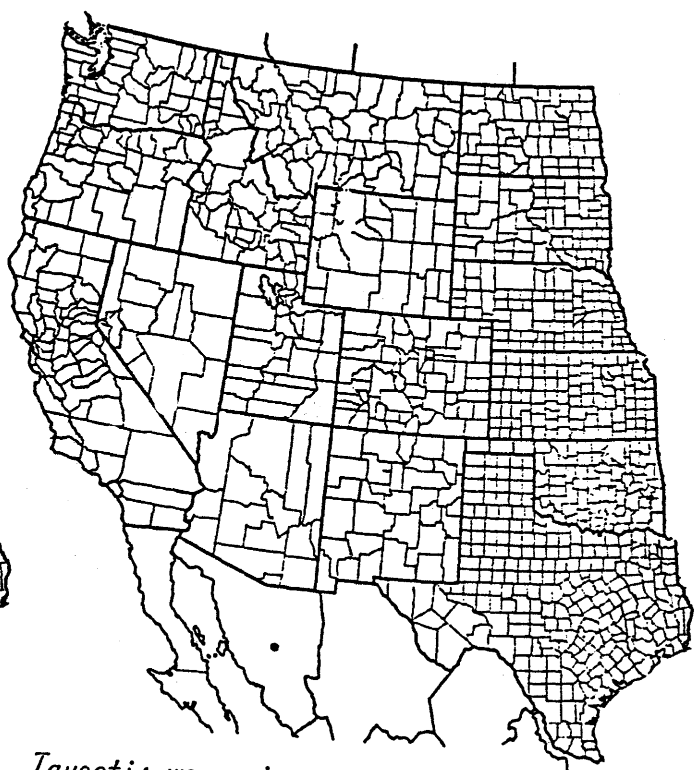
Vareuptychia undina Δ

Vareuptychia themis

Pareuptychia ocirrhoe

Taygetis nympha

Taygetis thamyra
Taygetis uncina △



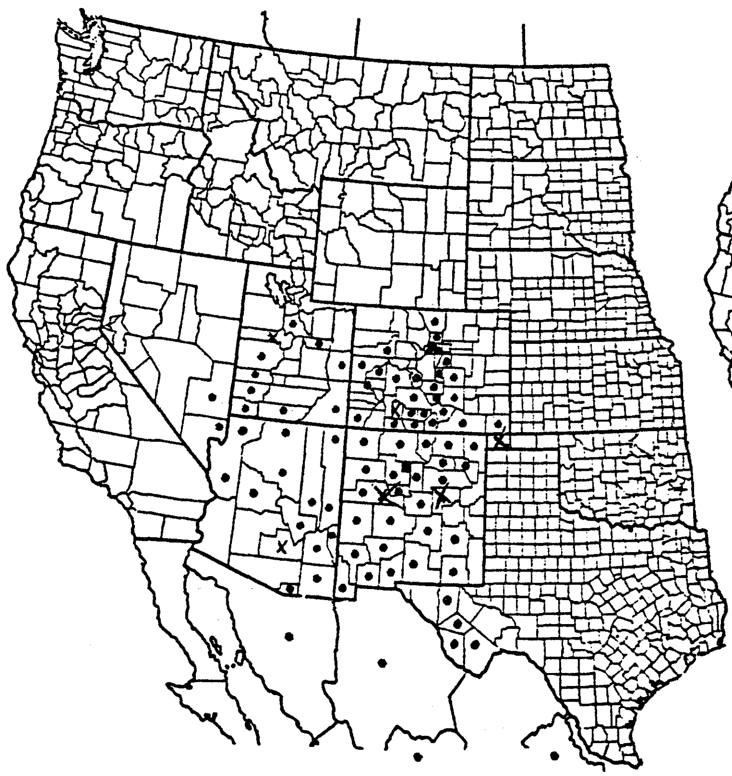
Taygetis weymeri

Mantaria maculata

Cyllopsis pyracmon

Cyllopsis henshawi

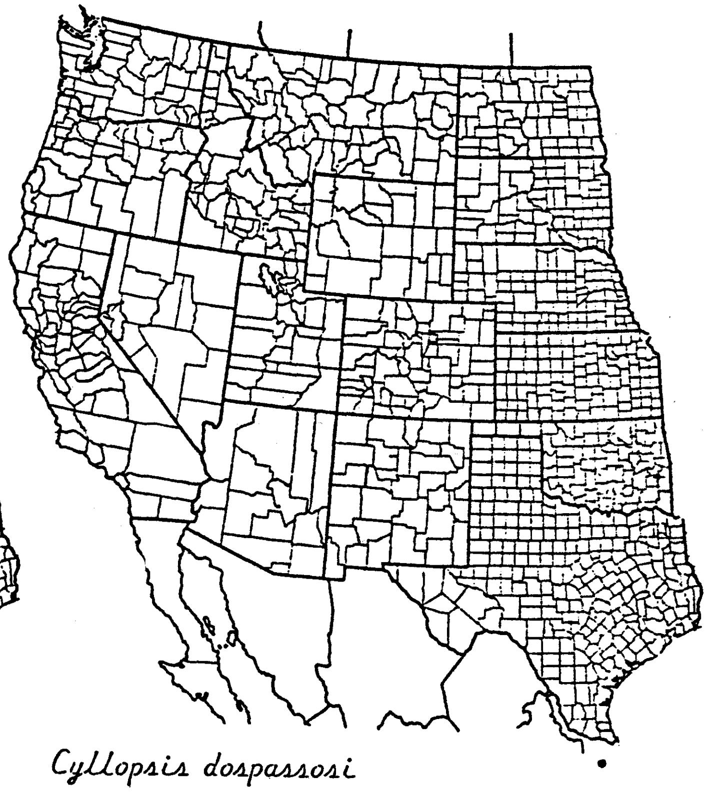
Cyllopsis nayarit (incl windi)



Cyllopsis pertepida

Cyllopsis hedemanni
Cyllopsis diazi Miller '74 △

Cyllopsis hilaria



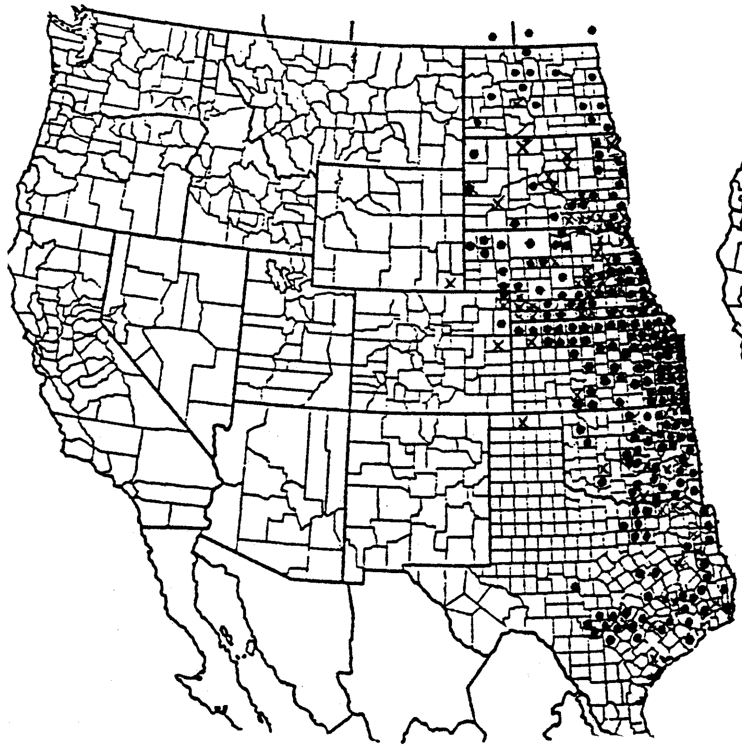
Cyllopsis dospassosi

Cyllopsis pseudopephredo

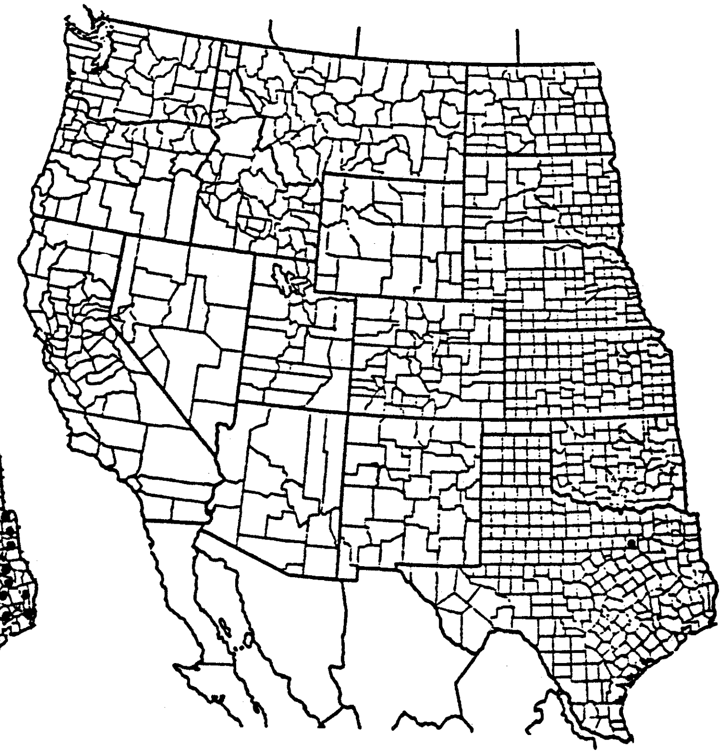
Cyllopsis gemma

Hermeuptychia sosybius (= hermes)

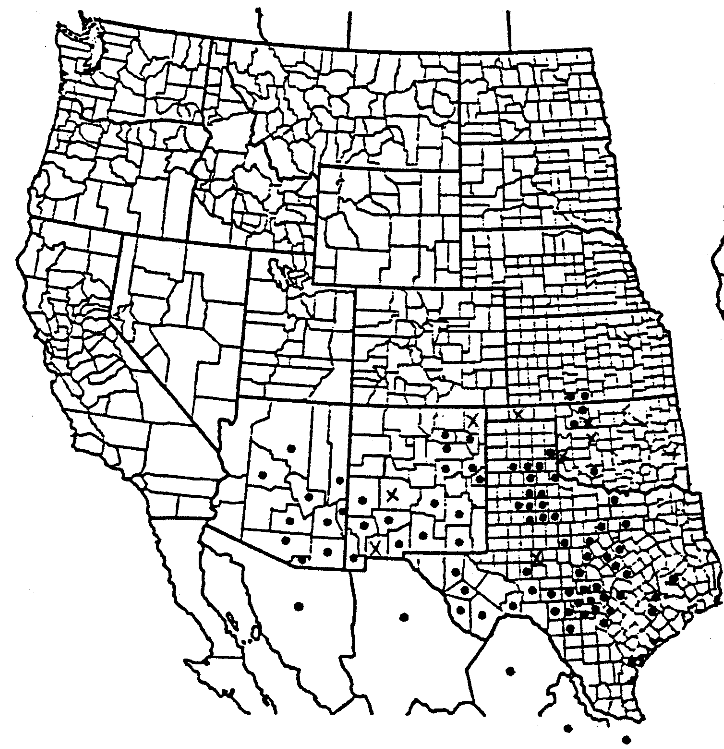
Neonympha areolata



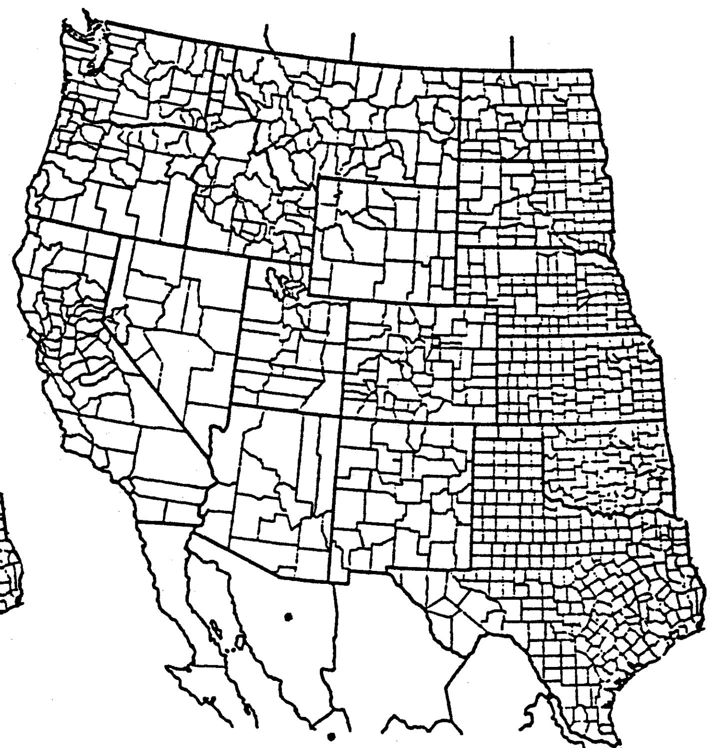
Megisto cymela COMPLEX



Megisto viola



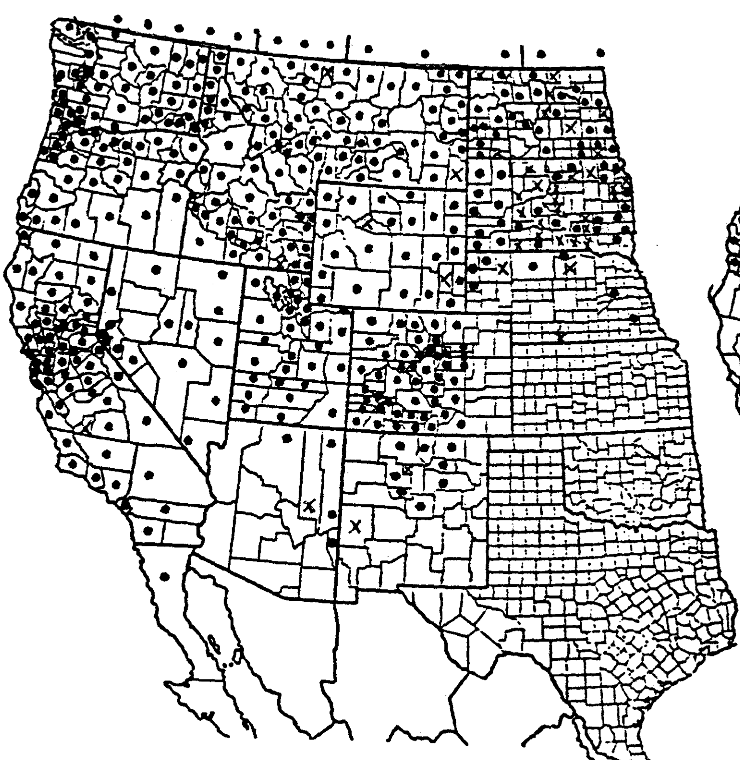
Megisto rubricata



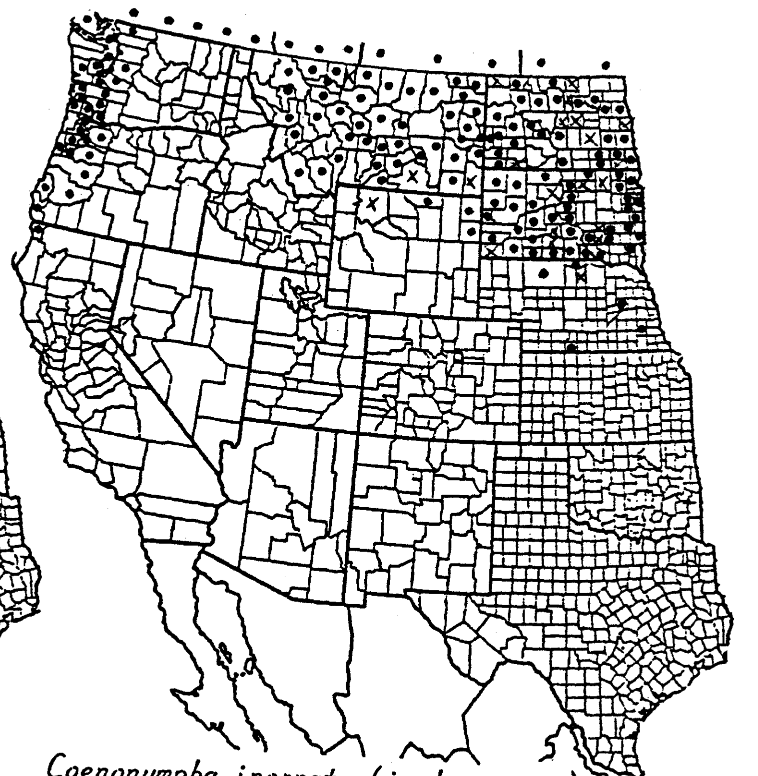
Pindis squamistriga

Paramacera xicaque (incl allyni)

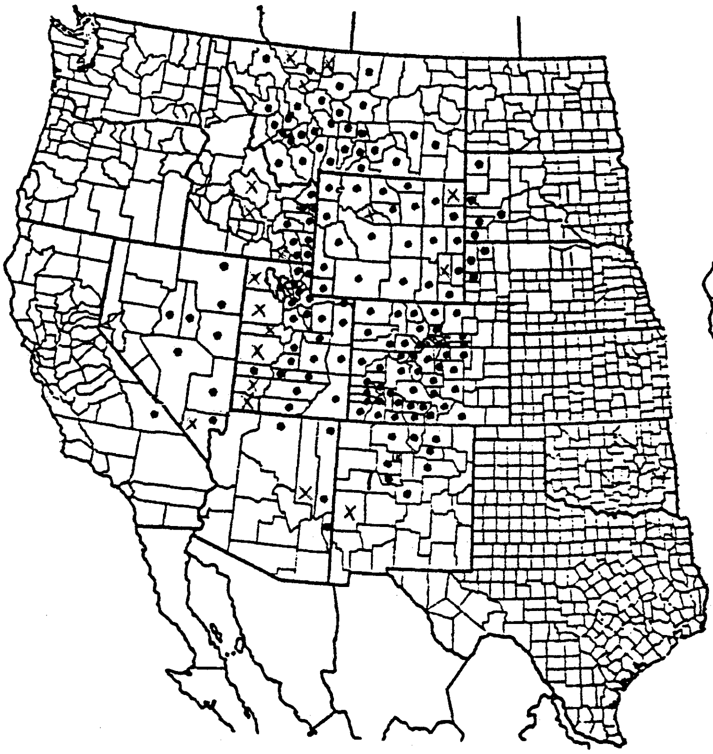
Coenonympha haydenii



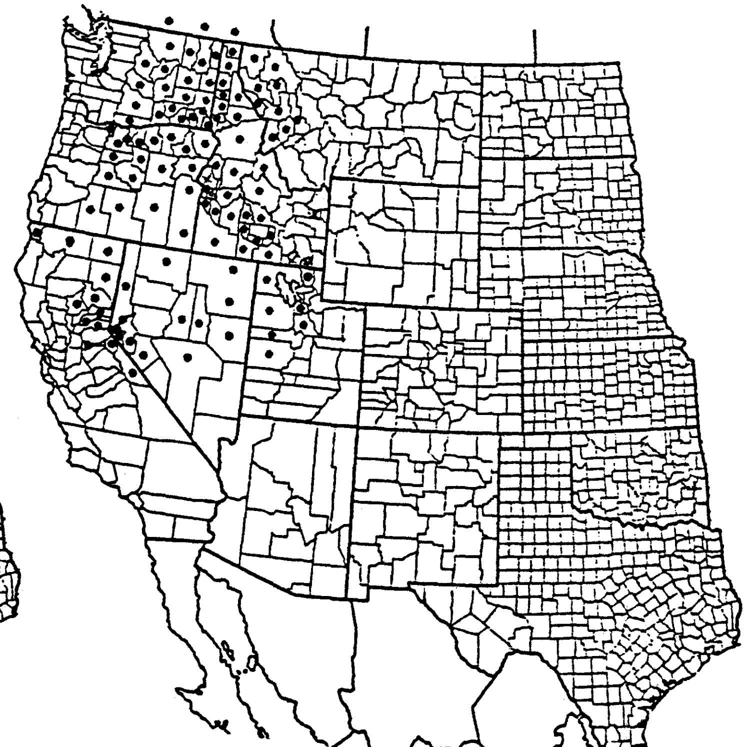
Coenonympha tullia COMPLEX



Coenonympha inornata (incl eunomia)

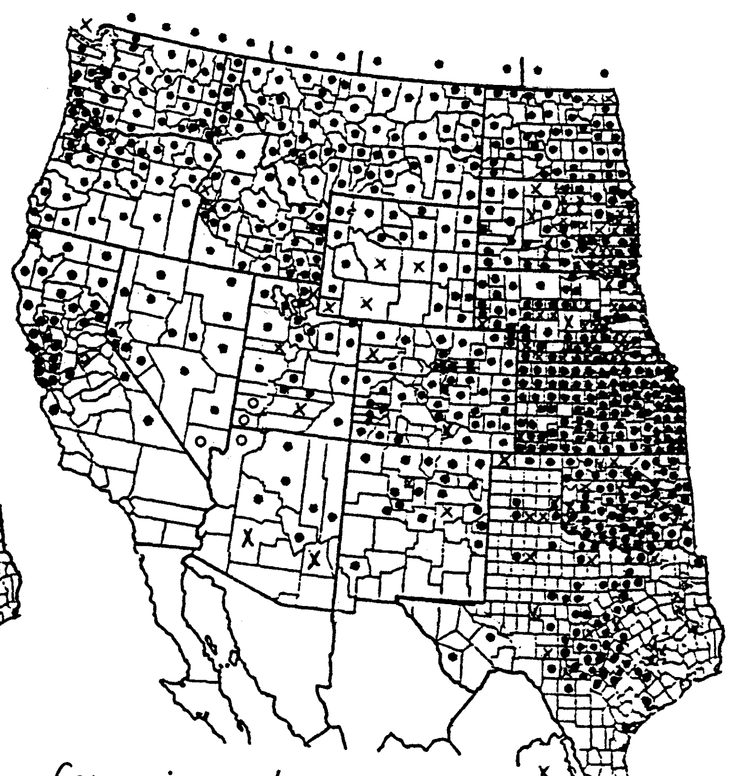


Coenonympha ochracea

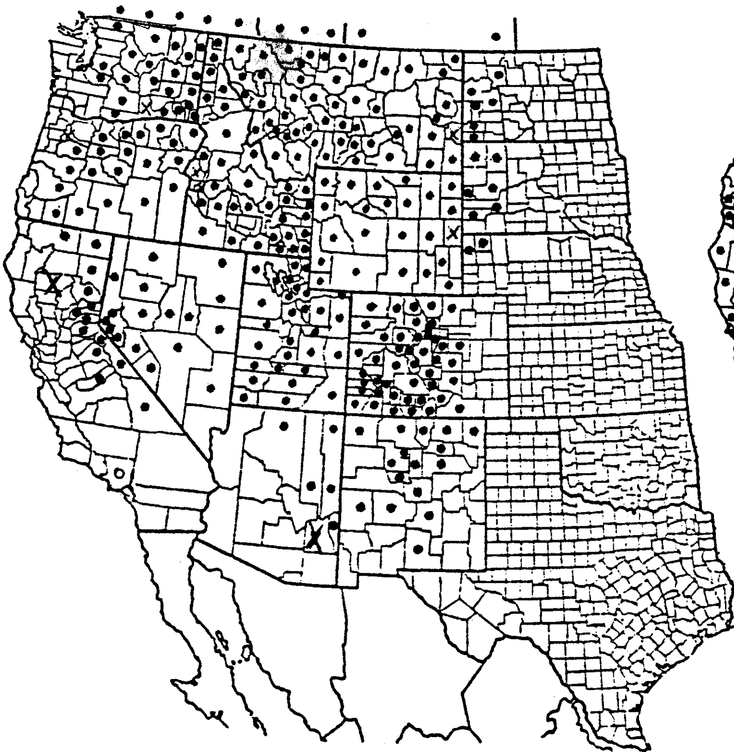


Coenonympha ampelos (incl mono)

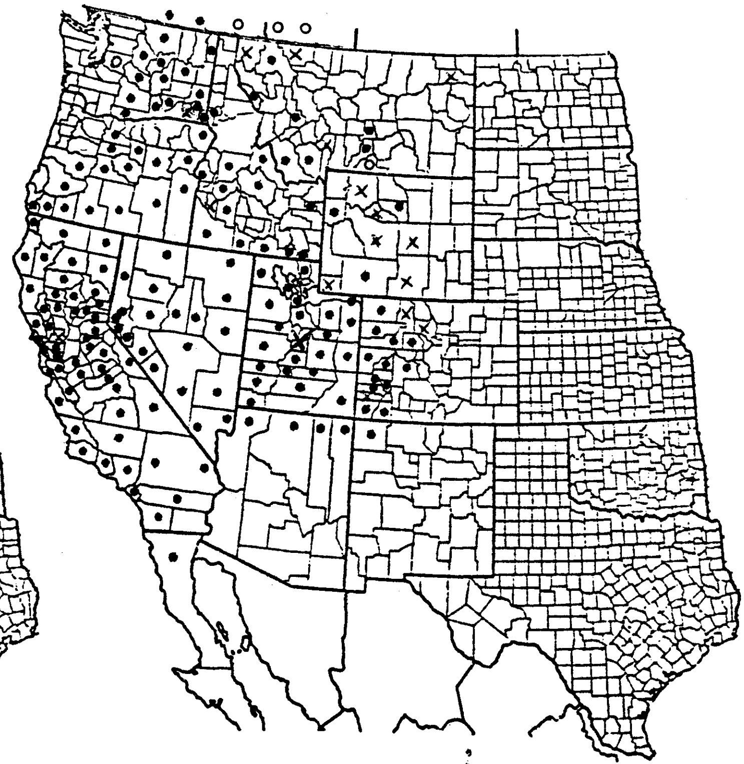
Coenonympha california



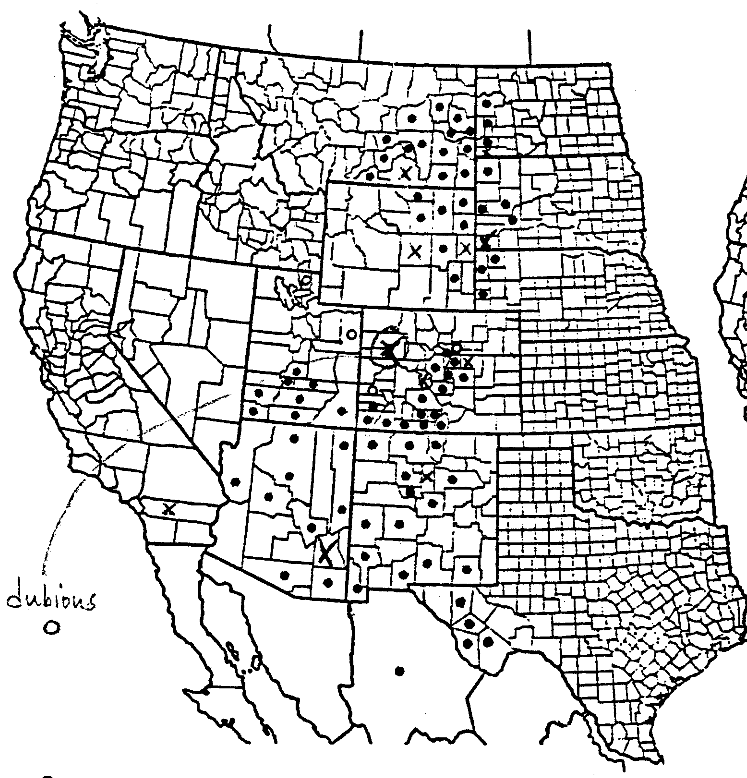
Cercyonis pegala



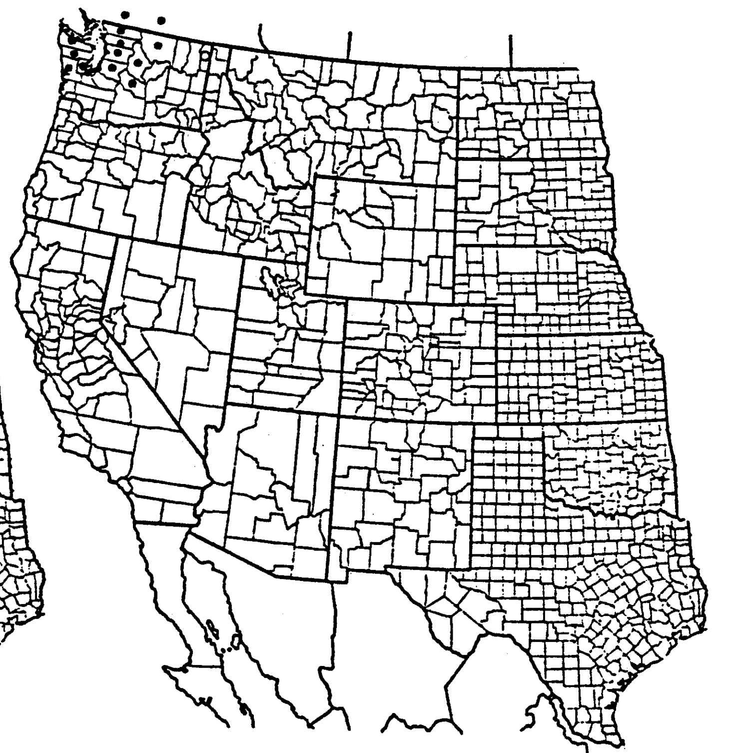
Cercyonis oetus



Cercyonis sthenele (incl sylvestris)

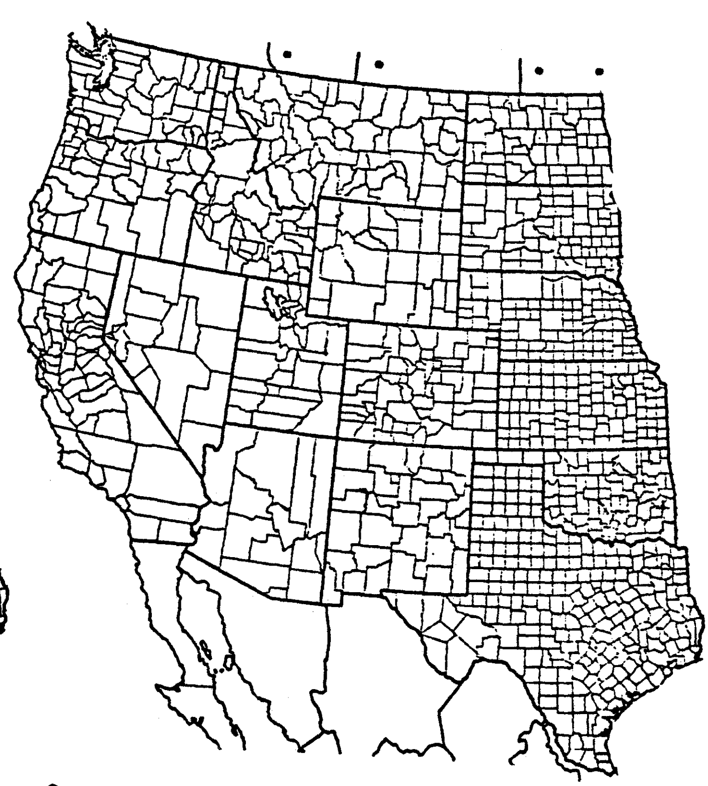


Cercyonis meadii



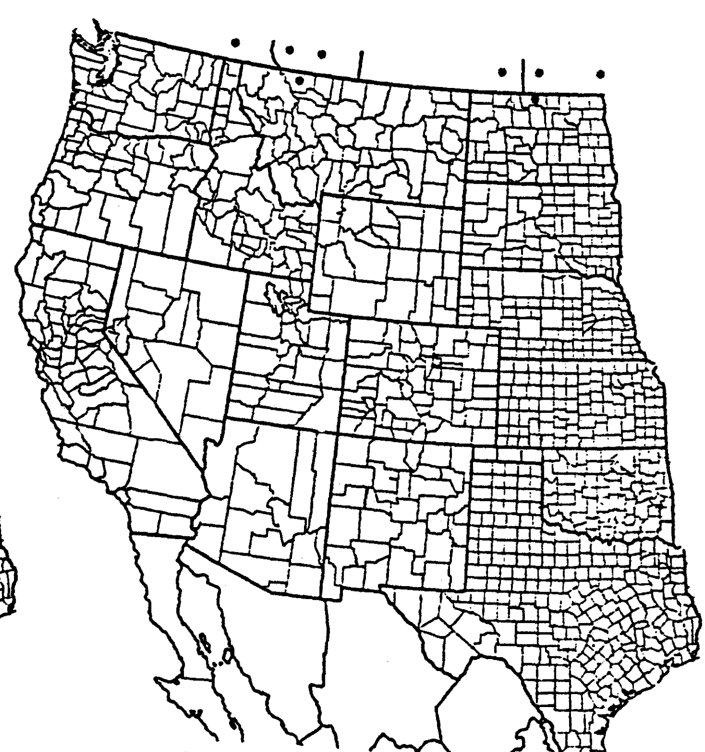
Erebia vidleri

Erebia rossii



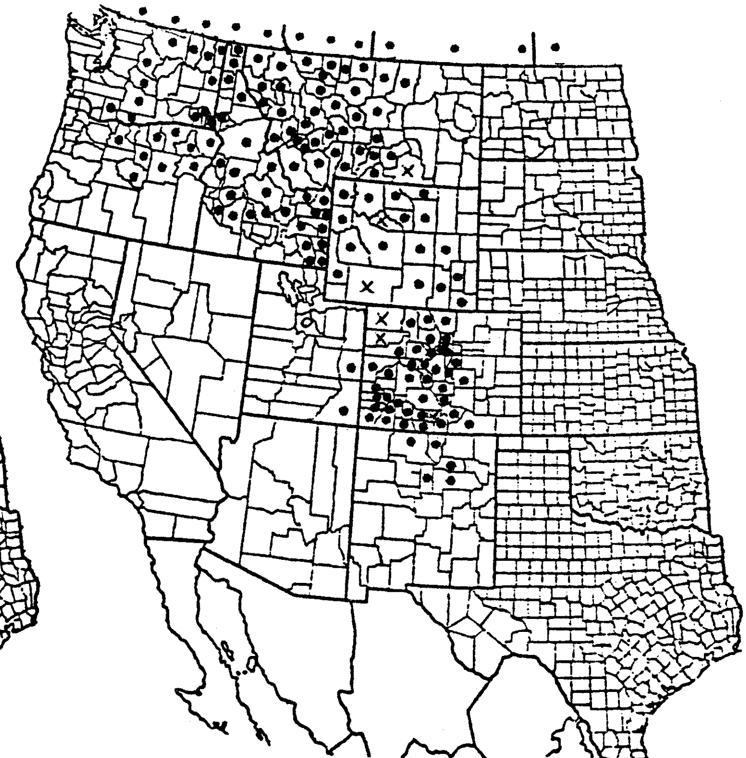
Erebia disa

Erebia magdalena

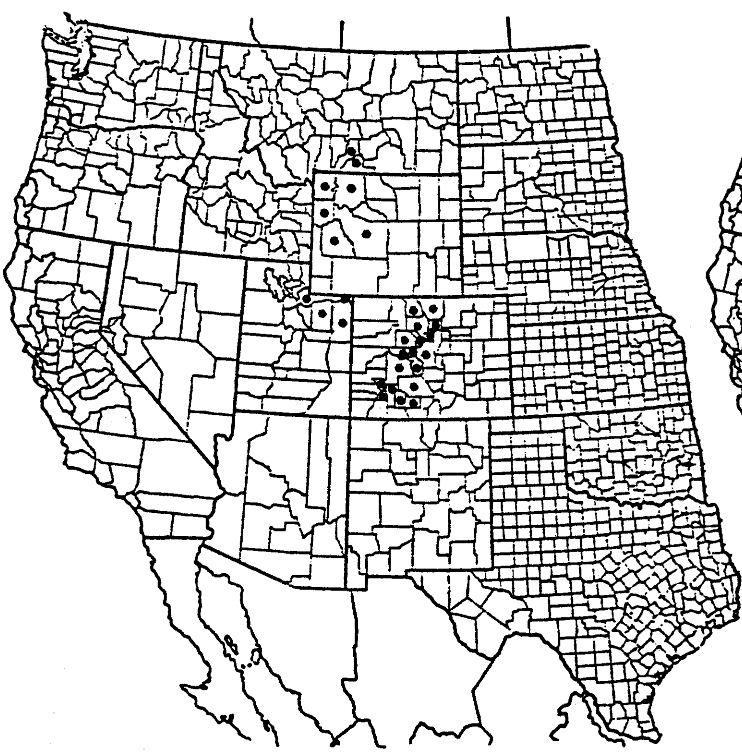


Erebia discoidalis

Erebia theano

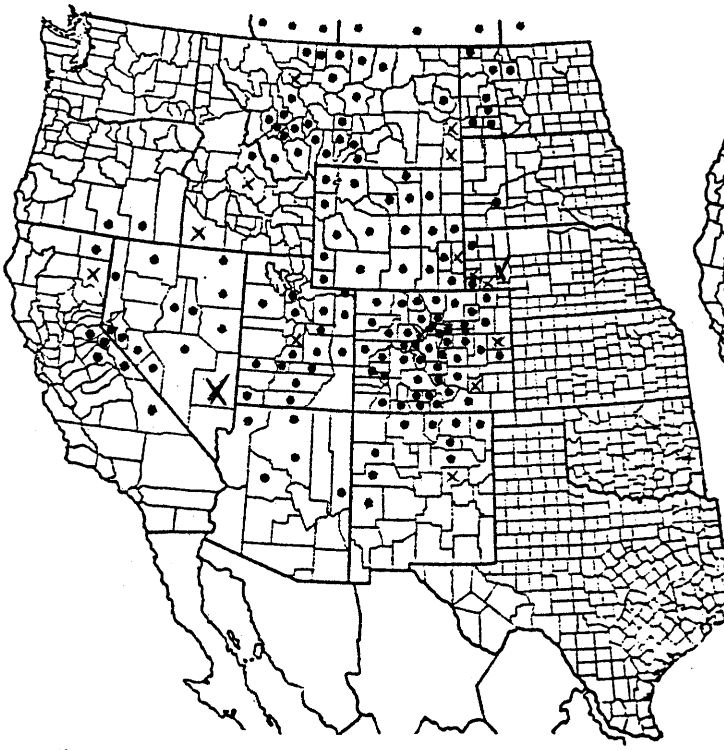


Erebia epipsodea

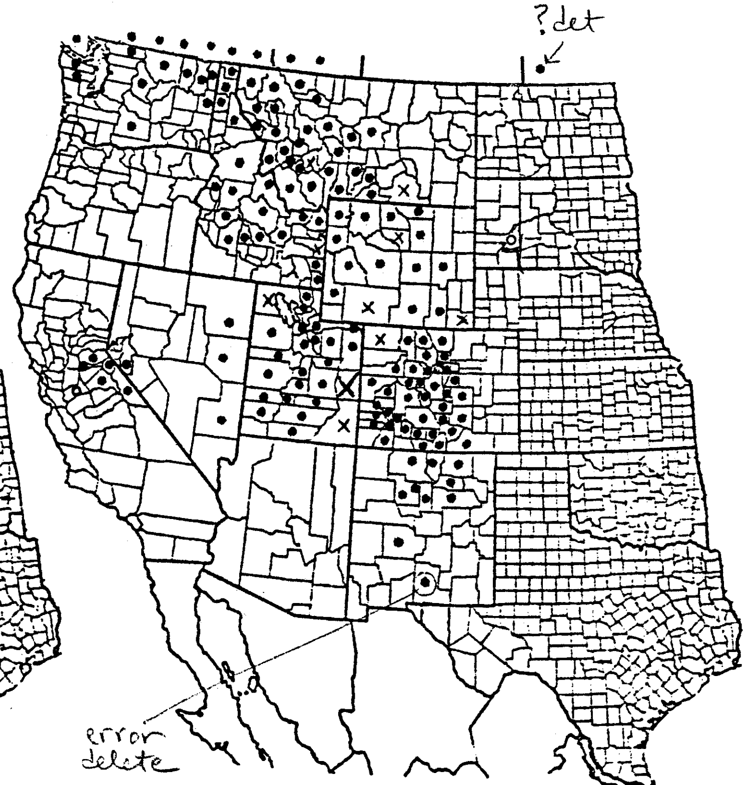


Erebia callias

Gyrocheilus patrobas

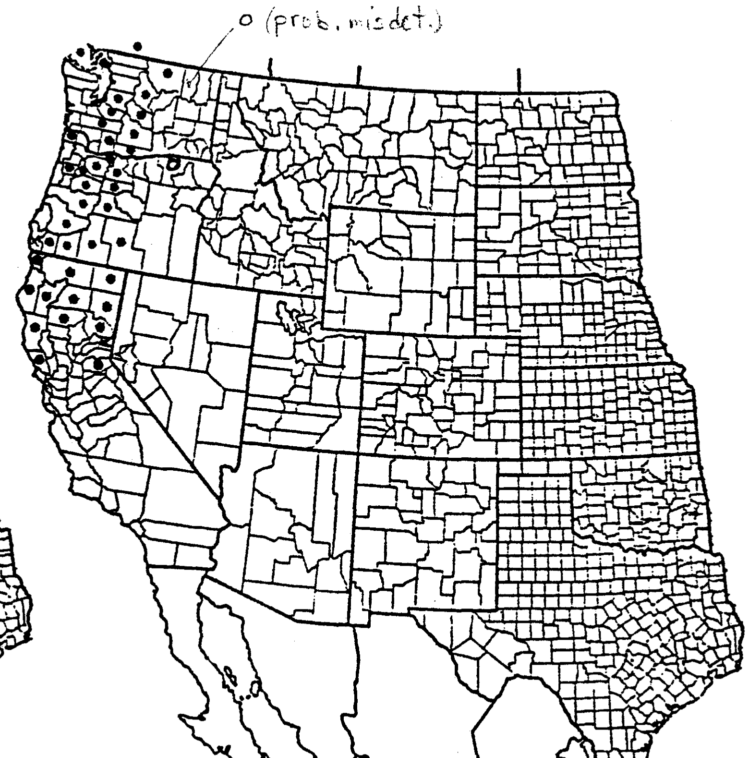


Neominois ridingsii



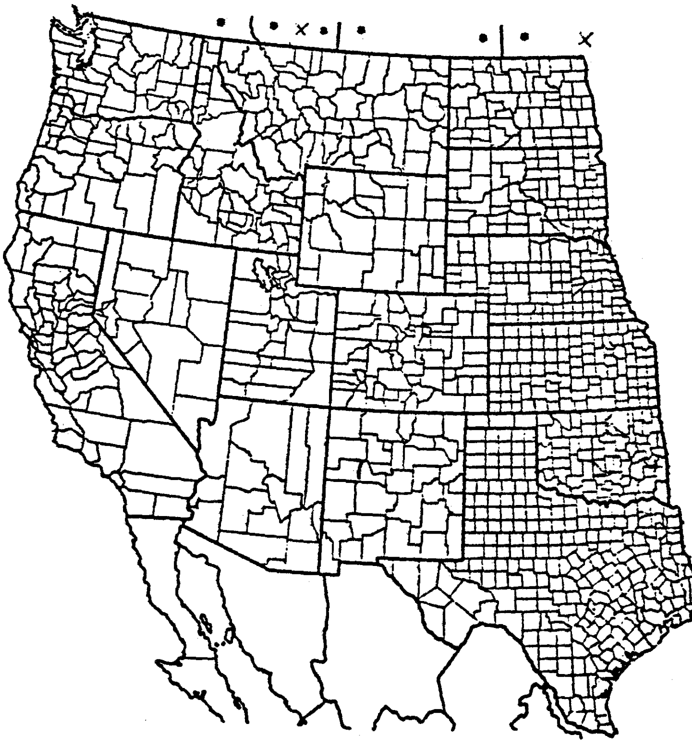
Oeneis chryxus COMPLEX (excl ivallda)

Oeneis ivallda

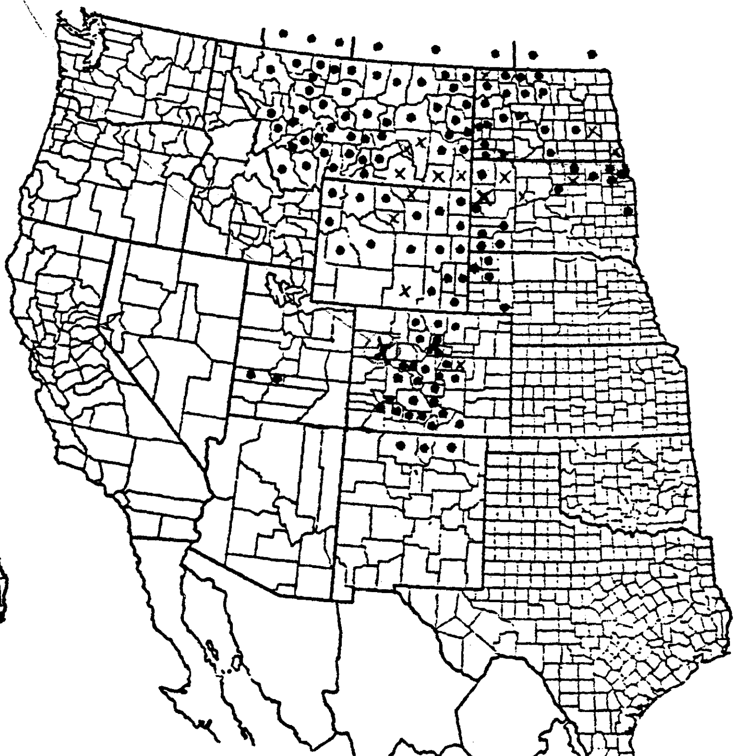


Oeneis nevadensis

dubious



Oeneis macounii

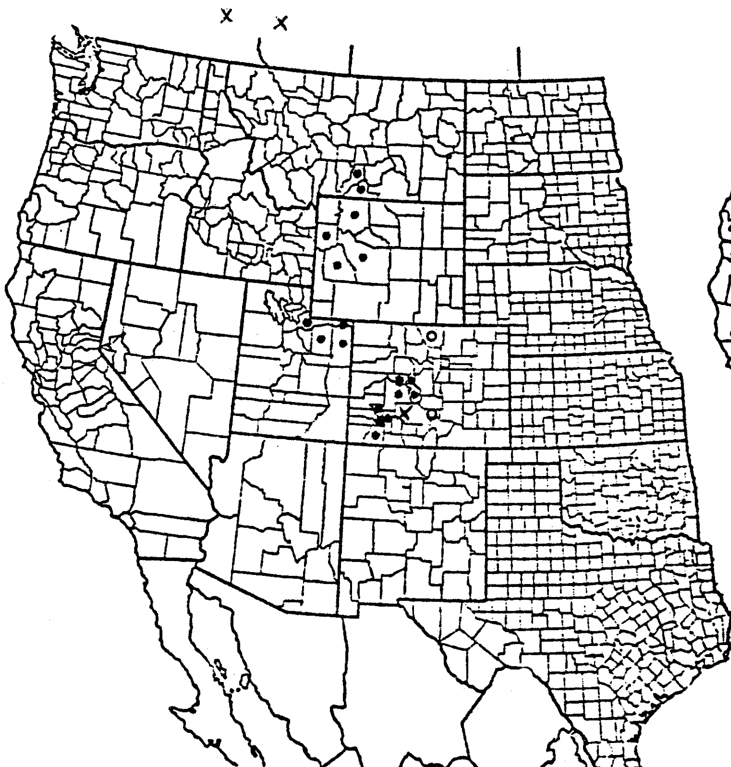


Oeneis uhleri

Oeneis alberta

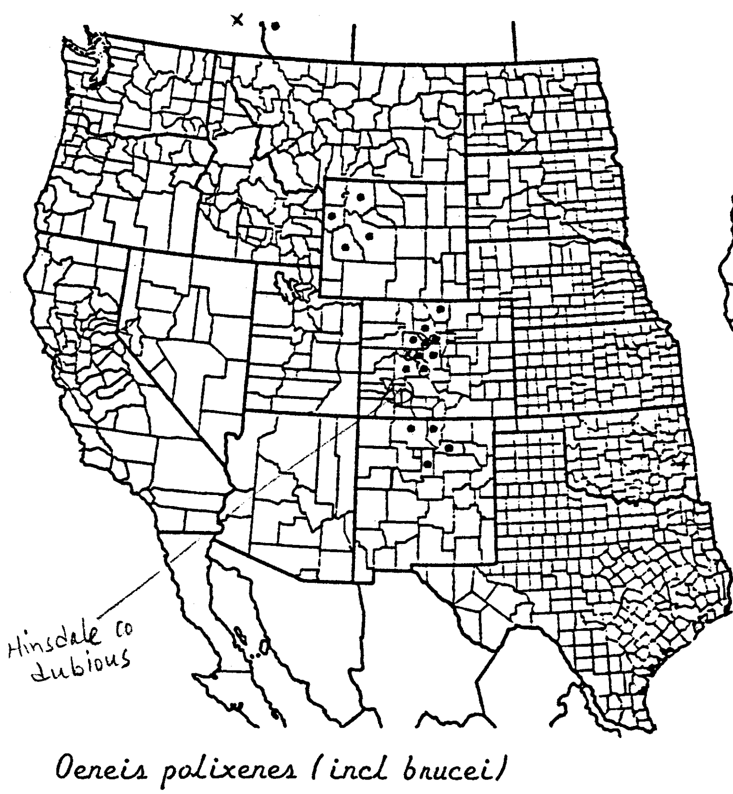
delete misdet

Oeneis jutta

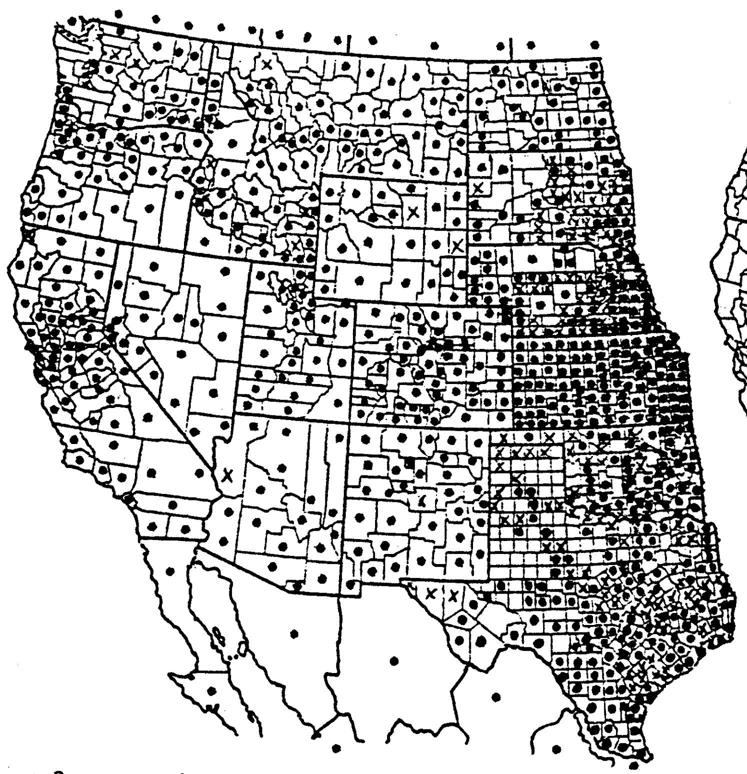


Oeneis taygete (bore older name but not in our area)

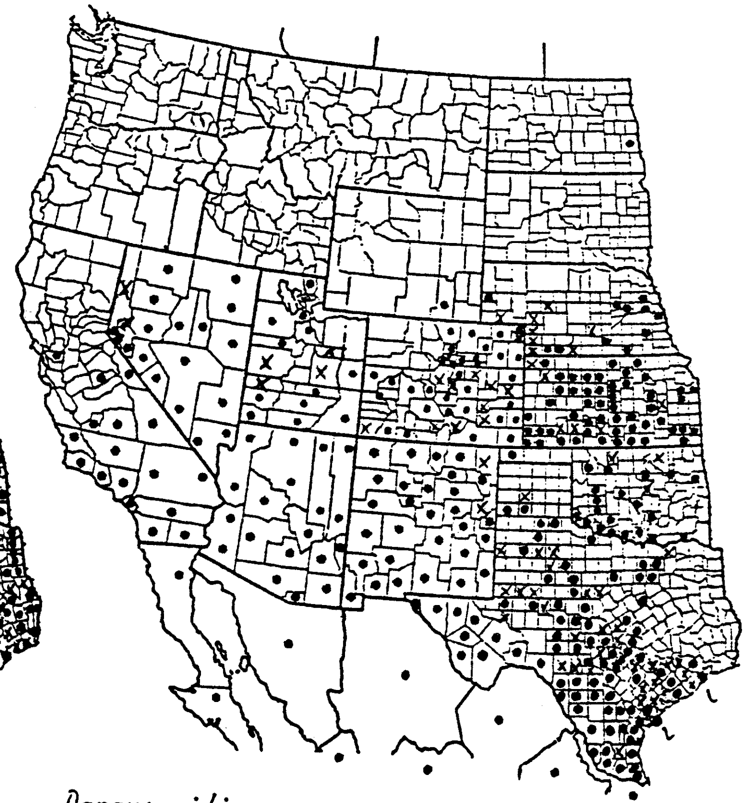
Oeneis melissa



Oeneis polixenes (incl brucei)



Danaus plexippus



Danaus gilippus

Danaus eresimus

Lycorea cleobaea (= ceres)

Dircenna klugii

Hymenitis oto

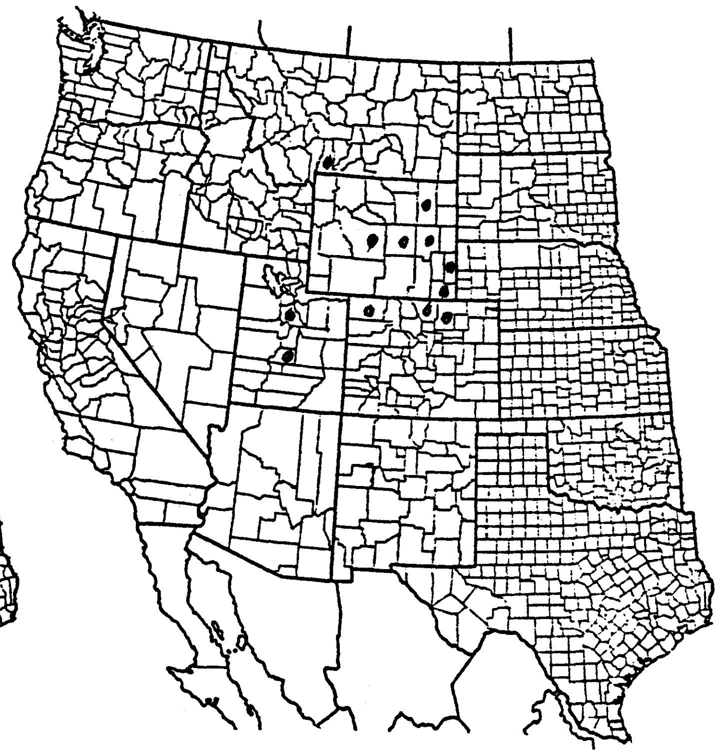
Pteronymia ~~cottyto~~ cotytto

Pteronymia simplex fenochioi
(fide ADW)

ADDENDA:

Pyrgus adepta

ADDENDA:



Neominois wyomingo

CELASTRINA NEGLECTA

Genus and Species Index