

Trail Log 1998-1999

Holmes Rolston, III

Summary

1998 India and Nepal

Hong Kong. Madras, India, lectures, Bioethics and Environmental Ethics in India, Bangalore, National Law School of India University, Pune, Ahmednagar, Aurangabad, Ajanta Caves, Elora Caves. Delhi, All India Institute of Medical Sciences.

Nepal. Kathmandu. Pokhara, trek in Annapurna vicinity, Machhapuchhare Peak, Gandruk, Pothana, raft trip, Royal Chitwan National Park, Mount Everest area trip, Lukla, Namche Bazaar, Kathmadu, flight to Bhairawa(h), visit to Tansen Hospital, Lumbini, birth place of Buddha.

Yellowstone National Park, wolf seminar, Jim Halfpenny.

Pomona, California, Southern California Academy of Sciences, Azusa and Angeles National Forest. Soledad River Canyon. Minneapolis/St. Paul, Minnesota area.

Yellowstone Institute, Wildlife Observation.

Finland, Conference on Aesthetics of Mires and Peatlands, field trips, and Norway, Cruise to Norway, North Cape, Murmansk, Russia.

Sawtooths and River Run, Middle Fork Salmon, Idaho.

China, Harbin, Northeast Forestry University, Dailing and Liangsui Nature Reserve, Wudalianchi (Five-Joined Lakes) Nature Reserve, Jilin, Changbai Mountain Nature Reserve, Shenyang. Northeast University, Qiangshan Nature Reserve, Beijing.

St. Louis. Meramec River. Missouri Botanical Gardens.

1999. Botswana and Tanzania

Victoria Falls, Chobe National Park, Botswana, Okavango Delta

Tanzania, Selous Game Reserve, Mikumi National Park

Sawtooths and Bighorn Crags, wilderness hiking. Idaho.

Snowmass, Aspen, Colorado, and Conference of International Association of Landscape Ecology.

Rocky Mountain National Park, backpacking, Comanche Peak Wilderness

1998 Trail Log

India and Nepal January 1 - February 12, 1998

Jan. 1, 1998, Thursday Left Ft. Collins, 4.45 a.m. The night before was Shonny and Adam's wedding.

The Denver to Los Angeles plane was late, so they rushed me on an hour earlier flight, also with a scare about no visa, but I could take care of that in Los Angeles. Checked bags only to L.A., and reclaimed them there, and the agent said no visa was needed, new rules.

Left at 12.00 on flight to New Delhi, with stop in Hong Kong, and shortly they announced they would refuel in Taipei, Taiwan. Plenty of spaces on the plane. Reached Taipei at 7.10 p.m. there (= 4.10 a.m. Denver time), so I've been up 24 hours, though with some good sleeping on the plane. I never saw the Pacific Ocean. Refueling stop due to strong headwinds, took about 40 minutes. Reached Hong Kong about 9.30 p.m., expecting to make a delayed New Delhi flight.

This is United's Flight # 1 (!!), which flies around the world.

But I got flagged for having no visa and pulled off the flight. Various confusions and ended up sleeping the night on a seat in the airport, but you could stretch out. Six or eight others were nearby, all Chinese.

Jan. 2, Friday. Skipped this day (!!) when I crossed the International Date Line.

Jan. 3, Saturday. Got some breakfast at a McDonalds, and made various inquiries to find the India Consulate was closed on Saturday and Sunday. So I took a bus to Wesley Hotel in Hong Kong for the weekend, which was within walking distance of where I had determined the Consulate to be.

Hong Kong is about the latitude of Havana, Cuba, or Honolulu, about the Tropic of Cancer, 23 1/2 degrees North.

Easy and inexpensive bus ride (\$ 3) in to the hotel. The hotel is \$ 107 per night and quite decent.

Wesley Hotel, 22 Hennessy Road
Wanchai, Hong Kong
Phone 2866 6688
Fax: 2866 6633

The Wesley Foundation, Methodist Church, with bookstore, is nearby. Hotel is not run by the Methodists, but is on land they own.

Jan. 4, Sunday.

In the morning, I took a bus tour of Kowloon and the New Territories. The bus went under a tunnel, 2 km. long. Past Hong Kong Polytechnics University. Peninsula Hotel, the oldest in Hong Kong, once overlooked the Harbor, now filled in. Famous for British high tea.

Hong Kong Cultural Centre, also a Space Center.

There is a new airport under construction, to open April 1998. Now, no flights are permitted 1.00 a.m. to 6.00 a.m., on account of the noise.

Lots of containerized shipping. This is the main port into China.

You can tell public from private housing, because you can hang the laundry out on public housing. Public housing is much cheaper, and crowded. There are 150 McDonald's in Hong Kong.

There are 300 temples, 150 Buddhist, 150 Taoist.
visited Bamboo Forest Monastery (Chuk Lam Sin Yuen) with much incense, and some ancestor tablets. There was a wire vase (an incinerator) for burning paper models of what your ancestors need. People had been burning pictures of cellular phones, to send them to ancestors!

banana trees.

We drove up a twisted road, with lots of imitation road-cut cliffs. Reached Tao Mo Shan overlook.

Drove past military base, formerly British. There are People's Republic of China soldiers there, but they keep in low profile.

Hong Kong drives on the left (as the British), but mainland China drives on the right (as in the U.S.).

We visited Kam Tim, Walled Village, where all the inhabitants have the surname Tang. The walls were built in the 1600's against bandits. The village goes back 700 years. There was a small derelict temple/shrine inside.

Visited Lok Ma Chau, overlooking the Shenzhen River to the People's Republic of China. Past that it overlooks Shenshen, a new city built in the 1980's.

Saw bones kept in jars, a burial practice.

Mainland Chinese are not free to come to Hong Kong, though many do illegally. Hong Kong citizens may go to mainland China to find wives, as Hong Kong women are too choosy.

Returned toward main part of city. Chinese University, one of six in Hong Kong.

Hong Kong Jockey Club, a big race horse stadium.

Prince of Wales Hospital.

Lots of condominium towers, 3,000 people typically live in one of these condominiums.

Drove past Amah Rock, shaped like a woman.

Drove past Lion Rock, shaped like a lion.

Bauhinia - this is a flower, purple, seen on trees in full bloom at Lok Ma Chou overlook. This flower

is now on the coins of Hong Kong, replacing the Queen of England. As a logo of the city, it was seen frequently. There are no bridges, only tunnels between Hong Kong and Kowloon.

End of morning tour.

In the afternoon, I took a bus tour of Hong Kong city proper, same guide.

Hong Kong reverted to the Chinese from the British on July 1, 1997. 6.5 million people live here, half of them in the new territories. 32,000 are U.S. citizens. 26,000 are British. 200,000 are from the Philippines.

Drove past Happy Valley Race Track.

Drove up Victoria Peak. Galleria Shopping Center is on top, high on a hill, with an overlook. A hazy day, as, apparently, is often the case.

Drove to Aberdeen, a fishing village, though I saw mostly yachts and water taxis. I declined a water taxi trip. Nearby is a jumbo floating restaurant.

Visited Repulse Bay. A British naval vessel was here in World War II, though the Japanese occupied Hong Kong for over three years.

Visited Stanley Market, with more Westerners and tourists than I had previously seen anywhere in town.

Hong Kong was British Crown colony from 1842-1997. The British came in the early 1800's, when there was no city here, only a fishing village. They seized the island in 1841. China ceded it in 1842, and in 1860 ceded Kowloon, and in 1898 granted a 100 year lease on the New Territories.

Hong Kong is now a SAR, Special Administrative Region of China.

The terrain is steep, which means that the harbor is deep, and the countryside was not much used by the Chinese, since it is unsuitable for agriculture.

Even modern developers still have to consult feng shui geomancers. There is a large high rise complex overlooking the sea with a mountain behind it. There is an enormous hole in the middle of it (4-5 stories of hole), so that the mountain spirit would not be offended, and still have his view to the sea!!

Cantonese is the dialect of Chinese spoken here. Mandarin is spoken in North China, and is the official language of China. The written characters do not differ, only the pronunciation.

This is a stable area, and the high rise office buildings, apartments and condominiums are on bedrock. Earthquakes are unknown. But there are typhoons.

On the whole the land seems rather dry, though it can be well forested. This is the dry season?

Jan. 5, Monday.

There was a hassle at the India consulate all morning. It was crowded and confusion and hard to talk to anybody except through thick glass. They have to check with U.S. authorities, to see that

I am not an undesirable, and no visa until tomorrow.

In the afternoon I walked around the shopping area. Businesses everywhere, markets in the side streets selling everything. There are lots of fabrication shops for steel and iron. I checked by the consulate again, and walked through three huge shopping malls in the lower 2-3 floors of skyscrapers. The shoppers are almost entirely Asians, few Westerners.

As late as 1940, 40% of the people in Asia were living under colonial governments.

Lots of curtains and rugs for sale. Lots of picture framing shops.

Jan. 6, Tuesday. Went to the consulate at 9.30 a.m. and was told to return at 4.00 p.m. Checked out of the hotel at 1.00 p.m., and walked the shops for a while. Lots of cellular phones. At 4.00 p.m., I finally got the blasted visa, and took off for the airport. So I unexpectedly got a long weekend in Hong Kong, which I probably would otherwise never have visited. I did miss a lecture in Madras, however.

Little trouble at the airport. 9.00 p.m. left for Delhi.

Jan. 7, Wednesday. 1.00 a.m. arrived Delhi, and got bags. Had to wait until 3.00 a.m. for a shuttle bus to the Domestic Airport, 12 km. away. Got to the domestic airport about 3.30 and waited till 5.00 a.m. to check in. Reasonably quiet here.

6.30 a.m. to 9.00 a.m. Flight from Delhi to Chennai (Madras). Uneventful.

In the airport at Madras, there was an American named Jim Martin, retired religion professor, who thought he recognized me.

I was met at Chennai by two zoology graduate students, cordial but confusing. A. G. Viji Roy and C. Prabhakar.

My main host in Madras and in India is Jayapaul Azariah, professor and head, Dept. of Zoology, University of Madras. The university keeps the name Madras, though the name of the city has been changed to Chennai, the original Tamil word. I was to have spoken at the Indira Gandhi Center for Atomic Research, but this had been cancelled owing to the visa fiasco.

I was to take a train to Salem in the afternoon, but for some reason the train was cancelled.

Crazy taxi ride into town. The driver hooted the horn almost the whole way in, though I was to learn that India is the noisiest place on Earth to drive. They have signs on the back of their bumpers to hoot to pass, and there is always somebody wanting to pass. Everything on the streets, including cows.

They took me to the Hotel Imperial (!), a joke, and I checked in.

They picked me up about 3.00 and I got a lunch in an Indian restaurant, quite a scene. Everyone else was eating with their hands, scooping it up. Then we walked around town, including St. Andrew Church (Church of South India). Then we rode an autorickshaw to the beach and to the university. There I met a philosophy and talked with him. Dr. R. Gopalakrishnan. They have given

about 100 Ph.D.'s since 1967. They have 25 Ph.D's now, 7 postdoctorates. He does philosophy of religion, especially tribal religions. There are no undergraduates in Indian universities. They are in the colleges. The philosophy department carries the name of Radakrishnan, who was a faculty member here, later President of India.

There are also several departments of religious studies, including a Department of Christian Studies, about four faculty. The University classes are all in English.

There are two campuses. This, the Guindy Campus, is the main one. Pronounced "gin-dee" gin as in begin. The "u" is not pronounced.

There was furious traffic on the streets, about one-third of it autorickshaws, one-third bicycles, cycle rickshaws, scooters, and the rest crowded old busses and old lorries. Rarely a decent looking car.

Chaperoned by one of the graduate students, I took a late night bus ride to Salem starting at 8.30 p.m. It was a rather stocky bus, driven furiously all night, with lots of traffic on the road. We went 300 km. But I got some good sleep. Noisy brakes squealed when applied, which happened regularly. There seem to be lots of night busses, partly because much of the year it is so hot during the day.

Jan. 8, Thursday. We arrived about 4.00 a.m., and caught an autorickshaw to the hotel, Hotel LRN Excellency, quite a ride. Then I checked into a rather good room, though neither this hotel nor the Madras Imperial has any toilet paper, not even any place to hang it.

Breakfast in the hotel.

Then I met Jayapaul Azariah and D. S. Sheriff, Associate Dean, VMKV Medical College. D. S. Sheriff is the main host here in Salem. He is Muslim, and was in Tripoli, in Libya, when the Americans bombed it.

Gave talk on types of environmental ethics.

Signs are often in English, especially those advertising something (like cellular phones!) and in great discontinuity with the poor on the streets.

More persons speak English in India than in all the English speaking nations of the world! But the sort of have their own brand of English, which they understand from each other better than outside English speakers can understand it. Indian English!

Kamal Kumar Dua wrote book on Bhagavad Gita and Environment. Met him, and he gave me brief article in summary. (In files).

Dr. Nadarajah Srisikandarajah (address in notes), a Tamil who fled Sri Lanka in the disturbance there and settled in Australia. School of Agricultural and rural Development, University of Western Sydney. He has a graduate student in Fort Collins, at CSU, working on embryos in sheep. His son, also met, is to be a Rhodes scholar in political science.

Left hotel about 11.00 p.m. to ride in crowded taxi to the train station.

Waited an hour in crowded and rather dirty train station.

Jan. 9, Friday.

Night ride on train to Bangalore. There were four bunks in the compartment, but no sheets. So I just slept stretched out on the vinyl bunks. This is first class travel! Second class has eight bunks per compartment!

Arrived Bangalore about 5.00 a.m. in crowded train station, very dirty. We were expecting to be met but missed the connection.

Took a taxi that had to search for the Guest House of the National Law School of India University, with much confusion.

Eventually we found our way to "The Club," a good hotel with a quite decent room, and had breakfast South Indian style.

We met Prof. N. L. Mitra, the director of the Law School later in the morning (card in files). Then went on tour to Banyan fig tree, of massive size. Banyan tree, Ficus bengalensis, grows sideways by dropping hanging (aerial) roots, which become supports. This one covers an acre or more. Leaves are large, glossy, evergreen. The figs are like cherries, and always full of fig wasps. Monkeys roaming about under the tree.

Lunch at a student restaurant. Shivavanjimi Ramakrishnan, a young woman student who was our guide through the day. Her father teaches zoology, and Jayapaul Azariah knew him and her. In the afternoon a tour of the town. We went to Ramakrishnan Ashram, a monastic temple. Then to a shopping district, crowded, and into a nice store for women's clothing. Then to a large bookstore, where I bought book in Indian trees.

Then back to the hotel, "The Club," and had the evening meal there, with Dr. S. V. Joga Rao, and his wife, and two children. Rao is the lead organizer of the symposium. All the Indians here eating with their hands.

Bangalore is said to be the garden city of India. More prosperous and more green space than other cities.

The people visible in the streets are in the upper classes of India, especially here.

Jan. 10. Saturday. Conference all day at the law school.

Lunch served on the lawn. Good ice cream. I spoke after lunch. After the conference, we met with the director again. Then I sent e-mail home.

Dinner in rooftop restaurant. Rather nice.

Jan. 11, Sunday. Flight from Bangalore to Pune. Met by R. N. Sharma, Deputy Director (and Head Entomology) and taken to the Guest House of the National Chemical Laboratory. R. N. Sharma, National Chemical Laboratory, Pune 411 008, India.

Went to Raja Dinkar Kelker Museum, 17,000 items, artifacts and relics from 17th - 19th century India.

Then to Gandhi Museum at the Aga Khan Palace. Aga Khan died 1957. His son married Rita Hayworth. His grandson Shah Karim Aga Khan 1957 - still living.

Gandhi was held in a room here 1942-1944. He went on a hunger strike and they thought he might die. He didn't. Gandhi's ashes (only some of them) are here. The main site is Delhi.

coucal - seen at Aga Khan palace

Back out on the streets, which can seem bedlam.

Then went to a Ganesh temple in a city park, about dusk.

Then back to the hotel, and to Sharma's house for drinks. Then dinner in the hotel at a big round table.

January 12, 1998. Monday. Seminar at National Chemical Laboratory. Several army persons were present, including Lt. Col. S. Kohli, M.D. Also present was Surjeet Kaur Chahal, philosophy, University of Pune, who gave me a copy of her book in environmental ethics.

In the afternoon, we drove to Ahmednagar. Furious traffic at first, then opened up into a more rural area. Rather dry, and generally looks depauperate. Rather crowded in the van.

Reached Ahmednagar. The host here is A. G. Bansode, Department of Zoology and Principal of the College. He did his Ph.D. on bats.

Lots of banyan trees. Lots of baubul trees. Neem trees, long toothed, asymmetrical. Sandalwood, with a simple leaf.

Parthinium, Congress grass, an irritant, looks like ragweed.

They call bananas plantain.

Rose-ringed pheasant, seen in tree on campus.

Brahminy kite, with white chest

Pariah kites, a scavenger in cities and towns.

Stayed in Guest House, cots, rustic toilets, something like a church camp.

January 13, Tuesday. International Workshop Cum Seminar: Environment, Medical Ethics, and Biodiversity. Gigantic confusion for the inaugural session in the morning, mostly turned out to be a ceremonial occasion. I got very different instructions about what to do, and eventually gave a five minute speech, greeting them, and, later, after lunch a keynote address. Papers continued throughout the day.

This is the state of Maharashtra.

January 14. Wednesday. Up at 4.00 a.m. for 5.00 a.m. departure, on three crowded busses, and confused. Drove to Aurangabad, 105 km, and to Ajanta Caves. Temples carved into basal rock. Generally confused tour but the temples are quite impressive. Much pestered by hawkers. Lunch at a Forest Rest House, a rather nice outdoor picnic, the usual rice and gravies.

Then we drove to Ellora caves, 21 km away, a huge temple carved into the bed rock. Langurs.

Then to the poor man's Taj Mahal, passing a big fort en route.

Then to a guest house, and much frustration getting to a bed for the night. We had to meet the Vice-Chancellor after supper on the lawn, who made some remarks to the group (100 persons on the lawn) in so soft a voice that I couldn't hear him six feet way. But they applauded anyway. Part of the problem is that there is never at these occasions anything you can safely drink.

Finally we got to a Government Guest House about 11.30 p.m.. No sheets, no towels, no toilet paper, but hot water that worked if you turned the switch on.

July 15, Thursday. Up at 7.30 and back to the University Guest House for an unintelligible lecture and slides that I couldn't see or understand.

Then a bus ride, stopping for a snack at a Catholic High School, then to Jaikwadi Dam and a huge lake.

Now they put Frank and me in the jeep (the Suomi), so they could play loud music on the busses. Two mongoose crossing the road. The Suomi took a "short cut," so the driver could stop at his home. We stopped in a wretched village for some time, and I took several pictures there. There were big bats in the trees, which I never saw too well, but I did see them, hanging in the foliage. Pteropus giganticus, the world's largest bat, a larger one now extinct. They are fruit eating and pests.

Then we drove to an organic farm for a greetings and a tour, supposedly a model for rural India. This farm has reclaimed dry land, several hundred acres, and made it flourish. Cordial picnic by a lake.

Then we had to get back on the bus, as the Suomi was going in for repairs. Reached a "Village," another model project, Ralegan-Siddh, since 1975, led by an eminent local citizen, Shri Annasaheb Hazare, who had been on the podium at Ahmednagar College. Great confusion about where to sleep. We finally got into a cabin, with six beds in three rooms. No sheets, no towels, no toilet paper. Hot, hot water which, when you left it on for a few minutes, steamed and blew a pressure valve.

80% of India is still rural. Rainfall here is 15"-16", sometimes 20"-25", with droughts every two or three years.

Supper again, inside a meal hall, but I took none. After more confusion, I went back to the cabin.

January 16, Friday. Noisy night, since the tin doors scraped with every opening. Six of us in three small rooms.

I rose to find the main group gone. They had had a session 10-12.30, and decided to go to a Mountain Station to be there at 10.30 a.m. Mahabaleshwar Hill, once forested but now degraded.

But the Suomo was back, with my pack in it. Confusion again, about a woman who might go with us. Confusion about trying to see Anna Hazare. We drove into town to see if we could find him, and visited a school, and eventually back to the Village, and took off for Pune.

Spent the afternoon at Sharma's House. Even in Sharma's house, he has no running water in the middle of the day.

Flight from Pune to Delhi.

You can't drink the water on Indian airlines.

We were met by some students from the medical school. Taxi drive into town (in two taxis), drove much too fast.

I tried to make a phone call to the U.S., with much hassle. There is an attendant in a phone booth, who meters the calls.

At the Guest House, All India Institute of Medical Sciences, the best room in many days, but no towels, and hot water did not heat until morning. Went to bed feeling very grubby.

January 17, Saturday. Conference: All India Institute of Medical Sciences. Host is Dr. K. P. Kochhar (All India Institute of Medical Sciences, Ansara Nagar, New Delhi 110029, India); her husband is also a physician in a private hospital in Delhi, also met. This is the most upperclass I have seen in India.

Delhi is the third most polluted city in the world. Hindustan Times, Jan. 18, 1998, p. 1.

Went to a crafts fair, at which time I also got some passport pictures made, then a rather elaborate meal at the Guest House. Hosts were a student and a young woman who is a professor here. Very cordial hosts.

Even in Delhi, there were cows walking around in the streets.

January 18, Sunday. Breakfast and goodbye to Azariah and Macer. Leavett has already gone for a daybreak flight.

A taxi, even an autorickshaw often has to stop by a petrol station to get gas enough to get you where you are going, as did my airport taxi.

There were pigs walking around on the approach to airport. Remarkably little hassle at the airport.

I never saw a U.S. fast food chain (McDonalds) in India. No beef!!

Nepal

Flight on Boeing 727 Royal Nepal Airlines. The Indian planes were Airbus.

I saw the Himalayas at considerable distance from the plane, striking but as yet far off.

Nepal - a land of superb scenery and some of the best walking on Earth. The Kathmandu Valley is ringed with hills, rising to the Himalayas. Himalayas means "the abode of the snows" in Sanscrit. One does not have to be a Sherpa or Edmund Hillary to get into these great mountains. But one does have to walk, or trek. But watch the weather, avoid the monsoons. Trails are muddy and plagued with leeches. Lonely Planet, p. 60

Shangri-la, a paradise in Nepali mythology. La - a mountain pass.

No U.S. airline flies to Kathmandu.

Everest and Annapurna Range cannot be seen from the ground at Kathmandu.

Booked into Vajra Hotel, really a quite nice hotel. Open court inside, and a pleasant red brick.

Walked into town and got a haircut.

January 19, Monday.

Breakfast in room, oranges, peanut cakes, though I later learned that breakfast came with the room.

Took taxi to Gurans Travel in Patan, and got Bhairawah ticket, to go to Tansen and mission hospital later.

Walked back across town, getting my Royal Nepal return flight out confirmed. Passed Annapurna temple, goddess of abundance.

Made it back to the hotel by 12.30. Lunched in room.

Joined my travel group at 2.30 p.m. My roommate is Nestor Burkhart, 2295 Loyola Rd., Cleveland, OH 44118-4507.

The group:

--Jerry Baum, Baltimore, MD, brother to Sue Speers. Works in education though is not a teacher.

--Rita Bloom, Washington, DC, works in textiles.

--Nestor Burkhart, Cleveland, OH

--Dan J. Cragin, Santa Monica, CA, father, retired Rockwell engineer, though Rockwell has now merged with Boeing.

--Dan P. Cragin, son, high school teacher in automotive mechanics

--Betty Davis Gates, Bethesda, MD, blonde, former model

--Floyd and Betty Hutton, Seattle, WA. He was high-school history teacher, retired.

--Ed and Betty Nelson, Oakland, MI. white-haired. retired engineer from General Motors, Fisher Body.

--Guthrie and Sue Speers, Center Sandwich, NH, retired Presbyterian minister 36 years at New Canaan Connecticut church. Studied at the University of Edinburgh, knows Tom Torrance, Don Shriver, was on Board of Trustees at Union Theological Seminary.

--Barbara Holmes, Houston, TX, joined us later. Works for Ker and Downey, the tour operators.

The guide is Basudev Giri, or "Basu," manager of Ker and Downey in Nepal. Studying economics when he can at university at Kathmandu. A brahmin.
Ker and Downey is owned by a Houston, Texas automobile dealer!!

In Nepal, about 5,000 students graduate from college and university each year. About 200 get work.

4.00 p.m. We walked to Swayambhunath, the "monkey temple," about fifteen minutes walk away. The temple is located on the top of a hill west of the city, a popular and instantly recognizable symbol of Kathmandu and Nepal. There is a gold colored square blocked stupa with Buddha's eyes. There were lots of rhesus monkeys. This is a Buddhist temple, though most Nepali's are Hindu.

On the walk, we stopped to watch women and children separating black from white wool. They are paid 80 rupees a day, about \$ 1.25.

There are allegedly Buddha's footprints at the bottom of the stairs. I bought 5 bracelets for 100 rupees from a young girl.

Nepal has 23 million people and a terrifying population growth of 600,000 a year--2.6% annual increase. The average woman has five children. Life expectancy is 54 years. Lonely Planet, p. 38.

Nepal is one of the poorest countries in the world. The GDP in 1994 estimated at US \$ 156 per person, though 90% of the population is and will remain subsistence farmers outside the cash economy.

Nepal has 40,000 trekkers a year. Their impact on the Himalayan ecology is of concern. Partly the litter they leave, or the litter left from their lodges, from what it takes to support them. Partly the need for fuel.

There is a two-day seminar on ecotrekking taking place while I am here.

Ecotrekking brings a change to raise the income of the region, and to make the Nepali landscape and culture familiar to much more of the world.

One-third of the fifteen year old girls are married. The Rising Nepal, story Jan. 19, on hand.

A tiger killed an 11-year old girl while I am here. The Rising Nepal, Jan. 19, on hand.

January 20, Tuesday.

37 languages are spoken in Nepal.

The Gurkhas kept the British out of Nepal. They have long since served as mercenaries in the British army. They used them among other places in Hong Kong.

Kathamandu is at 1300 meters (4,265 ft.). The lowest part of the country is 300 meters (984 feet.) Nepal was closed to outsiders until 1951. There was an era of hippies and drugs.

The Rana regime lasted 104 years, 1846-1951. They were hereditary prime ministers, ruled Nepal,

virtually keeping the royal family prisoners for ceremonial and religious purposes.

In 1951, King Tribhuvan reigned, aided by recently independent India. Nepal was opened to foreigners, and two years later Everest was climbed.

Nepal has only come lately into the family of nations. Until 1950 it was a closed society, until 1990 really ruled by a king.

Birendra, the present king, could not be crowned until the court astrologers found enough augers of his good fortune to permit it. And this for a young prince (now the king) educated at Eaton and Harvard!

Lots of giant radishes in the markets, both red and white.

The Kathmandu valley has 1.2 million people. The per capita income is \$ 180.

There are few divorces here socially, though it is legally easy. Polygamy is legal but not approved socially.

Nepal became a democracy in 1990 in a parliamentary crisis. Following demonstrations and riots, King Birendra on April 8 lifted the legal ban on political parties. The Constitution of November 9 invested sovereignty in the people, guaranteed human rights and introduced a parliamentary system with the King relegated to a constitutional monarch.

The strongest party is the Communist Party, but it is a strange kind of Communist Party.

The first Sherpa woman to climb Everest was Pasang Lhamu Sherpa in 1996? She died in an avalanche on her return. We passed a statue to her.

Rice is the main crop. Planted in July. Harvested in November.

Nepal is a land-locked country. All its petroleum has to come via India. There are only two major roads from here, anything like what we would call highways, one south to Pokhara, one north to Tibet.

We drove to Bodhnath Stupa, on a ring road, east of Kathmandu.

Lots of Tibetans here.

Big prayer wheel.

A Mantra: "Oh the Lord who is like a jewel, who sits in the Lotus Flower, please hear my suffering."

They were throwing saffron on the stupa. Big buckets of yellow liquid. Saffron is from flower petals. There are all grades of it. It is also used as a spice and can be expensive in the West.

The married women wear red. Widows pale colors.

There are few doctors.

Tuberculosis is a big problem.

In the valley that we drove through they grow rice in the wet season and make bricks in the dry season.

They use no plows here, because the plows have to be pulled by bulls, and the bull is associated with Shiva. So out of respect for Shiva, they hoe everything by hand!! This is not true elsewhere in Nepal, and later in the mountains I saw them plowing with oxen.

We returned to bus and drove to Bhaktapur, a medieval city. Many temples, much brick. Lots of fine brickwork and wood carving. Often quite picturesque.

At one temple the intestines of a sacrificed water buffalo were hanging on the temple wall. Elsewhere, erotic carvings on a temple wall. Copulating elephants carved on temple wall.

Lots of potters and pots (pix of potter and nursing woman in background).

The film, "The Little Buddha," was filmed here.

We returned to Kathmandu for lunch in a Tibetan restaurant, eating outdoors.

A bizarre combination of the sublime majesty in nature and the heartbreakingly ugly bungalows that the people inhabit. Still, there is also a certain nobility in the resolution written into the lines on their weathered faces.

I saw at one of the temples, an old woman daubing some paint on a Buddha image and wondered whether to despise her ignorance or admire her courage.

74%, three-quarters of the rural population are illiterate.
the floral glory of rhododendron forests
6,500 trees, shrubs, flowers
300 orchid species.

In this small country, there are more birds (800 species) than in North America, a region many times its size, and nearly 10% of the world's species.

The Impeyan pheasant flies only downhill. They must walk uphill! Lonely Planet, p. 27.

This is impossible terrain for development in the usual Western sense.
Corruption is endemic at every level of government.

Wednesday, January 21.

The markets look at first something like a cross between a flea market and a trash dump, though on closer inspection there is some remarkable craftsmanship.

By road to Pokhara is 8 hours, though the distance is only 200 km.

Went to the airport, and flew on a 19 seater plane, with cotton passed out to plug up your ears.

Enormous manual labor to terrace and to tend this mountainous landscape. One thinks of rice paddies, flat and wide, but in Nepal it is wet enough during the monsoons to grow a crop of rice on the steep, terraced hillsides. Perhaps half the mountains are deforested for terraces and fuel.

There is a certain aesthetic appeal in the lines of sinuous terraces, thrown into relief by the winter sun, ascending up a mountain.

We landed at Pokhara.

Pokhara was not connected to the outside world by road until the 1970's. Lonely Planet, p. 350.

Gorkha is near Pokhara, and Gurkha soldiers take their name from there.

The traditional Nepalese hat is the dacca, named from a cloth woven in the Bangladesh capital.

Poinsettia shrubs were in bloom in the hotel yard.

We met the porters:

Som - my porter

Durga, Surya, Santa, Tek, Kesh. 7 porters, two persons have one porter.

Vein flowers, an orange-flowering vine in town

I bought two tiger-eye necklaces from a Tibetan woman at the gate of the yard of the hotel, she spoke good English. The other woman was quite disappointed.

Pariah kits flying over town.

in the fields, rape - a yellow mustard.

We got on the bus and drove out of town, a steady climb to about 5,000 ft. Picnic lunch at the top of a pass, started the trek at Lumie. Across the way there was a hut with a man working at a hand spun sewing machine. A herd of sheep and goats came down the hill.

I started the trek at 2.30 p.m. Only some walked, others rode the bus further, for a shorter hike in.

The Annapurna area has 40,000 people and, now, 25,000 trekkers a year. The three religions are Buddhism, Hinduism, and Tourism.

Women are advised to wear skirts, not shorts, as it makes their toilets easier since "you must go behind a rock."

See map, "Round Annapurna," on hand for details of my route.

Most of this trek was downhill. First there was a larger cobblestone pavement, wide enough for a cart, going through several villages. Cows, chickens. Water spouts here and there.

People that you pass say, "Namaste," = Hello, or literally: "I salute all the divine qualities in you."

Crops: rice, millet, rape. They plant wheat in September, harvest it in April. Then they get a crop of maize. Then with the monsoons, they plant rice.

We passed several primitive mills, wheels turned by water, now dry streams.

There is a sense of their being backward, but then a sense of their integrity. Women carrying hay

for cattle, or weaving bamboo baskets, a girl, bare-foot, carrying her baby brother, bare-bottomed. A woman pounding out millet. A woman nursing a child, a man with a bamboo crate of chickens.

But then a profound sense not so much of their being backward as of trekking backward in one's own history, realizing that until the last century or so one's own ancestors lived rather much like this. The rural life, no electricity, no plumbing, central heating, no motors, no gears, cars, no paved roads.

"By the sweat of thy brow shalt thou eat thy bread."

Not so much primitive as primeval. Living antiquity.

Some barbed wire here and there, to keep cattle out of a hay pasture.

Lots of dry stone dykes. Terraced hills with rice stalks, or, if steeper, millet is planted during the rice season.

Urtica dioica, common nettle, often seen.

Reached the lodge, near Birethanti, quite nice. Sanctuary Lodge, 3,400 ft. This is on the Modi River Valley. They serve you "hot lemon." This is some lemon juice poured into boiling water and sweetened.

The lodge was built in 1991-92. Ker and Downey own four such lodges. It was built without machine tools. All materials came in carried on backs. The slate roof, for example, 2,500 big slates for the roof, was brought from 11,000 ft., requiring a two day trip to carry 1-2 slates.

Dinner

You eat with your right hand, because your left is to wipe after toilet!

There is solar hot water, apparently a unit for each room, with enough hot water for two showers, no more. There is a diesel power generator running from dusk to 9.30, then no electricity. But even then the lamps are dim.

After dinner read flora books in the dining hall.

Some genera found here:

Aquilegia

Caltha

Trollius

Aconitum

Delphinium

Actaea

Cimafuga

Ranunculus

Anemone

Thalictrum

Clematis

Paeonia

Michella
Berberis
Papaver
Meconopsis
Corydalis
Dicentra
Draba
Erysimum
Chorispora
Cardamine
Parry
Viola
Arenaria
Minuartia
Dianthus
Cerastium
Gypsophilia
Silene
Stellaria
Lychnis
Hypericum
Camelia
Geranium
Impatiens
Aesculus
Zanthoxylum
Euonymus
Olex
Rhus
Vitis
Cassia
Mimosa
Desmodium
Thermopsis
Astragalus
Oxytropis
Rubus
Hydangea
Arabis
Cardamine
Laportea
Campanula
Veronica
Urtica
Sorboria
Tragopogon
Rosa
Prunus
Spieaea

Cotoneaster
Pyrus
Sorbus
Fragaria
Geum
Potentilla
Sibbaldia
Saxifraga
Parnassia
Ribes
Sedum
Epilogium
Begonia
Opuntia
Angelica
Lonicera
Valeriana
Aster
Solidago
Anaphalis
Senecio
Cirsium
Gaultheria
Vaccinium
Androsache
Primula
Jasminum
Genitian
Swertia
Ipomoea
Pedicularis
Orobanche
Salvia
Scutellaria
Lamium
Stachys
Amaranthus
Bistorta
Rheum
Daphne
Euphorbia
Spiranthes
Habenaria
Cypripedium
Iris
Agave
Allium
Hypoxis
Lilium

Clintonia
Smilacina
Polygonatum
Tulipa
Trillidium, like a Trillium
Juncus
Arisaema, Jack in the box

So many of the genera are familiar.

Dendrobium, an epiphyte orchid. Possibly D. densifolium often seen, great clumps and layers of it on some trees.
Trees:

Rhododendron, a marvelous assortment of them.
Acer
Rhus
Sorbus
Viburnum
Populus
Alnus
Ulmus
Betula
Corylus
Carpinus
Quercus

Evergreens
Pinus
Tsuga
Cupressus
Juniperus

January 22, Thursday

I awoke to step out and see Machhapuchhare, "The Fishtail" glorious above the valley. 22,956 ft., 6997 meters. This a sacred mountain, not climbed, at least not since 1951. No permits are given.

Maa cha push har. More accent on the cha. With a fishtail at the summit.
(Spelled with two double h's in Lonely Planet and on the map. Spelled Machapuchre in other literature. Machha = fish. Puchhre = tail.

The hike to Annapurna Base Camp takes 10-14 days from here.

There is a sketch map of the main peaks in Nepal in Lonely Planet, p. 348. Rather good and helps you get oriented.

We will trek to Gandruk, 6,400 ft.



Glacier Dome, 7,193 meters
Annapurna South, 7,273 meters

A land where most of what you eat has been raised by your own labor.

Sacrifices are made to Annapurna, the goddess of grain, goddess of plenty, if the rice fails. Anna = various grains. purna = plenty, full of.

We set out on trek after breakfast.

grinding millet (pix)

poster about polio vaccine (pix). The Nepalis just had a campaign to get polio vaccine to every infant, and got it to over a million children in one day!

malnourished children (pix)

thistles

kestrel

some buteo

Lunch at Kimche.

Mongolians have flatter faces, rounder. Indo-Aryans have longer noses.

Woman pounding turmeric for curry (pix)

Man plowing with oxen (pix)

An ethereal feeling after lunch rounding a bend and there is the Annapurna range and its peaks.

white-backed vulture

crow

rufous-backed shrike, black headed race.

The climb was steep and taxing, all day. Giddy from the climb, and the peaks towering above, I understood how the myths of Shangri-la arose.

Like climbing stairsteps all day. Much of the trail was huge flagstones, steps, built up over the centuries.

We reached Gandruk (Gandrung, on maps), 6,500 ft, from a start at 3,400 feet. a 3,200 ft climb. (The climb up Long's Peak is 4,700 ft.) Lodge here is Himalaya Lodge.

Evenings were cold, as was early morning, but it warmed up fairly quickly.

Cold, but I am in the Himalayas, and it is January.

OAT has taken one person out by helicopter.

Prince Charles is coming to inspect Gurkha troops February 28, and to be flown by helicopter to Sanctuary Lodge, not to Gandruk. Some members of the British embassy are coming here, Himalaya Lodge.

The influx of cash from trekkers enables many more people to remain in the villages, rather than abandoning the villages for the wretched poverty of the cities.

There are 7,000 people in the village area of Gandruk. 1,200 families. 225 families have electricity. The Canadians helped them put in a small hydroelectric plant, makes 50 kilowatts. The grant was 900,000 rupees, they took out a loan of 900,000 rupees. All the labor was contributed. The lodge has a backup generator. Still, the light bulbs are 25 or 40 watts, pretty dim.

January 23, Friday.

I awakened to stunning views of Annapurna South, 7,273 meters, and Maachhapuchhre, 6,997 meters

Annapurna III, 7,555 meters

Annapurna IV, 7,525 meters

Not visible from here: Annapurna I, 8,091 m (= 26,538 ft), the tallest in the range, and 10th highest mountain in the world.

Annapurna II, 7,937, the second highest in the range.

(These summit numbers differ in various guides and sources, somewhat. They are corrected here from numbers in field notes, given by Basu.)

8 of 10 of the highest peaks in the world are in Nepal, and 8 of the world's 14 8,000 meter (26,250 ft) peaks. Good list in Insight Guide, p. 53.

Some of us went for a walk further toward the Annapurna ranges.

Baby in cradle, bamboo, woven cradle, dangling from hook (pix).

Reached a pass on the main trail, Komrony Hill (Kyumrung, maybe Chomrong, on map), guest house here. Old woman with one tooth (pix).

Then we took off up a ridge, through a good rhododendron forest, and eventually out to a grassy flats with a good view. The forest would be spectacular were we here in its bloom.

On return, donkeys with yak hair decorations

Returned for a late lunch. Then we walked to the Annapurna Conservation Project. There is a headquarters building where we saw a video. Benefits of the Annapurna Project: education about sanitation. Education about building toilets. Education about trash.

June 24, Saturday.

Trekking back down to Birethanti and Sanctuary Lodge, about two thirds of it by a different route.

Woman weaving rice mat (pix)

A rather level path at first, but then steep and rather taxing.

children (pix), that ran away and I had the guide call them back for a picture.

Passed a school, and left some donations.

Met several children, cutting ferns for cattle/buffalo. They were carrying them back in bamboo baskets. They asked, as our guide translated it, for "medications." One pointed to a cut on her hand. I applied a bandaid and she winced as I pressed it on. Four others also had cuts. We put



five bandaids on them. The first girl had a somewhat bad cut, and needed more than a bandaid.

90% are subsistence farmers. It is difficult to imagine that most of them will ever be more than that. One wishes for them better education and medical care.

They are poor in material goods, but the timeless virtues are here: love, honesty, courage, resolution, endurance, thrift, hope - and laughter, of which I heard much.

cuckoo

The group was pretty thoroughly whipped from the steep descent. Nestor hardly made it, and had to turn his daypack over to a guide.

But I did fine, better than I expected. I had been nursing a sore knee all fall, since the Rawah's backpacking trip last summer, made worse in the Yellowstone pack trip and the horseback trip in the Scapegoats. But the knee really didn't bother me.

Reached Sanctuary Lodge with Machhapuchhre nicely seen above the clouds.

The trails are certainly not all paved flagstone. This one was often very rough, and steep.

OAT will not run this trip up to Gandruk and the Himalaya Lodge next year. It has proved to be too strenuous for many of their customers, over 60. Ours is the first group in which everyone reached Gandruk. Some have had to turn back. (But what did they do with them, while others went on to Gandruk?)

Companies called Exodus and Country Walk in the UK will continue to run it.

Health care and literacy figures are among the worst in the world.

Tourism and carpet making are the biggest earners of foreign exchange.

There are three seasons:

Winter: October to March

Spring: April to mid-June. rain occasional.

Monsoons: June to September. violent downpours, often at night.

January 25, Sunday.

Very good nights sleep.

Next door to Sanctuary Lodge is Adventure Quest, also owned by Ker and Downey. This is used to train policemen from Singapore. A couple months back 22 of them got in trouble at high elevation and had to be rescued by helicopter.

Off on the trek to Dhampus. The trek was a steady climb, only eight of the thirteen attempted it. The others stayed another night at Sanctuary Lodge and then came out a shorter way.

Lunch at about 5,800 ft. A steady climb. Stone walls and a sort of picnic area that Ker and Downey had built, but we just ate on the walls.

Lycopodium. Some exceptional patches seen.

Daphne prob. mucronata. In bloom, an evergreen, with four white petals. Very attractive.

Cythea spinulosa, Tree ferns. Some quite nice ones.

Selaginella.

This is the richest, best woods I have been in on the trek. Lots of ferns, mosses, rhododendrons. This is a government forest preserve.

Passed one field with a scarecrow in it.

More climb after the lunch.

Annapurna I is often nice, though mostly in the clouds after lunch.

Annapurna II and IV to left, with tree on left (pix).

Lamjung Himal, to the right of Annapurna II.

Reached Pothana, where I bought the map, "Around Annapurna." But the trail we have been walking this morning isn't on the map. This was the summit of the day's climb, after that a descent to Dhampus.

A rather long day but I did it well, and the best day of the trek so far as seeing what the original native vegetation was like.

Nepal chestnut. Castanopsis hystrix.

The lodge is Basonta Lodge.

January 26, Monday.

Rose to a splendid view of Annapurna South, Annapurna I, Machhapuchhre, Annapurna IV, and Annapurna II.

Walked out.

On the way out, Dhaulagiri seen in the distance. 8,167 meters. 26,788 ft., the sixth highest mountain in the world. This is across the gorge behind the Annapurna Range, the gorge cut by the Kaligandki River, and this is the deepest gorge in the world.

Nepal has the highest mountain and the deepest gorges in the world.

Chuli = peak

Himal = range

pipal

pinus through here

peach tree, with a few blooms

bought two bracelets and a vase on the way out.

Reached the bus about 11.30, reached Pokhara about 12.30.

Lunch at the Tiger Eye Restaurant, rather fancy.

Ours was the first trip in which everyone made it to Gandruk. Next year OAT will stop going there.

Walked around town in the afternoon.

Bought film and book.

At the turnoff into the hotel, there were men making gravel with hammers all afternoon.

This is Superbowl Sunday. The Broncos won over the Green Bay Packers. The hotel has CNN, the first I have seen.

pipal trees in town (pronounced peep al)

January 27, Tuesday.

Left the hotel and drove several hours to start the river trip.

The bus ride was first on the Pokhara-Kathmandu road. Paid road toll.

Stopped for rest stop in open area.

Pix of three children carrying fodder and wood (later used in Coloradoan story).

An unfinished house is not taxed at the same rate as a finished house, so they never finish them.

We crossed a deep, narrow gorge right outside of town.

Water taps along the road every half mile or so.

A somewhat misty morning, though Annapurna II, IV, II were nicely visible.

cattle egrets

black drongo - black bird with forked tail.

I saw a few trundle sewing machines, like the one mother used to have. Most are hand spun.

Reached the boat launch and loaded up.

Little egret

White capped river chat, or white capped redstart - seen often along the shore.

white wagtail

lapwing

common kingfisher

We reached the tented camp about 4.00, beginning to get cold.

There was a Woman's Development Group, 15-20 women, who soon started dancing and singing, and eventually wanting a contribution.

There were poinsettias, head-high, with leaves in camp, good red blossoms.

The rafts and paddles are made in the U.S.
myna birds

Several dugout canoes seen, with men poling up the river.

Supplies to the camp are packed in 12 miles. This is cheaper than to bring them downriver.

January 28, Wednesday.

night in tented camp.

sal tree - Shorea robusta
5-6 cormorants
2 vultures, on rocks
12-15 good rapids, enough to get you wet
45 km. on the river

Got off the river, into bus. 2 hour drive through some wretched villages, especially Narayanghat.

We crossed the river Narayani on a boat to enter Royal Chitwan National Park. There were hundreds of people cutting various grasses, including elephant grass, to carry it out of the park, across the river. They are permitted to do this several days a year.
The river is the boundary of the park.

Reached the lodge, Temple Tiger. My lodge (with Nestor) is at the end of the line of lodges, next to the forest. Temple Tiger has 40 beds, 6 elephants, is owned by a rich man in Kathmandu, who calls early each morning to check on it. The more famous one is Tiger Tops, 60 beds, 15 elephants. There are five other lodges, some 225 beds, 55 elephants.

Afternoon ride on elephants. Four of us, plus driver, on back of elephant. loading from a high platform.
nuthatch
5 rhinos seen.
spotted deer.

red junglefowl seen when mounting the elephants. This is the ancestor of all the domestic chickens. It is just a chicken, but still rather a thrill to see it wild.

January 29, Thursday.

heard junglefowl crowing in the early morning.
During the night, the dew is so heavy that it drips like rain, and, especially with some mist, you can think it is raining, when it isn't and soon clears off.

morning elephant ride
4 rhinos
big fish-owl, seen on ground.

barking deer, seen in brush

We flushed a good group of about 10 red junglefowl, and saw them nicely, all appeared to be roosters.

spotted doves

bulbils

kingfisher

pea hen (female peacock), here wild

The Park was established in 1973, the first in Nepal. This is subtropical, the inner Terai lowlands. Since 1984, it has been a UNESCO world heritage site. It was a hunting preserve until 1950, later a rhino sanctuary.

The river areas are the flood plains of the Rapti, Eou, and Narayani Rivers, and Churia Hills.

Prince Philip was once in the Park, also President Carter.

"Chitwan" means "picture forest," or, by another account, "heart of the jungle."

King George V shot 10 rhinos and 21 tigers here, in 1911. A group including his son, the Prince of Wales, later Edward VIII, shot 18 tigers, 10 rhinos.

There is also a different species of rhino in Java, Sumatra.

Tiger - Panthera tigris tigris -- about 100 tigers. They eat chital, sambar, hog deer, wild boar.

Three in our group on an elephant ahead of us saw a tiger, trying to get out of sight as quickly as possible. I didn't see the tiger, but at least I was within thirty yards of those who did, and saw bushes moving where they said it went.

One visitor out of 20 sees a tiger.

The increasing deforestation is causing increasing flooding.

The Royal Nepalese army is responsible for preventing poaching and pilfering timber.

30% of the Park income is given to Village Development Committees.

The Smithsonian Institution had a tiger ecology project here in the 1970's, including radio-collared tigers. A conclusion was that tigers needed more habitat. McDougal reference in Shrestha, Protected Wildlife Species of Nepal, on hand.

Tiger Tops is only a few km. from the Indian border.

There are no people living inside the park.

The population of this region (the Terai) was 36,000 in 1950, 8.6 million in 1991. Shrestha, IUCN, Protected Wildlife Species of Nepal, p. 2.

The best time to visit is March-May.

January and early February when villagers are allowed to get grass (i.e. when I am here!) is not a good time.

70% of the forest is sal, Shorea robusta.

riverine forests are khair, issoo, simal.

Elephant grass, Sacchum species, to 8 meters high. Shorter grasses include khar (S.? imperata) for thatched roofs.

estimated 400 rhinos.

langur - Presbytis entellus --long-tailed monkey, several seen
peafowl, saw 12-15 of them.

gaur - Bos gaurus, largest of the world's wild oxen. Here, not seen.

buffalo - Bos bubalus, some are still wild, or feral. not seen.

Asian cow - Bos indicus - zebu. Some are still wild.

European cows are descended from Bos taurus, the aurochs, extinct in the wild since the 17th century.

Elephant talk, after return.

Asian elephants have smaller ears, females have no tusks or very small ones, and have two domes on their heads, compared to African elephants. They live for 60 years or longer. They don't breed working elephants, as it takes them out of work 5 years, 2 1/2 years to gestate, 2 1/2 years to nurse.

An elephant trunk has 100,000 muscles.

African and Asian elephants are not all that closely related.

<u>Asian elephant</u>	<u>African elephant</u>
five front toes	four front toes
four rear	three rear

Wild elephants are still in Parsa Wildlife Reserve, adjoining the Park, and sometimes come here.

Barking deer, Muntiacus muntjak

Spotted deer, Axis axis.

Rhino, Rhinoceros palustris, 1,500 rhinos in Asia, 450 in the Park, which is 90% of the total population in Nepal.

Rain at lunchtime. Thunder, some lightning.

It rained until 3.00, then we went first on a jeep ride, then on a boat trip, in search of the gharial

crocodile, none seen.

gharial - Gavialis gangeticus, the world's most endangered crocodile. Eats fish. Harmless to humans. They grow up to 16 feet long.

marsh mugger, Crocodillus palustris, more rounded mouth.

seen, 23 rhesus monkeys -- Macaca mulatta -- one group of 14 in a tree, nicely seen.

3 langurs -- Presbytis entellus -- nicely seen, a single langur, on the way to the river, and two on return.

We were already late, on account of the rain, and got the jeep stuck in the mud, which made us later.

Also there were many people at various points of the river, carrying thatch across. So no crocodiles seen.

pie kingfisher.

ruddy sheldrake, 8-10 pairs.

little cormorant.

return to lodge

January 30, Friday.

up at 5.30 for the elephant ride.

seen: hog deer, Axis porcinus, named for its tendency to keep its nose close to the ground, like a hog, as it runs through the brush.

This can interbreed with chital, spotted deer. Some dispute the species divisions.

2 rhinos seen (pix).

2 spotted deer, chital, others saw them, I missed them.

7 spotted deer, chital, including 4 bucks, 3 with good antlers. Nicely seen.

Nobody saw any tigers.

A rather wet jungle.

Left at 9.30 a.m. for bus ride to Bharatput Airport.

white-backed vulture, 10-12 of these at a carcass.

A wretched airport, with cows chased off the runway for the plane to land.

Waited some time. They gave us a box lunch and the airport, outside, at I had to chase off goats pestering me to eat it.

Woman nursing a child (pix) in the outside waiting area.

Children standing at the empty trash cans waiting to grab the lunch boxes and retrieve any leftovers.

Then a leper doing the same.

Alarming population growth, combining an influx from the hills and high birth rate. The Terai cannot absorb this escalating population much longer, and no answers are in sight. Lonely Planet, p. 294.

Return to Kathmandu, and to Vajra hotel.

January 31, Saturday.

Got up at 5.45 for breakfast with the group taking the Everest overflight (which I took after the Everest trek).

Did laundry for two hours. I am having a problem shaving, the shaver is dull and won't cut the beard of ten days that I have grown.

Today is the 50th anniversary of the assassination of Mahatma Gandhi.

Taxi to Patan Hospital, and walked around there. Four floors. Pretty minimal. 4th floor is private wards, and the funds from the rich who can afford to stay there are used to pay for the poorer patients on floors 1-3.

Walked back during the day, across Patan and Kathmandu.

St. Xavier School. I walked through it, ate lunch there. Sign: International Christian Congregation (KICC) meets here. This is presumably the remnant of the church that Massey Mott Heltzel once served here, and he died here.

Father Thomas E. Gaffney, S. J., Cleveland, Ohio, served here many years, and was murdered Dec. 14, 1997, shocking Kathmandu and Cleveland. He was 65 years old (my age), and said to be the Mother Teresa of Nepal.

Walked by the Western, or Pulchok Ashoka Stupe (Putuhowk). The four stupas marking the boundaries of Patan are said to have been built when the Buddhist Emperor Ashoka visited the valley 2,500 years ago. A grassy stupe (pix).

Bought aquamarine for Jane (to keep till June 1).

Return to hotel.

February 1, Sunday.

start Everest trek.

up and out at 8.00 a.m. Off to airport.

Padam Jurind is my guide on the Everest trip. He is with OAT, though not with Ker and Downey. Padam has done technical climbing to 22,000 ft.

Helicopter flight canceled because not enough people. Frustrating, and the frustrations were only to begin.

Russian helicopter, MI-17, carries 22 people. The pilot is a Russian.

Transferred to Lumbini Airlines and waited all morning. Flight cancelled, claimed it was too rough at the airport at Lukla to land.

Hillary built the strip at Lukla, since made longer, but it is touch and go to take off and land.

back to hotel, and went to Pilgrim's Book House in the afternoon.

Snow leopard and Himalayan black bear are here, endangered. Shreshtha, IUCN, Protected Wildlife Species of Nepal, p. 4, p. 48.

Everest was named for an early British surveyor. Sir George Everest, Surveyor General of India, 1830-1843. It is the only mountain in the entire range that bears the name of an individual. It's height was reasonably estimated in 1852.

The Tibetan name: Chomolungma.

The Nepali name: Sagamartha.

There were too many Sherpas killed carrying gear, and the general policy now is no Sherpa porters past base camp. Increasing numbers of tourists also means that Sherpas would just as soon work for them, rather than the technical climbers.

These mountains begin where the Colorado mountains leave off!

There is perhaps no other place in the world where everything you are looking at is higher than anything in Colorado.

Sagamartha. The jet stream in winter blasts a characteristic plume of snow eastward from its summit, leaving the steep, black, rocky southern face.

In summer, the jet stream reverses and piles monsoon snows white into the same face, giving a more wintry appearance in summer than in winter, curiously--at least when the mountain can be seen in summer, since clouds cover it most of the day.

Hindu wedding at a temple at the end of the bridge on return.

Went out for supper to K.C.'s restaurant, good pizza.

February 2, Monday.

Up at 5.00 a.m., off at 6.00 p.m., to wait all morning and be foiled again by Gorkha Airlines. There was a Himalayan expedition with a lot of gear, and an argument about whether the helicopter would take the big round drums in which lots of their gear was stored. Then there was the claim that the Nepali visa of the Russian ground engineer, who had to verify the flight, had expired, and he had to go and renew it. Then the flight was cancelled. Exasperating!!

Returned to the hotel about 12.00. Restaurant.

Then back to Pilgrim's bookshop. Bought Everest National park book.
light rain in the afternoon.

A monsoon is not a rain but a wind that carries rain.

Plants clinging to life in one of the most extreme habitats on Earth.

Above 6,000 meters, nothing at all grows.

Life ceases at about 5750 meters. Jeffries, Mt. Everest, p. 66.

People might love to see the flowers over spring and summer, but that is the monsoon season, and you can't see the mountains, an unhappy tradeoff.

The Himalayan marmot is the highest living mammal in the World.
Jeffries, Mt. Everest, p. 77.

Sherpa. "Sher" means East, the people who come from Far East, in Tibet.

Sherpas seem not to have prospered much until the accidental crossbreeding of the yak and the cow, and the introduction of the potato (!) by the British from the new world. Jeffries, Mt. Everest, p. 100

Sherpas think that the mother gives the child the blood and the father the bones.

Confronting the grandeur of the surrounding mountains it is difficult to avoid thoughts about the creation of the universe, whether scientific or religious.

Sagamartha. As close as you can be to the top of Everest without being a mountaineer. Sagamartha means "goddess of the universe."

Everest was formed 50-60 million years ago.

On May 29, 1953, Edmund Hillary, a New Zealand beekeeper, and Tensing Norgay, a Sherpa guide, became the first humans to stand on top of Mt. Everest. The summit is 29,028 ft. At 27,900, they spent two hours carving out a space for their tent for the night. The next day, they determined that the oxygen left in their bottles would support them only four and a half hours more. Still, they set out. With only one minute left before they would have to start their descent, Hillary climbed upward. Suddenly, he could go no further. They were at the top. The two men shook hands. Hillary photographed Norgay. Norgay buried chocolate, candy, biscuits, and a pencil his daughter had given him as an offering for the gods. Hillary buried a crucifix. Because the Sherpa had never used a camera and time was short, there are no photographs of Hillary on the rooftop of the world.

Tenzing died in lonely poverty in exile in Delhi in 1986.

Thyangboche has stupendous views of Everest.

Ang Rita Sherpa, from Nepal, holds the record for being the Sherpa with the most successful climbs of Mount Everest. He has made it to the top nine times. In 1991 the first all-Sherpa expedition scaled Everest.

In 1975, to celebrate International Women's Year, an all-female team of climbers from Japan scaled Mount Everest. Junko Tabei, a 35-year old mother, became the first woman successfully to make the climb.

More than 500 persons have now been to the top of Mt. Everest.

Annapurna was the first of the great peaks to be scaled. In 1950, Frenchmen Maurice Herzog and Louis Lachenal reached the top, little realizing that the descent would almost kill them. First, strong winds blew off Herzog's gloves. Frostbite followed. Then Lachenal slipped and lost his ice ax, hat, and gloves, and one crampon. After trudging through waist deep snow and spending the night in a tunnel of ice, they finally reached base camp. They had emergency medical procedures which saved their lives.

Wild yak do not do well at lower elevations. They never descend below 14,000 feet.

The Sherpas make a hybrid cross between a cow and a yak, which is smaller, domesticated, and can live lower down.

February 3, Tuesday.

Off at 7.00 a.m. for the third try. Fog in airport and cold. Waited around to about 12.00 and the sky cleared for takeoff.

There were about 12 passengers, and cargo all strapped in the middle. Russian pilot and Russian engineer.

Weaving in and out of the lower mountains.

Flight was about 50 minutes.

Landed at Lukla, on a pad. The airstrip is quite sloped.

Started hiking about 2.00. The trail descends a lot, then up and down. There are sometimes flagstone steps, but often not.

Reached Phakding about 4.15, and spent the night there. Stayed in Namaste Lodge. The porter, quite short, was overloaded and it took him 1 1/2 hours to arrive.

A lodge in town had burned the night before, and a woman was distraught over it.

There was an English couple, also a South Africa couple in Namaste Lodge.

I was cold in the night at first, in rented sleeping bag and rented down jacket, though I had brought my down parka. Then it warmed up.

The accommodations are pretty rustic, though they did have one Western toilet downstairs.

February 4, Wednesday.

Up at 5.30 a.m. and packed in the dark, though it wasn't as cold as I feared.

Hike to Namche Bazaar.

Up and down and rather tiring, then a long hard climb to Namche Bazaar. The first view of Everest was along the way (several pix).

Reached Namche Bazaar, Himalaya Lodge, 11,200 ft.
Took a nap in a sheltered place in the sun on the porch.

At 3.00 p.m., we walked up a ridge behind the village, to see Everest. This is Sagarmatha National Park headquarters. But the mountain was clouded up and we couldn't see it. (though some pix here).

Returned by a longer route. Saw wild goats, tahr (pronounced tarr) on return. Five of them, nice sight.

There was an older man in the lodge, the father of our host. He signed his picture in the Jeffries, Mt. Everest book. He led Jimmy Carter to a peak, 19,000 ft, last fall (last fall?). He also knew one of the commercial guides killed on Everest two years ago in the big tragedy.

February 5, Thursday.

Up at 5.30 to see Everest. Climbed the ridge back to the Park Headquarters. Everest now in excellent view, though a few clouds passed in front of it now and again. Good panorama of Everest with its winter plume and of nearby mountains. Took lots of pix.

Returned to lodge and hiked out.

More tahr, 2 on hillside, then 4, then 4 more.

About 15 vultures feeding on a dead tahr that presumably fell to its death.

A Japanese trekker died from altitude sickness and was helicoptered out. He was 57 years old.

Reached Namaste Lodge at Phakding about 3.30 p.m. By now I had a deep cough and found it a hard day. The lodges tend to be cold. You have to go to bed to be comfortable. The dining room had the pretense of a fire in it, but they may not be burning wood, just some pine cones. Fuel is, of course, a big problem here.

A group from Hong Kong had mountain bikes. One spoke good English, used to be a tour guide there, now runs a watch factory.

Food here increasingly turns me off. It is fried in grease, whether potatoes, eggs, or bread, and it all tastes the same.





The guide for the Hong Kong bikers had earlier led an Aspen, Colorado, doctor on a trip. The doctor had a heart attack on the trail.

It is tough brushing your teeth in a dark or dimly lit room.

February 6, Friday.

Got off to a more leisurely start, but I am tired of packing and beginning to want out of here for medical reasons - cough is getting worse steadily.

Walked uphill and down from about 9.15 to 2.00 with stop for lunch. Unappetizing noodles with spinach. But I did drink a coke.

We passed lots of stuff being packed in on yak-cow hybrids, and also carried by porters. We passed big loads of wood being carried to Everest Base Camp by yak-cows. It will take them five more days to get there. This gear belongs to a Swiss team of climbers. A Russian team is coming in in about two weeks.

Passed several porters with no shoes. Seems pitiful.

There are 11,500 trekkers a year in the Everest area.
Not hot but not as cold as yesterday. Foggy from 3.00 p.m. on.

I picked up a basket of firewood laid aside by a porter who was resting. It must have weighed 150 pounds! All I could do was lift it, much less carry it any distance. And he was carrying it in a basket with a strap across his head.

Reached Lukla. Still a hard hike with my cough, and I went to bed. I'll now be glad to get out of here.

February 7, Saturday.

A hard night, too much coughing. Dogs barking. Toilet is outside. Very mealy, pasty granola, bread and jam for breakfast. Again, I am tired of packing the sleeping bag and down jacket and fitting it all in the duffel bag.

A clear, pretty day, and helicopters taking off and landing. Waited all morning for the Lumbini airlines flight, while 6-8 other helicopters and fixed wing aircraft came and went, often unloading as much cargo as passengers on the helicopters.

Took off about 1.00, with lowering skies, and this had me concerned whether we would get out.

Good flight back to Kathmandu. About 1/3 cloud cover here.

Arrived about 3.00 p.m., and in the hotel by 3.30. Took a welcome shower and rest. The cough has left me too hoarse to talk.

Called Jane.

One wonders whether this steep and arduous land ought to be inhabited at all. Buddha was born

in Nepal. Buddha was born here. One can see how he came to the first of his noble truths, "Life is suffering."

Prince Charles is here on a visit.
Dinner with Padam and Dan in hotel.

In Nepal there are hotels for \$ 200 a night in the midst of a village of starving people. The expectations are rising, but there is nothing coming down the road that is going to fulfil those expectations. Nepali's have to come into the Western world, to meet such expectations, more than Westerner's can go to Nepal and give them those expectations on their own terms. Only Nepali's can own land in Nepal, but they lease the land.

February 8, Sunday.

A tough night, taken hour by hour, propped up with three pillows, as this seemed to reduce my coughing.

Clear morning and good weather. Less coughing.

Got to the airport about 8.40 for the Everest overflight, and got put on an earlier Buddha Airlines Everest flight. Two planes took off a few minutes apart. The plane is a Beechcraft 1900D, said to have all the latest in navigation equipment.

Marvelous flight. I identified several of the peaks, with a chart they supplied, including Gauri-Bhamore, 23,405 ft. Melungtse, 23,560 feet, especially in the Everest region.

Everest, 29,028 feet; Nuptse, 25,771 feet; Lohtse, 27,940 feet; Chamland 24,012 feet. Various pix, including Everest from the cockpit.

This is certainly a range of stunning mountains.

Also, I identified the valley from Lukla to Namche Bazaar (11,300 ft) that I had walked up and back the last four days to get a ground view of Everest.

Return flight circled through the Pokhara region, but not close enough to any high mountains to see them.

Returned, and bought a very outdated 7-up (December 1996) and spent an hour sipping it in warm sun on the roof of the airport.

Afternoon flight to Bhairawah, and was met by the Gilmores. Tad and Jane Gilmore; he is missionary surgeon from Greeley, Colorado. Taxi ride 2 hours, 15 minutes to Tansen, a mixed road but not an easy ride. Lots of weddings seen en route. They put up gala tents, and spend lots more money than they can afford, often staying in debt for years afterward.

Arrived after dark. The Gilmores gave me various pills, but I still had a rough night, sleeping with my head raised on two pillows to prevent coughing.

Notes on the hospital:

The hospital was founded by Bob and Bethel ? Flemming. Bob was asked by the Chicago Museum

of Natural History to study Nepali birds, then unknown in 1951. She was along and took an interest in founding the clinic, and hospital.

King Tribhuvan overthrew the Rana prime ministers. Tribhuvan opened up Nepal to Westerners, and they could come in to study birds, and to open the hospital (and to climb Everest).

There are clinics, except Wednesday and Saturday. About 400 new outpatients line up from 7.00 a.m. There are 30 sorters to take their history and do simple examinations, maybe ordering a few tests. If the problem is more complex, they will see one of the physicians. Acute problems are seen that day, others get a later appointment.

40-50% are seen only by the sorters. Malnutrition is a basic problem, associated with everything they see. 60% are the poorest of the poor.

There is a tuberculosis and leprosy clinic here. 7% of the tuberculosis patients are drug resistant.

There are 129 beds in the hospital, with 95% occupancy in the winter, but as the weather warms up this fills to 155% occupancy. U.S. hospitals run 50% occupancy. It costs 8 rupees to buy a ticket to get into the clinic. An x-ray is 40-50 rupees. Medication is 60 rupees. The social services group is all Christians. The drugs are made in India and are fairly good. A lot of money goes for the drugs.

United Mission to Nepal is an umbrella organization, recognized by the government for many years. There are 39 different sending organizations from 16 countries. Things have opened up a great deal since 1990, when they got democracy again. UMN has divisions in agriculture, engineering, and health.

There are perhaps 1,000 different NGO's working in Nepal, not a predominance from any nation. They have to deal with a government that is essentially corrupt, self-serving, though there are many well intended people there also.

Took a tour of the hospital. Saw 400 patients lined up waiting to get to the sorters. Visited various clinics and wards. Operating room. Children's wards. Beds lining the halls. X-ray lab. Ultrasound unit. Pharmacy. Young man with broken neck (pix). They put fliers and pamphlets about Christianity into the wards. Patients take them home and they are quite effective. The doctor in the operating room was a Korean Christian.

Leprosy ward. Leprosy is often taken to be a sign that you have offended the gods, and people have complained that if you help the lepers, the gods will be angry at you.

Maybe it helps to be sick yourself (as I was) when you tour that hospital.

They spoke well of a Peace Corps woman's work there.

Jane Gilmore was especially hard on what Hinduism does to women. Hinduism is mean to women. Women have no rights, worship men as a god. Women have to put in and clean the toilets. They have to walk 12 feet behind their man. They are married off by their parents as a business investment with no choice in the matter.

A buffalo is of more value than a wife, because a wife can be replaced at no cost. A buffalo costs money.

Nepal can look beautiful, with the mountains, even picturesque in the villages, but there is misery everywhere.

Tad Gilmore has \$3,000 worth of sutures sitting in the Kathmandu airport, because they want \$ 1,300 duty on them. They have been sitting there a year and a half. They were donations and would be used to help the Nepali people, but government bureaucrats want to line their pockets with customs money.

They object to Christians because Hindu's have millions of gods, and Christians have only one.

The mission and the church have to be kept rather separate. Nepali Christians do not want Westerners to be seen with them. This gives them a bad reputation.

The largest party is Communist. Communism has done many good things here, teaching them to put in toilets, to keep their paths free of trash, and building community spirit.

This hospital is due to be turned over to the Nepali government in 6 years. In a way that is a good idea; foreigners can't run it forever. But the government will probably prove too corrupt to run it successfully.

The Patan hospital is 15% government and 85% mission. There are not many foreign doctors in Patan.

UMN has 2,000 employees, 200 are foreigners. The majority of the staff are Hindu.

There are perhaps 400 Nepali's in positions of authority enough to have a telephone.

Alcoholism is a big problem, and the church prohibits drinking. They preach a strongly legalistic gospel, many sermons come out of the Old Testament. God's love is not as important as God's power.

There is Roman Catholicism in Kathmandu, and in some ways the Nepali's take better to it. There are plenty of statues and chants.

One-half of the men patients at the hospital can read and write. One-third of the women.

They may also go to witch doctors. Witch doctors require sacrifices to the gods, perhaps a chicken, a goat, to produce cures.

Gilmore does a lot of operations here that he would not be licensed to do in the United States. But somebody has to do them, or they go undone and the patient dies, or suffers indefinitely.

The Gilmores have not yet had a package of mail delivered to them that was not opened. Maybe it is by customs, but there is no such indication. At times things have been stolen out of them. Once they took everything but the beef jerky, presumably a Hindu thief!

Crops grown here:

amaranth

beans, broad

beans, bush
 beans, pole
 beet-root
 broccoli
 cabbage
 cabbage-Chinese
 cabbage-small Chinese
 capsicum
 cauliflower
 chard-swiss
 chili peppers
 chrysanthemum
 cucumber
 egg plant
 Fehungreek
 garlic
 kohlrabi
 leek
 lettuce
 mustard greens
 okra
 onion
 pea-sugar, snap peas
 pea - Chinese edible pod
 potato
 pumpkin
 radish
 radish - mullah
 spinach - winter
 squash, 2nd year production
 tomato
 rice
 millet
 maize

But few Nepalis would grow many of these things.

Mostly rice, dal bhat, rice with lentil gravy.

A frequent problem is women with burns. Their saris catch on fire. Also children fall into the fire.

The Gilmore's have a son coming in May. Andrew Gilmore, lives in La Porte, a student at CSU.

By the time a Nepali man is 50 years old, he is worn out.

Boys are highly prized, girls are a liability, until you can get them married off.

In the guest house dormitory (used by various visiting professionals, students, etc.) in which I was staying, you have to flush the toilets by pouring water into them. They use the waste water from the sink. One toilet is Western, one Asian. Even in the Gilmore's home they flush with waste water.

Patients default on TB treatments when they get better, since they don't want to walk that far to the hospital, and they can't leave their buffalos. A buffalo is a one-person animal, and will let only one person milk it. At Patan, they built sheds so that patients could bring their buffalos!

February 10, Tuesday.

A bit better, but still a bad night. I had to make it through hour by hour.

Met Peter Block, a Canadian doctor, now the hospital administrator.

Headed toward airport at Bhairawah, in taxi, Jane Gilmore along.

The road surface is not bad, but frequently punctuated with landslides, washouts, and crews repairing it, by hand largely.

Stopped at Butwal on the way back. There is a UMN training center here. Met missionaries from Holland, Canada, England. The Nepali government will take it over if and when they can. But it has been here 35 years, and it's not clear that the government will take it over any time soon.

In town, there is a wide main street, but with only two lanes paved. Rickshaws, cows, buffalos all over the place. Stopped for lunch in a hotel, but I had only coke. Got some bananas and oranges shortly afterward.

Drove to Lumbini, the birthplace of Buddha. The birthplace area is a compound with a smallish red brick building in two parts. Various images inside. There is a stone found in 1995 claimed to be a commemorative stone placed by Ashoka. There are lots of brick archaeological ruins, stupas, from 2nd to 4th century A.D.

There were burning 500 or so lamps outside Buddha's birthplace.

Visited the pool where Buddha's mother took a bath, shortly before he was born. Lots of tourists from Japan. Various temples have been built in the adjoining area.

In another month it will be unbelievably hot here, in the low country of Nepal.

Saw Ashoka's pillar, supposedly erected 318 years after Ashoka visited here, 245 B.C.E.

Maha Devi, Buddha's mother. Hindus can worship here too, praising Maha Devi as a goddess of the region, and Buddha as the ninth incarnation of Vishnu.

Returned to Bhairawah airport, and Jane Gilmore left to return to Tansen in taxi.

A miserable wait in a miserable airport for two hours.

Airplane was uncomfortable, hot, and dirty. Everything here is mangy.

Reached Kathmandu and made it back to Vajra hotel rather whipped. The cough has about got me stopped.

Good hot shower and force-fed myself some spaghetti in the restaurant. Another rough night, as I can only sleep propped up. I could sleep a few minutes, cough a few minutes, taking it hour by hour. "Life is suffering."

February 11, Wednesday.

Spent the day around the Vajra Hotel, resting and twiddling my thumbs. Re-read lots of the guide material. Coughing is somewhat improved, but I still start coughing hard if I try to lean down.

Picked up by Padam at 6.30. Tolerable wait in the international airport for 10.00 p.m. take off. Royal Nepal is a mangy airline, and I had to get off and wait 45 minutes in Bangkok, with a long walk around just to get upstairs to departures, right over downstairs, arrivals, where we had arrived.

One or two bad coughing fits during the night on the plane, and I discovered that I could control it by sipping hot water, suppressing the cough, so I sipped hot water the rest of the night.

February 12, Thursday.

Reached Singapore, about 6.00 a.m., and found United Airlines easily. Had them trace my luggage, which they were doing anyway. United Airlines is certainly a different world.

Uneventful flight to Hong Kong, where they re-checked the luggage. Singapore is virtually on the equator, and I'm headed to Denver, so this trip takes me virtually one-fourth of the way around the world in latitude (45 parallel is just north of Yellowstone), as well as one-half the way around the world longitudinally.

Four hour flight Singapore to Hong Kong, and then off the plane, only to get back on some 45 minutes later.

11 hour flight to San Francisco. Long flight but the cough seemed progressively easier to control with sips of water. A long night--seems stretched out even though we are flying East. Some sleep, always nursing the cough. Daylight came three hours before landing, but you have to live the same day all over again (February 12), Wednesday.

February 12, Wednesday (the second time!!)

San Francisco is cloudy and wettish.

Denver, and reached Ft. Collins, home at 6.00 p.m., hanging in there but not in good shape. Saw Steve Thorson at 9.45 a.m. the next day, and nursed the cough for the next six weeks. A tough one.

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end of India-Nepal trip.

March 12-16, 1998. Yellowstone Institute Wolf Seminar, Jim Halfpenny.

March 12, Thursday. Drove up at leisure to Billings. Lovely day. Antelope, about 200. Largest group was 40.

One golden eagle at roadside.

March 13, Friday. Drove to Park, stopping at sporting goods store in Livingston, bought cold weather hood, and upper body long johns.

50-60 elk, 50 antelope. One coyote nicely seen. 3 mule deer.

Maybe 150 elk in Lamar Valley. Two dozen bison, mostly singles or pairs.

Checked in at the Ranch, then drove up three quarters of a mile to a wolf kill. Wolves had been there until about 10.00 a.m. in the morning, but then spooked off by too many people.

Supper, and seminar opening class.

My cabin mates: Bruce Hammon, retired coach, biology teacher, from high school and Wabash College. Indianapolis.

Lynn Weston, a fire chief, Sunset, Utah, moustache, balding. Often in Yellowstone. Involved in various coyote studies as a volunteer. Both had been to Yellowstone repeatedly. As had most of the seminar group.

130 wolves in Yellowstone.

Now half the wolves have never been handled.

Quite a number have genes from 9F. See genealogy in files.

Druid Peak Pack. This has become one of the best known packs in the history of the study of wolves.

40F, the alpha female, seems to have had no pups.

42F, a second female, is black, getting grayer. The fur around her eyes is black. She seems to have had the five pups.

One result of the studies is that, while it was previously thought that only the alpha female bred, it now seems that often more than one female breeds.

Pup 104M was radiocollared in January, and is a heavy pup. Bright white chest star.

105?, 106? and 107? have never been handled and sex is not known.

Latter part of the evening spent on the legal issues surrounding the court order to remove the wolves.

March 14, Saturday. Up and out at 6.30 a.m., and to the carcass. The wolves were on it, five of them. Watched them twenty minutes or so there, then they began to move off, up the valley. We

relocated the vans about three times to see them, and now all eight in the pack could be seen at once, with one wolf far out ahead. Splendid views, over about fifty minutes or an hour. Then they disappeared over a ridge, and we moved the vans yet further up, but they failed to show on the other side. This is the most wolves I have seen at once. The highlight of the weekend, and the only time I saw wolves.

Seminar at the Ranch from 10.30 to noon, again after lunch, and then back about 3.30. We went out at 4.10. Saw 8 coyotes, 5 on the carcass, 3 on the hill, variously coming and going. Coyote came down and joined the road not far ahead of us, and walked the road quite a distance. Much antagonistic behavior. No wolves. Telemetry by Nathan Varley indicates weak signals. They are thought to be bedded down on a bench more or less out of sight north of the road.

Doug Smith spoke Saturday night, mostly about the reintroduction program.

Saturday night, we also saw Bob Landis video made Dec. 10 or 11, 1997. An unrelated wolf, 21M, came into the Druid Peak pack. Marvelous photography of his nervous encounter with the females, 40F the alpha female, and 42F, a an adult female, in the pack, and eventually joining the pack, sometimes facilitated by friendly pups. Much tail wagging, and the tails can be raised and somewhat curled. Often seen here. Landis is a full time wildlife photographer in the Yellowstone area.

Another saw another Bob Landis video on predatory behavior of wolves. This will go in with a Park Service Video on the wolves, and the package will sell for \$ 100, with proceeds to go to wolf recovery.

On a wolf the little toe and the big toe are hard to separate. On a mountain lion they are easy to separate.

The bigger the canine, the less likely the claws show.

Lion claws can show, but are thin.

21M, now the alpha male, has a white moustache, or streaks below eyes.

direct registry - when the rear feet hit exactly where the front feet hit.

The faster the animal, the more the hind feet hit ahead of the front foot print.

trot - the diagonal limbs are in sync. Also produces direct registry.

hip to shoulder - pendulum points. About 17" on a coyote.

If walking the hip to shoulder length approximates the stride.

If trotting the stride is 2-3 times this.

amble

gallop -- there is a gathered suspension, and an elongate suspension.

produces groups of four with intergroup space.

With wolves the intergroup space can be 25 feet!

bound = hop = jump.

stalk - the hind foot will be behind the front foot.

Dog trot. The animal is looking sideways, and this shows in the way the body weight shifts, and produces front feet left or right of the rear feet.

You can tell elk from deer from moose feet by the extent of the calloused area on the bottom pads.

Mar. 15, Sunday, up and out at 6.30. Wolves had made a kill up toward Soda Butte, up on hillside, on edge of woods. But they were off the kill when we got there. Several in the group picked out three wolves now and again briefly in the timber above, but I never saw them.

Back about 10.00 and class.

Out after lunch to walk into the first kill site. Difficult walking over the snow. Not much at the site, some leg bones and fur. Some wolf tracks seen.

Clark's nutcracker.

Left Lamar about 4.30. On drive out, 50 bison.
In Paradise Valley, 15 20 whitetails.

bald eagle
two golden eagles
buffleheads
ouzels, several
common goldeneye

Night at Motel 6 in Billings. Not all that good a motel.

March 16, Monday. Drove home at leisure. Lovely day. Pheasant. Nice golden eagle eating something at roadside. Several prairie dog towns with prairie dogs out. Antelope off and on all day. Group of 50, another of 25. 25 just south of Cheyenne.

Stopped in Sheridan at King's Saddlery. Splendid saddle museum, and free. Queen Elizabeth visited here. Bought pommel bag.

Bought gas in Casper at 83 cents a gallon, must be the lowest price I have paid in fifteen years. But it was quite high in Montana, \$ 1.35 a gallon in Gardiner. Take care, the stations inside the Park at Mammoth are closed at this time of year.

Home about 5.30 p.m.

end March 1998 Yellowstone wolf trip.

April 30-May 4, Southern California Academy of Sciences, California Polytechnic University, Pomona. I spoke May 1 in panel on endangered species, with several native Americans. Spent Saturday afternoon and Sunday in the San Gabriel Mountains north of Pomona-Pasadena-Los Angeles. There was a mad traffic jam getting from the airport to Pomona because a man had committed suicide in a flaming truck on the freeway. Host: Jonathan Baskin, Dept. Biology, Cal Poly, Pomona, who loaned me his vehicle.

May 2, Saturday. Left after lunch, and drove to Azusa and into the Angeles National Forest. Hiked up blocked-off but paved road, West Fork San Gabriel River.

A chaparral, or scrub forest. Red-stem filaree, Erodium cicutarium, Phacelia. Miner's lettuce, Claytonia perfoliata, with striking perfoliate leaf (once in genus Montia. California blackberry, Rubus ursinus. Narrow-leaved bedstraw, Galium angustifolium. Castilleja. Mistletoe. Limber pine, Pinus flexilis, some said to be over 2,000 years old.

Ceanothus. There are more native Ceanothus than any other kind of shrub.

May 3, Sunday. Drove back to same area, but now went on further to Crystal Lake Recreation area. Rather cold day, and mostly cloudy here. Hiked some, but too cold, and sprained ankle was bothering me. So I poked around. Majestic trees here, with almost no ground cover. Spent some time in a ranger station, visitor center using their books to figure out what I was seeing.

Yucca, Yucca whipplei, tall, striking yucca, also called Our Lord's Candle. Lots of them seen on the way up.

Canyon live oak (= Golden cup oak = Maul oak), Quercus chrysolepsis.

White fir.

California laurel, Umbellularia californica.

Bigleaf maple, Acer macrophyllum.

Oregon ash, Fraxinus latifolia.

White alder, Alnus rhombifolia. A full sized tree.

California juniper, Juniperus californica.

Aleppo pine, Pinus halepensis, introduced from the Mediterranean, but often planted roadsides. 2 needles.

Ice plant, planted on roadside banks, in town.

striking palm trees, planted in town. Washingtonia ??

Wild cucumber, Marah fabacus.

Lupines.

Blue Dicks, Dichelostemma (Brodiaea) pulchellum in Amaryllidaceae. Bare stem 1-2 feet tall, lavender flowers, grass-like leaves.

Black mustard, Brassica nigra. Introduced, a tall yellow flowering mustard, 3-6 feet high and all over the hillsides, especially in town area.

California dodder, Cuscuta californica. Lots of it.

May 4, Monday. Jonathan Baskin drove me around, to Placerita Nature Center, Newhall, CA (25-30 miles north of Los Angeles), to Soledad River Canyon, where he works on the conservation of sticklebacks (fish), Gasterostus aculeatus ssp. williamsonii. This is a boreal species, with plastic subspecies, but it is here. Another endangered species is the Least Bell's Vireo (must be a subspecies, not found in bird books). Then he drove me to LAX airport.

Dale, Nancy, Flowering Plants: The Santa Monica Mountains, Coastal and Chaparral Regions of Southern California. Santa Barbara, CA: Capra Press, 1986.

Audubon Society Pocket Guides, Familiar Trees of North America: Western Region. Alfred A. Knopf, 1986. Surprisingly good pictures.

Hill, Russell B., California Mountain Ranges. Helena, MT: Falcon Press, 1986. Good introduction.

Head, W. S., The California Chaparral: An Elfin Forest. Happy Camp, CA: Naturegraph Publishers, 1972. ISBN 0 87896-002-6, paper. -003-4, cloth.

Muntz, Philip A., California Spring Wildflowers. 1961.

Muntz, Philip A., California Mountain Wildflowers. 1963.

Muntz, Philip A., California Desert Wildflowers. 1962. All by Berkeley: Univ. California Press.

Raven, Peter H., Native Shrubs of Southern California. Berkeley, University of California Press, 1986.

May 7-10, 98. Synod of Lakes and Prairies, Mt. Olivet Retreat Center, 25 miles s.e. of Minneapolis-St. Paul. Flew there Thursday. Rain in afternoon. Cloudy but I could hike Friday morning.

Blue violets

Yellow violets, many. Nuttall's yellow violet. Viola nuttalli

Ribes americanum. Lots of Ribes in these woods.

Ranunculus, a small flowered one. Lots of it.

Galium lots of it.

Atrichum angustatum

Boxelder, Acer negundo

Strawberry, Fragaria

Thalictrum venulosum

Uvularia

Bur Oak, Quercus macrocarpa

two needled pine?? looked introduced

Smilacina

Viburnum

Basswood

Lonicera, bush honeysuckle

Crataegus, hawthorn

pin cherry, Prunus,

aspen

prickly ash

dogwood, Cornus,

Mnium,

Trillium, white one

duckweed

Aqualegia canadensis, red columbine

white mustard

maple

Jack-in-the-Pulpit, Arisaema

wood nettle

willow, Salix

pond lily, Nuphar

Virginia creeper

Vitis, wild grape

spruce, planted??

rose

raspberry

elm

Gill-o'er the ground, Glechoma

Geranium

Plantago, plantain

deer

field sparrow

ducks

great blue heron

robins

crows

Also took a good walk in the evening.

Vance, F. R. (Fenton R.), Wildflowers of the Northern Great Plains. Minneapolis: University of Minnesota Press, 1984. good.

Second growth woods, but still pleasant.

May 13, 1998. Estes Park with Elena Kossovitch, Irkutsk, Russia. Drove to Bear Lake, then walked up the road toward the Pool trailhead (road not yet open for cars), then lunched there. Then around to Moraine Park, then to Lion Gulch. Wonderful pasqueflowers in bloom there. We did some mosses at the bluff above the creek. Otherwise not a great deal out. About 75 elk. Toward mouth base of Poudre Canyon, four bighorn ewes, one with a quite young lamb, apparently nursing.

May 14, Thursday. Lory State Park, with Jane, Alex, and Elena K. Nice walk, a good deal out, though we strolled more than serious hike. The ankle sprain I got in February still bothers me on rough ground. Lunched there. Then to Greyrock for a short hike, but it started raining. Elena was keen on seeing the poison oak!! I packed up my second compound microscope and sent it home with her.

Yellowstone Trip, May 1998

Yellowstone Institute, Wildlife Observation, Gene Ball

May 25, 1998. Left Ft. Collins, 8.00 a.m., with Jane. Drove to Cody. Misty when we left but soon it cleared and was sunny, with lovely cumulus clouds over the mountains.

233 antelope seen en route, the largest groups of 24 and 28. Mostly in groups of 5-6.

Spent the night with Bruce and Margy Jones in Cody. Their daughter, Lib, was there, now teaching transportation engineering at University of Nebraska, Omaha.

May 26. Left, 7.30 a.m., and drove Chief Joseph Highway to Cooke City. Lovely drive, lovely day. 3 mule deer. Entered the Park about 11.00 a.m. Reached the Lamar Ranch and set up in Cabin 13. About 30 bison seen on the way in.

Lunch.

Met the group. Participants include Buzz Botts, from South Carolina, but for a good many years a park naturalist in Yellowstone in the summers, giving talks at Old Faithful, and in the Everglades National Park in the winter. Also Henry Eckenbrecht, Lenn Boren from previous years. Leader Gene Ball, Meeteetse, Wyoming.

Mother grizzly and two yearling cubs on the hills opposite the ranch, seen at distance through scopes.

Female yellow-headed blackbird, on roof of bunkhouse.

The interns are Jaimal, from Idaho State, and Andy.

Afternoon field trip.

Two whooping cranes at Slough Creek, nicely seen through binoculars and in the scope. Nice in flight. These are two whoopers that were led here by an ultralight aircraft trying to establish a population in the park. Great blue heron. Several bison. Several mule deer.

Went to look for the harlequin ducks and found none. Nice redtail in flight. Black leading edge (dark patagial marks), and commas. (See photos in Clark, Raptors.)

Drove past Roosevelt and toward Mammoth. Sandhill crane on nest at one of the ponds, nicely camouflaged, but nicely seen once you could locate her. Sora rail heard. Bluebirds.

Took a walk to see a splendid bear tree. About the best bear claw marks on an aspen that I have ever seen. Sets of claw marks were clearly seen to 40 feet up the tree.

As we left there was a coyote, first said to be dead, thought to have been injured by a car perhaps and died. It was belly up and feet up in the air. But then it got up and walked around!

Mallard ducks. Shooting stars, Dodecatheon, splendid on the whole trip. Cerastium, field chickweed. Forget me not, Myosotis. Sugarbowl, Clematis hirsutissima. Ravens. Spike buck at the pond past the bear tree. Valerian, Valeriana. Disporum, Disporum.

Coots. Spooked a sandhill crane on a nest at the pond past the bear tree. Two sandhills.

Returned to van. 5 antelope. 6 mule deer.

Supper.

Evening field trip. About 200 bison now in Lamar Valley. About 200 elk. 5 antelope. A bison walked right by the van. Two female Barrow's goldeneyes in river. Group of 5 bison by road.

Sow grizzly and three cubs seen at great distance in scopes up on mountainside (seen closer later). Two bighorns also at great distance. 15-20 elk in groups of two's and three's scattered across the upper valley.

May 27, Wednesday. Out at 5.30 a.m.

The same sow and three cubs first seen at a distance, but she was coming down the mountain, and then moved closer and we saw her better.

The same 200 bison, 200 elk out in the valley.

Franklin's gull.

Went to Slough Creek. Scaup. Bufflehead. Kingfisher. Canada geese. Antelope. Magpie. Whooping cranes, now feeding in a pond right at the roadside, and watched for some time. (pix). Lovely sight.

Redwing blackbird. 6-8 antelope. Trumpeter swan seen at distance. Yellow-headed blackbird. 3 mule deer.

Found the harlequin ducks, and watched a pair sometime. Quite colorful.

Adult bald eagle, in flight overhead.
Common merganser on the river. Robin.

Drove to Tower Falls area. 2 bighorns across the canyon. Ewes, which should give birth to young about now.

Coming back, black bear, yearling, right at roadside, and watched it for some time.

Uinta ground squirrel. Cliff swallows at the Ranch.

Lunch.

Walked up to wolf pens. 3 antelope watching us from the ridge top. Saw where the tree blew over, famously, and the wolves got out. Also this is the pen that President Clinton visited, to see the mother and her pups recaptured after the Alpha Male was shot.

Took nap, shower. Supper.

Field trip after supper. 3 grizzlies at great distance opposite the ranch.

The group had decided to go to Cooke City to eat, while Jane and I napped, and so Jane and I drove up to Trout Lake trailhead to meet them.

Adult bald eagle in tree on Lamar River. Same 200 bison, 200 elk in the valley.

We didn't find the group at Trout Lake trailhead, waited there 15 minutes, then started working our way back down. They soon caught up with us.

Sow grizzly and 3 cubs first seen up on the mountainside, but she was headed down, so we moved back up the valley, and she came out across the river. Saw the sow and her 3 cubs trotting along behind, variously getting left behind and running to catch up. Watched her in and out of the trees, now in an open area, then behind some trees, moving down river, for 40 minutes. The best grizzly sighting of the trip.

Returned to the ranch in Jeep, but others came behind us and saw a wolf, which we missed. But we were amply rewarded the next day.

May 28, Thursday. Off at 5.30 a.m.

Saw 7 of the 8 wolves of the Druid Peak Pack. First we saw only one, down by the river, and then others were spotted north of the highway, near a bison. There was a kind of stare-down between one wolf and the bison, and the wolf walked off. These wolves crossed the road, and eventually seven appeared. Raised leg urination, by the Alpha Female. Also made out the new Alpha Male. This is the wolf adopted into this pack last December after the previous Alpha Male was killed. (I had watched this video, by Bob Landis, twice.)

At one point, one of the wolves on the north side of the road gave two low howls, presumably to keep in contact with those down by the river. They swam across the river, and shook the water off on the other side. Several of them were quite playful with each other. They gradually made it

across the valley, now and then posturing as if to pounce on some ground squirrel. A marvelous sighting, the equal of the one I had in March 1996, when they crossed the road and went down toward the river in the snow, and the one last spring, where I saw all eight of the Druid Pack at, and leaving, an elk carcass, though not then at this close a range.

The we drove up past Soda Butte. Moose on hillside. Brewer's blackbird. Barrow's golden eye.

Return to ranch.

Two grizzlies on skyline in distance, across from the ranch.

Packed lunch for a hike.

Slough creek. 3 eagles. 2 whoopers, again. Trumpeter swan. Pintail. Bufflehead. Scaup. Cinnamon teal, in splendid color. Kingfisher.

Drove toward Yellowstone picnic area. Three coyotes, nicely seen not far from road. Chipmunks at the picnic area.

Started hike. Walked up the Specimen Ridge trail, which goes on the opposite side of the river from the Roosevelt-Tower road. You climb, then level off on the ridge. Pink plumes, Prairie smoke, Geum triflorum. Reached ridge summit.

Osprey nest and osprey on it, in spectacular location below.

Western tanager, seen nicely but briefly.

4 ravens

Nice osprey in flight.

Pair of ospreys on a second nest, male darker than the female.

Marmot. The one in Yellowstone is the yellow-bellied marmot.

Violet green swallows, in great flight. We were looking down on them from above.

Clark's nutcracker. They disperse seeds of the whitebark pine, which are important trees for the grizzlies, eating the cones. So in this sense the Clark's nutcrackers are vital for the grizzlies. They build up caches, and some of the seeds grow.

Picnic lunch on hilltop, looking at Cutoff Mountain. Scenic view. Three bighorn ewes not far away. Flicker. Nuthatch heard.

Turned back downward. 6 antelope.

Reached the road at the glacial pond. Stick geranium, Geranium richardsonii. 3 antelope.

Back at ranch about 2.30.

Social event: ice cream!

Nap. 4.30 supper.

Late afternoon, there were three horsemen across the river, herding the bison, one with a rifle, apparently shooting the bison. It turns out they are part of a study on brucellosis, and were darting a collared female for a blood check.

Other parks that have associations like this: Big Bend, Glacier, Yosemite, Canyonlands.

Field trip after supper.

One grizzly bear seen at a distance about where we saw the wolves in the morning. Green-winged teal.

Moose at the river, on the other side. Bear at the edge of the forest at a distance, which Pam Gontz said was a black bear, from its walk and look. I couldn't have confirmed this.

May 29, Friday. Off at 5.30 a.m.

Went to Slough Creek. Coyote at roadside on the way down.

At Slough Creek, there were four or five ravens at a distance, which we watched suspicious that something might be there, and soon realized that one of the "ravens" was a black wolf lying down. Soon it got up and we could see much more clearly. This is a wolf from the Rose Creek Pack (of which I saw none in March). We watched it quite a while, in scopes. It carried off a sizeable piece of meat, looking like part of the leg of an elk. Eventually it went up the hill further and further away.

Grizzly courting pair seen back south on the hills. One bald eagle in tree.

Whoopers flew by.

So that is four endangered species seen from one point in less than an hour:

- wolf
- bald eagle
- grizzly bear
- whooping crane

There was a coyote howl, close in, and we looked beyond to see a coyote perched on a rock not far way, howling, and back-lighted by the sun, giving it a golden outline. Great sight, and sound.

We drove Larry Siegford's Ford Explorer back to the ranch, and he went on with the van. We had to separate to start the drive back. The others, in mid morning were going to scramble up a hillside to try to see a mother coyote with ten pups. They had been seen playing about the densite.

Back to the ranch and packed up. The couple in the cabin next door had trapped a white-footed mouse that was troubling them in their cabin.

Driving up toward Cooke City, there was a red fox seen nicely first on the road and then in field adjacent. Again first backlighted by the sun, and then it moved around and we could see it well lighted. Splendid view.

3 deer, 1 deer, 3 deer.

Left the Park, through Cooke City. Drove the Chief Joseph highway to Cody and home.

One group of about 50 antelope all lying down on a hillside on the way back. 2 sandhill cranes.

Lunched at Meeteetse at riverside picnic tables. There was a statue of two black-footed ferrets, for which this area is famous, as the only surviving ones in the wild are here. Once the black-footed ferret was throughout the West.

Stopped in Casper, where Jane found a tick in her hairline. I coated it with Vaseline and got it off an hour later.

Grabbed drinks at Chugwater, ate in car, and reached home by 8.30 p.m. 550 miles.

end of May 1998 Yellowstone trip.

Finland and Norway, June 1998

June 1, Monday. Left Ft. Collins 7.45 a.m. for Newark.
Newark to Oslo on SAS, seemed a short night. Reached Oslo about 9.30 a.m. June 2.

June 2, Tuesday. Oslo to Helsinki. Reach Helsinki about 4.30 p.m, and took taxi to University Guest House.

June 3, Wednesday. Train to Joensuu. Left 7.02 a.m, and five hour ride. Nice ride, good day. Met at Joensuu by taxi and taken to Ilomatsi.

Conference on Aesthetics of Mires and Peatlands.
Checked in to the "Swallow's Nest" hotel. Spoke at 3.30 p.m.

5.00 trip to Art Museum in Joensuu.

June 4, Thursday. Up at 4.30 a.m in a good rain for a boat trip to bogs on a boat with oars. Wet but still a good trip. Black grouse flying in distance. Gulls. Got out and walked around a Sphagnum bog. Andromeda in flower, not much else. The conference is a week or so earlier than previous conferences to avoid mosquitoes. Rain. Rowed on to a cabin where a farmer and his wife had prepared breakfast. A very picturesque small cabin, with a fire in the sauna stove by which we could get warm.

Nice forest here. Hylocomnium splendens. Pinus sylvestris. Spruce. Sorbus. Looked for nesting swans and failed to find them. Looked for cranes and failed to find them, though I think I saw two in a field on the train in. The guide, Sauvo Henttonen, is an environmental planner at Iiomatsi and quite knowledgeable. Rowed back, though I was put at the helm and did the steering. 12 km., roundtrip. Back about 9.00 a.m. Inari Arjas, the beautiful Finnish woman that has been at these conferences several years, was on the trip. She lived with Kate Rawles when she did a year at Lancaster. Her father teaches biometrics at the University of Helsinki.

Conference the rest of the day. In the afternoon, after 5.00 a peatlands art event, with too many nude performers!!

I was too tired to go on the peatlands night walk, though others went and did not return until 3.30 a.m. and another group at 6.30 a.m.! These Finns enjoy their daylight while they have it.

June 5, Friday. Conference all day. 5.00 p.m. to peatlands and a company exhibition of their machines. Saw a moose crossing a field.

Dinner at a military museum, and then Peatlands Research Station. Rune singer's cabin adjacent. Back to Iiomatsi, and then to tea at a sort of welcome center/shop adjacent to the Orthodox Church, then a concert and talk by the priest in the church. 11.00 a small choir, nicely done.

June 6, Saturday. Conference all morning. Bus to Joensuu. Train at 4.47 p.m. to Helsinki, lovely day, though they pushed the time allowed for getting back to Joensuu too close for me.

Spent the night at Arthur Hotel in Helsinki, only a fair hotel. We got stuck in a smoking room.

June 7, Sunday. Walked around Helsinki in the morning, not much open. Spent some time at the open air market. Lunched in the hotel room, just before checking out. Waited until 2.00 p.m. in the hotel lobby. Taxi to airport.

Flight to Copenhagen. Delay in Copenhagen due to bomb scare that affected the pilots on their incoming plane (not our plane), but this made us 1/2 hours late. Reached Bergen, and took taxi to the ship with half an hour to spare. Boarded the boat, the Vesteralen, and sailed at 10.30 p.m. Our cabin is 411. We have a good distance to sail. If we were sailing south of Bergen instead of north, we would reach Rome by travelling the same distance that we are going to travel north.

June 8, Monday. Went ashore in Alesund, and got wet. Here from 12 till 3.00. Bought shoe strings!! Generally rainy day, but there was still some good scenery, often with a layer of cloud and the mountains visible below and above it.

Jane's notes on these towns are better than mine.

At Molde, we walked to a church that was closed. Called the City of Roses, due to its gardens. Here from 5.30 to 6.30 p.m.

Kristiansund. Raining and we didn't get off. Here from 10.00 to 11.00 p.m. Stacked salt on the shore for drying cod.

June 9, Tuesday. Jane's birthday. Trondheim. Spent 6 hours here. Went to the music museum.

Rorvik. From 8.30 to 9.45 p.m. Walked on board to see a sister ship, the Nordnorge.

The British couple sitting beside us in the dining hall is Peter and Ruth Griffiths, address in files.

June 10, Wednesday. Crossed the arctic circle, 7.15 a.m, and I saw the globe mounted on a rock on a small island named Vikingen.

Reached Bodo. Walked around town, including a glass shopping mall. After lunch, until 3.00 p.m.

Stamsund. We were eating while we put into port here.

Svolvor. There are rocks over town that look like goat horns.

Reached the Troll Fjord at 11.15 p.m., and the ship turns and goes up in this small fjord. Quite spectacular. Then trolls appears on the ship!, and there is troll soup served on board.

June 11. Wednesday. Reached Finneses at 11.00 a.m. and walked up town briefly. Reached Tromso at 2.45 p.m, and took bus tour. Visited the Arctic Ocean Cathedral, across a bridge. Arctic Museum.

About here we passed the polar tree line. There are no trees further north. In one sense "arctic" means "north of the Arctic Circle." In another sense it means, "north of the polar tree line." Land north of the arctic tree line is tundra.

Spruce, the common tree in much of Norway essentially stops at the Arctic Circle. Further north, the trees are birch, alder, pine. Spruce is the last of the main trees in Scandinavia to return after glaciation.

June 12, Friday. The sunniest day yet. Spent most of the morning on deck. We were docked in Hammerfest when we got up, 5.30 a.m. to 7.45 a.m.

White-tailed eagle seen in flight, a sea eagle, nicely seen, being harassed by gulls.

Early lunch for the trip to the North Cape. Reached Honningsvad.

Bus trip to North Cape. We were at the North Cape, 2.00 p.m. to 5.00 p.m., lovely day but cool. 10 reindeer nicely seen on the bus trip up. 2 more reindeer. Stopped at an overlook with the North Cape in the distance, with the horn. (pix).

Multiscreen video at the North Cape, nicely done. Walked around outside. There is a saxifrage in bloom here, probably Saxifraga oppositifolia. Pix in Moorkved and Nilssen, p. 72). One of the most northerly growing plants in the world. Nothing else out.

Rather bleak and wintry, even in the bright sun.

There are no trees on the island of Mageroy.

Returned to ship. Blue skies after supper and scenic passage along some cliffs. Bright, sunny evening.

Reached Mehamp. Two eider (ducks) seen in the harbor. Two more on the way out.

11.45, 12-25 white whales seen starboard, not that far from the trip. Clearly seen coming out of the water, and memorable sight. These were identified from the bridge as white whales, presumably Delphinapterus (in Walker), or beluga. Body length about 3.5 to 4.5 meters. They are a whale of cold waters, found in northern waters in Europe, Asia, and America. Hunted by peoples of the Arctic from ancient times, and caught extensively commercially. Some populations almost eliminated, others relatively safe.

Good daylight with the sun lowest in the sky at 12.07 a.m. and still well above the horizon. Took pictures, including one of Jane in a deck chair.

June 13, Saturday. Overcast again. The ship is running about one hour late due to lifeboat problems. The winch won't retrieve a boat they tried to lower.

Lunch on boat. Reached Kirkenes about 1.30 p.m. Taxi to the B&B. Julie Ferman Jensen, Fritjof Hansen's Gata 6. Small, but very decent room, with view over the water. But she spoke no English.

Walked to tourist info. Airline controllers are on strike, to sympathize with the nurses, and we are wondering whether we will get out of here. Rain all afternoon and raw. Ate in room.

Kirkenes is far enough south again to grow some trees, though the North Cape has none.

June 14, Sunday. Went to church, then to a military museum. There were moving displays at the museum. This was a much fought-over area. The Germans here were trying to block Allied supplies to Murmansk, Russia's only port (except in the Pacific). Kirkenes was bombed by the Russians 300 times, since the Germans were here, and eventually liberated by the same Russians, some months before the war was over.

Trip up the Pasvikelv River, with a boatload of psychiatric nurses at a conference here. Open boat went to the Russian border. 2 eider (ducks). 2 eider. Terns, red bill either arctic or common tern. Saw many of them, graceful fliers. Went past a bird colony with 500 common gulls nesting. Black backed gull (greater or lesser?). Various other ducks I could not identify.

Triton's Cave. Reached the Russian border and put ashore. From here, some distance away (half mile), the Boris Gleb Church is visible, a Russian Orthodox Church.

Seal came swimming by. Nicely seen sticking its head out of the water. Returned about 7.00 p.m.

Monday, June 15. Trip to Murmansk. Up at 5.00 a.m. and out at 6.00 walking to the travel agent, but no bus. I went back to the Arctic Riga Hotel, where a group of the psychiatric nurses were going to Nikel, a mining town over the border. Eventually got it sorted out, and they put us in a taxi.

Drove to Russian border, and were checked once by Norwegian and three times by Russians in crossing the border. Lovely day, lovely clouds all day. Some fairly good forests in here. Birch and some good sized pines.

Then we gained elevation and the birch became only about head high.

Reached Nikel, where nickel is mined, and the area is a scene of utter devastation over a hundred square kilometers, from the acid rain. Bleak and wretched. Trees dead over large areas. The best (worst!!) example I have ever seen of environmentalism at its worst. This was the Russian's main or only source of nickel in the war.

Reached Zapoljarno ?, also a nickel mine, where most of the nickel is now mined. This is also a Russian military zone.

Eventually the vegetation returns to normal, maybe 10 km. east, but now the elevation is higher and there are few or no trees. Lots of snow fields unmelted as yet, and lakes are half frozen. This is tundra. This landscape is like a great white and dark grey chessboard with irregular splotches. A few birds seen but not many.

Excellent example of a recently glaciated landscape. Lots of boulders and glacial deposits.

Little inhabited. There are no real signs of anyone living here for fifty miles. Rolling country, and then the road descends some and there are some flatter fields, presumably grain, but little growing in them yet. This is the Kola Peninsula, though there is no sense of being on a large peninsula, which has the Barent's Sea on the north, and the White Sea, a somewhat inland body of water to the south.

Towards Murmansk, there are some garden patches.

We passed through an area where the Germans fought trying to get to Murmansk to close the port, and the Russians put heroic efforts into stopping them. There are 12-15 monuments, military memorials to the dead, placed out in otherwise forested or open space.

Dog chewing a reindeer head (pix).

Passed a submarine base, Percenga. There are six huge nuclear submarines here, but only two are now operational. About 12.00 p.m., Norwegian time, reached Murmansk, but Murmansk is on Moscow time, 2 hours difference, i.e. 2.00 p.m. here.

One of the world's largest concentrations of military forces is here, or was during the Soviet era. We passed various residences where soldiers were staying.

Picked up an Intourist Guide, Boris. He spoke excellent English and was quite good. There are enormous numbers of enormous apartments, about 450,000 people here. Russians are paid relatively high wages to work here and many come and work temporarily, then go back where they

came from. The turnover is 20% per year. Murmansk is 200 km. north of the Arctic Circle.

A bridge had washed out and we had to drive around to the eastern side of the city to get in. Nice lunch in a fancy Russian restaurant, called "The Bear," with a huge bearskin inside, also a mounted reindeer head.

Visited a huge concrete statue of a Russian soldier, a war memorial.

Murmansk was essentially a Soviet-built city, it hardly existed in the days of the czars. It is Russia's only ice-free port in the north (tho there are ports in the Black Sea). So the Allies had to get supplies through here in World War II. Without those supplies, especially the U.S. military aid, Russia could have been defeated. There are nuclear powered ice-breakers here.

Visited an Orthodox Church, rather recently built, and not too impressive. An imitation of a typical Russian Orthodox Church. It is virtually the only church in Murmansk. Being a Soviet-built city, it was built churchless, tho some conservative Christian groups have since come in. There was a wooden church here before and in 1984 the congregation started building a new one, over the old one. In 1985, the government threatened to blow it up, but the people protested and won, resumed construction in 1987.

Russians have devalued the ruble, knocked three zero's off, and prices are posted in both new rubles and old ones, required to be so posted for one year. \$1 = 6 new rubles, 6,000 old rubles.

Went shopping in the main square, the "Five-Corners," (Pyat Ugla). Jane bought some Russian dolls, till about 4.00 p.m. Norwegian time, 6.00 p.m. Murmansk time. We first changed some money at a bank, but this took so long that later we just changed money with the black marketers, who were conveniently waiting around the shops to do this.

Drove back. Good weather continues. Back about 8.00 Norwegian time.
The airstrike is over! But!!

June 16, Tuesday. A frustrating day. Though the air strike is over, the 1.15 flight to Oslo is cancelled, because no jet plane can get here. Various inquiries in town, and then went to the airport and waited all afternoon to eventually get on a 7.00 p.m. flight, though being told we were standby passengers past Alta, and might not get any further. We could be asked to leave the plane.

45 minute flight to Alta, and we stayed on. Then 15 minute flight to Tromso, and we stayed on, though the plane was jammed. Reached Oslo about 11.15 p.m., having cancelled our hotel and expecting to sit up all night. But the airport here was closing and we could not stay. So we took a bus to a nearby SAS hotel, and got a good room at not too bad a price (\$ 125). A conference room and a big double bed. There is night here, for the first time in ten days.

June 17, Wednesday. Flight home. Good breakfast in hotel, though the airport van failed to come for a long time. Uneventful flight trans-Atlantic. Reasonably clear day, and you could see the Atlantic, which you can't always do. Saw some small islands in the vicinity of the Shetlands, quite nicely visible. Nice clouds.

Flew over somewhere in arctic and boreal Canada. Lots of lakes and rather barren looking ground.

Reached Newark. Long wait, and got on the plane, only to be told that there were thunderstorms around the airport and nothing was taking off. Waited about 4 hours, and eventually took off. Reached Denver in the wee small hours and United gave us \$ 80.00 on a taxi, and took a taxi to Fort Collins for \$ 130.00.

end of Finland-Norway trip.

July 7-9, 1998. Backpacking alone to Hagues Creek, Desolation Campsite. Good trip, testing my legs. Tuesday, left Ft. Collins about 8.00 a.m., reached trailhead at Corral Park about 10.30. Lunched by the Poudre River (eating caviar from the cruise in Norway! and Virginia country ham!), then reached Desolation Campsite, and pitched camp. Nice day. Took it easy. Just back of the campsite uphill a ways is the main trail to Mirror Lake. I found it and hiked back around. Five elk in the meadow, three cows and two calves. White-crowned sparrow. But the woods were rather quiet. Coyotes howling nicely in the night.

Wednesday, hiked down to Poudre River then up the Poudre River to Mouth of Chapin Creek. Nice hike, nice day. Big mule deer buck seen for about five seconds in the woods on the way back, but seen nicely and not far off. 9 miles of hiking here, and my leg did well. Knee is no problem, though I feel it, but the ankle sprain I got last February (at Julia Lee Kalan's) gives me more trouble, though I feel not in the ankle but in the arch of my foot. A bit of rain while eating supper, but no problem. Five elk in the meadow after supper, as I sat out in my poncho on stool. All single bulls, that came and went.

Thursday, hiked out by about 11.00. 2.3 miles from Corral Creek to Desolation campsite, so that is 4.6 backpacking, plus 9 dayhiking, and some Tuesday evening, or about 14 miles of hiking. But I generally took it easy.

Three moose on the drive out Long Draw, the first moose I have seen in Colorado. One cow in the willows, then she climbed out onto a grassy bank, and a little calf appeared behind her, tried to nurse. Then a second cow appeared. Watched them five minutes.

Moose seem to have been occasional visitors to Colorado but historically there were no resident populations. They were introduced by the Division of Wildlife in 1978 and 1979 into North Park, about two dozen animals. They grew to about 250 in 1990 and have been spreading especially in the Laramie River drainage. (Fitzgerald, Meaney, and Armstrong, Mammals of Colorado, p. 395) They were expanding their range southward in Wyoming.

Lunched at Sleeping Elephant Campground. The usual flowers and birds, though more pygmy bitter-root (Lewisia pygmaea, which Weber now calls Oreobroma pygmaea, oros, mountain, broma, food) than I recall in here before.

Sawtooths and Middle Fork Salmon River
July - August 1998

July 20, Monday. Gray Hampton arrived, 4.00 p.m.

July 21, Tuesday. Left Ft. Collins in Jeep about 7.30 a.m. and drove to Laramie, then west on I-80. Lunch at rest area. Nice day. Cold at lunch with a little rain.

Trouble with alternator about Kemmerer and made it into town, though we could easily have been stranded on the road. Got it fixed at a GM place in Kemmerer, took about two hours.

Drove to Montpelier, ID. and stayed in Super 8. Very nice. Dinner in restaurant next door. Saw a couple dozen antelope during the day.

July 22, Wednesday. Drove on into Pocatello, Snake River Valley, or Plain, and on toward Arco. Dry, desert area here. Toured EBR-1, Experimental Breeder Reactor 1. This was the first breeder reactor (which makes more fuel than it uses), and also the first reactor to generate electricity. It is out in the middle of nowhere (deliberately), now a museum. The Idaho National Engineering Laboratory is here, mostly north of the road. No admittance there.

Drove on to Arco, and bought groceries. Drove to Craters of the Moon National Monument, reached it about 1.00 p.m. Lunched in campsite and did the loop. Massive volcanic flows. Stopped at North Crater flow and walked twenty minutes. Syringa (Philadelphus) lewisii, Syringa, the state flower of Idaho. White blossoms.

Tansy Rush, Chamaebatiaria millefolium, with fern-like leaves. Rose family.

Antelope bitterbrush. Purshia tridentata.

Scorpionweed. Phacelia hastata.

Lava flows here were 2,000 years ago to 13,000 years ago.

pahoehoe lava. (pronounced puh hoy hoy) Congeals as ropey lines, smooth.

aa lava (pronounced ah ah). congeals as chunks, rough.

Proceeded to splatter cones, walked there a bit, and then on to Cave area to join a ranger walk at 4.00 p.m. Good walk, perhaps a quarter of a mile to see the caves, lava tubes. Finished about 6.00 p.m. Drove back with stop at Devil's Orchard. Return to camp and ate Dinty Moore stew. Ranger talk 9.30 p.m. Ravens, towhees, bluebirds.

July 23, Thursday. A good night. Noodles and off at 8.00 a.m. Lava flows are still extensive for another 20 miles or so.

Reached Carey, then turned north to Bellvue, on to Halley and Ketchum. By the time we neared Halley and Ketchum, the area becomes fancy ski towns, with expensive houses. Bought groceries in Ketchum, drove on to campground at Easley (where I had reservations). Lunched here. Then drove on to see if we could get a better camp on the Sawtooths side.

Drove over Galena Summit and the Sawtooths came into view. Great panorama now far below the Galea Summit.

Outfitters in the Sawtooth Region:

High Country Outfitters, 684-5554.

Mystic Saddle Ranch, 774-3591

Pioneer Mountain Outfitters, 734-3679

White Cloud Outfitters, 879-5513

Drove on down into Sawtooth Valley. Took a campsite at North Shore Campground on Alturas Lake. Pitched camp.

Drove down Sawtooth Valley, got gas, and made it to Ranger Station just before closing time, to get hiking information. Back to camp.

July 24, Friday. Left 8.00 a.m. and scouted Redfish Lake area with a view to hiking tomorrow.

Hiked Fishhook Creek Trail to an open meadow with peaks on each side. Good graded trail for 2.2 miles. Comes out in an open meadow with Williams Peak, 10,751 ft, to the west and ridges of Heyburn Mountain to the south. Lovely day.

Returned and had late picnic lunch in Ranger Station parking lot. Then we went into Stanley, and drove on to Boise to get Gray, Jr.. Three hour drive on a scenic road. Lots of lovely ponderosa pine. More mountainous than I might have through almost to Boise.

Got Gray, 4.40 p.m.; he was early and we had barely gotten there. Returned, dinner in Idaho city. More gold was produced here than in Alaska. Two deer. Back to Stanley toward dark. Groceries

in Stanley. Some rain.

July 25, Saturday. Hike to Alpine Lake, all day. 11 miles roundtrip, good mountain miles. Up at 6.15 a.m., and off about 8.15. Gray bought a daypack in Stanley. Drove to Redfish Lake and caught a shuttle boat to Redfish Inlet Transfer Camp. The day was foggy, and, though I thought it was ground fog, I couldn't be sure. Fairly steady climb all morning with good switchbacks the last 1.8 miles. The clouds burned off about 10.00 a.m, and the peaks through the clearing mist were spectacular.

To the south are the Saddleback Peaks, and a steep cliff face here is called "The Elephant's Perch," a famous climbing rock. Also a sporting goods store in Ketchum with this name.

Saw the usual flowers, though perhaps more Sego lily than I have ever seen before. Peaks great on all sides. Lunched at Alpine Lake.

Steady descent, pushing my ankle a little, though my knee gave no real problems. Back to the shuttle boat pier about 5.15 p.m., waited a bit for a boat. Then we were ferried across the lake in a good rain.

Went into Stanley for supper. Magnificent double rainbow when walking out from the restaurant. Back to camp about dark.

July 26, Sunday. Up at 6.15 for goat hike. Off about 8.15 and drove to Galena Lodge. Nice deer bounding in the woods. Two sandhill cranes, feeding in fields. Nice day.

Met Nappy Neaman at parking lot about 9.00 at Galena Lodge, and drove south to Silver Creek and on dirt road, then on foot. There was a wedding in here yesterday.

Climbed to a good basin. One nanny goat and kid seen briefly on skyline. Climbed further. Only billy seen nicely in scope, then disappeared behind a rock fin.

Climbed further and found the same billy in the open. Watched him at some length, while we ate lunch.

Walked out. Then drove back up the main road to an observation point and spotted 11 in one group, 7 adults, 4 kids, at considerable distance. Three in one group, two adults easily seen and a kid seen only when it moved. Three in another group; nanny and kid and yearling some distance away.

Total of 20 goats, only two identified as males.

The goats here are a natural population, not introduced.

The mountains we are in today are the Boulder Mountains. Further north are the White Cloud Peaks. Opposite are the Smoky Mountains. Those in the vicinity of Sun Valley are the Pioneer Mountains.

Drove to trailhead beyond Alturas Lake after supper. One deer.

July 17, Monday. Drove to Ketchum and Sun Valley. Nice day. Drove over Galena Summit.

Failed to find any goats. Drove into Ketchum. Went to Elephant's Perch store, and other stores. Bought a river bag for my cameras, which later proved quite useful. Went to River Run Ski Area, with marvelous lodge. Ate lunch on the grounds at the base of the lift.

Then drove into Boise, to take Gray to airport. Reached airport about 4.15 p.m. Drove back to Stanley. Good drive. Dinner at a restaurant in Stanley with about 100 Indian drawings, prints and drawings, some made by a local artist working in the restaurant.

On return, nice bullmoose in a field near Perkins Lake, toward dark. Watched him in scope several minutes.

July 28, Tuesday. Packed up camp. This was first an overcast day, then sunshine. Went to Fish Hatchery. This is mainly for chinook salmon, but the salmon that is doing the most poorly here is the Sockeye salmon. It spawns in the lakes, not in the rivers and streams.

Drove to Stanley Lake and ate lunch at Lake edge with McGown Peaks prominent. Hiked to Lady Face Falls.

Checked in at Lodge in Stanley, then did wash, and met with Bob Sevy in orientation for river trip. The river is at 2.85, moderate level.

The River of No Return Wilderness is the largest in the continental United States. 2.2 million acres. It is roughly 50 miles wide and 90 miles long. Few peaks are above timberline. The most common bird is the robin! There is little cattle grazing in the wilderness.

Trip leader:

--Matt Leidecker. Did geology at Middlebury College, Vermont. Did a thesis paper on the geology of the Middle Fork.

Other guides:

--Scott Calhoun. Went to University of Idaho, Moscow. Quite a knowledgeable guide--the one who drew the map of Idaho in the dirt and explained the geography of the state.

--Ben Brock, long hair

--Matt Yost. Went to University of Idaho, Moscow

--Charlie Thompson. Stayed only the first night, then flew out on an airplane from Indian Creek. He owns the sporting goods store next to the Lodge. Wife Kristy was along for this night.

--Scooter Gardiner. Came in to replace Charlie Thompson at Indian Creek. W. C. Gardiner, III, P. O. Box 2557, Ketchum, ID 83340

--Gary Neidermeyer, older.

--Jennifer Paul, the "swamper." A sophomore in college.

The group:

1. Joanne Hoffer, New York City, redhead, with Lee
2. Lee Tawil, New York City. black hair, bad back

3. Jeremy Main, Ridgefield, CT, from the U.K., older and balding. Liked flyfishing.
4. Patricia Main, Ridgefield, CT, his wife, from the U.K.

5. Verne Howard, Friday Harbor, WA. Grocer in the San Juan Islands. Close friends with John Linde.
6. Libby Howard, his daughter, with a great smile. They live some of the time in the Ketchum area, she was a friend of Jennifer Paul, the swamper.

7. John Linde, Friday Harbor, WA. judge there. Close friends with Verne Howard.
8. Brian Linde, Friday Harbor, WA. His son, quite athletic, short hair. Going to college in California this fall.

9. Dean Hagan, Chicago, IL. Lawyer, balding
10. Janice Rogers, Chicago, IL. Lawyer also, his wife
11. Stephen Hagan, Chicago, IL. Their son, going to Cornell this fall.
12. Lindsay Hagan, Chicago, IL. Their daughter.

13. Jack McKay, Winnetka, IL (Chicago area). Lawyer, went to Notre Dame University. Knows Ernan McMullin.
14. Karen McKay, Winnetka, IL. His wife, black hair

15. Jim Brand, Austin, TX. Doctor there who runs a hospital for indigent persons.
16. Sarah Brand, Austin, TX. His daughter, glasses.

17. Dean Banks, Oakland, CA. Lawyer, whom we conversed with rather often, and had supper the last night back at the lodge.
18. Sharon Banks, Oakland, Ca. His wife. She taught English as a second language to Hispanics mostly.

19. Eliot Wadsworth, Brookline, MA. Boston area. He had had colon cancer last winter.
20. Annich Bildman, Brookline, MA. Boston area. She was his "significant other," both were in the midst of divorces. She was originally French.

21. Gray Hampton
22. Holmes Rolston

10,000 people go down the Middle Fork in the four summer months. There are 22 outfitters on the Middle Fork. The Forest Service wants to limit parties to 15, the present limit is 22. About half the river runners are private parties. There are 50 to 75 class III rapids, and four or five Class IV rapids. But ratings don't tell you that much and differ a lot with water levels. There are some 200 rapids in the 100 mile stretch we will run.

There are lots of inholdings on the river.

July 29, Wednesday.

Rode the River Rat Express, which is a shuttle. Reached Boundary Creek.

The big boat, carrying the cargo, is called the sweeper. 22 ft.

Oar boats. 18 feet long. Made by Riken, their Wallapie. Passengers ride, and the guide steers with two oars.

Paddle boats. 15 feet long. Made by Riken. Six passengers paddle, and the guide steers with a paddle.

Kayaks. Came in later. Two singles and one double.

Also on the river we saw lots of hard-side kayaks, and some hardside and boxed in canoes.

If you are tossed out in the rapids, take the lazy boy recliner position, facing up, feet downstream. Your life jacket will hold you in this position.

Strainers--big trees fallen into the water with branches that "strain" out out.

There is a line-of-sight radio on board, if there is trouble.

Launched about 10.30 a.m. First Bend Rapid. Sulphur Slide Rapid. Ramshorn Rapid. Velvet Falls (Class IV). Most rapids are made by boulders in the river. But this is a bed rock rapid, made by a resistant ledge of rock, granodiorite. A drop of about 4 feet. Here Sarah (Brand) was thrown off the oarboat. Also two in the paddle boats got thrown out earlier. I had to grab on pretty hard myself once.

Lunched at Hot Springs above Trail Flat. Quite hot springs here.

The Chutes. Elkhorn Rapid.

Landed and walked to an old cabin and stamp mill for gold at Powerhouse Rapid, from the 1930's. Joe Bump Cabin.

Powerhouse Rapid (Class IV).

Camped at Sheepeater Hot Springs, mile 13.0.

Fire is made in a firebox, and the ashes are carried out. Also there are porta potties, and human waste is carried out, though they encourage you to urinate in the river! The porta potties were open on two sides, and unisex.

--Quinn, James M., Quinn, James W., Quinn, Terry L., and King, James G., Handbook to the Middle Fork of the Salmon River Canyon. Medford, OR: Commercial Printing Co., 1981. ISBN 0-944664-03-2.

Baked chicken breasts in Dutch ovens for dinner.

July 30, Thursday. Rain in the morning.

Put wet suits on for the morning. Rather tight fit. Left 10.10 a.m.

Passed Fire Island campsite. Lake Creek campsite. Artillery Rapid. Cannon Creek Rapid. (Some of these names go back to a time the U.S. Calvary was in here.) Pistol Creek Rapids was a good one (Class IV). The river is very narrow in an S turn (pix here).

Passed about 20 cabins at Pistol Creek Ranch, with airstrip. Good ponderosa. Lunched at Indian Creek Guard Station, with another airstrip. Here we took on supplies that had been flown in, including three inflatable kayaks.

Sunshine first, then rain off and on at lunch.

Took off wetsuit. Got in a paddleboat for the afternoon.

Walked up to adit at Pungo Creek. Mine is in a fluorospar vein.

An active stretch of white water but no named rapids all afternoon. Kingfisher.

Camped at Little Soldier, mile 30.8. Got into camp about 5.00 p.m., passed perhaps 15 other boats, or they passed us today. The river has gotten much wider. Rapid River and Pistol Creek are major tributaries.

blowout - a big rainstorm upstream in a tributary that muddies up the river for a few days.

nighthawks at twilight.

July 31. Friday. Good sunny morning. Eggs Benedict for breakfast.

Marble Creek Rapid. Pack bridge at Middle Fork Lodge. Nice ponderosas.

Took shower at Sunflower Flat. Mile 32.6.

Jackass Rapid (pix of kayaks in this rapid)

Lunched at Upper Jackass Flat.

After lunch, Gray and I got in a kayak. Once we got hung up and flipped, and I was underwater about 15 seconds. Hard to get back in the kayak in the swift current. I had the wetsuit on, but had a tendency to get cold in the later afternoon, with rain.

Camped at White Creek Camp. Mile 47.3. Rather steady rain.

Jennifer played her flute under the tarp. Steak for supper, and recitation of "The Cremation of Sam McGee" afterward by Matt Leidecker.

August 1, Saturday. Ground fog, then clearing. Pancakes for breakfast. We pushed off early for a long day, 30 miles.

Stopped at Hospital Bar, last of the hot springs.

3 chukar partridges



Bighorn sheep right at riverside.

5 chukar

3 mergansers

Tappan Falls (Class III or IV, depending on water) (lots of pix, with kayaks)

3 bighorns on hillside

kingfisher

2 otters, seen with heads above the water several times

Pulled the kayaks for Haystack Rapid.

Haystack Rapid. Haystack Rock is in the middle of the river. No kayaks here. Guides say this is the worst rapid on the river (tho book says it is Class III). Janice Rogers fell in halfway through the rapid.

Below, 2 more otter seen with heads out of the water, seen even better than the previous ones.

Lovely scenery all day. Rocky cliffs and crags, lots of pinnacles, scatter trees in the mountains. Crossed the 45th parallel. A marvelous kaleidoscope of changing forms.

Rain several times, then clearing.

Visited Rattlesnake Cave, with Indian pictographs, just before camp. Only three of us stopped off here.

Camped at Woolard Creek, Mile 74.9. Enchiladas for supper. Deer and fawn in camp after supper.

August 2, Sunday. Cloudy in the morning, with blue patches. We are now lower down and warmer.

Other outfitters on the river:

Rocky Mountain Rivers Tours, is good.

Hughes River Tours, is good

Sevy Guide Service. These three are the best.

Waterfall Creek Rapid

bridge (pix)

Big Creek Rapid (pix)

Here the Big Creek Trail leaves the river on the west side, and the Waterfall Creek Trail leaves on the east side. You enter Impassable Canyon. The U.S. Calvary couldn't get through here. There was a famous Sheepeater War, a skirmish with the Indians.

Lunched at Elk Bar. Good sandbeach bar. After lunch, the guides turned a paddle boat upside down and made a slide of it.

Dean and Sharon floating through the rapid here (pix)

Gray on the inverted paddle boat diving across it (pix).

After lunch, Redside Rapid. Redside is the colloquial name for cutthroat trout. This rapid has Sevy's Rock, where Bob Sevy hung up a boat and got in trouble, when he was young. Redside and Weber Falls are two good rapids.

Weber Falls (pix).

3 bighorns, one nicely silhouetted against the sky.

ouzel

12 chukar

6 pintails

Walked in to a waterfall, and snagged my arm on a thorn.

Passed Mist Falls, high, halfway up a cliff, below a clump of green vegetation, and with an alcove cave at the bottom.

Upper, then Lower Cliffsides Rapids.

Camped at Tumble Creek, just below Lower Cliffsides Rapid. Mile 88.8.

Idaho has three canyons deeper than the Grand Canyon:

1. Middle Fork of Salmon River

2. Main Fork of the Salmon River

3. Hell's Canyon, 8,043 feet is the deepest gorge in North America.

There are 96 campsites in the Middle Fork. The run to Cache Bar is 99.7 miles. The run to the confluence is 96.3 miles.

5 bighorns

1 bighorn

canyon wren

August 3, Monday. Off at 9.00 a.m.

Rubber Rapid (pix with Gray coming through). Guide says this is the heaviest white water on the river.

Excellent definition of the peaks in the early morning light and strong shadows.

Hancock Rapid.

Devil's Tooth Rapid.

House Rock Rapid

Reached the confluence with the main Salmon. There were two colors of the two rivers mixing. The Salmon is muddier.

Reached the take-out at Cache Bar. Lunched there and changed clothes.

Bus most of the afternoon back to Stanley.

Apricot orchards on the way out.

2 great blue herons

1 bighorn

Stopped at North Fork store, where the North Fork of the Salmon comes in. This is a minor stream.

Beaverhead Mountains, on the skyline.
Clear skies, all day.

Salmon is a good-sized town.
Challis. Small town, but all the services you need.
There was a story in the local paper about wolves killed four cows in the area.

A bison jump was here. There were bison until the 1880's here.

The BLM had rounded up feral horses.

Back in Stanley about 5.00 p.m.

Dinner with Dean and Sharon Banks. Run the Rogue River in Oregon. Lots of birds and wildlife.

With Sevy the guides make \$ 50 a day, and tips. This brings their wages to maybe \$ 400 a week.
The swamper, Jennifer, makes \$ 30 a day.

August 4, Tuesday. Off at 7.00 a.m. for drive home. South to the Snake River Plain. Picked up I-84 to n.w. corner of Utah.

Several glimpses of the Great Salt Lake.
Wasatch Mountains prominent on the eastern skyline.

Spent the night in Rock Springs, WY, at a Comfort Inn.

August 5, Wednesday. Drove home. 799 miles for the day and a half. Several dozen antelope.
Gray is proud of his beard! Home about noon.

August 6, Thursday. Gray took shuttle to Denver to fly to Dulles and join Julia, Mary Lou and Michael.

end of Sawtooth/Middle Fork Salmon trip

Aug. 20, 98. Pawnee Buttes with Will and Sally Aiken. They had come to bring their son, Travis, to CSU as a student. Saw first a single burrowing owl at the prairie dog colony, then a family of four, two adults and two juveniles. Various raptors.

Aug 25, 1998. Five raccoons crossing the street when I was coming up Stuart from Heatheridge, about 10.30 at night, coming home from Environmental Ethics class. A family of them, with long bushy tails silhouetted in the night light.

October 1-2, 1998. Queen's College, Cambridge. Conferencde on "Works of Love," with John Polkinghorne. Visited St. Giles Cemetery and Wittgenstein's grave. Also Arthur Edding is buried there. Also John Wisdom.

October 17, 1998. Hike from Brainard Lake to Mitchell Lake, then to Lake Isabelle, with Alan Carter, Heythrop College London, and Stan Godlovitch, Lincoln University, New Zealand. Queer weather the day before after some good Indian summer. Lots of rain, thunder, and hail in town so we were apprehensive about the trip. Drove to Boulder, picked them up, cloudy, some blue sky in east, misty in mountains. Drove to Gold Hill, and got confused there and took the wrong turn, which brought me back to Boulder before I figured out what was going on, now in a good snow flurry. Went back through Nederland and got to Mitchell Lake trailhead about 10.00 a.m. Road last couple miles snowpacked all the way in, about 4 inches of new snow from the day before. Trees marvelously covered with snow, like a postcard scene

Hiked to Mitchell Lake easily enough, then the trail got obscure from the snow and we either lost it or, if we were on it, it was too rough. Turned back and lunched in the parking lot.

Then hiked up to Long Lake and Lake Isabelle. By now skies were clearing up, sun out, and quite a nice day, though wintry in look and feel. On return hiked the south side of Long Lake. Total today about 6 miles. All this is under Mt. Audubon, which we only saw through snow flurries later in the afternoon.

China, October-November 1998

China's environment. China has 1/14th of the total land area on Earth, 1/4 of the world's people. The land area is approximately the size of the United States, the population over four times that of the United States. There is immense variation in topography, climate, soils, ecology, and ethnic peoples. The altitude ranges from 300 meters below sea level (in the Turpan Depression of northern Xinjiang) to 8800 meters (in the Himalayas, the "roof of the world"); ecosystems range from tropic to alpine, rainfall varies from over 250 cm. annually to under 1 cm. China is unique in Eurasia in having an unbroken forest from the tropics to boreal regions. The flora is among the richest in the world, some 30,000 species (U.S. about 20,000), including 5,000 woody species, 2,800 tree species (U.S. less than 700).

China has three of the longest rivers in the world, rivers that do not always flow peacefully, due to enormous catchment basins, often steep and barren, that shed water rapidly, and due to the erosion of loess soils that build up downstream deposits subject to periodic breakthrough and flooding. The Huang (Yellow) River ("China's Sorrow") has killed more people than any other feature of Earth's surface. In China, forestry is especially important in relation to soils and sedimentation and downstream water flow. Although the Chinese have lived more or less in harmony with their landscape for millennia, they today more nearly press the carrying capacity of their landscape than do most other peoples. Human development and environmental conservation are as integrally related in China as anywhere else on earth.

The immense Chinese population is very unevenly distributed on the landscape, due to the variation in climate and topographic features. In general China is about twice as elevated in landscapes as is the United States. Eastern China is densely populated, but the interior is often lightly populated and some parts are almost unpopulated. Some 90% of China's population live on little more than 15% of the land surface. The massive size of the population, together with the large and diverse land areas, pose problems of governability faced by no other country in the world. The climate is regarded as being more erratic and unpredictable than in most other nations.

China as a nation is not especially well-watered; the runoff is about one-fifth what it would be in other large nations. The actual water caught and used in the United States is about the same as the total amount of rain that falls on China, areas of comparable size. The result is a large population, unevenly distributed, an uneven rainfall, and strain on water resources.

The United Nations Environment Program reports that there are over 300 environmental awareness groups in China. There are also over 60 universities in China teaching courses on environmental engineering and ecology. A monthly English language journal, China Environment News, is published with UNEP assistance, together with a quarterly Chinese language journal, World Environment.

The Chinese do philosophy of nature under the term "dialectics of nature," which for them also includes philosophy of science.

My previous trip to China was in October 1991.

October 20, 1998. Tuesday. 1.45 a.m. Left Chicago on Korean Air.

14 1/2 hours flight. Darkness all the way but uneventful flight. Pretty good sleep. Skipped a day in flight but never quite figured this out.

October 21, Wednesday. 7.15 a.m. Reached Seoul, Korea, hardly yet dawn. Waited in Korean Air lounge. 10.00 a.m. flight to Beijing. One hour time change. 11.15 a.m. reached Beijing. Some confusion claiming my bag and getting it rechecked. Changing money. 8 yuan = \$ 1. 1.00 p.m. Air China flight to Harbin. I was seated beside a recruiter for Lucent Technologies (Bell system) going to Harbin to recruit recent Ph.D's. He had been in New Jersey.

Reached Harbin 2.30 p.m. Met by Ye Ping, Liu Er, and Yu Mouchang, very cordially. Nice airport.

Harbin has 2 million people, wide, tree-lined avenues, and European style architecture, comparatively, a legacy of the Russians, who once populated the city. The city fronts the south bank of the Songhua River. The Songhua flows on from Harbin to join the Heilongjiang (Black Dragon River), which gives the province its name (= Amur River).

Harbin, a Manchu word, means "a place for drying fishing nets in the sun," and was only a village for 800 years. From the 1890's onward, it became a city, especially with the Chinese Eastern Railway, a branch of the Trans-Siberian.

China does not use daylight time. Nor did Korea. China tried it once years ago and it didn't work. Supposedly all of China is on one time.

Drive into Harbin. 40 minutes. Very good road. Lots of poplar trees lining the road, painted white at the base, about 4 feet up, to prevent insect damage, it was said, though it looked more like a safety device to me.

Went to bed. Dinner that evening.

Liu Er proved an excellent interpreter. He was in U.S. 23 years. He went on a Harbin Institute of Technology exchange program and was in a Massachusetts high school one year, and then to

Philips Andover Academy one year. Then he went to the University of Chicago and graduated in physics. Then he went to Columbia University as a graduate student in neurobiology. Then he went to Princeton University in sociology, but he has never finished that degree.

Ye Ping is seeking a Ph.D. degree at Jilin University, in Jilin. He has a Master's degree in philosophy from Harbin Institute of Technology. Jilin is designated a key national university. It is one of only two universities in China certified to grant Ph.D's in the field of dialectics of nature, which is their name for what we in the West call philosophy of science.

He has written a report, *The Nature, Characteristics, and Trends of Contemporary Western Environmental Philosophy*, June 1996, of which he gave me a copy. All in Chinese. This report will be used in lieu of a thesis. He still has to sit exams in six fields.

This is Heilong-jiang province. Heilong means Black Dragon. Jiang means River. This is their name for the Amur River, which forms the border with Russia here, and on which I took a boat trip in Khabarovsk, on the Siberia trip.

October 22, Thursday. 7.00 a.m., picked up for breakfast by Liu Er.

The conference is at the Harbin Institute of Technology. This is a different institution from Northeast Forestry University.

8.00 a.m. gave paper to maybe 60 persons, in room, with large circle of chairs. Stopped about 9.10. Questions until about 9.50. Then there were three other papers, in Chinese, and I got some summary translations as they went along. One paper was by Zhou Ding, a woman in environmental chemistry. She was in the U.S. in August with the EPA. General theme: how the curriculum in engineering needs to be reformed in the next century. Ye Ping's Centre for Ethics and the Environment is important. There needs to be a cooperative relationship between humans and the environment. Sustainable development.

Second speaker, Zhao Jianjun, from southeast China. High tech civilization creates lots of entropy in the environment. Humans are members of the ecosystem.

Third speaker, Liu Bing, on ecofeminism. He teaches at the Graduate School at Beijing University of Science and Technology, Beijing. Spoke reasonably good English. Chinese scholars are unfamiliar with many Western schools of environmental philosophy, especially ecofeminism. An introduction to ecofeminism.

Another speaker, Chen Minhao, on the role of scientists in society.

The morning session was moderated by Li Chun-giu, professor of philosophy at Beijing Normal University, Beijing, address in notes.

In China there are three places where there is some concentration in environmental philosophy.

(1) Beijing, Institute of Philosophy.

(2) Harbin

(3) Inner Mongolia University. Bao Qingde has two colleagues in philosophy. They do (a) ecology of grasslands, (b) self-organization of nature, (c) theories in ecophilosophy.

Professor Bao Qingde (pronounced bow ching duh)

Department of Philosophy

Inner Mongolia University

Huhohaote, Inner Mongolia (pronounced hoo ho how tuh) Or Huhehot (pronounced Hoo hay hot long o)

also known as Kweisui (gway sway). Railroad goes through there. Not all that far, 150 airline miles from Beijing.

P. R. China

Met him at the conference. He has studied ecology of grasslands and philosophy of grasslands. He has published about thirty articles in philosophy and ecology. He doesn't know English, but some of his students do. He is a friend of Ye Ping.

12.00 p.m. bus to a student eating place, and I had lunch with a few of them in a separate dining room.

1.00 p.m. on a bus for a tour of town. Got off at a river and walked through town. Visited Orthodox Church, St. Sophia, now a museum.

Back about 4.00 and to supper almost at once. Went with Huan Yingna, a young girl, the first of two girls there who were students doing theses in environmental ethics. Her English is quite good. She is Ye Ping's student at the Harbin Institute of Technology. She translated John S. Dryzek, "Industrial Society and Beyond" from Dryzek's The Politics of the Earth: Environmental Discourses, Oxford University Press, 1997. Address in notes.

Then we were picked up on a bus for what proved to be an all night bus ride. The bus driver got lost and nobody knew which roads to take. They variously stopped and asked and turned around, with general confusion. The bus stopped two or three times in the night for toilets just along the roadside. The men file out and urinate, and then come back on the bus. Then the women do the same.

October 23, Friday. Reached Dailing about daybreak. They didn't know where the nature reserve was. Tried to get into a hotel, and they were full. They then located a person from the Liangshui (Cold Water) Nature Reserve, who came and got us. There is also here an experimental forest of the Northeast Forestry University.

We reached the reserve, and I got into a room, decent but cold. Slept 7.00 - 9.00 a.m. and then went to a talk on the reserve.

General Notes on Nature Reserves in China.

There are 333 nature reserves in China (1986), and there were none in the 1950's. There is an aim for 500 reserves by the turn of the century. The present People's Republic was founded in 1949. The first nature conserve was in 1956; in 1966 there were nineteen. From 1966-1976 the "cultural revolution" damaged many of these reserves, some destroyed. From 1976 onward, steady progress. In 1981 there were 76 reserves. Today there are 300+ national reserves, with a combined area of 19.33 million hectares. (Li and Zhao, p. i-ii).

China has some 27,000 species of seed plants. Over 2,000 species of trees, gymnosperms are especially well represented. One third of the world's pine trees grow in China. Ginkgo (Ginkgo biloba) a famous relict tree. 500 plant species are used in traditional medicine, with another 200 in herbal medicine. There are said to be 4,000 medicinal species.

China has 414 species of higher animals, of which 68 are under first-level national protection. There are 1,175 species of birds.

See Li Wenhua and Zhao Xianying, China's Nature Reserves in bibliography.

Three significant areas of wildlands remain in China. (Ye Ping)

(1) Daxinganling Major Xing'an Mountains, in northeast China. Largely forested.

(2) Tibet. River gorges, essentially little known.

(3) Tibet - Sichuan Border, 8,500 km.² Very dry. Uninhabited area. With only 50 security guards. With some Tibetan antelopes. Ye Ping estimates the three areas might be more than 2% of the total area of China. They are officially preserved, but without enough security guards. Ye Ping doesn't know if there are wild areas in Inner Mongolia.

Liangshui (Cold Water) Nature Reserve. With an experiment station and experimental forest of the Northeastern Forestry University. There is a small brochure about the reserve, with good photos. (See files).

In 1962 the railroad came and industrial exploitation of the forest began. In 1980 it was made a provincial level nature reserve. In 1997 a national level nature reserve. One of twelve reserves in China that is a Man and Nature Biosphere Reserve, also from 1997. Elevation 280-400 meters above sea level. Winters are dry and cold. There is a late, dry spring. Summers are short, hot and humid, most of the precipitation then. There are only 90 frost free days a year, that is, it freezes 275 days a year! So the region is not so good for agriculture. The dominant forests is broadleaf/Korean pine. There is old-growth pine forest.

There are many birds, over 200 species. There are not so many mammals, 40 species. Before the 1980's there were very few people in the area, after that more, including poachers. The seeds for Korean pine are expensive, and pilfered.

The buildings here have a capacity for 200 tourists, and they are trying to emphasize the scenery, but understood scientifically. The staff includes 2 professors, 18 engineers, and many other professionals. This is the only place in China to see undisturbed Korean pine forests. There are 30-40 Master's theses, and 1-2 Ph.D. theses done here each year.

Development of the region and problems protecting it. Korean pine is found only in n.e. Asia, China, Russia, and northern Korea. China had 60% of the pine, 30% in Russia, and only 10% was in Korea, though it was named from there. Rare specimens of it, though no forests of it, have been found in Japan. China was the center of its distribution and it was found in four mountain ranges. As a timber, it is high quality. Five needles, sells at high prices. But it was too hard to get out

before this century. The Russians built a railway and started large-scale exploitation. The Japanese in the 1930's were a second wave of exploitation. It was cut without replanting and with no attention to other resources.

First it was foreigners, and then the Chinese themselves who did the destruction.

The crisis is not only for the trees, but for the employees of the Forest Service, who have not been paid since June. They regret using the Soviet model of forestry.

Sustainable forestry was an ideal, but never practiced. Since 1950 they have cut 25 times what they have grown. They only cut the pine in the region; there are no industries to manufacture it here. That is done in other cities, like Shanghai. The locals use a lot of wood for fuel and cooking.

The cut quotas have been lowered 40%, with a push to locate more of the processing industries in the nearby region.

Mammals, mounted in museum

red deer, Cervus elaphus
 roe deer, Capreolus capreolus Chinese "pao"
 brown bear, Ursus arctos
 wild boar, Sus scrofa
 lynx, Felis lynx

Lunch, then a walk in the forest.

Labeled species seen on the walk:

Korean pine, Pinus koraiensis
 Korean spruce, Picea koraiensis
 birch, Betula platyphylla
 ribbed birch, Betula costata
 alder, Alnus hirsuta
Padus maackii. Rose family
 poplar, Populus koreana
 poplar, Populus ussuriensis The Ussur is another river.
 Amur linden, basswood, Tilia amurensis
 white birch
 aspen
 Xingan larch, Larix gmerini
 Amur cork tree, Phellodendron amurense
 Manchurian walnut, Juglans mandshurica
 Manchurian ash, Fraxinus mandshurica

The three main hardwood trees of Northeastern China are: ash, Fraxinus mandshurica; Manchurian walnut, Juglans mandshurica; Amur cork tree, Phellodendron amurense. (Li and Zhao, China's Nature Reserves, p. 24)

Returned from the forest walk about 3.00. By now it was very dark, clouds and moderate rain. It was so dark it seemed as though it was twilight.

Ye Ping pressed on on some other trail, and got lost!! Much discussed later.

Slept 3.30-5.00 p.m. Room is cold but manageable. Wore long-johns this whole trip. There is no water in the faucets though the toilet works. There was no electricity on return from the hike but it came on later.

Piao Xiwan, middle-aged man in double-breasted suit. He is the vice-president of Ye Ping's Institute. Met him on the hike to the Korean pines, and later had some conversation with him about his volunteers. He is in charge of a Volunteers for Ecoprotection program.

The food is typically Chinese and difficult to eat with chopsticks. So I carry along my knife and fork.

Evening. Several came to visit me in my hotel room.

Met Yang Tongjin, who is translating my Environmental Ethics. Yang is his surname. Tongjin is his given name. I was to see him and his wife more extensively in Beijing later.

Met Fan Chun Ping. She is editor of the Jilin People's Publishing House. Jilin is a province in China, the capital is Changchun. They are publishing my Philosophy Gone Wild. I had met her earlier along the river front walk in Harbin.

They have a Green Classical Library, now 11 volumes, 8 American authors.

Thoreau, Walden

Carson, Silent Spring

Leopold, Sand County Almanac

Commoner, Closing Circle

Meadows, Limits of Growth

During, How Much Is Enough?

Brundtland Report, Our Common Future

, Only One Earth

Merchant, Death of Nature

Muir, Our National Parks

The chief editor is Wu Guosheng, a researcher at the Institute of Philosophy, Academy of Social Sciences, Beijing. Each print run is 5,000 copies.

They are interested in doing Mckibben, End of Nature, and Capra, The Turning Point.

Second, I met with Zeng Huan. The second student, young girl, English less good. She is in the Political Law Department, Huazhong Normal University, Wuhan, Hubei, P. R. China. She is doing a thesis on natural value. Wants an ecological value orientation. Wants some articles on ecosystem management, land health, bioregionalism.

Third, I met with Ye Ping and Yu Mouchang. They wonder about having an international conference on environmental ethics in Harbin.

October 24, Saturday. 7.30 a.m. breakfast. Hardboiled eggs and boiled bread. Packed for drive back to Harbin.

Pictures just before getting on bus with Fan Chun Ping.

On bus about 8.30 a.m. Drove through birch/spruce forests to Dailing. Stopped there in a filthy toilet and for gas. Then drove on. Brief hailstorm. Rice fields. About 120 km. of dirt road in here, a long drive, but the road, though dirt, was not terrible. Various persons along it with shovels filling in the potholes.

Lunched at Tieli. There is a toll road and highway south of Tieli. Decent 2-lane asphalt for 15 miles. Rice fields. Then poor, degenerated paved or dirt. Reached Qing'an about 2.15 p.m.

Heilong-jiang Plain is the largest black soil plain in China.
More poor roads. Reached Suihua.

Some 4-lane within 3-4 miles of Harbin, reached Harbin about 6.30 p.m. About 320 km. drive, one way. Only about 15 km. of it decent road, and that with mostly carts, autorickshaws, and trucks. Ten hour drive back. About the same time as it took me to cross the Pacific in the jet.

Dinner in the hotel. 3rd floor private room, with Liu Er.
Evening, met with Yang Tongin, translator of my Environmental Ethics. Questions about various passages. Especially about "storied residence," which, I later learned, had been mistranslated in the Taiwan version. Also questions about "projective nature."

October 25, Sunday. After breakfast, I met in the square at the Harbin Institute of Technology sign (a prominent red stone sign with bright brass letters), the man from Inner Mongolia, Bao Qingde.

Also there was a woman:
Xiao Ling
Associate Professor and Vice Director
Department of Philosophy
Nanking University
22 Hankou Road
Nanking, Jiangsu 210093
P. R. CHINA

She is also associated with the Jiansu Institute of Natural Dialectics, as vice chair. She was the woman who had her picture taken with me a couple times, in a leather coat. Pictures taken again here (on my slides).

Visited the office of the Harbin Center for Environment and Society.

List of books seen there, mostly that I had sent them, in notes.

Visit to Northeast Forestry University. Host Cao Liancheng, professor of philosophy, College of Humanities and Social Sciences, Northeast Forestry University. There are 6,000 students here, both men and women.

Visited the ecology laboratory, Open Research Laboratory of Forest Plant Ecology. Zu Yuangang, director. I met with him, and he was cordial though he came and went during the conversation. He had been in the U.S. Only fair English. Toured the lab. Saw DNA sequencing equipment, PCR equipment, gas chromatograph, so there is some fairly high-tech stuff here. Visited the herbarium, 200,000 specimens. There is a brochure about the lab, see files.

Then I visited the College of Wildlife Resources, in a splendid blue building. This is the only such college in China. On the fourth floor, I met Jia Jingbo, vice director, and chief editor of Chinese Wildlife, of which he gave me multiple copies. He did his Ph.D. at the University of Helsinki, and spoke good English. A professor Ma Jianshang from there has been at CSU, and is pictured at CSU in their brochure, on hand.

Returned to hotel 2.00 and got good nap.

Evening, dinner at the home of Liu Er. Decent apartment, but there is no hot water. Also the elevator is intermittent, and they are on the tenth floor. He has a good computer, and website modem. Most of the software is pirated; he buys it from Chinese sources. But if he bought it from licensed American sources, it would take a year's salary. His salary is 300 yuan (\$ 37.50) a month, but with extra teaching and bonuses, it can come to 600 yuan (\$ 75.00)

His wife is Liu Wei. (Liu is surname, but her maiden name; Chinese women do not change names on marriage). She did a M.A. study of Tsao Hsueh-chin (ca. 1717-1763) (or Cao Xueqin), A Dream of Red Mansions (sometimes translated as A Dream of the Red Chambers). English translations: The Dream of the Red Chamber, New York: Penguin, 1995. A Dream of Red Mansions. Beijing: Foreign Language Press, 1994. And dozens of other translations. Confucian ethical ideals and the virtuous woman. She will be teaching at another university in the city soon. They have been married only a year.

Back at the hotel, I got a good hot shower, but otherwise the water has never been more than tepid. In the night and early morning, there was no running water at all. They bring two big, heavy steel Thermos bottles of boiled water, and they do keep quite hot all night and into the next day.

October 26, Monday. Up and ready by 7.15 a.m. for the trip north to Nehe, and on to the Wudalianchi Nature Reserve. Nice day, bright and sunny. On the train, rode through broad, flat plains. This is the Dongbei Pingyuan. Dongbei = east, north. Ping = level. yuan = vast area. Northeastern Plain, sometimes the Manchurian Plain. Covers three or four provinces. This is the largest plain in China.

It is suitable for mechanized farming. Huge areas are planted with wheat, corn, soy beans, sugar beets (more formerly), sunflowers.

In China there are three large plains:

- (1) Hugbei Pingyuan. Hua = China. Bei = north. North China Plain. Beijing is in North China.
- (2) Changjiang Zhongxiayou Pingyuan. Chang = long. Jiang = river. Zhong = middle. xiayou = lower. This is the Yangtze River. Middle and lower river plain.
- (3) Dongbei Pingyuan, where we are now.

We rode through the largest oilfield in China, though some say it is almost exhausted. It was developed in the 1960's. Many hundreds of pumps seen.

We decided not to go to a sanctuary for red crowned cranes, near Qigihar. Zhalong Nature Reserve. Good crane pix in this reserve in Li and Zhao, China's Nature Reserves, front color pages, on hand. Also a good pix in Xu Weishi, Birds of China, right at the front of a wetland, and of the crane, about p. 13.

There is a moving story about a young girl who had worked to save the cranes. To save them she got drowned. This was on national television last year. She was trying to save an injured bird. Also there was a song that went with the film. A true story.

The train went by vast marshes and water covered landscapes, with some discussion of how much water was remaining from the flood. This is on the Nenjiang River, which is a prominent tributary of the Songhua Jiang River, flows through Harbin, both flooded last August.

Luwei - the dominant grass in the marshlands. It is now 3-4 feet above the water. Although there was flooding in August, prior to that it had been rather dry. In other years, it can be 6-8 feet high.

In the countryside, there are many slogans about family planning. Also many slogans about land use.

Local governments can sell land for commercial use, and the national government dislikes this.

Reached Qigihar about 12.00 and transferred trains. Lovely day continues. More flat plains, mixed with marshlands. Reached Fuyu. The railroad right of way is heavily grazed by cattle. Arrived Nehe 2.30 p.m. 400+ km. on the train today. Took pix of boy with autorickshaw in train station lot.

Picked up by Yang Changguo, vice-mayor and vice-party secretary, in a fancy Audi automobile. Interview in hotel room. They grow rice, wheat, potatoes, soybeans. Formerly sugar beets, but import sugar is so low in price they don't grow it anymore. This is the 40th largest crop producing county in China. 110,000 people live in the city as permanent residents. 20,000 more mobile residents.

Tofu = made from soybeans and often eaten in China. Soybeans (Glycine max) originated in China and Japan. The word "tofu" is from Japan.

3%-5% of the population are members of the Communist Party, a higher rate in cities. 20%-25% of faculty members are members of the party. The party is selective, and you have to go through an apprenticeship for a year or so. In the past most government officials were members of the party, now some are not members. But neither are they in positions of much power.

Chief officers of the party are called secretaries.

Potatoes are eaten as such, but most are deep processed. To make them taste more like Chinese food!!

China is going to build what they call an "interstate" highway south to north and it will pass near

here.

The peasants are often working their crops on the road, drying it, or sifting out soybeans, and they leave only one lane to pass.

The part of the plain here is the Shong Neng Plain. Neng is the name of the river. Shong is another word for river.

October 27, Tuesday. Up at 4.00 a.m. for a 5.00 a.m. departure by car (a big Volkswagen). We drove in the dark an hour and a half. Dirt road but not too bad. Reached Wudalianchi, the name of a sizeable town (and also the name of the Nature Reserve, to come). The road is under construction, so we took a detour, which, after 40 minutes, didn't work out. The driver didn't know he was circling about. So we returned to Wudalianchi and they bargained with a man in a four-wheel drive to take us.

There was a very muddy mess alongside the road under construction, and essentially only one barely passable road, and various tractors, tricycles (autorickshaws), and 4WD's trying to get through. Eventually we got to a bridge over the Nemor River, and afterward it was better, though still 4WD the rest of the way.

After an hour we reached Wudalianchi, the nature reserve.

Wudalianchi. Five Joined Lakes Nature Reserve. Fourteen volcanoes here. (There are pictures in Li and Zhao, China's Nature Reserves.) There are volcanic rocks over the countryside. Went to a lake, the gate was broken and we had to walk in. This is one of the five lakes. Then back to the 4WD and off to the volcano. The Park was closed but they persuaded a gate woman to let us in. We drove in toward the volcano mountain, Daheishan (Great Black Mountain), or Heilongshan (Black Dragon Mountain) (two names for the same mountain). We passed the "Sea of Rocks." Then we parked and walked up one volcano. Rather nice stairstep pathway. Lots of small white birch, pretty in the sun. The main ground cover was carpets of moss, as extensive a moss ground cover as I ever recall seeing. Reached the crater. This erupted 1719-1721.

Four of the five lakes can be seen from the top. The lakes were formed by lava flow, which flooded a river in various places. Walked down, now about 12.30. The driver got from the gate woman a striking piece of congealed lava.

The natural area is preserved as a scenic conservation area, designated in 1982, also for scientific study, for mineral baths, and tourism. There are deer on one of the volcanoes. There is a rare plant, a creeping pine. One of the volcanoes has a lake in the center.

This as far north as Khabarovsk, in Russia.

Drove back to the main town, also named Wudalianchi. A truck had killed a pig in the road on the way back. Now so many vehicles were stuck in the construction on the town side of the bridge that we had to walk back into town.

Pigs are all over the villages, geese, ducks, chickens are less common, some dogs.

Picked up the driver in the Volkswagen, and returned to Nehe.

Even when there are faucets in the hotels, the water doesn't work half the time. There is almost never hot water in the early morning.

Dinner with Yang Xiangguo, Ye Ping's relative, and discussion about communism.

Overnight train back to Harbin. Six berths in a compartment, no doors, just strung along a narrow hallway to one side of the car. The bunks themselves were reasonably clean and soft, pillow and good cover. But the two girls across from us just tossed their trash on the floor, nut husks, orange peels. Reasonably quiet later on in the night, and I slept well.

October 28, Wednesday.

Arrived on the sleeper at 4.10 a.m. and took a taxi to the previous hotel, but no room. Foreigners are not permitted to sleep in any hotel, only selected hotels. Formerly there were only a few in Harbin, but now there are dozens. They found another hotel, but when we tried a taxi, the driver couldn't get his trunk open for my suitcase. We got another taxi, but they had to pay the first driver anyway!! since he was disappointed to lose the fare.

In the new hotel, I slept about 2 hours. 5.30 a.m. till 7.30 a.m. The water at first didn't work but later did. Got a good shower, eventually, after starting off cold. Ate breakfast in room, noodles, banana, orange.

Then I was picked up by Liu Er to check e-mail. We were trying to answer some copy editor's last minute queries on Genes, Genesis and God, relayed by Jane on e-mail. Eventually, nevertheless, we failed to get them through. Then back to hotel.

Lunch with Ye Ping in his apartment. I had to roll the suitcase two blocks from the hotel to his apartment. We stored it with a neighbor on the first floor, since his apartment is on the fifth floor. No elevator. Ugly halls, but the apartment was rather nice. I took pictures of children at a nearby school. Elaborate meal, friends brought in dishes.

His wife is Liu Xiao-li. The woman in China does not change her maiden name. She is a civil engineer at the Institute. They have a son, 16 years old, but I did not meet him.

Tried e-mail again, and then caught the train south. More plains, all agriculture. There are very few trees on this landscape that have not been planted, typically poplars in long rows along roads, or on either side of the train tracks. Also, there are not many fences on the landscape, no long running fences, though there are many wooden or stone fences adjacent to the houses. If cattle are out in the big fields, someone is watching them.

There are a surprising number of cellular phones here and there. Business men on the trains may have them.

Train ride continues. We begin to pick up a few wooded hills here and there. The houses mostly do seem to have electricity and often TV antennas.

Arrived in Jilin. There were a host of hucksters for hotels in the train station square. They conversed with several, found one, and we walked 100 yards (with the big suitcase) to the hotel.

They inspected the rooms.

In the hotel, I called Jane and got through easily, to discuss the Genes, Genesis and God proofs.

Dinner in a nearby restaurant.

October 29, Thursday. Up at 5.00 a.m. for 6.24 a.m. train departure. Breakfast on bun, orange, banana, and spice tea. Bright sunny day, not too cold.

Off on the train. The countryside becomes much more hilly, and some forests are in the hills.

The countryside becomes more picturesque, rolling topography, somewhat like eastern U.S., though flat bottomed with rice fields.

The train went through several good tunnels. Later, the country levels out some.

Rice stalks and corn stalks stacked in the fields, and the linear patterns of the rice fields can catch the sun and shade nicely. Rather aesthetically pleasant.

Reached Meihekou about 12.00 p.m. They had discovered an earlier train, and we hurried from one train to another, only about 10-12 minutes here, over 200 km. or so from Jilin. Left for Tonghua, 120 km. to Jonghua. Rolling countryside returns, reminiscent of rural Virginia.

Reached Tonghua about 4.00 and walked the streets for an hour. Stored the suitcase. Busy markets out in the streets.

Dinner in a restaurant. Dumplings.

Train, a sleeper, 9.00 p.m. to 4.30 a.m. The same six-berths set up. Fair sleep.

October 30, Friday. Arrived in dark at town of Lushuihe (county of Fusong), and took taxi to Lushihe Forestry Bureau. Ye Ping beat on the door until they raised a security guard. We sat in the guard's office for an hour or so, but he had some knowledge of forestry.

We walked to a hotel and checked in, about 6.30 a.m. Cold room. Banana, orange, spice tea, chocolate for breakfast. Went to bed.

About 9.30 they appeared with the Director of the Forestry Bureau and a jeep assigned to us for the day. Also a guide. Ye Ping made much effort to contact an alleged hermit, Ju Xi, and failed. He was to be our guide.

Changbai Mountain Nature Reserve. A Man and the Biosphere Reserve. Fairly intact comprehensive ecosystem. Only alpine tundra in east China. There is more in the Himalayas. The main summit here is 2,691 meters (8,929 ft.)

Changbai means ever-white, always snow on top. A mountain range. One of twelve nature reserves in China that are Man and the Biosphere Reserves.

The nature reserve is located in three different counties. The reserve is only part of the Changbai

Mountains, centered on the lake, caused by the volcano, named Baitou Mountain Lake, or white-head lake. On the east, west, and north are primeval forests, especially close to the lake, called the "Sea of Forests." This was one of the first groups of nature reserves, set up in the late 1970's. Before that there were essentially no nature reserves in China. There are many biological species with typical montane fauna and flora, bear, and tiger. Plants useful in medicine. Famous for ginseng, which attracts tourists.

A well known waterfall here (not seen, too high to get to now) is pictured in Li and Zhao, China's Nature Reserves.

The Changai Mountains area has been preserved since the Ching (Qing) dynasty, 1644-1911, owing to some beliefs. The ancestor of this dynasty ate a fruit planted by a mountain god, and gave birth to this dynasty, so they preserved the area (16th century). They overthrew the Ming dynasty.

We went out for a drive in the forest.

deciduous pine. They kept speaking of deciduous pine, by which they must have meant Larix. There was lots of Larix (which is in the Pinaceae, pine family. Later: In the Pinaceae, Lawrence, Taxonomy of Vascular Plants, says of the different genera in the family: "In all but Larix and Pseudolarix the leaves are persistent" (p. 364).

ginseng planted under power lines

Three kinds of deer in the pens

1. roe deer. Capreolus capreolus. A rather small deer. a small one. Found throughout Europe and Asia, reintroduced to the UK. But not common here, hunted out. Some divide the European and the Asian deer into two Capreolus species (Walker, Mammals). They have only one.
2. sika deer, plum blossom deer. Cervus nippon with white spots. Found widely in Japan, Manchuria, Siberia, Korea, in many subspecies, many of which subspecies are considered endangered. (Walker). They have about fifty in a larger enclosure here.
3. red deer, Cervus elaphus. The American elk, waipiti, (Cervus elaphus, formerly separated from the Eurasian Cervus elaphus as Cervus canadensis, but no more). Cervus is Latin for deer. Elaphus is Greek for deer. (In Europe elk means what Americans call a moose.) Twice or three times the size of the roe deer. They have about 10 here.

They breed them; sell some to zoos, cut the blood antlers and sell them.

pheasants, 3,000, the original ones from the U.S.

fish hatchery, seemingly some kind of trout, again, originally from the U.S.

The Forestry Bureau is doing poorly and trying to diversify income. But neither venture is very successful.

We drove to a substation, a sizeable building, and met a party headed by the secretary of the communist party for this work unit.

There was an endless dinner. Forest frogs, eels, mushrooms, rice. There were toasts forever, and I thought it would never end. I wished to get out and see the forests. Finally, back to the forests.

Mouse ran across the road.

Went to visit a primeval grove. The king of the Korean pine, a specimen said to be 500 years old. Pinus koraiensis.

Maple, Acer mono.

Maple, Acer triflorum

Maple, Acer mandschuricum

Maple, Acer pseudo-siebidianum

Manchurian ash, Fraxinus mandshurica

Syringa reticulata

Fir, Abies holophylla, a giant fir (pix, with people at bottom)

Elm, Ulmus pumila

Manchurian elm, Ulmus laciniata

Ribbed birch, Betula costata

Amur linden, Tilia amurensis

Lots of Equisetum under foot. Some rain at the King of Korean pine site.

Common mosses are: Hylocomnium splendens, Ptilium crista-castrensis, Pleurozium schreberi.
Bryums. Sphagnum.

We started back and made a second stop at another primeval forest.

There are four tigers in the sanctuary. (confirmed as habitat in Li and Zhao, China's Nature Reserves, p. 32)

Also here, boar, Susserofa

a native goat, Naemorhedus goral

Returned to town. We found the hermit, Ju Xi, by inquiring at the post office. He met us and led us to his home, down a narrow path with board fence. Surprising inside. He has a personal library of 10,000 volumes, all in glass cabinets. He showed me articles he has written. He is philosophical Taoist, though not a religious Taoist. There was a complete set of the works of Marx and Engels. An encyclopedia set of the ancient Taoist works.

Then we went into a computer room, then into two rooms filled with old amateur radio gear.

Supper at the hotel. More wood frogs, a big fish, pheasant, Changbai lobster (a crawfish), and dumplings. Also, alas, the Capreolus deer, which, they said, is only rarely eaten, but served to honored guests.

Another long dinner, but better and the conversation reasonably intelligent.

Back to the hotel room. Crude versions of British and American popular songs were floating in from the hotel bar. Auld Lang Syne, Tennessee Waltz, Moon River.

A barely manageable hot shower. The water was boiling hot on one side and the cold flowed intermittently on the other, difficult to adjust without scalding yourself one minute and freezing the other.

October 31, Saturday.

Up at 5.30 a.m. for 8.05 a.m. train departure. I went up to the top floor to try to see the Changbai Mountains, which are visible from here in good weather, but visibility was too poor. Breakfast in room, though then they came and we went downstairs for breakfast (which was not the plan). But the hermit has a son, who drives a taxi, and is arriving at 7.20.

I was to be on the trains 15 1/2 hours!!

The hermit came along to see us off on the train.

We passed some good old growth forest for 25 km., seen from the train window. Some oaks seen often from the train window, though I didn't see them in the woods I had walked through.

Some agriculture here and there, but lots of forests mostly cut some, still often rather good forests.

The train was crowded and dirty, so we moved to a higher class car, which was cleaner and more tolerable (and cost 10 yuan more each = \$ 1.25!!). But this was half again the cost of the fare (19 yuan). There was, however, very objectionable VCR, depicting unrelieved violence by Chinese actors all morning.

Several good tunnels, and through a river gorge. The sun was now out, blue sky and rather picturesque. There were stops in villages with women offering foods for sale through the windows.

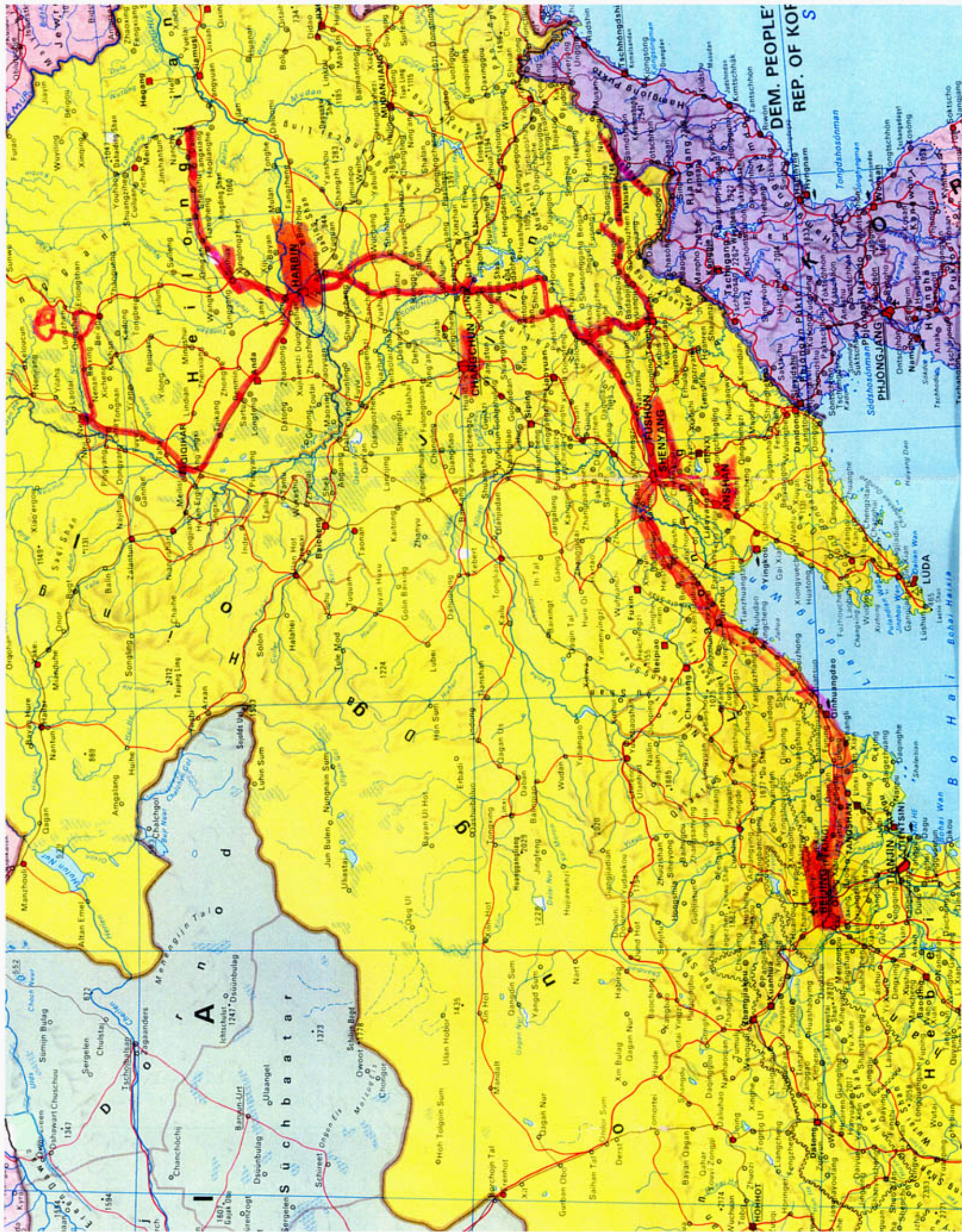
Ten days in China and I have not seen another Western face.

Reached Tonghua about 3.00 p.m., a reasonably good trip, especially compared to what was to come.

Waiting on the train platform for the next train, I walked an hour in the cold to keep warm. About 4.15, we crossed the train tracks to discover the train was waiting on another platform, and very crowded.

4.30 p.m. Left for Shenyang on crowded, dirty train, the worst of the trip. People peeling oranges, eggs, apples, and dropping the trash on the floor. Spitting on the floor. There was a rather attractive young couple opposite me, he in a coat and tie, nicely dressed, but his trash went right on the floor.

A train attendant came through sweeping up every few hours. She also mopped with an ancient, dirty mop, that just slopped the trash around.



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REP. OF KOREA

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KAMPUCHEA

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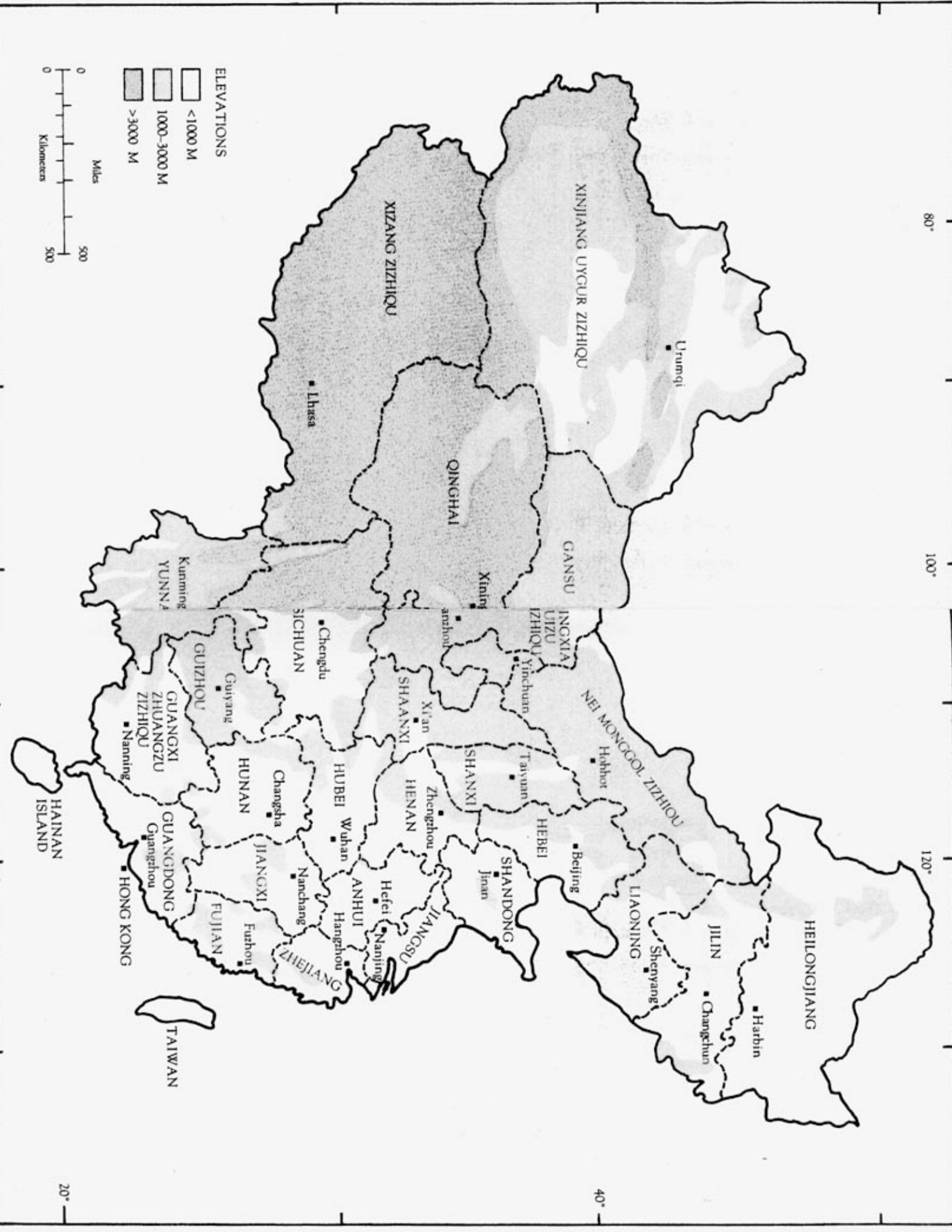
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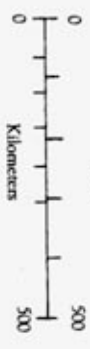
40°

ELEVATIONS

- <1000 M
- 1000-3000 M
- >3000 M

Miles

Kilometers



20°

4.30 p.m. - 11.30 p.m. a ride in the dark, and with the train so crowded I could hardly move. Ate noodles for supper, rather awkwardly. I was trying to read Anthony O'Hear's, Beyond Evolution. Eventually the aisles jammed, and when people saw we were leaving they pushed and shoved to get our seats.

Taxi to Northeast University after midnight. The taxi wasn't admitted through the main gate, so Ye Ping pulled my suitcase. Then he beat on the door of the hotel on campus to raise attendants. Finally into a hotel room on the campus about 1.00 a.m. And finally a warm room, by Chinese standards a very decent one.

They have repeatedly said that they do not turn the heat on until November 1, and now it is Nov. 1. This seems to refer to firing up the central heating plants for the public buildings, not to furnaces in separate buildings.

Shenyang - old town, 2,000 years old, and with some prominence from the 11th century onward. Court of the Manchu was here, and it was the capital of Manchuria. When the Manchu took Beijing (1644) and established the Qing Dynasty there, Shenyang (then called Mukden) became the secondary capital.

Chinese now like to avoid the word "Manchu" because it conveys the impression that the area is not ethnically "Chinese."

November 1, Sunday. Decent breakfast by Chinese standards, including an egg friend to order by a cook in the dining room.

Then I met with 8-10 officials all through the morning, all dressed impeccably in dark suits and ties. Some came first to my room, and then more gathered and they took me to a conference in a conference room, a rather nice one.

Interview with a woman newspaper reporter. Nice lunch with the President of the University and others. I tried a milky looking drink they called almond juice.

The UN is giving funds too develop two cities in China into model cities in environmental performance. The national government has set up five standards.

(1) social economic development. (2) environmental quality. (3) environmental development (4) environmental management. (5) public participation.

My hosts: Chen Changsu, an older man, who Ye Ping says is the chief person who does dialectics of nature in China. He moderated the afternoon talk with 500 students.

Hu Xiaomin, environmental engineering. Pleasant, younger, stayed with me the whole weekend. English difficult. He wants some titles in sustainable development, also environmental engineering. Addresses in notes.

Wang Zi Yan, philosophy. Taller, he also came with Hu Xiaomin, the environmental engineer. He seems to have been the principal arranger of events for my visit. He came to the conference in Harbin. Teaches dialectics of nature. Weak English. Send him books for the University Library.

After lunch, at 2.00 p.m. I gave a big lecture in the science hall. Liu Er translated, and I went for over an hour on maxims in environmental ethics (from Chapters in Ethics on environmental policy and business, also from Conserving Natural Value. Crazy, there were 500 students jamming the large lecture hall, standing in the aisles on both sides. They applauded when I walked into the room. Many seemed to understand a good deal of English, or at least they did when Liu Er also translated. There were questions at the end, some in English.

A rather electric meeting.

About 30 wanted signatures afterward, and various photographs taken, including two with 20 or so students. A woman, Hu Sulian, Political and Economic Department of Shenyang Teacher's College seemed especially anxious to meet me.

Dinner in the Foreign Students Apartment (where I had regularly been eating).

After supper, we went for a tour of the town by night. Student guide: Bao Minghui. Surprisingly bright lights. We went to a large square with large meteorite fragments. They were discovered in 1972, through they fell 1.9 billion years ago. They were formed 4.5 billion years ago, according to the signs.

Then we went to a royal palace, which we saw from the outside only. This was the first capital of the Ching (Qing) dynasty, in the first half of the 17th century. Then the capital moved to Beijing. The palace was finished in 1636 but the site was to remain the site of Manchu power for only eight years, whereupon the capital was moved to Beijing. But for some while afterward it was a kind of secondary seat of power. There was a restored area with classical architecture for several blocks here.

Then we went to a gigantic statue of Mao Tse-Tsung, and commemorating the resistance and victory over the nationalist and imperial governments. There were thousands of statues of Mao in China, and all but a few have been taken down. Shenyang put up just one, and then said we will leave just that one up!!

Here is the "English speaking corner." I spoke English with students who came there to practice English. Several here spoke rather good English.

There are three provinces in n.e. China.

1. Heilongjiang
2. Jilin
3. Liaoning (here). I have been in all three.

November 2, Monday.

Qianshan Nature Reserve. Up and out on van for trip to nature reserve. Quite nice van, foreign made, English dashboard, though in km. Surprise, a good 4-lane motorway to Anshan. Driving 90 mph in China!!!. Lots of rice fields. Anshan is one of the largest steel making cities in China.

Went to Environmental Protection Bureau and got a guide. Another 40 minutes to Qianshan Nature Reserve.

This is really a religious sanctuary, with Taoist and Buddhist shrines and temples scattered up a steep and forested mountainside. But considerable forested lands surround this, and they claim it as a nature reserve. I must have had 5 km.² in sight which looked reasonably untouched.

We left the van and walked. Made a gradual climb up the hillside, passing various temples, always rather picturesque. A woman artist drew my name in Chinese characters.

Passed some ginkgo trees that must have been wild ones.

Climbed a steep wall and squeezed through a difficult crevice in the boulders. Up a giant boulder with one step and a chain to pull on. "One step to the sky"

Then we took a very rough short cut part way back and regained the earlier path. Hiking about three hours.

Lunch in Anshan with the Environmental Protection Bureau there. Big lunch, with big plate of mantis shrimp, squilla, Genus Squilla, but I had a hard time figuring out what this was (didn't get an English name until Stuart Sargent looked it up in his dictionary). Good pix in Ruppert/Barnes, p. 729. Stomatopod crustaceans that burrow in mud along the shore. About 4" long. Plate of three dozen of them.

Then back to Shenyang, and to the Environmental Protection Bureau there for another dinner. Two rather big meals.

Then from 7-9.15 p.m, a conference with about 30 persons, and 10 or so student observers. There seemed to be a number of persons there that they thought especially important. Names in the notes. One, Xiao Duning, landscape ecologist, knows John Wiens. He will come to Colorado next year for a conference on landscape ecology in Denver.

Discussion on natural and cultural values.

I presented the three needed environments, wild, rural, urban, and with the claim that China's rarest environment was wild. Far few social problems would be solved by sacrificing the remaining wildlands.

Some good English spoken here.

I haven't had a cup of coffee or seen a Western face the entire trip. Only green tea, terrible.

November 2, Tuesday. Spent all morning with graduate students, a lecture on "Types of Environmental Ethics." No questions asked, but they seemed attentive.

Lunch.

Afternoon at the Waste Treatment Plant.

Dinner at the Foreign Student's Apartment, and a somewhat tedious wait for the sleeper train.

Train at 9.24 for Beijing. This was the best of the sleepers. Still 6 berths, open, no doors. But cleaner. Snack served for breakfast. 850 km, = 500 miles to Beijing.

November 4, Wednesday. Arrived 7.15 a.m, and walked some distance (Ye Ping pulling the suitcase) to the hotel they had chosen, Chinese Women's Activity Centre, now a part of it a hotel. But no rooms.

Then a long taxi ride, through Tiananmen Square, to Evergreen Hotel at Youth College for Political Science. Enthusiastic welcome there. They once specialized in political science but now are more diversified. Many Chinese institutions were like this.

Met by Yang Tongjin, and his wife. Again, he is translating my Environmental Ethics. She is Jiang Ya. Jiang = River, a common surname. Ya, a Russian name, from the days of Russian influence on her mother. She teaches social work and has done a lot of keyboarding of my Environmental Ethics. She also teaches ethics and has some philosophical training. Her main field is social welfare, especially concerned with aging. They have a daughter, 11 years old.

The transliterated title of Environmental Ethics is: Huanjing (= Environmental) Lunlixue (= Ethics): Daziran (Values) de jiazhi (in Nature) yiji (and) ren dui daziran (nature) de yiwu (duty). Beijing: Chinese Social Science Press (Zhongguo Shehuikexue Chubanshe). A very prestigious press in China. It is in a book series, Western Masterpieces in Ethics, Translation Series (Waiguo (foreign) Lunlixue (ethics) Mingshu (masterpieces) Yicong (translation series). Other titles are Henry Sidgwick, The Methods of Ethics; Adam Smith, The Theory of Moral Sentiments; John Rawls, A Theory of Justice; Robert Nozick, Anarchy, State, and Utopia; Aristotle, Nicomachean Ethics; Tom Beauchamp, Philosophical Ethics.

His Ph. D.thesis is: Yang Tongjin, Xifang Huanjing Lunli Sixiang Hanjiu (The Ethical Foundation of Environmental Movements--A Study of Western Environmental Ethics (in Chinese), June 1998, The People's University of China, Beijing. The first doctoral dissertation in China studying Western environmental ethics. The advisor was Luo Guojie, Chair of the Chinese Society of Ethics. Developing an environmental ethics in China requires an analysis of Western environmental ethics. Surveys various types of environmental ethics with detailed analysis of anthropocentric ethics, animal welfare ethics, biocentrism, and ecocentrism. These schools differ in regard to who is morally considerable. Confucian and Taoist virtue ethics can provide grounds for showing how virtuous persons express concern for nonhumans as well as for humans, resulting in a complementarity of humans and nature, a comprehensive and inclusive ethic. Yang continues his research at the Institute of Philosophy, Chinese Academy of Social Sciences, Beijing.

Nice dinner, Peking duck, in nice setting.

Afternoon. Interview with reporter for Station BTV, Beijing. This is the main TV station in Beijing. The name of the woman who interviewed me is Huo Xiu. Her surname is pronounced as though it were "whore"!! This was filmed outside. They have a program "Going with Nature."

Latter part of the afternoon, Jiang Ya and I went shopping, looking for a tablecloth and toy panda bear. There is a rather efficient van system. She easily flagged one down. These are private vans, not the city busses. Her English was rather good, but she hardly seemed to understand the kind of tablecloth (a fine lace one) that I wanted for Jane.

Supper in a restaurant in a big department store. Fast food and lots and lots of it. Neat and clean.

Van back to hotel. She wanted me to try a kind of big citrus fruit. Delicious. Called a youzi (yo zuh, pronounced with emphatic yo, long o), some kind of citrus from South China.

Later: This is a shaddock (Citrus maxima), or pompelmous, or, in alternative form pomelo (tho the latter term seems to refer to both pompelous and to grapefruit), or pummelo, the ancestor of the grapefruit (Citrus paradisi). Shaddock are bigger, weighing up to 7 pounds each. Seeds were taken from the East Indies to Barbados (in West Indies) and/or Jamaica by Captain Shaddock, of the East India Company. In 1750 the grapefruit, a natural mutation of the shaddock, was first described by Griffithy Hughes. By 1800 the name grapefruit was attached to the mutant form because of the way the fruit grew on the trees in clusters like grapes. (Jacques, Economic Plants, p. 75, and notes from Pitman and Davis Fruit Co., Harlingen, TX)

November 5, Thursday.

Up at 6.50, packed, and off at 8.10 for lecture at the Chinese Academy of Social Sciences. About 20 people.

The moderator was: Yin Deng-xiang, science, technology, and society. He tried to get me to come to his conference about a year ago, when I was in India. He has been in the U. S. several times, at the center at Penn State.

Chinese surnames are seldom more than one syllable.

Met Ma Huidi, a woman, who is a member of the Chinese Society for the Dialectics of Nature, and editor of a journal, Studies in Dialectics of Nature. Address and E-mail in notes. She wants to translate an article.

Lunch. Quite a fine dinner, one of the best I have had in China.

Off with Jiang Da to get a tablecloth at the Friendship Store.

Drove to Huairou (pronounced why zo long o, about equal emphasis on both syllables). This is the city where the Beijing Conference on Women was held. Hilary Clinton came here and gave her speech condemning Chinese population policy for abusing the rights of women.

The Chinese estimate that this population policy results in 20 million fewer babies a year.

Dinner in a restaurant. Walk to a lovely reservoir, along a tree with fine weeping willows. Rather much cleaner and better kept than anything seen so far in China.

McDonalds was nearby, and we had sundaes there. Quite good.

The Chinese anciently distinguished between wild nature and culture. The distinction is found in the Analects of Confucius

November 6, Friday.
breakfast in hotel.

There is a Japanese book in environmental ethics, translated into Chinese. Liu Er will send the info.

Liu is the author's surname. Something like Iwashige Huanjing sixiang = Environmental Thinking.

The Japanese Society of Ethics has had three conferences, co-sponsored by the Office for Ethics of the Chinese Academy of Social Sciences. Comparative studies in ethics, at which there were some papers having to do with environment. Two were in China.

1. 1992. Cangsha, Hunan
2. 1994. Tokyo
3. 1996. Wuhan, Hubai

There is a grandfather, father, son combination that has published a book, or books, called "Ethics of the Earth."

Great Wall of China. Mutianyu Great Wall.

Took a bus half a hour to the Great Wall. Then walked up it, steady climb for two hours, and rode cable car down. The Wall forms a kind of nature reserve corridor. Lots of oaks. Leaf colors quite nice, not spectacular. Lovely day. Bill Clinton and his family were here a year or so back, there were frequently pictures if them in stores.

lunch.

Visit to Hongluo Temple. Red Snails. Big ginkgo trees here.

Visit to Yangi Lake (= Wild Goose Lake)

The hotel in Huairou is reasonably nice, but the water has been useless, except for the last night.

Supper in a restaurant where each person had a pot over a sterno stove. You cooked your own meat, from thinly sliced beef, lamb, pork, boiling it in water.

Milkshake at McDonalds.

We just got out of Harbin in time. There was a big snow there the following day, and it turned cold so that the snow did not melt.

None of the Chinese I met seem to have hot water in their homes, though they have refrigerators, and some have instant hot water for a shower.

November 7, Saturday.

Up at 6.15 a.m., breakfast at 7.30. Extended walk alongside the lakeside until 10.00 a.m.

There were 200 or so wild ducks, on the lake, which mostly seemed of one kind, lots of black and white in them.

On the way back, a striking bird with a black cap, greyish blue body, and a long blue tail, 40-50 of them.

Taxi, about an hour to Beijing Airport. Take off at 1.45 p.m.

To Seoul. Lots of hills, with good forests around Seoul.

Beijing - Seoul 700 miles
Seoul - San Francisco 5,700

One way 6,400
Round trip 12,800 miles

plus San Francisco - Denver, etc., and land trips. So this trip is more than halfway around the Earth!!

Harbin - Beijing is 860 miles by rail.

In the night, about an hour after take off from Seoul, the plane got tossed around in turbulence as much as I have ever been tossed on a big jet (Boeing 747), though not as much as in the thunderstorm in Costa Rica.

Air temperature outside the jet, - 70° F. !!

November 7, Saturday. The second time I spend this day!!! since I crossed the International Date Line.

Some nice views of the Pacific in the morning. Bronze clouds, clear air, blue in various shades. Shadows under the clouds. A dimpled effect to the wave patterns on the Pacific surface. Billows in the cumulus. Quite aesthetically stimulating.

Reached San Francisco after noon.

Left San Francisco, 2.26 p.m., with some delays, and reached Denver just in time to catch the shuttle. Home about 8.00 p.m.

Note on pollution in China. Taken from a news release.

Fast-paced growth in China causes major health problems. Nearly 18 years of fast-paced industrial growth in China has produced the predictable environmental consequences, with five of China's biggest cities now ranking in the world's top 10 cities for polluted air. China's Environmental News, a national environmental daily, published a seven-part series of articles recently examining the alarming state of pollution in the country and the consequences it has wrought on both urban and rural communities.

"At present, the residents in a large number of China's largest cities are living under long-term, harmful air-quality conditions," Mr Zhao Weijun, vice-director of the air pollution department of the National Environmental Protection Agency, told the paper. Exacerbating the problem, he said, is that most people in China are unaware of the slow and long-term effects that high levels of dust particles and toxic chemicals have on human health. Acid rain, which is said to fall over more than 40 per cent of the country, has come to be known as "an airborne god of death" because of the

havoc which sulphur dioxide, a main by-product of the widespread use of coal as fuel in China, wreaks on agricultural lands.

In urban areas, out of every 100,000 people, an average of 35.6 die of lung cancer. The death rate due to respiratory diseases has seen a nearly 25% increase over the last 10 years. Air quality in Shenyang, Xian, Beijing, Shanghai and Guangzhou places them among the 10 most polluted cities in the world. According to a 1995 survey, the amount of dust in the air over China's northern cities surpassed World Health Organization standards by four to five times, while in southern Chinese cities, the amount is over three times the standard.

In Lanzhou, the provincial capital of Gansu, there is a saying that describes the state of pollution: "From the sparrows in the sky to the intestines of pigs, everything is black."

Xian, the capital of Shaanxi province, spews out 40,000 to 60,000 tonnes of toxic matter annually from cars, while respiratory diseases have reportedly risen 10 per cent annually over the past several years.

In Shanghai, 300 to 500 people are said to die a slow death every year due to poor air quality. The air in Shanghai reportedly contains 302 different types of chemicals -- a third of them carcinogenic.

Traffic police in Lanzhou, Harbin and other industrial cities suffer from a series of complications attributed to foul air, including a greater-than-normal occurrence of high blood pressure, neurosis, chronic eye problems and bronchitis.

Car exhausts are also increasingly adding to China's air pollution woes. Despite low car-emission standards, only 61 per cent of the vehicles in Beijing met those standards last year.

Worse, only 30 per cent of the capital's taxis made the grade, and few, if any, of the offending vehicles were removed from operation.

The Chinese government has attached much importance to cleaning up the environmental mess--but lacks funds. Also hampering efforts is the low-level of environmental awareness and inertia at huge loss-making, largely backward industrial state enterprises.

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end of 1998 China trip.

November 22, Sunday. Missouri Botanical Gardens, Shaw Arboretum, hike.
With Stephanie "Taffy" Ross, Philosophy, University of Missouri, St. Louis, and Harold Gamble, Meramec Junior College, Meramec (a St. Louis suburb). Maybe 25 miles s.w. of St. Louis. Lovely day and nice hike, about 10.00 a.m. to 4.00 p.m. Hiked to the Meramec River, then back via some wetlands being restored.

Honey locust, Gleditsia triacanthos
Shingle oak, Quercus imbricaria
Northern red oak, Q. rubra
Black oak, Q. velutina
White oak, Q. alba
Shagbark hickory, Carya ovata
Bitternut hickory, Carya cordiformis
Flowering dogwood, Cornus florida
Black cherry, Prunus serotina
Black walnut, Juglans nigra
Redbud, Cercis canadensis
American sycamore, Platanus occidentalis
lots of it and well developed, some great specimens
Sugar maple, Acer saccharum
White ash, Fraxinus americana
Eastern redcedar, Juniperus virginiana
American elm, Ulmus americana

There was a quite common bush honeysuckle, which the botanical gardens people said to be an escape. Maybe Lonicera Morrowi. Good leaf color still in some places. Merganser, killdeer.

Watched a fox in a field, eating something. Took a while to figure out what it was, but it ran off with its tail straight out. Gray fox.

Monday, visited Missouri Botanical Gardens, including meeting with Bruce Allan, mosses, who gave me a copy of his mosses of Maine. Also Jim Zarucchi, an (the?) editor of Flora of North America. He and Jim Miller (?), interested in intellectual property rights of plants and biological prospecting, came to my 4.00 p.m. talk at University of Missouri, St. Louis.

Dec. 12, 1998. Gray fox crossing Prospect Road almost at the crossing of Shields. 8.30 a.m. in the morning in good light. He ran across south and then went in the field area west of the pharmacy/discount store there. Wasn't going very fast, but he/she did not hold its tail straight out, but down, like a coyote. But it wasn't a coyote, too small, and lots of red in it. Pulled over a watched it a bit.

Dec. 16, 1998. Planet Mercury nicely seen in earliest dawn, not far below a new moon on the eastern skyline.

Trail Log 1999

Egypt, January 1999

January 2, 1999. Saturday. Left home 7.00 a.m., on Shamrock. Denver to JFK in NYC. Flight was an hour late because the crew was late from Cincinnati, ice storms in Midwest. Left Denver 1.00 p.m., reached JFK about 6.00, and had to walk outdoors in the cold to get to Terminal 4W. EgyptAir only uses some facilities with Alitalia, not a very user-friendly check-in. Then we waited in the upstairs main lounge till 11.00 p.m. for take off. Too much wasted time. It has taken 17 hours to get out of the U.S.

January 3, Sunday. Slept pretty well, short night and soon daylight, but slept on. 10 hour flight. Reached Cairo about 5.00 p.m. their time, 9 hours ahead of Ft. Collins. (28 hours Ft. Collins to Cairo) We were met at the airport and joined the group; immigration was easy and fast. Night in El Salam (Peace) Hotel, a Swissotel. Nice room. Orientation session. Guide is Muhammed Heikal.

I do not repeat below the general tourist descriptions in the Blue Guide and the Lonely Planet guide, q.v.

January 4, Monday. Slept well. On the bus to airport, and drove through Heliopolis. Flew to Luxor. A Spanish group whose plane had been delayed were chanting to get on our plane and pressed in a mob to try and get out ahead of us. Arrived 12.30, bus to our boat, a "floatel," named "The Ritz." We are a late lunch on ship, a buffet.

4.00 p.m. to Luxor Temple. This is the ancient Thebes, the political center of Egypt in 11th and 12th dynasty Pharaohs, at the height of its glory 1570 to 1090 B.C. The city had a population of nearly one million and architectural activity was astounding.

The temple is in town. Amun, one of the gods of creation, was worshiped here. The temple is alongside the Nile. There was an avenue of sphinxes between here and Karnak Temple, some remain at the entrance to Luxor. We were there in the evening light. Sphinxes (pix). As it darkened the lights came on, and the columns were quite aesthetically pleasing in the dusk light. The main part was built by Amenophis III, 1400 B.C., that is when the Hebrews were slaves in Egypt. Ramses II added some to the temple. Colonnade at night (pix). This was a House of Women (goddess Mut) and a festival was celebrated for fertility each year here. Originally it was all colored. Sandstorms covered 23 meters up of the temple. In 1860 Napoleon began restoration of it. There is a 140 ton obelisk standing in one piece. To show the life stage (being alive when created) of statues the left foot was always forward. Egyptians did not go to temples to worship but to visit and give offerings. Priests consisted of various people - doctors, pharmacists, dancers, etc.

Returned to ship. Walked around shops in the hotel complex. Dinner at 8.00 p.m.

January 5, Thursday. To Karnak Temple(s). Various built over 1,500 years. The largest religious site in the world, about 1.5 km x 0.8 km, large enough to hold ten cathedrals. Sphinxes (ram heads) at entrance, the other end of the avenue seen at Luxor. Notable hypostyle hall, a forest of stone (134) columns. Amenophis III, 1,400 B.C. (pix). This was the place of worship of Theban triad: Amun, god of creation, Mut, was goddess, son Khons, moon god. The walls everywhere relate tales of rulers and gods; Ramses II had his carved very deep, so that they could not be destroyed. Two women students sat scrapping and brushing to get the salt off the walls.

Two colossal pink granite statues of Ramses II stand.

Obelisks of Hatshepsut, two of them, one is the tallest obelisk in Egypt, about 30 meters high.

Returned to Luxor museum, where we saw some pieces unearthed in recent years which were very well preserved. Then to souvenir shop. Nap. Then we walked around town, Jane bought souvenirs. Dinner, 8.00 p.m., and belly-dancer.

January 6, Wednesday. Up early to get to the Valley of the Kings. The pharaohs built mortuary temples on the plains, and their graves were hidden in the hills. We visited the tomb of Ramses VI, usurped from Ramses V and one of the longest tombs. Glass protected the sidewalls that portrayed birth, life, death as a continuous process. Then we went in the tomb of Ramses IX. There were Coptic inscriptions on the wall, so must have been a hiding place for Christians during Roman times. The ceiling is quite spectacular with well preserved colors on the pictures. The granite sarcophagus is in 2 pieces. Light down a long passageway to the burial room for the workers was created by reflection of the sun on shiny objects held by workers lined up.

I located the tomb of King Tut, but did not go in (closed). It is beneath that of Ramses VI, and was long unsuspected, discovered in 1922.

I located the tombs of Merneptah and Ramses II, the two possible pharaohs of the Exodus.

Returned, and bus took us to the Temple of Hatshepsut, spectacular in the distance at the base of a cliff, but we did not go in.

Then on the Valley of the Queens. Visited the tomb of a prince ?, (son of Ramses III who died before birth at 6 months) with a mummified fetus inside. Tomb of Nefatari here is famous, and tickets were sold out. Only 150 people a day are allowed to go in for preservation reasons. We also went in another tomb of son of Ramses III, Amunherkhepshep, who died as a boy; the colors in this were very vivid.

On return stopped at the Colossi of Memnon (pix), two giant statues, (Amenhotep II - I believe) with fields nearby. The two statues are all that is left of a temple once here. Here is where 60 German tourists were shot by terrorists a year ago. At times our bus had an armed police escort.

The first cataract of the Nile is here, now under the smaller of the two dams.

Returned to ship. Sailed south about 2.30. Captain's party and dinner. Night docked at Edfu.

January 7, Thursday. 8.00 to the Temple of Horus (falcon god of protection) at Edfu. Horus was the falcon-headed son of Osiris, who avenged his father's murder by slaying his uncle, Seth. Built from 237 B.C. to the 1st century B.C. So it is 1,400 years later than Karnak and Luxor, but better preserved. Fine hypostyle halls. Columns had both lotus (lower Egypt) and papyrus (upper Egypt)

carvings to signify unification. By 1800's sand and trash had covered up to 30 meters of the temple and the city had built on top of it. Some shopping in a bazaar outside. Jane bought a white galabiyya (long men's robe) (pronounced gal uh bee yuh).

We sailed about 10.40 a.m., with a scenic trip up the Nile, until lunch. Various pix of homes, villages along the river. Palm trees. Egypt had and has no forests. A palm tree can live a year on half a liter of water.

Date trees. A person can live on three dates per day.

4.15 p.m. Kom Ombo, a dual temple to Haroeris (Har o (long) ere is) and Sobek (crocodile god). It got dark while we were there. Looked at some mummified crocodiles. Temple is Greco-Roman style. Jane bought a blue galabiyya.

Costume party on ship. Night docked at Aswan. As went through locks, small boats of people selling wares came along in the dark and threw things up hoping people would buy them and not throw them back.

Lots of pied kingfishers.
 grey heron
 cattle egrets
 little egret
 hooded crow
 house sparrow
 black-winged stilt
 spur-winged plover

3,000 ducks on one stretch of water, but too far out to identify.

July 8, Friday. Up at 5.00 a.m. for flight to Abu Simbel. Drove across the old Aswan Dam, then to airport.

Flew over Lake Nasser. 30 minute flight to Abu Simbel, almost to the Sudan border. It is only 50 km. to the Sudan, but travel there is not permitted. The temple of Ramses II here was moved 210 meters inland to escape the rising waters of Lake Nasser. Ramses II deified himself here. 4 colossal statues of Ramses II (pix). Other pix.

Nearby is the Temple of Hattor (goddess of love), with 6 statues, four are Ramses II, and two are Queen Nefatari, his wife. This had also been moved - mountain and all.

Went inside the "mountain," a hollow reconstruction, with the temple on one front.

Back to plane, and flight back to Aswan. Arrived, met the rest of the group, and drove across the Aswan High Dam. Stopped at a huge, huge monument built by the Russians to commemorate their building of the dam. Lunch about 1.15.

The Lake is very stark in the desert, the world's largest artificial lake. The U.S. and the U.K. refused to build the dam, and Nasser confiscated the Suez Canal. The British and the French and Israel attacked him. The U.S. pulled them off. This happened the fall we went to Edinburgh when I was

a graduate student in 1956.

Russia built the dam but Egypt still owes large sums of money on it. It provides lots more irrigable land, and 20% of Egypt's electric power. But it is filling up with silt, and there is no more silt being deposited on the fields below the dam. 4,000 Nubians had to move, their homelands (the ancient Nubia) were flooded.

Jane gets sick and takes to bed, with a headache.

Egypt had 6 ½ million people in 1882. It had 65 million in 1995, ten times as many. It is the most populous Arab country, and the second most populous, after Nigeria, in Africa.

2.45, by motorboat to the Temple of Philae (pronounced feel i [long]). A temple to Isis, wife and sister of Osiris. It was much defaced by Christians, who chiseled out the faces, sometimes whole figures.

Returned by the papyrus institute, mostly a sales gimmick. But I did see papyrus there. Cyperus papyrus, a sedge, triangular stems. This is the Egyptian bulrush, referred to the various Bible passages, including that of Moses hid in the rushes. Can get 8 to 10 feet high, has been known to get to 16 feet high. The top of each stem terminates in a sheath from which issues a large tuft on numerous grass like panicles, each bearing many small florets.

Papyrus formerly grew abundantly along the Nile, dense thickets; some writers even used the term "forests." But papyrus is now extinct in Egypt, although a few plants were found a few years back. It was found in Nubia before it was flooded, and is found further up the Nile. It also grew in Palestine, including Galilee, but is virtually extinct there as well. (Detail in Moldenke, Harold N. and Moldenke, Alma L., Plants of the Bible (Waltham, MS: Chronica Botania Company, 1952, copy on hand, p. 92-94).

To make paper, they peel the stalk and lay strips crossways, and press it with heavy pressure. That does it.

Papyrus is a Greek word, the name of this plant, and the origin of our English word "paper."

About 95% of the vegetation along the river is introduced.

Jane's upset stomach continues.

January 9, Saturday.

9.30 a.m. felucca (sailboat) ride, on the Nile. Supposedly around Elephantine Island, but there was not enough wind, so we were towed partway, and then did sail some, but not around the island. Coming back we mostly came by the current.

White-fronted goose
kingfisher

Back on ship, boat sailed 2.00 p.m., and afternoon sailing. 4.00 lecture on Egypt and Islam.

January 10, Sunday. Cruise down the Nile all morning. A nurse in our group took eight stitches out, which I had been nursing along. Paul Sayers came in to his office on December 31, New Year's Eve, to take a lump out of my arm and one off the back of my hand, and the hand stitches had to stay in ten days.

Rather scenic cruise. Lots of Italians on the boat.

Several thousand ducks.
Couple thousand coots
pochard - a common duck
water buffalo

12.00 visit to Esna temple, Jane's first outing since being sick. Bought scarf and child's galabiyya. Saw soccer players using the narrow area along the Nile. We saw women washing in the Nile and dipping buckets of water to take back home. Fishermen would pull out a fish and whack it on the head; then throw it in the boat.

Pix, man on donkey.

January 11, Monday. Off at 8.00 a.m. for plane to Cairo. Flight to Cairo. Reached Cairo 12.00 p.m.

Al-Muallaga Church, Hanging Church. This is the Babylon area of Cairo. This Coptic church was built on top of the Roman Fortress of Babylon; we saw a bit of the wooden roof of the fortress.

Church of St. Sterius, oldest church in Egypt, with a crypt where (supposedly) Mary and Joseph and Jesus lived.

Then, Ben Ezra synagogue, nearby.

Then to Nile Hilton for an elaborate lunch. Cost in Egyptian pounds 75 + taxes, or about U.S. 35 each, though this was included in our tour.

Then in very slow traffic, virtually a jam, to Ramses Hilton Hotel.

Supper - snacks in the hotel.

6.00 p.m., out to a light and sound show at the pyramids. Loud and a bit hokey.

Herodotus, a Greek historian, described the pyramids in 454 B. C., already as ancient monuments! The pyramids were the tallest buildings on Earth until the Eiffel Tower in 1889.

January 12, Tuesday. Big day at the pyramids, one of the Seven Wonders of the Ancient World, and the only one surviving. 4,500 years old.

Giza, the district where the pyramids are. There are three main ones reasonably adjacent to each other here. (1) Great Pyramid of Cheops. We first got out really too close for pictures. (2) Then we drove around to the Pyramid of Chepron, and I went in. This was a stooped walk for a hundred

yards, gently down, then more level. There was a big stone sarcophagus inside, but not much else. Jane went to see a funeral boat (inside a building) that they had dug up out of the sands. (For a pharaoh)

The pyramids were once covered with limestone, but this was stripped and used to rebuild Cairo, after the earthquake of 1356 A. D.

(3) Pyramid of Mycerinus, seen well, but we did not go up close.

There are no mummies in the pyramids. Tomb robbers took them long ago.

Then to the Sphinx, 2600 B. C. There is a stele at the base recording an ancient restoration, the stele of Tuthmosis IV, 1400 B. C. Precise age of sphinx is unknown. It was engulfed and hidden by sand for many years. Tuthmosis IV (before he became king) had a dream, and the sun god Ra appeared to him and said that if he would free his (the god's) image from the sand, he would become king. And he did, and did.

The nose and beard were shot off by the Turks from the Ottoman, who used the sphinx for target practice.

Lunch, at a nice restaurant.

Then to Memphis, a sort of garden, small site. Alabaster sphinx (8 tons), 1500-1300 B.C. Inside a rather open building is a limestone colossal stature of Ramses II, lying down, but with legs gone, - a sort of open air museum.

Memphis founded about 3100 B.C. probably by Menes was once a glorious Old Kingdom capital. Floods and mud inundated the city and there are few signs of it remaining. A poor village is there.

Then to Saggara (the necropolis for Memphis) (pronounced sakk kar uh). Near here is Zoser's step pyramid, 2700 B. C., the oldest one we have seen.

Then to the tombs of Akhti-Hotep and Ptah-Hotep, with splendid preserved relief. They were father and son, officials, in a fifty dynasty Pharaoh.

The reliefs were some of the best we saw. They depict everyday life: boat building, fighting, wild animals, birthing, games, pharaoh having a manicure, etc. Details is excellent advanced art work.

Then to a children's carpet factory, euphemistically called a "carpet school." They have children work 2 hour shifts. They use children because they have small fingers for the knotting work; I saw some crooked fingers. The work is lovely and expensive; children get 2% of the sale - I suppose 2% is divided among all the workers.

January 13, Wednesday. In the morning, the Egyptian museum. Early hour and a half was spent in the King Tut display, endless gold caskets and mummy covers. The royal mask of Tutankhamen. Canopic jars shaped as goddesses contain Tut's organs.

Stele of Merneptah, with the name of Israel (Hebrews). "The Israel stele" - (Gallery 13), Blue Guide, p. 202.

Pallete of Namer, 3,000 B. C.

I went to see the mummies of Ramses II, and Mereniptah, and others. About twelve in a dim room the Royal Mummy Room, to which rather few people went. Ramses II was unwrapped rather much, rather well preserved, even with hair. With Merneptah, only the face and feet were unwrapped. But it is a peculiar feeling to be in the presence of the mummies of the two persons, father and son, one of whom is most likely to have been the pharaoh of the Exodus.

In fact one repeated impression is that the Hebrews must have been very glad to get out, if they were at all conscripted for building these kinds of temples--though our guide denied they used slave labor. Incredible how much energy went into the deification of the pharaoh; he must have served as a national totem that kept the place together. Seems incredibly naive today, but they produced all this art. Maybe no worse than the Greek with their gods and the temples in Athens, but the Greeks were not deifying any living persons. And, at least from our guide, we heard little or nothing about justice and righteousness being the will of these gods. There seemed no evidently ethical component to their religion.

Afternoon, tour of Islamic Cairo.

Citadel.

Alabaster Mosque of Muhammed Ali (1830 A.D.). Muhammed Ali tricked the Mamluk leaders to a party here and massacred them, 430 killed. Only one escaped.

Went to Khan al-Khalili Bazaar. Jane bought a mother of pearl box for Shonny.

A couple hundred Muslim men prostrate in prayer in a mosque here.

Later, bus took to island in the Nile, and I rode up an elevator up the Lotus Tower, to overlook Cairo. Traffic below was at a crawl.

Tour included dinner on a floating restaurant described by guide as one of Cairo's best - ha!

January 14, Thursday. Went to hear a talk by an American woman who married an Egyptian man, whom she met in school in Detroit. She describes herself as an ex-patriot, which seems to mean in current use anybody living for an indefinite period of time outside their native land.

Led by Muhammed we walked to the World Trade Center, a shopping center there, rather a disappointment. Jane was after some thick sheets she never found. Then Jane and I walked back ourselves, with some glimpses of the other side of Cairo.

snack lunch in the hotel.

Then we walked to a government shop, which was closing due to Ramadan. Then to the American University of Cairo bookstore, and campus.

Toward dusk, drinks at the Window on the World, on the top floor and for filling in tour papers and getting our return tickets.

Saturday, Jan 15. 5.30 a.m. breakfast. Flight home. Jane and I sat across the isle from each

other, but they couldn't seat us together. Rather mangy flight, dirty toilets, but reasonably humane. JFK was a pain, I had to take off my boots to get through the security magnetic inspection.

At Denver, we did get a Shamrock quickly, and got home by about 10.00 p.m.

Great trip so far as the antiquities were concerned, though half the group was sick at one time or another, from presumably contaminated food.¹

end Egypt trip.

January 30-31, 1999. Eagles on plains. Spent night in Fort Morgan.

Left home 7.00 a.m. Geese. Roughleg. Kestrels (about 12 on the trip). Blackbirds. Redheads. One good adult bald eagle on the Platte River north of Masters, in scope close up for a few minutes, then it flew.

Snipe feeding at river in backwater pond. Killdeer. Green winged teal. Mallards. Great blue heron. At Riverside, 10 immature eagles on ice, 3 adults at some distance. 1 immature in tree.

Drove around to the east side and watched the immature in a tree, seemed small, wondering if it could be something else, but then a bigger one flew in right beside it, half again as big but otherwise the same.

At Empire, 1 immature in tree. 1000 geese and mallards. Magpies. At Orchard, a juvenile redtail. At Jackson, 3 adults out from where I ate lunch, but white heads and tails seen well. Then 43 seen as silhouettes on the ice way out across the lake. Drove further north to the end of campground area, and there were 39 more in distance on ice. Then I drove around to that side for better views. I had 17 in the scope at one time, including 7 adults. From this side counted 40 in the group at the north end of the lake. About half of these were adults. Gulls. Geese. Both are large, but not as large as eagles, and their posture even at a distance is quite different. Drove to wildlife area at the north. Three good eagles nicely seen in a tree there.

Drove to Fort Morgan and booked motel. Drove to Prewett. Good adult redtail. 5 bald eagles, 3 adult, 2 immature.

106 eagles for the day. Sets a record.

Sunday. Drove back to Jackson, up east side, then to Sunken Lake. Magpies. Brief look at coyote. Prairie dogs out. Blue heron. Horned larks, many of them. Two eagles at the lake, but no more. Where have they gone. This is bright sunny day and yesterday was strong overcast; could that be it?

Sunken Lake, harrier. Strange lake, apparently natural, but there is no tree or shrub line along the

shore. Salty? Lunched back at Jackson. Only one good eagle in sight. Drove to Orchard. One good golden eagle near Orchard, seen flying, then soaring. Along the road as it runs along the Platte, redtail, almost all white underneath, but clearly saw the reddish tail. Krider's red tail. Harrier. Drove home. This is a blue moon (2nd full moon this month). Superbowl Sunday, Broncos beat the Atlanta Falcons. The new car scope mount certainly is a poor one.

February 13, 1999. Day in Swan Valley and at Holland Lake, from Missoula, Mt. Rented car, drove up to Holland Lake (where we left on the pack trip with Smoke Elser, July 18-27, 1994). Lowering clouds most of the day, some snow flurries. One good adult bald eagle on the Blackfoot River en route, perched in a tree over the river. River water was open, but the lakes were frozen, and parts of some streams. Passed Lubrecht Experimental Forest.

Three bald eagles, two adults one immature, on Salmon Lake at a carcass out in the middle of the frozen lake. Good sized carcass with evident ribs sticking up. And thirty crows nearby, with general fussing over the carcass.

About a foot and a half of snow pack through most of this country. Reached Holland Lake. Fortunately the road in was plowed to give access to the lodge there. Parked and hiked through the middle of the day, on a snow covered road that snowmobilers had packed down enough to make good walking. Good conifer woods with snowpack, often falling snow. Spruce, fir, Doug-fir, larch. Some aspen. Returned and lunched in the outfitter pack camp where we left. Talked with some snowmobilers; they have a 51 mile run over back roads to Seely Lake they like. Returned to car and drove around to lodge, skittish on the snowpack. Two nice whitetail deer.

Returned, eagles still on the carcass at Salmon Lake.

Monday, gave President's Lecture at University of Montana. Tuesday, talked to Wayne Freimund's wilderness class in the morning. Lunched with Jack Ward Thomas (former chief, U.S. Forest Service, now a forestry professor at University of Montana), and others. Picked up what information I could about outfitters in the east front of The Bob, also the Selway Bitterroot Wilderness. Afternoon, gave lecture, "Challenges in Environmental Ethics" that afternoon. Got front page coverage in The Missoulian.

February 20, 1999. Lion Gulch and Homestead Meadows, with Phil Cafaro. He was here from Southwest State University, Minnesota on job interview. Also Pat McKee, Warren Platz, David Domenico, and son, Gabriel. Left 8.30 a.m., and drove to Pat's new home on Pole Hill Road. Two bighorn ewes in canyon, roadside. Then to Lion Gulch trailhead and hiked up and back. Some quite slick spots, especially in center of trail where ice collects, but we made it o.k. Lovely day. Back to McKee's about 3.30 for sandwiches, then drove through park.

50-60 elk on edges of town, then a splendid herd of 250 or so in Moraine Park, lovely in the evening sun and with snow patches amidst the brown grass, conifers in the distance. One mule deer. Coming out, four bull elk with gigantic racks, not far from the road, as nice racks as I have ever seen. About at Loveland City Park (old hydro plant) on return, three half curl rams at some distance, but reasonably well seen in binoculars. Cafaro had supper at our home.

February 27, 1999. Hike with Irene Klaver, job candidate here, into Gem Lake. With Pat McKee, Megan Drinan, graduate student. Nice day. Golden eagle high in the sky at the parking lot on return. Some elk, mostly outside the park, nearer town.

April 16-19, 1999. Philadelphia and rural area west of it. Friday nite with Jennings Bunch and his new wife, Harriet. Sunday, picnic with William Grassie and his wife, Babette Jenny, and their friends, at their home in forested area, branch of Brandywine Creek. Night at New Bolton, the large animal part of the University of Pennsylvania Vet School. Spring coming, but leaves not out on trees much. Dogwood not yet out, though it will be in a week. Lots of bloodroot, quite notable in the woods. Lots of spicebush. Lots of skunk cabbage. The usual spring weeds, waifs. Not any real sign of migrating birds. One bluebird pair. One whitetail deer seen. Woods are generally disturbed, nothing remotely resembling pristine woods. This is big horse country, and they hunt foxes regularly but almost never catch the fox.

Monday night, speech at Philadelphia Center for Religion and Science, at University of Pennsylvania International House, with Sir John Templeton in the audience.

April 30, 99. Mallard hen with ten little ducklings strung out behind her on campus, near the library.

May 6, 99. Swallows appear in town at the stoplights.

May 7-8, 1999. Trip to Walden and sage grouse. Jane and I left Ft. Collins about 2.00 p.m. and drove to Walden. Lovely day. One deer. Eight moose about ten miles east of Walden, the first one seen nicely, 40 yards from the road, a juvenile male with "buttons" for antlers. (Moose do drop antlers, like deer.) Seen kneeling when grazing.

Stayed in Village Inn Hotel, rather mangy. North Park Motel and Chedsey Motel seem to be the better ones. Supper with 25 others at Coffee Pot Inn, in a back Gold Rush Room, rather nicely done. Colorado Division of Wildlife program followed. North Park Chamber of Commerce: 970/723-4600

Up at 3.30 a.m. to join the group at 4.30 a.m. Drove west to Lake John area and north to section 13. This is state land, but technically closed. Drove in across the sage in the dark, headlights out. Reached a trailer/blind before daybreak, and the grouse were already active on the lek; you could hear their bubbling and popping. Gradually got more light, to see 47 cocks, and 3 hens. The cocks actively fan and flare their tails and pump air into the air sacs on their breasts, which inflate with a yellowish color. Good photo in Audubon, Field Guide. A spectacular display. Some cocks facing off each other, though no real fighting seen. Cocks chasing the hens now and then. I saw one copulation. Cocks much larger than the hens. Good sunlight; the Mt. Zirkels on the western horizon, a great scene. Cold but manageable.

After an hour or so of sunshine daylight, most of the cocks suddenly flew away, for reasons unknown. Ten-twelve remained with one hen and we watched longer, until she left. You are not allowed out of the blind until all the hens have gone. They eat sage leaves. Males mature in two years, live two more years. Females live longer 4-6 years. Lek is from Swedish, leka, to play, to gather or assemble. The lek is usually open, relatively free of sage, which also means relatively snow free. Cocks come in the evening before and during the night, display before dawn and for an hour or so into daylight. Only a few of the males do most of the mating. There are about 50 known leks in North Park, only about 35 active this year. Some leks have been used continuously for over 30 years.

Returned to motel. Cinnamon bun at the Coffee Pot Inn. Then took the auto tour at Arapaho Wildlife Refuge. Coots, mallards, geese, willets, cinnamon teal. Pintail. Shoveler. Killdeer. And others, that I didn't take time to sort out, with Jane aboard. To Walden and drove home. Lunched at Cameron Pass, again a lovely day and rather mild at the pass, though quite snowpacked. One bighorn ewe in a meadow not far from Sportsman's Lodge. Returned home

about 3.00 p.m. There is an event like this in Wray for greater prairie-chickens.

May 14, 1999. Returned the Winchester 92 and the anvil to the farm (or at least to Birmingham, if not Marion), via Augusta and John Voss, who came through, en route back to Alabama from a vacation trip west. The gun goes to Bill Forbes son Billy. I have been trying to get them there for several years. Granddaddy's gun is a Winchester 1982, serial 128018, a 38-40, octagon barrel. It was shipped from the factory on November 6, 1900, according to a letter from the Winchester Gun Museum, New Haven, CT, of April 25, 1963 (original sent to Billy Forbes). 38-40 is also known as 38 WCF. It was an attempt to make one cartridge for both pistol and rifle, to serve cowboys as saddle guns. There was also a 44-40 like this, with dual purpose in mind. The cartridge has a low muzzle velocity, 1600-1700 fps. It has sometimes been loaded for pistols with a faster burning powder, for the short barrels, and a slower burning powder for rifles, for the longer barrels. .38 is the caliber. 40 was originally the weight in grains of the black powder charge. There is a picture of it, reproduced from a 1929 Stoeger's Gun catalog, on sale then for \$ 31.75, in Shooter's Bible Treasury, 1963 (Shooter's Bible, Inc., Hackensack, New Jersey), p. 130. The ammunition was available in the sixties, Charles Leonard could get it for me at High Point. But it is no longer on the market. It has to be hand loaded. So I part with the gun when it is 99 years old!

The anvil was in the blacksmith shop on the farm. I recall seeing Granddaddy beating out the red-hot iron for single-trees, double-trees, wagon fittings on it. Big anvil, heavy, heavy.

May 15, 99. Saturday. Crosier Mountain, alone. Nursing a sore Achilles tendon now for 5-6 months, left foot, and I was testing it out, though to some extent the soreness has left the tendon and is more diffused on the left side of the left foot. Nice day, parked at the trailhead 3 miles or so west of Drake, and started up. As I entered the woods 20 minutes or so up the trail, there was a pasqueflower, prime bloom, first I have seen this season, and ten feet away the rear leg of a deer, still in fur lower down, upper part eaten. Life persists in the midst of its perpetual perishing.

Chipping sparrows. Climbed, crossed open flat area, climbed more, came out on top and then got confused. In resisted dropping down, went down, came back searched for trail, and went back down. In retrospect, I thought I was farther along than I was, and the trail does drop into True Gulch, but I couldn't seem to figure this out on the map. Went on, under open crags above, and lunched and turned back, fearing damage to my foot. I had over a mile yet to go. This is not a short trail. Picked my way back down, slowly. Watched a pygmy nuthatch at close range for a while coming down. Also met a mountain biker, who recognized me, as the Dr. Rolston who gave his commencement address yesterday, on Graduating into an Environmental Century! I gave the commencement address for graduate school commencement yesterday. I first did Crosier Mountain from Glen Haven, March 19, 1976, and then did it, with Giles, from the west (Drake) side, March 13, 1982, when he was ten.

Botswana and Tanzania
Okavango Delta and Selous Game Reserve
May 21-June 12, 1999

Previous Africa trips were 1990 and 1995. Egypt, of course, earlier this year.

May 21, Friday. Left Denver, 3.15 p.m. and easy British Airways flight to Gatwick, nonstop.

May 22, Saturday. Speedlink to Heathrow and took a day room at Ibis Hotel. Slept well 10.00 a.m. to 4.30 p.m. 9.00 p.m., depart by British Airways to Johannesburg. Good flight, though I slept less well.

May 23, Sunday. 9.00 a.m. Arrived Johannesburg and more wait than I wanted, for 1.30 p.m. flight, Zimbabwe Express, to Victoria Falls.

Arrived Victoria Falls, met at the airport, joined the group, five of whom had been in on the same flight, and two others joined us after having been canoeing a week on the Zambezi River.

Barbara Balaban. Older, well-traveled grandmother, whose husband did not like this kind of travel!
79 Shore Drive South
Copiague, NY 11176

Jim and Pat Bender Retired, good friends with "Andy" Regan.
4 Brent Court
Lafayette, CA 94549

Mary Ann "Andy" Regan
517 Athol Avenue
Oakland, CA 94606-1507

Peter Gordon 40's, formerly insurance adjustor for air crashes
P. O. Box 49
Yorkville, CA 95494

Tina Walker - traveling with Peter, high-school friends, did advertising

18 ½ Avenue 23
Venice, CA 90291

Transfer, 40 km., south of Victoria Falls to Matetsi Game Lodge, operated by Conservation Corporation of America. Tented camp, overlooks Zambezi River. There are no fences between here and Chobe, here and Hwange. There are 30,000 - 50,000 elephants in the region.

Game drive before dark:
green-spotted doves - which were to prove abundant
15 impala
chacma baboons
elephant
warthog
blue helmeted guinea fowl
centipede eater snake
reached the river, 20 elephants. Twins, 2-3 days old, nursing.
red-billed hornbill
guineas, 20-30 by the river
drinks at sunset on the river
male impala and harem of 20 females in the headlights coming back
6-8 guineas

Returned to meet Pilot D. Manga, P. O. Box 625, Maun, Botswana, our guide for the rest of the trip. Actually his is a biblical name, Pilate, which he has changed to Pilot.

May 24, Monday. Morning game drive
lizard buzzard
fort-tailed drongo
teak-tree pushed over by elephants
francolins
white-backed vulture
white-spotted weaver
tawny eagle
grey lourie
dark chanting goshawk
3 impalas
warthog. There are two pairs of warts on the males.
15 impala
elephant, eating an acacia
buffalo, only glimpsed
Senegal coucal
chirping cisticola
15 impala
3 elephants, 1 elephant
5-6 elephants
2 male impala, chasing each other
15 elephants crossing the road
including mother with tiny twins
bateleur eagle

paradise whydah, a long-tailed male.
 white-fronted plover. So the guide called it, but it had wattles.
 fish eagle, in sky
 morning tea break at the river
 tawny eagle, perched in tree, close up
 8 baboons
 8 guineas
 warthog
 6-8 impala
 Return for brunch/breakfast.

Off about 10.30 to Victoria Falls.

The river is 1,700 meters (1.7 km, wide, = 1.1 miles), and plunges 108 meters into a chasm that cuts at right angles. Thus it becomes a narrow river in a gorge in a matter of seconds. This is the greatest volume of falling water in the world.

Livingstone discovered the falls for Europeans in 1855, naming it Victoria falls, with typical British arrogance, as if the falls had no African name. There was little subsequent development until the 1900's, with copper and coal in the region. The Park was proclaimed in 1951, but little tourism. From 1973-1988 wars stopped tourism. From 1988 on, tourism has grown.

Spectacular falls. Often so much mist and spray rising that it made it difficult to see the extent of the falls. Also made it hard to get pictures without getting your camera wet. The falls walk is peaceful and not crowded; hawkers are kept outside. One bushbuck seen in woods near the falls. Watched a bungee jumper from a bridge below the falls.

The river erodes through a fault in a Jurassic basalt sheet. There seem to be large, criss-crossing faults at right angles, later filled with limestone and now eroded into the gorge into which the river falls, with a turn at right angles.

There are remnants of 7 other, previous falls, total 8, such cross-cut faults eroding into earlier falls and gorges. The interpretation of the park was not very good, very limited geological interpretation. I had to dig it out of other books.

Lunch, rest, at the Victoria Falls Hotel. Banded mongoose in hotel yard.

Some time spent at Elephant's Walk Shopping Center, nice shops, though Victoria Falls is not at all well developed.

Left, 2.30 or so, for drive to Elephant Camp, and elephant ride.

white-faced vulture, 4-5 in tree

3-4 kudu

Elephant ride. The elephants must be tamed from 5 years old, and are now 18-20 years old. There are 8 here; we rode 4. On the elephants for 1 ½ hours.

lilac breasted roller

25-30 guineas

10-15 impala

3 waterbucks

warthog

3 waterbucks

I can't say the elephant ride was all that productive; mostly a gimmick. Nothing like the elephant ride in Nepal, where rhinos were spotted, tigers in the bush, and serious wildlife observation.

The elephant kept wanting to eat as he walked along. It wasn't too easy to stay on when he went uphill. End of elephant ride. We fed them some pellets, tossing them in their open mouths. They were anxious for this reward. Drinks at a campfire.

Drive back to Victoria Falls at night.

Civet, nicely seen with spotlight at night. Civets are often mistaken for some kind of cat. But they belong to the mongoose family.

The main veldt here is teak (Kalahari teak) where there is any sandy soil. It is mopane if on basalt soil.

The rains here are November - March. There are afternoon thundershowers. September - October are hot and dry.

The Zambezi is Africa's fourth biggest river.

1. Nile
2. Congo
3. Niger
4. Zambezi

It is 2,700 km. long.

Return to Matetsi. Ate eland for supper.

The vehicle we will be using is a nice Land Rover. It has been modified for Wilderness Safaris, the agent here. It is stretched with a rebuilt body, with three fuel tanks, extra shocks. It has five batteries and two alternators! Three of the batteries and one alternator are for the fridge on the back, and it did work quite well. Wilderness Safaris has two exactly like this, and 8 about like it.

The local trip outfitter is:

Wilderness Safaris

P. O. Box 5219

Rivonia 2128

South Africa

27 11 807 1800 phone

807 2106 fax

e-mail: enquiry@wilderness.com.za

They put out a good brochure, seen in the van. Offices in Victoria Falls and in Maun.

May 25, Tuesday. 7.00 a.m. wakeup, 8.00 a.m., breakfast, 9.00 a.m. off for Chobe.

12-15 baboons in a baobab tree, with some fighting. Nicely seen.

8-10 zebras

8-10 sable, males (pix), handsome animals, long horns curved backwards. The females have horns too. Females are not the glossy back of males, so these must have been mostly females.

Reached the Zimbabwe-Botswana border at Kazungula. We had left the preserved area, and were now in inhabited area, though nowhere very much inhabited.

100 baboons in a burned field
bananas in fields

reached the town of Kasane, small town. Near here the Chobe River joins the Zambezi River, and we were thereafter on the Chobe, not the Zambezi. But the Chobe changes its name several times. End of blacktop, thereafter dirt road, though I think the main road south, directly to Maun is blacktop.

Headed toward Chobe. A few baboons, impala

6-8 elephants

15-20 impala (pix)

dartar (=anhinga)

cormorant

blacksmith plover, to become much more familiar throughout the trip

lilac breasted roller

small crocodile

larger crocodile

2 Egyptian geese

6 hippos

3 kudu (pix)

puku (pix). Only 2-3 seen. A rare antelope, endemic here, and not often seen on the trip. Bright golden yellow, no markings much. Not large.

2-3 baboons

5-6 elephants, one nursing

2 fish eagles, good view, profiled over the river

kudu, with river behind (pix)

608 kudu

dartar (= anhinga)

monitor lizard, stalking a dartar

red-billed oxpeckers on kudu (pix)

monitor lizard

12-15 guineas

6 guineas

impala

elephant

giraffe

50 buffalo lying in the shade

6 sable

8 giraffe, running, a beautiful gate. Giraffe are surprisingly graceful in motion.

6-8 kudu. Male eating from green tree (pix).

2 elephants, one running in the road

3 giraffe

3 giraffe

2 kudu

black-headed heron

red-billed teal
 6 impala
 6 baboons
 6 hippos
 15 kudu
 6 baboons
 15 baboons
 sacred ibis
 10 warthogs

Reached camp. This is Serondela Hatab Site No. 1. This is a pitched camp, put up the day before we arrived for us, and will be taken down when we leave. It overlooks the river. Tents are spacious. Porta-potty and bucket shower in the back. But nowhere to hang anything. Kerosene lanterns. No electricity in camp. There is a truck kitchen and a trailer water tank. This was to prove the roughest camp of the trip, although I was quite comfortable. They poured hot water in the bucket shower, when you wanted a shower.

Afternoon game drive.

glossy starling
 pied kingfisher
 3 warthogs
 guineas
 6 buffalo
 8-10 giraffe in a nice lope
 8 hippos
 3 banded mongoose, nicely seen
 yellow-billed stork
 black-headed heron
 30 giraffes, in grassy area near the river.
 hammerkop
 60 elephants in a grassy field near river, but seen only in distance.
 spur-winged goose
 lanner falcon
 whistling ducks ??
 30 yellow-billed storks
 Drove closer to the elephants, at dusk, crossing this part of the river (pix).

Coming back to camp, it was dark.

12 buffalo roadside
 The Southern Cross was clear above my shower!
 Lions roaring in the night.

May 26, Wednesday.

Off at daybreak on game drive.
 3 kudu
 10-12 impala
 5-6 baboons
 10 baboons, by the river (pix). One pair copulating.
 brown hornbill

white-backed vulture
 6-8 helmeted guineas
 1 francolin
 fish eagle in tree (pix)
 3 Egyptian geese, noisy in a tree
 maribou stork

The first lions of the trip. Lioness and four cubs, quite small, followed by three lions, her brothers presumably. Watched 25 minutes in and out of the bush, never seen for long at a time, and kept moving the vehicle to get ahead of them. Total of 9 lions here.

10-12 elephants, watched 20 minutes, grazing. Pulling tufts of grass with their trunks and eating it. They eat everything, from grass to trees.

30 guineas
 8-10 rollers in a tree
 impala snorting
 bateleur, in a tree over the road, a juvenile
 2 white-backed vultures, on nest
 hammerkop, in shallow water
 African jacana, at river water's edge
 15 guineas
 monitor lizard in a tree
 There are three species of francolin here:
 1. Crested
 2. Red-billed
 3. Swainsons

2 hippos, in distance, out of the water
 pied crow
 blue waxbill
 flock of white-faced ducks
 50 impala
 40 guineas
 8 guineas
 tree squirrels
 60 guineas
 50 impala
 6 elephants
 plover
 red hornbill

Then we drove through more open country. 60-70 impala
 20 guineas
 12 guineas
 3 bateleurs, in sky

Drove through the public campground at the river.
 12 guineas

4 warthogs, arriving back at camp. Returned about 10.45

Brunch.

Elephant testes are invisible, internal. The penis extends through a skin flap, invisible unless extended.

Musth. The so-called sexual arousal condition, though others contest that it is sexual.

Elephant tusks are smaller now than previously, due to selective killing. The largest elephant tusks were in East Africa.

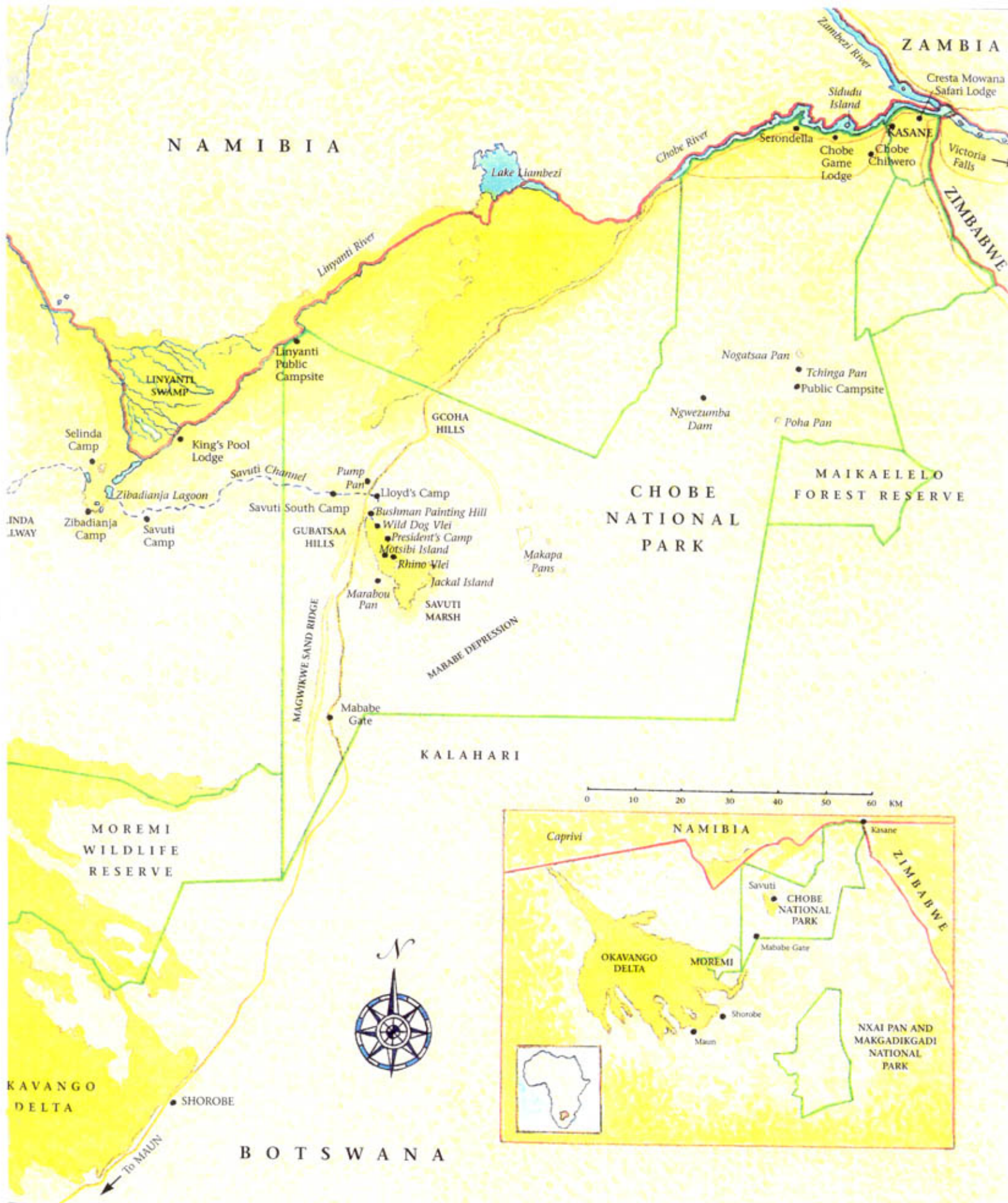
So far, no hyenas evident. No wildebeest. No zebra.

Afternoon game drive.

grey lourie
roller
glossy starling
6 kudu
15 giraffe
30 impala
roller
14 guineas
2 impala bucks
6 giraffe
4 elephants
8 elephants
24 guineas
24 guineas
20 elephants, in trees, near the river, up close
12 guineas
doves constantly. The cape turtle dove always calling.
12 elephants, huddled together.

4 red-billed wood-hoopoe on a dead tree
12 elephants
6 elephants, including some quite small ones
15 kudu
6 kudu, 1 buck
6 impala
6 kudu
2 kudu stags, six feet away
12 guineas
1 puku (p1x).
4 buffalo
25 impala

We reached Chobe Game Lodge. Very fancy. 4 warthogs in the lawn, digging it up.



blacksmith plover, 6 at the water
 hammerkop, carrying nesting material at the water's edge.
 6-8 elephants, near the water
 6 Egyptian geese
 10-15 elephants, at shoreline at sunset (pix). Pix first further off, then closer up.

50 guineas on the riverbank
 100 guineas
 fish eagle on a snag, at dusk

2 male lions, in the dusk, about dark, close in. I heard them give two good roars.
 buffalo.

May 27, Thursday. Cool in the morning. Frosty breath. I put my fingerless gloves on.

Morning game drive
 50 guineas, in the dawn's earliest light
 Kari bustard -- the heaviest flying bird, seen nicely, close up
 secretary bird
 a few impala
 francolin

lion tracks, including cub tracks in the sand
 15 guineas
 6-8 rebelled francolin
 fish eagle
 2 spur-winged geese
 giant kingfisher
 jacana
 2 hippos in water (pix)
 sacred ibis
 12 guineas
 fish eagle
 50 guineas
 24 guineas
 15 impala, group of males
 24 guineas
 24 grey hornbills
 yellow-billed egret
 little egret - yellow feet
 bateleur - nicely seen overhead
 slender mongoose, like a squirrel
 monitor lizard
 24 guineas
 a few impala
 100 guineas
 fish eagle
 15 red-billed hornbills
 brown snake eagle



We drove through a taller forest, with more ground cover.
 8 elephants, one making a mock charge at the van
 tawny eagle

We stopped for coffee at a water hole, pan

gymnogene, a large hawk
 100 guineas, groups of about 30
 elephant
 50 impala
 1 large kudu buck
 red hornbills
 100 impala
 a few rollers
 bateleur
 24 guineas
 15 guineas
 6 impala
 50 guineas
 4 warthogs

It is hard to get used to the idea that the sun is in the north.

Return to camp. One vervet monkey, in camp, but monkeys are not much in evidence.

gray lourie, calling in camp. Go-away bird.
 Lunch and shower. The bucket shower, upgraded with hot water, does rather well.

Off at 3.00 p.m. for the boat trip.
 30 guineas
 15 impala
 2 elephants
 15 elephants
 15 sable (pix of them both)
 sable running - a beautiful sight.
 crocodile (pix)
 yellow-billed stork
 warthog
 15 giraffe
 marabou stork
 30 giraffes, in a stampede crossing the river.
 40 elephants crossing the river
 50 impala
 2 Bradfield's hornbills
 Richard's pipit ??
 Egyptian geese
 fish eagle
 yellow-billed stork and crocodile (pix)
 40 elephants

50 impala
 10 elephants
 2 kudu
 12 impala
 8 buffalo
 12 elephants
 12 elephants
 2 bushbuck, near Chobe Game Lodge

Reached the Lodge, and started the boat ride.

15 elephants at water's edge, including baby nursing (pix)

Elephants have six sets of teeth and can use them, but when they give out, they can't eat well and starve.

Males have rounded profile; females are angled. Males have more hump at rear back.

6-8 Egyptian geese
 pied kingfishers
 wire-tailed swallow
 jacana
 fish eagle
 hippos in distance
 African darter in air (= anhinga), nicely seen
 darter - drying its wings
 reed cormorant - drying wings
 fish eagle
 squacco heron
 5 bushbuck
 brown headed kingfisher
 6 kudu
 impala
 pied kingfisher
 50 guineas

White-fronted bee-eater. Small, greenish, nests in sand at water's edge/

2 fish eagles at the nest.

3 hippos, one with its mouth wide open.

A second one with its mouth wide open.

Sunset over the water.

Long-toed plover

2 buffalo

3 elephants

Return to Chobe Game Lodge, and return to camp.

Lions in camp in the night. They left tracks near the staff tents, and "tried to take down" a tent a quarter of a mile away. Though others say that lions have never been known to attack persons inside of tents.

Arising early, still in the dark, seems like the middle of the night trying to comb my hair and shave by a kerosene lamp.

May 28, Friday.

Left at 7.15 a.m. Drive 40 minutes on narrow dirt, single track, and then reached a blacktop.

Ground hornbill, very large, seen nicely at roadside on blacktop.

2 zebra

200 buffalo! crossing the road, single file. They were nervous about it, and 30-40 would bolt across, and the next group would hesitate. A few cars passed while we were waiting. Some excitement here.

Crossed the Park Boundary, leaving Chobe Park, to re-enter it again later. Drove up to the bridge at Ngoma Bridge; the other side of the river is Namibia here

Drove through rural area, very dry.

Oxen pulling sledge with thatch.

baobab trees

palm trees

reached Kachikav = Kochikav = Kachekabwe (on the maps). Stopped here in a basket store.

Passed a dry mudhole, where a supply truck had been stuck five days in the rainy season.

Re-entered Chobe National Park. Mopane forest

Herd of 20 elephants, charging the van!

1 roan antelope on the road

roller

Often the van was spinning deep in the sand.

Lunch by a pan with elephant tracks.

black breasted snake eagle - black upper breast

24 baboons

2-3 impala

15 impala

tree squirrel

Arnot's chat, nicely seen

1 elephant, close up

5-6 elephants, in open field giraffe, one with a neck load of oxpeckers

2 baboons

tawny eagle

7 lechwe, on the marsh

6 lechwe on the marsh

2 waterbuck

15 impala

Reached Linyanti Camp, 2.00 p.m. This is a permanent tented camp on the Linyanti River = Chobe River, now under another name.

Kwando-Linyanti-Chobe wetlands

Savuti Channel. See Lonely Planet Guide, p. 515. The channel is shown in the Lonely Planet Atlas.

The Savuti River has not flowed since 1981.

There is odd hydrology here.

The turn in the Kwando-Linyanti River is the end of the Great Rift Valley.

Linyanti papyrus marsh is the "mini-Okavango."

papyrus - Cyperus papyrus, a sedge

Mopane, Colophospermum mopane, butterfly shaped leaves. Most common and widespread species of the Okavango, a legume.

Mopane worm. A larval stage of the Mopane moth, a large moth, 12.5 cm. wings. Adults are unable to eat. The worms are 7 cm. long, and are eaten raw, dried, or fried.

Real fan palm, Hyphaene petersiana, epitomizes the Okavango Delta.

There are toilets in the back of the tent. Very nice, but solar hot water doesn't work. 24 volt electric system, o.k., but minimal light.

Afternoon game drive

little bee-eater

1 jacana

2 jacana

2 hadeda ibis

fish eagle

5 lechwe on the marsh

tree squirrels

24 guineas

12 banded mongoose

6-8 impala

Sunset over the marsh, the sun setting behind a massive bank of papyrus.

1 elephant

coppery-tailed coucal, has a very limited range, endemic to this region coming back toward camp, with the spotlight:

2 bat eared fox, quite well seen, watched crouched in a field for 5 minutes

5 impala

baboons

pearl-spotted owl

hare

The hare is the scrub hare, Lepus saxatilis.

genet

genet, the second genet well seen

impala

kudu

African wild cat, quite nicely seen in the spotlight for 2-3 minutes. Excellent sighting. My first.
African wild cat, the second one less well seen
giraffe
elephant

Return to camp.

The spotlight is a Coleman Halogen, 800,000 candlepower, Model 5362 Series.
hippos bellowing in the water, right outside the tents off and on all night.
Elephants trumpeting not far away.

Frosty breath in the morning.

May 29, Saturday.
Morning game drive
25 impala
5-6 waterbuck, still in the early dawn
2 giraffes
2 hippos swimming fast in the water
1 hippo, standing on its rear feet in the water
24 guineas

wattled crane, nicely seen
10 francolins
2 hippos, out of water entirely. (pix)
long-crested eagle, nicely seen, spectacular crest
2 wattled cranes
1 kudu buck
3-4 impala
2 kudu, right at the road
50 baboons, scrambling down from a tree and running away
3 black shouldered kites, harassing a tawny eagle
fish eagle
2 adult bateleur, nicely seen. Watched 5 minutes
Giant eagle owl, heard calling, not seen

nursing kudu
4 kudu
15 impala
1 elephant close up
10 elephants, in distance
10 impala

immature bateleur
2 bateleur, adults

15 red-billed wood-hoopoe
15 impala
giraffe

doves seen and heard calling constantly
 red hornbills
 7 hippos in a pool (pix)

Morning tea here, watched them half an hour
 grey lourie
 hippo path, with overhanging branches (pix)
 3 giraffe
 50 guineas
 4 warthogs
 3 ground hornbills

On the marsh, dried up:
 25 lechwe
 10 baboons
 6 impala
 1 wildebeest, the first of the trip
 6 lechwe
 3 hippos, and papyrus in the background (pix)
 4 elephants
 15 impala
 roller
 30 impala
 8 impala
 6 elephants
 Pilot climbed a termite mound (pix).
 4-5 zebra
 10 impala
 30 impala
 1 bateleur
 25 impala
 15 impala
 6 elephants
 6 elephants
 20 impala
 3 baboons.

End, morning game drive.

Afternoon game drive
 25 impala
 3 giraffes
 6 pelicans
 25 impala
 12 zebra
 5 zebra
 25 impala
 elephant
 baboon with baby

francolins.

But we had been hurrying, as Pilot put it, from point A to point B, for reasons he would not divulge. "To see some impala," was his reply.

Then we found them. 6 wild dogs, near the airstrip. First seen at some distance. This and the leopard, the next day, were the two highlights of the trip.

The wild dogs appeared at sunset, this time first at such distance across the veldt, coming in from the delta, that we were unsure what they were. More lechwe maybe? We had been seeing this aquatic antelope, endemic here, enjoying its splashing speed when alarmed in the wetlands. No, they are too dark and a different shape.

No. Hyenas then? No, too stringy. They are dogs! And they are coming our way! Our surprise grew as the pack continued toward us. Within a few minutes they passed close by, like the leopard. Again, our vehicle didn't fit their search image. With binoculars, I noted the sharp canine teeth, black muzzle open and panting. Two went to one side, three on the other, to disappear where the veldt joined the forest.

These are the wolves of Africa, and as rare and difficult to see as wolves in America. Lycaon pictus, their scientific name, means "painted wolf." In contrast to the ordered spotted beauty of the leopard, the dogs are striking for their disordered splotches of dark brown, black, and yellow.

No two dogs are alike. Their patterns vary dramatically and are in no way evenly distributed or symmetrical. Their huge ears and long legs increase their ungainly appearance. They have only four toes, which is why they are not placed in the genus Canis, with five toes.

Turning the Rover around, we hurried to a forest road that we hoped they might cross. To our delight, they not only reappeared but followed the road. We followed in the growing dusk.

We watched their hunting, jousting, defecating, dragging their rears on the grass to wipe clean. They gnawed at an old carcass, ever-alerted at sounds, sniffed this way and that--evidently with skilled powers and subtle perceptions out of our human ranges. I last saw them, with the full moon rising, silhouetted in the night.

tawny eagle, before we found the dogs again.

Followed the dogs perhaps 40 minutes. After they defecate they drag their butts in the dirt to wipe clean.

Wild dogs. Only three populations exist in Africa of enough size to permit survival.

1. Selous Game Reserve, Tanzania
2. Kruger
3. n. Botswana

Wild dogs catch 85% of the animals they chase. They hunt well as a pack. They ought to be common, since they are such good hunters; nevertheless, they are rare. The reasons are not clear; maybe humans shooting them.

Snake. Python? But Pilot couldn't find it in the snake book the next day.

Returning to camp, in the spotlight:
wild cat, nicely seen
another wild cat
bushbaby

The bushbaby is lesser bushbaby. It looks like a squirrel. Mostly in trees, also on the ground. These are primates. Order: Primates.

Large red eyes (proportionately) catch and reflect from the spotlight.

spring hare
2 spotted hyena. (The other hyena, striped hyena, is in the desert.)
spring hare
heard a lion's roar
giant eagle owl, nicely seen

Male lion spotted in the night, lying down. Followed along the road for 20 minutes
spring hare
nightjar, well seen

The fiery necked nightjar and the European nightjar are the common ones here.

3 wildebeest
hippo, out of water in the night

Return to camp. A great game drive.

Elephant right outside the tent in the light. Lots of loud noises in the trees, and then I saw it, looking out the tent window, well in the moonlight.

May 30, Saturday.
Morning game drive. Left early, still dawn.
giant eagle owl
4-5 baboons
cape turtle doves calling: Drink La-ger. Drink La-ger.
francolins
40 guineas
2-4 jacana
hadedda ibis
24 guineas.

Male lion in good dawn light. Saw it briefly, then it left.

10 impala
6 kudu
1 elephant
2 elephants
2 kudu
5 elephants

6 kudu (pix)
roller
12 red hornbill

side-striped jackal, and 12 zebra behind it. This is the rarer one. The black-backed jackal is more often seen.

50 baboons. Watched quite a while, grooming each other.

4 warthogs

6 red-billed wood-hoopoe

4 giraffe

red-billed wood-hoopoe. Striking crest, well seen

50 red hornbills

doves constantly

50 baboons, mixed with 50 impala (pix)

kudu bull

leopard tracks in the road

15 lechwe

saddle billed stork

50 buffalo passing through the woods and lion reported in the area. The buffalo were spooky. (1 hasty buffalo pix)

We finally saw the lioness on a termite mound, some distance away.

6 giraffe

2 warthogs

Tea break.

Mopane leaves, butter fly shaped.

5-6 elephants.

We frequently had to move out of the road or drive around trees that the elephants had pushed down.

1 giraffe

squirrel

Return from morning game drive

Two elephants crossing the pond in front of the dining area, deep in the water, up to within about one foot of their eyes.

brown firefinch, around the tents. Locally endemic.

Pilot doesn't know anything about pepper ticks, the ones that bothered me so on the trek in the Umfolozi.

Afternoon game drive

15 buffalo

coppery-tailed coucal

francolins, including chicks

100 red billed quelea, in a flock. These birds fly in great flocks, so much so that at a distance the flying columns can look like clouds of smoke.

5 lechwe
hadedda ibis
swamp boubou

5 lechwe, in a marvelous jump over the water
bateleur
4 impala
green spotted dove call - very different and simpler than the turtle dove

35 impala
60 francolins
15 elephants

Sunset. (pix with 400 mm lens, with reeds)

5 hippos
elephant at sunset
2 elephants at dusk, one carrying a log.

Leopard in the night! This and the dogs were the two highlights of the trip.

"Leopard!" The cry in the African night was quickly hushed, as we realized how close we were. There, spotlighted suddenly as the lamp swung round to my side, was a poised and motionless leopard, hardly twenty feet from our open Land Rover.

Startled, I suppressed my initial alarm and began to admire the magnificent cat, the epitome of feline beauty, power, grace. She stared back, puzzled by the light. Close though she was, I lifted my binoculars. Her head and shoulders filled the field. I could count her whiskers!

She began to move, silently, not away from us but diagonally toward the rear of the car. Leaving the bush, she joined the track behind us. Turning around, we found her again. Slowly we followed, keeping the spotlight peripheral. Now she seemed unconcerned, judging our vehicle neither prey nor predator.

She left the road and returned, always with stealth. Ever-alert, she crouched, pounced on a rodent, gulped it down, and soon faded back into the night.

Bushbaby
giant eagle owl
spring hare, well seen.

5 lions, three in the road, 2 in the bush
in the dark, not all that well seen
nightjar.

2 hippos in the night, well seen
bushbaby, jumping from tree to tree. red eyes.



DISTRIBUTION

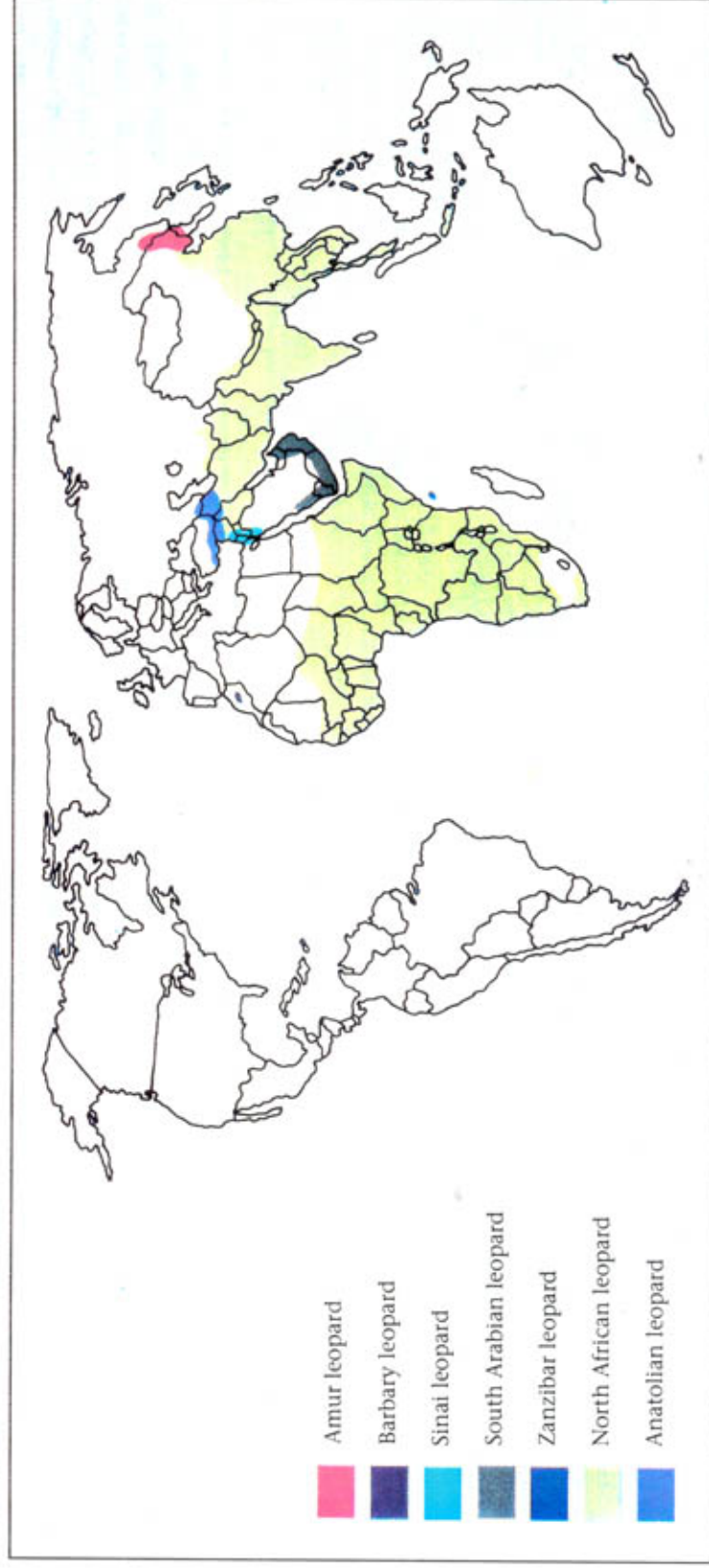
The leopard has the widest distribution of any of the large cats, ranging from the southern tip of Africa over the entire African continent south of the Sahara, parts of the Middle East and spreading eastwards to the Far East, northwards to Siberia and southwards to Sri Lanka and Malaysia. While the question of subspecies is a controversial one, it is generally accepted that there are seven subspecies of leopard which have been separated on variations in coat colour and spot size.

1. Amur leopard (*P. p. orientalis*): 10-15 individuals in eastern Siberia and an unknown number in Korea and north-eastern China. Endangered.
2. Barbary leopard (*P. p. panthera*): it is possible that approximately 100 individuals still survive in the Atlas mountains of Morocco and Algeria in North Africa. Endangered.
3. Sinai leopard (*P. p. jarvis*): found on the Sinai peninsula and in Israel. Endangered.
4. South Arabian leopard (*P. p. nimr*): found in the mountainous regions along the Saudi Arabian Red Sea coast and the coasts of South Yemen and Oman. Endangered.

5. Zanzibar leopard (*P. p. adersi*): a few individuals were once thought to occur on the island of Zanzibar off the East African coast, but this subspecies is now thought to be extinct.
6. North African leopard (*P. p. pardus*): widespread over nearly all of Africa south of the Sahara and over the greater part of southern Asia including the Malay peninsula and Java. In southern Africa found everywhere except for the Namib desert and the central Cape Province, the Orange Free State, southern Natal and southern Transvaal. Not threatened.
7. Anatolian leopard (*P. p. tulliana*): a few individuals may still survive in the Caucasus and in Turkey. Endangered.

Outside national parks and game reserves, the last places where the leopards can be found are impenetrable forests and inhospitable mountain habitat. However, the forested areas are gradually making way for human development and the only relatively safe areas for leopards are the rugged mountain areas where man is as yet unable to settle.

The rarer subspecies of leopards, such as the few individuals in Siberia, Turkey and Morocco, will survive only if their habitat becomes fully protected in the form of national parks or game reserves.



Map showing world distribution of the seven subspecies of leopard (*Panthera pardus*).

return to camp. Great game drive.

lions roaring in the night, both going to bed at night, and in the early morning.

May 31, Monday.

Up at 6.30 for a boat ride at 7.30 a.m. We can't go out until the hippos are back in the water, where they will stay for the day.

Black-eyed bulbul, at the breakfast areas.

Morning dove, calling overhead at breakfast.

lesser-striped swallow - making nests in the roof of the eating area.

walked up to canoe area

canoe ride

blacksmith plover

malachite kingfisher, nicely seen

jacana, walking on lily pads, nicely seen. Also called "the Jesus bird" from its walking on water!

2 baboons.

Baboons and impala are often found together, for mutual vigilance.

hippo grass. Vossia cuspidata.

hippopotamus grass, juncus like. Two feet tall out of water. Hippos don't eat it, just live in it.

lots of papyrus

lotus water lily. Nymphaea lotus. White water lily, floating serrate leaves, many seen on the water in bloom.

Nymphaea nouchali. Another one, entire margins, blue flowers or white.

red-eyed dove call. "I'm-a-red-eyed-dove. I'm-a-red-eyed-dove."

papyrus, with malachite kingfisher (pix)

lechwe, jumping

spur-winged geese

swallow-tailed bee-eater

pie kingfisher

black crane

end boat ride.

blue waxbill, seen walking back to camp (later, tho I can't cross-reference this to the one seen, June 9, in Selous. Probably the same bird). Called a cordon-bleu in East Africa book.

Heuglin's robin - seen in bushes not far from where we loaded the van

Left the camp for the airstrip.

Got stuck in sand. Got another van from a lodge nearby, called by radio, and hooked tow rope to it. This failed.

Jacked up the van, and got three wheels out of four jacked up, when a big supply truck arrived, sent from the camp, and pulled us out.

5 zebra
 10 impala
 10 impala
 10 kudu
 25 elephants

5 lions. 4 lionesses and 1 male lion, lying in the shade not far from the road. These are the 5 lions some of which we have seen before (pix). Watched them for 20 minutes.

a big crocodile
 baboons
 vervet monkeys
 6 lechwe
 5 hippos
 30 buffalo, in distance
 30 impala
 15 zebra
 4 warthogs

Reached airstrip, and transfer by air to Xepa airstrip and thence to Jacana camp. Flew in a 10 seater Islander, made by Brittain Norman.

Landed, rode in older Land Rover, half an hour, then a ride in a motorboat for one and one-half hours, through papyrus and Phragmites marsh, varying between narrow channels and more open water.

Nice camp, named Jacana, on an island. It was moved from Xepa, when the Moremi Wildlife preserve was enlarged. They had to move camp.

But the hot water does not work, again!

It is best to visit the Delta, April to October. November to March is the main rainy season. The roads are too treacherous, and the game moves into the woodlands.

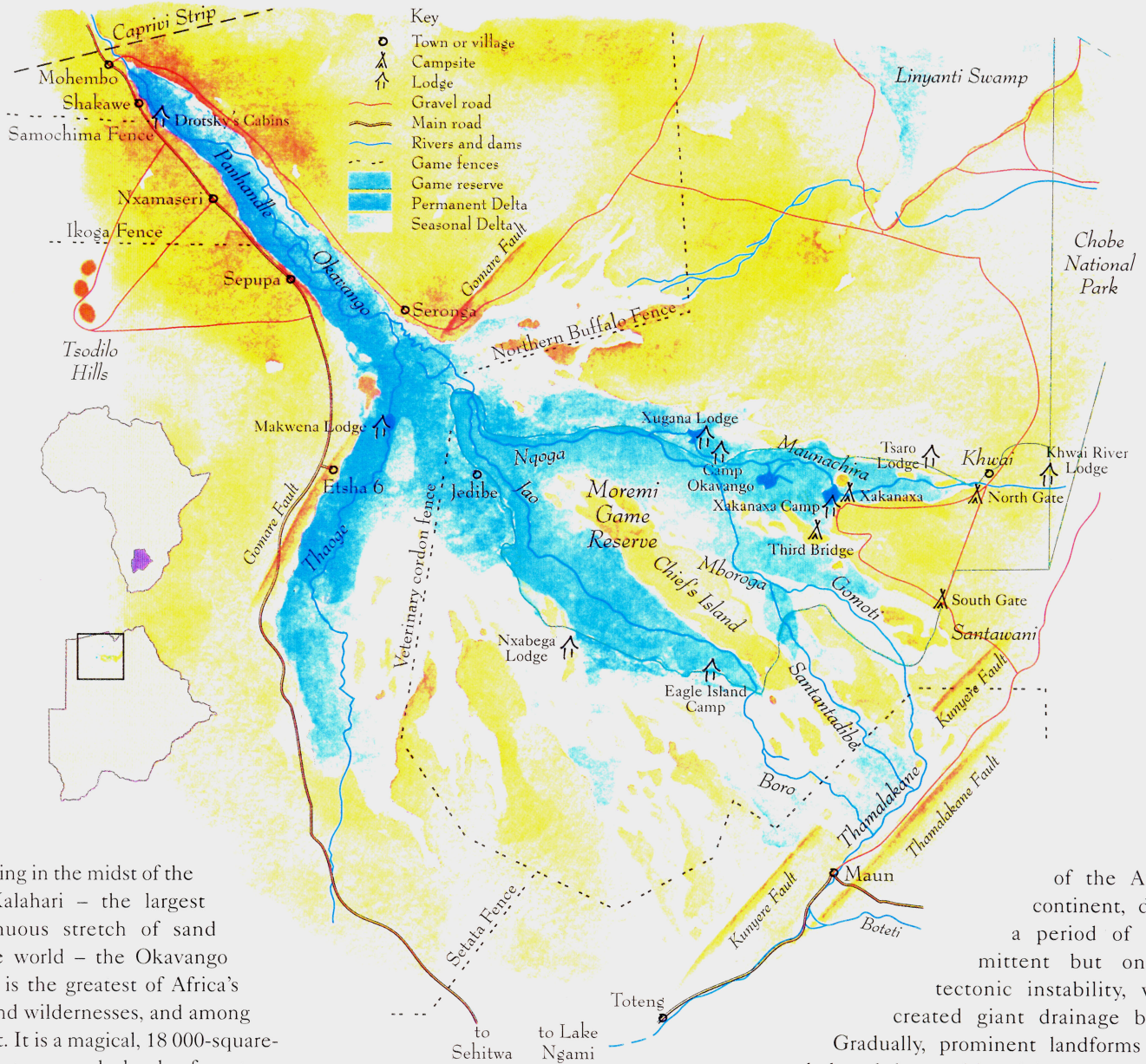
The western edge of the Delta and panhandle have good tar road.

Heuglin's Robin, calling about my tent. Extremely vociferous. Strident call and dawn and dusk is a series of clear, whistled notes.

mokoro - the wooden canoes. They ride low in the water - another 4" and you'd be shipping water.

map of fault lines goes here

Prologue



Lying in the midst of the Kalahari – the largest continuous stretch of sand in the world – the Okavango Delta is the greatest of Africa's wetland wildernesses, and among its last. It is a magical, 18 000-square-kilometre wonderland of waterways, floodplains, islands and forests, which between them host a myriad animal and bird species. It also embraces a rich tapestry of human cultures.

There is much speculation about when and how the Delta was formed. What is certain, though, is that its development spanned millions of years, and was closely interwoven with the creation of its neighbour and host, the Kalahari, and of a succession of massive water systems that covered the region.

About 135 million years ago Gondwanaland, a colossal landmass which once comprised the combined bulk of today's southern hemisphere continents, began to fragment. India and Madagascar, Australia and Antarctica, and finally South America slowly split off and moved across the oceans, until by 100 million years ago the present configuration of landmasses had formed. Along with this separation went the lifting of the southern edges

of the African continent, during a period of intermittent but ongoing tectonic instability, which created giant drainage basins.

Gradually, prominent landforms were eroded, and the resulting debris was collected by rivers and winds and deposited in low-lying areas. One of the great continental depressions thus filled was the Kalahari basin.

The highest region in this basin is the Benguela plateau in Angola where, four or five million years ago, the run-off from rainfall began to ooze through the black, peaty turf to form the Cubango River. In a series of trickles and streams, the water gained momentum down the steep gradient before entering the savanna. The infant Cubango River – or Okavango, as it is known further downstream – was joined first by the Cuito and Chobe rivers from sources in the Angolan highlands, and then by the Upper Zambezi which began its journey in northwestern Zambia. All added to its volume as it flowed southeastwards. Passing through the exposed sands of the Kalahari, 400 kilometres from its source, it joined the Orange River and flowed westwards before spilling into the Atlantic Ocean.

Generally speaking there are parallel fault lines as shown, and a depression between, an extension of the Great Rift Valley. This cut off the Okavango, which once flowed to the sea. There is an exit through the Thamalakane River, becoming the Boteti, near Maun, but now dry. Until recently it flowed regularly. But this in turn flows into the Makgadikgadi Pans.

Makgadikgadi (muk khaa dee khaa dee)

(The khaa or khay is rather like the a in an affected pronunciation of car.)

Nxai Pan. sorta like "knee i"

But only 2-3% of the water ever flows through this exit. Or some of it may run down Nhabe River into Lake Ngami, dry for many years.

The Okavango Delta is really an alluvial fan, since a delta discharges into a larger body of water. The Okavango is the river that never finds the sea.

The delta is as big as Switzerland or Massachusetts.

Caprivi Strip - Namibia's panhandle. Named for a German colonial.

This is the only sizeable source of water in Botswana, an otherwise dry land.

The area is so flat that termite mounds are the highest land forms.

Authors differ on how the ancient Okavango River reached the sea, and even on which ocean it reached.

The summer rains in Angola do not reach the delta until the rain-free winter months in the delta, having flowed 1,000 km.

It can take 4 months to flow across the delta.

In the dryland environments, fire is frequent in the winter months.

This is the subtropics.

The Okavango appears lush, but it is part of the Kalahari system, and soils are sandy, poor in nutrients, and plant communities do not support as much wildlife as the Serengeti-Mara area of East Africa.

The local rainfall in summer is about 30% of the water in the system. The other 70% is from Angola, flowing in.

There is a surprisingly slow flow, 4 months, though at the rate in the main channels it should take only two weeks. Water is slowed by vegetation and by filtering off into spillages.

The mix of winter floods and summer rains gives wildlife water all year, and they move from pans in the forest in summer to the rivers in winter.

Phoenix reclinata. Wild date palm = Tsaro - feather-shaped leaves.

Hyphaene petersiana. Fan Palm = Mokolwane. Ivory palm. Fan shaped leaves. The inner nut has an ivory look and is carved into ornaments.

Both palms become tree sized.

Sycamore Fig. Ficus sycamorus. big tree, surrounding the eating area.

June 1, Tuesday.

Overcast sky, the first of this trip.

Morning was spent in a Sokoro (dugout canoe). No paddles, but long poles.

grey lourie - good "go away" calls, off an on all morning.

marabou stork

male sitatunga, seen at a moderate distance, eating from trees in a small island. Watched it 5 minutes, gradually poling closer. It went behind the island, and spooked before we got a close look.

Sitatunga - elusive aquatic antelope, confined to papyrus swamps and adjacent land. They will hide under water with only their noses sticking out. They are more widely spread than you might think, although restricted to this habitat, which is relatively rare in Africa. See map in Collins guide. Lechwe have a much more narrow range.

vervet monkey - prominently calling

crested barbet - on an island where we had tea.

dodder

Nymphoides indica, Water Gentian. (Menyanthaceae, floating like Nymphaea). Star-shaped flowers, white, seen in with the Nymphaea.

Swamp fern. Thelypteris interrupta. Aquatic fern. Thelypteridaceae. Several times seen in good numbers.

Common reed. Phragmites australis. In more shallow water than papyrus

"If you see 10% of what sees you, you will have much to remember."

The very common sedge with a rounded stem. Best guess is Cyperus articulatus.

end morning Sokoro trip.

One of the group went fishing and caught a tigerfish, 15" long.

There are no rhino wild in Botswana any longer.

Botswana's elephants have small tusks, probably from nutrient deficiency in their diet.

evening Sokoro trip.

20 minutes out we poled through grass/sedge, releasing hordes of bugs all over us, and then landed and found a Pel's fishing owl. I saw it fly, not far away, but only a good glimpse.

Brasenia schreberi. Water-shield, with oval, floating leaves.
return to camp

Manager told a tale about his being attacked by a lion. He was accompanying a hunter. They wounded a lion, a bad shot by a young, teen-age hunter. They tracked it a day or so, and eventually he was attacked. Showed his scars the next morning (pix).

June 2, Wednesday.

overcast again in the morning.

late rising

Heuglins robin wakes you up at earliest light, however.

dart = anhinga, so named because it "darts" or spears its prey, fish, with a cock and jab of the neck. It is not because the bird itself darts around.

tetsee fly - causes sleeping sickness in cattle

flocks and herds. More eyes means better defense system. Also the capacity to help relatives makes better sense.

Chacma baboons range over such wide areas that they are not considered territorial.

The young ride first underneath their mothers and later on their backs. Not male one way and female the other, as reported in East Africa.

Left Jacana camp about 10.30.

2 hour boat ride back

20 impala.

5 tsessebe - adjacent to the airstrip. About like a topi (pix)

3 lions. 2 males, one with a majestic mane. Ate a picnic lunch, and then went back and watched the lions some more.

Mrs. David Kays. Sally. She and her husband own the camp. Rode back with us, and we talked extensively. They recently bid on 5 sq. km. There are two stages of bidding, first 130 some preliminary bidders. Then 51 serious bidders prepare a technical report under certain specifications, ecological considerations, etc., without regard to finances. These are judged without knowing who submitted them.

The best two bids technically are identified as to the names of the proposers, and they compete financially. She thought the process was quite fair and free of corruption (though the winner of one in fifty usually thinks so).

They opted for only photographic safari, though they might have run hunts. Hunters are satisfied

with rough camps, and pay a lot of money. To compete with hunting bidders, you have to have a higher volume of tourists, who want more luxury and pay less.

The cost they are charging Wilderness Safaris is about \$ 125 a day, lodging, meals, guide service. She said the staff income is 90% wages, 10% tips.

Planes arrived, and we flew about 15 minutes in a Cessna Stationair 6.

Reached Xudum Camp (pronounced Chudum). (X as in Christmas, Xhosa)

Larger camp, and longer time established. Others were here besides our party. Some New Zealanders. Some from Zimbabwe.

out about 4.30 for a game drive.
 black eyed bulbil
 grey hornbill
 Richard's pipit
 side-striped jackal (with white tail)
 glossy starling

3 giraffe
 15 baboons
 9 tsessebe (pix)
 12 impala
 15 wildebeest (pix)
 6 tsessebe - quite dark in color
 8 zebra
 a few francolins

black backed jackal, poorly seen in dusk light

side-striped jackal, seen well by spotlight
 wild cat, seen quite well by spotlight
 spring hare
 spring hare
 wild cat - seen well by spotlight
 The wild cats are a memorable part of the trip, always seen by spotlight.

several giraffes in the night
 several tsessebe
 10-15 zebra, in the night
 end night drive.

At dinner, talked to a Rob, with Landala Safaris. Landela, Botswana, Private Bag 248, Maun, Botswana. They bid on this place, have been operating in Botswana for a year and a half, mostly a Zimbabwe firm. He said, many bid, and they took the top 5 for the negotiations. When asked if the process was fair, he said he would only side-step the question, and say that Botswana was more nearly a democracy than any other country in Africa.

The University of Zimbabwe is 95% black. When it was the University of Rhodesia, it was 95% white. It is the only university in the country. There is no university in Botswana, according to Mrs. David Keys, though the Air Botswana flight magazine (later) mentions one.

There is a lion monitoring study here, done by Christaan and Hanlie Winterbach. They have a photographic database of 600 lions, and in this study 120 lions recorded. These are about half a dozen collared lions, 6 of 60 lions resident near the camp. The two main prides are the Xudum pride and the Pom Pom pride.

According to the current study "the lions don't read the book." The territories of the two prides should be mutually exclusive, but they greatly overlap.

A lion's roar can be heard up to 8 km.!

Lion cubs can starve when food is scarce because their mother will leave them nothing to eat. To say nothing of the fact that young cubs can be killed when a new male joins the pride.

Mixed herds of wildebeest, impala, zebra, and hartebeest are common. The senses of these animals complement each other and they are safer when they move together.

Hippos calling in the pond outside my tent at night. I saw them off and on in the day, a head above water a bit, then disappearing below the water.

The vehicle is a heavy Toyota Land Cruiser, no top.

June 3, Thursday.

ground hornbill
 very late start on morning game drive
 gray lourie
 2 tsessebe
 1 giraffe

4 lions (pix), the Pom Pom Pride, 2 collared females, 2 males, said to be sons of one of the females. There are 7 in this pride.

3 tsessebe (pix)
 brown snake eagle
 1 giraffe
 1 elephant
 5 ground hornbills
 8 giraffe
 4 zebra (pix)
 1 lone tsessebe
 8 tsessebe
 4 zebra
 1 wildebeest

End of morning game drive. Wildlife is certainly not as abundant, or at least not as evident here as at Chobe and Linyanti. Good lions, good tsessebe, otherwise not that exciting.

General notes about Botswana.

17% of Botswana is protected wildlife areas.

There are 1.3 million persons in Botswana, projected to 2.6 million by 2021.

Language: English, official language. Setswana, national language.

This was once Bechuanaland, become Botswana.

1.4 million (1996). One of the lowest population densities in Africa, and 80% of the population is on the eastern one-third of the country, where densities are high. But in 1980, there were only 815,000 people.

Population growth is high, 3.5% per year. The average woman of child-bearing ages bears 5.8 children.

18° to 17° latitude south. The northern two-thirds is in the tropics.

It can rain Sept - April, but most rains fall late Dec. to Feb.

Khoi (Hottentot) and San (Bushmen) have comparatively light skins, high cheekbones, slanted eyes, and tufted hair. Thin lips.

Three diamond mines (Orapa, Jwaneng, and Letihakene) are jointly owned by DeBeers Mining Co., and the Botswana Government. Botswana was, at independence in 1966, one of the poorest countries in the world, but diamonds have changed that. It is now the largest producer of diamonds by value in the world. It one of the wealthiest non-oil producing countries on the African continent.

17% of Botswana is natural parks and game reserves, and more as game management areas (225) = 39% total for managed wildlife.

Poor soils and harsh climate. Little land is really suitable for agriculture. More is suitable for cattle.

Bilharzia (=Schistosomiasis) is caught from a freshwater parasite.

Afternoon game drive.

crested francolin,

4 ostrich, 2 male, 2 female. These in Namibia and the Kalahari are the only genuinely wild ostriches in Africa. Others are re-introduced from domesticated birds.

25 wildebeest

20 wattled crane

1 zebra

Big flock of 125 wattled cranes, impressive in the air.

1 saddle billed stork.

6 wildebeest

6 zebra

With spotlight:

3 springhare

1 springhare

1 springhare

Only one of these well seen, with a long tail. Somewhat bushy. Not rabbit-like at all. Rather kangaroo-like.

June 4, Friday.

Papyrus is one of the fastest growing plants on Earth. The shoots grow, mature, and die within 90 days.

Baboons calling loudly outside the tent as I got up in the morning.

Dee Boersma runs (or once ran) a S. America penguin trip, in which you participate in the research. Barbara went on it, and says it was good.

roller

1 tsessebe

1 tsessebe, with 1 wildebeest

jackal

1 wildebeest

1 kudu

We looked for some while for the lions, unsuccessfully. We were alerted by tracks on the road.

3 giraffes

4 tsessebe

50 wildebeest

4 giraffe

2 ground hornbills

10 wildebeest

2 little bee-eaters

1 elephant

4 zebra

3 tsessebe

1 tsessebe with 4 impala

3 impala

roller

roller

Found the lions. Three male lions, but only seen briefly. These are "shy," says Pilot, because male lions are hunted nearby. Not females.

3 elephants

4 giraffe

Then we drove back toward camp, and found 8 lions, 7 female, 1 male. We watched these at

almost too much length. They were walking in a line for an hour, then sitting on a low hill. None had collars on, so these are different lions from yesterday. Central pride? A warthog came within range, and they all crouched low. But the warthog smelled or somehow sensed them and ran off the other way.

End morning game drive, at 11.30.

41 lion sightings to this point in the trip, though some were the same lions seen twice.

Afternoon game drive

4 warthogs

4 francolins

20 impala

5 zebra

red eyed bulbul

7 of the 8 lions sighted again, only thirty yards from where we left them in the morning.

green pigeon

2 reed buck, running off. The tail shows white underside.

Steenbok, very small, standing in grass. We watched it several minutes.

15 wildebeest, in the distance at dusk.

Black-backed jackal, well seen, a nice one. (flash pix).

25 impala in the dusk, some nice leaps.

In the dark, with spotlight

2 zebra

2 giraffe - a nice silhouette of head and heck against the dull red twilight sky.

We found the lions hunting in the dark. They came quite close to the van. We waited in the dark 40 minutes. In the night there were various sounds. The lions themselves moved quite quietly. You couldn't hear a sound with five lions walking nearby.

Then the sound of zebra stampeding, hoofs on the ground. Then zebra calling, Pilot said, to regroup, though you might think this would give them away to the lions. Check the zebra call on tape at home.

Eventually, we turned on the headlights to find a lion 25 feet in front of the vehicle. The noises let your imagination run wild. Lots of electricity in the experience.

En route to camp:

hyena in the road, by spotlight

3 giraffes

end of evening game drive.

The Botswana wildebeest population has been cut 99% by the veterinary fences. Lonely Planet, p. 472.

Fish seen in rising water on the road. Surprisingly big fish where there was no water here a few hours ago. A kind of catfish and they seem to move in fast as the floods rise.

June 5, Saturday.

morning game drive
wattled crane
2 tsessebe
10 tsessebe
1 tsessebe
1 giraffe
roller

sand grouse, though otherwise unidentified
30 wildebeest
8 zebra
1 ostrich

We reached the Xudum River and the road to Maun crosses it, but now impossible. They had crossed it two days ago.

fish eagle
yellow hornbill
15 giraffe, some quite close
6 baboons
4 tsessebe
4 zebra

We got stuck in grassy mud, trying to avoid a flooded road. They started gathering sticks and bushes to pack under the wheels, to find that the hubs were unlocked. Locking the hubs, no problem.

2 tsessebe
tsetse fly
1 tsessebe
3 francolins, one chick
3 giraffe
3 giraffe
1 giraffe

Leopard!? I saw it broadside, briefly, in the grass 50 yards away, and thought it was a lion. Then I saw its head, above the grass, and still said lion. But I saw it broadside and the shadow side was toward me. Pilot said it was a leopard from its behavior, and later confirmed it with tracks from the road. We drove out into the grass in an attempt to see more, to no avail. Such is the mystique with

which I end Botswana.

striped kingfisher
 crested barbet, well seen
 3 warthogs, a mother and two small ones.

The guides say that leopard spoor are smaller than lions, and can be separated from lion cubs, because cubs with this size print would still be with their mothers, and you would see some adult tracks too.

A scientist with a computer map at lunch says the Pom Pom pride has 17 lions. The Central pride has 20 or so. The 8 (7 lions, one male) are in the Central Pride.

The collared lions are in the Pom Pom Pride.

The three males are in neither pride, but have come into the area from elsewhere and are trying to work into the Pom Pom pride or the Central Pride.

Lions will kill 30% of the time here, but only 10% of the impala they chase.

Female lions live 10-12-14 years. Males 10 years. When a male is kicked out of a pride, he doesn't have the support hunting, and has a harder time of it.

The collar range is 2 km on the ground. 15-20 km from the air.

The females come into heat every two years; she cares for her earlier cubs until then.

Males seldom raise two sets of cubs from the same female. They are only in prime enough time (3 years maybe) to sire one set of cubs.

Cub mortalities are 50% over two years.

Zebra are declining greatly in Botswana.
 2 giraffe en route to the airport.

The charter aircraft was late. We were originally to arrive at 2.00, then told not to come until 2.40. They actually arrived 3.15.

Twenty minute flight to Naun in Cessna Islander. Flew over a veterinary fence, not far from Maun.

There was a rush in the airport at Maun, and no time to get into the curio store, where Pilot said there were some books I would have bought.

Air Botswana Flight Magazine says that once there was a University of Basutoland, Bechuanaland, and Swaziland, later the University of Botswana, Lesotho, and Swaziland, and so this university was outside Botswana.

The University of Botswana was established July 1982 after UBLS was closed.

There were 40 people on the Maun-Johannesburg flight. Two of them blacks, though 2 stewardesses were black.

The plane is an ACR42, made in France. A current plane. ACR means Aero something or other. 42 seats. Another one has 70 some seats.

Reached Johannesburg after dark (6.30) and uneventful transfer to Holiday Inn Garden Court Airport Hotel. Back to civilization!

Botswana is roughly the size of France. Or Kenya.

A year or so after independence, in 1966, they found diamonds, in 1967.

pula = rain = name of the currency. Rain is like money!

Botswana is unusual among African countries for its extremely low human population densities.

Livingston first drew attention to the Okavango Delta in 1857.

The cattle industry has greatly expanded in Botswana, commercial beef sent to Europe, heavily subsidized by the European Union, and benefits mainly a few cattle barons.

Botswana has to adhere to European disease-control initiatives, and hence the veterinary fences. Several thousand kilometers of fencing to protect against foot and mouth disease.

Large numbers of antelope have died at the fences, unable to get water.

The veterinary fences, however, sometimes protect the wildlife, as cattle are not allowed in those areas.

There is now also a Northern Veterinary Fence.

Tourism revenues are much higher than cattle revenues, maybe four times higher.

The Okavango People's Wildlife Trust (OPWT) was formed recently and held its first conference in 1997.

Botswana has generally a policy of high cost, low volume tourism.

The Okavango upstream is called the Cubango, a variation of the same word.

Moremi Wildlife Preserve was the first of its kind established by non-colonial administrators in Africa. The Batswana tribe set it aside in 1962.

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June 6, Monday.

Trip to Tanzania and Selous Game Resereve

In Johannesburg, tried to call Jane all night. Reached Shonny. 6.00 a.m. to find that the chimp trip is off, the Air Tanzania plane is not flying again, and an alternative trip is to the Selous Game Reserve.

Air Malawi flight. The plane is a Boeing 737, but the airline seems now to own only one.

Lake Nyasa, now Lake Malawi. Livingstone saw it first among Europeans in 1859 and named it Lake Nyasa. It is the "calendar lake", 365 miles long and 52 miles wide.

Swahili-Arab slaves were raiding Malawi, taking 10,000 to 20,000 slaves a year, many dying in transport. Livingstone fought it hard.

When Livingstone visited Lake Tanganikya in 1871, he found maize already grown there widely in the Congo basin.

Miracle, Marvin, Maize in Africa.

Miracle, Marvin, Seeds of Change.

Slaves could not have been transported as far as they were, either on land or sea, without maize. A compact food and easily stored.

Maize is a big plant and takes lots of nutrients from the soil. The soil soon needs fertilizer (although Mexicans must have done without it).

Reached Lilongwe, Malawi, to transfer. Waited an hour in a Third World Airport, with some

confusion about a boarding pass, also about whether I needed to recheck my bag.

I got back on the same plane, under a different flight number, and reached Dar-es-Salaam, 6.45 dark. I had to show my yellow fever vaccination, which, thankfully, I had. It is good for ten years and I had it in 1992. Otherwise, I would have been in trouble. Another close call.

No bag. But a woman was helpful, and sent out to the plane to get it. It was "mixed in with the Nairobi luggage." In the midst of the wait, all the airport lights went out and I stood in the baggage claim area five minutes in total darkness.

I was met, with no problems, and the driver was cordial. Took me to Peacocke Hotel, but leaving me uncertain about whether I might go to Gombe. He said "the boss will know." He picks me up tomorrow at 9.30.

My flashlight was stolen out of my luggage.

On the plane I sat beside a woman from Danville, VA, now resident in Malawi, and working for a big tobacco company, headquartered in Danville, and operating in Malawi. She was a tobacco buyer en route to a village in Tanzania--the only woman tobacco buyer in Africa.

Blantyre is twice the size of Linongwe, 200,000, though it is the capital.

June 6, 1999, Sunday.

Arrived from Johannesburg at Dar-es-Salaam. See above. Transfer to Peacocke Hotel. Very much a Third World Hotel. Noisy air conditioner and some other fan/motor came on in the night for a while, quite noisy. Fitful night. Muslim call to prayer on loudspeaker, 5.30 a.m. Still dark. Though later, I did not see all that much Muslim presence in the city. Christian churches are more obvious and commanding than any mosques I saw.

June 7, 1999, Monday. Arose not knowing whether I would go to Kigoma or to the Selous, but suspecting the latter, since I am not being picked up until 9.30, probably too late for any Kigoma flight.

Nope. Kigoma is out. Very disappointing. The plane is busted and not flying. Waiting for parts again. I will fly, small charter plane, to the Selous Game Reserve, but not until tomorrow.

I spent the morning with a driver, later my guide, getting my stolen flashlight replaced. Then I bought tanzanite. Heavily guarded store, went through two heavily barred doors. Lots of stones. One I bought is 1.44 carats, the other .72 carats. Then I went to bookstores, though I didn't find any really good bookstore or books.

(Later, July 8, 1999. While at the MIT/Templeton Workshop in Boston, waiting to tour the Museum of Scientific Instruments, I went in the Harvard Museum of Natural History and looked up tanzanite. They had one stone, uncut, about 2" long and 1" wide, purplish, rather dull. Zoisite-epidote group. Sorosilicate. From Arusha, Tanzania. See Sinkankas, Mineralogy, p. 514, on sorosilicates. There

is a classification scheme for silicates depending on structure; sorosilicates have a linked tip-to-tip tetrahedron arrangement sharing the same oxygen atom, and a hour-glass structure. soro - Greek, "group". zois - from Austian baron named Zois. Origin of epidote is Greek, but unknown.)

Back to Peacocke Hotel about 2.00 but no spare rooms. Transferred to Embassy Hotel, really a better one, but still Third World. Bananas and oranges for lunch.

Walked the streets with some misgivings from 3.00 p.m. to 6.00 p.m., gradually figured out the layout of the area. Shops, street stalls, and lots of people just walking around with a few shirts, or watches, or belts, or oranges, to sell. The streets are so full of vendors it was at times hard to walk around. At first hawkers were bothersome, especially those who wanted to change dollars on the black market, but after a while they seemed to leave off.

Back to the hotel, then walked to the water front. More vendors, and here is the matatu loading area. Workers jammed into the minibusses. Women often rather nice looking in their colorful clothes. Lots of men doing nothing.

Big Azania Front Lutheran Church. Not far away is St. Joseph's Metropolitan Cathedral. One wonders whether the Tanzanians needed Europe's Reformation divisions.

The British Airways flight to London is only twice a week, Tuesday and Fridays.

Some trips have resumed to Bwindi, Uganda, and the gorillas, under heavily armed guard, up to 100 strong! Some say this is the safest time to visit. But most say that the risk is not worth it.

Best time to go to Gombe is July-August. There is more traffic and Air Tanzania would probably push harder to accommodate it.

June 8, 1999. Tuesday.

Reasonably quiet night.

There is a Presbyterian Church of East Africa in Dar-es-Salaam.

I spent the morning doing not much of anything. Walked around to the Savannah Tours Office. The plane leaves at 2.00.

1.00 p.m. Pickup at hotel and went to old airport, now used for these flights. A mile or so from the new, international airport.

Flight on 14 passenger Cessna Caravan. Nice plane. Pilot a young man from S. Africa, two of them. In and out of cumulus clouds. Flew low over the runway at first to make sure there are no animals on it. Then turned around over the Rufiji River and came back and landed.

There were ten others on the plane, but I was the only one getting off at Rufiji River camp.

They didn't turn the engine off and they just lowered a small set of stairs and I got off, gritting sand in my teeth from the prop wash. They claim the battery doesn't recharge for a crankup between short flights, and if they turn the engine off here, and again a few minutes away in another camp,

they have starting problems.

But the second pilot put off the wrong bag, and I had to flag him down with some alarm, whereupon the first pilot got off, engine still running, while he dug out the right bag.

Met promptly by a jeep. 2-3 baboons adjacent to the runway coming in.

Drove to the Rufiji River Camp, only a few minutes away. Nice tented camp with a constructed toilet in back. But no hot water. 15 impala seem coming in, between airport and camp.

Selous Game Reserve - General notes.

Selous (1851-1916) was killed in World War I. He was a kind of British Buffalo Bill.

This is the world's largest game reserve, 54,600 sq. km. The Rufiji has the largest water catchment area of any river in East Africa.

The central Kalahari Game Reserve (Botswana) is 52,000 sq. km. The Okavango delta is 18,000 sq. km.

By road from Dar-es-Salaam is 250 km., and an eight hour drive. There are no cattle in the villages nearby. Tsetse fly problems.

Ad in hotel: Selous Game Reserve, 2 nights, 3 days, fly in/fly out. \$ 556.
This is a world heritage site.

The rainy season is just over here, and they have only been open a day or two.

Lots of pans seen flying in. Here it rains December to May. Though there is a dry spell in January and February. The camp holds 40 (20 tents), and there are only two guest here, myself and one other. Two weeks ago it was pouring rain.

Camp host is David Jenkins.
No night drives here.
22 hunting camps in Tanzania

On the whole, the game drives produced lots of now unexciting animals (though they might have been exciting three weeks ago). Nevertheless the Selous is probably more representative of what primeval Africa was like than is the Serengeti or Ngorongoro, which are unique places. The wildlife is more scattered, and not so concentrated.

The redeeming factor was detail in the birds. A Masai guide was named Kitoi. He went to a two-year guide school in Arusha (though not to the wildlife college near Kilimanjaro). He managed to get in the vehicle on every trip, sensing my interest in birds. I had to go to a little trouble to tip him independently at the end.

4.30 p.m. Boat ride.

The Rufiji River here is 1/4 to 1/2 mile wide.
 palm trees, all along the river.
 The Borassus palm has a single trunk.
 The Domb palm has branched trunks.

Big crocodiles
 wattled plover
 heron (pix)
 African skimmers, on a sand spit, and also skimming over the water.

One buffalo at river bank.
 fish eagle
 monitor lizard, a big one
 hippo with jaws wide open
 hippo, half out of water
 4 hippos
 tortoise, greenish one a foot and a half across.

Lots of foam on the water.
 Goliath heron (pix)
 skimmers, with orange bills
 white-headed plover, not in the S. African book.
 great egret (all white, large)
 2 Egyptian geese
 crocodile
 saddle-billed stork
 big crocodile (pix) and smaller one
 big crocodile
 2 hippos
 open-billed stork
 malachite kingfisher
 elephant in bush, a big one
 Egyptian goose
 white-fronted bee-eater. Orange breasted, black faced, green backs. Big colony of them nesting
 in bank, riverside
 2 pied kingfishers
 green heron - small
 3 big crocodiles on an island
 2 big crocs, with mouth open (pix), quite close. 10-12 feet long

giraffe
 1 hippo, close in
 fish eagle
 yellow-billed stork
 crocodile
 yellow-billed stork
 3 hippos, angrily diving
 9 giraffe, running away from us on river flats.

6 crocs
 2 hadeda ibis
 roller
 wattled plover
 2 crocs
 yellow-billed stork
 2 crocs
 5 Egyptian geese
 big croc
 hippo, angry in the water
 4 hippos
 2 crocs
 2 waterbucks
 3 crocs
 wattled plover
 4 hippos
 9 great white egrets
 big croc, walking on all fours
 yellow-billed stork
 big croc
 2 hippos
 2 crocs
 9 hippos, in one group
 croc
 3 crocs
 yellow-billed stork
 croc
 croc
 2 hippos
 4 hippos
 2 hippos
 2 pied kingfishers
 5 hippos
 4 hippos
 skimmers steadily
 fish eagle
 darters, in air ?
 3 pelicans

Far more crocodiles here than I have ever seen elsewhere in Africa.

I didn't try to count anything coming back.

Dinner. The other client is a woman, from France and named France. She runs an art school in Belgium.

hyenas howling before and after dinner.

The tent is right on the river and hippos were grunting all night long.

June 9, 1999. Wednesday.

Elephants were right in back of the tent in the night.

Morning game drive:

3 elephants, one baby

10 impala

giraffe

12 giraffe

10 impala

8-10 baboons

2 warthogs

10 impala

6 baboons

5 impala

grey hornbill

giraffe

warthog

5-6 impala

10 impala

6 baboons

whistling thorn forest

Reached a lake

3 hippos, one nearly out of water

10 impala

2 impala

2 impala

white-browed sparrow weaver, lots of these

white-backed vulture

mourning doves, 2 close up

15 sparrow weaver

grey hornbill

roller

3 rollers

bateleur

roller

glossy starling

fork-tailed drongo (only called a drongo in East African book)

roller

10 impala

little bee eater

10 impala

5 warthogs

hoopoe, or African hoopoe (first time a hoopoe; earlier ones have all been (red-billed)

wood-hoopoe

2 impala

red-billed hornbill

bateleur

10 wildebeest
 crested barbet

back in camp
 spotted flanked barbet ?? (white head)
 roller

afternoon drive
 roller at nest hole in tree
 50 impala
 2 impala
 roller
 2 wildebeest
 1 wildebeest, running
 20 impala
 reached the second lake
 pink-backed pelican
 white-headed plover, nicely seen
 3 Egyptian geese
 25 Egyptian geese
 1 crocodile
 spur-winged plover
 yellow-billed egret
 10 impala
 2 giraffe
 green wood-hoopoe (earlier one's in Okavango were red-billed wood-hoopoe, not here)
 100 impala
 woodland kingfisher, lower bill is black
 bateleur
 roller
 15 hippos, all piled up on top of each other
 15 impalas
 marabou stork
 20 impala

Cassia - yellow flowers, medium sized tree
Euphorbia candilabrium, like a cactus, green stems
 4 waterbuck

palmnut vulture - something like a fish eagle. Nicely seen. Also called vulturine fish eagle. So local as not to be regularly featured in East Africa book, tho discussed there, p. 42. Fully noted in S. Africa book. Feeds both on palm nuts and on fish. Uncommon and very local.

3 waterbuck
 3 giraffe
 6 baboons, one with baby on back
 5 ground hornbill

return to camp

afternoon game drive
pale chanting goshawk, nicely seen

blue-capped cordon-bleu (=blue waxbill, blue head, blue cheek too) (later, tho I can't cross-reference this to the one seen, May 31, in Linyanti).

fork-tailed drongo
sparrow weavers
brown headed parrot
glossy starling
roller
Hartlaub's turaco (a lourie). Not in S. Africa book.

white-throated bee-eater
6 giraffe
elephants rubbing against tree
warthog
buffalo
brown-hooded kingfisher

black-backed puffback (a shrike)
fork-tailed drongo
baboon in tree
white-crowned plover
little bee-eater
little egret
Egyptian geese
6-8 impala
20-30 impala
darter
glossy starling
white-backed vulture
yellow-billed egret
10 baboons

hippo, out of water
yellow-billed stork
green backed heron, very small
Egyptian geese
open-billed stork

reached a lake area
2 crocs
water dikop (a curlew, nicely seen)
3-banded plover (much like a killdeer)
giraffe
10 hippos
Dickinson's kestrel

ground hornbill calling - low call, notable
glimpse of it in bushes
end of afternoon game drive.

Kitoi, the Masai guide, is quite good with birds.

Met at supper: Hassan Saihednor (could be spelled wrong). Sand Rivers Rhino Project, P. O. Box 1344, Dar-es-Salaam, TZ.
e-mail sand-rivers@twigo.com

He went to Middlebury College, Vermont, knew Steven Rockefeller and Steve Trombulak. Then he did Ph.D at Oxford in environmental management. He is directing a rhino study here. He has twenty-some rangers tracking them, and they try to take pictures of them.

But what they find out is kept secret, for fear of poachers.

He is American, mother from Kansas, father is Kenyan.

The rhino's don't cross the big rivers and that can make small populations even smaller. That produces more inbreeding.

Hyena calling at dinner time.

June 10, 1999. Thursday
Morning walk, not game drive. Makhamia, long green pods, pea flowers.

We were never ought of sight of animal tracks and scat, and it was often hard to find a few square feet without them.

civet tracks
hyena tracks, with prominent claws
genet tracks, smaller
10 impala
elephant tracks. The hind leg is more oval.

hippo tracks
70 impala
ebony tree. It is not permitted to cut ebony now.

white-fronted bee-eater
giraffe tracks
white-fronted bee-eater
little bee eater

Brachystegia = miombio. A tree
wild basil, herb with strong smell
15 giraffe running
impala middens - made by males

Tamarindus tree

Cassia siamea, tree with long pods

snail shells

baboon tracks, long thin toes

paradise flycatcher

Terminalia flat-topped tree

hadedda ibis, 6-8 of them

5 giraffe

woolly necked stork

Acacia seyal, whistling thorn

monitor lizard - tail dragged in sand

hammerkop - in flight

2 warthogs

2 giraffe

21 giraffe - nicely posed against the trees, quintessential Africa.

dung beetle - two of these, one of them rolling a ball of dung

red bishop

Pel's fishing owl. Reasonably well seen this time. We were walking in deeper woods. Seen in a tree overhead, brown in good sunlight. But it flew before I got my binoculars on it. East Africa Guide says "a rare bird in East Africa."

hole dug by aardvark in termite mound

colobus (monkeys) - Angolan black and white colobus.

Two colobus first seen, the second one nicely jumping from one tree to another in good daylight.

3rd colobus seen seated in tree, overhead, good view. Watched him several minutes. Striking face, very bearded, black and white.

Boatride back, 25 minutes

perhaps 40 hippos seen from the boat, two big groups of 15 or so.

hammerkop

end morning walk.

Lemurs in Madagascar. A De Heaulme family, French, has lived there several generations, and runs some tours. Tulear, Ifaty (beach resort area a little north of Tulear), Fort Dauphin

There are three different towns where the tours operate.

At the Selous, in July and August when game concentrates near the rivers, the lions lurk near the water, and they seen them every day.

But not the dogs. They are unpredictable. Operators here say there are plenty of guineas and

francolins, but I saw few or none.

They have shot two animals in seven years. One hippo; one buffalo that charged.

flight back at 3.00 p.m. Plane was Cessna 172. I was the only one.
Two honeymooners got off! I got on. Seated 4, including 2 pilots.

We chased 2 warthogs and 10-15 impala off the landing strip.

10-15 impala
4-5 giraffe, seen from the air after takeoff.

Returned to Dar-es-Salaam, met, and taken to hotel.

June 11, Friday.

Rose 4.00 am., for 5.00 a.m. departure by car to Mikumi National Park. Pickup prompted at 5.00 and glad to get out of a mangy hotel!

Drive out of the city in the dark. Little traffic at first, then various lorries and busses.

The road is the main highway out of Dar-es-Salaam into anywhere in Africa.

Poor road at first, then better, and then a terrible detour. After an hour and a quarter reached a good two lane--even with white paint down the center.

Lots of people walking the sides, often also bicycles, often with bags of charcoal, maize, or whatever.

Women often carrying stuff on their heads.

The short rains are in December.

The long rains are March to May, and so are just over. The countryside is nice and green -- for Africa.

In the fields; maize. sisal (government owned fields). Scattered bananas

Reached Chatinze, a junction where roads go north to Arusha and Nairobi.

Continued, reached Uluruguru Mountains, significant mountains. Well-forested peaks. Highest is 2600 meters. Some of the cliff faces are striking and rather scenic. A few clouds hanging over the summits. The tallest one was a quite striking peak.

Girls in white, black, blue skirts, school uniforms.

coconut trees
 baobab trees
 mango
 tobacco factory
 though lots of land is apparently unused.
 Nearby landscape became more forested with shrubby forest.

Only one small herd of cattle seen
 pied crows
 martial eagle

Entered the Mikumi National park. The main, hardtop road goes right through it.

2 elephants
 2 giraffe
 elephant
 6 giraffe
 giraffe

reached Mikumi village on the other side of the park to get gas at Esso station. No electricity to pump the gas. 12-15 men were mounting an electric pole by hand, with a system of ropes and props. Eventually they pumped some gas by hand.

Return to park. Some police flagged the guide down, and there was a speeding ticket, 10,000 shillings. But the driver bribed him for 2,000 shillings, which he had to borrow from me! Oh well.

Back into the park.
 7 zebra
 yellow-billed egret
 grey heron

entered a gate house and paid fees.

The last rhino was shot here in 1986. There remains meat poaching, and commercial poaching. There have been 3,000 offenses in recent years.

40 impala
 20 zebra
 6-8 wildebeest
 8-10 giraffe
 6 zebra

2 eland, first I have seen on this trip.

11 giraffe
 unknown starling
 6 wildebeest
 3 marabou storks

At a pool:

Lunched here, a pickup lunch. I had gotten a can of spaghetti and some crackers.

croc

5 hippo

2 Egyptian geese

5-6 impala

6-8 vervet monkeys

2 busses of school children passed, asking if we had seen lions.

10 eland

15 wildebeest

30 zebra

often mixed herds

roller

but relatively few birds

Visited a decent lodge with cabins, with watering holes that attract the animals.

They had heard lions roaring last night.

Left the park

4 elephants

Return to Dar-es-Salaam. The landscape is not unlike Southside Virginia, with some Blue Ridge on the skyline. In a way this is often reminiscent of the Old U.S. South, with the blacks walking the roads, like Marion!!.

Now there were lots of cars, trucks, busses, flashing lights to alert other drivers that the police were on the road.

12 baboons on the road

Sizeable Roman Catholic Cathedral at Morogoro

3 baboons halfway back, in rural, settled area.

rice fields.

Another 6-8 speed checkpoints.

Everywhere things are ugly and poor, except some colorful (if dirty) dresses on the women.

It is probably a good thing for me to spend my last day in Africa so vividly reminded of how much of it is poor.

Painful detour again, about 25 minutes.

8-10 churches, no mosques all day

A lot of traffic stalls when we reached Dar-es-Salaam, and I had some anxiety about getting to the

airport on time. But o.k.

Hot, dirty, mangy airport, with totally unintelligible P.A. system.

No time and then, at the gates, no place to wash my face.

The British Airways crew was late, 50 people standing, no seats, with 150 empty seats within a few feet of them, but barred from using them by thick plate glass. No toilet facilities. This is not British Airways at its best.

Praise God to be out of here. But can all those I left behind praise God?

On seat beside me was British woman with son supervising a big construction project in Dar-es-Salaam. He has about 2,000 people under him and they do everything. Dig the clay, make the bricks, and go from there.

Flight to Entebbe (Uganda), which I never saw, in dark. Then flight to Gatwick, uneventful, though British Airways was definitely not at its best anywhere on this flight.

June 12, 1999. Reached Gatwick, early morning. Long wait. Bought Jane tea at Harrods. Out of Gatwick late morning, and stretched day directly to Denver.

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end of Africa trip.

June 27, 1999. Sunday. Lulu City (site). Left home, alone, 7.15. Spectacular drive over Trail Ridge, and on the trail about 10.00. This seems now to be called the Colorado River Trail. Good trail, through Shipler Park, with a cabin ruin. Sign when you cross Crater Creek. Sign when .2 mile from Lulu City, with the other fork going on to Poudre Pass. Trail have been rebuilt some from those shown on topo.

Calypso orchids, 15 or so, mostly in one place. 25 elk on Trail Ridge Road. 8 elk on the trail, rather close. 2 bighorn ewes seen on return, on rocky talus, nice view. Usual wildflowers, not particularly far along in the season. Plenty of dandelions invasive here. From the .2 mile to Lulu City it is 4.8 miles on to Poudre Pass. Testing my Achilles tendon again; does fair.

Sawtooths and Bighorn Crags, Idaho
Frank Church/River of No Return Wilderness

July 6-20, 1999.

July 6, Tuesday. 4.00 p.m. Bill and Billy Forbes arrive. Shonny and Adam over for supper on back porch.

July 7, Wednesday. Nursing a sore throat, caught on jet plane coming back from Boston.

Drove to Pocatello; stayed in Econo Lodge, University, opposite to Idaho State University. Very satisfactory. Card in files.

Air conditioner cut out after a long wait at a road construction site, but then started again.

Perhaps 100 antelope during the day.

July 8, Thursday. Drove to EBR-1, Experimental Breeder Reactor (near Arco), as with Gray Hampton the year before. Lunched in Craters of the Moon National Monument; good sandwiches from a deli in Arco. Drove the loop.

Drove to Ketchum, and bought groceries. Drove on over Galena Summit. Cloudless day. Great scenery.

Pitched camp, Glacier View Campground. Site B2, nice site. Beef stew for supper.

Outlet campground seems to be the best one in here. They spent \$ 650,000 on 19 sites a few years ago, renovating it!

Drove up the valley looking for wildlife after supper. 4 deer. 2 sandhill cranes. Nothing else.

July 9, Friday. Hike to Alpine Lake. Cold night and chilly getting up early. Off for shuttle boat, 7.15 a.m.

Steady pull up and I did the last 1.5 mile climb reasonably well. Snow at the lake, lots more than last year when Gray, Gray, Jr., and I came.

Lunched at the lake. 2 deer seen on the trail.

Brought back Labrador tea, Ledum glandulosum.

Steady climb back down. Reached transfer dock for boat, 4.30 p.m.

About 10 miles round trip.

Dinner at the Casino Restaurant in town.

July 10, Saturday. Fourth of July Lake in the middle of the day, in the White Clouds. The White Clouds are a prime candidate for a Wilderness Area, but not yet. They are now open to motor travel.

Nice hike, very pretty at the lake. About 4.5 miles round trip.

July 11, Sunday. Sawtooth Lake.

Not all that easy a climb, especially for me, nursing a cough. The blasted cold is putting a damper on the trip. Hard to sleep nights for coughing.

Steady, good trail to Aline Lake (another Alpine Lake, not the one climbed two days ago), after that a harder climb to Sawtooth Lake. Walked over snow the last half mile about half of the time. Not bad, but all the snow I wanted to walk over.

Descent, steady, back at the car at 4.30 p.m. Good hike, and I am glad to have made it. About 10 miles round trip.

Bought deli sandwiches in town and took them to camp for supper.

July 12, Monday. Billy did Horton Peak in the White Clouds, alone. We took him to the trailhead. 8 miles, 2600 ft. elevation gain.

Bill and I knocked around. Petit Lake, walked about an hour on a trail on the north side of the lake.

Fish Hatchery tour, and picnic lunch there.

Picked Billy up about 4.00; he was already on the road walking back.

Hot dogs for supper. Good showers here at Redfish Camp area; better than the one in town.

July 13, Thursday.

Walked to Fishhook Creek lookout, 4 miles round trip. 10-12 a.m.

Lunch at camp.

Packed up.

Checked into Mountain Village Lodge. Did wash 3-5.30.
 Met Bob Sevy, 6.00 p.m.
 Went to the clinic there for my cough. I am now too hoarse to talk.
 Dinner, salmon at Redfish Lodge, courtesy of Billy. Nice meal, Atlantic salmon!

Not all that good a night. Too much coughing to sleep.

July 14, Wednesday.

Met Sevy at 6.00 a.m., and rather long drive to trailhead. Drove to Challis, and to Bighorn Crags Campground. 24 chuckar in the road. One deer.

Six in group:
 Bob's assistant:
 David Kimpton

Chip and Terry Carstensen (he is also Hans)
 32 Arrowhead Dr.
 Norwell, MA 02061
 781/659-2142.

Does investments. Both went to Stanford; he in political science, later a business Masters; she did English. They have a son there now.

Home in Stanley:
 P. O. Box 274
 Stanley, ID 83278
 208/774-3495
 e-mail: 74166.2625@compuserve.com

Bill Forbes, Holmes Rolston.

Terry saw a wolf yesterday that had killed a calf the day before, returning to eat more.

Sevy says he has seen wolverines in the Sawtooth Valley, always in winter.

Yellowjacket is a mineral zone, a mining area, and a disaster area ecologically.

Reached the Outfitters Camp, 9.30 a.m. Very picturesque camp; big wall tents.

On the trail. Hiked trail north to Cathedral Rock. Golden Trout Lake in good view en route. Lunched a little short of Cathedral Rock. Sevy carries a big pack with lunch, including stove, and sets a good lunch. Half hour nap after lunch. Horses (packs were on mules) passed us about lunch time.

Lots of Hoodoo rocks in here (Hoodoo Meadows, 7 ½ quad). This ridge is called Phantom Ridge, not so named on topo.

Sevy's dog, Basco, is along, and loves the trail. Darts back and forth over most of it twice to our once.

Reached the Waterfall Trail. This is so named because it descends to the Middle Fork and comes out at the big waterfall, at Waterfall Creek Rapid, just before Impassable Canyon (see Aug. 2, 1998).

Passed horses and mules coming out. They travel about twice as fast as we do hiking.

Hiked to Welcome Lake and made camp.
Lots of wind in the evening.

July 15, Thursday.

Hiked to Heart Lake, then over a pass (a little over 9,000 ft.) to Terrace lakes, four of them. Lovely hike, good trail, lovely lakes. Lunched at the first lake, then walked to all four of them, and down a bit where the Waterfall Creek Trail begins to drop. Lots of dead trees mixed in with the live ones, from a beetle kill back in the 1930's, and the dead trees are remarkably aesthetically stimulating.

Cough is better.

Back in camp at 7.00 p.m.

They put out Sun Showers, which are only tepid. Also too many mosquitoes, so it's a quick spit bath.

Steak for supper. Potatoes in Dutch oven. Splendid meal.

July 16, Friday.

Hiked to waterfall below Wilson Lake, nice falls. Fishfin ridge is just north, and spectacular rock formations. Then to Wilson Lake and on to Harbor Lake. Bighorns seen at great distance just under the skyline. You couldn't be all that sure they were animals, except that they moved around. Might have been goats, but the color was more tan than white.

Fish for supper. Surprisingly good. The meat came right off the bone easily. These were rainbow trout, and cutthroat, and some hybrids between them.

A common scroph here is Chionophilia tweedi, Snowlover. Little, whitish, bluish scroph.

Some Beargrass, Xerophyllum tenax; sometimes in flower. More Hellebore, Veratrum viride. Arnica. Forget-me-not, Eritrichum aretoides. Mountain heather, Phyllodoce empetrifomis. Labrador Tea, Ledum glandulosum. Swamp laurel, Kalmia microphylla. Polemonium. Very little bistort, Polygonum.

Lots of Shooting-Star, Dodecatheon pulchellum. Western spring beauty, Claytonia lanceolata, abundant. Sitka Valerian, Valeriana sitchensis, quite common. Mariposa lily, Calochortus, more in Sawtooths. Vaccinium, massive groundcover, sometimes acres of it. Bishop's cap, Mitrewort. Wildflowers were decent, but not profuse.

Omnipresent large, vivid, chartreuse fruitcose lichen, Letharia vulpina (once used to poison foxes), quite striking on the dead trees. (McCune, Macrolichens of the Pacific Northwest, on hand, pp. 147-148; verified Bill Weber), pix. Tips of the chartreuse branches are often black with some sort of structure.



July 17, Saturday.

Hike to Reflection Lake. Trail not on topo. Rather hard hike 11 miles. Steady climb of a ridge directly south of Welcome Lake, with rollover pass, and the drop down the south side. Then skirting several drainages to Reflection Lake.

Lovely lake. Echo Lake is above it, and Bill walked up there. I was saving my strength, still bothered by cough.

Tough hike back; I started 20 minutes early. Mosquitoes bad at times; at other times there was enough breeze to blow them off.

Smoked salmon, and baby clams (from can) for appetizer.
Shrimp/ham stir-fry for supper. Very good.

Mosquitoes bad trying to take a "shower."

July 18, Sunday.

Off about 9.30 for the return hike. Lots of climbing but I felt pretty good.

Lunch on Phantom Ridge, not far south of Cathedral Lake turnoff. Lovely spot with spectacular rock immediately behind. Cooked soup and sardines. Good lunch.

Often about half the trees are dead, all the biggest ones. Still standing and, again, quite aesthetically stimulating.

Long hike and no water on much of this trail, though we carried plenty.

Walked about, about 5.00. There was a lost llama; we had seen it on the way in several days before. A man was searching for it not all that far from Welcome Lake. But Sevy found it right in the trailhead area, and with some difficulty they shooed it into a corral there.

Sevy does his Alaska trips in Gates of the Arctic National Park.

Drive back. Deer.

Back at Stanley about 7.30 p.m.

July 19, Monday.

Off at 7.00 a.m. Stopped to look for goats, unsuccessfully.

Drove south to Idaho Falls, and onto I-84.

Lunch at roadside stop. Kentucky Fried chicken.

Crossed into Utah.

Turned off to visit Golden Spike National Historic Site, Promontory, Utah.

Low on gas, and bought some from a local farmer, with an interesting conversation. He sometimes sends his cattle to Monfort feedlot at Greeley, for sale and slaughter.

Reached Golden Spike National Historic Site. The golden spike was driven May 10, 1869. Actually, there were two golden spikes, and two other sets of spikes, one silver, one silver and gold. They were dropped into two holes in a special tie made of California woods. Governor Stanford was a big dignitary. Stanford took the golden spikes home with him the same day, and they are in the Stanford University museum.

With the transcontinental railroad, a journey that had previously taken six months by covered wagon, or around South America, could be completed in six days.

But there was great difference between three classes on the trains. First class had pianos for dinner and fancy meals.

2nd class.

3rd class, hard seats and no food.

This track was used until 1903, and then relocated. Tracks stayed here until 1942, and were used as scrap in World War II.

The original engines were worked out and scrapped. The present engines are replicas, with considerable story about reconstructing them.

4 photographers were there on May 10, 1869.

64% of Idaho is federal land.

Night at Sleep Inn, Ogden, UT. Good, not too cheap. Card in files.

July 20, 1999. Tuesday.

Drove home. Lunch at Ft. Steele. Good site. Notes about motels in Evanston, etc. in files.

Home about 4.20. 832 miles.

Made it, and, surprisingly the Achilles tendon that I had feared might give trouble, gave none at all. Also the knee I was nursing since two years back gave no trouble at all. No hotspots on feet. All body parts seemed about equally stressed, not overstressed. I was guessing which, if any, would give out first.

The main drag was the cough, which sapped my strength, and gave me poor nights sleep.

Total hiking, about 75 miles! Pretty good for an old man.

end of Bighorn Crags, Frank Church/River of No Return Wilderness trip.

July 21, 1999. Wednesday. Rocky Mountain National Park with Bill Forbes, Jane, and Alex. Spent the day on Trail Ridge Road. Coyote, nicely seen, in Beaver Meadows. 150 or so elk on Trail Ridge Road, largest group perhaps 75, and often not far from the road, closer in and more right near the road than usual. Some with nice antlers. Picnic at Irene Lake beyond Milner Pass; some rain earlier but it cleared for the picnic. Return, three bighorn ewes on Specimen Mountain seen in distance, but nice on skyline. Alex did quite well. A man was killed by lightning hiking up the stairstep climb from the Alpine Visitor Center, and two others in his family injured, while we were there, although we heard sirens and saw emergency equipment, we didn't know what was going on until later.

July 30-Aug. 2, 1999. Trip to Snowmass (Aspen) and Conference of International Association of Landscape Ecology. I spoke at a session organized by Joan Nassauer (Landscape Architecture, Univ. Michigan). Jane and I left Friday, drove over in Honda. Decent drive but too many delays, some due to recent mudslides. Nice drive over Independence Pass. Arrived Snowmass, about 4.30. Stayed Wildwood Lodge.

Attended conference, and my symposium, Saturday. Barbecue and Rodeo Saturday night, the rodeo much in the rain. Ate barbecue dinner with Frank Golley and his wife.

Sunday a.m. attended conference, then went into Aspen and drove up to Maroon Bells (you can take a car after 5.00 p.m., or before 8.30 a.m.) Rain, then clearing and lovely.

Monday, drove home. Good day, lovely over Independence Pass, and splendid views of Mt. Elbert and Mt. Massive (which I climbed June 21-24, 1977). I did the Lost Man Trail, below Independence Pass, July 2-7, 1991. No wildlife seen, except a marmot and ground squirrels. Wildflowers in great profusion, about as good as I have ever seen. Brought home Holodiscus dumosus, Rock Spirea (Ocean-Spray).

August 9-11. 1999. North Fork, Big Thompson, camped at Halfway, walked to Lost Lake and Lake Hested. 4 bighorn ewes roadside in canyon. Horns of yearling rams are wider at the base and more divergent at the tips than ewes.

On trail about 9.15, and pretty much a nonstop hike to Halfway, got there about 1.00. Two-thirds of this hike is in Roosevelt National Forest, Comanche Peak Wilderness Area. By the time you get to Boundary Creek, you are not all that far from the Ranger Station and Halfway Camp.

Lunched at Halfway but by the time I started to pitch camp it had started to rain, and rain on and off the rest of the afternoon, though with enough let up for me to cook supper. Also there was a good dry spot under a tree that helped, and a good dry spot where I kept my pack.

Took a nap in the rain, and then walked down to the Ranger Station. Dipper nicely seen on a log in the stream.

Slept in the Pocket Hotel, and took only one sleeping bag, trying to save weight. Pretty confining, but it does work. The fabric doesn't leak (tho there is no fly), not at least over the part kept aloft by the fiberglass. Though the end of it just trails out, and the sleeping bag gets a little wet there. Put in a trash bag to cover the end of the sleeping bag. I packed out at 37 pounds total.

Some hassle getting in in the rain, but they I enjoyed the rain on the tent roof. Went to bed at 8.00 p.m., and stay in until 7.00 a.m. the next day, eleven hours! But slept quite comfortably.

Lots of good built up trail inside the park, though the Forest Service part lower down has none.

Bergamot, Monarda fistulosa. Campanula, Campanula roundifolia, was spectacular the whole trip. Elephantella, Pedicularis groenlandica. Sedum, Sedum rhodanthum, Queen's Crown. Arenaria. Yarrow. Mariposa lily. Potentilla. Galium, Galium triflorum. Corydalis, Corydalis aurea. Campion. Black-eyed Susan, Rudbeckia hirta. Erigeron. Tragopogon. Thistles. Epilobium angustifolium, Fireweed. Green Orchid, Habenaria hyperborea. Bog birch, Betula glandulosa. Bistort, Bistorta gistordoides. Monkshood, Aconitum columbianum. Parry's primrose, Primula parryi. Pinedrops, Pterospora andromedea.

Sphagnum in birch/fen a mile or so below Lost Lake. Aulacomnium.

Spectacular mushrooms, after a wet summer. I wish I knew them.
No mosquitoes.

Pocket gopher mounds. Hummingbirds.

Tuesday. Got up under cloudy skies, but day improved. Hiked to Lost Lake and then to Lake Husted. White crowned sparrows.

Great lunch at Lake Husted, lovely clouds, though watching a few drops of rain now and then. Returned with lowering cloud level not far above me, and before camp it was raining. But then it stopped and I ate supper and went to bed dry. A little rain after I was in bed.

Wednesday, awoke to blue skies, windy. Good breakfast and packed up. Hiked out almost nonstop, though good lunch just below Cheley Camp. Out about 1.30.

Perfect day for walking out. Semi-cloudy but sunny spots, breezy.

Where you drop to the N. Fork and start up is 7,640 ft. Halfway is 9,360, so the elevation gain is 1,720. Lake Husted is 11,088, so the elevation gain from Halfway is 1,718. Total elevation gain from where you hit the N. Fork to Lake Husted is 3,448 ft. Lake Husted is named for Shepard Husted, famous wrangler and guide at the turn of the century in Estes Park, and expert amateur naturalist, knowledgeable with Indians. Was a guide for Chief Justice Charles Evans Hughes and Otis Skinner, actor, father of Cornelia Otis Skinner. I did this trail first August 24-27, 1972, twenty seven years ago, troubled by an early snowstorm. I did it again, with Giles on his 30 mile backpack for Backpacking Merit Badge, August 23-28, 1987, twelve years ago. Total hiking, counting some side trips, about 21 miles. Not troubled at all by my Achilles tendon, though I took it carefully. If anything felt my right knee more, but it was no problem.

Sept. 10-12, 1999. St. Vrain Glaciers, alone.

Tried to go with Giles, but he had to work. Left Friday a.m., drove to Camp Dick. Pelican on pond en route. Good blacktop road to Camp Dick. Hiked in; pack weight 40 pounds. There is now a good foot trail on the north side of the river, and the 4WD road is on the south side. They reconnect four miles in, where the 4WD traffic turns south and uphill to the Cony Creek area. Good trail, bridges, including good bridge at the reconnection (which I didn't need). Good day. Camped just south of the Indian Peaks Wilderness Boundary, which is five miles up the trail, so I could have a campfire (though I had gotten a permit to camp in the Wilderness area).

Saturday. Rain in the night, and an uncertain morning. But I went on up to Glaciers area, and day turned out quite well. There are three crossings on throwdown logs, but manageable. I was using the Trek'r poles on this trip the first time, only one on the day hike. They do give you stability, as you can have a tripod effect. But you must note to get a solid footing for your pole; you don't want to depend on it and have it slip.

Lunched where the trail turns back and up to go over to Lake Gibraltar, in doubtful weather, and somewhat cold. But pretty with the clouds about the craggy south side of Elktooth Mountain. Lycopodium seen here. Hiked back, with better weather and now the Elktooth was spectacular. Never saw the glaciers that well; to see the biggest one you have to scramble on further.

Cooked supper in good weather, but rain in the night, and woke to a soggy camp. But nothing falling when I ate breakfast and packed up. Very foggy, essentially for the hike out. Out about 12.00 p.m. No wildlife. Few birds. Flowers often still out. Hiked about 20 miles. Left heel does better than right knee.

I was in here June 29-July 1, 1971, twenty eight years ago. I did the FWD drive circuit, on foot, with Giles, Aug. 24-26, 1979, when I lost Granddaddy Long's knife. I did Buchanan Pass from the west side, July 7-11, 1980. And from the east side, July 25-28, 1982.

Sept. 19, 1999. The Pool, with Phil Cafaro, Kris, and Sergey Kurbatov, from the Ukraine. Aborted hike planned for Chasm Lake below Long's but bad weather. 4 bighorn ewes in the Canyon. Elk off and on in Moraine Park and Hoseshoe Park, including 3-4 big bulls. Some good bugles heard. Rained off and on all day. Lunched at Arch Rocks, coming back. Then drove up Trail Ridge Road the first overlook past timberline, seeing little due to clouds.

October 8-10, 1999. Environmental aesthetic conference, Utah State University Logan, Utah. Fall colors lovely, with surprising reds, from a Bigtooth Maple, Acer grandidentatum. Found in Utah, in New Mexico, Arizona, but hardly enters Colorado, a bit in the southern border of the state. It filled the canyons near the drainage, also some hillsides. Also aspen, cottonwood.

October 10-13, 1999. 5th Biennial Science Conference, Yellowstone National Park. Took a 3 hour hike with Ned Hettinger, Bev(erley) Diamond, their son Christopher (11 months), and Bill Throop in mountains to the north of Bozeman. Up to Yellowstone on Monday for the conference. Stayed in Mammoth Inn, with elk at dusk and dawn constantly bugling right outside the window. Good views of Tetons from air flying up.

October 31, 1999. Hike into Absaroka/Beartooth Wilderness, up Lake Fork trail, with Walt Gulick

and David Strong, and his wife Amaya, and daughter, Rebeca. I was attending conference at Montana State University, Billings, and stayed over to hike Sunday. Went to Red Lodge, and on down Beartooth Pass Highway (now closed for winter). Turned off, past Lion's Camp, to trailhead of Lake Fork. This is Lake Fork of Rock Creek, which flows into Yellowstone River. Hiked in, due West, up Lake Fork about 3 miles, with rather icy snow underfoot much of the time. Good day, though a little windy. Lunched in wetland area in good sun. Then walked on up a bit more to where the basin opened up, and David spotted a mountain goat on a cliff above. Some distance off, but nicely seen in binoculars. This is the trail that goes on up into the Beartooth area, and they say it is not bad. No stream crossings today, though there is one up higher. There are no grizzlies on this side of the mountains. Seems to be poor habitat for them. Hiked out. Drove back through Pryor Mountains area. On return home, bought good map of Absaroka/Beartooth Wilderness, and trails in the area are written up in a book I have.

Monday, November 22. Good snow, 6 inches on back porch. This snow closed Trail Ridge Road, which was open the latest it has been in twenty years. Only open three times this late in the 65 years since the road was built.

November 26, 1999. Day after Thanksgiving, went to Rocky Mountain National Park and met Mary Jack, Ernest, Peter Kalan and his three children there. Julia Lee was sick. Windy day, after the good snow on Monday, November 22. Four coyotes on a carcass just past the entrance gate, rather like a Yellowstone scene. I don't recall seeing four at once, usually only two. Nicely seen with binoculars and scope, at some leisure.

Looked for elk without success. Then drove to Bear Lake and walked up, in blowing (but not falling) snow, lots of bite in the wind. Then to Sprague Lake Picnic area and tried out snowshoes. Then drove over Deer Ridge, and saw two elk up close coming back into town. Half a dozen later. Lunch, pizza in town.

Dec. 22, 1999. The moon is the closest and biggest it has been for 66 years, since I was in diapers. 14% brighter. It came closest a few hours after the winter solstice and a few hours before the full moon. I couldn't see it at night, but saw it nicely setting the next morning, in the western sky. In good daylight it was quite bright and quite large, amplified by the illusion of a larger moon at setting and rising. Tides exceptionally high.

Dec. 26, 1999. Rocky Mtn. Park with Alex and Jane (and without Giles, who failed to show all Christmas). Great weather, good day in the mountains, overshadowed with sadness. 8 bighorns in the canyon, some distance up the hillside, but nice in scope. Four good rams, half to 3/4 curl, the others spike rams. 70 elk in Moraine Park, not far from road. Picnic at Cub Lake trailhead with 8-10 magpies begging food. As mild a day, and without wind, as I recall this time of year. Drove to Sprague Lake and showshowed a bit, at least to let Alex walk around in them. Returned over Deer Ridge to Horseshoe Park, counted 98 elk there, mostly across the river. Returning to town, maybe 8 mule deer, but I am not seeing mule deer as frequently now in the park as I once did. Alex was quite well behaved.

End of the millennium!