## INSTITUTE OF CURRENT WORLD AFFAIRS

GSH-4

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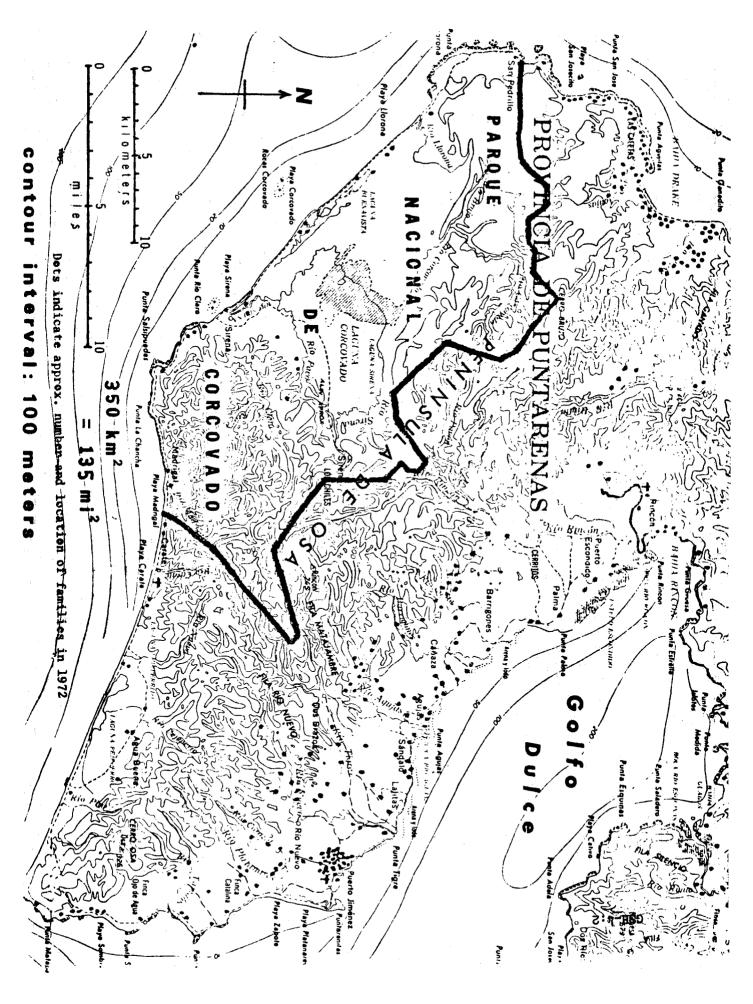
Mr. Peter B. Martin Executive Director Institute of Current World Affairs Wheelock House 4 West Wheelock Street Hanover, New Hampshire 03755

Dear Peter:

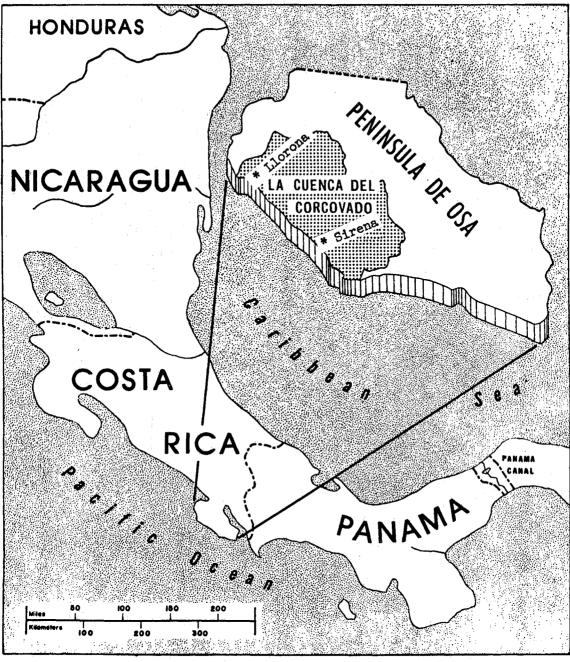
Late in the afternoon of 21 August, in Corcovado National Park on the Osa Peninsula of Costa Rica, I saw my first jaguar in the wild! The previous evening Jim Lewis, a really good ornithologist from Berkeley, California, and I had commiserated about not seeing any of the spectacular Osa fauna during our two week stay in Corcovado. Jim and his wife Barbara, who is doing her doctoral research on the changes in land use on the Osa Peninsula, have lifed on the Osa for nearly two years, but he has yet to see a harpy eagle, the largest eagle in the world that is reputed to occur in Corcovado. We had been seeing tracks of the giant anteater on the beach near Llorona, so we were hopeful of a sighting on the 19 km hike from Llorona to Sirena (see maps). Although it was a beautiful moonlit night, no giant anteater or jaguar rewarded our keen-eyed vigil during the five hour walk. However, we did see five Pacific Ridley turtles coming up on the beach to lay eggs, plus tracks of eight other turtles.

Less than a kilometer from the Sirena camp, I was slowly walking through a patch of forest when I heard an agouti (a medium-sized forest rodent) give its high-pitched distress bark. From its frequent barks I could tell it was coming toward me. I have seen many agoutis in tropical forests and I always look to see if I can catch a glimpse of what is chasing the agouti. What a glimpse I got this time! Less than eight meters from where I stood, the agouti raced by with the jaguar close behind. My glimpse of the jaguar was for only a few seconds, but it was exhilarating. I just stood there revelling in my luck. The grace and ease with which such a large cat raced through the forest really awed me. I guess I hadn't expected such fluidity of motion by such a heavy cat as the jaguar.

Corcovado National Park is located in southwestern Costa Rica on the western side of the Osa Peninsula (see maps). Its 34,346.5 hectares (34,346.5 ha= 84,836 acres = 343 km<sup>2</sup> = 133 square miles) contain the entire drainage system of the Corcovado River and Lagoon. The extensive, poorly-drained Corcovado Plain occupies about 10,000 ha (= 24,700 acres) in the central part of the park and is ringed on three sides by low but steep hills. The unspoiled sandy beach extends 22 km (14 mi) between the rocky headlands of Punta Llorona and Punta Salsipuedes.



GSH-4:3



## PENINSULA DE OSA

The Osa Peninsula is the wettest region on the Pacific slope of Central America. The Corcovado Plain receives about 4,000 mm of rain per year (157 inches), but annual rainfall may exceed 6,000 mm (236 in) in the high hills in the center of the peninsula.

Corcovado National Park epitomizes the popular concept of the tropical rainforest. The trees in Corcovado are truly spectacular--some are more than 65 m tall (211 feet), others more than 2 m in diameter, and some have exceptional buttresses (see photographs). The forests of Corcovado are the most impressive I have seen in tropical America. In March I set up a onehectare permanent study plot in the virgin forest near Llorona. Of the 356 trees (10 cm or larger in diameter) on the plot, I identified 111 different species. I estimate Corcovado National Park contains at least 500 species of trees, which is one quarter of the tree species thought to occur in all of Costa Rica.

Corcovado National Park also has an impressively rich fauna. In addition to six endangered cat species including the jaguar, the park also contains sizable populations of white-lipped and collared peccaries, tapir, brocket deer, crocodiles and caymans, and four species of monkeys--spider, howler, white-faced, and squirrel. The monkey populations seem to be really booming for they are more abundant each time I visit Corcovado. Of course the bird fauna is very rich too, making Corcovado a bird-watcher's paradise. One of the most impressive birds in Corcovado is the splendidlycolored scarlet macaw. Although it is an endangered species throughout Central America, it is abundant in Corcovado. As many as 45 raucous scarlet macaws roost nightly in a very tall *Basiloxylon excelsum* tree right in front of the park headquarters building at Sirena.

It is not my intention (in this brief newsletter) to try to describe the incredible beauty and richness of Corcovado National Park. Perhaps the most-telling tribute to Corcovado comes from the glowing, excited accounts of visits by widely travelled tropical biologists who often seem outwardly unappreciative of the aesthetic beauty and biological richness of a tropical forest.

Now that you're heading for your travel agent to prepare for your trip I will try to pull together the pertinent information on how such a gem as Corcovado became a national park and document the roles of several persons in bringing this long-held desire of many to fruition.

Paul H. Allen's book *The Rain Forests of Golfo Dulce*, published in 1956, was the first popular work calling attention to the great floristic richness of southwestern Costa Rica. Allen worked for the United Fruit Company for many years and botanized extensively on the north and east sides of the Golfo Dulce--the very deep gulf separating the Osa Peninsula from the mainland.

In 1957, a Costa Rican company, Osa Productos Forestales (OPF), wholly owned by U.S. timber interests, purchased 48,000 hectares (118,560 acres) in the northern part of the peninsula. The OPF holdings extended in an irregular band from Rincon at the head of the gulf to the Corcovado Basin, but excluded the central peninsular highlands held by the Costa Rican government. By 1960, Leslie R. Holdridge and Joseph A. Tosi, Jr. (ecologists and foresters then with the OAS-sponsored Interamerican Institute of Agricultural Sciences--IICA--in Turrialba, Costa Rica) were serving as forestry consultants to OPF. Holdridge and Tosi founded the Tropical Science Center (TSC) in 1962, as a private, non-profit Costa Rican association dedicated to advancing man's knowledge and understanding of tropical environments. In 1964, TSC leased from OPF two hectares along the Agua Buena Creek about 3 km from Rincon and constructed a field station for use by scientists wishing to study the flora and fauna of the Osa Peninsula.

TSC's scientific interest in the Osa was joined in 1965 by the Organization for Tropical Studies (a consortium of 25, mostly U. S., universities) which used the TSC field station as a primary site for their graduate-level courses in tropical ecology. (My introduction to the tropics during a 1967 OTS summer course included a two week stay at the TSC station.)

Jack Ewel (plant ecologist and associate of TSC, and then a doctoral candidate at the University of North Carolina) made the first biological reconnaissance of the Corcovado Basin in 1970. Tosi recalls that Ewel came back from Corcovado ecstatic over the forest he saw and the incredibly abundant wildlife in the Corcovado Basin. Efforts by OPF to extend a logging road into the Corcovado Basin in 1972 stimulated the first attempts to publicize the biological richness of Corcovado and its unique potential as a national park. In October, 1972, three Peace Corps volunteers -- Doug Boucher, Keith Leber and Chris Vaughan -- plus ornithologist Gary Stiles walked into the Corcovado Basin from Rincon. Their glowing report of the uniqueness of Corcovado urged the director of the Forest Service (the National Park Service had not yet been created) to declare the area a biological reserve or a national park. After an aerial inspection in a light plane, the Forest Service director said it was not feasible to protect the area due to the presence of a few (less than ten according to other sources) squatter families in the Corcovado Basin. I suspect the fact that the entire basin was owned by OPF was a strong deterrent for the weak Forest Service director.

Despite the lack of support from the Forest Service director, conservation interest in the Osa remained high. Sometime in 1972, a proposal for saving some of the Osa, by Waldemar Albertin, former head of forestry at IICA, centered on the government held land in the central highlands of peninsula. Apparently this proposal was never taken seriously because of the inaccessibility and indefensibility of the area proposed.

In February 1973, a small group of interested persons at the University of Florida headed by Jack Ewel and Doug Pool distributed a 12 page brochure on the Corcovado Drainage System. Liberally illustrated with excellent photographs, it offered both English and Spanish descriptions and maps of the Corcovado region, the main ecosystems represented, current status of land use and proposed action for preserving Corcovado as a national park or biological reserve. This brochure did an excellent job of stimulating local and foreign interest in the preservation of the Corcovado region.

At about the same time (May 1973) the newly-created Costa Rican Servicio de Parques Nacionales (SPN), a dependency of the ministry of agriculture and animal husbandry, prepared a report and proposed law for declaring 300 km<sup>2</sup> of the Corcovado region a national park. This proposal by the SPN did not receive the support of then-president Jose Figueres nor find sufficient support in the Legislative Assembly.

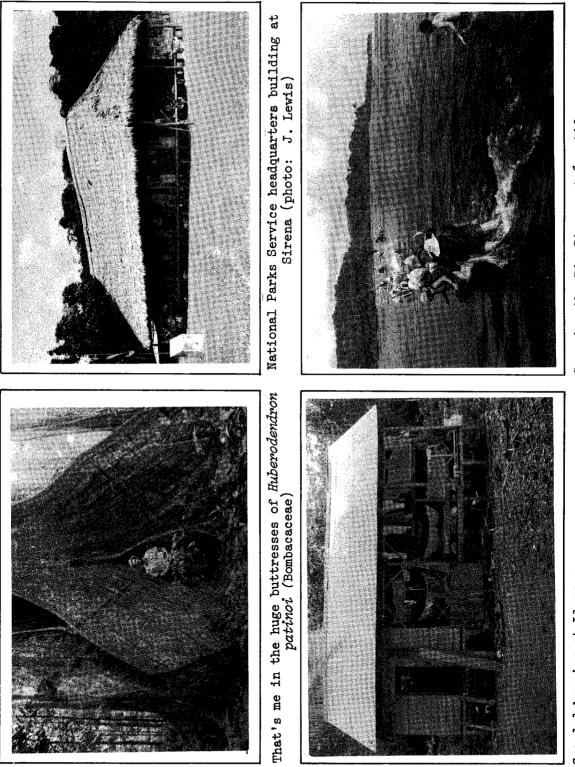
The remainder of 1973 and 1974 were characterized by the growing frustration of conservationists in their inability to save the Corcovado, and the Costa Rican public's increasing awareness and displeasure with the activities of Osa Productos Forestales. A management change brought in Captain Don Allen as manager of OPF, who completely abandoned the company's efforts in timber extraction and rice farming. More critically for Corcovado, he abandoned the company's previously effective control of squatters in OPF's vast forests. Growing public displeasure with Allen's shenanigans facilitated Communist-inspired invasion of OPF lands, particularly in the remote Corcovado Basin. If you searched the world for the archetypal ugly American, I doubt any could be more perfect than Don Allen. His primary effort was selling retirement lots to land-hungry Americans -- in the hot tropical lowlands where the rainfall exceeds 4 meters! Publicity of a shooting incident involving Allen's son infuriated the peace-loving Costa Ricans and prompted demands in the Legislative Assembly for expropriation of OPF.

After a six-week stay on the Osa in early 1975, an Italian naturalist, Paolo Cappelli, wrote a letter to President Daniel Oduber urging the preservation of the Corcovado region. Cappelli omitted descriptions of fantastic biology because he didn't want to repeat what had already been said by others, such as Jack Ewel, and simply regretted that nothing was being done to save the Corcovado. He did offer some suggestions on how scientific tourism might help defray the costs of conservation. This short comment on scientific tourism by a foreigner caught the President's eye and he passed Cappelli's letter to Alvaro Ugalde, asking what could be done about saving the Corcovado. (Ugalde was at the time the technical coordinator of the President's Commission on Natural Resources and in January 1976, became the director of the National Parks Service.) Ugalde asked Joe Tosi to finish his report on Corcovado, which was a planned chapter in a major study of potential parks and reserves commissioned by the World Wildlife Fund.

Tosi's 22-page report on the Corcovado region is an exceptional document, well-written and beautifully convincing of the need to preserve the Corcovado. Without question, Tosi's outstanding report was a major factor in obtaining Oduber's interest in and commitment to establishing a national park in Corcovado. Ugalde's report of July 28, 1976, accompanied by Tosi's report, stated that 90% of the Corcovado drainage system was undisturbed forest, but that 60 squatters were already on the Corcovado Plain. Ugalde also noted that 50% (16,136 hectares) of the proposed park was owned by OPF; the remainder was government held land.

Meanwhile, other things were happening that would also effect the final outcome of Corcovado National Park. Monte Lloyd, a University of Chicago professor of ecology, had become totally committed to saving the Corcovado, but believed it could only be done through massive international publicity and fund-raising efforts. To this end, Lloyd also entered into conversations with high officials of OPF to negotiate a land trade between OPF and the Costa Rican government. An interesting spinoff of Llovd's persistent efforts was that Walter Wood of Costa Rica Properties, which managed OPF after Don Allen was purged, picked up on Lloyd's suggestions of the fantastic economic benefits of scientific tourism. Wood proposed a private national park and OPF would have the sole hotel concession in the park. (I can't help but add parenthetically for the few who know Corcovado that Wood's two main hotel sites were to be Llorona and Sirena!) When OPF learned in September 1975, of the President's plans to decree the Corcovado area a National Park, OPF lobbied strongly for their own "conservation" project. OPF's belated position in favor of conservation was hardly altruistic.

Squatter activity in the Corcovado region had increased dramatically since 1972, when OPF stopped controlling the squatters. Costa Rica's possessory law allows squatters to make the first legal claims after three years of possession; thus the 1975-76 four month dry season commencing in mid-November was very important for the squatters' consolidation of their land claims. Local conservationists predicted a massive invasion of squatters into the Corcovado region during the approaching dry season, and urged the President to sign the decree creating Corcovado National Park before the dry season started. As the end of the rainy season on the Osa approached it seems as if the National Park Service was waiting for pledges from international conservation organizations while they in turn were waiting for the presidential decree to be signed before donating money for Corcovado. The impasse was broken when Ken Berlin of the Rare Animal Relief Effort (RARE) brought a \$10,000 check to Costa Rica for TSC's private cloud forest reserve at Monteverde. Joe Tosi (administrator of TSC) suggested the \$10,000 be held for immediate use in Corcovado after the presidential decree was signed. World Wildlife Fund--U.S. Appeal--added \$10,000 for Corcovado; thus with \$20,000 available, the decree creating Corcovado National Park (signed by President Daniel Oduber) became official on October 31, 1975.



Crowded housing at Llorona

Crossing the Rio Sirena at *low* tide

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Corcovado was a national park--on paper. Several other events occurred during 1976 that raised many serious doubts that Corcovado would really become a functioning national park. After more than a year of debate, the Legislative Assembly passed a bill in late 1975 expropriating Osa Productos Forestales lands. The expropriation bill greatly complicated the President's negotiations for a land trade between the government and OPF causing the president to veto the bill; nevertheless, the land trade was negotiated before the veto was signed.

For the delicate and risky task of consolidating the park and getting the squatters peacefully out of the park, TSC offered the temporary services of the administrator of its Monteverde Cloud Forest Reserve, Roger Morales, who was on leave from his technical job in the IICA forestry department. Roger is an avid bird watcher and naturalist--one of the very best in Costa Rica. Roger lived and worked in Corcovado for six months, establishing the Parks Service presence there and **s**oing a superlative job in mollifying squatter discontent and fury, plus cajoling and finally convincing the squatters to accept the government's payments for their land improvements and move to new land on the southern part of the peninsula.

The government had considerable difficulty in finding the large amount of money necessary to "pay off" the squatters. Not until President Oduber, at Ugalde's suggestion, decreed the Corcovado National Park a national emergency in July 1976, did the money become available. According to Ugalde, it cost the Costa Rican government 1.7 million *dollars* to move the squatters out of Corcovado. International conservation organizations including RARE, The Nature Conservancy and World Wildlife Fund--U. S. Appeal, donated more than \$100,000 in late 1975 and early 1976, which helped greatly in keeping the Corcovado dream alive until President Oduber could tap his government's emergency funds.

It is interesting to note that after decreeing Corcovado National Park, President Oduber received considerable pressure from some of his ministers to recind the decree, but he never wavered from his firm commitment to Corcovado National Park. I'm sure that the letters of appreciation to President Oduber from the world's scientific community certainly helped him in his resolve to consolidate Corcovado National Park.

Nearly all the squatters (more than 100 families) were out of the park by September 1976, and virtually all of the squatters' cattle were gone by May 1978. Corcovado is now a viable national park that is already attracting numerous foreign and resident visitors. It is well on its way to becoming the premier national park in Latin America.

For his efforts in and dedication to not only Corcovado but to conservation in general, President Oduber received the prestigious Schweitzer Award in 1976 in Washington, D. C., from the Animal Welfare Institute, and he was honored in 1977 by the New York Botanical Garden. Peter Raven, director of the Missouri Botanical Garden dedicated the reissue of Paul Allen's book *The Rain Forests of Golfo Dulce* to President Oduber for his timely efforts in saving the Corcovado.

Sincerely,

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Gary S. Hartshorn Forest & Man Fellow