

# The Dim Future of La Macarena

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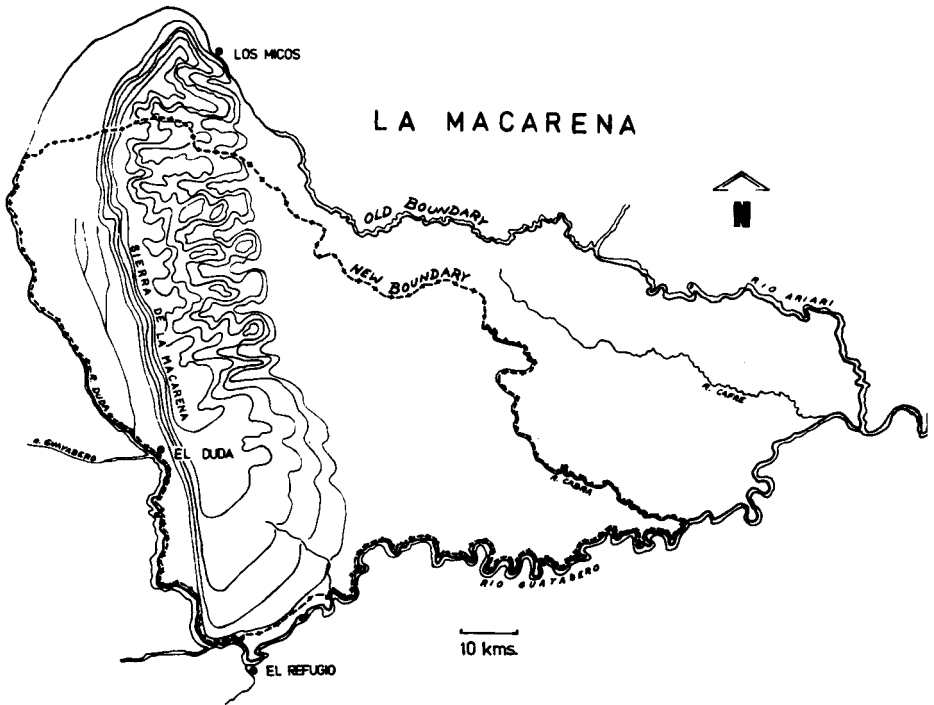
One of Colombia's finest national parks, La Macarena, is being gradually encroached by settlers – the park area has been nearly halved since 1948, and there is no sign of an end to the process. The author, a research zoologist of the New York Zoological Society, describes the situation and appeals to the President and the government to act to save the park.

In September 1974 I spent 3½ weeks in Colombia's Parque Nacional La Macarena surveying the rain-forest primates in the vicinity of El Duda. The biological richness and natural beauty of the park impressed me greatly. Its future as a conservation area, however, is in immediate jeopardy.

The park, which is in south-central Colombia (2° 10' to 3° 8' N and 73° 30' to 74° W), covers 630,000 ha. with elevations ranging from about 2500 m. in the west, in the Sierra de La Macarena, down to 50 m in the flood-plains of the east. Geologically, the Sierra is considered to be the most westerly extension of the Guyanan shield even though it is only some 20 km. from the Andes. The vegetation is extremely diverse, but most of it can be generally classified as tropical evergreen forest. Botanically it is closest to Guyana and Brazil, with some Andean elements; zoologically it has affiliations with the Orinoco, Guayana, the Amazon and the Andes; consequently a great number of animal species are found there, and, in fact, such a biological array can be found nowhere else in South America.

I spent most of my field time at La Macarena in the vicinity of cabaña El Duda, near the junction of the Duda and Guayabero rivers, and made single-day surveys near El Refugio and Los Micos. My observations were biased in favour of the larger mammals and the more conspicuous birds. Five species of primates were seen: the capuchin *Cebus apella* was the most common, but there were good numbers of spider monkeys *Ateles belzebuth*, squirrel monkeys *Saimiri sciureus*, red howlers *Alouatta seniculus*, and woollies *Lagothrix lagothricha*. The titi monkey *Callicebus torquatus* was seen near El Refugio outside the park boundary, although both this species and *Callicebus moloch* are known to occur in La Macarena, as well as the night monkey *Aotus*, which has also been collected there. Tapirs *Tapirus terrestris* were seen twice and, judging from the numerous tracks in different and widely separated parts of the forest, I should say they are relatively abundant in the El Duda region. Two groups each of collared and white-lipped peccaries *Tayassu (Dicotyles) tajacu* and *T. pecari* were seen and their abundant spoor also indicated good numbers. One of the highlights was a giant armadillo *Priodontes maximus* observed during one of my night walks. Other mammals seen included red brocket deer *Mazama americana*, agoutis *Dasyprocta*, squirrel *Sciurus igniventris*, opossums *Philander (Metachirops)* and *Marmosa*, and kinkajous *Potos flavus*. Other mammals of particular interest reported from La Macarena include jaguar *Panthera onca*, ocelot *Felis pardalis*, and the fresh-water dolphin *Inia geoffrensis*.

Colombia is noted for its avifauna and may have had until recently more



forms of birds than any other country in the world (1556 species and 2640 subspecies). La Macarena provides a remarkable example of this richness. Species of the Cracidae were among the most conspicuous forest birds, and I frequently saw speckled chachalacas *Ortalis guttata*, white-headed piping guans *Aburria pipile* and rufous-breasted guans *Penelope jacquacu*. The forest around El Duda rang with the deafening whistle of the gray screaming piha *Lipaugus vociferans*, a drab but vocally outstanding member of the Cotingidae family. Another common cotingid was the bare-necked fruitcrow *Gymnoderus foetidus*. Noisy flocks of *Amazona* parrots and *Forpus* parrotlets were abundant, but the most striking member of the Psittacidae family was the scarlet macaw *Ara macao*. I frequently came upon flocks of trumpeters *Psophia crepitans* foraging on the forest floor. This is one of the three species that comprise the Psophiidae, a neotropical family of birds that superficially resemble miniature rheas.

La Macarena was established as a national biological reserve in 1948, and declared a national park in 1971. But these well intended declarations have meant little to the region's ever-expanding human population. Since it was first decreed a conservation area La Macarena has shrunk from 1,131,000 ha. to 630,000 ha., due almost entirely to illegal encroachment by agriculturists and cattle ranchers (colonos). Censuses of the illegal colonos in the park made by INDERENA (Instituto de Desarrollo de los Recursos Naturales Renovables), the government agency responsible for park management, showed 1461 in 1967, 3180 in 1969, 4800 in 1970, and 5800 in 1972. No more recent census data are available but according to reliable sources the numbers today are even greater. The human population in the vicinity of La Macarena is increasing at an alarming rate and encroachment into the park can be



**YOUNG CAPTIVE WOOLLY MONKEY** *Lagothrix lagothricha*

*D. L. Golobitsh*

expected to escalate exponentially. My personal observations, combined with the views of INDERENA staff, other Colombian conservationists, and colonos lead to only one conclusion: Parque Nacional La Macarena will be dead in a very few years unless immediate and effective protective measures are taken.

Is La Macarena worth saving? Or should it be allowed to fall to the short-term exploitation of shifting cultivation and over-stocking with domestic cattle, a trend already too prevalent in Colombia? The great diversity of animal and plant species in La Macarena represents an invaluable store of biological material that is critical for both theoretical and applied scientific research. The variety of habitat types affords innumerable opportunities for comparative ecological and animal behaviour studies. Given complete protection against all forms of human exploitation such an area provides a biological control allowing studies to be made of the effect of man's activities on the surrounding land. For example, what effect does clear-felling of the forest and over-grazing with domestic stock have on the soil and water regime? What effect do man's various activities have on forest regeneration? Answers to these and similar questions can best be obtained through comparative studies of areas relatively undisturbed by man and those which he has exploited and is exploiting. We should not underestimate the importance of large tracts of protected rain forest as reservoirs of commercially and medically important plant and animal species. Many of these species can only regenerate in a forest environment, so that wholesale destruction is fatal to them. The implications of this should be clear to the commercial forester, pharmacologist, and those who export and use primates for medical research. This unique diversity of plant and animal species constitutes an invaluable and irreplaceable genetic storehouse. The importance of conserving *large* blocks of rain forest in order to minimize species extinction is clearly described by Terborgh (1974).\*

\* Terborgh, J. 1974. "Preservation of natural diversity: the problem of extinction prone species." *Bio-Science*, vol. 24 (12).



Sierra de la Macarena near El Duda *Lysa Leland*

Furthermore, by developing the right kind of tourism, Colombia could make La Macarena a source of much needed foreign exchange. It would be most undesirable and inappropriate to develop in or near La Macarena the kind of tourism that specialises in large hotels, night clubs, etc. As in East Africa tours could be planned for those interested in watching and photographing wildlife, with river trips and forest walks that would minimise the impact of man on the environment. To preserve the forest atmosphere tourist accommodation could be built outside the park, using local materials. Such tourism would bring profit to Colombia and save La Macarena from complete destruction.

Poaching is prevalent in La Macarena and a serious threat to certain highly prized species such as jaguar, ocelot, and the crocodilians, but the major problem is habitat destruction, and the urgent need is to enforce the law. The park guards are vastly outnumbered by the encroachers, poorly armed in comparison to them, and, most important, lack the legal power to enforce the park regulations, and get no support from the police or the army. They are virtually helpless against the encroaching *colonos*. Enforcement is the first problem to overcome, and only the government can achieve this, by giving the park guards, whose numbers should be trebled, and conditions improved, the necessary authority and support. Without this Parque Nacional La Macarena is doomed in the very near future, and Colombia and the rest of the world will have lost a most remarkable rain forest.

Assuming that La Macarena is worth saving as a conservation area and national park, what can be done? Although poaching is prevalent and poses a definite threat to certain highly prized species such as jaguar, ocelot, and

the crocodylians, the major problem concerns habitat destruction. It is my view, and the consensus of Colombian conservationists concerned with La Macarena, that there is a considerable need for improvement of the enforcement system. This could be accomplished by increasing the number of park guards by at least threefold, and at the same time giving them more training in biology and related skills with improved pay, logistic support, and general conditions. At present the guards are vastly outnumbered by the encroachers and poorly armed in comparison. More important, they have neither the legal power properly to enforce the park regulations, nor the support of the police or army. The guards are virtually helpless against the encroaching colonos. Thus, the first problem to overcome is that of enforcement. At this stage it appears that there is only one way that this can be achieved: the president of Colombia and his national government should give their full support to the INDERENA staff in their efforts to maintain La Macarena as a national park. This means that the police or whatever authority is necessary be given a directive to assist the park guards in every possible way to prevent further encroachment. Alternatively, the park guards should be given powers of authority equivalent to the police and army. Without full cooperation from Colombia's national government, Parque Nacional La Macarena is doomed in the very near future, and Colombia and the rest of the world will have lost a most remarkable rain forest.

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### Wildlife trade in Colombia

Official figures show that in 1974 more than half a million spectacled caiman skins were legally exported from Colombia. *Caiman crocodylus* is an endangered species and has some protection; since 1973 all hunting has been banned in the Orinoco basin and permitted only on a quota basis elsewhere, and the minimum size that could legally be taken was raised from 120 to 150 cm. Nevertheless the 1974 export figure was actually higher than the 1972 figure (556,442 compared with 555,064) and over 300,000 were *stated* to be under 150 cm and even under 120 cm. The figures of course do not show how many skins were smuggled out of Colombia. This is well known to occur, not only through direct smuggling but by shipping out more than the permit allows. One year for example, one exporter had permits to export 5491 caiman skins to a firm in Canada; he actually sent 7995—a 45 per cent excess.

In 1973 a ban was put on all hunting of jaguars, pumas, ocelots, margays, tiger cats, otters and giant otters. 1974 exports showed a considerable decline in all these (whether entirely because of the ban or partly through a decline in the populations, is not known). Nevertheless, 41 jaguar, 941 ocelot and 325 otter skins were exported. The 1972 figures were respectively 1205, 25,306 and 7845, as well as 32 giant otters which are not mentioned in the 1974 statistics.