

A remote park in Colombia

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In the half million hectares of the remote El Tuparro National Park, on the Venezuelan frontier, the abundant wildlife includes the Orinoco crocodile and a good population of the endangered giant otter. Hitherto access to the park has been poor, and the only people are a few settlers and Indians hunting with bows and arrows, but new roads are bringing in both new settlers and vehicle drivers with guns.

Colombia is exceedingly rich in wildlife, with large areas still practically unaltered by man. The Government has so far set aside 31 areas covering 4036,708 hectares (3.5 per cent of the country) as part of an extensive park system. This is administered by the Institute for Natural and Renewable Resources and the Environment (INDERENA) which has plans to set aside more areas as money is made available. Only two of the national parks, Tyrona near Santa Marta and Puracé near Popayán and Cali, attract many tourists due to their easy access and facilities. Others are not yet physically protected although this will come as they are developed for tourism.

In 1977–82 I spent some five years in the comparatively isolated and seldom visited park of El Tuparro, on the eastern llanos or plains near the Orinoco, studying the primates for INDERENA's National Primate Program. This included four of the five species known to be resident (Defler, 1979a, b, 1980). Created as a Faunistic Park in 1971, El Tuparro originally comprised 240,000 ha bounded by the Tomo,

Orinoco, and Tuparro rivers. In 1980 it was increased to 548,000 ha and made a national park, taking in land south of the Tuparro with the old site of Maipures village and the beautiful Maipures rapids on the Orinoco, described by the explorer Alexander von Humboldt who spent several days there in 1800.

Vegetation

The park's great flat expanses are 85 per cent savanna and 15 per cent gallery forest. The savanna is a complex mosaic of grasses and sedges, its composition varying with drainage and soil type. The common plants are the ubiquitous fire-resistant trees *Curatella americana* and *Byrsonima crassifolia*, and many grasses, notably *Trachypogon*, *Axonopus*, *Andropogon*, and *Leptocoryphium* spp, while walking is always made difficult by the woody-rooted sedge *Bulbostylis* sp. Some of the most beautiful large plants are the typical palms of the llanos, the moriche *Mauritia flexuosa*, whose thick stands, or morichales, indicate swampy places.

The gallery forests are often shrubby, although some well-developed forests have a tree canopy of 25 m with emergents up to 35 m. But in general the forest is not as well-stratified as the great rainforest or 'selva' to the south. The poor growth of the trees may be due to the extremely hot, dry January–March season, for the rainfall of between 2100–2600 mm is comparable to areas in the middle of the closed-canopy selva. The origin of many savannas such as the llanos is still not well understood.

The flat terrain is relieved by small forested hills or 'cerros' which begin about 20 km from the Orinoco and are part of the Guyana Shield. These support attractive stands of the palm *Syagrus orinocoensis*, which thrives in temperatures above 50°C when other plants are dormant, waiting for the cooling rains of the wet season. The forests themselves contain palms such as von Humboldt's 'most beautiful palm in the New World' *Attalea regia*, as well as *Jessenia polycarpa*, and many spiny *Bactris* spp. Some dicotyledenous species which the brown pale-fronted capuchin *Cebus albifrons* uses as food are *Ficus* sp., *Spondias mombin*, *Inga* sp., *Dipteryx punctata*, *Oxandra espintana*, *Ceiba* sp., *Bursera simarouba*, *Coupia chrysocalyx*, and *Parinari*

exelsa. A description of the vegetation types in the park has been published (Vincelli, 1981).

Birds, mammals and reptiles

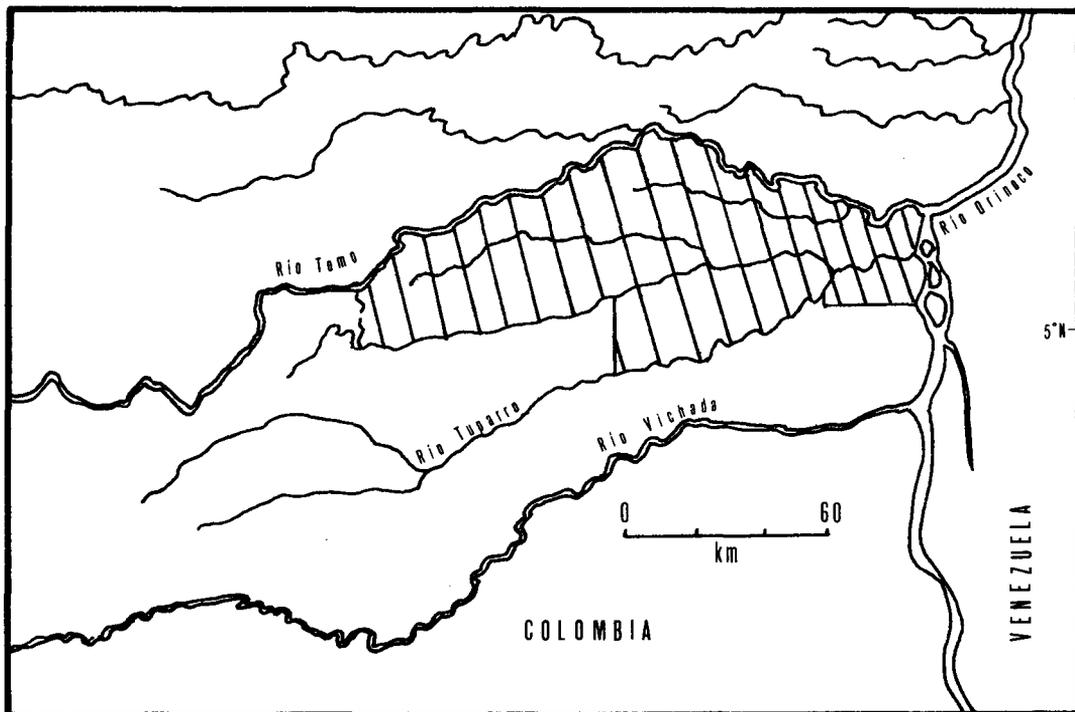
The most spectacular birds are the jabiru stork *Jabiru mycteria*, the very common red-and-green macaw *Ara chloroptera* and the Guianan cock-of-the-rock *Rupicola rupicola*. The impressive black-and-white hawk eagle *Spizastur melanoleucus* and the ornate hawk eagle *Spizaetus ornatus* are not uncommon; the harpy eagle *Harpia harpyia* is rare. Several species of parrot are common and there is a host of doves, hawks, herons, ibis and cracids.

Five species of primates are resident: brown pale-fronted capuchin *Cebus albifrons*, black-capped capuchin *C. apella*, red howler monkey *Alouatta seniculus*, widow monkey *Callicebus torquatus*, and night monkey *Aotus trivirgatus*. Also to be seen are white-tailed deer *Odocoileus virginianus gymnotes*, Amazon porpoise *Inia geoffrensis*, crab-eating fox *Dusicyon thous*, collared peccary *Tayassu tajacu* and tayra *Eira barbara*. Perhaps the greatest treat for any naturalist is the ease with which the endangered giant otter *Pteronura brasiliensis* can be seen; this may be one of the healthiest populations in Colombia, and El Tuparro would be a fine place to study its habits.

More difficult to see (although common in the park) are Brazilian tapir *Tapirus terrestris*, jaguar *Panthera onca*, puma *Felis concolor*, ocelot *F. pardalis*, jaguarundi *F. yagouarundi* and one or two other small cats. Among the shy and/or nocturnal animals are giant anteater *Myrmecophaga tridactyla*, giant armadillo *Priodontes maximus*, paca *Cuniculus paca*, grey agouti *Dasyprocta fuliginosa*, red brocket *Mazama americana*, and bush dog *Speothus venaticus*. Bats, rodents and marsupials have been little studied but are well represented.

The many reptiles include a small population of the rare and endangered Orinoco crocodile *Crocodylus intermedius*, difficult but not impossible to sight, spectacled caiman *Caiman crocodilus*, abundant here but endangered elsewhere, and two large snakes, both common, anaconda *Eunectes murinus*, and boa *Boa constrictor*. Giant river turtle *Podocnemis expansa* is rare but several other *Podocnemis* are common, and the matamata *Chelys fimbriata* and the land tortoise *Geochelone carbonaria* occur.

Poaching is not a great problem. The few nomadic Guahibo Indians living in the park have no guns. They hunt and fish with bows and arrows, and their use of the plant poison barbasco



Map of El Tuparro National Park.

to kill fish in small streams is not a major problem so long as their numbers remain small. A few Venezuelan hunters enter illegally for the *carne de monte* (forest meat) they can sell for high prices in Puerto Ayacucho, in Venezuela, the capital of the Federal Amazon Territory. Fortunately the worst known offender in this regard was recently apprehended and his equipment confiscated. He has, however, returned to poaching with completely new equipment; I saw him on the Tomo River in January 1982.

The future

Future problems for the park are likely to be of two kinds. First, few colonists were in this isolated area when the Territory was founded, but a new road has allowed more to move in, up to the western, southern and northern borders. The short western border is fairly defensible but the long meandering northern and southern borders along the Tomo and Tuparro will be difficult, and it is in these rivers that the animals most in need of protection occur, giant river otter and Orinoco crocodile. Already newcomers are hunting crocodiles in parts of the Tomo west of the park where crocodiles breed, and a colonist recently shot two giant otters to the west of the park, an easy thing to do to these inquisitive creatures.

The second problem will be the road link planned by the Government between Puerto Carëno capital of Vichada Indendencia, and the road through the middle of the park, in order to bypass the parts of the present road that are impassable in the rainy season. This will bring much commercial and private traffic through the western half of the park. The park's very low budget—in 1980 8000,000 pesos or \$160,000—and the fact that carrying firearms is customary in this part of Colombia will make it difficult, if not impossible, to control illegal hunting, especially in the dry season when vehicles can drive over the

savanna. Other routes are possible that would avoid the park altogether. If the park's annual budget remains so low both problems will be exacerbated.

Facilities

El Tuparro has some facilities for research workers at both ends of the park and more are planned. Tourism is undeveloped although in the dry months a few parties usually drive out from Bogotá, an arduous trip for which petrol must be carried. It is possible to fly from Caracas to Puerto Ayacucho, about 60 km north of Tuparro and arrange river transport via the Orinoco. The park has two landing strips suitable for a light plane, but no accommodation. Intending visitors should apply to the Parks section of INDERENA in Bogotá before any visit.

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