Ecological observations on Bois Neuf

By E.K. Ramcharan, G. Seeberan and *D. Chadee*
of The Department of Zoology, University of the West Indies, St. Augustine, TRINIDAD

BOIS NEUF! The name conjures up a sense of romance and adventure. Conversation with those who have been there reveals some of the wildest imaginings to which one can be party. For example, the largest 'Huille' is found there — of course it increases in dimensions with every telling. 'Endless' cascadoux and the largest guabine all come from the Bois Neuf River. The tastiest agouti inhabit the hill. The most beautiful orchids grow there and the forest is virtually untouched. Like a siren beckoning in the distance, Bois Neuf appears to have a mysterious hold on all who turn their thoughts to it. Did you know that it is a superhuman feat to make a return trip to Bois Neuf in one day? Well, that's another story!

Because of its position in the Nariva Swamp and its apparent isolation from nearby Bush Bush and the terrestrial forests we decided to overnight at Bois Neuf with the objective of assessing the area for conservation. After careful planning, we were able to assemble a field party and make final arrangements for the trip. We planned to spend three days and two nights on the hill during the driest period of the year.

Our vehicle rolled into Biche at 10:00 a.m. on Tuesday April 18, 1978 and we picked up our guide and two members of the field party — one group left a day earlier to make camping preparations on the hill. We then drove to our drop-off point and, weighted with food and equipment, headed towards the hill.

The hike to the hill took us along a logging trail and then a survey line cut by the Lands and Surveys Division of the Ministry of Agriculture, Lands and Fisheries. An abundance of tree stumps and fallen logs provided some difficulty along the way. This was compounded by the intense mid-day heat which proved quite discomforting to some members of the party. In spite of this, we reached our camp in two and a half hours. The journey to the hill was uneventful except for one incident — at one strategic bend along the trail we were accosted by a gang of men armed with a shot gun, knives and cutlasses, who provided a momentary threat to our existence. However, they were quickly pacified when they saw our guide coming up the trail behind us.

Along the logging trail and survey line, we passed through the Ortoire-Nariva Forest Reserve. Common trees along the way were crappo *(Carapa guianensis)*, guatecare *(Eschweilera subglandulosa)*, mahoe *(Sterculia caribaea)*, figuier *(Ficus sp.)*, wild chataigne *(Pachira aquatica)*, pois doux *(Inga spp.)*, and hog plum *(Spondias mombin)*. Evidence of intense flooding in the rainy season was everywhere. Streams were blocked with debris and some areas were still quite moist.

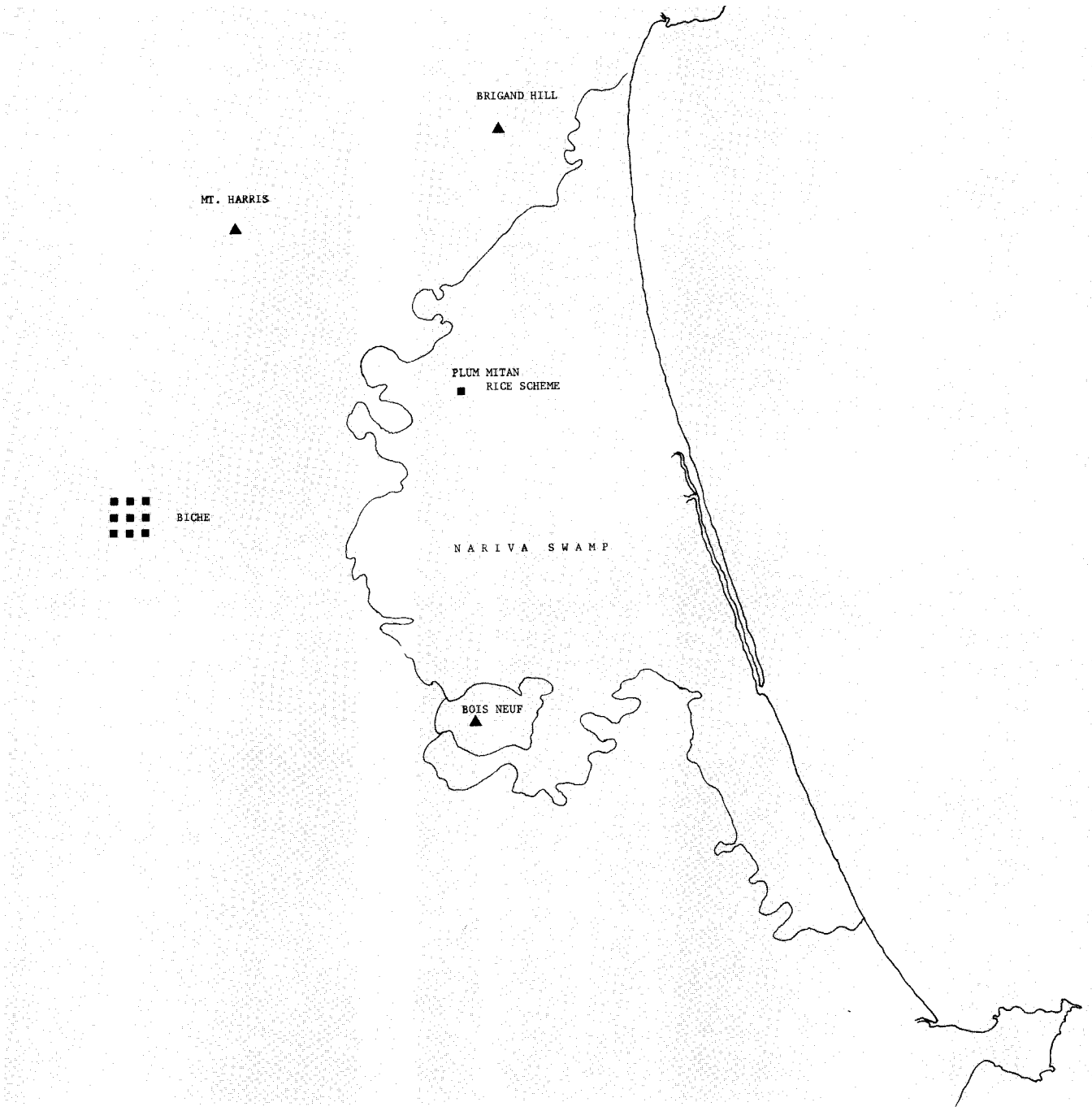
Nearing the hill, we left the survey line and, after a short walk through a grove of swamp immortelles *(Erythrina glauca)*, crossed a grassy area and reached the camp. Situated at the foot of the hill, the camp afforded an excellent view of the *Cyperus giganteus* herbaceous marsh southwards with a stand of Moriche palm as a transition between it and the adjacent forest.

After lunch, we reconnoitred the hill as a preliminary to some more organized analyses. During that tour, many of our preconceived notions were shattered. The hill obviously supported a large group of people and evidence of human activity and destruction was almost everywhere. The constantly shifting agricultural community resident on the hill was well serviced by an intricate and extensive network of trails. Cleared areas and abandoned fields were common and wanton destruction by fire seemed a passion; during our stay fires were in progress continually.

With an elevation of 35 metres above sea level, Bois Neuf is the highest and largest of the raised areas in the Nariva Swamp. Sandy, well-drained soils fringe the lower reaches of the hill while higher up, flows from a mud-volcano tend to create localized wet areas. Along the path of the mudflow the vegetation is either dead or dying. This is probably a result of the salinity of the mud. The idea of salinity is strengthened by the presence of *Acrostichum aureum*, a salt tolerant marsh fern, near the cone or tassik. Generally, the higher areas are well-drained and, according to the residents, of high fertility.

Two basic plant groups are present on Bois Neuf. The lower slopes eastwards support a large stand of cabbage palms *(Roystonea oleracea)*. Area topography is gentle, almost flat, and the soil is well-drained. Extensive fires have occurred in the area with the result that the ground cover of litter and vegetation has been destroyed. The higher parts of Bois Neuf support a forest vegetation. The forest canopy is two-layered and fairly open with the commonest trees being jiggerwood *(Bravaisia integerrima)*, guatecare *(Eschweilera subglandulosa)*, cedar *(Cedrela odorata)*, crappo *(Carapa guianensis)*, hog plum *(Spondias mombin)*, wild calabash *(Tabebuia stenocalyx)*, cuchape *(Coccoloba* acaril *(Trichilia smithii)* cooperhoop *(Brownia latifolia)*, and bois canon *(Cecropia peltata)*. On the western slopes of the hill, cocorite *(Maximiliana caribaea)* is quite common while on the higher, better drained slopes, carat *(Sabal mauritiiformis)* forms an important and extensive understorey. A dense stand of roseau *(Bactris spp)* is present on the southern slopes of the hill. Epiphytes were few and only three were identified by the authors. One was the bromelid *Aechmea nudicaulis* and the other two were the orchids *Oncidium lanatum* and *Rodriguezia secunda*. Live specimens of these orchids were brought back and placed in the orchid enclosure of the University.

A rich and varied fauna was in evidence during our stay in the area. Fishes were quite abundant in the Bois Neuf River and the commoner species seen and caught were cascadoux *(Hoplosternum spp.)*, chatto *(Callichthys callichthys)*, and guabine *(Hoplias malabaricus)*. Reptiles were rare, however, and only a matte *(Tupinambis nigropunctatus)* and one snake (ratonnelle) *Pseudoboa neuwiedii* were seen. An agouti *Dasyprocta agouti* provided the protein component of supper one night. Birds were quite common and among others, we saw wrens, parrots, swifts, the sucrier *(Coereba flaveola)*, pico-plat *(Sporophila intermedia)*, humming birds, the big-eyed grieve *(Turdus nudigenis)*, wood pigeons, violaceous trogons *(Trogon violaceus)*, blue-grey tanagers *(Thraupis episcopus)*, the greater corn bird *(Psarocolius decumanus)* and the common ani *(Crotophaga ani)*. One species of bat, the lesser Trinidadian fruit bat *(Artibeus jamaicensis trinitatis)* was seen on the hill. This animal makes its home by partially cutting a carat palm leaf



Map showing position of Bois Neuf in the Nariva Swamp

at the junction of the petiole and the blade so that the fallen blade forms a tent, the apex of which it inhabits.

If the present set of conditions on Bois Neuf is allowed to continue, it is reasonable to predict that within a few years the area will assume an appearance similar to that exhibited by the southern slopes of the Northern Range. The frequency and extent of fires and the removal of standing vegetation by farmers in their practice of shifting agriculture and their search for farmland less accessible to law enforcement officers ensure a severe restriction of forest regeneration.*

However, our lament over the wanton destruction did not impair our appreciation of what still remains of the beauty of Bois Neuf. The unpredictable howls of the red howler monkeys *(Alouatta insulanus)*, the raucous calls of the parrots at sunrise and sunset, the magical flickering lights of the click beetles at night, the thrill of encountering a rattonelle, a matte, an agouti or squirrel *(Sciurus aestuans)* around the next bend in the trail all blended to make our sojourn a memorable experience.

Mature forest can still be found on the hill and the fauna is quite interesting. Floral and faunal relationships with Bush Bush are yet to be worked out. Furthermore, intensive faunal studies are yet to be done. However, the diversity of habitats occurring on the hill warrants some measure of conservation. The flora is unique and its relationship to those of surrounding areas awaits future presentation.

Nevertheless, we had to leave on the morning of Thursday April 20. At 8:20 a.m., we broke camp and headed back to civilization burdened by our specimens, equipment and empty water bottles. The trip out was uneventful and we reached our pick-up point 65 minutes later. As our vehicle pulled out a large macajuel *(Boa constrictor)* slithered across the road as if to say "goodbye".

*It should be noted that Bois Neuf falls within Bush Bush Wildlife Sanctuary — Ed.