



THE FIELD NATURALIST

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October-December

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Rio Seco Waterfall September 29, 2002

John Lum Young

Rio Seco Waterfall nestled in the foothills of the eastern Northern Range is a short spill into an impressive pool. For sure this waterfall became more widely known since TIDCO posted a sign at the junction of Salybia-Mathura Trace and Toco Road in the mid '90s. After parking by the relatively new concrete bridge over the Salybia River the group strolled along Salybia-Mathura Trace at a gentle pace rendering the falls about 80 minutes distant.

Along the route we passed Wild Ixora (*Isertia parviflora*) in flower and the creeping fern Christmas Bush (*Lycopodium cernuum*) was seen on the drier banks of the trail. Its stalks are light green with very small branches pointing in every direction and short, stiff needle-like leaves arranged spirally along the stems. These plants are dried, spray-painted in various colours and used for decoration. Picked up from the floor was Donkey Eye, the seed of the climbing vine *Mucuna sloanei*.



Rio Seco

Photo: Jo-Anne Sewlal

There are two other types of Donkey Eye from the vines *Diaclea megacarpa* which has a larger and rounder seed (about 1¼ inches across by 1 inch thick), and *D. reflexa*. A running plant (*Coco sp.*) with a striking bright deep blue flower was also observed.

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Just before the Rio Seco River was a new trail, likely made by TIDCO, to the waterfall that reduced the walking time from this point on to 3 minutes. Previously one walked in the river upstream for 8 minutes to the falls. There are mixed views on the new trail cut into the precipitous hillside. Some agree that the overland trail avoids the slippery rocks along the riverbed but the writer believes that for such a short distance the new route was unnecessary.

TIDCO and other organisations at the forefront of promoting ecotourism have this knack for "tidying up" or managing nature that in reality results in increased disruption to the local environment. A classic example is the partial clearing of overhanging trees and

bushes at the openings to the Tamana Cave, which previously provided shade to the area keeping the entrances cool and moist. Since the "clean up" a marked decrease in the fauna was noted and this diminution of the taxa is quite probably a direct consequence of this form of site management (Darlington 1995).

The Rio Seco Waterfall, perhaps 12 feet high, was powerful enough to prevent swimming directly beneath. It poured into a very deep almost oval shaped pool about 70 feet by 50 feet. The greenish black hue of the water hinted at its great depth. (Village talk has it that eight houses can sit comfortably one on top of the other in the basin.) The water is very cold because the sun's rays never penetrate far enough to warm the lower reaches and, in fact, this pool is reputed to have the coldest water in Trinidad. "Rio Seco" is the Spanish translation of "Dry River" and indeed the upper part of this river is dry. About 1¼ hours upstream, the river emerges from a jumble of limestone boulders on the water channel. For miles thereafter the riverbed is dry and sandy as the stream flows under the watercourse. The water from tributaries emptying into the Rio Seco also disappears immediately at the junction.

TIDCO's brochure entitled **Waterfalls** in their **Treasures Unknown** series featured a photograph captioned "Salybia Falls can be found not far from the Rio Seco Falls". However experienced members like Murray Guppy were unaware of any falls downstream. They indicated however that Rio Seco Falls was called Salybia Falls (also Salibea Falls – Herrera 1989). I decided to verify if there were any waterfalls

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downstream by returning to the parked vehicles via the river. This route was estimated to take 3 hours. The way back for the rest of the group was straightforward and with Sheldon Edwards to ensure the members returned safely Dan Jaggernath, the group leader, together with an eager guest, Esperanza Luengo, accompanied me downriver.

We waded and swam through numerous long pools, some waist high or chest deep and others with water reaching over our heads. The deeper sections were most enjoyable; in the security of our lifejackets we simply floated downstream on the current. There were no waterfalls to be seen but we passed through interesting gorges. There was one in which the river turned at a right angle and flowed alongside an absolutely vertical canyon wall. After 2¼ hours the Rio Seco joined the Salybia River and in another 30 minutes we arrived at the Salybia Bridge; 2¾ hours in all, not far off the original estimate. The high tide mark was clearly visible as it left a dark stain on the steep banks of the river.

A quick stop for some homemade ice cream in Mathura topped off another interesting field trip. On returning home closer inspection of the TIDCO brochure revealed that it was a picture of the Rio Seco Falls. Imagine that!

TIDCO - Tourism and Industrial Development Company of Trinidad and Tobago Limited

The Aripo Savannas

Nicholla Johnson

Saturday October 19, 2002

The Botany Group arrived at the Forestry Division Nursery in Cumuto under a heavy clouded sky with a pair of Red bellied macaws (*Ara manilata*) flying overhead. As we walked along the road we followed a track through the savanna and at once was presented with the beautiful yellow and red flower of the Bread and Cheese/Savanna flower (*Mandevilla hirsuta*) growing along the side of the track. Other plants observed along the track were the razor sharp sedge (*Scleria bracteata*), the lovely purple leafed Melastome *Miconia ciliata* as well as *Coutoubea spicata*, the thorn covered *Bactris campestris*, and the orange flowers of *Heliconia psittacorum*. In the adjacent stagnant water course we stopped and looked at the aquatic plant *Mayaca fluviatilis* which was growing in a mass under the water. The yellow flowering Savanna Serette (*Byrsonima crassifolia*) was also in bloom which was filmed by our orchid enthusiast and videographer Greg. Other herbs and shrubs that lined the walkway included *Comolia veronicifolia*, the yellow Asteraceae *Wedelia caracasana*, and the Wild Ixora (*Isertia parviflora*) with its white flowers.

We soon stepped off the track and entered the grass and sedge dominated savanna area with the hummocky terrain. The first orchid of the day was *Episephium parviflorum* the biology of which was interestingly described by Carlyle Mc Millan (President of the T&T Orchid Society). Winston Johnson from the T&T National Herbarium then gave us an on-the-spot lesson in the differences between the two dominant sedges in the open areas *Rynchospora curvula* (short, rosette-like tuft) and *Rynchospora barbata* (taller and hairy). Some areas were also covered by the parasitic Lauraceae Love Vine (*Cassytha filiformis*) and was compared with the parasitic Convolvulaceae Love Vine that most members are familiar with as it covers the garden Hibiscus plants. Everyone also took a long and close look at the insectivorous Sun Dew (*Drosera capillaris*) which was in flower along with the purple flowered *Utricularia* sp., the yellow *Perama hirsuta* and pink/purple flowered *Sauvagesia sprengelii*. The orchid enthusiasts soon made a great find of a clump of two bulbs of the rare orchid *Cyrtopodium broadwayii* that is restricted to the Aripo Savannas and the Heights of Aripo area. Unfortunately it was not flowering but a description of the inflorescence was given by Carlyle.

We came out of the open savannas and entered the elevated palm island which was lined by a series of old US army bunkers and overgrown with ferns, the Strangler Fig (*Clusia palmicida*) and *Coccocypselum guianense* with its beautiful blue fruits. Along this more forested area we observed an *Epidendrum* sp. and *Encyclia* sp. orchid growing on a White Olivier (*Terminalia amazonia*). Along the track there were several flowering Yellow Mague (*Symphonia globulifera*) trees, the abundant Fat Pork (*Chrysobalanus icaco*), which was neither in fruit or flower, and a young Wild Cashima (*Rollinia ex-susca*). We observed the sedge *Eleocharis interstincta* growing in a pool of water, the orchid *Rodriguezia secunda*, the Bromeliad *Catopsis* sp. with its distinct silver base as well as the orchid *Epidendrum nocturnum*. We stopped to eat from the Pois Doux (*Inga setigera*), and Dan sheltered under a huge dry leaf of the Cuchape (*Coccoloba latifolia*). We eventually came upon a Bois Bande tree (*Parinari campestris*) with its distinctly brownish coloured leaves and this plant was quite the topic of conversation.

On entering the Palm Marsh Forest, our attention was drawn to a Root Ball which grows on the branches of some trees and is an association of *Pepperomia* sp., the Bromeliad *Achmea mertensii* which was in flower, the orchid *Coryanthes* sp. and a fierce biting ant species. Everyone couldn't help but stop and look also at the bright inflorescence of the Verbenaceae *Amasonia campestris* with its yellow tubular flowers amidst the bright red bracts. Several palms were seen along the track including a notably tall

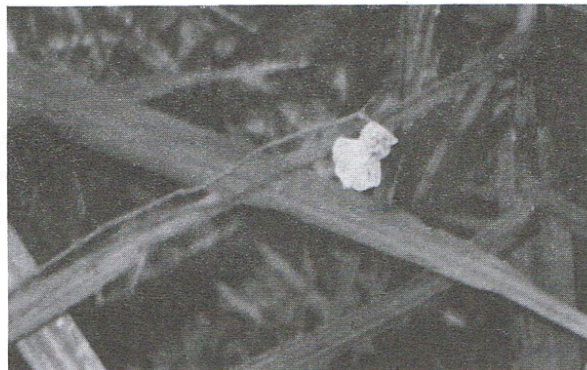
Bactris campestris near the edge of the marsh and the open savanna, the Moriche (*Mauritia flexuosa*), the Timite (*Manicaria saccifera*) from which we drank the water (liquid endosperm), the tall and solitary *Euterpe precatória*, the clumped *Euterpe oleracea*, one Royal Palm (*Roystonea oleracea*) near to one of the abandoned bunkers, and *Oenocarpus bataua* the fruit of which is a known food source for the Oil birds. There were signs of animal activity by the eaten remains of several Moriche fruits on the forest floor and the teeth markings were suspected as being those of an agouti (*Dasyprocta leporina*). Most of the trees and the abandoned bunkers were covered by huge *Philodendron* sp. plants which were a beautiful and amazing sight. The odd shaped epiphytic Bromeliad *Tilandsia bulbosa* was also observed with its mutant-like form. Many yellow flowering *Utricularia* sp. plants were seen forming a thick mass in the small lake within the Palm Marsh. We stopped for lunch near one of the bunkers where the orchid *Palmorchis pubescens* was growing, which was a first record for this species in the Aripo Marsh Forest.

The return was a bit of an adventure for some members of the group — exiting the savannas through a yard full of yelping small white dogs — but all were gratefully refreshed by ice cold coconut water supplied by Dan Jaggernaut. This month's botany trip was again a successful and learning adventure with the encounter of many exciting and rare plant species. We look forward to our next trip in March 2003 which will take us to see the Seasonal Deciduous Forest along the western peninsula of Trinidad.

Plate showing some of the plants in the Aripo Savannas (photos by Clayton Hull)



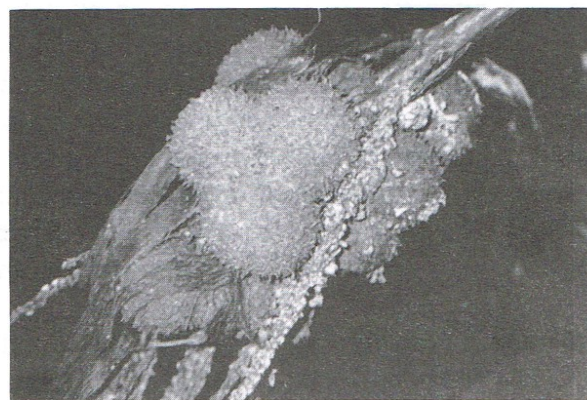
Wedelia caracasana



Utricularia sp.



Amasonia campestris

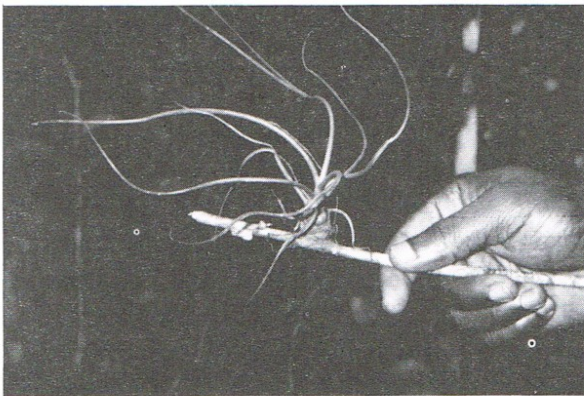


Timite fruits (*Manicaria saccifera*)



Moriche Palm Stand (*Mauritia flexuosa*)

Root Ball (Ants, Bromeliad, Orchid, and Piper)



Epiphyte (*Tilandsia bulbosa*)

Lunch stop



FIELD TRIP REPORT

La Laja Waterfalls —March 31, 2002

John Lum Young

We left the St. Augustine meeting point at 7:00 p.m. sharp and headed east to Arima. Some members of the Club were abroad on a 9-day walk in the Guyanese interior to observe the Iwokrama Project, and others were away for the long Easter weekend. Despite this, twenty-eight diehards made the trip to the Falls on the Sombasson River, one of the many tributaries forming the headwaters of the Guanapo River. Northwards into the Arima Valley we journeyed via the Bye Pass and along the Arima Blanchisseuse Road for about 5¼ miles. We then took the La Laja Road, which climbs out of the Arima Valley in an easterly direction over the divide with the Guanapo Valley.

La Laja used to be a vibrant agricultural community with homes on each estate. These houses were gradually deserted during the oil boom years of the '70s that contributed to the decline of traditional estate agriculture (as it did in other parts of the island). Up to the sixties the roads were properly maintained. There was a network of roads linking La Laja to the surrounding communities. One could double back to Verdant Vale or head south to Heights of Guanapo or north to Brasso Seco. Over the years, despite the irregular maintenance, much of this road remained in a relatively driveable condition though the other roads to the surrounding areas became overgrown, reduced to foot trails and in some instances disappeared altogether. With the advent of logging activity in the early '90s the transport trucks damaged the La Laja Road. The road further deteriorated with the uncharacteristically heavy and continuous rains in December 2001. Usually we would drive 3.9 miles in and park by a small waterfall with a shallow pool at its base. Though I had parked at this small waterfall two weeks earlier, the road was really in a very bad state for ordinary sedan vehicles to negotiate. We agreed, therefore, to park after ¾ mile at the first challenging corner next to some Mango trees (*Mangifera* sp.). Walking allowed us to appreciate the flora along the wayside, which is often missed when driving as eyes are focused on the road in order to best navigate the uneven surface.

There were a number of fruit trees along the roadside, some in maintained holdings and others in overgrown plots. Fruit trees included Cashew (*Anacardium occidentale*), Zaboca or Avocado (*Persea americana*), Gosco or Sour Orange (*Citrus aurantium*), Sugar Apple (*Annona reticulata*), Guava (*Psidium guajava*), Pois Doux (*Inga laurina*), Nutmeg (*Myristica fragrans*), Mammee Seepot (*Mammea americana*) and Soursop (*Annona muricata*). There were huge yellow Lemons (*Citrus limonia*), which from a distance looked like Grapefruits (*Citrus paradisi*). By the way, the popular Grapefruit is a hybrid that was developed in the Caribbean in the 19th Century.

We saw Pomerac (*Eugenia malaccensis*). Interestingly this is called French Cashew in Grenada. In fact many of the fruits in Trinidad have different common names in Grenada. This is somewhat surprising as many Grenadians settled in Trinidad over the years and one would expect some similarities in respect of common names. Breadfruit (*Artocarpus communis*) was also seen. Captain Bligh (of *Mutiny on the Bounty* fame) introduced this plant from the South Pacific to the Caribbean in 1793. The intention was for the large fruit to provide food for the slaves on the sugar plantations. Culinary delights are prepared with breadfruit, which now forms part of the exotic West Indian cuisine. Interestingly, breadfruit was used as a shade plant for Cocoa (*Theobroma cacao*) in Grenada whereas in Trinidad we used Immortelle (*Erythrina preppigiana*). Having a shade tree with edible produce seems to make more sense. Breadfruit is also a common backyard plant in the Grenada countryside and this staple during Grenada's 1983 war kept the citizenry from going hungry.

A lovely bunch of Lacatan fig (*Musa spp.*) was seen. It must have had about 8 hands, which is a lot for


Lacatan. Though the fig (banana) plant is often referred to as a tree it is really a large herbaceous plant. Other fruit trees along the roadside included Balata (*Manilkara didentata*) with some large, sweet berries and Katahar, or Kowa (*Artocarpus heterophyllus*), the young fruit of which is used to make talkari.

Orchids observed included the Butterfly Orchid (*Oncidium papilio*), *Epidendrum hartii* (in bloom) and a *Catasetum* sp. that could not be identified because it was not in flower. The *Epidendrum coronatum* was also seen. This orchid is called Lamb's Tail because its flowers bunch together and hang from the end of the stem resembling a lamb's tail. With the removal of the original forest cover in favour of cocoa estates, some orchids took a liking to the moss covered cocoa trees as the moss facilitates the germination of their seeds. Those orchids could become endangered as farmers rip them off the trees. The farmers regard all epiphytes as parasitic and in fact call them "paracito". Cocoa trees must be kept free of parasites to maximise the yield. However unlike bromeliads, which develop a thick network of roots along the branches and restrict the number of flowers issued by the tree, orchids have a specialized root system that allows them to feed from the air. The orchids therefore are not harmful to the tree, but who will tell the farmers?

Shrubs along the way included Black Stix (*Pachystachys coccinea*) in flower. One was seen climbing among the uppermost branches of a 10 foot tall Coffee tree (*Coffea arabica*). Along the moist shaded areas of the roadside grew Crepe Coq, also called Deer Meat and Rabbit Meat (*Centropogon surinamensis*). The *C. surinamensis* was in flower and so were the Hot Lips (*Cephaelis tomentosa*). In addition, on the damp roadside was another soft-stemmed succulent herb called Impatience (*Impatiens* sp.) with its 4 petalled pink flower. Interestingly Impatience has a similar common name in England where it is called Busy Lizzie. It is a non-native flowering herb. Most of the *Impatiens* sp. originated in India and tropical Africa though there are a few varieties from Mexico and Central America. The beautiful Savannah Flower (*Xyris* sp.) was seen in a clearing with its yellow blooms. The *Gonolobus broadwayi* vine was observed climbing a Mango tree. This vine belongs to the Asclepiadaceae family and is a high climber, favouring thickets along roadsides in northern Trinidad. Though there was an uncommonly shaped fruit (not edible) on the vine, fruits are rarely produced. The green fruit was about 4 inches long and 3 inches thick. It was dorsally double crested from apex to base and laterally winged in the upper half.

There were about a dozen nests of the Cornbird (*Psarocolius decumanus*) hanging from an immortelle tree. The stocking-shaped nests were in length between 2 feet and 4 feet. In abandoned plots where the forest sought to re-establish its presence, the secondary vegetation included Bois Canot (*Cecropia peltata*), Wild Onion (*Clusea* sp.) and Wild Chataigne (*Pachira insignis*) with its large flower resembling a barber's long-haired dusting brush. The flower is called the Powder Puff Flower. Bois Flot or Balsa (*Ochroma pyramidale*) was also seen. As a member of the Bombacaceae family it is related to the Silk Cotton (*Ceiba pentandra*). The soft fluffy material from the ripe fruit of the *O. pyramidale* was used to stuff pillows before synthetic material became easily available. Bois Flot is the lightest wood in the world. The Sandbox (*Hura crepitans*) was also seen. The fruits split open with a bang scattering the seeds away from the parent. The septa of the fruit are shaped like "flippers" or dolphins, which are polished and used in handicraft.

Bloodwood, also called Candle Tree (*Croton gossypifolius*) is another secondary growth plant that was pointed out. Red latex issued from the cut bark resembles blood and hence the plant's other name, Miracle Tree. After the old plantations, we passed through secondary forest then through a magnificent stand of tall trees that blocked out the sunlight under the canopy preventing thick undergrowth. This forest appeared undisturbed. Then it was back to secondary vegetation. In the secondary forest, there was the ever-present Bamboo (*Bambusa vulgaris*). Bamboo, though not native to Trinidad, has certainly established itself all over the island and is now part of our culture. This plant flowers at 30 year intervals. Dan Jaggernauth documented Bamboo in flower at Goldsborough last year (Tobago News - December 14th 2001).

Some stopped initially by one of the La Laja Waterfalls that was also on the Sombasson River. The fall was about 38 feet high. The river did not plunge over the cliff directly into the pool below but after a drop of about 15 feet, slid down the smooth rock face to a knee-deep pool at the bottom. There was another smaller fall downstream. Proceeding up river along the left hand bank we got to the largest of the La Laja Falls and stopped there. As a result of the extra 3 miles walked at the beginning, it was agreed not to continue on upriver to Sombasson Waterfall which would have been another hour distant. On the banks of the river the small Day-calling Frog (*Mannophryne trinitatis*), about 1 inch in length, kept up a steady rhythm serenading us for the duration of our stay. After taking a breather we returned safely. 

Acono Falls —July 28, 2002

John Lum Young

The July mystery trip was indeed that! The Acono gorges and waterfalls are well kept secrets mainly frequented by the more adventurous from the nearby village. The Group left St. Augustine in a slight drizzle, which caused some concern, but though rain was falling in St. Joseph the writer had earlier seen blue sky further north above the Maracas Valley. No need for Plan B, the back up mystery location. The convoy meandered through the shaded Riverside Road following the Maracas River, renowned for the many bathing spots along its length before residential sprawl changed that. Up to 20 years ago there were well-frequented pools along the river between Pancham Trace and WASA Water Trucking Department. Near Pancham Trace was Varis, further up Young Girls (so called because it seemed that at any hour of the day one met ladies bathing there) then Sand Basin (the river bed and banks were of smooth, stone-free sand).

We turned north onto the Maracas Royal Road near the Silver Bridge. (Pumping was a swimming hole behind the WASA Water Trucking Department.) Contrary to what some believe, Maracas Valley does not start from the Silver Bridge (B1/1) but from the next one north (B2/1) immediately before Balata Trace. Maracas, St. Joseph, or Maracas Valley, though close to the capital city of Port of Spain and despite the spate of housing developments in the last 25 years, has managed to maintain a serene and rustic atmosphere. The stretch of road from the corner after Balata Trace to the bottom of the incline before La Baja Road is known as Rusty Iron, which was

also the name of a swimming hole in the river below on the right. Rusty Iron also had a reputation as a place where jumbies were encountered at night. Marsden Bridge (B3/1) is immediately before the R. C. Chapel on the left. The once famous Marsden Pool, attracting people from afar, disappeared in the early '80s when a concrete bridge replaced the wooden one. The construction crew filled up the Pool to accommodate a temporary bridge while the new one was being constructed. From the railing of the old wooden bridge youths dived into the inviting pool below. Quesnel Pool remains upriver from the bridge but with the many developments in the Valley and the leaking sewers, swimming in the Maracas River today is unhealthy, certainly so downstream from where it is joined by the Acono River. The river ran red because of the early morning rains and no doubt some were preparing themselves for a disappointment.

We continued into the scenic valley up Dale Young (hill) with the residential Poolside and Poolside II on the right, then descended through La Seiva proper, the first major village. (Note though that La Seiva starts from bridge B3/1 and ends at bridge B1/2). Rogers Estate on the left gave way to the residential area of Riverview Gardens. Palm Pool used to be the bathing spot here. After La Seiva the Ederick Anderson Estate on the left became Maracas Gardens and Avondale Gardens. Next on the right was the gated community of Mira Flores, Leotaud Grounds (football field) and Mountain View another residential area. The open area on the left hand side of the main road with a large depression (opposite Leotaud Grounds) was called Hammels-

mith and had a number of citrus, mangoes and other fruit trees. The area was bulldozed and excavated to build a gas station. The project was abandoned when planning permission was denied. The bathing spot along the river in Hammelsmith was called Walls.

Next were Valley View, Cangrejo (another place reputed for coming face to face with a jumbie) and the famous Caribbean Union College celebrating its 100th anniversary. Then it was a right turn east into Acono, a valley within the Maracas Valley. Some of the Acono families came over the divide from the then Caura Village or La Veronica, in the nearby Caura Valley, when the Government, for construction of a dam, appropriated their lands. In 1945 during an emotional last mass at the Caura R.C. Church, before it was dynamited along with the other homes, the parish priest stated in his sermon that a dam will never be constructed on the site. And so it came to be! The Caura Valley today remains an agricultural and recreational area.

Frankly, the Caura Valley was a much better location for a dam compared to Arena. Even today 55 years later there is an absence of industry and housing in the upper Caura region. In April 1947, the new governor, Sir John Shaw, because of the corruption scandal that shook the entire country, expressed reservations about the project and it was halted soon thereafter. The scandal involved all levels of personnel connected with the undertaking including the then governor, Sir Bede Clifford. The dam was originally costed at \$3.82M. At the end of 1946 \$1.7M was spent and the project was only 17% completed. The revised cost to completion was \$6.816M. Certainly sounds familiar!

After parking we crossed the Acono River before the Acono Waterworks. As recently as 12 years ago the river here was 1.5m deep, it is now about 5cm deep having been filled with quarry waste. We proceeded further into the valley and were fortunate to see the Dutchman's Pipe (*Aristolochia grandiflora*) in flower. This climbing vine is popular along roadsides and rivers but flowers irregularly. The open flower is spectacularly coloured with a maroon to purple middle fringed by cream. It is difficult to imagine that a flower so attractive could smell so bad. The centre of the flower smells strongly of decayed flesh and carrion flies are drawn to it. These flies become temporarily trapped in the flower to facilitate the plant's pollination process. The sepal, which connects the open petal to the pedicel or stalk, is shaped like a saxophone and perhaps this contributed to the "pipe" in the plant's name.

The Mountain or Wild Soursop (*Annona montana*), a member of the Annonaceae family, was pointed out. The fruit, resembling a Soursop (*A. muricata*), was about 10cm in diameter with small fleshy spines about 15mm apart and ovate in shape (like an upside down egg). The flesh is dry and not edible. Also seen was a pair of woodpeckers drilling for insects on some tall dried trees. Apart from the hammering sounds of their beaks against the branches, the scarlet crown and crest also made them very noticeable. Without binoculars, however, we could not tell whether it was the Lineated Woodpecker (*Dryocopus lineatus*) or the Crimson-crested Woodpecker (*Philoeoceastes melanoleucos*). We passed First Pool, which used to be a very popular bathing spot. On any hot day villagers and their families could be found relaxing and cooking here. The pool used to be circular in shape about 1.5m deep and 6m across. The adjacent estate was sold about 4 years ago and the new owners bulldozed the area for planting short-term crops. With the absence of ground cover the soil washed away in the first shower of the Rainy Season and the pond silted up disappearing completely. Since then, villagers heaped up stones at one end to create a shallow pool about 0.3m deep.

We entered the gorges and the water was clear as crystal. The walls of the gorges consisted of a metamorphic rock with intrusions of quartz. The first gorge was 58m long. The entrance was 5m wide narrowing to 2.8m after 6m. It was about 8m at the highest point. The next gorge was longer and deeper but we

were only able to proceed for 97m. This canyon up to the point where we reached narrowed and widened a few times giving the impression of four smaller gorges but was really one gorge. The entrance was 5.9m wide, narrowing to 2m after 8.6m before widening after 44m to 8m. Wild Tannia grew profusely on a ledge on the left bank. The river in this part was knee deep due to silting. It was chest high a few years ago. After this section was a chest deep pool 7m long by 4.7m wide. The floor of the pool was littered with huge boulders which rendered the pool unsafe for swimming. The boulders could not be seen because of the poor light in the gorge. A rope was rigged to enable members to climb past a 3m waterfall that was located at the end of this pool. The walls of the canyon above the pool were about 12m high. After this waterfall the canyon widened briefly before closing in once more in another waist high pool at the foot of 1m cascade. This area is also silted up, being chin high as recently as four years ago. The gorge widened again after 5.7m to 8m with a bathing pool 11m long, 5m wide at the start but closing in to end at a narrow and powerful waterfall about 6m high. The tumbling water massaged the backs of those who were able to negotiate the current and reach the base. The walls of the canyon rose steeply up and the height here was estimated at 17m with both walls closing in at the top about 1.2m apart. From below it seemed possible to step across the gulf from one side to the other. Between the walls we could see a narrow band of blue sky that confirmed the beautiful morning. A few bats circled, disturbed by the presence of the group.


Though we did not venture any further, the chasm extended past this waterfall for some distance. For approximately the next 120m the floor of the canyon rose steeply between narrow walls. There were two waterfalls, the first about 16m high with a 2.5m deep pool at its base. The water did not tumble over in one straight drop but cascaded on to smooth rock halfway down, carving into the cliff face and creating an overhang before continuing its slide into the basin. The second, about 8m high, was a straight drop into a pool in excess of 2m in depth. After that steep section the gorge continued upriver for 383m in a series of small cascades and pools to a 6m high waterfall with a pool 6m long by 5.8m wide. The canyon continues beyond that waterfall but the area is still to be explored.

It was great to have Victor Quesnel (Botanist) and Luisa Zuniaga (former TTFNC Secretary) accompany us on this trip. All returned safely after carefully negotiating the sometimes smooth and moss covered rocks on the riverbed.

Acknowledgement:

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Botanists, Orchids and White-faced Capuchins in the Nariva Swamp

Nicholla Johnson

The Botany Group had its first trip for the year to the Nariva Swamp on March 16, 2002, which comprised 20 persons, including Winston Johnson (T&T National Herbarium) who assisted with all the identifications for the day, as well as Victor Quesnel, Floyd Homer, and our orchid experts Gregory Lee Kin and Carlisle Mc Millan a.k.a. "Mac" (T&T Orchid Society). We had set out from early morning and arrived at the village of Kernahan on the Southeastern edge of the Nariva Swamp. We saw flowering in the canals, the Water Hyacinth (*Eichornia crassipes*), the erect yellow flowering *Utricularia foliosa*, and the beautiful white and pink flowers of the water lilies *Nymphaea* sp. that added colour to this unique freshwater environment. We took a close look at the Herbaceous Swamp community that could be seen from this end of the swamp with the floating marsh plants that colonise the canals in this agricultural area. These plants included the edible *Ipomoea aquatica*, the young shoots and leaves of which are known as Karmi bhagi, and its beautiful, soft, purple flowers were visible amidst the dark swamp water, along with the Water Hyacinth look-alike *Limnobium laevigatum* and the small floating fern *Azolla caroliniana*. On sighting the tall and dominant *Phragmites australis*, the group initiated discussion about the reed *Typha domingensis* that grows in the Caroni swamp and bio-accumulates heavy metals. Other plants that were noted included Cascadoux grass (*Leersia hexandra*), the Bull grass (*Paspalum fasciculatum*), Para grass *Urochloa mutica* (= *Bracharia* sp.) and the tall Maranthaceae *Thalia trichocalyx* with small whitish purple flowers that were swaying in the early morning east coast breeze.

As we walked along the sandy track amidst the fields of watermelon (*Citrullus lanatus*), Winston, Floyd and Victor helped in the discussion about the many different weed species that caught the group's eyes. These included the distinction between *Mimosa casta* (large pinnae) and *Mimosa pigra* (smaller pinnae), and the different species of the yellow flowered *Ludwigia* sp. growing along the canals. Two different species of Chac-Chac (*Crotalaria incana*) (trifoliate) and *Crotalaria retusa* (simple leaf), were observed as well as the edible exotic Velvet bean (*Mucuna pruriens* var *utilis*) the common *Sida acuta*, the Congolala (*Eclipta prostrata*), the Burr grass *Cenchrus* sp., and another Legume *Centrosema pubescens*. We ate of the Coco Chat/Dog Teeth (*Solanum stramonifolium*) and observed the patches of Roseau (*Bactris major*) the thorny Wait-a-while (*Desmoncus polyacanthos*). Also present were some Palmiste/Royal Palm trees (*Roystonea oleracea*), and visible in the distance were several Moriche palms (*Mauritia flexuosa*). Along the roadside we also observed a Hog Plum tree (*Spondias mombin*) and the beautiful, bright pink flowering *Hibiscus furcellatus*.

At the top of the hill we were enthralled by a beautiful display of flowering Virgin orchids (*Caularthron bicornutum*) (= *Diacrium bicornutum*) growing at the top of what appeared to be a dead Balata tree (*Manilkara bidentata*). The trip videographer and orchid enthusiast, Greg, documented the display of white orchid flowers atop the dead tree. We had a close-up view of the Virgin orchid plants growing on a Cocorite tree (*Attalea maripa*) close by, observing the different phases of the plants' reproductive stages from unopened flower buds to dehiscing seed-pods. Mac provided a knowledgeable explanation of the reproductive biology of the plants.


As we neared the forest we ate of the hairy Pois doux tree (*Inga fastuosa*) (= *Inga venosa*) and saw a Bois Lum tree (*Guazuma ulmifolia*) with its trunk covered with the furry dimorphic vine fern *Microgramma vacciniifolia* with small sterile fronds and elongate fertile fronds. Nearby, encircling a Cocorite tree, was a large *Ficus guianensis* with aborted fruits, thick waxy leaves, pronounced leaf venation and reddish

colouring of a few of the leaves. Entering the forest edge we were greeted by the flowering of a notably tall *Heliconia psittacorum* (orange bracts), *Heliconia hirsuta* (red with yellow bracts) with ants present on the bracts. The deep purple flowers of the vine *Dioclea guianensis* and further in the forest, the large Water Vine (*Uncaria tomentosa*). The trees also observed as we walked towards the Bush Bush Wildlife Sanctuary included the Bois Mulatre/Fineleaf tree (*Pentaclethra macroloba*), a Mahoe tree (*Sterculia pruriens*), the ground/terrestrial orchids *Spirantes acaulis* and the African orchid (*Oeceoclades maculata*). Greg and Mac provided interesting facts about the colonisation of Trinidad by the African orchid and, of course, these Nariva specimens were documented on video.

The Jeriton/Matchwood tree (*Schefflera morototoni*) (= *Didymopanax morototoni*), with its leaf scars, was noted as well as the scented fruits of the Incense tree (*Protium guianense*) that littered the forest floor. Our attention was drawn to a young Cajuca/Wild Nutmeg tree (*Virola surinamensis*) in fruit and with emerging prop roots providing temporary accommodation for a large population of "Shinny"/hairy caterpillars that was the cause of many "Oos and Ahhs!" Floyd Homer pointed out to us a mature Serrette tree (*Byrsonima spicata*) with its very pointed leaves (mango-like in appearance) with several juvenile plants along the walkway.

We entered the Bush Bush Sanctuary walking along a wider track than before, with a clearer understory and thicker canopy surrounded by patches of Roseau, Cocorite and the variegated and green varieties of the *Spirantes acaulis* orchid species close together. Other observations were the red, star-shaped flowers of the Mahoe trees lying on the forest floor; the fruits and white flowers of the Guatecare tree (*Eschweilera subgladulosa*); the large fronds of young Carat palm (*Sabal mauritiiiformis*), and the spineless dwarf palm (*Bactris simplicifrons*) with its tiny red fruits. Dan made music with the fruits of the Toporite (*Hernandia sonora*) that littered the forest floor. We were pleased to see a flowering *Spirantes acaulis* and took a whiff of its sweet scent. Along the side of the path there was a noticeable Cannon Ball tree (*Couroupita guianensis*), the small plant *Xiphidium caeruleum* with small red-orange fruits amidst the fallen leaves of the Bois Canot tree (*Cecropia peltata*) with the petioles eaten out by the Red Howler monkeys (*Alouatta seniculus*). We saw signs of the resident monkeys' foraging activities — broken pods of another Pois doux (*Inga acuminata*) — and soon encountered a very animated troupe of White-faced Capuchin monkeys (*Cebus albifrons*), which provided much visual entertainment and video material for members of the group.

We had a hearty lunch at the shed near the Bush Bush boat-line, observing the nearby macaw look-out which had fallen, as well as the flight cage which was demolished by a fallen tree. The boat-line was very stagnant, with small pools of water now impassable for boats because of sediment accumulation but still providing an open view to more herbaceous swamp with *Montrichardia arborescens*, Moriche and Palmiste palms, and *Phragmites australis*, with the distinct background sounds of the nearby Atlantic Ocean. Some foreign day visitors to Bush Bush via the boat line also joined us for lunch. Greg provided us with the hard "jelly" from the huge dry coconuts produced by the tree growing near the shed.

After lunch, we had a brisk return walk out accompanied by the sounds of distant Red Howler Monkeys, and a very heavy downpour of rain which caught us near the exit of the Bush Bush Sanctuary. Thankfully, a very welcoming watermelon farmer called Ramsingh offered the soaking wet Botany group a dry respite and a delicious share of his recent crop. The trip ended as we walked down the hill under a clouded sky, looking at the expanse of the *Phragmites australis* dominated area of the Nariva swamp, all having learnt a little of this unique freshwater ecosystem in Trinidad. We are now looking forward to our next botanical excursion which will take us, in October 2002, to the Aripo Savannas. 

Tamana Caves - May 26, 2002

John Lum Young

We headed east from St. Augustine to Wallerfield and then south to Cumuto and the foothills of the Central Range. Though the sky was initially overcast, it was a pleasant morning as the early clouds were unable to restrain the rays of the morning sun. About two hundred metres (m) after Little Cora Junction in Cumuto was the Coryal High School.

We continued on through the rural communities of Howsen Village, Coryal, Carmichael and Samady. After parking on the Carmichael Extension Road just past the WASA station (locally referred to as the dam) we set off for Mount Tamana, which at 308.3m, was the highest peak in the Central Range. Along the estate road Nutmeg (*Myristica fragran*) and Mammee Seepot (*Mammea americana*) were in fruit. Opposite the Mammee Seepot was the trail to Mt. Tamana. A young Mapepire Z'ananna (*Lachesis muta muta*) was seen on this spot on the return trek. The climb to the hilltop though steep was short and along the way we passed one of the vents (10m wide and 5m deep), a collapsed roof really, of the Tamana Cave. We also examined a big Silk Cotton tree (*Ceiba pentandra*), perhaps about 200 years old, as trees in the tropics do not live much longer than 200 years before rotting and toppling over. This tree had already started rotting from within. Amazingly, there was a relatively huge Pawpaw tree (*Carica papaya*) about 11m tall with a girth of 0.8m. Though it is called a tree the trunk or stem is soft without the solid wood characteristic of other trees.

The summit of Mt. Tamana offered a panoramic view of the surrounding landscape. To the north the Northern Range stretched west as far as the eye could see, Arena Dam and Arima (northwest), the recently reopened quarry at La Seiva, Four Roads Tamana (west in the fore-ground), the Farmland Miss Chem tanks at Point Lisas (west in the distance) and the Montserrat Hills (south). After a short rest we set off for the caves situated on the northern face of Mount Tamana at an elevation of 240m above sea level. The Tamana Caves are shallow solution caves in a marly reef limestone composed of algal *Lithothamnion* and coral debris (Suter 1960). The cave system consists of the Dry Cave (a single large chamber and passage with two entrances from the surface) and the larger, more complex Main Cave which we explored.

The Main Cave is divided into 18 named sections (Hill 1969, Darlington 1970) and generally dips to the north in the same direction as the hillside but more steeply. Entrance to the cave is at the highest part called the Walk-in Chamber a steep mud slope with some rock falls. Adjacent to this on the left is the Boulder Chamber. Flashlights revealed a large population of the Small Nectar Drinking Bat *Anoura*. Connecting these outer chambers with the rest of the cave is a small crawl hole that could fit an adult of average build. We had to shuffle through feet first lying on our right side for about 3.3m. Only 13 of us ventured further. One guy turned back because he was too big to squeeze through. Bats that move between the Boulder Cham-



Logging in Tamana

Photo: Dan Jaggernaut

ber and the deeper parts of the cave frequently use this crawl hole. Therefore, we were not that startled by bats squeezing through the hole with us.

After the crawl hole there is another room on the left called the Side Chamber. The Side Chamber connects upslope to the Dry Cave via a hole smaller than the passage we just came through, in fact barely large enough to squeeze past. We continued along through the Round Chamber and then the Long Chamber following a narrow stream originating below the ledges of the Side Chamber and crawl hole. Both the Round Chamber and the Long Chamber have flat floors and domed roofs 3 – 5m high. These caverns support extensive roosts of bats and the floors of these chambers have thick deposits of guano. The cave narrowed as we passed through the Tunnel section which has a roof about 2m high and slopes down emerging in the Chimney Area (the large vent we had passed earlier on the way to the summit). A crab hole, probably belonging to the freshwater crab *Guinotia* commonly found in the Cave, was pointed out. A few metres further on the right are another chimney and a chamber at the back, up a steep slope. The stream that disappeared underground in the Chimney Area reappeared as we continued through the Rubble Slope, Steep Passage and through the section called the Throat (3m high by 3m wide) climbing down some ledges. Navigating the first ledge meant holding on to the rock below the guano that contained cockroaches (3 species). There was a 3m ladder at the second ledge no doubt placed there by one of the research teams that studied the cave fauna. We turned back at the next ledge as the ladder there was missing rungs and appeared unsafe. We retraced our steps after having ventured 190m into the Cave. Beyond the Throat, the chambers are separated by ledges and are relatively similar.

The floor plan was detailed as far as a chamber named the Far Deep (a further 95m from where we turned back) but it is unlikely that any further mapping can be entertained as the physical conditions make it difficult to stay at that depth for any extended period. The deeper part of the cave had been explored as far as a steep and treacherous, slippery guano slope about 100m beyond the Far Deep (Kenny 1978-79). It is in this part of the Cave that most of the bats live. For the more adventurous interested in exploring beyond that steep and slippery guano slope, it is best to have proper breathing apparatus. Histoplasmosis, (also called cave sickness or cave fever) caused by the fungus *Histoplasma capsulatum*, is found in bat guano (and bird guano) and occasionally proves fatal. This fungus occurred in some Trinidad caves associated with bat roosts and oilbird colonies (Ajello, Greenhall et al. 1962; Ajello, Snow et al. 1962). So caution is advised.

There are hundreds of thousands of bats representing eleven species that permanently roost in the caves. Most of the bats are insectivorous but there are four fruit eating species (*Phyllostomus*, *Glossophaga*, *Anoura* and *Carollia*) which are found mainly in the upper parts of the cave, though *Carollia* seem widely distributed throughout. The other species include *Chilonycteris*, *Pteronotus*, *Mormoops*, *Desmodus* and *Natalus*. *Pteronotus* and *Mormoops* seemed confined to the deeper parts of the cave while *Natalus* is found all over. Selwyn Gomes suggested that we observe the exodus of bats at dusk. The flight of the bats from the Cave was broadcast recently on the National Geographic channel and so the least we could do was experience the “live” spectacle. So Clayton Hull, Yvette Adams, Dan Jaggernath and I stayed with him while the others returned home.

In order to pass the few hours to sundown we took a drive around Guaico Tamana. Teak is being harvested in the area and the ten “timberjacks” (huge 10 tonne tractors that lift and pull logs), have destroyed the last 3km of the paved section of Guaico Tamana Road and 1km of the Carmichael Extension Road. These roads were never constructed to accommodate such heavy vehicles and Clayton wondered if in pricing the lumber the authorities took cognisance of the costs of infrastructure repair and inconvenience to local residents. But he already knew the answer! We returned at 5:30 p.m. to the hillside adjacent to

the main chimney to witness the bats exit the cave at sunset, which would be at 6:22 p.m. The snake that we saw sleeping in a recess in the wall of the main vent during the morning was still there but had shifted to an attacking position. The Yellow-bellied Puffing Snake (*Pseustes s. sulphureus*) of the Colubridae family fed on unsuspecting bats that came too close. Its keeled scales enable it to scale the rough limestone walls searching for a suitable crack in the vertical rock face. It is frequently seen in the same spot day in, day out.

The following are our observations. At 6:00 p.m. one small black bat left the cave. At 6:04 p.m. a bigger rust-coloured bat came out. Nothing until 6:21 p.m., we estimated that they were coming out at the rate of four bats per second (sec). After one minute, the rate increased to about eight bats per sec and four minutes later they were spewing forth in droves at the estimated rate of 100 per sec. This rate kept up for 20 minutes. The bats flew up the chimney (about 10m in diameter as noted earlier) anti-clockwise and went off in all directions once clear of the hole. Most though raced off down and across the slope. Interestingly, the smaller bat species, which cannot fly as quickly as the larger ones, did not jump into the fast lane spiral. They exited the hole by clinging to the sides and flying about one metre at a time anti-clockwise until they cleared the vent and were able to fly into the forest. At 6:56 p.m. we checked the activity at the Walk-in Chamber and the exit rate was about 4 bats per sec. At 6:57 p.m. we checked the other chimney and the exit rate was about 12 per sec. Back at the main chimney the traffic was reducing as evidenced by fewer and fewer small bats clinging to the walls. The snake was no longer in an attacking position and seemed to be curling up for the night suggesting that it had already had its meal. By 7:02 p.m., the exodus was down to 15 per sec and by 7:17 p.m. it trickled to 2 per sec. A few bats were returning to the interior. At 7:26 p.m. we concluded our observations and returned to the vehicles.

A few White-tailed Nightjars (*Caprimulgus cayennensis*) were seen on the roadway. Another great excursion ended with a huge bright full moon accompanying us on the return journey.

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Members at the Trig. Mark at the summit of Mt Tamana

Photo: Dan Jaggernauth

MANAGEMENT NOTICES

WE STILL NEED AN OFFICE: CAN YOU HELP ??

We're looking for :

- ♦ Very cheap rent or purchase! (we would be willing to renovate an old building or share offices).
- ♦ Office location in, or on outskirts of, Port of Spain (a house would also be suitable)
- ♦ Room for 1-2 offices, library/educational room/meeting room/t-shop, workroom (ideally!!)

OFNC Badges

Our sister organization, the Ottawa Field Naturalists' Club, has donated badges to the TTFNC. The cost is TT\$5.00 each.

A limited supply is still available.

WELCOME NEW MEMBERS

Danielle Tom Wing

Cindy Lau (life membership)

CCA CONFERENCE

The Caribbean Conservation Association's Conference was held in November 27-30 2002. Three Trinidadians were appointed to the Board. Carrall Alexander for the TTFNC, the CNIRD and Marcia Tinto (an individual).

Publications

THE PALM BOOK OF TRINIDAD AND TOBAGO INCL. THE LESSER ANTILLES by Paul L. Comeau, Yasmin S. Comeau and Winston Johnston

The TTFNC is accepting pre-publication orders for the above named book at the discounted price (25%) of TT\$200.00. The final cost (exclusive of shipping and handling) will be US\$40.00. For additional information visit the website at <http://www.wow.net/ttfnc>.

Members are also asked to note that copies of the *Native Trees of Trinidad and Tobago* are still available for purchase at TT\$80.00 per copy.

Issues of the *Living World Journal* from 1892—1896 are now available on 2 CD volumes.

NOTICE OF ANNUAL GENERAL MEETING

Dear Members,

You are hereby notified that the ANNUAL GENERAL MEETING of the TRINIDAD AND TOBAGO FIELD NATURALISTS' CLUB will be held on January 9, 2003 at the Audio-Visual Room, St Mary's College, Frederick Street, Port of Spain from 5:30 p.m.

The Agenda is as follows:

1. Treasurer's Report
2. Adoption of Accounts
3. Committee Report by the President
4. Secretary's Report
5. Election of Officers and Members of the Committee for the year 2003
6. Appointment of Auditors
7. Amendment of Rules of the Trinidad and Tobago Field Naturalists' Club under Article 38 — Proposal to 1) either increase the cost of life membership from TT\$500.00 to TT\$2000.00 or 2) to completely remove the option of life membership.
8. Any other business

Any member wishing to have any business discussed at this meeting may advise the Secretary in writing, at the address below, at least seven (7) days before the date of the meeting, giving particulars of the subject to be discussed.

The Secretary
c/o P.O. Box 642
Port of Spain.

Yours sincerely

Carla Smith
Secretary

Trinidad and Tobago Field Naturalists' Club

BOOK REVIEWS

FEATHERS AND WHAT GOES WITH THEM

Steven Hilty 1994. **Birds of Tropical America**. Shelburne, Vermont:
Chapters 304 pp. ISBN 1-881527-56-5 pb US\$13

I will never be much of an ornithologist, much less a bird watcher. Shocking as it must be to readers of these pages, I have difficulty taking uncooked birds seriously, and to me the work of the Rare Bird Committee is about as exciting and meaningful as a cricket match or the sex life of ferns. In all my life I have probably read no more than five books about birds. This is the one I remember.

Subtitled A Watcher's Introduction to Behavior, Breeding and Diversity, Hilty's book is about the living bird in its neotropical environment. It is a physically attractive book, with wonderful line drawings by Mimi Wolf. As always, it is a real pleasure to read natural history from someone who combines a deep knowledge of and concern for the subject with a strong, clear style of expression, all rooted in personal experience.

This personal rooting means that the book is strongest where it deals with areas best known to the author, especially the Andes. The 19 chapters are about evenly divided between those treating particular groups of birds (e.g. "Finding a Needle in the Haystack: A Vulture's View of Paradise") and those on broader themes (e.g. "Tropical Travelers: Migration Within the Tropics").

What makes *Birds of Tropical America* so outstanding is the way these two kinds of chapters are one. Most authors would open with some chapters on general themes, followed by a series of chapters on the particulars, perhaps ending with an overview chapter or one on conservation. There is nothing wrong with this straight-forward approach, but Hilty has ingeniously managed to rise above it. The general chapters rely on specific examples, and each of the particular chapters uses a group of birds in the service of a broader topic. A nice illustration of this is seen in the title of the vulture chapter mentioned above.

This is probably not the very last bird book I will ever read. After all, I have about 30 years of literate life left, and there should be another irresistible book out there about living, uncooked birds. But maybe not. I'm glad I read this one.

Christopher K. Starr
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THE SNAKES OF TRINIDAD AND TOBAGO. Hans E.A. Boos. 2001. Texas A&M University Press, College Station, Texas. ISBN 1-58544-1167-3. 270p. \$47.95 (cloth). –

*But Brother; the snake, the Macajuel, the laziest isn't he
He can swallow you in the forest quite easily.*

The poem quoted above (the macajuel is a *Boa constrictor*) is from Boos' book and it exemplifies the great charm of the volume. Sure, the book has the requisite color plates and black and whites (48 and 50, respectively) and species descriptions of all the taxa, but the uniqueness comes in the folklore found throughout. These are stories in the introduction, species accounts, and in the last chapter on snakebite. The folklore on snakes in Trinidad and Tobago is rich, and Boos does a great job of making it an excellent read. This is the first of three books on the Trinidad and Tobago herpetofauna. The other volumes will cover lizards, amphisbaenians, and crocodilians, and amphibians. If these other two are as rich in folklore then this could be a successful series.

It seems that one of the goals common to books on snakes is to somehow remove or at least reduce the evil stigma associated with these organisms, and from this new understanding derive hope that indiscriminate killing of snakes will cease. This book is no different in that regard. As Boos puts it, "In an emerging generation with attention focused on the television screen and the Internet, residual superstitious fears may be allayed; it is on this new generation that survival of our natural world and its inhabitants will depend. Snakes, demystified and demythified, become fascinating, unique creatures worthy of a closer look, and this may be their salvation. "The demystification is clearly aimed at island locals, hence the folklore, but the goal is globally appropriate."

Beyond the lore, the book recounts the history of herpetology, on the two islands in the introduction, and species accounts fill most of the remainder of the book. The snake assemblage on Trinidad and Tobago is South American (not Antillean) with a couple of endemic species. The accounts vary somewhat in content, but in general there are lists of specimens (examined?), description, range, and local names. Some of the local names are quite catchy. My favorite name is "ground puppy" for *Leptotyphlops albifrons*, but close competitors are "silent death of the black night" for *Lachesis muta* and "jumbo jocko" for *Boa constrictor*. The accounts also contain natural history, taxonomic notes, and folklore. At the start of each family section there are head scale drawings of varied quality, with only the colubrid head accompanied by a key to the scale names.

There are no synonymies, except for a peculiar one for *Erythrolamprus bizona*. In the synonymy and in the taxonomic history, it seems the author was unaware of a key paper on the species by Dunn and Bailey (1939). In a comment on what species a specimen of *Erythrolamprus* might be, Boos wrote, "In 1057, *E. bizona* may have been an unlikely candidate, as it had been described only in a very old paper by Jan (1863), as a variety of *E. aesculapii*." The accounts do not include locality maps, but instead localities refer back to a single map. Although these may be small criticisms from a systematist, they in no way detract from the goals of the book. The book in general is well written, clean, and accessible to the lay herpetologist.

The last chapter on snakebite (Snakebite Antidotes and Anecdotes) is marvelous. I am not going to spoil the contents by repeating any antidotes or anecdotes here. Some readers may laugh at such wild antidote lore, but such stories abound everywhere there are snakes. For example, in the great state of Louisiana an old Cajun treatment for a cottonmouth bite is to drink swamp water. As noted above, perhaps the main goal of this book is education, especially of Trinidad and Tobago locals. The book does this well, but the volume is worthwhile for herpetologists anywhere.

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CALL FOR PAPERS FOR THE 2003 ISSUE OF LIVING WORLD

The 2002 issue of Living World should be out in November, 2002. We are now looking forward to the next issue. **Deadline for the submission of articles for the 2003 issue is February 1, 2003.**

I wish to call members' attention to the new section titled "Nature Notes". If you have any interesting observations on any aspect of our natural history for publication, please forward these to any member of the Editorial Committee (Elisha Tikasingh, Nigel Gains, Paul Comeau and Graham White) and note the deadline. Articles for this section should not be more than one printed page.

The Editor

