THE FIELD NATURALIST

BULLETIN OF THE TRINIDAD AND TOBAGO FIELD NATURALISTS' CLUB

SECOND QUARTER OF 1995

CLUB EVENTS FOR THIS QUARTER

PROPOSED FIELD TRIPS

Sunday 30 April 1995	Oropuche (Cumaca) Cave	Trail Guide #20
27-28 May 1995 (Camp)	Little Tobago	Trail Guide #42
Saturday 10 June 1995		
(Night trip in view of moon-phase)	Aripo Savanna,	Trail Guide #24

Tobago
27-28 May 1995 (Camp)
Joint Trinidad and Tobago trip — Little Tobago, — Trail Guide #42

Other field trips will be determined at the monthly meeting preceding the field trip.

LECTURES FOR THIS QUARTER

30 April 1995	Stanley Temple (Visiting Professor, University of West Indies) SUSTAINABLE DEVELOPMENT
11 May 1995	Grace Sirju-Charan (University of the West Indies) Hamid Farabi (University of the West Indies) Nasser Mustapha (University of the West Indies) Stanley Temple (University of the West Indies) PANEL DISCUSSION ON SUSTAINABLE DEVELOPMENT
08 June 1995	Victor Quesnel (The Trinidad and Tobago Field Naturalists' Club) NATURAL HISTORY IN YOUR BACKYARD

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Telephone inquiries should be made to the Secretary or the Tobago Branch President.

FROM THE EDITOR

We are pleased to announce that our Club won the medal for 2nd place in the Educational Display Category of this year's Horticultural Exhibition. Thanks to the efforts of Ms. Muriel Pierre who is the driving force behind our entries to this annual event. Our gratitude to the dedicated band of helpers (you know who you are). Thanks also to Frankie Farrell and Daphne Pierre-Smith for their research, to our artist, Maureen Ottier for her beautiful Charcoal drawing and to all those who assisted in any way.

I must apologise for the delay in the production of the second bulletin of this year. I promise it will not happen again.

LECTURES

09 February 1995

Peter R. Bacon (University of the West Indies), THE WETLANDS OF TRINIDAD

The term "wetland"is used commonly to include (a) marine/coastal swamps, such as the familiar mangroves and (b) freshwater swamp forests and marshes, such as those at Nariva; but should also include (c) rivers, their floodplains and estuaries and (d) man-made environments such as fish ponds, reservoirs and rice paddies. All of these are land-based ecosystems subjected to inundation by saline, brackish or fresh water for some part of the year. They support "hydrophytes" which are plants adapted to wet situations and a diverse aquatic fauna. In Trinidad, we have a wide range of wetland types and these include some of the richest habitats in terms of their biodiversity.

Approximately 7,000 ha of mangroves occur at some 35 sites around the coast, with the largest area in Caroni Swamp. Although looking rather uniform, mangrove swamps are composed of several distinct communities like Red Mangrove Forest, Black Mangrove Woodland and Scrub Mangrove. Their development is related to the geographic situation, which ranges from estuarine (Caroni Swamp) and lagoonal (Nariva River) to basinal (Los Blanquizales); with tall forest where there is free tidal exchange and stunted trees where isolation leads to high salinities, as at the Chacachacare Salt Pond.

The mangrove database is poor for Trinidad; consisting largely of a list of sites with their areal coverage and detailed ecological studies of Caroni and some other sites dating from the late 1960's. There is very little up-to-date information on mangrove area status and very few documented observations on the fauna of any site.

The best known freshwater wetland is Nariva Swamp, although there are several other smaller ones. Nariva differs from Caroni in having a much greater number of plants (319 macrophyte species in 15 communities), expressed as a complex mosaic of vegetation patches, and has the largest fauna reported for any local wetland site (614 species). It must be noted, however, that much of the fauna remains unknown, as several animal groups have not been investigated. It should be noted also that the most recent survey of Nariva Swamp was published as long ago as 1979 and, as there has been intense human activity in Nariva in recent years, a status report on the biota is required urgently. In a similar fashion, the flora and fauna of the most of the man-made wetlands, such as the Caroni Arena Reservoir, remain virtually unknown.

A number of problems exist in relation to protection of Trinidad's wetlands and their contained plants and animals; some of which have been aired by the media in the last few years. They largely concern increasing human impact and the associated losses of areas and species. For example, because of difficulties in policing the Caroni Swamp the Wildlife Section was forced to make most of it a protected area. This was supposed to curtail un-regulated exploitation of oysters, fish and wildfowl but actually resulted in an unpleasant conflict situation with resource users. The exploitation continues, but the people who need to use the resources now do so illegally with the result that Wildlife has even less control. The Ministry of Health's ban on collecting shellfish has added to this situation and when the ban is lifted, as it is likely to be very soon, there will be a mad scramble for oysters that will be almost impossible to control. In Caroni also the Scarlet Ibis hardly ever breed as they once did; going to Venezuela to rear their young. This probably results from loss of associated freshwater marsh habitats on the eastern side, from which the parents collect food on which to feed the juveniles. We do not know what caused this change in behaviour but there appears to be value in trying to restore the required breeding-season habitats if our ibis populations are to be maintained in Caroni Swamp. The question remains, can we do this successfully.

Illegal and un-regulated rice culture in Nariva Swamp, combined with production of melons and vegetable crops during the seasonal draw-down period, is destroying large areas of natural vegetation, altering the hydrology and reducing wildlife. Nobody appears to be documenting agricultural encroachment and we have little information on the ecological impacts it causes. Further to this, we do not have enough information to develop any type of management plan that will ensure wildlife protection while resource use continues. As in the Caroni situation, it is essential that we get to grips with the human element and learn to work with the user groups in protecting wetlands. There is no doubt that the future of the remaining natural ecosystems in Nariva lies in some form of co-management arrangement which relies heavily on cooperation with the local communities. Preliminary investigations on developing ecotourism as a commercial alternative to rice culture suggest that Nariva may not have as much potential as Caroni (where a successful tour business already exists), but this needs further study.

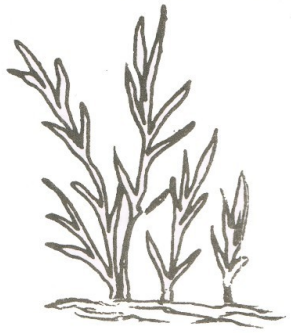
Another possible relates to the impacts of predicted sea level rise on Trinidad's coastal wetlands. One theory suggests that mangroves may completely disappear early in the next century. It must be remembered, however, that mangroves occur under very different conditions around our coast, in estuaries, lagoons and behind sand barriers, so these systems may differ considerably in their response to increasing inundation. We have far too little information on water levels and other features of our coastal wetlands, but it would be useful to be able to predict future changes more accurately. Nariva Swamp, for example developed its complex ecology over many centuries as sea levels rose and fell. It is most unlikely to disappear if sea level rises further, but its ecology might change considerably. Now that we are trying to manage the swamp, such changes could be of importance.

There is great scope for field observations and data recording to determine the status of Trinidad's wetland habitats and the plant and animal populations, if they are to be conserved and managed for the benefit of all sectors of society. We urgently need a better understanding of their structure and ecology.

09 March 1995

Lucy St.Omer (San Jose State University, California) COASTAL ENVIRONMENTS ALONG THE CALIFORNIA COAST

A slide presentation by Dr. Lucy St.Omer introduced Field Naturalists to various coastal environments along the California coast. Three types of coastal communities were examined - coastal scrub, rocky inter tidal coast and saltmarsh communities. Comparisons of habitat differentiation within the communities were made. The biotic and abiotic components of these communities were examined together with the natural stresses which organisms must adapt to, in order to survive. For rocky shore organisms, structural and physiological adaptations to desiccation, oxygen content and salinity were described. The negative effects of hydrologic changes on habitats in saltmarsh environments were examined together with present day efforts for restoration. Coastal scrub areas with the accompanying macroflora and fauna were portrayed as areas where humans continue to enjoy wildlife but also as natural habitats that remain protected and preserved. Problems of management and preservation associated with the various environments were examined.The role (specific actions taken) of organizations and associations in restoring damaged environments and managing unspoilt preserved communities were also examined.



FIELD TRIP REPORTS

FIELD TRIP TO ERIN SAVANNA

By: Dan L. Jaggernauth

23 October 1994

Our field trip for October 1995 took us along the Buenos Ayres Road where we turned off at Spring Trace, passed the Forestry's buildings and headed towards the Erin Savanna. Parking our vehicles on a hill, we set off on the trip. Amidst scattered showers, the sunshine pierced through the trees. The trail descended and after a few minutes we

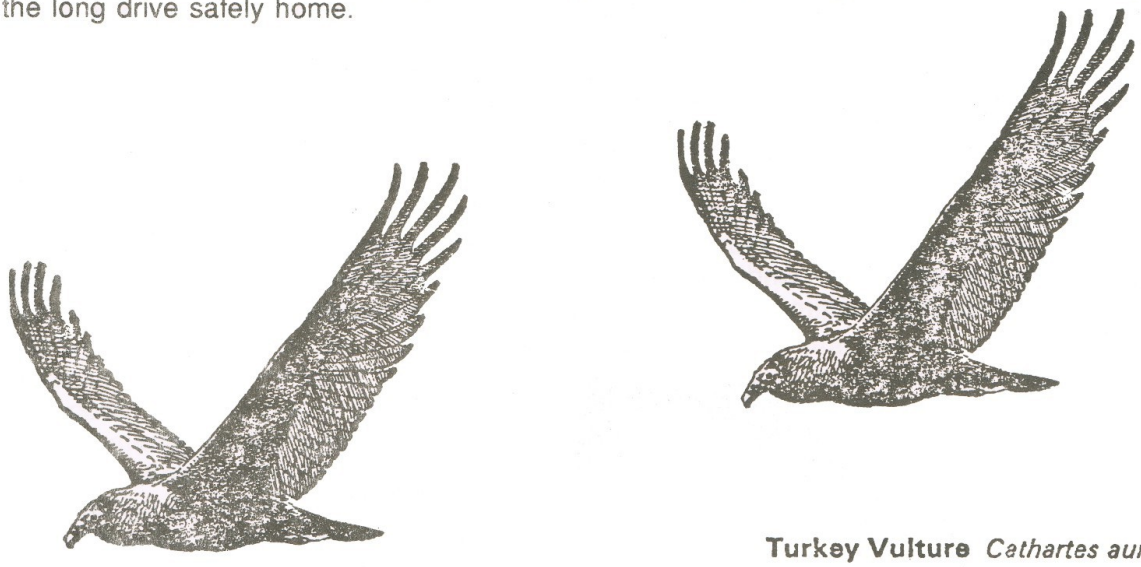
climbed uphill reaching a section of the savanna. All around us were *Pinus caribaea* , or Caribbean pine, recently planted by the Forestry Division. Hundreds and maybe thousands, some of which were clearly overtaking the "savanna serette," grasses and sedges. Field Naturalists members were enraged and very concerned about the beginning of the destruction of the savanna's natural vegetation. We then agreed to take positive action and contacted the Forestry Division to see what measures may be taken to prevent irreversible damage to the unique ecosystem of the Erin Savanna.

After taking many photographs of *Pinus caribaea* we began walking back to the main trail. On our way, Christopher Starr indicated a nest of the marabunta which housed a species *Polybia rejecta* and hundreds were on the outside of the nest. Walking carefully through the main trail we came across *Scleria bracteata* (razor grass). The much dreaded grass did not create any problems as Field Naturalists were sartorially prepared. Continuing uphill we arrived at another section of the Erin Savanna. Victor Quesnel was overjoyed to see this section in its natural state. Though the sun was hot, cool breeze blew across the open savanna. Some palm trees could still be seen at the forest's edge. Some members, including Professor Stanley Temple, went further down, doing their research.

As we took lunch, Victor Quesnel emphasized the need for us to write letters to the Newspapers as a means to stop the Forestry Division from planting the *Pinus caribaea* in this section of the savanna. He said we must be committed to protect the remnants of the savanna and the rich biological diversity that goes with it. From where we sat, we saw the Buenos Ayres quarry where red stones are widely used in road construction around the area. We walked further down to a stream and then back to our vehicles and drove to another trail.

At this site pine trees had recently been harvested and there was a lot of destruction. The roadway was damaged, small trees were uprooted, top soil was eroded and the forest floor was devastated by the tractor that operated there. One speculates what sort of criteria was used by Forestry Division in harvesting this pine lumber. Many logs lay aside in a drain, rapidly deteriorating. Members expressed feeling of intense disappointment and discouragement at what they had seen. Member Compton Gonsalves, seeing us depressed about the destruction, decided to elevate our spirits and using an open area where the pine trees had been cleared, did a dance for us which he called the "Erin Savanna Samba."

Walking back to the vehicles, our Security continued his watchful eye for our safety. Special thanks to Murray Guppy for making the security arrangements. Then we began the long drive safely home.



Turkey Vulture *Cathartes aura*

Note

On 23 February 1995 three Forestry officers and three members of the Club journeyed to Erin Savanna in response to the Club's expressed concern regarding *Pinus caribaea* being planted in the scientific reserve of the Savanna.

Arriving at the Forestry building at 09:30 we awaited Forestry officials. They arrived at 09:45 and we drove through the reserve area and parked our vehicles. Both sides knew the purpose of our visit as we headed for the savanna. Reaching the reserve, we focused our attention on the *Pinus caribaea*. The Forestry officers were very cooperative and were aware of the error made by planting pine trees in the reserve. They apologised and said the trees were planted by a directive from officers of the Cap-de-Ville pine nursery who had not obtained permission from Forestry Division in Port of Spain. The officers on the trip were knowledgeable about the flora and fauna in the reserve and aware of the consequences of the pine trees remaining there. When they asked for our proposals we suggested that the trees be removed over a two to three year period and sold as Christmas trees in order to defray expenses. We also indicated that the Trinidad and Tobago Field Naturalists' Club would help and, in addition, seek assistance from voluntary organizations.

We walked back to the main trail and journeyed to the other section of the savanna. Upon reaching this untouched natural reserve, one of the Forestry officers indicated it was his first trip to this unique savanna. Our President then asked if they planned to plant *Pinus caribaea* here, they assured us "No pine trees will ever be planted on this section of the savanna," adding that they also would prefer it to remain in its natural state. As we collaborated with the officers on this very sensitive issue, I felt that good sense would prevail. As to our wishes to have the trees removed, one of the Forestry officers, Seuram Jilmit, indicated he had to write a report of the trip and our proposals, to be presented to his superiors; the Club would then be contacted. He also recorded our names, addresses and telephone numbers.

As we were about to leave the last natural remnants of the savanna, I reminded the Forestry officers "We don't want the *Pinus caribaea* here," to which the response was "Have no fear." Then we walked back to our vehicles and drove safely home.

WHAT IS THE CONDITION OF THE SAMAN IN T&T ?

By Chris Starr

Since Clyde Chrichlow raised his concern about declining numbers of Saman trees a few months ago, I have tried to reach my own view of their condition. Non-rigourous observation suggests that Samans are still abundant in Trinidad. However, most of the trees that I see look quite mature. Furthermore, the few young ones that I have noticed all seem to be in accidental, weedy situations, as if no one is intentionally planting or cultivating Samans. Although the species seems to be in no immediate danger then, it might be good to assess its condition and look to the situation in 20 or 30 years. Perhaps some of the more botanical members would like to comment on this.

ANHINGA

Also called darters or snakebirds, anhingas impale fish under the water on their spearlike beaks. Long sinuous necks and webbed feet help them in their fishing.

Dan J

Pinus caribaea Erin Savanna

Muriel Pierre

Spicy and Other Little known Facts-TandT Field Naturalists' Display-Horticulture Exhibition 1995

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