



(4) The mesophytic flora of the mountain forest is characterized by several species of tree ferns; low ferns; mountain cabbage palm: the spiny palm *Bactris*; species of *Carludovica*; the Spanish ash (*Inga laurina*) ; the tall gum elemi tree (*Dacryodes*); the burwood (*Sloanea*); the wild mango (*Clusia*); the rosemary tree (*Podocarpus*); species of *Miconia*; and several of *Eugenia* and *Psychotria*, epiphytic orchids, aroids and bromeliads, and several species of *Pipe* and *Peperomia*.

(5) The vegetation on the mountain summits is characterized by the equitant and flat-leaved sedge (*Machaerina*); the tropical mountain violet (*Viola stipularis*); species of bromeliad genera (*Acclimoea*, *Pitcairna*), bedstraw (*Relbunium*), staghorn (*Lycopodium*) and ferns of the genera (*Acrostichum*) and (*Gleichenia*) see *Appendix 2* for in depth list of plants found within the Federation..



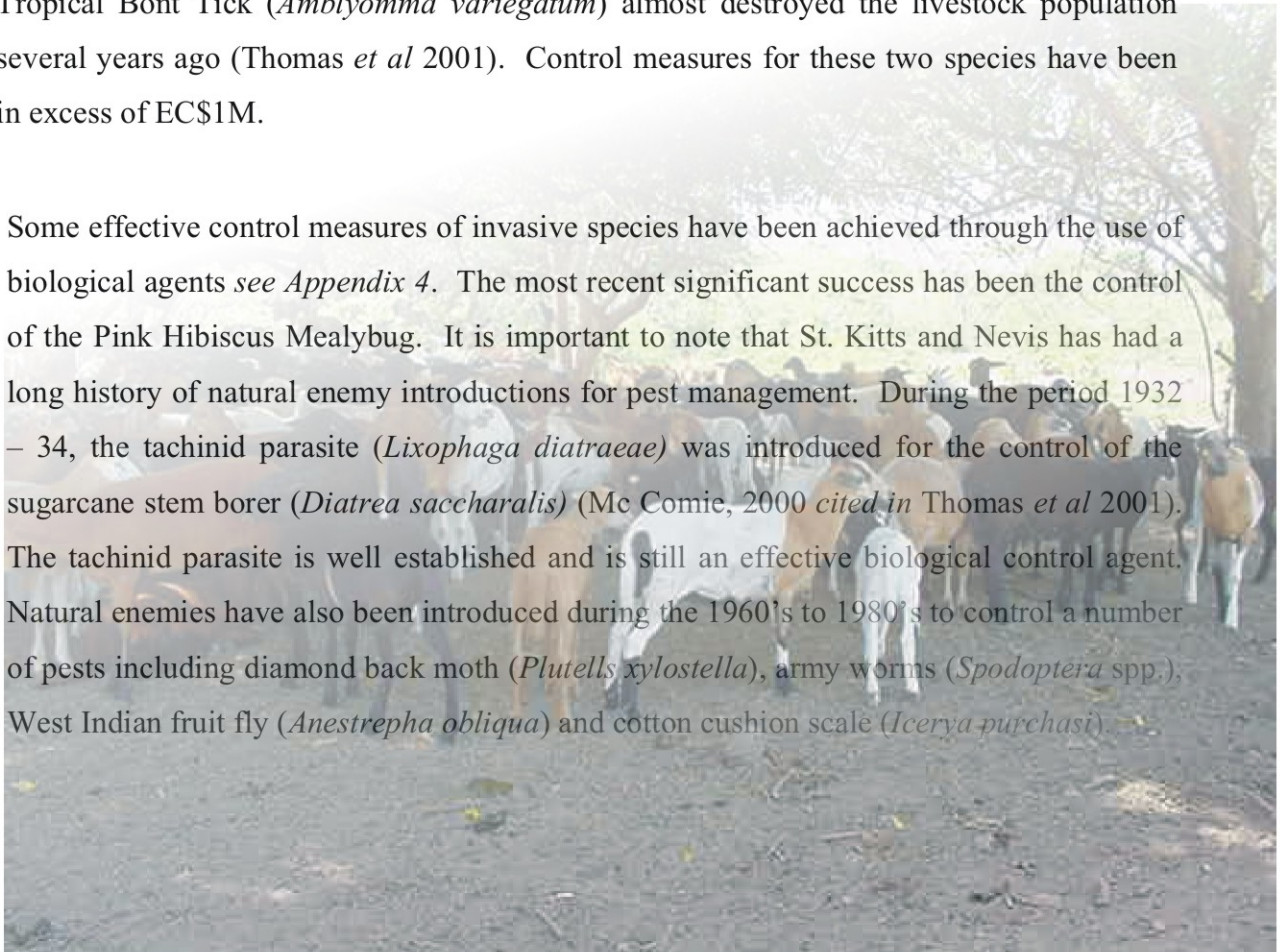


HARMFUL INVASIVE AND INTRODUCED SPECIES

Invasive species have adversely affected the biodiversity in agriculture *see Appendix 3*. Many of the invasive species have threatened the production of several crops including papaya and varieties of some crops including tomato. The specific route for the introduction of the invasive species is generally not known. However these species have been introduced with the entry of plant and animal material, by human movement or tropical storms.

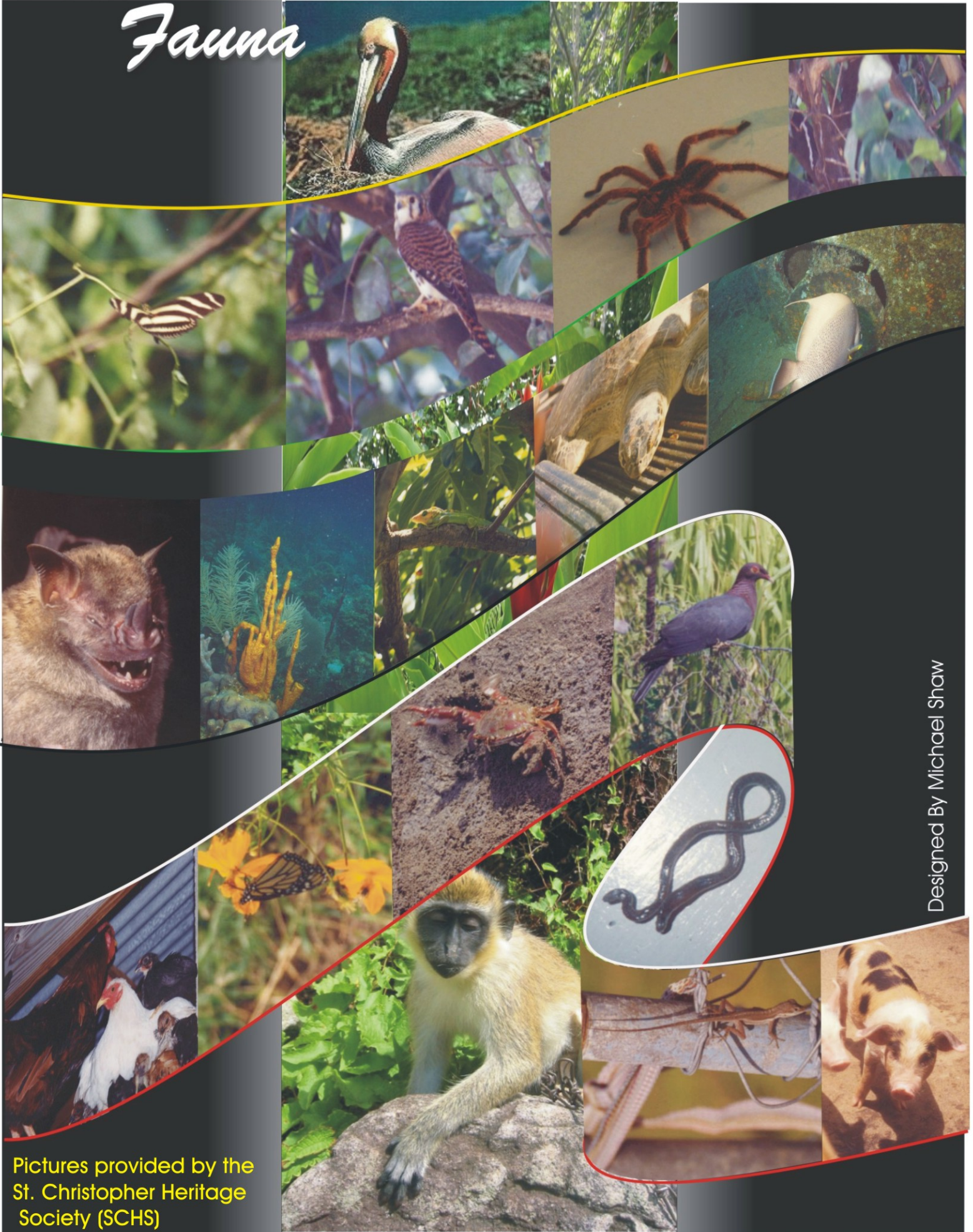
Recent introductions of invasive species have had severe economic impact. The introduction of the Pink (Hibiscus) Mealybug (*Marconellicoccus hirsutus*) in 1998 resulted in high financial losses to farmers and threatened agricultural biodiversity. Similarly, the Tropical Bont Tick (*Amblyomma variegatum*) almost destroyed the livestock population several years ago (Thomas *et al* 2001). Control measures for these two species have been in excess of EC\$1M.

Some effective control measures of invasive species have been achieved through the use of biological agents *see Appendix 4*. The most recent significant success has been the control of the Pink Hibiscus Mealybug. It is important to note that St. Kitts and Nevis has had a long history of natural enemy introductions for pest management. During the period 1932 – 34, the tachinid parasite (*Lixophaga diatraeae*) was introduced for the control of the sugarcane stem borer (*Diatrea saccharalis*) (Mc Comie, 2000 *cited in* Thomas *et al* 2001). The tachinid parasite is well established and is still an effective biological control agent. Natural enemies have also been introduced during the 1960's to 1980's to control a number of pests including diamond back moth (*Plutella xylostella*), army worms (*Spodoptera* spp.), West Indian fruit fly (*Anastrepha obliqua*) and cotton cushion scale (*Icerya purchasi*).



ST. KITTS AND NEVIS

Fauna



Pictures provided by the
St. Christopher Heritage
Society (SCHS)

Designed By Michael Shaw



The fauna consists of birds, reptiles aquatic species and mammals,. These may be native or migratory. Migratory species defines those which breed in other islands of the Caribbean or its bordering continental areas and migrate to the habitats of the Federation when northern temperate weather urges them to seek a lternative winter season food and shelter.

BIRDS

Bird watching in the Federation is a recreational activity. The presence of over 130 species inclusive of migrants have been reported *see below* for examples.

COMMON NAME

SCIENTIFIC NAME

SEABIRDS

Brown Pelican
Brown Booby
Magnificent Frigatebird
Laughing Gull
Sooty Tern
Least Tern
Roseate Tern
Royal Tern
Brown Noddy

Pelecanus occidentalis
Sula leucogaster
Fregata magnificens
Larus atricilla
Sterna fuscata
Sterna albifrons
Sterna dougalli
Thalasseus maximus
Anous stolidus

SHOREBIRDS

Great Blue Heron
Little Blue Heron
Green Heron
Yellow-crowned Night Heron
Snowy Egret
Cattle Egret
Common Gallinule
Caribbean Coot
Lesser Yellowlegs
Greater Yellowlegs
Common Stilt
Ruddy Turnstone
Willet
Black-bellied Plover
Thick-billed Plover
Snowy Plover
Rufous-naped Plover
Semipalmated Plover
Sanderling
Semipalmated Sandpiper
Spotted Sandpiper
Least Sandpiper
Lesser Scaup
Blue-winged Teal

Afdea herodias
Florida caerulea
Butorides virescens
Nyctanassa violacea
Egretta thula
Bulbulcas ibis
Gallinula chloropus
Fulica caribaea
Tringa flavipes
Tringa melanoleuca
Himantopus himantopus
Arenaria interpret
Catoptrophorus semipalmatus
Squatarola squatarola
Charadrius wilsonia
Charadrius alexandrinus
Pagolla wilsonia
Charadrius semipalmatus
Crocethia alba
Calidris pusilla
Actitis melanoleuca
Calidris minutilla
Aythya affinis
Anas discolors



COMMON NAME	SCIENTIFIC NAME
Terrestrial Birds	
Tree Duck	Dendrocygna spp.
Rock Dove	Columba livia
Red-necked Pigeon	Columba squamosa
Zenaida Dove	Zenaida aurita
Ground Dove	Columbina passerina
Bridled Quail Dove	Geotrygon mustacea
White-crowned Pigeon	Columba leucocephala
Peregrine Falcon	Faico peregrinus
Kestrel	Faico sparverius
Red-tailed Hawk	Buteo jamaicensis
Osprey	Pandion haliaetus
Yellow Warbler	Dendroica petechia
Black-whiskered Vireo	Vireo altiloquus
Black-and-white Warbler	Mniotiltavaria
Parula Warbler	Parula americana
Prairie Warbler	Dendroica discolor
Hooded Warbler	Wilsonia citrina
American Redstart	Setophaga ruticilla
Veery	Catharus fuscenscens
Northern Waterthrush	Seiurus novaboracensis
Louisiana Waterthrush	Seiurus motacilla
Scarlet Tanager	Piranga olivacea
Northern Oriole	Icterus galbula
Belted Kingfisher	Megaceryle alcyon
Lesser Antillean Bullfinch	Loxigilla noctis
Black-faced Grassquit	Tiaris bicolor
Caribbean Elaenia	Elaenia martinica
Stolid Flycatcher	Myiarchus stolidus
Grey Kingbird	Tyrannus dominicensis
Bannanaquit	Coereba flaveola
Lesser Antillean Pewee	Contopus latirostris
Pearly-eyed Thrasher	Margarops fuscatus
Scaly-breasted Thrasher	Margarops fuscus
Trembler	Oncocerthia ruficauda
Antillean Crested Hummingbird	Orthorhynchus cristatus
Purple-throated Carib	Eulampis jugularis
Green-throated Carib	Sericotes holosericeus
Purple Martin	Prognathobis
Cliff Swallow	Petrochelidon pyrrhonota
Barn Swallow	Hirundo rustica
Collared Swift	Streptoprocne zonari*
Black Swift	Cypseloides niger
Guinea Fowl	Numida meleagris
Peacock	Paw sp.

In order to maintain the biodiversity of avifauna on St. Kitts and Nevis protection to the various habitats has to be made a priority within current local development. These areas would include vegetation (forests), ponds (fresh water and brackish water) and the coastal areas. *Appendix 5* lists bird species of special conservation concern on St. Kitts and Nevis.



POULTRY (Avian)

The domestic chicken has been the most important form of poultry production in the Federation. It is the only indigenous species of poultry. The chicken industry has experienced major changes over time. The disappearance of the ‘*creole*’ chicken from the yards of many rural families is related to increased exposure to imported chicken. Breeds of poultry for egg production are wholly imported, with the Leghorn being the dominant strain.

Ducks are primarily kept by a few families in their backyard and are reared semi-intensively. Their numbers are generally low but may reach as high as fifty. Though they are not raised commercially, they do contribute in a small way by providing eggs and meat. It is not unusual for persons who rear ducks to slaughter for special and festive occasions eg. Christmas season. Agriculture and Fisheries Census (2000) recorded a total of 203 ducks in the Federation on 22 holdings.





Turkey is not a popular form of poultry reared on St. Kitts but is the case on Nevis. On St. Kitts there are just a few rural families raising a few turkeys, primarily as pets in backyard operations.

REPTILES-MARINE

Both St. Kitts and Nevis have several species of marine reptiles recorded (Horwith and Lindsay 1999), these are: the Green Turtle (*Chelonia mydas*), Hawksbill Turtle (*Eretmochelys imbricata*) and the Leatherback (*Dermochelys Coriacea*). All these have been listed as endangered species.



Figure 8: **Leatherback Turtle**(*Dermochelys Coriacea*)

Source: www.guardianlife.co.tt/glwildlife/neckles.html



*Figure 9 Hawksbill Turtle
(Eretmochelys imbricata)*

Source: www.guardianlife.co.tt/glwildlife/neckles.html



*Figure 10: Green Turtle
(Chelonia mydas)*

REPTILES-TERRESTRIAL



*Figure 11: Red legged tortoise
(Geochelone carbonaria)*

The red-legged tortoise is present in the wild on St. Kitts but it fights a hard battle to survive due to the presence of the mongoose that prey on its nested eggs.



Very common and endemic to the Federation is the Ground Lizard (*Ameiva erythrocephala*) along with the Anolis Lizards which are the Green Lizard (*Anolis bimaculatus bimaculatus*) and (*Anolis wattsi schwarti*) (Horwith and Lindsay 1999). Four (4) species of geckos are known to be very common in the Federation. These are the Common Woodslave (*Hemidactylus mabouia*), the Giant Woodslave (*Thecadactylus rapicaula*), (*Sphaerodactylus sabanus*) and (*Sphaerodactylus sputator*).



Figure 12: **Green Lizard** (*Anolis bimaculatus bimaculatus*)
Source: Lellouch (2000)

Generally, most residents are of the opinion that no snakes are present on St. Kitts and Nevis due to the presence of the mongoose but there are in fact snakes on both islands (Horwith and Lindsay 1999).



Source: <http://www.guanapark.org/ecology/fauna>
Figure 13: **Blind Snake** (*Typhlops monastus geotomus*)



A blind snake (*Typhlops monastus geotomus*) is common for both islands but sightings are rare (Horwith and Lindsay 1999). For St. Kitts alone there is a second morph of blind snakes that are silvery-grey as opposed to the brownish pink colour of *T. monastus*. Further, there is a preferred difference in habitat for both species. *T. monastus* prefers the wetter areas on the slopes in the rain forest, while the silvery-grey snake is found in the drier coastal areas (CCA 1990). Recorded for both islands is a Racer snake (*Alsophis rufiventris*), recent reports indicate that there are occasional sightings of this small brown snake in the Northeast coast of St. Kitts.



Figure 14: **Racer snake** (*Alsophis rufiventris*)

Source: www.kingsnake.com/westindian

AMPHIBIANS

The Giant or Marine Toad (*Bufo marinus*), was introduced into the Federation in an attempt to control the grey backed cane beetles. Introduced into many other Caribbean islands, its additional purpose was to be a biological control agent for rats and mice



Figure 15: Giant or Marine Toad (*Bufo marinus*)
Source: <http://centralpets.com/pages/photopages/reptiles/frogs/>

Endemic to St. Kitts and Nevis is a miniscule brown Tree Frog (*E.johnstonei*). This amphibian is primarily found in moist forests or similar habitats in bromeliads.



Figure 16: Brown Tree frog (*Eleutherodactylus johnstonei*)
Source: www.vvdailypress.com/living/biogeog

Leptodactylus fallax, known locally as crapaud or Mountain Chicken was native to the Federation according to (Burton 1920 & Merrill 1958 cited in Country Environmental Profile 1991). In recent times it has unfortunately succumbed to the over-exploitation by man and the mongoose for food. In Nevis, the development of the flora on the Four Seasons Resort has brought with it the importation of plants that were fitted into the landscape. This activity has resulted in the accidental introduction of the Cuban Tree Frog (*Osteopilus septentrionalis*) from South Florida.