

**MITIGATIVE MEASURES TO SAVE THE ST. LUCIA
WHITE-BREASTED THRASHER (*Ramphocinclus
brachyurus sanctaeluciae*)**



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January 2005**

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Forward

The St. Lucia White-breasted Thrasher (*Ramphocinclus brachyurus sanctaeluciae*) is one of the most endangered bird species in the world with a global population of approximately 1250 breeding adults (625 breeding pairs). A small population of White-breasted Thrashers, (just over 250 birds or 20% of the world population) lives on the Caravelle Peninsular in Martinique. The remainder lives on the east coast of St. Lucia, between Praslin in the south and Petit Anse in the north.

The majority of the lands with prime habitat of the St. Lucia White-breasted Thrasher is privately owned. However, one of the fundamental principles to save species is to first save its habitat. Without habitat protection the long term survival of any species is in peril. Habitat protection ranks high on the priority list of many international conservation agencies. In St. Lucia the case of St. Lucia White-breasted Thrasher as it relates to habitat protection is one of urgent concern. Unprotected habitats on private hands in coastal areas are usually at the mercy of developers and governments in developing countries, where economic development and conservation are in direct conflict.

The proposed Praslin Bay Resort Development on the 554 acre site which was formerly owned by the Dennehy family is a case in point. This area is home to an estimated 138 breeding pairs of St. Lucia White-breasted Thrashers (276 breeding adults). This amounts to just under one quarter of the world's population. The managing director of DCG properties Limited is prepared to assist in implementing various measures that will mitigate the impacts of the development and ensure the long term survival of the species.

The following mitigative measures are proposed:

-  Habitat protection
-  Habitat restoration
-  Pest control
-  Invasive species control
-  Ongoing research
-  Education

Habitat Protection

To save a species first you must save its habitat. With the entire thrasher habitat under threat from development pressure it is just a matter of time before its remaining habitat is consumed by one form of development or another resulting in total habitat loss and the extinction of the species. However, there is still some hope. Approximately 1000 acres of land adjacent to the Praslin Bay Resort Development is prime St. Lucia White-breasted Thrasher habitat and is home to about 317 breeding pairs.

All concerned parties including the DCG properties Limited, Government conservation agencies (Forestry Department, St. Lucia National Trust, etc.), international conservation agencies eg, Birdlife International, Durrell Wildlife, The Nature Conservancy, RARE, ICBP, WPTI, RSBP, etc., and the land owners should come together to form a trust fund to secure support from funding agencies to create a White-breasted Thrasher Reserve. This is a crucial where the long term survival of the species is concerned. The Reserve will form part of the Government Forest Reserve, with properly demarcated boundaries. There will be regular forest patrols and ongoing research projects similar to the work done to save the St. Lucia Parrot. Habitat protection and the creation of a parrot sanctuary, education and Legislation was the key to saving the St. Lucia Parrot (*Amazona versicolor*) from extinction. The St. Lucia Government through the Forestry Department proved the skeptics wrong when some experts predicted that by the turn of the last century the St. Lucia parrot would become extinct.

Although the St. Lucia White-breasted Thrasher (*Ramphocinclus brachyurus sanctaeluciae*) is the species at most risk in this area there are also other endemic species in this area that will benefit immensely from this initiative. They are : Birds - St. Lucia Oriole (*Icterus laudabilis*), St. Lucia Pewee (*Contopus oberi*), St. Lucia Black finch (*Malanospiza richardsonii*), and St. Lucia warbler (*Dendroica delicata*). Reptiles: St. Lucia Boa Constrictor (*Constrictor orophias*), St. Lucia viper (*Bothrops caribbaeus*), St. Lucia Pygmy Gecko (*Sphaerodactylus microlepis*) and St. Lucia anole (*Anolis luceae*).

DCG Properties Limited has promised to retain as much of the natural habitat as is possible within the development. Selective clearing should be undertaken for the purposes of the various phases of the development.

In the areas for establishment of the golf course it is considered that there will be approximately 135 acres which will be subject to clearance and remodeling of the landscape, wherever possible the surrounding natural vegetation will be retained with substantial additional tree planting around the course, 95 acres of the course will be subject to irrigation from the course sprinkler system.

Fragmentation of habitat is also of concern, some species respond differently to fragmentation however, the developer should as much as possible connect all natural habitat areas to avoid creating Islands or isolated pockets of habitation.

White-breasted Thrashers in the Caravels peninsular in Martinique show some tolerance to people traffic as their habitat is strewn with trails that accommodate several thousand visitors yearly. Birds have been known to nest right on the edge of trails. In St. Lucia the White-breasted thrasher have been found nesting in close proximity to the Castries to Vieux-Fort highway which has busy vehicular traffic. This also shows a certain degree of habituation to noise pollution and human activity.

Habitat Restoration

The maintenance or manipulation of habitats is a major component of wildlife conservation. This component cannot be slighted as some wildlife habitats in St. Lucia are undergoing tremendous changes. These changes are primarily accomplished by man for man's needs: housing development, construction of roadways, agriculture development and hotel development, just to name a few. Man's manipulation of the environment for his needs is the most prevalent factor affecting wildlife habitats and consequently wildlife populations. Often it is not the act of using natural resources, but the way man uses these resources that determine the total impact on wildlife. One of the main objectives of habitat restoration is to provide quality habitat where it has deteriorated, or where a specific habitat component is lacking.

There are areas within the White-breasted Thrasher habitat, where certain sections are deemed unsuitable for the thrashers due to the presence of invasive plant species, open grassland, abandoned gardens, etc. These areas can be restored by planting appropriate plant species or weeding out unwanted species to create a habitat where thrashers can strive. Restoration ecology plays a vital role in species conservation by restoring habitats using native species found in the area that are already adapted to local conditions. These plants provide food and shelter for many animal species whose very existence depends on them.

Pest and Invasive Species Control

Pest and invasive species control rank second after habitat loss as a priority area to save the St. Lucia White-breasted Thrasher. According to a recent report by Birdlife International, alien invasive species threaten 67% of endangered species on Islands. Invasive species are a problem world-wide and a major problem on Islands which are more susceptible than continental ecosystems. Competition and predation by alien species are probably the main reason for the high extinction rates on Islands and the rarity of many endemic species. The fauna and flora of Islands have in many cases evolved without the presence of invasive weedy plants and terrestrial mammals and consequently are severely compromised by introduced species that may be competitively superior.

The impact of exotic species on the native biota is not always easy to evaluate since to monitor any effect one requires data from before, during and after the species have become established. This is further compounded by fact that most islands have suffered the onslaught of dozens or hundreds of introductions, many over the same time period. In the case of many of the vertebrates they were introduced a long time ago and the main phrase of colonization is past and without data from before the introduction one can

speculate on their impacts on the pristine community. Some indication of the impact the species has had can be gained retrospectively by the removal or control of exotic species within the ecosystem and then monitoring the impacts of these magnifications. The situation with many of the exotic plants is easier to see since in most cases the process of invasion is still underway and different areas of native vegetation may show varying degrees of invasion.

Effects of predation on native species by feral cat populations are widespread and significant. Particularly on Islands (Whitaker 1998). In these insular environments feral cats are directly responsible for a number of extinctions and extirpations world-wide and across multiple taxa (Iverson 1978, Moors 1985, Kirkpatrick & Rauzon, Cruz and Cruz 1987, Towns et al. 1990, Donlan et al. 2000, Mc Neely et al. 2001).

St. Lucia has five species of naturalized invasive mammals. All of these are believed to impact on its native wildlife and all have introduced populations elsewhere on other Islands. Some such as rats (*Rattus rattus*, *R. norvegicus*), House mouse (*Mus musculus*), Mongoose (*Herpestes auripunctatus*), Feral Cat (*Felis catus*) and feral pig (*Sus scrofa*) are major problem species. The adverse effects of mammalian predators on the breeding success of native faunas, which have evolved in the absence of such predators, has been documented. (Atkinson 1985).

The Black Rat *Rattus Rattus* and Brown Rat *Rattus Norvegicus* are now cosmopolitan problem species. The effect of rats on island biotas was not fully appreciated until the late 1970's when a number of studies showed that they had profound effect upon many island endemics. Reviews by (Atkinson 1985) have demonstrated that rats can be implicated in the decline and extinction of many species of island birds. They affect birds primarily by preying upon the eggs and young (Atkinson 1985), and are serious predators of lizards, large arthropods, land mollusks and plant seeds and seedlings.

The mongoose is found Island-wide, in all habitat types, from the top of the highest peaks to the mangrove forest near the coast. The mongoose is a major problem on many tropical Islands, and prey upon native vertebrates. On St. Lucia, as elsewhere, it has a broad diet feeding on invertebrates, amphibians, reptiles, small mammals, birds and carrion. In St. Lucia it has been recorded feeding on endemic lizards.

In light of the above, considering the level of endangerment faced by the St. Lucia White-breasted Thrasher; the fact that the chicks leave the nest before they can fly ending up on the ground and remain poor fliers for the first few weeks of their life; the following policy should be adopted for the DCG property:

- Cats and dogs should be prohibited on the property
- Predator control measures for rats and mongoose.
- Permanent bait stations should be erected and maintained throughout the property

Ongoing Research

The common root of all investigations is a deficiency of knowledge. No one knows for sure how the thrashers will behave to the habitat disturbance the hotel development will cause. The only way to address some of the management problems associated with the species is by ongoing research on the species. DCG Holdings Limited should help in sponsoring ongoing research on the St. Lucia White-breasted Thrasher to monitor or determine the following.

- Population trends
- Distribution and dispersal
- Changes in habitat
- Pest levels
- Predator pressure
- Disease presence
- Predator control
- Brood parasitism, etc.

Education

Education is one of the most effective tools used to bring about change in peoples attitude to the environment and to wildlife conservation in particular. St. Lucia serves as a model in this regard, where education played a pivotal role in saving the St. Lucia Parrot from extinction.

In the mid 1970's the St. Lucia Parrot (*Amazona versicolor*) was on the brink of extinction with numbers estimated at less than 100 individuals in the wild. The rain forest was criss-crossed with hunter's trails and at the time there was an open and closed hunting season. However, due to lack of policing and monitoring all species- protected and unprotected- fell under the hunters gun.

A massive education campaign was undertaken by the Forestry Department together with Paul Butler of RARE and other conservation agencies. There were songs written about the parrot, weekly news paper articles "Bush Talk", radio jingles, puppet shows, TV and radio programmes, bumper stickers, essay competitions and every school on the Island was visited with our Parrot Mascot as the special guest to educate children about the parrot. This education campaign coupled with new revised legislation "The Wildlife Protection Act" and the establishment of a parrot sanctuary was the recipe for saving the St. Lucia Parrot.

This same recipe used to save the St. Lucia Parrot from extinction, can be used to save the St. Lucia White-breasted Thrasher. An education campaign programmed to reach out to communities, schools, construction workers and the general public, in particular the people who live in communities in close proximity to the Thrasher habitat, will be commissioned by the White-breasted Thrasher Action Group. The plight of the White-breasted thrasher, its importance and endangerment, and actions required to save the

species will be the main focus of the education campaign. The best people in the business of environmental education will be involved in this campaign, and every facet of the media will be used.

Literature cited:

Atkinson I.A.E. (1985). The spread of commensal species of *Rattus* to oceanic Islands and their effects on Island avifauna. In Moors P.J. (ed). Conservation of Island Birds. ICBP Technical Publication No 3.Pp35-81

Cruz J.B. and F. Cruz1987. Conservation of the Dark-Rumped Petrel *pterodroma phaeopygia* in the Galapagos Islands, Ecuador. Biological Conservation 42:303-312

Donlan C.J.B.R. Tershy, B.S. Keitt ,B. Wood. J.R. Sanchez, A. Weinstein, D.A. Croll, and J.L. Aguililar. 2000. Island conservation action in northwest Mexico. Pages 330-338 in D.H. Browne, H. Chaney, and K. Mitchell, editors. Proceedings of the fifth California Islands symposium. Santa Barbara Museum of Natural History. Santa Barbara California.

Iverson J.B. 1978. The impact os feral cats and dogs on populations of the West Indian rock iguana *Cyclura curuata*. Biological Conservation 14: 63-73

Kirkpatrick, R.D. and M.J. Reuzon. 1986. Food of feral cats *Felis catus* on Java and Howland Islands, central Pacific Ocean. Biotropical 18:72-75

McNeely, J.A., H.A. Mooney, L.E. Neville, P. Shei, J.K.Waage, editors. 2001. A global strategy on invasive alien species. World Conservation Union, Gland Switzerland.

Moors P.J. 1985. Conservation of Island birds. Case studies for the management of threatened Island birds. International Council for Bird Conservation, Cambridge, United Kingdom.

Sandford D. Schemnitz. 1990. Wildlife Management Techniques Manual Fourth edition. The Wildlife Society Inc.1980. Library of Congress cataloging in publication data.

Towns, D.R. and I.A.E. Atkinson, and C. H. Daugherty 1990. Ecological restoration of New Zealand Islands: papers presented at Conference on ecological restoration of New Zealand Islands, 1989. Department of Conservation, Wellington, New Zealand.

Whitaher, R. J. 1998. Island biogeography, ecology, evolution and conservation Oxford University Press, Oxford, United Kingdom.