

# GALAPAGOS

## *Miconia in the Pacific*

While most of the biodiversity of the Galapagos Islands is intact, it is under increasing threat from introduced or invasive species. Unless action is taken, much of the unique native flora and fauna will be destroyed.

Goats *Capra hircus* have long been a problem, and while several smaller islands including Santa Fe, Marchena, Pinta and Espanola were cleared of goats on the 1970s, the animals were introduced onto Volcan Alcedo in the early 1980s and now number many thousands. Their destruction of the vegetation is of immediate concern as Alcedo is the home of the largest population of giant tortoises. The goats have now spread to Volcan Darwin immediately north of Alcedo and may already have reached Volcan Wolf, the northern volcano on Isabela.

There are at least two species of recently introduced wasps, one of which is as yet unidentified, and these are posing an increasing threat to the wildlife and an inconvenience to the human population. The smooth-billed ani *Crotophaga ani* (family: *Cuculidae*) has multiplied to possibly 5000 individuals, and poses a serious threat to finches and lizards.

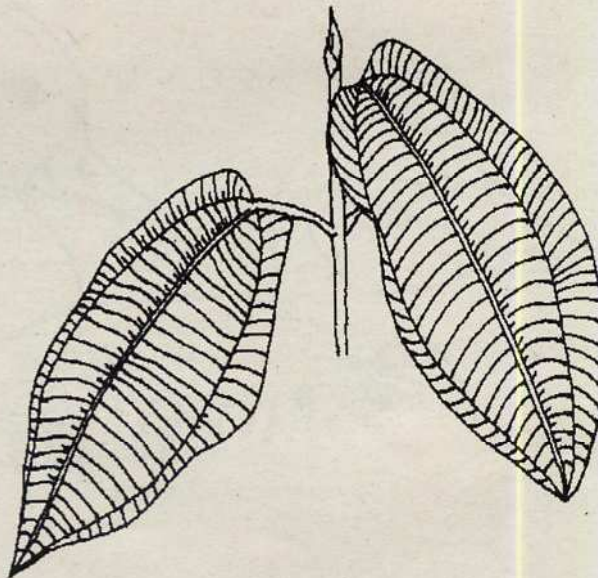
Introduced plants are possibly the most serious threat and hardest to eradicate. *Lantana camara* is a serious problem on Floreana, where it is becoming dominant and destroys the nesting sites of the dark-rumped petrel. The Quinine *Cinchona succirubra* and Guava *Psidium guajava* trees on Santa Cruz are rapidly taking over the miconia zone (*Miconia robinsoniana* - endemic) and the full impact of the 1982-83 El Nino year is becoming apparent with more introduced plants, including trees, spreading out of the farming zone into the national park. Rats are a continuing threat, especially to the breeding populations of Hawaiian petrel on Santa Cruz and Floreana. The arrival of the brown rat is a serious development as it is much more aggressive than its black cousin. Invasive species are without doubt the major threat to the Galapagos and a concerted effort is needed to eliminate them. As yet there are no effective control and quarantine measures in place so the number of invasive species is likely to increase in the short term.

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The native flora of tropical oceanic islands is well known to be particularly susceptible to displacement and even extinction by alien introduced species. Since its introduction to Tahiti in 1937 as an ornamental - with attractive purple and green foliage - *Miconia calvescens* DC (*Melastomataceae*), a small tree native to Central America, has become a dominant invasive plant in the Society Islands (French Polynesia, in the South Pacific Ocean).

It has spread over two-thirds of the island of Tahiti in all mesic and wet environments (>2000 mm/year), up to 1300 m. *M. calvescens* forms dense monotypic stands that completely displace native forests (40% of the Tahitian endemic plants are directly endangered). It has also reached the surrounding islands of Moorea and Raiatea. Control operations using manual uprooting were carried out on the island of Raiatea in 1992 and 1993 (over 250,000 plants were destroyed). Collaboration with Hawaiian biologists (Haleakala National Park of Maui and Hawaii Department of Agriculture) has been initiated in order to find efficient control methods (including bio-control) against this plant pest that represents a potential danger to the rainforests of all tropical oceanic islands.

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# ALIENS

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## Introducing: ISSG's Newsletter

Welcome to *Aliens* - newsletter of the newly-formed Invasive Species Specialist Group (ISSG) of the IUCN Species Survival Commission. The group aims to "reduce the threats posed by invasive species to natural ecosystems and their native species, through increasing awareness of invasive species and means of controlling or eradicating them". This newsletter is a contribution to that mission. It illustrates the range of threats which invasive species pose to the biodiversity of our planet.

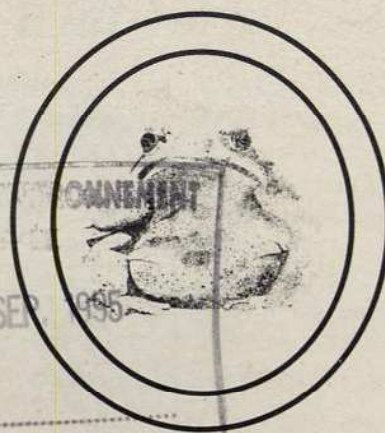
The Invasive Species Specialist Group (ISSG) is a worldwide network of experts on the conservation impacts of invasive species. Membership is by invitation, but it is not necessary to be a full member of the group to contribute to the cause of reducing conservation threats posed by invasives. We provide advice on threats from invasives and control or eradication methods to IUCN members, conservation practitioners, and policy makers. The group concentrates on reducing

or preventing the adverse effects of alien invasions on *conservation* values.

Because of the vast scope of the subject, our activities are focused in areas of special need. We envisage sub-groups dealing with terrestrial weeds, water weeds, terrestrial vertebrates, invertebrates, fish, marine invasives, microorganisms, genetically-modified organisms, and the international agreements and laws controlling invasives. There is a special overall focus within the group on the particular threats which invasive species pose to oceanic islands.

Projects planned by the ISSG include regular production of this newsletter, creation of a global database of invasive species, co-ordination of specialist workshops on invasives, and technical publications on invasive species management.

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### In This Issue:

Ballast Water  
Ruddy Ducks  
Bullfrogs  
Cane Toads  
*Miconia* in Pacific  
Wasps  
Marion Island  
Rodent Eradication  
Goats  
Flatworm  
Plants: Australia  
Grey Squirrel  
Model Legislation  
Invertebrates  
Frog Virus?  
Galapagos  
Chesapeake Bay  
Snakes  
Conferences

