

Feral Pig (*Sus scrofa*)



Feral pigs are escaped or released domestic animals. Introduced to many parts of the world, they damage crops, stock and property and transmit many diseases such as Leptospirosis and foot and mouth disease. Rooting pigs dig up large areas of native vegetation and spread weeds, disrupting ecological processes such as succession and species composition. They are omnivorous and their diet can include juvenile land tortoises, sea turtles, sea birds and endemic reptiles. Management of this invasive species is complicated by the fact that complete eradication is often not acceptable to communities that value feral pigs for hunting and food.

Strawberry Guava (*Psidium cattleianum*)



The strawberry guava is native to Brazil, but has been naturalised in Florida, Hawai'i, tropical Polynesia, Norfolk Island and Mauritius for its edible fruit. It forms thickets and shades out native vegetation in tropical forests and woodlands. It has had a devastating effect on native habitats in Mauritius and is considered the worst plant pest in Hawai'i, where it has invaded a variety of natural

areas. It benefits from feral pigs (*Sus scrofa*) which, by feeding on its fruit, serve as a dispersal agent for its seeds. In turn, the guava provides favourable conditions for feral pigs, facilitating further habitat degradation.

Miconia (*Miconia* 'vescens)

A highly ornamental tree from South America, Miconia was introduced to a botanical garden on the island of Tahiti in 1937. Its huge red and purple leaves made it highly desirable for gardeners. It was spread into the wild by fruit-eating birds and today, more than half the island is heavily invaded by this plant. It has a superficial and tentacular rooting system that contributes to landslides and has become the dominant canopy tree over large areas of Tahiti, shading out the entire forest under-story. Scientists estimate that several of the island's endemic species are threatened with extinction as a result of habitat loss due to Miconia. It has been introduced to other Pacific islands, including Hawai'i where it was introduced as an ornamental in the 1960s. The plant has since been found in many locations on the Hawai'ian islands. It is still sold as an ornamental plant in the tropics.

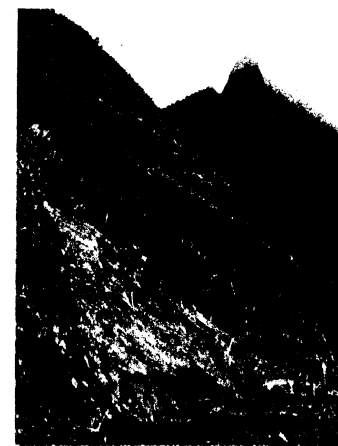


Photo: The Nature Conservancy

Miconia on a mountainside in Tahiti

Western Mosquitofish (*Gambusia affinis*)

The mosquito fish is a small, harmless-looking fish native to the fresh waters of the eastern and southern United States. It has become a pest in many waterways around the world following initial introductions early last century as a biological control of mosquito. In general, it is considered to be no more effective than native predators of mosquitoes. The highly predatory mosquito fish eats the eggs of economically desirable fish and preys on and endangers rare indigenous fish and invertebrate species. Mosquito fish are difficult to eliminate once established, so the best way to reduce their effects is to control their further spread. One of the main avenues of spread is continued, intentional release by mosquito-control agencies.

Mosquitofish; male and female pair

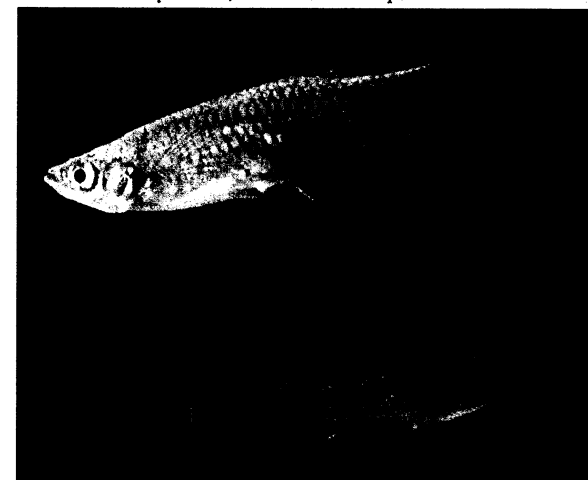
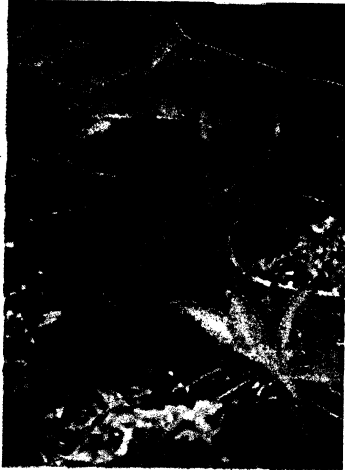


Photo: Bob McDowall

Small Indian Mongoose (*Herpestes javanicus* (*auropunctatus*))

Photo: Jack Jeffrey Photography



This voracious and opportunistic predator is native to areas from Iran, through India to Myanmar and the Malay Peninsula. It was introduced to Mauritius and Fiji and to the West Indies and Hawai'i in the late 1800s to control rats. Unfortunately, this early attempt at biological control has had disastrous impacts. Island populations of native fauna, which had evolved without the threat of a fast-moving, mammalian predator, were no match for the mongoose. It has caused the local extinction of several endemic birds, reptiles and amphibians and threatens others including the rare Japanese Amami rabbit (*Pentalagus furnessi*). The small Indian mongoose is also a vector of rabies.

Rosy wolfsnail (*Euglandia rosea*)

Native to the southeastern United States, the predatory rosy wolf snail was introduced to islands in the Pacific and Indian Oceans from the 1950s onwards as a biological control agent for another alien species, the giant African snail (*Achatina fulica*). The giant African snail was intended as a food source for humans but became an agricultural pest. In French Polynesia, the fast moving rosy wolf snail rapidly eliminated local endemic species. One group threatened by the rosy

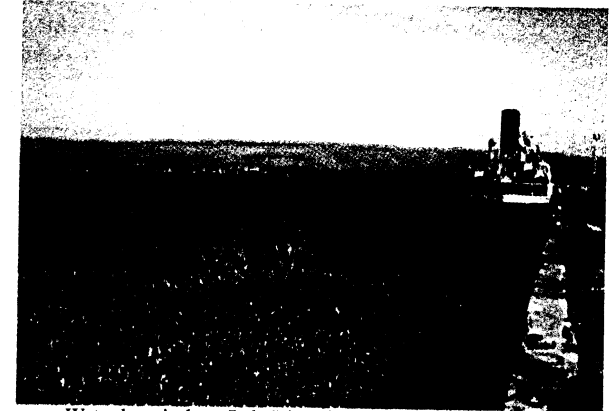
wolf snail is the Partulid tree snails, which evolved separately from each other in isolated valleys and exhibit a variety of unique characteristics. Many Partulid tree snails have been lost already and today the survivors exist in zoos and in the world's first wildlife reserves for snails. This invasion by a biological control agent has caused a significant loss of biodiversity.

Photo: Jack Jeffrey Photography



Water Hyacinth (*Eichhornia crassipes*)

This South American native is one of the worst aquatic weeds in the world. Its beautiful, large purple and violet flowers make it a popular ornamental plant for ponds. It is now found in more than 50 countries on five continents. Water hyacinth is a very fast growing plant, with populations known to double in as little as 12 days. Infestations of this weed block waterways, limiting boat traffic, swimming and fishing. Water hyacinth also prevents sunlight and oxygen from reaching the water column and submerged plants. Its shading and crowding of native aquatic plants dramatically reduces biological diversity in aquatic ecosystems.



Water hyacinth on Lake Victoria

Photo: Aquarius Systems, North Prairie, Wisconsin, USA

Nile Perch (*Lates niloticus*)

The Nile perch was introduced to Lake Victoria, Africa in 1954 to counteract the drastic drop in native fish stocks caused by over-fishing. It has contributed to the extinction of more than 200 endemic fish species through predation and competition for food. The flesh of Nile perch is oilier than that of the local fish, so more trees were felled to fuel fires to dry the catch. The subsequent erosion and runoff contributed to increased nutrient levels, opening the lake up to invasions by algae and water hyacinth (*Eichhornia crassipes*). These invasions in turn led to oxygen depletion in the lake, which resulted in the death of more fish. Commercial exploitation of the Nile perch has displaced local men and women from their traditional fishing and processing work. The far-reaching impacts of this introduction have been devastating for the environment as well as for communities that depend on the lake.

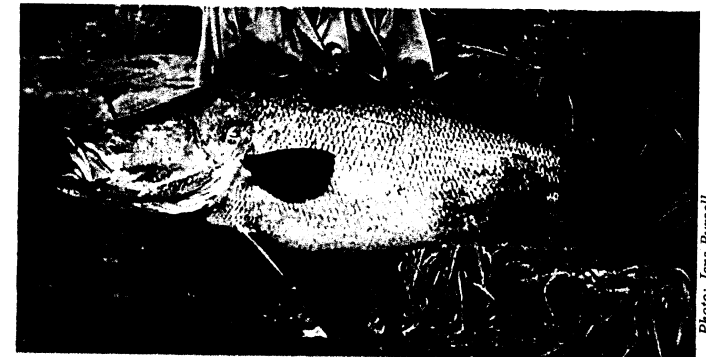


Photo: Jens Bursell