

Science in the Language Class

Partula snails

Additional Information

RZSS helps reintroduce Partula snails to their native habitat

Tree-snails that are among the most endangered species in the world were reintroduced to their Polynesian home following the success of an international zoo conservation project involving the Royal Zoological Society of Scotland (RZSS).



In 2017, RZSS sent four varieties of Partula snail - *Partula tohiveana*, *Partula affinis*, *Partula mooreana* and *Partula suturalis vexillum* – which had been bred at RZSS Edinburgh Zoo, to be released into the snail's native range of Tahiti.

Partula snail populations declined due to the introduction of the 'rosy wolf snail' *Euglandina rosea*.

At first the giant African land snails, *Achatina fulica*, were introduced to the islands as a source of food but they soon became pests, eating and damaging crops. To try to control the giant African land snails, the carnivorous rosy wolf snail was introduced. It was hoped that this snail would eat all the giant African land snails.

Unfortunately it ate the native Partula snails instead. Very soon many species of Partula snails became extinct.

Gareth Bennett, Senior Presenter at RZSS Edinburgh Zoo, said:

“We are proud to have been part of helping to restore the Partula snail back into its native habitat for many years now. Edinburgh Zoo has been involved in the conservation of Partula snails since 1984 and was given the last individuals of the *Partula taeniata simulans* variety in 2010 which the Zoo bred back to a safe level of several hundred.

We were very pleased to learn that reintroductions have gone so well and that snails from earlier releases have been found within the habitat continuing to thrive. This is a wonderful conservation success story and further demonstrates the critical role zoos can play in species conservation. The reintroductions are historical landmarks, not only for Polynesian tree snails but for wildlife conservation in general because the results we are seeing are made possible through the hard work of committed zoos working together as part of an international breeding programme.”

The international collaborative breeding programme is a cooperation between zoos and collections across the world, including ZSL London Zoo, ZSL Whipsnade Zoo, Bristol Zoo, Chester Zoo, Marwell Zoo, Poznan Zoo (Poland), Randers Zoo (Denmark), Riga Zoo (Latvia), Thoiry Zoo (France) and a number of zoos in the USA along with RZSS Edinburgh Zoo.

The various species of Partula snails in the breeding programme are managed under the International Partulid Conservation Programme.

Partula snails – important to the ecosystem

When you think of a zoo, snails are probably not the first animal that comes to mind!



The conservation of species large or small is very important to our biodiversity. Biodiversity means the number and types of plants and animals that exist in a particular area and in the world as a whole. An ecosystem includes all the living things in an area and they all depend on each other. Each plant or animal has its own role to play. If one of these plants or animals becomes extinct then it can disrupt the ecosystem.

Land snails have an important role in the ecosystem. They eat the dead and decaying plant material, fungus and algae. Snails are then eaten by a variety of animals that rely on the snails for the calcium they provide.

Snails are an important environmental indicator species. This means the presence, absence or how many of the species are in an area can help measure how healthy the environment is.



Teachers Note:

Recommended further reading for in-depth information on the Partula snails:

'Snailing round the South Seas– the Partula story' by Justin Gerlach, 2014

Detailed information on the 104 recorded species of Partula:

'Icons of Evolution: Pacific Island tree-snails, family Partulidae' by Justin Gerlach, 2016