

# 琉球大学学術リポジトリ

## ツシマヤマネコ保護の現状

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## **The Tsushima leopard cat: averting extinction**

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The Tsushima leopard cat is one of the most endangered species in Japan. The population is estimated to be between 80 and 110 animals (Ministry of the Environment Japan 2005). It is recognized as a subspecies of *Felis bengalensis*, and is one of only two species of wild cats in Japan. The Tsushima Leopard Cat is a solitary animal and needs a home range of 70 to 560 ha. Their main preys are mice and moles, but they will also take birds, insects and scavenge when necessary.

The population has been in steady decline for a number of years. This has been caused by the usual suspects; habitat destruction, traffic accidents, traps, dogs, and the introduction of invasive species, in particular feral cats. To avert extinction of this species, it is essential that both in situ and ex-situ conservation efforts are conducted effectively.

### **In-situ Conservation**

Even after extensive study of the Tsushima leopard cat, there is still a knowledge gap in our understanding of its biology and behaviour. There is increasing pressure on this conservation project, with budget constraints and the obvious need to reverse, or at least halt, the declining population as quickly as possible. It is essential that we continue and expand our studies to encompass all aspects of the animal's life. This is the only way in which we can create a truly effective conservation plan, based upon sound scientific research. The continued study of the distribution and population is of great importance, but further study of the reproductive physiology, genetic diversity and possible infectious diseases are also of paramount importance for the success of the project.

The primary concern is that their only habitat, the island of Tsushima, must be conserved to aid the recovery of wild population. Historically, Tsushima played a key role in foreign affairs because of its location as the closest island to the continent. This meant that human activity has been prevalent in the area since ancient times. Ninety percent of the land is owned privately, with little restriction on people's activities. One of the most challenging problems faced is creating a successful balance between the local economy and the conservation of the natural environment.

### **Ex-situ Conservation**

The report, a 'Basic Concept for Reintroduction of the Tsushima Leopard Cat' was released by the Japan Ministry of the Environment in 2004. This report highlighted the need to establish a self-sustainable captive population. Once this captive population was established, supplementation and reintroduction could then be undertaken to prevent the complete extinction of the animal in the wild.

"Reintroduction" is not our primary goal however. Preventing the extinction of the wild population has to be our number one concern. All conservation plans and actions should be based on how it will affect the population. As previously highlighted, there is no easy way to conduct In-situ conservation due to the socioeconomic issues of the island.

We must therefore go back to the captive breeding population and recognize that it is essential to establish a disease free, self-sustainable captive population with enough genetic diversity. Ex-situ conservation efforts have been conducted in partnership with Fukuoka-city Zoo. Although the program has been a success, there is concern due to it being based on only 5 founding members. The genetic diversity must be increased by the introduction of new founding members as soon as possible. This can most successfully be achieved by the use of rescued Tsushima Leopard Cats.

### **Reintroduction**

To make it possible for the Tsushima Leopard Cat to be reintroduced we must first restore the native habitat. Prior restoration of the habitat is essential for a successful reintroduction programme. This habitat restoration will obviously also be of great benefit to the native population.

The process of restoring the ecosystem will involve the re-growth of various native species across the island. The "Reintroduction project" can be viewed as benefiting a number of endangered species and not just the Tsushima Leopard Cat. It will also be very positive for the protection of the natural environment.

The Japan Ministry of the Environment has taken a central role in the conservation of the Tsushima leopard cat since 1994. Averting extinction of this species is of great importance and urgency. Its success or failure will have a large bearing on the recovery of all the endangered species in Japan. However the crucial issues are yet to be addressed. A substantial recovery plan, based on sound scientific research and study, should be established as soon as possible. Allied to this, the Tsushima leopard cat recovery implementation team needs to be established with stakeholders such as local and national government, academics, specialists, and interest groups, as well as individuals in order to achieve our common goal; the establishment of the self-sustainable wild population of the Tsushima leopard cat.