

General biological and ecological information about the species

The Golden Mantella (*Mantella aurantiaca*) is a strikingly colored frog that is only found in a few rain forests on the island of Madagascar. This charismatic frog begins its life as an egg laid in damp ground alongside small rain forest ponds before the first rains.



As these ponds fill up with water during the rainy season the eggs gradually become submerged and eventually develop into tadpoles that live in the ponds for a number of weeks. After this relatively short, but very important, time spent in the water the frogs emerge to live in the surrounding rain forest.



The Golden Mantella lives in the leaf litter zone where it hunts for small invertebrates during the day. With the onset of the cold season in Madagascar the frogs become less active and gradually move away from the ponds in search of suitable cavities, such as root systems and dead logs, in which to spend the winter.



Major conservation challenges

The Golden Mantella is a species that is facing a high risk of extinction in the wild. It is listed as Critically Endangered on the IUCN Red List of Threatened Species because of the continued loss of its rain forest habitat and the very small area in which this frog can be found.



Its reliance on small rain forest ponds is probably a key factor in its threatened status because not only are these habitats relatively rare but they are also highly prized for their agricultural potential by local people. Indeed, the main threat to the Golden Mantella is the conversion of rain forest and ponds into farmland. This frog appears to be able to withstand a moderate level of disturbance, such as selective logging, so the main conservation challenge is to protect its breeding ponds.



Conceptual model or species management plan

The rain forests where this species is known to survive are subject to three different types of management. Many of the breeding ponds occur in sites that fall within forest zones that are managed by local community associations, whilst a few are located either in open-access sites without any management or within the area of a nickel mine. The survival of the Golden Mantella in wild is therefore down mainly to the actions and commitment of a small group of communities and a mining company. In an effort to engage all the different actors within a single conservation initiative, Madagasikara Voakajy began the process of developing a Species Conservation Strategy for the Golden Mantella to take into account the needs and aspirations of all stakeholders and to guide these different groups towards a common goal. Set within this strategy are the individual management units for the species, notably at Ambatovy, Mangabe and Torotorofotsy. At the Ambatovy Project nickel mine Madagasikara Voakajy is assisting environmental managers to minimise, or compensate for, any damage to the Golden Mantella or its key habitats. At Mangabe, Madagasikara Voakajy is supporting community based associations to sustainably manage natural resources and specially to conserve breeding ponds of the Golden Mantella. The Mangabe forest was awarded provisional protected area status by the Malagasy government in 2008 and efforts are now underway to build on this progress so that the forest and the livelihoods it supports can be maintained in the long-term.



Current achievements

It is probably too early to talk about achievements but we can indicate significant progress made in the last few years:

- Golden Mantella frog identified as a priority species by the Ambatovy Project and the development of a species management plan at this site
- Awareness of all stakeholders, from local communities to government authorities about the plight of the Golden Mantella has been significantly raised
- Mangabe forest awarded provisional protected area status by the Malagasy government
- Monitoring of Golden Mantella habitat and abundance in Ambatovy and Mangabe
- Golden Mantella frog Species Conservation Strategy awaiting validation by the Malagasy government



Future plan for a given period of time

The future conservation plans for the Golden Mantella have been agreed by stakeholders and will be published in the Species Conservation Strategy. Generally though, a coordinated approach is needed to engage all relevant stakeholders at each of the rain forest sites where this species still occurs. For conservation efforts to be

successful we will need to consider the pressing needs of both local communities and a mining company, but if these can be channeled into providing net gains to biodiversity, livelihoods and business then the Golden Mantella has a good chance of hanging on.

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Photographs

MV_1 *Mantella aurantiaca* close-up (Roma Randrianelona)

MV_2 *Mantella aurantiaca* breeding pond at Mangabe rain forest (Lee Brady)

MV_3 *Mantella aurantiaca* feeding in leaf litter in the Mangabe rain forest (Lee Brady)

MV_4 *Mantella aurantiaca* being converted into farmland near Mangabe (Roma Randrianelona)

MV_5 Slash and burn agriculture in *Mantella* breeding habitat (Bertrand Razafimahatratra)

MV_6 Selective logging of rain forest in Mangabe (Richard Jenkins)

MV_7 *Mantella aurantiaca* survey at a breeding pond in the Ambatovy mine (Lee Brady)

MV_8 Madagasikara Voakajy team surveying for *Mantella* frogs (Bertrand Razafimahatratra)