

The ongoing story of Ambodiriana forest in Madagascar, a representative case study of *in situ* conservation

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Orchids cannot be protected if their habitats are not, but carefully chosen habitats allow protecting large numbers of species, this is what tells us the Ambodiriana case study, an ongoing story mixing ecological fight and scientific research.

The Ambodiriana forest, located near the village of Manompana on the East Coast of Madagascar (S 16° 40', E 49° 42', around 200 km North of Toamasina), is one of the latest coastal forests in Madagascar. Despite a rather small area, 240 hectares, it is blessed with at least hundred species of wild orchids. Among them some are considered endangered or critically endangered by IUCN, some are potentially new to science, and others are known only in this forest. Along with these orchids, rare palms, frogs and lemurs, including the aye-aye (*Daubentonia madagascariensis*) have been observed.

In 1996, slash and burn culture (tavy) approaching dangerously the site, discussions started between on one side the local community and authorities, the Malagasy government and on the other side a newly created NGO called ADEFA (Association de Défense de la Forêt d'Ambodiriana), for the conservation of this primary forest that was once protected by a “fady”, i.e. a taboo. Eventually an agreement was signed in 1999, for 15 years. ADEFA was based in La Réunion island, as most of its members and its president, Chantal Misandeau, who regularly came to Ambodiriana. During 15 years, eco-tourism activity was developed, with a team of guides and bungalows in a camp, and regular scientific surveys by various specialists, botanists and zoologists, progressively revealed the exceptional value of the forest, which is a very specific habitat, due to 3 waterfalls that maintain a high humidity level. In 2015, for unclear administrative reasons, the agreement with the Malagasy government lamentably could not be renewed in time, causing ADEFA to be dissolved. Moreover an important theft occurred in the camp and in March 2016 cyclone Enawo hit the region and damaged the bungalows. Last but not least, the owners of the camp area, which was rented, wanted to recover their land and burn it to sow rice. In 2017 the situation is slowly improving, with the help of Rain Forest Trust and the local NGO Madagasikara Voakajy, who volunteered to help us set up a new agreement and status of the forest, with the goal of establishing a New Protected Area (Nouvelle Aire Protégée, NAP), and if necessary to buy the corresponding land. A new organisation was created in La Réunion, the “Association Des Amis de la Forêt d'Ambodiriana à Manompana” (ADAFAM), aiming at creating a sustainable activity of eco-tourism that will trigger a shared interest of local community to protect the forest on the long term.

The presentation will give the latest news and will present an overview of the orchid flora and other riches of this endangered but so far miraculously preserved primary forest. Orchid protection not only encompasses many topics of science, but also straddles diplomacy, law, economy and psychology!



Figure 1. *Gastroorchis tuberculosa*, one of the emblematic orchids in Ambodiriana.



Figure 2. *Gastrodia madagascariensis*, first mentioned in 1925 without flowers, then lost, recently rediscovered in Ambodiriana.