



The rediscovery of *Jumellea recurva* (Orchidaceae) in native forests of Bel Ombre, Mauritius

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Abstract

The rare orchid *Jumellea recurva* was considered extinct in Mauritius since 1822, but was rediscovered during a forest survey on 24 February 2011. It was found growing on the trunk of *Nuxia verticillata* along Rivulet Jacobie in the forests of Bel Ombre. The size and shape of the flower spur was the main character used to confirm the species identification.

Introduction

The oceanic island Mauritius lies in the Indian Ocean at approximately 20° 17' South and 57° 33' East, where it was formed by a volcanic eruption ca 8–10 million years ago. The island has a surface area of 1865 km² and rises to 828 m above sea level at Piton de la Petite Rivière Noire. The majority of the species that colonised the island following its formation originated from Madagascar and East Africa, but some species also migrated from India and Southeast Asia.

The volcanic origins of Mauritius, along with the tropical climate, topography and millions of years of isolation, resulted in the evolution of a diverse biota with a high degree of endemism. About 47% of all higher plants are endemic to the island.

When the first explorers discovered Mauritius in the 16th century, the island was uninhabited and covered with luxuriant forests. After years of deforestation and development, the native forest suffered severe fragmentation and currently the forested land cover accounts for only about 30% of the island. Good quality native forest (forest having more than 50% native plant species) is found mostly in the southeast and today covers less than 2%. The rest of the forested area consists of plantation forestry, deer-ranches or highly degraded vegetation that is invaded by alien plant and animal species.

Jumellea recurva (Thouars) Schlechter (1915: 430) is an endemic orchid of Mauritius and Reunion. On the island of Reunion this epiphytic orchid is found in wet forests in the southwest, between 250 and 600 m elevation. There it is found in clumps, or scattered at mid height on the trunks of native trees. The species is locally frequent, but has a total population size of less than 1000 individuals (Bernet 2010). It is known from 19 different sites on Reunion: Entre-Deux, Piton Langevin, Les Makes, Cirque de Mafatte, Dos d'Âne, l'Étang Salé, La Possession and Saint-Joseph. In Reunion living individuals were collected to maintain a population in cultivation in the nursery by the Conservatoire Botanique Nationale des Mascarin (C. Lavergne, pers. comm.), but propagation has proven to be difficult.

In Mauritius this species was believed to be extinct since its discovery by A.A. du Petit-Thouars in 1822, but it has recently been rediscovered. On its rediscovery (1 March 2011) a population of ten individuals was found in one location. Further field work carried out in different areas proved to be beneficial in locating other populations of this species (Fig. 1); three plants were found in the forest at Petrin on 17 March 2011, growing on *Gaertnera psychotrioides* Baker (S 20.40742, E 57.46904) and two plants were located at Le Pouce