



Gastrodia madagascariensis (Gastrodieae, Orchidaceae): from an historical designation to a description of a new species from Madagascar

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Abstract

Gastrodia madagascariensis, a leafless achlorophyllous orchid, is described and illustrated here. The epithet was originally coined by Perrier de la Bâthie in 1939 for fruiting material found on the eastern coastal plain of Madagascar more than a century ago, but the name was never validly published. This new species is closely related to *G. similis* from Reunion Island, from which it can be distinguished by the perianth tube spreading towards the apex, the shape of the column and stigma, and the flower colour. The achlorophyllous genus *Gastrodia* currently comprises five species in the tropical parts of the Afro-Madagascan region, one of which, *G. africana*, is possibly extinct. We provide an artificial key to distinguish them. In addition, there is also an extratropical species in continental Africa, the introduced *G. sesamoides* (very local near Cape Town, South Africa).

Keywords: *Didymoplexis*; Flora of Madagascar; myco-heterotrophy; Perrier de la Bâthie

Résumé

Gastrodia madagascariensis, une orchidée aphyllé non-chlorophyllienne, est décrite et illustrée ici. L'épithète fut initialement proposé par Perrier de la Bâthie en 1939 pour décrire une plante en fruit trouvée dans la même région côtière de Madagascar il y a plus d'un siècle, mais sa publication était alors invalide. Cette nouvelle espèce est proche de l'espèce *G. similis* endémique de l'Île de la Réunion, mais s'en distingue toutefois par un calice campanulé, la forme de la colonne et du stigmaté, ainsi que la couleur de la fleur. Le genre non-chlorophyllien *Gastrodia* comprend aujourd'hui cinq espèces en Afrique tropicale et à Madagascar; l'une d'entre elles, *G. africana*, étant probablement éteinte. Une clé d'identification de ces espèces est proposée ici. De plus, on recense une sixième espèce sur le continent africain, c'est-à-dire l'espèce introduite *G. sesamoides* (près de la ville du Cap, Afrique du Sud).

Mots-clés: *Didymoplexis*; Flore de Madagascar; myco-hétérotrophie; Perrier de la Bâthie

Introduction

Just before his untimely death on 16 November 1925, Rudolf Schlechter (1925) published “Orchidaceae Perrierianae”, in which he enumerated all the orchids from Madagascar known until then. Out of the 446 taxa mentioned, 332 were described by Schlechter himself, all based on material collected by H. Perrier de la Bâthie (hereinafter referred to as Perrier) and sent to Schlechter in Berlin for naming. Amongst the specimens studied by Schlechter was a leafless orchid lacking chlorophyll collected in September 1912 and numbered *Perrier de la Bâthie 11349*. Schlechter assigned it to the genus *Gastrodia* Brown (1810: 330) and was convinced that it was a new species, but refrained from describing it, because only fruiting and no flowering material was sent to him.

After the death of Schlechter, Perrier took it upon himself to continue documenting the orchid flora of Madagascar. This eventually resulted in a 2-volume treatment of the orchid family for “Flore de Madagascar”, published in 1939 and in 1941 respectively. In the first volume of this work, he proposed the name *Gastrodia madagascariensis* (Perrier de la Bâthie 1939: 212) based on the above-mentioned specimen. However, he only provided a description in French and therefore the name was not validly published according to Art. 39.1 of the International Code of Nomenclature (McNeill *et al.* 2012), which at the time required a description or diagnosis in Latin.