



## Taxonomy of Atlantic Central African orchids 4. A new species of *Tridactyle* (Vandaeae, Epidendroideae, Orchidaceae) from Gabon and Equatorial Guinea

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### Abstract

Nine plants specimens of an apparently new *Tridactyle* species were collected in Gabon and Equatorial Guinea. They have an erect habit and a particular leaf shape which makes the species unique in the genus. The flowers and inflorescences share the general morphology of *Tridactyle tridactylites*, one of the most frequently collected species of *Tridactyle* in Central Africa. Four other *Tridactyle* taxa possess a 3 to 6 cm long inflorescence and a labellum with entire side lobes, and one species, *Tridactyle stevartiana*, has leaves of similar width and length. We here show that these new 9 specimens represent a new species, described as *Tridactyle minutifolia*. The diagnostic traits include linear thin leaves, and erect habit. Interestingly, many specimens of *Tridactyle minutifolia* lack spur; this phenomenon is sometimes found in orchids growing in an environment where their pollinators are absent. A table of the diagnostic characters of the six Continental African *Tridactyle* taxa considered here is included. A preliminary assessment of the conservation status of *T. minutifolia*, using the IUCN Red List Categories and Criteria is provided.

**Key words:** Africa, Angraecoid, IUCN criteria, Angraecinae

### Introduction

With 47 species currently recognized (Govaerts *et al.*, 2014), *Tridactyle* Schlechter (1914: 602), is one of the larger genera of the angraecoid orchids. The genus name refers to the three-lobed labellum. *Tridactyle* species occur as epiphytes or, rarely, lithophytes in Tropical and Southern Africa. The last revision of the genus (Summerhayes 1948) divided the genus in 8 sections mainly based on the length of the inflorescence and the shape of the labellum.

During fieldwork in the Monts de Cristal, the field team of the Missouri Botanical Garden collected in Tchimbélé area a living specimen of an unknown species of *Tridactyle*, which was maintained in cultivation in the shadehouse of Tchimbélé. The Monts de Cristal region is known for its remarkable species-richness and endemism (Stévant *et al.* 2014) which is higher than in other regions of Gabon; this cloudy and mountainous area corresponds to a postulated forest refuge (Stévant *et al.* 2014). A few years later, the last author (TS) visited the shadehouse and immediately distinguished the living plant as a new species due to its erect habit and narrow leaves. TS collected a first spirit collection and transferred the two living specimens to shadehouses in Libreville for further examination. Then, an additional specimen was collected in the SEEF logging concession in the Monts de Cristal. Finally examination of the collections at BRLU and WAG revealed additional specimens from Monte Mitra (Equatorial Guinea) and from Monts Doudou (Gabon). Most of these specimens were initially placed in *Tridactyle tridactylites* (Rolfe 1888: 34) Schlechter (1914: 601) on account of the length of the inflorescences. However, comparison with other Type material of *Tridactyle* species confirmed that these specimens represent a new species described here as *Tridactyle minutifolia*. This new species belongs to the section D according to Summerhayes (1948), because of its long inflorescences (more than 4 cm) and the shape of the side lobes of the labellum, which are entire. This paper is the fourth in a series of publications (Stévant *et al.*, 2010; Droissart *et al.*, 2014; Stévant *et al.*, 2014) based on recent intensive fieldwork and focusing on collections-based taxonomic revisions of Orchidaceae in Atlantic Central Africa.