


On the occurrence of *Nephrangis filiformis* (Orchidaceae) in Kenya and Tanzania

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Nephrangis filiformis is a rare epiphytic African orchid growing in wet upland tropical forest. In all recent floristic treatments and botanical websites its distribution is reported as Liberia, Côte d'Ivoire [Ivory Coast], Democratic Republic of the Congo (DRC), Rwanda, Burundi, Zambia, Uganda, Kenya and Tanzania. Here I show that its alleged occurrence in Kenya and Tanzania is based on a misidentification in a book published in 1968, which has been carried over ever since. Since there is no physical or photographic evidence to the contrary, I conclude that *Nephrangis filiformis* does not occur in Kenya or Tanzania.

Accurate distribution data are critical for threat assessment. Both overestimating and underestimating the distribution range of a species can lead to an incorrect IUCN Red List category (IUCN 2022). *Nephrangis filiformis* (Kraenzl.) Summerh. is a rare, epiphytic, tropical African forest orchid known from less than 50 herbarium specimens (22 at BR, 12 at K, 2 at MO and WAG and 1 at EA; acronyms according to Thiers [2024]).

Nephrangis filiformis was described as *Listrostachys filiformis* Kraenzl. based on a single specimen, *Stuhlmann* 2229, collected at 1 900 m in the 'Njavekesi-Berge', south of Lake Edward in the DRC (Kraenzlin 1895). Schlechter (1918) transferred the species to *Tridactyle* Schltr. in the monotypic subgenus *Nephrangis* Schltr., but commented that it might eventually prove to represent a distinct genus. His doubt about its taxonomic position arose from the fact that he had only *Stuhlmann's* specimen at his disposal, of which the flowers were mostly over. Summerhayes (1948), after examining half a dozen specimens, some of which preserved in spirit, confirmed Schlechter's view and raised his subgenus to generic rank. In his opinion this was warranted due to the remarkable lip shape, the absence of basal auricles characteristic of *Tridactyle*, and differences in pollinarium structure. Simo-Droissart et al. (2018) showed that *Nephrangis*, now comprising two species, forms a clade within the African angraecoid orchids.

In the second edition of *Orchids of East Africa*, Piers (1968) reported *Nephrangis filiformis* from Uganda ('common in rain forest'), and for the first time from Kenya ('common in the forests of the Lake Province, e.g. Kakamega forest') and Tanzania ('forests near Muheza and the in the West' [sic]), but does not mention any associated specimens. Cribb (1989) in *Flora of Tropical East Africa*, confirms this taxon for Uganda on the basis of several specimens, but refers to Piers (in lit.) with regard to its presence in Tanzania and Kenya. Since then, the distribution in East Africa has been copied in several other regional floras such as *Flore d'Afrique Centrale* (Geerinck 1992), *Orchids of Kenya* (Stewart 1996), *Flora Zambesiaca* (La Croix & Cribb 1998), *Orchidaceae of Ivory Coast* (Szlachetko 2008), *The Orchids of Rwanda* (Fischer et al. 2010a) and *Orchidaceae of West-Central Africa* (Szlachetko et al. 2021). At present, *Nephrangis filiformis* is considered to have a disjunct distribution on the western side of the African continent in Liberia and Côte d'Ivoire and on the central to eastern side of the continent in the DRC, Rwanda, Burundi, Zambia, Uganda and as far east as Kenya and Tanzania (POWO 2024).

However, it is clear from the description in Piers (1968) that the purported occurrence of *Nephrangis filiformis* in Kenya and Tanzania is based on a misidentification. Piers (1968) describes the lip as follows, ‘The most conspicuous part is the lip which is of an unusual shape: “hastate” at the base, i.e. with two pointed lobes extending back to the column, and a triangular front lobe, drawn out into a fine point.’ This description fits the lip of *Tridactyle filifolia* (Schltr.) Schltr. and not that of *N. filiformis*, which is unguiculate and concave at the base, abruptly dilated into two reniform, rounded lobes, hence the name *Nephrangis*. Both species are illustrated in Cribb (1989). Vegetatively they are almost indistinguishable. Indeed Summerhayes (1948) comments that ‘In the vegetative state it is difficult to distinguish the species [*N. filiformis*] from var. *subulifolia* of *Tridactyle tridentata* (Harv.) Schltr. (= *Tridactyle filifolia*).’

In this case it is clear that the presence of this species in Kenya and Tanzania is based on a misidentification and that this distribution record was carried over since 1968 from one source to the next. Neither the East African Herbarium (EA), nor the Royal Botanic Gardens Kew (K), the two most important herbaria with regard to East Africa, hold any specimens collected from Kenya or Tanzania. Furthermore, no Kenyan or Tanzanian records of this species are reported on GBIF (<https://www.gbif.org/>)

species/2832418). Fisher et al. (2010b), in their extensive checklist of the vascular plants of Kakamega Forest in Kenya, also did not record this species. *Tridactyle filifolia*, however, is widely distributed in tropical Africa and is known to occur in Kenya and Tanzania (POWO 2024).

Consequently, and until proof to the contrary, we must assume that *Nephrangis filiformis* does not occur in Kenya and Tanzania.

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Competing interests

The author declares that he has no financial or personal relationship that may have inappropriately influenced him in writing this article.

Author contributions

BB performed the research and authored the paper.

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