



Overlooked diversity in African *Solanum* (Solanaceae): new and endangered *Solanum agnewiorum* from Kenya

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Abstract

Despite the almost universal occurrence of *Solanum* in Kenya, there continues to be a significant gap in floristic knowledge of this important genus. We describe *Solanum agnewiorum* from montane forest in the central highlands. We assess the IUCN conservation status of this species as Endangered.

Key words: Africa, Kenya, montane forest, Solanaceae, *Solanum*, *Solanum* subgenus *Leptostemonum*

Introduction

The genus *Solanum* L. is one of the most economically important genera of plants and includes the cultivated potato, tomato, and aubergine. With ca. 1500 species (J. Bennett & S. Knapp pers. comm. Sep 2006) it is also one of the largest (Frodin 2004) and most taxonomically challenging genera of plants. The Planetary Biodiversity Inventory (PBI) *Solanum* project is an international collaborative initiative working towards a modern online monographic treatment of the entire genus since 2004 (Solanaceae Source 2010). Both Solanaceae and *Solanum* diversified in circum-Amazonian tropical South America (Knapp 2002) with later radiations into the Old World (Weese and Bohs 2007). *Solanum* in Africa and Madagascar constitutes less than 10% of the species level diversity with 113 accepted species (Jaeger 1985), the majority of these endemic to the African continent. This study is part of the work towards a monographic treatment of the spiny *Solanum* (*Solanum* subgenus *Leptostemonum*) in Africa and the Flora of Tropical East Africa. For more detail on the taxonomic history of this group see Vorontsova et al. (in press); for further information on the project and descriptions of related species see Solanaceae Source (2010).

Kenyan *Solanum* represents a significant gap in the local floristic knowledge. High levels of morphological variability make identification difficult and the common occurrence and weedy habit of many species has discouraged collectors and taxonomists who have frequently dismissed these plants as “uninteresting weeds”. No complete taxonomic treatment is available since Dunal (1852) and Wright (1906), published prior to the bulk of African botanical exploration. No up to date taxonomic reference material is readily available except short popular treatments by Agnew (1994) and Beentje (1994). African *Solanum* has suffered from widespread and cumulative confusion throughout its taxonomic history and the majority of herbarium determinations are out of date.

The new species described here was originally identified by Andrew and Shirley Agnew during their work towards the Upland Kenya Wild Flowers (1994) at the East Africa Herbarium in Nairobi, as documented by Andrew Agnew’s handwritten notes on herbarium covers. A description of this species is published under the name “sp. J” in Agnew (1994) and Beentje (1994). It is formally described here for the first time and