



Notes on the genus *Gymneia* (Lamiaceae: Ocimeae, Hyptidinae) with two new species from Brazil

R.M. HARLEY^{1 2}

¹Royal Botanic Gardens, Kew, Richmond, Surrey TW9 3AB, England, UK.

²Programa de Pós-Graduação em Botânica, Universidade Estadual de Feira de Santana, Av. Transnordestina s.n., Novo Horizonte, 44036-900, Feira de Santana, Bahia, Brazil. rharley05@aol.com

Abstract

Two new species of *Gymneia* from Brazil, *G. moniliformis* and *G. chapadensis* are described and illustrated, and details of habitat and conservation status included. Morphological relationships to other species of the genus are given, and inflorescence structure of the genus discussed.

Key words: Chapada dos Veadeiros, cyme morphology, *Hyptis*, Serra do Cachimbo, taxonomy

Resumo

Duas novas espécies de *Gymneia* são descritas para o Brasil, *G. moniliformis* e *G. chapadensis*. São incluídos as descrições, ilustrações, detalhes sobre o habitat e o estado de conservação. São discutidas a estrutura da inflorescência em *Gymneia* e as relações morfológicas com as outras espécies do gênero.

Palavras chaves: Chapada dos Veadeiros, *Hyptis*, morfologia das cimeiras, taxonomia, Serra do Cachimbo.

Introduction

The genus *Gymneia* (Bentham 1833: 67, 77) Harley & Pastore (2012: 23) was originally treated as a section of *Hyptis* Jacquin (1787: 101), but is one of the groups recently elevated to generic status (Harley & Pastore 2012) as a result of molecular phylogenetic studies in which the genus *Hyptis* was shown to be highly paraphyletic (Pastore *et al.* 2011). This is the first of a series of papers in which new species are described in the newly proposed classification of the Hyptidinae.

Hyptis sect. *Gymneia* Bentham (1833: 67, 77) was created as section no. 1 of the genus *Hyptis*. Bentham (1833) described the flowers as sessile, in subglobose verticillasters, forming a dense spike or interrupted raceme, with numerous appressed, subulate bracts, on a flowering stem naked above, with minute floral leaves, the fruiting calyx sub-membranous, the tube strongly deflexed at its apex and with setaceous calyx-lobes. Only three species were included: *Hyptis virgata* Bentham (1833: 77), *H. interrupta* Pohl ex Bentham (1833: 77), and *H. platanifolia* Martius ex Bentham (1833: 77), with the later addition of *H. malacophylla* Bentham (1848: 86) and *H. ovalifolia* Bentham (1848: 87). Epling later published a sixth species, *Hyptis ampelophylla* Epling (1936: 279) and lectotypified section *Gymneia*, choosing *Hyptis platanifolia* as the type species; all these species now form the genus *Gymneia* (Harley & Pastore 2012).

The six species of *Gymneia* are mainly found in the cerrados of southern Brazil. They occur especially in the States of Goiás, Minas Gerais, Bahia, Mato Grosso, Mato Grosso do Sul and São Paulo, but with a few of these extending to other areas, especially westward into eastern Paraguay and Bolivia and another species through the caatingas of NE Brazil.

Phenology:—All known collections were made in February or March, and were in both flower and fruit.

Distribution:—Known only from the Chapada dos Veadeiros, Goiás State, Brazil.

Additional specimens examined:—BRAZIL. **Goiás:** Chapada dos Veadeiros, 10 km S of Cavalcante, 1000 m elevation, cerrado, 8 March 1969, *Irwin et al. 24065* (K!, MO, NY!, UB!); *idem*, 29 km by road N of Alto Paraiso, 1800 m elevation, 9 March 1973, *Anderson et al. 6744* (K!, MO, NY, UB); *idem*, Rodovia GO-118, próximo ao Rio das Almas, entre Teresina e Alto Paraiso, 8 February 1987, *Pirani, Harley et al. 1814* (K!, SPF!); Nova Roma, estrada para Alto Paraiso de Goiás, 13° 50' 15" S, 46° 58' 04" W, 24 April 2009, *Queiroz, L.P. et al. 14245* (HUEFS!).

Note:—*Gymneia chapadensis* has been known for many years, although only rarely collected. Other species which have been recorded from the area are *G. ampelophylla*, *G. interrupta* and *G. malacophylla*.

Habitat:—The Chapada dos Veadeiros range, about 200 km N of Brasília, is an area of elevated metamorphic sandstones, with marshy areas interspersed with outcropping rocks and savanna habitats with Cerrado, and supporting an extremely rich Campo Rupestre flora, noted for its many endemic species. This species favours more open areas at altitudes of 872–1800 m.

Conservation status:—The species is only known at present from the above four collections. A large part of the region is already designated as a National Park, due to the very high endemism found among the plant species. Nevertheless, the area is subject to frequent fires, and the plant must be considered Critically Endangered, according to IUCN Red List Criteria (IUCN 2001).

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