



Short communication

Amphiglossa foliosa (Asteraceae: Gnaphalieae, Relhaniinae), a new species from southern Namaqualand, South Africa

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ABSTRACT

Amphiglossa foliosa J.C.Manning & N.A. Helme is a new species endemic to the greater Knersvlakte between Nuwerus and Klawer in Western Cape. It is diagnosed by its sprawling, laxly leafy stems with relatively large, oblanceolate leaves 8–15 × (2–) 3–7 mm, thinly tomentose bracts, the inner with dark, wine-red apical appendages, and the relatively numerous florets, 9 to 12 per capitulum. It is most likely to be confused with *Amphiglossa celans* from coastal Namaqualand between Garies and Kotzesrus, which shares the strongly bicoloured involucre but has distinctive, wiry, strongly flexuose branches with divaricately spreading flowering branchlets, linear or narrowly elliptic leaves mostly 3–8 × 1.5 mm, densely tomentose involucre with the outer bracts joined together by matted hairs, and 5 florets per capitulum.

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1. Introduction

Amphiglossa DC., currently with 11 species, is a small southern African genus largely endemic to the Greater Cape Floristic Region, with two species ranging into interior South Africa and northern Namibia (Koekemoer, 1999). Although *Amphiglossa* was informally treated by Anderberg (1991) as a member of the *Metalasia* group of genera, characterised by white or pink rather than yellow florets, later DNA sequence analysis fails to retrieve the group as monophyletic, resolving it into two clades, with *Amphiglossa*, *Bryomorpha* Harv., *Disparago* Gaertn. and *Stoebe* L. comprising the *Stoebe* clade (Bergh and Linder, 1999).

Originally restricted to species with heterogamous, radiate capitula, the genus was expanded by Koekemoer (1999) to include taxa with homogamous, discoid capitula previously treated as the genus *Pterothrix* DC. Preliminary DNA sequence analysis, however, retrieves *Amphiglossa* as diphyletic (Bergh and Linder, 1999), and substantial revision of generic circumscriptions in the subtribe is required to render the genera monophyletic. As currently circumscribed, *Amphiglossa* comprises wiry or twiggy shrublets with small, sessile, homogamous or heterogamous capitula, either in solitary or in small clusters, containing from 3 to

12 white or pink florets, with a pappus of ± entirely plumose bristles. These become interlocked and the entire cypselia complement is shed in a cluster (Koekemoer, 1999).

Amphiglossa was revised by Koekemoer (1999), with four new species in the genus. The majority of taxa are local endemics, most of them poorly collected and known, at least in part because they flower in summer, when little collecting is done in the winter rainfall arid areas. Here we describe the new species *Amphiglossa foliosa* from southern Namaqualand, Western Cape, which we included as sp. A in the recent account of the genus for the Namaqualand flora (Snijman, 2013). This brings the number of species in the genus to twelve. Resembling *Amphiglossa celans* Koekemoer from central coastal Namaqualand in its laxly leafy stems and discoid capitula with red-tipped inner involucral bracts, *A. foliosa* is distinguished by its stouter habit, mostly larger, oblanceolate leaves, thinly tomentose involucre, more numerous florets per capitulum, strongly plumose pappus bristles, and earlier flowering.

A revised generic classification of the subtribe, although in preparation, is not imminent (N. Bergh, pers. com.) and we therefore proceed with describing the new species in the current classification.

2. Materials and methods

Collections at BOL, NBG, PRE and SAM, the main herbaria with good representation of collections of Cape species, were consulted (herbarium acronyms after Holmgren et al., 1990; Thiers, 2011).

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3. Results

3.1. *A. foliosa* J.C. Manning & N.A. Helme, sp. nov.

3.1.1. Type

Western Cape, 3118 (Vanrhynsdorp): ± 12 km SE of Nuwerus, Oorkraal 114, NW of Rooibraai, (–AB), ecotone between quartzite and granite, 15 Nov. 2008, N.A. Helme 5810 (NBG, holo.; K, MO, PRE, S, iso.).

Sprawling, multi-stemmed, divaricately branched shrublet to 250 mm tall with brittle branches to 800 mm long, puberulous when young, glabrescent, 1–2 mm diam., chestnut brown but covered with flaking cuticle and appearing dull greyish, young branches laxly leafy with internodes ± 10 mm long, older branches leafless; short-shoots sparse and present only on youngest and older stems. *Leaves* spreading or slightly deflexed, twisted ± 270°–360°, primary leaves oblanceolate or lanceolate, 8–15 × (2–) 3–7 mm, narrowed to short petiole-like base ± 1 mm long, leaves on short-shoots linear-oblanceolate, apically recurved-mucronulate, margins involute, strongly discoloured, abaxial surface glabrous, greyish green, 1–5 veined from base, veins prominently raised abaxially, adaxial surface white-felted, probably persistent for one season only. *Capitula* developing in uppermost 2 to 8 leaf axils, solitary in spike-like synflorescences or more commonly up to 4 on lateral branchlets in pseudopaniculate synflorescences, sessile, discoid, homogamous, (9) 10 to 12-flowered; involucre cylindrical to narrowly cup-shaped, 6.5–7.0 × 2.0–2.5 mm, bracts ± 30, inner progressively longer, dry and firm-textured with narrow papery margins, apiculate, thinly woolly distally, outer 4 or 5 series pale straw-coloured with stereome flushed dark brown distally, ovate to lanceolate, 1.5–5.0 mm long, erect, inner 2 or 3 series oblong, 5–7 mm long, with dark wine-red ovate apical appendage 1.5–2.0 mm, apiculate, weakly spreading apically. *Receptacle* flat, 1 mm diam., honeycombed. *Florets* bisexual, corolla pale pink, cylindrical, ± 4.5 mm long, 5-lobed. *Anthers* feathery-tailed, ± 2 mm long. *Ovary* subterete, 5-ribbed with lateral ribs strongest, ± 1 mm long, annulus indistinct; style ± 4 mm long, branches ± 0.75 mm long, stigma marginal. *Pappus* bristles ± 20, connate at base, ± 4.5 mm long, barbed in basal quarter to third otherwise strongly plumose, with seta to 1 mm long, tufted apically. *Cypselas* unknown. *Flowering time*: November (Figs. 1 & 2).

3.1.2. Distribution and ecology

The species is endemic to the Knersvlakte and is known from five populations between Nuwerus and Klawer in southern Namaqualand, Western Cape, from 100 to 450 m alt. (Fig. 3). Plants at the known localities (two of which are sight observations) are common but highly localized (<3 ha in extent). The type population occurs on the edaphic interface between quartzite and granite, in Central Knersvlakte Vygieveld (Mucina et al., 2006). Other populations occur on quartz patches in Knersvlakte Quartz Vygieveld, on mixed shale and quartz substrates in Knersvlakte Shale Vygieveld, and occasionally on loamy soils in Vanrhynsdorp Gannabosveld (Mucina et al., 2006).

3.1.3. Diagnosis

Amphiglossa celans is recognised by its sprawling, laxly leafy stems with relatively large, spreading or deflexed leaves, oblanceolate and 8–15 × (2–) 3–7 mm, inner involucre bracts with dark, wine-red apical appendages, early flowering, and the relatively numerous florets, 9 to 12 per capitulum. *A. celans* from coastal Namaqualand between Garies and Kotzesrus, and *Amphiglossa rudolphii* Koekemoer from further inland, between Loeriesfontein and Worcester, are discoid species with similarly laxly leafy stems, and *A. foliosa* is most likely to be confused with *A. celans*, which shares the strongly bicoloured involucre with inner bracts tipped dark wine-red. *A. celans* has distinctive, wiry, strongly flexuose branches with divaricately spreading flowering branchlets bearing 3 or 4 capitula at the ends. The leaves on the flowering shoots are linear or narrowly elliptic and mostly 3–8 × 1.5 mm, and the

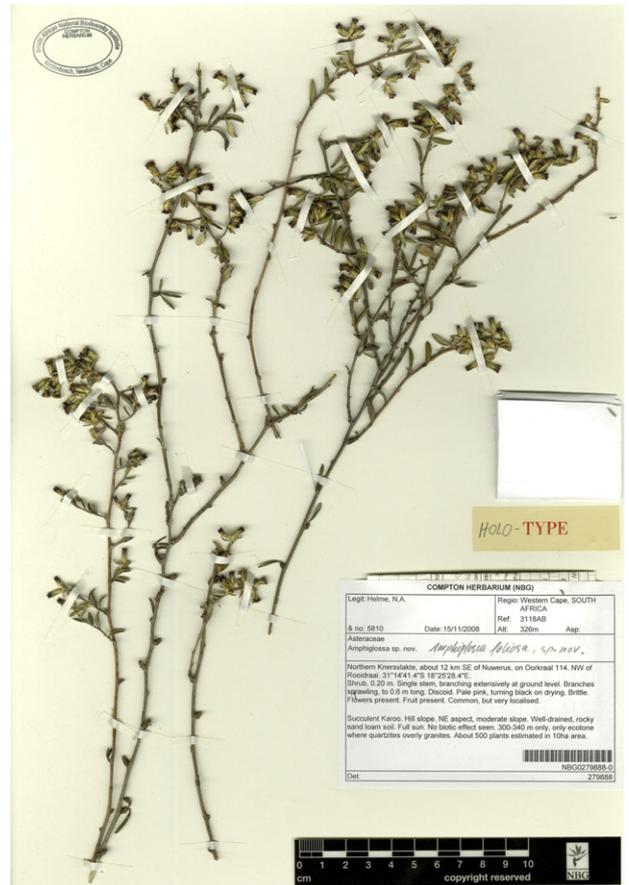


Fig. 1. *Amphiglossa foliosa*, Helme 5810 (NBG, holotype).

involucre are densely tomentose, with the outer bracts joined together by matted hairs. The capitula contain just 5 florets each and the pappus bristles are only shortly plumose, with setae up to 0.2 mm long. The species occurs in deep sandy habitats and flowers in late summer and autumn, between February and April. The stems and branches in



Fig. 2. *Amphiglossa foliosa*, Helme 5810. Detail of synflorescence.

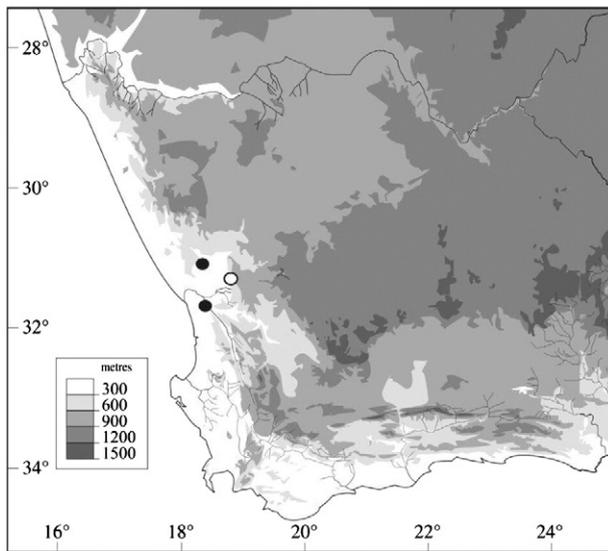


Fig. 3. Distribution of *Amphiglossa foliosa*, ● (sight record, ○).

A. foliosa are thicker and not flexuose and the capitula are more numerous and arranged in panicle like synflorescences, with larger leaves on the flowering branches, oblanceolate and mostly $8\text{--}15 \times 3\text{--}7$. The involucre are only thinly tomentose with the outer bracts not cohering, the capitula each contains 9–12 florets, with strongly plumose pappus bristles, the seta ± 1 mm long, and flowering is in November.

Among the species of *Amphiglossa* with discoid capitula, only *A. foliosa* and *A. tecta* (F.Brusse) Koekemoer, from Postmasburg in Northern Cape, have more than 5 florets per capitulum.

3.1.4. Conservation status

We estimate the total known populations to number $\pm 2500\text{--}5000$ plants but suspect that various undiscovered subpopulations exist in the region. The total area of occupancy is estimated to be < 2 km². One of the known localities (Gideonsoord near Klaver) is expected to lose

about half of the subpopulation to a proposed dam and associated new cultivation, and there are thus definite, ongoing threats to the species. We recommend a provisional classification of VU D2 in terms of the IUCN criteria (IUCN, 2001).

3.2. Additional specimens seen

Western Cape—3118 (Vanrhynsdorp): ± 10 km S of Nuwerus, Oorkraal 114, NW of Rooidraai, (–AB), 6 Sept. 2007, N.A. Helme 4907 (NBG), 16 May 2008, N.A. Helme 5459 (NBG); 10 km SE of Nuwerus, on Karee Berg 113, near summit, (–AB), 29 July 2009, N.A. Helme 6400 (NBG); 7 km W of Klaver, Gideonsoord 303, (–DC), 21 Aug. 2013, N.A. Helme 7795 (NBG).

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