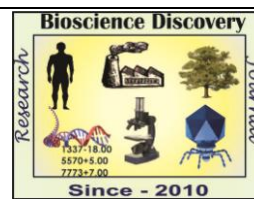


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Research Article



Record of *Dysphania pumilio* (R. Br.) Mosyakin and Clemants (Amaranthaceae) from Vijayapur District of Karnataka, India

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Abstract

The species of *Dysphania pumilio* (R. Br.) Mosyakin & Clemants, an Australian species, was recorded for the first time in Vijayapur district (16° 83' 02.00 N 75° 71' 00 E) of Karnataka, India. Previously, this *Dysphania* species was collected along the rail lines of Coonoor railway station, (Ootakmund, Madras state), Ooty, Nilgiri district, Tamil Nadu at 1700 m altitude. This species can be easily recognized by its spreading habit with slender radiating stems growing up to 30-60 cm long, stamens 1 and stigmas 2. A short description with colour photographs of the plant in its natural habitat is provided.

INTRODUCTION

The genus *Chenopodium* L. is very diverse group of species belongs to family Amaranthaceae which has great medicinal value hence it has been used in several traditional practices by the tribal communities in several parts of the country (Kanaka Rajesham *et al.*, 2013; Mary Suba *et al.*, 2014 and Alawa *et al.*, 2016). The genus has been transferred to Suaeda Forssk. ex J. F. Gmel. and Bassia All. in the 1700s and early 1800s (Uotila, 2013). The remaining major part of the genus has been divided into seven different genera, four of them belonging to the tribe Atripliceae Duby (*Chenopodium* S. Fuentes *et al.*, *Chenopodium* s.str., *Lipandra* Moq. and *Oxybasis* Kar. & Kir.), one to Anserineae Dumort. (*Blitum* L.) and two to Dysphanieae R. Br. (*Dysphania* R. Br. and *Teloxys* L.) (Fuentes-Bazan *et al.* 2012). The reassignment of the aromatic species of *Chenopodium* to the genus *Dysphania* took place in the 2000s, the generic name

Dysphania has been traditionally applied to 7-10 species endemic to Australia (Wilson, 1983). Recent molecular studies (Kadereit *et al.*, 2003) have shown a close relationship among the species of *Chenopodium* L. characterized by the presence of multicellular glandular hairs (previously included in the subgen. *Ambrosia* A.J. Scott), supporting the proposal by Mosyakin & Clemants (2002 and 2008) to transfer the glandular species to *Dysphania* R. Br.

There was no phylogenetic division of the genus *Dysphania*, only on a morphological basis, the aromatic *Chenopodium* species, now belonging to *Dysphania*, have been divided into several sections (Mosyakin, 1996). The native Asiatic species belong to D. sect. *Botryoides* (C. A. Mey.) Mosyakin & Clemants; excluded are *D. ambrosioides* (L.) Mosyakin & Clemants (D. sect. *Adenois* (Moq.) Mosyakin & Clemants), originally an American species but naturalized and

widespread in southern parts of Asia and members of the Australian *D. sect. Orthosporum* (R. Br.) Mosyakin & Clemants: *D. pumilio* (R. Br.) Mosyakin & Clemants (Ramayya and Rajagopal 1969, as *C. pumilio* R. Br.) and *D. truncata* (Paul G. Wilson) Mosyakin & Clemants (Ravi and Anilkumar, 1990, as *C. truncatum* Paul G. Wilson), found as aliens in India.

The Amaranthaceae, the amaranth family represents the most species rich lineage within the flowering plant order of Caryophyllales. Now including the former goosefoot family (Chenopodiaceae), the extended family contains about 165 genera and 2040 species (Christenhusz & Byng, 2016). In India, The genus *Dysphania* is represented with only 2 species (Paul, 2012). In this paper the presence of *D. pumilio* (R. Br.) Mosyakin & Clemants in Vijayapur District, Karnataka is discussed as a new additional record for the state and its distribution, invasive status and notes on its habitat also been provided.

During floristic exploration surveys in view of documenting the Flora of Vijayapur district, a species of *Dysphania* R. Br. was collected in the vicinity of Vijayapur city, Karnataka. The location has been recorded with the aid of Global Positioning System (GPS-Garmin GPSMAP 60Csx) as 16° 49' 37.5 N 75° 41' 3.8 E. After thorough examination and reference to relevant published literatures, it was identified as *D. pumilio* (R. Br.) Mosyakin & Clemants (Fig. 1). The collected specimens were processed and deposited in the Herbarium, Department of Botany, Akkamahadevi Women's University, Vijayapur, Karnataka.

Dysphania pumilio (R. Br.) Mosyakin & Clemants, Ukrayins'k. Bot. Zhurn. (Ukr. Bot. J.) 59: 382, 2002. *Chenopodium pumilio* R. Br., Prodr. 1: 407, 1810; Benth., Fl. Austral., 5: 163, 1870; Brenan, Fl. Trop. East Africa 13, 1954; Ramayya & Rajagopal, *Curr. Sci.*, 38: 173-175, 1969.

Type: Australia, R. Brown (BM, holo. K. iso.!).

Herbs, annual, prostrate or radiating, 40-60 cm long. Stems branched, glandular. Leaves alternate, petiolate; leaf blade elliptic to lanceolate, 0.5-4.0 x 0.5-2.0 cm, covered with sessile and stipitate glandular-hairs, lobed margin, 2-4 lobes for each side, cuneate at base, apex rounded. Flowers greenish, minute, sessile or with short pedicel, in axillary clusters, to 0.2-0.8 cm in diameter at the

nodes. Perianth 4-5, valvately arranged, ovate, white at maturity, rounded dorsally, with apex acute, more or less pubescent. Stamen 1, basifixed anthers. Ovary superior, small, style short, stigmas 2. Fruit spheroidal or ellipsoidal, seed 1, vertical, ovoid brown to black.

Phenology: Flowering and fruiting from July to September.

Habitat and ecology: especially in ruderal places, by roadsides, up to 650 m. Most commonly, the accompanying species are *Croton bonplandianus* Baill., *Parthenium hysterophorus* L., *Senna uniflora* (Mill.) Irwin & Barneby and *Tephrosia purpurea* (L.) Pers.,

Distribution in India: The species has been reported for the first time in along the rails of Coonoor railway station, (Ootakmund, Madras state), Ooty, Nilgiri district, Tamil Nadu at 1700 m altitude.

Specimen examined: **INDIA**, Karnataka, Vijayapur Dt. Freedom Fighters Colony, 24 Aug 2016, SVK 1120.

Discussion

The species of *D. pumilio* has been reported from numbers of localities in the different parts of the world for example, in Rumania by Chytry (1993), in Iran by Rahiminejad *et al* (2004), in Bulgaria by Grozeva (2007), in Italy by Iamónico (2011) and very recent 2017 in Serbia by Bogosavljevic and Zlatkovic. In India, the first record of *D. pumilio* dates from 1969, when it was recorded in the Ooty, Nilgiri district, (previously Ootakmund, Madras state), Tamil Nadu at 1700 m altitude. The current population of *D. pumilio* is estimated to hundreds of individuals, as they have located in one population only appears all along the local roads and in ruderal habitats within settlements. The obtained results and observations, the species does not pose any harm to ecosystem or habitat in areas where it has growing, hence it may indicate that *D. pumilio* can be considered a noninvasive, naturalized species in Karnataka, India.

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Fig. 1. *Dysphania pumilio* (R. Br.) Mosyakin & Clemants; **A.** Habitat; **B.** Habit; **C.** Close view of habit.

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