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## *Wedelia glauca* (Asteraceae) a new naturalized alien to Italy

### Abstract

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*Wedelia glauca* (Ortega) Blake (Asteraceae), perennial herb native to the tropical regions of South America, was found naturalized in the suburbs of Palermo (Sicily). This is the first report to Italy. In Europe this plant is known from Spain and Portugal.

*Key words:* Alien Flora, Sicily, *Wedelia*.

### Introduction

Interest on alien flora in Italy has always been high, but in recent decades it has grown considerably. The recent dedicated checklist (Galasso & al. 2018) and its six months updates (Galasso & al. 2021) are the result of the studies coordinated by the group for Floristics, Systematics and Evolution of the Italian Botanical Society. In addition, several independent contributions that are published annually (e.g. Del Guacchio & al. 2020; Mugnai & al. 2021).

In the course of floristic investigations in Sicily a new perennial herbaceous species of *Asteraceae*, was found in the suburbs of the city of Palermo. It occupies a large area among the agricultural lands surrounding the city and is characterized by a rich luxuriance and a high dispersal capability by seeds and vegetatively.

This plant has been identified as *Wedelia glauca* (Ortega) Blake, a species native to the tropical regions South America, and widespread especially in Argentina, Chile, Paraguay, Southern Brazil and Uruguay (Martínez-Sagarra & al. 2016). It has a great adaptive capacity; as obtained from herbarium specimens housed in L, MA, P, SI (Herbarium acronyms according to Thiers 2021) in the area of origin it grows in farmlands and pastures from the sea level to 2600 m a.s.l. It is reported as naturalized in the southeastern US, Alaska, India, SE Australia, New Zealand and South Africa in wastelands, farmlands and pastures. *W. glauca* is considered as a very dangerous invasive weed, given the ease with which it spreads over wastelands, croplands and pastures, and the difficulty in eradicating it (Burkart & Carera 1953). In addition, it is very toxic for livestock (Micheloud & Odriozola 2012; Giannitti & al. 2013) and has been reported as having allelopathic potential against irrigated herbaceous crops (Sobrero & al. 2004; Mujawar 2017).

In Europe it is known only from Spain and Portugal in the Iberian Peninsula (Greuter 2006; Roy & al. 2020). Curiously, the species has been described on material grown in the botanical garden of Madrid (Gómez Ortega 1797) (Fig. 1) but its naturalization in Spain has been reported only recently (Carretero 1988).



Fig. 1. Original iconography of *Wedelia glauca* in Gómez Ortega (1797).

## Materials and Methods

The description below is based on material collected in Sicily. The illustration and photos are offered as an aid to identification. Exsiccata are housed in the *Herbarium Mediterraneum Panormitanum* (PAL) and in the Herbarium of Department of Agricultural and Forest Sciences of Palermo (SAF). The main and most updated floristic surveys of Italy (Pignatti 2018; Galasso & al. 2018, 2021), Europe and the Mediterranean (Greuter 2006; Roy & al. 2020) were consulted to check the occurrence of this taxon and trace its distribution.

### Description

Erect perennial rhizomatose herb to 70 cm high. Scapes glabrous. Leaves opposite, narrow-lanceolate, 5–15 cm long, 5–3 mm wide, sessile, usually entire, rarely with remote teeth near the base, glabrous to finely pubescent (Fig. 2a). Capitula solitary, 10–15 mm diam.; peduncles 2–6 cm long; involucre bracts lanceolate, 6–15 × 1.5–2.5 mm; receptacle scales lanceolate. Ray florets bright yellow, 10–15 × 2.2–3 mm; ligulate oblanceolate, 3-toothed. Disc florets numerous, yellow (Fig. 2b). Cypselae angled, 4–6 mm long (Fig. 2 c); pappus scales 2 mm long.



Fig. 2. *Wedelia glauca* in Sicily: a) habit; b) detail of the capitulum; c) detail of the cypselae.



## Results and Discussion

The species was found in a residential area in the suburbs of the city of Palermo where it discontinuously occupies an area of about 10 ha on gardens, citrus orchards and uncultivated lands on clay and sandy soils on carbonate substratum between 100 and 150 m a.s.l. (Fig. 3). It has been recorded for the first time in 2009 and monitored for 12 years during which it expanded its area of a couple of hectares. This species is not mentioned in the recent contribution on the urban vascular flora of Palermo (Domina & al. 2020) because the place of discovery falls outside the perimeter of the area examined in that contribution.

*Wedelia glauca* makes a dense and continuous lawn almost monospecific. The population found in Sicily is characterized by a rich luxuriance and a high dispersal capability. The milling of the soil facilitates its diffusion by fragmenting the rhizomes. Given the high invasive capacities, shown since the first observations, and its toxicity to livestock, the expansion of this plant in Sicily needs to be monitored. In summer, when the plant has bloomed, it is also evident when driving through the area, in winter the vegetative part merges with native vegetation making it less easy to recognize. The monitoring of this species through aerial photos or Google Street View panoramas (Barone & al. 2021) would, therefore, be conducted using photos taken in the summer.

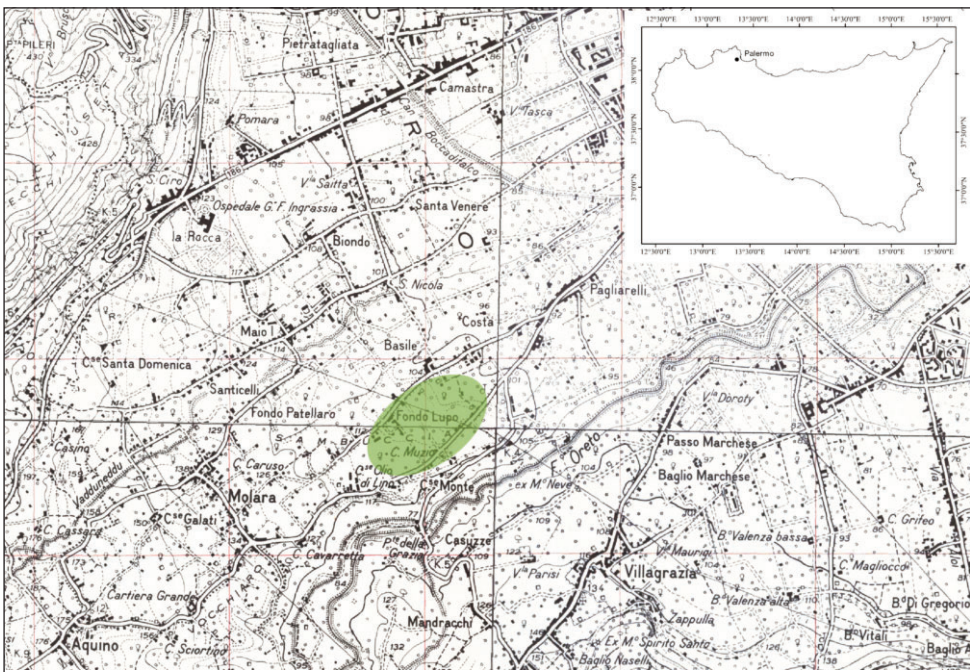


Fig. 3. Distribution of *Wedelia glauca* in Sicily.

*Exsiccata: Wedelia glauca* (Ortega) Blake, Palermo, via Olio di Lino, 8.6.2009, P. Mazzola (PAL); Palermo, via Olio di Lino, waste land and citrus orchards, 38° 08' 14,97"N 13° 32' 10,66"E, 120 m a.s.l., 23.7.2013, P. Mazzola & G. Domina (PAL99981, 99982); *ibidem*, 3.7.2021, G. Domina (PAL, SAF).

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