

First records of *Amaranthus cacciatoi* (Amaranthaceae) out of its *locus classicus*

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Ključne besede: tujrodne vrste, floristika, severna Italija

Abstract

Amaranthus cacciatoi was discovered in north-western Italy (Trentino-Alto Adige and Veneto regions), where it was registered in corn fields and roads margins. The records reported here represent the first ones out of *locus classicus* of the species (Rome city) and are considered as casual alien occurrences.

Izveček

Vrsto *Amaranthus cacciatoi* smo našli v severozahodni Italiji (regiji Trentino-Alto Adige in Veneto) na koruznih poljih in ob cestah. Te najdbe predstavljajo prva nahajališča izven klasičnega nahajališča vrste (mesto Rim) in veljajo za njeno prehodno pojavljanje.

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Introduction

Amaranthus L. (*Amaranthaceae* Juss. s. str.) is a genus comprising 75–95 species, of which approximately half are native to the Americas (Hernández-Ledesma et al., 2015; POWO, 2026). Several species spread out of their native distribution areas, sometimes becoming invasive and negatively impacting agricultural systems and natural vegetation (Costea et al., 2001; Iamonico, 2015; Das, 2016).

Amaranthus is taxonomically complex due to its high phenotypic variability and possible hybridization (Costea et al., 2001a; Bayón, 2015; Iamonico, 2015, 2017), which has resulted in the nomenclatural difficulties and misapplication of some names; many of these taxonomic and nomenclatural confusions and problems were discussed and clarified in our earlier publications (see, e.g., Iamonico, 2014a, 2014b, 2016a, 2020a; Iamonico & Palmer, 2020).

As part and continuation of the ongoing studies of the Italian representatives of *Amaranthaceae* (see e.g., Iamonico & Sánchez Del Pino, 2016; Sánchez Del Pino & Iamonico, 2016; Marcenò et al., 2022; Iamonico, 2023; Iamonico & Freitag, 2023), we here present a note concerning *Amaranthus cacciato* (Aellen ex Cacciato) Iamonico, which was discovered for the first time out of its *locus classicus*.

Material and methods

The present research is based on field surveys in Veneto and Trentino-Alto Adige regions (north-eastern Italy), examination of specimens preserved at FI, G, PAD, RO, and ROV (herbarium codes follow Thiers (2026) [continuously updated]) and in the personal herbarium of Carlo Argenti (not listed in *Index Herbariorum*), and analysis of relevant literature.

Results and discussion

Amaranthus cacciato was originally described from Rome by Cacciato (1966) as a variety of *A. bouchonii* Thell. Iamonico (2012), by using a morphometric approach on 200 specimens of *A. bouchonii* s. str., *A. bouchonii* var. *cacciato*, and *A. powellii* S. Watson, showed that Cacciato's variety deserves a rank higher than variety; thus, he proposed the subspecies level [*Amaranthus powellii* subsp. *cacciato* (Aellen ex Cacciato) Iamonico]. One year later (Iamonico 2013), after various useful discussions with T. Raus, the taxon was elevated to the species rank, based on the different origin of *A. powellii* (native to the Americas, most probably southwestern North America), *A. bouchonii* (known to have evolved in Western Europe), and *A.*

cacciato (known so far only from central Italy). Anyway, *A. cacciato* morphologically differs from the other two supposedly closely related taxa by the following characters: synflorescence lax and not erect, with many lateral branches and bract/tepal length ratio 1.8–2.2 (*vs.* synflorescence stiff and erect, unbranched or with very few widely spaced branches and bract/tepal length ratio 2.3–3.7 in *A. powellii*); terminal florescence usually 2–9 cm long, flowers actinomorphic or slightly zygomorphic (tepals equal or subequal, with parallel margins; Figure 1A), and fruit with circumscissile dehiscence [*vs.* terminal florescence usually up to 20 cm, flowers zygomorphic (tepals very unequal and their margins parallel or not), and fruit indehiscent in *A. bouchonii*] (Iamonico, 2012, 2015).

At the current state of knowledge, *Amaranthus cacciato* occurs in Italy only (Iamonico, 2015+; POWO, 2026), where it was so far recorded in Rome only (Latium region, central Italy; Iamonico, 2015). Field surveys in Veneto and Trentino-Alto Adige regions (north-eastern Italy) allowed us to find three populations identifiable as *A. cacciato*. These discoveries represent the first records out of Rome (*locus classicus* of the species).

Amaranthus cacciato (Aellen ex Cacciato) Iamonico, Willdenowia 43(2): 239–240 (2013) ≡ *Amaranthus bouchonii* Thell. var. *cacciato* Aellen ex Cacciato, Ann. Bot. (Rome) 28: 618 (1966) ≡ *Amaranthus powellii* S. Watson subsp. *cacciato* (Aellen ex Cacciato) Iamonico, Nordic J. Bot. 30(1): 13 (2012).

Holotype. Italy. Lazio, Roma, in ruderalis, communis in ipse Urbe, 12 August 1965, Cacciato 98 (G!, see Figure 26 in Iamonico, 2015: 60).

Chorology. Central (Latium region) and northern (Trentino-Alto Adige and Veneto regions) Italy. *Amaranthus cacciato* is considered native to Italy according to Iamonico (2015, 2015+), whereas the *Portal of Flora of Italy* (PFI, 2025) reports it as alien (naturalized in the Lazio region). In our opinion, further investigations are needed to establish the origin status of this taxon. By following the concept in PFI (2025), we considered *A. cacciato* as a casual alien species in both Trentino-Alto Adige and Veneto regions.

Habitat. Roadsides, uncultivated land (Rome city, Latium region) at 20–60 m a.s.l. Concerning the new populations found in the north of Italy, that from Veneto (Belluno Province, at 575 m a.s.l.; Figure 1) is dense and composed of about one hundred individuals growing in a corn field (during the resting phase) with other weeds, e.g. *Amaranthus blitum* L. s. str., *Lipandra polysperma* (L.) S. Fuentes, Uotila & Borsch, *Amaranthus hybridus* L., and *Abutilon theophrasti* Medik.

Phenology. Flowering from May to September (in Latium) and from March to October in northern Italy (Trentino-Alto Adige and Veneto regions).

Specimens examined. ITALY. Lazio: Roma, Piazza R. Malatesta, 4 November 1960, *Cacciato s.n.* (RO!); Roma, Centocelle, 29 August 1961, *Cacciato s.n.* (RO!); Roma, 20 August 1962, *Cacciato s.n.* (RO!). Roma, Cinecittà, 14 June 1963, *Cacciato s.n.* (RO!); Roma, ruderali a Torpignattara, 14 August 1964, *Cacciato 5026.5* (FI!); Roma, in ruderalis, communis in ipse Urbe, 12 August 1965, *Cacciato 98* (G!); Roma, prati a Cinecittà, 10 August 1965, *Cacciato s.n.* (RO!); Roma, 28 August 1966, *Cacciato 13* (G!); Roma, 4 October 1968, *Cacciato s.n.* (RO!); Roma, lungo via di Portonaccio, 20 August 1968, *Cacciato s.n.* (RO!); Roma, 14 July 1970, *Cacciato s.n.*

(RO!); Roma, via Appia Nuova, all'altezza di via delle Capannelle, incolti al margine della strada, 15 September 2008, *Iamónico s.n.* (RO!). **Trentino-Alto Adige:** provincia di Trento, comune di Divezzano, Sagrato della cappella Orzano di Divezzano bordo stradale, 530 m, 20 October 2006, leg. Et det. *Pujatti 9933/1*, rev. *Prosser* (sub *Amaranthus hybridus*), rev. *Iamónico*, 20 March 2024 (ROV62014); provincia di Trento, comune di Tassullo, Val di Non, tra Tassullo e la forra di S. Giustina, meletto, 500 m, 18 October 2012, leg. *Prosser, Bertolli et Andreatta 9632/3*, det. *Prosser* (sub *Amaranthus hybridus*), rev. *D. Iamónico*, 20 March 2024 (ROV60075). **Veneto:** Belluno, Frontal di Lentiai (Borgo Valbelluna), 575 m, 30 October 2023, leg. *C. Argenti*, rev. *D. Iamónico* (PAD, RO, Herbarium Argenti).



Figure 1: Specimen of *Amaranthus cacciatoi* collected in Veneto; A) detail of the perianth (ROV62014). Photographs by D. Iamónico.
Slika 1: Primerek vrste *Amaranthus cacciatoi*, nabran v Venetu; A) detajl cvetnega odevala (ROV62014). Fotografiji D. Iamónico.



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