

Edda Lattanzi

The distribution of three species of the genus *Calicotome* in Italy

Abstract

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The distribution in Italy of three species of the genus *Calicotome* (*C. spinosa*, *C. villosa* and *C. infesta*) is described and analysed, based on field observations and studied specimens from Italian herbaria. A key for their identification is provided. *C. spinosa* var. *ligustica* is included in *C. infesta*.

Key words: Flora, *Leguminosae*, Mediterranean.

Introduction

The aim of this work is to update and define the distribution in Italy of three species of *Calicotome* Link: *C. spinosa* (L.) Link, *C. villosa* (Poir.) Link and *C. infesta* (C. Presl) Guss.

Fiori (1925) treated *Calicotome spinosa* as a polymorphic species with four varieties: “var. *typica*”, var. *villosa*, var. *infesta* and var. *ligustica*, with statements of distribution that caused confusion among his followers.

Rothmaler (1949), in a revision of the genus, recognized five species occurring in the Mediterranean basin: *Calicotome spinosa* (L.) Link, *C. infesta* (C. Presl) Guss., *C. villosa* (Poir.) Link, *C. rigida* (Viv.) Rothm. and *C. fontanesii* Rothm., the latter two absent from the Italian territory. Within *C. spinosa* he distinguished three varieties based upon differences in bracteole morphology: “var. *typica*”, var. *ligustica* and var. *opistholepis* Rothm. Within *C. villosa* he recognized two varieties on the basis of different length of corolla and legume: “var. *genuina*” and var. *cretica* (C. Presl) Rothm.

Gibbs (1968a) reduced the species occurring in Europe to only two: *Calicotome spinosa* and *C. villosa*, the latter including *C. infesta*. Later, (Gibbs 1968b) he recognised in *C. villosa* three taxa of varietal rank: var. *villosa*, var. *rigida* (Viv.) Béguinot & Vaccari (= *C. infesta*) and var. *intermedia* (C. Presl) Ball, the latter occurring in SE Spain and N Africa. Pignatti (1982) followed Gibbs (1968a), mentioning *C. infesta* in a note, and gave generic information on the Italian distribution.

García Murillo (1999) recognized four species occurring in Spain: *Calicotome spinosa*, *C. villosa*, *C. infesta* and *C. intermedia* C. Presl.

Materials and methods

This study is mainly based on field observation, personal collections and material kept in several Italian herbaria (APP, CAG, CLU, FI, LEC, MS, PI, RO, SIENA, UTV). The specimens collected in Liguria, on Elba, in Toscana, Lazio, Campania, Gargano, Basilicata, Calabria and Sicily are deposited in the Author's herbarium. Literature data were disregarded.

Conclusions

On account of differences in morphology characters and distribution, *Calicotome villosa* var. *rigida* = *C. rigida* (Viv.) Maire & Weiller, endemic of N Africa (Brullo & Furnari, 1996), cannot be considered as a synonym of *C. infesta*, as is shown in the following key:

- Upper leaf surface pubescent; legume glabrous, suture lacking wings (N Africa; Brullo & Furnari 1996).....*C. rigida*
- Upper leaf surface glabrous, legume sericeous sutures winged*C. infesta*

It has proved impossible to keep apart var. *ligustica*, described by Burnat (1896) as differing from *C. infesta* in bracteole shape, a variable character; as any more than a variety of *C. infesta*.

Our studies resulted in a better understanding of taxonomy and distribution of *Calicotome* in Italy. In agreement with Garcia Murillo (1999) and partly with Rothmaler (1949), I recognize three species as occurring in Italy, which can be reliably identified with the following simple key:

- 1 Calyx glabrous or with scattered appressed hairs; legume glabrous (Fig. 1a).....*C. spinosa*
- 1* Calyx and legume villous or sericeous.....2
- 2 Calyx and legume villous with long, patent hairs (Fig. 1b).....*C. villosa*
2. Calyx and legume sericeous with short, appressed hairs (Fig. 1c).....*C. infesta*



Fig. 1. – Legumes of: **a**, *Calicotome spinosa*; **b**, *C. villosa*; **c**, *C. infesta*.

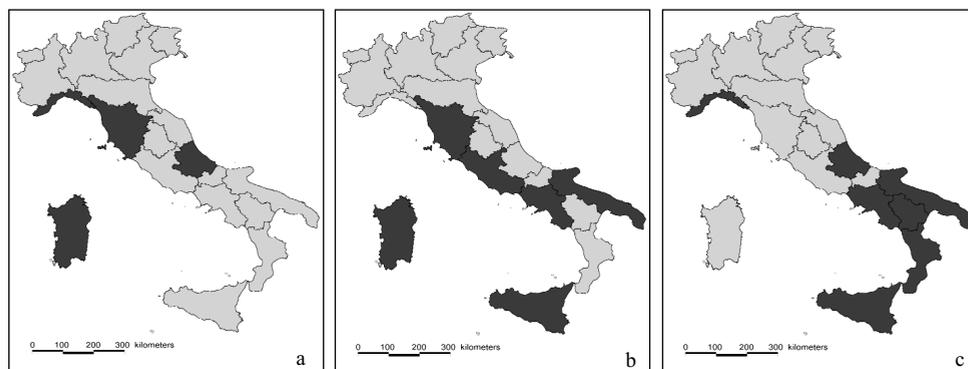


Fig. 2 – Geographic distribution in Italy of: **a**, *Calicotome spinosa*; **b**, *C. villosa*; **c**, *C. infesta*.

Calicotome spinosa is frequent in Liguria, on the N side of Elba and NW Sardegna, rare in N Tuscany, very rare in Abruzzo (Valle dell’Orta: a new locality for that region: specimen collected by Fabio Conti in 2002, APP) (Fig. 2a).

Calicotome villosa is common in Tuscany, on the S side of Elba, in Lazio, Campania, S Sicily and on nearby islands, in SE Sardegna and the Gargano peninsula (Fig. 2b).

Calicotome infesta occurs in W Liguria, is common in Salento (Puglia), Basilicata, Calabria and N Sicily; rare in Cilento (Campania) and Abruzzo (Fig. 2c).

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References

- Brullo, S. & Furnari, F. 1996: La vegetazione del Gebel el-Akhdar (Cirenaica settentrionale). – Boll. Accad. Gioenia Sci. Nat. Catania **27**: 375.
- Burnat, E. 1896: Flore des Alpes Maritimes, **2**. – Genève et Bâle.
- Fiori, A. 1925: Nuova flora analitica d’Italia. – Firenze.
- Garcia Murillo, P. 1999: Genus *Calicotome*. – Pp. 182-188 in: Castroviejo, S. (ed.), Flora iberica, **7(1)**. – Madrid.
- Gibbs, P. E. 1968 a: *Calicotome*. – P. 86 in: Tutin, T. G., Heywood, V. H., Burges, N. A., Moore, D. M., Valentine, D. H., Walters, S. M. & Webb, D. A. (eds), Flora europaea, **2**. – Cambridge.
- 1968 b: Taxonomy and distribution of the genus *Calicotome*. – Notes Roy. Bot. Gard. Edinburgh **28**: 275-286.
- Pignatti, S. 1982: Flora d’Italia, **1**. – Bologna.
- Rothmaler, W. 1949: Revision der Genisteen. II. Die Gattungen *Erinacea*, *Spartium* und *Calicotome*. – Bot. Jahrb. Syst. **74**: 276-287.

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