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***Artemisia variabilis* Ten. (Asteraceae) in Sardinia (Italy)**

Abstract

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During researches on the flora of the calcareous territory of Sassari (North-western Sardinia), *Artemisia variabilis* Ten. has been found. Some systematic, chorological and ecological observations on Sardinian populations are given.

Tenore (1826) originally described *Artemisia variabilis* from the surroundings of Naples. Later on, Gussone (1843) gave this taxon also for Sicily. It was considered as a species in all the Italian Floras of the last Century (Bertoloni, 1853; Arcangeli, 1882 e 1894; Cesati & al., 1884). In the first half of the twentieth century, the name *Artemisia variabilis* had less fortune: Fiori (1903 and 1927) considered *Artemisia variabilis* just a variety of *A. campestris* L. More recently, Zangheri (1976) gave it as a possible synonym of *A. campestris* subsp. *glutinosa* (Gay ex DC.) Briq. & Cavillier and Tutin (1976) as a synonym of *A. campestris* subsp. *glutinosa* (Gay ex Besser) Batt. A year later, Pignatti (1977) again presents this taxon as a good species: an Italian endemic that grows in the regions of Campania, Basilicata, Calabria and Sicily (Pignatti, 1982). Frizzi & Tammaro (1982) and later Lucchese (1990) reconfirm it for Abruzzo and Molise.

Artemisia variabilis Ten., Fl. neapol. prodr. app. 5: 28. 1826

Iconography. - Fig. 1 (made by F. Valsecchi).

Description. - Plant perennial, 1-1.5(2) m high; annual shoots arising from a very short perennial stem, numerous, woody, up to 3 cm in diameter, branched below, ascending, brown, brown-reddish, longitudinally striate; lower leaves 5x11 cm, sometimes pinnate, with 3-7 segments, upper leaves with segments of second and third order or simply linear, all petiolate to sessile, repeatedly divided, with linear segments 0.5-1 mm wide, slightly fleshy, green, with dot-like glands <0.1 mm (in vivo!), older ones pruinose; panicle dense pyramidal, inflorescence branches of first and second order, often secund, racemes terminal, contracted; capitula numerous, 2x2.5 mm, from ovate to obovate, sessile or pedunculate, peduncles at the base of bracts linear, from entire to divided in 3-5 lobes, sometimes with scattered bracteoles; outer involucre bracts 2-3, 0.5x1 mm, ovate, concave, with scarious margins, several inner involucre bracts, 1.2x2 mm, ovate, almost completely scarious, with evident midribs, brown-reddish; receptacle convex, without scales; outer flowers 4-5,

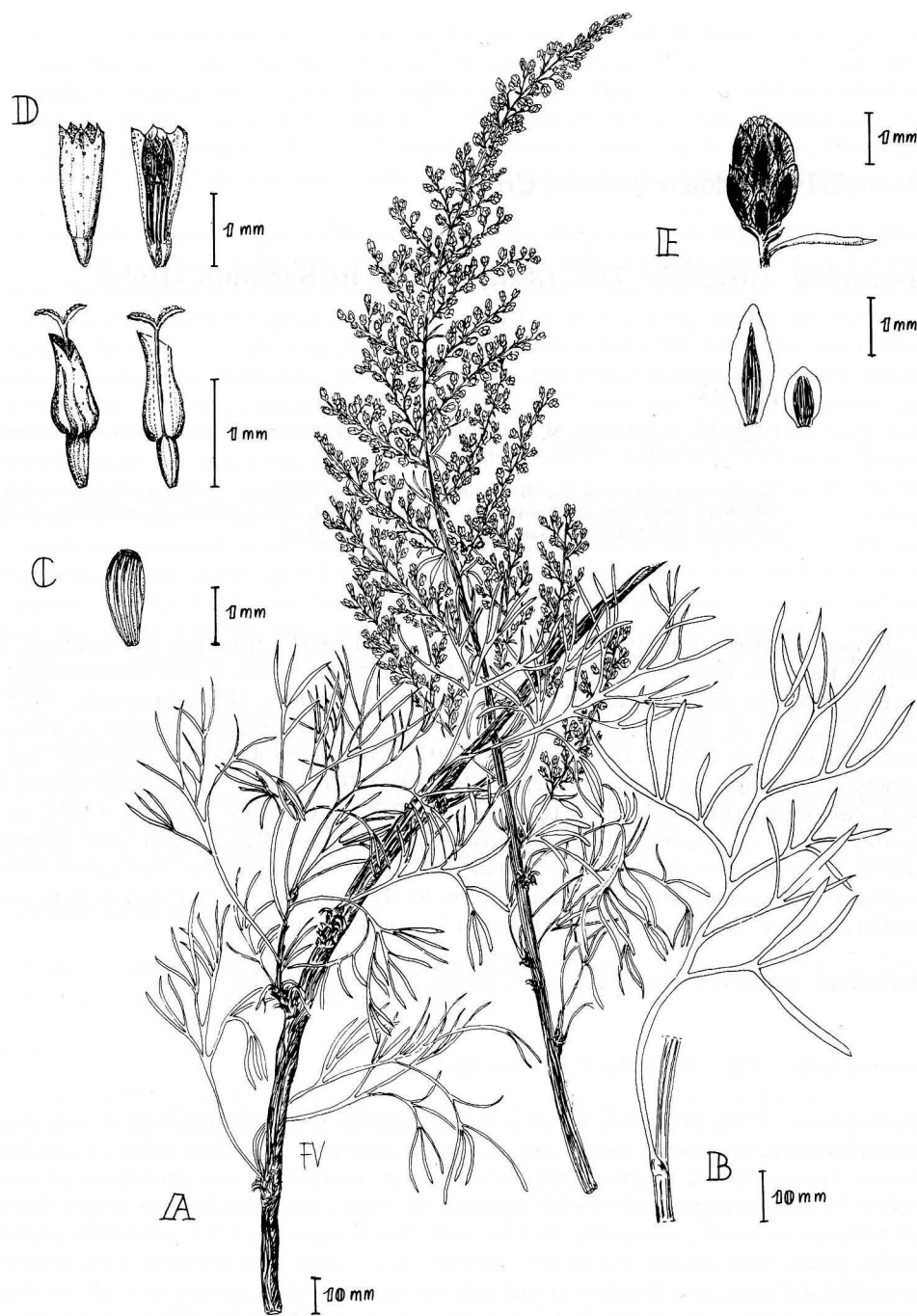


Fig. 1 - *Artemisia variabilis* Ten. - A, stem and inflorescence; B, leaf; C, achene; D, male and female flowers; E, head and involucre bracts.

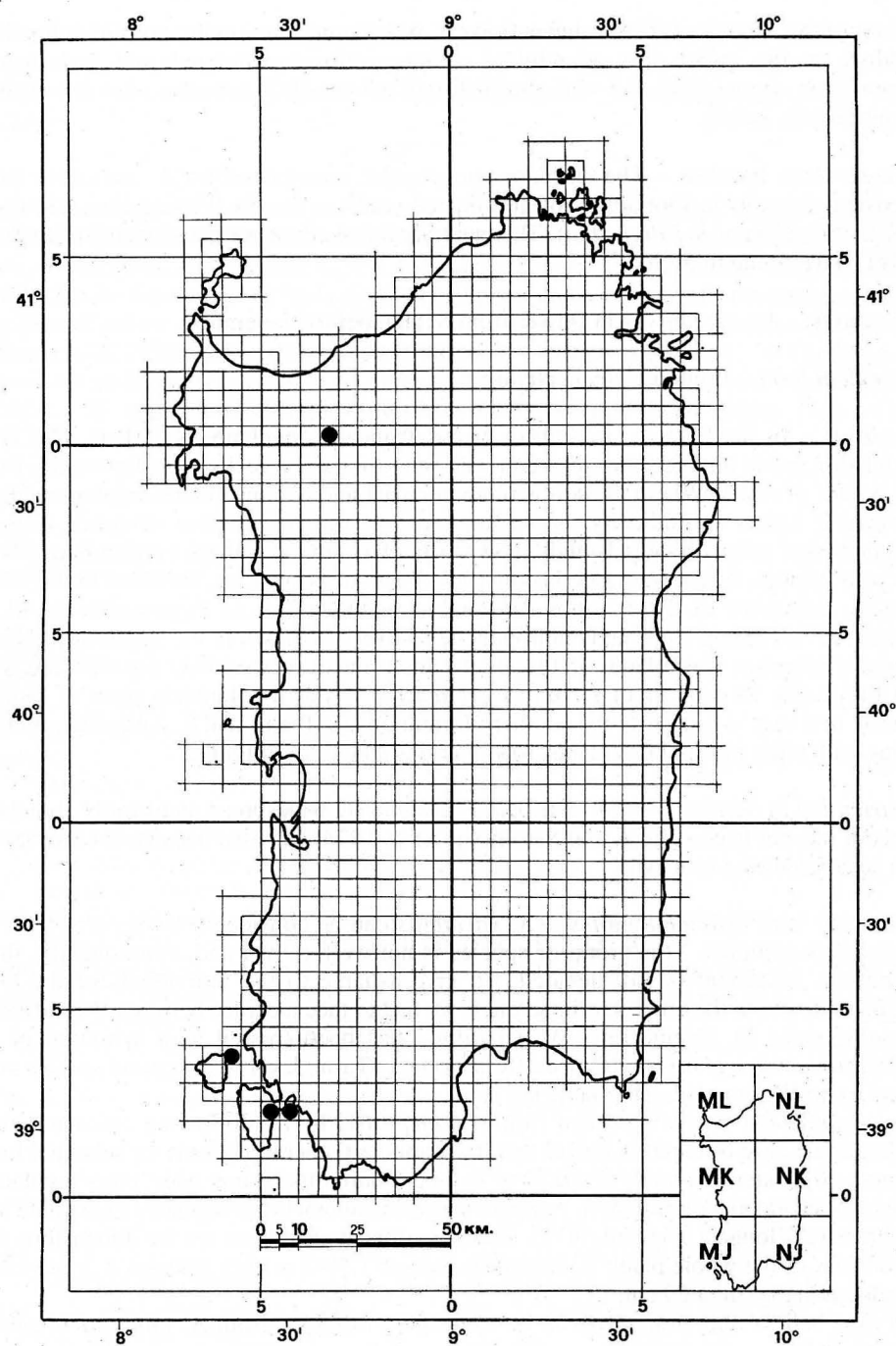


Fig. 2 - *Artemisia variabilis* Ten. distribution in Sardinia. U.T.M. graticule.

1.5 mm long, female, filiform; inner flowers, 6-7, 2 mm long, male; corolla yellowish, reddish on the upper part, glandular; anthers yellow, prolonged into awl-shaped appendices; stigma bifid, 0.5 mm, purplish-red; achenes 0.5x1.3 mm, obovate, brown, longitudinally striate.

Chromosome number. - The chromosome number, ascertained for *A. variabilis* from meristematic cells in root apices of germinated seeds, is $2n=54$ (Exsiccatum: SS: Ossi, 7.XII.1993, Urbani & Filigheddu). This new Sardinian count confirms what Brullo & al. (1991) have found in Sicily.

Phenology. - *A. variabilis* is in flower from September to November.

Biological form. - Fruticose chamaephyte.

Ecology. - In Sardinia *A. variabilis* grows from sea level up to 350 m. The Ossi population grows on miocene calcareous sandstone, either on rocks or on free stones from the wastes of caves. Where the soil is more compact and compact rocks are dominant, *A. variabilis* enters sporadically as a component of the Association *Atriplici halimi-Artemisietum arborescentis* Biondi 1988, particularly in the Subassociation *inuletosum viscosae* Biondi, Allegrezza, Filigheddu 1988. This subassociation, included in the Class *Pegano-Salsoletea* Br.-Bl. & Bolòs 1957 and in the Order *Salsolo-Peganetalia* Br.-Bl. & Bolòs 1957, is nitrophilous and anthropogene and very common in the North of Sardinia, where it colonises waste lands and fields. In this context, *A. variabilis* fits well and with the limitrophe formations of *Lavatera cretica* L., acts as a colonising plant of ruderal places. In a very similar way the southern formations (S. Pietro and S. Antioco) colonise, along with other nitrophilous plants, road margins and sandy littorals.

Distribution in Sardinia. - (Fig. 2) *A. variabilis* is fairly widespread and locally abundant. Since it has not been collected in Sardinia prior to 1974, and also because its ecology, it can be considered a neophyte.

Systematic and taxonomic notes. - *A. variabilis* can be considered to be part of the *A. campestris* complex. This group of species is not well known and, consequently, their taxonomic treatment is still debated. To give a name to the individuals of the Ossi population, and to the other Sardinian ones, we had to face a choice between two different options, since in recent times *A. variabilis* has been treated as a synonym of *A. campestris* subsp. *glutinosa* (Gay ex Besser) Batt. (Tutin, l. c.) or as a good species very close to *A. campestris* L. (Pignatti, 1977).

A. variabilis can be distinguished from *A. campestris* by the following characteristics: bracts at the base of capitula longer than the capitula (generally shorter or subequal in *A. campestris*); outer involucre bracts (2 or 3) much shorter than inner ones, inner involucre bracts all subequal (whereas in *A. campestris* involucre bracts are regularly imbricated and progressively longer) (Pignatti, 1977). Other significant characters are the dimensions and woodiness of the whole plant: *A. variabilis* is up to 1.50-2 m high whereas *A. campestris* is seldom higher than 60 cm.

We also believe the Ossi plants to be even more different from *A. campestris* subsp. *glutinosa* (Gay ex Besser) Batt., as this taxon must have erect branches from the base and is strongly glutinous especially in the higher parts (floral branches) (Battandier & Trabut, 1888; Besser, 1834 and 1845; Tutin, l. c.).

The study of the Sardinian populations, included the ones previously reported as *A. campestris* L. (De Marco & Mossa, 1973; Milia & Mossa, 1976), shows a strong morphological uniformity. All the individuals we have seen are well described as *A. variabilis*.

Specimina visa. - S. Antioco, Su Giunchettu, 20.IX.1974, G. Milia, sub *A. campestris* (CAG) - S. Antioco, Su Giunchettu, 30.XII.1974, G. Milia, sub *A. campestris* (CAG) - Ossi, 17.VI.1988, R. Filigheddu, A. Luglié & M. Urbani (SS) - Colline lungo la strada dalla Stazione ferroviaria di Scala di Giocca al paese di Ossi (Sassari), nei pressi del bivio per Muros, substr. calcareo, 18.VIII.1988, R. Filigheddu & M. Urbani (SS) - S. Antioco (Istmo), 1.IX.1988, E. Bocchieri & B. Mulas, sub *A. campestris* (CAG) - Is Cordedas nei pressi del bivio per Tratalias, 1.IX.1988, E. Bocchieri & B. Mulas, sub *A. campestris* (CAG) - S. Antioco (Cagliari), 5.X.1988, R. Filigheddu & S. Diana (SS) - Ossi, 6.X.1988, R. Filigheddu & M. Urbani (SS).

Acknowledgments

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References

- Arcangeli, G. 1882: Compendio della flora italiana: 365. — Torino.
 — 1894: Compendio della flora italiana 2° ed.: 687. — Torino & Roma.
 Battandier, J. A. 1888: *Artemisia* L. — P. 469 in Battandier, J. A. & Trabut, L. C., Flore de l'Algerie, 1. — Alger.
 Bertoloni, A. 1853: Flora Italica 9: 119-120. — Bononiae.
 Besser, W. S. J. G. 1834: De Dracunculi — Boll. Soc. Imp. Nat. Moscou. 8: 27.
 — 1845: Monographiae Artemisiarum. Sectio I. Dracunculi. — Mém. Acad. Imp. Sci. Saint-Petersbourg Divers Savans. 4: 478-480.
 Brullo, S., Guglielmo, A., Pavone, P. & Terrasi, M. C. 1991: Numeri cromosomici per la flora italiana: 1254. *A. variabilis* Ten. — Inform. Bot. Ital. 23: 40.
 Cesati, V., Passerini, G. & Gibelli, E. G. 1884: Compendio della flora italiana: 505. — Milano.
 Cullen, J. 1975: *Artemisia* L. — Pp. 319-320 in: Davis, P.H. (ed), Flora of Turkey and the East Aegean Island, 5. — Edinburgh.
 De Marco, G. & Mossa, L. 1973: Ricerche floristiche e vegetazionali nell'isola di S. Pietro (Sardegna): La flora. — Ann. Bot. 22: 59.
 Fiori, A. 1903: *Artemisia*. — P. 250 in: Fiori, A. & Beguinot, A. Flora analitica d'Italia, 3. — Padova.
 — 1927: Nuova flora analitica d'Italia, 2(4): 636-637. — Firenze.
 Gussone, J. 1843: Florae siculae synopsis, 2(1): 457. — Neapoli.
 Lucchese, F. 1990: Segnalazioni floristiche italiane: 589. *A. variabilis* Ten. — Inform. Bot. Ital. 23: 40.
 Milia, G. & Mossa, L. 1976: Ricerche floristiche e vegetazionali nell'isola di S. Antioco (Sardegna meridionale): la flora. — Boll. Soc. Sarda Sci. Nat. 16: 203.
 Pignatti, S. 1977: Note critiche sulla Flora d'Italia. V. Nuovi appunti miscellanei. — Giorn. Bot. Ital. 111: 45-61.
 — 1982: Flora d'Italia, 3: 109. — Bologna.
 Tammaro, F. & Frizzi, G. 1982: Segnalazioni floristiche italiane: 166. *A. variabilis* Ten. — Inform. Bot. Ital. 14: 287. [1984].
 Tenore, M. 1826: Ad Florae neapolitanae prodromum appendix quinta: 28. — Neapoli.

- Tutin, T. G. 1976: *Artemisia* L. — Pp. 185-186 in: Tutin, T. G. & al., *Flora europaea*, 4. — Cambridge.
- Zangheri, P. 1976: *Flora italica*, 1: 723. — Padova.

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