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***Salix oropotamica* (Salicaceae), a new species from S. Italy**

**Abstract**

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*Salix oropotamica*, occurring along the mountain streams of Aspromonte (S. Italy), is described and illustrated as a species new to science. Its relationships with *S. caprea* are discussed too.

In the ambit of taxonomical researches on the genus *Salix* in Italy (Brullo & Spampinato 1988, 1993, Brullo 1993) an interesting population growing in the mountain belt of Aspromonte (S. Italy) was found. It shows some relations mainly with *S. caprea* L. chiefly for the occurrence of hairy ovaries and decorticated wood without ridges, as well as leaf hair-covering and shape of the catkins; but on the basis of herbarium and field investigations these orophilous Calabrian plants are morphologically well differentiated from the typical specimens of *Salix caprea*. Therefore, they can be referred to a new species proposed as *Salix oropotamica*.

***Salix oropotamica*** Brullo, Scelsi & Spampinato sp. nov. (Fig. 1, 2). - Type: Italy, Aspromonte, Gambarie, Torrente Listi, 26.4.1994, Scelsi & Spampinato (holotype CAT); *ibid.*, 9.3.1994, Brullo, Minissale, Scelsi & Spampinato (paratype CAT).

Frutex vel arbor parva, 4-8 m alta. Rami vetustiores cortice subglabro vel pubescenti, ligno subcortice glabro leviter striato. Rami annotini dense griseo-tomentosi. Gemmae ovatae, applanatae, brunneo-rubescens. Stipulae semicordatae, 5-16 mm longae, margine dentatae. Petioli griseo-tomentosi, in foliis bene evolutis 3-16 mm longis. Lamina foliorum oblongo-lanceolata vel elliptico-lanceolata, basi cuneata vel cuneato-obtusata, apice acuminata, (4) 5-10 cm longa, (2,5) 3-5 cm lata, nervis lateralibus utroque latere 10-14, superne viridis, glabra vel puberula, tomentosa nervo medio, subtus griseo-tomentosa, nervis prominentibus, margine denticulato. Amenta lateralia, praecocia, peduncolis brevibus, foliosis, villosis; mascula longe cylindrica, 1,5-3 cm longa, erecta vel incurva; feminea cylindrica vel cylindrico-ovata, 1,5-4 cm longa, erecta vel incurva. Bractea membranacea persistens, elliptico-oblongata, acuta vel obtusiuscula, in 2/3-3/4 superiore nigra, pilis longiusculis obsita, in mascula 2,5-4 x 1-1,3 mm, in feminea 3-3,3 mm x 0,8-1 mm. Nectarium viridi-luteum, unicum, oblongo-rectangulare, 0,8-0,9 mm longum.



Fig. 1. *Salix oropotamica* Brullo, Scelsi & Spampinato: **A**, sterile branch; **B**, branch with female catkins; **C**, branch with male catkins; **D**, stipules; **E**, female flower; **F**, male flower; **G**, stigma; **H**, closed capsule; **I**, opened capsule; **L**, seed.

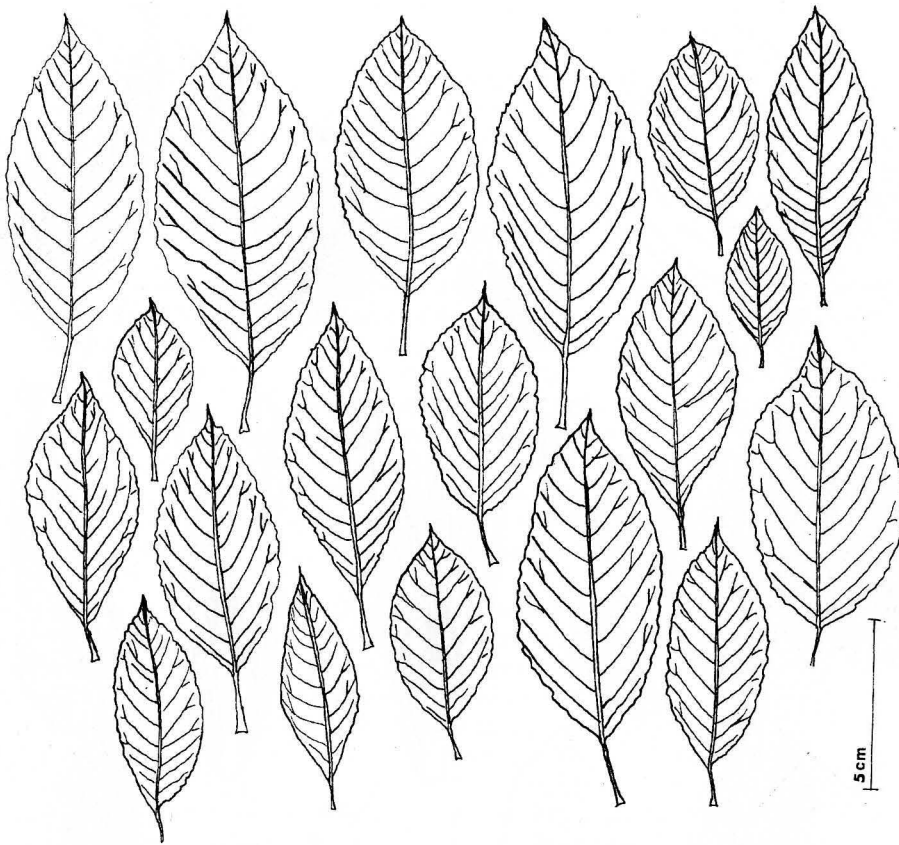


Fig. 2. Leaf variability of *Salix oropotamica* (specimens coming from *locus classicus*).

Stamina 2, filamentis liberis, albis, glabris, 4-6 mm longis, antheris oblongis, 1-1,2 mm longis, luteis, loculis leviter difformis. Ovarium longe pyriforme, 3 mm longum, 0,9-1 mm latum, dense pilosum, gymnophoro 1,5 mm longo, sparsim piloso. Stylus nullus. Stigmata 2, bifida, erecta, 0,6-0,7 mm longa. Capsula 5-6 mm longa, dense pilosa, carpophoro 2,5-3,8 mm longo, loculis in dehiscencia divaricato-arcuatis. Semina olivacea longe elliptica, c. 1 mm longa, stipite cilindrico, 0,3-0,4 mm longo.

*Specimina visa.* - Italy, Aspromonte, Gambarie, Torrente Listi, 12.6.1984, Signorello & Spampinato (CAT); *ibid.*, 30.7.1984, Signorello & Spampinato (CAT); *ibid.*, 19.4.1991, Scelsi & Spampinato (CAT); *ibid.*, 18.7.1992, Scelsi & Spampinato (CAT); *ibid.*, 9.3.1994, Brullo, Minissale, Scelsi & Spampinato (CAT); *ibid.*, 26.4.1994, Scelsi & Spampinato (CAT); *ibid.*, 18.7.1994, Brullo, Scelsi & Spampinato (CAT); *ibid.*, Montalto, 13.6.1993, Brullo & Scelsi (CAT); *ibid.*, Cappello Nero, 18.7.1994, Brullo, Scelsi & Spampinato (CAT).

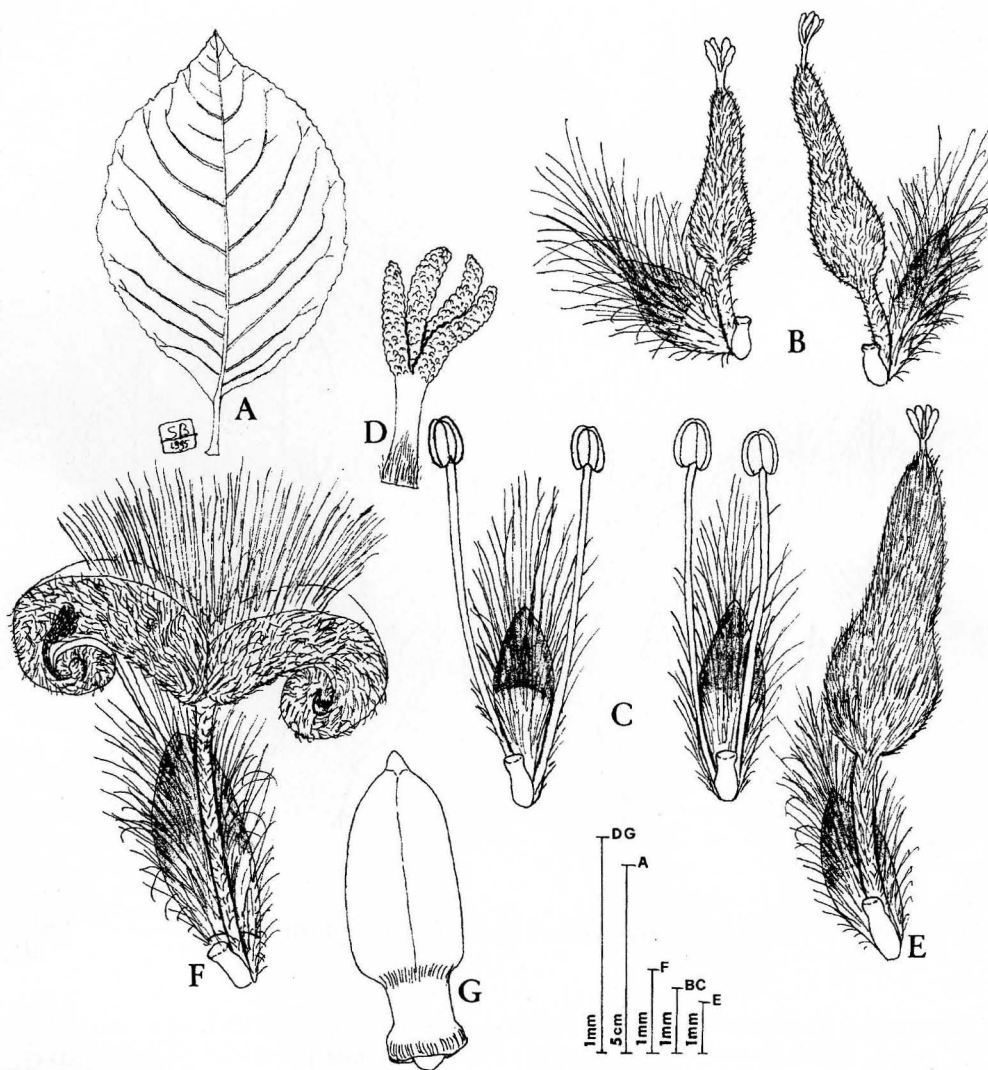


Fig. 3. *Salix caprea* L.: A, leaf; B, female flowers; C, male flower; D, style and stigma; E, closed capsule; F, opened capsule; G, seed.

*Ecology.* - *Salix oropotamica* is localized on dampy soils along some streams occurring in the mountain belt of Aspromonte area (S. Calabria) at 1200-1500 m of altitude. It is associated there with various hygrophilous species, i.e. *Salix alba* L., *S. purpurea* L., *Athyrium filix-foemina* (L.) Roth, *Carex pendula* Hudson, *C. remota* L., *Hypericum hircinum* L. subsp. *majus* (Aiton) Robson, *H. androsaemum* L. Besides several nemoral orophilous species are quite frequent as, *Geranium versicolor* L., *Brachypodium sylvaticum* (Hudson) Beauv., *Festuca exaltata* Presl, *Stachys sylvatica* L., *Mycelis*

*muralis* (L.) Dumort., etc.

**Taxonomical relationships.** - The new species is closely related to *Salix caprea* L., which is widespread in the boreal region of Europe and Asia (Pignatti 1982, Meikle 1984, Akeroyd 1993, Blanco 1993). In particular, according to Martini & Paiero (1988), *S. caprea* is quoted in Italy from Alpine and Apennine territories, while is rare in planitial areas and in Sicily. On the basis of field investigations, *S. caprea* occurs also in Aspromonte, but here it is uncommon and shows more xeric exigences than *S. oropotamica*.

*Salix oropotamica* differs from *S. caprea* in having the twigs grey-tomentose, decorticated wood slightly striate, leaves oblong-lanceolate to elliptical-lanceolate, cuneate or cuneate-obtusate at base, with 10-14 lateral nerves at each side, stipules up to equalling the petiole, bracts blackish for 2/3-3/4 of their length, nectary oblong-rectangular, anthers oblong 1-1.2 mm long, style lacking, capsule locula divaricate-curved at the dehiscence, seeds long elliptical. Instead, *Salix caprea* is characterized by twigs pubescent to glabrous, decorticated wood smooth, leaves broadly ovate to ovate-oblong, rounded at base, with 6-10 lateral nerves at each side, stipules max. 1/4 as long as the petiole, bracts blackish at upper part, nectary oblong-utriculate, anthers subrounded 0.8 mm long, style well developed, 0.3-0.4 mm long, capsule locula strongly revolute at the dehiscence, seeds oblong (Fig. 3).

Besides, there are remarkable differences between the two species also from ecological point of view. *Salix oropotamica* is a typical orophilous hygrophyte, growing along the stream sides, while *S. caprea* is a species tolerant the dry soils, occurring normally on the outskirts of woods and hedgerows as well as the sub-nitrophilous and anthropic places, as road escarpments on filling material, from the basal up to mountain belt.

*S. oropotamica* must be considered a distinct species from *S. caprea*, apart from its remarkable morphological and ecological differences, but also for the relictual character of its populations, which are very homogeneous and strictly circumscribed to the mountain streams, in an area of the S Calabria very rich in endemic species, viz. *Soldanella calabrella* Kress, *Lereschia thomasi* (Ten.) Boiss., *Limodorum brulloi* Bartolo & Pulvirenti, *Epipactis meridionalis* Bauman & Lorenz, *Epipactis aspromontana* Bartolo, Pulvirenti & Robatsh, *Chaerophyllum calabricum* Guss., *Adenostyles macrocephala* Huter, Porta & Rigo, etc.

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#### References

- Akeroyd, J. R. 1993: *Salix* L. — Pp. 53-64 in: Tutin, T. G., Burges, N. A., Chater, A. O., Edmondson, J. R., Heywood, V. H., Moore, D. M., Valentine, D. H., Walters, S. M. & Webb, D. A. (ed.), *Flora europaea*, 2 ed., 1. — Cambridge.
- Blanco, P. 1993: *Salix* L. — Pp. 477-517 in: Castroviejo, S. & al. (ed.), *Flora Iberica*, 3. — Madrid.
- Brullo, S. 1993: *Salix arrigonii*, specie nuova della Sardegna e considerazioni sulle sue affinità tassonomiche e sul suo ruolo fitosociologico. — *Boll. Soc. Sard. Sci. Nat.* 29: 247-253.
- & Spampinato, G. 1988: *Salix gussonei* (*Salicaceae*), a new species from Sicily and its

- relationships with *S. pedicellata*. — *Willdenowia* **17**: 5-10.
- & — 1993: A new species of *Salix* (*Salicaceae*) from Calabria (S Italy). — *Candollea* **48**: 291-295.
- Martini, F. & Paiero, P. 1988: *I Salici d'Italia*. — Trieste.
- Meikle, R. D. 1984: *Willows and Poplars of Great Britain and Ireland*. — London.
- Pignatti, S. 1982: *Flora d'Italia*, **1**. — Bologna.

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