

Argantoniella G. López & R. Morales, a new genus of Labiatae from the Iberian Peninsula and Northwest Africa

by

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Abstract

The new genus of Labiatae, *Argantoniella*, based on *Satureja salzmannii* P.W. Ball is described. The new combination *Argantoniella salzmannii* (P.W. Ball) G. López & R. Morales is made.

Key words: *Argantoniella*, Labiatae, new genus, NW Africa, S Spain.

Resumen

Se describe el nuevo género *Argantoniella* dentro de la familia Labiatae, basado en *Satureja salzmannii* P.W. Ball. Se propone la nueva combinación *Argantoniella salzmannii* (P.W. Ball) G. López & R. Morales.

Palabras clave: *Argantoniella*, género nuevo, Labiatae, NW de África, S de España.

Introduction

Among the species in the Iberian Peninsula traditionally included in *Satureja* (Bentham, 1832-36; Ball, 1972), *S. salzmannii* P.W. Ball noticeably differs from the rest. It is an Ibero-North African endemic on which the monotypic section *Satureja* sect. *Salzmannia* G. López is based. Because of the peculiar morphology of *S. salzmannii*, López (1982) considered this taxon phylogenetically isolated and highly deviant within the genus. Biogeographically it also deviates because there is no other *Satureja* species with a similar distribution. The fact that it is found in Europe and Africa, but its fruits seem not suitable for long-distance dispersal points that, in all probability, it is older than any other Iberian *Satureja*, already in existence at the end of the Miocene (López, 1982) and whose intercontinental migration was enabled by the Messinian salinity crisis (Bocquet & al., 1978). Its chromosome number, $2n = 30$ (Morales, 1990), is identical to that of other *Satureja* species and relatively common in the family (e.g., *Origanum*, *Thymus*, *Thymbra* or *Micromeria*).

A recent reassessment of its morphological characteristics has led us to the conclusion that it differs to such degree from the other *Satureja* species that it

should no longer be included in this genus. Indeed, similar prostrate rooting stems and flat, spatulate and ciliate leaves are found in some species of *Thymus*, but are unknown in any other *Satureja* species. Its inflorescences of leafy glomerules without well-defined verticillasters are also unlike those of *Satureja*. Its calyx is tubular, almost regular, with the clefts separating two of the teeth deeper than the others. The teeth are equal, broad, semi-obtuse and lanceolate, and the tube has inside a regular well-defined, short-haired ring located slightly above the middle and just below the teeth sinuses. In contrast, *Satureja* species typically have a tubular or campanulate calyx with triangular or subulate sharp teeth, and the tube rim can be either glabrous or covered with long, exerted hairs irregularly arranged. The corolla of *S. salzmannii* has two upright lips with horizontal lobules curved at a right angle, and a bifid upper lip, whereas *Satureja* typically have a totally erect upper lip, entire or slightly emarginated, and an extended lower lip. The anterior stamens in *S. salzmannii* are straight, opposite to the corolla lower lip, and located in the two sinuses separating the middle lobe. In *Satureja*, the anterior stamens are ascending and underneath the upper lip, besides the posterior stamens. The styles of

S. salzmännii have two clearly unequal stigmatic branches, whereas in typical *Satureja* they are equal in length or only slightly unequal. In *S. salzmännii* the fruits are glabrous and narrow towards the apex, and consequently have a conical rounded upper end, but in remainder *Satureja* the fruits are apically hemispherical and more or less glandular-pilose. Besides the differences listed above, it must be added that *S. salzmännii* gives off almost no smell when crushed, and for this reason it was named *Satureja inodora* Salzm. ex Benth., whereas other *Satureja* are for the most part very aromatic plants frequently used for seasoning.

The morphological differences between *S. salzmännii* and typical *Satureja* are far greater than those encountered within and between *Acinos*, *Calamintha*, *Clinopodium*, *Micromeria*, *Satureja*, *Ziziphora* and other close genera accepted by Cantino & al. (1992), some of which have been even included by other authors in *Satureja* (Briquet, 1895-1897; Greuter & al., 1986). *Satureja salzmännii* cannot be accommodated within any of these genera, nor can it be included in a more broadly circumscribed *Satureja*, that would also

require (see Cantino & Wagstaff, 1998) the transfer of a number of otherwise acceptable genera (as listed above). Finally, it must be said that it is not possible to transfer *S. salzmännii* to *Thymus*, no matter how similar its leaf morphology and appearance might be to some *Thymus* species, notably *T. caespititius* Brot. Indeed, *S. salzmännii* widely differs from *Thymus* by its almost regular calyx with broad teeth, the peculiar stamen location, and its clearly unequal stigmatic branches.

There are reasons to think that the current circumscription of *Satureja* is not phylogenetically acceptable. In Wagstaff & al. (1995), some Eurasian and American species were included that, although similar, don't seem to be closely related to each other. These authors concluded: "Our results (Fig. 2) suggest that this grouping is not monophyletic, and that *Satureja* should be divided into several genera" (Wagstaff & al., 1995: 891). In the case of *S. salzmännii*, the artificial, "odds and ends" nature of the genus stands out even more clearly than usual: it was classified under *Satureja* because no better alternative could be found but, in fact, the only similarity with *Satureja* s. str. lies in some family generic char-

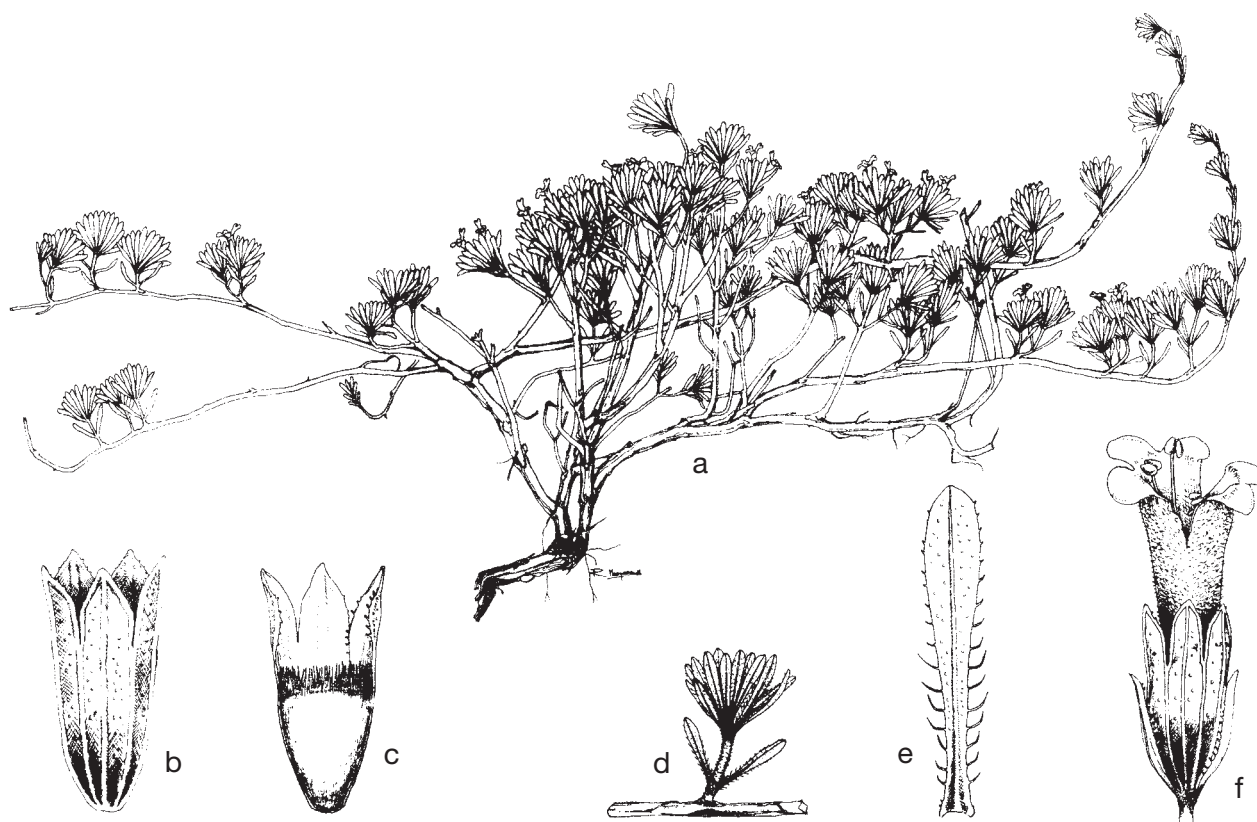


Fig. 1. *Argantoniella salzmännii*, Alcalá de los Gazules, Cádiz, (MA 104376): **a**, habit; **b**, calyx; **c**, internal surface of calyx; **d**, branchlet; **e**, leaf; **f**, flower.

acteristics. It becomes, therefore, necessary to define a new monotypic genus in which this peculiar species might be adequately included. Doroszenko (1986), in an unpublished Ph. D. dissertation, divided *Satureja* s. l. into 17 genera placed in four groups. We have seen only the abstract of this dissertation and apparently there is no monotypic genus in this work based on *S. salzmannii*.

Argantoniella G. López & R. Morales, **gen. nov.**

≡ *Satureja* sect. *Salzmannia* G. López in *Anales Jard. Bot. Madrid* 38(2): 384. 1982

Typus: *Satureja salzmannii* P.W. Ball [*Satureja inodora* Salzm. ex Benth., non Host].

A Satureja, habitu prostrato-radicanti, foliis planis lineari-spathulatis, glaberrimis, ciliatis, ad apicem ramulorum densissime dispositis, floribus subsessilibus in glomerulis paucifloribus dense foliatis dispositis, calyce –10 costato—glaberrimo, dentibus subaequalibus, late lanceolatis, obtusis, carpostegio incluso, regulari, densissime et breviter ciliato, supra mediam tubi partem inserto, staminibus anticis rectis, ad labium inferiorem aduersum, stylo bifido, ramis inaequalibus, perspicue differt. A Thymus, calyce subregulari dentibus latis obtusis, staminibus dispositio et stigmatibus inaequalibus, sat diverso.

The name for the new genus is derived from *Argantonius*, “the silver man”, legendary king of the *Tartessos*, an ancient Iberian people living in west Andalusia 3000-500 years BC, and the diminutive Latin suffix *-ella* because of its being a small inconspicuous plant with almost no smell that mostly goes unnoticed.

Argantoniella salzmannii (P.W. Ball) G. López & R. Morales, **comb. nov.**

Satureja salzmannii P.W. Ball in *Bot. J. Linn. Soc.* 65: 356. 1972 [*basionym*]

Satureja inodora Salzm. ex Benth., *Lab. Gen. Sp.*: 354. 1834, nom. illeg., non Host, *Fl. Austr.* 2: 135. 1832, syn. subst.

Type: [Morocco] “Hab. prope Mogador”, Salzmann, *Pl. Tang. Exs.* (holotype, G-DC).

Illustrations: López (1982: 409); Figs. 1-3.

Small shrubby plant, with prostrate stems 10 to 35 cm long and white flowers 5.0-6.5 mm in length. It grows in open dry places on siliceous rocks, mainly oligocenic sandstones, at an altitude from 80 to 1100 m in open Mediterranean shrubs and woods, rugged slopes and rocky crevices. It occurs in mountain areas of Cadiz and Malaga provinces (S Spain) and northern Morocco (Fig. 4). Flowering from May to July. $2n = 30$.

Known localities for Argantoniella salzmannii

MOROCCO. Tanger, 35°48'N 5°48'W, *Salzmann* (Jahandiez & Maire, 1934); Garbia, Kahansa [Kahaoucha], 35°42'N 5°38'W, 50 m, in arenosis ericetisque, 2-VII-1930, *Font Quer* 575 (MA 104378); Mont Zemzem, 35°35'N 5°56'W, *Font Quer & Maire* (Jahandiez & Maire, 1934). SPAIN. **Cádiz**: Tarifa, carretera al embalse de Almodóvar, entre la sierra de Ojén y la de Enmedio, subida al Santuario de Nuestra Señora de la Luz, 30STE6397, 80 m, areniscas, lentiscar con palmitos, 25-VI-1981, *Barra, López* 2673GF & *Morales* (MA 256133, MA 381906); Algeciras, El Cuartón, 30STE7194, calizas, 7-IX-1996, *Martín Mosquero & al.* (SEV 156800, cf. *Martín Mosquero*, 2002: 244); Algeciras, Sierra del Bujeo, 30STE7395, 1-VIII-1996, *Martín Mosquero* (SEV 153656, cf. *Martín Mosquero*, 2002: 244); Picacho de Alcalá de los Gazules, 30STF5738, 400 m, areniscas, 25-VI-1981, *Barra, López* 2684GF & *Morales* (MA 426319); Tarifa, Sierra del Niño, arroyo de Bugones, 30STF6206, 17-VI-1980, *Arroyo & al.* (SEV 63892, cf. *Arroyo & al.*, 1983: 428); Los Barrios de Alcalá de los Gazules, 30STF61, 140 m, ventana de la roca, 26-IV-1979, *López* 1012GF & *Morales* (MA 426316); Los Barrios, a 13 km, carretera a Alcalá de los Gazules, 30STF6712, arenal sobre arenisca, brezal con *Halimium lasianthum*, 17-VIII-1982, *López* 3482 (*Morales*, 1989: 196); de Alcalá de los Gazules a Jimena, 30STF63, 4-VII-1919, *Gros* (MA 104376, BC49912); Sierra del Aljibe, Cortés, límite con la provincia de Málaga, 30STF64 (*López*, 1982: 410); entre Alcalá de los Gazules y Puerto de Galis, Puerto Oscuro, 30STF6644, 1000 m, 14-VI-1997, *Martín Mosquero & al.* (SEV 153885, cf. *Martín Mosquero*, 2002: 244); Algeciras, Sierra de la Luna, 30STF7100, calizas, 21-VIII-1997, *Martín Mosquero & Ocaña* (SEV 153893, cf. *Martín Mosquero*, 2002: 244); Sierra de Pal-



Fig. 2. Photograph of the whole plant (Alcalá de los Gazules, Cádiz).



Fig. 3. Photograph of a brachlet with the leaves and flowers (Alcalá de los Gazules, Cádiz).

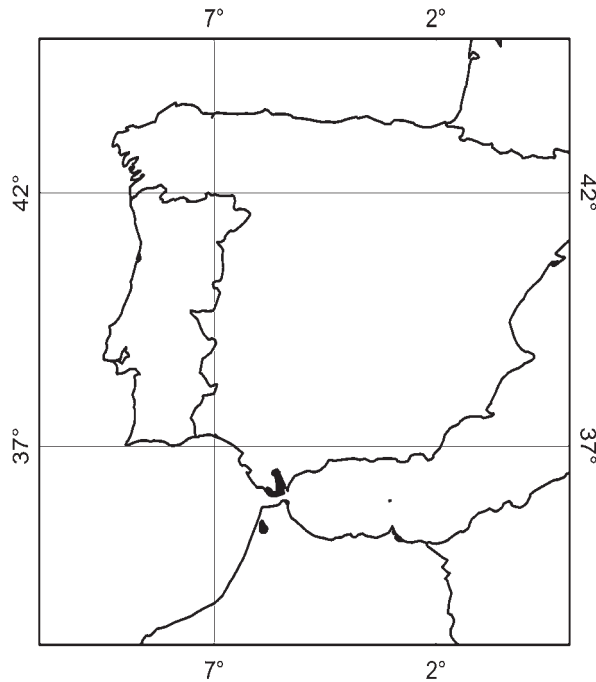


Fig. 4. Distribution of *Argantoniella salzmännii*.

ma, 30STF7202, 29-VII-1887, *Reverchon* (MA 104375); Los Barrios, puerto del Hambre, VI-1929, *Ceballos* (MA 104377); entre Los Barrios y Arcos de la Frontera, calizas, 7-IX-1996, *Martín Mosquero & al.* (SEV 153679, cf. Martín Mosquero, 2002: 244).

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Received: 5-IV-2004
Accepted: 10-VI-2004