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New Spanish nothotaxa in the genus *Teucrium* L. (*Lamiaceae*)

Abstract

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Four new nothospecies are described in the genus *Teucrium*, from eastern Spain: *T. xconquense* (*T. capitatum* x *T. gnaphalodes*), *T. xgnaphaureum* (*T. aureum* x *T. gnaphalodes*), *T. xmaestracense* (*T. aureum* x *T. expassum*) and *T. xpseudoaragonense* (*T. angustissimum* x *T. expassum*). The name *T. xcoeleste* Schreber (pro sp.) is revived, to apply to hybrids derived between *T. angustissimum* and *T. capitatum*.

Introduction

In the eastern half of the Iberian Peninsula there exist many taxa belonging to the genus *Teucrium* L., most of them endemics with a small distribution area. Their areas very often overlap, and it is quite usual to find mixed populations formed of two or three such taxa. During our studies on taxa of *Teucrium* sect. *Polium* in the eastern mountains of Spain we noticed the existence of morphologically intermediate individuals in such intermingled populations, which we regard as hybrids.

Taxonomists know how easily species of some genera of *Lamiaceae* (e.g., *Marrubium*, *Lavandula*, *Mentha*, *Phlomis*, *Prunella*, *Satureja*, *Sideritis*, *Thymus*) produce hybrids. This also applies in the genus *Teucrium*, in which several nothotaxa have been described from Spain (Sennen 1912, 1917, 1936, Font Quer 1920, 1926, 1946, Alcaraz & al. 1988, Pajarón & Molina 1989, etc.). The taxonomy of the genus *Teucrium* is not, however, completely understood in the Iberian Peninsula, which has likely contributed to the fact that an indeterminate number of nothotaxa which exist in that area still remain unnoticed. In this paper we undertake the study of several such unpublished Spanish nothotaxa.

Results and discussions

Teucrium xcoeleste Schreber, Pl. Verticill. Unilab.: 49. 1773, pro sp. (*T. angustissimum* Schreber x *T. capitatum* L. [subsp. *gracillimum* (Rouy) Valdés-Bermejo]). — Lectotype: Herb. Schreber no. 5277 (M).

Next to the "Cartuja de Porta-Coeli", Valencia Province (30SYJ19), as well as on the mountains called "Montes de Porta-Coeli", one can find *Teucrium angustissimum* and *T. capitatum* subsp. *gracillimum* living together on calcareous soils in disturbed, sunny



Fig. 1.- Lectotype of *Teucrium xcoeleste* Schreber (Herb. Schreber No. 5277 M): partial view, showing details of the inflorescences, calyces and leaves.

habitats. Among the typical forms of these two Spanish endemics, one can commonly observe some individuals showing intermediate morphological characteristics, which can be regarded as hybrids.

Schreber (1773: 49) described a taxon from exactly this place, living "in praecelsis montibus regni valentini, praecipue ad carthusiam porta coeli dictam", which he called *Teucrium coeleste* (Fig. 1). In the original description, he pointed out affinities between *T. coeleste* and both *T. angustissimum* and *T. valentinum* as follows: "In multis cum priori [*T. angustissimum*] et *T. valentino* convenit; ... Folia floralia inverse lanceata aut linearia, sicut *T. valentino*, non ovata *T. angustissimi*, obtusa, tomentosa... Cal. viridis, magis, sed laxius, tomentosus quam *T. angustissimo*, ore tomento repleto, dentibus triangularibus acutis, neque, *T. valentini* modo, lanceatis obtusis...". These sentences in the protologue, that indeed recall the diagnosis of a nothotaxon, led us to take into consideration this almost forgotten name.

Study of the type material of *Teucrium coeleste* kept in the Munich Herbarium (M), confirmed that, in particular with respect to the features of the leaves, indumentum and shape of the calyx, and form of the corolla, Schreber's single specimen is exactly alike the afore-mentioned hybrid individuals. We therefore propose to revive the name *Teucrium xcoeleste* to designate all plants derived from the crosses between *T. angustissimum* and *T. capitatum*, noting that the type specimen corresponds to the hybrid *T. angustissimum* x *T. capitatum* subsp. *gracillimum*, the two only taxa of *Teucrium* growing in Schreber's classical locality.

Teucrium xconquense M. B. Crespo & G. Mateo, **nothosp. nov.** [*T. capitatum* L. (subsp. *capitatum*) x *T. gnaphalodes* L'Hér.]. — **Holotype:** Hs, Cuenca: Serranía de Cuenca, pr. Aliaguilla, 30SXX40, ad 1100 m alt., inter parentes, 16.6.1976, G. Mateo (VAB 76/546, the uppermost specimen on the sheet). Fig. 2.

A *Teucrium capitatum* subsp. *capitato* discrepat caulibus ascendentibus, pilis longioribus obtectis; foliis albidis, magis revolutis crenatisque; inflorescentia densiore, angustius ramosa, glomerulis pinguioribus; calycibus majoribus, pilis longioribus vestitis; corollis rubentibus, labello bis longiore. A *T. gnaphalode* differt statura majore, caulibus erectioribus, brevius repentibus, vix radicantibus; foliis levius crenatis et laxius albotomentosis; inflorescentia magis ramosa; corollis minoribus, labello brevior.

Teucrium gnaphalodes (sensu lato) is endemic to the southwestern Mediterranean and is widely distributed throughout the eastern part of the Iberian Peninsula, principally growing on disturbed ground overgrazed by herds of sheep and goats. In such places, it often grows together with *T. capitatum*, a very common taxon in high, continental areas of Spain. We have found several individuals bearing intermediate features between *T. capitatum* and *T. gnaphalodes*, growing on slightly nitrified sandy soils in the Cuenca Province. We have interpreted such plants as being hybrids derived from the cross of these two taxa, and, since there appears to be no earlier name available for them, we are describing them as a new nothospecies, *T. xconquense*.

Teucrium xgnaphaureum M. B. Crespo & G. Mateo, **nothosp. nov.** (*T. aureum* Schreber x *T. gnaphalodes* L'Hér.). — **Holotype:** Hs, Teruel: Castelserás, 30TYL43, ad 450 m alt., inter parentes, 7.1978, J. Mansanet & al. (VAB 78/253, the specimen in the upper lefthand corner of the sheet). Fig. 3.

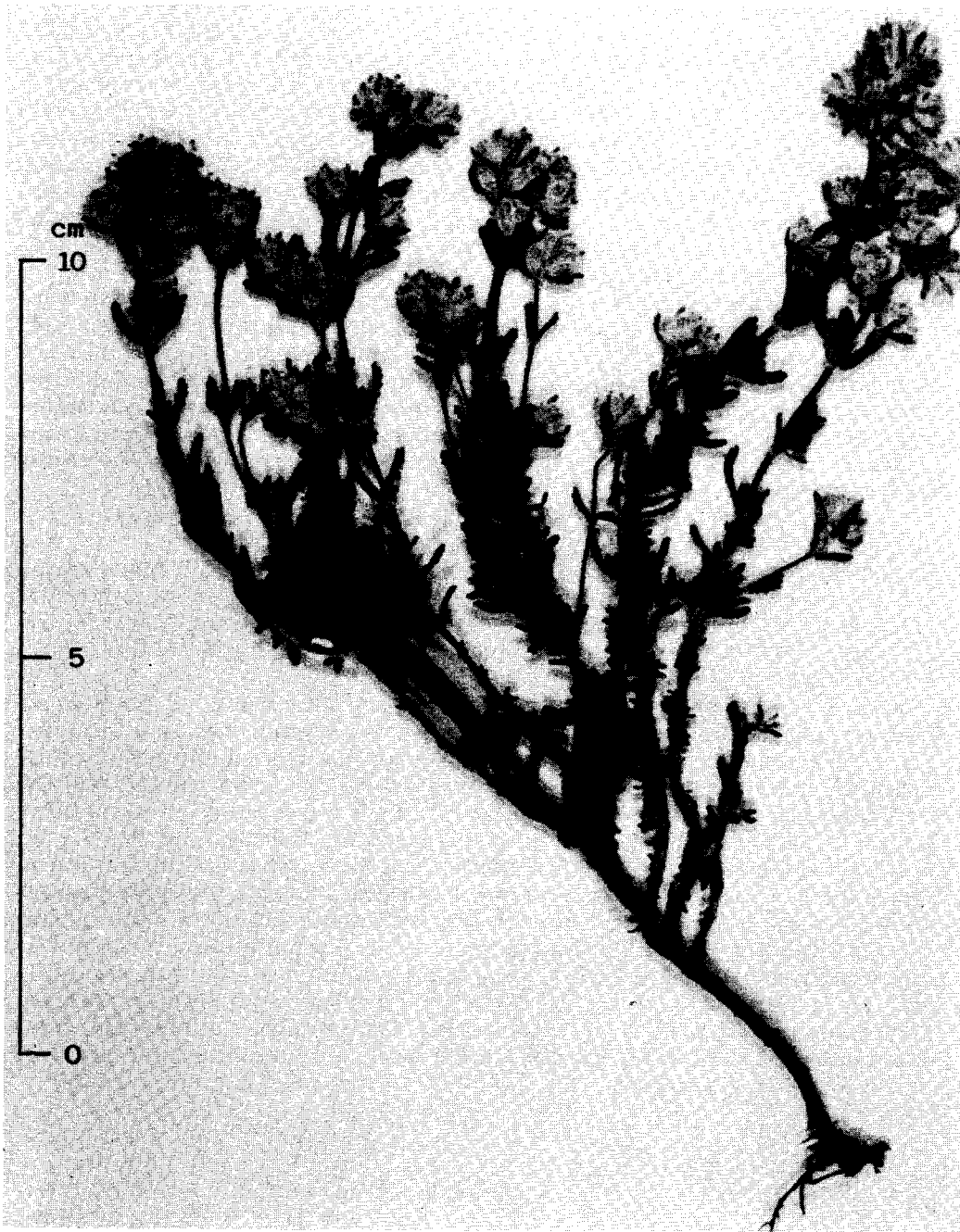


Fig. 2. Holotype of *Teucrium xconquense* M. B. Crespo & G. Mateo (VAB 76/546).

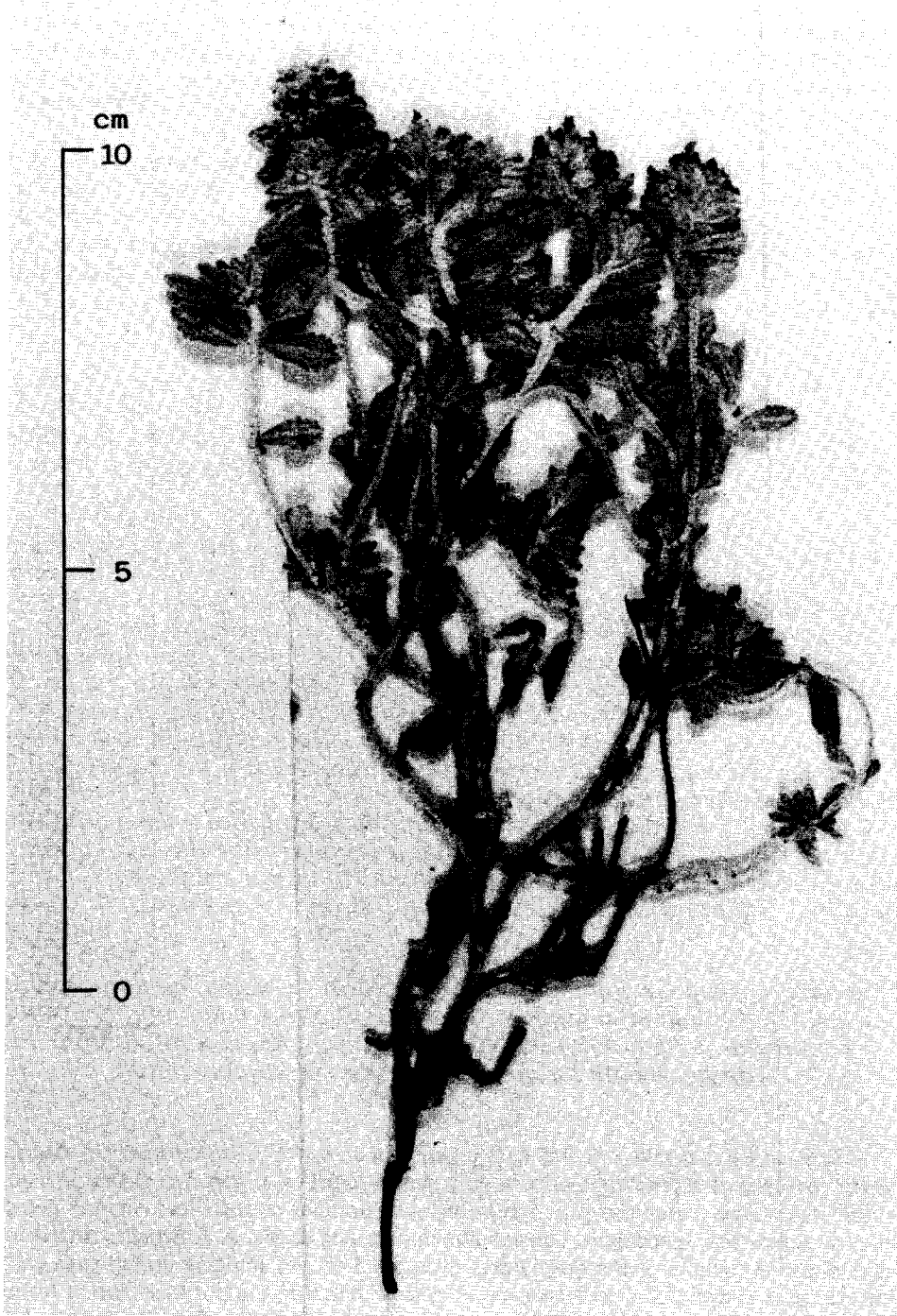


Fig. 3. Holotype of *Teucrium xgnaphaureum* M. B. Crespo & G. Mateo (VAB 78/253).

Differt a *Teucro aureo* indumento albedo; foliis dense albo-tomentosis, nervis inferne inconspicuis; inflorescentia longiore, albida vel cinerea (parce vel nullo modo lutea); calycibus albidis, pilis densioribus sepala tote occultantibus; corollis rubentibus. Differt a *T. gnaphalode* habitu herectiore; foliis latioribus magis explanatis, dentibus minus numerosis et apice tantum obvis; inflorescentia sphaerica, minus ramosa; dentibus calycis acutioribus, pilis hirtulis vestitis; corollis minoribus.

This new nothospecies is almost intermediate between its parents. It was found growing on sunny, dry calcareous soils in the north-east of the Iberian Peninsula, in the Teruel Province, where *Teucrium gnaphalodes* is very abundant and *T. aureum* rather rare (almost at the western limit of its Iberian distributional area). As regards the latter taxon, we agree with Navarro & Rosúa (1990: 245) who regard *T. aureum* Schreber and *T. luteum* (Miller) Degen as two independent species.

Teucrium xmaestracense M. B. Crespo & G. Mateo, **nothosp. nov.** (*T. aureum* Schreber x *T. expassum* Pau). — **Holotype:** Hs, Castellón: In regione maestracensi, pr. Morella, 30TYL4705, ad 1150 m alt., inter parentes, 26.6.1988, G. Mateo, (VAB 88/2274, the specimen in the lower righthand corner of the sheet). Fig. 4.

Differt a *Teucro aureo* pilis indumenti brevioribus et laxioribus; foliis angustioribus, magis revolutis; calycibus virescentibus, pilis paucis non hirtulis vestitis; corollis pallidius luteolis. Differt a *T. expasso* colore leviter luteolo; calycibus majoribus, pilis laxioribus obtectis, dentibus longioribus acutioribusque; corollis luteolis nec albidis.

Teucrium expassum is endemic to the continental parts of north-eastern Spain and has a fairly large distributional area. On the high calcareous mountains of the interior of the Castellón Province, in the region called El Maestrazgo, one can find both *T. expassum* and *T. aureum*, in the same, degraded plant communities. Quite commonly, individuals appear that combine the morphological characteristics of these two taxa, and can be regarded as hybrids. We are naming them *T. xmaestracense*.

Concerning *T. expassum*, we maintain the original spelling used by Pau (1888: 14; see also Pau 1895: 152-153; 1926: 122), since it is grammatically correct. In our opinion, the correction to "*T. expansum*", that was effected by several authors (Rivas Goday & Borja 1961, Valdés-Bermejo & Sánchez-Crespo 1978, etc.), is superfluous.

Teucrium xpseudoaragonense M. B. Crespo & G. Mateo, **nothosp. nov.** (*T. angustissimum* Schreber x *T. expassum* Pau.) — **Holotype:** Hs, Teruel: Noguera, 30SYK0155, ad 1100 m alt., inter parentes, 9.7.1988, G. Mateo (VAB 88/2411, the specimen in the lower lefthand corner of the sheet). Fig. 5.

A *Teucro angustissimo* differt habitu procumbente; foliis brevioribus latioribusque, minus revolutis et supra magis pilosis; calycibus minoribus, colore cinereo nec perspicue viridi, indumento tomentoso pilis hirtis crispatis interdum ramosis fere omnino obtectis; bracteis minoribus, lanceolatis, densius tomentosis, nec acutis. A *T. expasso* differt foliis angustioribus, paucicrenatis (crenaturis utrinque 1-2) vel integris; indumento calycis laxiore, pilis simplicibus, ad basem et ad apicem dentium longioribus (habitu hirtulo); dentibus calycis triangularibus, acutis.

Teucrium angustissimum is an Ibero-Levantine endemic with a very reduced

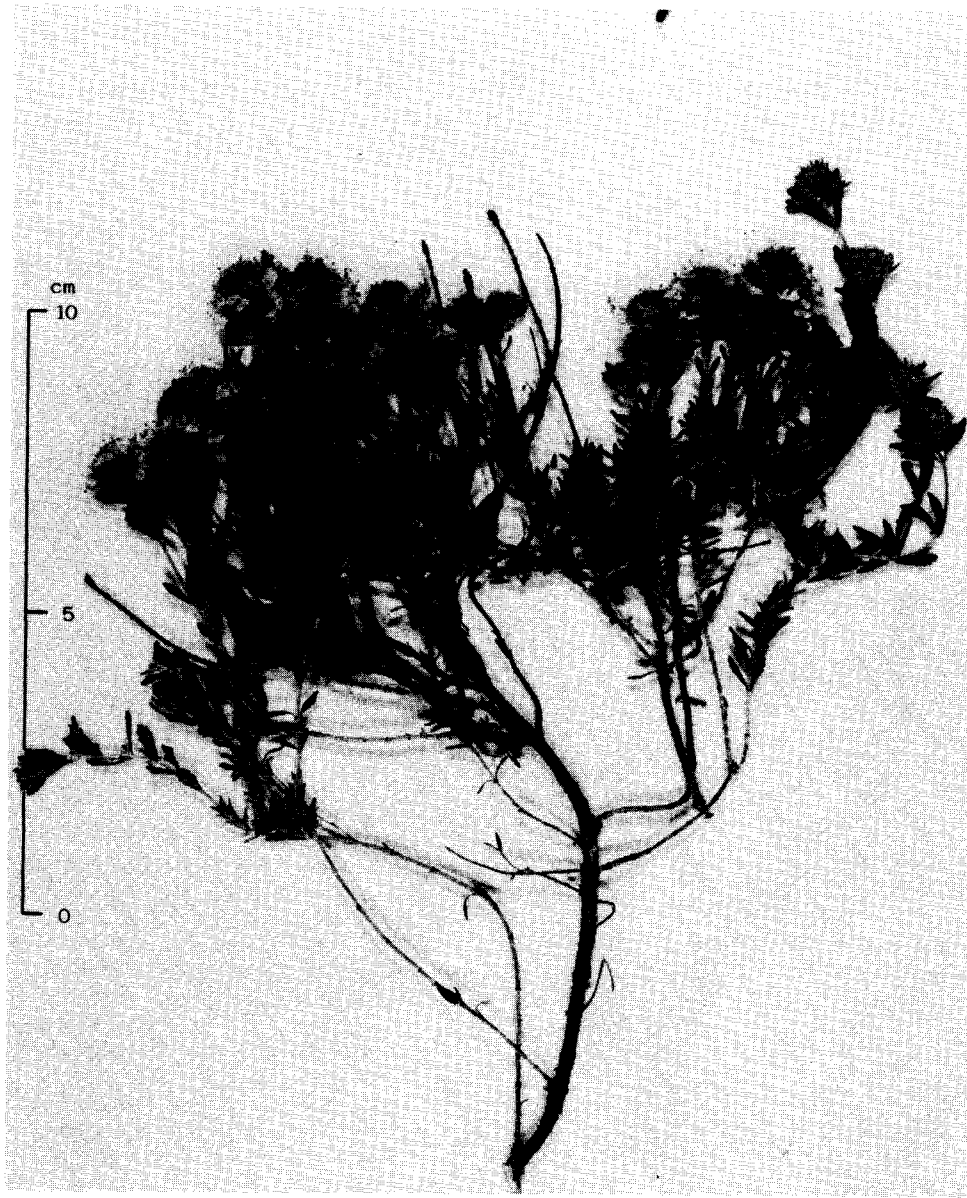


Fig. 4. Holotype of *Teucrium xmaestracense* M. B. Crespo & G. Mateo (VAB 88/2274).

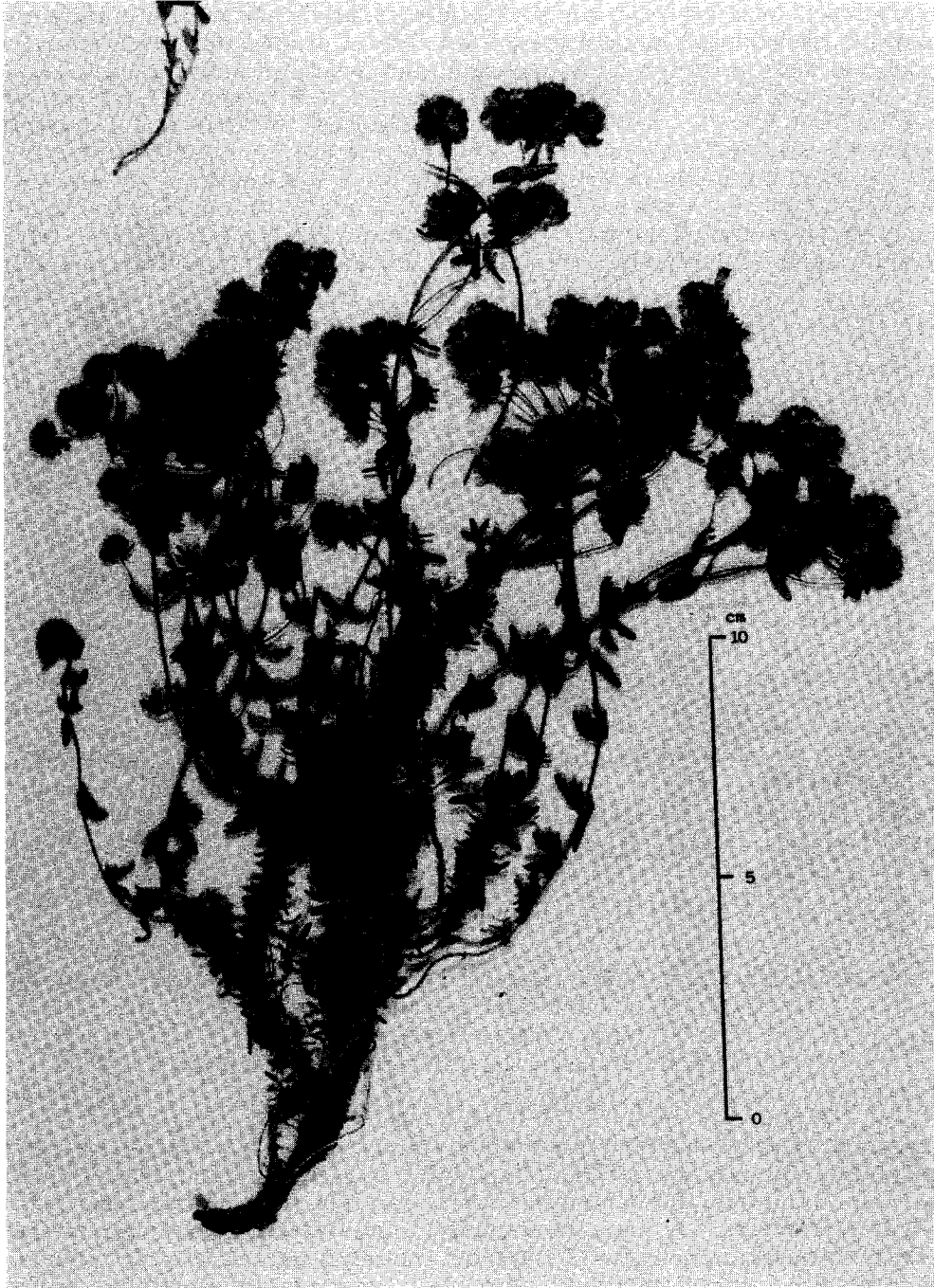


Fig. 5. Holotype of *Teucrium xpseudoaragonense* M. B. Crespo & G. Mateo (VAB 88/2411).

distributional area in the inland mountains of eastern Spain, where the provinces of Teruel, Castellón and Valencia meet. This taxon had been misinterpreted and was almost forgotten (Puech 1984), and its populations were generally referred to *T. aragonense* Loscos & Pardo (Tutin & Wood 1972: 134), a closely related but not identical Spanish endemic (see Pau 1926: 122). In the most continental part of its area, it grows together with the endemic *T. expassum*, and it is fairly easy to find individuals combining morphological characteristics of these two taxa. We hold them to be hybrids, and propose the name *T. xpseudoaragonense* for them.

Acknowledgement

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