

GABRIEL BLANCA¹⁾, MIGUEL CUETO²⁾, LEONARDO GUTIÉRREZ²⁾ and MARIA J. MARTÍNEZ¹⁾

¹⁾ Department of Plant Biology, Faculty of Sciences, 18001 Granada, Spain

²⁾ Arid Zone Experimental Station, C.S.I.C., 04001 Almería, Spain

Two Hybrids of *Thymus hyemalis* LANGE (*Labiatae*) from Southeastern Spain

KEYWORD

Hybrids, SE Iberian Peninsula, *Thymus*, *Labiatae*

ABSTRACT

Two new hybrids in the genus *Thymus*, *Th. x indalicus* BLANCA et al., nothosp. nov. [= *Th. baeticus* BOISS. ex LACAITA x *Th. hyemalis* LANGE subsp. *hyemalis*] and *Th. x enicensis* BLANCA et al., nothosp. nov. [= *Th. hyemalis* LANGE subsp. *hyemalis* x *Th. zygis* LOEFL. ex L. subsp. *gracilis* (BOISS.) R. MORALES] are described. Until now no hybrids of *Th. hyemalis* have been described, due to its early period of flowering and because it hybridizes with closely related species, making rather difficult the detection of such hybrids.

INTRODUCTION

The species of the genus *Thymus* hybridize easily in areas where they live together (ELENA ROSELLÓ 1976, MORALES 1984, 1986a, 1986b, SOCORRO et al. 1990, MATEO et al. 1991, SÁNCHEZ GOMEZ et al. 1992, etc.). This capacity for hybridization may become more difficult largely due to the different periods of flowering of the species which live in a given area.

However, at the limits of an area or in populations found at extreme altitudes, variations in the period of flowering of a given species can coincide with those of other species which also live in the area.

On other occasions, some species may have various periods of flowering according to climatological conditions. Thus, for example, the presence of frost during the anthesis of a thermophilous species, such as *Th. hyemalis* LANGE (endemic to the SE Iberian Peninsula), may cause an interruption in flowering, which will resume when temperatures return to more moderate levels (MORALES 1986: 15).

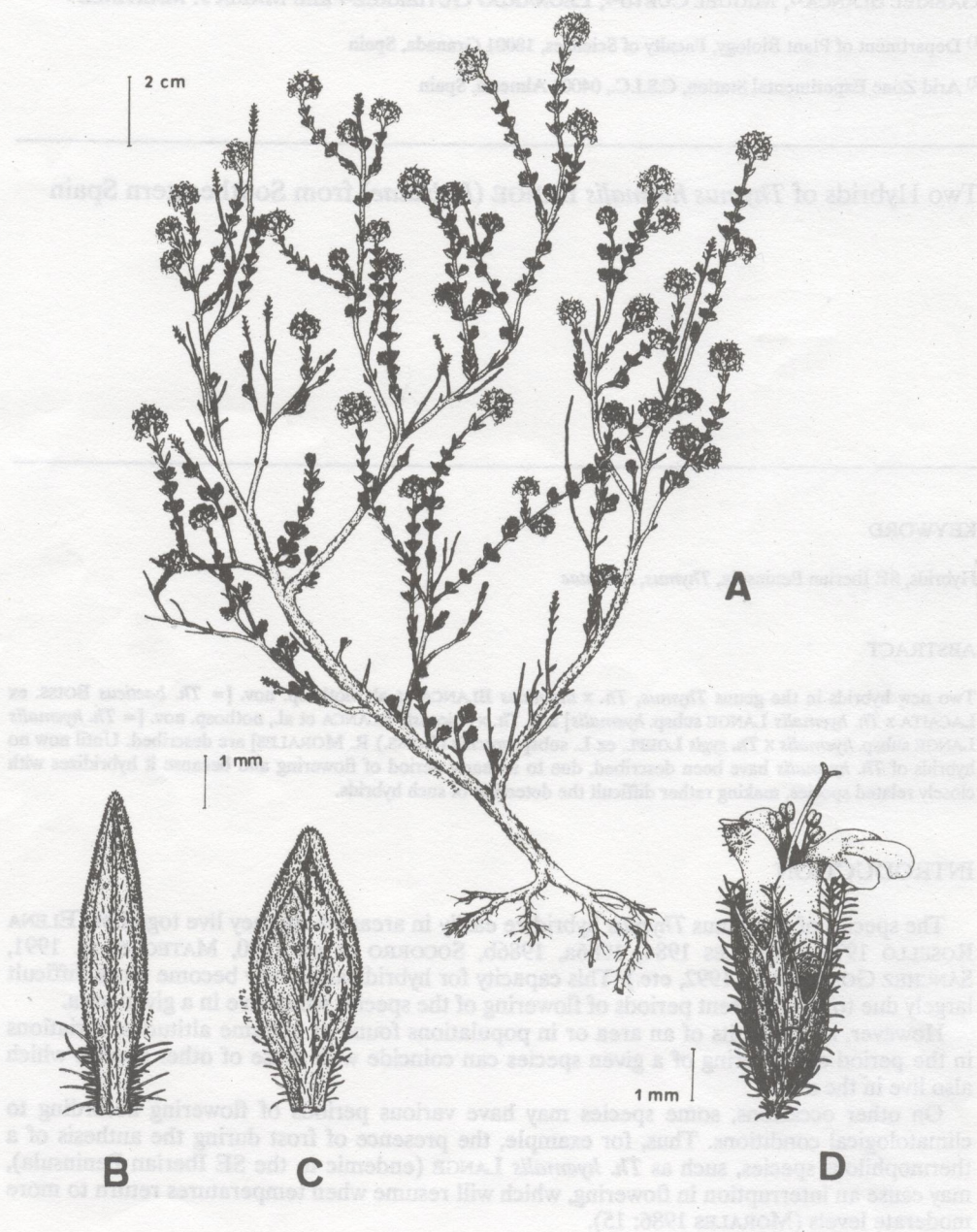


Fig. 1. *Thymus x indalicus* BLANCA et al. A - general aspect, B - leaf, C - bract, D - flower (GDAC 35750).

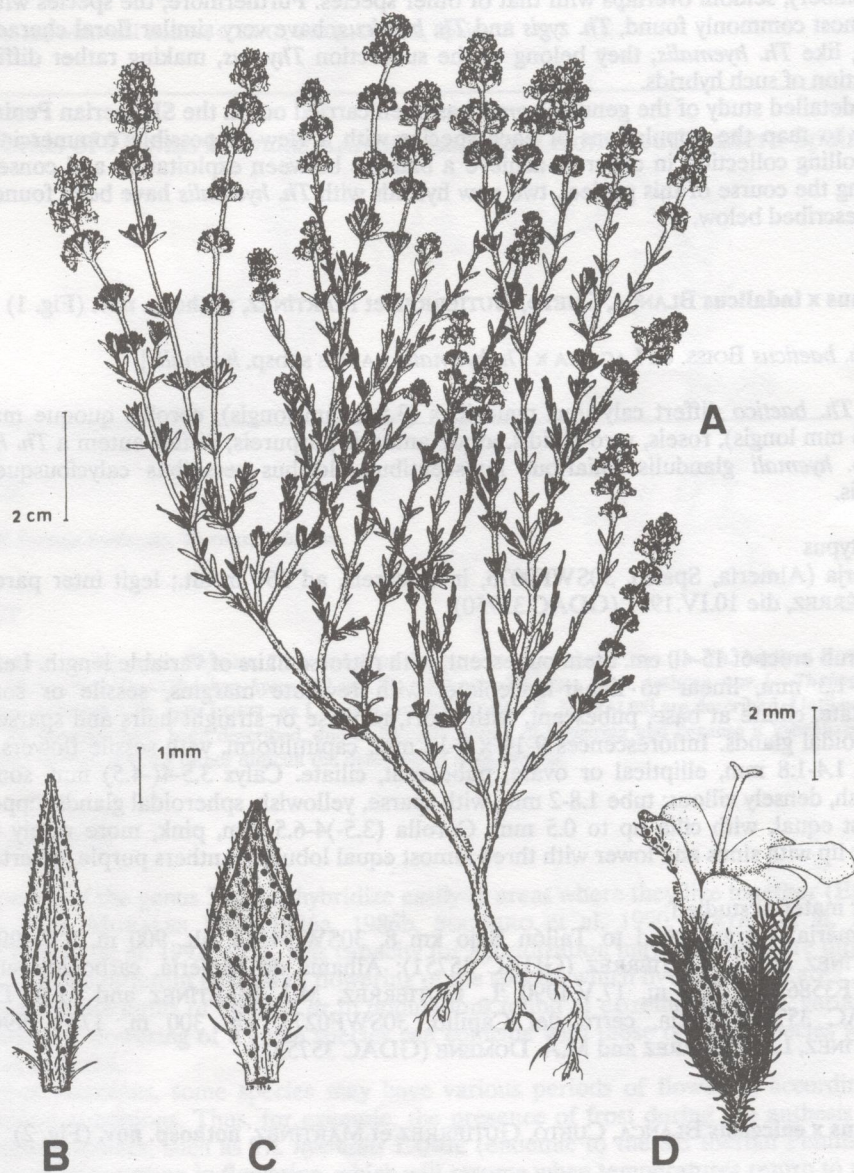


Fig. 2. *Thymus x enicensis* BLANCA et al. A - general aspect, B - leaf, C - bract, D - flower (GDAC 35749).

Until now, no hybrids of *Th. hyemalis* have been described with any other species. This is due to the fact that its period of flowering (October to May, with a short pause in December), seldom overlaps with that of other species. Furthermore, the species with which it is most commonly found, *Th. zygis* and *Th. baeticus*, have very similar floral characteristics since, like *Th. hyemalis*, they belong to the subsection *Thymus*, making rather difficult the detection of such hybrids.

A detailed study of the genus *Thymus* has been carried out in the SE Iberian Peninsula, in order to map the populations of each species with a view to possible commercialization, controlling collection in order to achieve a balance between exploitation and conservation. During the course of this project, two new hybrids with *Th. hyemalis* have been found, which are described below.

***Thymus x indalicus* BLANCA, CUETO, GUTIÉRREZ et MARTÍNEZ, nothosp. nov. (Fig. 1)**

[= *Th. baeticus* BOISS. ex LACAITA x *Th. hyemalis* LANGE subsp. *hyemalis*]

A *Th. baeticus* differt calycibus maioribus (3.5-4 mm longis), corollis quoque maioribus (4-6.5 mm longis), roseis, raro albidis, atque antheris purpureis; differt autem a *Th. hyemalis* subsp. *hyemali* glandulis foliaribus lutescentibus, floribus sessilibus calycibusque dense villosis.

Holotypus

Berja (Almería, Spain), 30SWF0076, in calcareis, ad 250 m alt.; legit inter parentes L. GUTIÉRREZ, die 10.IV.1991 (GDAC 35750).

Shrub erect of 15-40 cm. Stem pubescent, with retrorse hairs of variable length. Leaves 4-7 x 0.5-1.3 mm, linear to linear-lanceolate, with revolute margins, sessile or somewhat petiolate, ciliate at base, pubescent, with short, retrorse or straight hairs and sparse yellow spheroidal glands. Inflorescences 9-14 x 8-12 mm, capituliform, with sessile flowers. Bracts 4-6 x 1.4-1.8 mm, elliptical or ovate, pubescent, ciliate. Calyx 3.5-4(-4.5) mm, sometimes reddish, densely villous; tube 1.8-2 mm, with sparse, yellowish, spheroidal glands; upper teeth almost equal, with cilia up to 0.5 mm. Corolla (3.5-)4-6.5 mm, pink, more rarely whitish, upper lip with sinus and lower with three almost equal lobules. Anthers purple, exserted.

Other material studied

Almería: Gérgal, road to Tallón Bajo km 8, 30SWG4510, alt. 900 m, 8.V.1990, M.J. MARTÍNEZ and L. GUTIÉRREZ (GDAC 35751); Alhama de Almería, carbonate substrata, 30SWF3586, alt. 950 m, 17.V.1990, L. GUTIÉRREZ, M.J. MARTÍNEZ and M.A. DOMENE (GDAC 35752); Berja, cerro del Capillo, 30SWF0273, alt. 300 m, 17.IV.1990, M.J. MARTÍNEZ, L. GUTIÉRREZ and M.A. DOMENE (GDAC 35753).

***Thymus x enicensis* BLANCA, CUETO, GUTIÉRREZ et MARTÍNEZ, nothosp. nov. (Fig. 2)**

[= *Th. hyemalis* LANGE subsp. *hyemalis* x *Th. zygis* LOEFL. ex L. subsp. *gracilis* (BOISS.) R. MORALES]

A *Th. hyemali* subsp. *hyemali* differt inflorescentia spiciformi verticillasteribus distantibus

composita, bracteis angustioribus (0.9-1.5 mm latis), foliis non dissimilibus; differt autem a *Th. zygyde* subsp. *gracili* calyce longe piloso - pilis arcuato-patentibus - atque dentibus superioribus ciliatis praedito corollaque rosea.

Holotypus

Enix (Almería, Spain), 30SWF4079, iuxta semitam speculam militarem petentem, ubi legerunt inter parentes L. GUTIÉRREZ et M.J. MARTÍNEZ, die 17.V.1990 (GDAC 35749).

Shrub erect of 15-30 cm. Stem erect or arched-ascending, pubescent, with straight or somewhat retrorse hairs. Leaves 3.5-6 x 0.5-0.7 mm, linear to linear-lanceolate, with revolute margins, sessile or somewhat petiolate, ciliate at base, pubescent, with short hairs and reddish spheroidal glands. Inflorescences of 2-8 cm long, spike-shaped, with 2-8(-10) distant verticillasters, which are at the apex more or less approximate. Bracts 3.5-5.5 x 0.9-1.5 mm, lanceolate to elliptico-lanceolate, pubescent, ciliate. Pedicels 0.5-1.5 mm. Calyx 3.5-4(-4.5) mm, reddish, with long, arched-patent hairs; tube 1.7-2 mm, with spheroidal reddish glands; upper teeth almost equal, with cilia up to 0.5 mm. Corolla of (3.5-)4-6.5 mm, pink, upper lip with sinus, shorter than lower lip which has three almost equal lobules. Stamens absent.

COMMENTARY

This new hybrid has a similar aspect to *Th. hyemalis* subsp. *millefloris* (cf. RIVERA et al. 1987, MORALES 1989), but differs in the following characteristics:

	<i>Th. x enicensis</i>	<i>Th. hyemalis</i> subsp. <i>millefloris</i>
Inflorescences	2-8 cm long with 2-8(-10) verticillasters	Up to 20 cm long with 6-20 verticillasters
Floral pedicels	0.5-1.5 mm	3 mm
Bracts	0.9-1.5 mm wide	3-4 mm wide
Calyx	3.5-4(-4.5) mm long	5-6.5 mm long
Corolla	(3.5-)4-6.5 mm long	6-10 mm long
Stamens	Absent	Present

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