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On the geographic distribution of the genus *Thymbra* L. (*Labiatae*) *

Abstract

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The history of observations on the genus *Thymbra* and its four species is described. On the basis of herbarium materials and literature information a common point map of distribution for these species was prepared. The genus *Thymbra* is an Eastern Mediterranean genus, which, however, in the southwestern Asia reaches deeply inland to Iraq and even western Iran.

Additional key words: *Angiospermae*, *Labiatae*, *Thymbra*, chorology.

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The genus *Thymbra* has been created by Linnaeus in the year 1753 and described in „*Species Plantarum*”. Linnaeus included two species in it, *Thymbra spicata* and *T. verticillata*. However, the latter proved identical with *T. spicata* and so its name entered the synonymy of *T. spicata*. For almost 160 years the genus *Thymbra* was a monotypic genus. E. D. Clarke described in 1813 a further species, *Thymbra ambigua* (Davis 1982), however, it also corresponds with its traits to *T. spicata*. Besides another species, *Thymbra capitata* Griseb., was being included in the genus *Thymbra*, however, this one is now included within the genus *Thymus* as *Thymus capitatus* (L.) Hoffmanns et Link (Jalas 1972), or is being recognized in the separate monotypic genus *Coridothymus* Reichenb. f. as *Coridothymus capitatus* (L.) Reichenb. f. A closer study of the genus *Thymbra* was made only recently by Reisinger (1962), who divided its three species known at that time into two sections, *Thymbra* and *Neothymbra* Rech. f. He prepared a key to the identification of species and drawings of their flowers.

Presently the genus *Thymbra* counts four species, three of which occur on the southern extremity of the range of *Thymbra spicata*. The geographic distribution (Fig. 1) of these species clearly shows that it is an Eastern Mediterranean genus,

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the representatives of which, however, enter deeply inland, reaching Iraq and even western Iran. Both the range of the genus and of its various taxa has not been shown on maps before. There exist only point maps of distribution of *T. spicata* on two Greek islands, Rodhos and Chios (Boratyńska et al. 1985; Boratyński et al. 1989).

I have prepared a common point map of distribution for all the species on the basis of herbarium and literature data available to me. These materials originated primarily from such herbaria as: Royal Botanic Gardens, Kew, Royal Botanic Garden, Edinburgh, Naturhistorisches Museum, Wien, Herbarium Haussknecht, Jena, Botanical Museum, Lund, The Goulandris Natural History Museum, Kifissia and the Institute of Dendrology, Polish Academy of Sciences, Kórnik (own collection made in Greece). As regards literature, I relied primarily on such works as Halácsy (1902), Nábelek (1926), Rechinger (1943a, b, 1962, 1979, 1982), Zohary (1973), Feinbrun-Dothan (1978), Mouterde (1979) and Davis (1982).

1. *Thymra spicata* L.

This is the best known and most widely distributed species of the genus *Thymra* (Fig. 1). According to Linnaeus it was occur in Macedonia and in Lebanon. While currently *T. spicata* is known from many stands in Lebanon, it is not being reported from Macedonia. In Europe the species occurs only in Greece and in Turkey. The Greek stands are grouped primarily in the eastern, continental part of the country, in southern Thessaly, in Attiki, Ftiotis and Voiotia. *T. spicata* is known also from northwestern Greece, from where it has been reported by Halácsy (1902) and Hayek (1931), from the Ionian Islands, where, however, it is known only from Corfu. Besides it has been also found on several islands of the Aegean Sea, such as Milos (Halácsy 1902), Lesyos, Samos and Rodhos (Rechinger 1943a) and also from Chios (Meikle 1954). Recently it has been discovered in Euboea (Boratyński et al. 1991).

Boissier (1879) and Halácsy (1902) include in the range of *T. spicata* also the northern Peloponnisos (Akhaia). Unfortunately they do not report an exact localisation, thus it is not possible to show this stand on the map. Besides Boissier (1879) and Hayek (1931) mention it also from Crete, which, however, was not confirmed by other authors and Greuter (1974) believes that it is a „very doubtful record, almost certainly wrong” (Fig. 1).

The major part of the range of *T. spicata* covers southwestern Asia, where the species grows in Anatolia (particularly northwestern, western and southern) in Syria, Lebanon, Israel and Jordan, and also in northeastern Iraq and in western Iran. In the latter country it has been found on two stands only. It is surprising that *T. spicata* is absent from Cyprus. It has been reported from the island several times, however, as Meikle claims (1985) the information was erroneous and concerned *Coridothymus capitatus*.

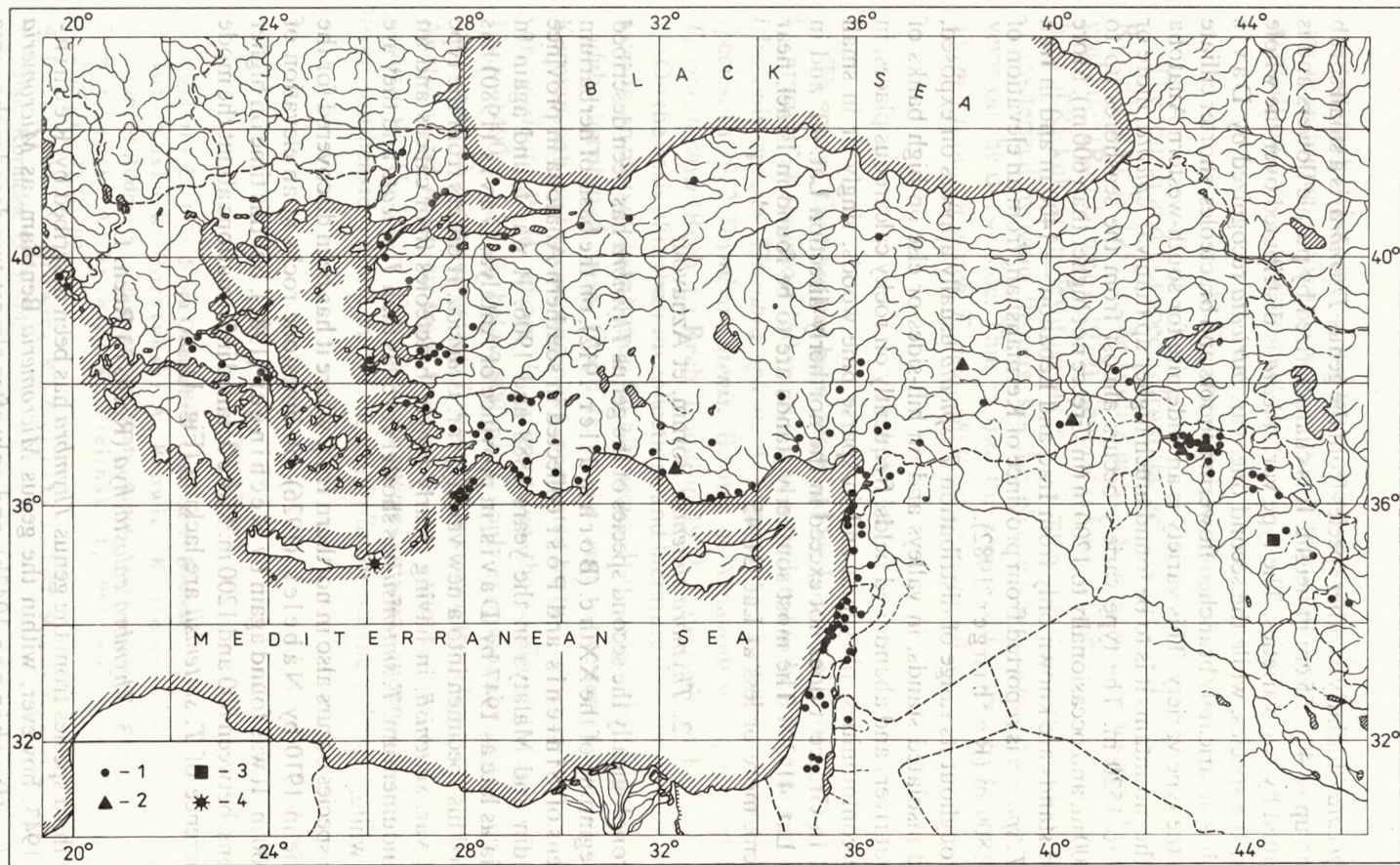


Fig. 1. The range of the genus *Thymra* L.: 1. *T. spicata*, 2. *T. sintenisii*, 3. *T. neurophylla*, 4. *T. calostachya*

T. spicata, similarly as other species from the genus *Thymbra*, is a small shrub attaining up to 40—55 cm in height. It is characterized by purple flowers and is represented by two varieties. The type var. *spicata* is distributed over the whole range of the species, while the second one, var. *intricata* recognized by Davis (1949), has divaricately branched flowering shoots and bracteoles, shorter ciliate than in the type variety. This variety is an endemite for south-western Anatolia and in the mountains it is to be found much higher up than var. *spicata*, more or less up to 1520 m. The type variety occurs almost from the seashores up to 600—800 m, and occasionally to 1200 m (in Greece not higher than 600 m). More elevated stands are known only from Iraq and Lebanon — 1400 m and in Iran where *T. spicata* is reported from province of Kermanshah, from an elevation of 1020—1800 m (Rechinger 1982).

Throughout its range of distribution *T. spicata* usually appears on exposed, dry and insolated stands, in valleys and on hill-sides or else on high banks of dried-out rivers and abandoned fields, frequently on rocky calcareous places, in steppe communities, phrygana and in sparse pine woods, singly or in small groups. In Greece it does not exceed in the northerly direction Lat. 40° and in Turkey Lat. 41°30'. The most southerly stands are to be found in Israel, near Jerusalem, more or less at Lat. 31°45'.

2. *Thymbra sintenisii* Bornm. et Aznavour

Chronologically the second species of the genus *Thymbra* has been described at the beginning of the XXth c. (Bornmüller 1912), on the basis of herbarium specimens of Sintenis and Post collected in southern Anatolia in province of Mardin and Malatya in the years 1888 and 1906. It was found again in Anatolia as late as 1947 by Davis, in province of Antalya. Davis (1980) has separated his specimen into a new variety, var. *issaurica*. It differs from the type variety, var. *sintenisii*, in having clearly longer bracteoles than calices and an longer indumentum. *T. sintenisii* has shorter corollas than *T. spicata* and they are always white.

The species occurs also in northern Iraq, where it has been discovered for the first time in 1910 by Nábelek (1926), on limestone rocks at an elevation of 600—700 m. It was found again by Rechinger (1982), but this time on higher elevations, between 800 and 1200 m. More detailed informations about the mode of occurrence of *T. sintenisii* are lacking (Fig. 1).

3. *Thymbra calostachya* (Rech. f.) Rech. f.

The third species from the genus *Thymbra* has been described by Rechinger in 1943, however, within the genus *Micromeria* Bentham, as *Micromeria calostachya* (Rechinger 1943b), and only after almost two decades the same author moved it to genus *Thymbra*, changing the name to *Thymbra calostachya* (Rechinger 1962). This taxon is characterized by white, small flowers,

smallest in the whole genus. It is the only representative of the genus on Crete and has been found on the southeastern tip of the island, in province of Sitia, near Achladi on a rocky escarpment (Fig. 1).

4. *Thymbra neurophylla* Rech. f.*

The fourth and last species from the genus *Thymbra* has been discovered by Reching er in 1957 in the Iraqi Kurdistan, however, he described it only 22 year later (Reching er 1979). So far it is known from only one stand — 27 km East of Kirkuk, at an elevation of 600 m. Similarly as the two previous species it is characterized by white flowers, but has plicate leaves, with numerous, distinct veins on the dorsal side. Thus in Iraq there grow three species from the genus *Thymbra*, one of which *T. neurophylla* is an endemite (Fig. 1).

SUMMARY

The genus *Thymbra* has been described by Linnaeus in 1753 in "Species Plantarum". For almost 160 years it was considered to be a monospecific genus (the only species *Thymbra spicata* L.), presently, however, it contains four species. In 1912 *Thymbra sintenisii* Bornm. at Aznavour was described, in 1962 *T. calostachya* (Rech. f.) Rech. f. and in 1979 *T. neurophylla* Rech. f.

On the basis of herbarium collections and literature data the author prepared a common map of distribution for all species. It turns out that *T. spicata* is most widely distributed, from Corfu Is. in the west to western Iran (province of Kermanshah) in the east and it is represented by two varieties, var. *spicata* and var. *intricata* P. H. Davis. It grows from the seashore to an elevation of 1200—1400 m (usually below 800 m) and only exceptionally higher (up to 1800 m in Iran). The second species, *T. sintenisii* is known from few stands in southern Anatolia and northern Iraq. It also has two varieties, var. *sintenisii* and var. *issaurica* P. H. Davis. The other two species are small endemites, *T. calostachya* from southeastern Crete and *T. neurophylla* for northern Iraq.

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O geograficznym rozmieszczeniu rodzaju *Thymbra* L. (*Labiatae*)

Streszczenie

Rodzaj *Thymbra* opisany został przez Linneusza w 1753 roku w „Species Plantarum”. Przez prawie 160 lat uważany był za rodzaj monotypowy (jedyń gatunek — *Thymbra spicata* L.), obecnie jednak liczy cztery gatunki. W roku 1912 opisana została *Thymbra sintenisii* Bornm. et Aznavour, w roku 1962 *T. calostachya* (Rech. f.) Rech. f. i w roku 1979 *T. neurophylla* Rech. f.

Na podstawie zbiorów zielnikowych i danych z literatury autor opracował wspólną dla wszystkich gatunków mapę ich punktowego rozmieszczenia. Okazało się, że najszerszej rozprzestrzeniona jest *Thymbra spicata*, która występuje od wyspy Korfu na zachodzie, po zachodni Iran (prowincja Kermanshah) na wschodzie i reprezentowana jest przez dwie odmiany — var. *spicata* i var. *intricata* P. H. Davis. Rośnie ona od samych brzegów morza do wysokości 1200—1400 m (najczęściej do 800 m), a tylko wyjątkowo nieco wyżej (do 1800 m w Iranie). Drugi gatunek *T. sintenisii* znany jest z nielicznych stanowisk w południowej Anatolii i w północnym Iraku. Również i on ma dwie odmiany — var. *sintenisii* i var. *issaurica* P. H. Davis. Pozostałe dwa gatunki to endemity — *T. calostachya* dla południowo-wschodniej Krety i *T. neurophylla* dla północnego Iraku.

O географическом размещении рода *Thymbra* L. (*Labiatae*)*

Резюме

Род *Thymbra* был описан Линнеем в 1753 году в „Species Plantarum”. Почти 160 лет его считали монотипным родом (один вид — *Thymbra spicata* L.), в настоящее время он насчитывает четыре вида. В 1912 году была описана *Thymbra sintenisii* Bornm. et Aznavour, в 1962 году *T. calostachya* (Rech. f.) Rech. f., и в 1979 году *T. neurophylla* Rech. f.

На основании гербарных материалов и литературных данных автором разработана общая для всех видов карта их точечного размещения. Выяснилось, что самым распространенным является *Thymbra spicata*, которая встречается от острова Корф на западе по западный Иран (провинция Карманшах) на востоке и она представлена двумя разновидностями — var. *spicata* и var. *intricata* P. H. Davis. Она растет от самых берегов моря до высоты 1200—1400 м (чаще всего до 800 м), и лишь исключительно немного выше (до 1800 м в Иране). Второй вид *T. sintenisii* известен по немногочисленным местообитаниям в южной Анатолии и северном Ираке. Также и у него две разновидности — var. *sintenisii* и var. *issaurica* P. H. Davis. Остальные два вида это эндемики — *T. calostachya* на юго-востоке о. Крит и *T. neurophylla* для северного Ирака.

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...на основании полученных результатов и сопоставления данных с известными фактами о распространении этого рода в Европе и Азии. В частности, в Европе он встречается в Испании, Франции, Италии, Греции, Турции, а в Азии — в Китае, Японии, Индии, Австралии, Новой Зеландии, Южной Африке, Южной Америке и Австралии. В Европе он встречается в Испании, Франции, Италии, Греции, Турции, а в Азии — в Китае, Японии, Индии, Австралии, Новой Зеландии, Южной Африке, Южной Америке и Австралии.

№	Наименование вида	Местонахождение
1	<i>Tritrachia</i> sp.	Испания
2	<i>Tritrachia</i> sp.	Франция
3	<i>Tritrachia</i> sp.	Италия
4	<i>Tritrachia</i> sp.	Греция
5	<i>Tritrachia</i> sp.	Турция
6	<i>Tritrachia</i> sp.	Китай
7	<i>Tritrachia</i> sp.	Япония
8	<i>Tritrachia</i> sp.	Индия
9	<i>Tritrachia</i> sp.	Австралия
10	<i>Tritrachia</i> sp.	Новая Зеландия
11	<i>Tritrachia</i> sp.	Южная Африка
12	<i>Tritrachia</i> sp.	Южная Америка
13	<i>Tritrachia</i> sp.	Австралия

...на основании полученных результатов и сопоставления данных с известными фактами о распространении этого рода в Европе и Азии. В частности, в Европе он встречается в Испании, Франции, Италии, Греции, Турции, а в Азии — в Китае, Японии, Индии, Австралии, Новой Зеландии, Южной Африке, Южной Америке и Австралии.