

NEW SPECIES AND NEW PLANT RECORDS OF LAMIACEAE FROM IRAN

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Received 01.03.2009. Accepted for publication 15.04.2009.

Jamzad, Z. 2009 06 30: New species and new plant records of *Lamiaceae* from Iran. –*Iran. J. Bot.* 15 (1): 51-56. Tehran.

Thymus marandensis Jamzad is described as a species new to science. It is closely related to *Th. persicus* (Ronniger ex Rech. f.) Jalas, *Th. brachytilus* Jalas and *Th. leucotrichus* Hal. *Thymus linearis* Benth. subsp. *linearis*, *Satureja macrosiphonia* Bornm. and *Micromeria cristata* (Hampe) Griseb. subsp. *cristata* are reported for the first time from Iran. Their distribution patterns are discussed.

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Key words. *Lamiaceae*, *Thymus*, *Satureja*, *Micromeria*, new species, new records, Iran.

گونه جدید و گزارش‌های جدید از خانواده نعنا از ایران

زیبا جم‌زاد، دانشیار پژوهش مؤسسه تحقیقات جنگلها و مراتع کشور.

گونه *Thymus marandensis* به عنوان گونه جدید برای علم گیاه‌شناسی معرفی می‌گردد. این گونه با گونه‌های *Th. persicus* از ایران و *Th. brachytilus* و *Th. leucotrichus* از ترکیه قرابت دارد. گونه‌های زیر برای اولین بار از ایران گزارش می‌گردند و الگوی پراکندگی جغرافیایی آنها مورد بحث قرار می‌گیرد.

Thymus linearis subsp. *linearis*, *Satureja macrosiphonia*, *Micromeria cristata* subsp. *cristata*.

INTRODUCTION

As a precursor for the Flora of Iran account of *Lamiaceae*, the subfamily *Nepetoideae* is reviewed. The family comprises 46 genera, 27 of which belong to *Nepetoideae*, the largest subfamily. *Nepeta* with 77 and *Salvia* with 61 species are the largest genera with high number of endemics, the greatest diversity and widest distribution patterns. Nevertheless some smaller genera like *Cyclotrichium*, *Dracocephalum*, *Hymenocrater*, *Satureja* and *Thymus* are important for the number of endemics and their medicinal properties. The latest account of the family was that in K. H. Rechinger 's (1982) *Flora Iranica*. He followed Briquet's classification system (1895-97) and recognized most *Nepetoideae* in subfamily *Stachyoideae*. In the last decades with the aids of new methods in systematic studies, emphasizing molecular phylogeny, the classification of *Lamiaceae* has changed. Eight subfamilies are now recognized for *Lamiaceae* (Cantino et al. 1992).

The Iranian genera within *Nepetoideae* were studied using herbarium specimens and field studies. Here, I report a new species of *Thymus* L. and three species new for the flora of Iran. Their distribution patterns and

related species are discussed. Illustrations are provided for the new species and new records.

NEW SPECIES

Thymus marandensis Jamzad, sp. nov. –Fig. 1.

Herba caespitosa, basi indurata. Caules floriferi 4-8 cm longi, circumcirca pilosi, pilis patentibus caulis diametrum aequantibus. Folia 4-6 mm longa, 1-1.5 mm lata, in caulibus floriferis quam internodia longiora, in caulibus sterilibus quam internodia breviora, lanceolato-spathulata, basin versus longe petioliformi-attenuata, apice ± obtusa, margine vix revoluta, longe cinerascenti pilosa; nervi laterales paribus 2, prominentes. Bracteae foliaceae. Bracteolae 1 mm longae. Calyx 3.8-4 mm longus, campanulatus; purpureo-suffusus; dentes superiores 1 mm longi, triangulares; dentes inferiores 2 mm longi, ciliati. Corolla ± 7 mm longa, purpurea vel pallide rosea.

Holotypus. Azerbaijan, Marand, Kuh-Kamar village, 2000-2600 m, 17.6.1988, Assadi & Shahsavari 65659 (TARI).

Caespitose with woody base. Stem branched, covered with patent long hairs all round; hairs longer than the stem diameter. Flowering branches 4-8 cm long, with



Fig. 1. *Thymus marandensis* ($\times 0.77$); details ($\times 7.7$).

imbricate leaves; internodes shorter than the leaves; sterile branches with internodes longer than leaves. Leaves 4-6 x 1-1.5 mm, lanceolate- spatulate, gradually narrowed towards the base, at the margin slightly revolute or with a thickened pseudorevolute margin, basal half ciliate, covered on both sides with long, stiff, patent hairs. Bracts leaf-like but smaller. Calyx 3.8-4 mm long, campanulate; teeth purple; upper teeth triangular-lanceolate, 1 mm long; lower teeth 2 mm long, ciliate. Corolla purple or pink, \pm 7mm long.

The new species belongs to Sect. *Hyphodromi* (A. Kerner) Halácsy subsect. *subbracteati* (Klokov.) Jalas (Jalas 1971), characterized by more or less revolute or convolute leaves, its members are mainly distributed in Turkey with till now one representative in Iran: *Th. persicus* (Ronniger ex Rech. f.) Jalas.

The new species differs from *Th. persicus* in the linear longer leaves covered with sessile glands and in the longer calyces and corollas. It seems closely related to two endemic species from Turkey: *Th. brachychilus* Jalas and *Th. leucotrichus* Hal. (Jalas, 1980 & 1982b). *Th. marandensis* differs from *Th. brachychilus* which is distributed in south and inner Turkey (Zones C5, B7), in having a broader leaf, without sessile glands, inflorescence not differentiated from vegetative shoots and smaller calyx. It differs from *Th. leucotrichus* which is distributed in central and NE Turkey (Zones A6 -A8, C5, B6 & B7) in stem hairs, having bracts similar to the leaves (bracts are wider than leaves (1.8 - 3.5 mm wide) and colored towards the apex in *Th. leucotrichus*) and calyx with shorter upper teeth (the upper and lower calyx teeth are equal in *Th. leucotrichus*).

NEW RECORDS

Thymus linearis Benth. in Wall., Pl. Asiat. Rar. 1: 31 (1830). -Fig. 2.

-- subsp. ***linearis***

Semnan: Shahrud, Kuhe Abr, 2530 m, Roshan 7363 (TARI).

Th. linearis subsp. *linearis* was previously recorded by Jalas from the Fl. Iranica region (Afghanistan and Pakistan). Its general distribution is north India, Kashmir, NE. Afghanistan, NW. Pakistan, Nepal and Tadjikistan.

Th. linearis belongs to the sect. *Serpulum* (Miller) Benth. subsect. *Pseudomarginati* (Braun ex Borbás) Jalas. It has two subspecies: subsp. *linearis* with elliptic to elliptic obovate leaves and prominent marginal veins; subsp. *hedgei* Jalas. with linear-lanceolate to lanceolate elliptic leaves and \pm obsolete lateral veins (Jalas 1982a).

The members of this subsection are distributed in Caucasus and Himalaya. The Caucasian specimens of *Thymus* subsect. *Pseudomarginati* have been treated by Jalas (1973) as one species: *Th. caucasicus* Willd. ex Ronn. with subsp. *caucasicus* and subsp. *grossheimii* (Ronn.) Jalas. The latter subspecies is also distributed in NW Iran in Azerbaijan province and in the centre of Iran (Albourz Range). Leaves with a long petiole and \pm orbicular blade are characteristic of *Th. caucasicus*, but *Th. linearis* is characterized by shorter petioles and a more elliptical blade. *Th. caucasicus* var. *grossheimii* has been collected from central Albourz. The presence of *Th. linearis*, the closely related species to the above mentioned species in Central Albourz is an interesting new record.

Th. linearis subsp. *linearis* is a creeping mat-forming herb, verticillasters in terminal head and some in axils of leaves along the branch. Leaves elliptic-obovate, with \pm prominent lateral nerves. Bracts slightly smaller than leaves, ciliate at the margin.

Micromeria cristata (Hampe) Griseb., Spic. 2: 122 (1844).

-- subsp. ***cristata***. -Fig. 3.

Azerbaijan: 29 km from Silvana on the road to Salmas (MG3), 1600 m., 27. 6. 2003, Assadi 85180a (TARI).

Micromeria is represented by three Iranian species namely *M. hedgei* Rech. f.; *M. persica* Boiss. and *M. myrtifolia* Boiss. distributed in west and south Iran.

M. cristata was identified among recent collections from NW Iran. Its distribution is N. & C. Balkans, the type from Bulgaria. It is also present in central N. Anatolia.

Micromeria cristata subsp. *cristata* is a small perennial with a stout woody tortuous stock. Leaves lanceolate to narrowly elliptic. Inflorescence spike-like. Calyx narrowly tubular, 3-6 mm long, actinomorphic, with a bearded throat.

Satureja macrosiphonia Bornm., Feddes Repert. 6: 114 (1908). -Fig. 4.

Lurestan: Kuhdasht, Balekeh Mt. 1450 m, Karimi 91385 (TARI).

Satureja macrosiphonia was first described from Iraq. It is characterized by its long corolla, 4- 5 times longer than calyx and virgate, paniculate branches.

ACKNOWLEDGMENTS

I wish to thank Mr. Ian Hedge for his advises and reviewing the manuscript. Thanks are due to Mrs. Nowbakht, Mrs. Farahdoost and Miss. Habibi for drawing the illustrations.



Fig. 2. *Thymus linearis* subsp. *linearis* ($\times 0.66$); flower and opened calyx ($\times 6.6$); leaves and bract ($\times 3.3$).

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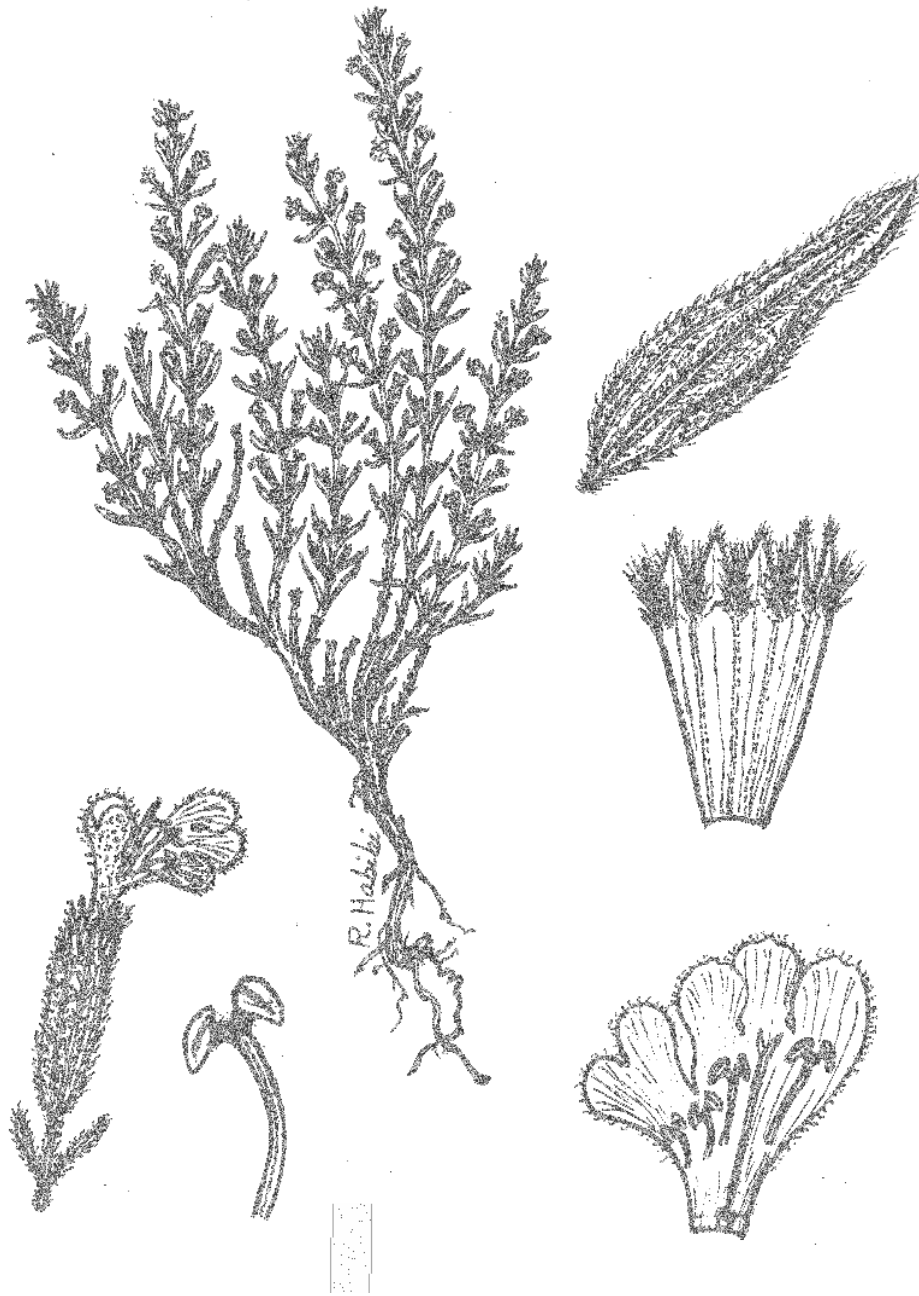


Fig. 3. *Micromeria cristata* subsp. *cristata* ($\times 1$); flower and opened corolla ($\times 10$); opened calyx and leaf ($\times 12$) and stamen ($\times 20$).

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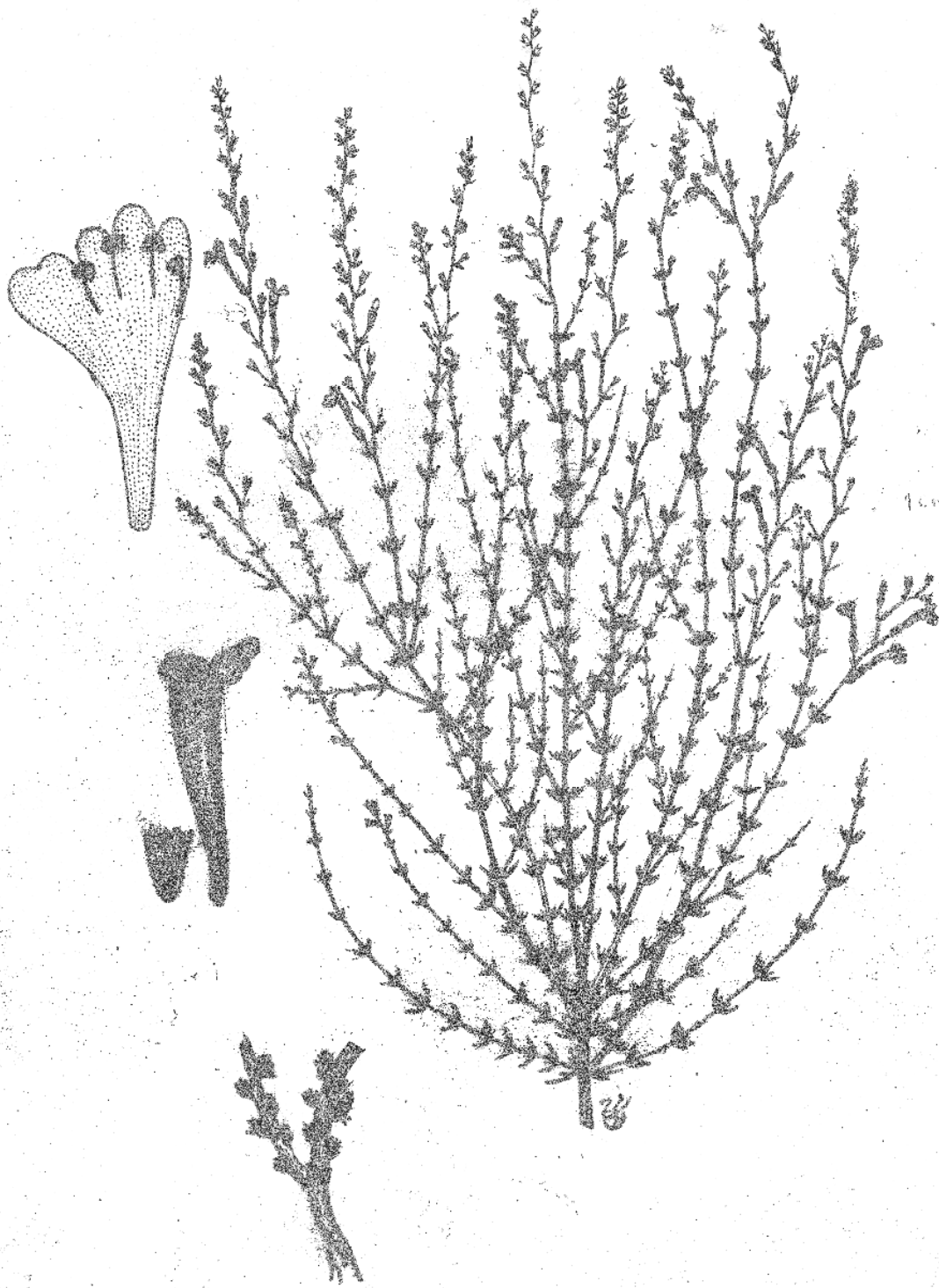


Fig. 4. *Satureja macrosiphonia* ($\times 0.69$); opened corolla ($\times 3.7$); corolla and calyx ($\times 2.9$).