

THREE NEW RECORDS OF *TANACETUM* FOR THE FLORA OF IRAN

S.B. DJAVADI

Department of Botany, Iranian Research Institute of Plant Protection

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Abstract

Three new records of *Tanacetum* L., namely, *T. punctatum* and *T. zahlbruckneri* from Azerbaidjan and *T. vulgare* from Mazandaran Provinces are reported for the first time from Iran. Illustrations and distribution map are also presented for each species.

Key words: Asteraceae, *Tanacetum punctatum*, *T. zahlbruckneri*, *T. vulgare*, New records, Iran

Introduction

The genus *Tanacetum* L. from Asteraceae tribe *Anthemideae*, comprising c. 160 species, distributed in Europe, Asia, northern Africa and North America (OBERPRIELER 2007). This genus is represented by 54 species in Flora Iranica area, out of these 25 species are mentioned from Iran (PODLECH 1986). With new recent investigations, the number of species in Iran is increasing (MOZAFFARIAN 2005).

In studying of herbarium materials belonging to tribe *Anthemideae* Cass., available in "IRAN" Herbarium, many species of this tribe were determined. Among them, *Spathipappus porphyrostephanus* (Rech. f.) Tzvel. and *Soliva sessilis* Ruiz Lopes et Pavon were reported as new genera for the Flora of Iran (DJAVADI & IRANSHAHR 2007, NAQINEZHAD *et al.*2007). *Matricaria discoidea* is also recorded for the first time from Iran (DJAVADI *et al.*2007). In this study, three species of the genus *Tanacetum* are recorded as new members for the Flora of Iran.

Materials and Methods

Herbarium materials of tribe *Anthemideae* available in "IRAN" Herbarium were revised and redetermined with using Flora Iranica (PODLECH 1986), Flora of Europe (HEYWOOD 1976), Flora of Turkey (GRIERSON 1975) and Flora of the USSR (TZVELEV 1961). Among them, three species of *Tanacetum* are recorded as new.

Results

1. *Tanacetum punctatum* (Desr.) Grierson in notes R.B.G. Edinb. 33: 435, 1975

Azerbaijan Province: Bostan-abad, Pishiclou to Chiniboulagh, 4 km Pishiclou, 2150-2350 m, 1.8.1984, Termeh & Moussavi, IRAN-49833; Bostan-abad, Atmish-alti, Sahand slopes, 2620 m, 3.8.1984, Termeh & Moussavi, IRAN-46879 (Fig. 1).

Plant perennial, c. 40 cm high, with short oblique rootstocks and rooting stolon-shaped innovation shoots, glabrous. Stem upright, abundantly foliated, ribbed, simple or, more or less, branched above the middle. Leaves glabrous, with numerous dotted glands: basal and lower cauline leaves rapidly dry, on rather long petioles, segments 3-6 paired, shallowly 3-5 toothed near apex; middle cauline leaves sessile, \pm oblong, pinnatisect. Heads solitary or 2-10 in number, on long peduncles, aggregated in loose corymb-shaped inflorescences; peduncles glandular, swollen at apex. Involucres glabrous; involucre bracts herbaceous, external ones shorter than internal ones, all with rather broad dark brown or brownish membranous margin, transitioning at apex in more lucid appendage, torn-fringed along the edge in internal ones. Ligulate florets white, c. 20 in number. Achenes pale

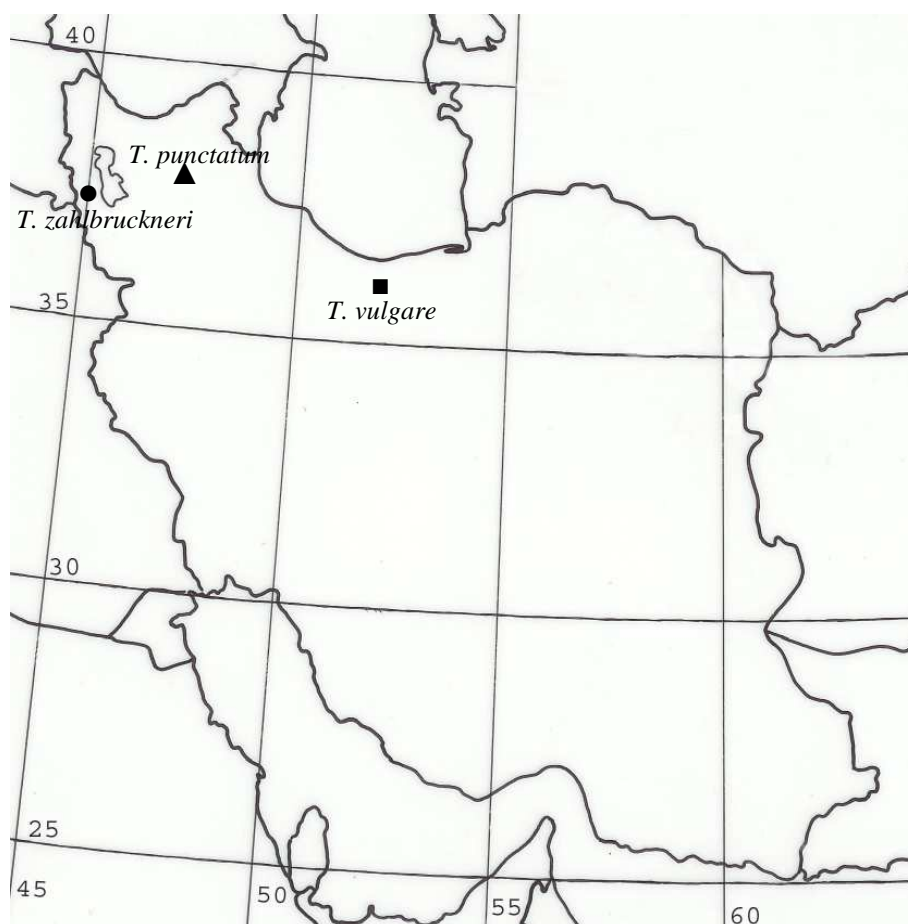


Fig. 1. Distribution of the three new records of *Tanacetum* for Flora of Iran.

brown with 5-8 indistinct longitudinal ribs. Pappus corona-shaped, whitish, irregularly divided into 4-6 lobes along the edge (Fig. 2).

In written description for this species in Flora of Turkey (GRIERSON 1975), lower leaves are sessile or on short petioles. Therefore, according to the mentioned references, it seems that this species is very polymorphous species. So that, it can be probably broken into several ecological-geographical races (GRIERSON 1975).

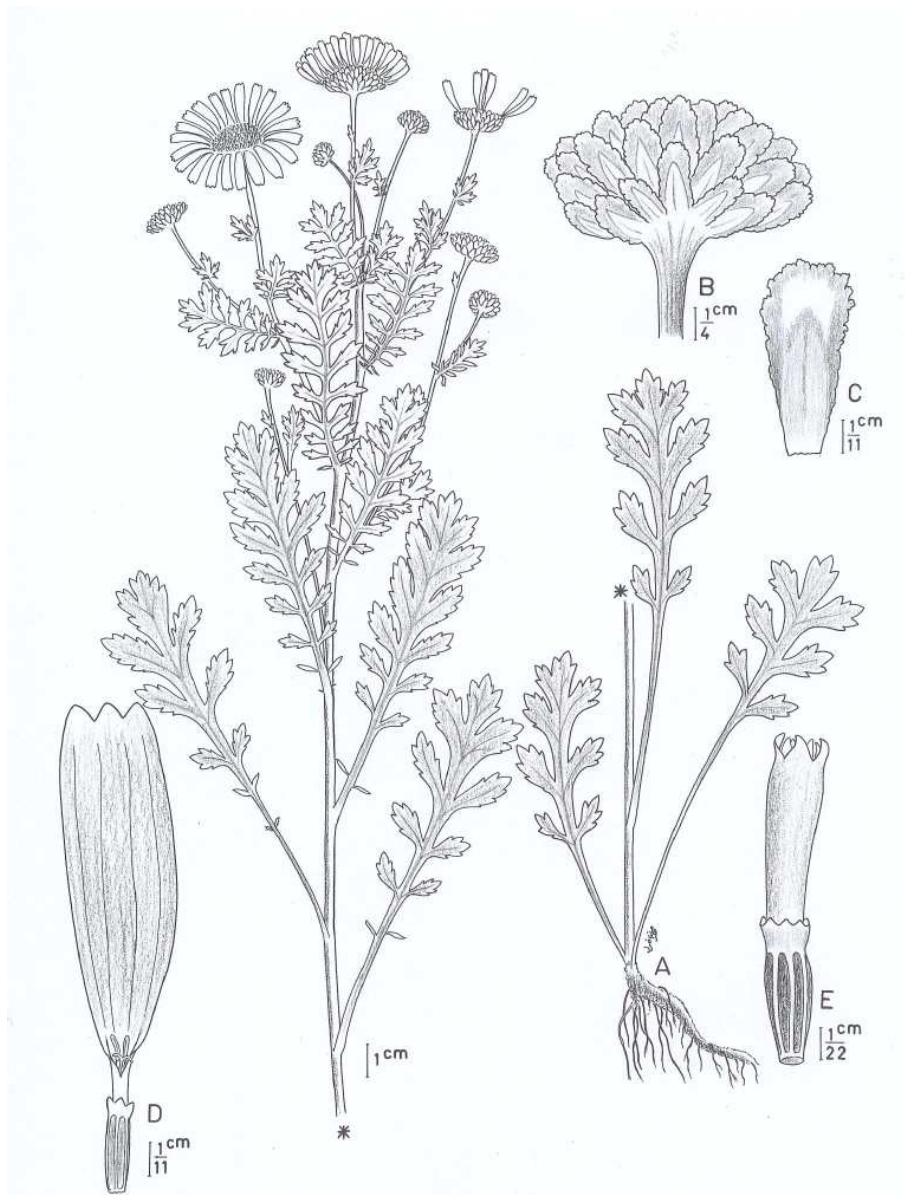


Fig. 2. *Tanacetum punctatum*: A. Habit, B. Involucre, C. bract, D. Ligulate floret with achene, E. Tubular floret with achene.

Because of its fairly large capitula with white ray flowers and black-margined bracts, this species could easily be mistaken for *Leucanthemum* Mill., but can be readily distinguished from the genus by its leaves and achenes (GRIERSON 1975). In the genus *Leucanthemum*, leaves are simple and undivided (not pinnatisect) and achenes with 10 distinct ribs. It is noticeable that the genus *Leucanthemum* Mill. has been recently recorded from Iran by V. MOZAFFARIAN (2005).

General distribution: Georgia, Azerbaijan, Armenia and Iran

Habitat: It grows in water meadows and marshy places at heights from 1000-3500 m. Type specimen has been described from Levant (referred to East).

2. *Tanacetum vulgare* L., Sp. Pl. 844, 1753

Mazandaran Province: Chalous, Doab, Veysar, forest region, 1500-1800 m, 10.7.1980, Termeh, Daneshpajouh & Zargani, IRAN 48793 (Fig. 1).

Plant perennial, stem solitary, upright, purplish, c. 55 cm tall, abundantly leafy, branched above. Leaves alternate, pinnatipartite to pinnatisect, lobes serrate, hairy, glandular-punctate, oblong-ovate in outline, primary segments 7-10; basal and inferior stem leaves rapidly dry; lower cauline leaves c. 6 cm, on rather long petioles, widened at base; upper cauline leaves similar but sessile or on a short petiole. Capitula numerous, aggregated in rather dense composite corymb-shaped inflorescences. Involucre c. 5 mm in diameter, hemispherical; phyllaries with whitish scarious margins and apices and rather narrow pallid or brownish membranous margin along edge. Ray flowers absent, all florets tubular, 5-toothed. Achenes 5-ribbed, with scattered sessile transparent glands, pappus corona-shaped with unevenly lobed. Receptacle conic (Fig. 3).

General distribution: widespread in Europe, almost throughout Europe and temperate Asia (Turkey, North part of China, Mongolia, Korea, North part of Japan), N. America (chiefly as alien plant) and Iran

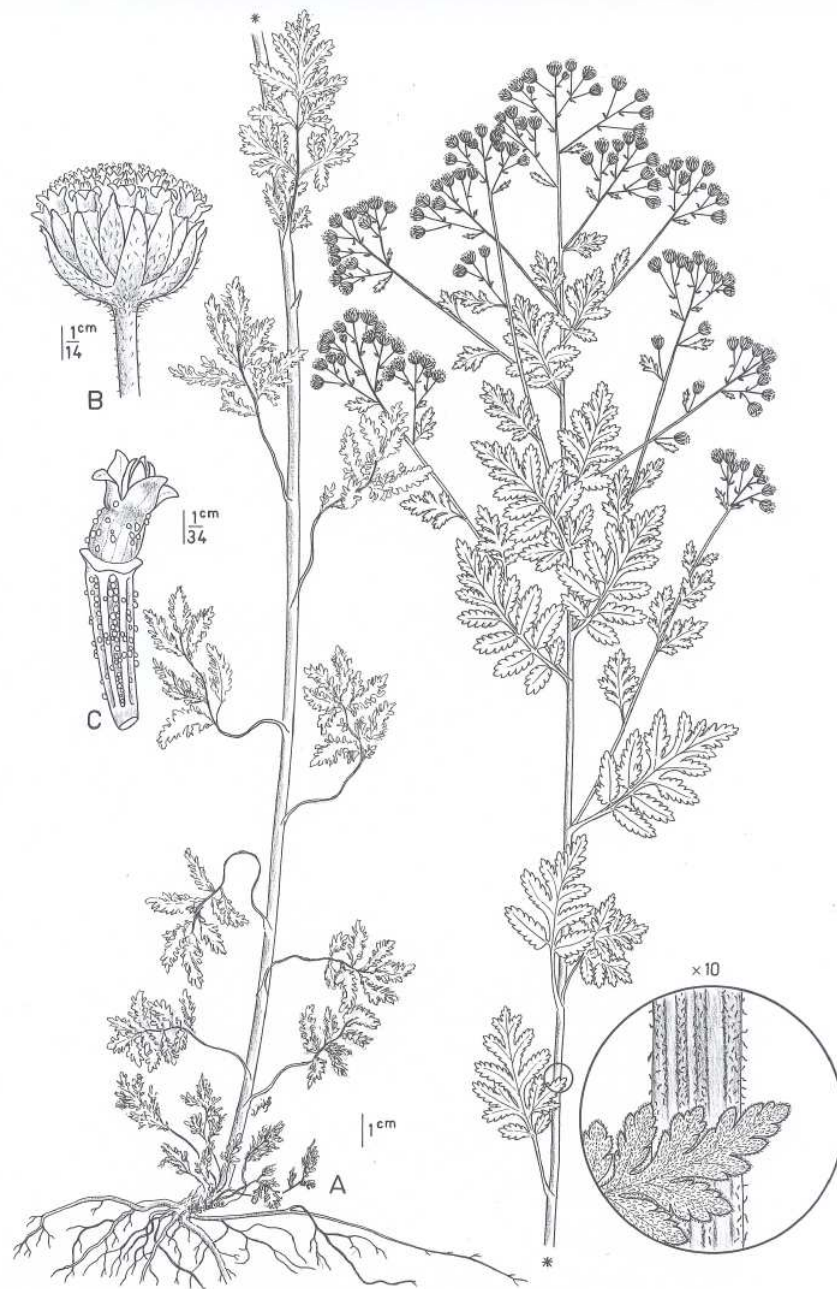


Fig. 3. *Tanacetum vulgare*: A. Habit, B. Involucre, C. Tubular floret with achene.

Habitat: Roadsides, meadows, shrubs, steppes, banks of river and waste places; extensively cultivated for ornamental and as a pot-herb. Type specimen has been described from West Europe (TZVELEV 1961).

Common name: Tansy

Economic importance: A herb used in folk medicine since long. Stems and heads contain an insecticide.

(http://www.agriculture.gov.sk.ca/Problem_Weeds_Cattlemens_Guide)

3. *Tanacetum zahlbruckneri* (Náb.) Grierson in Notes R.B.G. Edinb. 33: 435, 1975

Azerbaijan Province: 41 km south of Urmia (ex Rezaiyeh), Ghasemlou valley, 1550-1800 m, 1.6.1978, Matin & Daneshpajouh, IRAN 12625 (Fig. 1).

Plant perennial, c. 30 cm high. Radical leaves c. 5 cm (including petioles c. 3 cm), 2-pinnatisect; primary segments 4-5 paired, each finely dissected into 3-5 simple or 3-fid, narrowly linear, acuminate lobes, glandular; cauline leaves similar, smaller, sessile. Capitula generally 2-4 per stem, on long peduncles. Involucre c. 1.5 cm wide; outer bracts ovate-lanceolate, margins brownish-black, scarious at apex. Ray flowers white, central florets tubular, 5-toothed. Achenes ribbed, c. 2.5 mm pappus corona-shaped c. 1 mm (Fig. 4).

An Irano-Turanian element, Type specimen has been described from Turkey (GRIERSON 1975).

General distribution: Turkey and Iran

Note: The plant which was previously recorded as *Tanacetum zahlbruckneri* by MOZAFFARIAN (1991), belongs to the genus *Tripleurospermum*. Therefore, this is the first report of *Tanacetum zahlbruckneri* in Iran.

Acknowledgements

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Fig. 4. *Tanacetum zahlbruckneri*: A. Habit, B. Involucre, C. Ligulate floret with achene, D. tubular floret with achene.

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Address of the author: S.B. DJAVADI, Department of Botany, Iranian Research Institute of Plant Protection, P.O. Box 1454, Tehran 19395, Iran.
E-mail: sb_djavadi@hotmail.com

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