

Thymus broussonetii Boiss

Lamiaceae (Labiatae)



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■ Morphological Description

Small shrub 12-40cm; stems with short hairs, generally retrorse (curved backwards). Leaves 5-18x2-5mm, ciliate, glandular-dotted. Inflorescence capitulate, 15-30x1520mm; bracts ovate to elliptical. Calyx 6-7.5 mm; teeth ciliate, lower teeth c. 4 mm, the central tooth of the upper teeth c. 1 mm. Corolla reddish to purple.

Two subspecies are recognized: Leaves more than 10 cm, subpetiolate, bracts hairy only on the back: ssp. *Broussonetii*. Leaves less than 10 cm, petiolate; bracts densely hairy on both sides, hairs long. Ssp. *Hannonis*.

Flowers March-July.

■ Geographical Distribution

Local: Mainly on the Atlantic coast; grows in the regions of Rabat and Essaouira, but also found in Middle Atlas and Anti-Atlas

Regional: *T. broussonetii* Boiss.: Morocco, Algeria and Tunisia. *T. broussonetii* ssp. *Broussonetii*: Morocco, rarely in Algeria and Tunisia. *T. broussonetii* ssp. *hannonis* (Maire) R.: Morocco, Agadir, around Cape Rhir.

Global: Section *Thymus* is found only in the western Mediterranean region. The most important species are *T. vulgaris*, *T. zygis* and *T. willdenowii*.

■ Ecology

***T. Broussonetii* Boiss. :** Altitude 10-1000m. Morocco, Algeria and Tunisia. Ssp. *Broussonetii*: Altitude 50-1000m. Morocco, mainly on the Atlantic coast; and rarely in Algeria and Tunisia. Ssp. *Hannonis*: Altitude 10-150m. Morocco: Agadir, around Cape Rhir. It usually occurs on basic soils.

Cultivation: It is primarily a warmth-needing plant. Possibly giving it superbly draining soil and

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The name is probably borrowed from Latin *thymus*, which goes back to Greek *thymós* "spirit", originally meaning "smoke" (related to Latin *fumus* "smoke"; cf. "perfume") and the verb *thyein* "smoke, cure; offer an incense sacrifice". The reference is probably the strong, smoky odour of thyme. An entirely different explanation of the name *thyme* gives Old Egyptian *tham*, which refers to a strongly smelling plant used for the mummification process, as the source of the Greek plant name.

Arabic: Za'itra, Za'atar el-hamir, Ra'atar essouiri.

ازعيطر- زعطر لحمير- زعطر السويري-زعتر

English: Broussoneti Thyme.

French: Le thym de Broussonet.

a completely sunny exposure would help it through the winter.

■ Status

Not IUCN threatened specie.

■ Parts Used

Flowering branches, leaves, aerial part.

■ Constituents

The essential oil of *Thymus broussonetii* from Essaouira region contains thymol (15.2 to 28.9%), carvacrol (10.1 to 30.4%), borneol (14.8 to 19.4%), p-cymene (3.8 to 15.3%), pinenes (4.1 to 7.8%), camphene 3 to 5.9%), myrcene (2.3 to 2.8%), gamma-terpinene (2.4 to 6.8%). The same species collected in Rabat region was poor in thymol (0.2%) but rich in carvacrol (77.3%). The methanol extract of leaves was shown to contain some flavonoids: luteolin, eriodictyol, thymonin and glycosides: luteolin-7-O-glucoside, luteolin-3'-O-glucuronide, eriodictyol-7-O-glucoside. Ursolic acid and oleanolic acid were also isolated from the chloroform extract.

■ Pharmacological Action and Toxicity

The topical anti-inflammatory activity of four

extracts from *Thymus broussonetii* leaves, an herbal drug used in Moroccan traditional medicine has been studied using the croton oil ear test in mice. A bioassay-oriented fractionation revealed that the pharmacological activity is mainly in the chloroform extract. Fractionation and analysis of this extract allowed the identification of ursolic acid and oleanolic acid as the main anti-inflammatory principles.

Oil of thyme is itself quite poisonous. Thymol has caused dermatitis in dentists, and, when used in toothpaste, chelitis and glossitis. Oil of thyme, in bath preparations, has been reported to cause hyperemia, and severe inflammation.

■ Traditional Medicine and Indigenous Knowledge

Everywhere in Morocco, broussonet thyme is used like *Origanum compactum* Benth. In Rabat region, the mixture, obtained from the maceration of dried plant in olive oil during one week. The oil solution is used to treat wounds, cuts, furuncles and abscess. The decoction is used against aphta, gingivitis, and sore throat. Infusion of leaves and flowering branches for colds, pains, coryzas, rheumatism, articular pains, as gargle for throat troubles. Decoction without sugar for jaundice and other liver diseases, galactagogue, vermifuge, emmenagogue,

diuretic, digestive, appetizer, general antiseptic for the intestine; used in the form of plaster on the abdomen in case of digestive troubles.

■ Diseases

Colds, pains, coryzas, rheumatism, articular pains, throat troubles, jaundice, liver diseases, digestive troubles, aphta, gingivitis, wounds, cuts, furuncles and abscess.

Also as general antiseptic, galactagogue, vermifuge, emmenagogue, diuretic, digestive, appetizer.

■ References

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