Diplotaxis harra (Forsk.) Boiss.
Brassica

Compiled by: Dr. Zeineb Ghrabi

Morphological description
Diplotaxis harra is a annual or perennial species, hispid at the base at least, rarely glabrescent or glabrous. Its 20-60 cm. stems are erect and branched. The flower-bearing stems have leaves, at the base at least. The flowers are yellow, with a spindly pedicel that is longer than they are.The petals are twice as long as the sepals, which are downy. The fruit is a pendulous siliqua at the tip of a 2-4 mm.-long capillary gynophore.
Two sub-species are signalled in Tunisia: the subsp. eu-harra Emb. & Maire and the subsp. *crassifolia* (Rafin.) Maire (= *Diplotaxis crassifolia* Rafin.) DC; = *Sinapis crassifolia* (Rafin.), which is especially distinctive for the number of teeth on the leaf and the length of the gynophore.

Geographical distribution
Local: The subsp. eu-harra Emb. & Maire is common in Tunisia: dorsal ridge, central and southern Tunisia, Medjerda valley; the subsp. crassifolia (Rafin.) Maire is only signalled in central and southern Tunisia.
Regional: North Africa.

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Flore Orient. 1: 388. 1867
Pendulina fontanesii Willk.; *Pendulina harra* (Forsk.) Willk; *Pendulina hispica* Willk; *Sinapis harra* (Forsk.)

Arabic: harra
French: diplotaxis
English: wall rocket

Global: The subsp. eu-harra Emb. & Maire has a distribution area that spreads over North Africa and western Asia; the subsp. crassifolia (Rafin.) Maire is a Mediterranean endemic but restricted to Morocco, Algeria, Tunisia and Sicily.

Ecology
Diplotaxis harra is common in pre-Saharan Tunisia, where it occupies gypseous soils and is a feature of various plant groups, such as the *Artemisia herba* alba, *Eruca vesicaria* and *Diplotaxis harra* group.

Status, conservation and culture
It is one of the *Cruciferae* that is not cultivated in Tunisia; it is picked wild.

Part used
The aerial part.

Constituents
The various *Diplotaxis* contain: a heterosid, sinigroside, which hydrolyses under the action of myrosine, liberating a sulphurated essential oil containing allyl sulfocyanate and allyl sulphide. Glucosinolates (â-thioglucoside-N-hydroxysulphates) precursors of the isothiocynates. Arachidonic acid, palamitic acid, cholesterol, stigmasterol, B-sitosterol and non-methylated fatty acids.

Traditional medicine
For constipation: a decoction of the aerial part of the plant; three cups a day before meals. Sugar diabetes without complications: 50 gr. of the aerial part of *Diplotaxis harra* decocted in a litre of water for 30 minutes; one glass a day taken by mouth on an empty stomach. Sunstroke: crush 50 gr. of *Diplotaxis harra* leaves and 50 gr. of *Astragalus*

armatus roots, then mix with olive oil and apply locally to the crown of the head at night for 3 days. *Diplotaxis* seeds are prescribed internally to warm up the body and externally as a rubefacient. A decoction of the seeds or leaves of Diplotaxis harra and *Diplotaxis pitardiana* is used as a rub for scab in animals.

Pharmacological action and toxicity

The glucosinolates and their derivatives are bactericidal, fungicidal and nematocidal. The non-methylated fatty acids are bactericidal and fungicidal and kill yeasts. An irritating, reddening action has been noticed on the mucous membrane.

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