

***Datura metel* L.**  
Solanaceae



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### ■ Morphological description

*Datura metel* is an annual, ash-green, hairy species 0.40-1 m. high. Its leaves are simple, uncut or sometimes with slightly indented sinuate margins. The flowers are strongly scented, with short peduncles, erect and big (15-20 cm.). The corolla is twice as long as the calyx. The fruit is a globular pendulous capsule, with little thorns that are not dilated at the base. Flowering occurs from August to September.

### ■ Geographical distribution

**Local:** Rarely grows wild in Tunisia; central and north-eastern Tunisia.

**Regional:** Tunisia, Algeria and Morocco.

**Global:** *Datura metel* comes from India originally; it has been naturalised and become a cosmopolitan: Spain, France, Italy and tropical Africa.

### ■ Ecology

It grows on sandy soils, but rarely grows wild.

### ■ Status, conservation and culture

It is not cultivated in Tunisia; it is picked wild.

### ■ Part used

The flowers.

### ■ Constituents

The leaves contain about 0.5% of alkaloids, the main one being scopolamine, accompanied with a

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**Arabic:** hchichet el fedda

**French:** stramoine

**English:** datura

little norscopolamine, hyoscyamine and meteloidine. A new tropanic alkaloid, datumetine, was isolated on the leaves. These are also rich in withanolides (steroidal elements: datumetine, daturibine, etc.) The seeds contain 0.2-0.5% of alkaloids and the roots 0.1-0.2%. The flowers particularly contain scopolamine (0.26%) and hyoscyamine.

### ■ Traditional medicine

*Datura* is antiasthmatic; its flowers are smoked during an attack.

### ■ Pharmacological action and toxicity

Atropine and scopolamine are the two alkaloids responsible for the plant's toxicity: dryness of the mouth, visual disorders and muscular weakness.

### ■ Use in herbal medicine

Bromohydrate of scopolamine has been used in the treatment of Parkinson's disease. The main use of scopolamine is to prevent the symptoms of travel sickness. Atropine is available as eye drops (for uveitis, to prepare for certain eye tests).

### ■ Pharmaceutical products

Bromohydrate of scopolamine is used in making speciality analgesics: association with morphine and sparteine, association with opium extract and procaine.

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