

Datisca cannabina
(DATISACEAE)

NOMENCLATURE:

Accepted Name: *Datisca cannabina* L.

Approved by:

References: All of Bibliography

Synonyms: *Datisca nepalensis* D. Don

Identification:

FRACTIONATOR:

DESCRIPTION: Glabrous, erect, dioecious, perennial herb, from 0.6-2 m. tall. Cauline leaves alternate, pinnate, 15-30 cm. long; leaflets 5-11, petioluled, lanceolate, up to 15 cm. long and 2.5-4 cm. wide, coarsely serrate, long acuminate; leaf of the branches linear-lanceolate, 2.5-8 cm. long, 0.7-1.2 cm. wide, serrate or entire. Flowers in axillary clusters and terminal racemes, shortly pedicelled. Male flowers: calyx 3-4 lobed, lobes unequal, ca. 2 mm. long; stamens 11-13, anthers oblong, 3-3.5 mm. long, filaments very short. Female flowers: calyx obscurely 3-4-ribbed, adnate to the ovary, 3-4 lobed, lobes ca. 1 mm. long. Gynoecium 3-4-carpellary, inferior, unilocular, ovules many on 3-4 parietal placentae; styles 3-4, free, each divided nearly to the middle in 2 linear stigmas. Fruit a pedicelled, narrowly oblong, pendulous, 3-4(-5)-ribbed, coriaceous capsule, opening at the top between the styles, 5-9 mm. long, 3-4 mm. broad. Seeds numerous, minute, elliptic, ca. 1 mm. long, testa reticulate with a cupulate membranous strophiole.

ECOLOGY: Moist places of rocky banks or gravel bars along streams of woodlands of oak, cedar and pine from elevations 1,000-6,000 feet. Some associated species include *Quercus coccifera*, *Fontanesia phillyreoides*, *Quercus baloot* and *Cedrus deodara*. *Datisca glomerata* has a similar ecology occurring from 200-6,500 ft.

Datisca cannabina occurs on the southern slopes of the western Himalayas in India, Kashmir, Pakistan and Afghanistan and in the southern part of Tadzhik S.S.R. From eastern Iran in the Elbutz Mountains westward through the Middle East, and from Turkey to Crete.

COMMENTS: The family Datisceae includes three genera and four species. Airy-Shaw (1964) separated the two woody genera (Tetrameles and Octomeles) into their own family, Tetramelaceae, but this was not upheld by Davidson (1973). The Datisceae have been considered to be allied to the Begoniaceae, Cactaceae and Haloragidaceae. Davidson (1973) concluded that this family forms a natural group within the Cistales and that it may be related to the Begoniaceae through common ancestry with the Flacourtiaceae.

The genus, Datisca, includes one other species, D. glomerata (Presl) Baill. that is also active from California where it is essentially endemic. The distribution of the genus is a good example of a Mediterranean-Californian disjunction.

Both species of Datisca are very similar in their morphology and ecology. They bear a strong resemblance to Cannabis sativa and this can present a problem when collecting Datisca in the field. From the author's own experience with D. glomerata, one observer threw a wood chip that nicked the author's ear from a vehicle moving at approximately 60 mph. The collecting of D. glomerata had attracted quite a crowd and many inquiries which included the California Highway Patrol.

The roots and rhizomes of D. glomerata are thick and fleshy. They are very difficult to dig out of gravel beds along streams.

Datisca cannabina is generally regarded as uncommon. Clarke, (1879) in Hooker's Flora of British India, stated "not very common" and this has been repeated by authors of more recent floras. However, Stewart (1972) noted that it was "fairly common" in Kashmir. In California, D. glomerata was often seen in small numbers on steep rocky moist banks and along streams. D. glomerata was reported to the author to be common along some streams in Shasta and Siskiyou counties.

USES: Cultivated for its ornamental foliage and readily propagated by seeds or cuttings. Reported to be used medicinally in Italy and stated to yield a bitter tasting purgative juice. Other medicinal uses include: diuretic, expectorant, sedative, fevers, gastric and scrofulous complaints. The roots contain the alkaloid Datiscline and yield a yellow dye.

ACTIVITY DATA IN DATISCA: The antitumor agents isolated from D. glomerata include eight related cucurbitacins, two are named Datiscaein and Datiscoside. This would support the opinion that the family is closely allied to the Begoniaceae.

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PREPARED BY: R. W. Spjut DATE: October 14, 1977



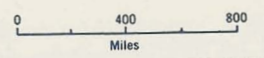
Fig. 1, *Datisca cannabina*: A, male branch $\times \frac{1}{2}$ (*Hassan Din* 249, RAW); B, male flower $\times 5$; C, surface view of male flower $\times 5$; D, female branch $\times \frac{1}{2}$ (*M.A. Siddiqi & A. Rahman* s.n. 31-7-1954, RAW); E, female flower $\times 4$; F, t.s. of ovary $\times 10$; G, fruit $\times 4$; H, seed $\times 40$.



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Datisca carnabina.