Flora of South Australia

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Photograph: Helen Owens
XYRIDACEAE

B.J. Conn

Mostly slender to robust herbaceous, perennial or sometimes annual, tufted plants, usually of marshy areas; leaves mostly or all basal, distichous or occasionally spirally arranged, basally with an open sheath; lamina narrow, flat to cylindric or filiform, often ‘grass-like’. Inflorescences usually many; each a ± globose or cylindrical spike, each borne on a long axis (scape) which is usually as long as leaves; flowers bisexual, usually sessile, subtended by a bract; sepals 3, often unequal in size; petals 3, regular or irregular, basal half much narrower than distal half, or sometimes partly fused basally or less frequently blue or white; stamens 3 or rarely 6, opposite petals; staminodes present or absent; filaments short and joined to petals or corolla tube; carpels 3, fused; style simple or 3-branched distally; placentas axile or parietal; ovules (1–) many, orthotropous. Capsule opening loculicidally in 3 valves and sometimes circumsciss near the summit, sometimes enclosed by corolla tube; seeds small, numerous, longitudinally ribbed, endosperm present.

5 genera with about 280 species (mostly in genus Xyris), mainly in tropical and subtropical regions, especially America (Achlyphila Maguire & Wurdack from Venezuela is monotypic); only Xyris occurs in S.A. The status of this family is unclear because there are suggestions that it may not be monophyletic (Davis et al. 2004).

1. XYRIS L.

Sp. Pl. 1: 42 (1753).
(Greek name for a species of iris.)

Perennial, slender to robust herbs; lateral shoots with a bicarinate protective sheath; leaves alternate, distichous, occasionally absent, with basal sheath well-developed, margin membranous, entire or occasionally ciliate. Inflorescence 2–30-flowered, ovoid, obovoid or subglobose; basal sheath present; scape terete or subterete; bracts spiral, imbricate, with dorsal stomate field mostly distinct; flowers with lateral sepals spathulate, or oblong to obovate, keel prominent or indistinct, stomate field present or absent; dorsal sepal ovate, orbicular or obovate, falling off after anthesis; corolla yellow, ovate; stamens with filaments oblong or trapezoid; staminodes present or absent; style terete or flattened, undivided or trifid. Capsule obovoid, slightly dorsiventrally flattened, 3-lobed, hardened, not dehiscing at apex; seeds obloid to ellipsoid, longitudinally and transversely ridged.

About 250 species mainly in warm areas.

The term ‘stomate field’ describes an area on the dorsal surface of the bracts; it is a triangular, oblong or elliptic region with a high density of stomates, such that are usually clearly visible (usually different in colour from the remaining dorsal surface). It is best viewed at at least 10× magnification.

Erect herb, with slender, few to many scapes, 30–50 cm high; lateral shoots with a bicarinate sheath, with keels smooth; leaves linear, 120–600 mm long; basal sheaths ± shining, reddish brown to black, abaxial surface smooth, margin entire with well-developed membranous zone; ligule ± triangular; lamina green, mostly subterete. **Inflorescence** 5–10-flowered; basal sheath 110–170 mm long, twisted, ± ribbed, with lamina linear and aristate; scape terete or subterete, 1–1.4 mm diam., bracts and flowers arranged in an obovoid compact spike, 9–17 mm long, 5–8 mm diam.; sterile bracts 9–45, tightly arranged, usually forming 5 longitudinal columns; distal sterile bracts triangular to ovate or obovate, central region reddish brown to dark brown, dorsal stomate field triangular to ovate; fertile bracts orbicular to obovate, 5–8 × 3.9–6.3 mm, with central region ovate to hemispherical or broadly triangular and yellowish to reddish brown or dark brown; flowers with lateral sepals oblong to elliptic or narrowly obovate, 5.9–7 mm long; lamina ± translucent; keel reddish brown, distinct and prominent, distally fringed; stomate field narrowly ovate; dorsal sepal broadly obovate to orbicular, 5.5–7 × 5.2–6 mm, with central region opaque to more or less translucent, distally reddish brown to dark brown; corolla much exceeding calyx, its lobes conspicuous, yellow, ovate; petal claws and staminodal filaments free; stamens with filaments oblong to narrowly trapezoid; staminodes Y-shaped, densely hairy; style branches 1.6–1.8 mm long, distally ± tubular to funnel-shaped **Capsule** 4.2–4.6 mm long, enclosed by 2 persistent lateral calyx-segments, obtuse, circumsciss near apex with apical cap thick and hard. **Tall yellow-eye. Pl. 1.**

S.A.: SL, KI, SE; Qld; N.S.W.; Vic.; Tas. Flowers: in summer.

(Rare status in S.A.)

**References**


Pl. 1. Xyris operculata. A, inflorescence with two open flowers; B, habit. Photos: D.J. Duval, DENR.