# *Stylidium chiddarcoopingense* (Stylidiaceae), a new species from south-west Western Australia

*Stylidium chiddarcoopingense* (Stylidiaceae) is a new species of triggerplant endemic to south-west Western Australia. It is a member of the *Stylidium caricifolium* complex, in which seven species are now recognized. The other six species were described and illustrated in Lowrie *et al.* (1998). All members of the *Stylidium caricifolium* complex belong in subgenus *Tolypangium* Endl., section *Squamosae* Benth. (Mildbraed 1908).

## Taxonomy

**Stylidium chiddarcoopingense** Lowrie, Coates & Kenneally, *sp. nov.*

*S. nungarinense* S. Moore affine sed foliis linearibus, in sectione transversale ellipticis, 0.8–1.2 mm latis, 0.7–0.8 mm crassis.

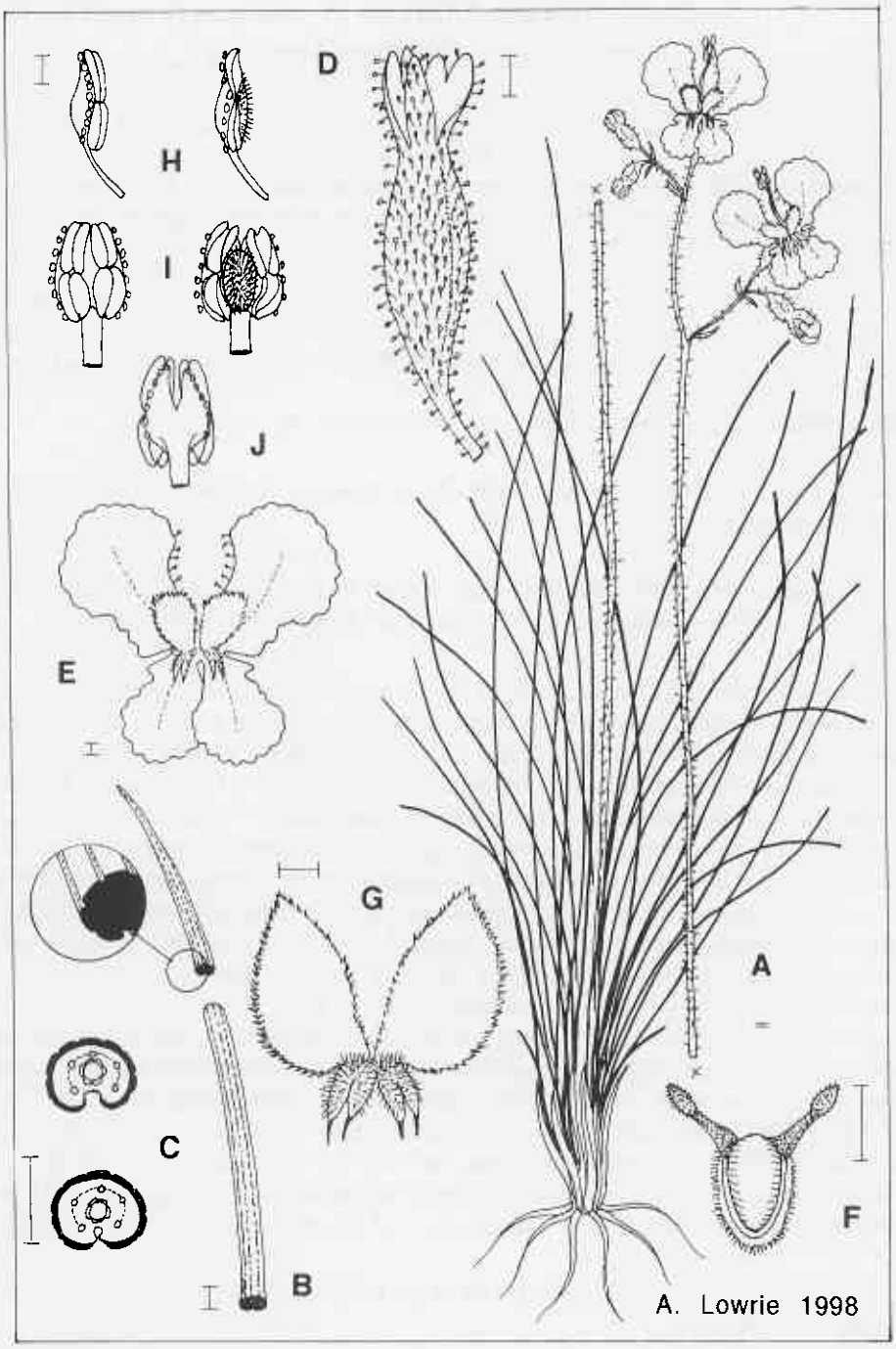
*Typus:* Chiddarcooping Hill, Chiddarcooping Nature Reserve, Western Australia, 30° 54' S, 118° 41' E, 16 September 1998, *D.J. Coates* 198 (*holo:* PERTH 05335094; *iso:* MEL).

*Perennial herb,* forming a leafy tuft of long erect or recurved leaves arising singly or in pairs from each basal papery sheath. *Leaves* light green in young leaves, dark green in older leaves, linear, 12–30 cm long, elliptic in section, 0.8–1.2 mm wide, 0.7–0.8 mm thick, midrib visible on the abaxial surface of older leaves, margins revolute, midrib hidden in juvenile and young leaves by the revolute margins, adaxial surface striate, smooth, with glassy epidermis cells in the shallow longitudinal valleys, glabrous. *Inflorescence* paniculate, including scape 30–40 cm long, densely glandular-pubescent; peduncles 1- or 2-flowered, the basal ones 3.5–4.5 cm long, the upper ones shorter; floral bracts linear, 3–5 mm long; bracteoles 2–2.5 mm long. *Hypanthium* narrowly ellipsoid at anthesis, 7–7.5 mm long, 2–2.5 mm wide, densely glandular-pubescent. *Sepals* 5, 2 connate for half their length, 3 free to base, glandular-pubescent. *Corolla* white, lobes vertically paired; anterior lobes 16–17 mm long, 11–12 mm wide; posterior lobes 10–11 mm long, 7–7.5 mm wide. *Labellum* ovate, *c.* 1.5 mm long, *c.* 1 mm wide; margins fringed with long translucent white papillae, apical papillae red; basal appendages 2, white, terete, with red ellipsoid tips, 0.7–1.5 mm long, papillose; boss ovate, pale green, *c.* 1.3 mm long, 0.6 mm wide, smooth. *Throat* appendages 4, upper 2 wing-like, white, 5.5–7.5 mm long, 3–4 mm wide; lower 2 narrowly ovate, bifurcate, white, red-tipped, *c.* 1.3 mm long, papillose. *Gynostemium c.* 15 mm long; anthers olive green, vertically paired; abaxial surface with glassy globose appendages bead-like along the margins; pollen grey; stigma elliptic, *c.* 1.5 mm long, *c.* 0.8 mm wide, cushion-shaped. *Capsule* ellipsoid, *c.* 9 mm long, *c.* 5.5 mm wide. *Seeds* unknown. (Figure 1)

*Other specimen examined.* WESTERN AUSTRALIA: Chiddarcooping Nature Reserve, Sep. 1995, *D.J. Coates* 1395 (PERTH).

*Distribution.* Known only from two populations *c.* 4 km apart in the Chiddarcooping Nature Reserve *c.* 75 km north-east of Merredin.

*Habitat.* Grows at the base of breakaways in kaolin sandy soils and rock scree associated with *Allocasuarina* shrubs.




*Stylidium chiddarcoopingense* A – habit of flowering plant; B – leaf, enlarged section left; C – mature leaf section showing visible mid vein along abaxial surface (top), immature leaf section showing revolute margins completely enclosing the mid vein along abaxial surface (bottom); D – hypanthium and sepals; E – corolla; F – labellum; G – throat appendages; H – lateral view of gynostemium tip (with stigma at right); I – front view of gynostemium tip (with stigma grown out, right; J – back of gynostemium tip. Scale bar for all = 1 mm. Drawn from *D.J. Coates* 198 (PERTH).

*Flowering period.* September, October.

*Chromosome number.* n = 8, *D.J. Coates* 1395 (previously unpublished data).

*Conservation status.* CALM Conservation Codes for Western Australian Flora: Priority Two. Only known from the type location which is a nature reserve.

*Etymology.* The epithet – *chiddarcoopingense* refers to the Chiddarcooping region in south-west Western Australia where this species was discovered and specimens for cytogenic studies were collected.

*Affinities. Stylidium chiddarcoopingense* is distinguished from all members of the *S. caricifolium* complex by its distinctive linear leaves that are elliptic in section and only 0.8–1.2 mm wide and 0.7–0.8 mm thick. Its closest relative is considered to be *S. nungarinense*, which is similar in having glabrous leaves arising singly from each basal papery sheath and the same chromosome number of n = 8, but shows significant morphological differences such as its lanceolate leaves, narrower upper throat appendages and distinctive corolla outline. *Stylidium wilroyense* Lowrie, Coates & Kenneally also has a chromosome number of n = 8 but shows greater morphological differences including its scabrid leaves and dark pink corolla. Each of the seven species of the *S. caricifolium* complex has its own unique corolla outline.

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## References

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