

***Eriochilus glareosus* (Orchidaceae), a new species from  
south-west Western Australia**

**Garry Brockman<sup>1</sup> and Christopher J. French**

Western Australian Herbarium, Biodiversity and Conservation Science,  
Department of Biodiversity, Conservation and Attractions,  
Locked Bag 104, Bentley Delivery Centre, Western Australia 6983

<sup>1</sup>Corresponding author, email: [garry.brockman@bigpond.com](mailto:garry.brockman@bigpond.com)

**SHORT COMMUNICATION**

*Eriochilus glareosus* G.Brockman & C.J.French, *sp. nov.*

*Type*: Roleystone, Western Australia [precise locality withheld for conservation reasons], 12 June 2004, G. Brockman 1147 (*holo*: PERTH 06963986; *iso*: CANB).

*Eriochilus* sp. Roleystone (G. Brockman 1140), Western Australian Herbarium, in *Florabase*, <https://florabase.dpaw.wa.gov.au/> [accessed 6 July 2022].

Terrestrial tuberous *herb* 6–12 cm tall. *Leaf* single, 6–20 mm long × 5–10 mm wide, arising from the scape at around one third of the scape height, sometimes not fully developed at anthesis and clasping the scape, ovate, entire, with an acute tip, bi-colourous, dark green above and deep purple or greenish purple and sparsely ciliate below. *Scape* 50–100 mm tall × 1–1.2 mm thick, wiry, maroon and sparsely ciliate below the leaf, maroon/green and glabrous above the leaf. *Ovary* 7–9 mm long × 1.5–2 mm wide, longitudinally ridged, glandular, green. *Flowers* 1–2(3), 13–15 mm long × 7–9 mm wide, upright, white with purple markings on the labellum, white lateral sepals and brown shades in other segments; flowers emit a strong sweet honey odour. *Dorsal sepal* 6–7.5 mm long × 2–2.5 mm wide, slanted obliquely forward over the column, spatulate, entire, apex subacute, margins and dorsum sparsely ciliate, greenish brown. *Lateral sepals* 8–11 mm long × 2.5–3 mm wide, projecting from beneath labellum, spreading, obliquely down and forward, narrowly elliptic, white with sparse ciliate margins becoming denser distally. *Petals* 5–6 mm long × 0.5–0.8 mm wide, projecting forward often obliquely down, distally turned in and mildly flared, ciliate, linear, greenish brown. *Labellum* 7–9 mm long × 2.5–3 mm wide at the widest point, appressed to the column upward and forward in the proximal one quarter, then forward before curving down and back through 180°; proximal one third oblong, transversely concave, with short lateral lobes, 0.5–0.75 mm high, upright and translucent, callus flattened, 0.7 mm wide × 1–1.5 mm long, green, shortly ciliate; distal two thirds ovate and thickened and covered with clumps of maroon and white cilia to 1.2 mm long. *Column* 5–5.5 mm long × 1.2–1.5 mm wide, held erect from the ovary, thickened centrally, 0.8–1 mm throughout; column wings 0.5 mm; anterior opening 1–1.3 mm wide × 0.5–0.6 mm deep, obscurely horizontally oval, margins cream with maroon markings. *Anther* 1–1.2 mm long × 1.2–1.5 mm wide, ovate, margins irregular and glandular, yellow/brown with purple margins. *Pollinium* in two sets of four, individually

1.0–1.2 mm long  $\times$  0.3–4 mm wide, clavate, bright yellow. *Stigma* translucent, scutiform, elliptical, 1.5–1.8 mm  $\times$  c. 1 mm. *Capsule* not seen. (Figure 1)

*Diagnostic features.* *Eriochilus glareosus* can be distinguished from all other members of the genus by the following combination of characters: small statured herb up to 12 cm tall, one or two small flowers (rarely 3) with narrow labella (2.5–3 mm wide at the widest point), widely spreading petals and an entire, ovate leaf, dark green above, deep purple or greenish purple and sparsely ciliate below.

*Selected specimens.* WESTERN AUSTRALIA: [localities withheld for conservation reasons], 12 June 2004, *G. Brockman* 1146 (PERTH); 12 June 2004, *G. Brockman* 1140 (PERTH); 3 June 2021, *G. Brockman* 4094 (PERTH); 3 June 2021, *G. Brockman* 4092 (PERTH).

*Phenology.* Flowering occurs from June through July.

*Distribution and habitat.* A seldom seen species currently known from only five close locations in the Perth Hills area of Roleystone – Martin. It occurs in scattered numbers within populations, in and around disturbed habitat in Jarrah and Casuarina woodlands on laterite. It is most commonly found in and around open revegetated gravel reserves. Response to fire is uncertain.

*Conservation status.* This species is poorly known and currently listed as Priority One under Conservation Codes for Western Australian Flora, under the name *E. sp.* Roleystone (*G. Brockman* 1140) (Western Australian Herbarium 1998–). Conserved in regional parkland; however, this species is threatened by recreational vehicle activities, illegal firewood collection, fire mitigation programs (track widening), and illegal rubbish dumping.

*Etymology.* The specific epithet is from the Latin *glareosus* (pertaining to gravel), alluding to the preferred habitat of the species.

*Common name.* Scarp bunny orchid.

*Affinities.* *Eriochilus glareosus* is most similar to *E. helonomos* Hopper & A.P.Br. in having a short stature, one or two flowers and a small leaf. However, *E. glareosus* can be readily distinguished from *E. helonomos* by its smaller flower size (13–15 mm long *cf.* 17–19 mm long), with a narrower labellum (2.5–3 mm wide *cf.* 4–4.5 mm wide) and spreading petals (vs clasping the column). The leaves in *E. glareosus* are also wider than *E. helonomos* (5–10 mm *cf.* 3–7 mm) and ovate rather than cordate, with a deep purple or greenish purple underside (vs green). *Eriochilus helonomos* also prefers a damp habitat as opposed to the well-drained habitat of the new species.

*Eriochilus glareosus* grows sympatrically with *E. dilatatus* Lindl. subsp. *dilatatus* and it is easily distinguished from this subspecies by its shorter scapes (5–12 cm *cf.* 7–52 cm), fewer flowers (1–2 *cf.* 1–20) that are narrower (7–9 mm *cf.* 12–20 mm) with a narrower labellum (2.5–3 mm wide *cf.* 3–5 mm), and a smaller leaf (6–20 mm  $\times$  5–10 mm *cf.* 5–30 mm  $\times$  10–60 mm), which is light green on both surfaces in *E. dilatatus* subsp. *dilatatus*.

The distribution of *Eriochilus glareosus* does not overlap that of *E. dilatatus* Lindl. subsp. *brevifolius* (Benth.) Hopper & A.P.Br. It is distinguished from this subspecies by its shorter scapes (5–12 cm *cf.* 5–28 cm), fewer flowers (1–2(3) *cf.* 1–5) that are narrower (7–9 mm *cf.* 10–15 mm), with a narrower



Figure 1. *Eriochilus glareosus*. A – close up of a flower; B – plant *in situ*; C – close up of leaf underside, plant *in situ*. From the type locality in Roleystone, Western Australia. Voucher: G. Brockman 4092 (PERTH). Photographs Garry Brockman.

labellum (2.5–3 mm wide *cf.* 3–5 mm), and a smaller leaf (6–20 mm × 5–10 mm *cf.* 4–32 mm × 2–11 mm), with entire margins (wavy for *E. dilatatus* subsp. *brevifolius*).

*Eriochilus glareosus* flowers later than *E. dilatatus* subsp. *dilatatus*, which is in fruit when *E. glareosus* is in full flower. *Eriochilus glareosus* usually flowers later than *E. helonomos*; however, sometimes there is overlap in unseasonably wet conditions when the flowering period of *E. helonomos* is extended.

*Notes.* This new species shows an apparent preference for disturbed environments where it flowers freely; however, it has also been found in undisturbed locations following a summer fire. The build-up of general forest litter makes it very difficult to relocate in unburned forest.

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