

Cryptocentrum caespitosum Carnevali, *sp. nov.* TYPE: PANAMA. Coclé: North rim of El Valle, 9 July 1939, Allen 1911 (Holotype: US!; Isotypes: AMES!, F!, MO!, NY!, SEL!, VEN!). Subgenus *Cryptocentrum*. Fig. 1.

Species C. gracillimae Ames & *C. Schweinf. affinis* sed foliis conduplicatis, non-teretibus, latoribus; petalis labelloque brevioris proportionem latiore differt.

Etymology: the name refers to the caespitose, albeit monopodial, habit of the species which is unusual and distinctive in this genus of monopodial plants.

Epiphytic herbs 5–10 cm tall, monopodial, densely cespitose, erect; **monopodia** abbrevi-

ated, 0.5–1 cm long, 2–5-leaved, entirely covered by leaf sheaths, branching basally. **Leaves** 4–9 cm long, 3–4.5 mm wide, conduplicate, coriaceous to fleshy coriaceous, linear-oblong, apex asymmetrically bilobulate, longer lobe obtuse, exceeding the shorter by 0.4–0.6 mm and keeled, leaf margin microscopically erose. **Inflorescences** 4–7 cm long, shorter than or about equaling the leaves, with 7–10 internodes, 2–3 appearing simultaneously on the same stem; apparently erect, enveloped by 3–4 bracts; **peduncle** terete, 0.8–1.2 mm thick; **bracts** 1.0–1.6 cm long, 3–5 mm wide, when flattened elliptic, acute, dorsally strongly keeled, in natural position subinflated and tubulose, longer than the internodes of the peduncle, multinerved; **floral bract** similar to the peduncle bracts, 1.5–2 cm long, 5.5–6.5 mm wide, obovate-elliptic, obtuse or subrounded. **Pedicellate ovary** 15–17 mm long, 0.8–1 mm thick, subterete, surface smooth or very laxly verruculose. **Flowers** described by the collector as “tan”, with free portions of petals and sepals spreading, resupinate. **Sepals** subfleshy, 5- to faintly 7-nerved, approximately of the same length or the dorsal slightly longer, margins rolled backward, cellular-erose; **free portions** 5–9 mm long, 1.8–2.1 mm wide, oblong or oblong ovate, apex obtuse; or obtuse-rounded; **tube** 2–3 mm long, ca. 3 mm thick. **Petals** 5.5–6.5 mm long, 2–2.5 mm wide, in general outline lanceolate, apex obtuse, bent portion ca. 4 mm long, 5-nerved. **Labellum** 5.5–6.5 mm long, 3–4 mm wide when expanded, narrowly lanceolate in general outline, apex obtusely acute, 3-nerved, **hypochile** 3.5–4 mm long, **epychile** 2–2.5 mm long. **Spur** 16–18 mm long, ca. 1 mm thick subcylindric, slightly thickened apically where it is 1.3–1.5 mm thick. **Column** 1.8–2.1 mm long, ca. 1.5 mm thick, laterally flanked by dolabriform wings for 3/4 of its length. **Anther** ca. 1 mm long and thick.

Additional specimen examined: PANAMA. Panamá: Mountains north of Cerro Jefe, 26 August 1967, W. Stimson *et al.* 5425 (NY).

Relationships and diagnostic features: *Cryptocentrum caespitosum* is distinctive in its habit. The monopodia are short and several on the same plant, all about the same length, giving the species its distinctive caespitose aspect. The flowers are very similar to those of *C. gracillimum* from farther northwest in the Central Valley of Costa Rica, but they are smaller and with proportionally broader seg-

ments, particularly the petals (width/length ratio 0.36–0.40 in *C. caespitosum* vs. 0.21–0.27 in *C. gracillimum*). The plants of these two closely related species, however, are very different. The leaf apex in *C. caespitosum* is very unequal, as opposed to only slightly unequal in *C. gracillimum*. The leaves of *C. caespitosum* are also wider and flat in cross-section, although they are still very succulent. *Cryptocentrum caespitosum* is restricted to

central Panama, while *C. gracillimum* is endemic to the Central Valley of Costa Rica.

Cryptocentrum dunstervilleorum, from the Guayana Highlands in Venezuela and Guyana is also closely related but is easily distinguished from *C. caespitosum* by the narrower, terete or semiterete leaves, and much shorter spur. Flat-leaved specimens of *Cryptocentrum inaequisepalum*, a species from the eastern slopes of the Andes from Colombia to Bolivia,

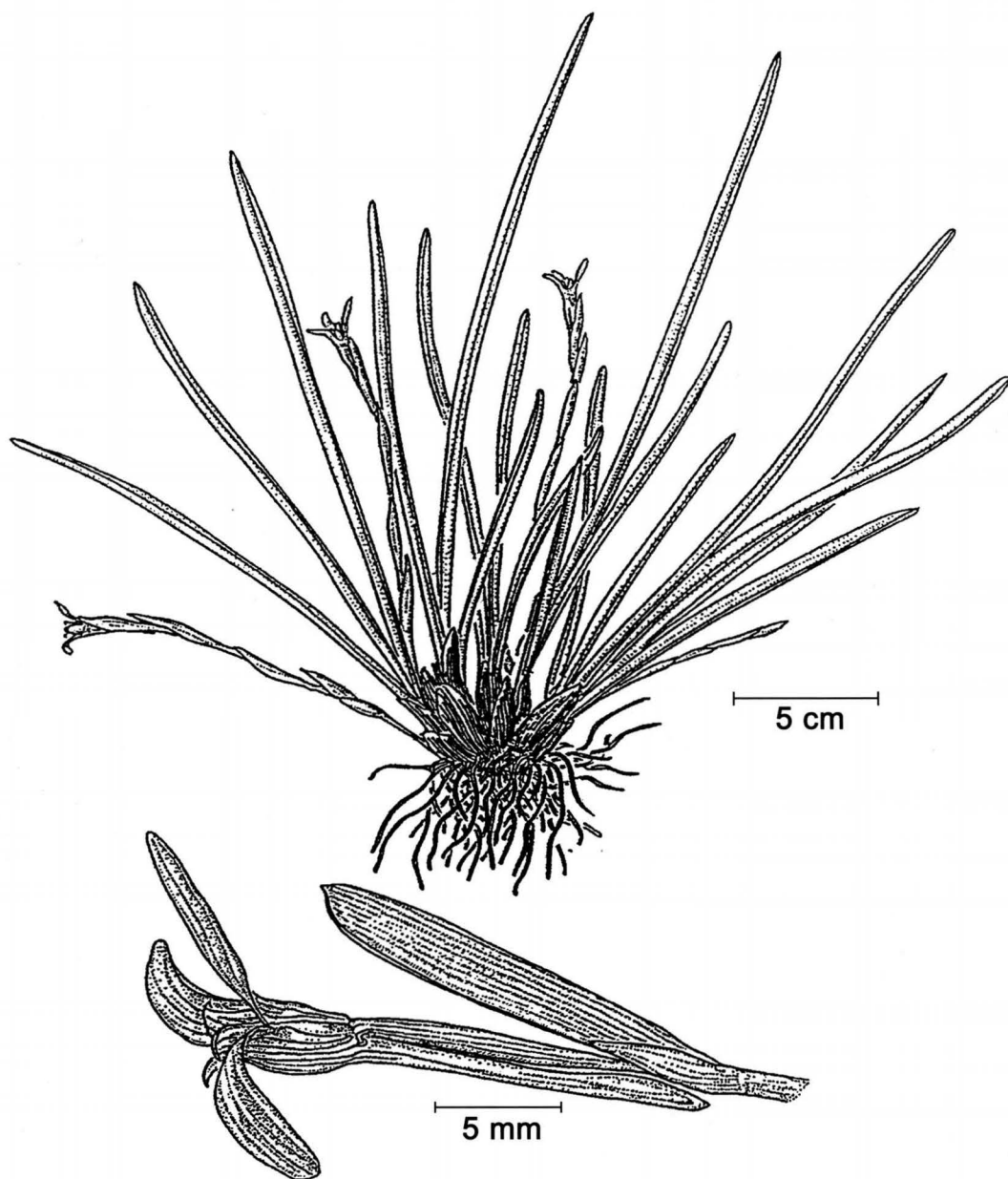


FIGURE 1. *Cryptocentrum caespitosum* Carnevali (based on the type collection).

are also superficially similar to *C. caespitosum* but have larger flowers and longer floral bracts.

Two superficially similar species, both members of Section *Cryptocentrum*, *C. calcaratum* and *C. lehmannii*, grow in the same general area of *Cryptocentrum caespitosum*. These two species have flat leaves that are much less succulent and wider than the leaves of *C. caespitosum*. *Cryptocentrum calcaratum* has been collected at El Valle de Antón, the type locality for *C. caespitosum*, but it is easy to distinguish because of its much longer floral bract (25–)30–40(–45) mm long as opposed to 15–20 mm in *C. caespitosum*. The floral bract in *C. calcaratum* is also proportionally longer since it accounts for 1/3–1/2 of the total length of an inflorescence that only has 3–5 internodes. *Cryptocentrum lehmannii* has only been collected in Veraguas and Chiriquí, to the west of the known localities for *C. caespitosum*. The Central American forms of *Cryptocentrum lehmannii* are characterized by longer inflorescences [(4–)5.5–12(–15) cm], longer leaves [(5–)10–20(–25) cm], and longer spurs (17–27 mm) than those found in *C. caespitosum*.

Phytogeography: *Cryptocentrum caespitosum* is endemic to central Panama where it has been found on the opposing ends of two different mountain ranges that come close to each other around the former Canal Zone in Panama. The type collection comes from El Valle de Antón, an area famous for its diverse and highly endemic orchid flora (Dressler, 1993a) as well as of other plant taxa. El Valle de Antón is at the southeasternmost extreme of the Cordillera Central of Panama. This mountain range is in turn an extension of the Cordillera de Talamanca which comes from southern Costa Rica. The second population of the species has been documented from Cerro Jefe, at the western extreme of the Sierra de San Blas. The Cerro Jefe region is another area of high orchid endemism. The two localities are approximately 100 km apart, and although neither of the collecting labels bear elevation data, it is likely that both samples come from the cloud forests that exist at those localities, probably at elevations of ca. 1000 m.