

10. *Crassula viridis* (S. Watson) Bywater & Wickens comb. nov.

Tillaea viridis S. Watson in Proc. Am. Acad. 23: 272 (1888). Type: Mexico, Sierra Madre, Chihuahua, *Pringle* 1366 (holotype VT!; isotypes K! MA! NY!).

Tillaeastrum viride (S. Watson) Britten in Bull. N.Y. Bot. Gard. 3: 1 (1903).

Decumbent herb, 50–70 mm high. Leaves narrowly triangular, (4–)6–9 (–10) mm long, apex acute. Pedicels (0.4–)0.6–1 (–4) mm long. Flowers 1 per node, 4-merous, 1.4–1.5 × 1.3–1.7 mm. Sepals broadly triangular, 0.7–0.8 × 0.5–0.7 mm, obtuse. Petals triangular, 1.3 × 0.6 mm, acute. Scales filamentous, 0.6 mm long. Carpels 6–12-seeded. (Fig. 4 L–Q).

SEED. [LM]: relatively large, oblong to narrowly reniform, (0.46–)0.5–0.54 × (0.18–)0.2 (–0.23) mm, reddish brown, longitudinally striate, papillate. [SEM]: cells in long rows forming longitudinal striations, developing one papilla per cell in mature specimens, cells joined by interlinking rounded lobes, cell divisions apparent, surface rugose. Some wax debris may be present. (Plate 32 A–B). Seed from the 7 specimens examined were uniform in mature samples. Immature seed showed partly developed papillae.

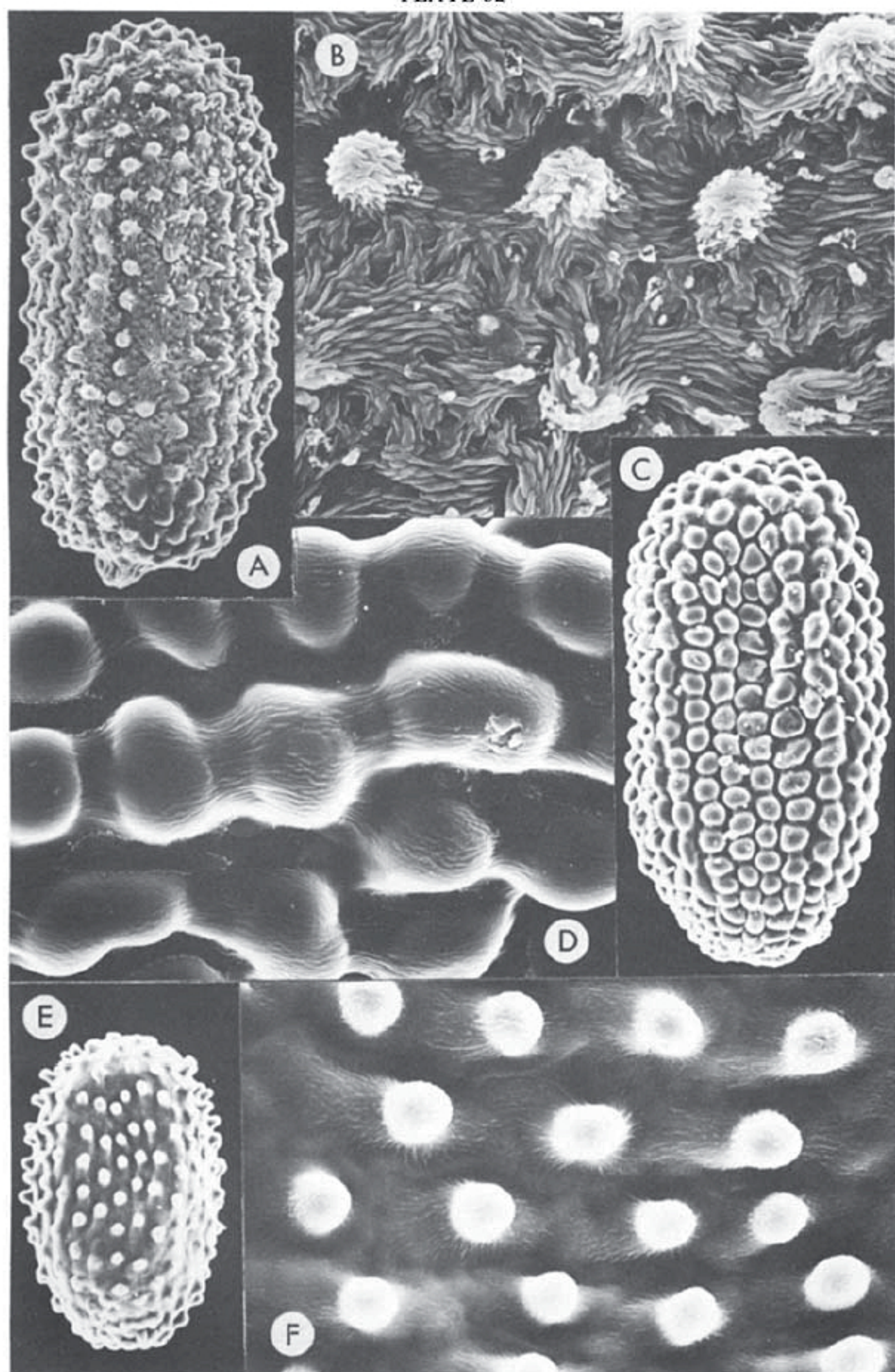
HABITAT. Terrestrial or aquatic, on margins of pools and rivers, in shallow water and damp places.

DISTRIBUTION. Idaho, Mexico, Brazil (Map 1).

Outwardly *C. viridis* most resembles *C. venezuelensis* and *C. peduncularis* with its relatively large, triangular leaves. It can be distinguished from these by the form of the seed; seed of *C. venezuelensis* are also large but do not have any papillae; those of *C. peduncularis* are smaller and have a number of papillae to each cell. *C. drummondii* also has one papilla per cell but the cell lobes are triangular and the seed and plant are smaller, the leaves short and obtuse. The papillae of *C. viridis* are late-developing and immature specimens could be mistaken for similar species. Further collections in both North and South America are needed to clarify the distribution of this species.

The original description cites *Pringle* 1561 in error, this being a collection of *Ceanothus fendleri* Gray. Details of *Pringle*'s collection of number 1366 are found in H. B. Davis (1936).

PLATE 32



A–B *C. viridis*: **A** seed × 145; **B** surface × 725, from *Pringle* 1366; **C–D** *C. decumbens*: **C** seed × 145; **D** surface × 725, from *Philippi* s.n.; **E–F** *C. closiana*: **E** seed × 145; **F** surface × 725, from *Gay* s.n.