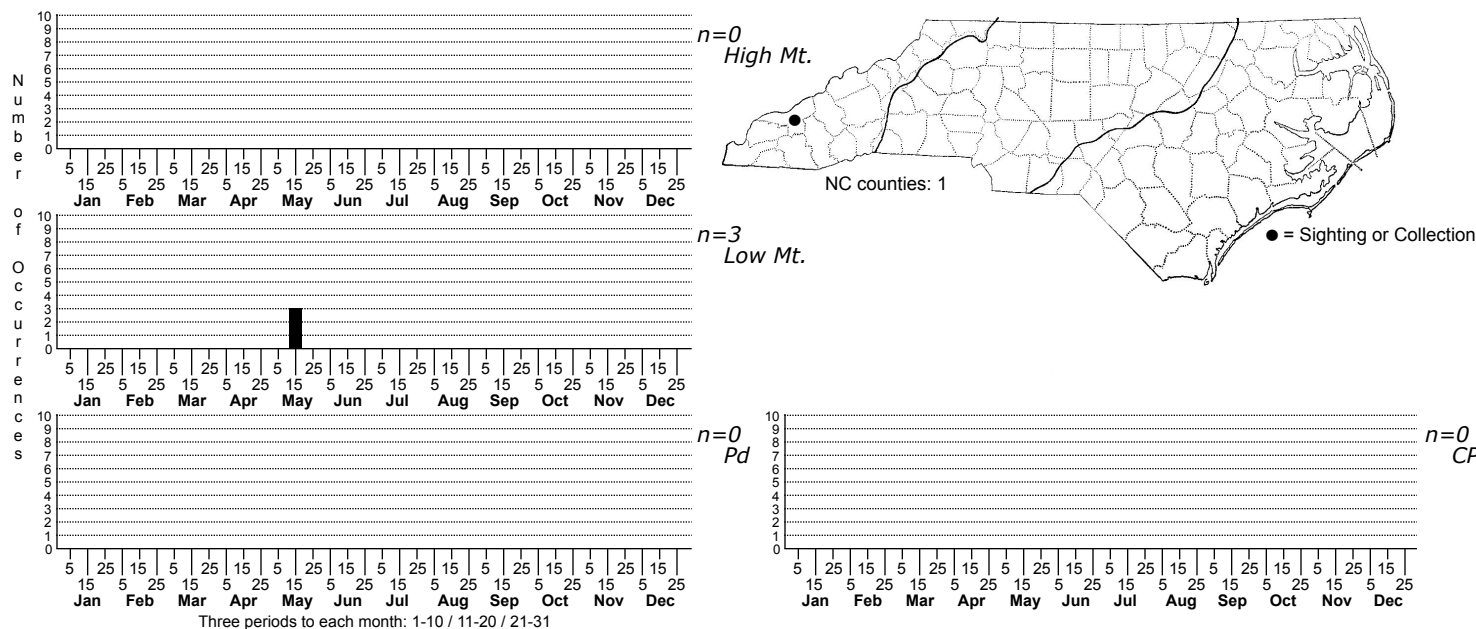


## *Viridiscus celatus*



FAMILY: Echiniscidae

**TAXONOMIC COMMENTS:** The genus was recently analyzed with integrative taxonomy, and this new species was described from Johnson City, TN by Momeni et al. 2023. A reanalysis of specimens from GSMNP previously described as *Viridiscus perviridis* led to new species designation.

**SPECIES COMMENTS:** Terrestrial. Very recent newly discovered species, so far known only from TN and NC.

**ID COMMENTS:** Females (i.e., from the third instar onwards; measurements and statistics in Table 6). Body medium sized and bulky. Body cavity with yellowish pigments (typical for most echiniscids), whereas dorsal and pedal cuticular plates olive green (Figs. 1C, 3E,F). Red eyes and yellow pigments present in live specimens, but dissolve after mounting in Hoyer's medium, thus only green pigmentation persists (Figs. 12, 13B). Except for cirrus A, with a tubby clava near the cirrophore (Fig. 12), other dorsal and lateral trunk appendages are absent. Cephalic appendages include internal and external peribuccal cirri with tubby cephalic papillae between them (Fig. 12). Dorsal plate sculpturing comprises large epicuticular granules (Fig. 12), which may be poorly developed in central plate portions (Fig. 13B). Sponge layer identifiable beneath granules. Granules appear more convex in anterior portions of paired segmental plates than in the remainder of the armour in PCM. Micropores not visible in PCM and their presence or absence remains to be confirmed in SEM. All plates strongly sclerotised and with clear edges. The cephalic plate with a well-marked anterior chalice-shaped incision, the cervical plate and lateral sections of the body lack dense granulation and are covered with fine regular punctuation. The scapular plate contains three portions. Only the central part is visible in the dorsal view, and two small, weakly delineated, trapezoidal sections are present on the lateral portions of the body, with intracuticular pillars visible (Fig. 13B). The first median plate is triangular and unipartite, the second median plate is subdivided into two portions, and the anterior portion lacks the sponge layer. The third median plate is absent, but the area between the paired segmental plate II and the caudal plate is covered with large granules. Paired segmental plates I and II have two clearly delineated parts. Intersegmental plate is inserted between the posterolateral edge of the paired segmental plate I and anterior margin of paired segmental plate II. The caudal incisions are unsclerotised and weakly marked (Figs. 12, 13B). Venter densely granulated in PCM (endocuticular pillars); a pair of subcephalic plates present (Fig. 14A). Gonopore hexapartite. Pulvini (= narrow proximal bands of intracuticular pillars) and pedal platelets (= broad central bands of pillars) are visible on all legs. Dentate collar with numerous irregular teeth (Fig. 14C). Sensory organs present on all legs: a tiny spine on leg I embedded at the edge of pedal platelet; hemispherical rudimentary papillae on legs II&ndash;III, embedded in the centre of pedal platelets (identifiable only when specimens are dorsolaterally oriented); and papilla IV on hind legs (Fig. 13B). Claws anisonych; primary spurs I&ndash;III tiny and thin, positioned slightly lower on branches compared to more massive spurs IV (Fig. 14B&ndash;C).

-Momeni et al. 2023

**DISTRIBUTION:** Please refer to the dot map.

**HABITAT:** Moss.

**OBSERVATION METHODS:** PC and DIC.