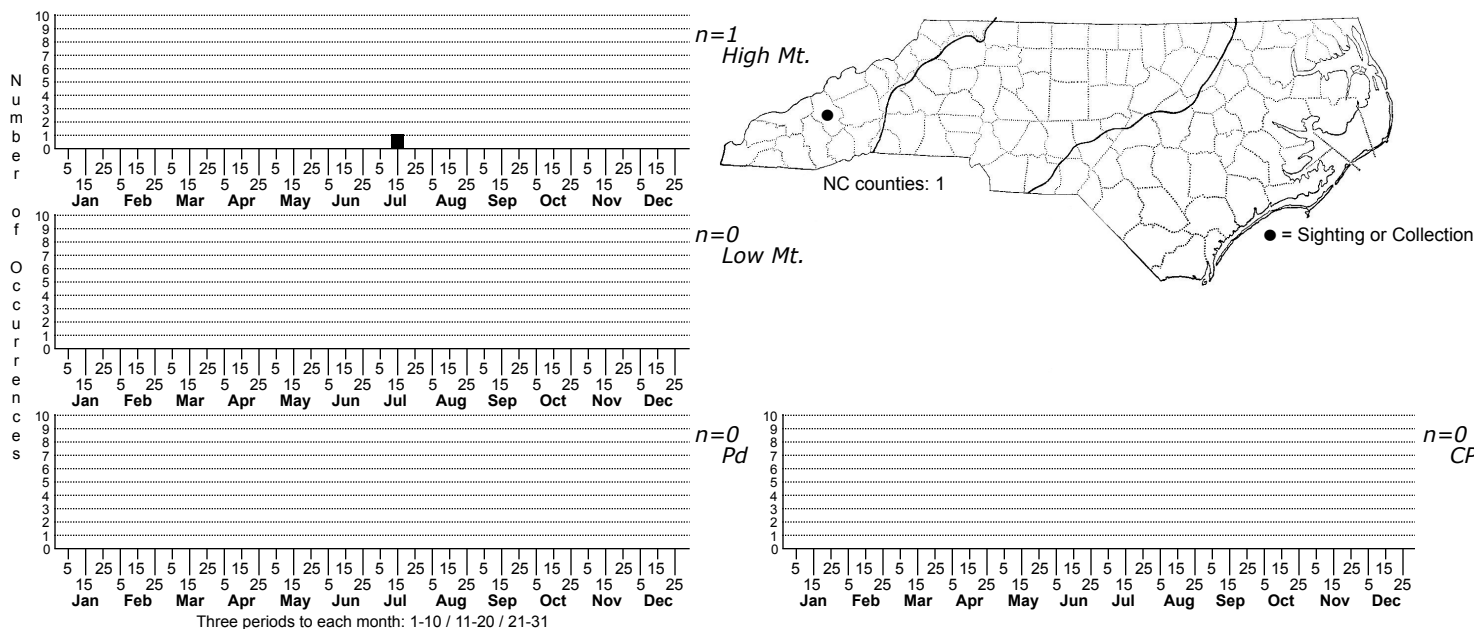


## *Ursulinus lunulatus*



FAMILY: Isohypsibiidae

**TAXONOMIC COMMENTS:** Transferred from Isohypsibius by Gasiorek et al. 2019, nomen inquirendum according to Gasiorek et al. 2019 due to insufficient original description. Morphologically indistinguishable from species first described in Hungary, no DNA for further comparison.

**SPECIES COMMENTS:** Terrestrial. Reported only from GSMNP and Wyoming in USA.

**ID COMMENTS:** Length up to 280  $\mu\text{m}$ , colorless, eye spots present. Dorsally, on its flanks and on the basal portion of the legs, the cuticle is sculptured with big rounded granules or, sometimes, polygons (quadrangular or triangular). There are also 10 transverse rows of large gibbosities. The first row, immediately behind the head, is composed of 3 gibbosities, of which the middle is transversely elongated; row 2, only two dorsolateral gibbosities; row 3, at the level of the first pair of legs, 3 large hemispherical gibbosities; row 4, 4 gibbosities, of which the two central are clearly smaller than those lateral; row 5, at the level of the second pair of legs, 3 large gibbosities; row 6, 4 gibbosities, of which the central has a size equal to the lateral, and they are very close together; row 7, at the level of the third pair of legs, 3 gibbosities; row 8, 4 gibbosities, the central two larger than the lateral; row 9, 2 gibbosities; row 10, 3 gibbosities of which the central is hemispherical, the lateral are transversely elongated. Between the 3rd and the 4th, between the 5th and the 6th, and between the 7th and 8th rows, one finds a papilla on each side, of moderate size, but projecting a little. The buccal tube is about 30  $\mu\text{m}$  long and width less than 4  $\mu\text{m}$ ; the appendage of apophysis for muscle insertion of the stylet has a crest shape. Pharynx oval, with robust apophyses and two elongated macroplacoids, of which the first is longer and has a profound constriction at the middle; microplacoid absent. The doubleclaws of each leg have size and shape little different, and that is more evident on the 4th pair of legs: where the principal branch of the external claws has a basal portion more robust and a more sharpened distal portion, the secondary branch is rather long, and bent in a hook. The principal branch of the internal claws has a size almost constant on all its length. Very small accessory points. At the base of all the doubleclaws there exists a large smooth lunule. On the first three pair of legs also is noted a cuticular impression in the form of a bar. *I. lunulatus* is one of the more clearly described species and easily recognized within the “tuberculatus group”, and seems also to be one of the more widespread.

-Ramazzotti & Maucci 1983

Length 150-240  $\mu\text{m}$ . The body is white-yellow or white-light-brown, eyes are present. Dorsum covered with 10 rows of gibbosities, 2-4 in each row. The first, third, fifth, seventh, and tenth rows with 3 gibbosities; the second, fourth, sixth, and eighth with 4 ones; 2 gibbosities occur in the ninth row. The middle gibbosity in the last row is usually the best developed. The gibbosities at the body median line are more distinctly formed than those at the lateral sides. Cuticle is covered with a thick network, having small meshes (1.5-2.5  $\mu\text{m}$ ) and irregular in shape. Usually the median gibbosities were larger (15-22  $\mu\text{m}$ ) than the other ones (about 10-13  $\mu\text{m}$ ). Buccal tube 27  $\mu\text{m}$  long, 3  $\mu\text{m}$  wide (all measurements in a specimen 235  $\mu\text{m}$  long). Pharynx oval (24 x 21  $\mu\text{m}$ ) with apophyses and two macroplacoids. No microplacoid. Macroplacoid lengths: 1st - 5  $\mu\text{m}$ , 2nd - 3.3  $\mu\text{m}$ . The first macroplacoid constricted in its middle. At the bases of inner claws of 1-3 pairs of legs there occur wide bars. Claws stumpy and developed as those in *I. pappi*. Accessory spines on main branches very small. Length of outer claws on fourth pair of legs 14  $\mu\text{m}$ , excluding lunules. The width of lunules of these claws is 6.0 and 4.5  $\mu\text{m}$  (outer and inner, respectively). This species is very similar to *I. pappi*, taking in to account the dorsal reticulum, buccal apparatus and the shape of the claws, but it differs distinctly by the arrangement of the dorsal gibbosities, smaller body and claw size, thinner bars on legs 1-3 and by relatively bigger reticulum meshes. Rare species of upland character, known in Poland from a few widely dispersed localities. Probably it is connected with carbonate bedrock, however, it has been also found in other habitats. A European element.

-Dastych 1988

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

**HABITAT:** Soil/leaf litter. Rarely in moss and stream samples.

**OBSERVATION METHODS:** PC and DIC.