

The preceding description is based upon numerous specimens of typical *L. cyaneus* from Europe and the United States.

Puckard's *L. metallicus* is this species, as I have found by a study of his cotypes in the Museum of Comparative Zoology, Cambridge, Mass.

The specimens of this species collected by the Expedition are all typical as regards structural details, but most of them are atypical in respect to colouration. Thus, in a heavily pigmented specimen, all four antennal segments are yellow; and most of the denuded specimens are olivaceous, the effect of the yellow ground colour in combination with minute spots of violet pigment.

*L. cyaneus* is primarily a species of the humus, but occurs also in other situations, as under loose dead bark or in moss. The species is common under sticks or stones on the ground, and is often found on soil that is too dry for the existence of collembolans without scales.

*Lepidocyrtus cyaneus* has been reported from northern Siberia, Greenland, most parts of Europe, the United States, Africa (Egypt, Kamerun, German East Africa) and the Bismarck archipelago.

Nine specimens, under driftwood on higher, dry tundra, Demarecotton point, Alaska, May 16, 1914. F. Johansen.

### ***Sminthurides aquaticus* (Bourlet).**

Plate 8, figs. 67-72.

*Smythurus aquaticus* Bourlet, 1813. Lubbock, 1873. Gudemans, 1887. Uzel, 1890.

*Sminthura apicalis* Reuter, 1880. Levander, 1891.

*Smythurus apicalis* Uzel, 1890.

*Sminthurus aquaticus* Reuter, 1891, 1895. Schött, 1891. Lie-Pettersen, 1896, 1898. Schäffer, 1896. Poppe and Schäffer, 1897. Scherbakov, 1898a, 1898b. Carl, 1899. Krausbauer, 1902. Evans, 1908.

*Smythurus amicus* Folsom, 1896.

*Sminthurus (Sminthurides) aquaticus* Börner, 1900.

*Prosmminthurus aquaticus* Willem, 1900.

*Sminthurides aquaticus* Börner, 1901a, 1906. Agren, 1903. Axelsson, 1904, 1905a. Wahlgren, 1906a, 1906b. Lie-Pettersen, 1907. (Axelsson) Linnanieni, 1907, 1909, 1911, 1912. Collinge, 1910. Collinge and Shoebottom, 1910.

General colour yellow, brownish yellow, greenish, rose, or violet. Eye-spots large, black. Eyes 8 + 8, two in each group being smaller than the others (fig. 67). Antennae purple, slightly longer than the head, with fourth segment not subsegmented. Antennae of male with second and third segments modified to form clasping organs. Abdomen segmented dorsally. Unguis of first and second feet (fig. 68) slender, with inner margin indented a little beyond the middle; unguiculus extending two-thirds as far as the unguis, lanceolate, acute, with a subapical filament as long, to twice as long, as the claw proper, and extending often a little beyond the unguis. Ungues of third feet (fig. 69) three-fourths as long as those of the other feet, slender, feebly curving, without teeth; unguiculus extending not quite as far as the unguis, broadly lanceolate, notched, with apical filament exceeding the unguis. Tenent hairs absent. Third tibiotarsi with a peculiar distal sense organ (fig. 69) consisting of a pair of slipper-shaped structures, with a stout seta extending beyond the tibio-tarsus. Ventral tube emitting a pair of short rounded sacs. Furcula reaching beyond the mouth. Dentes three times as long as mucrones. Mucrones convergent, spoon-like in general form (figs. 70, 71) elliptical from above, with stout pigmented midrib, and three colourless lamellae as follows: (1) inner dorsal, with radiating ribs terminating in marginal teeth; (2) outer dorsal, with faint radiating ribs due to dorsal ridges, but with entire margin; (3) ventral lamella, narrow and entire. Basal lateral mucronal seta present. Rami of temaculum tridentate (fig. 72);