

the matter of distribution. It was also shown that *lineatus* is evidently a cosmopolitan form, having been reported from England, Ireland, Scotland, Hebrides, North Russia, Denmark, Germany, France, Bohemia, Switzerland, Terra del Fuego, and the coast of the New England States. It occurs commonly under sea-weed on the shore in various parts of the globe. It has also been found existing under fresh-water conditions.

***Lumbricillus*, sp. (a).**

A collection from Pibmalerksiak island (Cockburn point), Northwest Territories, July 15, 1916, contained thirty-three enchytraeids, of which thirty-two were of similar size and general external appearance. These worms were taken from the mud in a "water hole." Unfortunately, none of them are mature and specific identification is impossible. However, all the specimens examined in detail show the testes composed of a number of distinct lobes—a character which has been regarded as diagnostic of the genus *Lumbricillus*. Mention should be made of the fact that these specimens, while possessing the divided testes, have straight setae—a feature which departs from the usual definition of the genus *Lumbricillus*.

***Lumbricillus*, sp. (b).**

The above mentioned collection from Pibmalerksiak island (Cockburn point), Northwest Territories, July 15, 1916, also contained one specimen which shows distinct differences when compared with the other individuals of the same lot. The significant feature is the possession of sigmoid setae. It also exhibits the divided condition of the testes and apparently belongs to the genus *Lumbricillus*. However, the immaturity of the specimen prevents a specific identification.

GENERAL CONSIDERATIONS.

PIGMENTATION.—In an earlier paper, the writer (1916:120) discussed the presence of the pigmentation which occurs in all of the known glacier enchytraeids and pointed out that it does not seem possible to explain its presence on the grounds of low temperatures, since certain species in warmer latitudes show pigmentation while others in frigid conditions show no indication of it. In this connection, it is interesting to note that none of the specimens collected in arctic Canada exhibit any marked pigmentation such as occurs in the above mentioned glacier worms. The specimens of *Mesenchytraeus johanseni* n. sp. show a heavy load of brownish-black pigment granules in all the chloragog cells but none elsewhere. This is also true of the specimens of *Lumbricillus* sp. (a). No pigmentation of any sort was observed in any of the other specimens. Additional evidence is thus presented against the view that heavy pigmentation of the internal organs in enchytraeids is directly correlated with frigid habitats.

SEASONAL RELATIONS.—According to the field records of the collector, some of the enchytraeids of this collection were found alive among moss roots in dried-out stream beds in mid-summer. Possibly this is an indication of their method of surviving drought conditions of the summer season. At least it would appear that these aquatic worms can tolerate a marked reduction of the water in the surroundings. Another noteworthy feature is the very low temperatures to which these worms are subjected during the winter months. The remarkable resistance of certain enchytraeids to frigid conditions has been discussed in other papers (Welch, 1916; 1917b) and it is evident that the worms living in arctic Canada are also successfully adjusted to long exposure at freezing temperatures.