FAUNAL NOTES

LIBBIE H. HYMAN

Laboratory of Experimental Biology, American Muscum of Natural History

The marine obligochaete which occurs in large numbers at Mt. Desert Island under stones between the tide marks and which is being extensively used by Dr. Minnich in light-reaction experiments was identified at the request of Dr. Minnich and found to be *Clitellio arenarius* (O. F. Müller) 1776, family Tubificidae. In connection with the identification of this species, several vials of tubificids labelled *Clitellio irroratus* Verrill which were found in the Verrill collection at the Peabody Museum, Yale University, were also examined and found to be identical with *Clitellio arenarius*. *Clitellio irroratus* Verrill therefore falls into synonymy with *C. arenarius*. Another tubificid which lives with *C. arenarius* at Mt. Desert but is much less abundant was identified as "*Tubifex*" benedeni Udekem 1855. A lack of sexual specimens prevented my determining the exact systematic status of this species, which probably should be removed from the genus *Tubifex*.

Several marine Turbellaria were collected and studied. Only one species of polyclad was found, fairly common under stones between tidemarks. This was identified as *Notoplana atomata* (O. F. Müller) 1776. Serial sections showed that the Mt. Desert specimens are identical in all details of their anatomy with European specimens of this species. It is probable that *Leptoplana variabilis* (Girard) 1850 is a synonym of *Notoplana atomata* and *Leptoplana ellipsoid* (Girard) 1853 may also be identical with this species.

Three marine Alloeocoela were found. The most common, a species of *Monocclis*, a minute slender white worm, could be obtained by shaking the coralline algae in sea-water. Two species of Plagiostomum were obtained and studied. One of these, a plump white form, found in fair numbers under stones between tide marks, has been studied in considerable detail, both alive and in serial sections. It was found to be a new species of *Plagiostomum* and is here named Plagiostomum album, P. album is cylindroid, up to 4 mm. in length. with a little tail, white with a black spot between and in front of the eyes and a delicate lacing of brown lines over the dorsal surface. There are four eyes in a trapezoid arrangement. The mouth is subterminal and leads into a very large pharynx, about one-fourth the body length. The intestine presents a characteristic feature in that it extends forward around the rear end of the pharynx. The reproductive system greatly resembles that of P. lemani, having a granule vesicle of some length and a very elongate penis. It differs from that of other species of the genus in a blind sacciform diverticulum from one side of the common genital atrium. The other species of Plagiostomum is also plump, and cylindroid, without a tail, orange-yellow. with little brown flecks all over the dorsal surface, 2 mm. in length. A single specimen was procured, taken on the surface mud at a

depth of thirty feet. Due to the opaque coloring nothing could be made of the internal structure, nor were eyes seen. The specimen was preserved but has not been sectioned yet.

Two or three specimens of the marine triclad found at Mt. Desert Island among the rocks between tide marks were secured. This form is yellowish-gray, with two eyes and a truncate head rounded at the sides. None of the available specimens has any sex organs and hence it is impossible to determine the genus.

A rich invertebrate fauna was found in the various fresh-water ponds of the islands. Several specimens of hydra were secured—they were all of the species Hydra Americana (Hyman) 1929. Only one kind of planarian was found, Euplanaria tigrina (Girard) 1850 (—Planaria maculata Leidy, name preoccupied). I was informed that Phagocata woodworthi (Hyman) 1937 (erroneously called Phagocata gracilis) occurs on Mt. Desert but no specimens were seen. Rhabdocoels were very abundant as to individuals, but few as to species, in the ponds. The most common were Typhloplana, probably viridata, Gyratrix hermaphroditus, a species of Dalyellia, and several species of Stenostomum.

THE LIGHT RESPONSE OF *CLITELLIO ARENARIUS* (O. F. MULLER)

D. E. MINNICH

Department of Zoology, University of Minnesota

Clitellio arenarius is a marine tubificid worm, 4-5 cm. long, living gregariously in the sandy substrate under small stones between the tide levels. On Mount Desert Island this species is abundant in a number of localities. Isolated individuals respond to a sudden increase of illumination of sufficient amount by a muscular contraction which begins at the posterior end of the body and progresses anteriorly. The degree of response depends on the strength of the stimulus and varies from a slight movement of the extreme posterior end to a vigorous contraction in the course of which the posterior two thirds or more of the body is wound into a compact coil. The reaction time of dark adapted animals varies with the light intensity from ca. 2 seconds to ca. 0.7 of a second. The reaction time is composed of two parts, a sensitization period during which the light must shine and a latent period which is independent of light. The latter is markedly affected by temperature. Light adapted animals placed in the dark show a typical process of dark adaptation as indicated by a progressive decrease of reaction time with the duration of time spent in the dark. The process of dark adaptation is also markedly influenced by temperature. The results on this annelid closely parallel the results obtained by Hecht (1918-19), with Ciona and Mya.

References

Hecht, S., 1918-19, J. Gen. Physiol., 1, 147; 545.