Interspecific seasonal variation in abundance and differences in population densities, depending on age and sex of the host, are also probable. An examination of the parasites of *Testudo horsefieldi*, which included seven of the eight species considered here, showed interspecific differences in abundance depending on two of these factors, season and age of host[9]. Thus, niche diversification beyond that shown by the distributional studies here reported may be expected.

G. A. Schad

Institute of Parasitology,
McGill University,
Macdonald College Post Office,
Prov. Quebec.

[1] Hairston, N. G., Smith, F. E., and Slobodkin, L. B., *Amer. Naturalist*, **94**, 421 (1961).
[2] Andrewartha, H. G., and Birch, L. C., *The Distribution and Abundance of Animals*, 463 (University of Chicago Press, Chicago, 1954).
[3] Holmes, J. C., *J. Parasitol.*, **47**, 209 (1961).
[4] Euzet, L., and Williams, H. H., *Parasitol.*, **50**, 21 (1960).
[5] Foster, A. O., *J. Parasitol.*, **22**, 479 (1936).
[6] Frankland, H. M. T., *Parasitol.*, **49**, 132 (1959).
[7] Schad, G. A., *Canad. J. Zool.*, **40**, 1046 (1962).
[8] Chabaud, A. G., *C.R. Acad. Sci., Paris*, **243**, 436 (1956).
[9] Dubinina, M. N., *Parazitol. Sborn., Zool. Inst., Akad. Nauk, S.S.S.R.*, **11**, 61 (1949).

The Motor Axon Terminations of Annelids

Previous work on the histology of the peripheral nerves of annelids has failed to reveal the nature of the termination of the motor axons on the muscle fibres. Retzius[1] and Smallwood[2] both described the motor axons of *Lumbricus* as ending simply with small swellings on the surface of the muscle fibres after producing a few lateral branches. Smallwood described a second type of ending which may be similar to those presented here, but his figure is inadequate. Fig. 1 is a photograph of a methylene blue preparation of *Nereis diversicolor* showing the termination of three motor axons on the parapodial levator muscle. They are located in the dorsal region of the parapodium where the fibres of this muscle originate on the connective tissue underlying the epidermis. I have also found similar endings in this position in *Nereis virens*. Each axon divides into a cluster of 15–20 end plates and transverse sections of the preparation showed that these were on the surface of a small group of muscle fibres. The endings (Fig. 2) are similar to the grape type shown by Gray[3] to occur on the tonic muscle fibres in the frog. If the simple type of termination described by Retzius represents a true functional ending, the occurrence of a second type is of great interest in view of the evidence put forward by Horridge[4] and Wilson[5] for fast and slow systems of muscular contraction. It suggests the possibility that each type of muscular response may be mediated through morphologically distinct endings.

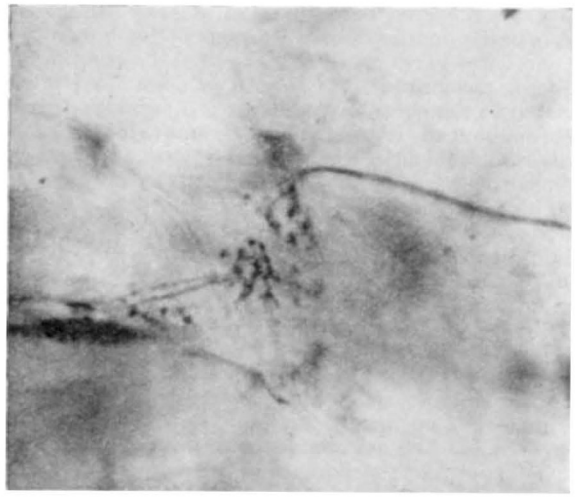

Fig. 1. Photomicrograph of motor axons and terminations on parapodial levator muscle of *Nereis*. Methylene blue

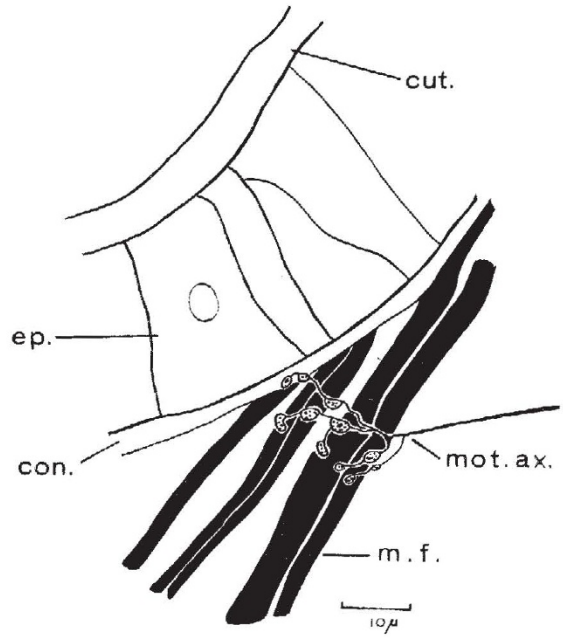

Fig. 2. Camera lucida drawing of a section cut at 7μ through the endings shown in Fig. 1. *con*, Connective tissue; *cut.*, cuticle; *ep.*, epidermis; *mot.ax.*, motor axon endings; *m.f.*, muscle fibre. Methylene blue and eosin

D. A. Dorsett

Marine Science Laboratories,
Menai Bridge,
Anglesey.

[1] Retzius, G., *Biol. Unters. Neue Folge* (Leipzig), **3**, 1 (1892).
[2] Smallwood, W. M., *J. Comp. Neurol.*, **42**, 35 (1926).
[3] Gray, E. G., *Proc. Roy. Soc.*, B, **146**, 416 (1957).
[4] Horridge, G. A., *Proc. Roy. Soc.*, B, **150**, 245 (1959).
[5] Wilson, D. M., *J. Exp. Biol.*, **37**, 46 (1960).

Responses of *Mytilus edulis* Larvæ to Increases in Hydrostatic Pressure

Knight-Jones and Qasim[1] have reported that a number of marine planktonic animals are sensitive to small changes in hydrostatic pressure. These animals included crustacean and polychæte larvæ, which tended to become more active and swim upwards when submitted to increased pressures. The value of such a response to a planktonic organism of high specific gravity must be very great.

The response of the larvæ of *Mytilus edulis* to increases in pressure have been investigated using the apparatus described here. Three different stages in the larval development have been used: the early veliger, or veliconcha, larva; the later, eyed-veliger, larva; and the pediveliger, or swimming-crawling stage, larva.

The apparatus consisted of a large pressure reservoir fitted with a gauge and hand-pump, which could be used for building up pressures up to 1·62 atmospheres above ambient, and a small experimental chamber in which the larvæ could be observed under a binocular dissecting microscope. Communication between the reservoir and the experimental chamber was made through pressure tubing and controlled by a screw clip. The larvæ were introduced into the experimental chamber and the pressure pumped to the required level in the reservoir tank, with the clip closed. On releasing the pressure into the experimental chamber, the response of the larvæ could be observed directly, and the pressure above ambient recorded from the gauge. *Mytilus* larvæ of different ages