urchins, all found the proximal centriole in its normal post-nuclear position in the neck of the spermatozoon.

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Mitochondria of Goldfish, *Carassius auratus*

The metabolism of mitochondria of poikilotherms acclimatized at different temperatures has not been studied, though such studies have been made on rats[1,2]. The mechanisms of adaptation to cold and warm temperatures in a poikilotherm may be different from those of a homoitherm due to the presence of a temperature-regulating centre in the latter. Hence, mitochondria from livers of goldfish, *Carassius auratus*, acclimatized at 10° and 30° C. were isolated to study their oxidative phosphorylation. The following account gives the method of isolation and the structure of mitochondria of the liver of unacclimatized goldfish.

The liver was placed in ice-cold 0·25 *M* sucrose solution immediately after its removal from the goldfish. All the following steps for the isolation of mitochondria were conducted at 0°–2° C. 2 gm. of the liver were homogenized in 10 c.c. of 0·25 *M* sucrose (buffered at *p*H 7·4 with *tris* buffer and containing 0·001 *M* versene) by fifteen up-and-down strokes of a Potter–Elvehjem homogenizer driven at 300 r.p.m. The homogenate was centrifuged at 700*g* for 10 min. in a refrigerated centrifuge to remove the cellular debris and nuclei. Then the supernatant was pipetted out and centrifuged at 14,000*g* for 10 min. to sediment the mitochondria.

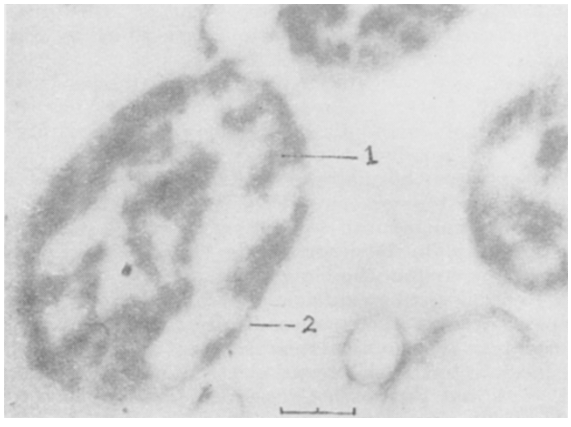

Fig. 1. Electronmicrograph of liver mitochondria of goldfish. 1, Cristæ; 2, double membrane. (× 40,000)

Electronmicrographs of the mitochondrial pellets showed that the mitochondria of the liver of goldfish obtained by the above method were intact (Fig. 1). They were oval in shape, 0·8–1·0μ in length and 0·5–0·6μ in breadth. They had a double membrane and cristæ as in rat liver mitochondria. These mitochondria stained well with janus green.

Oxidative phosphorylation of the liver mitochondria of goldfish acclimatized at 10° and 30° C. will be discussed elsewhere. I am grateful to Prof. C. L. Prosser, Department of Physiology, University of Illinois, for his guidance.

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Spread of the Ascidian, *Styela mammiculata* Carlisle

Carlisle[1] described a new species of ascidian, *Styela mammiculata*, which was first taken in 1953, near Plymouth. If, as Carlisle suggested, this is an introduced species, it may be expected to spread. The discovery of numerous specimens on various submerged surfaces and in dredged material in Langston Harbour, Hampshire, during the summer of 1959, is therefore of interest. The species appears to be extending its range rapidly along the south coast of England, and increasing in numbers where already established. We expect it to spread to other sheltered and warm areas of the British and continental coast, either by natural means or by transport on the hulls of ships.

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FOREST PRODUCTS

Effect of Moisture Changes on Creep in Wood

During studies on creep in wood under various types of loading over periods of up to several years, it became apparent that changes in the moisture content of the wood while under load markedly influenced both creep-rate and total creep.

To explore this further, small beams of $\frac{3}{4}$-in. square cross-section were cut from billets of three species, namely, *Eucalyptus regnans* (a hardwood prone to collapse of the cell wall during seasoning), *Eucalyptus pilularis* (a hardwood with very little tendency to collapse), and *Pinus radiata* (a softwood with negligible tendency to collapse). Three moisture conditions were studied, namely, green material maintained in the green state during test, initially green material allowed to dry while under load, and material air-dried to 12 per cent moisture content before loading and maintained at approximately that value during test.

The tests were conducted in a temperature-controlled atmosphere at 25° C. The beams were simply