

our preliminary investigations, showing that periodic growth may be traced even in the ocean, but as to the nature of this periodicity I dare not at present express an opinion.

Fig. 562 represents a scale taken from the abyssal fish *Macrurus (Nematonurus) armatus*. As indicated in Chapter VII. this species lives in depths beyond 2000 fathoms, and at

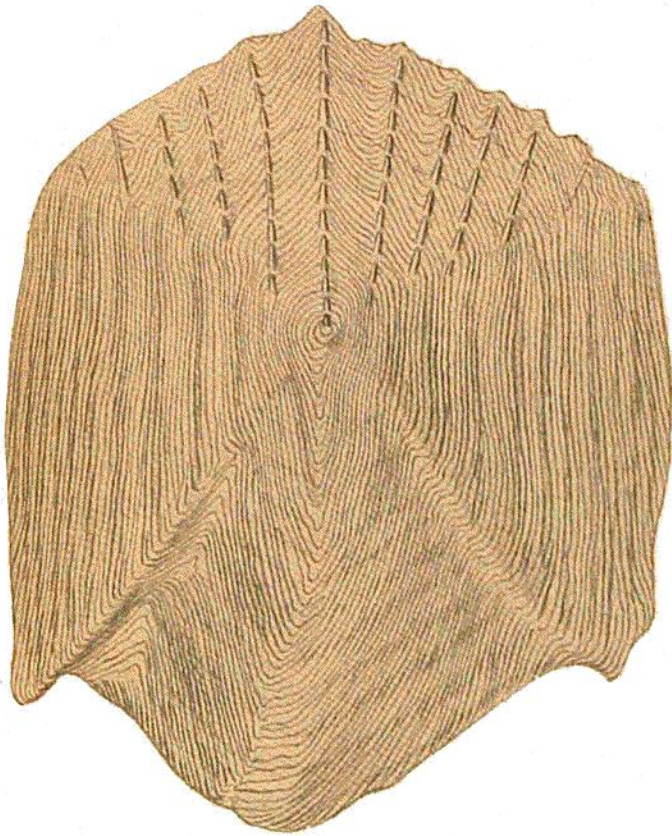


FIG. 562.

Scale of *Macrurus (Nematonurus) armatus*, Hect. (about  $\frac{1}{4}$ ).  
Fish from Station 88. Length, 52 cm.

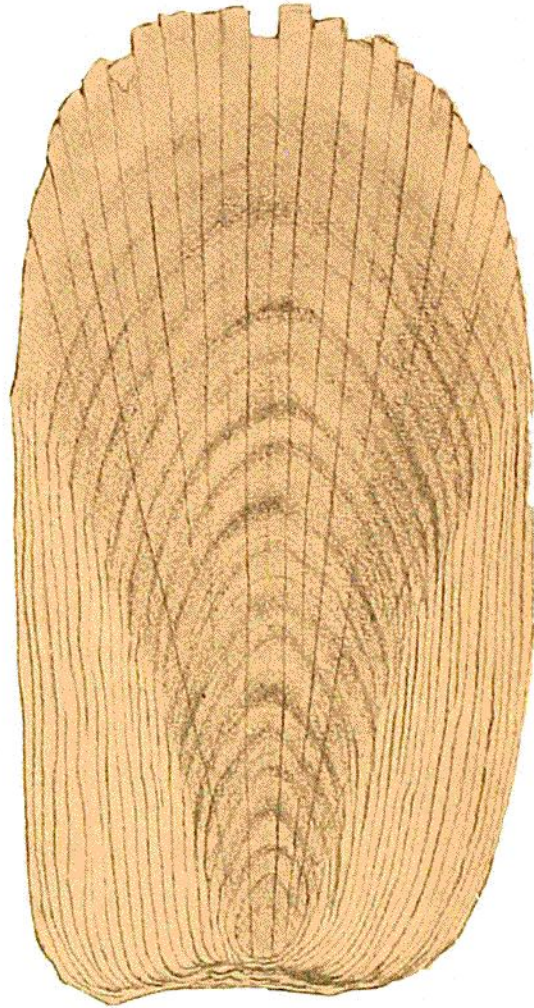


FIG. 563.

Scale of *Bathygadus melanobranchus*, Vaill.  
Nat. size of fish, 42 cm. Station 41,  
1365 metres.

a temperature of  $1^{\circ}$  to  $3^{\circ}$  C. The specimen from which this scale was taken was captured at Station 88 in 3120 metres, and was 52 cm. long. The figure shows the presence of rings, which remind one of the rings found in the scales of the cod family, but they do not continue round the entire area of the scale. The number of rings present appears to be more than ten, but I am unable to decide this with accuracy.

Fig. 563 shows a scale from *Bathygadus melanobranchus*,