



TEXT-FIG. 1.—*Retropinna anisodon* Stokell, mature adults. The male (above) shows nuptial tubercles and much larger fins than the female (below). $\times 1\frac{1}{2}$ natural size.

Almost immediately after fertilization the cytoplasm begins to separate from the yolk, and within an hour is concentrated at the animal pole. A thin line then appears in a plane perpendicular to the long axis of the blastodisc, forming the line of cleavage for the formation of two large ovoid blastomeres (Text-fig. 2, C). The second division (Text-fig. 2, D) is also meridional and is at right angles to the first, resulting in four subequal blastomeres. The third cleavage, which gives rise to eight blastomeres, was first observed about three hours after fertilization. Division then proceeds irregularly, dividing the blastoderm into two layers of cells.

Twenty hours after fertilization, a blastodermal cap of many small cells has been formed (Text-fig. 2, E), and the oil globules have coalesced to form one large globule. At thirty hours the extra-embryonic membranes almost enclose the upper part of the yolk, while the neural fold and segmentation cavity are apparent. At fifty-two hours, the blastopore has closed. The otic vesicles appear on or about the fourth day at which time the embryo has completely encircled the yolk (Text-fig. 2, H), and movements in the form of slight contractions are apparent. Throughout several seasons' observation it was found that development time varied from eight to twenty-one days. The water temperature during development ranged from 15 to 21 degrees C.

The newly-hatched larvae are 4.5 to 4.8 mm in length (Text-fig. 2, J). They are transparent with large eyes pigmented greenish-brown and black. The dorsal profile of the head is rounded with the rudimentary jaws sub-terminal in position.