in a shorter time than by the usual shield budding method. A complete report will be published later.

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NEW DATA ON THE DEEP SEA FISH STYLOPHTHALMUS AND IDIACANTHUS

IN the course of intensive study of the Stomiatoid fish taken by the Tropical Research Oceanographic Expeditions of the New York Zoological Society off Nonsuch Island, Bermuda, we have come across several interesting facts well worthy of immediate record. These have to do with two families, *Stylophthalmidae* and *Idiacanthidae*. The former was erected by Brauer in 1906 to contain a single genus and species, since which time a number of uncertain forms have been described. The latter family was founded by Peters in 1876 and now contains a single genus and about five species.

In the course of 1,350 nets hauled in an eight-mile circle with its center at 32° 12′ No. Lat. and 64° 36′ West Long., nine and a quarter miles south-southeast of Nonsuch, Bermuda, we have taken 28 specimens of so-called *Stylophthalmus paradoxus* and 101 *Idiacanthus fasciola*. Four fifths of the very young stylophthalmine larvae were taken in a single haul at 100 fathoms, while all older stages came up from between 500 and 1,000 fathoms.

Recent study of these has led me to the following revision of the growth stages of both groups:

Stylophthalmus paradoxus represents the larva and post-larva of *Idiacanthus fasciola*, while the so-called post-larval stages of *I. fasciola*, characterized by enormous post-orbital light organs and the absence of pelvic fins and mental barbels, are in reality diminutive, larvoid, but sexually mature males. These males present extreme lengths of 32 to 45 mm, while the adult females in my collection measure from 60 to 270 mm. The numerical proportion of these dissimilar males and females is four to one.

In the collection of 129 individuals of this species there is represented every intermediate stage between stalk-eyed larvae from 16 to 45 mm, and sexually mature males and females, the latter up to 270 mm in length.

In addition to the above I have taken a number of short-stalked larvae, very similar to those assigned to *Stylophthalmus* by Brauer, which I refer without hesitation to *Argentinidae*, genus *Bathylagus*. Details of the transition from so-called *Stylophthalmus* to *Idiacanthus* will be presented in the course of the monographic treatment of the deep sea fish in the New York Zoological Society's *Zoologica*.

To summarize in brief, the optic nerve which runs the length of the enormously elongated eye-stalk of the larvae is gradually absorbed into the head, pulling the eye with it, more rapidly than the cartilaginous support of the stalk. This cartilage, while still attached to the eye-ball, is bowed down in an ever-tightening spiral, into a pre-ocular socket behind the nares. In this position the tight coil of cartilage is gradually covered with skin, and by late adolescence in both sexes is completely absorbed.

In conclusion, the chief differential characteristics of adult *Idiacanthus fasciola* of both sexes are as follows:

ADULT FEMALES	ADULT MALES
Color, brownish black	Color, dark brown or paler
No subdermal pigment spots	Subdermal pigment, as in larvae
Large fangs	Edentulous
Well-developed pelvic fins	No paired fins
Small postorbital light	Huge postorbital light
Well-developed mental barbel	No barbel
Well-ossified skeleton	Skeleton cartilaginous
Normal, black stomach	Digestive system quite degenerate
Normal ovaries	Testes enormous, occupying most of body.

In addition, the males have an external, apparently copulatory organ, equal in length to the diameter of the eye, and supported by the hollowed, specialized first anal ray.

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