

Rearing of hatchlings of *Uroteuthis* sp. and *Sepia* sp.

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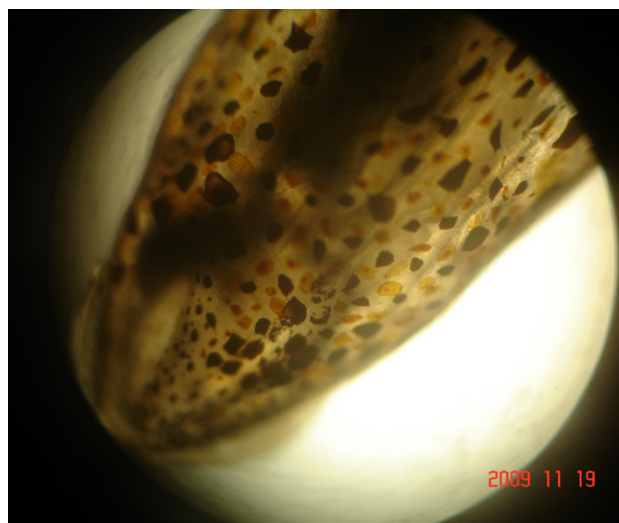
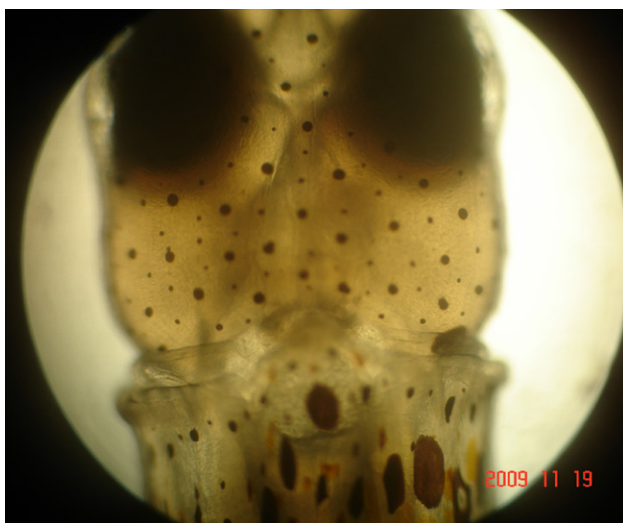
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Egg capsules of *Uroteuthis* sp. obtained from sea off Visakhapatnam were maintained in 1 t black FRP tank in 35 psu provided with gentle aeration. The egg mass consisted of two strings of viable egg capsules. The total number of capsules in the strings was 1288. Strings were suspended in the tank to be submerged in the water. The string might be of different batches of egg laying or laid by different females. The capsules were observed to be viable with embryos moving inside the capsules. Water level was maintained at 70 percent of the tank providing a gap from above. They were maintained in black tanks with mild light regime covering half portion of the tank with black cloth. Water quality parameters were maintained. About 20-30 percent water was exchanged daily after siphoning off any debris at the bottom of the tank. Paralarvae hatched out continuously for 6 days starting from 11th day of collection of egg. The hatchlings ranged from 4.6 to 6.2 mm in length with a weight range of 11.6 to 14.8 mg. After hatchlings were released, they are initially sluggish and mainly pelagic mostly moving in straight lines seldom

zigzag. Green water phenomena was maintained with *Isochrysis galbana* and *Chaetoceros calcitrans* throughout the culture period. From 2nd day onwards, they were fed with live *Artemia* naupli. It was found that they do not capture the prey at first attempt but capture the live food once or twice and they feed. From 9th day onwards they were fed with larger live *Artemia* and small *Acetes*, but they did not prefer *Acetes*. They were sensitive to both bright light and vibrational disturbances. This was manifested with sudden release of ink and became dormant for hours. In many cases there was mortality with release of ink. The paralarvae survived for 22 days. The growth after 22 days was 17.8 to 19.7 mm length range and weight ranged from 675 to 842 mg.

The paralarvae were observed under binocular microscope (Lawrence & Mayo model XSZ). In the live paralarvae, light and dark coloured chromatophores could be observed. The patterns were distinct and also changed as per their movement. The paralarvae had all the typical characters

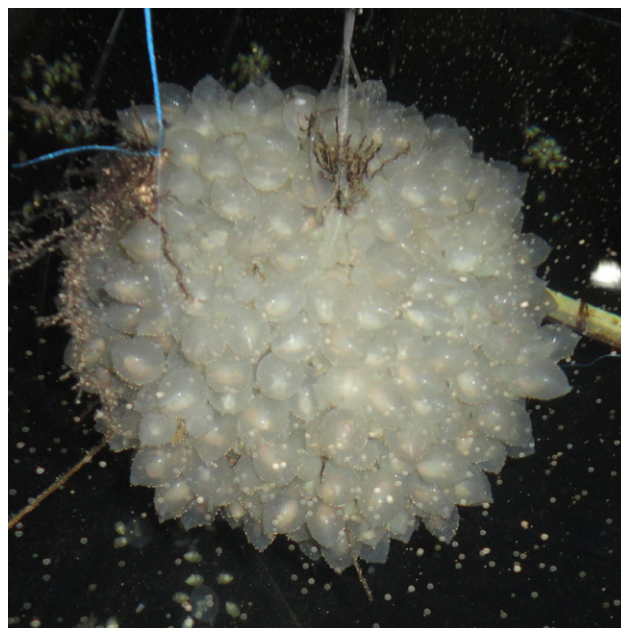


Paralarva of *Uroteuthis* sp., anterior portion (left) and posterior portion (right)

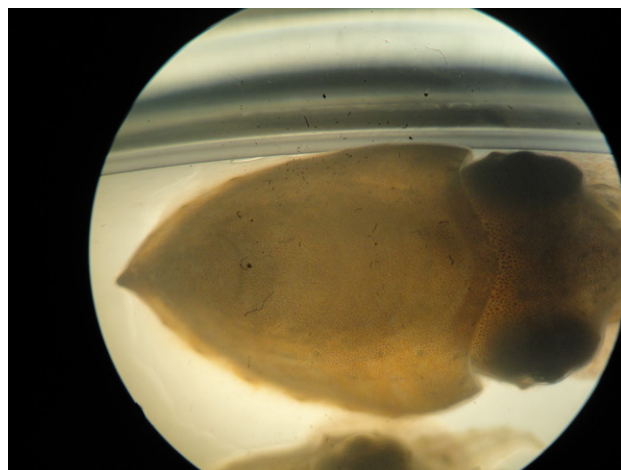
of the squid paralarvae such as the presence of corneal membranes, fins, well developed arms and tentacles with distinct suckers, chromatophores more numerous on ventral than dorsal side.

Egg capsules (50 numbers) of *Sepia* sp. collected off Visakhapatnam Fisheries harbour were maintained in small plastic troughs in 35 ppt salinity, provided with gentle aeration and 30 percent hatching occurred releasing 47 paralarvae. Again, another batch of 200 egg capsules were obtained and maintained in the hatchery from which 51 paralarvae were released (27 percent hatching). The paralarvae were fed live *Artemia* naupli., however, they did not survive beyond six days. Another batch of egg capsules of *Sepia* sp. obtained from sea off Visakhapatnam were maintained in 1 t black FRP tank in 35 ppt provided with gentle aeration. The egg mass was a big bunch of nearly 1000 eggs and looked like a bunch of grapes. The capsules, white and transparent, were observed to be viable with embryos moving inside the capsule. Water level was maintained at 70 percent of the tank capacity. They were maintained in black tanks with mild light regime covering half portion of the tank in black cloth. Water quality parameters were maintained. Para larvae hatched out continuously for 6 days starting from 11th day of collection of egg. In total, 776 para larvae hatched out from the bunch. The hatchlings released were initially sluggish.

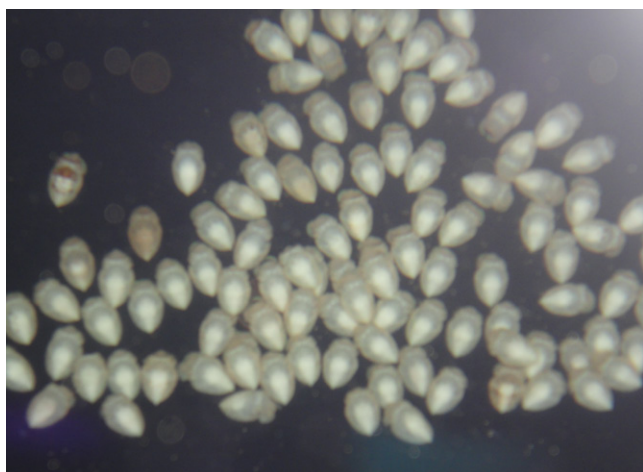
From 2nd day onwards, they were fed with live *Artemia* naupli. From 9th day onwards they were fed with larger live *Artemia* and small *Acetes*, which was slowly being accepted by the paralarvae. Since live feed could not be provided continuously and mortality started occurring, the hatchlings were ranched into the sea off Visakhapatnam coast.



Egg capsules of *Sepia* sp. obtained from sea off Visakhapatnam



Hatchling of *Sepia* sp., posterior view under microscope



Hatchlings of *Sepia* sp.

