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Two Aberrant Forms of the Moon Jellyfish, *Aurelia aurita* (Linné), in the Northeastern Gulf of Mexico¹

The moon jellyfish, *Aurelia aurita* (Linné), is common in the coastal waters of the northeastern Gulf of Mexico from September through December, with infrequent occurrences in March and April. From April, 1971 to June, 1973 over 1500 normal specimens of *Aurelia aurita* were collected in a monthly sampling program utilizing trawls and dip nets off the coasts of Mississippi, Alabama and Florida and one mile beach surveys on the barrier islands.

In recent months, two aberrant *Aurelia aurita* were obtained from two of these islands during routine beach surveys.

The first specimen was collected November 28, 1972 on the northern side of Ship Island, close to Fort Massachusetts (30° 12'N, 88° 58'W). This jellyfish had a bell diameter of 15.2 cm and contained two extra gastric pouches and oral arms in addition to the normal complement of four (Fig. 1).

Browne (1901) examined 3000 adult specimens of *Aurelia aurita* from the River Tamar and found that approximately 1.0 percent had six genital sacs and oral arms. However, the configuration of these structures was not discussed in detail and no drawings were shown with which to compare the present specimen. In addition, the *Aurelia* from Ship Island had only seven rhopalia; Browne found no jellyfish with six genital sacs and this number of rhopalia in his studies. Hargitt (1905) discussed a hexamerous specimen which possessed six gonads and oral arms, but his picture clearly showed that the symmetry of the jellyfish was not affected.

Examination of the radial canal pattern of the Ship Island *Aurelia* revealed that the normal portion of the jellyfish contained the usual number of radial canals except for that part immediately adjoining the two extra gastric pouches. At this juncture the canal system was abnormal and merged with the canal system of the aberrant half of the animal. To our knowledge this is the first such variant of *Aurelia aurita* reported from the Gulf of Mexico.

Another abnormal *Aurelia* was obtained from the south side of Horn Island on March 18, 1973 (30° 14'N, 88° 46'W). It differed from the normal in having only three gastric pouches and oral arms (Fig. 2). Browne (1901) and McIntosh (1911) found this variation occurred in 0.5 percent and 0.7 percent of their specimens, respectively. This abnormality would be less than 0.06 percent for the *Aurelia* population in the northeastern Gulf of Mexico, based on present collections.

The latter specimen was damaged by wave action before it was found, and the radial canal system and number of rhopalia could not be elucidated with any

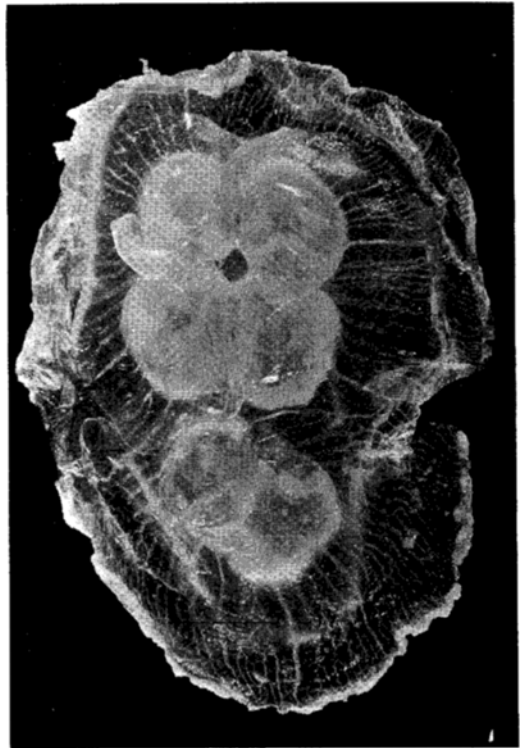


Fig. 1. Ventral view of *Aurelia* with two extra gastric pouches. Bell diameter, 15.2 cm

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Fig. 2. Ventral view of *Aurelia* with three gastric pouches. Bell diameter, 9.5 cm

clarity. The original bell diameter was estimated to be 11 cm, within the range (10.0 cm-35.5 cm) of the normal *Aurelia* collected, though smaller than the average of 19.4 cm. Further sampling may provide a more accurate estimate of the different variations in the Gulf race of *Aurelia aurita*.

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New Records of Peracarid Crustaceans from Oligohaline Waters of the Chesapeake Bay¹

We recently discovered *Almyracuma proximoculi* Jones and Burbanck (Cumacea), *Leptocheilia rapax* Harger (Tanaidacea) and *Corophium aquafuscum* Heard and Sikora (Amphipoda) in oligohaline (<5 o/oo salinity) waters of the Chesapeake Bay system. These have not been reported from the bay previously and the geographical distribution and ecology of all three species are poorly known.

Almyracuma proximoculi Jones and Burbanck, 1959

Locality: Chickahominy River, a tidal tributary of the James River estuary, Virginia. 37° 21.2'N, 76° 55.0'W (Fig. 1). 18 November 1971. R. J. Diaz, collector.

The monotypic genus *Almyracuma* was established by Jones and Burbanck (1959) for a new nannastacid from the Pocasset River, Massachusetts. Since then it has been found in Green Pond, Rhode Island (W. D. Burbanck, pers. commun.) and Currituck Sound, North Carolina (T. E. Bowman, pers. commun.).

Six specimens, including both males and females were collected from the Chickahominy River at a depth of 9 m by bottom grab. The salinity at this location, 10 nautical miles above the juncture of the Chickahominy and the James rivers, has not exceeded 0.2 o/oo in recent years, although the location is under tidal influence. Salinity at the mouth of the Chickahominy rarely exceeds 0.5 o/oo. Temperature at time of collection was 13C and dissolved oxygen

concentration was 8.8 mg O₂/liter. Sediment from which *Almyracuma* was recovered was muddy sand (58% sand, 16% silt and 26% clay) with a large amount of vascular plant detritus.

Other organisms found in association with *Almyracuma* were an isopod *Chiridotea almyra*, an amphipod *Gammarus daiberi*, an unidentified ostracod, the larval dipterans *Chaoborus punctipennis*, *Stictochironomus* nr. *devinctus*, and *Coelotanytus* sp.; the tubificid oligochaetes *Limnodrilus cervix*, *L.* sp., *Ilyodrilus templetoni*, and *Peloscoclex multisetosus*; and an endoproct *Urnatella gracilis*. *Chiridotea almyra*, oligochaetes, and dipteran larvae were also associated with *Almyracuma* in the Pocasset River (Jones and Burbanck, 1959; Sanders, et al., 1965).

Almyracuma proximoculi has now been found from Cape Cod to North Carolina in habitats of very low or greatly fluctuating salinity. On Cape Cod it is particularly associated with groundwater seeps and springs (T. K. Duncan, pers. commun.). The scarcity of records of this species may reflect its small size and habitat restriction.

Almyracuma possesses a degree of euryhalinity rare among cumaceans. The Pocasset River populations may experience salinities ranging from less than 1 o/oo to 30 o/oo during a tidal cycle and apparently show no ill effects from drastic salinity changes (Sanders, et al., 1965). Chickahominy River populations either live permanently in tidal fresh water or, if recruitment is allochthonous, must tolerate extended periods in fresh water. Among cumacean species known from the Chesapeake Bay area (Wass, 1972), *Leucon americanus*

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