THE "MACROTRITOPUS PROBLEM" SOLVED: *OCTOPUS DEFILIPPI* RAISED FROM A WILD-CAUGHT, PELAGIC MACROTRITOPUS

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The previously unknown identity of the distinctive pelagic octopod "Macrotritopus larva" characterized by long third arms has been determined to be *Octopus defilippi* Verany, 1851 by rearing a wild-caught Macrotritopus to sexual maturity in the laboratory. Macrotritopus has been reported throughout the subtropical and tropical Atlantic and Mediterranean but the adult form was uncertain. We observed several Macrotritopus and caught seven (mantle lengths 7-15 mm) during underwater night light stations we performed at 15-40 m depth during a saturation dive mission in NOAA's NULS-1 underwater habitat located in St. Croix, U. S. Virgin Islands.

In midwater, drifting octopuses spread their very long arms out in a vertically oriented fan, but feeding was not observed. When pursued, they swam backwards by jet propulsion, in some instances to the bottom where they crawled

in a coordinated manner into the first hole they encountered. It is possible that they are benthic by day and pealgic by night.

We transported two live Macrotritopus via air to Galveston, Texas and placed them in a closed artificial seawater system consisting of two 150 L. glass aquaria, one functioning as the maintenance chamber and the other as the filtration and water conditioning system. Temperature was maintained at 25°C and the salinity was kept between 32-35 ppt. Two 50% water changes were made to reduce nitrate accumulation.

We reared one female octopus from 10 to 90 mm mantle length in 151 days on a diet of live fiddler craps (*Uca* sp.). For the first four weeks the octopus buried itself in the oyster shell substrate except during foraging and feeding; thereafter it hid in empty shells. She maintained a nocturnal activity pattern that became less pronounced with age. On day 143 she laid over 10,000 unfertilized eggs, mean length 2.1 mm, which she carried in her arms for 8 days until death. The octopus showed a wide range of body patterns that were composed of 12 chromatic, 6 textural and 9 movement components. This specimen has been deposited in the National Museum of Natural History, Division of Molluscs (USNM 730019), Washington, D. C.