

Characters for Separating *Octopus bimaculoides* and *Octopus bimaculatus*

Following are some tips from Eric Hochberg on separating *Octopus bimaculoides* from *O. bimaculatus*.

Character	<i>bimaculoides</i>	<i>bimaculatus</i>
Iridescent ring (within ocellus)	“necklace-like” or closed “figure 8” design; very distinct.	open arrangement with spokes; not as distinct.
Patch and Groove System (dark lines which appear as a reticulate pattern on skin)	faint; irregular pattern	conspicuous pattern of round patches of varying sizes.
Dorsal Mantle White Spots	*faint	* conspicuous and large
Arm Length	*shorter; 3x to 4x length of body	*longer; 4x to 5x length of body
Max. Mantle length	75-85 mm	150-185 mm

* relative characters; difficult to determine without placing 2 species side by side.

Characters that can be used to separate preserved animals returned to lab:

A. If the specimen is a gravid female or a clutch of spawned eggs are present it is very simple.

bimaculatus: produce large numbers (approx. 20,000) of small eggs (2-4 mm).

bimaculoides: produce fewer numbers (approx. 2,000) of large eggs (16-18 mm) eggs

B. If the specimen is not a gravid female, the species can be distinguished by sucker counts. In males count the suckers present on the hectocotylized arm (right arm 3). On this arm they can be counted by the naked eye.

bimaculoides: sucker count range = 102-115

bimaculatus: sucker count range = 135-155

C. If the specimen is not a mature female or if the male is missing the hectocotylized arm, the other arms can be counted. On all arms other than the hectocotylized arm the suckers are so small at the tips of the arms that the first 50-100 suckers must be counted using a dissecting microscope.

bimaculoides: sucker count range = 140-185

bimaculatus: suckers count range = 215-315

D. Habitat Differences:

bimaculatus is **typically*** found in rocky intertidal and subtidal areas.

bimaculoides is **typically*** found in bays and estuarine areas. In the northern part of its range this species often occurs in rocky areas in the intertidal and subtidal zone.

*These habitat differences are intended as a general guideline only, they are not definitive and/or fixed.