Marshall's Mysteries - Answers

A



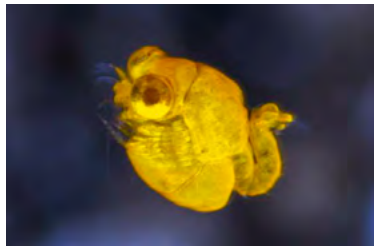
Tuberculate Night Anemone (Alicia pretiosa).

Carnivorous and asexual, ie can reproduce from either a single cell or a group of cells, in the absence of any sexual process such as fertilization.

Contain nematocysts that can "deliver a memorable sting" to capture prey and for defense. A nematocyst has a trigger which, if activated, fires a shaft in microseconds, delivering a toxin. Another good reason to not touch anything underwater, regardless of whether it looks soft and pretty…!

More detail on this anemone can be found on pages 328-29 of "Indo-Pacific Corals" by Joe Rowlett.

B



Mysid (Idiomysis sp), ie a crustacean.

Idiomysis have relatively large, puppy-like, endearing, eyes.

Sometimes called (Hovering) Opossum Shrimps (but they are not shrimps) because, similar to opossums, the female mysids rear their larvae in a brood pouch or marsupium.

Mysids can be cannibalistic, with adults sometimes preying on their young once they emerge from the marsupium. Not sure if the cute Idiomysis has these urges…

This Mysid can be found on page 145 of "Coral Reef Crustaceans from Red Sea to Papua" by Andrey Ryanskiy.

C



Juvenile Graeff's Sea Cucumber (Pearsonothuria graeffei, previously Bohadschia graeffei), which mimics poisonous Phyllidia nudibranches, notably the two below.



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Celestial Phyllidia
(Phyllidia coelestis)



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Swollen Phyllidia
(Phyllidia varicosa)

The adult, shown on the right, is obviously much larger than the juvenile and would be less successful in mimicking the much smaller toxic Phyllidia nudibranches. By this adult stage the sea cucumber have neuro-toxins of their own (allegedly similar to cocaine) in their cuvierian tubes that they eject from the anus when threatened.



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More detail on this Sea Cucumber can be found on page 83 of "Starfishes and Other Echinoderms from the Tropical Indo-Pacific" by Andrey Ryanskiy.

If you think any of the identifications or information above is wrong, please let me know at colintrmarshall@yahoo.com. Feel free to send me any images of anything you'd like some help in identifying – any particularly interesting mysteries may be included in future Underwater Photography issues.

D

The Sweetlips juveniles & adults in the question are shown below, including intermediate phases. There are many reasons for the variation in patterns & colours, including :

- signaling sexual maturity
- camouflage (appearance may need to change if the fish moves to different feeding environments as it matures)
- disruptive patterns (to break up the fishlike outline)
- confuse predators with stripes (think of zebra herds) and spots (false eyespots)
- deliberately appearing different to the adults (who are targeted by predators)
- mimicry, for example, the juvenile Many-spotted Sweetlips mimics a toxic nudibranch or flatworm, even in its motion - head pointing down and undulating wildly

Painted Sweetlips aka Mother-in-Law Fish (Diagramma pictum)

D[1]






D[5]



Many-spotted Sweetlips aka Harlequin Sweetlips (Plectorhinchus chaetodonoides)

D[2]






D[6]



Oriental Sweetlips aka Oriental Blubberlips (Plectorhinchus vittatus)

D[3]






D[4]



More detail on these Sweetlips can be found on pages 471-78 of Volume II of "Reef Fishes of the East Indies" by Gerry Allen and Mark Erdmann.

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