

Hitchhikers on the Reef

by Steve Norvich

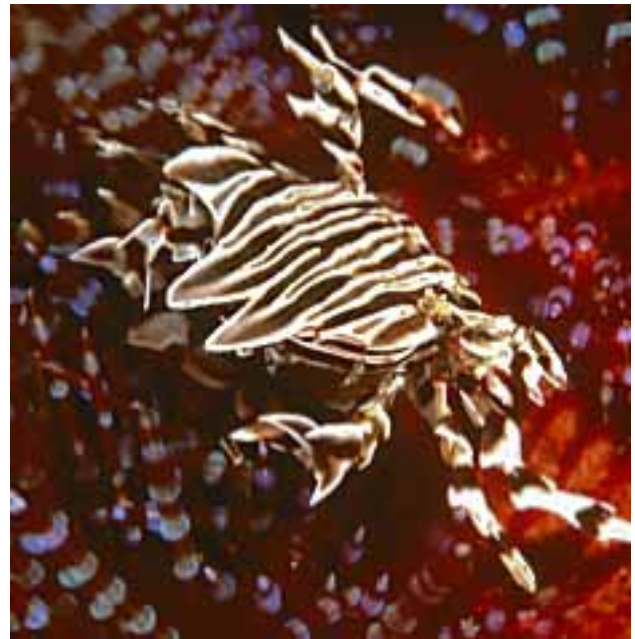
While the technical side of photography is necessary for good images, it is hardly sufficient, for without subjects to photograph, there will be no interesting images created. Searching for photographic subjects is aided by understanding relationships within the marine environment. This includes knowing the habitat of marine animals, knowing what they eat, and knowing about relationships that occur with other animals.

One of these types of relationship is commensalism, wherein one partner lives in close association with another and benefits from the relationship while providing neither benefit nor harm to the partner, and another is mutualism wherein both partners benefit (as opposed to parasitism wherein one partner benefits while the other partner is eventually harmed). This article talks about one particular type of commensalism and mutualism, with several examples, wherein one partner receives shelter and transportation from its partner



Hitchhikers on the Fire Urchin, Asthenosoma varium, an example of commensalism
Periclimenes colemani (family Palaemonidae) or Coleman Shrimp

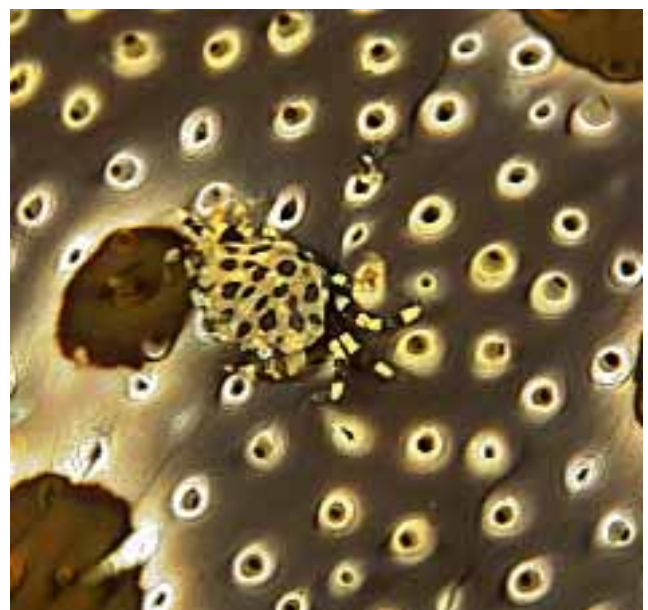
Coleman shrimp are normally found in pairs on the toxic sea urchin, *Asthenosoma varium*, also called a fire urchin, with the female being the larger of the two. Coleman shrimp move amongst the poisonous spines and pedicellaria without incurring harm but they usually clear an area of these obstructions where they perch. They make beautiful photographic subjects and are easy to photograph as they have every confidence that they are secure on their poisonous perch and do not move about as other shrimp often do.



Urchin Crab Zebrida adamsii
Urchin Crab on fire urchin

The white and dark brown striped Urchin crab is another guest of the fire urchin often occurring on the same animal as the Coleman Shrimp.

Whereas the Coleman Shrimp only lives on the fire urchin, Urchin crabs live in association with a variety of urchins. The last segment of its leg forms a hook to hold onto the spines of the sea urchin. It can be found singly or in pairs



Swimmer crab on urchin Actinopyga

Often found on the sea cucumber *Actinopyga*, the swimmer crab is commensally associated receiving transportation and protection. It is often found with the Emperor Shrimp discussed below. While the swimmer crab benefits from the relationship, the sea cucumber does not.



Emperor Shrimp on Actinopyga

Emperor shrimp hitch rides on various partners; I have seen them on sea cucumbers of various species and nudibranchs of various species including *Risbecia tryoni*, *Ceratosoma trilobatum*, and Spanish Dancers.



Emperor shrimp (near gills) of Risbecia tryoni nudibranch

Their coloration varies according to the “transportation partner” they ride on, but I am uncertain if they are able to change coloration if they happen to change transportation. Not content merely to relax and enjoy the ride, they are constantly on the move, normally perched near the substrate looking for food to



Emperor shrimp on sea cucumber near substrate looking for next meal



Emperor shrimp on Ceratosoma trilobatum nudibranch

pass by; I guess this is the marine version of “meals on wheels”?

In addition to providing the potential for sustenance, the noxious reputation of nudibranchs also provides some degree of protection since predators are reluctant to ingest them. But the relationship is really bi-directional as the shrimp keep the nudibranch free from parasites.

These animals are sometimes easy to photograph and at other times incredibly frustrating, moving around like puppies on their transportation host.

Most of these subjects can easily be shot at 1:1 with either a 60mm or 105mm lens. The exception is the zebra crab which was shot with a tele-extender.

Hopefully this discussion of hitchhikers on the reef will give you an idea for photographic subjects and where to find them.

Steve Norvich