

Hitchhikers Guide to the Reef

By Mark Webster

If you were a fan of the 'Hitchhikers Guide to the Galaxy' then you will have been bewildered by the eventual answer to the secret of the universe that was '42' – that answer confused most of us but will never be forgotten. Hitchhikers in the marine world are probably not so perplexed by the notion of the meaning of life and also seem to be spoilt for choice when it comes to choosing a partner in life, whether it is static or mobile. There are numerous examples of commensalism and symbiotic relationships on the reef, many of them existing in the macro range, and they make both fascinating and challenging subjects for the avid underwater photographer. It is often beneficial to have a little knowledge of species habitat and an objective or goal when we dive with our cameras, so the purpose of this brief guide is to introduce you to a number of the likely players and suggest the best tools and techniques for capturing an image.

Anemone Hosts

Clown fish, or more accurately anemone fish, are of course the most obvious example found on almost every reef in the Indo Pacific regions in a number of different species variants. They are an irresistible subject and no matter how determined I may be to ignore them during a trip, I will inevitably come home with a few images. Despite their attraction they are in fact quite difficult to photograph well as they are constantly on the move



Clown fish or anemone fish come in several different species and are one of the most appealing and best recognized of all fish and immortalized in the Walt Disney film Finding Nemo. They do need a degree of patience to predict their movements and capture a good image though. Nikon D200, Subal ND20, 60mm micro, Inon quad flash, ISO100 f11 1/125.

and often darting out of the host anemone to nip at this uninvited intruder. Consequently you can often end up with a bunch of poorly focused or partially framed shots mixed with a few keepers. For a tight portrait using a DSLR the best tool is a 50/60mm macro lens. If you use a compact you have the flexibility of a zoom lens but also the disadvantage of shutter delay to compound the problem.

Anemones play host to several species of shrimps as well, from totally transparent 'ghost shrimps' to the exotic looking eggshell and banded



Bumble bee shrimp (Pliopontonia furtiva) is quite a rare species it seems – this one was found in the Lembeh Straits on the edge of a large carpet anemone. Nikon D200, Subal ND20, 105mm micro, Inon quad flash, ISO100 f18 1/125

Clown crab (Lissocarcinus laevis) is often found at the base of larger carpet anemones and will often emerge waving their claws at your unwanted intrusion. Nikon D200, Subal ND20, 105mm micro, Inon quad flash, ISO100 f18 1/125



shrimps. These shrimps are all keeping their anemone host clean and sharing meals whilst enjoying the protection that the host offers. Some are also cleaning species that will leave the safety of the anemone when a client approaches and displays the correct signals. In big carpet anemones there may be a dozen or more shrimps of different species.

Crabs, particularly the porcelain crab family, are another anemone dweller. Some species, like the clown or harlequin crab (*Lissocarcinus laevis*), like to live just under the skirt of the anemone where you will find them peeking out at the world. Others like the delicately spotted *Neopetrolisthes maculatus* will be found boldly sitting out in the open on the anemone tentacles constantly grasping at the passing plankton on which they feed. There are often several of these species on each anemone, accompanied by shrimps and anemone fish. We even have a symbiotic dweller in the UK – the small Leach's spider crab lives in the arms around the skirt of the snakelocks anemone. They are most prolific in spring and early summer and are often found in pairs on the larger anemones.

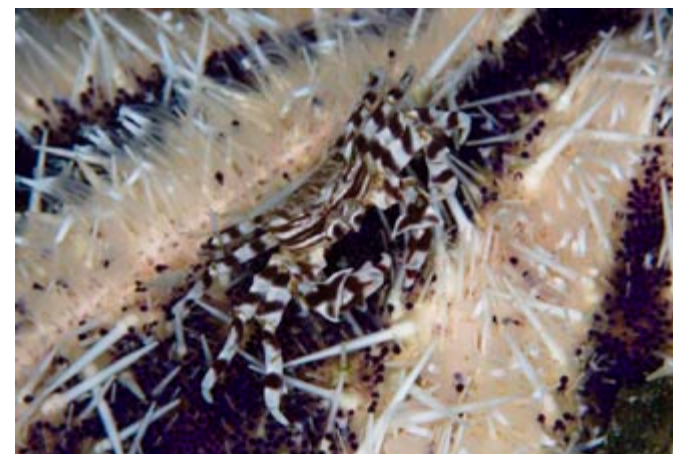
Urchin Hosts

There are numerous species of urchin which most commonly play host to species of shrimp and crabs. Amongst the most colourful are the Coleman shrimps and Zebra crabs which can be grouped together as they are often found on the same host, the fire urchin (*Asthenosoma varium*), sometimes even sharing an urchin. The zebra crab (*Zebrida adamsii*) is found on other species of urchin, but the fire urchin is by far the most colourful host and provides a great contrast with the black and white



Coleman shrimps (Periclimenes colemani) are also found on fire urchins in male/female pairs often at the crown of the urchin where they have picked an area clean of spines. Nikon D100, L&M Titan, 105mm micro, Inon quad flash, Inon wet lens, ISO200 f22 1/125

detail of both the Coleman shrimps (*Periclimenes colemani*) and the zebra crab. The Coleman shrimps are found in pairs normally close to the crown or top of the urchin, where they have picked out the spines to make some living space. The larger of the pair is the female and they show no concern at all at a close approach, safe in the knowledge that the urchin delivers a very unpleasant sting. The zebra crab by contrast will initially be seen close to the base of the urchin, sometimes in pairs, and being of a more nervous disposition will constantly march about the urchin to avoid your attentions. The vivid colours of the fire urchin make for a startling contrast the monochrome livery of these two species, although I often find that colour is reflected back from the urchin bathing the subject in a warm or pinkish glow. The zebra crab can be shot at 1:1



The zebra crab (Zebrida adamsii) is most often found on the fire urchin, but occasionally you will find it on other urchin hosts, in this case one with complimentary colouring. Nikon D200, Subal ND20, 105mm micro, Inon quad flash, ISO100 f16 1/125

successfully but often the Coleman shrimps are very small and need additional magnification.

Sea Whip Hosts

If you are like me you will not be able to pass a sea whip on the reef without stopping to inspect it for tiny well camouflaged tenants. The most common finds are the coral gobies, which are also found on soft corals, which often appear to be almost translucent and have an irritating habit of skittering out of view just as you have composed a sharp image. Under flash light they reveal rich iridescent colouring which may match the host perfectly. Sometimes there are two or more of these little fish which may come together every now and then, but usually all too briefly!

More unusual or prized finds on sea whips



Sea whip gobies are the most commonly found species on a variety of sea whip hosts. Sometimes there is only one to be seen, whilst other hosts may have four or five. Nikon D200, Subal ND20, 105mm micro, Inon quad flash, ISO100 f16 1/25



The whip coral shrimp (Dasyatis zanzibarica) is frequently seen on sea whips throughout the Indo Pacific seas, but is quite difficult to spot due to its small size and excellent camouflage. Nikon D200, Subal ND20, 105mm micro, Inon wet lens, Inon quad flash, ISO100 f16 1/25



Crinoid squat lobsters (Allogalathea elegans) are found in the arms of crinoids or feather stars and generally have a livery that matches the host perfectly so can be very hard to spot until they move. Nikon D100, L&M Titan, 105mm micro, Inon quad flash, Inon wet lens, ISO200 f22 1/125

include several species of shrimps and the ostentatiously named and strange looking Zeno crab (Xenocarcinus sp). These critters are more of a challenge to find as they match their hosts almost perfectly and don't move about like the whip gobies. They are however aware of your attentions and will often slowly spiral around the whip just as you prepare for that killer shot.

With all these species one of the biggest challenges is focusing – their size means that you really need more magnification than 1:1 (2:1 is best) which means depth of field is tiny. A wet diopter may be the best choice to boost magnification as you have the option to remove it during the dive – other options include a dry diopter on the lens or a teleconverter, but both require you to commit to

very small subjects throughout the dive.

Given that most sea whips reach out into the current you will also have to cope with a quivering or swaying sea whip to make life even more difficult. Most DSLR's will allow you to lock the focus or use manual focus which avoids the constant lens hunting and makes life a little easier – you can either try and follow the movement of the sea whip or more simply wait for your subject to move through the plane of focus and trigger the shutter. Sometimes you can position yourself on the up current side and shelter your subject from movement, but whatever method you adopt these are sometimes challenging subjects and it is satisfying to produce a sharp and well composed shot.

Crinoid Hosts

Crinoids are abundant on the reef during daytime in certain areas such as Indonesia and the Philippines, whilst in others like the Red Sea they only appear at night. Many but not all are also home to diminutive shrimps, squat lobsters, crabs and cling fish all of which adopt a pattern which matches the crinoid perfectly. They are very difficult to spot and normally it is a dive guide that points them out initially. They tend to live towards the centre of the crinoid which can make them difficult to see, although most guides have a technique of tickling the base of the crinoid between its legs with a chop stick which makes them open up for a few minutes and allows you to get a shot. I am



The ornate Ghost pipefish (Solenostomus paradoxus) have fantastic camouflage when close to the crinoid host, but they are quite easy to photograph once spotted as they are convinced you cannot see them! Nikon D200, Subal ND20, 105mm micro, Inon quad flash, ISO100 f16 1/60

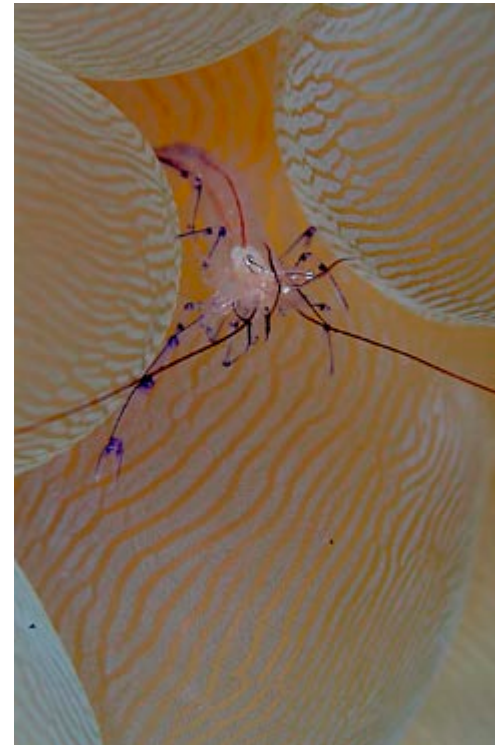
not certain if this is harmful to the crinoid, but it is done gently and does not appear to be. By contrast in the Red Sea where the crinoids commonly appear at night and climb to the top of the reef you will most often find the little squat lobsters and armoured crabs on the legs of the crinoid where



Pygmy seahorses (Hippocampus bargibanti) are a must have subject for many photographers. They are found on specific species of sea fan (Muricella sp.) and are exceedingly small and well camouflaged. Nikon D100, L&M Titan, 105mm micro, Inon quad flash, Inon wet lens, ISO200 f22 1/125

they cling to the reef, which makes them easier to see and photograph.

Again these critters are very small and really need 2:1 magnification and manual or locked focus techniques and also careful flash positioning so as not to cast a shadow from the extended arms of the crinoid.



This small shrimp (Vir philippinensis) is frequently found on grape or bubble corals and is almost completely transparent with fine purple markings. Nikon D100, L&M Titan, 105mm micro, Inon quad flash, Inon wet lens, ISO200 f22 1/125

Another larger but equally well camouflaged species frequently encountered with crinoids are ghost pipefish, most likely the ornate and harlequin. These can range in size from only a couple of centimeters long to up ten or twelve centimeters. This is a gorgeous looking subject and

quite easy to photograph once spotted as they are convinced you cannot see them and they often hover just above or to the side of the host making them very approachable. They are often in pairs and again the female is the larger of the two and range in size from 3cm to 10cm and so are a good size for a 50/60mm macro lens and for a compact zoom.

Coral Hosts

Interesting subjects can also be found on corals as well, particularly soft corals. Translucent ghost shrimps with delicate purple claws are often found nestled in the folds of bubble corals along with small gobies. The weird looking and hairy Orang-utan crab (Aachaeus japonicus) is also found on bubble corals and soft corals, but can be difficult to spot. Decorator and armoured crabs are frequently seen on Dendronephthya branching soft corals, particularly at night. Another close relative of soft corals and octo corals is the sea pen, which often only appears at night to sift nutrients from the current. Larger sea pens frequently have a selection of tenants including small pastel coloured porcelain crabs, shrimps, squat lobsters and gobies – I have often wondered what these critters do when the sea pen retracts in to the seabed during the day?

Sea fans and branching

gorgonian corals are home to another classic super macro subject which has become a 'must have' image for many underwater photographers. This of course is the pygmy seahorse which can be found two or three different species dependant on the gorgonian. These critters are truly tiny and are incredibly difficult to find without the help of a guide. Once found they are a real technical challenge to focus on as they will require 2:1 or greater magnification to fill the frame. The depth of field at this ratio is very narrow and you subject will have the irritating habit of twisting and turning constantly whilst you try and achieve sharp focus. But they are so cute looking that you will be delighted with a successful shot.

You will also find ghost pipe fish hiding around gorgonian corals, particularly the thinner harlequin species, sometimes in pairs and in small groups.

Best Locations for the Hunt

You can find examples of commensalism and symbiotic relationships in many locations, including temperate seas, but undoubtedly there are hot spots which will leave you spoilt for choice. For the most reliable and varied selections try Lembeh Straits, Bali, Ambon, Irian Jaya (West Papua), Phillipines

and Papua New Guinea – all these regions generally have skilled guides who specialise in spotting the unusual for photographers. The Red Sea also has plenty of opportunities, but the guiding style is a little less focused on critter spotting so finding these creatures is more up to the photographer's own spotting skills. A little research before you leave on a trip and a good species identification book will help a great deal once on location. These are great subjects for a macro lens and also provide immense satisfaction in having spotted a likely host and tracking down the tenants.

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A diver in a black wetsuit and yellow buoyancy compensator is underwater, holding a camera. They are next to a large, branching red coral structure. The water is clear and blue.

UW Photo Workshops with Mark Webster

1-8 October 2008 Red Sea - South Tour
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15-22 May 2009 Red Sea - North Tour
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