

Getting the shot - Jawfish with eggs

by Tony Land

I've been shooting underwater photographs as a hobby for the better part of 15 years. In all of that time, I've had the luxury of living in a diving hotspot - either South Florida, or Grand Cayman. In both locations, world-class diving was just minutes from my home year round.

One of the photographs that had eluded me for all of these years though, was that of a male Yellow-Headed Jawfish incubating eggs in his mouth. When I finally managed to get a shot of one, it was July 2021. In the months since then however, I've seemed to run into these little expectant fathers everywhere, and I realized that they had probably been around me all along - I just didn't know what to look for or how to capture the moment.

Soon after posting my first one on social media, I received a lot of messages asking for tips on how I was able to get this shot. So rather than explain it over and over, I decided to write this article. I'm not sure if this process will work well for everyone, but this is what works for me.

Know what you're looking for

This was the biggest issue for me. Like some others, I incorrectly assumed that male Jawfish swam around with their eggs hanging half out of their mouths, so this is what I would look for. This was after all, every photo I had seen of them with eggs. Although I have observed this behavior once before, it's very rare for these little critters to swim around with eggs displayed prominently. Mostly, they keep them in what looks to be the back of their throats, and their mouths are mostly shut. At a glance, it's hard to discern if they have eggs or not.

This is generally how I find Jawfish with eggs. Look for them partially out of their den with their mouths somewhat open. No eggs will be displayed normally. Unlike the others around them, they will not be up in the water column feeding.

For me the trick to spotting one is by looking for their 'incubating behavior.' Jawfish who do not



This little fish is just showing off.

have eggs will tend to be feeding or gardening during the daytime. When feeding, you can often find them swimming about 12-18 inches above and near their den just sort of hovering about. You'll see them occasionally swim off and take a nip of some particle floating by in the water column. When gardening, they are cleaning debris out of their den. During this, they will cart out mouthfuls of sand and shells and spit them out nearby. They will be in a constant state of motion when doing this. While this can be interesting behavior, they generally do not have

eggs when they clean their dens. Ignore these.

What you're looking for is males who are in their den to some degree, and don't move much. If they do come out, it's not very far, and they will not be feeding. These are the ones to examine. When you find one like this - look at his mouth. It will be open slightly, and he may be opening and closing both his mouth and gill plates. At the correct angle, you may be able to see the eggs in their partially opened mouths, but depending on the Jawfish itself, and the age of the eggs he is incubating,



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A Jawfish 'gardening.' He's scooping up mouthfuls of sand from his den and spitting it out nearby.

it might not be obvious. Particularly when the eggs are brand-new, they lack color, and the distinctive reflective eyeballs, that make them easy to spot.

Females lay their eggs deep inside the den of a male Jawfish. Once this occurs, the male will dutifully pick them up and incubate them for a period of 3 to 5 days. When incubating eggs, periodically the male will expel them very quickly in an effort to aerate them and shuffle them around. Snapshots of the eggs in mid-aeration are mostly the classic

photographs that you see. From my observations, they tend to aerate them every 2-5 minutes or so, sometimes more often. This aeration is what you need to look for, and try to photograph.

Approach slowly

This is where it gets tricky. A male Jawfish incubating eggs will be far more skittish than normal. If they see what they think is a predator, they will dart back into their den and stash the eggs. When they come back



Same Jawfish taken over a period of 4 days. Note the change in eggs, especially between day 1 and day 2 where the eyes become visible.

out of the den they will not have the eggs with them, and act normally in a “nothing to see here,” behavior. It’s really important to get down low, and approach slowly with no quick movement, so you don’t startle

them. When really spooked, they will disappear into their dens for hours.



This is what a jawfish photo dive profile looks like. One solid hour with the same fish.

Be patient

Now that you've found your little friend, prepare to spend a long time with him. Jawfish get accustomed to divers fairly quickly, and they are quite curious, but some fish are more confident than others. It will take at least 10-15 minutes for them to grow comfortable enough with you to come back out of their den enough to get a decent photo. However if you think this is going to be a quick shot, think again. For every Jawfish / eggs photos I have, I've spent between 60 and 90 minutes with the fish.

Camera settings

I'm using a Canon R6 with a 100mm macro lens. I do have a Nauticam EMWL, but I find close focus wide angle not useful for jawfish, and the 100 macro works better. You'll want some form of a macro lens, and a 60mm would probably work as well. You might be able to get these shots with a point and shoot camera, but it would be very tough due to shutter lag issues.

The 'money shot' if you will, is to capture them aerating the eggs. This is a lighting quick movement the fish

makes, so I always shoot at 1/250th of a second shutter speed. If your camera and strobes allow for high-speed sync, consider using a quicker shutter speed. I have had motion blur in many of the shots due to the incredible speed at which they move the eggs in and out.

My aperture depends on the background. I'm trying to really isolate the eggs from whatever reef structure is behind the eggs, so I try to keep my depth of field shallow enough to blur the background, but not so shallow that only part of the fish and eggs are in focus. I've had good luck between f7 and f13. For my

ISO, I set this to whatever the ambient light conditions dictate.

Since the aeration is so fast, I shoot in continuous high mode, which increases my likelihood of getting a good frame. The Canon R6 will shoot up to 12 frames per second in this mode, but remember your strobes will likely not keep up with this. In most cases, even the best of strobes will not support more than a few frames at 12 FPS. It really depends on a number of factors, including the strobe type, battery type and most importantly - the power setting of the strobe. For this reason I use my Sea & Sea YS-

250's. They are powerhouses that can keep up with high frame rates fairly easily. I find my Inon Z330's do not. For either strobe, I turn my power down low, and push them forward quite a bit. I want the lowest power possible so the strobe can recycle quick enough to keep up with the camera.

If you're not shooting 'thumb focus' you will absolutely want to do this. This is where you disable the half-press focus activation on your shutter release. Instead, you focus using the AF-ON button on the rear of the camera. Having the focus activate on the half-press of the shutter release will cause enough lag to miss the action. You want to prefocus on his face and then refocus only when the fish changes relative to the focal plane.

Watch their behavior

As I've said before, their aeration of the eggs is super fast. It's pushing the limits of a human's reaction time, (or at least mine anyway,) so watch the fish carefully through the viewfinder. Different fish have slightly different behavior patterns, but eventually you'll begin to identify little 'tells' they display just before aeration. One fish I observed would dart into his den. He'd drop his eggs, come back up and peek around, then disappear for another minute. When he popped back up again, he was likely to aerate right away. Another fish would do a little yawning motion just before. When I would see these little indicators, I'd make sure he was in focus, and do a half press of the shutter release and get ready to fire.



Photo taken at 1/250th, f13, ISO 1000, and low strobe power gives a light background with bokeh.



Same fish, taken at 1/250th, f22, ISO640, and high strobe power gives a nice dark background.

Take lots of photos

Now, even though I got pretty good at learning their little nuances, I still had plenty of times where I would miss the shot. I would fire the burst too soon, or too late, or he would fake me out and just yawn. On a typical jawfish photography dive, I will take as many as 300 exposures, 99% of which will be unusable.

But even when I think I got the good shot, I keep at it. Looking through a small viewfinder or LCD isn't the same as looking at a computer screen. On the computer you'll see little nuances like focus issues, or motion blur that you didn't observe underwater.

Change it up

Albert Einstein once said "The definition of insanity is doing the same thing over and over and expecting different results." So underwater with your little fish photo session, be sure to mix it up a bit. Try different exposure combinations, different angles, different f-stops, ISO and strobe settings. You may find something that works unexpectedly, and makes the shot come out better.

Remember that increasing your strobe power to get the dark backgrounds is going to reduce the number of useable frames you'll get in your burst sequence. So my recommendation is to start with low strobe power and get the light background shots first. Once you learn the nuances of the fish, and can predict his aeration behavior, then try the dark background shots.



This 15-second video shows just how quick the aeration is. The first few seconds of the clip are at normal speed. The second half of the clip is at 1/4 speed. This video clip also illustrates how well the eggs are concealed in the throat of the Jawfish. If you look carefully, you'll see it also shows this fishes 'tell' - the eggs will be forward in his throat and he widens his mouth just before. When I see this, I hit the shutter release for a burst of 4-8 frames.

Watch your background

The best photos tend to be simple, so watch what's behind the fish. Ideally you want blue water, but sometimes this won't be possible. You want to get down as low as you can, and shoot at an upward angle. A 45 degree viewfinder will be worth its weight in gold here. What you aim to do here is have as much space as possible between the fish and whatever is behind the fish. Low shooting positions and upward angles work the best.

For variety in composition, I try to get an angle where I am 90 degrees to the fish on his left or right side for a few shots, then I try to get a few from a 45 degree angle from the front. They will move around a bit, but tend to aerate into the current if there is any. Getting the shot from straight ahead of the fish

is challenging - they tend to turn away from you, and it's hard to get all of the elements in focus.

Some others things that help me

An electronic viewfinder is immensely helpful for any macro situation. This allows me to take the shot, and then review it without moving the camera or my eye from the viewfinder. When you're trying to shoot a skittish little fish who has no idea what you, or your massive camera system is, you want to minimize any unnecessary movement. Without the EVF, unless you're shooting with an LCD, you'll need to break your composition and focal plane to review the shot. You don't need to review every shot, but periodically it's helpful to do. Particularly when you change exposure settings, or strobe placement. Even in ambient light changes like when the sun goes behind clouds, you'll want to check to make sure it's still a good image.

My other big advantage is using a rebreather. You'll likely roll your eyes at this one, thinking a rebreather as too complex, too expensive or too much hassle. My KISS Sprit rebreather takes me the same amount of time to set up as an open-circuit setup, and weighs the same. That said, I won't try to persuade you in this article. I can tell you however, that the behavior of marine life underwater is most certainly different when you are not making bubbles. Exhaled diver bubbles are loud. Divers don't often understand just how loud they are, but when I'm on a rebreather I can hear open circuit divers from hundreds of yards away. I always hear bubble blowers long before I see them.

If I can hear you, the fish damn well can as well. And their behavior most certainly will change. Many times I've been patiently waiting

for a Jawfish to get comfortable with me, when I hear bubbles getting louder somewhere near me. It's always a pair of divers coming over to see what I am looking so intently at. The behavior of the Jawfish will absolutely change, usually getting more skittish and ducking back into its den. Bubbles do matter. So unless you can hold your breath for 30 minutes at time, consider getting a CCR to keep the little subjects from darting away.

The other massive advantage for the rebreather is increased no-decompression time, and far more breathing gas. If your Jawfish is in the shallow confines of a site like Blue Heron Bridge, this is irrelevant. But if you're at Lighthouse Point in Grand Cayman - many of these guys are in the sand around 70-80 feet. Depending on your dive computer conservatism and your personal air consumption, you might not have enough of either to do long dives and capture the shot.

I hope this helps! Good luck on capturing your photo. It's very satisfying when you do finally get the shot.

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