

RARE AND UNUSUAL MARINES

Text and Photos by John Hoover

The Oman Butterflyfish *Chaetodon dialeucos* Salm and Mee



ABOVE & BELOW RIGHT: The Oman Butterflyfish *Chaetodon dialeucos*.

RIGHT: The Clown *Amphiprion* sp.

■ Holding my mask to my face I tumbled backwards out of the Zodiac into the murky green waters of the Ghubbat Hashish. The thought of the beach we had launched from ten minutes before did not bolster my confidence. It had been strewn with carcasses of large sharks and rays hauled ashore by local fishermen. This was apparently prime shark fishing territory.

I flipped over and peered into the gloom. There was supposed to be a coral reef under me somewhere. A trial dive brought me face to face with a swirl of iridescent blue: a gorgeous juvenile angelfish retreating into its hideaway. The coral was only 8 feet down but practically invisible to a snorkeler on the surface. Coming up just long enough to report that we were in the right spot, I took another look. Immediately I saw what we had come to find. Elated I shouted to Rod, Jonathan, and Dawood who were still in the Zodiac, "I saw one!"



"So they're here, then," exclaimed Rod. There was immediate activity on board. Rod threw the anchor over. Jonathan and Dawood maneuvered the big wire fish trap over the side. All donned masks and fins and jumped in. Hand nets were passed around and we scattered, each hoping to catch the first specimen of the unknown, undescribed species of butterflyfish which I had just seen and which Rod had spotted in these waters a few months before. If we were successful

we would have found the first new shallow water butterflyfish in the Indian Ocean in many years.

Dr. Rodney V. Salm first saw the reefs in this area from the air during a 1987 survey of the coast of Oman, the second largest country on the Arabian Peninsula. Oman is a beautiful land of colorful deserts, high mountains, and exceptionally friendly people. Her coasts are washed by the Gulf of Oman in the north and the Arabian Sea in the

south. Due to nutrient rich seasonal upwellings, Omani waters literally boil with fish. In fact, some of the world's richest fishing grounds are found here. It is also an area almost unexplored by marine biologists, and a highly unusual one at that. In some places, for example, the combination of hot climate and cold upwellings encourage the rare phenomenon of kelp and coral growing side by side.

Most coral reefs off Oman's coast are small and patchy; however, during his aerial survey Rod saw that, near a peninsula in central Oman, reefs extended for many kilometers. The peninsula is known as Bar al-Hikman and the protected bay where he saw the reefs is the Ghubbat Hashish, or Bay of Hashish. Intrigued, he returned to the area overland (sometimes navigating by compass on the featureless desert) and spent a week exploring and diving. Among other things, he kept seeing a butterflyfish that he couldn't identify. Returning to Muscat, Oman's capital, Rod brought a photograph of the fish to the Marine Science and Fisheries Center where both Jonathan Mee and I worked at the time. (I was setting up a fisheries research library and Jonathan was establishing a public aquarium.) All three of us were quite familiar with tropical reef fishes and it didn't take us long to see that this one was new.

We immediately made plans with Rod to collect a specimen. The trouble was that it was now June, the beginning of the 6 month southwest monsoon season when constant 20-30 knot winds send enormous swells crashing against the rocky coast. During this time of year some of the world's roughest waters are found in the Arabian Sea and even the fishermen stay home. Although the Bay of Hashish was somewhat protected we didn't know if diving would even be possible. Nevertheless, waiting half a year was clearly intolerable and we resolved to give it a try.

Readers of FAMA do not need to be told that butterflyfishes are a flashy group --- among the most colorful and sought-after of all marine aquarium fishes. I'd be willing to bet that most coral reef enthusiasts, collectors, and fish watchers have, at some time or other, secretly dreamed of finding a new species of butterflyfish. Of course these fish are so conspicuous and their family is so well described that new discoveries are most unlikely, especially in the shallow water accessible to snorkelers and sport divers. Very occasionally a new species is discovered, but almost always in deep water or off some very remote island, or both. Dr. Gerald R. Allen, one of the authors of *Butterfly and Angelfishes of the World* (Aquarium Systems, 1985), writes of his discovery of a new species during a series of deep scuba dives made with Walter Starck in Palau during 1972.

It had long been Walter's ambition and mine to discover a new species of butterflyfish, and at Bairakaseru Island we were successful at last. On the first dive we sighted a pair of unfamiliar chaetodontids swimming among black coral on the vertical

wall. We knew at once they must be new. We tried unsuccessfully to secure the fish with rotenone, a commercial fish collecting preparation. Finally, on three subsequent dives, Walter managed to spear three specimens at depths ranging from 40 to 75 meters (130 and 246 feet).

Seventy five meters is far beyond most divers' range. At these depths danger of the bends is greatly increased and nitrogen narcosis makes a diver giddy and intoxicated. Clearly these professionals thought it worth considerable risk to catch their new species of butterflyfish. By contrast we were chasing ours around in ten feet of water with homemade dip nets. None of us had much experience collecting. Rod, although an experienced naturalist and diver, had not had occasion to catch live fish

for many years. Jonathan, from cold California waters, had had few chances to visit coral reefs. His assistant, Dawood Al-Wahaiby, was just beginning in this field. I had had very limited experience in Hawaii, where I used to stock my own aquarium. Still, it seemed only a matter of time before one or the other of us was successful. The visibility wasn't very good, but Rod had led us to a sheltered spot and the swells were no problem. Besides, for backup we had the big wire traps. There were so many fish here that the main problem we foresaw was trying to haul the full traps out of the water. Surely there would be a few butterflies in with the masses of sweetlips, angelfish, snappers, and so forth that would undoubtedly be milling around in them tomorrow. When Jonathan

and Dawood pulled traps around Muscat they almost always had butterflyfish in them.

As we swam around it began to strike all of us that this certainly was a strange reef. The coral was totally different from that in other parts of Oman. Many of the fish were different too. I noticed at once that the clownfish inhabiting a group of large anemones did not look or behave the same as *Amphiprion clarkii*, the common clownfish known from Oman. Even the sergeant majors weren't quite right --- clearly a different species from the ones up north. Big yellow-bar angels were everywhere, almost in schools, peering at us from under every ledge and generally getting in the way as we chased our new species around the coral heads. Large groupers peered at us unafraid. But it wasn't until later that we realized the strangest thing about this reef: comparing notes we all agreed that none of us had seen any wrasses at all. Who ever heard of a coral reef without wrasses? And where, for that matter, were the other butterflyfish so abundant in Oman? We saw few of these; the predominant butterfly here was indeed the new one.

As butterflyfish go it wasn't particularly striking, but it was a handsome fish in its own way with a brown body, a white nose and a porcelain white stripe behind the eye. Actually, it looks quite like *C. mesoleucos*, the White-Face Butterflyfish from the Red Sea, minus the fine dark vertical lines and with a much broader dark stripe through the eye. The two fish are undoubtedly related. Of the White-Face, Allen writes, *This species has distinctive markings and is not likely to be confused with any other butterflyfish.* We could prove him wrong if we could just catch one. But as we were finding out these fish were not at all easy to catch. Like most of their family they were fast swimmers with a tendency to hide in cracks and caves just beyond reach of the nets.

It was getting late in the day, we had driven seven hours through the desert on mere tracks, and we decided to call it quits. No one was even close to catching a butterfly and we had not even set up camp yet. Besides, we had all day tomorrow. Not wanting to feel the afternoon a total loss I snagged a couple of strange clowns, then we headed back to "Shark-Carcass Beach."

At dinner we discussed what we would call this fish. Rod thought of *Chaetodon hikmani*, after the Al-Hikman tribe in whose territory we were in. The trouble with that was that it sounded like the name of some European, possibly Scandinavian, ichthyologist. *Chaetodon qaboosi* received serious consideration. His Majesty Sultan Qaboos bin Said, the able and popular ruler of Oman, has brought his country into the modern world and also happens to be an ardent wildlife conservationist. But we didn't know the protocol for naming a very small fish after a ruling monarch. I suggested *Chaetodon hashishi*. That was

thrown out right away. Who would believe a bunch of guys who claimed they had discovered a new butterflyfish in a place called the Bay of Hashish? (The last word, by the way, only means "grass" in Oman; the bay got its name because it is shallow and full of turtle grass.) Whatever the scientific name, we all agreed that the common name should be the Oman Butterflyfish. It only remained to catch one.

We stayed up late trying to construct a barrier net out of some gauze-like material that we happened to have. The 20 knot wind did not help. When we finished we looped it ever so carefully around the nose of the Zodiac so that it would not get tangled and went to bed.

The next morning we drove down the beach looking for a spot which Rod thought might be more productive. When we found it, Jonathan and I went in through the surf with our snorkeling gear but failed to see any of the new butterflyfish. In any case, the surge here was much too great for netting anything. Rod also wanted to check out a site where a whale had beached some years ago. He was collecting the bones in a pile. Everytime he came down here he found a few more bones and added them to the pile. Today was no exception. We found ribs, vertebrae, and some round knobby things that turned out to be whale ear bones. On the way back to camp we stopped to watch some pink flamingos in a salty lagoon; we were in no hurry, being fairly confident that the fish traps we had set the day before would yield at least one or two butterflyfish.

When we arrived at camp we found that the fishermen had brought their fishing boat in to the beach and were unloading the day's catch of evil looking sharks and rays. Two men were butchering the carcasses on the beach to the accompaniment of a vigorous Omani work chant. The livers were thrown in an oil drum, the fins and meat into pickup trucks waiting on the beach. The fins would be sold to traders from the Far East for shark-fin soup; the meat would be dried and sold to the bedouin of the interior. The men worked steadily and paid little attention to us. They had to finish before the tide went out or their boat would be stranded on the mud flats. Later, however, some of them came over and offered us dates. We offered them coffee. We described the fish we were after and they said they knew it. The name they gave for it was *misht*, which means comb. It is the name given to any butterflyfish in Oman and probably derives from the long dorsal spines. The tide was still high; after the fishermen moved their boat to deep water, Rod saved them a long wade back by going out in the Zodiac and bringing them back in. As they clambered out over the bow onto the beach I noted with dismay that the barrier net, which we had looped carefully around the stubby nose of the Zodiac the night before, was now a hopelessly tangled mess.

That afternoon we went by boat back to "No-Wrasse Reef," which was off a rocky point distinguished by some scrubby

mangrove trees. These, plus two on the beach opposite, were the only trees (and the only shade) for miles in this windy, uninhabited peninsula of sand, salt flats, and lagoons. Jonathan and Dawood confidently pulled the first trap, which to our great surprise was completely empty, as was the second. With our barrier net essentially destroyed it was now handnets or nothing. This was our last chance; tomorrow morning we had to leave.

Rod and I had brought scuba gear while Jonathan and Dawood were content to snorkel. We distributed the nets and set to work. I quickly realized that even with the advantage of scuba it was not going to be easy. After several completely futile attempts I felt completely discouraged. We simply couldn't go back empty handed. "Please, God," I said in all sincerity "we need help." Just then I saw a fine specimen swim under a roomy ledge. I got my nets on either side of him, he hesitated, and I knew I had him. A shake of the cotton net on the left caused him to zoom straight into the waiting monofilament on the right --- a clean catch! I felt exultant. Surfacing I began to swim to the boat. Just as I arrived I saw Dawood climb aboard and take something from Jonathan who was in the water on the other side of the boat. Divine Providence was generous today: He had caught one, too, at almost the same instant I had. This new species was the first wild butterflyfish he had ever caught! We spent about an hour longer trying to catch more specimens with absolutely no success. I finally took a couple more of the strange clowns and we called it a day.

In the morning Jonathan and Dawood bagged our live specimens in fresh seawater and oxygen and we made the long trip back to Muscat, the capital. Back at the aquarium laboratory, with fish in hand, Jonathan dispelled any lingering doubts. This was indeed an undescribed species of shallow water butterflyfish. And, as a bonus, the clownfish too, were definitely not Clark's Clown, *Amphiprion clarkii*, the common


species known from Oman. Although the Red Sea is a long way from Oman, Jonathan checked to see if they might be Double-Bar Clowns *A. bicinctus*. They were not.

In February 1988 Rod returned to Bar Al-Hikman, inviting me, Dawood, and Marcia, my wife, to come along in order to photograph the butterflyfish in the wild and to collect live specimens. The monsoon was over and we hoped the visibility would be good enough for photographs. It was, but only barely, and the dark coloration and shy nature of the fish made them difficult to capture on film. I managed to get what I thought would be some reasonable shots and I also caught one small specimen. Dawood and I each caught one of the clowns. All the live fish were successfully brought back and lived happily for many months in my 55 gallon home aquarium.

The Oman Butterflyfish makes a good, although rather shy, aquarium fish if given lots of special attention. It is cute, peaceful, and eats greedily from its keeper's fingers, preferring chopped fish or shrimp. It will grudgingly accept flake food if very hungry. However, it is safe to say that because of its limited distribution, the species will probably never be available to the aquarium trade. Nor, as Jonathan discovered, is it a good candidate for public aquaria as it is delicate and does not compete well with larger fish. It is interesting, in view of the shy nature of the Oman Butterfly, that its close relative, The White Face Butterfly of the Red Sea, is said to be extremely aggressive.

The clowns, too, are almost certainly a new species. A number of specimens have since been collected from other parts of southern Oman and have been sent to specialist Gerald R. Allen. Another interesting fish from Bar Al-Hikman was a curious yellow-brown dottyback, or *Pseudochromis* that, on the February trip, swam into my net and caught itself in the mesh. At first I tried to let him go, but he was really stuck. When I finally got him free he looked interesting, so I kept him. Later, going over my slides from the trip I found a picture of an identical fish peering out of a crevice. This was puzzling because I hadn't tried to take pictures of anything except the butterfly. Then I remembered having seen the flash accidentally go off while the camera was pointed at the bottom. I had inadvertently pressed the shutter release and one of these dottybacks just happened to be there. This little fish seemed to be doing everything it could to be discovered. I was happy to oblige. We identified it as *Pseudochromis leucorhynchus*, a species known up until now only from Kenya.

The Oman Butterfly was formally described by Jonathan and Rod in the March 1989 issue of *FAMA*. It received the name *Chaetodon dialeucos*. The species name means "marked with white." The two original specimens which Jonathan and I caught are now in the collections of the California Academy of Science in San Francisco and the Bernice Pauahi Bishop Museum in Honolulu.



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