

Fish Portraits

By Isabel Cooper

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I have pursued my profession as an animal artist in queer parts of the world. And I have had a number of peculiar studios, round about in odd corners of wild forests, and islands, and seas. But the strangest of them all was most certainly my work-room aboard the S. Y. "*Arcturus*", during an Oceanographical Expedition of the New York Zoological Society.

The voyages of this expedition - twice out into the Atlantic Ocean, and twice down through the Eastern Pacific to the Galapagos Islands - were most interesting experiences. It was strange and fascinating, indeed, to leave behind the variegated dust of a continent, and to sail, week after week, far beyond the ordinary laneways of maritime traffic - in quest of fish, and their friends and enemies and victims. Strange for beings who live on the steady upper crust of the world to try to fathom the mysterious lives of creatures whose vast shifting element we cannot even breathe. Creatures who glide, cold-blooded and silent and suspicious, through green-lit waves, or blind and fearful, through black space, miles below the muffled whirring of ships' screws, and the quiet sound of spray and spindrift.

We made up in mechanical efficiency for our really serious lack of adaptability - even to the point of taking with us diving helmets, which enabled us to walk, for a few stolen minutes now and then, through the waving forests of the fish, and through some of their drowned meadows and grottoes and canyons. We were equipped with all the latest inventions for dredging and trawling and fishing, as well as with the greatest possible amount of enthusiasm. Our ship was exceedingly sturdy and staunch, and broad-beamed, and well adapted to the requirements of an ocean laboratory.

On the upper deck of the laboratory-proper, neatly wedged between a chart table and the ship's library, was my "studio". This may sound a bit cramped and crowded; studios are supposed to be reasonably spacious, with plenty of swinging-room for brushes, at least. But I assure you that the more tightly a floating studio is wedged, the more beneficial for the work and nerves of the artist! These boundaries fore and aft, together with the wall on the port side, made three directions in which I could not roll.

Possibly the most remarkable feature of my sea-going studio was the fact that it never remained quietly in one plane of space for longer than an instant. By which mild and rather negative statement I really mean the gruesome fact that, in open ocean, the studio and its entire contents oscillated violently and almost continually through one, two, or three dimensions. This activity became really astounding at times. When the ship was merely slanting about, objects on my desk would develop the most interesting and intricate sorts of rhythm all their own. So you can see the necessity of keeping things as compact as possible. Long ago, on dry land, I learned the value of keeping my gear shipshape. I have maintained - for long periods of time, and in a very few cubic feet of space - the jolliest of ateliers, in the interior of British Guiana. Also, I worked on board the steam yacht "*Noma*", in the Galapagos Islands. My studio in this case was merely desk room, bounded on two sides by the dissecting room. So that I have really had a very excellent training in the knack of perching around in uncongenial spots, with the most open of minds.

My immediate surroundings on the "*Arcturus*" were not bad at all - if unusual. The charts were fairly stationary, and gave me very little trouble. And, except perhaps in the case of the shelves of a second-hand medical book-shop, there is always something pleasing about rows and rows of books. Even when, as in this case, the shelves were inclined at a dizzy angle, to counteract the ship's rolling and pitching. To the starboard of my work-table was an open space which collected chairs and people, towards evening, and which was nightly rent asunder by the stress of arguments and discussions - always the breath of life to me. And out of my wide, salt-splashed port there was continually to be seen the sea - stormy Atlantic, or sparkling Caribbean, or slow, beautiful Pacific, with the comforting level of the horizon to furnish a refuge for my thoughts, at least, on tumultuous, busy days.

I had a great deal of trouble with my paints and inks and other rolling stock on board the "Arcturus". All these things would tend, in rough weather, to merge gradually into an indistinguishable mass, right before my eyes - no matter how many new and fantastic tethering devices and halters and barricades I invented.

Imagine a desk which slants in almost any direction, or else revolves with a strange, shuddering corkscrew motion. And a working light which shines indiscriminately from east or west or north or south. And models who are mostly alive and swimming. And you will have a faint picture of my "Arcturus" studio. I am thinking especially of a wild morning in Mid-Atlantic, when I had definitely made up my mind that the elements were not to hinder me from finishing a special portrait. My desk had been long since hooked firmly to the deck. And I had worked out a complicated system of paddocks for microscopes, ink bottles, brushes, etc. My model was a very small and unprepossessing deep-sea fish, whose tiny aquarium was wired to the microscope slide. As far as I can remember my paints were safely sliding about in a drawer. I was sticking to my chair in much the way that a rider sticks to a frisky horse - a matter of knee pressure. But we struck a wave whose trough just fitted the wide sides of our ship. Which means that you roll as far as possible without actually turning over completely in the water. Whereupon I was projected across the room, several of my tools jumped the traces, a whole section of heavy scientific literature moved forward in a mass, and caught me amidship. A funny moment. I suppose the microscope must have looked like the Campanile in an earthquake, with a strange pale little fish spinning off through space like a lost soul.

I was obliged to study new phases and phenomena of gravitation which had never before troubled me. And not the least of these concerned the control of my subjects. In order to achieve sketches to suit the scientists' purposes the fish had to pose alive. And they happen to be the most difficult models in the world. You cannot hold them still with any degree of comfort or success. They are nowhere near as easy to manage as my jungle models, the snakes and lizards and frogs of Demerara. Once you had a good firm grip on a snake's neck the problem was solved. And some of the lizards and frogs would even sit still of their own accord and look you angrily in the eye for minutes at a time.

There are just three ways to deal with fish. You can let them swim around in a glass tank, and regard them through the glass sides. Or you can have them flopping about in a pan of water. Or you can hold them up by the tail. If they swam, I considered myself lucky if they moved slowly and peaceably, allowing me a glimpse now and then of the pose which I wanted. But they were much more likely to whirl about in a panic, stirring up a terrific surf in the aquarium, and gulping great gulps of fear and dismay. Or they jumped right out of the water, and landed, slime and all, in the middle of my drawing or my face.

The most becoming pose a fish can take is in profile - so that you may catch the full, charming contours of his deficient brain-case, the backward sloping forehead, and the definitely receding chin. But this profile view is almost impossible to get. They prefer to gaze at you head on, concentrating all the sadness and distrust of their bulging, jeweled eyes upon you through the glass, and biting feebly at nothingness, with their strange skeleton mouths.

A fish model who is reclining upon his side in a pan of water is far from satisfactory. He either flops appallingly, or else dies, which is just what must be carefully avoided. When you find yourself with a really adaptable and congenial fish you may be sure it is dead! I arrived long ago at the point where I was willing to hold a fish up by the tail, though they are damp, slippery handfuls at best. But it is not often that I have been able to keep a firm hold upon a living fish. They have the most slithering of contours, as well as a violent power in their flat tapering muscles, against which the strength of the most capable human hand would not function.

I wonder whether I will be understood when I remark that the satisfaction of turning out accurate drawings of these diverse and beautiful creatures of the sea was only enhanced by the rather exceptional difficulties involved. This is quite true. There was an extraordinary pleasure in bringing the precision of fine pen and brush work to the many problems presented by silver scales, and transparent fish finds, and weird iridescence of sculptured fish faces. And all this amid wind and rain and tossing salt spray, in a tiny studio that swung and eddied through space, entirely without benefit of gyroscope!

The variety of subjects was endless. Flying fish; and great, powerful flashing fish from upper zones, and down through all the dimming zones to the chill abysses at the very bottom of the sea; fish of coral reefs and shallow banks, and sheltered rock pools, and the crater bays that cluster around the feet of the Galapagos volcanoes; all the strange life of the Sargassum weed; the countless microscopic floating beings, the one purpose of whose brief and exquisite, glittering, transparent lives seems to be merely to feed the fish of prey who harry them about, gulping them down in great brutal gulps. There is no use in feeling sorry for nary one kind of unfortunate fish, however. As far as I can see there is not a creature of the sea who has not some dark and pestilential enemy, no matter how sinister and fearful he himself may seem to some shivering lesser fish.

Shrimps of many peculiar kinds came under my lens, with all their different fashions in striped and spotted blazers. And crabs, and a small Pacific sea-serpent, and the unnatural organisms who creep about under rocks, and those whose inadequate physique does not even permit creeping - anemones, and sea cucumbers, and sea fans, which serve as landscapes for their slightly more active associates, the sea-urchins and starfish. At intervals I had the sea-birds and reptiles of the Galapagos for models, though the concentration of this expedition was mainly upon the actual life of the water.

I never knew before that there were so many different kinds of flying fish. It seemed that each day saw the discovery of a new delicate winged creature, with black-spangled cape of pinions folded round his silver length, and funny yellow mustaches curling from the sides of his thick awkward mouth, and wide-spread propelling tail of spotted silver tissue.

The extremely immature flying fish were the most delicately beautiful, I think, of all the fish I worked from. They made me think of fairy aeroplanes, with their filmy wings and balancers, and the flashing silver of their fuselages. One surface haul in open ocean brought us a baby flying fish, under an inch long, incredibly existing in a welter of foam and tossing spray, any three drops of which should have been enough to batter the life out of his frail body. He was almost transparent, with bright blue eyes and white wings, ribbed and black-edged, like the wings of ghostly little moths who fly about in tropical shadows. A beautiful morsel of unreality, compared with the monster flying fish we found among the islands - a foot long, with great, gleaming salmon-tinted ailerons, running amok among our small boats at night.

The flying fish offered quite the most hopeless problem for an artist. There could conceivably be only one worse kind of model than a swimming fish. And that would be a flying one! The only thing I could do about it was gaze at their quick, skittering forms from the deck of the ship, and hope that the impressions I received of their appearance were correct. But they veer and swerve and bank so fast between the crests of the waves, and so nearly match the water's sheen with their own, that it is very hard to get anything out of the most prolonged observation. And when they finally came to my workroom they were usually dead, with dimming silver bodies and close-furled wings. So that I had to keep pouring water over them, and pin out the fragile folds of their wings against white paper. And, most important of all, sketch them at breakneck speed, before they shriveled up entirely, and became worthless as well as models.

The element of speed enters into almost all my work from living creatures. There is always some very good reason why the sketches must be completed as soon as possible. This enforced absorption in my work is an excellent thing, particularly at sea, where it serves to keep my mind off some rather pessimistic reflections upon the activity of the ocean itself, and the very comparative pleasure of working on ships.

The big tuna-like and mackerel-like fish that were caught from time to time were the very hardest to work from. They had to be dead to be posed properly. They resented capture so bitterly that from the moment they were hooked until they gasped their last gasp, they never ceased to beat a wild tattoo of despair upon the deck, and you would have needed a slow-motion picture camera to catch even a blurred outline of them. Even before death their colors changed, merging through darkest metallic purple and blue to peacock green or russet or sunrise pink; the different tones suffusing each other more rapidly than the red of a blush covers the skin. So that I just had to pick out the likeliest general color, and trust for the best.

These fish are marvelously sturdy, energetic creatures, with clean and beautifully modeled stream-lines, and brightly shining silver or white-gold armor plates upon their heads, and corsets of dull-grained gun-metal, making a dark pattern against their polished sides. They seem to be built for speeding through the waves of the surface, and plunging through the thin translucent walls of giant combers and breakers.

Nothing could seem more different from these full-bodied, hurtling beings - shattering the tinkling green glass of the mightiest waves - than some of the fish of more sheltered waters. We caught many different species in the shallow bays of the Galapagos and Cocos Islands, and in the broad sounds between the islands. The variety of these fish was nearly endless: - small scarlet fish with spots of fiery blue along their flanks, who were preyed upon by the predacious frigate-birds; great golden-spotted black fish, rather dizzying to look upon, but graceful and calm as they floated about in our tanks on deck; the big awkward golden and brown groupers who infested all the islands' waters; the "Moorish Idol", of Hawaiian fame - one of the strangest creatures in the world, a sort of swimming decoration rather than a veritable organism - barred and edged with black, with a most unnatural and startling pattern of white and yellow superimposed upon, and coinciding quite casually with, his still more unnatural physique.

There was one kind of particularly endowed fish, a great, sad maroon-colored fish, with the extraordinary accomplishment of being able to develop a patch of brilliant yellow just back of his left eye, apparently at will. And there were many different kinds of surgeon and trigger fish in the bays and rock pools, and sooner or later most of them arrived in my floating studio, very much alive, or only partially so, or fading fast. They seemed to be particularly emotional. I had a large blue-green trigger-fish in an aquarium before me. Both he and the aquarium were long and flat, so that he could not turn around, which was a considerable comfort to me. But he was not so pleased, and appeared to be doing a good deal of gulping. And of course he wore a sad and martyred aspect. But I was certainly not prepared to see him turn absolutely in an instant to a pale and livid yellow, with the gill region an unpleasant orange. Even his eye which had been of a startling blue, turned to the same sickly and plague-smitten hue. He continued to gulp, and look more depressed than ever, and in about an hour had completely recovered his former complexion.

The moon-fish of tropical waters were a great deal of trouble to sketch, but were, notwithstanding, more fascinating to me than any of the others except perhaps the parrot fish. The smallest moon fish, about an inch and a half in length, was such an unreal bit of silver life that it seemed impossible to give any idea of it with crude paints. The only thing about him that stood out with any degree of visibility was his expression of bitter disillusionment. An emotion scarcely suitable to a fragment of fish life so thin and dun-colored that you could hardly see him at all except when the sad little creature banked in his slow circling, and a faint silver light gleamed from the infinitesimal flakes of metal upon his sides. And yet I had the very definite problem before me of transferring to paper the delicacy of his invisible fins,

and the shadow stripes of antique yellow that showed about once every ten minutes along his sides, and the fantastic precision of the rows and rows of graded, dove-tailing silver scales, and the careful limning of the grey-shaded gills and jaws.

An entirely different problem was the big, black, white-streaked moon-fish who haunted the anchorage waters in Chatham Bay, in the Cocos Islands. To merely say that he was black, with a white streak, is not beginning to describe this astonishing brute. His actual body was black, to be sure, but his fan-like tail was orange, with a fine black edge. His forward fins were yellow, and those aft of his very bumpy forehead were first orange, becoming rose-colored, and black edged, and covered with cobalt figures and characters. The bump was decorated with a complete set of blue stars. The most startling of his features, however, was the narrow streak of blue white which ran vertically across his back. It matched nothing else about him, and appeared to be some one's slip of the brush.

I saw a group of these harlequins swim past, upon one of the occasions when I was down in the diving helmet. A rare sight, indeed, to see these piebald, silent, fantastic beings moving slowly through dim green water, rose and blue fins waving in unison, and little swirls of water smoke coming from the vigorous sculling of their orange tails, and the vertical lines of white standing out like streaks of brilliant daylight, against the dark mass of the fish.

It was quite the most marvelous experience of the whole trip, to be able to descend into the world of the fish, and see them gliding about among the seaweeds of their home meadows, and forests. The diving helmet was most satisfactory - a big bronze hat, of outlandish proportions, with a tube reaching up into the proper atmosphere of human beings, and a glass window opening upon the misty, swirling depths, and the rocks and branching corals of the fish's homes. It would have been impracticable to try and sketch the fish themselves under water, but I wish I had been able to manage oil paints and a canvas or two, to get some impression of this wonderful underwater scenery.

There was an amazing lot of color in it. The rocks themselves were often quite brilliant, or covered with startling sponges, and seaweeds, and those strange organisms who pass their whole peculiar lives clinging to the surfaces of rocks, and take on the same colors and textures. There was an immense variety in the inanimate scenery, as well. In some places the rock formation is very impressive, with towering cliffs rising dark and formidable out of shadowy valleys, full of a shifting sediment of mist and fog and faintly gleaming fins of shy fish who will not venture out in their brilliant garb to be observed in all their magnificence against the unfriendliness of the plain grey rocks.

The beautiful coral forests and glades, with their winding paths of sand and their ceaselessly waving seaweeds, are often as bright as day, except that the shafts of brilliant sunlight which strike obliquely through the surface ripples are changed by the molten magic of the water to clouds of dim green and gold. And all proportions are distorted under water, so that the middle distance seems like a realm that you could touch, and the far distance like an endless valley of shadows and mysteries.

I wish that it were possible for us to explore the deeper waters, as well as these beautiful, illuminated shore regions. How wonderful to be able to stroll, searchlight in hand, at a depth of two miles or so, and observe what goes on in these colorless cold places. I suppose the latent colors of the inhabitants would appear, if we could apply the color-giving light. Certainly many of these creatures are brilliantly colored when they are brought to the surface - scarlet crabs and shrimps, and sea-cucumbers of the most unnatural magenta and purple, and strangely tinted star-fish. But the colors are as nonexistent, down under the water, as the colors of brilliant silks that are laid away in a cupboard, or as the hues of a flower garden at midnight.

There is an extraordinary deep-sea crab, of bright scarlet, with long spiky legs, and a remarkable series of turrets and towers and steeples of pink completely covering his bowed and sculptured back. A small brother of this specimen was even more scrawny and prickly than himself. The workmanship displayed

in the careful construction and modeling and burnishing of these incredible lacquered creatures always impresses me, particularly when I realize that they are never seen, except perhaps by some strange little night-swimming gnome of the deeps, who may mock at them with the faint phosphorescence of his own gleaming headlights. But that would not be enough light to bring out the brilliance which the light of day shows to the eyes of man.

A more than strange, mysterious world, this, of the bottom of the sea. A million heavy cubic leagues of blackness, probably without the surging which stirs the upper levels of the sea; blacker than the darkest night on earth, and nearly at freezing temperature; lighted only with thin gleams of colorless phosphorescence, flashing like the ghosts of searchlights. A fearful home for cringing, fragile fish who have no place of refuge, and no protection against their enemies. There must be bitter tragedies enacted down there in the darkness and silence. Yet the safety of a fish is not an individual matter. Because there are always enough of each species left to furnish new generations, to be the prey of new generations of their enemies.

I had many extraordinary little models from this region. They were mostly subjects for the microscope, being usually under an inch long. They had to be arranged in what we hoped were life-like poses, in tiny glass boxes. And they had to be covered with water, to keep them from shrinking past recognition, which did not help the artistic end of things much. Because the water in the miniature aquarium would reproduce the activity of the ship, even down to the least, most innocuous shivering of the propeller. So that the poor little defunct model would appear to be dancing a trembling schottische of his own invention, instead of lying quietly in his watery grave.

On rough days there would be even more trouble, the water in the aquariums simply flying out at the sides at every roll. Frequently the specimen would fly out too, which was the last and greatest calamity, owing to the fact that each one of these tiny slivers of dead, transparent silver that came to my workroom was in all likelihood the only one of its kind out of the ocean, and therefore invaluable. And there is nothing harder to pick up, or more pathetic to look upon, than one of these frail scraps of organic life, when it has been crushed by the violence of gravity against a rough heaving deck, and become breaded with the usual mixture of dust and salt.

The greatest difficulty of all in the painting of these little deep-sea fish, lay in the fact that I had to look at them through the lens of a microscope. A very complicated problem, at times, to keep my eye focused, and the microscope focused, upon something almost invisible which slid round and round in a restless pool of water; which suffered all the distortions which the mirages of surface tension make, and which showed only feebly at best under the shifting glare from the sky upon the ripples of the water.

But there were interesting problems of technique in the painting of these exquisite beings. Imagine a strange fish, which seemed like a shadow of dull brown and grey, as it floated in the small glass tank. Yet which proved, under the lens, to have fine, many toothed, transparent jaws, the modeling of which could only be seen by studying the highlights; and great bulging gills, with delicate ribs and tendons and arching segments - thin and fine as blown glass, and as intricate and finely traced as the cables of a suspension bridge against the sky; a back-bone which was indicated only by groups of finest palest stippled ridges; and rows and rows of tiny black-rimmed lamps along its sides, and around the inner edges of its shining invisible jaw-bones.

Or picture to yourself a sea-serpent, with all the dread array that such a black-hearted creature should have, yet all to a fairy scale of millimeters instead of feet, and all in a fairy color scheme of greys and transparent shadows. One infinitesimal eel of the depths was as colorless as the seawater in which he floated, and I could only detect his faint outlines by shining a beam of strong light up through the bottom of the aquarium, and right through his own glass-clear tissues. His eyes were rigged far out from his head on threads like spun silk, and the black pupils were the only visible parts of him, even under the microscope. I never hope to understand the complicated calculations of physics by which it is proved

that the smaller and frailer a creature is the less it is affected by pressure. But there is, doubtless, a lucid bit of physical truth which accounts for it, else how could these wisps of ocean life exist among the heavy, shifting masses of the waters?

Very different from these transparent ghosts are the many coal-black, misshapen little gnome-like beasts, who haunt the mid-zones - with their humped black velvet-clad bodies, and inadequate fins, and expressions as of infuriated kittens snarling in dark corners. They have little silver torches over their noses and wide, many-fanged mouths. A problem for a Rembrandt - these dark creatures, against their lightless background, with the gleaming white of their sharp teeth for a touch of Chiaroscuro!

The various kinds of octopi and squid which we caught presented the strangest problem of all for me. They were most often brilliantly colored, with long, beautifully articulated tentacles and feelers. And all this was fairly simple to sketch. But the quantities of small spots which kept appearing and disappearing on their backs were the most impossible things to reproduce that I have ever encountered. I have had lizards and frogs change their entire color schemes right before my eyes. But in that case, at least, I could wait and catch the changes, and gradually complete a series of drawings showing the range of their different complexions. But in the case of the octopus, there was simply nothing to be done, because change is the natural state of an octopus's complexion. These weird flashing colors keep glowing and fading as long as the creature is alive. You might as well try to paint a portrait of a modern electric sign, or the glowing and fading of the embers of a fire.

I should like to see a colored motion picture taken of one especial small squid, who completely baffled me. His general color was turquoise blue, very transparent - the variegated and startling colors of his inner anatomy showing through in spots. He had craven green eyes, with marvelous opal pupils, and drooping, purple-tinted lids which only accentuated his general air of knavery. But most forbidding, and, I should judge, paralyzing to any lesser creature who found itself within range of those wicked blue tentacles, was this strange peculiarity of his hide - that waves of brown and red and orange spots kept sweeping across it, dimming and darkening in ghostly fashion, with an uncanny, syncopated rhythm.

It is hard to tell which of all the strange captives of the sea that came to our floating laboratory was the most interesting and outlandish and rare model for an artist. There were difficulties with almost all of them - whether green and scarlet parrot fish, with his wise parrot leer, or the jewel-eyed puffers who were swept up in hundreds on the shores of the desert Galapagos, or the complacent, old gentlemen-toadfish, or "Antennarius" - the spotted fawn of the Sargassum weed, or the myriads of ocean-going crabs, green and yellow and gold, with white sign-boards upon their backs. But there was certainly interest and delight in the work of painting the portraits of these silent, alien beings, in all the splendor of their natural appearance, before despair and death and decay reduced them to mere specimens, and blotted out the glimmering of tissue fins, and the shining of strange colors, and the gleaming of silver scales.

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ⁱ The original typescript by the author is in the Mahaffie family archives, c/o John B. Mahaffie, 4420 49th St., NW, Washington, DC 20016, 202-271-0444, jbmahaffie@gmail.com. This edition typed from the original by John Mahaffie.