


# HOW SAMMY WENT TO CORAL-LAND

## Chapter 5: In Coral-Land

by Emily Paret Atwater



*Oh! do you know  
Where the sea-flowers blow,  
Down deep in the ocean's bed?  
Where the shy plants hide  
'Neath the swelling tide,  
And the Anemone lifts its head?  
Where the Nautilus frail,  
To set his sail,  
Creeps forth from the silver sand?  
Then come with me,  
And you will see  
The wonders of Coral-Land.*

“So this is Coral-Land!” exclaimed Sammy, wonderingly. “What a beautiful place it is!”

He and his companion had soon recovered from the fright caused by their recent unpleasant experience, and now, filled with a comforting sense of tranquility, they swam leisurely along in the placid water. The dangers and privations of the journey were over, they had made an excellent meal on some delicious tidbits found among the weeds, and nothing now remained but to enjoy to the full the delights of their new home.

It was truly a charming place, being in reality a good sized lagoon, or lake, shut off from the outside world by the protecting coral-reefs which encircled it like a large ring.

There are many such lagoons, and this one, called by the fish-world, “Coral-Land,” because of the beautiful coral within its depths, was only one of many coral-lands, for coral-islands, and coral-reefs are found everywhere in tropical seas. Sometimes these coral-reefs are found near the shores of large islands, or continents, and then they are called Shore-Reefs. There are also Barrier-Reefs, usually enclosing an island in the deep sea, and Lagoon Islands or Atolls, which enclose a lagoon, or lake,



such as the one where Sammy now was.

Near the centre of this Lagoon arose another ring of coral-reef, like a small circle within a larger circle, and in the centre of the second little lake so formed, was a tiny coral-island, dotted here and there with gay flowers, and waving palm-trees.

Outside the reefs the white-topped breakers thundered on unceasingly, but the calm waters of the Lagoon were undisturbed by their fury. Far above and below towered the magnificent rocks, forming so complete a barricade that sharks and very large fish found it difficult to gain an entrance to the Lagoon, and could never penetrate to the inner lake, where the inhabitants of Coral-Land sometimes took refuge.

As for the smaller fish, the reefs were punctured with innumerable little passages and caverns through which they could easily gain access to the outside ocean, if they wished, but most of them preferred the quiet and security of the Lagoon. Many had been born there and knew no other life, and many, like the Sun-Fish had grown so fat with good living that it would have been almost impossible for them to squeeze through the largest opening.

In fact the Lagoon was like a large aquarium of curious and beautiful fish. Floating lazily along was a round, prickly Globe-Fish, and close behind him drifted a cross looking Porcupine-Fish, an odd, countrified sort of creature, with his gaping mouth, the sharp spines on his ugly body raised in preparation for a possible attack from the strangers. Away off among the distant rocks some dazzling Gold-Fish chased each other merrily hither and thither; a brilliant blue fish darted out from a near-by thicket, and a company of scarlet fish swam past, making a beautiful picture, with the clear, blue waters of the Lagoon as a setting.

Far down below myriads of gorgeous shells lay scattered about on the white sand like gay figures in a carpet, every color showing plainly through the wonderfully transparent water. Here a tree of coral rose up from the depths, its branches covered with lovely star-shaped flowers; farther below a bed of shrubbery sprang from hidden rocks, and close at hand a colony of beautiful Sea-Anemones lifted their proud heads, and swayed gracefully in the water. Some of these flowers were shaped like chrysanthemums with rows of fringed petals, some were shorter and stouter, like dahlias, and all formed a mass of brilliant color, pink, purple, orange, blood-red, and



sea-blue, striped with pink.

Never had Sammy seen such a sight as this bed of Anemones, and, struck with admiration, he stopped to examine them more closely. But the experienced Pilot warned him to be careful.

“They look very fine,” said he, “but they are not to be trusted.” You know, of course, that the Sea-Anemones, like almost all flowers and plants which grow in the ocean, are living animals, polyps, we call them. The Anemones are polyps, and the coral big and little, living and dead is being made, or has been made by polyps.


“You see that bed of pink flowers over there, and those green rushes, and those fern-like plants? Well, they are all living polyps, or colonies of polyps, some kinds of which leave coral when they die, like the coral polyps proper.

“As for the Anemones; those innocent looking flowers really possess powerful weapons in the shape of tiny lassos, which are concealed in lasso-cells. These lasso-cells, which are very small, are carefully hidden in the walls of those petal-like tentacles, or feelers of the Anemone. Still other lasso-cells are hidden in the mouth of the Anemone, and inside its stomach. In the cells the long, slender, thread-like lassos lie coiled up ready for use. The lassos escape from the cells by turning themselves inside out with lightning-like swiftness, and woe to the crab, or small water animal that comes in contact with this lovely flower! It is immediately pierced by the lassos, and poisoned by the deadly fluid hidden in the cells. Even big fish have been known to die in great agony when touched by the Sea-Anemone.

“The Anemone frequently swallows a whole crab (if it is a good size itself) and is particularly fond of gulping down its food in this manner, keeping it for awhile in its stomach to squeeze out the juice; after which what is left is thrown out through its mouth.

“All Anemones have mouths and stomachs, and some have rows of eyes like a necklace around the body. The mouth is a small opening in the centre of the disk, or head of the Anemone, and this leads into the stomach below.

“Sometimes the Anemone uses the tentacles around the disk to help feed itself, and it also uses the mouth, lips and disk for the same purpose. When the Anemone is at rest it expands its disk and draws in the sea water, and when it is disturbed it



contracts, and throws out the water from its mouth. The Anemones are very sensitive to touch, and will shrink up like a sensitive plant. They are of all sizes too; that little blue one over there is only about one-eighth of an inch, and that big purple fellow stands over a foot from its base.


“You see that the body of the Anemone is shaped like a column, the flat head, or disk, being at the top, with rows of tentacles, like petals, fringing the edge. The bottom of the Anemone is also flat, and with this flat base it holds fast to the rocks to which it attaches itself. The Sea-Anemones are able to move about from rock to rock, and in that they differ from their first cousins, the Coral Polyps, for they are always stationary.

“The Anemone has several curious ways of reproducing itself. Sometimes one animal will divide itself and become two individuals, and sometimes pieces from the bottom of the Anemone will become separate Anemones. Another strange way is by throwing out the young through the mouth, and it doesn’t seem to make much difference whether they come out in the shape of eggs, or whether they are fully formed, as is frequently the case.

“Still another process of reproduction is by budding. A small lump appears on the parent Anemone; this keeps on growing and growing until it soon has a mouth, disk and tentacles like the mother; after which it separates, and starts out in life for itself. Whole colonies of Anemones are formed in this way.

“But come,” said the Pilot. “Here we have spent all this time talking about the Anemones, and the coral is far more interesting and beautiful. Suppose we take a look at this large tree,” he went on in his most school-master manner. “See how lovely it is with its trunk and branches covered with little star-shaped flowers! Those flowers are the polyps, and they, or rather their ancestors, made the tree. You know that the most important of the coral polyps live in groups, or colonies. They usually reproduce themselves by budding in very much the same way as do the Anemones, but the Coral Polyp does not separate from the parent when it gets its growth; it stays fastened to the mother, and soon imitates her example by producing a bud which becomes a coral flower. And so it goes on until there is a whole colony of animals, each one having a separate mouth and stomach for his support, and yet continuing as a part of the family.

“I told you that the Anemones and Coral Polyps were first cousins, and so they



are, for almost the only difference between them is that the Anemones have no coral in their make-up. Then too, the Coral Polyps cannot move about like the Anemones, and they are somewhat different in appearance, being more like lovely daisies, or stars, than chrysanthemums.

“The coral is made from the lime of which the water of the ocean contains a large quantity, and is hidden in the sides and lower part of the polyp, there being none in the stomach and disk. When the polyp dies the fleshy part decays, and the coral, which is the skeleton of the polyp, is left. It is very hard, being composed of carbonate of lime, and will last for ages. The inside of this tree that we are looking at is all dead coral, or corallum, while the flowers that are on the outside of the trunk and branches are the living animals.

“Some kinds of coral polyps bud and extend in different directions, and that accounts for the many wonderful shapes in which coral grows. Some species divide in two, like the Anemones, but the majority live in families, or colonies. There are coral reefs and coral trees, domes and balls of coral, graceful vases, and all sorts and kinds of different plants and odd growths.

“You know that living coral cannot exist above the surface of the ocean, for exposure to the sun and air kills the polyps; yet it is always growing upward and outward, the living animals making their homes upon the tombs of their ancestors, so to speak, until they in their turn perish and add their skeletons to the growing structure.

“The most wonderful of all coral is that found in the coral reefs, which are so old that the most ancient fish in all fishdom, or his great-grandfather before him, could not tell when they were begun; and so hard and enduring that the storms of centuries have never been able to destroy them. But strong as they are, the mighty ocean, (both friend and foe to the coral), is still stronger, and in time the constant washing and beating of the tides wear away portions of the hard rock, changes the formation of the reefs, and helps in a large measure in the making of the lovely coral islands. But still the coral goes on growing, the living polyps protecting the dead coral below and beneath, and then dying to make way for the next generation. And so the coral holds its own in spite of the fury of the sea, and the many little boring water animals that strive to penetrate the dead coral, and crumble the rock into ruins. But the coral has its friends, as well as enemies, and the most useful of the first are various weeds and



plants which grow on the reefs, and beside protecting the upper parts from exposure, help in their formation by leaving a kind of coral behind them when they die.

“If you will look about you,” went on the Pilot, “you will see what beautiful colors some of the coral has. See that big piece over there like a large red toadstool, and this curious vase all covered on the outside with tiny polyps like purple stars! You will find it in many lovely colors, and still more fantastic shapes. I have heard that some varieties of pink and red coral are very highly valued for jewelry by the two-legged land race.”


In this manner the learned Pilot discoursed to his pupil, being only too glad to have an excuse for showing off his superior knowledge; and Sammy drank it all in, having in mind the time when he should return to his far-away home and brag of his adventures to the simple fresh-water fish.

Beside acting as guide, and explaining to his companion the mysteries of Coral-Land, the Pilot kindly introduced Sammy to some of his acquaintances and friends. One of these was a very large odd-looking Sun-Fish, a curious creature, all head and no body. This fish, being very haughty in his manners, and exclusive in his tastes, was considered very aristocratic: and having spent the greater part of his life in the Lagoon, was acknowledged as the great social leader of Coral-Land.

The Sun-Fish presented Sammy to the Trunk-Fish, (so named from his curious shape), and the Trunk-Fish in turn introduced him to the Globe-Fish and the Porcupine-Fish, and they made him acquainted with the family of scarlet fish, and some handsome gold-fish. Two of the gold-fish, called respectively Gay and Gilt, were particularly friendly to Sammy, who soon found them much more entertaining than the worthy, but somewhat prosy Pilot.

So, as the days went on, our hero spent more and more of his time in the company of his new friends, while the Pilot was content, now that his duty was done, to gossip with the Sun-Fish, or betake himself to some particularly good feeding ground of which he knew. Coral-Land abounded in quantities of good things such as fishes love, and Sammy soon grew fat, for Gay and Gilt were much less greedy than the Pilot, and always shared their meals evenly with their friend. It did not take him long to learn what to enjoy and what to avoid, both in the way of food and acquaintances, and he found it a most useful form of knowledge.





Thus he learned to beware of the graceful jelly-fishes who were constantly to be met floating about, their long tentacles streaming behind, and their umbrella-shaped disks expanding and contracting as they swam, for he knew that the Jelly-Fish was a cousin of the Sea-Anemone, and that its tentacles could sting most unpleasantly. So he admired them from a distance, and very beautiful they were, especially at night, when their gleaming phosphorescent bodies lighted up the darkness of the sleeping Lagoon.


Sammy learned that the affectionate embrace of the many-armed Octopus was not to be desired; and that a thicket of seaweed is a good hiding-place from a chance enemy, and is apt to contain many delicious tidbits in the way of fish food. He knew the manners and habits of the many brilliant-hued fish who live in Coral-Land; and he knew that the floor of the Lagoon had as many curious and beautiful inhabitants as its waters. There the Star-Fish sprawled on the sand, the Sea-Cucumber crawled along, expanding and contracting its worm-like body; there the Sea-Urchin hid himself in the rock, and shells large and small, pink, blue, red and all the colors of the rainbow lay scattered about on the sand and rocks.

All these shells had, of course, their living inhabitants, for a shell is always the home of some water animal, and when the owner dies the shell is left as a monument, and very beautiful monuments most of them are.

The Sea-Snail, the Cockle, the Razor-shell and many others have each a good-sized foot which helps them in crawling along, or in boring holes for themselves in the rocks.

Sammy had taken some pains to become acquainted with the Nautilus and his family, whose beautiful little boats he had often seen sailing gaily along on the surface of the Lagoon, especially after a storm when the water was calm.

The Nautilus has a beautiful spiral mother-of-pearl shell, and when on a voyage it uses part of its body as a sail, and the long tentacles about its mouth help it in swimming. It spends a good deal of its time on the bottom of the ocean near the coral reefs, and can creep along very quickly, supporting itself with its head and tentacles. The head is flat and muscular and acts as a defense to the opening of the shell, and the Nautilus also possesses very strong jaws which it makes good use of in crushing crabs and other shell-fish on which it feeds.



Sammy found it rather difficult at first to come to a friendly understanding with the Nautilus, for the gallant little mariner was somewhat shy of strangers, and would frequently show his distrust by suddenly drawing in his tentacles, upsetting his shell, and dropping to the bottom of the Lagoon, thus effectually cutting short any conversation. But this was only his way of protecting himself; after a time he grew bolder, and being a true sailor spun many a wonderful yarn about his voyages.


To the Nautilus Sammy was indebted for a most important piece of information. It happened in this wise. He had now spent several weeks in Coral-Land. He knew the Lagoon thoroughly from end to end, the best feeding and hiding-places, the delightful caverns and caves in the reefs, and was on friendly terms with almost all its inhabitants. But a fish is a restless creature, and, strange to say, Sammy was daily growing more and more weary of this peaceful Lagoon. It was all very wonderful to be sure, the beautiful coral in its lovely colors and fantastic shapes, the gay flowers and plants, the strange shells, and the brilliant, sparkling fish; but then the warm water was certainly enervating, and the mountain stream that he called home had many charms, now that he was no longer there.

The Pilot-Fish had long since departed for other scenes, and Sammy wished that he had consented to accompany him. Now it was too late, and the only thing to do was to wait and hope for some way of beating a retreat. Not caring to confide his weakness to his two friends, who would not understand it, he kept his secret to himself, longing more and more for that quiet mountain stream so very far away.

One fine day as Sammy was swimming sadly along, and alone, near the outer reef of the Lagoon, his friend, the Nautilus approached him in great excitement.

"I've seen such a strange sight," he exclaimed eagerly, sailing close up to the salmon in his haste. "This morning I thought I would have a little adventure, for it's very tiresome spending so much time in the Lagoon, so I found my way, through a passage known only to myself, out to the ocean, and such fun as I had sailing up and down! To be sure I had to keep a pretty sharp outlook, for it is a dangerous place out there. However, nothing of any consequence happened, and I was beginning to feel a little disappointed, when suddenly, only a short distance away, I saw a school of large, pink fish, very much like you in appearance, and all swimming north. Never before in all my experience have I known a school of fish of that kind in our neighborhood! It





will be the talk of Coral-Land for a week. Excuse me, but I really must go and tell my family,” and abruptly upsetting his shell the Nautilus disappeared at once from view.

For a moment Sammy hesitated. Gay and Gilt, with his other friends, were far away. Should he try to find them and say good-bye? No, it would take too much time, and they would be sure to protest against his going, and then the school would be out of sight. One swift glance about him, and away he dashed; another moment and he was at the reef, a passageway out was found, and darting through the breakers, he rose to the surface and looked forth once more on the broad ocean. Behind him lay all the wonders and beauties of Coral-Land, and there, far away towards the north, a mass of moving fish darkened the surface of the water. Could he reach them before they disappeared, or before some hideous monster saw and intercepted his flight? Away he darted, faster, faster, and still faster. Now the school was getting larger, he was surely gaining; still nearer, and he could see the sun gleam on countless scales; nearer still, one final effort, and the school of salmon opened to receive him, and then swept on northward and homeward.

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There was a pause. Grandma dropped her work, and leaning idly back in her rocking-chair, gazed dreamily out over the ocean, sparkling in its sunset glory.

“Is that all?” inquired Eleanor. “Didn’t Sammy really get home?”

“That is all,” said grandma. “What became of our hero after he joined the school of salmon I never knew. In all likelihood he never left his companions. But whether he guided them to the pleasant waters of that mountain stream, or whether they took him with them to some lake or inland river, I cannot tell.”

As for Gay and Gilt, they long mourned the mysterious disappearance of their playfellow, and often now when the sun shines brightly on the blue waters of the Lagoon, when the Nautilus sails forth on his voyage, and the sea-flowers sway and nod in their deep beds, the two gold-fish swim sadly about amid the depths of Coral-Land and tell stories to the passing stranger of the merry young salmon who came from the north, so long ago.