CORAL REEF FEEDERS pdf

1: Best Coral Food for SPS, LPS, Reef Tank - () Reviews & Guide

Coral Feeder found in: Coral Feeder 2 pack, EKOMIXO Fish Feeder Battery with Air Connection, Reef Chili Coral Food, Original Blend Frozen Food, ZoPlan 1 oz, AFS Automatic Feeding System, AF Energy Growth Acceleration Food, AF.

Biology The building block of coral reefs are the skeletons of generations of hard corals , composed of calcium carbonate. As each polyp dies, it leaves behind its skeletal structure, upon which the next generation of polyps grow, enlarging the reef. Grazing fish such as parrotfish , sea urchins , sponges and other organisms break down the coral skeletons into fine fragments, which settle into spaces in the reef structure. Coral reefs are among the most diverse and productive biological communities on Earth. The reef structure provides habitat and shelter to a wide variety of marine plants and animals - it is estimated that a quarter of marine life lives in or around coral reefs. Additionally, corals act as water filters, increasing water quality in the vicinity of the reef. Offshore, the reef structure acts as a breakwater , protecting coastlines from ocean waves. The wide variety of flora and fauna has turned some coral reefs and the islands and coastal areas near them into popular tourist attractions. The reef is in the Pulley Ridge area, a north-south-trending drowned barrier island, more than 60 miles km long, approximately 40 miles 70 km west of Dry Tortugas National Park. It is up to three miles wide and about 20 miles long 5 km wide and 30 km long , and located at a depth that ranges from to feet 60 to 80 m. Unlike most coral reefs, which tend to grow vertically, Pulley Ridge coral grows flat, an adaptation to the limited penetration of light at that depth to increase surface area exposed to sunlight. Similar deep reefs occur in other parts of the world, e. Various efforts are being made to grow coral reefs and coral, a difficult task; they are fragile, react to small changes in their biological environment. Coral reefs are being grown using a process called "mineral accretion". Applying a low voltage to a metallic structure causes limestone to build on the metal, upon which baby coral can attach, settle and feed. This greatly speeds the coral reef growth process. Numerous photos of the results are available at their website. Formation A fringing reef can take ten thousand years to form, and an atoll can take up to 30 million years Most present-day coral reefs were formed after the last ice age when melting ice caused the sea level to rise and flood the continental shelves. This means they are less than 10, years old. As coral reef communities were established on the shelves, they built reefs that grew upwards, keeping pace with the rise in sea level. Reefs that did not keep pace became drowned reefs, covered by so much water that there was insufficient light for further survival. Coral reefs are also found in the deep sea away from the continental shelves, around oceanic islands and as atolls. The vast majority of these ocean coral islands are volcanic in origin. The few exceptions have tectonic origins where plate movements have lifted the deep ocean floor on the surface. Images Inhabited cay in the Maldives The three major zones of a coral reef: Coral reefs are not found in coastal areas where colder and nutrient-rich upwellings occur Anatomy of a coral polyp Table coral Close up of polyps are arrayed on a coral, waving their tentacles. There can be thousands of polyps on a single coral branch Coral polyps Most coral polyps are nocturnal feeders.

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2: Coral reef - Wikipedia

Coral Feeder Tube SPS HPS Feeder Long Version Fish Reef Coral Aquarium Sale Part.

How do polyps and anemones deal with larger prey? By far the majority of individual marine invertebrates on the coral reef feed on microscopic prey borne on the ocean currents, sifting it from the water with a variety of net- and mesh-like body parts. These filter-feeding animals are usually sessile, or at the least slow moving, so they rely on their food to come to them, rather than the other way around. Which invertebrates are filter feeders? As well as the coral polyps, animals such as tubeworms, basket stars, clams, sponges, and even some kinds of crabs feed by filtering plankton from the water as it moves past them. Most of these animals feed at night, thereby avoiding the risk of exposing vulnerable body parts during the day, when so many fish predators are active. By concentrating their foraging activity into the night-time period, filter feeders can also benefit from the migration of unimaginable numbers of zooplankton as they rise to the surface waters at night to feed on microscopic plants. How do filter feeders capture their prey? A prerequisite for a filter feeder is to be situated in at least some water current so that it can feed on the tiny animals that flow past it as if on a conveyor belt After this, there are a few different strategies, Filter-feeding crabs have claws like mesh baskets that they sweep through the water Anything they catch is then directed towards the mouth. Other animals, such as sea squirts and sponges, have millions of tiny hairs, known as cilia, which beat in waves and increase the flow of water and plankton into them. This food is either directed straight into the mouth or caught in a mucus-lined trap that catches all the particles in the water before the animal ingests them, like fly paper. The idea of a sticky trap is also used by sea cucumbers, which extend branched and slightly sticky tentacles into the current to capture their food. However; not all sea cucumbers feed like this; some push their feeding tentacles out across the substrate to feed on organic particles that sink out of the water column. Bivalves also feed by filtering the water they draw into themselves to breathe. Like corals, giant clams have symbiotic algae living in the exposed portion of their mantle, which also supply them with food. Some sponge species enter the same relationship with algae to help them satisfy all their nutritional requirements. Plankton is a term that describes a huge variety of small, unrelated animals and plants. They vary enormously in size; some zooplankton may be hundreds of times larger than phytoplankton. Larger members of the plankton are more nutritious, but also more mobile and likely to resist capture by basic mechanical means. Such prey may need to be subdued, and anemones and their relatives achieve this using nematocysts. When triggered, these cells release tiny harpoonlike structures that are attached to the anemone or polyp by threads. They drive into the flesh of the prey, spinning counterclockwise to go deeper and delivering toxins to paralyze. Check out these related articles:

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Best Coral Food Reviews 1. Use a syringe, turkey baster, or other appropriate tool to get the food right up to where the coral will easily be able to absorb and benefit from the special blend of nutrients. Another great thing about this product is that, with normal use, one container should last for three months. This is an economical and effective choice. Because it has a little something for everything in your tank, it helps take some of the guesswork out of what you should use to provide all the right nutrients. Phytoplankton feeds the microfauna that live in your tank, which in turn feed the coral. This works in combination with the included zooplankton to contribute to the vast range of nutrients included in Coral Frenzy. Coral responds exceptionally well to Coral Frenzy. There are no secret ingredients or fillers and everything is listed on the side of the container. This is the first product that has attempted to bring this natural element into a closed aquarium system. Any coral or marine animal that usually feasts on phytoplankton, zooplankton, and other dissolved organic materials will get the proper nutrients from Marine Snow. You can use it to broadcast feed everything in your tank or use a syringe to give it directly to the coral that needs it. If any appears to coat the surface of the water, simply mix it in with a fish-safe wand or allow it to be dispersed by your pump. This formula is a mixture of ingredients that occur naturally in the ocean and gives your invertebrates exactly what they need. This is a great choice for coralsâ€”and if your aquarium is home to sponges, clams, or scallops, it will keep them healthy and thriving, too. Target feeding your coral is the recommended method for this complex blend, but you can add it to an area with a high current to disperse it around your tank. If you choose to broadcast feed PhytoPlex, be very careful not to use too much. It contains copepods, a small crustacean that will satisfy even the pickiest of eaters in your reef. They also reproduce naturally and continue to contribute to the environment of your aquarium long after you introduce them. Specifically, these pods are of two different species: Tigriopus californicus and Tisbe biminiensis. Tigriopus californicus is rich in omega-3 fatty and amino acids. Females lay hundreds of eggs which, when mature, will help keep your tank clean. Tisbe biminiensis are smaller and live in small cracks. They also help keep your aquarium clean and keep any fish you have in with your coral entertained as they hunt for these copepods around every crevasse in your tank. What is the Best Food for Corals? This is a great choice for a new reef aquarium owner because it will help make sure that the right nutrients get into the water. This helps keep your tank clean and maintains appropriate nitrate levels, which helps to protect not only the coral but also all the fish and other creatures in your aquarium. There are no secret ingredients or fillers in Coral Frenzy, In fact, they list all the ingredients right on the side of the package. What Does Coral Eat? Most corals depend largely on phytoplankton, which is small, sometimes microscopic, water plants or algae. Some will ingest zooplankton, which is a variety that is self-propelling and therefore a little more difficult to get a hold of. Another source of nutrients that are very important to coral is bacterioplankton, which is usually called reef snow. In addition to this, the coral can also utilize various dissolved organic matter that can easily cross their cell membranes and go directly into the coral. How Does Coral Eat? Coral has to be triggered to get ready to eat. Once they are stimulated, the polyps expand and are ready to take in food. A lot of things can act as a trigger for coral, including changes in temperature, light, oxygen content, and movement in the water. Coral that can survive lower light live in deeper water and tend to be LPS coral. Coral in shallower water can more easily feed on plankton. Coral polyps are in the same family as jellyfish and anemones. They have elongated bodies and small at times microscopic tentacles while having no real head. Coral polyps stay inside their exoskeleton during the daytime and become active at night, although this behavior is adapted to aquarium life when there is no natural sunrise and sunset. As soon as something touches the polyp, a tiny barb called a nematocyst kills the plankton or whatever has triggered it. How to Feed Coral? While feeding fish is usually as simple as just dropping the right amount of flakes or pellets into the water, feeding coral is a little more complicated. Even though most coral food is designed to cover a range of species and provide a lot of nutrients, you should still get to know

your coral and understand what it needs to thrive. This is because any food that goes uneaten could stay in the water and eventually cause the nitrate levels to rise. When feeding coral, there are two different methods to try. One is broadcast feeding. This is when you use the current from the pump or some other method of stirring up the water to disperse the food evenly around the tank. This is a less controlled method of feeding. If you put too much food into the water this way, it could go uneaten and lead to future problems. The other method is target feeding. Target feeding involves using a syringe or other tool to deliver the perfect mix of food right to the coral that needs it. You also have to consider the kind of coral you have before deciding what feeding method to use. Because LPS coral is more aggressive, using a targeted feeding method might be a better option. If you only have SLS coral, the broadcast feeding method could work well because this will allow the food to get into all the little nooks and crannies, making it easier for this non-aggressive coral to eat. Conclusion Finding good coral food is essential to the health of your aquarium. The right food and feeding method will help your SPS and LPS coral flourish, while also providing nourishment to the other organisms in your tank. The wrong food and feeding method could negatively affect the balance of your aquarium reef and the condition of the water, leaving you with dull stagnant coral and nitrate-rich water.

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4: Filter Feeders and Anemones | Infolific

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Overview[edit] In the foreground is an orange-lined triggerfish displaying spines. Triggerfish have mouths that crush shells. Orange-lined triggerfish are particularly aggressive. The black and white fish are three-stripe damselfish and the unstriped fish are blue-green chromis damselfish. If the triggerfish attacks, the damselfish will hide in the nearby pillar coral. If the triggerfish wants to hide, it will squeeze into a coral crevice and lock itself in place with its spines. Coral reefs are the result of millions of years of coevolution among algae, invertebrates and fish. They have become crowded and complex environments, and the fish have evolved many ingenious ways of surviving. Many reef fish have also evolved cryptic coloration to confuse predators. Small reef fish get protection from predators by hiding in reef crevices or by shoaling and schooling. Many reef fish confine themselves to one small neighbourhood where every hiding place is known and can be immediately accessed. Others cruise the reefs for food in shoals, but return to a known area to hide when they are inactive. Resting small fish are still vulnerable to attack by crevice predators, so many fish, such as triggerfish , squeeze into a small hiding place and wedge themselves by erecting their spines. They also provide cleaner services to marine turtles, by removing algal growth from their shells. They do not tolerate other fish with the same colour or shape. When alarmed, the usually placid yellow tang can erect spines in its tail and slash at its opponent with rapid sideways movements. Most coral reef fish have spines in their fins like this damselfish. The usually placid yellow tang can erect spines in its tail and slash at its opponent with rapid sideways movements. While many reasons have been proposed, there is no general scientific consensus on which of these is the most influential, but it seems likely that a number of factors contribute. These include the rich habitat complexity and diversity inherent in coral reef ecosystems, [4] [5] the wide variety and temporal availability of food resources available to coral reef fishes, [6] a host of pre and post larval settlement processes, [7] and as yet unresolved interactions between all these factors. There are two major regions of coral reef development recognized; the Indo-Pacific which includes the Pacific and Indian Oceans as well as the Red Sea , and the tropical western Atlantic also known as the "wider" or "greater" Caribbean. Each of these two regions contains its own unique coral reef fish fauna with no natural overlap in species. Of the two regions, the richest by far in terms of reef fish diversity is the Indo-Pacific where there are an estimated 4,â€”5, species of fishes associated with coral reef habitats. Another â€” species can be found in the greater Caribbean region. The slowest of these, the dwarf seahorse , attains about five feet per hour. Male toadfish "sing" at up to decibels with their swim bladders to attract mates. In contrast, open water fish like this Atlantic bluefin tuna , are usually streamlined for straightline speed, with a deeply forked tail and a smooth body shaped like a spindle tapered at both ends. They are countershaded with silvery colours. Body shape[edit] Most reef fishes have body shapes that are different from open water fishes. Open water fish are usually built for speed in the open sea, streamlined like torpedoes to minimise friction as they move through the water. Reef fish are operating in the relatively confined spaces and complex underwater landscapes of coral reefs. For this manoeuvrability is more important than straight line speed, so coral reef fish have developed bodies which optimize their ability to dart and change direction. They outwit predators by dodging into fissures in the reef or playing hide and seek around coral heads. Their pelvic and pectoral fins are designed differently, so they act together with the flattened body to optimise manoeuvrability. This is in marked contrasts to open water fishes which are usually countershaded with silvery colours. The patterns have different functions. Sometimes they camouflage the fish when the fish rests in places with the right background. Colouration can also be used to help species recognition during mating. Some unmistakable contrasting patterns are used to warn predators that the fish has venomous spines or poisonous flesh. This spot is surrounded by a brilliant white ring, resembling an eyespot. A black vertical bar on the head runs through the true eye, making it hard to see. Most predators aim for the eyes, and this false eyespot tricks the predator into believing that the fish will flee tail first. When escape is not possible, the butterflyfish will sometimes turn to face its aggressor, head lowered and

spines fully erect, like a bull about to charge. This may serve to intimidate the other animal or may remind the predator that the butterflyfish is too spiny to make a comfortable meal. It feeds primarily on small crustaceans and other invertebrates, and is popular in the aquarium trade. Just as some prey species evolved cryptic colouration and patterns to help avoid predators, some ambush predators evolved camouflage that lets them ambush their prey. The tassled scorpionfish is an ambush predator that looks like part of a sea floor encrusted with coral and algae. It lies in wait on the sea floor for crustaceans and small fish, such as gobies, to pass by. They lie on the bottom and wave a conspicuous worm-like lure strategically attached above their mouth. They continually scan for predators with eyes that swivel independently. Its ventral lower surface has large, white spots on a dark background, and its dorsal upper surface has black spots on yellow. The brightly painted yellow mouth may deter potential predators. The frogfish is an ambush predator disguised to look like an algae-covered stone Another ambush predator is the tassled scorpionfish camouflaged to look like part of a coral encrusted sea floor. Gobies are very cautious, yet they can fail to see a tassled scorpionfish until it is too late. Feeding strategies[edit] Many reef fish species have evolved different feeding strategies accompanied by specialized mouths, jaws and teeth particularly suited to deal with their primary food sources found in coral reef ecosystems. Some species even shift their dietary habits and distributions as they mature. Their mouths protrude like forceps, and are equipped with fine teeth that allow them to nip off such exposed body parts of their prey. Parrotfishes eat algae growing on reef surfaces, utilizing mouths like beaks well adapted to scrape off their food. Other fish, like snapper , are generalized feeders with more standard jaw and mouth structures that allow them to forage on a wide range of animal prey types, including small fishes and invertebrates. Carnivores are the most diverse of feeding types among coral reef fishes. There are many more carnivore species on the reefs than herbivores. Competition among carnivores is intense, resulting in a treacherous environment for their prey. Hungry predators lurk in ambush or patrol every part of the reef, night and day. These typically have large mouths that can be rapidly expanded, thereby drawing in nearby water and any unfortunate animals contained within the inhaled water mass. The water is then expelled through the gills with the mouth closed, thereby trapping the helpless prey [13] For example, the bluestripe snapper has a varied diet , feeding on fishes , shrimps , crabs , stomatopods , cephalopods and planktonic crustaceans , as well as plant and algae material. Diet varies with age, location and the prevalent prey items locally. Like goats, they seek anything edible: The yellowfins change their colouration to match that of the snapper. Presumably this is for predator protection, since goatfish are a more preferred prey than bluestripe snapper. By night the schools disperse and individual goatfish head their separate ways to loot the sands. Other nocturnal feeders shadow the active goatfish, waiting patiently for overlooked morsels. Moray eels and coral groupers Plectropomus pessuliferus are known to cooperate with each other when hunting. If the final male disappears, changes to the largest female occur, with male behavior occurring within several hours and sperm production occurring within ten days. Bluestripe snapper will eat just about anything. Yellowfin goatfish change their colouration so they can school with the blue-striped snapper. Coral grouper sometimes cooperate with giant morays in hunting. Specialised carnivores[edit] Large schools of forage fish , such as surgeonfish and cardinalfish , move around the reef feeding on tiny zooplankton. The forage fish are, in turn, eaten by larger fish, such as the bigeye trevally. Fish receive many benefits from schooling behaviour , including defence against predators through better predator detection, since each fish is on the lookout. Schooling fish have developed remarkable displays of precise choreography which confuse and evade predators. They are swift predators who patrol the reef in hunting packs. When they find a school of forage fish, such as cardinalfish, they surround them and herd them close to the reef. This panics the prey fish, and their schooling becomes chaotic, leaving them open to attack by the trevally. Cardinalfish swim in schools for protection against trevally. Bigeye trevally hunt cardinalfish in packs and herd them against the reef. When the cardinalfish panic and break school formation, the trevally pick them off. Porcupinefish inflate themselves by swallowing water or air, which restricts potential predators to those with bigger mouths. The titan triggerfish can move relatively large rocks when feeding and is often followed by smaller fishes that feed on leftovers. They also use a jet of water to uncover sand dollars buried in sand. Barracuda are ferocious predators on other fishes, with razor-sharp conical teeth which make it easy for them to rip their prey to shreds. Barracuda patrol the outer reef in large schools, and are

extremely fast swimmers with streamlined, torpedo-shaped bodies. They inflate their body by swallowing water, reducing potential predators to those with much bigger mouths. External image Porcupinefish with cleaner wrasses Fish can not groom themselves. Some fish specialise as cleaner fish , and establish cleaning stations where other fish can come to have their parasites nibbled away. The "resident fish doctor and dentist on the reef is the bluestreak cleaner wrasse ". As the bluestreak snacks on the parasites it gently tickles its client. This seems to bring the larger fish back again for regular servicing. But other parasites find the mucus itself good to eat. So lizardfish visit the cleaner wrasse, which clean the parasites from the skin, gills and mouth.

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By far the majority of individual marine invertebrates on the coral reef feed on microscopic prey borne on the ocean currents, sifting it from the water with a variety of net- and mesh-like body parts.

Fringing reef A fringing reef, also called a shore reef, [29] is directly attached to a shore, [30] or borders it with an intervening narrow, shallow channel or lagoon. The final width depends on where the sea bed begins to drop steeply. The surface of the fringe reef generally remains at the same height: In older fringing reefs, whose outer regions pushed far out into the sea, the inner part is deepened by erosion and eventually forms a lagoon. Like the fringing reef itself, they run parallel to the coast. The fringing reefs of the Red Sea are "some of the best developed in the world" and occur along all its shores except off sandy bays. Above all, the offshore outer reef edge formed in open water rather than next to a shoreline. Like an atoll, it is thought that these reefs are formed either as the seabed lowered or sea level rose. Formation takes considerably longer than for a fringing reef, thus barrier reefs are much rarer. The best known and largest example of a barrier reef is the Australian Great Barrier Reef. Platform reef[edit] Platform reef Platform reefs, variously called bank or table reefs, can form on the continental shelf , as well as in the open ocean, in fact anywhere where the seabed rises close enough to the surface of the ocean to enable the growth of zooxanthemic, reef-forming corals. Some platform reefs of the northern Mascarenes are several thousand kilometres from the mainland. Unlike fringing and barrier reefs which extend only seaward, platform reefs grow in all directions. Their usual shape is oval to elongated. Parts of these reefs can reach the surface and form sandbanks and small islands around which may form fringing reefs. A lagoon may form In the middle of a platform reef. Platform reefs can be found within atolls. There they are called patch reefs and may reach only a few dozen metres in diameter. Where platform reefs form on an elongated structure, e. This is the case, for example, on the east coast of the Red Sea near Jeddah. In old platform reefs, the inner part can be so heavily eroded that it forms a pseudo-atoll. Some platform reefs of the Laccadives are U-shaped, due to wind and water flow. Atoll Formation of an atoll according to Charles Darwin Atolls or atoll reefs are a more or less circular or continuous barrier reef that extends all the way around a lagoon without a central island. A ring of reefs results, which enclose a lagoon. The initial stage of a fringing reef. Type of platform reef. Also called a shelf-edge reef or sill reef. Usually, three major zones are recognized: The three zones are physically and ecologically interconnected. Reef life and oceanic processes create opportunities for exchange of seawater , sediments , nutrients and marine life. Most coral reefs exist in waters less than 50 m deep. Some inhabit tropical continental shelves where cool, nutrient-rich upwelling does not occur, such as the Great Barrier Reef. Others are found in the deep ocean surrounding islands or as atolls , such as in the Maldives. The reefs surrounding islands form when islands subside into the ocean, and atolls form when an island subsides below the surface of the sea. Alternatively, Moyle and Cech distinguish six zones, though most reefs possess only some of the zones. This diagram represents a reef on a continental shelf. The water waves at the left travel over the off-reef floor until they encounter the reef slope or fore reef. Then the waves pass over the shallow reef crest. When a wave enters shallow water it shoals , that is, it slows down and the wave height increases. The reef surface is the shallowest part of the reef. It is subject to surge and tides. When waves pass over shallow areas, they shoal , as shown in the adjacent diagram. This means the water is often agitated. These are the precise condition under which corals flourish. The light is sufficient for photosynthesis by the symbiotic zooxanthellae , and agitated water brings plankton to feed the coral. The off-reef floor is the shallow sea floor surrounding a reef. This zone occurs next to reefs on continental shelves. Reefs around tropical islands and atolls drop abruptly to great depths, and do not have such a floor. Usually sandy, the floor often supports seagrass meadows which are important foraging areas for reef fish. The reef drop-off is, for its first 50 m, habitat for reef fish who find shelter on the cliff face and plankton in the water nearby. The drop-off zone applies mainly to the reefs surrounding oceanic islands and atolls. The reef face is the zone above the reef floor or the reef drop-off. Coral and calcareous algae provide complex habitats and areas that offer protection, such as cracks and crevices. Invertebrates and epiphytic algae provide much of the food for other organisms. The reef flat is the

sandy-bottomed flat, which can be behind the main reef, containing chunks of coral. This zone may border a lagoon and serve as a protective area, or it may lie between the reef and the shore, and in this case is a flat, rocky area. Fish tend to prefer it when it is present. Each reef is made up of irregular patches of algae, sessile invertebrates, and bare rock and sand. The size, shape and relative abundance of these patches changes from year to year in response to the various factors that favor one type of patch over another. Growing coral, for example, produces constant change in the fine structure of reefs. On a larger scale, tropical storms may knock out large sections of reef and cause boulders on sandy areas to move. Most corals live within this boundary. Note the cooler waters caused by upwelling on the southwest coast of Africa and off the coast of Peru. This map shows areas of upwelling in red. Coral reefs are not found in coastal areas where colder and nutrient-rich upwellings occur. Southeast Asia accounts for Atlantic and Caribbean coral reefs account for 7. Coral reefs are rare along the west coasts of the Americas and Africa , due primarily to upwelling and strong cold coastal currents that reduce water temperatures in these areas the Peru , Benguela and Canary Currents respectively. The presence of coral reefs at this high latitude is due to the proximity of the Gulf Stream. Bermuda coral species represent a subset of those found in the greater Caribbean. Coral[edit] Close up of polyps arrayed on a coral, waving their tentacles. There can be thousands of polyps on a single coral branch. Coral When alive, corals are colonies of small animals embedded in calcium carbonate shells. Coral heads consist of accumulations of individual animals called polyps , arranged in diverse shapes. Zooxanthellae[edit] Coral polyps do not photosynthesize, but have a symbiotic relationship with microscopic algae dinoflagellates of the genus Symbiodinium , commonly referred to as zooxanthellae. Without their symbionts, coral growth would be too slow to form significant reef structures. There are eight clades of Symbiodinium phylotypes. Each clade contributes their own benefits as well as less compatible attributes to the survival of their coral hosts. Each photosynthetic organism has a specific level of sensitivity to photodamage to compounds needed for survival, such as proteins. It is able to produce mycosporine-like amino acids that are UV resistant , using a derivative of glycerin to absorb the UV radiation and allowing them to better adapt to warmer water temperatures. In the event of UV or thermal damage, if and when repair occurs, it will increase the likelihood of survival of the host and symbiont. Since clades B through D are found at deeper depths, they require an elevated light absorption rate to be able to synthesize as much energy. With elevated absorption rates at UV wavelengths, these phylotypes are more prone to coral bleaching versus the shallow clade A. Typical shapes for coral species are named by their resemblance to terrestrial objects such as wrinkled brains , cabbages, table tops , antlers , wire strands and pillars. These shapes can depend on the life history of the coral, like light exposure and wave action, [62] and events such as breakages. An individual polyp uses both reproductive modes within its lifetime. Corals reproduce sexually by either internal or external fertilization. The reproductive cells are found on the mesenteries , membranes that radiate inward from the layer of tissue that lines the stomach cavity. Some mature adult corals are hermaphroditic; others are exclusively male or female. A few species change sex as they grow. Internally fertilized eggs develop in the polyp for a period ranging from days to weeks. Subsequent development produces a tiny larva , known as a planula. Externally fertilized eggs develop during synchronized spawning. Polyps across a reef simultaneously release eggs and sperm into the water en masse. Spawn disperse over a large area. The timing of spawning depends on time of year, water temperature, and tidal and lunar cycles. Spawning is most successful given little variation between high and low tide. The less water movement, the better the chance for fertilization. Ideal timing occurs in the spring.

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6: Coral reef fish - Wikipedia

Our Coral Frags are aqua-cultured and grown using the same parameters as the ocean. They are just what you need to start your Reef/Coral or Fish Tank off right. All corals are carefully cut, developed, fed, and taken care of.

Coral reefs are either restricted or absent from along the west coast of the Americas, as well as the west coast of Africa. This is due primarily to upwelling and strong cold coastal currents that reduce water temperatures in these areas Nybakken, Reefs are also restricted along the coast around north-eastern South America and Bangladesh due to the release of vast quantities of freshwater from the Amazon and Ganges Rivers respectively. If we look to vertical distribution living reefs do not get deeper then about 60 meters. Deeper there is not enough light for their symbiotic algae to live. Diversity Worldwide there are about reef building species. These species are not evenly spread over the tropics. The "Indo-Malayan triangle" accounts for of them, this area is referenced as the "Coral triangle" or the "Center of marine biodiversity". The total number of plant and animal species on tropical coral reefs is unknown. Roughly estimated it is thought to be a million. Many of these reef fishes prey on invertebrates on the reefs. Zonation Fore reef In the less deep parts of the fore reef the conditions are favourable for most coral species. Particularly the intense sunlight and the good mixture of water attribute to their growth. Fish are abundant, their feeding conditions are good and there are enough hiding places. Fore reefs in strong wave conditions form alternating vertical ridges buttresses and channels. The ridges are formed by branching corals; seawater and debris can drain off the reef into deeper water through the channels. If this topology occurs this part of the reef is referred as the buttress zone. Continuing down the seaward slope to about 20 m, optimal light intensity decreases, but reduced wave action allows the maximum number of coral species to develop. At these depths corals tend to grow in flat, plate-like formations. Although most scientists agree that this is an adaptation to the lower light levels, an exact explanation is still disputed. Below 30 to 70 m depth sponges, sea whips, sea fans, and not-light-dependant corals become increasingly abundant and gradually replace the reef building corals. Reef crest The reef crest is the highest point of the reef. On reefs where the wave action is moderate this zone is dominated by branching reef species like Acropora and Millepora. If the wave actions are more severe the reef crest is dominated by encrusting calcareous red algae forming an algal ridge. Back reef The back reef, is located on the sheltered side of the reef. It extends outward from the shore to the reef crest or, in the case of atolls, it forms the lagoon. Because it is so shallow, this area experiences the widest variations in temperature and salinity. Reduced water circulation, the accumulation of sediments, and exposure to air and direct sunlight during low tide, limit coral growth. The substrate is formed of coral rock and loose sand. Beds of sea grasses often develop in the sandy regions, and both encrusting and filamentous algae are common. Although living corals may be scarce except near the seaward section of this zone, its many microhabitats support the greatest number of species in the reef ecosystem. Species and their food Coral reefs can be seen as the oases in marine deserts. The surrounding seas are extremely poor in nutrients and hence, they have a low productivity. So how can coral reefs belong to the most productive areas of the world? This subject is still much debated among scientist but must it have to do with the extreme efficiency of the food chain. Zooxanthellae plant cells living in the coral polyps produce a considerable amount of organic matter that is transferred directly to the coral tissues. Apart from this food source corals use their numerous polyps to catch food particles floating in the sea. Large algae may win the competition for space with corals and form algal mats. Calcareous algae are important because they cement the corals together to form a firm reef. Also many microscopic algae live attached on different species. But if you look closely youll find them. Many herbivorous fish species graze on these benthic algae. These grazers are very important to the reef, where they disappear corals are rapidly overgrown by algae. The herbivorous fishes and invertebrates, together with the coral polyps form a good food supply for carnivorous species. To better understand the feeding habits all those fishes on the reef use the link.

CORAL REEF FEEDERS pdf

7: Feeding Corals - Reef Aquarium

UFO Coral Feeder. Yesterday while visiting Aqua Medic USA we spotted a unique coral feeder being used to target feed and rehabilitate corals. The UFO (unwanted fish out) coral feeder comes down from above to cover and protect your corals from unwanted fish.

Ahermatypic Corals Corals from the genus Tubastrea, Dendronepthya, non photosynthetic gorgonians, do not harbor symbiotic zooxanthalle, and hence the autotrophic mode of feeding is non existent in these corals. All the food energy requirements have to be met by hetrotrophic modes of feeding, making these corals more difficult to keep in reef aquaria. Aquariums housing these corals require strong currents and large amounts of planktonic food. Recent research has shown that Dendronepthya and other soft corals from the Red Sea obtain most of their nutrition from phytoplankton Fabricus et. The tubastrea species, is one of the easier ahermatypic corals to keep due to the large polyp size and its ability to accept larger pieces of food. They need to be fed almost daily, and can be "trained" to open at specific times of the day, by feeding consistently at the same time every day. Filter Feeders, Detrivores, and other microfauna In addition to the fish, corals and other invertebrates, a coral reef aquarium also contains a host of other life forms such as sponges, sea squirts, fan worms, marine worms, copepods and amphipods, etc. Filter feeders typically feed by trapping small particles by processing large volumes of water through their body or appendages. Detrivores feed either on the detritus or ingest bacteria on them, or organics coating the detritus particles. In a well fed aquarium the needs of these organisms may be indirectly met. However, it has been the experience of many aquarists that adding supplemental small particulate food phytoplankton, blended food mix, rotifers, plankton surrogates, etc has increased the population and size of sponges, sea squirts, and fan worms. Anecdotal evidence seems to suggest that adding food targeted towards meeting the specific needs of these creatures is beneficial. In the following section, I will discus some of the "new" products that have appeared in the aquarium trade, that will simplify and make it easy to provide nutritional sources of food and attempt to satisfy the feeding requirements of a wide spectrum of the food web. Nori and Other Seaweeds The use of Nori - also known as Laver, a seaweed of the genus Porphyra, a group of marine red algae which is used extensively in oriental cuisine has greatly contributed to maintaining the health of herbivorous fish, e. Laver is cultivated as a major food crop in the Orient. For use as food in the aquarium, the plain dried form is preferred, although fish will eat the roasted variety - just stay away from the flavored variety. Tangs need to graze continuously, and in most well established reefs there is very little macro algal matter available. The common means of providing this was to use land based leafy vegetables such as lettuce. In my personal experience, I have found most tangs start accepting nori very quickly and I have been able to maintain tangs in full-bodied form without shrunken stomachs using nori and other seaweeds. There is a large variety of naturally dried seaweed kelp, dulse, laver available in most oriental grocery stores and health food stores, and some of these are excellent food for tangs. A wide variety of seaweeds are also available through the aquarium companies e. To feed the fish, these sheets of dried algae can be attached to rocks with a rubberband, or attached to a "lettuce" clip. Indo-Pacific Sea Farms www. Several aquarists have reported being able to keep the Gracilaria growing in sufficient quantities in their lighted sump and refugium. It grows fast enough to use as an additional supply of fresh live seaweed for tangs and other herbivorous fish. Sweetwater Zooplankton A few years ago I had trouble keeping the Red Sea Anthias Squammipinnis alive for any significant period of time. The primary difficulty was in getting them to feed. Anthias are planktivores that feed in open waters and require feeding several times a day. The Sweetwater Zooplankton was very readily accepted by the anthias as food, and I was able to wean them on to other foods. Now even my anthias relish nori!. Sweetwater zooplankton consists primarily of cultured daphnia water fleas. It is available in sealed jars with unlimited shelf life. Once opened, it needs to be stored in a refrigerator and will last for up to a month. Phytoplankton Phytoplankton are free floating microscopic plants that grow in the upper regions of the ocean where sunlight is plentiful. These small plants, which are composed of algae, are the bottom of the food chain for the entire ocean, and the largest group of primary producers in the ocean. There are several hundred species of phytoplankton. In a typical reef aquarium, the

phytoplankton population is very low to non-existent - either it gets consumed faster than it can reproduce, or gets removed by skimmers. Phytoplankton serves as the primary food source for a lot of reef organisms. Phytoplankton come in a wide range of microscopic sizes. Based on the study on Dendronepthya Fabricus et al the range of size suitable for corals is the range 3 to 20 micro meters. Examples of strains of phytoplankton are Nannochloris, Isochrysis, Tetraselmis, among others. Although phytoplankton can be cultured at home, the process is often beyond what an average aquarist wants to get involved with. Recently several products have appeared in the market that have the potential to simplify the process of phytoplankton addition. The microalgae paste is highly concentrated using a low gravity centrifuge, and a food grade cryopreservative is added to prevent freezing and lysing of the algae cells when kept below freezing temperatures. The paste remains liquid when frozen and can be kept for several months in a refrigerator freezer. Feeding can be easily accomplished by adding a few drops of the paste directly to the tank and letting it disperse in the water currents. I have been using drops of the concentrated algae in my reef, every days. I turn the skimmer off, for several hours when feeding micro algae, to keep the food from being removed by the skimmer. This is a very easy and convenient way to add phytoplankton to the aquarium, without all the hassles of growing your own cultures. In an article in Aquarium Frontiers, Craig Bingman reported some success in keeping dendronephtya using the cryo preserved algae http: The phytoplankton is specially processed to remove the nutrients used for culture, and sold in a liquid form which can be stored in the refrigerator. The product claims to have a shelf life of upto a month in the refrigerator. This is also easy to add to the aquarium, and provides another easy and convenient method for adding plankton to the aquarium. Another sources for live phytoplankton is Liquidlife http: In contrast to the cryopreserved phytoplankton, this phytoplankton is live and provides the added benefit of live food - triggering the feeding response. The other benefit of live phytoplankton is that they will be able to swim, remain in suspension longer, and also take in some of the nutrients from the tank. The disadvantage is that the product shelf life is limited and the cost is higher. The best strategy for feeding phytoplankton may be to use a mixture of several different species. Different creatures may have different tastes and may prefer one species over another. Studies using a mix of phytoplankton species have been shown to produce increased growth and survival when compared to animals fed a single species. Knowing the concentration in the phytoplankton product one can then determine how much of the product to add. However, most suppliers of live phytoplankton do not provide this information, so I just aim to make the water turn a light shade of green. It usually clears up in an hour or so. Interestingly, research indicates that the scleractinian corals rejected algae and other plant material. Research indicated that even if plant material was ingested it was not digested and regurgitated. This has interesting implications for the hobbyists since it could lead to the conclusion that "green water" or phytoplankton may not be a suitable food for hermatypic scleractinian corals. However, there may be indirect benefits to these corals from the increase in other microfauna resulting from the feeding of the phytoplankton. Several aquarists including myself have observed increase in the polyp extension of corals, and increase in feather dusters, sponge and tunicate populations, along with increases in other micro inhabitant populations. In addition to providing additional food source that can be directly added to the tank, these phytoplantkon products can also be used to enrich artemia, and as a food supply for rotifers. The spray dried phytoplankton is intended for use as food for corals and other invertebrates, fish food, larval fish and invertebrate food, and an enrichment food for Artemia and rotifer culture. The spray dried product has the advantage of being convenient to use, does not require storage in the refrigerator and has a long shelf life. The disadvantages are that spray drying may impact some of the chemicals in the phytoplankton and reduce their nutritional value. These could potentially be used in reef aquaria to feed the filter feeders and even some corals. These feeds are available in sizes ranging from 5 microns to microns. Aquatic Eco systems also has a wide range of larval feeds intended for clam, osyter, and other aquaculture that may be very well suited for feeding reefs. After using the APR, I started to notice increase in the number of sponges and filter feeders in my tank. Also, the existing sponges increased in size. This was my first foray into attempting to feed the filter feeders, sponges and tunicates. Other Useful Food Products and Food Additives Newly hatched brineshrimp are an excellent food source for a reef aquarium. Additionally decapsulated brineshrimp eggs can be used. I use the decapsulated brineshrimp eggs as an additive in my food mix, and also feed the tank occasionally

directly with this. Spirulina algae, is another excellent source of nutrition for marine fish and invertebrates. This can be fed as spirulina food flakes, or in the powdered form to be used in a food mix. Another useful food additive is the Omega-3 fatty acids that are important part of the diet of most marine animals. These fatty acids are an essential part of the diet for most marine fish larve. It is often recommended that brineshrimp and rotifers be enriched with omega-3 fatty acids before feeding. A reciepe for homemade food mix I have been feeding my aquarium more heavily than the average aquarist for the past two years. Rather than try to feed the fish, inverts and filter feeders separately I wanted a concoction that would satisfy most needs with single feedings, supplemented by specific target foods occasionally. Here a recipe that I and several other hobbyists have used variations of this have been using. I basically go to the sea food section in the grocery store, and pick up several shrimp, squid, sea scallops, mussel, clams, fish, and any other raw seafood that is available. The other main ingredient I use is Nori. I also use other natural dried sea weeds that I have been able to find in the oriental grocery stores. First throw the nori and other seaweed into the blender and shred into small pieces. Do this while its dry and it breaks up into nice small pieces. Then, remove most of it to leave a hand full in the blender and add half the seafood mix along with some water and blend it into a fine liquid paste. Then I add back the rest of the nori, the remaining sea food mix, along with some spirulina flakes, spirulina powder, decapsualted brine shrimp, vitamin drops, a few drops of algal paste, some artificial plankton and rotifers, some yeast and a few drops of Selco. Chop it in the blender so as to give some larger chunkier pieces. Place the mix into the freezer bags and spread it thin in the bag to allow breaking off pieces easily, and freeze. The finely blended stuff along with the other micro sized food will work fine to feed the filter feeders and corals, and the larger pieces along with the nori works well for the fish, and the other invertebrates such as star fish, and shrimp.

CORAL REEF FEEDERS pdf

8: Coral Feeding Tool - Bulk Reef Supply

Fish feeders are a great way automate your feeding schedule for day to day use or when you are on vacation and are unable to feed them manually. Bulk Reef Supply carries Eheim and Hydor brands - both are compact, programmable and reliable.

Coral Reefs 1 Abiotic Factors Name: Coral Reefs 1 â€" Abiotic Factors Vocabulary: Look at the graph to the right. What does it show? Why do you think corals have declined since ? Gizmo Warm-up Coral reefs are some of the most diverse habitats on Earth, home to over a quarter of all marine species. In the Coral Reefs 1 exploration, you will focus on the effects of environmental factors on Caribbean reefs. Click Advance year 10 times. Look carefully at the composition of the reef over time. Do you see any major changes? Select the DATA tab. Check that Staghorn coral, Star coral, Sponges, and Algae are selected. Populations are given as a percentage of normal populations. What do you notice about these populations? In a healthy reef, what are the values for Nutrient load, Water clarity, Coral cover, and the total number of fish species? A healthy Caribbean reef is home to over 50 species of coral and over fish species. In this simplified model, we only consider the interactions of ten important species. How do different species interact in a healthy coral reef? For each organism, give its name and what it eats or how it obtains energy. How do you think corals would be affected by cloudy, muddy water? Activity A continued on next page Activity A continued from previous page 3. A producer is an organism that makes its own energy, usually from sunlight. A consumer is an organism that gets energy by feeding on other organisms. Which of the reef organisms in this Gizmo are producers? List at least one example of each. A food chain is a series that shows what organisms eat other organisms. Create two possible food chains for the Caribbean coral reef based on what you have learned about the ten organisms in this Gizmo. A food web is a more complicated diagram that shows the feeding relationships of all the organisms in the ecosystem. As with a food chain, an arrow pointing from species A to species B indicates species A is eaten by species B. In the diagram at right, create a food web by drawing arrows to show which organisms are eaten by others. Check that Ocean conditions is selected on the dropdown menu. In recent decades, global climate change has altered ocean conditions in the Caribbean. Average surface temperatures have risen about 0. Many scientists think climate change will lead to stronger storms and may cause the ocean to be more acidic. Coral reefs in the Caribbean are sometimes damaged by hurricanes. Which organism was most hurt by increased storms, and why do you think this is so? Click Return to original settings and Restart. What changes do you notice? The white corals you see have undergone coral bleaching. At high temperatures, corals may lose their zooxanthellae, causing corals to lose their color and their main source of food. Once bleaching occurs, the coral colony usually dies. Which coral is most affected by bleaching? On the DATA tab, select every organism. In general, how does the decline in corals affect the other organisms on the reef? Corals depend on ample sunlight, warm but not too warm temperatures, clear water, and low levels of nutrients such as nitrogen and phosphorus. Algae and sponges, on the other hand, thrive in water that is higher in nutrients. Logging, agriculture, and other human activities can add excess nutrients and sediments small dirt particles to the sea. How do changes in land use affect reefs? Under normal conditions, what is the a. The sediment load and nutrient load are measured in parts per thousand ppt. Logging removes vegetation that anchors soil and prevents erosion. How do you think logging will affect a coral reef? Which species were hurt the most by logging? Which species were helped most by logging? Why do you think the populations of parrotfish and long-spined sea urchins changed the way they did? Activity C continued on next page Activity C continued from previous page 6. The primary effect of dumping raw sewage into ocean water is a sharp increase in the nutrient load. How do you think this will affect the reef? These are invasive species you will experiment with in another activity. How does the increase in nutrients affect the algae population? How does this change the populations of the two species that eat algae, parrotfish and sea urchins? In , a mysterious disease killed off most of the long-spined sea urchins in the Caribbean. Based on these results, what is the importance of long-spined sea urchins to Caribbean reefs?

CORAL REEF FEEDERS pdf

9: Coral Reef Animals | Animal Life of The Coral Reef

Coral reef fish are fish which live amongst or in close relation to coral www.enganchecubano.com reefs form complex ecosystems with tremendous www.enganchecubano.com the myriad inhabitants, the fish stand out as colourful and interesting to watch.

Crustaceans Polychaetes Another key group - the corals and their relatives - are instrumental in building the reef and are discussed along with the coral reef biome. Sponges Sponges are primitive, sedentary animals that filter feed on tiny food particles carried in the water sweeping over them. Coral reef sponges commonly exhibit one of three different body forms: The largest are usually found in deep water, and some have internal spaces big enough to contain a fully-equipped scuba diver. They tend to be highly colorful, with many species display brilliant yellow, orange, or reddish hues. Tube sponges are common in both shallow and deeper portions of coral reef ecosystems. Some species grow quite large, while others are fairly small. They also often cover reef surfaces in crevices between coral colonies. Like tube sponges, these forms are often brightly colored, displaying a variety of hues in the yellow to red range. Echinoderms The name "Echinoderm" literally means "spiny-skinned", a trait that shared by all members of the group. These are unusual animals, protected be a series of external skeleton made up of hard plates. Echinoderms also display "radial symmetry" - that is there is no "front" or "back" end. Of the five distinct types of echinoderms that can be found on and around coral reefs, we here briefly describe the two that are generally the most common and that have the greatest influence on reef ecosystems; sea stars and sea urchins Class Echinoidea. Sea stars Class Asteroida - These animals, also known as "starfish", are often found in sand and seagrass habitat around coral reefs as well as upon the hard reef substrate. As with echinoderms in general, these animals are able to move slowly about the reef or other benthic substrates through the use of numerous specialized appendages called tube feet located under each of the arms. Crown of Thorns sea star Most sea stars prey heavily upon mollusks, but there are exceptions. Some species hunt upon the reef itself, where they prey on other invertebrate animals including hard corals. Over the past 50 years, sporadic outbreaks of the coral-feeding "crown of thorns" starfish Acanthaster planci, pictured right have periodically ravaged coral reefs throughout much of the Indo-Pacific. Sea Urchins Class Echinoidea are active grazing herbivores and are among the most common of all coral reef echinoderms. Some live in seagrass meadows of the lagoon, while others shelter in crevices on reefs by day, emerging to actively forage on the reef itself or in nearby sand or seagrass habitats by night. Sea urchin During the s, a widespread decline of the long-spined sea urchin Diadema antillarum was reported from a number of Caribbean reef locations. However, a number of other factors have also been proposed that may have caused or contributed to Caribbean coral declines over the past 5 decades and the actual contribution of sea urchin "die-offs" to these declines has yet to be firmly established. Mollusks Coral reef mollusks are mainly benthic bottom dwelling invertebrates, but there are a few open water swimmers included as well. Three classes of mollusks are common in coral reef ecosystems: Gastropods snails, chitons, nudibranchs Bivalves clams, mussels, scallops Cephalopods squid, cuttlefish, octopus Gastropods are mostly herbivorous marine snails - slow-moving benthic grazers with a one-piece shell. Most species are small, and are usually well camouflaged or well-hidden. Gastropod Not all gastropods are plant-feeders however; some are active and voracious predators of other small invertebrates. For example, a group of predatory snails called cone shells contains species that have the capacity to inject a neurotoxin that can be lethal to much larger animals, including humans. Bivalves have a shell composed of more or less equal halves. These are active filter feeders, pumping water through strainers to remove food. Giant clam The most frequently encountered of this group are the clams and scallops, which are not uncommon on the reef proper as well as in nearby sand and seagrass habitats. Bivalves depend upon concealment and the heavy shell to keep predators at bay. Nonetheless they are heavily hunted by reef fishes and sea stars. The giant clams Tridacna spp. These animals have been overharvested in recent years, and are becoming increasingly rare. Cephalopods squid, cuttlefish, octopus are among the most highly advanced of all invertebrate animals. These swift, intelligent predators have well-developed nervous systems complete with relatively large brains and eyes very much like our own. Reef

squid Cephalopods are distinguished by their many tentacles, which number eight in octopi, and ten in squids and cuttlefishes. They are masters of color change and are capable of complex behaviors. Squid and cuttlefish are the only coral reef mollusks that feed as free-swimming, open water hunters. Crustaceans Coral reef crustaceans include the large, more familiar animals such as shrimps, lobsters, and crabs, as well as many smaller or cryptic types like amphipods, stomatopods, and copepods. Most amphipods are tiny Like their land-based relatives the insects, crustaceans have an external jointed skeleton and numerous paired appendages that function in locomotion, feeding, and in a sensory capacity. Crustaceans play a host of different roles in the ecology of coral reef communities. Some are scavengers, cleansing the reef of decaying animal remains. Others are active predators or omnivores. Many are preyed upon by coral reef fishes. Here, we introduce three of the larger, more common reef crustaceans. Spiny Lobsters Panulirus spp. Spiny lobster They are not full-time reef residents, but rather visitors that spend a good part of the year in deep benthic habitats distant from reefs. Nonetheless, at times their numbers in reef areas are substantial. Typically, spiny lobsters remain safely positioned by day in cracks and crevices within the reef, with only the slowly waving antennae protruding. At night, they wander about more freely. Shrimps are common coral reef crustaceans that come in many sizes and colors. They represent an important food source for a number of reef fishes. Cleaner shrimp On coral reefs, some shrimp species called "cleaners" play a highly significant role in the life of the coral reef community, gaining food by removing parasites from fishes or other invertebrates. Because of these benefits, the host grants them a special "protected" status. Cleaner shrimp can be distinguished from most other types of shrimps by their particularly long antennae see photo, right. Crabs that dwell on reefs generally remain well hidden within the reef structure by day. Reef crab Most are omnivores, feeding on a wide variety of food items including algae, worms, mollusks, bacteria, other crustaceans, fungi, and even detritus. Certain types of crabs may play a more prominent role in coral reef health than previously suspected. They do this by acting as "cleaners" of hard coral colonies, removing and thereby reducing the numbers of infesting parasites and other harmful organisms from the bodies of their hosts in much the same way that cleaner shrimp benefit certain fishes. Polychaete Worms Polychaetes Cl. Polychaeta are distinctive worms bearing many "bristles". These animals are common on the hard reef framework as well as within seagrass meadows, mangrove forests, coral rubble, and sand plains. Polychaetes play a variety of roles in coral reef ecosystems. Bristle worm Some types represent an important food source for other animals, particularly reef fishes. Others participate in the processing of sediment detritus and the erosion of dead coral. Some polychaetes are sedentary sessile , while others are motile and move about freely. The notorious fire worms and bristle worms are at least to scuba divers are among the most familiar motile polychate worms because they are quite painful to the touch.

CORAL REEF FEEDERS pdf

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