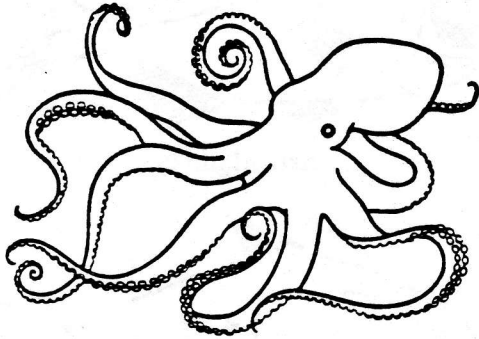




Importance of Color

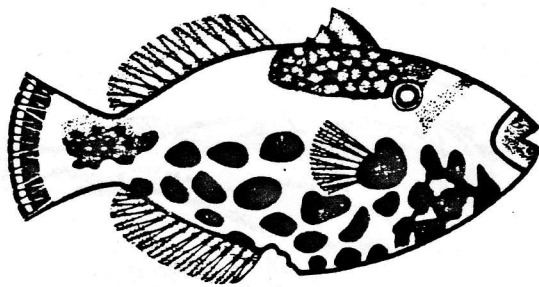
Coloration may help hide an animal or draw attention to its role in an animal community.



octopus

Camouflage

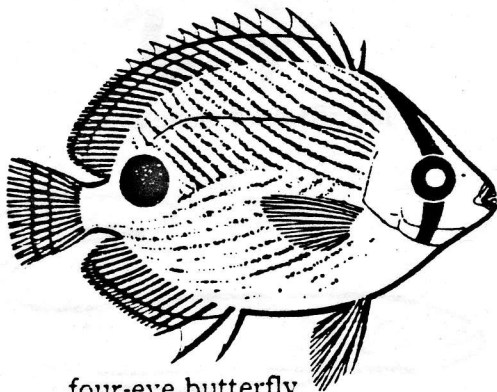
Camouflage coloration helps animals blend in with their surroundings. The octopus changes color instantly from black to gray to red to match its background. It can also change the texture of its skin, becoming bumpy or smooth to blend in with rocks and seaweeds.



clown triggerfish

Disruptive Coloration

Spots and stripes break up the body shape of some fishes and conceal them against their backgrounds. This kind of camouflage, called disruptive coloration, is common in coral reef fishes.



four-eye butterfly

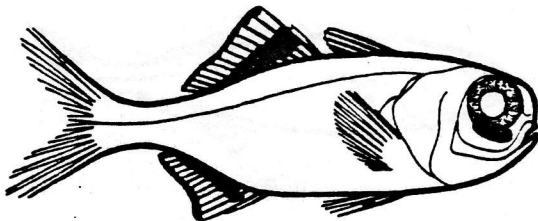
False Eye Spots

Unusual color patterns may hide vulnerable parts of an animal's body. The true eyes of a four-eye butterflyfish are hidden in a band of black, but near the tail are two prominent "false eyes." A confused predator may attack these instead of the real eyes, allowing the butterflyfish to escape in the opposite direction.



Behavior and Special Body Features

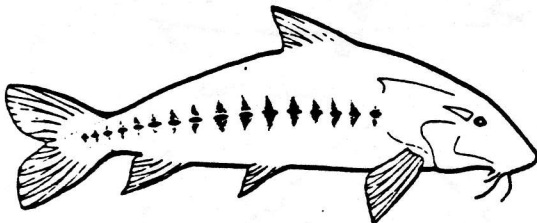
Many animals combine behavior and special body features to insure their survival.



flashlight fish

Bioluminescence

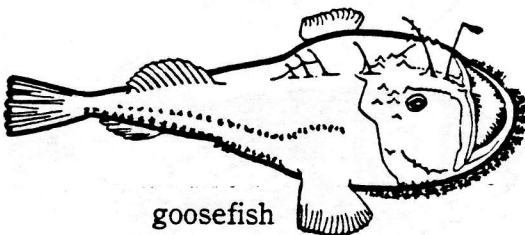
Flashlight fish have their own built-in light system. By covering and uncovering pockets of glowing bacteria beneath each eye, the flashlight fish blinks signals to other fish, confuses predators and locates food. Flashlight fish live in deep, dark water and hunt only at night.



Amazon catfish

Barbels

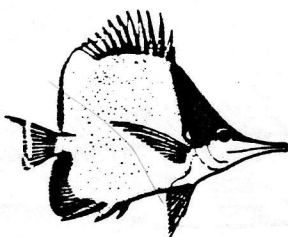
They look like whiskers but they are not hairs. Barbels are feeling- and tasting-organs. In the murky waters of the Amazon River, barbels help the giant catfish find its food. It touches and tastes the river mud to detect snails, crustaceans and other foods.



goosefish

Anglerfishes

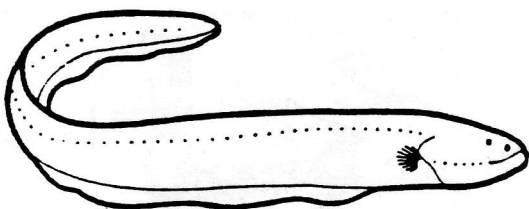
Some slow-swimming bottom dwellers have a special way of capturing their food. They use a fleshy "fishing lure" to attract their prey. When an interested fish swims near, they open their huge mouths to swallow the victim.



long-nose butterflyfish

Strange Mouths

The mouths of many animals allow them to feed on foods others cannot catch or eat. The long slender snout of the long-nose butterflyfish allows it to feed on tiny invertebrates that hide in the cracks and crevices of the coral reef.



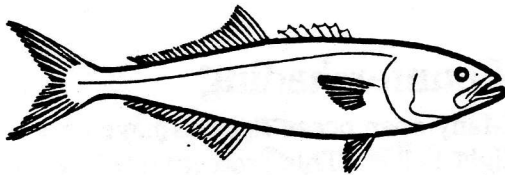
electric eel

Electricity

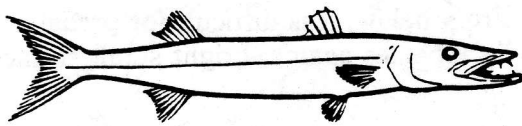
Several fishes have special body organs that produce electricity. The electric eel sets up a low voltage electric field around its body that helps it detect food and navigate in muddy river waters. If threatened, the electric eel may produce more powerful discharges, up to 800 volts.

Importance of Shape

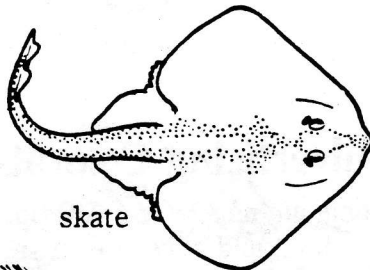
Body shapes give important clues about where fishes live and how they move.



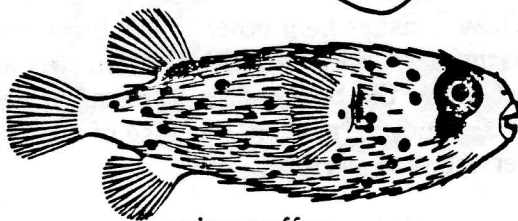
bluefish



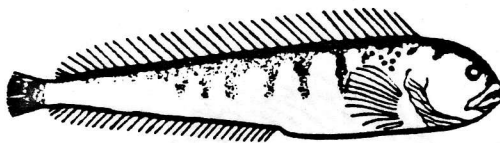
barracuda



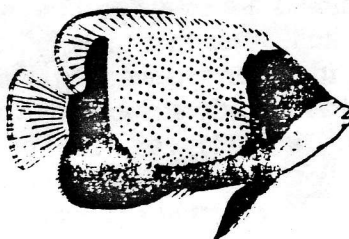
skate



spiny puffer



wolffish



majestic angelfish

Fusiform: the swiftest of all fishes

Powerful tails help them chase prey and avoid predators. Many of them live in the open ocean and swim continuously, traveling thousands of miles in their lifetimes.

Rod: elongated, arrow-like fishes

These hunters ambush their prey. They float motionless until a smaller fish swims near. Then they lunge out with lightning speed to seize their victim.

Depressed: flat, pancake-shaped fishes

They use camouflage instead of speed for survival. To escape predators they burrow into the sand or mud. Many change the color of their skin to match their surroundings.

Sphere: puffers and balloonfishes

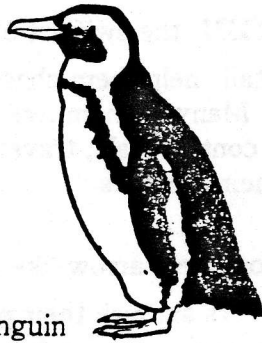
When threatened they fill their bodies with water or air, becoming too big to swallow. Some have spines all over their bodies for added protection.

Ribbon: snake-like fishes

They are slow swimmers but move easily through cracks and crevices, under rocks and around aquatic plants. They are secretive, hiding from predators and ambushing prey that come too near their hiding places.

Compressed: fishes flattened from side to side

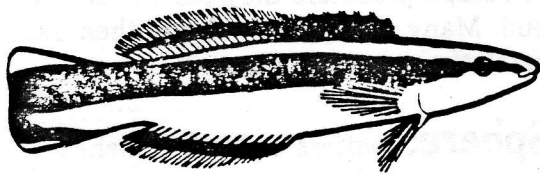
When viewed head-on these thin fishes almost seem to disappear. They are common on coral reefs. Their compressed bodies allow them to make quick sharp turns and dart in and out of hiding places.



penguin

Countershading

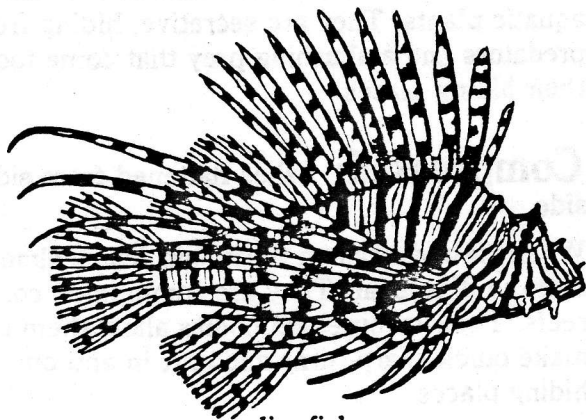
Many open ocean animals have dark backs and light bellies. This protective coloration is called countershading. Viewed from above, dark backs blend with the darkness of the deep ocean. From below, it is difficult for predators to see light bellies against bright sunlit surface waters.



cleaner wrasse

Advertising Coloration

Some animals have coloration that attracts attention and advertises a special service. Cleaner fishes help other fishes by removing harmful parasites from their skin. Predators recognize the bright color patterns of cleaners and do not harm them because of the useful service they perform.



lionfish

Warning

Some animals are so well protected with spines, poisons, and armor that their coloration is a warning for other species to stay away. The lionfish has brightly striped fins with poisonous spines that it displays to would-be attackers.