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Clownfish

In the movie "Finding Nemo" by the Disney corporation, the computer animation was spectacular. By studying the movements of fish and water, the animators used computer technology to imitate the real thing. Yet, as remarkable as the artwork was, it still did not compare with the marvelous things that God has created.

Two of the main characters in

... Great and marvellous are thy works, Lord God Almighty; ...
 Revelation 15:3 (KJV)

the movie were the clownfish "Marlin" and his son "Nemo." Before their adventure began, their home was in the middle of a sea anemone. Anemones are fish-eating animals that look like underwater flowers. Anemones have hundreds of poisonous tentacles that kill fish that touch them.

How can such a pretty little creature like the sea anemone be so deadly? At the end of the anemone's



Anemone's poisonous tentacles

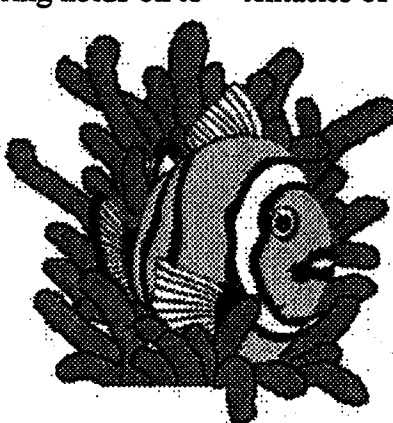
the bottom of the dart is a spring (kind of like a Slinky®). On the top of the capsule is a trap door and a trigger. When a fish gets too close to the anemone's arms, he bumps into the trigger, the trap door flies open, the poison dart shoots out and sticks the fish, filling him with poison. The dart opens up and the spring holds on to the fish waiting for him to die.

Then the sea anemone pulls the dead fish into his mouth that is in the center of all those arms.

That's lunch! The brightly colored clownfish, however, lives right in those deadly, stinging tentacles.

How do clownfish live in the middle of anemones without being stung? Clownfish are coated with a special mucous (slime) that keep the poisonous darts from firing. The exact way this works is not known; but it lets the clownfish live safely and within the sea anemone.

This close friendship of the clownfish and the anemone is called *symbiosis* (Sim-by-o-sis), which means two kinds of animals (or plants) 'living together'.



tentacles (or arms) is a small capsule. Inside this capsule is a dart filled with a sac of poison. At

Mutualism is a type of symbiosis where both kinds get some good from the friendship.

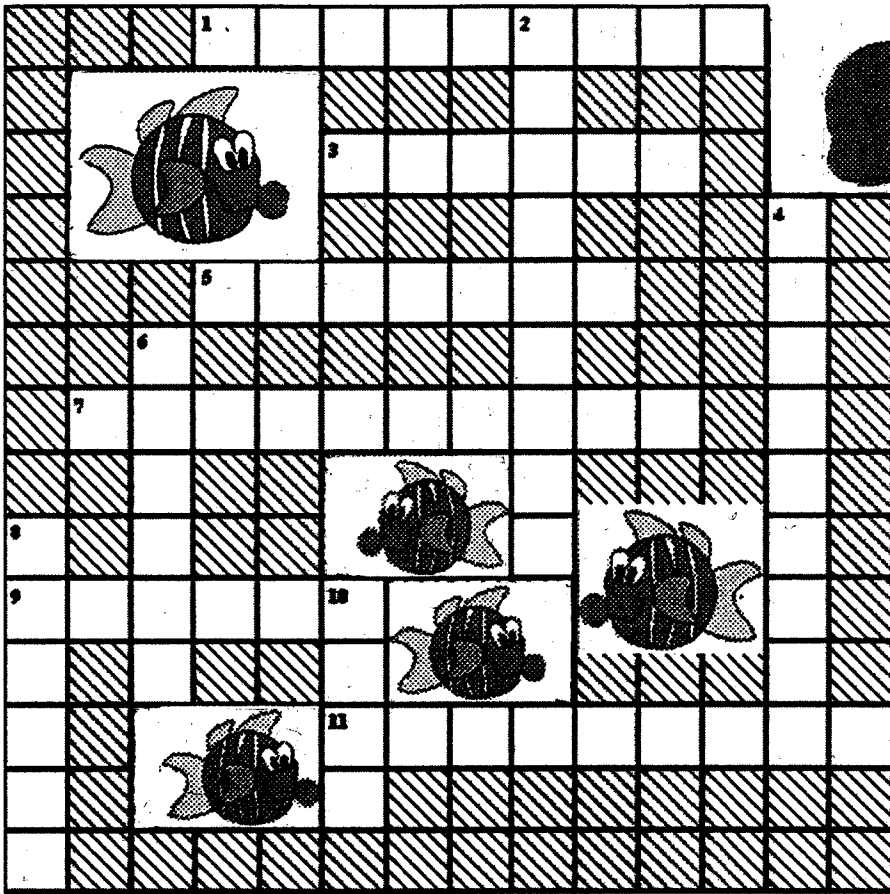
What does the anemone get from having the clownfish on board? Well, believe it or not, there are a few fish that eat anemones. Since clownfish (a kind of damselfish) are very territorial and unfriendly toward other fish, the clownfish helps the anemone by scaring away anemone-eating fish. The clownfish also helps by cleaning the anemone.

What does the clownfish get from the sea anemone? Most fish know not to go near the anemone's tentacles. By hiding in the tentacles of the anemone, the 2 to

5-inch long clownfish is protected from fish that would like to eat him. Also, the clownfish eats the anemone's leftovers. It waits until the anemone paralyzes and eats a fish, and then helps itself to bits that the

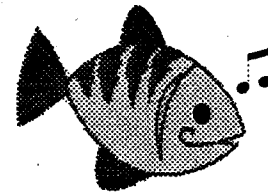
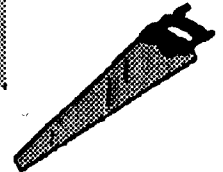
anemone leaves uneaten.

Evolution would teach that over a long period of time the clownfish somehow learned to make the special mucous he needs to protect himself from the poison darts of the sea anemone. But does that really make any sense? How many times did the clownfish have to *DIE* before he found just the right protection? Why haven't a lot of different fish learned how to do this? Do you see the problems? The way the deadly anemone and clownfish live together points to an intelligent designer. In other words, someone very smart must have made them ... and who was that someone? The only answer that really makes sense is God. God created them!



A
Which whale
is the saddest?

B
What do you use
to cut the ocean?



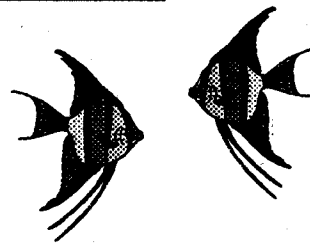
C
What does a
fish have to
do to get
into the
choir?

ACROSS

- 1 Anemone's "arms"
- 3 Like slime
- 5 Fish eating sea animal that looks like a flower
- 7 The kind of fish that clownfish are
- 9 What the sac in the anemone's capsule holds ...it kills
- 11 A kind of symbiosis

DOWN

- 2 Fish that live with anemones
- 4 'Living together'
- 6 Nemo's son
- 8 Like a Slinky®
- 10 Marlin's son



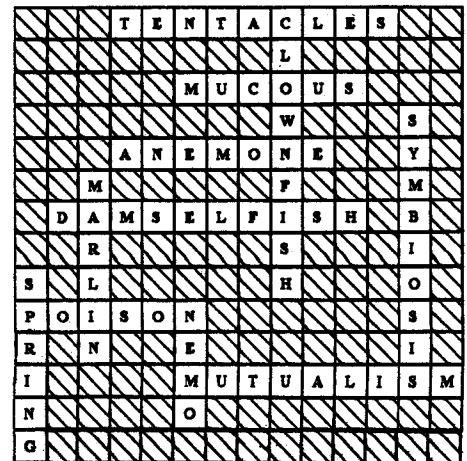
D
How do angelfish
greet each other?

E
Which fish finds
the best bargains?



ANSWERS

A. The blue whale. B. A sea-saw. C. He has to be able to carry a tuna. D. "Halo!" E. A sale-fish.



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