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Piranhas, the Feared Fish Reputation Undeserved?

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What animal is apt to strike terror in the heart of anyone taking a riverboat journey down the Amazon or one of its tributaries in South America? The word "piranha" conjures up visions of vast schools of small fishes quickly devouring anyone that should happen to fall into the river by accident.

Twenty-seven of the 28 species of piranhas in the fish family Serrasalmidae are grouped in two genera: *Pygocentrus* and *Serrasalmus*. All are native to tropical and subtropical South American river systems (mainly the Amazon, Orinoco, and San Francisco rivers). Native peoples of South America catch piranhas and use their teeth to make tools and weapons.[1] One species in particular, *Pygocentrus cariba*, is known for its razor-sharp teeth, and the red-bellied piranha, *Pygocentrus nattereri*, has a nasty reputation for aggressive behavior.

A Biblical History of Piranhas

Many people question the piranhas' razor-sharp teeth and carnivorous habits, given the fact that God created everything "very good" and stated that all animals in the beginning were to be vegetarian (Genesis 1:30–31). Originally, the ancestors of the piranha family of fishes were created perfect and harmless, but everything changed when Adam and Eve sinned, bringing sin's curse—death—upon themselves and also on God's once perfect creation (Romans 5:12, 8:22).

We don't know if the piranha's perfect ancestor had the razor-sharp teeth that the fish have today, or if its physical features were somehow redesigned by God at the Fall to help them survive in a fallen world. We will first examine the eating habits of piranhas and then consider how they may have changed since they were originally created.

Dispelling Some Myths

Contrary to popular belief, most piranha species are quite harmless. One study of attacks by piranhas on humans in Suriname indicated that the vast majority of bites inflicted were mostly to the feet and that injuries were relatively harmless, with victims being able to walk back to the beach without being attacked further.[2] Many of the attacks cited in this study were associated with high fish and human densities in the water, accompanied by commotion in the water by humans and introduction of food, fish offal, or blood in the water.

In another study conducted in Brazil, most injuries to bathers and swimmers resulted from a single bite per victim, generally related to the fish defending its brood.[3] The injured people were swimming in a dammed portion of a river in the southeastern part of the country. Human damming of rivers concentrates piranhas, creating a condition that would not exist if the rivers flowed naturally.

Piranhas, Variation, and Kinds

A recent study conducted in the Upper Amazon basin identified two contributing factors to the genetic variability and distribution of Amazonian fish species: first, major disturbance events in recent geological times; second, the great diversity of the aquatic habitat, which is thought to influence ongoing genetic diversity and gene flow.[4]

The worldwide Flood of Noah's day was a major disturbance event (Genesis 7:11) that resulted in the great diversity of aquatic, as well as terrestrial, habitats in South America.[5] This has particular relevance when studying the geography of tropical South America and its related fauna, including fishes in its rivers and lakes.

A study conducted in the Venezuelan Llanos revealed that three species of piranha, as well as six other species in a diverse tropical fish assemblage, shifted their diets as the floodplain where they lived transitioned from the wet to the dry season.[6] Their diet in the wet season consisted of microcrustacea, then switched to aquatic insects, and finally to fishes as the dry season advanced, when the crustacea and insects were no longer available.

The transition from the wet to the dry season lasts approximately four months. Scientists believe competition for the available food resources was responsible for the resultant patterns of diet specialization during this period. When the dry season arrived, the three piranha species specialized on eating fish fins.[7]

Also, there is a look-alike equivalent of the piranha called the pacu that is in the same subfamily as the piranha, Serrasalminae. Pacus look so much like piranhas that pet store owners often sell pacus to freshwater aquarium buffs as "vegetarian piranhas."

As creationists, we can speculate that both piranhas and pacus are probably from the same original created kind. Pacus, which eat largely vegetarian diets (but are omnivorous in some instances), along with the recorded shifts in piranha diets, reveal that this created kind could easily have been completely vegetarian in the beginning, but no longer is because of sin and the Curse on creation.

Conclusion

Evolutionists believe that piranhas diversified from a common ancestor nine million years ago "in the proto Amazon-Orinoco."[8] Creationists, on the other hand, believe the Word of God, which teaches that the piranhas' ancestor was created by God some 6,000 years ago and was originally vegetarian but has since moved on to other foods. However, both evolution and creation scientists believe that most of the diversification of the piranha fish family can be explained by geologic events combined with sea-level changes and hydrography. Creationists interpret these events in the context of the global Flood and its aftermath, which would be a major cause of variation within the kinds.

Footnotes

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