



### Flying Fish-Traps

➤ PTEROSAURS, the weird flying reptiles that dominated the air in those far-gone ages when dinosaurs were rulers of the land and lakes and swamps, seem to have been exclusively fish-eaters. The story is told in compact summary by Dr. E. W. Gudger of the American Museum of Natural History (*Scientific Monthly*, August).

The success of these ancient flying reptiles as fish-catchers is all the more astonishing when one realizes the handicap under which they worked. There were no flying reptiles that could also swim, as fish-eating ducks, cormorants and pelicans can swim. It is highly improbable that any of them could dive and swiftly emerge, prey in beak or claws, like modern kingfishers or ospreys. They apparently flew or swooped along the surface, snapping up fish they found feeding or gulping air.

Even flying was probably a harder job for these flying reptiles than it is for birds or bats. Their wings and the muscles that moved them were much less efficiently built than those of modern winged animals, Dr. Gudger points out; pterosaurs probably soared like albatrosses or buzzards, but depended little, if at all, on flapping their wings like geese or crows. It is even possible that the only way they could gain altitude, if rising air currents failed them, was by climbing trees or cliffs.

But whatever their other limitations, the pterosaurs were certainly magnificently organized for soaring flight. Their wings, long, narrow and tapered, were like thin leathern sails stretched between their bodies and a single, tremendously elongated finger-

bone on either forelimb. Their bones were hollow for lightness, like those of modern birds. Dr. Gudger estimates that the biggest of them all, Pteranodon, which had an over-all length of eight feet and a wingspan of 20 feet, weighed only about 25 pounds.

This same Pteranodon was distinguished in another way. The other, smaller pterosaurs, like Rhamphorhynchus and Pterodactylus, had toothed jaws which presumably made fish-catching easier, huge Pteranodon had toothless jaws that were merely horn-rimmed, like

the beaks of modern birds. Yet he must have been a most successful fisher. There are indications that he anticipated modern pelicans in the invention of a storage pouch under his lower jaw, for specimens have been found with fish bones in that position.

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