



WATER BIG

THE EYES HAVE IT

A new study suggests that their eyes, not their limbs, first prompted our ancient aquatic ancestors to make that momentous leap—more likely a slither—from water to land. Crocodile-like animals seeing easy meals on shore eventually evolved limbs to take them there for dinner.

Professor Malcolm Maclver and collaborators studied the fossil record and discovered that fish eyes nearly tripled in size before the creatures made the water-to-land transition. The tripling coincided with a shift in location of the eyes from the sides of the head to the top.

By popping those eyes just above the water line, fish could see 70 times farther in air than in water. The massive increase in visual capability likely allowed newly limbed animals to evolve more complex cognition. Freed from the vision-limiting water, they were no longer forced to react with split-second speed to survive. Evolution, Maclver says, eventually gave humans the capacity to weigh options for the future and to choose strategically.