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PORTRAIT OF GEORGES BANK

Mixing Water Brews A Fertile Cradle for Fish and Shellfish

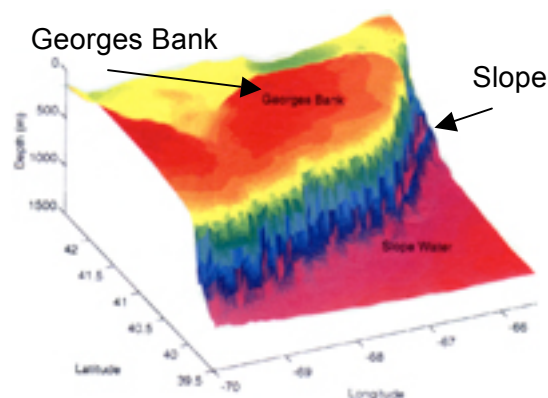


Georges Bank, measuring 150 km wide and 280 km long, has about the same area as Massachusetts, Rhode Island and Connecticut combined. It is more than 100 meters higher than the seafloor of the Gulf of Maine that lies to its north.

The Bank is at the western end of a chain that stretches from Newfoundland to Nantucket Shoals. It is part of the continental shelf of North America. Continental shelves

are areas of shallow, sloping seafloor that are home to most of the marine life on earth. There is ten times more life in and near a continental shelf than in the deep ocean.

Georges Bank is a more productive continental shelf than most. Why is it so full of life? It is a mixing spot where nutrient-rich Arctic waters combine with warm Gulf Stream waters. A spinning current called an anticyclonic gyre creates a kind of "water lasso" that encircles much of the Bank and corrals these elements. The sun beats down on the Bank's shallow waters, producing an abundant crop of phytoplankton, the microscopic plants that are sometimes called "the grass of the sea." Phytoplankton are a vital part of the marine food chain. They grow on Georges Bank at a rate three times higher than on any other continental shelf, attracting an entire ecosystem of marine animals.



The southern half of the Bank is a smooth plain that dips downward. Along that bank are fifteen submarine canyons that a geologist once described as having "awe-inspiring proportions." He wrote: "If their features were visible, they would compare scientifically with the most impressive canyons of the world." These canyons are between 8 - 20 km long and 3 - 10 km wide, and are between 400 - 600 m deep.

Throughout the canyons are "pueblo villages"—holes in the rock walls—that are home to many kinds of fish and shellfish. Fishing gear can't reach the animals that live here, so their numbers have never been seriously threatened.

The relatively flat surface on top of the Bank is the area most often fished. 100 species of fish are found at Georges Bank, as well as 32 species of marine birds, whales, dolphins and porpoises.