

BERMUDA'S LEGACY





Bermuda and its waters within the greater Sargasso Sea



Detail of Argus and Challenger Banks in relation to Bermuda



Introduction

The Sargasso Sea is one of the great ecological wonders of the world; on its surface floats a “golden rainforest” as teeming with colorful life as a coral reef. It remains much as it was when first described by Christopher Columbus in 1492. Plants, fish, turtles, and crabs thrive in this exceptionally clear, warm body of water, miles above the ocean floor. Among its wonders are birds that roost on the mats of golden Sargassum seaweed; a fish that has evolved pectoral fins, like five-fingered hands, that enable it to grasp and climb the seaweed; and eels that travel vast distances from the rivers of Europe and North America to reproduce somewhere in its depths before they die.

This is the only sea in the world surrounded by currents, rather than land, and Bermuda is the only island within it. In addition to providing a nursery for fish and other sea life, the seaweed benefits Bermuda directly when it washes ashore and sinks into the sand, fertilizing the soil and strengthening the island against storms and erosion.

The Environment

The Sargasso Sea spans an area about half the size of the United States. In the calm within its swirling currents, two species of seaweed grow bubble-like sacs to keep afloat and catch the sun’s rays in a patchwork of dense mats that attract myriad wildlife.

This unique habitat results in a complex community of more than 100 species of fish and 145 types of invertebrates. Some of this marine life is incredibly tiny and specialized for this distinct ecosystem. Others, like the white and blue marlin, and flying fish, are found worldwide but come here to spawn, while porbeagle and tiger sharks give birth to their pups in these waters.

Industrious baby sea turtles make their way to the camouflage of the seaweed as soon as they are born on the beaches of Africa, South America, and the Caribbean Islands, spending their juvenile years munching on the Sargassum and growing to a size where they are less vulnerable to predators. Swordfish, jacks, dolphinfish, wahoo, barracuda, and tuna also spend time around the seaweed mats as juveniles.

The song of the humpback whale can often be heard as this majestic animal makes its way to the North Atlantic in the spring and then back to warmer southern waters in the fall.

The Opportunity

Throughout our history, Bermudians have primarily fished around the island’s coast and on the reef platform and banks. Because productive fishing can

be found close in, only a few fishermen have ventured into waters far from shore. However, the more distant waters of our Exclusive Economic Zone (EEZ) are vulnerable to foreign ocean-going vessels, many of which fish there illegally. These poachers can reduce the amount of fish available to local fishermen, damaging our livelihoods and our cultural heritage.

While most of the Sargasso Sea is in international waters, part of it lies within Bermuda’s EEZ, which extends 200 nautical miles from the coast - our own piece of this special gem.

Today, Bermuda has a chance to protect much of this area by maintaining the waters closer to the island, where Bermudian fishermen catch virtually all their fish, as a rich fishing zone. The outer area - with the creation of Bermuda’s “Blue Halo” - would become one of the world’s largest wildlife sanctuaries, on a par with the marine reserves around the United States’ Northwestern Hawaiian Islands and Britain’s Chagos Islands in the Indian Ocean.

By banning fishing in this outer area, Bermuda will establish itself as a leader in international marine conservation. This measure would help maintain rich and healthy stocks of fish around the island, while serving as a model for other nations in the emerging effort to protect the international waters of the Sargasso Sea. The Blue Halo is a visionary opportunity for Bermuda. Designating and protecting it will help safeguard our fisheries, leaving a rich legacy for future generations of Bermudians and increasing the country’s international profile as an eco-tourism destination where guardianship of the marine environment is taken as seriously as hospitality.

How the Blue Halo Would Affect Us and the World

As overfishing takes its toll on fish populations around the world, the vulnerability of our waters comes into focus. The Blue Halo would demonstrate Bermuda’s commitment to addressing the global problem of illegal fishing and provide us with the necessary tools to enforce a no-fishing zone. At the same time, turning the outer parts of our EEZ into a world-class marine sanctuary would actually benefit our fishermen.

This action by Bermuda would also pave the way for negotiating better protection in the greater Sargasso Sea. The creation of marine reserves elsewhere in the world has actually led to increased populations of fish and marine life. Establishing the Blue Halo would ensure that our near-shore fish stocks remain abundant and attractive to fishermen and divers alike. Finally, this designation would be a celebration of Bermuda’s beauty, boosting its image as a special place and creating a legacy for future generations. ■

**FACTS
ABOUT THE
SARGASSO SEA**



7 Million Tons

↓ ↓ ↓ ↓ ↓

That is the average estimated weight of all the seaweed in the Sargasso Sea. The mats of Sargassum are the only such permanent floating structure on the planet. The Sea is an oval 3,000 km long and 1,000 km wide, but because it is defined by surrounding clockwise currents that vary their courses, it is the only sea whose shape changes over time. The two free-floating species of seaweed that cover some of its surface evolved from bottom-dwelling ancestors more than 40 million years ago. Both species reproduce by fragmentation.

✚ 1492 ✚

Christopher Columbus sailed into the Sargasso Sea on September 16, 1492, just 10 days after leaving the Azores on his first voyage of discovery. His description is the oldest on record. *"We saw much weed, stretching to the north as far as you can see,"* he wrote in his journal. *"It comforted the men, since they concluded it must come from some nearby land."* They were wrong: two thirds of the voyage - 23 days out of 35 - was spent slowly creeping through the mats with no land in sight.



The magnificent humpback whale migrates through Bermuda's waters on its seasonal journeys between the warmer Caribbean Sea and the cooler waters of the North Atlantic. Since 2007, 500 individual humpback whales have been recorded, drawing considerable local attention with their unique song and playful dance.



The porbeagle shark inhabits water down to a depth of 1,360 meters and comes to the Sargasso Sea to deliver her newborn pup. Bermuda's waters have also been referred to as the "tiger shark highway" bringing tiger sharks back to a precise favorite location year after year. Evidence suggests that Bermuda's waters are also an important tiger pupping ground.

7,000 km →

No major species depends on the Sargasso Sea more than the well-travelled North American and European eels, which spawn at unknown locations in the Sargasso Sea. While still larvae, they swim out to the Gulf Stream. The American eels ride the current to the first stop on the U.S. East Coast while the Europeans ride all the way to the other side of the Atlantic. There, the larvae turn into baby eels so transparent that they are called glass eels which swim up the local rivers. They go on to live solitary lives of five to 20 years, growing to about 70 cm. Then, in a remarkable feat, they swim back to the Sargasso Sea relying only on the stored fat that makes them a delicacy. This epic journey is their last, and it is here that they spawn and die. Throughout their lives, some of these eels travel 7,000 km.

300 Years



For almost 300 years, the cahow, the national bird of Bermuda, was believed to be extinct. However, in 1951 a few pairs were discovered breeding. Due to diligent care by local ornithologists, the breeding population of this endemic seabird has slowly increased to over 100 pairs.

↑ ↓ 20 cm

This is the average depth of Bermuda's soil, and Sargassum seaweed is the time-honoured way to enrich it. While no significant commercial harvest at sea has begun, the threat is serious enough for the United States to have banned in 2003 the removal of more than 2.2 tons a year from its waters and to have proposed that its harvesting in international waters be regulated.

The Sea's most curious denizen, popular with aquarium lovers, is undoubtedly the Sargassum fish, a creature so theatrical that its Latin name, *Histrio histrio*, means



actor actor. It literally hangs out within the seaweed by using its unique pectoral fins. These have evolved into arms with five-clawed prehensile fingers that it uses to clamp onto the Sargassum weed. It lies there in ambush, superbly camouflaged, until it suddenly opens its mouth and sucks in a passing shrimp, crab or fish - including other Sargassum fish. Its mouth is so big and its skin so flexible it can swallow prey several times its size.

100,000,000

The tiny cell, prochlorococcus, was first discovered in the Sargasso Sea in the 1980s. Yet it is the most abundant living microbe on the planet, with 100 million of these cells found in just a quart of sea water! Since it plays a key role in producing oxygen and processing carbon, this microbe is estimated to provide one of every five breaths we take. Imagine how much we have yet to learn about the ocean! Just a few years back, we didn't even know that prochlorococcus existed.

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