

A MASSIVE UNDERTAKING

BY STEPHANNIE KETTLE

In late January 2019, members of Mote's Stranding Investigations Program were called to assist in the necropsy, or animal autopsy, of an extremely rare and enormous Gulf of Mexico Bryde's whale found deceased in Everglades National Park, near Flamingo, Florida.

The Gulf of Mexico Bryde's whale is the only year-round resident, baleen whale in the Gulf. With a range constricted to the northeastern portion of the Gulf along the continental shelf, these whales are completely dependent on this habitat.

Fewer than 100 Gulf of Mexico Bryde's whales are estimated to remain in the Gulf. They are threatened by energy exploration and development, oil spills, vessel strikes, human-caused noises and fishing gear entanglement. With a limited range and low genetic diversity, a catastrophic event, such as an oil spill, could have extreme consequences.

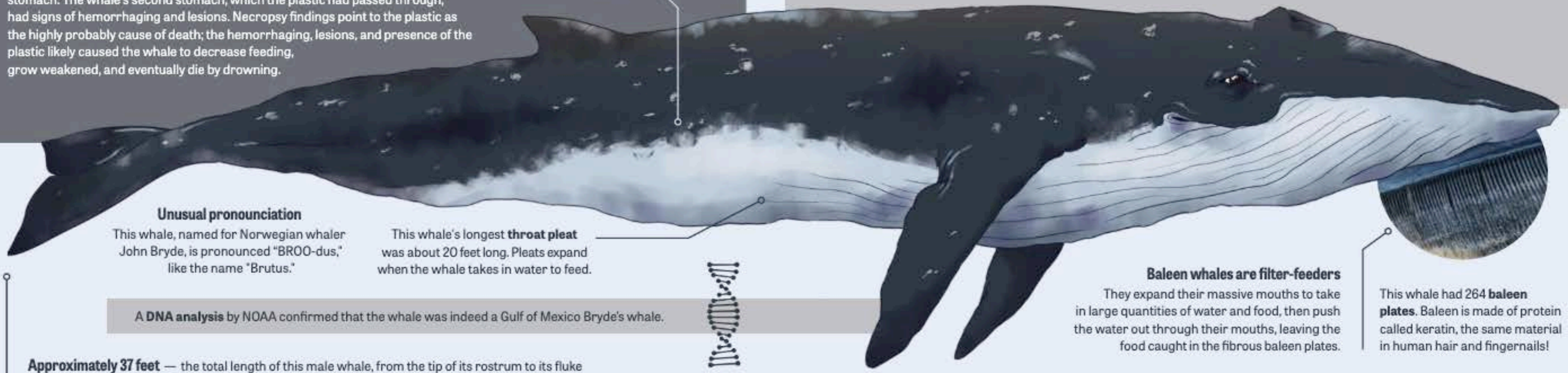
For a population so small, each whale is important, so the death of an individual can be significant. However, this deceased whale also presented a vital learning opportunity. So little is known about these whales that the chance to investigate the potential cause of death, and to collect the skeleton to become the type specimen for this subspecies of Bryde's whale, made this recovery and necropsy all the more important. ■



How did it happen?

It can be hard to determine an animal's cause of death upon examination, but there are often clues. In this case, necropsy notes point out the general thinness of the whale and the presence of a piece of plastic with sharp edges in its third stomach. The whale's second stomach, which the plastic had passed through, had signs of hemorrhaging and lesions. Necropsy findings point to the plastic as the highly probable cause of death; the hemorrhaging, lesions, and presence of the plastic likely caused the whale to decrease feeding, grow weakened, and eventually die by drowning.

Approximately 3-by-2-inch plastic piece



Unusual pronunciation

This whale, named for Norwegian whaler John Bryde, is pronounced "BROO-dus," like the name "Brutus."

This whale's longest **throat pleat** was about 20 feet long. Pleats expand when the whale takes in water to feed.

Approximately 37 feet — the total length of this male whale, from the tip of its rostrum to its fluke

A DNA analysis by NOAA confirmed that the whale was indeed a Gulf of Mexico Bryde's whale.



The whale's skull will be kept for identification studies.

Path to preservation

1 Recovery and necropsy

A total of 32 participants assisted in the recovery and necropsy of the whale in Everglades National Park (ENP). Organizations participating included National Oceanic Atmospheric Administration (NOAA), Florida Fish and Wildlife Conservation Commission (FWC), ENP, Mote, Chicago Zoological Society's Sarasota Dolphin Research Program (SDRP), and University of Miami (UM). FWC Biologist Denise Boyd led the necropsy team. Mote Stranding Technicians Jess Blackburn and Ashley Lysaught assisted in the necropsy, along with SDRP interns.



2 Burial and exhumation

After necropsy, the whale was transported and buried at Fort DeSoto State Park in St. Petersburg, Florida, to allow decomposition to begin. In May, partners from FWC, NOAA, Smithsonian Institution, Mote and SDRP returned to Ft. DeSoto to exhume the remains. Mote Stranding Investigations Program Manager Gretchen Lovewell, Senior Biologist Rebecca Hazelkorn, and Technician Jess Blackburn assisted in the exhumation, along with SDRP interns.



3 Preservation

The skeleton was then transported to Beaufort, North Carolina, to a location nicknamed "Bonehenge," where it will be further prepared to become the **type specimen** of this subspecies at the Smithsonian — the individual against which any future specimens will be compared.

Baleen whales are filter-feeders

They expand their massive mouths to take in large quantities of water and food, then push the water out through their mouths, leaving the food caught in the fibrous baleen plates.

This whale had 264 **baleen plates**. Baleen is made of protein called keratin, the same material in human hair and fingernails!

PHOTOS BY: FWC