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Hawaiian monk seals in crisis

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EAST ISLAND, French Frigate Shoals — A newborn seal pup lay still on the sand as its mother patrolled back and forth in the water, vocalizing in the hoarse bark mother seals use to call their pups.

On the blindingly white coral sand, her pup, its black pelt still glossy in the midmorning sun, was dead — another defeat in the continuing war against extinction for these majestic marine mammals.

The National Oceanic and Atmospheric Administration Fisheries monk seal team conducted a necropsy that afternoon, checking the 22-pound pup for obvious physical problems and preserving critical organs and tissue samples for later examination by veterinarians and laboratories.

The animal appeared to be stillborn, its umbilical cord and placenta lying next to the body. The preliminary report was that it may have been premature, that its skull was not fully developed and that it was smaller than normal for a seal at birth.

It has been a rough year for monk seal researchers. This was the 8th death at French Frigate Shoals, where the number of monk seals continues to plummet.

"Monk seals are now in a crisis situation," said Bud Antonelis, chief of the protected species division at the NOAA Pacific Islands Fisheries Science Center.

There may have been as many as 3,000 Hawaiian monk seals across the Hawaiian archipelago in the 1950s. In the mid-1980s, half the population was at French Frigate Shoals. Today, the population is between 1,200 and 1,300, and only a third or so are at French Frigate, where the decline has been most disturbing.

"The numbers are now at the lowest point in recorded history," Antonelis said. "And we could have less than 1,000 in five years."

"It's dire right now, and we know it's going to get worse," said Suzanne Canja, who heads NOAA's monk seal team at French Frigate Shoals.

The seal pup survival rate was so low during most of the 1990s that there are few new females ready to take the place of females getting too old to reproduce. As a result, NOAA Fisheries has taken such extraordinary steps to protect twin female seal pups from Midway Atoll that were weaned too small. They've been brought to Honolulu to fatten up, in hopes that they can be released big and healthy to re-enter the wild population there.

BREEDING GROUNDS LOST

With Hawaiian monk seals, it's not that researchers don't have a clue what's going on with them



A Hawaiian monk seal rests at French Frigate Shoals, once home base for half the seals in the Northwestern Hawaiian Islands. Today the archipelago's seal population has fallen, and only a third are at French Frigate Shoals.

NOAA Fisheries Service photo

REPORTER GOES TO SEA

Editor's note: Advertiser science writer Jan TenBruggencate accompanied the scientific expedition of the NOAA ship *Hi'ialakai* into the Northwestern Hawaiian Islands. This is his final report from the trip.



A fat Hawaiian monk seal at French Frigate Shoals rests a flipper on its mother's neck as mom and pup snooze

With Hawaiian monk seals, it's not that researchers don't have a clue what's going on with them. It may be that they have too many clues.

Here's one: Half a century ago, there were more than 110 acres of sandy island area in French Frigate Shoals, a 22-mile crescent of reefs with a dozen named islets. Today there are fewer than 40 acres, and five of the 12 islets are less than a tenth of an acre. Several of them occasionally disappear entirely.

One of the disappearing islands is aptly named Disappearing Island. But the one that concerns Antonelis the most is Whale-Skate.

In the past, it has sometimes been two separate islands, Whale and Skate, and sometimes the sandbars connect the two to form one. Photos taken during the 1960s show it vegetated with a large seabird nesting population.

"Whale-Skate was the prime pupping site on French Frigate. In the early 1990s most of the females breeding at French Frigate Shoals were there. In the mid-'90s it started eroding and in 1998, it washed entirely away," Antonelis said.

When The Advertiser visited last week, it was a little mound of sand, and seals and turtles ringed it flipper to flipper.

There is no consensus on whether a rise in sea levels, new current patterns or something else has caused the drop in French Frigate Shoals' acreage, but NOAA's Jason Baker has issued a report suggesting that anticipated rises in sea levels during the next century will make issues worse.

The team at French Frigate says the biggest problem for the seals is surviving to adulthood. During the 1990s, pups were dying because they were too thin. This might have been because their mothers weren't feeding well enough. That in turn might have resulted from a variety of factors: a decline in atoll productivity, more aggressive competition from other predators such as sharks and ulua, or even perhaps a collapse of the lobster population.

Antonelis calls it an "inability to forage successfully," for whatever reason.

NEW PREDATOR ARRIVES

As Whale-Skate was washing away, a new problem arose. A group of Galapagos sharks developed a pattern that seal researchers said was new. They started aggressively patrolling the shallow water around Trig Island, where many of the Whale-Skate moms had moved, and started killing baby seals.

"The biggest population right now is on Trig, and we could lose 25 pups there to sharks," said seal team member Dan Luers.

That's how many were taken in 1998. The numbers taken have dropped since then, partly because 12 Galapagos sharks, individually identified as threats to monk seals were removed, and because the seal team is moving newly weaned pups from Trig to Tern Island, where there's less of a shark problem.

There are other problems for the seals, but if pupping habitat continues to decline, there will be little hope, Antonelis said. He is proposing a study of ways to restore some of the habitat at French Frigate Shoals — perhaps using the same kind of sand replenishment proposed for Waikiki Beach to rebuild Whale-Skate Island.

"Habitat loss is certainly a serious concern, and we need to learn more about it," Antonelis said. "We really don't have too many options."

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on the beach. This is a sight that researchers who are monitoring the alarmingly fast decline of the Hawaiian monk seal population are happy to see.

NOAA Fisheries Service photo



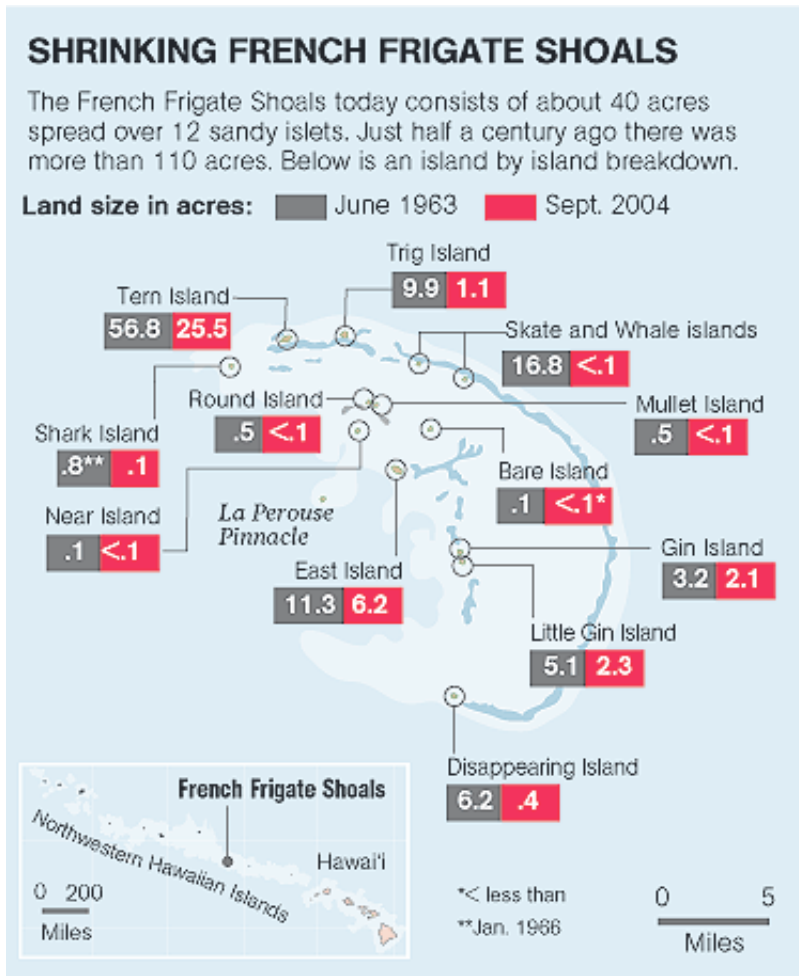
NOAA Fisheries seal team member Aaron Dietrich examines a seal found dead Wednesday on East Island at French Frigate Shoals. It was the 14th seal death at French Frigate Shoals this year.

JAN TENBRUGGENCATE | The Honolulu Advertiser

Correction: Eight Hawaiian monk seals — six pups and two juveniles — have died or are missing at the National Wildlife Refuge at

French Frigate Shoals this year. Also, 12 Galapagos sharks, which were individually identified as threats to monk seals, have been removed from the area in recent years. Information in a previous version of this story was incorrect.

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