

# *Swimming With Patagonia's*

By ROGER PAYNE, Ph.D.

*Marbled by dancing sunlight, a 45-foot whale surfaces*



# *Right Whales*

*Photographs by WILLIAM R. CURTSINGER and CHARLES R. NICKLIN, Jr.*

*in its winter refuge off South America.*

577

## Swimming With Patagonia's Right Whales

**S**PRAY-SWEPT SOLITUDES of Argentina's coast harbor a recently discovered herd of southern right whales—so named because their rich store of blubber and whalebone once made them the "right" species to harpoon. Even today, despite an international covenant among 14 countries to protect the endangered creatures, outlaw whalers eye this and other remnant herds. Though faced with the possible loss of their subjects, scientists are gleaming a treasury of facts about the lifeways of these gentle, infinitely fascinating mammals.



**C**LOSE TO SHORE, below the high escarpment, a herd of whales frolicked. The tide was in, and the great animals rolled and turned and churned the clear water with their flukes. We could have hit them with stones thrown from our brushy sunbaked vantage, 100 feet above the beach.

"Keep on the lookout for Y-Spot," I said, handing the binoculars to my wife, Katy. "She's almost bound to be somewhere nearby."

North and south the wild and lonely coast of Patagonia faded into the haze. In the windy spring of southern Argentina, this September day was one of exceptional calm. I could make out five or six vast, dark shapes like submarines. They were southern right whales (*Eubalaena australis*), a once-abundant species that is now perhaps the rarest of all wide-ranging mammals.

Along this sparsely inhabited stretch of coast, whales came to mate and calves cavorted in the easy playfulness of the nursery. From our clifftop perch, the whales' sheer bulk—one or two were longer than fifty feet and would weigh as many tons or more—dwarfed the members of our research team moving among them.

Photographer-divers Bill Curtsinger and Chuck Nicklin were quietly swimming with the whales. Andy Pruna, our motion-picture cameraman, and Pedro, the boatman, attended them in a skiff. Three orange transmitters, with underwater microphones suspended from them to catch whale sounds, floated at the corners of a triangle of shallow sea 2,000 feet on a side.

I picked up earphones plugged into receiving equipment on the clifftop. Through them I could monitor the sounds of the whales, as well as the running report of whale action transmitted from the boat and from a Cessna 150 spotter plane circling overhead.

Suddenly a great shape breached and hurled itself in charcoal sleekness from the water to smack down on the surface with a boom like cannon fire. Moments later our spotter spoke from the plane: "I think it's Y-Spot's companion breaching. Y-Spot just rolled over on her back with her calf draped across her chest. Now she's patting it with a flipper." I brought my camera-telescope to bear on Y-Spot, named for a big white splotch on her back like piebalding.

### Newfound Haven Proves Ideal for Whale-watchers

Only recently has this remote whale haven in the western South Atlantic become known to us. In 1969 the National Science Foundation research ship *Hero* came upon a herd of right whales off the coast of Patagonia. Residents of the area confirmed that the species visited the region each winter and spring.

Making a reconnaissance trip in 1970, sponsored by the New York Zoological Society, I found the place ideally suited for behavioral studies. The animals congregated in a small bay and along a stretch of coastal shallows, promising relatively easy approach.

During that first season we uncovered extraordinary evidence of right whales' restraint toward humans.

One day Katy was out in our skiff with an Argentine diver, Adalberto Sosa. A whale approached and circled the boat closely, almost touching it several times with its head. But then it turned its flukes to the skiff, swished them strongly from side to side, backed up and placed them under the stern and raised the whole boat, passengers and all, about six inches in the air.

Katy kept cool. On the radio she told us what was happening, and simply asked, "Do you have any suggestions?" At the time, a



**Bumps of identity**, the calluslike growths that sprout in varying shapes on the head of each right whale help in the recognition and tracking of individual animals. Communities of whale lice (left), some of them half an inch long, cling to the growths. Gathering specimens of these hitchhiking crustaceans, photographer Curtsinger (above) eases his rubber raft up to a lounging giant. The inquisitive mammal views the intrusion with ponderous calm. Notes Curtsinger: "The whales seemed as curious about us as we were about them."





**Lolling sea monsters** provide dramatic close-ups. Only once did a whale seem to react aggressively, advancing to within three feet of submerged lensman Curt-singer and violently thrashing its great head. "I think it was just telling me to scram," recalls the photographer, who calmly continued shooting pictures.

**Whales a-courting go:** Two males pursue a coy female (left). To evade unwanted suitors, cows sometimes surface and float on their backs.

stony dune obstructed my view of the action. I was uneasy, but Katy's voice was unalarmed, and a similar thing had occurred to me the previous day, so I didn't worry.

The whale let the captive craft hang there for a long minute, then lowered its flukes slowly without tipping the boat. Over the next five minutes Sosa and Katy made no attempt to free the skiff, and the whale lifted and set it down two more times with utmost control and deliberation. Two whales with calves loafed nearby. Maybe this was a mild threat by which the animal intended to ease the boat out of the area. Finally, Katy and Sosa took the hint.

Next day Sosa swam within ten feet of a mother and calf without incident. We had become convinced that the true disposition of a right whale is at variance with its centuries-old reputation for smashing boats and men. That violent action only followed harpooning and lancing, with the whale writhing in agony.

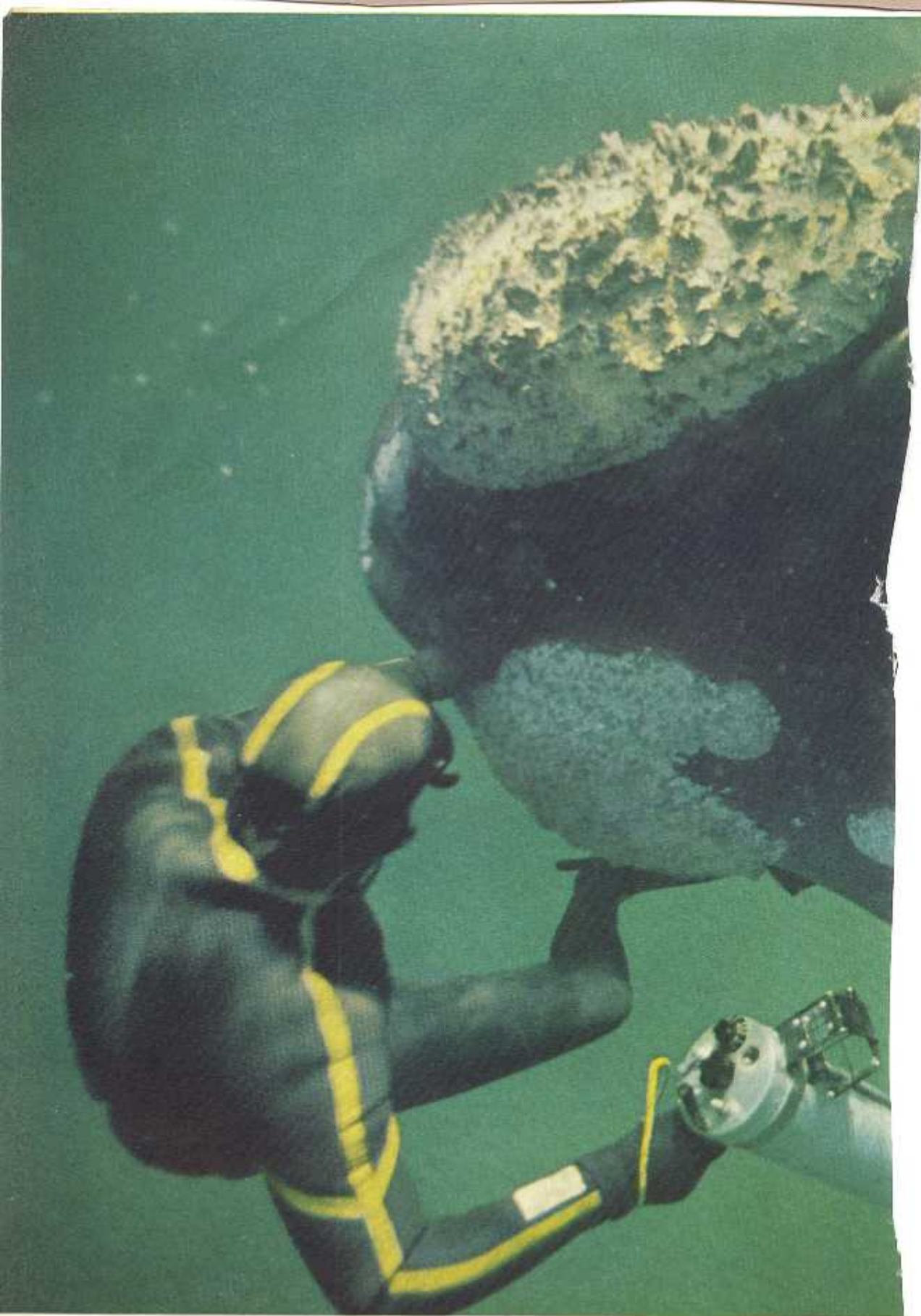
#### Don't Those Leviathans Ever Sleep?

Our major study took place in 1971, when we returned to Patagonia with support from the New York Zoological Society and the National Geographic Society. For almost three months we camped beside the bay, and right whales became a part of our daily lives.

We could watch them while we were cooking or eating or doing the dishes. At night their breathing and out-of-water sounds often awoke us. Sometimes it was as if we heard wind blowing across an open pipe; at other times the sounds were loud, high trumpet calls.

In hundreds of encounters with dozens of right whales, we confirmed that they are by nature placid and gentle. Only once did a whale behave in a way that seemed to threaten violence.

I had assured Bill Curtsinger that it was perfectly safe to swim



Too close for a close-up—or for comfort—movie photographer Pruna keeps his



camera out of harm's way as he gently pushes off from a nosy whale.





No Jonah-swallower, a right whale could never gulp down a man; the mammoth's throat is too small. Instead of teeth, it wears a comblike set of horny baleen plates; popularly called whalebone. With this immense strainer, it filters small organisms from seawater.

Wet-suited author Roger Payne (above) examines the giant wraparound grin of a beached right whale, dead of undetermined cause. Dr. Payne wins continuing support for his whale studies from the New York Zoological Society, where he is a research zoologist, and from the National Geographic Society.

**Feather or bone?** Baleen bears superficial resemblance to both. Photographer Nicklin (right) examines the fibrous, ruggedly flexible material, which once buttressed ladies' corsets and made the hourglass figure painfully possible.



among the whales. Bill had no more than slipped from the boat when a whale turned to face him. At a distance of only about three feet, it began slamming its head from side to side and up and down, churning and battering the shallow water into explosions of flying spray in an awesome display of raw power. Throughout this tempestuous exhibition Bill held his ground.

When the whale's frenzy had subsided, Bill swam slowly back to the boat, passed his camera carefully over the gunwale, pulled himself over the side, and said simply, "That was fascinating."

Our most ambitious project, correlating whale sounds with behavior, was especially difficult because whales apparently make no special motions of their mouths or bodies while vocalizing. That's where the need for an array of underwater microphones came in: By measuring delays in arrival time of a whale's voice at each one, we hoped to determine the position of the sound source.

Meanwhile, from the airplane, our spotter photographed the whales' activity and radioed a blow-by-blow account of their behavior. Later, we would try to unscramble the information and sort out which whale said what to whom in what situation.

What makes up the "talk" of right whales? They revealed a complex vocabulary of strangely haunting grunts and groans. But it may take years for us to interpret the sounds—if, indeed, we ever can. Right whales' hearing apparently is keen: When we would knock on the side of the boat, they would dive.

To determine the sex of whales, we usually had to rely upon their behavior. One part of our study area seemed primarily a mating ground, another a nursery where, as spring progressed, mothers with calves predominated. Few females with calves stayed in the mating territory, where a great many males were always competing for partners. Mating appeared entirely promiscuous—the whales displayed no noticeable pair bond.

Whale of a tail juts from the surface in a cetacean activity called lobtailing. Repeatedly, the massive flukes clap against the water with thunderous impact. One whale's lobtailing sometimes appears to cue others nearby to follow suit. The author's team hopes to learn the meaning of this and other forms of right whale behavior, including still-undeciphered noises, or "speech."



We found that courtship involved much stroking and hugging of a female by the males competing for her. She would avoid her suitors by rolling onto her back and lying at the surface. But eventually she had to right herself to breathe, and then the males would grab hasty breaths and dive beneath her, swimming upside down and pushing and shoving each other.

With only one male present, however, the female normally was quiet and tender in her acceptance. The pair would hold each other with their flippers, belly to belly, while mating.

#### Whales Stand at Ease—on Their Heads

Another notable activity had nothing to do with courtship. Frequently, we would see a whale assume a vertical posture, tail out of the water and nose down, its mouth inches off the bottom. One observer reported this as a possible feeding attitude. But I suspect that it is a rest posture, for whales would maintain the position, eyes closed, for about 20 minutes at a time before surfacing to breathe. Normally they blow every two to three minutes.

It was delightful to watch the young whales at play. Strands of seaweed dislodged by storms were the toys. I watched one calf swim up beneath a clump of kelp, draping the green ribbony stuff over its head like a bizarre hat. Swimming ahead, it let the strands slip free and stroke along its back and flanks all the way to the tail. With a swirl, the calf rolled on its side and used its tail to scoop the seaweed within reach for patting with its flippers.

Newborn calves liked to play with their mothers' tails. They would slide off first one fluke and then the other. Usually the mothers patiently absorbed all the jostling. Once, though, we saw a big female deftly roll onto her back just as her mischievous calf was about to ram her. She grabbed the youngster by clamping the small of his tail to her side with a flipper. He wriggled and struggled and spluttered. When he had calmed down, she slowly let him go.

To document right whale social structure fully will require much more fieldwork. Yet a shadow hangs over our hopes. The few known herds often concentrate near shore where they make easy targets for outlaw whalers or for whalers from nations not bound by international agreement. Even though declared a protected species for the past 37 years, right whales have made little, if any, recovery.

In late spring Patagonian right whales leave their breeding area—an area protected by the Argentine Government—and head south to summer feeding grounds. But where do they go? Will they evade the guns of whalers who are party to no restrictions?

Far-reaching undersea topographies that reverberated formerly with the shouts of whales now echo only the monotonous hiss and surge of sea-surface waves set against the dull, numbing roar of shipping. The once-vast host of right whales now is reduced to a few roving bands—harassed, divided, and dispersed. □

**Spouting cow** escorts her calf along a surf-fringed strand. The youngster—weighing perhaps three tons at two months—stays within an easy sidelong glance of its mother. In shallow water she keeps the calf on her landward side. They spend hours playing together, occasionally resting and drifting with the tide. Mother elephant seals and their newborn pups, bottom, also find haven during the southern winter and spring on this mild-weathered Patagonian shore. Undisturbed by man, it provides a rare sanctuary for many marine species.

#### SIX-MONTH INDEX AVAILABLE

As one of the benefits of membership in the National Geographic Society, an index for each six-month volume will be sent free, upon request, to members who bind their *GEOGRAPHICS* as works of reference. The index to Volume 141 (January-June 1972) is now ready.

