





Photo by Dagmar Fertl



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Sharing the Sea

Bottlenose dolphins and man interact closely, sometimes too closely, along the Gulf Coast.

by Nicole Le Boeuf and Dagmar Fertl

COASTLINES HAVE historically been among mankind's most valued parcels of land. Likewise, for generations, the bays and channels of Texas have been popular places for recreational boating. Hundreds of bottlenose dolphins also are attracted to Gulf Coast bays for their abundant food supplies, and our coexistence sometimes can be dangerous to these magnificent animals.

Bays are important to us for a variety of reasons. Aside from their bountiful fisheries, bays offer excellent sailing, boating, and sightseeing opportunity. Many bay systems act also as important transportation arteries and serve as final disposition sites for treated wastewater.

Those same water bodies provide critical natural habitat for many animal species, and some bays also are important for oil and gas production. Generally, bay systems are good indicators of the health of the immediate environment.

We've all heard about boats being a primary cause of death for Florida manatees. Did you know, though, that bottlenose dolphins can suffer a similar fate?

UNWITTING ANTAGONISTS

While most of us are cognizant of the wildlife that shares these waters, we are blissfully unaware of the harm that we can inflict on these creatures.

For centuries, dolphins and humans

have had a special fascination for one another — so much so that bottlenose dolphins, more than any other species, have been kept in captivity for many years. People frequently relate tales of dolphins approaching their boats, almost appearing to seek out human contact.

Bottlenose dolphins have learned to capitalize on human disturbance of the environment.

As researchers, we often have watched people approach dolphins in hopes of initiating some special encounter. It's hard to imagine that such magical meetings can prove harmful, or even deadly, to dolphins. But they can.

Dolphins have to be alert all day, paying attention not only to predators and prey, but to boaters, as well. In many areas, dolphins appear to be habituated to boat presence and go about their daily activities seemingly unaware of nearby boaters.

They fish, take care of their young, and socialize with one another in the midst of what appears to be a virtual circus of boats.

On days when there is plenty of

food and social company, dolphins are quite relaxed in the presence of boats and sometimes approach them. When food supplies run short, however, dolphins may appear annoyed by human presence and often "tailslap" to show their aggravation.

POWERFUL INSTINCTS

Researchers have witnessed dolphins being visibly harassed by recreational boaters. Once, a group of four mother/calf pairs and two adult females were swimming behind a shrimp boat. The calves socialized while the adults fed. A recreational boat rapidly circled the calves and tried to videotape the animals (which appeared panicked).

The mothers raced to the calves and

and vertebrae.

Aside from being highly detrimental to the dolphins, collisions also can do a great deal of damage to a boat.

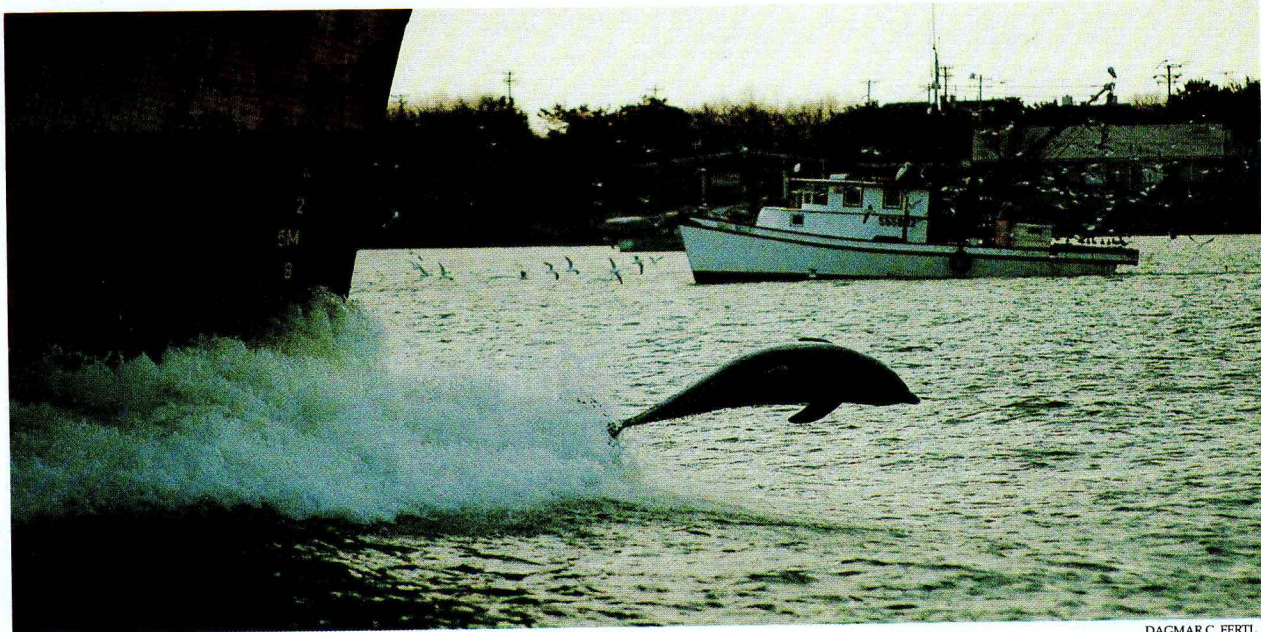
The good news is that dolphins can and often do take action to avoid negative encounters. Dolphins, like other large mammals, learn to reduce their interaction with humans if the contact is harassing or disruptive. Studies in some areas show a statistically significant drop in numbers of dolphins sighted in channels when boating traffic is the heaviest.

Dolphins may avoid heavy boat traffic to escape noise pollution, or their evasion might be designed to reduce the risk of collision for themselves and their young. The youngest

IT'S THE LAW

Did you know that dolphins are protected by law? The U.S. government enacted the Marine Mammal Protection Act (MMPA) in 1972 to protect dolphins from harassment and endangerment by humans in U.S. waters. This federal law prohibits boaters from harming, feeding, swimming with, and even approaching dolphins in the wild. Violation of the MMPA can land you a stiff fine — as much as \$20,000.

So what do you do when you see a dolphin out in the wild? If you are under power, carefully slow down and steer around the dolphins' path. A dolphin's reaction to oncoming boats can



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positioned themselves so that the calves were between the research vessel and the adult dolphins. Only then did the harassing boat leave.

What do dolphins have to fear from well meaning sightseers and those who are just in a hurry to get from one location to another? Although most dolphin/boat encounters are uneventful, serious injury can occur when propeller blades cut through the skin and muscle tissue.

If the boat impacts the head or backbone of the dolphin, the wound can be fatal.

A number of dolphins in the Galveston Bay area exhibit "souvenir" scars of their close encounters with boats. Other dolphins have been found dead on Texas beaches with obvious propeller wounds. Others have not-so-obvious injuries, such as broken ribs

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and the oldest dolphins are thought to be most vulnerable to boat collisions. Younger animals are probably oblivious to the dangers that boats pose, while older animals lack sufficiently quick reaction to dive clear of the obstacle.

Boater awareness and education are the keys to minimizing collisions with dolphins.

Be aware, as captain, that there are other users of the bays besides yourself.

be likened to that of a pedestrian's reaction to vehicular traffic.

The correct approach is to watch these magnificent creatures from a distance as they go about their daily activities and cavort with their companions. You should not approach the animals; the MMPA requires that you stay 100 yards away from dolphins.

If the game changes and dolphins come to you, enjoy the treat. Either have your boat engine in idle, however, or turn it off. This way, you can enjoy hearing their breathing and delight in the attention they're paying you.

Sharing the waterways with dolphins should be an enjoyable, yet guarded coexistence. It's much like driving on the highway, when paying attention to your own actions is not

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always enough to prevent an accident. Be a defensive driver on the water, too, and possibly save a dolphin's life. ♪

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BOTTLENOSE DOLPHIN FACTS

Distribution: The Atlantic bottlenose dolphin (*Tursiops truncatus*) is one of the most well-known cetaceans because of its widespread use in marine parks and research facilities. Bottlenose dolphin are found worldwide in temperate and tropical waters, absent only from polar regions. They are frequently seen in harbors, bays, lagoons, estuaries, and river mouths. There appear to be two ecotypes, a coastal form and an offshore form. Biochemical studies now are providing more information about the relationship within and between the ecotypes.

Since different areas along Texas and other coastlines often have markedly varying population levels, it is thought that there are individuals which may be migratory. Currently under research, it is believed that the population(s) are composed of "residents," which stay in a particular area year-around, and "transients," which travel up and down the coastline. It does appear that the residency of some bottlenose dolphins is seasonal, with many individuals reappearing at a particular site about the same time each year. Movement probably parallels that of available food sources in response to fluctuating water temperature.

Description: Bottlenose dolphins are usually charcoal gray with a slightly lighter belly, which sometimes is lightly spotted. During warm weather, the belly is often a flushed pink color, thought to be a natural response to the warm water. The rostrum, or "beak," is short and stubby. Recognizable markings or characteristics, such as dorsal fin shapes or notchings, can identify individuals; repeated sightings of these individuals provides information about home-range limits and group composition.

Bottlenose dolphins typically are eight to nine feet in length. They weigh about 30 pounds at birth and reach 400-500 pounds at maturity. Males are slightly larger than females.

Natural History: Males reach sexual maturity at 10-12 years, females 5-12 years. The average life span is estimat-

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ed at roughly 25 years. Dolphins may be aged by the presence of growth layers in their teeth, much like reading the age of a tree from its rings.

Females bear a single calf every second or third year. Gestation is about 12 months. Calves nurse for a year or more but stay with their mothers for as long as five years. During this extended period of dependence, calves spend their time learning home ranges, how to find and capture food, how to recognize other dolphins, and who fits where in the dolphin social hierarchy.

Coastal bottlenose dolphins are found in smaller groups than dolphins that spend most of their time offshore. Ecological pressures, such as predation and foraging, probably are the driving factors for group sizes. Dolphins live in a "fusion-fission" society; animals generally do not remain with one particular group for long periods of time, although long-term bonds do appear to exist for some individuals.

A 20-year study in Sarasota, Florida, showed a degree of segregation based on age and sex, at least for that area. Adult males rarely associate with sub-adult males, the latter usually remaining in bachelor groups or with one or two adult females. Females with calves associate with each other, and occasionally with other age and sex classes.

Everywhere they have been studied, bottlenose dolphins appear opportunistic in their feeding habits; they take a wide variety of fish and invertebrates. Dolphins may be seen following shrimp boats, feeding alone or cooperatively with each other, or herding fish onto mud banks. In some parts of the world, dolphins also work with humans to catch fish.

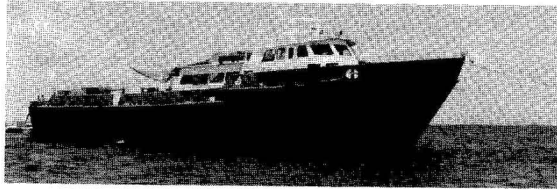
Bottlenose dolphins are quite adaptable and have learned to capitalize on human disturbance of the environment for new food sources (such as shrimp boats) or to expand their range (through use of man-made ship channels). However, these dolphins, and their relatives face a variety of threats throughout their range. Information is accumulating on direct (hunted) and indirect (bycatch of fisheries) takes, mainly in small numbers, worldwide.

Bottlenose dolphins, specifically their responses to habitat depletion and pollution, may be used as indicators of the health of the marine environment. Because of their apex ecological position in the food web, slow reproductive rate, and the gaps in our knowledge about them, continued research is needed to safeguard them and the environment in which we live.

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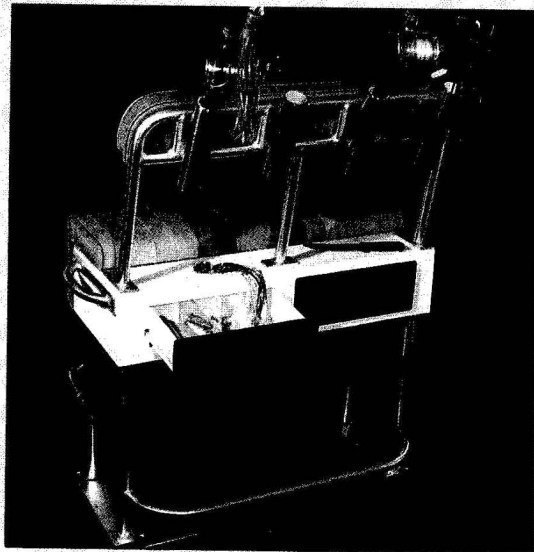


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