

# Of Dead Zones and the Sound of Silence

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#### A NOTE ABOUT THE AUTHOR.

M.E. "Pete" Isleib, co-regional editor for *American Birds*, has lived and worked much of the past three decades on the shore and waters of Prince William Sound and the Gulf of Alaska as a commercial fisherman and ornithologist. He was author of *Birds of the North Gulf Coast—Prince William Sound Region, Alaska, 1973*, the major monograph of the birds of the spill areas.

He was the principal observer of the United States Fish and Wildlife Service special studies (pipeline and tanker route related) of waterbirds of Prince William Sound between February 1971 and May 1977. These surveys included seasonally repeated air and water transects of Prince William Sound's shorelines and water areas.





EVERYONE WITHIN REACH OF TODAY'S multimedia press has read, heard, or seen news and stories of the Exxon Valdez and the consequences of its contact with Bligh Island Reef.

The resulting 11 million gallons of Prudhoe Bay crude oil in the pristine waters of Prince William Sound and contiguous Gulf of Alaska has had a profound impact that most Americans have felt or will feel in one way or another (including a nationwide 15 to 20 percent rise in gasoline prices).

Unlike most disasters the Exxon Valdez spill is a continuous catastrophic episode that will last years. As I write this, some 70 days later, oil and sheen drifts on with wind, tides, and currents, and oil-coated dead and dying birds are coming ashore on

beaches as far away as the tip of the Alaska Peninsula, 600 miles southwest of Prince William Sound.

The petroleum industry and the United States Coast Guard were not prepared. The disorganization and incredibly slow response was criminal. Meaningful containment and clean-up activities did not even begin until weeks had passed. Should you read or hear the reports prepared by Exxon's public relations arm you will learn of the number of experts and consultants hired, the numbers of boats and other equipment as well as thousands of people working on spill-related projects: in general, the great amount of money being spent to put Humpty Dumpty back together again (with about as much success as all the King's men). The issue of safely trans-

porting oil, and the containment and clean-up of accidental spills of all toxic substances including crude oil, warrants complete review by the American people. Federal resource agencies, including the United States Fish and Wildlife Service, were also caught unprepared. It was weeks before various efforts were coordinated and by that time the spill covered thousands of square miles and many opportunities were foregone.

Should you be interested to learn of the numbers of bird and marine mammal losses you could call the wildlife rescue centers or the United States Fish and Wildlife Service offices in the region's port cities. At present, they would be able to inform you the dead body count exceeds 1000 Sea Otters and 200 birds of about 70 species.

Of course, these numbers have far less relationship with reality than the infamous body counts of the Vietnam War. These counts are of the bird and mammal bodies picked up and brought to a collection site, usually at one of the region's port cities and then officially counted. At the moment there is considerable press about what the officials plan to do with the 25-plus tons of oil-goo-coated bodies.

The mariners and fishers of the Sound and Gulf, a rough and independent group, who are differently attuned to the rugged beautiful region than the granola and binocular communities, have been touched and taken aback by the wailing of dying loons and sight of goo-coated sea otters. They have been shocked by the *sound of silence* in the thousands of square miles of the *dead zones*.

Most people who have spent time in the dead zones of the spill come away very angry and embittered and feel betrayed by both the petroleum industry and the federal government.

Biologists on the scene report that most waterbirds showed little or no avoidance and in some cases appeared attracted to the oil slicks. Most say the best way to estimate bird losses is to calculate what was present before an area was anointed with oil and consider that lost.

Jeffery Hughes, coordinator for the Alaska Department of Fish and Game non-game program, has spent considerable time in the dead zones and firmly states the official body counts represent between 1 and 10 percent of



*An example of oiled wildlife from Prince William Sound not seen on television. This is a close-up (ventral view) of the head and neck of what appears to be a Northern Shoveler. The bird's head is in the lower center of the photo, bill pointing left, and total scale is about 12 inches. Photograph/Joel Bennett.*





Dead oiled loon (probably Yellow-billed) in the intertidal zone, Prince William Sound. Photograph/John Hyde.

the losses depending on which species is at issue, its body size, and its affinity for the beach or shoreline. For example, murrelets and auklets just seem to disappear while many cormorants, if near shore, climb out onto rocks and await the inevitable.

Other experienced biological field personnel agree with Hughes and a 5 percent calculation is presently in use: this would mean approximately one million direct avian casualties in the first 70 days following the Good Friday disaster.

Diving birds—loons, grebes, cormorants, sea and bay ducks, and alcids—were the most affected by the broad pool of oil as it overflowed around and through an archipelago of islands in Prince William Sound and westward around and across the Gulf of Alaska.

Biologists with the Alaska Maritime National Wildlife Refuge report great loss of murrelets and other sea birds in the Barren Islands after the spill engulfed the area in mid-April. The Barren Islands seabird colonies host well in excess of one-half million birds. On a survey of 35 normally active Peregrine Falcon aeries adjacent to spill areas, only six were birds located. No peregrines were at the seven Chugach Islands aeries and researchers saw no birds of any sort on adjacent waters.

Numerous other observations reveal similarly missing birds: *the sound of silence*.

Eagle researchers report 55 percent fewer active nests in the spill areas and wildlife rescue personnel say the best way to locate sick and incapacitated eagles is to look on the forest floor beneath the aerie.

Avian predators, especially scavengers, have been among those lost. Gulls, crows, hawks, and eagles (even Great Horned Owls) have been located oiled and/or sick; in some cases these birds turned up many miles from spill-affected areas.

The species most affected by the spill, due to the numbers present in the area and its small population size, is Yellow-billed Loon (*Gavia adamsii*). At least several hundred Yellow-billed Loons regularly winter in the zone smothered by the spill: which is the center of its Northeast Pacific wintering waters. The total populations of this species can only be guessed at, but I believe the loss attributed to the Exxon Valdez spill will exceed 10 percent, even possibly 20 percent, of its Northeast Pacific wintering population.

Little is presently known on the transfer through the ecosystem of the toxic properties of Prudhoe Bay crude. Studies, as the result of the spill and now underway, will help reveal

the seriousness of this aspect. Additionally much less is known about the lifespan of crude oil toxicants in the cold waters of the subarctic. It is reasonable to suspect that small sublethal quantities of ingested hydrocarbons will adversely affect avian reproductive capabilities. Fecundity problems may account for greater long-term losses than the direct casualties.

When the crude oil escaped the hull of the Exxon Valdez on March 24, 1989, it was late winter in Prince William Sound. Very few migrants had reached the region as the principal waterfowl migration through Prince William Sound occurs during the last half of April, which overlaps with the shorebird passage during the first half of May. Some of the first migrants to reach Anchorage (100 miles northwest of Prince William Sound) in early April included oiled Northern Pintails and Glaucous-winged Gulls, indicating these individuals had stopped somewhere in Prince William Sound while *en route*.

Fortunately, due to their habitat preferences and the timing, most waterfowl and shorebird migrants overflew spill areas to reach their western and northern Alaska breeding zones.

In late March and April the bulk of losses were from nearshore residents including cormorants, murrelets, guillemots, and wintering loons, grebes, and ducks: most vanished into a sea of goo.

For the pelagic species, such as puffins, kittiwakes, storm-petrels, and shearwaters that did not enter these waters in numbers until late April, the picture is as yet unclear. Because these species represent tens of millions of birds in the western Gulf of Alaska substantial casualties are expected.

Projections in the 1970s predicted three major tanker spills during the life of the Prudhoe Bay field. The Prudhoe Bay and nearby oil fields on Alaska's north slope are now past their peak production with about half the recoverable oil remaining. Aging equipment greatly increases the risk for additional spills.

If the Arctic National Wildlife Refuge were developed, the life of the pipeline and tanker route would be greatly extended as well as the magnitude of the risk to the marine birds of the eastern Northern Pacific Ocean.

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