





# The Exxon Valdez oil spill: first impressions and commentary

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#### A NOTE ABOUT THE AUTHOR.

Stan Senner, Chairman of the United States section of the International Council for Bird Preservation, traveled to Prince William Sound, Alaska after the Exxon Valdez oil spill as part of a team to evaluate the damage and set up research and monitoring programs to assess the long-term effects of the spill. The short article here voices his impressions and concerns upon his return.



A dead oiled cormorant, one of several hundred recovered as of May 10, 1989 in Prince William Sound. Most of the cormorants affected were Pelagic Cormorants.

THE GROUNDING OF THE EXXON Valdez on March 24, 1989 released more than 11 million gallons of crude oil into Prince William Sound on the northern Gulf of Alaska coast. As of mid May, the oil was still spreading—more than 700 miles of coast have been oiled and some predict the oil will ultimately reach the Arctic coast. It is too soon to evaluate either the ecological effects of the spill or even the adequacy of response by industry and government, but some first impressions, gathered in the field, seem appropriate.

A great many Alaskans are upset and feel betrayed by an industry that, as a whole, they had embraced since oil was first discovered on the Kenai Peninsula in 1957. The short-term disruption has been considerable: an entire herring fishery season was cancelled in Prince William Sound and salmon openings from Prince William Sound to Kodiak and Kachemak Bay are in jeopardy. Many people have left their normal jobs to work on oil clean-up crews, prompting businesses—for example, restaurants in Cordova—to post signs apologizing for their lack of good service. Clinical psychologists are making the rounds of the affected coastal communities, helping families to deal with the disruption of their lives.

Some politicians are making hay by blasting the oil industry and the agencies that are responsible for regulating it. Some of those same politicians are responsible for not having appropriated adequate funds to enable state and federal watchdogs to do their jobs. Prior to the spill, for example, the Alaska Department of Environmental Conservation was reduced to a four-day work week.

The spill certainly proved that the various agency and oil spill contingency plans—there were at least six different plans—were nothing more than paper exercises. No one had ever contemplated a spill of this magnitude in this situation. Perhaps, as a result, the discussions of possible effects and worst-case scenarios contained in future environmental impact statements required by the National Environmental Policy Act will be taken seriously.

The State of Alaska and especially its departments of Environmental Conservation and Fish and Game get high marks for quick, tough, and thorough responses. The federal response has been more mixed. Because of its responsibility for migratory birds, I paid particular attention to the United States Fish and Wildlife Service. No doubt, many Service personnel worked long and hard following the spill, but as a whole, I was disappointed by a response that tended toward the cosmetic (e.g., the hazing program at Green Island) and was less than aggressive—perhaps due to limited funds and the fact that the Bush Administration has yet to appoint the agency's director.

Of primary interest to *American Birds* readers will be the spill's effects on birds. There is a natural tendency to focus on the body count. So, for the record, through May 10, 1989, there was a total of 11,702 birds recovered, dead or alive. Among the birds received at the primary rescue center in Valdez were: 208 loons, mostly Commons (*Gavia immer*) and Yellow-billed (*G. adamsii*); 293 grebes, mostly Horned (*Podiceps auritus*); 373 cormorants, mostly Pelagics (*Phalacrocorax pelagicus*); 292 scoters, mostly Black and White-winged (*Melanitta nigra* and *M. fusca*); 15 Bald Eagles (*Haliaeetus leucocephalus*); 356 murrelets, mostly Commons (*Uria aalge*); 116 Pigeon Guillemots (*Cephus columba*); and 269

murrelets, mostly Marbled (*Brachyramphus marmoratus*).

Comparing these numbers to the millions of birds that nest in and around and migrate through Prince William Sound and the affected areas to the southwest (e.g., the Barren Islands), it is tempting to conclude that the population-level effects will not be significant. However, that judgement would be premature. The bird carcasses brought to the rescue centers are probably only a small percentage, perhaps 10 or 20 percent, of the actual mortalities. More important, however are the indirect effects. For example, gulls and kittiwakes nesting at colonies many miles from oiled waters and beaches were appearing with oiled breast feathers. How will this affect reproduction in 1989? To the extent that toxic fractions of oil are dispersed in the water column or that oil is buried in sediments, only to surface over years, the effects may be manifest for a long while. A particular concern in this regard will be long-term impacts on invertebrates and other prey organisms for birds.

With all of these questions, the key phrase is "long-term." The short-term effects—for example, those evident in body counts—get a great deal of attention. But when the story is no longer front-page news, will there be a comprehensive effort to synthesize what we know and to identify and support a research and monitoring program to find out what we do not know? This is not to advocate a researcher's version of ambulance chasing. A complete assessment and understanding of the ecological damages and underlying mechanisms is vital, not only to ensure that those at fault will pay the full true costs, but to ensure that adequate safeguards will be adopted to prevent future disasters.

Research can also help identify positive actions that will in some measure compensate for the losses due to the spill and help to insulate species from new, cumulative shocks in the future. A good example would be if Exxon were to purchase timber rights in order to protect Marbled Murrelet nesting habitat on, say, Montague Island where some of Prince William Sound's giant spruce trees may still be found.

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