

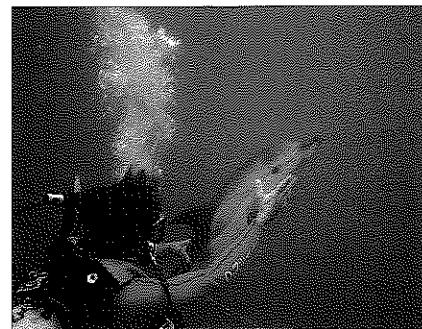
OUR WAR AGAINST OUR WATER

Will It Be Armistice or Armageddon?

In 1987, marine biologist Sam LaBudde secretly videotaped the drowning of thousands of dolphins during four months of tuna-fishing operations while on board a Panamanian tuna seiner.

Release of the tape set off a storm of international protest and resulted in substantial changes in U.S. marine-mammal protection.

As part of the research undertaken by the Honolulu-based group Earthtrust in 1988, Mr. LaBudde helped to expose the devastation caused by the Asian red squid driftnet fleet. The HSUS and several other groups assisted in underwriting this expedition.



ROBERT YOUNG

Mr. LaBudde has worked with river dolphins in China (in an effort also aided by The HSUS) and walrus and other marine mammals in Alaska. He is currently a biologist with Friends of Animals.

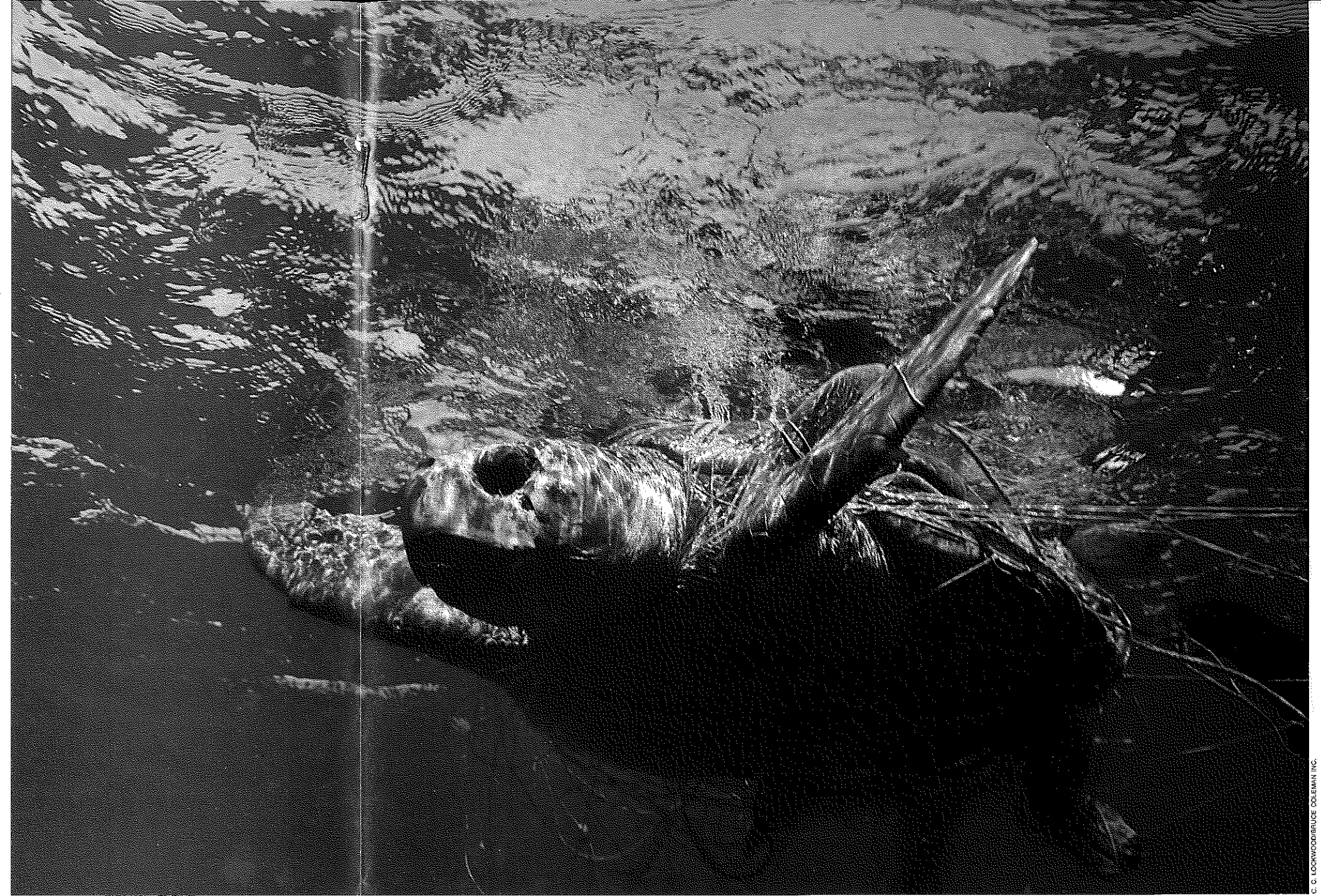
In the same way that the area west of the Appalachians was once known as the Wilderness, it was not so very long ago that the vastness of the seven seas was hailed as the last frontier. As has been the case with all of those vast pristine fastnesses designated as frontiers and summarily ravaged by man, the oceans, too, have been conquered and are now threatened with the same human afflictions of greed,



ignorance, and indifference that have resulted in annihilation for entire ecosystems and thousands of terrestrial species. A logical extrapolation of human activities and their effect on the greater marine habitat would indicate a similar fate for the oceans.

If one could imagine a "medical planetologist" diagnosing the health of the Earth in the same way that a physician views a human patient, it seems more than likely that the human species would be perceived as a global virus or bacterium raging out of control. In viewing the Earth's oceans and waterways as a circulatory system within a living being, it is easy

to compare the effects of humans on aquatic systems to those caused by some type of infectious disease within the human bloodstream. That our "standard of living" threatens the life of our host planet is all too clear. It might even be appropriate to reterm it the planet's "standard of dying," so rampant is our despoliation of nature. What is not so obvious is what, if anything, is going to be done about it. We must first decide whether we want to adopt an allopathic approach that stresses treating the symptoms or a homeopathic one that entails an assessment of the causes for the disease (ourselves) and ways to reinforce the



G. LOCKWOOD/BRUCE COLEMAN INC.

efforts of the body (the Earth) to heal itself.

The simplest way of dealing with any problem is to prevent it from ever arising. The old adage "an ounce of prevention" is particularly relevant in the context of assuring health for the oceans and the environment in general. Despite what industrialists and policymakers like to tell us about how expensive it is to stop pollution, it is far more costly to deal with its long-term consequences and effects, effects that are, in some cases, beyond our power to rectify. Certainly, no one could argue that it's easier to remove PCBs from the oceans than it is to stop their release into the atmosphere and waterways. No one would ever think to suggest a captive-breeding program for blue

whales, even though it is not at all certain that this and other cetacean species will survive much longer. The billion-dollar cosmetic clean-up that Exxon mounted following the wreck of the tanker *Valdez* is far in excess of what it would have cost initially to construct vessels with puncture-proof fuel cells. Prince William Sound was, without question, the crown jewel of North American coastal ecosystems. Neither Exxon nor anyone else can ever replace the thousands of oil-soaked seabirds, otters, eagles, whales, and other animals that died as a result of slow poisoning and exposure to toxic crude oil. Nor is there the slightest hope that anyone can, in some way, compensate for undermining the

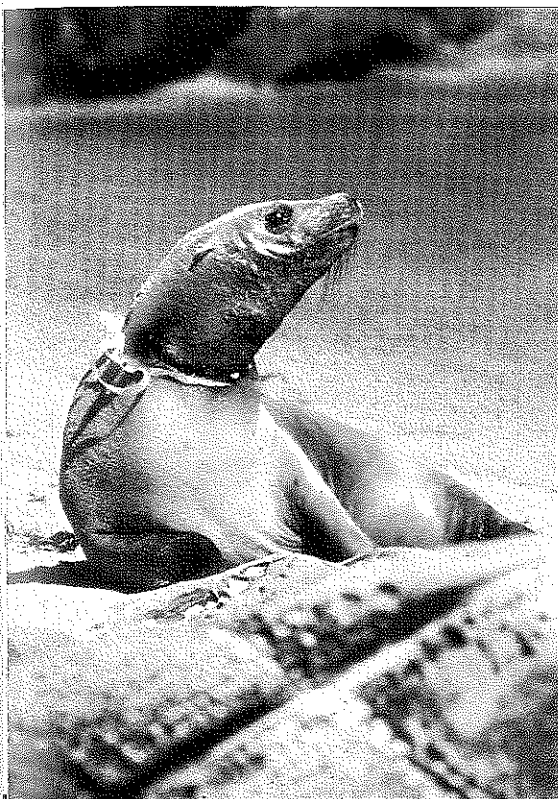
purity and sanctity of the land and its wild denizens: all have been affected and will likely bear traces of the spill for years. As a sometime Alaskan whose coastal property faces south on the spill area, I can assure you that the sight of sealions and killer whales cavorting beneath wheeling flocks of seabirds was priceless. We can only hope that they return.

Keeping the oceans clean and healthy is much more cost-efficient than trying to dole out first aid when disaster strikes. More importantly, the war of attrition on the planet's flora and fauna and the battle to keep many species and ecosystems in the global picture need not be fought in last-minute desperation. The long-term economic costs created by en-

Above: A loggerhead turtle struggles against the lethal embrace of a driftnet. **Opposite:** Biologist Sam LaBudde attempts to free an entangled young dolphin. Discarded fishing nets doom thousands of marine animals yearly; driftnet "strip-mining" of the oceans may threaten the entire Northern Pacific ecosystem.

B Y S A M L A B U D D E

It has been the easiest thing in the world for humans to adopt a policy of abuse toward water.



AMERICAN OCEANOGRAPHY SOCIETY

A beached sea lion, fatally caught in the rings of a six-pack holder, awaits death. Ocean debris is increasing alarmingly.

Environmental mismanagement far exceed any short-term profits or convenience afforded by such policy. We can only hope that we will soon realize that environmental destruction must be paid for, and that, in most instances, financial restitution for environmental damage falls far short of actual costs.

PCBs, heavy metals, and organic-pollutant levels continue to rise in the oceans, as do their concentrations in virtually every type of marine or aquatic organism known to science. Overfishing and the use of rapacious and indiscriminate fishing methods like drift-netting have reduced the abundance of many marine species to their lowest levels in human history: a number of marine species now teeter on the brink of extinction. Pacific walrus are being slaughtered for their ivory faster than they can reproduce, and coastal development is destroying their fertile feeding and spawning grounds within the limited wetland areas at a rate comparable to that visited upon the rainforests. Ozone depletion may soon result in sufficient penetration of

ultraviolet light to initiate destruction of marine phytoplankton—the source of two-thirds of the Earth's oxygen production. All over the planet, clean freshwater rivers are transformed into outflow channels for industrial effluvia and human waste, as the billions of people within developing nations struggle to achieve modernization in the style of the United States, Japan, and western Europe. As if this were not enough, France continues atomic testing in the Pacific, and a number of countries, including the United States and Japan, continue to push ahead with plans for strip-mining the ocean floor, a technology that could suffocate coral reefs, destroy the viability of regional ecosystems, and sterilize vast areas of the world's oceans. Let us welcome our grandchildren to the third millennium.

It has been the easiest thing in the world for humans to adopt a policy of abuse toward water. What could be more convenient than a natural, gravity-driven system for waste removal that transports all undesirable material far away and deposits it into a seemingly limitless expanse for dilution? The first time anyone really paid much attention to water pollution was about the time that rivers began catching on fire and burning because garbage was being dumped in them faster than they could carry it away. This was also about the time that PCB levels in Scandinavian fish and Minamata disease from mercury poisoning in Japan made it clear that there was such a thing as downstream, and that some of civilization's by-products were so deadly that they could, indeed, come back to haunt us.

In the same way that DDT buildup in food fish caused ospreys to all but disappear from many areas in the United States, pollutant levels on the Atlantic seaboard may be so high as to cause widespread mortality in bottlenose dolphins. Our own Great Lakes are so polluted that bulletins are regularly issued suggesting that ingestion of whitefish may be harmful to human health. The Mississippi River is straddled by the sixty-mile-long "chemical corridor" at a point just before it empties into the Louisiana wetlands, and industrial pollution in the St. Lawrence seaway is so high that the waterway's population of Beluga whales legally qualifies as hazardous waste. With federal policy that sanctions and abets these kinds of travesties in a country as "civilized" as the United States, is it any



KEN GRANAMBRUCE COLEMAN INC. INSET: JEFF FOOTEBRUCE COLEMAN INC.

wonder that other parts of the world's marine habitat and the oceans as a whole are under imminent threat?

One problem contributing to the sorry state of the oceans is that, despite the right of nations to promulgate environmental policy within their own borders, no such policy is enforceable outside coastal 200-mile limits. It turns out that most of the Earth's surface is completely unregulated by any sort of management whatsoever, environmental or

otherwise. With the exception of the pole areas (which are at least covered by some sort of international agreement), all of this area is within the Atlantic, Indian, and Pacific oceans. It is this international loophole that has allowed the Japanese and others to ply 30,000–40,000 miles of driftnet each night in the North Pacific alone. In the space of ten years, the pelagic (open ocean) driftnet fisheries went from being virtually nonexistent to the point where they are the largest fishing

Above: After the Exxon tanker accident, the crude oil spilled hundreds of miles to the northeast in Prince William Sound fouled this Alaskan beach in the Kenai Fjords area. Inset: An oil-soaked western grebe swims away its last few moments of life.

fleets in the world. Spinning out gossamer curtains of 20- to 50-mile long nets that catch and kill virtually everything in their path, the driftnet fleets are responsible for the deaths of tens of thousands of dolphins, porpoises, whales, seals, and other marine mammals each year, as well as hundreds of thousands

of seabirds. A recent U.S. Commerce Department study indicated that half a dozen species of seabirds may be losing 3–6 percent of their total world population annually to driftnets. The northern fur seal is declining at a rate of 5–7 percent annually, and recent disappearances of young Pacific humpback whales in

Excess of wealth and waste... has its foundations in the destruction of the environment.



"There must now be fewer dolphins in the world's oceans than at any time... in the course of human history": dolphins caught in a tuna-fishing boat's driftnets are among the casualties of unregulated fishing practices in the eastern Pacific.

dicare that the driftnets have already begun to threaten the survival of many species. Even prolific "target" species like squid appear to be suffering widespread reductions in population, further evidence that this "strip-mining of biomass" may be threatening the collapse of the entire North Pacific ecosystem.

None of this can come as a surprise to anyone even casually informed about current affairs. What is appalling is the consistency with which these issues are avoided by the state and federal governments. President Bush's policy of "no net loss of wetlands" has already been compromised (it was recently downgraded to "proposal" status) in apparent deference to developers. It is not difficult to see why such circumstances are allowed to persist. A reflection of our national policy of

"deficit spending on the environment," every example of environmental degradation on the planet takes place because someone is making a buck on it. More so than freedom or liberty, profligate greed has become firmly established as the Western Way.

Historically, the commercial and industrial culprits do not pay the price for this devastation but rather the people of the world, who can no longer enjoy clean running streams and abundant wildlife, who must question whether it is safe to eat fish and wonder at the concentrations of heavy metals building up in their own bodies. The sanctity of a thriving biosphere has been eroded, a process that has infinitely more to do with the future and quality of life on this planet than any Gross National Product or national security pro-

gram could ever pretend. The high cost of a clean environment that politicians refer to is, in reality, the trimming of profit margins for commercial interests that have largely been granted carte blanche with respect to waste disposal and operational parameters.

It would be easy to attribute total guilt for this devolving scenario to the lustful appetites of corporations and their stockholders, convenient to blame the CEOs and members of Congress as the culprits fomenting plunder and ruin upon our natural resources; it would also be a lie. A large part of the truth is much simpler and remarkably undramatic; the corrupt and responsible parties are We the People.

The opulent material excess of wealth and waste so warmly embraced by those in the western world has its foundations in the destruction of the environment. Our appetite for cheap, fast, and disposable goods, our furious consumption of manufactured products, and our penchant for private ownership

has created a dynamic that drives natural equilibria completely awry. We are the race that consumes, the first species ever to learn how to prosper, however temporarily, by destroying those very systems that support it and sustain life. Clever monkeys who imagine themselves to have thrown off the process of natural selection, we fancy ourselves as something not a part of the world we inhabit. It is our very sense of comfort that costs us more than we care to understand and that distracts us from the truth about our actions.

As long as the excesses of wealth and waste continue to furnish us with surrogate realities, we can perpetuate our system of denial and ignore the ways in which we nickel and dime our environment to death, robbing our children, bit by bit, of the natural legacy that daily diminishes. The ecological toll taken by billions of beings operating as "selves," aided by the tools of modern technology and pursuing dreams that largely describe escape and isolation as their desired ends—this has become our formula for biological Armageddon.

We can rediscover and exercise our right to choose and save the rivers, the oceans, and the species within them from further harm, but only after we decide that it is important enough to do so. The perception as individuals that the most efficient means of creating national policy is to pay attention to how and where we spend our dollars is not too far from the truth. Perhaps the best way to qualify what is good for the oceans and, ultimately, ourselves is to focus on a symbol of the ocean's health and viability.

It is possible, even likely, that, were there people living within the sea who could call us to task whenever we abused their habitat and its denizens, we would not be so thoughtless in our behavior. However, as there are apparently no mermaids and mermen, it might be constructive to sensitize ourselves to the existence of other beings in the oceans that must ultimately bear the burden of all our transgressions against the seas. Perhaps the dolphin, whose brain is comparable to our own, and whose compassion surpasses our own, must fulfill the role as the citizen of the sea to remind us of what we risk should we continue in the manner of the past.

Certainly, there must now be fewer dolphins in the world's oceans than at any time during the course of human history. Pollution, lethal fishing technologies, and the general

impact of human activities on coastal and pelagic habitats have all contributed to the demise of dolphin populations. As species at the top of what is commonly referred to as the food chain, the health and abundance of dolphin populations establishes them as excellent indicators for the state of the greater marine habitat. No comfort can be found in their vanishing numbers.

During the summer of 1988, the eastern seaboard was the site of the greatest "natural" die-off of dolphins ever recorded in human history. Some 700 bottlenose dolphins washed ashore from New Jersey to Florida over the course of several months. Thousands more may have died at sea. It is possible that the coastal population may have been halved in the course of a single year. A research cruise and congressional hearings failed to establish a definite cause, but indications were that the dolphins' immune systems had been depressed from concentrations of PCBs, heavy metals, and other pollutants. One individual was found with a PCB level of over 6,000 parts per million. It would seem that the East Coast of the United States is rapidly becoming incapable of supporting its most highly evolved species. If these dolphins, which eat fish from the same waters plied by the coastal fishing fleets of the United States, cannot survive on such fare, then surely the prospect of relying on these waters as a source for food and human employment must also be at risk.

Each year, tens of thousands of dolphins are killed as a direct result of tuna-fishing operations in the Eastern Tropical Pacific (ETP) and because of the widespread use of driftnets in the Pacific and Indian oceans. The ETP tuna fishery on dolphins accounts for only about 5 percent of the world's annual tuna harvest and has to rank as the most singularly cruel, barbaric, and exploitative fishery in history. Herding dolphin schools with speedboats, helicopters, and explosives, the fishermen have refined commercial fishing to the point where slow death by drowning, crushing, maiming, dismemberment, and bombing of dolphins has become standard practice. Taiwan, South Korea, and Japan continue to decimate dolphin and porpoise populations with coastal and pelagic driftnets; recently, the Japanese have taken to dedicated harpoon and drive fisheries on porpoises and dolphins; these mammals are stabbed and bled to death before being packaged for hu-

man consumption or ground up for fertilizer. Every species of freshwater river dolphin in the world is endangered; at least two of these species are in imminent danger of extinction. Worldwide, several hundred thousand dolphins die at the hands of man annually.

In the event the ozone layer continues on its course toward depletion, one must also begin to consider the effect this might have not just on dolphin populations, but on the rest of marine life, as well. Recent experiments have shown that increasing ultraviolet radiation slows photosynthesis in marine phytoplankton; radiation increases of 10 percent cause almost 100 percent mortality of phytoplankton. The small species of phytoplankton found to be especially susceptible are also the primary food source for krill, a type of shrimp that is the principal food source for many species of fish and wildlife. Phytoplankton themselves are the basis of life in the oceans; their destruction would signal the death of the oceans and perhaps of the Earth itself. Initially, higher levels of ultraviolet penetration might also claim many dolphins as their first victims since, as air breathers, dolphins are constrained to spend their lives at or near the surface of the ocean. Pragmatically speaking, the dolphins have no place to hide.

Appropriate litmus tests for gauging our commitment to preserving the oceans and saving the dolphins are nearly unlimited. They begin with an examination of what we as individuals are willing to flush down toilets within our own homes and include careful scrutiny of the processing and manufacturing of all those things that we as consumers purchase in the marketplace. They end with the outflow pipes of heavy industry fouling streams and rivers, strip-mining and clear-cutting within watersheds, and the around-the-clock procession of garbage scows heading offshore to poison the open ocean with thousands of tons of refuse each day. These are the things that kill oceans and rivers and the precious species within them. The solutions need no explanation. But we might do well to remember one thing more, especially if there are some of us that are not fraught with concern for the fate of the dolphins or the rest of those species in the deep, and that is the very physical nature of our own being. We ourselves are mostly water, and no one is served by disdaining that substance so necessary to our very existence. ■