

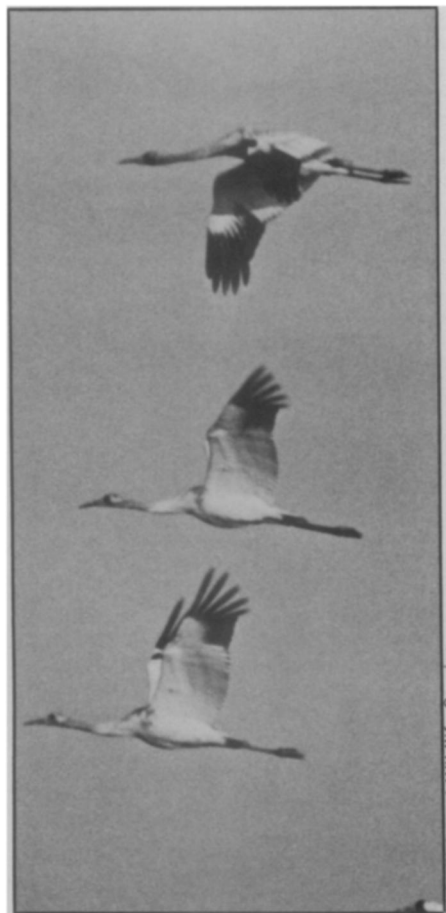
Fighting Goliath Without a Slingshot



The Everglades: Push to save habitats.

“You are not going to sell aesthetics to a starving Hindu.”

by John H. Douglas



Young whooping cranes: How valuable?

The whooping crane could be wiped out in one night. One bad storm sweeping over the Aransas Wildlife Refuge on the Texas Gulf Coast, where the remaining four dozen or so birds spend the winter, could do it.

But what would be the loss? Only aesthetics? There would be the absence of one more sign of spring, as graceful cranes fly northward under gray skies, secure in the instinctual knowledge that when they have finally crossed the greater part of the North American plains, nature will have prepared, and man protected, a summer home of lakes and trees in Wood Buffalo National Park of Canada. But nothing more?

What would be the cost of trying to save them? Land. Tax dollars. A question of priorities: Which is more important, try to save a handful of birds or use the land for growing food or providing recreation for humans, while saving the money to help our wretched cities?

Finally, where would it all end? The whooping cranes are visible and close to home; but far away, in the tropics of Asia and South America, whole jungles are being cut down, sending into extinction species no one even knows exists—conveniently out of sight of many do-gooders with tender consciences.

Faced with painfully limited resources, and under growing attack from other interest groups, the American conservation movement is currently in the throes of trying to find new answers to questions such as these. Through intense private discussions, officials of conservation organizations are trying to confront scientists and government officials from around the

country (SN: 4/13/74, p. 238). Through abrasive courtroom conflicts, academic conservation types are drawn into rough-and-tumble confrontation with the Goliaths of industry. And through legislative lobbying of growing sophistication and effectiveness, conservationists are learning to refine their goals and methods to accommodate political and economic reality. From this refining process has grown a stronger, more pragmatically inclined movement, but when viewed against the background of the problems they are attempting to solve, the conservationist Davids still seem to be fighting Goliath without a slingshot.

The very structure of the movement is one of loosely organized special interest groups, fragmented by ideology and tactics, trying to attack billion-dollar problems on million-dollar budgets. Though united in spirit and rhetoric, the groups necessarily compete for limited funds and public attention. A drive to save a marsh, whose importance as a nursery for land and water wildlife ranks all out of proportion to its size, may find itself in direct competition with a similar drive to protect the same animals once they mature. Beyond this is the growing competition with social interest groups who want money and manpower devoted first to helping disadvantaged citizens.

Fortunately, the various groups have been increasingly able to unify their efforts, at least on specific issues. A coalition of groups, including the National Wildlife Federation, the Izaak Walton Leagues, the Sierra Club, the AFL-CIO, the Garden Club of America and some dozen other organizations, scored one of the great lobbying successes of recent years in forcing Con-

gress to raise Clean Waters Act restoration funds from the Nixon's Administration's \$214-million request to a whopping \$1 billion.

But problems have grown apace. Half the mammal extinctions recorded since ancient times have occurred during the last 50 years. Since 1600, 120 species of mammals and 150 species of birds have been wiped out. At first the main cause was overhunting and upsetting fragile local ecologies, for example, the introduction of domestic pigs to Mauritius Island, which killed the Dodo bird. But now destruction of habitat takes the greatest toll.

The greatest habitat destruction in history is just now gathering speed. Throughout the tropics, once impenetrable jungles are being cut down wholesale to provide wood for industrialized nations or to create farms for expanding populations. On either side of the highways cutting through the Amazon, forests are leveled and burned to provide land for poor people moved at government expense out of crowded cities. In Asia, generous concessions to consortiums of foreign logging industries may soon denude vast areas of the continent.

The devastating results may come swiftly. Even if the forests of Borneo and Nepal are reseeded, erosion will destroy vast areas of fertile land and threaten life in the rivers. Wildlife, in many cases, will have no place to retreat, and unknown numbers of currently viable species will be added to the endangered or extinguished lists. Finally, the promise of free land for the poor is in many instances a cruel hoax, for much tropical land is not really very fertile. Nutrients in tropical jungles are concentrated in the biomass rather than in the soil. Leaching of remaining nutrients proceeds at a faster rate than in productive temperate-zone soils, impoverishing the soil even more and polluting streams. Fertilization by standard temperate zone fertilizers often does more harm than good by raising the soil's natural acidity to toxic levels. Such new farms usually last only two to five years, according to Daniel H. Janzen, a zoologist at the University of Michigan who specializes in tropical ecology. After that, "magnificent stands of native weeds" and hordes of insect pests supported by a new food supply take over. "The tropics are very close to being a tragedy," he says, "on a global scale."

Though conservationists pronouncing such warnings were once scoffed at, some recent ecological disasters have helped make governments and industry more attentive. Conservationists with demonstratable skill in understanding complex ecological interactions can help developers save money as well as nature, the vice president of the Wildlife Management Institute, Laurence R.

Jahn, told SCIENCE NEWS. Ever since the devastation of hurricane Agnes, he says, planners have been more willing to listen to conservationists when they warn about not building on areas subject to flooding and mudslides, and not destroying the seemingly insignificant amounts of vegetation that in fact hold back highly unstable coastal sand dunes.

At the international level, perhaps the most spectacular disaster that could have been prevented by cooperation between developers and conservationists are associated with the Aswan Dam in Egypt. The ecological and human consequences are already becoming clear. Silt that once fertilized the lower Nile basin now collects uselessly behind the dam; artificial substitutes will soon have to be introduced. Artificial irrigation that has been substituted for the natural flooding cycle threatens to salinate the land, a process that will be difficult and costly to reverse. Because flood-borne nutrients no longer flow into the eastern Mediterranean, the sardine catch in the area has dropped 97 percent. Finally, constant irrigation has brought about a new plague for Egypt, schistosomiasis, a debilitating disease caused by parasitic blood flukes that can penetrate the skin on contact with water containing snails that harbor them. Greatly increased amounts of standing water have caused an epidemic of such snails in Egypt, and a significant portion of the population now suffers the chronic dysentery and insidious liver damage brought on by the disease.

The current thrust of conservationist action aims at heading off problems before they arise, through drafting of pragmatic new legislation. The most recent victory was the Endangered Species Act, passed last December. In addition to prohibiting any sort of commerce in endangered species or their products, enforced by penalties including stiff fines and prison sentences, the act adopts the growing philosophy among conservationists that saving habitats is a more practical goal than trying to save endangered species one by one. While some may argue that the provisions for habitat preservation through land acquisition are not foresighted enough, the bill contains one section that is widely regarded as a "sleeper," which may give conservationists a powerful new weapon in fighting for wildlife preservation.

The provision in question, Section 7 of the act, states that all Federal agencies are obliged to make sure no action taken under their authority jeopardizes an endangered species or one of its critical habitats. Some observers have predicted this section could lead to a whole new class of lawsuits that would tie up development projects in much the same way nuclear reactors have been stalled over environmental impact legalities. Others like the Wildlife Man-

agement Institute's Jahn, hope that instead of lawsuits, the section will stimulate Federal agencies to do more preplanning by establishing interdisciplinary teams that can take a broad view of the likely impact on natural systems of any new development.

But emotions often run high in arguments among conservationists when the subject turns to suing or compromising. One such argument erupted during hearings on the Endangered Species Act, before the House Subcommittee on Fisheries and Wildlife Conservation and the Environment. A dramatic exchange on fundamental issues of economics and priorities in conservationism took place between the subcommittee chairman, John D. Dingell (D-Mich.), and representatives of the Sierra Club.

Dingell challenged Robert C. Hughes of the Sierra Club to suggest a way habitats could be saved without allowing some hunting to help pay for its preservation. Hughes responded that the photo-safari business is booming. "You have to live in the real world here," shot back Dingell, "and the one fool we have been able to stick with the cost of this program over the years is the hunter." He continued: "The hunter buys the duck stamps, the fisherman buys a fishing license, but the dickybird watcher raises Cain about the hunters slaughtering the beast." That's an old argument, retorted Hughes; lack of money "is the fault of those who make the laws who have not legislated payment."

The discussion then degenerated into a squabble over whether to tax the binoculars of dickybird watchers, when suddenly Dingell launched into an unabashed sermon that cut to the heart of the global challenge facing conservationists. Progress is slow coming, he said; other priorities must be considered: "You are not going to sell aesthetics to a starving Hindu."

As the Congressman so bluntly observed, conservation is a global affair, no longer just a matter of saving a few animals for the aesthetic enjoyment of a few well-off people. In the face of dwindling resources, exploding population and a growing threat of famine, mankind is having to adopt a broader view of the world, one with which conservationists should be familiar—that the earth is not only a relatively small planet of limited wealth, but also that survival here depends on an incredibly interrelated and complex web of life. By helping bring together experts familiar with various areas of that life-web, and learning to speak the language of business and government policy makers, conservationists can thus make a major contribution to saving humanity as well as the whooping crane. □