Africa Is Becoming an Elephant Graveyard

Africa has lost half its elephants; well-armed poachers and a ready market for ivory are responsible; a new law might help

IN THE LAST CENTURY, ivory traders almost wiped out the elephants of East Africa. Now conservation biologists are warning that unless dramatic action is taken, modern-day poachers armed with AK-47 assault rifles and chain saws may succeed where their predecessors failed.

Researchers believe that Africa lost half of its elephants in the last decade. Though the rigor of the census varies, conservation organizations estimate that 700,000 animals are left. Even this number is far from certain. Surveys from West and Central Africa, where elephants live in the forests, are too unreliable to make confident statements. The jungles of Zaire alone may support between 100,000 and 500,000 individuals. No one knows. But the trend is clear. Says Jørgen Thomsen of the World Wildlife Fund in Washington: "The decline has been both spectacular and indisputable."

The dwindling supply of elephants is matched by an enormous demand for ivory, especially in Japan, which carves ivory into hanko, the personal seals used in transactions instead of a signature. Thomsen also suspects that traders may be stockpiling ivory, as one might horde gold or silver, speculating on the market. Ivory now fetches as much as \$200 a kilogram. Says Mark Willis of the State Department: "It's a bit like the drug trade. The more you try to control it, the more expensive it becomes."

The reason for the dramatic decline of the African elephant is not habitat destruction, but indiscriminate poaching. As much as 80% of the ivory on the world market in any given year is believed to be illegally acquired. Even elephants in Africa's famous wildlife preserves are not safe. For example, in recent years Kenya has lost some 70% of the elephants living within park boundaries.

Several African countries, including Kenya, have responded to the runaway slaughter of elephants by initiating shoot-on-sight policies aimed at poachers. Heavily armed themselves, the poachers are shooting back.

The grim situation has led some conservationists to call for a complete ban on all ivory imports to the United States and Europe. However, there is considerable debate over the wisdom of a total ban, since it would only drive the trade completely underground. Congress recently rejected the all-or-nothing approach when it passed the African Elephant Conservation Act of 1988. The law allows African nations to continue to trade in ivory, an important source of hard currency, but it also aims to clamp down on the poaching by placing moratoria on countries that do not play by the rules. Marshall Jones of the U.S. Fish and Wildlife Service, the agency responsible for implementing the law, says: "The idea is to make the bad guys orphans in commerce."

The wildlife service took the first step last month when it banned the importation of all ivory from 77 countries that are not parties to the Convention on International Trade in Endangered Species (CITES). The law has teeth, say its proponents, for it not only isolates the rogue producers, it punishes the intermediary countries that trade in tainted ivory. For example, because Gabon is not a party to CITES, all ivory from Gabon is now banned. Furthermore, any country that deals in ivory from Gabon is barred from selling any of its ivory to the United States. It is hoped that a major ivorycarving center such as Hong Kong, which exports about one third of its product to the United States, will exert pressure on countries like Gabon to join the CITES brotherhood.

It is too soon to tell if the new law will have much impact. The ivory trade is notoriously resilient. Traders and poachers have been quite adept at circumventing the law.

Until recently, much of the tainted ivory moved through the small and impoverished nation of Burundi. The new government of Burundi has vowed to stop the illegal trade. It confiscated a large stockpile of ivory, and now it is seeking international assistance in getting rid of it, since such a valuable cache is politically destabilizing. "It's like sitting on a powder keg,"

Jones. "Selling that ivory would fund the next revolution."

In the past, illegal ivory from Burundi would travel through intermediary countries to be "laundered." Traders in Hong Kong, for example, imported ivory from Dubai, a free-trade zone in the United Arab Emirates, where the tusks were superficially carved. This allowed Hong Kong traders to import "ivory artwork" from Dubai without bringing into play the CITES restrictions that apply to raw ivory. Thomsen has an example of such handiwork in his Washington office. It is a 3-foot tusk with a few inches of shallow doodling at one end. After considerable pressure, Hong Kong tightened the loophole in August and will now require all carved ivory to be accompanied by permits confirming its legal origin.

As mandated by the African elephant act, the wildlife service is now charged with reviewing the conservation programs of all African countries with wild elephants. If the programs do not pass muster, ivory trade in that country will be banned in 1990. Many African states will have a hard time convincing the wildlife service that they have their poaching under control. Decades of civil unrest left a legacy of heavy weaponry in Africa. The poachers are sophisticated and well armed. The park rangers lack morale and support. For \$25 a month, who wants to confront a small army of determined men with automatic weapons?

In a study done by the Zimbabweans, it was estimated that it would cost \$200 per square kilometer per year to adequately protect the elephants in the parks. Zimbabwe, with one of the finest conservation programs in Africa, spends about \$160 per square kilometer. Most of Africa spends about 50 cents. The new legislation authorizes the U.S. Fish and Wildlife Service to spend \$25 million over the next 5 years helping the Africans, but the funds have not yet been appropriated.

■ WILLIAM BOOTH



lvory trade. The poachers only want the tusks. The vultures cover the elephants with white droppings.

732 SCIENCE, VOL. 243