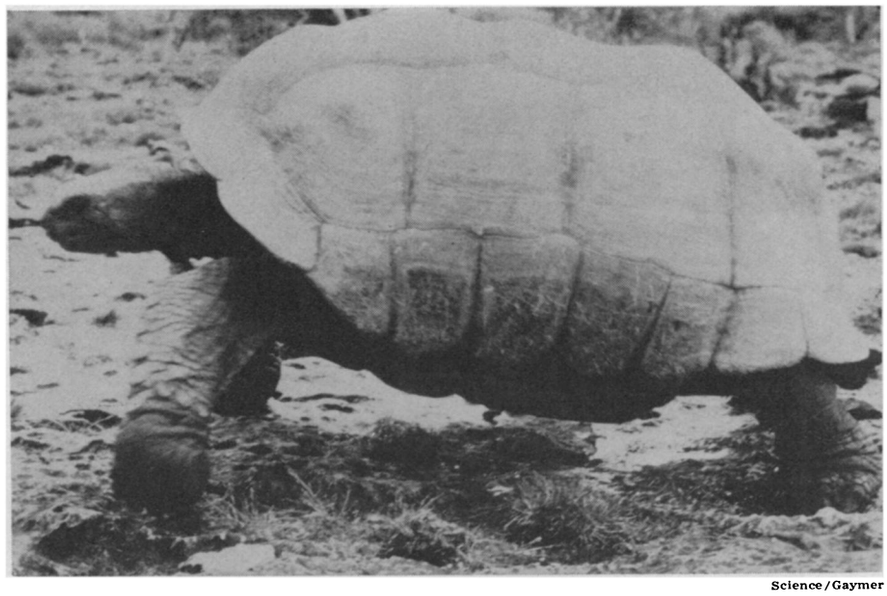
ALDABRA

Of Tortoises and Men

The necessities of war threaten to wipe out the last haven for wildlife in the Indian Ocean.

by John Ludwigson



Science/Gaymer

Testudo gigantea strolls across the site of a proposed British air base.

There are few places left in the world where men have not permanently changed the very nature of nature—killing off some species, introducing others, and forcing the rest to adapt to life with civilization.

Now one of the handful of such untouched spots remaining is threatened with construction of an air base and a large radio transmitter, a step which would mean the extinction of at least one species of bird and the end of the giant land tortoise in the Eastern Hemisphere.

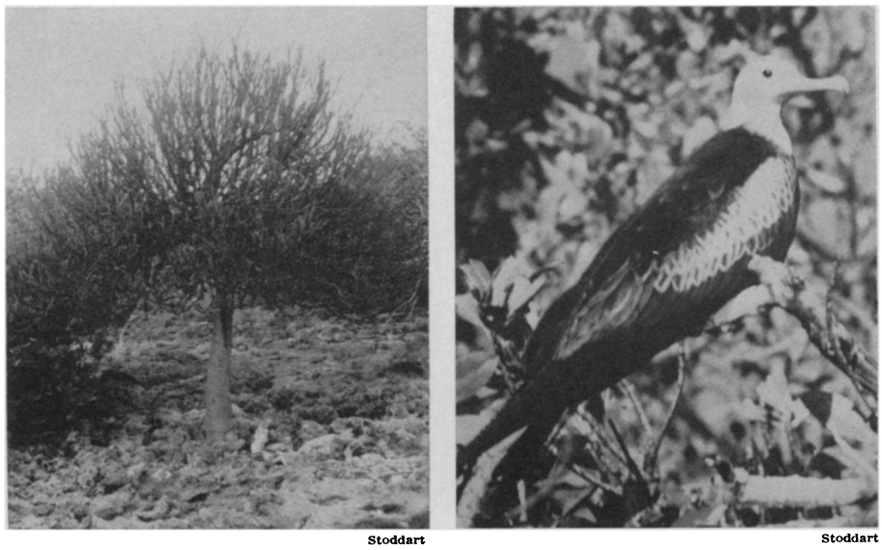
The spot is Aldabra, a 60-square-mile coral atoll in the Indian Ocean about 300 miles north of Madagascar. The little-visited atoll is the home of more than 170 species of plants of which 10 percent are found nowhere else. It is the only island in the Indian Ocean that remains largely unaffected by man.

On this remote and unusual island, the British Ministry of Defense—with the backing of the United States Department of Defense—plans to build an air base with a 9,000-foot-long runway. This would replace former bases in East Africa now controlled by emerging nations.

According to the British Embassy in Washington, the base would be mainly a refueling stop for planes making the long haul from Europe to Asia.

The air base would be constructed on the south island of the atoll and connected to the west island, where the British Broadcasting Corporation plans its radio station, by paved roads that would bridge the channels separating the islands.

According to British officials, the radio station would be part of a communications network in the Indian Ocean and Far East. Others have suggested the real purpose of the transmitter may be propaganda broadcasts aimed, perhaps, at the new African nations.



Stoddart Stoddart

Unique Euphorbia abbotti tree, frigate bird typify Aldabran wildlife.

U. S. interest in the proposal is harder to fathom. Officials in the Pentagon will admit to knowledge of the scheme, but little else. While American planes might also refuel on an Aldabran airfield, the atoll would also be well situated as a nest for spy planes keeping tabs on happenings in Africa and parts of the Middle East.

But, fortunately for the wild inhabitants of Aldabra, the construction proposals have met with a storm of high-level protest from eminent scientists both in Britain and the United States.

Early in February, the prestigious British Royal Society, one of the oldest scientific societies in Europe, announced that the proposal "is causing considerable concern" and that it plans an expedition to Aldabra this year to evaluate further the island's ecology. If the island can be saved from airfield construction, the Society plans to establish a permanent research station there.

On May 22, the Society took the almost unprecedented step of sending a delegation, headed by its president, to urge preservation of the atoll on the Minister of Defense, Denis Healey.

Healey agreed that the atoll is uniquely important to science, but offered no assurance that it would be preserved. The best he could do, he told the Royal Society delegation, is see that the scientific issues "are fairly presented to my colleagues." If an airfield is built, he added, "our object in this would be to make sure that changes to the eco-system of the island are kept to a minimum. . . "

Then he added the thought that consideration had been given to using other, already spoiled, islands nearby for the base "but it has proved necessary for compelling reasons to rule them out." He did not spell out his compelling reasons.

A final decision on whether or not to build the base should be made within a year, Healey says. It could also, of course, come much sooner, taking the scientific community by surprise.

Shoulder-to-shoulder with The Royal Society in the fight to preserve Aldabra are officials of the U. S. National Academy of Sciences, the American Association for the Advancement of Science, the Smithsonian Institution and numerous individual scientists.

"The only reason for wanting to put an air base there is that you can do it cheaply," observes Dr. F. Raymond Fosberg, a special adviser on tropical biology at the Smithsonian. "We feel that is not sufficient excuse for destroying something that is completely unique."

"There is no question that there are other islands that would be suitable for military purposes," adds Harold J. Coolidge, president of the International Union for Conservation of Nature and Natural Resources and director of the Pacific Science Board of the National Academy of Sciences.

Although the British Ministry of Defense holds out the hope that even if an air base is built, the ecology of Aldabra can be largely preserved, the scientists doubt it. Dael Wolfle of the AAAS observes, "the larger birds (such as frigate birds which soar to 3,000 feet) would be a hazard to aircraft and some species would probably have to be exterminated. The home of the giant land tortoise is precisely the best part of the island for airfield construction."

In an editorial in the July 21 SCIENCE he writes, "The current program to study what little remains of native Hawaiian plant and animal life is evidence of the need to study island ecologies before invasion brings ecological chaos."

The ecology the scientists are so intent on preserving is generally accepted as one of the richest of its kind in the world. Aldabra is home to 22 species of land birds of which 12 species or subspecies are found only there, and uncounted sea birds. More than 350 species of insects have been identified on the atoll's four main islands, but scientific knowledge of the area is so sketchy that no one can say for certain how many are unique to Aldabra.

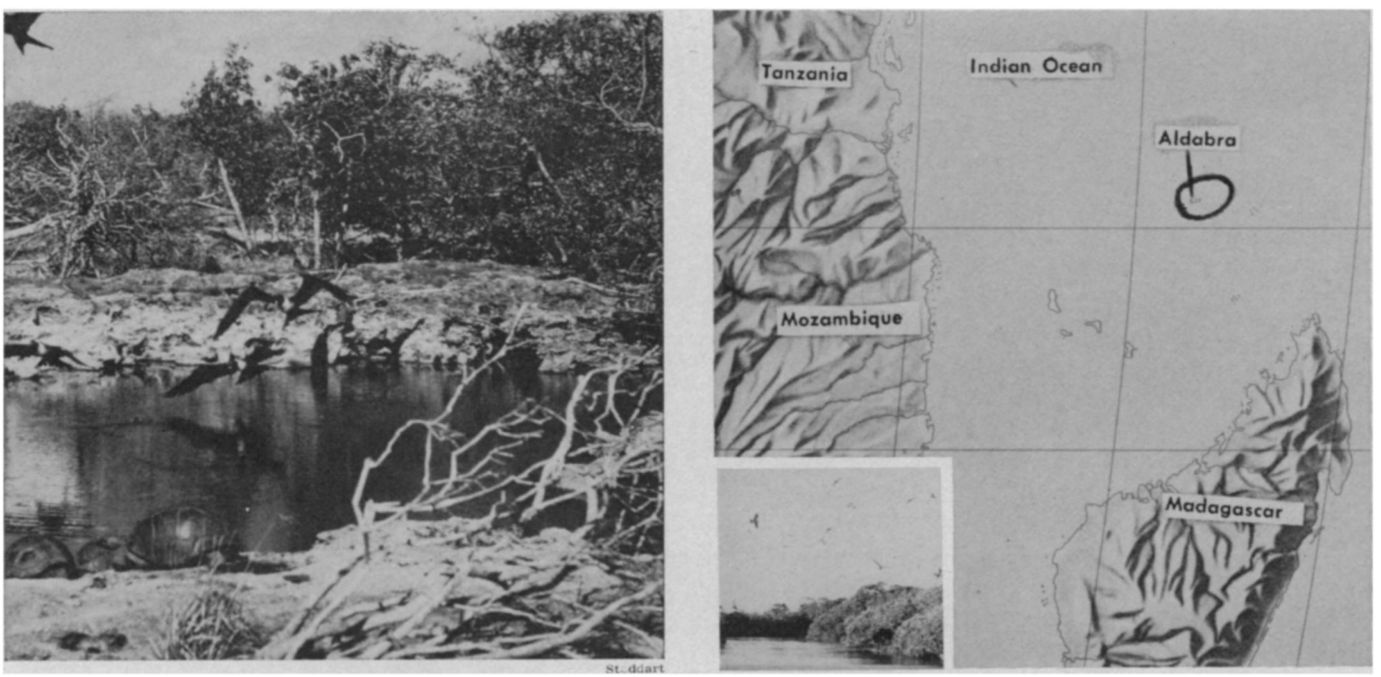
Among the vast variety of birds is the last remaining flightless species in the Indian Ocean—a flightless rail—which would almost certainly join the dodo in extinction if the atoll is civilized. It's not that the construction would necessarily bother the rails, scientists explain. The problem is that domestic cats have gone wild on the south island where, at the moment, they are isolated from the rails which live on middle island. Construction plans however, call for bridges that would feed the rails to the cats.

The most striking form of wildlife on Aldabra is the large colony—one of the two left in the world—of giant land tortoises. There are now more than 10,000 of these lumbering, boulder-sized animals on Aldabra, according to a report from The Royal Society. They exist on grass and the leaves of shrubs, wallowing in shallow fresh water pools when the weather gets hot.

The islands have escaped settling and development partly by luck and partly due to the scotching of a scheme, proposed in 1874, to harvest the mangroves. Charles Darwin, who had a similarly unspoiled island group —the Galapagos—to thank for much of his ecological research data, intervened then to prevent the operation on Aldabra.

Darwin had visited the Galapagos Islands, which lie on the equator just west of Ecuador, during a five-year surveying expedition aboard the H. M. S. Beagle. Observations there led directly to his concept of organic evolution.

Whether Aldabra will weather this latest attempt to civilize it remains to be seen. But the scientists have no intention of relenting in their battle for an ecological last stand there. "We are trying to put as much pressure as possible on them (the British Government) not to do it," says Dr. Fosberg.



Fresh water attracts frigate birds, tortoises to south island pool on the lonely atoll of Aldabra in the Indian Ocean.