



Creating the Nation's first BioPark

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Letter from the Desk of David Challinor
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There are very few places left on earth where humans have not either lived or visited. We are indeed a traveling species, and now successfully occupy virtually every terrestrial habitat. Animals, too, wander and turn up in very unexpected places. Frequently, the hand of man is involved directly or indirectly in animal movement, and examples abound of such intervention. A typical case with disastrous results was the introduction of rabbits to Australia where, without natural predators, they soon became a dreadful pest. Not all introductions result in such a problem. European hares, for example, were imported to Dutchess County, New York in the 1930's as a more sporting quarry for local beagle packs than the native cottontails. They survived, but only marginally, and are still seen occasionally.

Animals that travel independently of man are especially fascinating. Pelagic birds are the greatest wanderers, a good example being a Kermadec petrel, which had evidently flown from its natal island of Kermadec just north of New Zealand, all the way to New Jersey, where it was identified from a photograph as it flew overhead.

The first Roseate tern to reach the Pacific coast was another wanderer. A specimen, banded on Long Island the previous August, was found in June 1970 on Gorgona Island in Colombia. I think we can safely assume that powerful flyers like terns and other long-distance migrants reached their unexpected destinations under their own power. Post-hurricane bird watching along the Atlantic shoreline is an ideal time to see rare vagrants. Even small passerines (perching birds) are blown across the North Atlantic, mostly from west to east, and bird watchers, in Britain especially, have accumulated impressive lists of New World strays to their country.

One species that made an east to west Atlantic crossing successfully enough to establish a propagule (a sustainable breeding population) is the Cattle egret. The evidence indicates that these egrets were blown from west Africa to northeastern Brazil, probably for centuries before they caught hold. Initially, they failed to survive in the new world until cattle raising expanded in northern South America and forests were replaced with pastures. Cattle egrets follow grazing cattle to



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harvest the insects that emerge from the grass as the grazers move across a pasture. Cattle egrets, by quickly exploiting their new pasture niche, expanded their range rapidly; by 1960 they had reached New England.

Terrestrial mammals have more barriers than birds for moving long distances, but like Cattle egrets, some mammals have successfully expanded their range. The first coyote collected in Connecticut was sent to the Yale Peabody Museum about 1959. Today, coyotes are relatively common throughout New England, having moved east from the midwest. More spectacular mammal travelers are the pinnipeds, especially the fur seals. Kerguelen fur seals were first spotted in 1982 on one of the Juan Fernandez islands off the central coast of Chile. Swimming east with wind and current from Kerguelen or Amsterdam Island in the Indian Ocean, the seals would have covered about 10,000 nautical miles. Although this species is also found on Tristan da Cunha in the south Atlantic, about half the distance from Amsterdam by swimming west, it is unlikely the seals would have fought the strong wind and currents. There are innumerable other examples of long distance travelers among marine mammals, and many cetaceans (whales and dolphins) may swim from pole to pole and possibly circle the globe as well.

Human barriers to animal migration abound: tall television antennas, lighthouses, and skyscrapers are lethal to migrating birds; superhighways and other roads take their toll on small mammals and deer; and fish are thwarted in their upstream migrations by dams. Recently, however, engineers are planning ways to reduce the effect of these barriers. Highway under- and overpasses for game are increasingly built, and fish ladders are now common. Indiscriminate importation of exotic animals into the United States and most other countries is now rigidly prescribed by statute. The Customs Service, the Department of Agriculture, and the Fish and Wildlife Service all contribute to the enforcement of the laws to prevent the spread of animal diseases and to protect endangered species. A future letter will discuss some of the issues in the enforcement of these animal importation laws and how they affect zoos.

Such efforts are expensive, but will be increasingly needed as humans crowd out the other species with which we must cooperatively share our planet.