

Research Reports

New York Zoological Society conservation researchers in the field.

Nicolaos Papageorgiou has completed research on the population ecology of the agrimi (*Capra aegragus cretica*), native to Crete. He focused his study on the Theodorou Wildlife Reserve—a small (168 acres) island just offshore from Crete. The agrimi were established there with the release of one pair of goats in 1928, another pair in 1937, and a third in 1945.

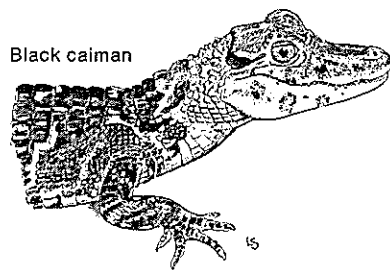
One of four subspecies of the wild goat, *Capra aegragus*, the agrimi is now seriously endangered. In the White Mountains of western Crete, where it still occurs naturally, interbreeding with domestic goats may lead to its extinction through hybridization. Today the Theodorou reserve alone offers any security; and even that is uncertain. Without natural predators on the island to control their numbers, the goats have multiplied to the point where they are over-grazing their food supply. Papageorgiou's study clearly documents the serious effects this is having on the island's vegetation. To preserve the agrimi on Theodorou, it will be necessary to reduce their numbers and to stimulate the recovery of food plants presently disappearing before the hungry animals.

James N. Layne has found a promising increase in the number of Audubon's caracara (*Polyborus plancus auduboni*) in Florida. The bird's slow disappearance there had prompted the Florida Committee on Rare and Endangered Plants and Animals to list it as a "threatened" species in that state.

This beautiful, vulture-like falcon also occurs in southern Texas, Arizona, Baja California, through Mexico south to Panama, and in Cuba. In south-central Florida, it is a characteristic inhabitant of open prairies, where it may be seen perching on fence-posts or pacing along road-

sides in search of food. It feeds on a variety of prey including insects, amphibians, snakes, birds, and mammals, and frequently on carrion.

Though no more than 100 caracaras were thought to remain in Florida four years ago, Layne's preliminary survey indicates that as many as 140 may live there today. Future surveys will confirm or deny this potential signal of population stabilization.



Black caiman

Over-exploitation of reptiles in the Amazon and Putomayo Rivers in Colombia has led **Roger W. Foote** to survey the caimans and side-neck turtles there. Specifically, he will document the geographic and seasonal abundance of black, common, dwarf, and smooth-fronted caimans, as well as yellow-spotted, six-tubercled, and giant side-neck turtles in parts of both rivers and their tributaries.

For many years the caimans have supplied hides to commercial hunters, and the turtles meat and eggs for the cooking pot, to the point where both have virtually ceased to exist in the region. Foote will collect data on their reproductive cycles, behavior, and reproductive success; their population composition; and their continued use by people in the area. He is coordinating his work with a survey that NYZS Conservation Fellow Federico Medem is conducting on South American crocodilians.

Leslie Garrick, of the NYZS Center for Field Biology and Conservation, is initiating a study of the ecology and behavior of the American crocodile (*Crocodylus acutus*).

Extinction threatens this reptile over most of its range—southern Florida, the Greater Antilles, Central America, Colombia, Peru, and Venezuela.

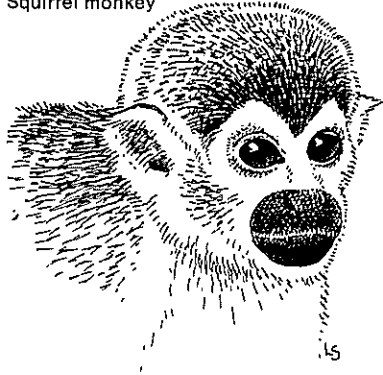
The American is one of the most variable of crocodile species. Earlier researchers described several subspecies based on geographic variation in morphology. And striking behavioral differences have been observed between populations. For example, females of some populations lay eggs in hole-nests dug in the sand, while others deposit them in mounds of vegetation or earth that they scrape together. Better understanding of the species will permit the design of sound management practices to assure its continued survival.

Charles A. Ross' nearly completed project will contribute to the improved management of American alligators (*Alligator mississippiensis*). Working under NYZS contract to the U.S. Fish and Wildlife Service, Ross is defining the morphological variations within individual alligator populations and comparing them to the variations found throughout the species' range. He has examined large numbers of specimens in Louisiana, Florida, and Georgia. One unexpected finding to date is an apparent morphological difference between captive-reared and wild alligators.

Results of this project will be extremely useful in federal or state plans to translocate alligators. Such shifting of populations sometimes leads to interbreeding and loss of genetic variability. Ross will also compile an extensive bibliography on the American alligator.

Thomas Struhsaker, Research Zoologist for the NYZS Center for Field Biology and Conservation, spent July and August, 1974, researching primates and their habitats in northern Colombia. He and a team of zoologists—Norman J. Scott, Hernando Chirivi, Kenneth

Squirrel monkey



Glander, and Jorge Fuentes—had intended to clarify some of the primate conservation problems there. They found conditions worse than expected. Not only had agricultural development already destroyed most of the rain forest, but heavy hunting threatens the few patches that remain.

In September, Struhsaker surveyed the 1,481,482-acre Macarena National Park. It is Colombia's largest park and the home of many rain-forest animals including howler, capuchin, spider, woolly, and squirrel monkeys, tapirs, brocket deer, peccaries, and numerous birds. Unfortunately, squatters are destroying this spectacular sanctuary as they invade its boundaries in search of farmland.

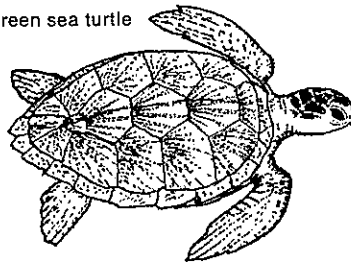
The logbooks of New England whalers from 1800 to 1860 are being tapped for new information about the decline of sperm whales (*Physeter catodon*). **George W. Schuster** is using the records to show the decline in sightings—their extent, nature, and timing—of, first, the large sperm whale bulls, and then entire pods. He also hopes to learn more about the whales' rate of decrease in size, as well as their behavioral reaction to the approach of whale boats.

The Society's first director of the New York Aquarium, Charles H. Townsend, used old logbooks in his 1935 study of whales' seasonal movements; and data for this cen-

tury have been gathered by other researchers. Schuster aims to present more detail than the earlier studies. Further, his compilations will permit comparison between analyses of recent records and those of the earlier hunters.

French Frigate Shoals in the western Hawaiian Islands harbors the last remaining green turtle rookery in United States waters. The large numbers once prominent in Florida succumbed to the nets of the turtle fishermen in the last century. During the past two years, **George Balazs** has been making observations in Hawaii on the natural predators of hatchling turtles, egg fertility, and embryo and hatchling mortality. He also collected evidence of illegal poaching, and censused the population.

Green sea turtle



The French Frigate rookery is unique in all the world, since it is the only place where adult male green turtles come ashore to bask in the sun. Regrettably, this recent study—performed under contract to the U.S. Fish and Wildlife Service—indicates that the total population of green turtles (*Chelonia mydas*) nesting in the Hawaiian Islands includes fewer than 200 females.

The Bahamas National Trust, with Society support, has constructed a barricade across an estuary of Great Inagua Island in an attempt to protect and confine a group of green sea turtles being raised there. It is hoped that, once these turtles mature, they will nest on the estuary beach, thereby re-establishing a rookery for the species in the Ba-

hamas. Although the green turtle was once sufficiently plentiful throughout the West Indies to give its name to several cays, it is now in danger of extinction there. If this semi-captive propagation effort proves successful, the same technique may be used elsewhere to rebuild lost populations of these marine reptiles.

Also in the Bahamas, **Walter Auffenberg**, NYZS Conservation Fellow, is investigating the ecological and behavioral requirements of rock iguanas (*Cyclura* species). These large herbivorous lizards are vanishing from many areas where they were once abundant: Several species already have become extinct in the Virgin Islands, Puerto Rico, and Navassa.

On Crooked, Watlings, and Andros Islands, and the Turks and Caicos Islands, Auffenberg has recorded the lizards' dietary components, growth rate, and reproductive cycles. Further, he has found that the rock iguana populations seem to be decreasing with the growing numbers of introduced pigs and dogs.

As part of his continuing study, **Dietrich Schaff** has completed an initial census of the endangered northern swamp deer (*Cervus duvauceli duvauceli*) in the Sukla Phanta Royal Shikar Reserve of Nepal. While 1,250 to 1,500 individuals were formerly estimated to be living in the reserve, the current census figure is considerably lower. This study is beginning to yield data on herd composition, foods, and interaction with other species, including man and his livestock. Schaff has also documented the fact that the deer in Nepal timidly flee at the sight of man, while those in northern India's Dudhwa Sanctuary—where poaching has been eliminated—are more tolerant of humans.

—F. Wayne King

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About the cover

Amid avifaunal congestion on Bird Island in the Seychelles archipelago, the seemingly delicate fairy tern (*Gygis alba*) survives its own preference for such precarious nesting sites as narrow cliff ledges and spindly branches.

Photo by Anthony D. Marshall

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Honoring Sir Peter Scott

"For contributions to the cause of wildlife the world over," Britain's Sir Peter Scott was awarded the New York Zoological Society's Gold Medal by President Robert G. Goelet at the February 26th annual members meeting. This was the first such presentation since 1969.

Throughout his thirty-year career as an aviculturist and conservationist, Peter Scott has been a dominant and inspiring force in the effort to preserve and protect wildlife. He is a founder and officer of the World Wildlife Fund; was Vice President of the International Union for Conservation of Nature and Natural Resources; and presently he serves as Chairman of the IUCN's Survival Service Commission.

In 1946—already an accomplished professional wildlife artist, author of two books, and holder of the British Navy's Distinguished Service Cross—Peter Scott established the Wildfowl Trust in Slimbridge, England, for the study and preservation of waterfowl. As Director, he initiated a propagation program to save the nene, or Hawaiian goose, from extinction. Beginning with a group of three in 1950, the Trust has raised more than 875 nene at Slimbridge and reintroduced 200 of them to their native habitat on Maui.

With time the Wildfowl Trust expanded, and it now breeds many rare and threatened species in refuges and facilities it maintains all over Great Britain. Several centers are open to the public and offer educational programs. Each year, Slimbridge itself receives thousands of school groups for tours.

For Scott's successes with the Wildfowl Trust, Queen Elizabeth awarded him the title "Commander of the British Empire" in 1953; and for subsequent accomplishments in wildlife conservation, Her Majesty knighted him in 1973.

Sir Peter's lifelong involvement with nature is a legacy from his father. Before Captain Robert Scott

perished on an Antarctic expedition, he wrote a last letter to his wife, urging her to "Make the boy interested in natural history." And though living in London, Mrs. Scott made sure her son grew up well-acquainted with the beaches, moors, and mountains of England and Europe. While still a student, the youthful Scott took to sketching birds, collecting insects and wildflowers, and learning to keep animals in captivity.

Midway through zoology studies at Cambridge University, Scott began painting wild geese, and *Country Life* magazine started to publish his works. That promoted an academic shift to art and architecture, and the launching of a career in portraiture. Within a short time, however, Peter felt compelled to study and paint waterfowl again.

He wrote and illustrated his first book, *Morning Flight*, which was published in 1935. As prolific as he is talented, Sir Peter has produced thirteen of his own books and illustrated fourteen others since then.

Periodic field trips—to northern Canada, Iceland, South America, Africa—have provided Scott with additional knowledge of waterfowl in-the-wild, inspiration for more books and paintings, and material for a natural history/adventure series he narrated on British television. Motivated by a competitive spirit as well as a love for the outdoors, he won both an Olympic bronze medal in yachting and the 1963 British National Championship in gliding. Scott also captained Great Britain's *Sovereign* in the 1964 America's Cup races.

The Society is indeed honored to present its Gold Medal to Sir Peter Scott, a man who has dedicated his life to honoring all of nature. □

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