

North Atlantic

Among the new studies started this fiscal year is investigation of the status of river otter at Acadia NP. Under direction of Dr. Ray B. Owens of the University of Maine at Orono, current distribution of the species within the park will be determined and suitability of aquatic habitats will be assessed.

Also at Acadia, the peregrine falcon restoration program continues for the third year, with 10 birds released in May 1986.

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Development of a computerized decision aid system for fire management planning has been initiated for Acadia NP. The current plan calls for suppression of all fires. In the absence of a fuel reduction plan and with continued fire suppression activities, biomass has accumulated to potentially hazardous levels. Natural mortality in older growth spruce stands may significantly accelerate fuel accumulation in these stands. The simulation model being designed by several investigators at U. Mass-Amherst will project the long-term consequences of fire suppression on vegetation composition and forest development and aid in the resource management decision-making process.

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Cape Cod NS is conducting a census of breeding pairs of the piping plover (*Charadrius melodus*) and an investigation of the possible effects of beach development, human recreation, and predation as factors affecting nest success and chick survival. The plover population has declined seriously in the last decade. In January 1986, the USFWS officially listed the species as endangered in the Great Lakes Watershed, including New York and Pennsylvania and as threatened from the Canadian Maritime Provinces down along the Atlantic Coast. The seashore is one of 12 study locations in Massachusetts being monitored by the Mass. Natural Heritage Program and U. Mass-Amherst.

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Due to the rising incidence of Lyme disease among Fire Island NS park staff, the distribution and spirochete infection rate of the tick *Ixodes dammini* is being investigated. Dr. Howard Ginsberg, Rutgers University, also will prepare the Servicewide information sheet for Joseph Schock, who is the NPS Washington Office liaison person with the U.S. Public Health Service.

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The North Atlantic Region is continuing to develop its Geographic Information System (GIS) capabilities for all park units. Program objectives are to expand the GI data base, to provide technical training on the capabilities and applications of this system for resource management planning, park planning, and research activities, and to provide suitable hardware and access to analytical software.

Recently the Region installed a Wang computer system. Each park in the Region now has at least one Wang PC or a workstation. With the help of the GIS Field Unit, a Textronix 4010/4014 emulation package, which will run on a Wang PC with a monochrome screen, was located. The unit has produced several digital maps on SAGIS. These, along with SAGIS, have been furnished to the University of Massachusetts-Amherst, where they will be accessible through modem communications to all park units.