

Technology

Through the use of satellite technology, biologists are now able to monitor vast reaches of Arctic goose breeding habitat, enabling both the U.S. and Canada to base their hunting regulations on concrete data rather than a hunch.

During the first experimental use of satellite pictures this year, U.S. Fish and Wildlife Service biologists discovered the snow and ice melted about three weeks earlier than normal in these virtually inaccessible areas.

This fact is good news for the biologists since an early break-up sets the stage for a successful year of nesting, laying, and raising young birds which will be mature enough to make the long trip south when the winter returns once again.

Arctic nesting geese--which include most species common to North America-- run a close race

with nature each year. The brief summer in the northernmost reaches of the globe allows little time for the hatching and rearing of the young.

If geese don't get their nests built by mid-June there is little chance the year's young will survive the winter migration. Nature has also adapted the birds with a unique way to cope with the ice and snow which may still cover the nesting grounds when they arrive.

If this is the case, the female is physiologically able to "resorb" her eggs, dissolving the eggs back into her body. In years when snow and ice delay nesting, the normal clutch of four to five eggs is reduced and Arctic nesting geese, as a result, often endure a boom or bust reproductive existence.

It is hoped the use of satellite imagery will enable biologists to more closely monitor these widely fluctuating populations and set more realistic hunting regulations reflecting these yearly differences.

This has not been possible in the past due to the inaccessibility of the Arctic nesting areas and the high cost of placing field crews on them.

The project was an outgrowth of cooperative studies by the Interior Department's U.S. Fish and Wildlife Service and the Canadian Wildlife Service last fall and winter.

In this year's experiment U.S. and Canadian biologists used two independent systems—the weather satellite launched for the National Oceanic and Atmospheric Administration (NOAA) and the Earth Resources Technology Satellite (ERTS) launched for the Interior Department.