

[From Fall 1996]

## **Seaside Shorebirds Exceed 500,000**

Aerial surveys of shorebirds conducted on the seaside of the Eastern Shore of Virginia have begun to document this area as one of the most significant staging areas along the Atlantic Coast for northbound shorebirds during the spring.

Funding for the surveys is being provided by the U.S. Fish and Wildlife Service, the Eastern Shore Foundation, the Virginia Department of Conservation and Recreation, The Nature Conservancy's Virginia Coast reserve, and the Center for Conservation Biology.

The surveys, which are the first comprehensive attempt to estimate the abundance of shorebirds moving through this coastal area in the spring, are being conducted by Dr. Bryan Watts of the Center for Conservation Biology at the College of William and Mary and Barry Truitt of The Nature Conservancy's Virginia Coast Reserve.

The flights each spring and fall of small sandpipers, plovers, and other shorebirds, between their wintering areas in South American wetlands and their breeding grounds high in the Arctic Tundra are one of the most amazing animal migrations known. Staging areas refer to key locations, often wetlands, along their migratory routes where shorebirds concentrate in huge numbers because abundant food sources allow the birds the ability to replenish the body fat and energy reserves needed for the next leg of their migration.

According to Dr. Watts, the seaside of the Eastern Shore seems to be an important staging area for those shorebird species such as Dunlin, Dowitcher, Whimbrel, and Black-bellied Plover that depend on open mud flats for foraging during migration. This is in contrast with the well-known Delaware Bay staging area where shorebird species that rely on beach habitats and horseshoe crab eggs congregate during the spring.

The seaside appears to be of exceptional importance as a staging area to Whimbrels, known locally as the "curlew." Whimbrel densities in sampled mud flats on the seaside are the highest reported to date in the Western Hemisphere. The peak population estimate for this species exceeded 40,000 individual birds in both 1994 and 1995. It appears that the seaside may be used as an important staging area before the birds fly over land to breeding grounds in north-central Canada.

Projected estimates of total shorebirds utilizing the seaside peaked in early to mid May with peak numbers exceeding 215,000 in 1994. Sanderling and Red Knots were significantly more abundant along open beaches, while Dunlins, Black-bellied Plovers, Whimbrels, and Dowitchers were significantly more abundant on tidal mud flats. Even with conservative estimates of the time that individual shorebirds actually stay on the seaside, the surveys to date suggest that well in excess of 500,000 shorebirds utilize this area during the course of spring migration alone.

The low-altitude surveys were flown at the time of low tide in order to determine the type of habitat used for foraging by the shorebirds. They cover all the ocean beaches of the barrier islands from Assateague to Fishermen's and a series of 10 band transects from the mainland across the marshes, bays, and mud flats to the barrier islands. A Cessna 172 aircraft from Chesapeake Aviation was used to fly the surveys. Observers in the plane identified, counted, and mapped all concentrations of shorebirds.

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Habitat availability was determined using a satellite image of the seaside manipulated with a computer geographical information system at the University of Virginia's Long Term Ecological Research (LIER) lab. Habitat estimates coupled with the survey numbers were used to generate both shorebird densities and gross population estimates for the whole seaside.

The information collected during these collaborative surveys has led to a renewed interest in the shorebirds of the seaside.