**NABCI IN CANADA**

# Bird Conservation Region 14:
# Peeps and Partnerships in the Bay of Fundy

**By J. Alexander (Sandy) Burnett**

At first glance it looks like wind-blown smoke — a dark, fast-moving cloud twisting and swirling above the turbulent waters of Shepody Bay. It spirals upward, gathers itself into a compact ball, hovers, then flashes white in the July sunlight and swoops off in another direction.

Seen through binoculars, the erratic cloud resolves itself into a host of Semipalmated Sandpipers, tiny shorebirds, scarcely bigger than sparrows. With amazing precision, they wheel and bank, virtually in unison, before settling on a strip of gravel beach just above the limit of the high tide.

"There's probably 12,000 in that group," says Peter Hicklin, a shorebird biologist with the Canadian Wildlife Service (CWS). Hicklin is one of a select handful of researchers who have devoted much of their professional careers to the study of these long-distance migrants. After more than 25 years of experience, his practiced eye can scan a flock of the little birds, affectionately known as 'peeps', and make an informed estimate of their numbers in an instant. It's a useful talent at a location where millions of shorebirds touch down every summer, not to be counted, but to gorge on nutrient-rich invertebrates called mud shrimp.

The Bay of Fundy is renowned as the site of the highest tides in the world. When the waters ebb, their retreat exposes hundreds of square kilometres of mudflats to the light of day and, from mid-summer to mid-autumn, to the probing bills of migrating sandpipers, plovers and their ilk.

Canada is home to 47 species of shorebirds. Some nest near prairie sloughs or northern lakes, or in coastal wetlands. For others, the chosen nesting locations are scattered across the trackless Arctic tundra, from Baffin, Ungava and Ellesmere to the Mackenzie Delta. Widely dispersed their nests may be; yet, when the time comes to turn again towards wintering grounds in the southern United States, Mexico, and Central and South America, significant numbers of some 26 different species converge annually on the mudflats of the upper Bay of Fundy.

Of these, the Semipalmated Sandpiper is by far the most numerous. Estimates range from 2.5 to 4.4 million individuals, as much as 80% of the world population of the species and half the total number of shorebirds that migrate through Atlantic Canada each year.

On arrival, the peeps adopt the rhythm of the tides. When the flats are exposed by the falling tide, they feed industriously, scattered across the intertidal mud. When the water is high, they roost on the shore in huddled masses, waiting for the tidal cycle to repeat. At the height of the season, in early to mid-August a single roost may contain more than 100,000 birds. During a stay of 10 – 20 days, each one doubles its weight, storing energy in the form of fat to fuel the next stage of the journey, from Atlantic Canada to the coastal wetlands of Suriname and French Guiana in northeastern South America. It's a 72-hour, non-stop flight of close to 5000 kilometres across the open Atlantic Ocean with no hope of rest or shelter till they arrive.

Were the quality and reliability of this fuelling stop to be degraded, the change would seriously compromise the Semipalmated Sandpiper population. Few areas of seasonal habitat are at once so small and of such critical importance to so many birds. It is scarcely surprising, then, that the upper basins of the Bay of Fundy are the focus for the first major project of the North American Bird Conservation Initiative (NABCI) in the area known as Bird Conservation Region 14, the Atlantic Northern Forest.

NABCI is a tri-national initiative of Canada, the United States and Mexico to develop and implement bird conservation plans for the long-term health of all native bird species in all habitat regions of North America. Its rationale is simple. Birds are numerous, highly visible, economically significant and ecologically essential components of the biodiversity of all three countries. If all the continent's bird populations are in good health, abundant, and distributed throughout their known ranges relative to historical norms, it may be inferred that the environmental health of North America is good. If not, then like the celebrated canary in the coal mine, those species in trouble will serve as indicators of ecosystems in distress and of an urgent need to take remedial action.

To facilitate the initiative, the natural habitats of the continent have been mapped into 67 Bird Conservation Regions (BCRs). The resulting spatial framework has been in use by NABCI since late in 1999. Its units have nothing to do with political boundaries. Rather, each comprises a set of related and contiguous ecosystems.

BCR 14, for example, stretches from the Adirondack Mountains and the northern Appalachians to Cape Breton Island. It includes all three Maritime Provinces, Québec's Gaspé Peninsula and Eastern Townships, most of the States of Maine, New Hampshire and Vermont, and significant portions of western Massachusetts and northern New York. Among the many important bird species associated with BCR 14, in addition to shorebirds, are the fog-forest-dwelling Bicknell's Thrush and Nelson's Sharp-tailed Sparrow of the coastal saltmarshes. Common Eider and colonial seabirds utilise coastal and offshore

islands, while large quantities of migrating and wintering waterfowl concentrate in coastal wetlands.

BCRs may be ecologically based, but the realities of geopolitical jurisdiction certainly govern the development and application of management strategies. Within the Canadian portion of BCR 14, the Canadian Wildlife Service (CWS), as the federal agency responsible for migratory birds, is taking a lead role in conservation planning, working in close consultation with provincial wildlife authorities and non-government environmental groups. Given that CWS responsibilities in Atlantic Canada extend to include Newfoundland and Labrador, its plans for specific bird groups encompass portions of three other BCRs: #3, the Arctic Plains and Mountains; #7, the Taiga Shield; and #8, the Boreal Softwood Shield.

In many instances, the NABCI partnership has consolidated and capitalized on conservation initiatives that were already under way. The Eastern Habitat Joint Venture (EHJV), for example, established under the North American Waterfowl Management Plan in 1989, has provided a waterfowl conservation strategy that already has many accomplishments to its credit. EHJV planning for other bird groups is also progressing rapidly. Within the framework of Canada's national plan for seabirds, waders and other waterbird species apart from ducks and geese, a regional waterbird strategy has been taking shape since the spring of 2001. An integrated strategy for landbirds is in the early stages, with preliminary assessments of distribution and status currently in progress.

Aside from the EHJV plan for waterfowl, the Atlantic Canada Shorebird Conservation Plan, drafted in 2000, is probably the most advanced. Prepared by representatives of CWS, Ducks Unlimited Canada, EHJV, and the natural resources departments of the four Atlantic Provinces, it summarizes knowledge about shorebirds in Atlantic Canada, reviews threats to their well-being, and proposes priorities for their conservation and protection.

Not surprisingly, one of the leading concerns identified within the Atlantic Shorebird Conservation Plan is the vulnerability of key migration stopover sites in the upper Bay of Fundy. Disturbance to the mudflats and roosting beaches and increasing recreational use of shorelines by local residents and tourists are among the threats identified. The draft plan proposes a number of strategic conservation actions. Development of interpretive centres at the areas of peak visitation could provide opportunities both to educate the public and to control access to the beaches. Careful monitoring of shorebird distribution and use of the area could help to improve understanding of this vital link in the ecological chain. It could also serve as an early warning mechanism to highlight changes — especially declines — in the abundance of many shorebird species.

Shorebird conservation activity in BCR 14 predates NABCI by a wide margin. Shorebirds have been converging on the Bay of Fundy for centuries; wildlife conservation policies and priorities have been converging on the same area for decades. Two of the key

feeding and roosting locations, Shepody Bay in New Brunswick and Nova Scotia's Minas Basin, were designated as wetlands of international importance under the Ramsar Convention and hemispheric shorebird sites under the Western Hemisphere Shorebird Reserve Network (WHSRN) as early as the late 1980s. Private conservationists Mary Majka and David Christie have worked closely with CWS for many years to establish the Mary's Point Nature Centre as an important shorebird reserve on the west ide of Shepody Bay. CWS and the Nature Conservancy of Canada (NCC) have been engaged in an active partnership to secure and protect key roosting and feeding areas from development or disturbance. Sites near Dorchester, New Brunswick and Grand Pré, Nova Scotia, have been identified for this purpose.

Several properties along the Shepody Bay shore have already been acquired by NCC and an interim interpretive display has been set up as the focal point for visitors to the Johnson's Mills Nature Preserve. It was at this location, overlooking one of the sandpiper roosting sites, that Canada's Minister of the Environment, the Hon. David Anderson, launched the Fundy Shorebird Project, on August 14, 2001, as Atlantic Canada's first officially designated NABCI project.

The project, developed and delivered under the auspices of the EHJV, unites CWS and NCC with other partners in a commitment to secure critical shoreline habitat in the upper Bay of Fundy, particularly at Shepody Bay and the Minas Basin. A budget of close to one million dollars has been earmarked for this purpose, with the bulk of the funds being supplied by the U.S. Fish & Wildlife Service and The Nature Conservancy (US). NCC, CWS, the provinces of Nova Scotia and New Brunswick, Ducks Unlimited and the Nova Scotia Nature Trust are all active participants.

Of particular significance is the presence of major United States funding, through the North American Wetlands Conservation Act (NAWCA). This American legislation has been instrumental in the conservation successes of the North American Waterfowl Management Plan. The Fundy Shorebird Project, however, is among the first, at least in Atlantic Canada, to receive NAWCA funding for a program that puts a heavy emphasis on wetland conservation for species other than waterfowl. For this reason, it has been greeted by NABCI partners as an important symbol of the commitment to all-bird conservation throughout North America.

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