

A 'Slimbridge' in British Columbia

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The formation of the British Columbia Waterfowl Society

In June 1960, on my way to British Columbia as an immigrant, I broke my journey across Canada to spend a few days with H. Albert Hochbaum at the Delta Waterfowl Research Station in Manitoba. He casually mentioned that Peter Scott had once expressed the view that the Vancouver area was the ideal location in North America for a collection of wildfowl. On arrival I saw the truth of this remark. The climate of the Pacific coast was mild, great flocks of ducks and Lesser Snow Geese *Anser c. caerulescens* still visited the remaining marshes on their annual migration, and the pleasant farmlands of the Lower Fraser Valley offered nesting habitat for several species of waterfowl. However, it was the negative aspects of the situation which prompted me to seek support for the creation of a 'Slimbridge on the Pacific shore'.

In spite of their scenic appeal and recreational value, the coastal marshes were, and still are, being steadily reduced by urban-industrial sprawl. It seemed strange that no refuges had been set aside either to safeguard vital areas of marsh or to offer sanctuary to a proportion of the wildfowl population. During the shooting season about 15,000 guns sub-

jected the ducks and geese to constant pressure. However, by 1960 many of those concerned with conservation in British Columbia were acknowledging the need to consider the aesthetic and educational aspects of wildlife and its habitat when assessing its value. As a result when I wrote to the *Province* newspaper suggesting the establishment of a 'Snow Goose Park' on the Fraser River Delta the proposal was received with much greater interest than I had dared to hope. Moreover, the publisher of the *Province* turned out to be Mr. F. S. Auger, who not only was President of Ducks Unlimited (Canada), but had just returned from a visit to Slimbridge. So, by a stroke of good fortune, my proposal went to the one man in British Columbia whose knowledge and position enabled him to act immediately in response. With his help, a meeting of persons anxious to save our remaining marshes was called. The result was the foundation of the British Columbia Waterfowl Society early in 1961.

The selection of a refuge site (Figure 1)

The directors of the Society agreed that their first objective should be to create a refuge which, like Slimbridge, would not only secure a significant area of

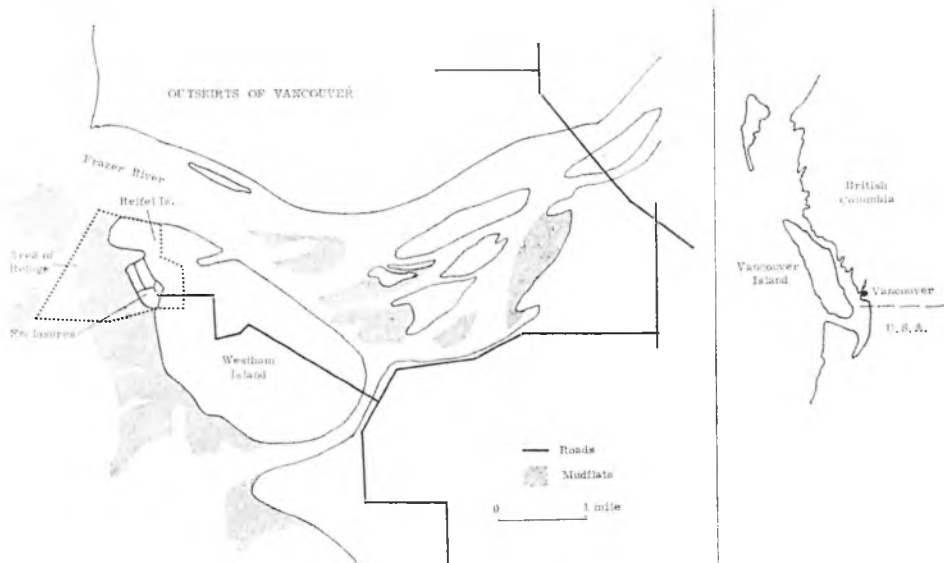


Figure 1. Sketch map showing location of Reifel Island Refuge.

coastal marsh but also offer opportunities for the observation, study and enjoyment of waterfowl, so capturing public interest and support. However, it was no simple task to select an area which was accessible to large numbers of visitors, suitable for a waterfowl collection, close to a large tidal marsh favoured by birds—especially the Snow Geese, and which could be declared a refuge without offending local waterfowl hunters. We made a survey of possible sites in the area of Vancouver and narrowed the choice down to four—Pitt River Valley, Mud Bay, Tsawwassen Bay and Reifel Island. Dr. G. V. T. Matthews, Director of Research at Slimbridge, visiting us in July 1962, confirmed our impression that Reifel Island was the best from every point of view. By our second stroke of luck, the owner, Mr. G. Reifel, welcomed the opportunity to fulfil the dream of his father, George C. Reifel, to turn part of his island home into a sanctuary. He generously leased 40 acres of foreshore land to the Society for 30 years at \$1 per annum. Beyond the sea dyke lay extensive sea-marshes which were Provincial Crown Land. In 1963 the Society succeeded in persuading the Provincial Government of British Columbia to declare 700 acres of these marshes a Provincial Waterfowl Refuge.

The area thus secured is bounded to the west by the 15 mile wide Georgia Strait, running between the mainland and Vancouver Island. There the low tide exposes great sand flats, a feeding area for thousands of waders and a resting place for ducks and geese. The rising tide brings in sea birds and diving ducks: Scoters *Melanitta deglandi* and *nigra*, Long-tailed Ducks *Clangula hyemalis*, Scaup *Aythya marila* and *affinis*, Golden-eye *Bucephala clangula*, and Harlequin Ducks *Histrionicus histrionicus*. The edge of the marsh is a maze of hummocks and clumps of bulrushes *Scirpus* spp. on whose rhizomes and shoots the Snow Geese feed. The sedges *Carex* spp. fringing the broad tidal creeks provide additional food for the thousands of dabbling ducks which loaf there between their daily flights to farmland. Further inland the sea-marsh becomes a thick jungle of cat-tails *Typha* spp. tangled with immense quantities of driftwood. Behind the sea dyke of Reifel Island are meadows divided by broad drainage ditches and two large tidal creeks. The latter have now been blocked at both ends to form lakes 800 yards long and 40-60 yards wide which provide resting areas for flocks of about 2,000 American

Wigeon *Anas americana* which graze on the meadows in the winter. The shallow waters of the island are almost choked with beds of sago pond-weed *Potamogeton pectinatus*, so attractive to the diving ducks. The hedges and coppices on the island add yet further to the variety of its habitat. As a result the Refuge attracts a greater number of different birds than any other area on the coast, 155 species having been recorded.

No sooner was the Refuge established than it proved its efficacy. Two thousand Canada Geese *Branta canadensis parvipes*, which previously visited the Fraser Delta only for a few weeks in October, remained on the Refuge until snow deprived them of grazing in January. Since then flocks have visited the Refuge each winter, resting on the sand flats and flying into the meadows daily until hard weather drives them further south.

We were unfortunately less successful in holding the wild flock of six thousand Lesser Snow Geese in the Refuge for long periods. The area of their favourite inter-tidal marshes within the refuge boundaries at first proved too small to give them a sense of security. However, they are now beginning to make more use of the refuge and there is hope that the boundaries may soon be extended seaward so that the Snow Geese become as permanent a part of the winter scene here as the White-fronted Geese *Anser a. albifrons* are at Slimbridge (Plate VIb, p. 49).

The development of the Refuge

Even without the Snow Geese, the spectacle of thousands of ducks moving to and fro across the tidal marshes against a background of snow-capped mountains was sufficient to justify the Society's hope of making the Refuge a public attraction. But confronted with the task of designing the waterfowl park I now regretted that I had not noted the details of construction and layout when I had helped to conduct visitors round Slimbridge ten years before. This time the *deus ex machina* was the Royal Canadian Air Force which gave me the task of studying means of reducing the hazard of bird strikes to their European based aircraft. During the course of this work it was necessary to consult the leading experts on bird migration, including Dr. Matthews. A visit to him at Slimbridge in 1964 presented the opportunity needed to study the lay-out and functioning of the Wildfowl Trust grounds and collection and to seek the expert advice of the Hon. Director, Peter

Scott, and the Curator, Tommy Johnstone. Other of our Society's directors who have since been to draw inspiration from Slimbridge are C. H. Marx and Sir L. Lennard.

With the plans completed we were still confronted with the problem of raising funds for their fulfilment. However, over the last five years many of our needs have been met. The first major contributions came from Vancouver business men. Then, in 1965, Ducks Unlimited (Canada) designated habitat improvement on Reifel Island as its first project in British Columbia, and made available a grant of \$10,000 and the engineering advice of Mr. G. Campbell. The Canadian Wildlife Service immediately added \$35,000. This made it possible to build a dyke 4,500 feet long enclosing part of the inner cat-tail-clogged tidal marsh which could now be cleared and converted into brackish marsh for feeding and nesting with controlled water levels. Even while the bulldozers were still at work, waders, especially Greater Yellowlegs *Totanus melanoleucus* and Long-billed Dowitchers *Limnodromus scolopaceus*, thronged the shores of the new ponds and waterways. Smartweed *Polygonum* sp. and barnyard grass *Echinochloa crusgalli* grew with amazing rapidity on the freshly dug soil and within a few weeks attracted large flocks of Pintail *Anas acuta*, Mallard *Anas platyrhynchos*, American Green-winged Teal *Anas crecca carolinensis* and American Wigeon. Sago pond-weed spread into the larger ponds and attracted a flock of 200 Canvasbacks *Aythya vallisneria*.

The habitat improvements also had marked effects on the species breeding in the refuge. By the spring of 1967 the numbers of nesting Blue-winged Teal *Anas discors* and Cinnamon Teal *Anas cyanoptera* had at least quadrupled. Mallard and Gadwall *Anas strepera* had increased too, seeking nesting sites in the newly dyked brackish marsh together with American Bitterns *Botaurus lentiginosus*, Green Heron *Butorides vivescens* and Virginia Rail *Rallus limicola*. It was also encouraging to see that Wood Ducks *Aix sponsa* were making use of many of the nesting boxes we had put up in the waterside alder and poplars. Unfortunately the breeding results were disappointing because many pairs were evicted by pugnacious European Starlings *Sturnus vulgaris*.

The waterfowl collection

By this time the society had a Warden living on the Refuge and in 1968 Mr. Stanley Devereux, from Bristol, was appointed Manager. Once the Refuge had a permanent staff it was possible to assemble a waterfowl collection. This started modestly with some Canada Geese and Mallard. But it soon grew with the donation of Trumpeter and Whistling Swans, Ross's, Snow, Blue, White-fronted and Cackling Geese, all the dabbling ducks of British Columbia plus some Black Duck from Ontario, Redhead, Canvasback, Scaup, American Goldeneye, Bufflehead, and Ruddy Ducks. We now have, at the end of 1969, some 700 wildfowl of 36 species. They live within a fenced area of 40 acres, divided into eight pens of varying sizes. The fences are only three feet high, but to keep predators out, especially Raccoons, Foxes and Mink, an electric cattle wire is placed a few inches from the top of the perimeter fence and electrified at night. A raised gravel path circuit enables visitors to see the collection, and visit the observation blind overlooking the marsh. The Manager's house has already been erected near the car park at the entrance, and as funds become available we plan to add a public display area and gallery, wash-rooms, library, laboratory, office and student accommodation. We anticipate an increasing flood of visitors, with the outskirts of Greater Vancouver, a city of 900,000 inhabitants, only 15 miles away.

Wild shorebirds and waterfowl join those in the pens. It was an exciting moment in March 1969 when a pair of Trumpeter Swans *Cygnus c. buccinator* flew into the lake beside the pen where our pinioned Trumpeters were calling. They stayed for a few weeks feeding on sago pond-weed and flying out to the sea-marshes for grit. But early in April they resumed the journey to their breeding haunts in northern Alberta or on some yet undiscovered lake in the interior of British Columbia. Perhaps they and their brood will return next year, duplicating the saga of the Bewick's Swans *Cygnus columbianus bewickii* at Slimbridge. But even if they don't, the 'George C. Reifel Waterfowl Refuge' will be there for thousands of other waterfowl flying, like them, the hazardous journeys between the still-wild places of North America.