

*The Bird Rocks Bird Sanctuary.*—This Sanctuary consists of two sea-washed rocks in the central part of the Gulf of St. Lawrence. These rocks were discovered in 1534 by Jacques Cartier, who noted enormous numbers of gannets there. Some authorities have estimated that as late as the early 19th century more than half of the world population of gannets nested on the Bird Rocks—a unique concentration of bird life, because the exposed area of the rocks is given in the earliest records as only 14 acres and has since been reduced by erosion to less than half that size.

Their small area and isolated situation did not protect the Bird Rocks from raids by fishermen and others on the birds and their eggs. These raids became fewer after a lighthouse was erected on the larger rock in 1869, but the construction of the lighthouse and associated buildings seriously reduced the available nesting area. The bird population was at a critically low point in 1919 when the sanctuary was set up to include the exposed rocks and all surrounding waters to a distance of one mile.

Although now protected from human enemies, the gannet colony on Bird Rocks can never recover its former magnitude. In 1860 it was estimated to contain 100,000 individuals, but in 1932, after 13 years of protection, the number was placed at only 1,000. Rapid erosion of one of the rocks is believed to have forced part of the gannet population to found a new colony on Anticosti Island, 92 miles distant. In view of the history of erosion, the future of the colony is somewhat problematical.

*Other Sanctuaries.*—Since the establishment of the two pioneer sanctuaries under the Migratory Birds Convention Act in 1919, scarcely a year has passed without one or more new bird sanctuaries being established. An interesting feature is that the creation of many of these sanctuaries was initiated by private citizens, who voluntarily petitioned to have their property placed under the sanctuary restrictions. Such public spirit is admirable and has been of particular aid to the cause of conservation because Federal Government policy is not to establish sanctuaries on private property without full consent of the owners. These sanctuaries on privately owned land vary greatly in extent: the smallest is Rideau Island Bird Sanctuary, covering only one acre, within the limits of the city of Calgary, Alberta; and the largest is Harrington Lake Bird Sanctuary near Ottawa, where a number of property-owners have co-operated to make eight square miles of forest, lake and cultivated land into a peaceful habitat for many species of aquatic and insectivorous birds.

Sanctuaries established on Crown lands are, in general, much larger than those on private property and often consist of tidal-water areas, with or without islands or adjacent portions of the mainland being included. An example of this type is the Port Joli Bird Sanctuary near the southern extremity of Nova Scotia: it consists of tidal-water areas in three separate inlets, including islets and rocks in those areas but not including any part of the mainland. Unlike many other migratory bird sanctuaries in Canada, this one has a year-round value, climatic conditions permitting its use throughout the winter by aquatic birds which nest in more northerly parts of Canada.

The largest migratory bird sanctuary in Canada consists of part of Akimiski Island, in James Bay, and the waters bordering it. This Sanctuary covers 1,300 square miles, of which land and fresh-water lakes constitute slightly more than one-half. Two other sanctuaries, covering mainland and tidal-water areas in the southeast quarter of James Bay, are respectively 68 and 110 square miles in extent.