

A Purple Martin Success Story *by* Bruce Cousens

The western subspecies of the Purple Martin (*Progne subis arboricola*) has become the focus of a unique volunteer housing project in British Columbia. This cavity dweller had virtually disappeared in BC as a result of habitat loss and competition from introduced species. A nest box project, initiated in 1985, has brought this martin back from 5 known pairs to over 300 pairs in 26 locations in 2004.

The western subspecies of Purple Martin occurs west of the Rocky Mountains in southwest BC, and primarily west of the Cascade Mountains in the U.S., from Washington to southern California. In BC, nesting occurs only on coastal lowlands and islands of the Strait of Georgia, as far north as Campbell River. It is considered separate from the more numerous and widely known Purple Martin of eastern-central North America (*P. subis subis*), and their breeding ranges do not intersect. With limited band recovery information, it is unclear whether the two subspecies winter together in South America.

Western martins originally nested in small colonies in natural cavities and abandoned woodpecker holes in old trees and snags in open woodland areas, forest clearings, and burned areas, often near bodies of water. Across their breeding range, western Purple Martins began nesting in cavities in city buildings in the early 1900s, where they faced nest site competition from introduced House Sparrows. In the 1940s, and perhaps in response to sparrow competition, they began using natural cavities formed in offshore wooden pilings. Their numbers began a steady decline in the 1950s, shortly after the arrival and rapid population expansion of non-migratory European Starlings. All told, intensive competition with exotic species for nest cavities, changes in building design that reduced nesting opportunities, and ongoing natural habitat loss from land clearing, snag removal, and fire suppression were all likely factors contributing to the overall martin population decline in BC.

By the 1970s, western Purple Martins were reduced to small remnant colonies and isolated pairs nesting in "refuge" situations - natural cavities in seashore wooden pilings (where starlings rarely nested), and more occasionally in tree cavities located near fresh water in rural and forested areas away from cities. They disappeared from

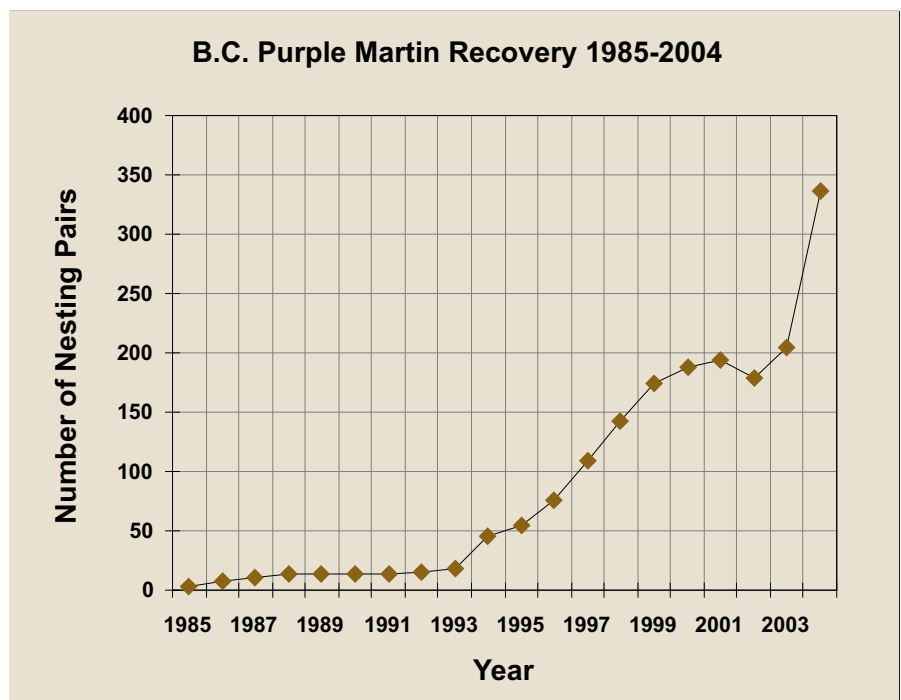


Photo: Carley Colclough

the Vancouver area after 1972 and had declined to five known pairs nesting in marine piling cavities on southeast Vancouver Island by the 1980s.

The Purple Martin is currently Red-listed (a candidate for Threatened status) in BC and is listed as a Species of Special Concern throughout its western breeding range in the U.S. The entire western subspecies population is estimated at only 3000-5000 pairs.

Recovery efforts began in BC in 1985 with several single-compartment nest boxes placed on marine pilings by volunteers at Cowichan Bay on southeast Vancouver Island. When these boxes were quickly successful, more were installed at other sites on east Vancouver Island and the BC Lower Mainland, again built, mounted, and monitored by volunteers. Use of predator-resistant nest boxes, with entrances sized to admit martins but





Banding of nestlings, and band reading over several years, has confirmed that young birds are dispersing among colonies. Le marquage et la recapture des jeunes oiseaux au cours de plusieurs années a permis de confirmer que ces derniers se dispersent entre les colonies. Photo: Ralph Hocken.



Nest boxes installed on marine pilings are quickly occupied. Les nichoirs installés sur les piliers sont rapidement occupés. Photo: Bruce Cousens.



Photo: Ron Ridout

exclude most starlings, helped the martins compete successfully and begin to make a comeback. (Western martins don't use eastern-style, communal, "condo" boxes.) The number of breeding pairs slowly increased, with martins returning to nest in the Vancouver area (at Burrard Inlet) in 1994, after being absent for over two decades. In 1997, the first breeding pair returned to Campbell River, the historic northern breeding range limit, again after an absence of over two decades.

Recovery was slow initially, but by 1995 over 50 pairs were nesting at 7 colony locations in southwest BC and a similar recovery was occurring in Puget Sound, WA. By 2000, this number had increased in BC to over 175 pairs at 12 sites. Population growth stalled for several years, apparently due to a series of cool, wet summers with low insect food availability, causing reduced survival and nesting success. With a doubling of available nest boxes in 2001 and return of warm dry summers in recent years, the population has increased to 336 pairs at 26 locations in 2004!

In 1996, a nest box monitoring and nestling banding study was initiated to document reproductive success and monitor dispersal patterns of young birds entering the breeding population, in order to determine the degree of genetic mixing between colonies. After a number of years of banding and band reading with a spotting scope at many colony sites, it has become clear that dispersing new recruits are well mixed among all the colony sites around the Strait of Georgia and that some regular emigration and immigration is occurring with the Puget Sound, WA population. Bird Studies Canada's Baillie Fund, supported by dollars raised through the Baillie Birdathon, is a major contributor to the continuation of this banding study.

Today, the recovery program is still strongly volunteer- and stewardship-based, but has grown too large and costly for coordination and management by of

volunteers alone, with over 50 nest box sites and 70+ volunteers. Recovery efforts are now coordinated and managed as the BC Purple Martin Stewardship and Recovery Program by the Georgia Basin Ecological Assessment and Restoration Society (GBEARS), a BC non-profit society formed by professional biologists for study and conservation of species at risk. Until a way can be found to re-introduce them to other nesting situations in the wild, western Purple Martins in BC will likely remain heavily dependent on human-provided nest boxes for continued survival and nesting success.

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