ot, dry weather ruled across the Region through the whole period, courtesy of a strong ridge of high pressure that gave way to only a few minor rain events. Brown Pelicans were more prevalent than at any time since the fall of 1999, with near-record numbers along the west coast of Vancouver Island. Exciting finds in the way of breeding birds included the discovery of a Black Swift nest near Whistler and the return of breeding Sandhill Cranes to the northern tip of Vancouver Island.

LOONS THROUGH ALCIDS

A remarkable inland concentration of loons was discovered on Hodder L. 6 Jun (ph. GR, TT), with 1100 Pacific Loons, 25 Common Loons, and 3 Yellow-billed Loons. Very rare in summer, a Yellow-billed Loon was on Slocan L. near Silverton 21-22 Jun (EB). A Manx Shearwater seen from a cruise ship in Hecate Strait furnished a 3rd Regional record 20 Jul (†MLPR). This summer, American White Pelicans were found n. and e. of their usual summer loafing areas, with 18 over McBride on 1 Jul (CL); 4 on Eaglet L. 2 Jul (CA) and 12 there 13 Jul (MA); and 30 on Carrier L. 8 Jul (KG, RD), with an astounding 145 there 15 Jul (DW, SS). Perhaps at least some of these birds were failed nesters from Chase L., ND, where a mass abandonment occurred in early Jun. The numbers of summering pelicans in the Creston area had also grown to more than 200 (LVD), which may or may not be related to the Chase L. abandonment. Brown Pelicans staged a strong invasion, with singles at Carmanah Pt. 2 Jun (RR), Clover Pt., Victoria 27 Jun (BB, MGS), and Metchosin 24 & 30 Jul (DA, II). An impressive 77 flew by Carmanah Pt. 27 Jun (JH, BG, JE), with another 29 on 28 Jun and 27 on 29 Jun. Were it not for these



Broad-winged Hawks nested near Tabor Lake, 12 km east of Prince George, British Columbia (here 25 July 2004); this is one of three juveniles that fledged successfully. Two other pairs were located in the vicinity this summer, making Prince George an important nesting area away from the species' typical range in the northeastern part of the province. Photograph by Ted Zimmerman.

British Columbia

high counts, the 3 birds noted in the Vancouver area in late Jul would have been thought to pertain to the same individual.

Very rare in summer, a few swans lingered on Vancouver I.: an imm. Tundra Swan, present since spring, remained in Comox through the period (NH, JF); an ad. Trumpeter Swan furnished the first summer record for the Nanaimo area at Nanoose Estuary through the period (GLM et al.); and 2 Trumpeter Swans, an ad. and an imm., were in Comox 14 Jul (GLM). Although no breeding was confirmed, a pair of Ringnecked Ducks provided the first summer record for the Nanaimo checklist area as they spent the summer in Buttertubs Marsh (GLM et al.). Broad-winged Hawks were, until fairly recently, known to nest only in the Peace R. area. One of their best strongholds away from traditional nesting in the ne. has been the Prince George area, where three pairs were found this summer (fide JB). One nest with 3 chicks was discovered on the w. side of Tabor L. 20 Jul (TN, JW, DW, ph. TZ). Several nests of Sandhill Crane were discovered ne. of Port Hardy 7-11 Jul (PL, MGS), the first confirmed nestings on Vancouver 1. in 63 years.

Single ad. Hudsonian Godwits were at Carmanah Pt. 2 Jun (ph. JE), Oyster Bay 4-5 Jun (ES, BBr), and Tsawwassen 12 Jun (RTo, JF et al.). Sandy I., off the e. coast of Vancouver I., has recently been recognized as a great shorebird location; it now holds one of the Region's high counts for Ruddy Turnstone, with 26 there 17 Jul (GLM). The returning pair of Black-necked Stilts at T'Kumloops marsh was finally discovered incubating 11 Jun (BD, WD); by that date in 2002, hatching had already occurred, which suggests there was likely an earlier failed attempt, as the birds had been present since 6 Apr (CR). On 6 Jul, there were 3 chicks present (RR, SR). Unfortunately, the nesting pair at Alki L., Kelowna was less successful: the birds were incubating a nest with three eggs in mid-Jun (RyT), but there was insufficient water in the lake, and the birds abandoned the nest and the site. This does constitute the first breeding attempt for the Okanagan, and one of only three for the province. A high count of 10 Upland Sandpipers was recorded near Fort St. John 1 Jul (FG, KA). Of the three phalarope species, Wilson's is the rarest to be found on Vancouver I.; a female present in Victoria 6 Jun (RS) was the only one reported. Edye Pass, on the Skidegate-Prince Rupert Ferry is a known staging area for Red and Red-necked Phalaropes; surveys conducted 5 Jul (PH, MH) produced 8000



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birds and a record-high 28,714 phalaropes on 8 Jul (PH, MH).

An ad. Forster's Tern was at Iona I., Richmond, where very rare, 6 Jun (MTo, STo et al.). Although Cassin's Auklets breed on Cleland I., near Tofino, they are rarely seen near shore. This summer, a few birds were seen in the vicinity of the island: one on 19 Jun; 6 on 9 Jul; 3 on 10 Jul; 11 on 1 Jul (all AD); and 2 were seen off Victoria from the M.V. Coho 18 Jul (RS). Accidental along the s. coast, 4 Tufted Puffins were seen from the Tsawwassen Ferry Terminal 19 Jul (BS, PS).

DOVES THROUGH FINCHES

A White-winged Dove, a species recorded five times in the past 10 years, was discovered on the Brooks Pen., a remote, uninhabited stretch of coastline along the w. side of Vancouver I. 12 Jul (ph. JC). This peninsula is considered by many to be a potential vagrant trap but is very rarely visited by birders. Flammulated Owls are essentially restricted to the Okanagan Valley and Thompson Basin, yet a pair was heard calling on Mause Cr., near Cranbrook 3 Jun (DN), where the species is considered accidental. A Yellow-billed Cuckoo was found in Jordan River, sw. coast of Vancouver I. 30 Jun–1 Jul (CSa, DR, GLM).

An Alder Flycatcher was observed 14-18 Jun at Grant Narrows Dyke (CG et al.),



This White-winged Dove, only the fifth for British Columbia in the past 10 years, was found along an uninhabited stretch of the west coast of Vancouver Island, on the Brooks Peninsula 12 July 2004. This site may be a good vagrant trap but is rarely checked. *Photograph by John Coulson*.

where very rare; another singing male was in Lavington 12 Jun (DGC). Most remarkably, an Alder Flycatcher was seen at Salmon Arm feeding 2 recently fledged young, with another Alder calling nearby 25 Jul (†TH). If accepted, this would be the southernmost nesting recorded in the province. An Ash-throated Flycatcher was at Half Moon Bay, Sunshine Coast, where considered casual 18 Jun (ph JJ, AR). A Western Kingbird, rare along the w. coast, was on Gabriola I. 3 Jun (LJ). An Eastern Kingbird was as far w. as it could get in Tofino 10 Jun (GB). Purple Martins have a very limited distribution along the extreme s. coast and along the e. coast of Vancouver 1. Two females at the Salmon R. Estuary in Sayward were at the n. edge of their range 8 Jun (MGS). The Region's largest colony, in Maplewood, has grown substantially, thanks to the work of volunteers. The recently rebuilt nest boxes produced record-high numbers this year, with 49 pairs and 163 fledglings (fide DMa). Hopefully this level of success will continue and may lead to more sightings and perhaps breeding colonies in new locations.

A Western Scrub-Jay was in Squamish 23 Jun+ (MD, ph. GD). A Black-billed Magpie was at Cheewhat Beach on the w. coast of Vancouver I. 21 Jun (JH), and another was in Vancouver 16 Jul (MM). A Black Swift nest was discovered 26 Jul+ (PL) at Brandvwine Falls P.P., near Whistler, one of very few nests ever recorded in the Region. Calliope Hummingbirds are very rare spring visitors to the coast; a male in Langford 12 Jun (DA) furnished one of few Victoria records. A Rock Wren singing near the summit of Mt. Cain 24 Jun (PL) adds to the growing evidence that Rock Wrens are now more widespread on Vancouver I. There is, as of yet, only one confirmed breeding record for the island. House Wrens are annual in the Vancouver area, but nesting is seldom noted; a pair that nested in Delta 1 Jun+ was the only area nest reported (RTo et al.).

A Veery singing at Grant Narrows Nature Dyke Trail 14-20 Jun (CG et al.) was in an area where very rare. At least 5 Northern Mockingbirds were found this season: 2 near Tofino 19 Jun (GB, AD), one in Sooke 26 Jun (RS), a singing male in Kelsey Bay 28-29 Jun (GLM, TR), and one on Triangle I. 9-14 Jul (LS). A Sage Thrasher was found singing near White L. in the s. Okanagan 1 Jul (RJC, RC). A Brown Thrasher near Salmon Arm 21 Iul (†TH) would constitute the first Iul record for the Region and the 19th regional record.

Victoria's 2nd record of Ovenbird—but first record of a live bird—was of a singing male on Mount Newton 10–11 Jun (SM, DA); another was at Nelson 11 Jun (JA). An ad. male Chestnut-sided Warbler was at Camo-



This Black-throated Sparrow in West Vancouver, British Columbia 15 June 2004 was characterized as a spring "overshoot." *Photograph by John Wei*.

sun Bog, Vancouver 17–20 Jun (CA, ph. PC).

A Rose-breasted Grosbeak was a banding highlight at Rocky Point B.O. 18 Jul+ (JM, AN et al.) and furnished a first local record; there are only a handful of records for Vancouver I. A young male Rose-breasted

Grosbeak that had just flown the nest was rescued from the middle of the road at Willow River 50 km ene. of Prince George 6 Jul (ph. CB), evidence of a first local breeding record. A singing ad. male Indigo Bunting was in Cheam Wetlands, Chilliwack 11 Jul (1O). There are only a few records for the Vancouver area, and almost all of them are in Jun. A Black-throated Sparrow was in West Vancouver 15 Jun (ph. JW); this is the second spring overshoot this year, with the first in Kelowna in late May, for this very rare visitor to the Region. A male Lark Bunting was at Scotch Creek, near

Salmon Arm 4 Jun (†TH), and the same or perhaps another male was later in Summerland 17 Jul (IC). Although there are numerous summer records of Graycrowned Rosy-Finch on Vancouver I., no nesting had ever been confirmed. This summer, 6 ads. and 2 recently fledged young were found on Mt. Myrah, Strathcona Park 25 Jul (GLM, JL).

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A recently fledged Rose-breasted Grosbeak photographed 6 July 2004 in the Prince George area furnished a first local nesting record and one of very few such records away from the Peace River area. Photograph by Northern Raptor Preservation Society.

State of the Region

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British Columbia, a vast Region with a land mass of nearly 900,000 km², encompasses a multitude of different habitats. Major habitat types found in the province include thousands of kilometers of coastline, coastal estuaries, vast temperate rainforests, coniferous, deciduous and mixed forests, semi-arid shrub-steppe, wetlands, alpine tundra, grasslands, riparian lowlands, lakes and rivers, and offshore waters. Each of these habitats has undergone dramatic changes during the last century due to resource extraction, population growth, and natural occurrences. The province has adopted a wildlife listing that places taxa either in the Red List (endangered), Blue List (threatened), or the Yellow List (species of concern). Many taxa have been assigned to one of these lists for a plethora of reasons. British Columbians are now faced with many daunting challenges on the conservation front, only the most acute of which will be summarized here.

The offshore waters of the province are the subject of much recent study, and they harbor many tubenoses and alcids of concern. The chief threat to these birds is probably oil spills, which could threaten a huge percentage of the world population of Cassin's and Rhinoceros Auklets, as well as Fork-tailed Storm-Petrels. Over-harvesting of several marine species and seabird entrap-



Across western Canada and in Alaska, millions of acres of White Spruce have been lost to a persistent outbreak of Spruce Bark Beetle, which may be connected to apparent population declines in species such as White-winged Crossbill, several thrushes, and Townsend's Warbler. Normally, cold winters kill back the beetles, but warmer-than-average winters since the late 1980s have permitted them to spread across vast areas of forest. When the impact of the bark beetle devastation is combined with that of intensive logging activities, the loss of habitat could bring about rapid declines in otherwise healthy populations of spruce-obligate nesters. Photograph by Joe Fuhrman.

ment in fishing nets both continue to be conservation concerns for marine fisheries.

Most of the province is covered in deciduous, coniferous, and mixed forests. Although the harvest of timber is essential to the sustainability of the provincial economy, the result of wide-spread logging has been catastrophic for organisms that depend on the forest ecosystems. Although clear-cutting has been proven to be environmentally undesirable, over 90% of cut blocks in British Columbia, in the 1997—1998 period, continued to be clear-cuts. While some species do benefit from clearcutting (e.g., Chipping Sparrow, American Kestrel), a decline in avian diversity of between 50 and 60% has been noted in clear-cut areas in British Columbia. The opening of the forests also allows predators and Brown-headed Cowbirds to inhabit areas previously unoccupied. The forest fragmentation that is the result of clear-cutting leads to direct negative impacts on nesting birds such as Marbled Murrelet and Spotted Owl, both inhabitants of old-growth, coastal rainforests and both topics of hot debate between loggers and environmentalists. Another management topic, the cutting of snags for safety reasons, is worthy of note. Lewis's Woodpeckers and other cavity-nesting birds have suffered declines due to the lack of suitable nesting habitats in their valley bottom riparian habitats.

While clear-cutting poses one of the greatest threats to birds in British Columbia, the emerging Mountain Pine Beetle epidemic also looms on the horizon of forestry conservation in the province. Mountain Pine Beetle outbreaks are natural and have occurred for many thousands of years throughout the pine forests of western North America. Over the past decade, winter temperatures have been milder than those recorded in recent history, and entomologists forecast what may be a catastrophic outbreak by 2008 if current trends continue. Sustainable winter temperatures of around –40° C are needed to kill the beetles, and these temperatures have not materialized, perhaps due to global warming. In 1999, 165,000 hectares of provincial forests were infested with Mountain Pine Beetles. In 2003, the number had ballooned to 4.2 million hectares of infested forest. Although woodpeckers, with their insatiable appetites for wood-

boring insects, may be experiencing population growth, many other resident and migratory birds are losing much of their habitat in the central interior of British Columbia.

With the average global temperature on the rise, British Columbia's forests are now much more susceptible to forest fires than they were as little as 10 years ago. A number of devastating wildfires have torn through the dry forests of the interior since the new millennium, and in 2003 alone, over 260,000 hectares of forest was destroyed in the province. These fires change the species composition remarkably, but they are natural and essential in the rejuvenation of the forest. Following the fire season of 2003, when hundreds of homes were destroyed by flames, prescribed burning and the clearing of the underbrush of many forested areas close to populated regions has occurred. This has essentially left vast expanses of open forest devoid of undergrowth, impacting many species that depend on the forest understory for nesting (e.g., Spotted Towhee and MacGillivray's Warbler). Unfortunately, few studies have been conducting to assess the long-term avian trends that occur following prescribed burns in the province. On a positive note, woodpecker populations are benefiting greatly from the increased food sources and nesting opportunities created by forest fires. The clearing of forest understory cannot be pinned down specifically to prescribed burning, however. Cattle are allowed to wander free range throughout many forested regions. The cattle consume the grasses and much of the ground cover throughout the woodlands in which they roam.

The single greatest threat to bird populations in British Columbia is population growth and the urbanization and adjacent agricultural activity that results from an expanding population.

It is an unfortunate reality that most British Columbian cities are found in valley bottom situations, where the climate is inviting and agriculture can thrive. British Columbia is a mountainous region with just 10% of its landmass comprised of valley bottom habitat. It is in these valley bottoms where vast marshes once existed along with extensive tracts of untouched riparian bottomlands and meandering streams and rivers. The draining of marshes, channeling of rivers, and cutting of riparian forests have had irreversible affects on many birds and animals associated with those habitats. The areas of biggest concern include the Fraser River Lowlands, Vancouver Island, and the Okanagan Valley.

Over 55% of the population of British Columbia lies within the Fraser River Lowlands (2.2 million). Once an area of extensive wetlands and riparian woodlands, over half of the 64,500 hectares of those habitats have been lost since the 1890s, and currently at least 10 bird species are at risk due to habitat loss, including Sandhill Crane, Short-eared Owl, and Hutton's Vireo (Fraser et al. 1999). An estimated 1.4 million birds utilize the Fraser River delta during migration, and some of these birds now depend, to a degree, on the agricultural lands as a substitute habitat (Butler and Campbell 1987). In recent years, the growth of ginseng crops and the implementation of large-scale greenhouse operations have been especially degrading in that they render the habitat useless to birds and animals.

Human population growth is a large contributing factor to habitat loss on Vancouver Island as well. The concentration of people along the southeastern shore of Vancouver Island has resulted in increased development pressures on natural habitats. The vast Douglas Fir forests, once draping the mountains of Vancouver Island, have been reduced to a remnant, due to logging and development. All but one of the major estuaries on Vancouver Island's east coast have lost habitats. Hundreds of thousands of waterbirds winter and gather off of these estuaries, and continued habitat loss may reduce the productivity of these ecosystems. At least 13 at-risk bird species inhabit eastern Vancouver Island, including Brandt's Cormorant, Green Heron, and Barn Owl, and the Queen Charlotte Islands archipelago, an important wilderness for both plants and animals, have three endemic bird taxa, subspecies of Northern Saw-whet Owl, Steller's Jay, and Hairy Woodpecker.

The Okanagan Valley in southern British Columbia is home to more species of plants and animals than virtually anywhere else in Canada. Many of these species are now threatened because of urbanization and an explosion in agricultural activity. Vast expanses of shrubsteppe habitat have been converted into immense vineyards, ginseng crops, orchards, and other monoculture crops, putting nearly 20 species of birds at risk in the Okanagan. The widespread draining of over 85% of the valley's wetlands has occurred due to urbanization, and over 60% of the grassland habitats have been altered. As a result, only 9% of the valley remains in a natural, undisturbed state (Redpath 1990). With the population expected to reach over half a million people with the next few decades, the pressure is on to preserve and protect the Okanagan Valley and its unique array of organisms.

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