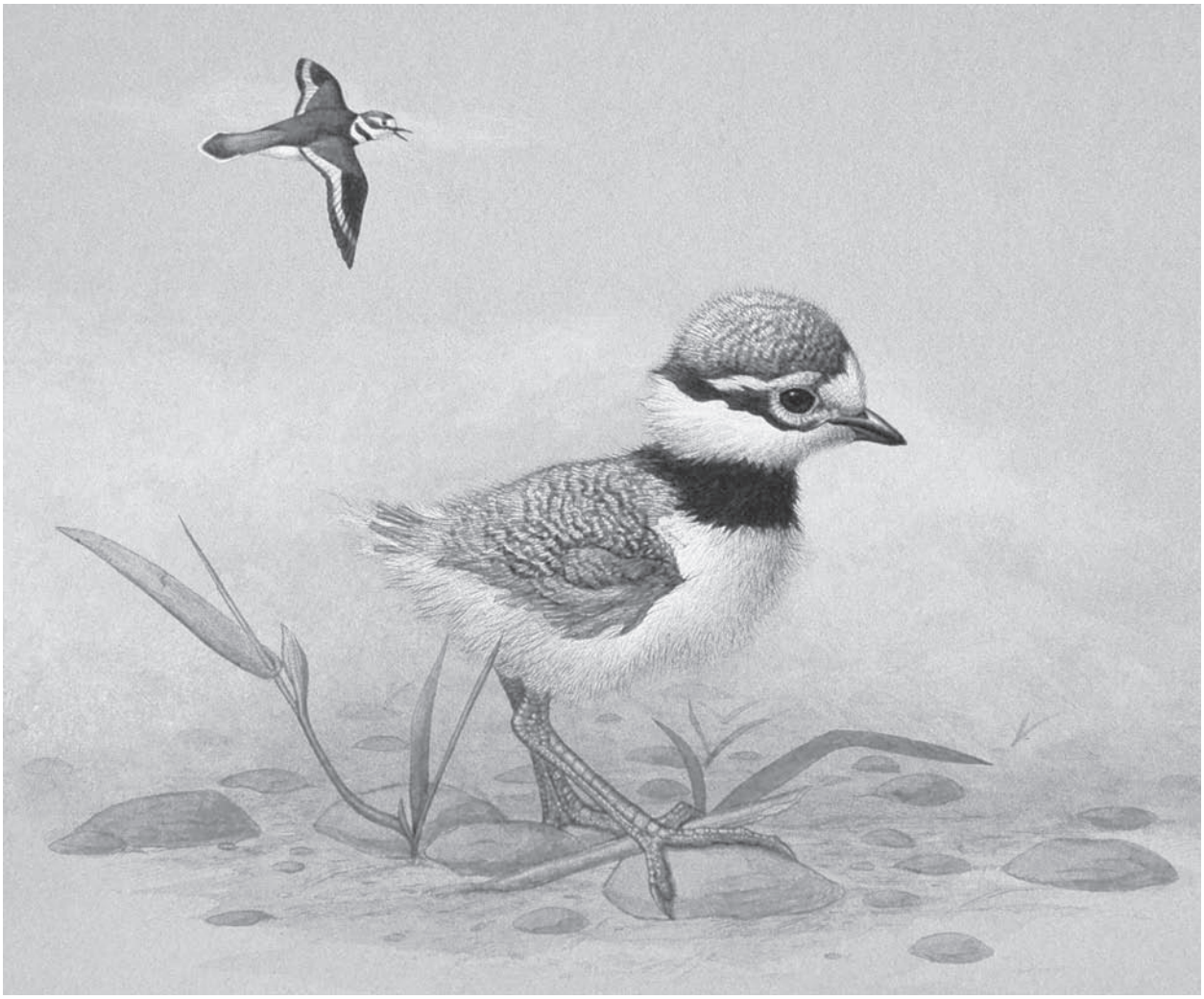
BRITISH COLUMBIA NEST RECORD SCHEME

52nd Annual Report - 2006 Nesting Season



R. Wayne Campbell, Michael I. Preston and Linda M. Van Damme

Biodiversity Centre for Wildlife Studies Report No. 8 **April 2007**

British Columbia Nest Record Scheme and *Wildlife Afield* – 2006

In addition to providing specific information on individual species, nests, and colonies, participants in the BC Nest Record Scheme often discover or learn new things about the biology and natural history of breeding birds in the province. These findings have important implications for our understanding of bird biology, life history, management, and conservation, and there is huge value in publishing those observations. In 2006, the Biodiversity Centre for Wildlife Studies published 22 articles in *Wildlife Afield* and its accompanying Supplement. The articles are:

Arndt, J., E. Moore, L. Prosser, and R. Wege. 2006. Ten years of monitoring nesting Ospreys (*Pandion haliaetus*) in the West Kootenay region of British Columbia. *Wildlife Afield* 3:125-133.

Burton, C.H. 2006a. Red-throated Loon breeding on the south mainland coast of British Columbia. *Wildlife Afield* 3:140-142.

_____. 2006b. Southernmost breeding record of the Pacific Loon (*Gavia pacifica*) in British Columbia. *Wildlife Afield* 3:144-146.

Campbell, R.W. and B. Begg. 2006. Impact of Cooper's Hawk predation on a nesting colony of Brewer's Blackbirds on Vancouver Island, British Columbia. *Wildlife Afield* 3:25-27.

Campbell, R.W. and E. McMackin. 2006. Status of the Yellow-breasted Chat in the Creston Valley, British Columbia, 1968-2006. *Wildlife Afield* 3:17-21.

Campbell, R.W. and M.I. Preston. 2006. RoadWatch BC: a program for collecting, centralizing, and synthesizing information from vehicle-induced wildlife mortalities in British Columbia. *Wildlife Afield* 3 (Supplement):42-47.

Campbell, R.W., M.I. Preston, M.K. McNicholl, R.M. Brigham, and J. Ng. 2006. Feature species - Common Nighthawk. *Wildlife Afield* 3:32-71.

Carter, H.R., K.H. Morgan, T. Chatwin, and F. Bruhwiler. 2006. Notes on recent breeding of Common Murres at Starlight Reef and Cleland Island, British Columbia. *Wildlife Afield* 3:117-121.

Gronau, C.W. 2006. Triple nesting record for the Pied-billed Grebe in British Columbia. *Wildlife Afield* 3:142-144.

Lidstone, S. 2006. Skeletal remains of the Northern Flicker with a gross bill deformity discovered in a poplar tree cavity. *Wildlife Afield* 3:29-31.

Matsuda, B.M. 2006. Unusual nest site for an American Kestrel in British Columbia. *Wildlife Afield* 3:151-152.

Nicholson, D. and V. Harris. 2006. Noteworthy record of the Northern Hawk Owl breeding in southeastern British Columbia. *Wildlife Afield* 3:150-151.

Preston, M.I. 2006a. Report of the wildlife data centre: 1 January to 30 June 2006. *Wildlife Afield* 3:72-78.

_____. 2006b. Report of the wildlife data centre: 1 July to 30 December 2006. *Wildlife Afield* 3:205-214.

_____. 2006c. Bird observations in British Columbia – a guide for submitting records to the Biodiversity Centre for Wildlife Studies. *Wildlife Afield* 3:214-217.

Preston, M.I. and Joanna Preston. 2006. Estimating the probability of vehicle collision from birds crossing roads in interior British Columbia. *Wildlife Afield* 3 (Supplement):48-53.

Ranson, P. 2006. American Avocets breeding at Bechers Prairie near Riske Creek, British Columbia in 2005 and 2006. *Wildlife Afield* 3:3-5.

Scott, C. 2006. Pileated Woodpecker captures a recently fledged American Robin. *Wildlife Afield* 3:135-136.

Siddle, C. 2006. A coastal breeding record for the Yellow-breasted Chat in Mission, British Columbia. *Wildlife Afield* 3:148-149.

Van Damme, L.M. 2006a. Common Raven steals and caches eggs of the Double-crested Cormorant in the Creston Valley, British Columbia. *Wildlife Afield* 3:22-25.

_____. 2006b. Western Grebe parasitism of Red-necked Grebe nests on Duck Lake in the Creston Valley, British Columbia. *Wildlife Afield* 3:121-125.

Van Damme, L.M., B. Stubbs, and P. Dupas. 2006. First confirmed breeding record of the Sandhill Crane in the Creston Valley, British Columbia. *Wildlife Afield* 3:105-111.

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Compiled by

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KEEPING WATCH: IT'S ABOUT THE BIRDS!

The need to understand ecosystems and environments is more vital today than ever before due to mounting human pressure on plants and animals that are not only linked to each other but contribute greatly to the world we live in. We know that the natural world is dynamic and that species increase and decrease, habitats expand and contract, landforms change over time, and these changes can be short-term and local or long-term and global.

Monitoring change in an environment is critical because plants and animals cannot be conserved in isolation. Too many important decisions are made on "anecdotal" information when better data is needed.

Among the many different groups of animals that respond to environmental problems, birds are among the most common taxa for study (Figure 1). Birds are almost universal and occupy virtually every habitat type. They also demonstrate a range of behaviours, from strongly migratory to non-migratory, seed-eaters to meat-eaters, entirely aquatic to entirely terrestrial, and from nesting underground to nesting in the tops of the tallest trees or on the most daunting of mountain precipices. Because of their diversity, they are also sensitive to environmental contaminants, habitat change, disturbance, and factors affecting their prey. Overall, birds are among the best studied group of animals, and people are fascinated by their attractive appearance and nature.

Figure 1. The Solitary Sandpiper is a highly migratory species that breeds throughout the boreal forest regions of British Columbia and winters in Mexico and the West Indies. Few nests have actually been found in British Columbia and conservation of the shorebird depends on having more details of its breeding biology and habitat requirements. Johnson Creek, BC. 22 June 2003 (R. Wayne Campbell).

One of the ultimate goals of conservation activities in British Columbia is to maintain species diversity by preventing local extinction. The task is challenging and requires a commitment from professionals and amateurs working together for a common goal. In British Columbia, we are well "ahead" of the game because over the past 10 years the Biodiversity Centre for Wildlife Studies has been concentrating its efforts into amassing historical information that previously was unavailable for conservation purposes. The task has been very expensive in both cost (use of personal monies) and time (nearly 145,000 volunteer hours).

The reason it has not been attempted before is because no individual, group, or government agency had accumulated the historical resources to draw from and the process of entering "old" records is too slow and the results are not immediate. As well, data entry is quite a mundane task and finding qualified individuals, with a background in wildlife and computer skills to enter the data, is rare.

The single most important dataset on birds in the province is the British Columbia Nest Record Scheme (BCNRS), which has now been operating for an uninterrupted 52 years. Individuals with a passion for nest finding have always operated it. Typical expenses include printing nest cards and manuals, storage space, publication of annual reports, postage, filing cabinets, stationery, and long-distance telephone calls. Hidden costs in the nest record scheme include field labour, travel costs for fieldwork, data entry time, and meetings or lectures to promote the program. In the near future we intend to publish a report that will summarize the detailed history of the BCNRS.

BCNRS annual reports were originally sent to participants as mimeographed documents from the University of British Columbia from 1955 to 1969. In 1970, Wayne Campbell took over full responsibility of the BCNRS, and suggested that an annual report could appear as a regular feature in the Federation of British Columbia Naturalists newsletter. While this was promising, and brought some exposure to the importance of the BCNRS, space in the newsletter was always an issue and an increasing number of participants wanted a stand-alone publication with more information, especially regarding stories from the field. In 1997, a 22-page report was issued, and with the publication of this report, it has since grown to 54 pages. This approach, combined with provincial workshops and instruction manuals provided by the Biodiversity Centre for Wildlife

Studies, and operating as a non-profit society, are the main reasons why the BCNRS has grown in popularity and significance.

The **primary goal** of the BCNRS has remained unchanged since its inception in 1955 - **to gather data on the breeding performance of birds in the province**. This may include determining breeding ranges, laying dates, clutch and brood sizes, nesting success, and geographical and elevational differences in breeding biology. In addition, there are many researchers who can analyze BCNRS data and publish their findings in academic journals. One such paper *Predicting the Effects of Climate Change on Avian Life-history Traits* by David W. Winkler, Peter O. Dunn, and Charles E. McCulloch was published in *Proceedings of the National Academy of Sciences of the United States of America*. The scientist's results, in which the BCNRS played a major role, showed that Tree Swallows had advanced their mean date of clutch initiation (laying date) by nine days over the past 30 years (Figure 2).

The obvious value in long-term monitoring programs like the BCNRS is the ability to detect early problems with individual species and populations and also identify critical habitat requirements for each species. The latter is especially important in such an ecologically diverse province like British Columbia.

With the exception of the British Trust for Ornithology's (BTO) Nest Record Scheme, which is the largest in the world and currently contains over a million nest cards, the BCNRS, which houses nearly 250,000 cards, has a very respectable collection. So, how does the effort in British Columbia compare to other nest record schemes in relation to the human population available to draw from?

While not intended to be statistically defensible, Table 1 does suggest that there are more nest finders in British Columbia per capita than in a small sample of six other nest record schemes operating in various parts of the world.

Table 1. Average number of nest cards per year added to various nest record schemes in the world in relation to human population size for that region.

Region	Population[1]	Per Year[2]	Period
Australia	20.3	2,000	(2000-2006)
British Columbia	4.1	12,600	(1997-2006)
Maritimes	1.8	500	(2000-2006)
North America	216.0	23,000	(1966)
Ontario	12.4	3,000	(2000-2006)
United Kingdom	47.4	28,000	(2000-2006)
South Africa	47.0	2,000	(2000-2006)

[1]estimated, in millions.
[2]average number for the period, plus or minus 5%.

Currently, the BTO receives about 28,000 cards per year for 180 species. Annually, the group averages 150 cards for 55 species and more than 100 cards for a further 10 to 15 species. Since 1997, when we made the BCNRS a high priority in British Columbia, we have been averaging over 12,600 cards (Figure 3) for 245 species per year and on average have received more than 100 cards for at least 25 species.

Figure 2. Over the past 30 years the egg-laying date for Tree Swallows across North America became earlier by nine days. Nulki Lake, BC. 23 May 1994 (R. Wayne Campbell).

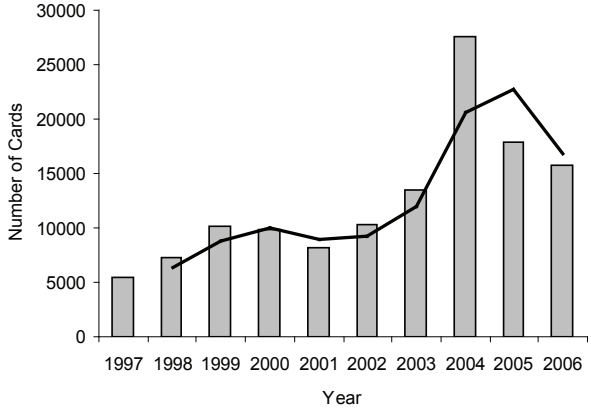


Figure 3. Total number of nest cards received each year for the British Columbia Nest Record Scheme, 1997-2006. The average for this nine-year period of 12,603 nests, is much higher than the average of 2,065 nests for the previous 42 years due to its recent high priority status and contributor support.

We were unable to obtain annual information from the North American Nest Record Card Program housed in the Laboratory of Ornithology at Cornell University. A year after their program was announced in 1965 they received 23,000 cards from 700 contributors. When announcing the establishment of the NANRCP they published the following statement:

"*We are well aware that there are other local nest-record programs in this country* [United States] *and in Canada and, naturally, we do not want to infringe on them in any way*."

Each contributor should feel proud of what has been achieved through our own provincial Nest Record Scheme – It Is About the Birds!

THE 2006 NESTING SEASON

Summary

This was another very productive year for the BCNRS. Active nest-finders in 2006, combined with our continuing program to transfer historical nests and broods to cards, added a wealth of new information to our breeding files that are now over half a century in the making! Although we led the country in all categories again relating to number of participants, total number of cards added to the files, and species found, the most important statistic is the quality of information that is being recorded. Many cards are complemented with prints and diagrams, GPS locations (Figure 4), repeat visits, and detailed notes on habitat and behaviour.

Figure 4. The precise location of this incubating White-breasted Nuthatch near Invermere, BC. was recorded using a handheld GPS unit. 13 May 2006 (Michael I. Preston).

The dry spring in some areas, and the wet summer in others, did not discourage most people from following their passion. At Quick, east of Smithers, Evi Coulson said it was one of the driest years since she and Mel moved there in 1974. From early May to the end of August they had only three or four days with adequate rainfall. Even in September there was only about 2 cm of rain.

Overall, the number of nestlings reported "dead" in nest boxes across the province, and in "bluebird trails", was down significantly.

We had to print another 15,000 new cards for the 2006 season to meet the demands of our supporters (Figure 5). One of the "weak links" in a bird's life is a species' reproductive output and the BCNRS is the only comprehensive source of such information. Again, we are impressed with the effort to "fill in the blanks" on each card and add extra notes, and often digital images, to complement what was observed.

Figure 5. Jim McCammon, our annual volunteer, handled sorting of the 2006 nest cards as they started to arrive in early June. Victoria, BC. November 2006 (R. Wayne Campbell).

This year **15,809 breeding records** were added to the British Columbia Nest Record Scheme for **241 species**. Of these, **10,808 cards** were submitted by **259 active participants** for the 2006 nesting season. Another **5,001 nests and/or broods** were transferred from historical sources.

In total, 28 species were represented by more than 100 cards.

For the period 1892 to 2006, we added nest records for 102 of the 114 years. Total records for various periods were: 1892-1899 (3), 1900-1969 (2,985), 1970-1999 (4,687), 2000-2005 (347), and 2006 (7,791).

Noteworthy Events

No new breeding species were discovered in 2006 although we are reviewing information for three species that may be added to the provincial total from historical information.

Many noteworthy events were reported that included early nesting dates, range expansions, unusual nest locations, species behaviourism's, developing species' profiles, and delightful stories from the field.

Vicky and **Lloyd Atkins** were only 30 days into the New Year when they noticed an adult **Northern Flicker** looking into a nest hole in a birch tree in their front yard in **Vernon**. A pair remained interested in the nest site and finally in early May the nest contained eggs.

On the coast, the first actual nest with eggs was found in mid-January. **Rock Pigeons** were on eggs on 17 January in downtown **Victoria** and a **Great Horned Owl** was sitting in its nest in **Mount Douglas Park**, Victoria on 4 February. **Ted Ardley** reported the first fledged **Anna's Hummingbirds**, at **Swan Lake** in Victoria, on 26 March. This pair's season probably started in mid-February with courtship activities. In the southern interior, the 2006 season also started early. **Marcia Long** found her first **Great Horned Owl** nest, in the **Creston** valley, on 9 February (Figure 6).

Figure 6. Great Horned Owl fledglings under the protective limbs of a Douglas-fir in the Creston valley, BC. 2 June 2006 (Marcia Long). BC Photo 3499.

And in the same productive valley **Linda Van Damme** found four nestling **Song Sparrows** on 18 April suggesting that eggs would have to have been laid in late March. In a wetland along Road 22, north of Osoyoos, **Barry Lancaster** found a brood of 11 **Redhead** ducklings on the very unusual date of 7 June. **Gordon Brown** continued his nest watch for the **Black Swift** discovered 10 years ago. **Geoff Barnard** located an amazing 13 **Anna's Hummingbird** nests around Swan Lake near Victoria.

Near **Fort Nelson** one of the earliest nesting activities involved a pair of **Red-tailed Hawks**. **Myrna Blake** noticed the pair inspecting the old nest site on 4 May and a week later an adult was incubating. She followed the nest through to fledging.

Nesting **Sandhill Cranes** are continuing to expand in areas of the Kootenays. In 2005, **Douglas Leighton** published an article entitled *Recent range expansion of Sandhill Cranes (Grus canadensis tabida) in British Columbia* (*Wildlife Afield* 2:64-73) that encouraged others to be watchful for additional breeding locations.

The following year (2006) two new records were reported for the Kootenay region. **Peter McIver**, **Bob Stubbs**, **Pauline Dupas**, and **Linda Van Damme** reported two adults with two small to fledged young near **Leach Lake** in the Creston valley (see *First confirmed breeding record of the Sandhill Crane in the Creston Valley, British Columbia* (*Wildlife Afield* 3:105-111). In the East Kootenay region Sheila Reynolds watched two adults with two half-grown young walking about in a wetland near Wasa.

Other species showing expansion in breeding range included a pair of **Swainson's Hawks** reported near **Revelstoke** by **Ed Beynon** and **Tennessee Warblers** found in the **Golden** area by **Douglas Leighton**. **Dean Nicholson** and **Valerie Harris** found a noteworthy southern breeding record for the **Northern Hawk Owl** in **Kootenay National Park**. Fortunately they published details of this observation as: *Noteworthy record of the Northern Hawk Owl breeding in southeastern British Columbia* (*Wildlife Afield* 3:150-151).

On the coast, **Tony Greenfield** reported, *"**John Dafoe** of Coastwise Guiding called me with a great record on 20th August. He was boating down Agammemnon Channel and on the sheer cliffs at **Fernie Point**, on the SE corner of Nelson Island, he spotted a colony of c. 70 **Pigeon Guillemots** & young. This is a previously unknown colony. I don't know if this is new this year, or regular*."

Long-term monitoring projects continued in 2006 with inventories of aquatic and terrestrial nesting colonies, hawk and owl nests, nest box trails, and surveys of isolated wetlands for terrestrial and aquatic species.

A concerted effort was made to bring together

historical and current records, and breeding information, to update the **Common Nighthawk** and **Common Loon** accounts published in *The Birds of British C*olumbia in 1990. Although we had concerns about the current status of the Common Nighthawk in British Columbia we did not realize that **COSEWIC** (Committee on the Status of Endangered Wildlife in Canada) was considering issuing a status report for the species in 2007. So, our effort was timely!

The number of occurrence records (162,982) and nest records (779) for the **Common Nighthawk** allowed for a 40-page account to be published (see *Wildlife Afield* 3:32-71). The time taken to seek out historical breeding records paid off as our data base increased by 486 percent to nearly 800 nests.

The **Common Loon** account was originally planned for *Wildlife Afield* 3(2) but it grew too large to include in the journal so it will be published as a "stand alone" report in our Special Publication series in autumn 2007. Again, the time taken to patiently transfer historical information was rewarding. At the moment the loon working databases contains nearly a quarter of a million observations and an increase of 458 percent in breeding records.

Highlights

Families and Species

The provincial list of breeding species remains at 312 although historical records are presently being examined for Eurasian Wigeon and Black-legged Kittiwake. Because British Columbia is so ecologically diverse there may still be pockets of very local breeders that are new for the province.

The top three families represented in the top 10 species were again colonial-nesting birds, partly the result of our long-term monitoring program for marine and fresh-water bird colonies. These groups were **Gulls and Terns** (2,611 nests), **Cormorants** (1,114 nests and broods), **Grebes** (973 nests and broods, and **Geese, Swans, and Ducks** (913 nests and broods).

The top 10 species included **Ring-billed Gull** (1,569), **Glaucous-winged Gull** (1,042), **Eared Grebe** (973), **Pelagic Cormorant** (683), **American Coot** (579), **Canada Goose** (504), **Tree Swallow** (436), **Double-crested Cormorant** (431), **Mallard** (409), and **Barn Swallow** (408). Of these, five were colonial-nesting species that accounted for 29% of all nests and broods reported in 2006. Individual nest counts and descriptions were submitted for each of these species.

Over 100 cards were received for 28 species. Some of these included both 2006 season cards and historical records such as **Common Nighthawk** (400), **Herring Gull** (369), **Red-necked Grebe** (256), **Common Loon** (230), **California Quail** (124), **Rock Pigeon** (114), and **Killdeer** (110).

Others, including **Great Blue Heron** (319), **Mountain Bluebird** (307), **Osprey** (306), **American Robin** (241), **Bald Eagle** (129), **Western Grebe** (129), and **Purple Martin** (109), were reported only in 2006.

Monitoring programs in 2006 accounted for large numbers of cards for many additional species including **Barn Swallow**, **Cliff Swallow**, **Pied-billed Grebe** (Figure 7), **Red-winged Blackbird**, **Western Bluebird**, and **Yellow-headed Blackbird**.

Figure 7. An impressive 91 Pied-billed Grebe nests and/or broods were reported in 2006. Merville, BC. 4 June 1987 (Doug Innes).

Five families, other than those previously mentioned, had impressive totals and included **Grebes** (1,504 records for five species; Figure 7), **Swallows** (1,164 records for seven species), **Rails and Coots** (621 records for three species), **Woodpeckers** (260 records for 11 species), **Owls**

(156 records for 10 species), **Pigeons and Doves** (129 records for three species), **Wrens** (124 records for five species), and **Chickadees** (110 records for four species; Figure 8) and **Falcons** (37 records for five species).

Figure 8. At 25 nests, the Mountain Chickadee was the third highest Paridae recorded. Invermere, BC. 13 May 2006 (Michael I. Preston).

Significant numbers of cards received in 2006 for species that enhanced their representation in the BCNRS included **Anna's Hummingbird** (19), **Black Oystercatcher** (54), **Brown-headed Cowbird** (67), **Common Grackle** (32), **Common Loon** (230), **Common Nighthawk** (400), **Cooper's Hawk** (30), **Golden-crowned Kinglet** (56), **Great Gray Owl** (4), **Great Horned Owl** (85), **Green Heron** (5), **Prairie Falcon** (4), **Ring-necked Pheasant** (45), **Spotted Sandpiper** (96), **Townsend's Warbler** (63), **Western Kingbird** (89) **White-tailed Ptarmigan** (42), **Wood Duck** (127), and **Yellow-breasted Chat** (4).

Sandy Proulx and **Phil Ranson** checked on the **American Avocets** nesting on **Bechers Prairie**, north of Riske Creek. **Emily Müller** located two **Black-backed Woodpecker** nests, a rare find in the province, and provided full details for habitat and nests (Figure 9).

Figure 9. Black-backed Woodpecker at nest tree in a lodgepole pine forest near the Cheslatta River, BC. on 25 May 2006 (Emily Müller). This record is a new breeding location and a rare find for the province.

In 2005, **Christopher Buis** reported an early breeding date for a pair of **Wood Ducks** at **Mount Lehman** when he found an egg in a nest box on 17 March, 11 days earlier than reported in *The Birds of British Columbia*. In 2006, he checked the nest box on the same day and it already contained six eggs for a very early calculated egg-laying date of 11 March. He promised to report the first date for 2007!

Linda Durrell continued to track the westward range expansion of the **Lazuli Bunting** in the Cariboo-Chilcotin region. A nest of the **Long-eared Owl**, a very rare visitor and local breeder in the **Dawson Creek** area, was discovered by **Mark Phinney** at McQueen Lake (Figure 10). It successfully fledged young.

The **Wood Duck** is continuing to expand its range northward with individuals frequently being seen now in the Peace River region. Following behind this dispersal are pairs breeding. **Nancy Krueger** and **Cathy Antoniazzi** found a brood this summer at **Prince George**. **Canada Warbler**

Figure 10. Long-eared Owl nest with full clutch of five eggs. McQueen Slough, BC. 26 May 2006 (Mark Phinney). BC Photo 3506.

Figure 11. Brewer's Blackbird nest with a single Brown-headed Cowbird egg. Pennask Lake, BC. 19 May 1994 (R. Wayne Campbell). Please complete two cards for each parasitized nest, one for the host and the other for the cowbird.

broods were found near Dawson Creek and Fort Nelson that helped establish actual breeding (not singing) sites. New **Sandhill Crane** and **Common Nighthawk** breeding sites were located near Fort Nelson.

Brown-headed Cowbird parasitism was reported for a host (pardon the pun) of species including **American Redstart** (Rita Wege), **American Robin** (Mark Phinney), **Black-throated Gray Warbler** (Vic Goodwill, Ron Satterfield) **Brewer's Blackbird** (Wayne Campbell; Figure 11), **Chipping Sparrow** (Mark Nyhof, Glenn Ryder), **Common Yellowthroat** (Lyndis Davis, Doug Graham), **Dark-eyed Junco** (Gwen and Tom Briggs, Vic and Peggy Goodwill, Mark Nyhof), **Golden-crowned Kinglet** (Vic and Peggy Goodwill, Mark Nyhof, Ron and Joy Satterfield), **House Finch** (Mark Nyhof), **Hutton's Vireo** (Rob Mackenzie-Grieve), **Least Flycatcher** (Doug Graham), **Lincoln's Sparrow** (Mark Phinney), **Lazuli Bunting** (Linda Durrell), **Olive-sided Flycatcher** (Rob Mackenzie-Grieve), **Orange-crowned Warbler** (Jeff Gaskin), **Pacific-sloped Flycatcher** (Glenn Ryder), **Red-winged Blackbird** (Vicky and Lloyd Atkins), **Savannah Sparrow** (Ron Satterfield), **Song Sparrow** (Wayne Campbell, Ron Satterfield), **Swainson's Thrush** (Vic Goodwill, Mark Phinney), **Townsend's Warbler** (Vic Goodwill), **Vesper Sparrow** (Doug Graham), **Western Tanager** (Marlene Johnston), **Warbling Vireo** (E. Davidson), **White-crowned Sparrow** (J. Anderson), **White-throated Sparrow** (Mark Phinney), **Willow Flycatcher** (Chris Siddle, Glenn Ryder), **Yellow-rumped Warbler** (Gwen and Tom Briggs, Doug Graham, Chris Siddle, Ray Williams), and **Yellow Warbler** (Wayne Campbell).

The above species all have open nests and allow easy access for egg-laying cowbirds. It was a surprise to receive cards for two species that are cavity nesters but were feeding fledged cowbirds. **Janne Perrin** watched a bedraggled adult **Black-capped Chickadee** feed an incessantly demanding fledged cowbird young in an urban park in **Harrison Hot Springs** and **Wayne Campbell** observed an adult **House Wren** feed a cowbird fledgling in **Colwood**.

Coverage

In total 367 National Topographic Grids (31%) were represented in 2006. All coastal areas, including Vancouver Island, the Gulf Islands, the Queen Charlotte Islands, and the Lower Mainland from Tsawwassen to Hope, had nearly complete representation. Manning Park, the entire Okanagan valley, accessible parts of the Cariboo-Chilcotin, West and East Kootenay, Thompson-Nicola, Shuswap Highland, the Prince George to Terrace region, and increasing portion of the Peace River region were also very well covered. Again, the entire north central portion of the province was poorly documented (Figure 12).

The map grids best covered were **North** and **Central Saanich** (92B/11 – 455 records), **Greater Victoria** (92B/6 – 414 records), **Metchosin/Sooke** (92B/5 – 261 records), and **Vernon/Coldstream** and (82L/6 – 152 records). There were 107 map grids for which there was only a single nest record reported.

Remote forests, wetlands, and marine shore

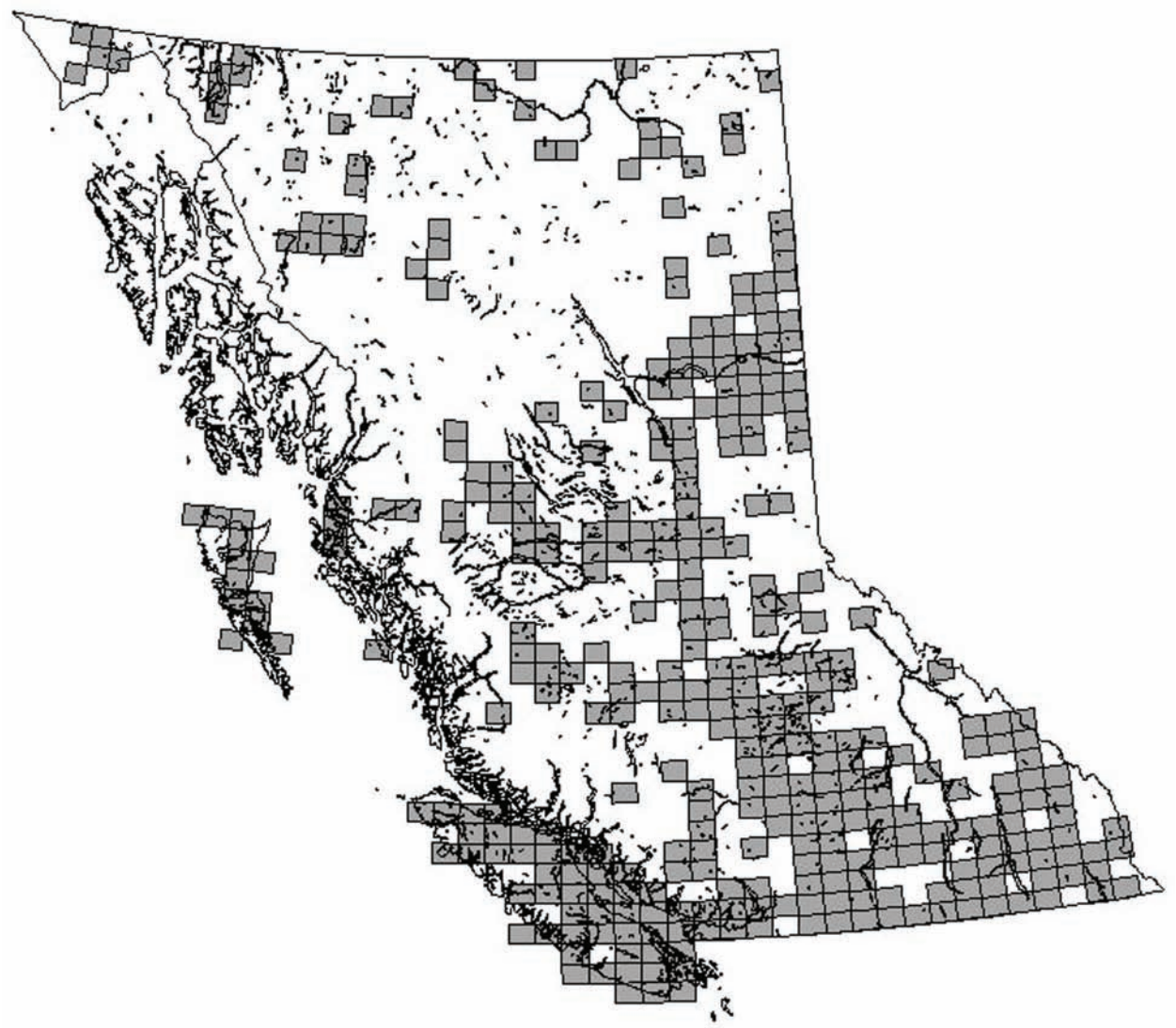


Figure 12. Provincial coverage for the British Columbia Nest Record Scheme in 2006.

regions of **Vancouver Island** and the **Queen Charlotte Islands** were again thoroughly covered by **Mark Nyhof**. His totals for Golden-crowned Kinglet and Townsend's Warbler were impressive. The **Peace River** region, including the vicinity of Hudson's Hope, W.A.C. Bennett dam, Chetwynd, Tumbler Ridge, Fort St. John, Cecil Lake, Boundary Lake, Swan Lake, Dawson Creek, Pee Jay, Parker Lake, Fort Nelson, and Liard Hot Springs received excellent coverage by six roving naturalists. Four new map grids (e.g., Pee Jay area) which have never been represented before, now have considerable occurrence and breeding information.

Additional contributors also reported nesting from new map grids that help fill gaps in the breeding ranges for some species. **Emily Müller**, besides covering the Germansen Landing area, also visited fire-damaged habitats near the **Kenney Dam** (Figure 13).

The intense monitoring program in the **Creston valley** was continued by **Linda Van Damme**, **Cyril Colonel**, and **Marcia Long**. Their efforts were focused primarily on breeding **Double-crested Cormorants, Great Blue Herons , diurnal and nocturnal raptors,** and **colonial waterbirds**.

The northern **Okanagan valley** was again well covered by **Vicky** and **Lloyd Atkins**, **Alice Beals**, and **Chris Siddle** who this year all involved other local nest finders. Salmon Arm and the extreme south end of **Shuswap Lake** was well represented by the huge effort of **Ted Hillary**. **Chris Charlesworth**, working

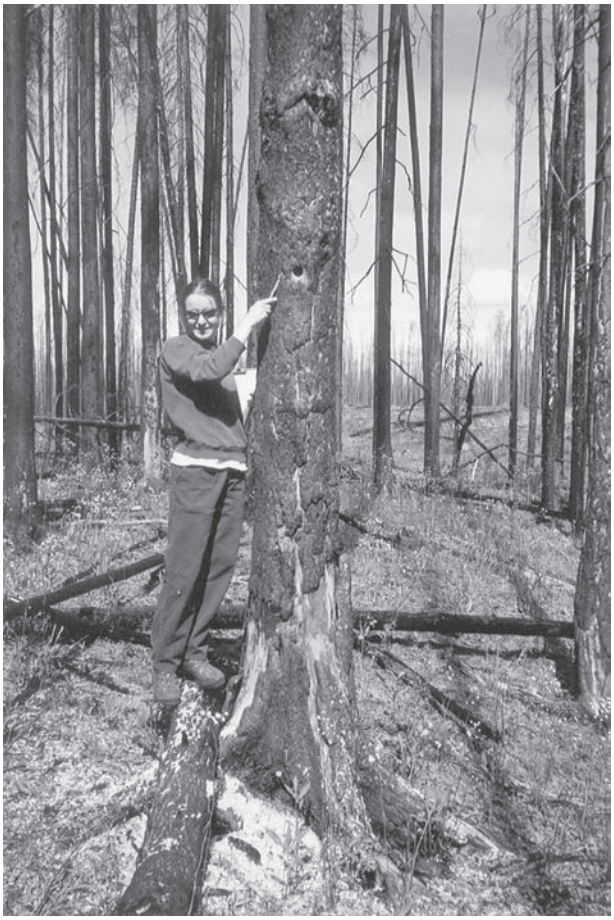


Figure 13. Kara Cory, a co-worker with Emily Müller, pointing to the neat round hole of a Black-backed Woodpecker nest in a fire-scarred lodgepole pine tree near Lawrence Lake, BC. 30 May 2006 (Emily Müller). BC Photo 3514.

with **Rick Howie**, provided the first coverage for the high elevation **Highland Valley** area near Logan Lake.

Other areas especially well covered included **Harrison** and **Agassiz** (Janne Perrin), **Okanagan Valley** (Jim Ginns), **Mackenzie** (Vi and John Lambie), **Swan Lake** (Victoria), (Geoff Barnard), **Revelstoke** (Orville Gordon), the **West Kootenay** region (Elaine Moore, Janice Arndt, Rita Wege, Larry Prosser, Lorraine Symmes, and Marlene Johnston), **Eagle Lake** (Eve Neale), **McLeese Lake** (Sandy Proulx), **Powell River** and **Theodosia Inlet** (Ivar Nygaard-Petersen), and **McBride** (Elsie Stanley).

Participants

While we are maintaining our strong support group it is very encouraging that people from industry, tourism, graduate and public schools, fishermen, and resort owners are beginning to show an interest in sending in nest cards. At first some are intimidated with the procedure required to complete a card, others don't think their one or two cards will be helpful, and many have not been educated on the significance of breeding information for the conservation of birds and ecosystems.

We have noticed a growing trend for some nest-finders to concentrate their effort regionally rather than scattering it around the province. As a result, the information coming in is site-specific with excellent data that can be used to not only put the area into perspective provincially but also adds to our understanding on how ecosystems function.

We appreciate the effort required by everyone to record and submit nest cards. While **every card** is important there are a few individuals who "live for the nest" and start their season very early and end it very late. A few others simply record everything they see on each outing irrespective of whether it is a breeding record or not. These passionate recorders, that included totals for the 2006 season, included: **Wayne Campbell** (2,907 records, 73 species, 76 map grids – high species Ring-billed Gull, 1,376 nests), **Michael** and **Joanna Preston** (1,105 records, 75 species, 82 map grids - high species American Coot, 60 nests and broods), **Wayne** and **Eileen Campbell** (760 records, 79 species, 94 map grids – high species American Coot, 88 nests and broods), **Mark Nyhof** (644 records, 78 species, 42 map grids – high species American Robin, 70 nests and broods), **Linda Van Damme** (469 records, 44 species, 6 map grids –high species Double-crested Cormorant, 76 nests and broods), **Chris Siddle** (402 records, 55 species, 13 map grids – high species Eared Grebe 538 broods), **Vicky** and **Lloyd Atkins** (267 records, 47 species, 6 map grids – high species Western Kingbird, 35 nests and broods), **Glenn R. Ryder** (251 records, 63 species, 19 map grids – high species, American Coot, 23 records), **Ted Hillary** (213 records, 27 species, 2 map grids – high species Mallard, 49 nests and broods), **Sandy Proulx** (207 records, 12 species, 9 map grids – high species Mountain Bluebird, 116 records), **Jim Ginns** (173 records, 32 species, 6 map grids – high species Tree Swallow, 25 records), **Martin K McNicholl** (144 records, 1 species, 4 map grids – high species Common Nighthawk, 122 records), **Linda Durrell** (137 records, 30 species, 1 map

grid – high species Black-billed Magpie, 12 nests and broods), **Douglas J. Graham** (121 records, 61 species, 12 map grids – high species Black Tern, 8 nests), **Beverly H. Butcher** (119 records, 5 species, 1 map grid – high species Tree Swallow, 66 nests and broods), and **Ivar Nygaard-Petersen** (113 records, 6 species, 4 map grids – high species Purple Martin, 96 records).

Some of the figures above are misleading because the team of **Vicky** and **Lloyd Atkins** and **Alice Beals** submitted cards individually and also encouraged and co-ordinated breeding information from others for the north Okanagan Valley. Vicky and Lloyd had the most cards but others in the group included **Vicky Atkins** (96 records), **Alice Beals** (33 records), **Vicky Atkins** and **Alice Beals** (26 records), **Betty Kerr** and **Alice Beals** (12 records), **Alfred Atkins** (3 records), **Kevin Atkins** (3 records), **Dan** and **Connie Chapman** (2 records), and **Lloyd Atkins** (2 records). In addition, another 10 records were transferred from the *North Okanagan Naturalist Club Newsletter* for **Iris Armfelt**, **Kay Bartholomew**, **Margaret Hubble, Edith Levey**, **Daphne Manning**, **Hylda** and **Peter Mayfield**, and **Luke Skulmoski**. In total, 437 records were submitted from this area in 2006.

Ron Satterfield, and his wife **Joy**, submitted another 71 breeding records while another 78 nests and broods were extracted from the field notes of the late **J.E. Victor Goodwill**.

Hilary Gordon continued her very active role as a regional co-ordinator for the **Salmon Arm** region. She made sure that cards were properly filled out, sorted, and that breeding records were not overlooked in naturalist publications and newspaper articles. She also mailed batches of cards during the whole spring and summer season making the task of sorting and entering material for the annual report less demanding.

Every breeding record is important whether an actual nest is found, a brood is seen, recently fledged young are watched being fed, or a nest is spotted that has adults present but the contents cannot be determined. Also, we underestimate the importance of contributions from people travelling around the province visiting new destinations. **Nancy Krueger** and **Cathy Antoniazzi** provided information for the Peace River region, Prince George, Vanderhoof, and Okanagan valley regions. Sometimes the aggregate total is surprising. For example, during their travels around the province **Michael** and **Joanna Preston** checked nest boxes and when they returned to their home in Victoria they realized they had accounted for 30 percent of all Western Bluebird cards submitted in 2006.

Even local trips from home can be productive. **Pat Levitt**, who lives in Courtenay, visited **Cochin Lake** and kept track of breeding birds. **Morgan Anderson**, who visited **Kootenay National Park** during summer work, reported on nesting birds she found.

Quality of Information

Filling in the Blanks

The blank spaces with headings on the front and back of each card serve as a reminder of the kinds of information that is required for analysis of breeding information that can be used in conservation activities.

Linda Durrell epitomizes the extent of adding additional information to each card (Figure 14). Her extensive notes frequently helps with interpretation of visits and the outcome of each nest as well as adding new knowledge about the natural history for the species. Below is a sample of notes she added in the "Remarks" space for a **Vaux's Swift** nest she discovered only 3.3 m above ground in a natural black cottonwood cavity along the Chilcotin River:

"*The young sounds something like a "ringing" sound when alarmed while more like a "chattering" sound when parents feed them. The wings of the adults hit the side of the entrance when they fly into the nest. On the 11th* [August] *I observed this cavity for about twenty-five minutes before both parents flew into the nest but while I was waiting two red squirrels were seen nearby. Lots of mosquitoes today; the most I've seen all summer.*

The nestling swifts don't make any noise when the parents fly into the cavity unlike the sapsuckers and starlings squawking while waiting for their parents to return. I learned that the young leave the nest site in 21 days and cling to the inside of the cavity for another seven days before flying away. It appears that the young vacated the nest successfully although I did see squirrels on the nest tree on the 15th and 16th when the swifts were gone.

Later, I checked the cavity with a flashlight and mirror but couldn't see the actual nest."

Again, the interest in recording additional information on cards is encouraging. Specific information is not "overload" information and our electronic databases have been developed to include and sort additional details that relate to the card. Especially helpful was the increasing number

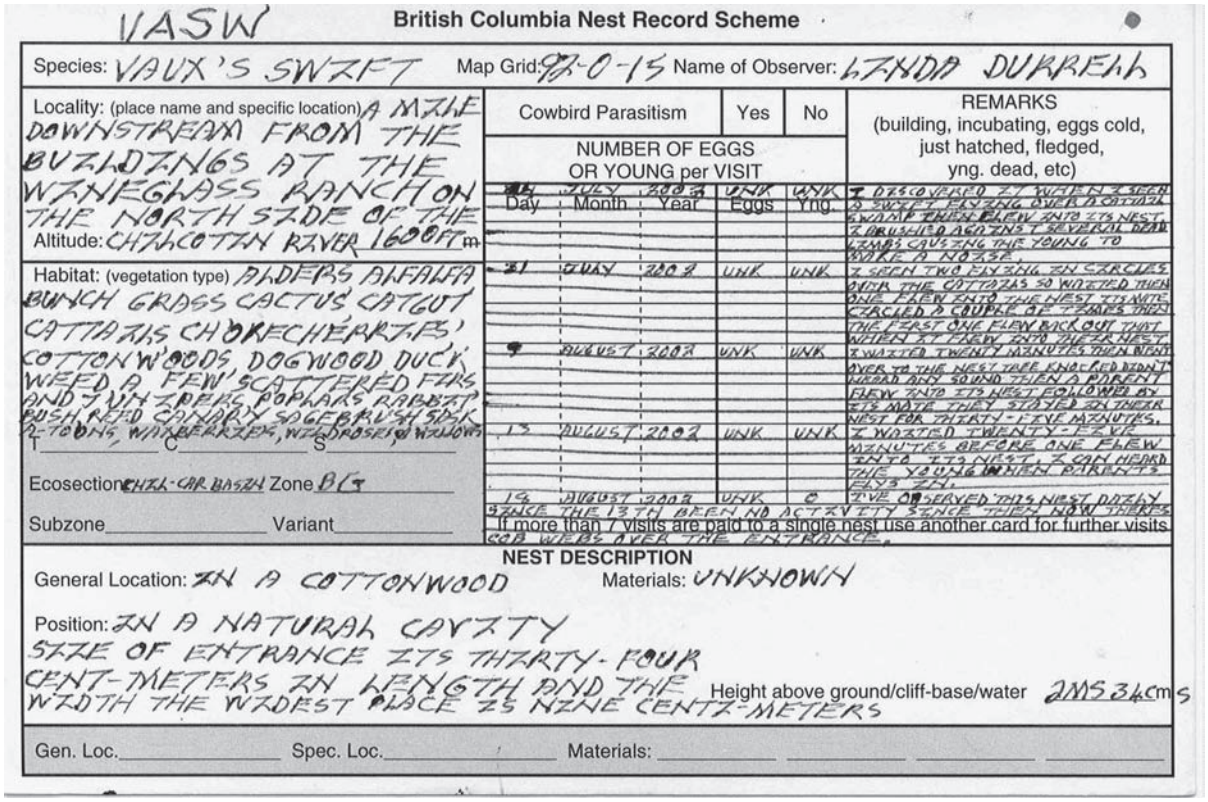


Figure 14. Linda Durrell uses all available space on this nest card to record very useful information on a little known species, the Vaux's Swift, in the province.

of participants who recorded the estimated age and sex (when possible) of broods and fledged young.

Please remember to print or write legibly within the spaces and use dark ink, not pencil. The 4-letter code (see Biodiversity Centre for Wildlife Studies Report No. 4 – British Columbia Birds – 2005 Species List (Common and Scientific Names, Taxonomic Order, and 4-Letter Codes) can be used for species names and subspecies (races).

For example, if a **Yellow-rumped Warbler** nest is found please indicate either "**Audubon**" **Warbler** (AUWA) or "**Myrtle**" **Warbler** (MYWA). Other species with easily identifiable subspecies include **Dark-eyed Junco** (e.g., "**Oregon**" or "**Slate-colored**" Junco), **Horned Lark** (e.g., "**Arctic**" and "**Dusky**" Horned Lark), **Northern Flicker** (e.g., "**Red-shafted**" or "**Yellow-shafted**" Flicker), and **White-crowned Sparrow** (e.g., ""**Gambel's**" and "**Puget**" White-crowned Sparrow).

Colour phases are also important to record especially for raptors like **Red-tailed Hawk** and **Swainson's Hawk**. The phases can be described as "light", "intermediate", "rufous", or, "dark". Most Red-tailed Hawks nesting in the Atlin area of northwestern British Columbia are "dark" morphs.

Whenever possible, please try to describe the stage of development for nestlings (e.g., eyes closed, naked young, some down on head, pin feathers, well feathered, left nest, etc.) or the estimated age of downy young, (e.g., loons, grebes, seabirds, waterfowl, grouse, ptarmigan, and shorebirds). Please refer to **Appendix 1** for drawings for different stages of development.

Documentation with Photographs

The number of colour prints attached to nest cards increased again. Most of the images remain attached to the nest card but some noteworthy prints were added to the **BC Photo File for Wildlife Records**. Each record, however, is cross-referenced to the original submission.

Cyril Colonel again provided photo-documentation for hundreds of nest sites for **Double-crested Cormorants**, **Great Blue Herons**, **Ospreys**, **Red-tailed Hawks**, and **Great Horned Owls**, in the Creston valley. Each nest contains unique biological information. He, and field partner

Linda Van Damme, start each year early, looking for birds returning to their nest sites in March. It is a long season and the real work of compiling the information, starts in late September, when the season finally ends.

All photographs are welcome and you can see the cross-section we received as many are scattered throughout this report.

More contributors are adding GPS coordinates or UTM scores on cards. The more precise the location the more valuable the record.

All species that lay eggs in the nests of other species, such as **Brown-headed Cowbird** (Figure 15) **Redhead**, **Bufflehead**, **American Coot, Lesser Scaup**, **Canvasback**, and **Ruddy Duck**, should have two separate cards filled out. It is useful to put both species name on each card for easy cross-referencing. This also includes feeding of fledged **Brown-headed Cowbirds** by their host as **Laurie Rockwell** pointed out.

Figure 15. At the end of the breeding season Vicky and Lloyd Atkins found this Red-winged Blackbird nest with a single blackbird egg and a Brown-headed Cowbird egg. This is a very rare occurrence in British Columbia. Swan Lake, north of Vernon, BC. August 2006 (Lloyd Atkins). BC Photo 3502.

Diagrams

The use of diagrams and sketches may enhance the value of the record. These can be added to the back of the nest card, or as **Evi** and **Mel Coulson** did, added to the back of a print (Figure 16). **Ivar Nygaard-Petersen** completed detailed diagrams for individual nests for colonial-nesting **Great Blue Herons** and **Purple Martins** published elsewhere in this report. Many others made sketches of the precise location of a nest in a tree or bush.

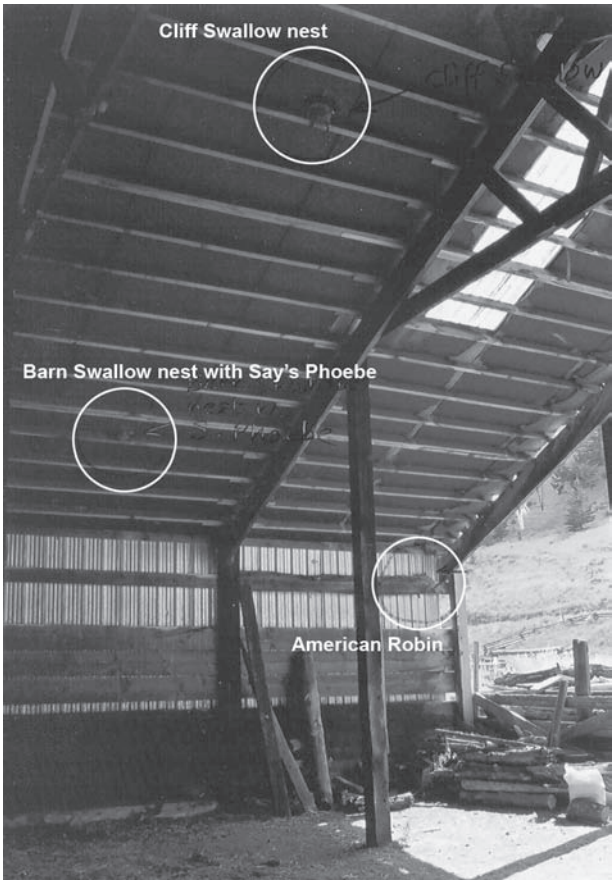


Figure 16. Evi and Mel Coulson have a small, open barn on their property in Quick, BC in which six different species are nesting within an area of 25 m x 12 m. The diagram shows the location of a Say's Phoebe, American Robin, Barn Swallow, and Cliff Swallow nest inside the barn and a Tree Swallow and a Mountain Bluebird nesting boxes outside.

Repeat Visits

The value-added information collected from repeat visits to a nest or nest site is invaluable and increases in importance over time. Most cards submitted are of single visits because we are usually travelling from place-to-place and cannot return to visit the site again. This year many nests had two to four additional cards stapled together to include all of the visits. A few followed raptor nests from start to end and submitted a "notebook" of information for the nest.

A few people found nests and were able to follow them from start to finish. **Lloyd** and **Vicky Atkins** kept track of a **Great Horned Owl** nest south of Vernon for 118 days that it was active (Figure 17). For the fifth year in a row **Glen** and **Isabel McInnes** watched a pair of **Osprey** nesting at Stave Lake recording 108 observations over the breeding period. The first adult arrived 20 March and on 2 April both adults were first seen at the nest. Glen and Isabel average about 70 visits each year. Since 2002 the pair has successfully raised one young in 2002 and 2004 and 2 young in 2003, 2005, and 2006.

Figure 17. Between 15 February and 12 June 2006 Lloyd and Vicky Atkins visited this Great Horned Owl nest 18 times to determine its success. The nest was always viewed from a safe distance. Vernon, BC. early April 2006 (Cor Munders). BC Photo 3511.

This season over 40 percent of all cards had repeat visits, an amazing effort by everyone (Figure 18).Two well-timed visits can provide convincing information on clutch and brood size. And for many nests, especially for birds of prey, actual productivity figures could be stated with confidence.

If more than a single card is required to record multiple visits, please staple them together.

Figure 18. To minimize disturbance to a nest while making follow-up visits more people are using mirrors to check the contents such as this Rose-breasted Grosbeak nest with an egg and two newly hatched young. Fellers Heights, BC. 2 July 2006 (Mark Phinney).

Negative Information

Each year, some traditional nest sites, such as birds of prey, colonial-nesting swallows, swifts, some waterbirds, colonial marine birds, American Dippers, and loons, may or may not be occupied. If these sites are visited, and the nest is not occupied, it would be useful to complete a card indicating that it has been used in the past (or the previous year) but not in the present year. These "negative cards" are very helpful when interpreting changes in local breeding distribution, effects of weather and human disturbance on breeding activities, and perhaps chemical contamination.

For example, several Black Tern colonies were unsuccessful in 2006. That is, the sites are well known, but for whatever reason, the birds did not use the wetland. Cards were completed for those sites visited and notes were made on water levels, changes in vegetation, spring burning activities, developments, and access by livestock. Fortunately, most monitoring programs, especially for Osprey and Bald Eagles (Figure 19) complete a card irrespective of the nesting activity.

Vicky Atkins went a step further and submitted detailed notes for 17 species where the nesting was not successful or she did not get back to confirm nesting success. This summary is very helpful when calculating breeding success for a particular species. **Cyril Colonel** also made an effort to record details for active nests even though the contents

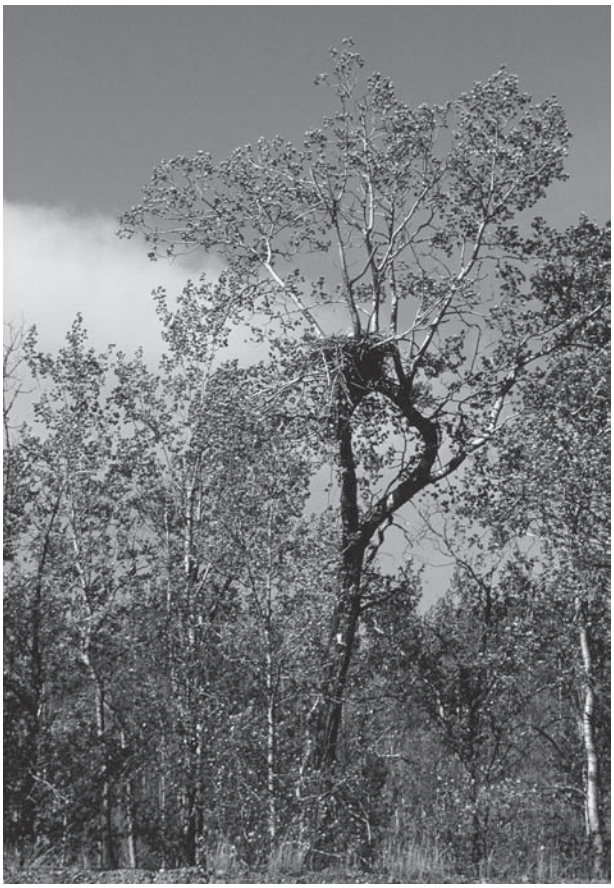


Figure 19. This Bald Eagle nest, easily visible from a boat along the shore of Fraser Lake, BC., has an interrupted history of use since it was first found in the early 1990s. Each year, however, cards are completed, along with photo-documentation, irrespective of whether it is occupied. In 2006, it was occupied. 23 May 2006 (R. Wayne Campbell).

were unknown.

All of these "nest" cards are filed for reference with the original active sites but are not included in the report totals.

Notes from the Field

Each year we wait in anticipation to hear stories and experiences that nest finders report when sending in their cards. This nesting season we received lots of personal experiences, noteworthy field observations, and significant events that can't help but make us marvel at nature and how little we know about wild animals. And your letters, e-mails, and telephone calls also show how many people enjoy wildlife and care about their well being.

Providing Prime Housing

Hilary Gordon sent the following note that appeared in the Shuswap Market News (**Salmon Arm**) on 26 May 2006. The article, concerning a pair of nesting **Black-capped Chickadees**, was written by columnist **Bonita Lingenfelter**. Highlights follow:

"*The chickadee box remains empty this year. It was checked out by at least one pair of the birds but for some reason it did not pass the muster.*

Having resigned myself to their absence, I was surprised to see a chickadee, with a beak-load of caterpillars, flit into an ash sapling that is wedged in between the neighbour's fence and the west-side of my house.

After assessing me carefully, she left the branch and flew directly into the wall. Her disappearing act bewildered me for a second or two, and then I realized that an entrance hole had been created where a knothole plug had fallen out of the cedar clapboard.

Securely tucked away from all predators, the birds had found an ideal place, and I could hear the babies' bee-like buzzing when their mother entered.

This chickadee family, with their almost grown children, could not have found better accommodation."

Moving Day for Waxwings

Evi Coulson sent details of a **Cedar Waxwing** nest discovered by **Zita** and **Dave Conway** at **Quick**, BC. that was in jeopardy during home renovations. Evi writes:

"*The day renovations started on one side of the porch* [e.g. 19 July] *a nest with 4 eggs was discovered in the lilac bush. Dave cut the branch with the nest and during 2 hrs tried to walk with it a few metres to some willows nearby* (Figure 20). *The female kept sitting on the nest whenever Dave rested, and took off whenever he made a step, returning to her eggs again when he stopped. After 2 hrs the female seemed to be fed up with the game, preened herself nearby and seemed to take off with the male.*

So, Dave and Zita tied the branch into another lilac bush on the right side of the stair. After about an hour or more the female returned, found the nest, and continued sitting.

The eggs hatched on 1 August and on 14 August all young left the nest."

Figure 20. Dave Conway transporting a Cedar Waxwing nest, in a crotch of a lilac bush, to safety at the other side of his house. Quick, BC. 28 July 2006 (Zita Conway). BC Photo 3509.

No Swimming – Swallows Nesting

For many years in the 1960s four to six pairs of **Barn Swallows** nested under the government wharf at **Wilson's Landing's** on the shore of Okanagan Lake. The wharf was busy, with 50 or more boaters using it daily, and it was a favourite diving board for swimmers who often swam under the wharf. Since the swallow nests were only three feet above water local bird lovers, and motel owners, were concerned that swimmers might disturb the nests. So, a sign was placed on the wharf banning all swimming until the swallows finished nesting.

The small colony of four to five pairs nested successfully for many years.

Barrow's Goldeneye Kills Common Merganser Chick

Last weekend, **Joanne Vinnedge** and members of her family, observed an unusual scrap in front of their house on **Stuart Lake**, BC., between a **Common Merganser** and **Barrow's Goldeneye**. The female merganser had about 16 chicks, and we noticed a scuffle between her and a female Barrow's. The Barrow's actually drove her away from our little bay, and killed one of the merganser chicks. We watched her worry away at the neck of the chick for a few minutes, and then leave it floating. She then went and climbed up on a large flat rock, and it was then that we noticed the four Barrow's chicks. The female merganser came back later that day, and the Barrow's again chased her away. She hasn't been back.

This flat rock in front of our place has been a favourite waterfowl loafing spot for years when the lake level is right. It is usually dominated by common mergansers. Since this incident, the merganser has been noticeably absent. She has been around a couple of times, but does not usually stay for very long. The Barrow's has obviously won the territorial dispute this year. The Barrow's still has her four chicks.

Fortunate Flicker Family

Lloyd and **Vicky Atkins** reported a success story for a pair of **Northern Flickers** whose nesting was suddenly interrupted by a storm in **Vernon**, BC. The chronology of the events follows:

January 1 – adult flicker and European Starling looking in hole.

February 4 – pair of flickers in tree.

February 6 – female flicker sitting on tree near nest hole; two males showing off, one male went into hole, other male going to and fro; bill sparring when he stuck his head into cavity. Later a Black-capped Chickadee looked in but the flicker shooed it off.

February 11 – male flicker drumming and calling beside hole.

April 9 – two female and one male displaying.

May 7 – heavy winds and the snag broke at the nest hole (Figure 21). Five eggs in cavity. Lloyd cut a two-foot piece from the fallen section and replaced it on the stump (Figure 22). A couple of strips of wood were nailed on to secure it. The male and female flicker returned, agitated, but eventually each entered nest.

Figure 21. Birch tree with Northern Flicker nest that broke at the nest site during a heavy wind in Vernon, BC. 7 May 2006 (Vicky Atkins).

Figure 22. Lloyd Atkins cutting a two-foot chunk of fallen tree to replace Northern Flicker nest site. Vernon, BC. 7 May 2006 (Vicky Atkins).

May 8 – a pair of European Starlings in nest.

May 11 – the pair of European Starlings coming and going; No flickers around. Took stump apart. No eggs or mess so put snag back together.

June 6 – male flicker calling from nest hole, female went in and mating. A third flicker was displaying with the other two in the nest hole.

June 8 – male and female in and out of nest.

July 1 – adult left nest with fecal sac.

July 7 – adults “very angry”. The “bee-hive” noise of young could be heard.

July 17 – one nestling looking out of cavity (Figure 23).

July 18 – one young fledged with at least two still in nest.

July 19 – all young gone.

The whole event, from setting up territory, to home repairs, and raising a family, lasted 171 days!

Figure 23. Adult female Northern Flicker at repaired nest with near fledging youngster. Vernon, BC. 17 July 2006 (Lloyd Atkins).

Chukar Dump Nests

Ian Routley mentions that he regularly has **Chukar** "families" visit his yard in **Lillooet** - which is on the same side of the Fraser River as the Stathers (east). The area is roughly at the same elevation (900 meters) and the habitat is similar being mainly ponderosa pine and bunch grass. Ian has lots of video of the Chukars feeding at his ground feeders and clustering around his small birdbath, trying to all fit along the edge. The highest count for young at his house is 17, which by the end of July, is usually reduced to 10 or less. During winter he has had more than 20 at the ground feeders.

Ian writes: "*On May 6, 2005 two friends of mine, Mark and Daniel Stathers, were working on the roof of their shed when they inadvertently discovered a Chukar nest. The father and son team had piled metal roofing on 6 by 6 cants the preceding fall. They carried several sheets of roofing over to their shed without incident. When they went to lift the last piece of roofing they were startled by the explosion of a retreating Chukar. To their surprise they found a nest constructed of ponderosa pine needles containing 17 eggs* (Figure 24)*. It was well concealed and protected from the elements. Unfortunately, even though they replaced the piece of roofing and made a hasty retreat, the Chukar did not return to the nest.*

Each spring, the Chukar like to sit at the top of a dead ponderosa pine in my yard which serves as an alarm clock when they are declaring territory and looking for mates (Figure 25)*."*

Figure 24. Chukar nest containing 17 eggs that was accidentally uncovered in a yard in Lillooet, BC. 12 May 2005 (Ian Routley). BC Photo 3500.

Figure 25. A spring ritual in Ian Routley's yard in Lillooet, BC. is a Chukar proclaiming its territory from atop an old snag. Spring 2005 (Ian Routley).

Urban Homes and Spring Cleaning

Over the past two decades **Northern Rough-winged Swallows** have learned that small crevices between concrete blocks used as retaining walls provide nesting sites in many towns and cities across southern British Columbia. On 23 April 2006, **Wayne Campbell** noticed 10-12 swallows squabbling over nest sites in a low concrete wall in **Cache Creek** (Figure 26). The fighting at times was intense, and noisy, and it appeared that the main interest was in a single cavity. He examined the site and discovered that it was the only nest site, of twelve, that wasn't filled with sand and dirt that had seeped into the crevice from the retaining wall.

Wayne spent the next half-hour digging out clogged crevices with a long stick and left for the Peace River. On his return trip in early July, eight were used for nesting by swallows and one was usurped by a pair of House Sparrows.

It is likely this new colony, and others like it, will need to be cleaned every spring.

Figure 26. By cleaning clogged crevices in this retaining wall at Cache Creek, BC. the number of families of Northern Rough-winged Swallows raised in 2006 increased from one to eight pairs. 23 April 2006 (R. Wayne Campbell). BC Photo 3513.

There Goes a Duck!

This story appeared in the *Creston Advance* on June 4, 1965:

"*A young Mallard duck, probably frightened by a high wind last week, walked into K&W Service station, in Alice Siding, last week. One of the owners of the station was working under a car and told the other boys, "There goes a duck". Needless to say they thought he was joking, but on his repeating the statement looked around to see the duck headed into the office.*

Barry Robinson took the duck home and the young bird is thriving on good food and lots of attention from the family."

Some Like it HOT!

Linda Van Damme, while travelling along the west fork of the St. Mary's Forest Service Road in the **Kimberley** area, noticed a pair of **Dark-eyed Juncos** carrying food into a smoldering slash pile. After a short search a nest with three stubby-tailed and feathered nestlings was spotted 1.5 metres from the pit of the burn pile. The nest appeared dry and protected by overhanging debris. Although a **Red Squirrel** was scampering along one of the unburned logs of the slash pile, it did not discover the nest of juncos.

Nor, did it ferret out the **Winter Wrens** who were busy feeding three fully feathered young in a nest 2 metres from the ground under a root ball concealed with conifer boughs!

What's the explanation?

On the 25 of May, **Laure Neish** was at the **Penticton** Marina area and noticed a pair of **Red-necked Grebes** busily building a nest right in the laneway of where boat traffic would pass (Figure 27). This is the second time she had seen them build a nest in this location and the last time (several years ago) they built it under a dockhand. The female was sitting on eggs, but the nest got swamped and that ended the hope for young. Laure doesn't understand why they keep building in a location with such a poor guarantee of success.

Figure 27: A Red-necked Grebe near a nest being built in a busy passageway at the marina in Penticton, BC. 25 May 2006 (Laure W. Neish). BC Photo 3504.

An hour after she took photos the nest had sunk, perhaps because a boat had moved in near to where they were.

Music to my ears

Brenda Mallory, who writes a weekly newspaper column on birds for the **Smithers** area, reports that one of her readers, **Michelle Whittemore**, reported a **Rufous Hummingbird** nest on top of a wind chime on her deck in Smithers (Figure 28).

Figure 28. For whatever reason, a female Rufous Hummingbird decided to build her nest atop a wind chime, within 10 feet of a house door, in Smithers, BC. 30 May 2006. (Michelle Whittemore). BC Photo 3508.

Michelle documented some dates and activities:

May 30 - Rufous Hummingbird nest discovery at 0500! (Having my morning coffee as Jake, the airedale, is doing his morning business!). It caught the corner of my eye. Thought it was the start of a wasp hive at first. Just perched on top of my wind chime. Only 10 feet from our door. (This is not our main door that we use daily. It is off the living room, and leads to the fenced back yard.) The chime is hanging under a covered porch and is quite protected, even from the wind. (I guess not that great of a place for a wind chime!) Unbelievable! Two eggs. Mother only leaves nest to feed.

June 14 **-** Babies! In all honesty I think the babies came a couple days earlier (Figure 29). I didn't look in the nest on June 13!

Figure 29. After being incubated for 16 days or so two tiny young appeared in the "music" nest. Smithers, BC. 15 June 2006 (Michelle Whittemore).

June 22 - Haven't seen mother all day!

June 23 - No mother, where is she!

June 24 - No mother, getting worried, called Brenda Mallory. Mixed sugar water and fed my babies with syringe sitting on top of a stepladder. Wayne, my husband, and I took turns.

June 25 - Fed my babies early morning. While sitting on top of the stepladder heard the familiar sound of a hummingbird. Could it be mother? Quickly got down off the ladder and disappeared into the house. Yes it's mother! My job is done. Must let mother nature take care of things!

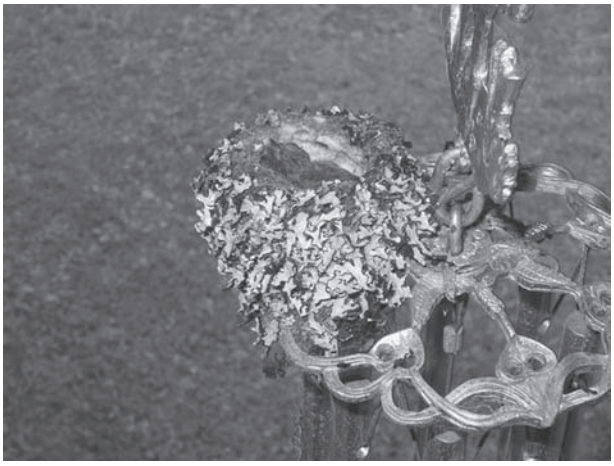


Figure 30. The nestlings are quickly acquiring body feathers. Smithers, BC. June 2006. (Michelle Whittemore).

June 26 - June 30 - Mother only comes by to feed them now (Figure 30). Does not stay with her babies. Maybe because they are getting bigger and there is no room for mother? We leave for the long weekend on the Friday, 30 June. Not sure if I will see my babies and I'm pretty sure they will have flown the coop by the time we get back on Monday 3 July. They seem to be getting pretty big. I say my good-byes and hope to see them next year.

July 3 - We arrive back from camping around early evening. The first thing I do is run to the nest. My two babies are waiting. One is perched on the side of the nest, the other is perched on the wind chime disk. I say hello, and they look at me and fly away. Gone, just like that. I'm so glad they waited around so I could see them leave!

It was a thrill. So many neighbours and friends came by to have a look. There wasn't one person that wasn't amazed. I will leave the nest on the chime as I believe they may come back and "refurbish" it next year.

Two hummingbirds have been added to the population.

Golden-crowned Kinglet Rears Brown-headed Cowbird Chick

Ed Pellizzon, a volunteer at the **Rocky Point Bird Observatory**, noted that on the morning of 7 July the area was quiet. While walking down the road near the main gate he could hear a young **Brown-headed Cowbird's** begging call and had to find out who was feeding it. Talk about cruel! He watched a pair of **Golden-crowned Kinglets** come and feed the fledged bird and was amazed that a cowbird female can fit her bottom into a tiny kinglet nest to lay its egg.

Ed decided to look in his Peterson's guide on birds' nests and found that a Golden-crowned Kinglet's egg is typically 13 x 10 mm and a Brown-headed Cowbird's egg is 21.5 x 16.5 mm. The latter is almost 3/4 bigger than the kinglet's egg size.

He still wonders how the kinglet managed to sit on the egg and incubate it to hatching and then brood the nestling to fledging?

Replacement for a Crowing Barnyard Rooster

Lorraine Symmes, who lives in **Woodbury**, has been observing some interesting behaviourisms of a female **Ruffed Grouse** that she thought others might be interested in.

A female grouse, with two good- sized juveniles have been hanging around the house for about three weeks even though I do not feed them. I have seen her repeatedly "teaching" her young to fly up to high places. On about a dozen occasions (so far), at 5 am, she brings her brood to the rear of the house where we have a roofed outdoor porch. She then noisily flies to the roof (about 30 feet up) and proceeds to call to them repeatedly until they fly up to join her. The young then run around on the roof for a few minutes before flying back down to the ground. Later, the mother joins them a few minutes. It's the same pattern each time. She uses a kind of adnoidal cooing and clucking sound. It's quite sweet. The reason we have first-hand knowledge of behaviour is because we sleep outside under this same roof and are awakened at 5 am each time she repeats the pattern!

Cat Nap in a Jay Nest

On 20 April 2006, Mary Madden, who lives in Point Grey near the University of British Columbia Endowment Lands, wrote:

"*We have a Steller's Jay's nest in a bush right outside our front window. We have witnessed the construction of this nest over the past week, much to the delight of my three children, and ourselves frankly. I am in the process of trying to protect the nest from the neighbour's cat that discovered it this morning. There are no eggs yet, but the jays were frantic at the sight of the cat climbing the tree, so I'll do what I can to keep her away.*"

As a follow-up, on 29 April, Mary wrote:

"*I have some sad news to report. Despite my*

efforts to protect the Steller's Jay nest from the neighbor's cat by wrapping the trunk with blackberry brambles, she got into the nest and knocked both eggs out. I looked out the window, and to my horror found the cat curled up in the nest! One of the eggs survived the fall and I carefully returned it to the nest, while the pair of jays watched from the neighbor's roof. The female jay immediately returned to the nest where she sat for about three days. She has since abandoned it however. I'm guessing that she realized that the egg was not viable. Hoping that the jay would return to the nest and try again, my very sorry neighbor has kept both of her cats indoors since that traumatic moment.

We see a pair of jays on the wire in our back yard and we continue to feed them peanuts in the hope that they will stay around. We of course cannot be sure that it is the same pair, we can fantasize!

The lonely looking egg remains in the very beautiful nest."

Tent for a Turkey

On 19 July, while crews were cutting roadside vegetation along Highway 21 in the **Creston** valley, they unknowingly exposed a female **Wild Turkey** while she was sitting on her clutch of 11 eggs at the entrance to the community refuse site (Figure 31). One of the employees called **Lorraine Scott**, a well-known local birder, to report the incident. Lorraine decided to build a lean-to from the cut weed stalks (Figure 32) so that the hen had some protection from the heat wave where afternoon temperatures were reaching the upper 30º C.

Debbie, the employee left grain and water for the preoccupied hen. On 23 July all but one of the eggs hatched and the following day seven downy chicks were seen scurrying in the ditch following their mom.

Figure 31. Wild Turkey hen exposed at her nest by a highway crew along Highway 21 in Creston, BC. 19 July 2006 (Sharon Laughlin). B C Photo 3522.

Figure 32. To protect the hen turkey while she completed her incubation duties, Lorraine Scott built a weed stalk lean-to that served its purpose well. Creston, BC. 19 July 2006 (Sharon Laughlin).

Foster Care for Arcimedes, the Kestrel

Lorna Surnia and her family helped raise a fledgling American Kestrel in Kaslo, which was named, "Arcimedes" after the Greek mathematician who made major discoveries. Her story:

"*A pair of flickers excavated a cavity in one of our poplar trees but the kestrels displaced them this year to raise their own family* (Figure 33). *Two of them left the nest a week ago (16 July). We tried to not interfere, thinking the parents would feed them on the ground, but they didn't. When the ravens got one it was more than the boys could stand and we have been feeding and trying to raise this young kestrel* (Figure 34). *The survivor is alive and well a week later and the other two have left the nest now as well. I see the female is feeding the fledglings. Thanks goes to Dirk (Rinehart-Pidcock) for the info you gave my nephew on rearing them. I think you saved this ones life.*

An update on our kestrel, Arcimedes. It's been an interesting experience for all of us. When his nest mates fledged we put him outside to see if he would be accepted with the others. The female fed the others as before but not him, so we continued to catch grasshoppers for him and supplemented his diet with chicken and ground beef. She did defend him from the ravens. Attacking with a vengeance so we continued to set him out during the day. The boys caught grasshoppers

Figure 33. "Arcimedes's" siblings peering out the nest cavity. Kaslo, BC. 15 July 2006 (Lorna Surina).

and tried to get him to recapture them. At this point he was flying very well. He slowly ventured farther and farther from home coming back to us only when desperate for food. This happened three times, the last time he was away for 2 full days and a night. We fed him up again and can only hope that he was able to make it on his own. He and the rest of the family have left the yard and the siskins and chickadees have returned.

Who knows."

Figure 34. "Arcimedes" with his surrogate parents Cameron, Morgan & Jarren Surina. Kaslo, BC. 28 July 2006 (Lorna Surina).

Old Nests for New Homes

Nests for some species, like raptors, may be refurbished and used in consecutive seasons. What is less known is the re-use of nests for songbirds and other small species.

Three such incidences were found in the 2006 season involving two species using nests other than their own and one species that simply reused its own nest built two years earlier.

Anna's Hummingbird and Rufous Hummingbird

Geoff Barnard, who has been monitoring **Anna's** and **Rufous Hummingbird** nests at **Swan Lake,** Victoria, found a first. From his fieldwork in 2005 Geoff knew the specific locations for many hummingbird nests. In 2006 he noted that a female Anna's Hummingbird had refurbished an old Rufous Hummingbird nest located on the branch of a Douglas-fir tree over the trail into the forest below the Nature House.

The female Anna's was still sitting on her nest on 30 April.

Dark-eyed Junco and American Robin

Ed Pellizon, from **Victoria**, wrote: "*For the past two years I have had an **American Robin** couple nest in a back shed on the property where they built their nest about 6 feet up off the ground in a corner rafter. This year [2006] they did not use this nest. I was at the shed today to get some wood and had a **Dark-eyed Junco** fly out of the old robin's nest. I had a look inside and found three eggs in there, very strange for juncos to nest high up like that, and to take over an old robin's nest is even stranger. The junco that used an old robin's nest in my yard have hatched 3 eggs so far (May 15th).*"

Eastern Kingbird

Linda Van Damme noticed that a pair of **Eastern Kingbirds** which built a nest in 2004, raising three young only one metre from the ground were using the nest again in 2006 and successfully raised two young to fledging. The hawthorn nesting tree was along a seldom traveled dyke in the Creston valley.

American Robin

Tom Godin checked an old **American Robin's** nest at **100 Mile House** that was used successfully in 2005. To his surprise he found a female incubating four eggs on 3 May 2006. The nest did not appear too well refurbished.

Too Close for Comfort!

While naturalizing in the **Creston valley**, **Marcia Long** noticed an unusual nest site for a **Black-billed Magpie**. The bulky stick nest was precariously attached to a power pole directly beneath an active Osprey nest The nest was actually jammed between two horizontal cross beams (Figure 35).

Figure 35. Black-billed Magpie nest crammed between cross beams on a power pole that also supported an active Osprey nest. Creston, BC. 28 April 2006 (Linda M. Van Damme). BC Photo 3512.

She watched the nest over the spring and summer and to her amazement the pair of magpies were successful in raising their young to fledging. Marcia still wonders how the nest stayed in position with all the weight of mud and sticks and vagaries of weather.

Diversification - the Key to Success!

Linda Van Damme found an **Osprey** sitting in a **Canada Goose** nesting platform box installed in the marshes of **Duck Lake** by the Creston Rod and Gun Club (Figure 36). The platform sits only 1.7 m. from the water, so maybe it was surmised that their meals of fish simply just jump into the nest! The pair was eagerly watched for many weeks and towards the end of the nesting season the pair successfully fledged one young.

And, later in the 2006 season **Linda** along with field partner **Cyril Colonel**, discovered **Osprey** chicks on a metal grill of a navigation light tower at the south end of Kootenay Lake (Figure 37). The sticks from the nest had been blown away so nothing of the nest remained and the chicks were forced to lie on the metal grill. Adults were seen late in the season carrying sticks to the site in an attempt to rebuild their lost nest.

Figure 36. Sometimes the tables are turned as in this Osprey usurping a nesting platform set up for Canada Geese at Duck Lake, BC. July 2006 (Linda M. Van Damme). BC Photo 3505.

Figure 37. Ospreys are very adapatable in their choice of nest sites that include navigation light towers. Kootenay Lake, BC. 25 August 2006 (Cyril Colonel). BC Photo 3510.

Close Neighbours

Many birds are opportunists when it comes to finding food but fewer change traditional habits when selecting nest sites. In the residential part of **Nakusp**, **Paul Whalen** put up a nest box for swallows in his garage. A pair of **Tree Swallows** soon occupied the box but little did they realize that they soon had to share the nesting season with a pair of **American Robins** who found the top of the box an ideal spot for their nest (Figure 38). Unlike many residential neighbourhoods today, the birds put up with each other and successfully raised young.

Figure 38. An American Robin nest built on top of an active Tree Swallow nest box. Nakusp, BC. 18 June 2005 (Paul Whalen). BC Photo 3501.

At Home on the Farm

On July 3 2006, **Andrew Sanders** discovered a **Violet-green Swallow** nest site at the opening of the "feeder house header" of a combine less than a metre from the ground. The adults were feeding two young close to fledging (Figure 39).

Figure 39. Near fledging Violet-green Swallow peering at the world from its nest in a farm combine in Wynndel, BC. 3 July 2006 (Linda M. Van Damme). BC Photo 3503.

The combine was parked at the family's strawberry farm in **Wynndel** and was not currently in use.

Historical Information

Our annual program to extract breeding information from historical sources such as scientific literature, field notebooks, museum catalogues, old reports, correspondence, naturalist club newsletters, books, and consultant's reports continued.

The task is onerous and very time-consuming but is necessary if we want to talk with some confidence about current trends or breeding times for birds and put current knowledge into perspective. We continued extracting breeding records from the extensive field notes of the late **J. E. Victor Goodwill** but at a much-reduced level. We also continued to methodically transfer data from egg and skin collections in museums including the **Cowan Vertebrate Museum** (Vancouver, BC), **Royal British Columbia Museum** (Victoria, BC), **Field Museum of Natural History** (Chicago, IL), **National Museum of Canada** (Ottawa, ON), **United States National Museum** (Washington, DC), **Academy of Natural Sciences of Philadelphia** (Philadelphia, PA), **Museum of Vertebrate Zoology** (Berkley, CA), **Provincial Museum of Alberta**, Edmonton, AB), and **University of Michigan Museum of Zoology** (Ann Arbor, MI).

In addition, thousands of cards were transferred from historical notes and files including quarterly reports for *Audubon Field Notes/American Birds*, British Columbia Fish and Wildlife Branch, British Columbia Parks Branch, R. Wayne Campbell,

Figure 40. Our extensive occurrence and breeding databases, dating back to 1887, allowed for a thorough review of the changing status of the Common Nighthawk in British Columbia including a shift in arrival and departure times.

Canadian Wildlife Service, Ducks Unlimited Canada, Maurice Ellison, Robert G. Foottit, David F. Hatler, Ethel Kippin, *Muskrat Express*, James A. Munro, Parks Canada, Theed Pearse, Michael S. Rodway, Glenn R. Ryder, Chris Siddle, *Victoria Naturalist*, and *Wandering Tattler*.

Martin McNicholl, a professional ornithologist, searched his field notes from 1971 to 1974 for **Common Nighthawk** nesting information he recorded incidental to field work on the Blue Grouse near Courtenay. After many days of searching he found 124 nests which now represents 16 % of the total cards in the BCNRS. His efforts were a major contribution to the 40-page account on the nighthawk published in *Wildlife Afield* (see Vol. 3, No. 1, 2006; Figure 40).

Linda Durrell went back through her notes and completed cards for six years from 2000 to 2005 for the **Wineglass Ranch** near Riske Creek. **Chris Siddle** completed 54 cards for 30 species from his 2005 field notes. **Brian Nicola** transferred notes from his travels around the province from 1979-2004.

Many breeding records were transferred from technical and consulting reports and a few people (e.g., **Gary Davidson**) submitted cards from their notes for earlier years.

We had near annual representation for the past decade and really started to fill in the 1980s decade for which our files were under-represented.

List of Species with Total Breeding Records by Family

Family Anatidae - Geese, Swans and Ducks (1,802): Canada Goose - 504 (Figure 41), Mute Swan - 39, Trumpeter Swan - 14, Wood Duck - 127, Gadwall - 38, American Wigeon - 51, Mallard - 409, Blue-winged Teal - 41, Cinnamon Teal - 26, Northern Shoveler - 39, Northern Pintail - 11, Green-winged Teal - 15, Canvasback - 25, Redhead - 49, Ring-necked Duck - 61, Lesser Scaup - 23, Harlequin Duck - 4, Bufflehead - 61, Common Goldeneye - 57, Barrow's Goldeneye - 49, Hooded Merganser - 55, Common Merganser - 91, Red-breasted Merganser - 1, Ruddy Duck - 12.

Figure 41. Most of the Canada Goose records each year are for broods. This nest, composed of bulrush stems, was found at Swan Lake, north of Vernon, BC. by Lloyd and Vicky Atkins on 19 May 2006 (Lloyd Atkins).

Family Phasianidae - Partridges, Pheasant, Grouse, Ptarmigan and Turkey (280): Chukar - 4, Gray Partridge - 1, Ring-necked Pheasant - 45, Ruffed Grouse - 67, Spruce Grouse - 38, Willow Ptarmigan - 35, Rock Ptarmigan - 1, White-tailed Ptarmigan - 42, Blue Grouse - 42, Sharp-tailed Grouse - 2, Wild Turkey - 3.

Family Odontophoridae - American Quail (124): California Quail - 124.

Family Gaviidae - Loons (231): Red-throated Loon - 1, Common Loon - 230

Family Podicipedidae - Grebes (1,504): Pied-billed Grebe - 91, Horned Grebe - 55, Red-necked Grebe - 256, Eared Grebe - 973, Western Grebe - 129.

Family Phalacrocoracidae - Cormorants (1,115): Brandt's Cormorant - 1, Double-crested Cormorant - 431, Pelagic Cormorant - 683.

Family Ardeidae - Bitterns, Herons, Egrets, and Night-Herons (325): American Bittern - 1, Great Blue Heron - 319, Green Heron - 5.

Family Accipitridae - Osprey, Kites, Eagles, Hawks and Allies (546): Osprey - 308 (Figure 42), Bald Eagle - 129, Northern Harrier - 1, Sharp-shinned Hawk - 3, Cooper's Hawk - 30, Northern Goshawk - 1, Swainson's Hawk - 2, Red-tailed Hawk - 66, Ferruginous Hawk - 1, Golden Eagle - 5.

Figure 42. For some species, like Osprey, it is possible to record value-added information on each nest card such as when the birds arrived, copulated, started nest-building, fledged young, and finally departed. Creston valley , BC. 12 April 2007 (Linda M. Van Damme).

Family Falconidae - Falcons (37): American Kestrel - 17, Merlin - 3, Gyrfalcon - 1, Peregrine Falcon - 12, Prairie Falcon - 4.

Family Rallidae - Rails, Gallinules and Coots (621): Virginia Rail - 17, Sora - 25, American Coot - 579.

Family Gruidae - Cranes (9): Sandhill Crane - 9.

Family Charadriidae - Plovers (114): Semipalmated Plover - 4, Killdeer - 110

Family Haematopodidae - Oystercatchers (54): Black Oystercatcher - 54.

Family Recurvirostridae - Stilts and Avocets (1): American Avocet - 1

Family Scolopacidae - Sandpipers, Phalaropes and Allies (132): Greater Yellowlegs - 1, Lesser Yellowlegs - 1, Solitary Sandpiper - 1, Spotted Sandpiper - 96, Long-billed Curlew - 8, Least Sandpiper - 3, Wilson's Snipe - 18, Wilson's Phalarope - 4.

Family Laridae - Jaegers, Skuas, Gulls, Terns and Allies (3,044): Bonaparte's Gull - 14, Mew Gull - 20, Ring-billed Gull - 1569, California Gull - 12, Herring Gull - 369, Glaucous-winged Gull - 1042, Forster's Tern - 4, Black Tern - 14.

Family Alcidae - Auks, Murres and Puffins (60): Pigeon Guillemot - 44, Marbled Murrelet - 2, Cassin's Auklet - 13, Tufted Puffin - 1.

Family Columbidae - Pigeons and Doves (129): Rock Pigeon - 114, Band-tailed Pigeon - 4, Mourning Dove - 11.

Family Strigidae - Typical Owls (156): Barn Owl - 17, Flammulated Owl - 1, Western Screech-Owl - 15, Great Horned Owl - 85 (Figure 43), Northern Hawk Owl - 1, Northern Pygmy-Owl - 1, Barred Owl - 16, Great Gray Owl - 4, Long-eared Owl - 12, Northern Saw-whet Owl - 4.

Family Caprimulgidae - Goatsuckers (402): Common Nighthawk - 400, Common Poorwill - 2.

Family Apodidae - Swifts (5): Black Swift - 1, Vaux's Swift - 1, White-throated Swift - 3.

Family Trochilidae - Hummingbirds (61): Black-chinned Hummingbird - 2, Anna's Hummingbird - 19, Calliope Hummingbird - 4, Rufous Hummingbird - 36.

Family Alcedinidae - Kingfishers (23): Belted Kingfisher - 23.

Family Picidae - Woodpeckers (260): Lewis's

PARTICIPANT PROFILES

This year we have profiles for seven individuals who have all made significant contributions in monitoring two quite different groups of birds, those nesting in “bluebird trail” nest boxes and a fish-eater that nests almost anywhere there is a substrate large enough to build its stick nest. The most important contribution, however, is realizing that a commitment to gathering long-term information and assuring that it is filed in the same central repository in British Columbia is critical.

The volunteer effort required to gather such information in a systematic manner, compile it, and send it to us in a form that is compatible with our 52 year history is huge and requires dedication and understanding. All of the following individuals have given their time unselfishly and have contributed greatly to understanding the lives of Mountain Bluebirds, Mountain Chickadees, Tree Swallows, and Ospreys in the province.

Beverly Butcher

Beverly was born on a farm at RoseIsle in southwestern Manitoba. The family farm, although involved in a mixture of activities, concentrated mainly on raising pure-bred registered Polled Herefords. Some of her earliest memories were of her parents teaching the family about farm life and wild animals that lived around the farm. Beverly's father, sensing his daughter's interest in nature, frequently took her on small excursions where they learned to identify the tracks of rabbits, coyotes, deer, prairie chickens, and mice, whether in the snow or spring mud. Exploring every part of the farm and woodlands was a never-ending delight for Beverly.

She left the farm to pursue a career in nursing and graduated as a Registered Psychiatric Nurse in Brandon, Manitoba and later married and started to raise a family. In 1965 her husband, George, secured a job with BC Hydro in Williams Lake, BC. Once in the Cariboo she enjoyed family camping trips and hikes between the busy time required raising a family and working at the Cariboo Memorial Hospital.

In 1992, Peggy Aitken, an avid birder, incredible teacher, and friend, and also a member of the Williams Lake Field Naturalists (WLFN), invited Beverly to help with monitoring nest-boxes. The following year, Steve Howard moved his wildlife rehabilitation centre to Williams Lake from Tumbler Ridge, BC. and asked Beverly to help with care of the animals. She helped with the rehab centre until 2003 when it relocated to Raven Ridge under the care of Urs and Beth Schupbach where she continued her volunteer work caring for animals. During the decade she and Steve cared for a wide variety of animals, often releasing treated raptors at Sugarcane or Alkali Lake. The team also had a strong education program taking wild animals and displays to local schools, fairs, and the Society for the Prevention of Cruelty to Animal functions. When Beverly's husband retired from BC Hydro he also provided support and assistance in her projects.

Beverly is a committed volunteer and still passionate about wild animals and unselfishly takes the extra step to assure that nesting information is deposited in the British Columbia Nest Record Scheme, something she has been doing since the early 1990s. Each summer she monitors 115 nest boxes and tries to visit each box at least seven times to get clutch and brood-sizes, occupancy, and productivity information.

She is an active member of the WLFN and regularly participates in surveys, such as Christmas Bird Counts and Long-billed Curlews, when the window of time is available. She has been keeping wildlife notes since 1992 and contributed to the species accounts in the final two volumes of *The Birds of British Columbia*.

Beverly says, *I continue to contribute whatever I can to the care of all ecosystems around me*.

West Kootenay Osprey Monitoring Group

(Elaine Moore, Robin Rohrmoser, Janice Arndt, Emilee Fanjoy, Larry Prosser, and Rita Wege)

Elaine is an office clerk in Nelson, BC. and has nearly 15 years birding experience. She had been birding in a "not-very-deliberate" way since 1988 when she became fascinated by a female Common Merganser swimming in Kootenay Lake with nine babies in tow. In 1990, she was further entranced by Violet-green Swallows chattering in the early-morning conversation on the porch railing of the house she lived in at Ainsworth, BC., and by the morning sun flashing on their delicate feathers when they took flight. In 1992 a deepening passion for birding was engendered through her friendship with Linda Van Damme.

Elaine has since spent many tranquil, and sometimes exciting, hours walking in the outdoors, alone or with friends and strangers, enjoying birds and their antics. She has taken part in Christmas bird counts, raptor and waterfowl counts, and has been a leader for several birding walks. She has been a member of the Osprey monitoring team since its beginning in 1997 and from 2000 to 2005 co-coordinated the winter bird count for the Nelson area.

She regularly submits bird sightings to the Wildlife Data Centre (BCFWS), nest cards to the British Columbia Nest Record Scheme, and has helped with data entry for current and historic field data.

Larry is newcomer to birding. His interest developed when he met Rita, his future wife, and together they quickly became involved in various projects including the British Columbia Nest Record Scheme, Christmas bird counts, local waterfowl counts, and owl surveys. He has been a member of the West Kootenay Osprey nest-monitoring project since 2000. He enjoys taking photographs of birds, plants, butterflies, and habitats while travelling in their camperized van throughout the United States and Canada.

Larry, a computer technician, and Rita presently reside in Nelson but will soon be moving to Shoreacres, BC., where they will have new habitats and wildlife to enjoy.

From left to right: , Elaine Moore, Larry Prosser, Rita Wege, and Emilee Fanjoy.

Rita first discovered that she enjoyed learning to identify birds in her first year of university in Waterloo, Ontario. Thirty-one years later she still continues to find pleasure and enjoyment in finding and watching birds and collecting field data. She has traveled around the world to observe birds in their natural habitats.

She is a very active and well organized naturalist and serves as compiler for Nelson Christmas bird counts and the West Kootenay waterfowl count. She also participates in owl surveys; regularly submits bird sightings and nest record cards to the Biodiversity Centre for Wildlife Studies, and monitors nest boxes. Presently she is the membership chairperson for the BC Field Ornithologists. She has been the project leader for the West Kootenay Osprey nest monitoring project for the past 10 years.

Rita has lived in Nelson, BC since 1984 and will be moving soon to Shoreacres, where she will continue to learn more about butterflies, and of course birds, in their new home.

Emilee is a former forest research technologist and canoeing instructor with over 40 years of experience working and playing in the outdoors. She moved to Kamloops BC almost four years ago and still misses her birding friends and involvement with the Osprey monitoring project in the Nelson area. Presently she is employed with the BC Ministry of Forests and Range, Southern Interior Forest Region, and enjoys canoeing, hiking, back country skiing, and basket weaving.

In all four seasons Emilee spends as much time as possible in the outdoors experiencing and enjoying the various ecosystems in the Kamloops area including keeping an eye out for all wildlife she encounters.

Robin was introduced to birding by Linda Van Damme in Nelson during the early 1990s through the


Robin Rohrmoser.

Nelson Naturalists. She spent much of her spare time during that period birding in the area, participating in Christmas bird counts, and submitting birding data to the provincial database. She was also one of the original members of the West Kootenay Osprey team.

She moved to Victoria in 2000 and currently works as an editor with Hansard Services at the Legislative Assembly of BC. In her off-time, Robin performs with a historical dance ensemble. Not actively birding at the moment, Robin still pays great attention to the birds in her James Bay neighbourhood and never fails to take her binoculars along on road trips. Robin recently read and enjoyed *To See Every Bird On Earth*, a fascinating account of one man's quest to see and list every bird on the planet.

Janice was born in Toronto and spent her childhood in southern Ontario. She compiled her first "bird-sightings" list when she was seven. Most of her teenage years were spent in Langley where her interest in birds and natural history continued to develop. In 1991, Janice received a Bachelor's degree in Fisheries Science from the University of Guelph and that same year, she married Steve, a fellow biologist. The family moved to New Brunswick in 1992 and stayed nearly five years. Their children, Justin (now 12) and Bethany (10) were born in Fredericton during that time. The family moved to Nelson in 1996 where Janice has been employed as a biologist by government agencies, environmental consulting firms, and a conservation organization.

For several years Janice wrote a birding column for the Nelson Daily News. Janice considers herself to be a biologist and birder, enjoying both the behavioural and ecological aspects of observing birds and keeping a list of new species she has seen.


From left to right: Justin, Bethany, and Janice Arndt.

Figure 43. Downy Great Horned Owl young at their nest site in the Creston valley, BC. 2 June 2006 (Linda M. Van Damme). BC Photo 3507.

Woodpecker - 2, Williamson's Sapsucker - 6, Yellow-bellied Sapsucker - 14, Red-naped Sapsucker - 19, Red-breasted Sapsucker - 29, Downy Woodpecker - 30, Hairy Woodpecker - 53, American Three-toed Woodpecker - 4, Black-backed Woodpecker - 3, Northern Flicker - 67, Pileated Woodpecker - 33.

Family Tyrannidae - Tyrant Flycatchers (185): Olive-sided Flycatcher - 3, Western Wood-Pewee - 8, Willow Flycatcher - 5, Least Flycatcher - 5, Hammond's Flycatcher - 1, Gray Flycatcher - 1, Dusky Flycatcher - 5, Pacific-slope Flycatcher - 8, Eastern Phoebe - 14, Say's Phoebe - 15 (Figure 44), Western Kingbird - 89, Eastern Kingbird - 31.

Figure 44. A pair of Say's Phoebes have built their nest under this small water tower, 0.4 m (1.5 ft) from the ground, since at least 2002. Savona, BC. 23 April 2006 (R. Wayne Campbell). BC Photo 3515.

Family Vireonidae - Vireos (40): Cassin's Vireo - 5, Hutton's Vireo - 16, Warbling Vireo - 17, Red-eyed Vireo - 2.

Family Corvidae - Jays, Magpies and Crows (191): Gray Jay - 42, Steller's Jay - 15, Blue Jay - 2, Black-billed Magpie - 34, American Crow - 30, Northwestern Crow - 23, Common Raven - 45.

Family Alaudidae - Larks (7): Sky Lark - 2, Horned Lark - 5.

Family Hirundinidae - Swallows (1,273): Purple Martin - 109, Tree Swallow - 436, Violet-green Swallow - 49, Northern Rough-winged Swallow - 47, Bank Swallow - 45, Cliff Swallow - 179, Barn Swallow - 408.

Family Paridae - Chickadees (110): Black-capped Chickadee - 27, Mountain Chickadee - 25 (Figure 45), Chestnut-backed Chickadee - 56, Boreal Chickadee - 2.

Figure 45. Mountain Chickadee nest cavity in old Douglas-fir snag that contained at least two nestlings on 15 May 2006. Kalamalka Park, Autumn 2001 (Lloyd Atkins).

Family Aegithalidae - Bushtit (29): Bushtit - 29.

Family Sittidae - Nuthatches (26): Red-breasted Nuthatch - 19, White-breasted Nuthatch - 2, Pygmy Nuthatch - 5.

Family Certhiidae - Creeper (11): Brown Creeper - 11.

Family Troglodytidae - Wrens (124): Canyon Wren - 1, Bewick's Wren - 15, House Wren - 50, Winter Wren - 33, Marsh Wren - 25.

Family Cinclidae - Dipper (28): American Dipper - 28 (Figure 46 and 47).

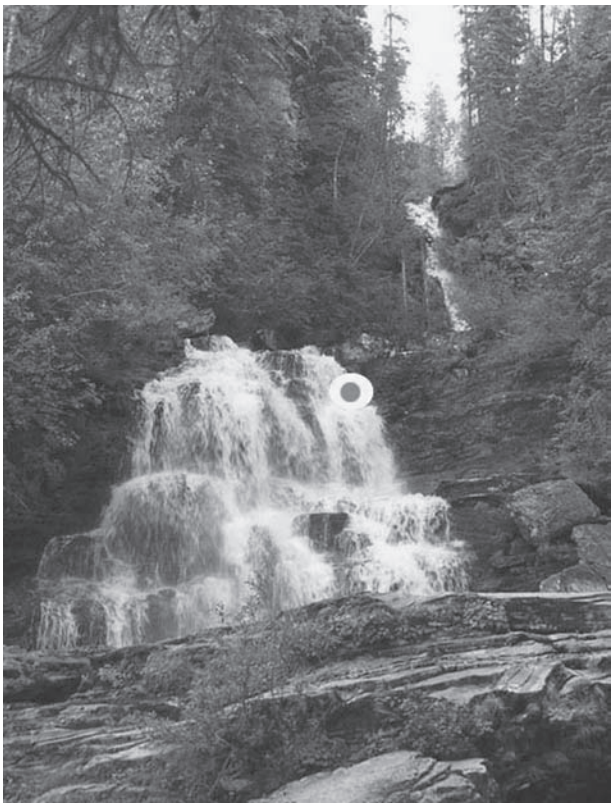


Figure 46. Location of American Dipper nest (centre dot) behind cascading water at Bijoux Falls Park, BC. 2 July 2006 (Jack Bowling). BC Photo 3518.

Family Regulidae - Kinglets (57): Golden-crowned Kinglet - 56, Ruby-crowned Kinglet - 1.

Family Turdidae - Bluebirds, Thrushes and Allies (683): Western Bluebird - 84, Mountain Bluebird - 307, Townsend's Solitaire - 11, Veery - 2, Swainson's Thrush - 21, Hermit Thrush - 6 (Figure 48), American Robin - 241, Varied Thrush - 11.

Figure 47. Juvenile American Dipper, about two days fledged, at Bijoux Falls Park, BC. 16 July 2006 (Jack Bowling). BC Photo 3519.

Family Mimidae - Mockingbird, Thrashers and Allies (9): Gray Catbird - 7, Sage Thrasher - 2.

Family Sturnidae - Starling and Allies (90): European Starling - 88, Crested Myna - 2.

Figure 48. Hermit Thrush ground nest with eggs located by Emily Müller at Knewstubb Lake, BC. on 20 June 2006 (Emily Müller).

Family Motacillidae: Wagtails and Pipits (5): American Pipit - 5.

Family Bombycillidae - Waxwings (27): Cedar Waxwing - 27.

Family Parulidae - Wood-Warblers (205): Tennessee Warbler - 1, Orange-crowned Warbler - 24, Yellow Warbler - 31, Magnolia Warbler - 1, Yellow-rumped Warbler - 30, Black-throated Gray Warbler - 8, Townsend's Warbler - 63, American Redstart - 7, Northern Waterthrush - 1, MacGillivray's Warbler - 11, Common Yellowthroat - 19, Wilson's Warbler - 5, Yellow-breasted Chat - 4.

Family Thraupidae - Tanagers (10): Western Tanager - 10.

Family Emberizidae - Towhees, Sparrows, Longspurs and Allies (238): Spotted Towhee - 25, Chipping Sparrow - 29, Clay-colored Sparrow - 1, Brewer's Sparrow - 1, Vesper Sparrow - 11, Lark Sparrow - 1, Savannah Sparrow - 11, Fox Sparrow - 3, Song Sparrow - 44, Lincoln's Sparrow - 9, White-throated Sparrow - 1, White-crowned Sparrow - 14, Golden-crowned Sparrow - 3, Dark-eyed Junco - 84, Snow Bunting - 1.

Family Cardinalidae: Grosbeaks, Buntings, and Allies (19): Rose-breasted Grosbeak - 3, Black-headed Grosbeak - 10, Lazuli Bunting - 6.

Family Icteridae - Blackbirds, Orioles and Allies (619): Bobolink - 1, Red-winged Blackbird - 248, Western Meadowlark - 6, Yellow-headed Blackbird - 152, Rusty Blackbird - 2, Brewer's Blackbird - 71, Common Grackle - 32, Brown-headed Cowbird - 67, Bullock's Oriole - 36, Baltimore Oriole - 4.

Family Fringillidae - Cardueline Finches and Allies (87): Gray-crowned Rosy-Finch - 4, Pine Grosbeak - 2, Purple Finch - 14, House Finch - 28, Red Crossbill - 8, White-winged Crossbill - 1, Pine Siskin - 9, American Goldfinch - 12, Evening Grosbeak - 9.

Family Passeridae - Old World Sparrows (33): House Sparrow - 33.

Total nests/broods – 15,141 ; 241 species
(2006 season –10,808 ; historical – 4,333)

List of Active (in bold) and Historical Contributors in Alphabetical Order

K. Adams - 1, **Linde Alexander - 1**, David Allison - 1, **Alex Anderson - 1**, E.M. Anderson - 13, **Errol Anderson - 39**, **Harvey Anderson - 1**, Harvey Anderson and Ray P. Williams - 1, Jerry and Gladys Anderson - 177, **Morgan Anderson - 10**, **W.J. Anderson - 1**, **Kris Andrews - 8**, **Kris Andrews** and **Jim Spencer - 1**, Chris Angus - 1, Anonymous - 66, Ted Ardley - 1, **Iris Armfelt - 2**, **Bethany Arndt - 2**, **Janice E. Arndt - 22**, **Janice E. Arndt** and **Elaine Moore - 9**, **Justin Arndt - 2**, Genevieve Arnold - 1, **Alfred Atkins - 3**, **Kevin Atkins - 3**, **Laura** and **Trevor Atkins** - 5**, Lloyd Atkins** - 2 (Figure 49), **Vicky Atkins - 96**, **Vicky** and **Lloyd Atkins** - 267, **Vicky Atkins** and **Alice Beals** - 45, R.N. Atkinson - 2, **Avery Bartels - 4**, and Peter Axhorn - 4.

Figure 49. Lloyd Atkins, and his wife Vicky, submitted 250 records for 47 species in 2006 of which one quarter was for Western Kingbird and Red-winged Blackbird. Here, Lloyd is repairing a Northern Flicker cavity in a birch tree that broke at the nest hole during a heavy wind. Vernon, BC. 7 May 2006 (Vicky Atkins).

B **B.C. Hydro - 1, B.C. Parks Branch - 6**, **Margaret Baker - 1**, **Geoff Barnard - 43**, Kay Bartholomew - 2, Virginia Bartlow - 1, **B. Beach - 1**, **Alice Beals - 33**, **Alice Beals** and **Betty Kerr - 12**, **B. Beam - 1**, Phyllis Becker - 1, Frank Beebe - 5, **Barbara Begg - 25**, Barbara Begg and Judy McDonald - 1, Barbara Begg and Norman Marcus - 1, Barbara Begg and Ted Hart - 1, Fred Bennie - 2, **Winifred Bennie - 1**, **Mike Bentley - 1**, **Marion Benton - 9**, **William D. Benton - 1**, Robin C. Best - 95, **Maj Birch - 1**, L.B. Bishop - 1, **Myrna Blake - 1**, **Peter Blokker - 7**, Donald A. Blood - 1, J. Boone - 22, **Jack Bowling - 1**, Dorothy Bradley - 2, **Jan Bradshaw** and **George Lucas - 1**, Slim Brecknock - 1, Peter Bricknell - 1, Gwen Briggs - 1, Tom R. Briggs - 8, Tom R. and Gwen Briggs - 28, Tom R. Briggs and Simon Henson - 1, **Tom Brighouse** and **Doug Ibbitson - 1**, Allan Brooks - 10, Allan Brooks and P.A. Taverner - 1, **E.S. Brooks - 1**, **Doug Brown - 1**, **Doug Brown** and **Donald Carruthers - 1**, **Gordon Brown - 1**, **Chris Buis - 1**, **Clyde H. Burton - 4**, W. Burton - 1, **Beverly Butcher - 119**, Robert Butler - 1, and **Isabel Buxcey - 1**.

C Giff Calvert - 16, **Jim Cameron - 2**, **Eileen Campbell - 9**, **Jim Campbell - 5**, **Lucille Campbell - 1**, **R. Wayne Campbell – 2,907**, **R. Wayne** and **Eileen C. Campbell - 760**, **R. Wayne Campbell** and **Chris Siddle - 13**, **R. Wayne Campbell** and **John Deal - 1**, R. Wayne Campbell and Ken Morrison - 2, **Robin Campbell - 1**, **Canadian Wildlife Service - 56**, Robert A. Cannings - 1, Phil Capes - 1, Clifford Carl - 1, Cathy Carr and Mark Nyhof - 1, Donald Carruthers - 1, Donald Carruthers and Ron Satterfield - 1, M. Carson - 2, Cecil Waterfowl Group - 207, Connie and Dan Chapman - 2, Al Charbonneau - 1, **Chris Charlesworth - 82**, Norm Chesterfield and Bob Walker - 1, **Vi Chungranes - 1**, **Murray Clark - 34**, J.O. Clay - 2, Kenneth Coates - 1, **A. Cober - 12**, Elaine Coderge - 1, Ed Coffin - 2, **Cyril Colonel - 35** (Figure 50), **Cyril Colonel** and **Linda M. Van Damme - 2**, John Comer - 7, **Comox Valley Naturalists Society - 2**, **Dave** and **Zita Conway** and **Evi Coulson - 1**, Aziza Cooper - 1, John K. Cooper - 12, John M. Cooper - 1, D. Copley - 1, **Evi** and **Mel Coulson - 15**, **Vic Cousineau - 40**, Christopher Coxson - 2, Jane Cross - 1, **Marjorie Crowther - 3**, and Sue Cumming and Ron Satterfield - 1.

D Milo D'Angeles - 5, **Allen Daniel. - 1**, S.J. Darcus - 4, A.R. Davidson - 7, A.R. Davidson and Leila G. Roberts - 1, A.R. and Eleanore Davidson - 8, A.R. Davidson and Ron Satterfield - 1,

Figure 50. Cyril Colonel documenting the nests of a Great Blue Heron colony in the Creston valley, BC. His annual report contains a complete photo-record of nests in trees before spring leafing through to fledging of young when it is challenging to find the nests. 20 February 2006 (Linda M. Van Damme).

Eleanore Davidson - 4, Eleanore and A.R. Davidson - 1, Eleanore Davidson and Ron Satterfield - 1, **Gary S. Davidson - 22**, Gary S. Davidson and Alice Beals - 1, Gary S. Davidson and Chris Siddle - 1, Gary S. Davidson and Larry Halverson - 1, Lyndis Davis - 4, Lyndis Davis and Jack Collins - 2, Cliff Day - 14, Charles de Blois Green - 9, Mrs. W.D. De Silva - 1, **John Deal - 1**, **John Deal** and **R. Wayne Campbell - 11**, **Dennis A. Demarchi - 1**, Raymond A. Demarchi - 1, Raymond A. Demarchi and Jack U. MacKill - 9, Lukas Dewitt - 2, Brent Diakow - 4, **Dorothy Diduck - 21**, **Jochen Dierschke** and **Peter W. Jones - 1**, **Adrian Dorst - 3**, B. Doughton - 1, **Ducks Unlimited Canada - 55**, Len Dunsford - 1, **Pauline Dupas** and **Bob Stubbs - 1**, and **Linda Durrell - 137**..

E **Mike Edgell - 2**, Barry Edwards - 1, R. Yorke Edwards and Harold Hosford - 1, Roger Edwards - 1, K. Egger - 1, Gladys Elliot - 2, **Peter Elliot - 12**, Maurice Ellison - 1, Alice and Marjorie Elston - 1, and Anthony J. Erskine - 1.

FMary Fallis - 1, John Fanin - 1, **Mrs. H. Ferguson - 1**, Joyce Fitz-Gibbon - 19, M.R. Flahaut - 1, Ethel Fogarty - 1, **Lorraine Fontaine - 1**, L. Scott Forbes - 14, Bruce Ford - 1, H.A. Ford and Tim Zurowski - 1, **J. Foster - 33**, J. Bristol Foster - 8, David C. Fowle - 2, D.H. Franklin - 214, David F. Fraser - 11, Richard Fraser - 1, D. Lorne Frost - 3, D. Lorne Frost and R. Wayne Campbell - 1, and Ralph Fryer - 2.

GKim Gage - 3, Kim Gage and Tony Buckle - 1, George Galicz - 1, Joe Gardner - 2, Jan Garnett - 1, Jeff Gaskin - 35, Bryan Gates - 3, Bryan Gates and Barbara Begg - 1, Tracee O. Geernaert - 4, **Geological Survey of Canada - 1**, **George C. Reifel Migratory Bird Sanctuary - 47**, Arthur Gibson - 1, Art Gillan - 1, **G.T. Gillespie - 1**, Graham Gillespie - 1, W. Gillick - 1, **J. Ginns - 173**, W. Earl Godfrey - 1, **Tom Godin - 1**, Sharon Godkin - 1, J.E.V. Goodwill - 89, J.E.V. Goodwill and Kim Gage - 1, **J.E.V.** and **M.E. Goodwill - 140**, J.E.V. Goodwill and Ron Satterfield - 16, M.E. Goodwill - 1, M.E. Goodwill and Leila G. Roberts - 1, **J. Paul Goossen - 55, Hilary Gordon - 4**, **Hilary** and **Orville Gordon** - 1, **Hilary Gord**on and **F. Kike** - 30, **Orville Gordon - 25**, **Orville** and **Tim Gordon - 1**, **Ted Goshulak - 2**, **Ted Goshulak** and **Stan Olson - 2**, **Trevor Goward - 4**, Douglas J. Graham - 118, T. Grainger - 1, James Grant - 30, Al Grass - 5, Ron Gray - 1, H. Green - 76, J. Green - 3, **Tony Greenfield - 5**, Barb and Mike Grenere - 1, **Christian** and **Aileen Gronau - 2**, Charles J. Guiguet - 20, and **John Gwilliam - 2**.

HDoug Haddow - 1, Alan Hall - 1, **Chris Hamilton - 2**, M.E. Hanry - 2, **Willie Haras - 54**, George A. Hardy - 4, **Mary Harrington - 1**, **M. Harris - 2**, F.Gordon Hart - 1, John and Mark Hart - 1, John and Mary Hart - 2, Ted Hart - 1, Merle Harvey - 1, **M. Harwell - 141**, Sharon Hassell - 2, David F. Hatler - 20, Robert B. Hay - 10, Robert B. Hay and J.E.V. Goodwill - 2, Robert B. Hay and Keith Taylor - 1, W. Grant Hazelwood - 1, Rick Healy - 1, **Ruth Hellevang - 4**, Simon Henson - 16, Simon Henson and Ron Satterfield - 1, J. Hepburn - 1, Brenda Herbisor - 1, **Werner and Hilde Hesse - 6**, **Ted Hillary - 213** (Figure 51), Jim Hilton - 1, **Mark Hobson - 3**, Martin W. Holdom - 1, J. Holman - 1, Beryl Holt - 5, Beryl and John Holt - 2, Bob and Mary Hooper - 2, Tracey D. Hooper - 3, Otto Horvath - 2, Harold Hosford - 1, Bob Houston - 1, Bob Houston and Mark Nyhof - 1, **Richard R. Howie - 11**, Richard R. Howie and R. Wayne Campbell - 1, Richard R. Howie and Sid Roberts - 1, **Margaret Hubble - 2**, and **Pat Huet - 3**.

Figure 51. Ted Hillary scanning Salmon Arm Bay for waterbird broods. Shuswap Lake, BC. 15 June 2004 (Craig Pulsifer). Each year Ted reports hundreds of breeding records for the Salmon Arm region with detailed field notes and follow-up observations. He is one of the few contributors who regularly records the activities of all fledged birds at his feeders.

IDoug Innes - 6, **Marion Innes - 2**, Doug and Marion Innes - 7, and **J. Ireland - 1**.

JBilly Jack - 1, **Chris Jamieson - 1**, **J. Janne** and **Karl Perrin - 4**, **Doreen Janzen - 20**, Pat Jeffers and Leila G. Roberts - 1, **Len Jellicoe - 7,** Richard S. Jerema - 138, Leo Jobin - 5, **Gordon Johnson - 198**, **Paula Johnson - 1**, **Vanessa Johnson - 1**, Stuart Johnston - 1, **Marlene Johnston - 40**, Walter B. Johnstone - 19, **David Jones - 1**, **Jason Jones - 1**, and P. Jones - 2.

KFritz Karger - 3, Joanne Keber - 1, **Kevin Kelleher - 2**, J.E.H. Kelso - 7, **Sue Kempster - 1**, **Ken Kennedy - 10**, **Frank Kime** and **Ted Hillary - 27**, **Bill Kincaid - 1**, Joan King - 1, Sandra Kinsey - 1, Ethel Kippin - 483, Ken Klimko - 2, Richard W. Knapton - 1, Anne Knowles - 2, Anne Knowles and Alice Elston - 1, Lee Koza - 1, **Nancy Kreuger - 58**, **Nancy Kreuger** and **Cathy Antoniazzi - 22**, **Nancy Kreuger**, **Dan Dunlop** and **Sandra Kinsey - 1**, **Nancy Kreuger** and **Laird Law - 1**, and **Nancy Kreuger** and **Steven Lawrence - 2**.

LD. Labrocq - 5, **Elsie Lafreniere - 17**, **Elsie Lafreniere** and **Nancy Kreuger - 11**, Hamilton M. Laing - 3, **John** and **Vi Lambie - 87**, **Vi** and **John Lambie - 3**, **Barry M.B. Lancaster - 1**, Arthur N. Lance - 1, Fenwick Lansdowne - 1, **Steven Lawrence - 3**, Sue Lawrence - 1, Barbara Leckie - 1, Martin C. Lee - 3, **Douglas Leighton - 1**, Enid K. Lemon - 3, Sylvain M. Lessard - 98, Edith Levey - 1,

Pat Levitt - 20, Molly Lines - 2, **Bonita Lingenfelter - 1**, **Marcia Long- 5**, Nancy Lovett - 1, **Betty Lunam - 1**, **Betty** and **Jim Lunam - 1**, Robert E. Luscher - 3, and Robert E. Luscher and Lee Straight - 1.

MR.R. MacFarlane - 1, **Marlene Machmer - 26**, Violet MacKay - 2, **Ken MacKenzie - 1**, R. MacKenzie-Grieve - 36, R. MacKenzie-Grieve and P. Ray Williams - 2, Alan MacLeod - 28, **Mary Madden – 1**, W.S. Maguire - 2, **Dianne V. Maloff - 11**, **Daphne Manning - 1**, Norman Marcus - 2, Nancy Marko - 1, Jim Marshall - 1, Kathy Martin - 2, Patrick W. Martin - 7, **Wayne Matkoski - 1**, Hylda Mayfield - 1, Peter Mayfield - 1, Bernadette McCabe - 1, James W. and Emma McCammon - 1, **Murray McDonald - 1**, **Glen** and **Isabel McInnes - 8**, **Peter McIver - 1**, **Ed McMackin - 34**, Michael McNall - 1, Bruce McNaughton - 1, **Martin K. McNicholl - 144**, Barbara and Michael Meiklejohn - 11, Barbara Meiklejohn and Ron Satterfield - 1, A.L. Meugens - 25, A.L. Meugens and J.K. Cooper - 8, A.L. Meugens, J.K. Cooper and N. McNeil - 1, A.L. Meugens and Ken Kennedy - 1, A.L. Meugens and D. Lorne Frost - 2, A.L. and M. Meugens - 3, A.L. Meugens and N. McLean - 2, Harry Middleton - 2, **Don Miller - 4**, **H. Miller - 2**, G. Mitchell - 1, **Pat Mitchell - 1**, **Ray Mitchell - 1**, **Roy Mitchell - 8**, Pat and Barb Molinaro - 1, **Elaine Moore - 4**, G. Morgan and E.M. Tait - 1, A.L. Morris and Derick MacDonald - 1, Ken P. Morrison - 3, Terry Morrison - 1, S. Mosher - 1, Dave Mossop - 1, K. Moyle - 1, Allister Muir - 1, **Emily Müller - 20** (Figure 52), **Emily Müller** and **Kara Cory - 1**, David A Munro - 2,

Figure 52. Emily Müller waiting to take a Cessna 185 flight to locate Caribou in the Chase/Sustat region of British Columbia on 17 June 2006. Emily, now a third-year student at the University of Northern British Columbia, has been watching and recording wildlife in the Germansen Landing area for the past decade.

James A. Munro - 662, O.J. Murie - 2, M.T. Myres, and W.D. McLaren - 1.

N**Eve J. Neale - 20**, **Laure Neish - 1**, R. Wayne Nelson - 64, C.F. Newcombe - 1, **Brian Nicola - 16**, **Elizabeth North - 2**, North Okanagan Naturalists' Club - 3, **Ivar Nygaard-Petersen - 113**, **Mark Nyhof - 644**, and **Mark Nyhof** and **Ron Satterfield** - 1.

O Derek O'Brien - 34, Gordon C. Odlum - 124, **Peter Olesky - 2**, **Stan Olson - 3**, and **Jim Owens - 1**.

P**Henry** and **Philip Palmer** and **Jesse Blackmore - 4**, **Parks Canada Staff - 12**, **M. Parsons - 1**, R. Parsons - 1, Mary Pastrick - 3, **J. Patterson - 1**, W. Adrian B. Paul - 16, **John Payne - 1**, **Mrs. John E. Payne - 1**, Theed Pearse - 4, **Ed Pellizon - 3**, D.F. and C. Penner - 1, **J. Janne Perrin - 77**, **J. Janne Perrin** and **Bona Ballie - 1**, **Karl Perrin - 2**, Vi Peters and P. Ray Williams - 2, Brian J. Petrar - 16, **Mark Phinney - 47** (Figure 53), Harold Pollock and Charles Trotter - 2, Alf Porcher - 4, **David Powell - 1**, **G. Allen Poynter - 36**, **Michael** and **Joanna Preston – 1,105**, Roy Prior - 7, Roy Prior and J. McGeoch - 1, Roy Prior and Mark Nyhof - 1, **Sandy Proux - 207**, and **Jean Puize - 1**.

Figure 53. Veronica Phinney holding a Hooded Merganser egg while her dad, Mark, checks a nearby nest box. Arras, BC. 14 May 2005 (Mark Phinney).

RKenneth Racey - 12, Helen Rachini - 1, Leah Ramsey and David Fraser - 1, A.L. Rand - 1, Sandy Rathbone - 1, Sandy Rathbone and George P. Sirk - 1, **Tony Reese - 1**, **Trish Reid - 1**, Tom E. Reimchen - 1, **Sheila Reynolds - 18**, **Derek**

Rhind - 1, S.N. Rhoads - 1, Diane Richardson - 1, **Leslie Richardson - 1**, **Dirk Rinehart-Pidcock - 12**, **Dirk Rinehart-Pidcock** and **Gail Spitler - 16**, **Anna Roberts - 122**, Leila G. Roberts - 47, Leila G. Roberts and Lyndis Davis - 1, Leila G. Roberts and Ron Satterfield - 3, Robin D. Robinson - 1, **Laurie Rockwell - 25**, Michael S. Rodway - 3, **Linda Ronayne - 1**, Royal Ontario Museum - 1, **Glenn R. Ryder - 251** (Figure 54), and **S. Rymar - 1**.

Figure 54. Glenn Ryder continues to be one of the top nest-finders in the province having 64 years of experience under his belt. Sechelt, BC. 20 May 2001 (R. Wayne Campbell).

SKarl Sars - 7, Ron Satterfield - 185, Ron and Joy Satterfield - 92, Ron Satterfield and J.E.V. Goodwill - 38, Ron Satterfield and Leila G. Roberts - 2, Ron Satterfield and Marjorie Crowther - 1, Ron Satterfield and Mark Nyhof - 1, Ron Satterfield and P. Ray Williams - 2, Ron Satterfield and Rick West - 1, Ron Satterfield and Simon Henson - 2, Carrie Saxifrage - 2, **John Saxon - 1**, Ann Scarfe - 1, **Lorraine Scott - 1**, **Barbara M. Sedgwick - 8**, K.E. Seel - 2, **Bill Sendall - 1**, **John Shelford - 1**, **C.A. Shepard - 1**, Chris D. Shepard - 113, Michael G. Shepard - 10, Michael G. and Teresa G. Shepard - 1, Michael G. Shepard and P. Ray Williams - 1, T. Shepard - 1, **Jane Sheppard - 1**, P.M. Shillaken - 1, Ervio Sian - 1, **Chris Siddle - 402**, Chris Siddle and Gary Davidson - 1, **Ed Silkens - 47**, Fred Simpson - 15, **Jim Sims - 7**, George P. Sirk - 9, Luke Skulmoski - 1, Bud Smith - 1, Tom Sowerby - 1, Lynn Spears - 1, Win Speechly and Leila G. Roberts - 1, William Spreadborough - 4, Pam Stacey and Robin Baird - 3, J. Stainer - 21, Eldon Stanley - 1, **Elsie Stanley - 8**, **Glen** and **Elsie Stanley - 1**, Ordell Steen - 1, Andrew Stepniewski - 19, D. Stewart - 2, **R. Stewart - 1**, Ronald M. Stewart - 1, **David Stirling - 156**, Ron Stoneberg - 1, Bonnie Storm - 2, Jim and Hazel Street - 2, **R.D. Sullivan - 1**, **Lorna Surina** - 1, Harry S. Swarth - 8, Pat Swift - 1, **Lorraine Symmes - 8**, **Lorraine Symmes** and **Bobbi Huber - 1**, and **Lorraine Symmes** and **Pat Forsyth** - 1.

TE.M. Tait - 1, Jeremy B. Tatum - 21, Jeremy B. Tatum and K. Sars - 1, Jeremy B. Tatum and Leila G. Roberts - 1, Jeremy B. Tatum and Richard Sewell - 1, P.A. Taverner - 15, **E. Taylor - 1**, **Gwen Taylor - 1**, Keith Taylor - 6, Keith Taylor and Tim Zurowski - 1, **Howard A. Telosky - 4**, **Julie Thompson - 1**, **Robert L. Thompson - 2**, **Ken Thomson - 1**, **Jack Todd - 2**, Terese Todd - 1, J.W. Tolmie - 2, Paul Tracy - 1, Neil Trenholme - 50, Charlie Trotter - 15, Charlie Trotter and Lyndis Davis - 1, **John Tschopp - 2**, Eric Tull - 1, **Margaret Turner - 2**, and Danny Tyson - 1.

U**University of British Columbia students - 1**, M.D.F. Udvardy - 1, and **Joel Ussery - 2**.

V**Vancouver Natural History Society - 1**, **Linda M. Van Damme - 469**, **Linda M. Van Damme** and **Cyril Colonel – 16** , **Linda M. Van Damme** and **Marcia Long - 4**, Gerard F. Van Tets - 336, Kevin Van Tighem - 14, Kees Vermeer - 1, **Victoria Natural History Society - 9**, and **Bridgit** and **Kevin Vogan - 1**.

WCarson Wade - 1, Margaret Wainwright - 3, **Betty Walker - 8**, **R. Walker - 1**, Ruben Ware - 1, Ruben Ware and Guy R. Crowther - 1, **David** and **Mary Warren - 1**, Ross G. Waters - 2, Robin W. Weber - 1, **Wayne C. Weber - 3**, **Rita Wege - 22**, **Rita Wege** and **Janice Arndt - 10**, **Rita Wege** and **L. Prosser - 24**, Rick West - 4, D. Weston - 1, Stephen P. Wetmore - 1, Edward G. White - 1, **F.G. White - 1**, Mildred V. White - 1, **Michelle** and **Wayne Whitmore - 1**, B.W. Whitney-Griffiths - 1, Bruce Whittington - 24, **Karen L. Wiebe - 3**, **D. Wilby - 1**, **Brenda Williams - 2**, Dorothy and Jack Williams - 1, **Kerry Williams - 1**, **M. Williams - 1**, and **Marg Williams – 1, P. Ray Williams - 141,** P. Ray Williams and Bruce Whittington - 1, **P. Ray** and **Kerry Williams - 1**, Joanne Winnedge - 6, **Marcus Womersley - 12**, **Doug Wood - 1**, **Sarah Wood - 1**, Michael Woolfe - 48, David Woolgar - 1, **Sidney L. Woskiewich - 1**, Ann Wrenshall - 4, **E.M. Wright - 38**, Gwen Wright – 1, and J. Wynne - 8.

Y Robin Yellowlees - 1, **Don Young** and **Jennifer Bergen - 7**, and Ian Yule - 2.

Z Tim Zurowski - 16, and Fred C. Zwickel - 12.

Total Contributors - 580
(Active - 259; Historical - 321)

Wildlife Workshops and Extension

Workshops and lectures continued as time permitted. Taking time to explain the importance of the BCNRS, and its function in conservation, to individuals and groups has rewarding returns. Not only are more eyes in the field looking for breeding records, but also the way the information is gathered and documented is increased. This year we are encouraged by the interest from individuals in industry and tourism.

WILDLIFE ALERT

Common Loon/Canada Warbler

As promised, an updated account for the Common Nighthawk (Figure 55) in British Columbia was written and published in 2006 (*Wildlife Afield* 3:32-71). We have already had many requests for the account since it is showing declines in many North American cities and the general consensus is that the species is declining over much of its range. Thanks to your support we were able to produce a major report that highlighted not only the breeding biology but conservation concerns.

There is widespread concern about the future of the Common Loon in eastern North America. Human disturbance, acid rain, chemical pollution, entanglement, and over-fishing may be contributing to local declines. Although we have not had the same "red flags" in British Columbia we have decided to prepare a full, updated account that will serve as the definitive base for future conservation concerns.

Numbers of Canada Warblers have apparently been decreasing in parts of their eastern range over the past few decades. Since the species has now expanded its range into northeastern British Columbia, COSEWIC has included the full range in its request for a status report.

Over the summer we will be pulling together information for this woodland warbler and hopefully we will have enough new information to publish an updated account in *Wildlife Afield* in the autumn.

Figure 55. Our extensive databases showed that the breeding range of the Common Nighthawk has increased in British Columbia over the past few decades, probably due to opening up land for agriculture. Still, the species is declining in some areas of the province. Juniper Beach Park, BC. 8 July 1999 (R. Wayne Campbell).

LONG-TERM MONITORING AND INVENTORY PROJECTS

Each nesting season, the **Biodiversity Centre for Wildlife Studies**, with help from field naturalists, industry, and universities, monitors wetland species, colonially-nesting species, and raptors throughout the province. It is part of a long-term wildlife monitoring program that also includes wildlife road mortality observations and roadside raptor counts.

We also actively survey specific areas every year while at the same time, in the off-season, transfer historical information for those sites such as Swan Lake near Vernon.

In 2006, projects directly related to the **Nest Record Scheme** included surveys of **colonial-nesting fresh-water birds** (e.g., Eared Grebe, Western Grebe, Double-crested Cormorant, Great Blue Heron, Herring Gull, Ring-billed Gull, California Gull, Forster's Tern, and Black Tern); **terrestrial bird colonies** (e.g., Purple Martin and Bank and Cliff Swallows); **nest box trails**; **raptor nests** (e.g., Osprey, Bald Eagle, and Red-tailed Hawk); and four species of **owls**.

This year we have summarized some of the findings in more detail

Nest Box Trails

Thousands of nest boxes have been built and placed around the province mainly for bluebirds, waterfowl, and owls. Often other species benefit from these artificial structures and in 2006 the following 29 species were reported using nest boxes: **Wood Duck, Common Goldeneye**, **Barrow's Goldeneye**, **Hooded Merganser**, **American Kestrel**, **Western Screech-Owl**, **Northern Saw-whet Owl**, **Downy Woodpecker**, **Northern Flicker**, **Purple Martin**, **Tree Swallow**, **Violet-green Swallow**, **Black-capped Chickadee**, **Mountain Chickadee**, **Chestnut-backed Chickadee**, **Red-breasted Nuthatch**, **White-breasted Nuthatch, Pygmy Nuthatch**, **Brown Creeper**, **Bewick's Wren**, **House Wren**, **Western Bluebird**, **Mountain Bluebird**, **American Robin**, **European Starling**, **House Finch**, **House Sparrow, Red Squirrel** (Figure 56) and **Deer Mouse**.

Figure 56. Occasionally Red Squirrels enlarge the opening to bluebird boxes and enter the structure to raise their families. Mather Creek, BC. 13 May 2006 (Michael I. Preston). BC Photo 3485.

We are grateful to the following Individuals who monitored nest boxes in 2006 and submitted their information on cards or summary sheets: **Vicky** and **Lloyd Atkins** and **Alice Beals** (north Okanagan valley), **Clyde Burton** (Powell River), **Beverly Butcher** (Cariboo), **Wayne** and **Eileen Campbell** (east Kootenay, Kamloops, and Dragon Lake), **Cyril Colonel** (Creston valley), **Vic Cousineau** (Lister), **Clifford A. Day** (Vernon), **Jim Ginns** (Okanagan Falls), **Hilary Gordon** (Chase to Pritchard), **Willie Haras** (Kamloops), **John** and **Vi Lambie** (Mackenzie), **Michael** and **Joanna Preston** (east Kootenay. Pritchard, and Peace River region; Figure 57), **Eve Neale** (Telkwa), **Ivar Nygaard-Petersen** (Powell River), **Sandy Proulx** (Riske Creek), **Dirk Rinehart-Pidcock** (Argenta and Kaslo), **Anna Roberts** (Meldrum Creek), **I. Laurie Rockwell** (Summerland), **Glenn R. Ryder** (central Fraser River valley), **Ed Silkens** (Campbell River), **Linda Van Damme** (Creston valley), **Betty Walker** (Oliver), and **Rita Wege** and **Larry Prosser** (West Kootenay).

Figure 57. Joanna Preston checking a Common Goldeneye nest box. Trapping Lake, BC. 30 May 2006 (Michael I. Preston).

Most nest cards submitted for boxes included the actual **box number** usually printed in the upper left corner of the card. This is very helpful when analyzing data because several different people may visit many of the trails during the summer. For example, the nest box trail extending from Kamloops east to the Pritchard area on the north side of the South Thompson River was checked by six different people in 2006.

Willie Haras noted that in one nest box near Kamloops he had three **Mountain Bluebird** broods in 2006. The first nest was started 8 April and on 6 July there were five nestlings of the third brood still in the box.

Wetland Monitoring

Colonial-nesting fresh-water birds were again surveyed in some lakes, marshes, sloughs, beaver ponds, and along rivers. Each species is discussed below.

Ring-billed Gull

Thorough surveys for three major colonies (e.g., Shuswap Lake, Quesnel, and Fraser Lake) were completed. While Ring-billed Gulls were affected by fluctuating water levels other species that also nest at the same site (e.g., Herring Gull and California Gull) faired better. The Christmas Island site, near Salmon Arm, was surveyed independently by three groups including naturalists from the Shuswap area.

The colony at Quesnel is unique in that pairs are nesting on the ground in a "forest" of black cottonwoods, some of which have grown to seven metres or more**.**

Western Grebe

The success of two colonies this year seemed to be impacted by rising water levels and wind storms, both natural events that have plagued all colonies in the province since the early 1900s

Salmon Arm

On 4 June Ted Hillary reported: the Western Grebes are trying to nest in at least two areas of their traditional site north of the government wharf, on Christmas Island (which is almost completely flooded), and west of the government wharf near the Nature Park.

There seem to be 50-60 pairs scattered throughout their original breeding grounds. There were 15-16 nests on Christmas Island, but most have been flooded out. There are 4-5 nests near the Nature Park, but the water is still coming up and some are getting washed out. In both places, the grebes continue to be actively building nests.

Duck Lake, Creston

Linda Van Damme completed her 12th year of monitoring the nesting activity of Western Grebes on Duck Lake near Creston. This season, the grebes built nests on the lake's dense mats of milfoil only 200 m from shore, offering an opportunity for good viewing through a spotting scope. A rainstorm with high winds on 7 July displaced some nests, which were blown to shore and abandoned. With this event one nest was discovered which contained two Western Grebe and three Red-necked Grebe eggs (*Wildlife Afield* 3:121-125).

Several pairs of Western Grebes were successful in hatching young after this first storm and before the next major storm on 31 July, which completely destroyed all nests.

Unpredictable weather can seriously impact the breeding success of nesting grebes on Duck Lake (Figure 58).

Figure 58. Western Grebe nest blown ashore during storm at Duck Lake, BC. 7 July 2006 (Linda M. Van Damme).

Great Blue Heron

Keeping track of **Great Blue Heron** nesting sites continued throughout the province. Nest sites ranged from a single isolated nest (near Kamloops) to hundreds in a mixed conifer-hardwood forest on the cliffs near the Tsawwassen ferry jetty. All colonies were photographed, copies of which have been added to the **BC Photo File for Wildlife Records** and cross-referenced to nest cards. Photo-documentation usually included a series of images of the entire colony site as well as individual trees with nests (Figure 59).

Some contributors were thinking about the future and the importance of having on file more specific information about a colony. At **Powell River**, **Ivar Nygaard-Petersen** provided a detailed map of the position of each nest tree, the number of individual trees, and the total nests they contained for the entire colony (Figure 60). He also followed through with visits to obtain productivity and ventured into the colony to record any dead nestlings on the ground.

Figure 59. Part of a Great Blue Heron colony west of Kamloops, BC. 21 April 2006 (R. Wayne Campbell). BC Photo 3516. On this visit most adults were standing on nests, displaying, and copulating, but not yet incubating.

In the Creston valley, **Linda Van Damme** and **Cyril Colonel** have made nesting Great Blue Herons a personal project and together have logged more than a hundred observation hours. They start before the herons arrive and follow through until the last nestling has fledged, a 5 1/2-month season. Details are recorded on nesting activities (Figure 61), colony size, reproductive success, interactions with recent nesting Double-crested Cormorants, trends, and behaviour to potential bird predators.

The fulfillment of their efforts is the commitment to publish results of their study. One paper, *Common Raven Steals and Caches Eggs of the Double-crested Cormorant in the Creston Valley, British Columbia* has already appeared in print (*Wildlife Afield* 3:22-25). More will follow!

Some heronries are not reported to the BCNRS and each year information is sent elsewhere, both within and outside the province. We encourage individuals when time permits to forward us a copy when contributing to other sources.

Osprey

All regular contributors continued to monitor the breeding success of Osprey in select regions of the province. Usually short-term monitoring projects do not show immediate trends and it takes a major commitment to faithfully gather data so over the long-term results do reveal the health and future of Ospreys.

We welcome **Sheila Reynolds** and **Judy Winterbottom** who initiated Osprey nest monitoring this season in the Cranbrook to Wasa region of the East Kootenay.

Many other contributors submitted cards for Osprey nests they discovered while travelling around the province. While scattered, many of these single nests turn out to be a mini-monitoring activity in themselves. For example, we have over 30 years of continuous data for nests along the east side of Nicola Lake because infrequent travelers report their observations.

Results for areas regularly surveyed in 2006 are as follows:

West Kootenay (Arrow Lakes)

Nests were not surveyed as **Gary Davidson** spent the year travelling in Australia.

West Kootenay (Balfour to Waneta)

Janice Arndt, **Elaine Moore**, **Larry Prosser**, and **Rita Wege** celebrated a milestone this season in completing their 10th consecutive year of monitoring nesting Osprey (see *Wildlife Afield* 3:125-133 for their 10 year summary). Their survey area stretches from Balfour in the north to Waneta in the south, the shore of the West Arm of Kootenay Lake, and the Kootenay and Columbia Rivers.

In total 53 potential nest sites were found, that is, sites where nesting material was present. Of those 53 nests, there were only 15 (28 %), that produced and/or fledged a total of 27 young. While this is a bit lower than the last three years (e.g., 34, 39, and 35 young), the average number of young per nest (1.8) was slightly above the average of 1.7 young per nest.

Only two of the 15 productive nests were built on trees, the remainder were built on pilings, channel markers, hydro towers, dams, or utility poles. One nest was on a platform atop of a tree, but this is

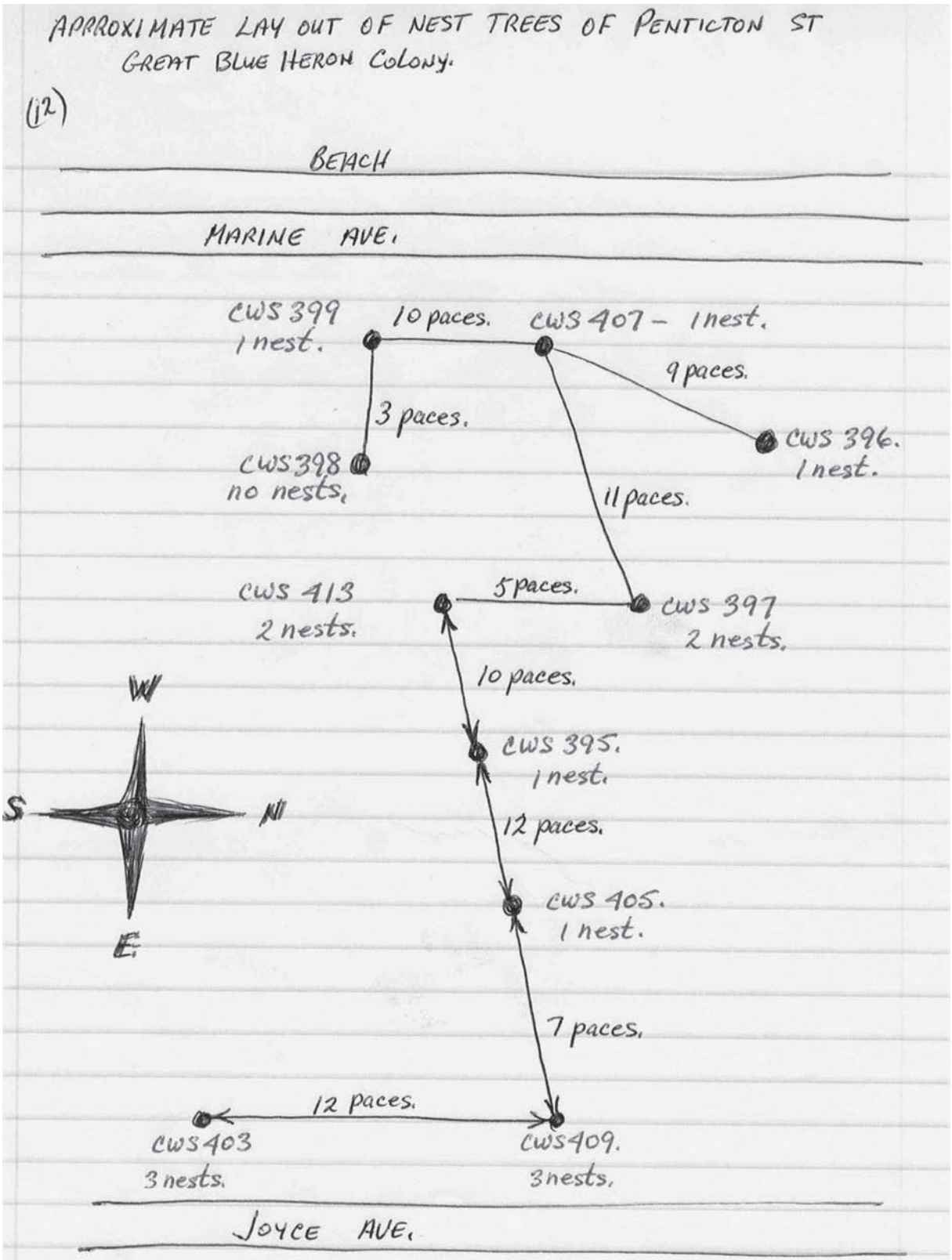


Figure 60. Field sketches of the general location of Great Blue Heron colonies, along with precise GPS co-ordinates, and individual nest trees is important to have on file each year. In 2006, the Penticton Street heronry in Powell River contained 15 nests in 10 nest trees, all red alder. (sketch by Ivar Nygaard-Petersen).

Figure 61. Linda Van Damme and Cyril Colonel have been monitoring the occupancy and reproductive success for individual nests in a large Great Blue Heron colony in the Creston valley, BC. 4 April 2005 (Cyril Colonel). BC Photo 3517.

counted as human-made since someone climbs up there every year or so to trim the branches back so that the nest remains accessible to the Osprey! Canada Geese were firmly entrenched in four of the 15 nests at the beginning of the season

Creston Valley (US Border to South Kootenay Lake)

For the 9th consecutive year **Linda Van Damme** and **Cyril Colonel** monitored Osprey nests built on power poles in the agricultural lands and in black cottonwood trees along the Kootenay River, and on pilings at the south end of Kootenay Lake. The average number of young per productive nest was 1.6. One nesting adult perished this season from electrocution. Nests built on energized power poles can be a real hazard to Ospreys and in 2006 two poles burned down.

East Kootenay (Cranbrook, Wasa and West Wardner)

Sheila Reynolds and **Judy Winterbottom** were enthusiastic about initiating monitoring of this Osprey population. In this first season they were successful in locating and visiting seven active nests which fledged 10 young for an average of 1.4 young/nest. One nest was built in a ponderosa pine snag, three on de-energized poles installed for Ospreys, while the remainder were on energized power poles.

In addition they visited an active nest at the Galloway Mill near Jaffray but were unable to confirm the number of young. On 3 August they observed 2 adult birds and 1 young fishing at St. Mary's Lake, but were unable to locate a nest site. Maybe next year?

Both Sheila and Judy suspect that strong winds in the spring destroyed nests on the power towers crossing the Kootenay River along Fenwick Road.

On one trip out, they watched an adult Osprey dive into the Kootenay River four times before being successful at catching a fish. The river was still quite high and muddy.

Salmon Arm

Edward Hillary recorded the complete season for Ospreys nesting around **Salmon Arm** including the government wharf, Christmas Island, and the marina. His detailed notes included arrival and departure times, nesting activities, and fledging dates. Some nests had over 20 visits over the full nesting period.

Osprey Management, Conservation and Stewardship in the Kootenays

Many Osprey throughout the East and West Kootenay region select power poles as a base from which to build a nest. The huge stick nests built on the double cross arms at the top of energized power poles often cause power outages and fires when sticks interfere with electrical conductors. With the Osprey's impressive 1.5 metre wingspan, nest building runs the risk of electrocution when the wings touch wires completing the circuit between conductors and grounded wires.

Three of the Osprey nests discovered in the Wasa, Cranbrook, and Wardner area of the East Kootenay are on poles installed by *BC Hydro* exclusively to provide a safe nesting site for the Osprey.

In the autumn of 2006, a power pole burned to the ground in West Creston. For the people, *Fortis BC* (formerly West Kootenay Power and Aquila) installed a new energized pole complete with a transformer, "single" cross arms and a new style of deterrent and for the osprey a taller pole with "double" cross arms, a wide nesting platform and no electrical current (Figure 62). Additional poles have been installed at other locations such as Nick's Island Road north and on the Lower Kootenay Indian Band Lands.

Figure 62. New Osprey nesting pole and platform installed by *Fortis BC* in West Creston 20 October 2006 (Linda M. Van Damme).

Imasco Minerals Incorporated, western Canada's largest producer of stucco located at Sirdar above the eastern slope of Duck Lake in the Creston valley have three nesting platforms on site. Prior to 2003, the company had problems with a pair of Osprey building a nest in the head rig work platform of the plant. To alleviate this problem they built a nesting platform in close proximity on a topped pine tree This nest was used for several years then abandoned. A second platform was built southwest of the original site but was never used. A third platform was installed south of the second and was used by the Osprey (Figure 63). The employees enjoy having the Osprey on site.

Along the Nelson to Waneta route are the hydroelectric dams built on the Kootenay and Columbia Rivers (Figure 64). Over the years the Osprey have built their big stick nests on the dam structures. *Fortis BC* has taken an active role in safety for employees as well as for the Osprey to ensure the stick nests are not interfering with the operational functioning of the dam. Upright metal structures have been built to encourage Osprey nest building and are actively used.

Along the Arrow Lake, locals proudly refer to the stretch of highway between Nakusp and Needles as "Osprey Way". A helicopter survey conducted by *BC Hydro* in 1994 along this stretch of highway discovered 29 Osprey nests built on the towers. The Nakusp Chamber of Commerce initiated a project to involve BC Hydro and the Ministry of Transportation. The interpretive signs a traveler sees at the pullout just south of Nakusp and at the Needles rest area were paid for by BC Hydro and installed by Highways Department. People working together**.**

Gary Davidson writes: "*The Nakusp Chamber of Commerce initiated the entire project and asked highways to re-name the highway "Osprey Way", but it didn't officially happen. A meeting between the Chamber, BC Hydro and Highways was held and all parties agreed to the participate in some way. BC*

Figure 63. The active nest site in 2006 was this platform installed on a ponderosa pine tree near the office building at Imasco. 23 July 2006 (Cyril Colonel).

Figure 64. Osprey nest site at Upper Bonnington Dam, 7 April 2002 (Larry Prosser).

Figure 65. Mitigation and education programs to inform the public about nesting Ospreys has been supported by BC Hydro. Needles, BC. 1 March 2007 (Gary S. Davidson).

Hydro paid for the signs (Figure 65), and highways erected them, one at their rest area at Needles and one at a viewpoint pullout just south of Nakusp. The helicopter survey was done in April 1994, and yes, I did go with Bob Bradley on that survey. We found 29 towers with nests, although some were either only partially completed or in disrepair. Since that time an additional 44 nests have been at least started, (not all were completed). Complete surveys are not possible every year, but I have done quite thorough surveys in the years: 1994, 1995, 1998, 2002, 2003, and 2005. In the early years, (94, 95 and 98), an average of 11 nests per year produced young. In the later years, (02, 03 and 05) an average of 17 nests per year produced young. Despite this increase, it is interesting to note that the total number of young produced per year has not changed. An average of 23 in the early years compared to 24 in later years."

The United States Government Service published a useful brochure for mitigation activities for Osprey nests in Oregon and Pacific Northwest. They recommend:

1. Alternative solutions are best implemented after the breeding season. If nests are interfering with the electrical supply during the breeding season, pruning of the long nest sticks can help prevent immediate power outages.

2. Nests built on channel markers can potentially block the view of navigation lights, nests can be accommodated by constructing lateral nest platforms away from lights.

3. A variety of nest deterrent devices are available to discourage nesting on activated poles and decrease risk of electrocution of osprey and fire to the pole, all to accommodate the nesting osprey.

The Biodiversity Centre for Wildlife Studies, on behalf of all its contributors, offer a big round of applause to *BC Hydro*, *Fortis BC*, *Imasco*, the *Nakusp Chamber of Commerce*, and the *British Columbia Highways Department* for their sensitivity and proactive role in stewardship of nesting Ospreys.

Bald Eagle

Known nest sites around the province were once again checked for activity. In some cases several nests were regularly visited (e.g., Jan Bradshaw and Rick Howie in the Kamloops region and Janice Arndt in the Creston valley while most nests were noticed while travelling to other locations.

It was very encouraging to receive cards this year for nests that were inactive throughout 2006 but have been occupied earlier. In a few cases people actually completed two separate cards for different species that have been known to occupy the same nest. For example, at Nicola Lake, a Bald Eagle nest that was last used in 2005 was used by Ospreys in 2006.

Cliff and Bank Swallow

Very useful information was submitted this year on both species. Time was spent to get accurate counts of burrows and nests and more importantly, the actual number in each colony that had attendant adults.

Also, a welcome surprise was the effort that some people put into describing the precise location, with numbers, of Cliff Swallow nests on bridges. On their cards they recorded the number of active nests on the “east side”, “west side”, and “under” the bridge. This becomes very important when we use information to assist the provincial Department of Highways with their decisions on when and where to wash-down bridges with nesting swallows.

Purple Martin

The Purple Martin, a success story in the province, is expanding its range and increasing its numbers every year. Part of that success is the nest box programs scattered in coastal areas of

southwestern British Columbia and the efforts of individuals to monitor specific sites.

In 2006, Ivar Nygaard-Petersen, Clyde Burton and members of the Malaspina Naturalists Club kept watch at the colony at Myrtle Rocks south of Powell River (Figure 66). They checked 40 boxes and over the summer banded 26 nestlings. Twenty-eight (70 %) of the boxes had some nesting activity, from nest materials to near-fledged young.

The most encouraging event, however, was

Figure 66. Purple Martin nest boxes attached to coastal pilings at Myrtle Rocks, BC. 28 May 2006 (Ivar Nygaard-Petersen). BC Photo 3520.

the detail to which Ivar documented the exact position of each nest box, along with its history, for the entire colony. The diagram he prepared (Figure 67) is precise and over time it will become an important "value-added" component, along with his photographs, of the visit to the colony. This contribution to the BCNRS greatly increases the significance of its holdings.

RARE AND SENSITIVE SPECIES

This is the first year we decided to hold back on most requests for site-specific information on "listed" species in British Columbia because of provincial and federal government policies on releasing such information. Also, we had two unfortunate incidents in 2006 where a Sage Thrasher nest, and Northern Goshawk nest, were abandoned due to human disturbance.

We will be developing guidelines, along with our data-sharing agreement, to address this increasingly sensitive issue.

Some species of interest in 2006 included Rubber Boa, Canada Warbler, Barn Owl (nesting), Sage Thrasher (nesting), Vaux's Swift, Great Blue Heron, Double-crested Cormorant, Ring-billed Gull (nesting), Short-eared Owl (nesting), Sandhill Crane (nesting), Band-tailed Pigeon, California Gull (nesting), American Bittern, Common Nighthawk, Yellow-breasted Chat, Western Screech-Owl (nesting), Broad-winged Hawk (nesting), Common Nighthawk, Forster's Tern (nesting), American Bittern (Peace River), Palm Warbler (nesting), and Northern Leopard Frog.

FIELD TIPS AND TECHNIQUES

Fledged Young

To enhance the value of collecting breeding information, and time in the field, we want to encourage participants to fill out cards for fledged young even though a nest has not been found. A recently fledged young sitting on a branch, or one that has been out of the nest for awhile, but is being fed by its parents, is noteworthy.

Most birders can identify young birds but it is important to record the stage of development. Descriptions could include downy tufts on head, stubby or bob-tail versus short/long tail, gape colour (often yellow), adults feeding away from the nest, ability to fly, well or not at all, spotted breast, or the bird's behaviour such as begging for food.

Figure 68 gives six examples of fledged young for which nest cards should be completed. They include young with tufts of down, stubby-tails, yellow gapes, being fed by parents, or well fledged but in juvenile plumage and known to have been raised locally.

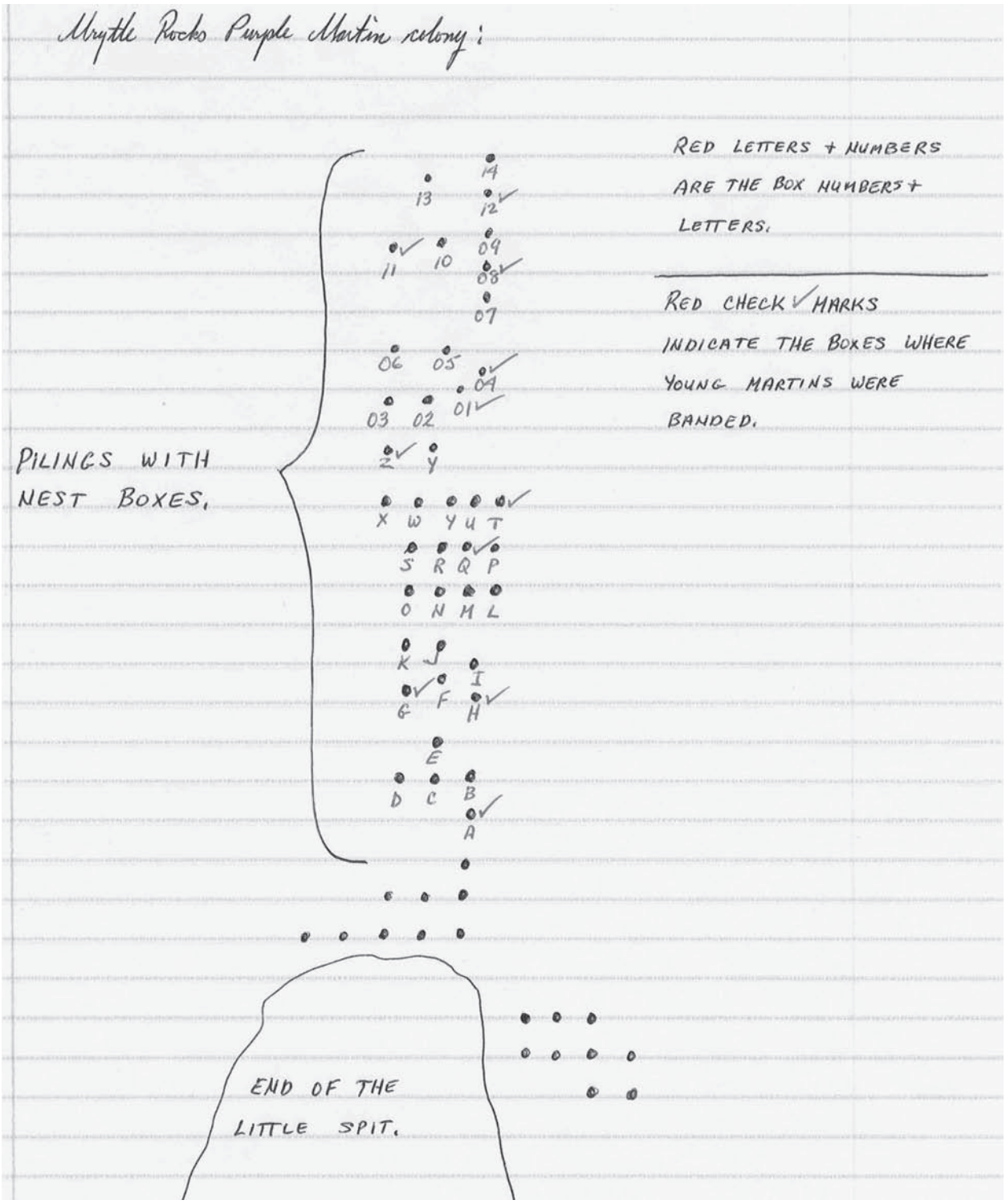


Figure 67. Field sketch of the location, placement, and individual box identification for the Purple Martin colony at Myrtle Rock, BC. (sketch by Ivar Nygaard-Petersen).

Figure 68. Please complete nest cards for young with **down tufts**: **(a) Yellow Warbler** young recently out of nest (ca 10 days old) showing tufts of down on head and large yellow gape at corner of mouth. Creston, BC. 16 June 2006 (Marcia Long); **(b) Red-winged Blackbird** with tufts of down and pin feathers just out of nest about 14 days after hatching. This is especially important for marsh nesting birds because most observations are made from shore. Fort St. John, BC. 22 June 1996 (R. Wayne Campbell); **stubby tail**: **(c) Black-billed Magpie** young with two-inch tail that has to grow another 10 inches before it becomes an adult. Chetwynd, BC. 1 June 2004 (R. Wayne Campbell); **yellow gape**: **(d)** the bright yellow gape at the corner of the bill on these **Eastern Kingbirds** suggests that they have only been out of the nest a few days. Creston, BC. 16 June 2006 (Linda M. Van Damme); **being fed by parents**: **(e)** a fledged **Tree Swallow** young, estimated at four days out of nest, being fed by a parent. Creston, BC. 10 July 2006 (Linda M. Van Damme); and **juveniles**: **(f)** it is still important to try to separate the number of juveniles in broods (e.g., Trumpeter Swans) and in pre-migratory flocks if you know that the birds nested nearby. **Bank Swallow**, still being fed by adults Creston, BC. 17 July 2006 (Linda M. Van Damme).

Aging Waterbirds

Broods of waterbirds, especially cygnets, goslings, and ducklings of waterfowl (Figure 69), can be aged quite accurately following the criteria on plumage development shown in Appendix 1 (see page 48). This additional information allows the hatching date to be calculated and other analysis such as correlating weather in a particular season to productivity and laying times. Also, knowing the age of waterbirds is very helpful when developing profiles for regional breeding chronologies.

The drawings in Appendix 1 can be reduced and added to field notebooks for quick reference.

Figure 69. Female Redhead with an 8-13 day-old brood. Kootenay River, BC. 31 July 2006 (Linda M. Van Damme). The plumage development for the ducklings is rated Class 1B, that is the body is down-covered, but the colour is fading. In this Class (1B) the ducklings range in age between 8 and 13 days old.

FROM THE SCIENTIFIC LITERATURE

Scientific research is expensive, requires a lot of time to carry out and complete, and a commitment to publish the results for an audience of professionals and amateurs. Fortunately, with the current emphasis on maintaining biodiversity, much of the research has direct implications for the conservation of birds. Some of the titles in academic papers are intimidating but the important thing to remember is that biological abstracting services pick up key words to identify a paper from the title so many authors try to give them as many clues as they can all at once.

Productivity of Black Oystercatchers: Effect of Recreational Disturbance in a National Park

National Parks are considered by most to be areas of wilderness with undisturbed habitats for wildlife. In Kenai Fjords National Park, Alaska, park users camp on gravel marine beaches where Black Oystercatchers also nest. Since the recreational pressure on federal parks is increasing each year the conflict between nesting birds and recreationists is of concern to managers and biologists (Figure 70).

Julie Morse and her colleagues studied the effects of recreational activities on the reproductive performance of oystercatchers. In subsequent years 95 % of banded oystercatchers returned to the same breeding territories and results showed that nesting birds were resilient to low levels of recreational disturbance.

Condor 108:623-633, 2006.

Figure 70. Nesting Black Oystercatchers (lower right corner) appear to tolerate low levels of recreational disturbance. The future concern, however, is the increase in recreational pressure along marine shores. Anna Inlet, BC. 4 June 1990 (R. Wayne Campbell).

Differences in the Reproductive Ecology of Belted Kingfishers (Ceryle alcyon) Across Streams with Varying Geomorphology and Habitat Quality

Biologists S. Mazeika, P. Sullivan, M. C. Watzin, and W. C. Hession studied the importance of stream geomorphology and habitat quality on the breeding success of Belted Kingfishers in Vermont. Their research, which has implications for management of kingfishers in British Columbia, showed stream and riparian management strategies should be focused on protecting and restoring functional morphology which will have ecological benefits for riverine birds.

Waterbirds 29(3):258-270, 2006.

Nest-site Selection and Productivity of American Dippers in the Oregon Coast Range

Many ornithologists generally agree that availability of high-quality nests sites limits breeding population of birds, including American Dippers (Figure 71). John Loegering and Robert Anthony decided to test this hypothesis by creating nesting substrates and setting them up along clear, fast running streams in Oregon.

Their efforts more than doubled the breeding population on a 10-kilometer stretch of stream and the reproductive success was high.

Wilson Journal of Ornithology 118:281-294, 2006.

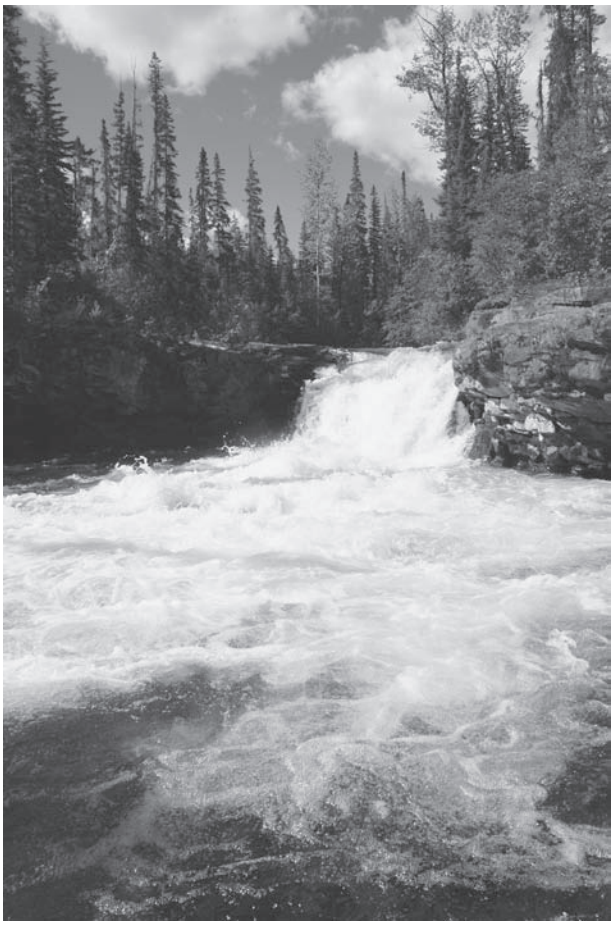


Figure 71. In 2006, a pair of American Dippers nested on the rock bluff to the right, immediately adjacent to this small, but very powerful, waterfall. Eleven Mile Creek, BC. 22 June 2006. Kamloops, BC. 14 May 2005 (Michael I. Preston).

Sandhill Cranes Breeding on Northern Vancouver Island, British Columbia

Historically, the Sandhill Crane bred on Vancouver Island but its current status is poorly known. The recent interest to use bog habitats for wind farms on Vancouver Island prompted biologist John Cooper to summarize the crane's historical breeding status and put on record a small breeding population, discovered in 2004, for northwestern Vancouver Island.

Northwestern Naturalist 87:146-149.

Patterns of Artificial Burrow Occupancy and Reuse by Burrowing Owls in Idaho

This study examined reoccupancy and longevity of artificial burrows used to manage a population of Burrowing Owls in neighbouring Idaho. James Belthoff and Brian Smith set out 104 clusters of artificial burrows with two to three boxes each. Just over 55 percent of clusters were used each year and over 32 percent were used for more than four years.

They concluded that artificial burrows provided long-term nest sites for Burrowing Owls.

Wildlife Society Bulletin 31:138-144, 2003

Changes in Egg Size and Clutch Size with Elevation in a Wyoming Population of Mountain Bluebirds

Compared to lowland studies there is a paucity of information on the life history of birds in alpine environments. A group of researchers, led by Scott Johnson from Towson University, compared egg and clutch sizes (Figure 72) of Mountain Bluebirds at two different elevations.

The group determined that the size of eggs was significantly smaller at higher elevations and clutch size was only marginally smaller. The authors suggested that "*when under energetic or nutritional stress at high elevations, females sacrifice egg size before sacrificing clutch size.*"

Condor 108:591-600, 2006.

Seasonal Fecundity of Sagebrush Brewer's Sparrow (Spizella breweri breweri) at the Northern Edge of its Breeding Range

This research, the culmination of a Ph.D. Thesis by Nancy Mahony, was carried out in the southern Okanagan (Figure 73) and Similkameen valleys of British Columbia. The study was the first to examine

Figure 72. It is likely that Mountain Bluebirds nesting at high elevations of British Columbia may also show smaller egg sizes than in lowland regions. Kamloops, BC. 14 May 2005 (R. Wayne Campbell).

the seasonal number of young successfully raised (fecundity) of the Sagebrush Brewer's Sparrow.

Individual Brewer's Sparrows reproductive success varied between years at different elevations due to predation and weather conditions. In one year, an early spring storm destroyed 43% and 20% of first nests at two sites.

Besides the academic contribution of the research, Nancy recommended that wildlife managers must protect sites from habitat loss or alteration across a range of elevations.

Auk 123:512-523, 2006.

Figure 73. Due to the unpredictable nature of the environment that Brewer's Sparrows inhabit at the northern edge of their range in British Columbia large tracts of sagebrush grasslands must be protected at all elevations to assure reproductive success. One such area includes the Kilpoola Lake, BC. region. 5 June 1997 (R. Wayne Campbell).

PLEASE NOTE

A few old nest cards are still being used with our old address (e.g, P. O. Box 6218, Station C, Victoria, BC. V8P 5L5). These cards can be used but please be sure completed cards are sent to the address below. New nest cards, with our current address, are available.

British Columbia Nest Record Scheme
3825 Cadboro Bay Road
PO Box 55053
Victoria, BC. Canada
V8N 6L8

APPENDICES

Appendix 1. Plumage Development of Young Waterfowl

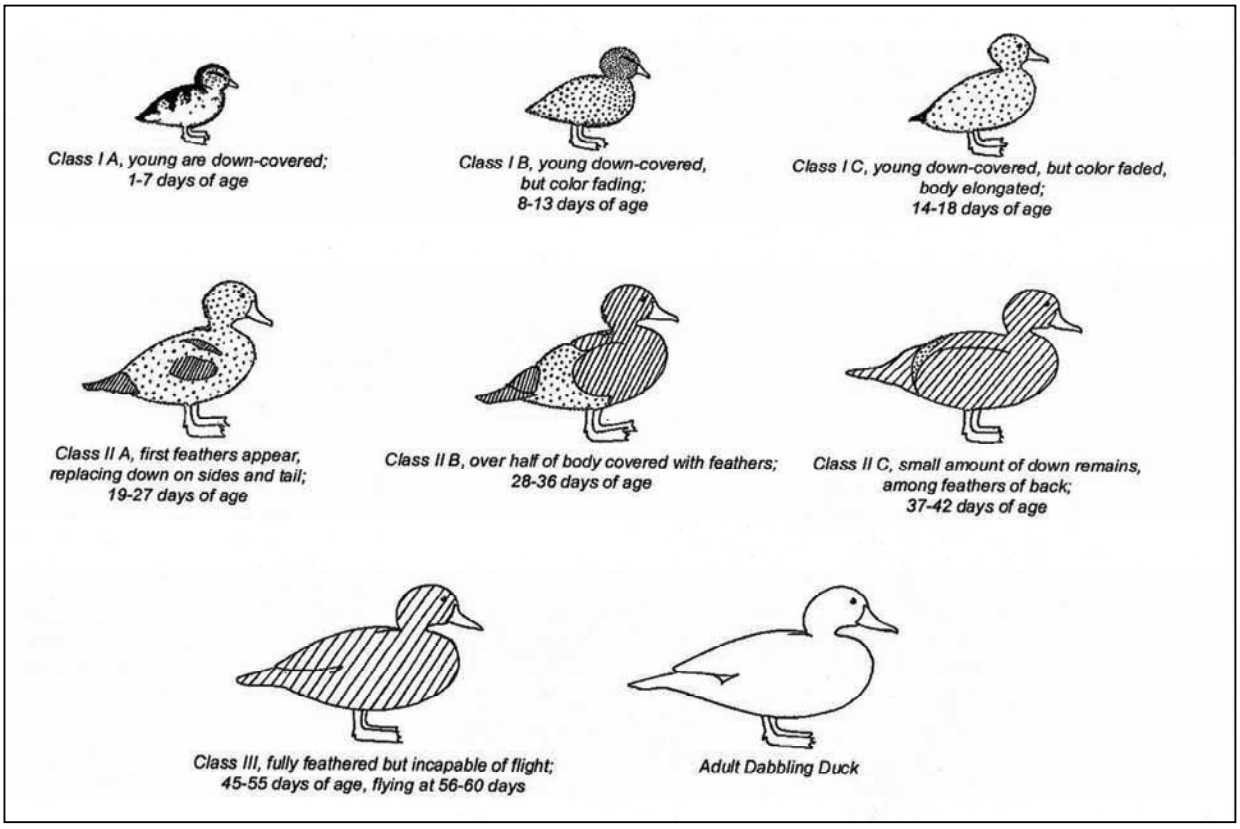
In the spring of 1997, the first B. C. Nest Record Scheme manual was issued by the WBT Wild Bird Trust of British Columbia, along with participating partners, as WBT Wildlife Report No. 1. An important omission in that manual was the inclusion of plumage changes of waterfowl developed by J. B. Gollop and W. H. Marshall in their 1954 publication A Guide for Ageing Duck Broods in the Field. This information, when recorded on nest cards, is very useful in determining breeding chronology and mortality figures as the young pass from the downy stage to the flight stage. Brood ages are recorded at three stages of growth as follows:

CLASS I – (Levels A, B and C) – downy stage that covers the period from hatching to the time body feathers begins to appear among the down. It usually lasts about three weeks.

CLASS II – (Levels A, B and C) – this stage, from about the fourth week through the sixth week, covers the period when the body feathers gradually replace the down plumage.

CLASS III – (Single Level) – this stage of development, which lasts for about 10 days, includes the period when the young appear fully feathered just before their first flight.

Information for each brood can simply be recorded on each nest card as I-A, I-C, II-B, III, etc. The drawings, which have been modified from Frank C. Bellrose's Ducks, Geese and Swans of North America, should be used as the reference.



Appendix 2. Guide to Timing of Visits to Nests of Passerine (Song) Birds.

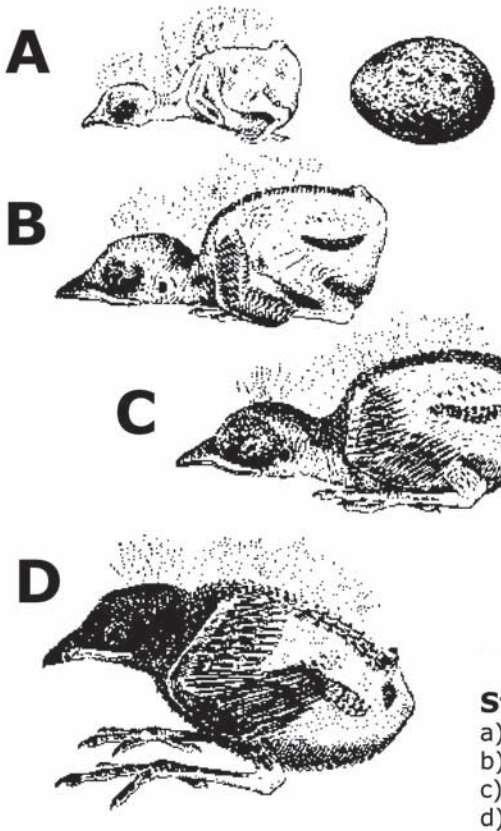
Contents of nest when found or last visited	Next visit should be	Notes needed at next visit
Nest under construction	2 - 4 days later, to determine laying schedule	No. of eggs, warm or cold; parent at nest or not
1 - 3 eggs	3 - 5 days later, to confirm completion of clutch	No. of eggs, warm or cold; parent at nest or not
4 - 7 eggs	3 - 5 days later, to check clutch size	No. of eggs, warm or cold; parent at nest or not
Eggs and newly hatched young	6 - 8 days later, to check survival of young	Number, size, and degree of feathering on young
Young, naked or downy	5 - 7 days later, to check survival of young	Number, size, and degree of feathering on young
Young, pin-feathered	3 - 5 days later, to check survival of young	Number, size, and degree of feathering on young
Young, mostly feathered	2 - 4 days later, to check on fledging	Number and flying ability of young
Young which fly when approached	7 - 10 days later, to check on reuse of nest	

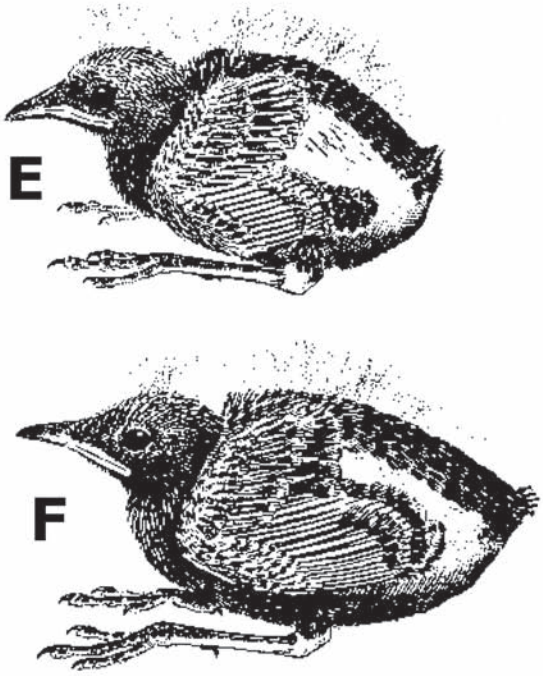
Evidence of Failure (if nest contained eggs or live young at an earlier visit)

Evidence of failure	Notes needed
Broken eggs	Evidence of predator (tracks, droppings, condition of nest)
Dead young, in or near nest	Evidence for desertion (young unharmed), or predation (young injured, predator sign)

NOTE: Most passerines have a clutch of 4 – 7 eggs, laid at daily intervals; incubation periods of up to 12 – 15 days; nestling periods of 11 – 19 days (open nesters near lower figures, cavity nesters near upper figures)

Appendix 3. Stages of Nestling Growth

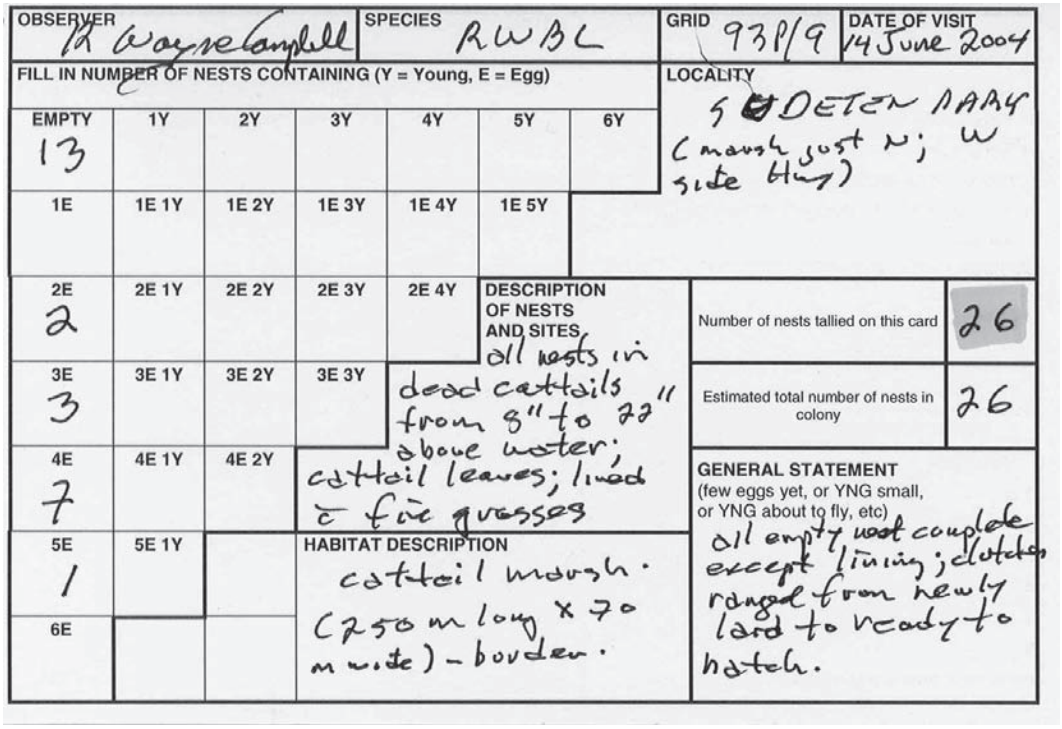




Stages of nestling growth

a) within a day of hatching; egg is for scale
b) three to four days old (small quills)
c) five days old (quills longer, eyes partly open)
d) six days old (most feathers in pin, eyes fully open)
e) seven to eight days old (wing quills sprouting at tips)
f) eight to nine days old (more feathers emerged from quills)

Appendix 4. Example of a Completed BCNRS Colony Card for Documenting Colonial-Nesting Birds



OBSERVER: R Wayne Campbell | SPECIES: RWBL | GRID: 93P/9 | DATE OF VISIT: 14 June 2004

FILL IN NUMBER OF NESTS CONTAINING (Y = Young, E = Egg)

EMPTY	1Y	2Y	3Y	4Y	5Y	6Y
13						
1E	1E 1Y	1E 2Y	1E 3Y	1E 4Y	1E 5Y	
2E	2E 1Y	2E 2Y	2E 3Y	2E 4Y		
2						
3E	3E 1Y	3E 2Y	3E 3Y			
3						
4E	4E 1Y	4E 2Y				
7						
5E	5E 1Y					
1						
6E						

LOCALITY: 5 @ DETEN NAAY (marsh just N; W side Hwy)

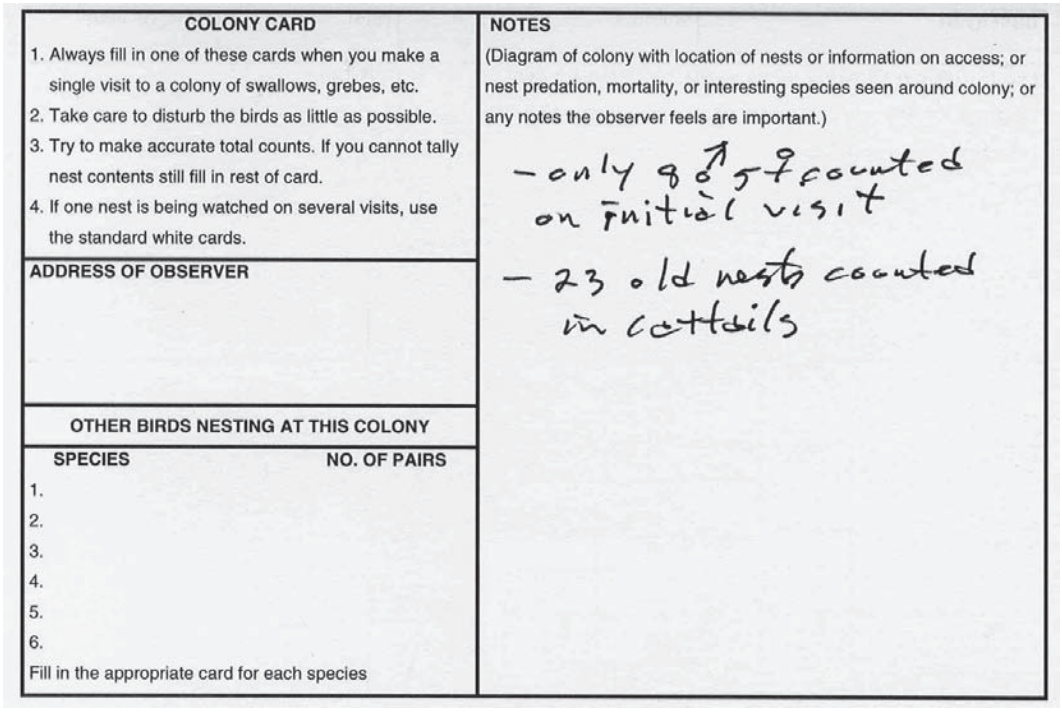
DESCRIPTION OF NESTS AND SITES: all nests in dead cattails from 8" to 22" above water; cattail leaves; lined c few grasses

HABITAT DESCRIPTION: cattail marsh. (250 m long x 70 m wide) - border.

Number of nests tallied on this card: 26

Estimated total number of nests in colony: 26

GENERAL STATEMENT (few eggs yet, or YNG small, or YNG about to fly, etc): all empty, most complete except lining; clutches ranged from newly laid to ready to hatch.



COLONY CARD

1. Always fill in one of these cards when you make a single visit to a colony of swallows, grebes, etc.
2. Take care to disturb the birds as little as possible.
3. Try to make accurate total counts. If you cannot tally nest contents still fill in rest of card.
4. If one nest is being watched on several visits, use the standard white cards.

ADDRESS OF OBSERVER

OTHER BIRDS NESTING AT THIS COLONY

SPECIES	NO. OF PAIRS
1.	
2.	
3.	
4.	
5.	
6.	

Fill in the appropriate card for each species

NOTES (Diagram of colony with location of nests or information on access; or nest predation, mortality, or interesting species seen around colony; or any notes the observer feels are important.)

- only 9 ♂ ♂ + counted on initial visit
- 23 old nests counted in cattails

REQUESTING AND SUBMITTING CARDS

A REMINDER
OUR CURRENT ADDRESS

A few old nest cards are still being used with our old address (e.g, P. O. Box 6218, Station C, Victoria, BC. V8P 5L5). These cards can be used but please be sure to send completed cards to address below. New nest cards, with our current address, are available.

B. C. NEST RECORD SCHEME
P.O. Box 55053
3825 Cadboro Bay Road
Victoria, B. C. V8N 6L8
Tel\Fax: (250) 477-0465
e-mail: bcfws@shaw.ca

All enquiries including requesting and submitting cards can be sent to the address above.

Single nest and colonial cards, as well as an **Instruction Manual**, are available from the address above. Due to fieldwork commitments we suggest that you request material before mid-May.

Our web site (www.wildlifebc.org) presently has instructions and materials available to participants.

We prefer to have nest cards completed and submitted by October 1 so the growing task of compiling and publishing the report can be completed by the end of the year and distributing the annual report can begin in spring the following year. This year, compiling 15,000+ cards into species, grid, and contributor categories, and entering the information electronically, took nearly four months volunteer work - part time!

For species acting as hosts for **Brown-headed Cowbird** eggs or young please fill out a separate card for the **BHCO** and cross-reference it to its host (Figure 74). For young or recently fledged BHCO young be sure to indicate if the young were in the nest (i.e., nestling) on the front of the new nest card.

Other species, including some waterfowl, are also parasitized during their nesting season. For example, it is not uncommon to find **Ruddy Duck** eggs in **Redhead** nests or **American Coot** eggs in **Lesser Scaup** nests. If this is noticed please complete separate cards for each species and cross-reference to each nest or brood.

Common species (e.g., **Canada Goose**, **Mallard**, and **American Robin**) and introduced species (e.g., **Rock Pigeon**, **European Starling**, **House Sparrow**) are still important to record.

Figure 74. Recording parasitism events in and around a nest is important and requires two separate cards. This punctured Swainson's Thrush egg was found on the ground below a nest that was earlier parasitized by a Brown-headed Cowbird. Fellers Heights, BC. 2 July 2006 (Mark Phinney). BC Photo 3521.

Also, **PLEASE** use a dark ballpoint pen or dark ink (not pencil) and write clearly.

We really appreciate receiving cards as early as possible. This gives us a chance to start the long compiling process and data entry to produce the map, and lists of species and contributors. **Allen Poynter**, despite having a hip surgery in May, still managed to get into the field and was the first to submit cards in early June.

ACKNOWLEDGEMENTS

Support and belief in the BCNRS project is the main reason we continue to lead Canada and the United States in regional breeding bird databases. Each Featured Species published in *Wildlife Afield* draws almost all of the breeding information from the nest cards you submit. For example, the 40-page Common Nighthawk account that was recently published (*Wildlife Afield* 3:32-72) used more nest cards for the evaluation of the bird's breeding biology in the province than are available for that species in all of the other Nest Record Schemes in Canada

combined.

THANK YOU to all our contributors and supporters. We hope you will continue to be active in 2007 and good luck with your nest finding!

All cards (current and historical) were sorted, compiled, and entered by **James McCammon** and **Eileen Campbell**. In addition, Eileen also entered the information electronically into an Excel spreadsheet for use in preparing the geographical representation, species, and contributor portion of the report. **Michael I. Preston** prepared the figures, tables, and map.

Everyone who submitted cards in species order certainly made our task easier. It was a relief to find them!

Mark Nyhof again provided the cover illustration of a delightful Killdeer chick with a concerned adult nearby. All photographers are acknowledged with their images in each figure caption.

THE BRITISH COLUMBIA WILDLIFE RECORDS COMMITTEE

The task of maintaining the integrity of our databases is a very high priority. Every record that we receive is critically reviewed, assuring a professional level of quality control. Questionable information is followed up with e-mails, letters, or telephone calls. For some records, we require professional review in the form of written documentation. In many cases such a review involves examination of photographic evidence. This becomes especially important when species are being added to British Columbia lists.

Beginning in May 2005, and continuing through April 2006, the Biodiversity Centre for Wildlife Studies formally established a provincial wildlife records committee that presently includes insects, amphibians, reptiles, birds, and mammals. The representative for each wildlife group is listed below, as well as on our website. The representative for each wildlife group will be responsible for contacting at least two “experts” for external review. Then, all reviewers and the representative must accept the record before it is added to our databases and our provincial lists.

The new checklist for British Columbia birds (May 2007) is our first cooperative publication.

British Columbia Wildlife Records Committee

Chairman: R. Wayne Campbell (Retired, Curator of Vertebrates, Royal BC Museum, Victoria, BC)

Entomology (Insects)
Dr. Richard A. Ring (Professor Emeritus, University of Victoria, Victoria, BC)

Lepidoptera (Butterflies)
Crispin S. Guppy (Wildlife Habitat Biologist & Entomologist, Quesnel, BC)

Herpetology (Amphibians and Reptiles)
Dr. Francis R. Cook (Researcher Emeritus, Canadian Museum of Nature, Ottawa, ON)

Amphibians (Salamanders, Frogs, and Toads)
Dr. David M. Green (Professor, Director of Redpath Museum, McGill University, Montreal, QC)
Brent M. Matsuda (Wildlife Biologist & Consultant, Jacques-Whitford Axys, Burnaby, BC)

Reptiles (Turtles, Lizards, Skinks, and Snakes)
Brent M. Matsuda (Wildlife Biologist & Consultant, Jacques-Whitford Axys, Burnaby, BC)

Ornithology (Birds)
R. Wayne Campbell (Biodiversity Centre for Wildlife Studies, Victoria, BC)
Tony Greenfield (British Columbia Field Ornithologists)
Dr. Martin K. McNicholl (Nature Vancouver, Burnaby, BC)

Mammalogy (Mammals)
Dr. Alton S. Harestad (Professor, Dept. Biological Sciences, Simon Fraser University, Burnaby, BC)

BIODIVERSITY CENTRE FOR WILDLIFE STUDIES – OUR WEBSITE

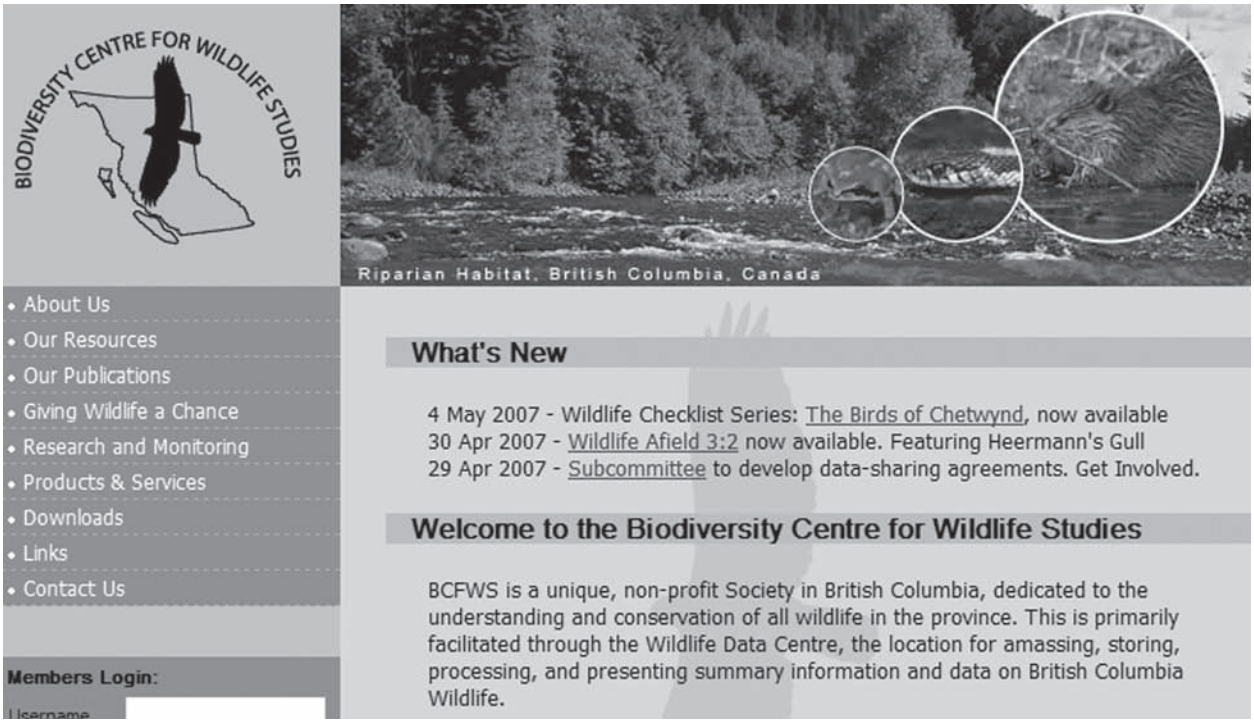
On 1 May 2005, the Biodiversity Centre for Wildlife Studies officially launched its new, long-awaited, website. The announcement was made at the 9th Annual Wings Over the Rockies festival in Invermere, BC. Our address is: www.wildlifebc.org.

Designing and developing the site was no easy task, but thanks to our friends at Reboot Consulting in Victoria, the site came together rather flawlessly. We have integrated a great deal of technology to our site, including such features as e-commerce, flash video, and a secure members area. The website also features an easy to use navigation system that lets the user know their whereabouts at all times.

While there is still much to do on our site, the site is regularly updated with new information, and first-time visitors will find a plethora of useful information. Visitors to the site can get an overview of resources housed by the Wildlife Data Centre, learn about biodiversity and conservation priorities in British Columbia, and view samples of species profiles. For contributors, downloads of observation data sheets, data entry templates, and a data entry instruction manual are available. As well, nest cards can now be ordered simply by sending us an e-mail. Visitors can view samples of monthly species maps, scan the table of contents of our bi-annual journal *Wildlife Afield*, and download a membership form or purchase reports and memberships on-line.

The latest development on our website is an on-line catalogue of the BC Photo File for Wildlife Records. Web visitors will be able to view all records documented in this file, as well as be able to view a few of the images. While this project is still a “work in progress”, the bird file is currently organized by family and has Loons and Grebes complete. Eventually we will have files posted for mammals, reptiles, amphibians, and butterflies.

We hope you enjoy browsing our website. We are working hard to make more information available.



WWW.WILDLIFEBC.ORG

Publications Available from the Biodiversity Centre for Wildlife Studies

The Biodiversity Centre for Wildlife Studies (BCFWS) and the Wildlife Data Centre is actively involved in producing a number of publications on wildlife. These publications are meant to inform and educate readers on conservation activities, wildlife identification, and natural history topics. BCFWS publications are a major component of fulfilling our Society objectives (see www.wildlifebc.org for more details).

Pamphlets and Brochures

Bunnell, F.L. and K.A. Squires. 2005. Forest-dwelling Endemics of British Columbia. Produced by The Centre for Applied Conservation Research at the University of British Columbia and the Biodiversity Centre for Wildlife Studies in Victoria. Pamphlet.

Reports

Campbell, R.W. and M.I. Preston. 2002. British Columbia Nest Record Scheme Instruction Manual – 2004 Update. Biodiversity Centre for Wildlife Studies. Report No. 1. Victoria, BC. 29 pages. ($10.00; free to contributors).

Campbell, R.W., M.I. Preston, and L.M. Van Damme. 2004. British Columbia Nest Record Scheme 49th Annual Report – 2003 Nesting Season. Biodiversity Centre for Wildlife Studies. Wildlife Report No. 2. Victoria, BC. 30 pp. ($10.00; free to contributors).

_____. 2005. British Columbia Nest Record Scheme 50th Annual Report – 2004 Nesting Season. Biodiversity Centre for Wildlife Studies. Wildlife Report No. 3. Victoria, BC. 26 pp. ($10.00; free to contributors).

_____. 2006. British Columbia Nest Record Scheme 51st Annual Report – 2005 Nesting Season. Biodiversity Centre for Wildlife Studies. Wildlife Report No. 6. Victoria, BC. 30 pp. ($10.00; free to contributors).

Preston, M.I. 2006. Effects of terrestrial and aquatic vertebrates on forest dynamics: an overview for the conservation of biodiversity. Biodiversity Centre for Wildlife Studies. Report No. 7. 13 pp. (Available on-line at www.wildlifebc.org).

Preston, M.I., R.W. Campbell, and L.M. Van Damme. 2005. British Columbia Birds: 2005 Species List. Biodiversity Centre for Wildlife Studies Wildlife. Report No. 4. Victoria, BC. 20 pp. ($10.00).

Wind, E., M.I. Preston, and A. Chan-McLeod. 2005. Assessing songbird habitat at different spatial scales. Biodiversity Centre for Wildlife Studies. Report No. 5. 8 pp. (Available on-line at www.wildlifebc.org).

Special Publications

Campbell, R.W., M.I. Preston, S. Kinsey, and L. Law. 2007. Wildlife Checklists of British Columbia - The Birds of Chetwynd...with popular birdwatching sites. Biodiversity Centre for Wildlife Studies. Special Publication No. 2. 16 pp.

Campbell, R.W., M.I. Preston, L. M. Van Damme, T. Greenfield, M.K. McNicholl (compilers). 2007. Wildlife Checklists of British Columbia - The Birds of British Columbia. Special Publication No. 3. 12 pp.

Helm, C. 2006. Wildlife Checklists of British Columbia - The Birds of Tumbler Ridge. Biodiversity Centre for Wildlife Studies. Special Publication No. 1. Pamphlet.

Wildlife Afield

Back issues of *Wildlife Afield* are available for $15.00 each (includes shipping and handling). *Wildlife Afield* is published twice annually, in early March and September. The following issues are available.

Volume 1:1 (out of print)	Volume 1:2 (limited)	Volume 2:1 (good)	Volume 2:2 (good)
Volume 3:1 (good)	Volume 3:1 and supplement (good)		Volume 3:2 (good)