



The BC-Yukon Nocturnal Owl Survey

October 2002



a newsletter from Bird Studies Canada

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STILL more owls!

Slightly fewer routes were covered in 2002 than in 2001 on the BC-Yukon Nocturnal Owl Survey--this year 155 owlers listened in the dark at 2025 stops versus last year's effort of 170 owlers at 2072 stops. But the number of owls detected was the highest in the three year history of the survey--367 owls versus 308 last year and 233 owls in 2000. When effort is factored in, we're back to the 2000 level of 1.8 owls per 10 stops after a dip to 1.5 last year.

The biggest increase was in Boreal Owls reported from the central and northern Interior regions, while Western Screech-Owls dropped slightly. In fact there were more screech-owls detected in the southern Interior (7) than on the coast (5)! A boost in the number of routes done in the Yukon has prompted me to change (at last) the title of this project to truly reflect where the data are coming from.

---Dick Cannings, survey coordinator

Thanks, Heather!



We were very fortunate this summer to have Heather Bryan of Penticton help us out with data entry. Heather's hard work quickly finished off the backlog of datasheets. She then set to work volunteering at the Vaseux Lake Bird Observatory, where she spent almost every day of August checking mist-nets and scribing data for bander-in-charge Gabriel David.

Thanks to the owlers: Dave Aldcroft, Sean Aldcroft, Ken Anderson, Cathy Antoniazzi, Helen Antoniazzi, Roy Arlt, Richard Armstrong, Francine Audy, Lori Austin, Victor Austin, Libby Avis, Rick Avis, Steve Baillie, Ron Barre, Dan Bastaja, Marc-André Beaucher, Darren Bennet, Andy Bezener, Maj Birch, Andra Bismanis, Scott Bodaly, Myrna Bosomworth, Jack Bowling, Doug Brown, Murray Brown, Richard Cannings,

Lynne Cannon, Bob Charlesworth, Myke Paul Colton, Fraser Cross-Tallman, Medea Jonathan Darbyshire, Dobrowolsky, Frank Orville Dyer, Cameron Uwe Finger, Michael Cecilia Fraser, Dave Jeff Fraser, Scott



Chapman, Chris Chutter, Mary Collins, Corbould, Linnea Curteanu, Ed Dahl, Rick Dawson, Boris Doyle, Eva Durance, Eckert, Phil Edgell, Force, Trevor Forder, Fraser, Emily Fraser, Fraser, Mark Gardiner,

Dolly Gehlen, Phil Gehlen, Mike Gill, Betty Goodman, Jim Goodman, Chris Grossler, Kindrie Grove, Denise Gubersky, Les Gyug, Chris Haddock, Ron Hall, Larry Halverson, Willie Haras, Bev Harding, Phil Henderson, Sandra Hepburn, Steve Howard, Jean Hudson, Steve Hunter, Peter Johnston, Paul Jones, Andy Karassowitch, Frank Kelly, Joan Kelly, Harold King, Joan King, Sandra Kinsey, Catherine Kitchen, Denis Knopp, Barb Krimmer, Rod Krimmer, Nancy Krueger, John Lambie, Vi Lambie, Laird Law, Pat Levitt, Diana Maloff, Gordon Marshall, Wendy Marshall, Sue McDonald, Kathleen McEachern, Ryan McEachern, Carolyn McGhee, Jane McGhee, Sandy McRuer, Michelle Mico, Bruce Morgenstern, Pearl Morgenstern, Norma Morton, Bob Murkett, Ted Murphy-Kelly, Gordon Neish, Laure Neish, Heather Neville, John Neville, Fran Newson, Susan Pendray, Ann Nightingale, Ken Otter, Lyn Paterson, Stan Paterson, Georgia Patterson, Mark Phinney, Rosamund Pojar, Larry Prosser, Leah Ramsay, Phil Ranson, Sheila Ray, David Reid, Trish Reid, Gillian Richardson, Trevor Richardson, Syd Roberts, Stuart Robinson, Laurie Rockwell, Mary Roddick, Vern Roddick, Greg Ross, Susan Ross, Ian Routley, Jeanne Roy, Madelon Schouten, Annette Schroeter, Deanna Snider, Gail Spitler, Elsie Stanley, Alf Tallman, Vida Tattrie, John Theberge, Mary Theberge, Russell Tkachuk, Ryan Tomlinson, Cynthia Tuck, Jim Tuck, Hank Vanderpol, Alan Vyse, Frances Vyse, Margaret Waring, Wayne C. Weber, Rita Wege, Doug Wilson, Stuart Withers, Ken Wright, Ray Yeo.

Timing of coastal surveys

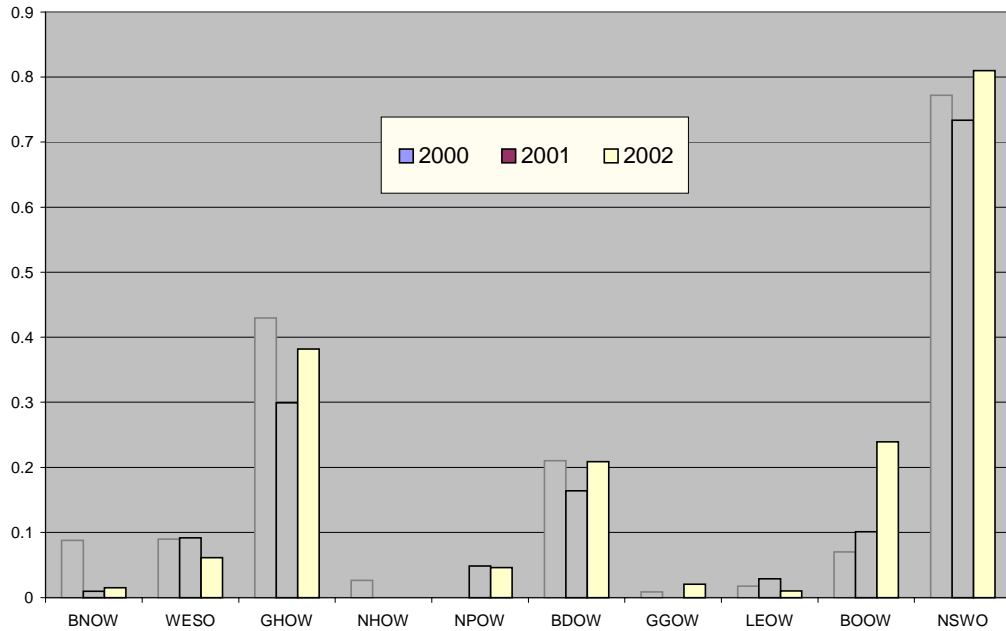
In 2002 I suggested that coastal owlers do their routes in February, redoing them in other months (e.g. January, March) if possible so that we can find the best time for owl detections in that region. Initial reaction was very positive (Kathleen McEachern was ecstatic to get owls on all three of her counts after going owl-less for two years) but after all the data came in the overall detection rate had risen only slightly. In fact,

results from the mainland surveys suggested that February counts were similar to those in March, while February counts on Vancouver Island seemed to have lower success than those held in March. The two ways we can raise the success level for these surveys is to either have longer surveys or to start a protocol that uses tape playback. I'll let you know what we decide to do!

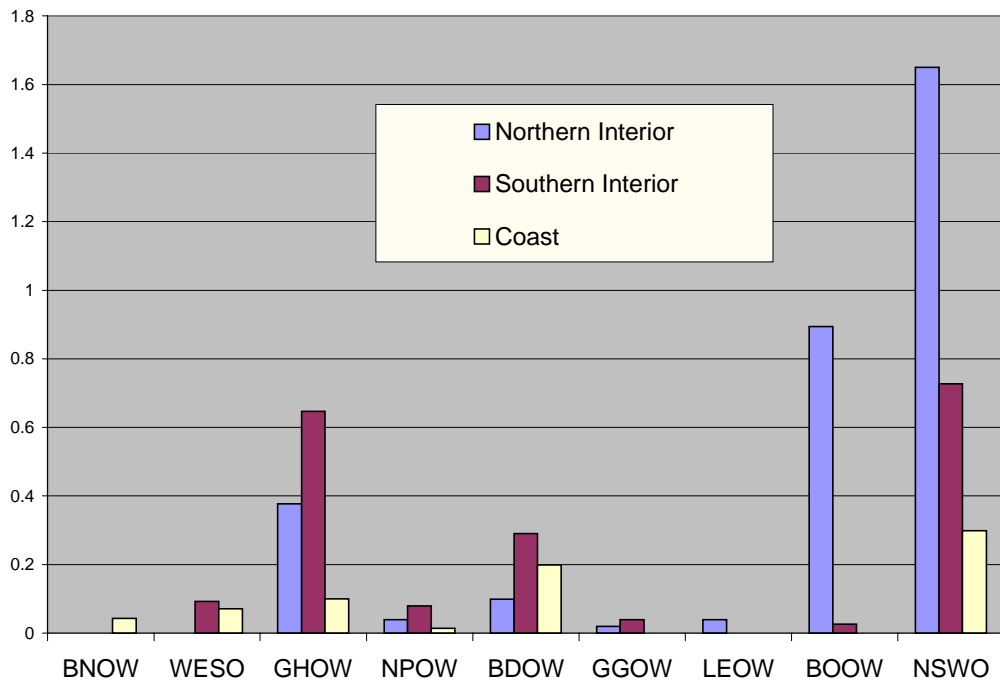
Plus ça change...

These two graphs illustrate the difference in owl detections among years and among regions in 2002. Species abbreviations are the same as listed in Table 1.

Owls per 10 stops by year



Owls per 10 Stops: 2002



		BNOW	WESO	GHOW	NPOW	BDOW	GGOW	LEOW	BOOW	NSWO	BLGR	RUGR	TOTAL OWLS
COAST													
61 routes	Total Birds	3	5	7	1	14	0	0	0	21	0	0	51
	Birds per 10 stops	0.04	0.07	0.10	0.01	0.20	0.00	0.00	0	0.30	0.00	0.00	0.72
	# routes with species	3	3	7	1	9	0	0	0	14	0	0	
SOUTHERN INTERIOR													
54 routes	Total Birds		7	49	6	22	3	0	2	55	1	0	144
	Birds per 10 stops	0.00	0.09	0.65	0.08	0.29	0.04	0.00	0.03	0.73	0.01	0.00	1.92
	# routes with species	0	6	25	3	15	2	0	2	25	1	0	
NORTHERN INTERIOR													
46 routes	Total Birds	0	0	19	2	8	2	2	48	90	0	11	171
	Birds per 10 stops	0.00	0.00	0.38	0.04	0.10	0.02	0.04	0.89	1.65	0.00	0.22	3.34
	# routes with species	0	0	7	2	5	2	2	16	23	0	6	
TOTAL													
161 routes	Total Birds	3	12	75	9	44	5	2	50	166	1	11	367
	Birds per 10 stops	0.01	0.06	0.37	0.04	0.22	0.02	0.01	0.25	0.82	0.01	0.05	1.81
	# routes with species	3	9	39	6	29	4	2	18	62	1	6	

Table 1. Owls and grouse reported on the survey in 2002. Species totals are given as birds per 10 stops so that direct comparison can be made with results from other years. Coastal routes are those west of the Coast-Cascade crest; Southern Interior counts are those from the Thompson, Nicola, Okanagan, Columbia and Kootenay valleys and adjacent plateaus; Northern Interior routes include those from the Cariboo-Chilcotin, Prince George, Mackenzie and Fort Nelson areas, the Bulkley Valley, and the Yukon. Species abbreviations: BNOW, Barn Owl; WESO, Western Screech-Owl; GHOW, Great Horned Owl; NPOW, Northern Pygmy-Owl; BDOW, Barred Owl; GGOW, Great Gray Owl, LEOW, Long-eared Owl; BOOW, Boreal Owl; NSWO, Northern Saw-whet Owl; BLGR, Blue Grouse; RUGR, Ruffed Grouse.

Northern Saw-Whet Owl Migration Discovered at Rocky Point

by Andy Stewart

On September 13, 2002, Paul Levesque and Laurie Savard set up 4 brand new mist nets and a tape player in a small patch of conifers and waited for dark. Only 7 days earlier they had been notified that their BC Public Conservation Assistance Fund grant had been approved to run this trial owl banding station at Rocky Point near Victoria. Rocky Point, located at the southern end of Vancouver Island, is a Department of National Defence property and is used by the military for munitions storage, explosives demolition, and training. It is also the most southerly land point in western Canada and has recently become known for its impressive autumn movements of passerines and diurnal raptors. Rocky Point is also the home of the Rocky Point Bird Observatory.

At dusk, Paul & Laurie began playing owl calls and checking their nets every 15 minutes. On each round of the net lanes they came up empty handed – was this whole effort going to be a big bust? On their 10:30 p.m. check they noticed something suspended in net 2 but at first were puzzled by this pale, fluffy-looking object. What the heck is that Paul wondered to himself as he focussed his head lamp on this foreign-looking creature. As he neared the net he realized it was in fact a Northern Saw-Whet Owl – exactly what they were trying to capture. Success on their very first night and on Friday the 13th no less!

After 11 nights of operation Paul, Laurie, and their many volunteers have caught saw-whets on every night except for the one, when high winds forced them to shutdown early. As of Oct 14th they had caught and banded no less than **150** saw-whet owls, for an average of over 12 owls per night. Their best success so far came on the night of October 11 – 12th when they caught an astounding 38 saw-whets.

Where do these owls come from and where do they go after arriving at Rocky Point? Do they all come from Vancouver Island or are some from further afield? Clearly they must be in migration as only 2 of these owls have been recaptured since the banding began. Do they continue south across the 18 km wide Strait of Juan de Fuca to Washington state? Hopefully by continuing on with this project, Paul and Laurie will answer these and other questions concerning the nocturnal movements of these remarkable little owls.



Laurie Savard and Paul Levesque removing a Northern Saw-whet Owl from a mist net at Rocky Point (27 September 2002).

*Editors Note: as of October 26, Laurie and Paul had banded **182** Saw-Whet Owls at Rocky Point!*

Three-year trends in owl populations

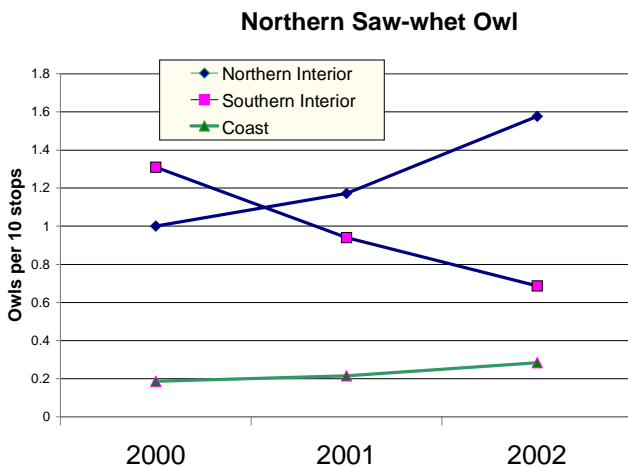
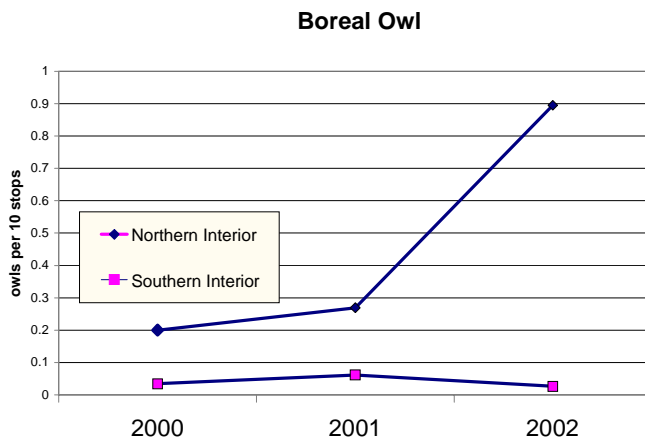
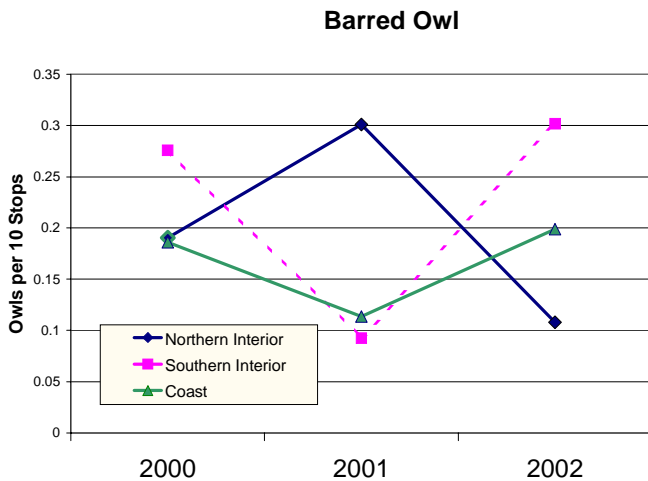
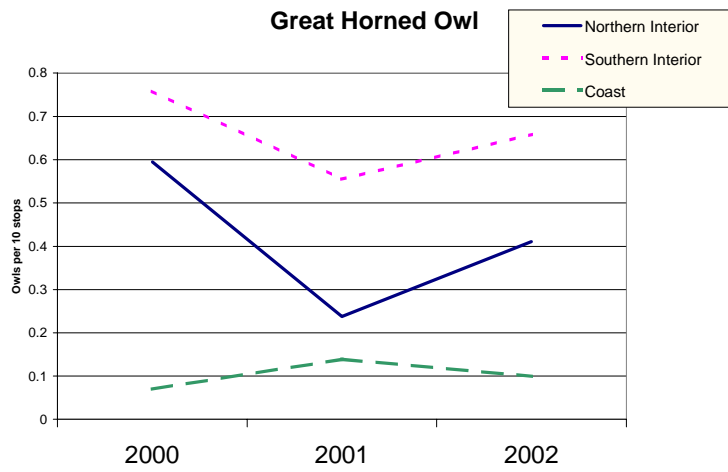
Now that we've been monitoring owl populations in BC and the Yukon for three years, it's a good time to look at how some of the more common species have been doing. The graphs on the left represent the numbers of Great Horned, Barred, Boreal and Northern Saw-whet Owls reported for every 10 stops surveyed in 2000, 2001 and 2002.

I've separated the survey into three main regions--the coast, the southern Interior and the northern Interior (including the Yukon). The trend for Great Horned Owls is fairly clear in the Interior, where they largely subsist on snowshoe hares. As the hare populations crashed in 2000, Great Horned numbers followed suit, especially in the north where about two-thirds of the population disappeared. This year, Great Horned Owls have shown a modest increase in numbers in the interior; the less cyclic populations on the coast show a lower but more stable level.

Barred Owls showed a similar drop in 2001 followed by a rebound in 2002 on the coast and in the southern interior, but the pattern is quite the opposite in the north. The reasons for these changes are less clear.

The Boreal Owl graph sends a clear message of population boom in 2002 in northern BC and the Yukon. Boreal Owl populations tend to follow the ups and downs of the vole populations on a four-year cycle. We can predict that Boreal Owl numbers will come down in the next two years to lower levels.

Northern Saw-whet Owls feed primarily on deer mice, so don't usually show the same drastic fluctuations as do their Boreal cousins. They do eat voles when there are lots of them around, so that could explain the recent increase in northern BC, but the concurrent drop in numbers in southern BC is more mysterious.



NEWS AND NOTES

Owl monitoring across Canada

Bird Studies Canada is now coordinating owl surveys from coast to coast, with provincial programs in BC and Yukon (that's us!), Alberta, Manitoba, Ontario and Atlantic Canada. A Québec owl survey is in the planning stages, and hopefully the Saskatchewan survey, one of the first in Canada, will be revived in the near future. Lisa Takats Priestley, the BSC coordinator for the prairie provinces, is taking on the national coordination of these owl surveys. Lisa has a strong background in owl monitoring, having done her MSc thesis on owl monitoring in Alberta, a study that we used in part to set up the protocol for the BC-Yukon survey.

One of the advantages to a national survey is of course the ability to monitor owls across the country using similar techniques. Another plus is that we will likely be able to use scannable form technology produced for the Ontario owl monitoring scheme. These forms will greatly improve the efficiency and accuracy of data input.

West Nile Virus hits the Owl Rehabilitation Research Foundation

Kay McKeever's renowned Owl Rehabilitation Research Foundation in Vineland, Ontario has been hit hard by the West Nile Virus. Most of their northern owls--Snowy, Great Gray, Northern Hawk and Boreal--succumbed to the virus after being stressed by an extremely hot summer and an infestation of blood-sucking hippoboscid flies. Southern species such as Eastern Screech, Great Horned, Barred, Flammulated, Northern Pygmy, Long-eared and Short-eared survived the virus outbreak essentially unscathed. For more details, see a letter from Kay at <http://www.ovc.uoguelph.ca/vth/wildbird/owlfoundation.htm>.

Owl identification tapes

If you are a primary observer on one of the owl surveys and would like a reference tape of the owl calls you may hear, please contact Dick Cannings at the address on the back page.

Web Sites

Web cams seem to be everywhere these days, and some of the more interesting ones are set up at owls nests. Here are a few of them:

<http://www.cam.colostate.edu/nestnews> Great Horned Owl nest

http://home.ec.rr.com/ospreynest/picture_page.htm Great Horned Owl nest in old Osprey nest

<http://216.117.186.83/owls02/owl02.htm> Barred Owl nest

<http://www.pitt.edu/~dziadosz> Various bird nest cams

<http://gargravarr.cc.utexas.edu/owl/2000/news.html> Eastern Screech-Owl nest cam



As mentioned in last spring's newsletter, Northern Hawk-Owls bred farther south than usual in 2001. That trend continued in 2002, with pairs nesting again near Riske Creek (where this photograph of a fledgling was taken during a BC Field Ornithologists field trip in mid-June) and on Greenstone Mountain near Kamloops.

FLAMMULATED OWL SURVEYS

This year we asked owlers in the southern Interior to try some special routes for Flammulated Owls. We received data from a number of observers, but only the few routes done early in the period recorded any owls. I think this survey has the potential to produce valuable data, so I'll be setting up a new survey time period for next year's routes. Thanks to all those who participated in this!



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Looking forward to 2003...

Participants will be getting their 2003 BC Nocturnal Owl Survey packets early in the new year. I would like to thank you all for the hard work you put in 2002; if we keep this up we'll have a valuable database for owl population monitoring research, and the owls will thank us too!

--Dick Cannings

BC-Yukon Nocturnal Owl Survey

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