



What a year for Fringillidae!

As the raptor migration starts to draw to an end, the *Observatoire d'oiseaux de Tadoussac's* (OOT) ornithologists have been kept on their toes by the huge number of Fringillidae passing above Tadoussac. After the single-day record for White-winged Crossbills (8,565 individuals) set on the 25 October, another important passage occurred on the 27 October, when 7,156 individuals were observed. So far this year, well over 55,000 White-winged Crossbills have been counted. This is the highest figure ever recorded by the OOT. A new record for the number of Common Redpolls seen in a single year has also been set, with 31,745 individuals counted to date. The previous record of 30,038 was set in 2003. In the same vein, several other single-day records have been broken this year. The passage of 7,956 Common Redpolls on the 2 November broke the previous record of 5,550 individuals that was set on the 29 October 2003. Finally, the existing single-day record of 12 Red Crossbills, set on the 7 October 2004, has been beaten three times this year and is, at the moment, sitting at 28 individuals. As well as being the result of an exceptional dispersion year, these new records also reflect an alteration in the visual counts timetable: the counts have been starting at 7 o'clock, an hour earlier than in 2006. This change to the protocol was made in order to verify the influence of the sunrise on the numbers of migrating passerines observed. On average, this extra hour of monitoring accounts for 10 % of the daily White-winged Crossbill total and 23 % of the daily Common Redpoll total. On the other hand, Red Crossbills do not seem to be such 'early birds': only two of the 89 individuals counted to date were observed before 8 o'clock.



Like the individual photographed here, a large number of the White-winged Crossbills that our observers have been able to age were juveniles.

© Samuel Denault

As a family, the Fringillidae are well known for being irruptive. That is, their abundance at a given place varies between years, increasing suddenly due to high reproductive rates and dispersal movements that concentrate the birds in a given area. In such years, these boreal species are more frequently observed in the south of Québec. A team of scientists from California (Koenig and Knops, 2001. *Journal of Animal Ecology*), have been investigating the reasons behind these displacements. After having analysed the data from the Christmas Bird Count (CBC) in the United States, they noted that Purple Finches undertook huge displacements in years of high productivity, and that this was independent of the amount of food

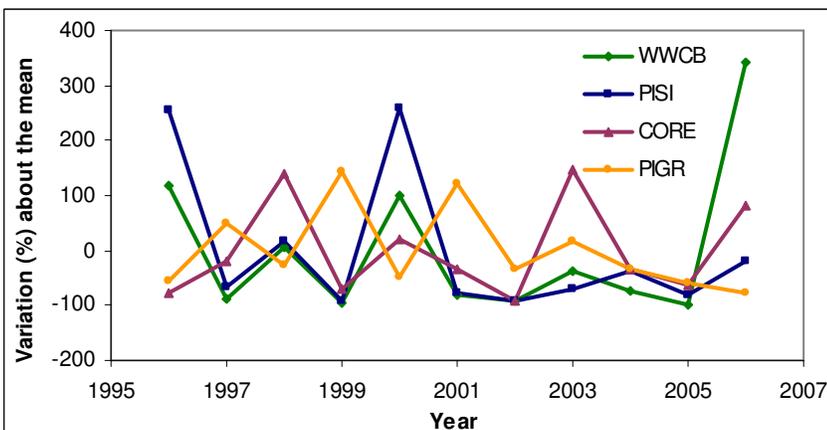


Figure 1. The annual fluctuation in the population size of species of Fringillidae counted at the OOT shows a pattern resembling the teeth of a saw. Most species seem to undergo important displacements every two to three years.
Source : OOT

available in the boreal forest. According to the authors, dispersing individuals are seeking new territories. Furthermore, their analysis shows that White-winged Crossbill dispersion is more food motivated: this species seems to undertake dispersal movements in years of low cone production. The OOT's dataset highlights the marked inter-annual fluctuation in Fringillidae numbers (Fig. 1). Three species, the White-winged Crossbill (WWCB), the Pine Siskin (PISI) and the Common Redpoll (CORE), are synchronous in their fluctuations. By contrast, the Pine Grosbeak (PIGR) seems to be one year out of sync. A collaborative study with the Canadian Wildlife Service is underway in order to gain a better understanding of the ecological parameters associated with these fluctuations. Perhaps the OOT is able to detect shorter distance displacements than the CBC, or perhaps the explanation underlying this phenomenon is more complex than was previously thought. Whatever the reason, you should see a good number of Common Redpolls at your feeders this winter!

Number of owls banded		
Species	Week 10	Total 2006
Northern Saw-whet Owl	1	128
Boreal Owl	0	3

Bander : Yann Rochepault

Raptor counts		
Species	Weeks 10 and 11 26 oct. to 8 nov.	Total 2006
Osprey	2	737
Bald Eagle	45	140
Northern Harrier	4	215
Sharp-shinned Hawk	49	2839
Goshawk	15	79
Broad-winged Hawk	0	439
Red-tailed Hawk	533	2693
Rough-legged Hawk	40	215
Golden Eagle	17	36
American Kestrel	0	706
Merlin	1	128
Peregrine Falcon	1	73
Gyrfalcon	0	1
Turkey Vulture	0	54
Unidentified raptor	1	28
TOTAL	708	8383

Top-five migrating passerines	
Weeks 10 and 11	Total 2006
Common Redpoll (26 759)	White-winged Crossbill (57 417)
White-winged Crossbill (21 613)	Common Redpoll (31 745)
Pine Grosbeak (3568)	Cedar Waxwing (10 898)
American Crow (1495)	Pine Siskin (10 024)
Purple Finch (688)	American Crow (4687)

Official Counters : Samuel Belleau and Samuel Denault

BANDING STATION: Rain forced the closure of the nets for several days and brought an earlier than planned end to the banding station's activities for 2006. The last night of owl banding took place on the 26 October, when a single Northern Saw-whet Owl was banded. This year the OOT banded the highest number of Northern Saw-whet Owls since the year 2000. For more detailed information concerning the total number of each species banded in 2006, please visit our Internet site (www.explos-nature.qc.ca/oot). We would like to take this occasion to thank the *Ministère des Ressources naturelles et de la Faune* for the loan of the mobile laboratory.

VISUAL COUNTS: Eagle migration is still going strong: 19 Bald Eagles and 8 Golden Eagles were counted on the 26 October. The 140 Bald Eagles observed to date, represents the largest number ever counted by the OOT before the 9 November. Hopefully, this trend will hold out until the end of the season. However, the scenario is a little different for Golden Eagles: only 36 individuals having been recorded to date. This figure is ten individuals less than the average for this stage in the season. With regards to coastal birds, the first Iceland Gulls of the season have been seen and 1,069 Bonaparte's Gulls were counted on the 6 November during a survey that is part of a pilot study looking into the monitoring of this species.

Keep your eyes open and enjoy the migration!

Editorial team: Émilie Berthiaume (author, emilieberthiaume@explos-nature.qc.ca), Bruno Drolet (editor, French version) and Andrew P. Coughlan (editor and translator, English version).

Our operations for the 2006 season are assured through the support provided by Environment Canada's Canadian Wildlife Service and Science Horizons Youth Internship Program, *Faune Québec – ministère des Ressources naturelles et de la Faune*, the *Parc national du Saguenay*, the Saguenay - St. Lawrence Marine Park, the *Université du Québec à Chicoutimi's Consortium de recherche sur la forêt boréale commerciale*, the *Fondation de la faune du Québec*, Bird Study Canada's Baillie Birdathon, *Explos-Nature's Fonds de développement OOT* and the Friends of the OOT Fund.