

Summary of 2012 Field Season (Kevin Kelly)

This summer was the third summer of work on a Master's project for Kevin Kelly, working with Becky Holberton (U.Maine) on alcid condition.

This year the alcids laid at least a week earlier than ever recorded on MSI, with subsequent early fledge dates. The food this year was better than it has been in the past two years, with mostly herring and hake and almost no Euphausiids seen in both Razorbill and Puffin diets. Growth rates were average, higher than the past two years.

A partial Razorbill census was conducted using 2 meter transects every 30 meter gridline from north to south. The rough estimate of nests from this census was 1,425.

In the Auk Condition project with Prof. Holberton (U. of Maine), we took 92 blood samples from 81 adult puffins. No Razorbills were sampled. All samples are with Prof. Holberton in her lab at Orono for analysis. We also collected 20 samples of blood from these same puffins to be sent to Iceland for a genetic analysis project being undertaken there.

We collected diet samples from 12 burrows, by blocking the entrances with chicken wire for up to 2 hours.

This summer we also put out 26 geolocators on breeding puffins from burrows in order to collect data on where they go in the winter. These tags were kindly donated by Drs. Mark Mallory (Acadia U.) and Jonathan Verreault (UQAM) who had ordered them for arctic gulls but were unable to reach the site.

We also collected 20 puffin eggs for routine contaminant monitoring by CWS.

Bird highlights for this year included a Northern Gannet nest on the south shore of the island, the first nesting ever recorded on the island. It appeared in late May and an egg was present for just under a week before it disappeared. Following the disappearance of the egg gannets were seen in the area for a few days, but within about a week they had obviously left the island. Other bird highlights were the first ever record of Red-bellied Woodpecker and Nelson's Sharp-tailed Sparrow passing through during the migration period in May.

Staff

The crew arrived by boat from Cutler ME on 13 May, and left 5 August. Kevin Kelly was island supervisor, assisted by Alys Granados and Brian Koval. Prof. R. Holberton and Tony Diamond each visited for a few days in May to assist Kevin with his alcid work, and

Tony visited again 26-28 July. We were unable to send a representative to the GOMSWG meeting in August since we were all in Vancouver for the North American Ornithological Congress at the same time. Water supply was good; communications via internet were good this year, but the phone and radio were less dependable.

Terns

This year marked the eighth consecutive year with no fledged terns on MSI. There were a total of 25 nests found in marked plots this year, down from last year (33). No tern census was done, but the estimate of total nests was 300-500 based on the numbers seen around the island. Courtship behavior started in mid-May and the first egg was found on 5 June. Once egg-laying began the colony was never fully comfortable on the island, but they were seen dive-bombing gulls over the colony on multiple occasions and incubating throughout the day. Egg-laying seemed to occur for only about a week in early June and many of the eggs were lost within a few days. In mid-late June there seemed to be a second, smaller wave of nesting behavior seen on the island. This too was short-lived and on 27 June the first day of abandonment of nests began. No Peregrine Falcons were seen on the 27th but on both the 28th and the 29th there were two Peregrines present on the island all day. From then on there were no days when the terns were around in any numbers, with only a few terns at time seen on the island during the day. The terns continued this trend, leaving at first light and coming back after dark for several weeks, and in mid-July there were only a few terns heard around the island at night and very few seen during the day.

Alcids – selected results

	Monitored Burrows	Burrow Occupancy	Hatching Success (total hatch/total active nests)	Breeding Success (total fledge/total active nests)
Puffin	101	0.78	0.71	0.62
Razorbill	84	0.70	0.69	0.57

Atlantic Puffin chick diets consisted of (by number): 50.8% Hake, 38.5% Herring, 5.7% Butterfish, 2.0% Euphausiids, and less than 1% each of Haddock, Squid, Polychaetes, Pollock and Sandlance.

Razorbill diets were: 79.4% Herring, 20.2% Hake and less than 1% Sandlance and Pollock.

Full results will be updated on <http://www.unb.ca/acwern/msi/studyresults.htm>

Predators

Gull scaring is still done by researcher presence, firing noise-makers and occasionally non-lethal shooting with a pellet gun or slingshot (as stated above one of these occasions resulted in a fatality this year). Noise-makers haven't been used much in the past two seasons to minimize tern disturbance. Twenty-two nests on nearby Gull Rock were destroyed over 3 visits, and 37 nests were found and destroyed on MSI itself; these numbers are a continuation of a recent sharp increase, additional to the increasingly bold predatory behavior by the gulls.

Assistant Brian Koval is completing a Master's in Scotland, and for his project collected fresh samples of gull feces from nests on MSI and Gull Rock, and from roosts on MSI. These were screened for auk DNA by Kirsten Bowser at UNB; of 44 samples, 5 tested positive for puffin, most in a cluster of nests on MSI northeast of NW notch. Kirsten was unable to develop a primer for Razorbill or Common Murre, as planned.

Raptors this season included Peregrine Falcons, Merlin, Bald Eagles and Northern Harrier. Peregrines were again a presence on the island early in the season, and likely contributed to the abandonment of nests by the terns. They were seen on the island on 30 days, up from 11 last year, 8 of which there were two seen on the same day, often perched near each other. Bald Eagles this year were seen often early in the season, and often on Gull Rock, possibly contributing to more gulls nesting on MSI than Gull Rock this year. Merlin and Harriers were seen on only one day each.