

Introduction/ Discussion

In an effort to benefit the seabirds nesting on the islands SE of Vinalhaven mink traps were set on Otter, Roberts, Carvers, and Hay islands, during the spring of '98. The first traps were set on the 9th of April. The last traps were taken up on the seventh of May. One Mink was caught on Otter. There had been 4 mink caught during the spring of '97 three on Otter and one on Robert's. Two mink were trapped on Otter during the late summer of '95. This effort was supported by the Vinalhaven Land Trust, The Maine Department of Inland Fisheries and Wildlife, and The Petit Manan National Wildlife Refuge.

The recent history of the minks occupation of these islands is not well known, there have doubtless been mink off and on these islands on and off forever. During this most recent occupation the Mink consumed the Leaches Petrels nesting on Otter. Like a fox in a chicken coop a mink on a seabird island will kill more than it eats.

The mink also caused the failure of the Guillemots attached to these islands, in the last few years there has been next to zero Young Guillemots raised there. The presence of a large number of adult Guillemots around the islands in Mid May, suggests that there has been a successfully breeding population there recently.

A search for Guillemot nest sites during the first week of August showed that the Guillemots were more successful raising young on these islands this year than they had been recently. There was a great gain in the number of successful sites on Carvers island. Where we had found only two successful sites, dead chicks at 10 sites and dead adults at 5 sites, in '97. This year we found live chicks at 8 sites, 18 other sites that had chick guano where no chick was seen, and dead chicks at only two sites. The Guillemots seem to like Carvers well, in these last few years there has been as much breeding effort on Carvers as there has been on Hay, Roberts and Otter put together.

A site with a guano pile is significant because it indicates the presence of a chick. Though we don't know the fate of the chicks at the sites where only the guano pile was seen we know that the adults were successful in hatching a chick. There were 12 guanoed sites found on Carvers in '97 and 27 found in '98.

For the first time in the last four years there were live Guillemot chicks found on Hay and Otter. On Hay 9 live chicks were found at 5 sites. On Otter 10 chicks were found at 8 sites and there were 8 other sites that may have fledged young. There was little change on in the breeding success of Guillemots on Roberts this year, three were three sites with live chicks found in '97 and in '98 but in '97 there were 5 sites with dead chicks, and no sites with dead chicks were found this year.

The total number of sites found at which Guillemot chicks hatched, guanoed sites, for Carvers, Hay, Roberts and Otter was 24 in '97, there were 58 such sites found in '98.

The large Gulls particularly Black-backs may have a considerable effect on the where the Guillemots nest. The concentration of Guillemot nest sites in the deep cracks on the east side of Brimstone where Gulls would be reluctant to go, suggest the Gulls may exclude Guillemots from good habitat.

If the mink are kept off the islands then the number of Guillemots nesting there seems likely to grow, and Petrels may try nesting on Otter again.

There were one hundred active mostly successful Guillemot nest sites found on Brimstone during the first week of August.

Mink occupy the entire Fox islands and a lot of Maine, Guillemots nest on only a few islands in this area and Maine is the only Place in the US where many of them nest. Though it is a shame to kill these individual Mink it would be a shame to let them kill off these birds.

Mink/Guillemots
Time/Budget

Coastal Bird Surveys
Box 102 Vinalhaven, Maine 04863

During the Spring of '98 the effort to eliminate mink from Seabird nesting islands SE. of Vinalhaven was continued. The trapping was followed up by some investigation of the Guillemot population in the area.

There were two counts made of adult Guillemots around the islands in Mid May. During the first week of August a survey of Guillemot nest sites was made by 5 observers on Otter, Roberts, Carvers, Hay, and Brimstone to document their breeding effort and measure their success.

There were live Guillemot chicks found on Hay and Otter islands for the first time in the last 4 years. Apparently the Mink trapping is having the desired effect. A report of the results of the ground surveys will be submitted on completion.

This effort was supported Financially by the Maine Department of Inland Fisheries and Wildlife (\$500), the Petit Manan National Wildlife Refuge (\$500) and the Vinalhaven land trust (\$1,000)

The following is a summary of effort made and where the money went.

March 25, Ashore Otter, Roberts islands looking for Mink Sign.

April 9, Set 16 traps on Otter, 6 on Roberts, 5 on Carvers, (Earl Hamilton, Eric Davis)

April 13, Check Traps, find one Mink on southernmost set on Western shore of Otter, no mink on Roberts or Carvers.

April 19, Check the traps no Mink.

April 26, set two more traps on Otter, took up two traps from Roberts and three traps from Carvers. (Earl Hamilton)

April 30, Set two traps on Hay island, (also known as Lanes Nubble), and checked Otter and Roberts.

May 7, all the Traps taken up from all four islands.

May 14, Survey of adult Guillemots.

May 16, Survey of adult Guillemots.

August 4, Ground Survey of Carvers and Lanes Nubble, 5 observers.

August 5, Ground survey of Roberts and 1/3 of Otter,

August 6, ground survey of the rest of Otter,

August 7, Ground survey of Brimstone.

Expenses:

7 trapping visits \$100/visit,	\$700,
Earl Hamilton, 2 visits and use of 29 traps,	\$200,
Adult Guillemot Surveys, \$100/ survey,	\$200,
Ground survey crew Salary, total \$130/day, x4	\$520, ,
Ground survey, boat and principal investigator, \$200/day x4	\$800,
Transcription and Write up, \$130/day 4 days,	\$520,
Total funding	\$2,000
total expense of project,	\$2,940.

Guillemot productivity on the Islands South East of Vinalhaven '95-'98

Island	Count Date	total	Sites with		total	Site w	Sites w	High count Adults
		Live Chicks	Guano no Chick seen	Dead Chicks	Sites W Guano	Dead Adult	Dead Eggs	
Otter 98	5-Aug	10	8	2	17	0	1	101
Otter 97	8-Aug	0	2	4	6	4	3	78
Otter 96								120
Otter 95	3-Aug	0	0	2	1	6	6	200
Roberts 98	5-Aug	6	0	0	4	1	5	52
Roberts 97	1-Aug	4	1	4	7	1	3	47
Roberts 96	3-Aug	0	0	0	0	1	4	110
Roberts 95	2-Aug	5	6	4	13	0	0	98
Hay 98	4-Aug	8	1	2	8	0	0	46
Hay 97	4-Aug	0	0	1	1	2	3	17
Hay 96	6-Aug	0	2	0	2	0	1	72
Hay 95	1-Aug	0	2	0	2	0	2	45
Carvers 98	4-Aug	10	20	2	29	1	3	156
Carvers 97	4-Aug	3	2	9	12	3	3	147
Carvers 96	3-Aug	2	2	8	10	4	5	154
Carvers 95	1-Aug	9	5	4	15	4	1	99
Brimstone 98	7-Aug	61	46	0	93	2	2 na	
Brimstone 97	6-Aug	59	21	8	74		18	310
Brimstone 96	4-Aug	79	24	3	84	1	4	354
Brimstone 95								305

The count date is the date of the shoreline search.

The total live Chicks is the total number of living Guillemot chicks found on the island during the search of the shoreline.

Sites with Guano no chick seen, is the number of sites at which there were guano piles but no chick was seen, The young may have fledged or be hidden dead or alive.

Dead chicks, total dead guillemot chicks found.

Total sites with Guano includes, sites with live chicks, Sites with dead chicks or just guano no chick seen. this indicates the number of sites that hatched young. The guano piles are conspicuous and make a good measure of the breeding effort.

The total guanoed sites for Otter, Roberts, Carvers and Hay was 24 in '97, 58 in '98. Indicating that the Mink trapping is having the desired effect

Sites with dead adults, the total number of dead guillemots found in nesting sites.

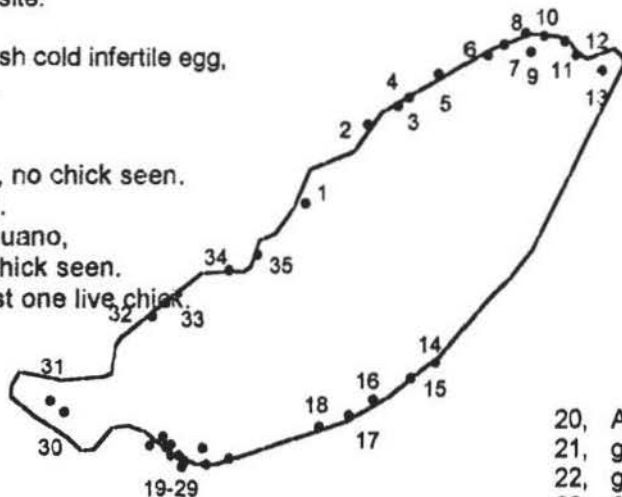
Sites with dead eggs, the number of sites at which this years dead eggs were found, this includes sites with one or two eggs, and sites that may also have had dead adults which would also be recorded in the dead adult column.

The High counts of adults were made in the middle of May.

Carvers island Guillemot nests sites, Aug. 4 1998.

site #

- 1, Guano pile, no chick seen, Possible fledge.
- 2, Guano pile No Chick seen Possible fledge.
- 3, Guano pile no chick Seen Possible Fledge, no egg.
- 4, Guano pile, No chick Seen, no egg possible fladge.
- 5, dead chick, close to fledge, egg shell,
- 6, Guano Pile, Egg shell, no chick seen Possible fledge.
- 7, guano Pile, very fresh, egg shell, Probably in there can't see.
- 8, Guano, egg shell, no chick seen.
- 9, small guano pile, no more, possible site.
- 10, Mink Den? no scat pile.
- 11, egg and egg shell, no guano, fresh cold infertile egg.
- 12, guano, egg shell, no chick seen.
- 13, old dead egg.
- 14, 2 live chicks ready to go.
- 15, dead fertile egg, small guano pile, no chick seen.
- 16, dead chick, guano pile, Mink Kill.
- 17, dead adult in burrow, no egg no guano.
- 18, egg shell, small guano pile, no chick seen.
- 19, scrambling heard, guano at least one live chick.



- 20, At least one live chick.
- 21, guano pile, no chick seen.
- 22, guano pile, no chick seen.
- 23, 2 live chicks ready to go.
- 24, guanoed site no chicks seen.
- 25, dead egg last years.
- 26, large guano pile, no chick seen.
- 27, dead egg, and big guano pile.
- 28, famous crack, with guano, no chick seen, Possible fledge.
- 29, 2 live chicks ready to go.
- 30, guano pile.
- 31, guano pile.
- 32, big guano pile, no chick seen.
- 33, downy chick, at least one also heard squeeling.
- 34, guano pile, squeeling, at least one.
- 35, guano pile.

↑N

Carvers Island Guillemots 1998

The following are the results of a search for Guillemot nest sites on the shoreline on Carvers Island August 4th 1998. The Search was made by five observers between 08:30 and 12:30.

Site #, (see map)

- 1, Guano pile, no chick seen, possible fledge.
- 2, Guano pile, no chick seen, possible fledge.
- 3, Guano pile, no chick seen, no egg, possible fledge.
- 4, Guano Pile, no chick seen, no egg, possible fledge.
- 5, Dead chick, close to fledge, egg shell.
- 6, Guano pile, no chick seen, egg shell, possible fledge.
- 7, Guano pile, very fresh, egg shell, no chick seen probably in there.
- 8, Guano pile, egg shell, no chick seen.
- 9, Small guano pile, no more, possible site.
- 10, Mink den? No scat pile.
- 11, Egg shell, this years cold undeveloped egg, no guano.
- 12, Guano pile, egg shell, no chick seen.
- 13, Old dead egg.
- 14, 2 live chicks ready to go.
- 15, Dead fertile egg. Small guano pile, no chick seen.
- 16, Dead chick, guano Pile, Mink Kill.
- 17, Dead adult in a burrow, no egg, no guano.
- 18, Egg shell, small guano pile, no chick seen.
- 19, Scrambling heard, guano, at least one live chick.
- 20, At least one live chick.
- 21, Guano pile, no chick seen.
- 22, Guano pile no chick seen.
- 23, 2 live chicks read to go.
- 24, Guano pile, no chick seen.
- 25, Dead egg last years.
- 26, Large guano pile, No chick seen.
- 27, Dead egg, and big guano pile.
- 28, Guano pile, no chick seen Possible fledge.
- 29, 2 live chicks ready to go.
- 30, Guano pile.
- 31, Guano pile.
- 32, Big guano pile no chick seen.
- 33, Downy chick, at least one also heard squealing.
- 34, Guano pile squealing, at least one live chick.
- 35, Guano pile.

Summary: We found 20 sites with guano piles where no chick was seen these could have fledged. That is almost 60% of the sites found compared to 45% at Brimstone a few days later. Perhaps the Guillemots started earlier on Carvers, Maybe a mink Killed some of them, there were two dead chicks found close to fledging that looked like mink kills. Maybe a mink visited the island. If Mink had Killed many of the chicks at those sites with guano where no chick seen then we should have seen more dead chicks in those sites. We also found 4 sites with at least one chick, 3 sites with 2 live 4 week old chicks, 3 sites with dead eggs, 2 sites with dead chicks close to fledging, and a site with a dead adult.

The sites we clumped at the SE and NW corners of the island.

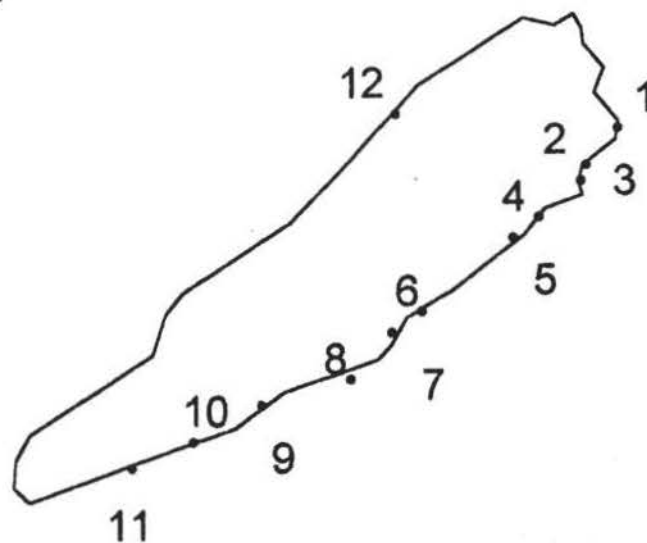
There were 156 adult Guillemots counted around Carvers on May 14 at 08:15, and 143 on May 16 at 07:10

There were 5 mink traps set on Carvers April 9, three taken up on April 26, the last two taken up May 7. The last two were in a baited wire run. We caught no mink and didn't see any fresh sign of them. **Summary Carvers '97,** We found: 4 dead eggs, at 3 sites, two of those sites also had dead adults. 9 dead chicks at 9 different sites. 3 live chicks at two sites, one of the sites has had a chick in it each of the last three dismal years on Carvers. 3 dead adult at least one of which was killed by a mink.

Gullemot nest sites Hay Island '98

Site

- 1, Dead tiny chick, with egg, no guano.
- 2, Single live chick, 2 egg shells.
- 3, 2 live chicks, @ 4 weeks old, ready to go.
- 4, Chick guano, no chick seen Possible fledge.
- 5, Egg shell, old? good chamber, no guano.
- 6, 2 live 3 week old chicks, downy feathered cheeks.
- 7, 2 live 4 week old chicks.
- 8, 1 live chick, @4 weeks old ready to go.
- 9, Egg shell, yolk spilled, no guano.
- 10, Egg shell, guano, no chick seen, small guano pile.
- 11, Egg shell dead large chick, dead @ 10 days.
- 12, 2 dead eggs last years.



Hay Island, (Lanes Nubble) Guillemots 1998

The following are the results of a search for Guillemot nest sites along the shore of Hay Island August 4th 1998. The search was made by five observers between 1:30 and 3:15.

Unlike 1997, when mysteriously absent, there were gull fledglings on the island.

Site #

- 1, Dead tiny chick with egg no guano.
- 2, Single live chick, 2 egg shells.
- 3, 2 live chicks, 4 weeks old, ready to go.
- 4, Guano pile, no chick seen, possible fledge.
- 5, Egg shell old, good chamber no guano.
- 6, 2 live 3 week old chicks, downy feathered cheeks.
- 7, 2 live 4 week old chicks.
- 8, 1 live 4 week old ready to go.
- 9, Egg shell, yolk spilled no guano.
- 10, Egg shell, small guano pile, no chick seen.
- 11, Egg shell, dead large chick, dead for @10 days.
- 12, Last years 2 dead eggs.

Summary:

3 sites that had two live chicks. 2 sites that had one live chick. 2 sites that had chick guano but no chick was seen. 2 sites had dead chicks, 1 site with egg shell that may not have been this years.

There were only two sites with chick guano in '95 and 2 in '96 and 1 in '97, none of those sites were judged likely to have fledged young. '98 was the first of the last 4 years that live Guillemot chicks have been seen on Hay

There were 41 adult Guillemots counted around the island on May 14, at 08:20, and 46, counted at 07:20 on May 16. . There were @ ten active sites, @ half the number of adults attending in mid may getting as far as eggs.

There were 2 mink traps set in a baited wire run on April 30, they were taken up on May 7, no Mink were caught and I saw no fresh sign of them.

Summary : '97 Hay August 4,

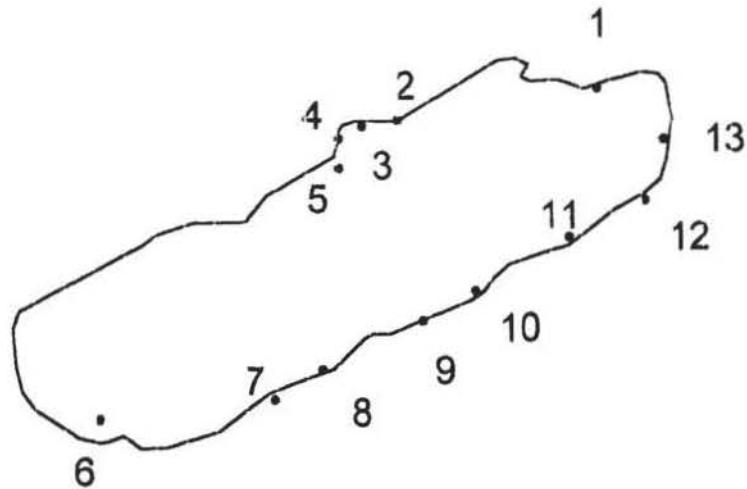
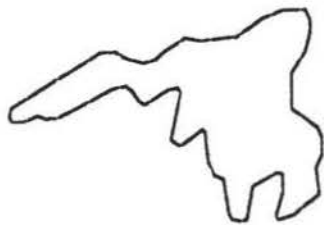
Search for Guillemot nest sites, 1 dead chick, 4 dead eggs at three sites, and two dead adults.

Roberts Guillemots 1998.

Approximate locations of Guillemot nesting sites found on Roberts island August 5, 1998.

Site

- 1, 2 eggs cold and dead egg roll.
- 2, 2 Small downy chicks.
- 3, Egg shell, no guano, old shell?
- 4, 2 dead eggs, 1/2 developed, poked.
- 5, old Site, amnion, fish, small guano pile.
- 6, 2 large feathered chicks, 3-4 weeks old.
- 7, 2 dead eggs, this years.
- 8, dead egg, last years.
- 9, Dead adult.
- 10, Dead egg, at the edge of the turf.
- 11, Egg shell.
- 12, 2 live chicks, ready to go.
- 13, Dead egg, this years.



Roberts Guillemots 1998

The following are the results of a search for Guillemot nest sites on the shore of Roberts Island August 5 1998 between 8:10 and 10:50. There were 5 observers.

Site #, (see map)

- 1, 2 eggs, dead cold, egg roll, the same as last year.
- 2, 2 small downy chicks.
- 3, egg shell, no guano, old shell?
- 4, 2 dead eggs, 1/2 developed, poked.
- 5, old site, amnion, fish, small guano pile.
- 6, 2 large feathered chicks, 3-4 weeks old.
- 7, 2 dead eggs this years.
- 8, dead egg last years.
- 9, dead egg.
- 10, dead egg, site on the edge of the turf.
- 11, egg shell.
- 12, 2 live chicks ready to go.
- 13, dead egg this years.

Summary:

We found: 2 sites that had 2 @ 4 week old chicks, 1 site with two small downy chicks, 3 sites that had two dead eggs, 2 sites that had one dead egg, 2 sites that had egg shell but no guano the shells may not have been this years, an old site that had amnion a fish and a small guano pile, a site with a dead adult and a site that had a dead egg from last year.

The successful sites this year were different from the successful sites in '97.

There were 52 adult guillemots counted around Roberts on May 14 at 07:40, there were 43 counted around the island on May 16 at 06:33.

We found 6 live chicks at three sites not much of a gain from the 4 live chicks at three sites found in '97, 5 sites with dead eggs which suggests abandonment perhaps due to a visit by a mink early in the year. Last year we found 5 sites with dead chicks this year we found no dead chicks. We found more dead eggs this year this suggests disturbance earlier in the year.

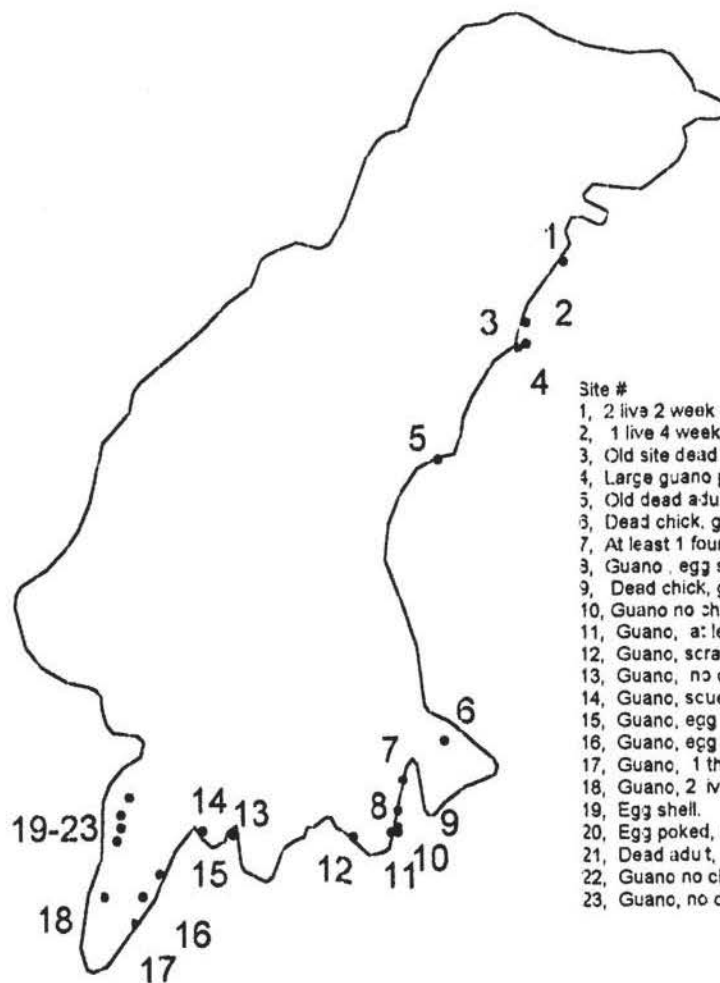
There were 6 Mink Traps set on Roberts April 9, four of those traps were taken up on April 26, the last two were taken up on May 7. There were no Mink caught and I saw no fresh sign of them. There was one Mink Trapped on Roberts during the spring of '97.

Little Roberts was not searched for Guillemot nest sites because of the nesting Cormorants. There were 86 adults Guillemots around Little Roberts on May 14, and 90 on May 16.

Roberts '97

Summary: 4 sites with dead chicks, 2 sites with 2 dead eggs, 1 site with 1 live 1 week old chick, 1 site with 2 one week old live chicks, 1 site with 1 live 3 week old chick, 1 site with one dead egg, 1 site with 2 dead chicks, 1 site with an eaten egg and 1 site with a dead adult.

Otter Island Guillemot rest sites 98



Site

- 1, 2 live 2 week old chicks.
- 2, 1 live 4 week old chick, guano, egg shell.
- 3, Old site dead adult no action this year.
- 4, Large guano pile, no chick seen, probable fledge.
- 5, Old dead adult last years.
- 6, Dead chick, guano.
- 7, At least 1 four week old chick.
- 8, Guano, egg shell, no chick seen.
- 9, Dead chick, guano.
- 10, Guano no chick seen Possible fledge.
- 11, Guano, at least one live @ 3 week old, and old dead chick not this years.
- 12, Guano, scrambling heard, at least one live chick.
- 13, Guano, no chick seen.
- 14, Guano, scueeling, no chick seen at least one live chick.
- 15, Guano, egg shell, no chick seen, possible fledge.
- 16, Guano, egg shell, fish, no chick seen, possible fledge.
- 17, Guano, 1 three week old chick.
- 18, Guano, 2 live 3 1/2 week old chicks.
- 19, Egg shell.
- 20, Egg poked, and 2nd egg in chamber, no guano.
- 21, Dead adult, egg shell.
- 22, Guano no chick seen, kern.
- 23, Guano, no chick seen, old dead chick not this years.

Otter Guillemots '98

The following are the results of a search for Guillemot nest sites on the shoreline on Otter Island 1998. The Search was made by five observers, 3 hours on August 5 and 6 hours on August 6.

Site # (see map)

- 1, 2 live @ 2week old chicks,
- 2, 1 live 4 week old chick, guano egg shell.
- 3, old site dead adult, no action this year.
- 4, Large guano pile, no chick seen probable fledge.
- 5, Old dead adult last years.
- 6, Dead chick, guano.
- 7, At least 1 @ 4 week old chick,
- 8, Guano, eggshell, no chick seen.
- 9, Dead chick, guano.
- 10, Guano, no chick seen, possible fledge.
- 11, Guano, at least one live @ 3 week old, and old dead chick not this years.
- 12, Guano Scrambling heard, at least one live chick.
- 13, Guano, no chick seen.
- 14, Guano, squealing, no chick seen, at least one live chick.
- 15, Guano, egg shell, no chick seen, Possible fledge.
- 16, Guano, Egg shell, fish, no chick seen, no possible fledge.
- 17, Guano, one 3 week old chick.
- 18, Guano, 2 live @ 3 1/2 week old chicks.
- 19, Egg shell.
- 20, Egg poked, and 2nd egg in chamber.
- 21, Dead adult, egg shell.
- 22, Guano, no chick seen.
- 23, Guano, no chick seen, old dead chick not this years.

Summary:

This is what we found at the sites that were judged to have been active this year. There were 2 sites with 2 chicks. There were 3 sites with at least one chick. There were 3 sites with one chick. There were 8 sites with guano piles and no chick seen. the chick responsible for the pile could be hidden live or dead, or fledged. There were 2 sites with guano and a dead chick. There was one site found with fresh egg shell, and one site found with 2 dead eggs.

As a measure of the interest in the island by the Guillemots, adults were counted around the island in mid May. On May 14th at 08:30 56 adults were counted around the island, on May 16th at 07:30 there were 101 adult guillemots around the island.

There were 17 sites found on the southern shore. The other 5 were on the east shore, this is a great gain from last year, a total of at least 10 live chicks at 8 sites and 8 other sites with chicks guano. This compares with zero live chicks and a total of only 6 sites with chick guano in '97.

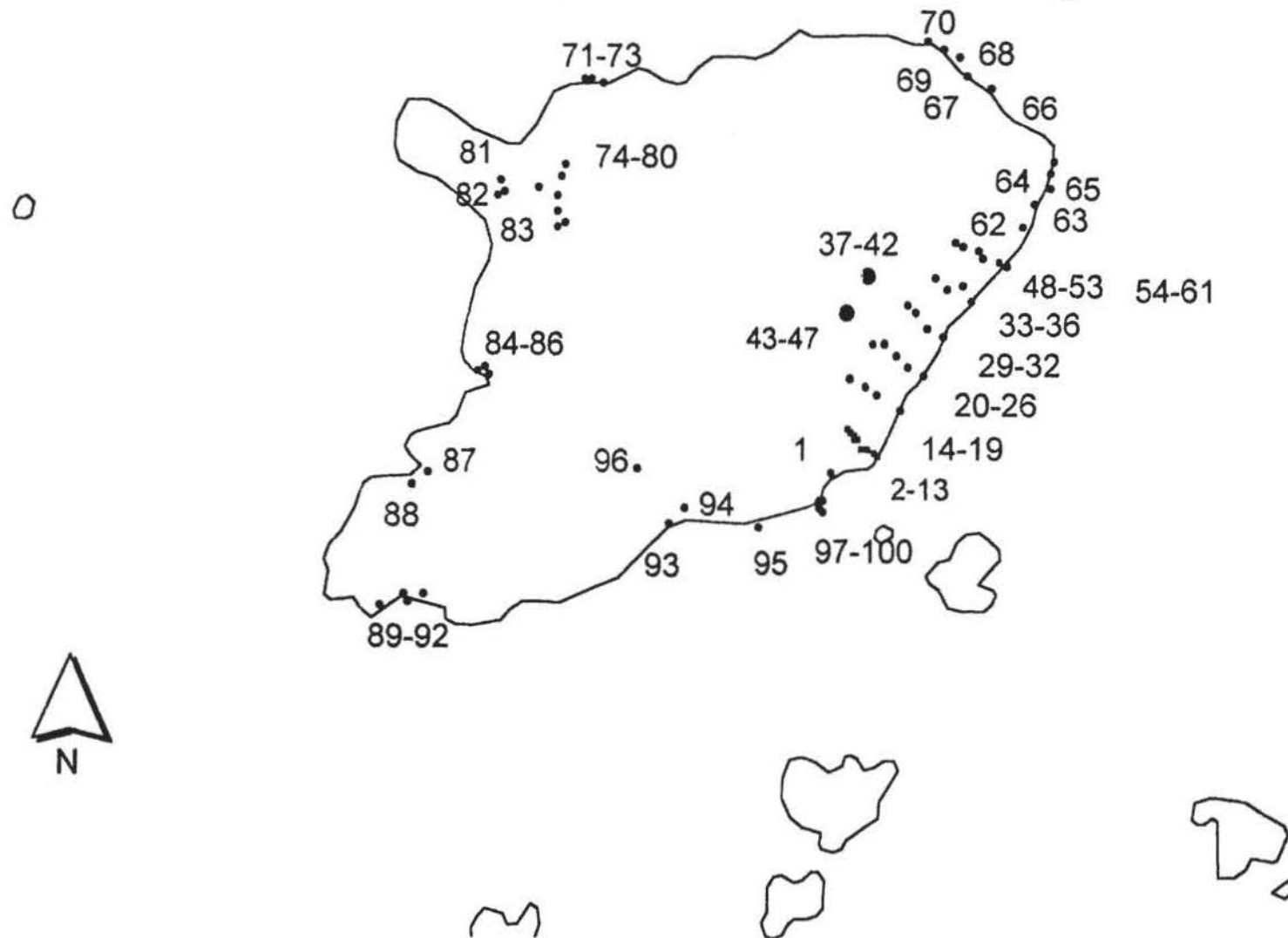
16 Mink traps were set on April 9 on Otter. A Mink was found in a trap set over a tunnel on the N W shore. Two more traps were set on April 26. All the traps were taken up on May 7. There were 3 Mink trapped on Otter During the Spring of '97 and two others during the late summer of '95. Hopefully these individuals were a particular cohort that won't quickly be replaced.

Otter 97'

Summary: 4 sites with dead chick and guano. 2 sites with guano and no chicks seen. 2 sites with dead adults and dead eggs. 2 sites with dead adults. 1 site with a dead adult and egg shell. 4 sites with egg shell, 2 sites with dead eggs.

Brimstone Guillemots 98

Approximate location of Guillemot nest sites on Brimstone Island August 7 '98



Brimstone Guillemots '98.

The following are the results of a search for Guillemot nest sites on the shoreline of Brimstone island August 7 '98 by five observers, between 08:30 and 15:00.

There are 6 deep cracks on the eastern shore North of the landing beach, the Guillemots nest sites are concentrated in these cracks. These sites are close to the water, which is an attractive feature for a site as it reduces the vulnerability of the chick as it makes its way to the water. The cracks may provide some protection from gulls who would be reluctant to go down into them.

Site #,

1, Guano, egg shell, No Chick Seen.

Crack # 1,

- 2, 2 small downy chicks, @ 10 days old.
 - 3, 1 large feathered chick, @4 weeks old.
 - 4, Guano, no chick seen, Possible fledge.
 - 5, Guano, egg, scrambling, 1 live chick not seen.
 - 6, 1, 4 week old chick.
 - 7, Guano, no chick seen possible fledge.
 - 8, Guano, 1 four week old chick.
 - 9, Guano, 1 four week old chick.
 - 10, Guano, no chick seen, possible fledge.
 - 11, Guano, no chick seen, possible fledge.
 - 12, Guano, no chick seen, possible fledge.
 - 13, Guano, no chick seen, possible fledge.
-

Crack # 2,

- 14, Guano, no chick seen, possible fledge.
 - 15, Guano, 2 four week old chicks.
 - 16, Guano, 2 three week old chicks.
 - 17, Guano, no chick seen, can't see the chamber.
 - 18, Guano, no chick seen possible fledge.
 - 19, Guano, 1 @ ten day old chick.
-

Crack #3,

- 20, Guano, 1 @ 3 1/2 week old chick, and dead egg.
 - 21, Guano, 1 two week old chick.
 - 22, Guano, can't see the back, possible fledge.
 - 23, Guano, egg, 1 two week old chick.
 - 24, Guano, 2 three and a half week old chicks.
 - 25, At least one 3 week old chick.
 - 26, Guano, no chick seen, can't see the back, possible fledge.
-

Between crack #3 and #4,

- 27, Guano, scrambling, old dead egg, at least on live chick.
 - 28, Guano, 2 three week old chicks.
-

Crack #4,

- 29, 1 four week old chick.
 - 30, Big guano pile, no chick seen, fresh eels, probable fledge, egg roll.
 - 31, Guano, no chick seen, probable fledge.
 - 32, Guano, no chick seen, probable fledge.
-

Brimstone Guillemot 98 continued,

nest site #,

Crack #5 the wide.

33, Guano, egg shell, no chick seen.

34, Guano, egg shell, no chick seen, possible fledge.

35, Guano, no chick seen, possible fledge.

36, Guano, no chick seen, possible fledge.

Above crack # 5

37, Guano, no chick seen, possible fledge.

38, Guano, 2 large 4 week old chicks.

39, 2 four week old chicks.

40, 1 four week old chick.

41, Guano, no chick seen, possible fledge.

42, Guano, 1 three and a half week old chick.

43-47 at the NE end of petrel ridge.

43, ?

44, ?

45, No guano seen, 2 chicks heard.

46, guano, no chick seen, possible fledge.

47, 2 old dead eggs dead adult.

Crack #6,

48, 2, one week old downy chicks.

49, 2 dead eggs.

50, 2 dead eggs, egg roll.

51, Guano, no chick seen, possible fledge.

52, Guano, 1 four week old chick.

53, Guano, 1 four week old chick.

54, Guano, 1 two and a half week old chick.,

55, Guano, no chick seen, can't see chamber.

56, Guano, no chick seen Possible fledge.

57, 2 two and a half week old chicks.

58, Guano, no chick seen, can't see the whole chamber, possible fledge.

59, Old egg shell and dead chick.

60, Guano, can't see chamber, no chick seen.

61, Guano, 2 four week old chicks.

62, Guano, 1 three week old chick.

63, 1 four week old chick.

64, Guano, 1 four week old chick.

65, Guano, can't see chamber.

66, Guano, 2 four week old chicks.

67, Guano, egg roll, no chick seen, can't see chamber.

68, 2 dead eggs.

69, 1 one week old chick.

70, Guano, egg shell, no chick seen.

71, Guano, no chick seen.

72, Guano, no chick seen.

73, old dead egg.

Brimstone guillemots continued.

Site #,

- 74, Guano, no chick seen.
- 75, 2 two week old chicks.
- 76, 2 three week old chicks.
- 77, 1 four week old chick.
- 78, 2 four week old chicks.
- 79, 1 four week old chick.
- 80, Guano, egg shell, no chick seen possible fledge.
- 81, Guano, no chick seen, possible fledge.
- 82, Guano, no chick seen possible fledge.
- 83, Guano, no chick seen possible fledge.
- 84, 2 four week old chicks.
- 85, Guano, no chick seen.
- 86, Guano, dead egg, possible fledge.
- 87, Guano, egg shell, no chick seen, can't see the back of the chamber.
- 88, Little guano pile, dead egg.
- 89, Guano, no chick seen.
- 90, Dead adult with a dead egg.
- 91, Guano, old dead chick.
- 92, Guano, dead egg, no chick seen.
- 93, 2 dead eggs.
- 94, Guano, egg, no chick seen.
- 95, Egg.
- 96, Guano, can't see the back of the chamber, no chick seen.
- 97, 1 four week old chick.
- 98, Guano, no chick seen.
- 99, Guano, no chick seen.
- 100, Guano, no chick seen.

Summary: There were 100 Guillemot nest sites found. Most of those sites, 65, were concentrated on the eastern shore. There were 17 sites found away from the shoreline.

There were 46 sites, @ 50 %, that had chick guano but no chick was seen, the chick may have been hidden, fledged, or dead.

There were 14 sites that had 1 chick @ 4 weeks old.

There were 8 sites that had 2 3- 4 week old chicks.

There were 5 sites that had 2, 2-3 week old chicks.

There were 5 sites that had 1 or two dead eggs, no chick guano.

There were 4 sites that had 1 2-2 1/2 week old chicks.

There were 3 sites that had 1 3-3 1/2 week old chicks.

There were 2 sites with 2 small downy chicks.

There were 2 sites at which scrambling was heard, at least one live chick.

There were 2 sites where the contents are unknown.

There was 1 site with at least one 3 week old chick.

There was 1 site with 2 chicks age unknown.

There was 1 site with two dead eggs and a dead adult.

There was 1 site with one dead egg and a dead adult.

There was 1 site with old egg shell and an old dead chick not this years.

There was 1 site with an old dead egg not this years.

There were 96 Guillemot nest sites found on Brimstone in '97, 90 in '96. The increase is due to a more thorough search of nesting areas away from the shore rather than a real increase in breeding effort by the birds.