ATLAS OF COLONIAL WATERBIRDS NESTING ON THE CANADIAN GREAT LAKES, 1989-1991 PART 2. CORMORANTS, GULLS AND ISLAND-NESTING TERNS ON LAKE HURON IN 1989

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NOTE

The Atlas is to consist of five parts as follows:

Part 1. Cormorants, gulls and island-nesting terns on Lake Superior in 1989.
(Blokpoel and Tessier 1993)

Part 2. Cormorants, gulls and island-nesting terns on Lake Huron in 1989.
(this report)

Part 3. Cormorants, gulls and island-nesting terns on the lower Great Lakes system in 1990.
(Blokpoel and Tessier 1996)

Part 4. Marsh-nesting terns on Lake Huron and the lower Great Lakes system in 1991.
(Austen *et al.* 1996)

Part 5. Herons and egrets in the Great Lakes system during 1989-1991.
(in preparation)

ABSTRACT

During the 1989 breeding season, an inventory was made of Double-crested Cormorants (*Phalacrocorax auritus*), Ring-billed Gulls (*Larus delawarensis*), Herring Gulls (*L. argentatus*), Caspian Terns (*Sterna caspia*) and Common Terns (*S. hirundo*) nesting in the Canadian portions of Lake Huron. This was done to determine the nesting population of each species in Canadian Lake Huron and to make comparisons with results obtained in 1980.

The field work was a cooperative effort by the Canadian Wildlife Service (CWS), the Ontario Ministry of Natural Resources, and contractors hired and trained by CWS. Islands were visited by boat and all active nests were counted. The methods used for counting nests were: ground counts (for 97.1% of the colonies), estimates from boats (2.1%), and estimates from the air (0.8%).

In 1989 a total of 478 active colony sites was found. In addition, there were 29 colony sites for which there were no data (20 sites were not visited and for 9 sites there were no records). The 478 colony sites held 41 Double-crested Cormorant colonies (with a total of 6,018 nests), 96 Ring-billed Gull colonies (150,218 nests, plus one colony with an unknown number of breeding pairs), 441 Herring Gull colonies (24,640 nests, plus one colony with an unknown number of breeding pairs), 8 Caspian Tern colonies (2,295 nests), and 57 Common Tern colonies (4,242 nests). In addition, 2 colonies of the Great Black-backed Gull (each with one nest) were found.

Of the 478 active colony sites, 347 (72.6%) had only one species, and of those, 319 (91.9%) had only Herring Gulls. By far the next most common species composition was: Herring Gull and Ring-billed Gull (56 sites, 11.7%).

The Double-crested Cormorant colonies were scattered throughout the study area where islands were available. The nesting population of the Double-crested Cormorant grew from 9 colonies with 335 nests in 1980 to 41 colonies with 6,018 nests in 1989. The mean annual growth rate during 1980-1989 was 37.8%.

The Ring-billed Gull colonies were widely distributed throughout the study area. There were 96 Ring-billed Gull colonies of known size with 150,218 nests, making this by far the most abundant species. Using comparable data, the population increased from 128,849 nests in 80 colonies in 1980, to 150,218 nests in 96 colonies in 1989. This represents a mean annual growth rate of 1.7%.

Herring Gulls were the second most numerous species, with 24,640 nests in 442 colonies spread across the study area in 1989. Using comparable data, the population of 30,738 nests in 399 colonies in 1980 dropped to 24,629 nests in 430 colonies in 1989, representing a mean annual rate of decline of 2.4%.

There were 8 Caspian Tern colonies in 1989, all in the North Channel and Georgian Bay. One 1980 colony site had become abandoned in 1989, while a new site was colonized by 1989. The population increased slightly from 1980 to 1989, from 2,138 nests to an estimate of 2,295 nests, which represents a mean annual growth rate of 0.8%.

In 1989, 57 Common Tern colonies were found (4,242 nests). However, the actual number of nests, and perhaps of colonies, was higher, because many sites were visited too early in the season for the late-nesting terns. Using comparable data, the nesting population decreased from 4,521 nests in 59 colonies in 1980 to 3,858 nests in 45 colonies in 1989, representing a mean annual rate of decline of 1.7%.

The 1989 survey results (together with those for 1980) are presented in detail in App. 4-10, which correspond to the seven 1:250,000 Topographic Maps that cover the parts of the study area that held colonies. The organization and layout of those appendices are explained in App. 3.

In addition to being listed, the 1989 colony sites (together with those for 1980) are plotted in App. 12-18, again by the seven 1:250,000 maps. The colony sites are plotted both on 1:250,000 maps (to provide overviews) and on 1:50,000 maps (to provide details of location). The organization of these maps is explained in App. 11.

RÉSUMÉ

Pendant la période de nidification de 1989, on a inventorié le Cormoran à aigrettes (*Phalacrocorax auritus*), le Goéland à bec cerclé (*Larus delawarensis*), le Goéland argenté (*L. argentatus*), la Sterne caspienne (*S. caspia*) et la Sterne pierregarin (*Sterna hirundo*) nichant dans les portions canadiennes du lac Huron. L'objectif a été de quantifier la population nicheuse de chacune des espèces dans la partie canadienne du lac Huron ainsi que de comparer les résultats avec ceux obtenus en 1980.

Le travail sur le terrain a été l'effort coopératif du Service canadien de la faune (S.c.f.), du ministère des richesses naturelles de l'Ontario, et d'entrepreneurs embauchés et entraînés par le S.c.f. Les îles ont été visitées par bateau et tous les nids occupés ont été comptés. Les méthodes utilisées pour dénombrer les nids sont: les dénombrements du sol (utilisés pour 97,1% des colonies); les calculs approximatifs effectués du bateau (2,1%); et, les estimations aériennes (0,8%).

En 1989, on a trouvé 478 emplacements actifs. De plus, il y avait 29 emplacements pour lesquels des données étaient inexistantes (20 emplacements n'ont pas été visités, et pour 9 autres on avait pas de données). Ces 478 emplacements contenaient 41 colonies de Cormoran à aigrettes (avec 6 018 nids en tout), 96 colonies de Goéland à bec cerclé (150 218 nids, plus une colonie avec un nombre inconnu de nids), 441 colonies de Goéland argenté (24 640 nids, plus une colonie avec un nombre inconnu de nids), 8 colonies de Sterne caspienne (2 295 nids), et 57 colonies de Sterne pierregarin (4 242 nids). En plus, on a trouvé deux colonies (chacune avec un nid) du Goéland à manteau noir.

Dans l'ensemble des 478 emplacements actifs, 347 (72,6%) avaient seulement une espèce, et le Goéland argenté était la seule espèce dans 319 (91,9%) de ces derniers. Le mélange d'espèces la deuxième en importance, de très loin, était: Goéland argenté et Goéland à bec cerclé (56 emplacements, 11.7%).

Les colonies de Cormoran à aigrettes étaient éparpillées partout dans l'aire d'étude là où les îles étaient disponibles. De 1980 à 1989, la population nichante a augmenté de 335 nids dans 9 colonies à 6 018 nids dans 41 colonies, ce qui représente une moyenne annuelle de croissance de 37,8%.

Les colonies de Goéland à bec cerclé étaient bien répandues partout dans l'aire d'étude. Cette espèce était de très loin la plus abondante. Son augmentation de 128 849 nids dans 80 colonies en 1980 à 150 218 nids dans 96 colonies en 1989 représente une moyenne annuelle de croissance de 1,7%.

Le Goéland argenté, avec 24 640 nids dans 442 colonies éparpillées partout dans l'aire d'étude, agissait de la deuxième espèce d'importance en fonction de nombre en 1989. En utilisant seulement les données comparables, on a constaté une baisse de la population, de 30 738 nids dans 399 colonies en 1980 à 24 629 nids dans 430 colonies en 1989, ce qui représente une moyenne annuelle de baisse de 2,4%.

Il y avait 8 colonies de Sterne caspienne en 1989, dont toutes se trouvaient dans le chenal du Nord ("North Channel") et dans la Baie géorgienne ("Georgian Bay"). Une colonie trouvée en 1980 a été retrouvée abandonnée en 1989, alors qu'un nouveau site a été trouvé occupé en 1989. La population a vu une légère augmentation de 1980 à 1989, de 2 138 nids à un estimé de 2 295 nids, ce qui représente une moyenne annuelle de croissance de 0,8%.

En 1989, 57 colonies de Sterne pierregarin ont été trouvées (4 242 nids). Cependant, le nombre véritable de nids était plus élevé parce que plusieurs emplacements ont été visités trop tôt pendant la saison pour effectuer des recensements justes des sternes, qui nichent relativement tard. Le nombre véritable de colonies aussi est peut-être plus élevé pour la même raison. En utilisant seulement des données comparables, la population nicheuse a diminué de 1980 à 1989 avec un taux moyen annuel de 1,7%, de 4 521 nids dans 59 colonies à 3 858 dans 45 colonies.

Les résultats des relevés de 1989 (ainsi que de 1980) sont présentés en détail aux annexes 4 à 10, lesquelles correspondent aux 7 cartes topographiques à l'échelle de 1:250 000 qui englobent la partie de l'aire de l'étude contenant des colonies. C'est à l'annexe 3 que se trouvent les détails relatifs à l'organisation ainsi qu'à la disposition des annexes.

En plus de paraître sur une liste nominative, le site des colonies de 1989 (de même que celles de 1980) est aussi relevé graphiquement, encore d'après les cartes topographiques à l'échelle de 1:250 000 aux annexes 12 à 18. On peut retrouver la localité des colonies sur les cartes à l'échelle de 1:250 000 (lesquelles donnent un aperçu général) ainsi que sur les cartes à l'échelle de 1:50 000 (pour une localité plus précise). On explique à l'annexe 11 l'organisation de ces cartes.

TABLE OF CONTENTS

1 INTRODUCTION

Birds that breed in a colony and that breed or feed in association with water are referred to as colonial waterbirds (Maehr and Rodgers 1985). Colonial waterbirds are of special concern to the Canadian Wildlife Service (CWS) because during the nesting season they are concentrated on their colony sites and are then highly vulnerable to predation and disturbance. In addition, as top predators in the food web, they may bio-accumulate contaminants that are present in their environment, and, therefore, they can be used to monitor contaminant levels and their bio-effects. In the Great Lakes, contaminant levels in Herring Gulls eggs have been monitored routinely since the early 1970s (Mineau *et al.* 1984; Bishop *et al.* 1992; Ryckman *et al.* 1997). Furthermore, when gulls nest at large colonies in urban or industrial sites they may cause various problems to people (Blokpoel and Tessier 1986). An additional concern is that nesting gulls may encroach on the nesting habitat of other species (Courtney and Blokpoel 1983; Blokpoel and Tessier 1986).

Large-scale inventories of colonial waterbirds nesting on the Great Lakes did not begin until 1976. In 1976, and again in 1977, the U.S. portions of the Great Lakes were surveyed under contract for the U.S. Fish and Wildlife Service (USFWS) (Scharf *et al.* 1978). The Canadian portions of the Great Lakes were surveyed and censused in a more gradual fashion: Lake Ontario and the upper St. Lawrence River in 1976 (Blokpoel 1977), Lake Erie and adjacent waterbodies in 1977 (Blokpoel and McKeating 1978), Lake Superior in 1978 (Blokpoel *et al.* 1980) and Lake Huron, including Georgian Bay and the North Channel, in 1980 (Weseloh *et al.* 1986). During 1981-1988 certain areas were re-inventoried during one or more years (e.g. Blokpoel and Harfenist 1986, Weseloh *et al.* 1988).

A lakes-wide inventory of all colonial waterbird species on both sides of the Canada/US border was carried out during 1989-1991. The inventory was done in close cooperation between CWS and USFWS. In Canada the fieldwork was coordinated by CWS (Ontario Region) and was largely carried out by contractors with substantial assistance from the Ontario Ministry of Natural Resources (OMNR) and Parks Canada. Because of the large amount of work and cost involved in making an inventory of all the Great Lakes it was decided to attempt a 3-year effort with fieldwork as follows:

1989 - all "primary" species in the upper Great Lakes;
1990 - all "primary" species in the lower Great Lakes; and
1991 - all "secondary" species in all Lakes.

For the purpose of the inventory, "primary" species are those species that nest primarily (or originally) on sparsely vegetated islands and off-shore structures, i.e. Double-crested Cormorant (*Phalacrocorax auritus*), Ring-billed Gull (*Larus delawarensis*), Herring Gull (*L. argentatus*), Great Black-backed Gull (*L. marinus*), Caspian Tern (*S. caspia*) and Common Tern (*Sterna hirundo*). "Secondary" species are those species that nest primarily in marshes and on densely vegetated islands, i.e. Great Blue Heron (*Ardea herodias*), Great Egret (*Casmerodius albus*), Black-crowned Night-Heron (*Nycticorax nycticorax*), Forster's Tern (*Sterna forsteri*) and Black Tern (*Chlidonias niger*).

During the inventories of the "primary" species in 1989 and 1990, any colony of "secondary" species would be noted and recorded but in most cases no effort was made to count the nests. In 1991, when the "secondary" species were surveyed, it was impractical to re-survey Lake Superior again, except for the coast of Pukaskwa National Park.

The data for the Canadian Great Lakes are presented in detailed reports with complete information on colony locations. These reports are published as CWS Technical Reports and the five planned Technical Report listed on the page preceeding the Abstract will together constitute the "Atlas of Colonial Waterbirds Nesting on the Canadian Great Lakes, 1989-1991".

This report constitutes Part 2 of the "Atlas of Colonial Waterbirds Nesting on the Canadian Great Lakes, 1989-1991". It has the following three purposes:

(1) to present the results of the 1989 inventory using the format used by the USFWS for several other atlases of colonial waterbirds,

(2) to present the results of the 1980 inventory using the USFWS format, and,

(3) to compare the 1989 and 1980 results and discuss any changes.

Our intended readership consists of managers, planners, developers, park naturalists, and various other "users" of the Great Lakes and their natural resources, as well as biologists and interested lay people. We present a large amount of information in a concise format and we recommend that readers read the following Methods section in order to access the information quickly.

2 STUDY AREA

The study area encompasses all the islands and the mainland shoreline of Canadian Lake Huron, i.e. from Sault Ste. Marie, in the northwest part of the study area, to Sarnia, at the south end of the study area (Fig. l). The study area consists of the St. Marys River, the North Channel, Georgian Bay and the rest of Lake Huron, that we refer to as Lake Huron proper.

In this report we present our findings separately for the three different portions of the study area, i.e. the North Channel, Georgian Bay and Lake Huron proper. For the purpose of this report, the North Channel continues westward to Sault Ste. Marie, i.e. it includes the St. Joseph Channel and the Canadian portions of Lake George and the St. Marys River. These three portions of Lake Huron are shown in Fig.1 and detailed descriptions of the division lines are given in App.1.

Going from west to east and north to south the area is covered by the following nine 1:250,000 Topographic Maps: 41K, 41J, 41I, 41G, 41H, 41A, 31D, 40O, and 40P (Fig.2). However, waterbird colonies were found only in areas covered by the first seven maps.

There is a large number of islands, islets, rocks and shoals in the study area, especially in the North Channel and Georgian Bay. Many of the smaller islands are unnamed. Most of the islands are relatively close to shore, but some islands are far out into the lake and can be visited by boat only during good weather.

3 DEFINITIONS

For the purpose of this report, a **colony** consists of one or more breeding pairs of a species that usually nests in groups. Thus we consider a single Herring Gull nest as a colony in this report. In contrast, we refer to the place where a colony is located as a **colony site**. It is often difficult to determine the extent of a colony and thus that of a colony site. For example, if two small, bare, rocky islands, separated by only a few meters of water, are each covered by Herring Gulls nests, one could argue that they form, biologically, one colony and that, therefore, the two islets constitute one colony site. In this report we present our findings for the smallest possible geographical unit (i.e. island or rock), except for cases where the data were not recorded in sufficient detail (e.g. colony site 41H174, the islands east of Little Snake Island.).

4 METHODS

Nest counts - Islands were reached by boat, examined from the boat and, if nesting was evident or likely, field workers would go ashore and count all active nests by searching the entire island. We refer to this method as the Ground Count method (GC). For large colonies the colony site would be temporarily divided into "strips" using brightly coloured flexible plastic tapes. Field workers counted active nests within the strips using hand counters. **Active nests** were nests that had eggs and/or chicks or that were clearly attended but held no eggs or chicks.

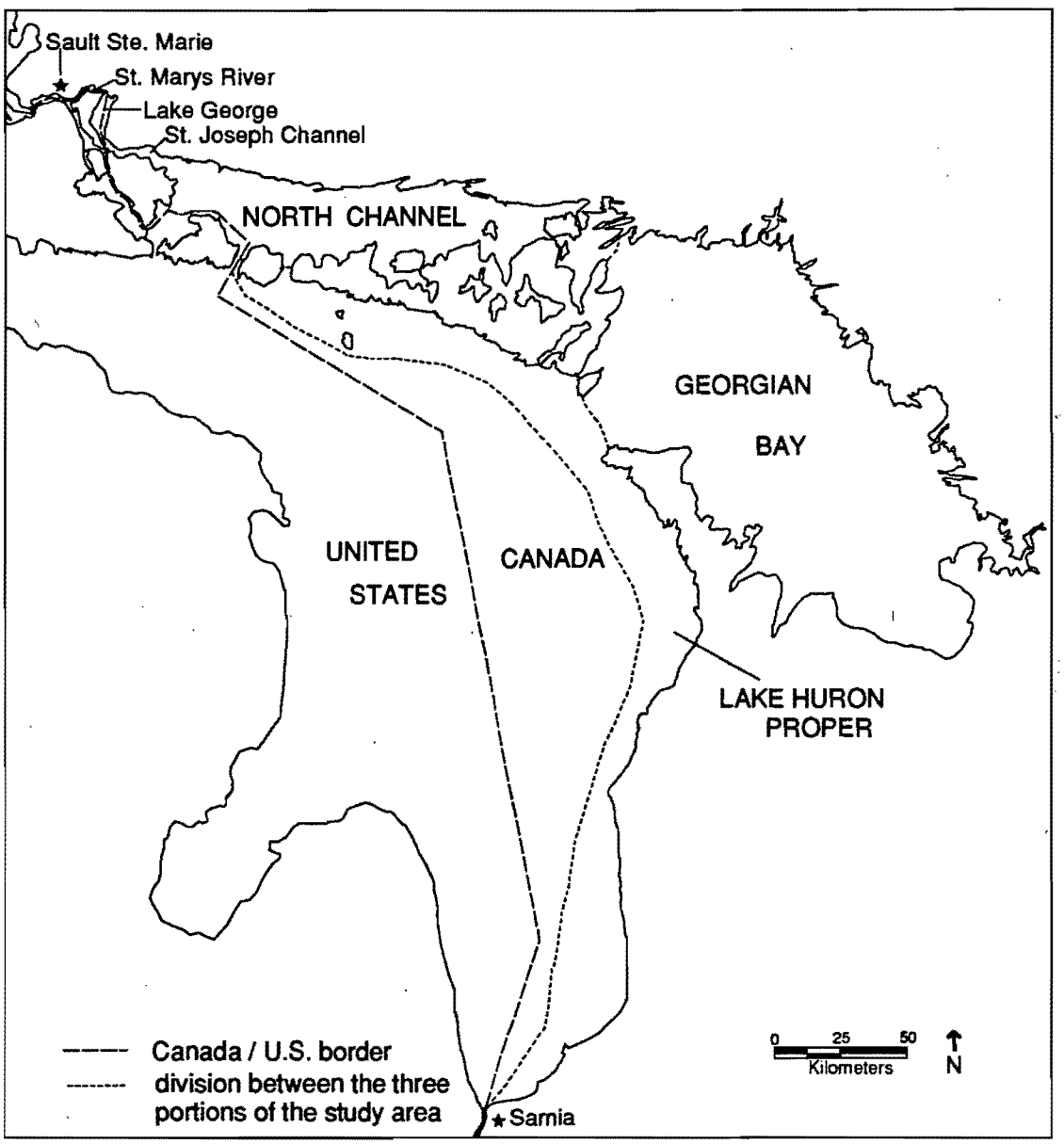

Fig. 1. Map of Canadian Lake Huron showing the three portions of the study area, i.e., North Channel, Georgian Bay and Lake Huron proper. See Methods section for details.

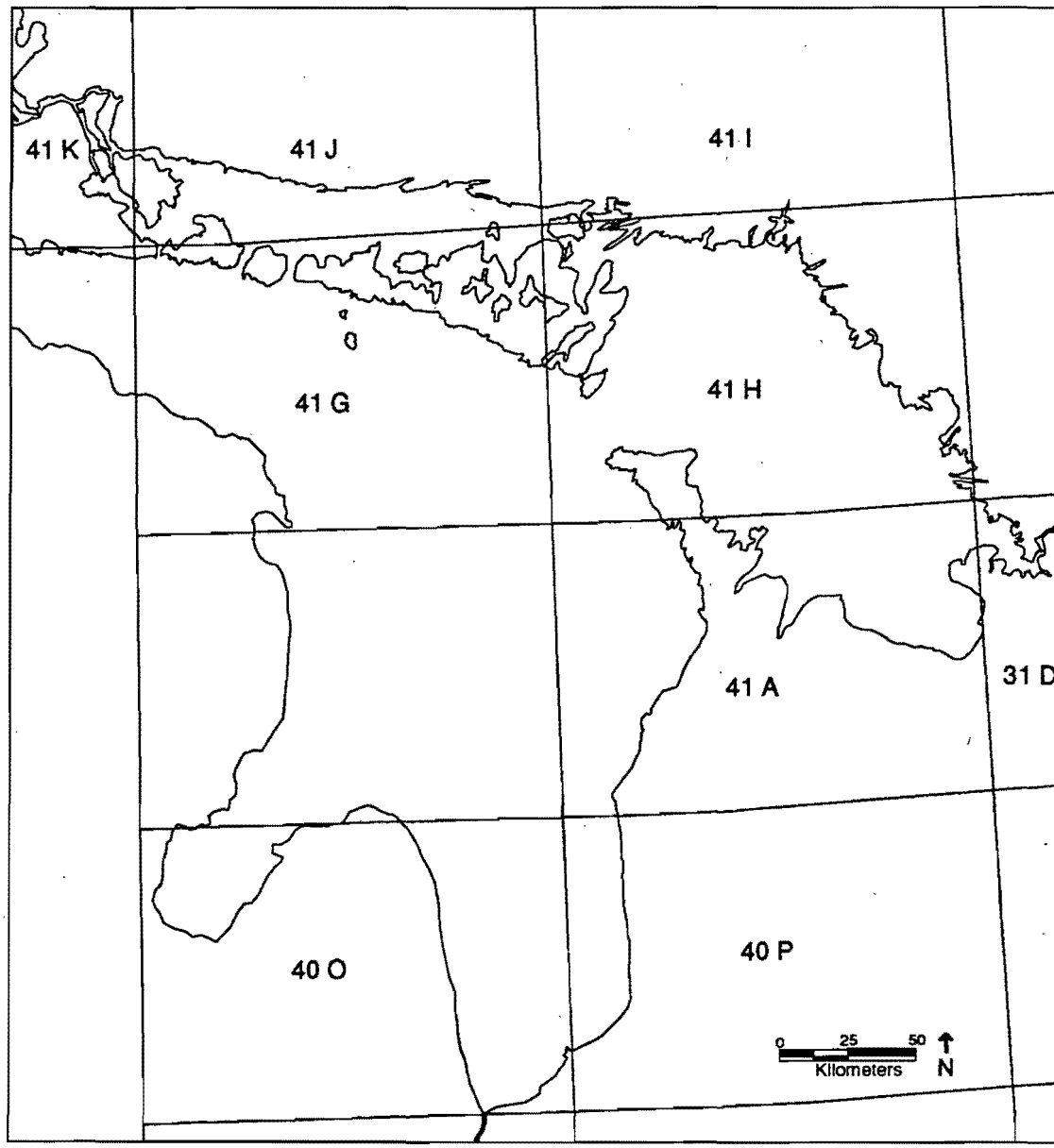

Fig. 2. Map of Canadian Lake Huron showing its coverage by 1:250,000 Topographic Maps.

In some cases birds were obviously nesting but local conditions did not permit landing. In these cases the number of nests would be counted from the boat. We refer to these counts as Boat Estimates (BE). In the Owen Sound district, part of the area was surveyed from the air (Aerial Estimates, AE).

Survey dates and survey participants - The time available for fieldwork was limited. Colonies should be visited late in incubation (to ensure that most birds are on eggs), but before or very early into hatching (to prevent chick mortality). This means that most fieldwork should be carried out in a time span of about two weeks. Because a large area had to be covered, the fieldwork had to be carried out by several teams of field workers with each team assigned a section of the study area (Fig. 3). Several OMNR district offices cooperated actively by providing boat transportation to the two-person teams of contractors hired and instructed by CWS. Most of the study area was inventoried by these contractors, and the rest was covered by CWS teams. Names of survey participants and survey dates are given in App. 2.

Field instructions. Before the start of fieldwork, one of us (GDT) visited the cooperating OMNR offices to discuss the project with OMNR staff and contractors, to provide written and oral instructions, and to issue navigation charts, field notebooks, data sheets, logbooks, hand counters, hardhats and earplugs.

Preparation of maps. As mentioned in the Introduction, we followed the format used by the USFWS to present the results of waterbird inventories in the U.S. (e.g. Erwin 1979, Speich and Wahl 1989).

The key elements of the format used in the USFWS atlases are: listing all colony sites by 1:250,000 map, assigning each colony site a unique identification number, plotting all colony sites on a 1:250,000 map (to provide overviews of colony distribution) and on 1:24,000 USGS maps (to provide detailed colony locations). In this report we used standard 1:250,000 and 1:50,000 Topographic Maps prepared by the Geological Survey of Canada.

Because the USFWS format was not used when the 1980 data for Canadian Lake Huron were initially presented (Weseloh *et al.* 1986), and because we wanted to compare the 1989 data with the 1980 material, we decided to present the 1980 results again in this report, using the new format.

The unique identification numbers for the individual colony sites consist of a prefix (the number of the 1:250,000 map that covers the area where the colony site is located) and a 3-digit number. For example, colony site 41I001 is the first one covered by the 1:250,000 map "41I - Sudbury" (see App. 6). When assigning identification numbers we combined all the 1989 and 1980 colony sites and then worked our way from west to east and north to south along the shore of Lake Huron. All 1989 and 1980 sites are listed in Appendices 4-10 by 1:250,000 map and for the 1980 sites we provide the numbers they had been assigned in the original report by Weseloh *et al.* (1986). Further details on the organization of Appendices 4-10 are provided in App. 3.

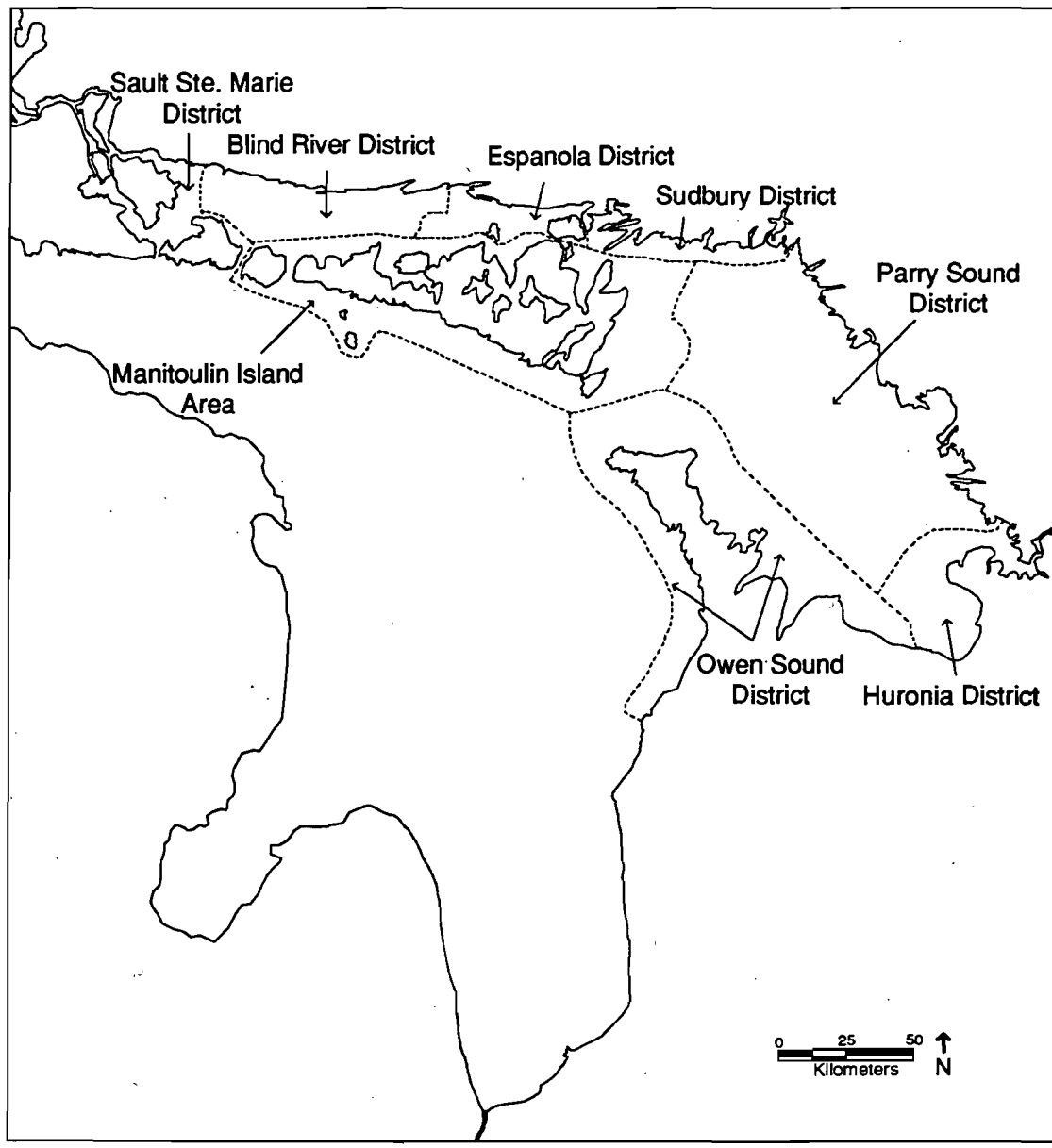

Fig. 3. Map of Canadian Lake Huron showing the sections that were inventoried by different teams in 1989.

Comparison of the 1989 and 1980 data - Some colony sites received no or incomplete coverage in 1989 and/or 1980. As detailed in Section 5.1 below, there were several colonies that were not visited (NV), for which no proper records were available (NR), or that were visited too early in the season to be reliable for the late-nesting terns. For two colony sites (41J087 and 41H145) with long histories of nesting by CaspianTerns, we used 1990 nest counts of Caspian Terns as estimates for their 1989 numbers, because 1989 data were lacking or unreliable. Similarly, we used the 1990 count of cormorant nests at colony site 41H145 as an estimate of the size of that cormorant colony in 1989.

We made the 1989 and 1980 data comparable by creating data subsets which excluded all colony sites with incomplete or unreliable data in either or both years (except for colony sites 41J087 and 41H145, as mentioned above) . For 1980 data that were reported as minima (e.g. 5^{+}, colony site 41H149), we used the minimum counts in the 1980-1989 comparisons. We used a value of 5 for site 41H223 where in 1980 "few" Herring Gulls nested.

Calculation of rate of change of nesting population - The mean rate of change (r) in a nesting population during 1980-1989 was calculated using the following formula:

$$r = \left(\sqrt[t]{\frac{N_t}{N_o}} - 1 \right) X \ 100\%,$$

where N_t and N_o are the numbers of nests in 1989 and 1980, respectively, and t is the number of years between 1980 and 1989 (N=9).

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5. RESULTS AND DISCUSSION

5.1 Overall reliability of the 1989 inventory

In total 478 active colony sites were found. In addition to these 478 colony sites, there were 20 sites that had been surveyed in 1980, but that were not visited in 1989 (NV) and there were 9 more sites that had been surveyed in 1980, but for which there was no record in 1989 (NR).

The Blind River district (Fig. 3) could be surveyed only early in the 1989 breeding season. Thus the data were not representative for the terns and in App. 4-10 this is indicated by footnotes. However, OMNR staff recensused the Caspian Tern colony on East Cousins Island (Colony Site 41J087) at the appropriate time in 1990. In this report, we assume that the number of Caspian Tern nests in 1989 was the same as in 1990 and we included East Cousins Island in the 478 colony sites mentioned above.

Halfmoon Island (41H145) could not be visited in 1989, but in 1990 CWS staff counted the nests of Double-crested Cormorants and Caspian Terns and noted nesting by Herring Gulls and Ring-billed Gulls. In this report, we assume that in 1989 the same number of cormorants and terns were nesting as in 1990 and we included Halfmoon Island in the above 478 colony sites.

In the Great Lakes the terns nest later than the gulls and cormorants. To get a representative nest count for terns it is necessary to census their colonies later in the breeding season and for the great majority of the colony sites this was done. Similarly, to discover any new tern colony a late survey is in order. In most areas this was indeed done, but in some areas only known tern colonies and their surrounding areas were visited later in the season, because there was not enough time left to cover the entire area. Thus a few new colonies, if any, could have been missed.

Of the 478 active colony sites in 1989, 464 (97.1%) were censussed using Ground Counts. Boat Estimates were used for 10 (2.1%) sites and Aerial Estimates for 4 (0.8%) sites. Comparability with the 1980 data is good, because in that year too the great majority of the colonies were censused using Ground Counts. Of the 468 active colony sites found in 1980, 407 (87.0%) were censused using Ground Counts, 39 (8.3%) using Boat Counts, and 22 (4.7%) using Ground Estimates.

Ground Counts have the highest level of accuracy. Boat Estimates are reasonably accurate for small treeless shoals and islands, especially if observed at close range, but much less so for larger islands with trees and/or islands observed from a distance. Aerial Estimates are usually less accurate than Ground Counts.

5.2 Overall numbers of colony sites and nesting pairs in 1989

Excluding 29 colony sites for which there were no data (NV or NR), there was a total of 478 active colony sites. These 478 colony sites held a total of 645 colonies of six species of colonial waterbirds with a total of 187,415 nests (Table 1).

Of the 478 active colony sites, 347 (72.6%) had one species, 99 (20.7%) had two species, 27 (5.6%) had three species, four (0.8%) had four species, and only one (0.2%) had five species. None had all six species (Table 2).

The 1989 survey results are listed in App.4-10, which correspond to the seven 1:250,000 Topographic Maps that cover the part of the study area with waterbird colonies. The organization of these appendices is explained in App.3.

The 1989 colony sites (together with those for 1980) are also plotted, again by the seven 1:250,000 Topographic Maps, in App.12-18. The colony sites are plotted on 1:250,000 maps (to provide overviews) and on 1:50,000 maps (to show detailed locations). The organization of these maps is explained in App.11.

In the following sections we present and discuss the results on a species-by-species basis using the order of the AOU checklist (American Ornithologists' Union 1983).

Table 1. Numbers of colonies and nests of colonial waterbirds at colonies of known size in Canadian Lake Huron in 1989.

	DCCO[a]	RBGU	HERG	GBBG	CATE	COTE	Total
# col's	41[b]	96[c]	441[c]	2	8[d]	57	645
# nests	6018[b]	150218[c]	24640[c]	2	2295[d]	4242	187415

[a]DCCO--Double-crested Cormorant, RBGU--Ring-billed Gull, HERG--Herring Gull, GBBG--Great Black-backed Gull, CATE-- Caspian Tern, COTE--Common Tern.
[b]Including Halfmoon I. where nests were counted in 1990 but not in 1989, see text.
[c]Excluding Halfmoon I. where nests were not counted in 1989 or 1990, see text.
[d]Including East Cousins I. and Halfmoon I. where nests were counted in 1990, see text.

Table 2. Species composition at the 478 active colony sites in 1989.

Nesting Species[a]	# Colony Sites
DCCO	1
HERG	319
RBGU	5
COTE	22
DCCO, HERG	18
DCCO, RBGU	1
HERG, RBGU	56
HERG, GBBG	1
HERG, COTE	18
RBGU, COTE	5
DCCO, HERG, RBGU	13
DCCO, HERG, GBBG	1
DCCO, HERG, COTE	1
DCCO, RBGU, CATE	2
HERG, RBGU, CATE	1
HERG, RBGU, COTE	9
DCCO, HERG, RBGU, CATE	3
HERG, RBGU, CATE, COTE	1
DCCO, HERG, RBGU, CATE, COTE	1
Total	478

[a] DCCO -- Double-crested Cormorant; RBGU -- Ring-billed Gull; HERG -- Herring Gull; GBBG -- Great Black-backed Gull; CATE -- Caspian Tern; COTE -- Common Tern.

5.3 Double-crested Cormorant

5.3.1. The situation in 1989

In total, 41 cormorant colonies were found in Canadian Lake Huron with a total of 6,018 nests. Colony sizes ranged from 8 to 650 nests. The mean colony size was 146.8 nests. Both mean and ranges were similar among the three portions of Canadian Lake Huron.

The 25 largest cormorant colonies held 5,391 nests, or 89.6% of the total (Table 3). They were scattered throughout the study area where islands are available (Fig. 4). There are very few islands in southern and western Georgian Bay and none in the southern portion of Lake Huron proper.

Cormorants usually shared the colony sites with other colonial waterbirds (Tables 2 and 3). At only 1 site (Kangaroo Rock, 41J042, 154 nests) were they the only nesting species. At the other 40 mixed-species colony sites, cormorants shared the habitat most commonly with Herring Gulls (18 sites) and with Herring Gulls and Ring-billed Gulls (13 sites, Table 2).

In recent years, cormorants have nested rather asynchronously in the Great Lakes. This is partially due to the enormous population increase (discussed below), which results in the presence of relatively large numbers of first breeders and prebreeders in the colonies. These younger birds tend to nest later in the season, thus causing nesting asynchrony and making it impossible to determine the total nesting population in one visit. In 1989, tests were done in Canadian lakes Superior and Huron to determine the extent of late nesting. "Early" and "late" counts of apparently occupied nests were made in 35 colonies in Lake Huron and 8 colonies in Lake Superior. Most "early" counts were made during the early incubation stage at most nests, whereas "late" counts were carried out during the early-to-mid nestling stage for most nests. On average the "late" counts were made 33.4 days after the "early" counts. Overall, "late" counts were significantly higher, by 22%, than "early" counts, but there was marked variation among areas: 11% in Georgian Bay, 31% in the North Channel and 53% in Lake Huron proper (Ewins *et al.* 1995). The nest numbers we report in this Atlas Report are for the incubation stage and are thus underestimates of the whole-season nest numbers.

Table 3. The 25 largest Double-crested Cormorant colonies in 1989.

Site #	Name	DCCO	HERG	RBGU	CATE	COTE
41J022	Africa Rk.	184	32	0	0	0
41J024	Kalulah I.	104	39	0	0	0
41J042	Kangaroo Rk.	154	0	0	0	0
41J063	Herbert I.	446	103	0	0	0
41J070	i. W of West I.	126	15	0	0	0
41J071	West I.	575	40	3650	0	0
41J078	Doucet Rk.	134	0	17	0	0
41J087	East Cousins I.	114	0	775	379	0
41J118	Gull Rk.	100	25	0	0	0
41G001	Wheeler Rf.	220	40	0	0	0
41G005	Batture I.	149	146	5701	0	0
41G020	Manitoba Rf.	185	3	5	0	0
41H019	West Rk.	650	65	0	0	0
41H050	Gull I.	201	215	0	0	0
41H078	Southwest Rk.	159	22	0	0	0
41H090	Southeast Rk.	241	60	16	0	0
41H110	Flat Rk.	204	68	33	0	0
41H118	Mayflower I.	168	42	2044	0	0
41H135	Blackbill Is.	115	28	0	0	245
41H147	Colin Rk.	104	49	0	0	0
41H162	is. E of Garland I.	205	47	0	0	0
41H204	Tribune Is.	95	65	0	0	0
41A028	i. SSW of Argyle Is.	92	217	1	0	0
41A047	South Watcher I.	536	0	3582	747	0
41A056	Chantry I.	130	2543	2971	0	0
Total		5391				

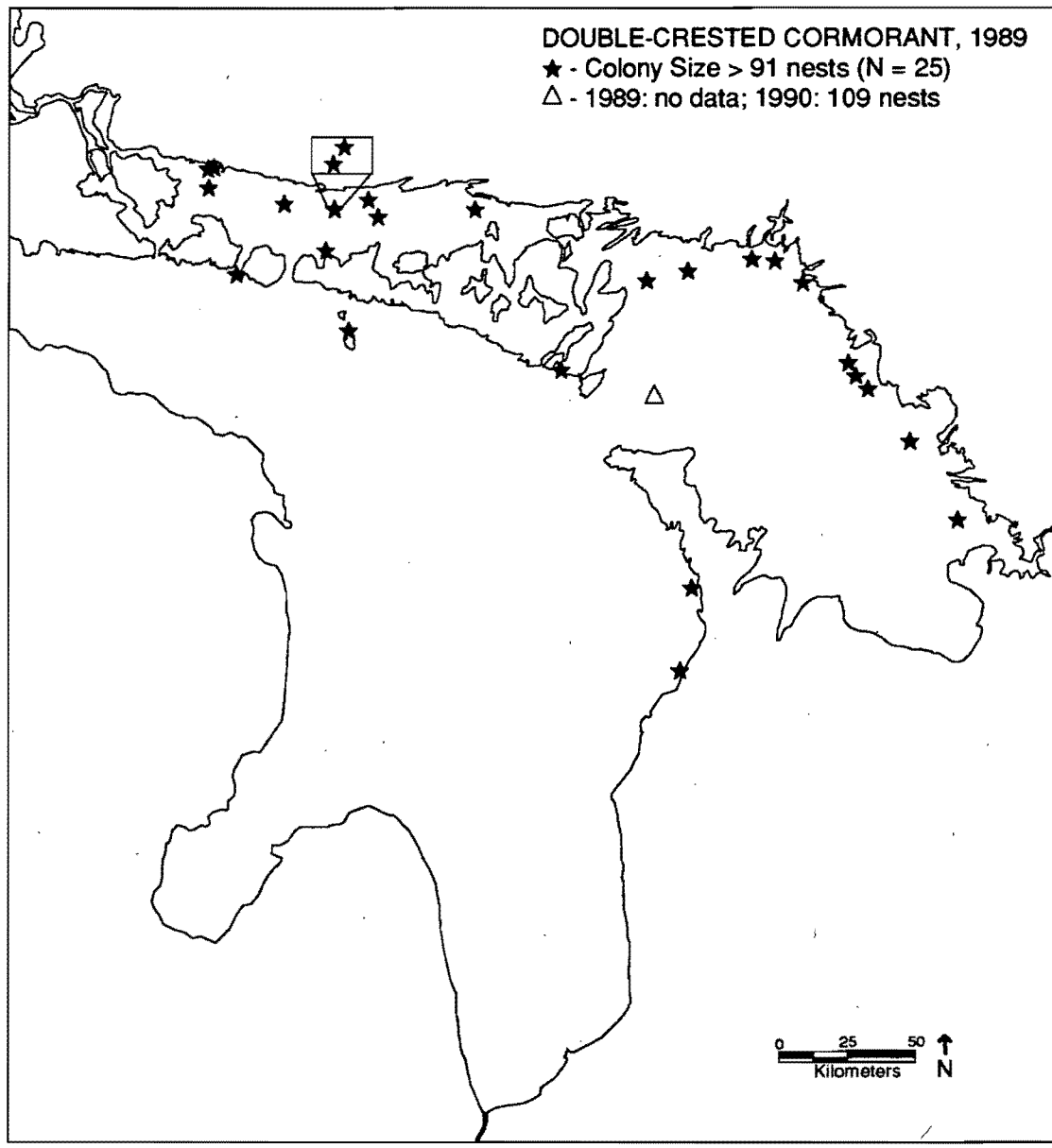

Fig. 4. Distribution of the 25 largest Double-crested Cormorant colonies in Canadian Lake Huron in 1989.

5.3.2 Comparison of the 1989 and 1980 data

The known nesting population grew from 9 colonies with 335 nests in 1980 to 41 colonies with 6,018 nests in 1989 (Table 4). The mean annual growth rate was 37.8% during 1980-1989. Growth rates were 37.1% for Georgian Bay and 33.7% for the North Channel. The Lake Huron proper population, non-existent in 1980 (Weseloh *et al.* 1986), grew to 829 nests in 1989 (Table 4).

These rates of increase are in agreement with the 34.4% mean annual growth rate for Double-crested Cormorants on Lake Superior during 1980-1989 (Blokpoel and Tessier 1993) and the 38.4% for the Great Lakes in general during 1980-1987 (Blokpoel and Scharf 1991). A recent review of this species' status in the entire Great Lakes during 1913-1991 also mentioned the dramatic increase (at a mean annual rate of 29%) since the early 1970s (Weseloh *et al.* 1995).

Of the 9 cormorant colonies active in 1980, 8 were still active in 1989. Only the smallest one (41J064, Talon Rock, with 7 nests in 1980) had disappeared by 1989. The 8 other colonies all increased in size (range: 100-536 nests), at a mean annual rate of 19.0%.

Table 4. Numbers of colonies (Col's) and nests of Double-crested Cormorants in 1989 and 1980, and mean annual rate of population change (RoPC), in the three portions of Canadian Lake Huron. Only comparable data are used; see Methods.

	1989		1980		
Area	Col's	Nests	Col's	Nests	RoPC
Georgian Bay	21	3012	4	176	+37.1%
Lake Huron proper	6	829	0	0	N.A.
North Channel	14	2177	5	159	+33.7%
Total	41	6018	9	335	+37.8%

5.4 Ring-billed Gull

5.4.1 The situation in 1989

There were 96 Ring-billed Gull colonies of known size with a total of 150,218 nests, making this species by far the most abundant. In addition, one colony (Halfmoon Island, 41H145), with 3,352 nests in 1980, had an undetermined number of nests in 1989, so the actual 1989 total was 97 colonies with well over 150,218 nests. Sizes for the 96 colonies with nest counts ranged from 1 to 15,584 nests, with an average of 1,565.0 nests. Mean colony size varied among the 3 portions of the study area: 1,423.7 nests in the North Channel, 1,476.6 nests in Georgian Bay and 2,047.0 nests in Lake Huron proper.

The 25 largest Ring-billed Gull colonies in 1989 held 131,537 nests, or 87.6% of the total. These colonies ranged in size from 1,598 nests to 15,584 nests (Table 5). Based on its known long history, Halfmoon Island, not included in the 25 colonies above, would most likely have ranked among the 25 largest colonies had data been available for 1989. It is therefore shown with a different symbol in Fig. 5. These 26 colonies were scattered throughout the study area (Fig. 5).

Ring-billed Gulls nested alone (5 colonies) or at colony sites with up to a total of five species (Table 2). For the 97 Ring-billed Gull colony sites for which the co-nesters could be determined, the two most common assemblages were: "Ring-billed Gull and Herring Gull" (56, 57.7%), and "Ring-billed Gull, Herring Gull and Double-crested Cormorant" (13, 13.4%).

5.4.2 Comparison of the 1989 with 1980

Including only colonies with data for both years, the Ring-billed Gull population increased from 128,849 nests in 80 colonies in 1980, to 150,218 nests in 96 colonies in 1989. This represents a mean annual growth rate of 1.7%. Almost all the increase occurred on Georgian Bay (Table 6). The growth rate for Lake Huron is higher than the one for Canadian Lake Superior, where the nesting population remained largely unchanged during 1980-1989 (Blokpoel and Tessier 1993), but considerably smaller than the 11.6% to 12.6% on the lower Great Lakes system during 1976-1990 (Blokpoel and Tessier 1996).

Of the 80 Ring-billed Gull colonies found in 1980, 46 (57.5%) were still active in 1989. Of these 46 colonies, 36 had increased in size and 10 had declined. In total, 50 new colonies were found in 1989 and these had a mean of 155.1 nests.

Table 5. The 25 largest Ring-billed Gull colonies in 1989[a].

Site #	Name	RBGU	DCCO	HERG	CATE	COTE
41J055	Middle Grant I.	2305	0	74	0	0
41J071	West I.	3650	575	40	0	0
41J072	Suzanne I.	2587	0	16	0	0
41J131	Elm I.	2738	0	21	224	0
41G005	Batture I.	5701	149	146	0	0
41G012	Gertrude I.	15584	0	0	0	0
41G017	Gooseberry I.	2774	0	5	0	0
41H005	West Mary I.	6302	0	78	0	91
41H040	Papoose I.	4988	0	259	220	14
41H095	Cherry I.	2132	0	1	0	0
41H096	Elgin Rk.	2666	0	0	0	0
41H118	Mayflower I.	2044	168	42	0	0
41H156	N i. of S Limestone Is.	11146	33	55	433	0
41H157	S i. of S Limestone Is.	9157	0	60	0	0
41A001	Mad Rf.	2500	0	250	0	0
41A021	McCallum I.	7060	0	293	0	0
41A023	i. SE of Evelyn I.	1598	0	4	0	0
41A031	Burke I.	11820	0	39	0	0
41A034	Barrier I.	2000	0	1000	0	0
41A046	North Watcher I.	4378	47	6	38	0
41A047	South Watcher I.	3582	536	0	747	0
41A055	Douglas Pt.	6553	0	152	0	0
41A056	Chantry I.	2971	130	2543	0	0
31D019	Eshpabekong I.	3201	0	22	0	0
31D021	i. SE of Eshpabekong I.	12100	0	29	0	0
Total		131537				

[a]Does not include Halfmoon Island; see section 5.4.1

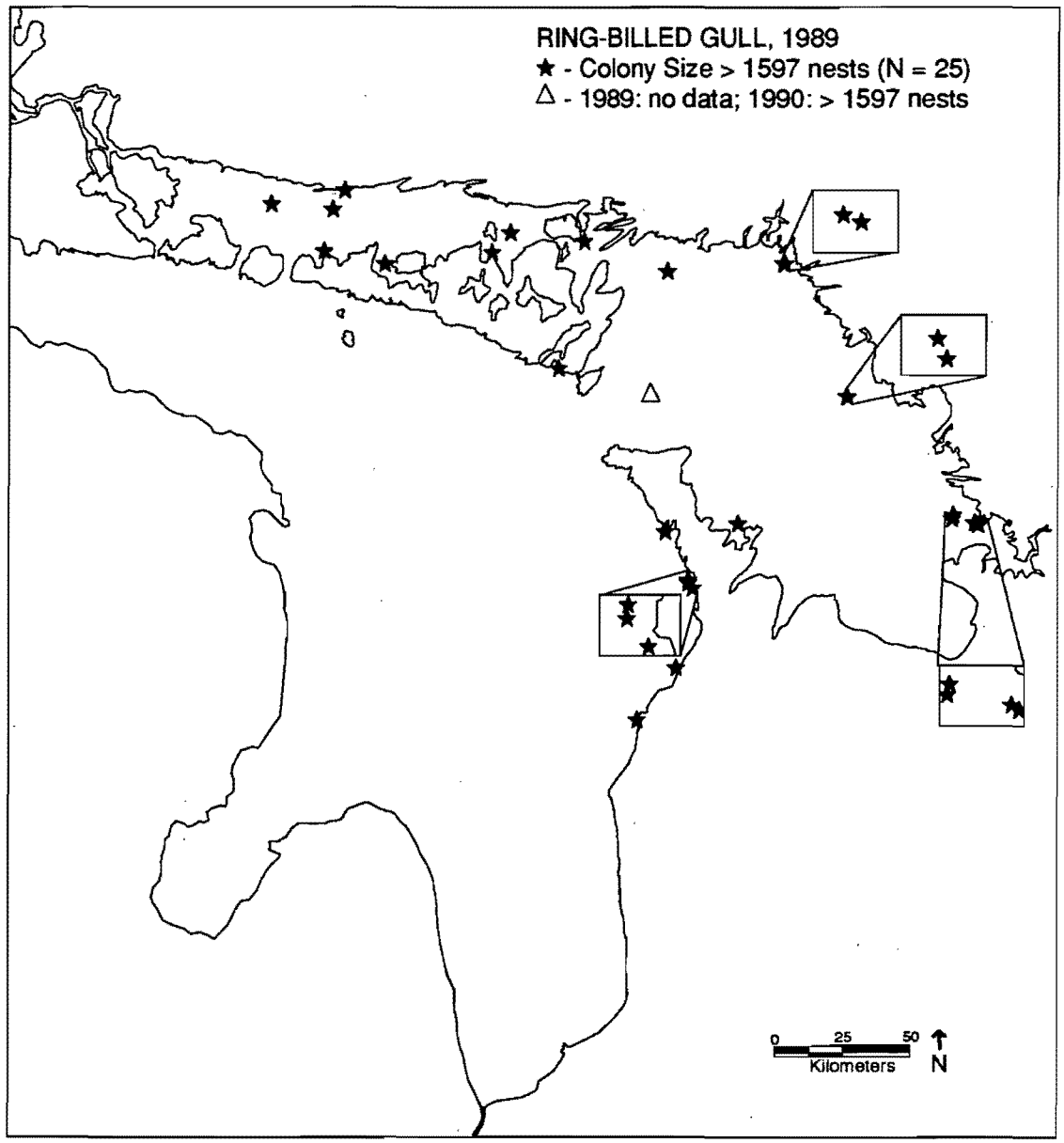

Fig. 5. Distribution of the 25 largest Ring-billed Gull colonies in Canadian Lake Huron in 1989.

Table 6. Numbers of colonies (Col's) and nests of Ring-billed Gulls in 1989 and 1980, and mean annual rate of population change (RoPC), in the three portions of Canadian Lake Huron. Only comparable data are used; see Methods.

	1989		1980		
Area	Col's	Nests	Col's	Nests	RoPC
Georgian Bay	44	64969	42	44385	+4.3%
Lake Huron proper	18	36843	15	36229	+0.2%
North Channel	34	48406	23	48235	+0.04%
Total	96	150218	80	128849	+1.7%

5.5 Herring Gull

5.5.1 The situation in 1989

In 1989, there were 441 Herring Gull colonies of known size with a total of 24,640 nests. In addition, Halfmoon Island (41H145) with 1,242 nests in 1980, had an undetermined number of nests in 1989. Thus the total known nesting population in 1989 was 442 colonies with well over 24,640 nests. The Herring Gull was the second most numerous species after the Ring-billed Gull, but it had by far the most colonies of the six species.

The 441 known-sized colonies ranged from 1 to 2,838 nests, with a mean of 55.9 nests. Mean colony size was by far the largest for Lake Huron proper: 152.1 nests. In contrast, mean colony sizes were only 52.2 nests for Georgian Bay and 28.8 nests for the North Channel.

The 25 largest Herring Gull colonies in 1989 held 12,787 nests, or 51.9% of the total. These colonies ranged in size from 161 to 2,838 nests (Table 7). Halfmoon Island (with 1,242 nests in 1980) is not included in these 25 colonies because there was no count for 1989. However, based on its history, this site most likely ranked among the 25 largest colonies in 1989 and is, therefore, shown in Fig. 6 with a different symbol. Although these colonies were present in all three portions of Canadian Lake Huron, there were very obvious concentrations in southeastern Georgian Bay and off the west side of the Bruce Peninsula (Fig. 6).

At the 442 Herring Gull colony sites, Herring Gulls nested alone (319 colony sites, 72.2%) or in association with up to 4 species (Table 1). The most common assemblage at the 123 mixed-species colony sites was "Herring Gull and Ring-billed Gull" (N= 56, 45.5%).

5.5.2 Comparison of the 1989 and 1980 data

Including only colonies with data for both years, the Herring Gull population decreased from 30,738 nests in 399 colonies in 1980 to 24,629 nests in 430 colonies in 1989. This represents a mean annual decline of 2.4%. Declines ranging from 1.1% to 4.0% were measured on the three portions of Canadian Lake Huron (Table 8).

In Canadian Lake Superior during 1980-1989, the Herring Gull nesting population increased overall at a mean annual rate of 6.0% (Blokpoel and Tessier 1993). However, along the remote shoreline of Pukaskwa National Park the population declined during that same period at a mean annual rate of 1.3%, which is comparable to the values for Lake Huron reported above. For the Canadian lower Great Lakes system during 1976-1990 the Herring Gull population increased at a mean annual rate between 8.1% and 8.7% (Blokpoel and Tessier 1996).

Of the 361 Herring Gull colonies found in 1980 for which fates could be determined in 1989, 289 colonies (80.0%) were still active in 1989. Of these 289 colonies, 177 decreased in size, while 105 increased and 7 had the same number of nests. A total of 104 new colonies was found in 1989, and these had a mean of 6.4 nests.

Table 7. The 25 largest Herring Gull colonies in 1989[a].

Site #	Name	HERG	DCCO	RBGU	CATE	COTE
41J103	Mouse I.	272	0	385	0	0
41G033	2 is. W of Walker Pt.	219	0	294	0	0
41H040	Papoose I.	259	0	4988	220	14
41H043	Southwest Hawk I.	230	0	0	0	0
41H050	Gull I.	215	201	0	0	0
41H170	is. N and W of Snake I.	226	0	10	0	0
41H259	Gull I.	245	0	29	0	0
41H260	Jagged I.	357	0	0	0	0
41H263	Long I.	473	0	0	0	0
41H267	Harbour I.	161	0	0	0	0
41H276	North I.	527	0	0	0	0
41A001	Mad Rf.	250	0	2500	0	0
41A004	Dane I.	350	0	0	0	0
41A007	NE i. of Chimney Rfs.	256	0	0	0	0
41A008	E-c i. of Chimney Rfs.	170	0	0	0	0
41A014	Cavalier I.	308	34	0	0	0
41A021	McCallum I.	293	0	7060	0	0
41A025	W i. of Argyle Is.	271	0	0	0	0
41A028	i. SSW of Argyle Is.	217	92	1	0	0
41A030	i. NW of Burke I.	564	0	0	0	0
41A032	Basswood I.	302	0	0	0	0
41A034	Barrier I.	1000	0	2000	0	0
41A042	Gray I.	241	0	0	0	0
41A053	Nottawasaga I.	2838	0	0	0	0
41A056	Chantry I.	2543	130	2971	0	0
Total		12787				

[a]Does not include Halfmoon Island; see section 5.5.1

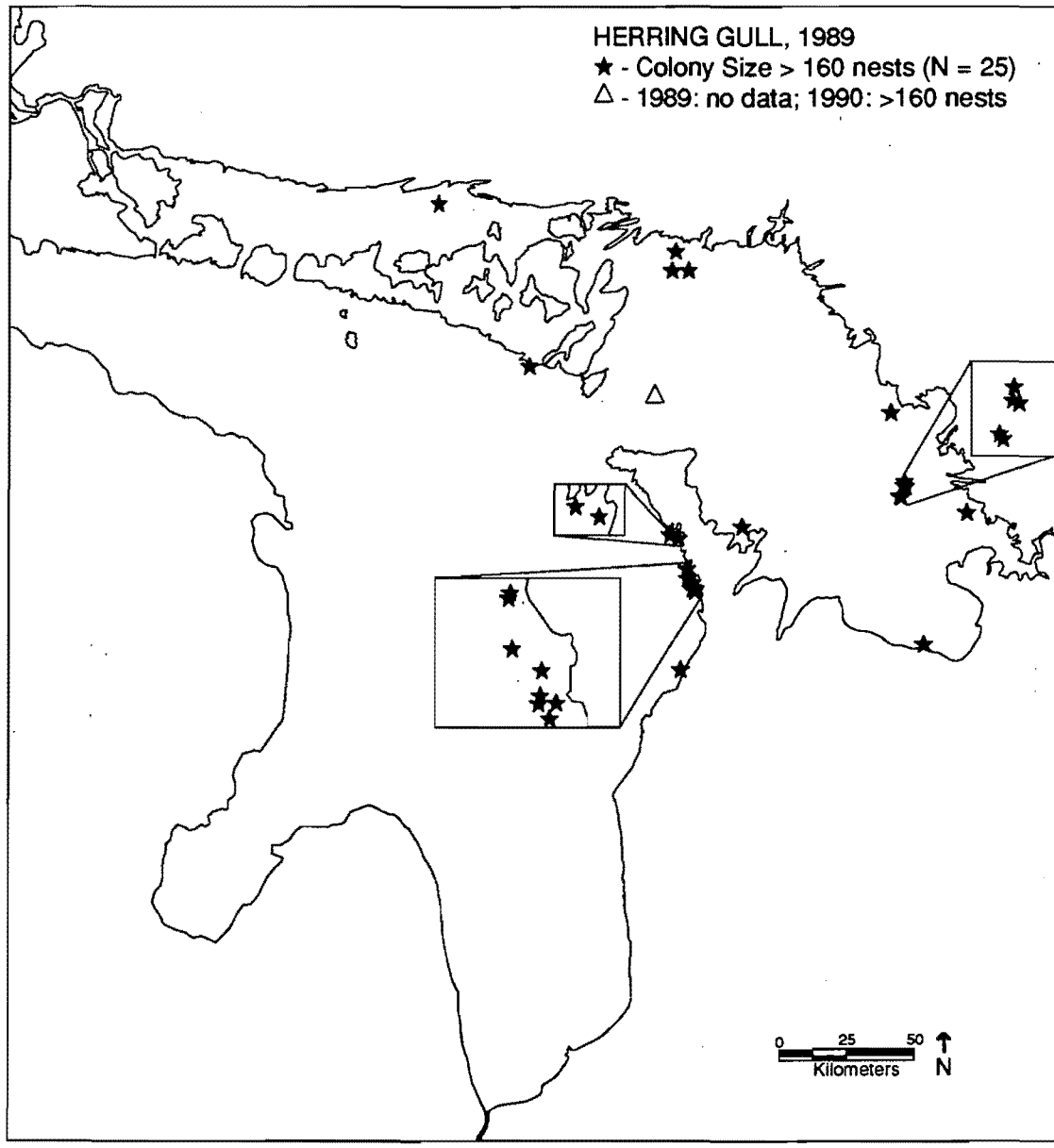

Fig. 6. Distribution of the 25 largest Herring Gull colonies in Canadian Lake Huron in 1989.

Table 8. Numbers of colonies (Col's) and nests of Herring Gulls in 1989 and 1980, and mean annual rate of population change (RoPC), in the three portions of Canadian Lake Huron. Only comparable data are used; see Methods.

	1989		1980		
Area	Col's	Nests	Col's	Nests	RoPC
Georgian Bay	252	13709	228	15112	-1.1%
Lake Huron proper	47	7148	55	10323	-4.0%
North Channel	131	3772	116	5303	-3.7%
Total	430	24629	399	30738	-2.4%

5.6 Great Black-backed Gull

5.6.1 The situation in 1989

Two Great Black-backed Gull colonies were found in Canadian Lake Huron. Both were located off the west coast of the base of the Bruce Peninsula, west of Wiarton, in Lake Huron proper (Fig. 7). Each colony had only one nest.

At one colony site (41A030, i. NW of Burke I., a.k.a. Little Haystack Island), the species assemblage was "Great Black-backed Gull and Herring Gull" and at the other site (41A014, Cavalier I.) the assemblage was "Great Black-backed Gull, Herring Gull and Double-crested Cormorant".

5.6.2 Comparison of the 1989 and 1980 data

No Great Black-backed Gull nests were found in 1980. The first nesting record for the Great Lakes was of a single pair on Little Haystack Island in 1954 (Krug 1956), the same colony site where one pair was nesting in 1989. The nesting by Great Black-backed Gulls in Lake Huron in 1989 is part of a slow but persistent invasion of the Great Lakes by this essentially marine species (Ewins *et al.* 1992).

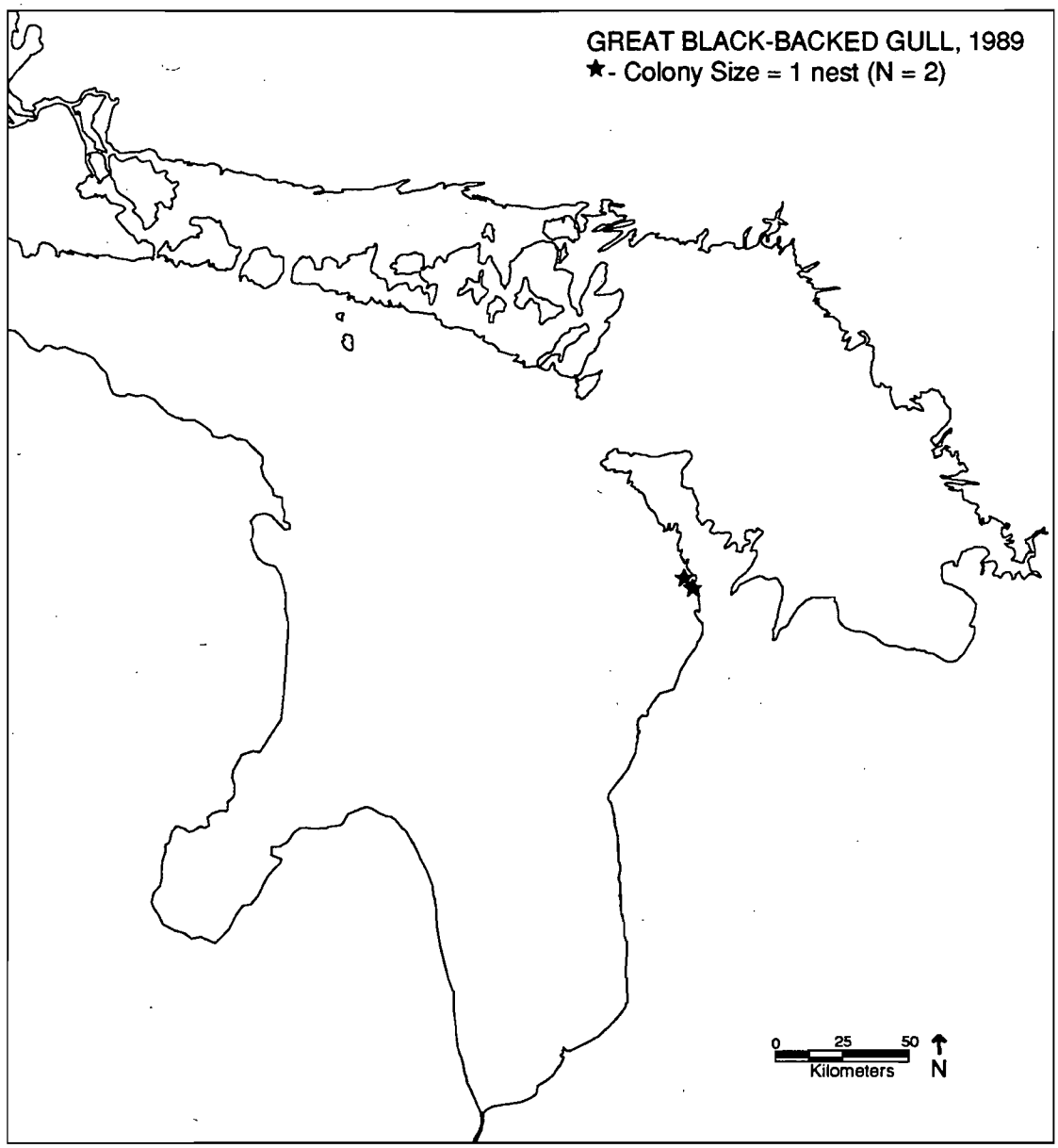

Fig. 7. Distribution of the Great Black-backed Gull colonies in Canadian Lake Huron in 1989.

5.7 Caspian Tern

5.7.1 The situation in 1989

There were 6 Caspian Tern colonies of known size in 1989. In addition, there were two colonies (East Cousins Island and Halfmoon Island) that were not counted in 1989, but that were censused in 1990. Assuming that the same number of birds nested at these sites in 1989 and 1990, there were 8 colonies with an estimated total of 2,295 nests in 1989 (Table 9). Colony sizes ranged from 38 to 747 nests, with a mean of 286.9 nests. Mean colony sizes were fairly similar among the two portions of Canadian Lake Huron that had Caspian Tern colonies (Georgian Bay, 282.0 nests; North Channel, 301.5 nests).

Colonies were restricted to Georgian Bay (N=6) and the eastern half of the North Channel (N=2), as shown in Fig.8. The colony sites were evenly distributed, except for the two Watcher Islands (41A046 and 41A047) in southern Georgian Bay.

Caspian Terns nested only in colony sites that had 2-4 other breeding species. All Caspian Tern colony sites had Ring-billed Gulls (Tables 2 and 9).

Table 9. Caspian Tern colonies in 1989.

Site #	Name	CATE	DCCO	HERG	RBGU	COTE
41J087	East Cousins I.	379[a]	114	0	775	0
41J131	Elm I.	224	0	21	2738	0
41H040	Papoose I.	220	0	259	4988	14
41H089	largest i. of Gull Rks.	47	8	43	1207	40
41H145	Halfmoon I.	207[a]	109	n[b]	n	0
41H156	N i. of S. Limestone Is.	433	33	55	11146	0
41A046	North Watcher I.	38	47	6	4378	0
41A047	South Watcher I.	747	536	0	3582	0
Total		2295				

[a]Data are for 1990, see Section 5.1.
[b]n= nesting, but nests not counted

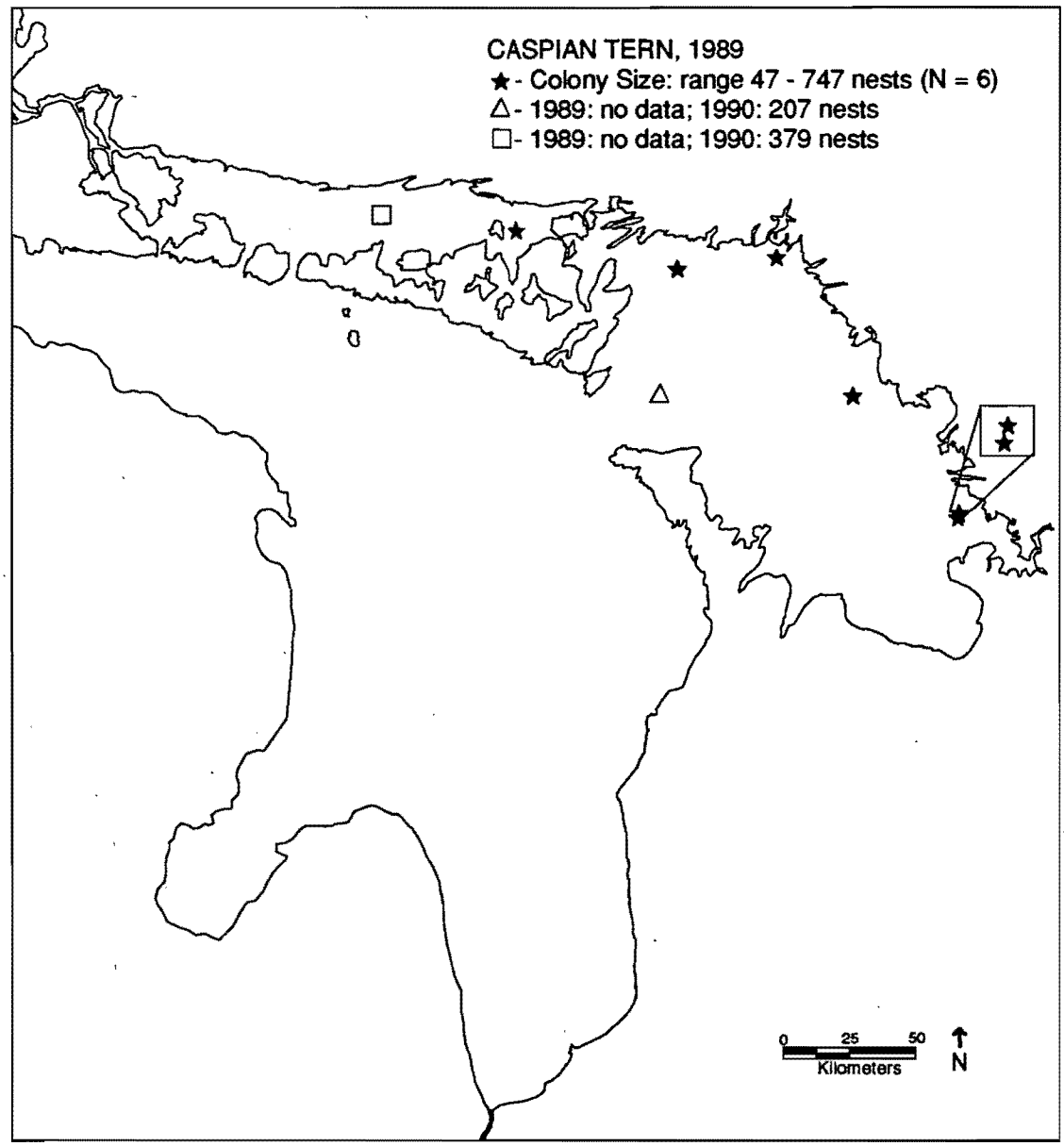

Fig. 8. Distribution of the Caspian Tern colonies in Canadian Lake Huron in 1989.

5.7.2 Comparison of the 1989 and 1980 data

Even though the number of colonies remained the same (N=8) from 1980 to 1989, the population increased slightly, from 2,138 nests to an estimated total of 2,295 nests (Table 10), which represents a mean annual growth rate of 0.8%. The mean annual growth rate was higher in the North Channel (1.1%) than in Georgian Bay (0.7%).

During 1980-1989, no Caspian Terns nested in Canadian Lake Superior (Blokpoel and Tessier 1993), but on the lower Great Lakes, the nesting population increased greatly during 1976-1990, at an average annual rate of 22.1% (Blokpoel and Tessier 1996). A review of Great Lakes Caspian Terns during 1972-1991 also reported an enormous increase on Lake Ontario and a very small increase on Lake Huron (Ewins *et al.* 1994).

Of the 8 Caspian Tern colonies found in 1980, 1 colony (on colony site 41H050, Gull Island) had become inactive by 1989, but the other 7 (87.5%) were still active in 1989. Of these 7 colonies, 4 had increased in size while 3 had declined.

One new colony was found in 1989 (47 nests). The relatively close proximity (32 km) of the new site (41H089, largest i. of the Gull Rocks) to the abandoned site (41H050, Gull I.) suggests that at least some of the 1989 birds at the new site originated from the abandoned one.

Table 10. Numbers of colonies (Col's) and nests of Caspian Terns in 1989 and 1980, and mean annual rate of population change (RoPC), in the three portions of Canadian Lake Huron. Only comparable data are used; see Methods and Section 5.1.

	1989		1980		
Area	Col's	Nests	Col's	Nests	RoPC
Georgian Bay	6	1692	6	1591	+0.7%
Lake Huron proper	0	0	0	0	NA
North Channel	2	603	2	547	+1.1%
Total	8	2295	8	2138	+0.8%

5.8 Common Tern

5.8.1 The situation in 1989

In 1989, 57 Common Tern colonies were found, and they contained 4,242 nests. However, many colony sites were visited too early in the season to obtain accurate nest counts for terns, so the actual number of nests, and perhaps of colonies, was higher.

Common Tern colonies ranged in size from 1 to 861 nests, and the mean colony size for the 57 colonies was 74.4 nests. Mean colony sizes varied among the three portions of Canadian Lake Huron: 84.4 nests for the North Channel, 70.7 nests for Georgian Bay and 62.3 nests for Lake Huron proper.

The 26 largest Common Tern colonies in 1989 held 3,952 nests, or 93.2% of the total (Table 11). Colony sizes ranged from 30 to 861 nests, with a mean of 152.0 nests. (Note: these 26 colonies included colony sites 41K027 and 41J129, that each had 30 nests. Hence we present the 26, not the 25, largest colonies.) The 26 largest colonies were largely restricted to the North Channel and eastern Georgian Bay (Fig. 9).

At the 57 colony sites, Common Terns nested alone at 22 (38.6%) sites (Table 1). The most common assemblage at the 35 mixed-species colony sites was "Common Tern and Herring Gull" (18 sites).

5.5.2. Comparison of the 1989 and 1980 data

Including only colonies with data for both years, the Common Tern population decreased from 4,521 nests in 59 colonies in 1980, to 3,858 nests in 45 colonies in 1989. This represents a mean annual rate of decline of 1.7%. Mean annual rates of change in the 3 portions of the study area varied from -5.2% to + 7.8% (Table 12).

In Canadian Lake Superior during 1980-1989, only one small Common Tern colony became established (Blokpoel and Tessier 1993), while in the Canadian lower Great Lakes system the Common Tern nesting population declined during 1976-1990 at a mean annual rate between 2.1% and 2.3% (Blokpoel and Tessier 1996).

Of the 57 colonies found in 1980 for which there were reliable data in 1989, 25 (43.9%) were still active in 1989 while 32 (56.1%) had become abandoned. Of the 25 colonies still active in 1989, 15 (60.0%) decreased and 10 (40.0%) increased in size. A total of 28 new colonies was found in 1989. Excluding the 6 colonies that were surveyed too early in the season for terns, they had a mean of 33.6 nests.

Table 11. The 26 largest Common Tern colonies in 1989.

Site #	Name	COTE	DCCO	HERG	RBGU	CATE
41K027	Whitestone Rf.	30	0	3	0	0
41K028	i. NNW of Hay Pt.	129	0	5	1	0
41J039	Ironside Rf.	33	0	0	263	0
41J060	i. N E. Grant I.	86	0	0	0	0
41J073	1st i. W of 41J074	143	0	1[b]	0	0
41J074	i. SE of Caribou Pt.	142	0	0[b]	0	0
41J119	shoal W of Courtney I.	40	0	0	0	0
41J120	rk. S of Spilsbury I.	136	0	0	0	0
41J129	East Rk.	30	0	30	0	0
41I004	i. 0.6 km W of Flat Rk	57	0	15	0	0
41G013	i. SW of Henry I.	534	0	0	6	0
41G016	Meredith Rk.	45	0	0	1	0
41H005	West Mary I.	91	0	78	6302	0
41H013	Kokanongwi Shingle	43	0	107	82	0
41H020	Young Squaw I.	330	0	0	0	0
41H089	Gull Rocks	40	8	43	1207	47
41H121	i. NE of Owen I.	156	0	0	0	0
41H131	Norgate Rks.	174	0	13	501	0
41H135	Blackbill Is.	245	115	28	0	0
41H154	is. N of Garland I.	45	0	1	0	0
41H155	North Limestone I.	861	0	112	0	0
41A006	NW i. of Chimney Rfs.	165	0	5	0	0
41A010	W-c i. of Chimney Rfs	75	0	4	0	0
41A038	SE Wooded Pine I.	223	0	54	0	0
31D014	SE i. of Warwick Rks.	51	0	1	0	0
31D028	3rd rk. W of Quarry I.	48	0	0	0	0
Total		3952				

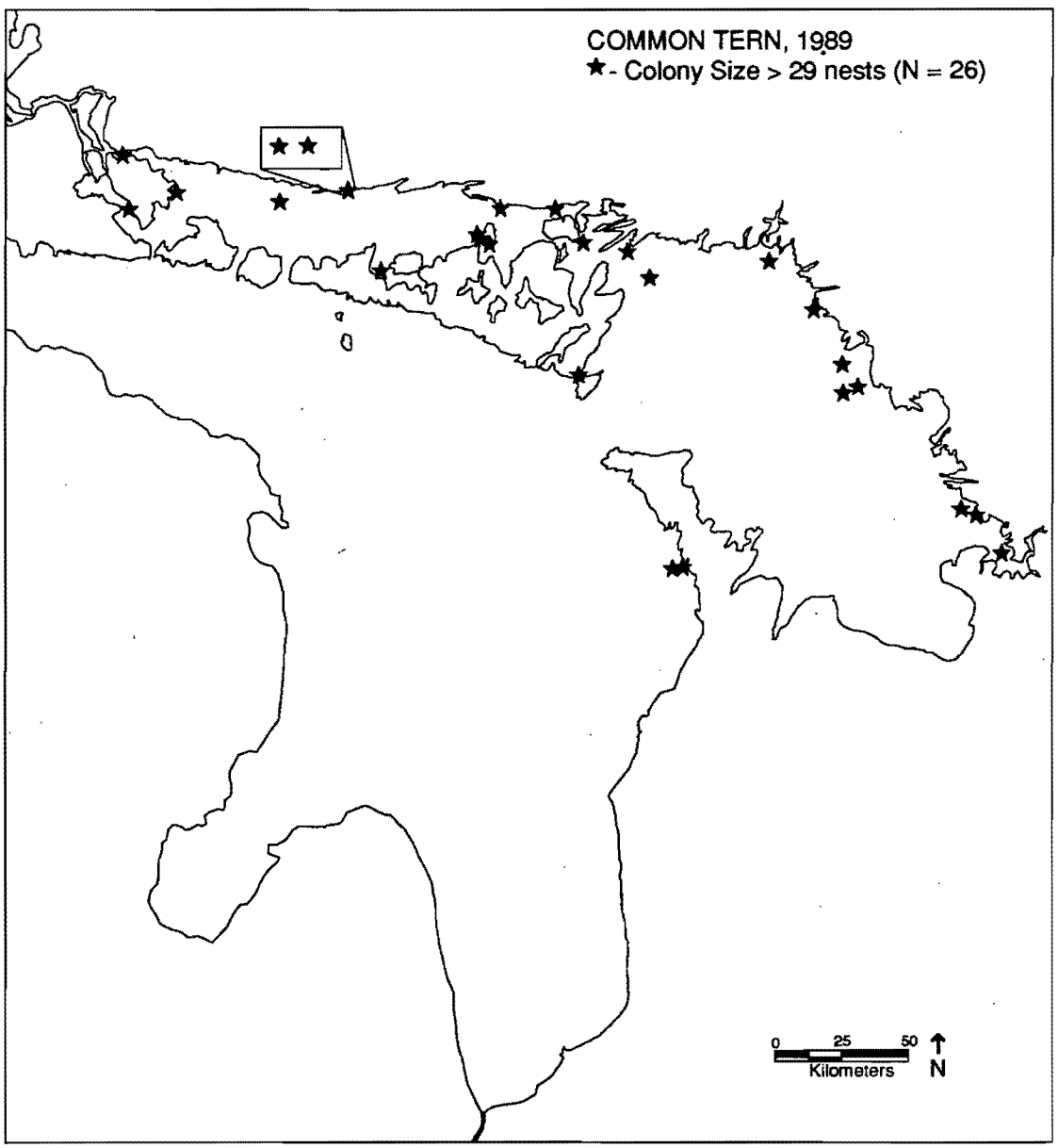

Fig. 9. Distribution of the 26 largest Common Tern colonies in Canadian Lake Huron in 1989.

Table 12. Number of colonies (Col's) and nests of Common Terns in 1989 and 1980, and mean annual rates of population change (RoPC), in the three portions of Canadian Lake Huron. Only comparable data are used; see Methods.

	1989		1980		
Area	Col's	Nests	Col's	Nests	RoPC
Georgian Bay	31	2431	36	2486	-0.2%
Lake Huron proper	4	249	7	127	+7.8%
North Channel	10	1178	16	1908	-5.2%
Total	45	3858	59	4521	-1.7%

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8. APPENDICES

Appendix 1. Description of the division lines separating the North Channel, Georgian Bay and Lake Huron proper.

The division line between the North Channel and Lake Huron proper runs westward from Hungerford Pt. (45°30'55"N, 81°50'40"W; Navigation Chart 2235) along the south shoreline of Manitoulin Island, and turns north at its west end to about halfway up the Mississagi Strait (45°55'00"N, 83°13'30"W; Navigation Chart 2267). It then swings west to reach Cockburn Island at 45°55'00"N, 83°15'50"W, from where it follows the south and west coast of that island up to about halfway up False Detour Channel (45°57'30"N, 83°26'10"W). From there it turns west to reach Great Duck Island on the U.S. side at 45°57'30"N, 83°30'00"W (Navigation Chart 2267).

The division line between the North Channel and Georgian Bay runs from the northwesternmost tip of Manitoulin Island (Bold Point, 45°54'30"N, 81°40'10"W), Navigation Chart L/C2245) to the southernmost point of Badgeley Island (Evans Point, 45°55'30"N, 81°37'20"W). It then follows the eastern shore of Badgeley Island to its northeasternmost tip (Maxwell Point, 45°57'50"N, 81°34'10"W), and then runs northwest to the southern tip of Powderhouse Bay on Badgeley Point (45°58'20"N, 81°35'05"). Killarney Bay is thus considered to be part of Georgian Bay, while Frazer Bay, Baie Fine and McGregor Bay are considered part of the North Channel (Navigation Chart L/C2445).

Similarly, the division line between Georgian Bay and Lake Huron Proper runs from the northernmost tip of the Bruce Peninsula (North Point, 45°15'45"N, 81°39'55"W, Navigation Chart 2235) to the easternmost point of North Otter Island (45°17'35"N, 81°41'10"W), on to the southwesternmost point of Yeo Island (45°24'00"N, 81°47'35"W), and then on to the southernmost point of Fitzwilliam Island (Indian Harbour Point, 45°26'15"N, 81°48'30"W). From there the division line follows the west shore of Fitzwilliam Island to its northwesternmost point (Phoebe Point, 45°29'50"N, 81°49'20"W), from which it goes northwest to the southernmost tip of Manitoulin Island (Hungerford Point, 45°30'55"N, 81°50'45"W, Navigation Chart 2235).

Appendix 2. Areas covered and people involved in the fieldwork of the 1989 inventory of Canadian Lake Huron

District or Area	CWS Staff and Contractors	Other Cooperators	Dates of Fieldwork
Sault Ste. Marie	C. Nirkkola	T. Marwood K. Oswald T. Walker	18 May--7 June
Blind River	S. Babbitt K. Fiset	H. Babbitt S. Elliott	9 May--8 June
Espanola	M. Berzins L. Primavesi D. Wesley		20 May--26 May
Sudbury	C. Blomme D. Niemi		23 May--2 June
Northern and Central Georgian Bay	C. Bishop A. Jaramillo D. V. Weseloh	L. Benner	19 May--14 June
Huronia		S. Boyd R. Craig C. Farintosh G. Findlay D. Hawke W. LaFrance M. Sinkowski S. Small J. Tombolini	23 May--6 June
Owen Sound	M. Kirk G. Peck		15 May--24 May

Appendix 3. Explanation of listing of colony sites in Appendices 4-10.

The results of the 1989 survey (together with those of the 1980 survey) are presented by 1:250,000 Topographic Maps in App.4-10. There are seven 1:250,000 Topographic Maps that cover the areas of Canadian Lake Huron that have nesting colonies. These seven maps are: 41K, 41J, 41I, 41G, 41H, 41A and 31D.

App.4-10 run across opposite pages. On the left-hand page we identify and give geographical coordinates for each colony site, while on the right-hand page we report the inventory results for the corresponding colony sites. The colony site identification numbers are given in the left column of both the left-hand and right-hand page.

We use the following abbreviations for bird species: DCCO - Double-crested Cormorant, RBGU - Ring-billed Gull, HERG - Herring Gull, GBBG - Great Black-backed Gull, CATE - Caspian Tern and COTE - Common Tern. The survey methods used for the 1989 and 1980 inventories are shown on the right hand page in the Methods ("M") column, using the following abbreviations: GC - Ground Count, BE-Boat Estimate, GE - Ground Estimate (used only in 1980), and AE - Aerial Estimate (used only in 1989).

Numbers given in the columns "DCCO" and "HERG" are the numbers of active nests of these two species at that colony site. In the "OTHER" column, data are presented for Ring-billed Gull, Great Black-backed Gull, Caspian Tern and Common Tern, but not for herons and egrets, which will be dealt with in Part 5 of this Atlas.

We present the results of the 1980 inventories to facilitate comparisons and to assign the 1980 colony sites with the same type of identification numbers as used for 1989 colony sites. The original numbers used to identify the 1980 colony sites in Weseloh *et al.* (1986) are given here in the right column of the right-hand page.

In 1989 we sometimes used colony sites names that are different from those used in 1980 (Weseloh *et al.* 1986). For example, the 1980 colony site "Is. 1.2 km S of Pumpkin Pt." (with original location number K8E003), was separated in 1989 into two smaller colony sites, "1st i. S of Pumpkin Pt." and "2nd i. S of Pumpkin Pt." (with new colony site indentification numbers 41K022 and 41K023, see App. 4).

In some cases, a small cluster of islets was considered as one colony in 1980 and/or 1989. In those cases we use a T (for total) and a bracket to indicate the total number of nests and of colony sites involved (e.g. 41J009 - 41J011 in 1980).

Regarding the naming of colony sites, we have used Navigation Charts as the basis for island names and for describing unnamed islands, islets and rocks. Where the 1:250,000 and/or 1:50,000 Topographic Maps showed a different name, we added this information in parentheses. See, for example, colony site 41J012, "i. W of McPhail Rk. (=Duncan Rk.)", in App. 5.

Appendix 4. Waterbird colonies present on Canadian Lake Huron in 1989 and 1980 in the area covered by 1:250,000 Map 41K. See Appendix 3 for explanation of Appendices 4-10.

Colony site ident. #[a]	Name or description of colony site	Latitude	Longitude
41K022	lst i. S of Pumpkin Pt.	46°23'12"	84°07'48"
41K023	2nd i. S of Pumpkin Pt.	46°23'12"	84°07'48"
41K024	Rf. SW of Birch Pt.	46°22'12"	84°08'30"
41K025	Peninsula E of SE tip of Sankey I.	46°20'48"	84°05'48"
41K026	Almon I.	46°18'42"	84°03'42"
41K027	Whitestone Rf.	46°18'48"	84°01'54"
41K028	i. NNW of Hay Pt.	46°07'54"	84°00'12"

[a] Colony sites 41K001-41K021 are on Lake Superior (see Blokpoel and Tessier 1993).

Colony site ident. #	1989 Results					1980 Results					Former # of colony site
	M	DCCO	HERG	OTHER		M	DCCO	HERG	OTHER		
41K022	GC	0	24	0		GC	0	63 T	0		K8E 003
41K023	GC	0	17	0		GC	0	----	0		K8E 003
41K024	GC	0	3	0		BE	0	0	0		----
41K025	GC	0	1	0		BE	0	0	0		----
41K026	GC	0	13	0		GC	0	34	0		K8E 002[a]
41K027	GC	0	3	30	COTE	GC	0	0	31	COTE	K8E 001
41K028	GC	0	5	129	COTE	GC	0	0	39	COTE	J4016
				1	RBGU						

[a] Referred to as 2 islands in 1980 (Weseloh *et al.*, 1986). Only one island occupied in 1989.

Appendix 5. Waterbird colonies present on Canadian Lake Huron in 1989 and 1980 in the area covered by 1:250,000 Map 41J. See Appendix 3 for explanation of Appendices 4-10.

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41J001	McNab Rf.	46°19'18"	83°55'54"
41J002	Hurt Rk.	46°19'42"	83°55'24"
41J003	Short Rk.	46°18'48"	83°55'12"
41J004	North Sister Rk.	46°18'12"	83°54'42"
41J005	East Sister Rk.	46°18'06"	83°54'36"
41J006	E most i. SE of Plummer I.	46°17'54"	83°53'36"
41J007	i. SE of Dunlevie Pt.	46°18'42"	83°53'06"
41J008	Jackson Rk.	46°17'48"	83°52'54"
41J009	W-most rk. of the Piercy Rks.	46°16'42"	83°52'18"
41J010	S-most rk. of the Piercy Rks.	46°16'42"	83°52'12"
41J011	E-most rk. of the Piercy Rks.	46°16'48"	83°52'06"
41J012	i. W of McPhail Rk. (= Duncan Rk.)	46°17'24"	83°50'54"
41J013	i. NNW of McPhail Rk.	46°17'24"	83°50'54"
41J014	i. N of McPhail Rk. (= One Tree I).	46°17'24"	83°50'48"
41J015	i. NE of McPhail Rk.	46°17'24"	83°50'42"
41J016	McPhail Rk.	46°17'24"	83°50'30"
41J017	McKay Rf.	46°16'36"	83°47'30"
41J018	Little I.	46°16'48"	83°45'12"
41J019	i. W of Pallideau I.	46°16'48"	83°44'18"
41J020	rk. off N side of 41J019	46°16'48"	83°44'24"
41J021	i. NW of W tip of Long I.	46°16'12"	83°43'48"
41J022	Africa Rk.	46°15'30"	83°38'30"
41J023	Frechette I.	46°16'24"	83°37'36"
41J024	Kalulah I.	46°15'42"	83°36'36"
41J025	Gooseberry I.	46°15'48"	83°35'36"
41J026	i. NE of Gooseberry I.	46°16'00"	83°35'18"
41J027	Is. E of S tip of Gooseberry I.	46°15'48"	83°35'24"
41J028	Bald Rk.	46°15'48"	83°34'36"
41J029	i. SW of Thessalon Dock	46°15'06"	83°33'12"
41J030	i. SW of Thessalon Breakwall.	46°14'54"	83°33'00"
41J031	i. at W end of Thessalon Breakwall.	46°15'00"	83°33'00"
41J032	west portion of Thessalon Breakwall.	46°15'06"	83°33'00"

Colony site ident. #	1989 Results M	DCCO	HERG	OTHER	1980 Results M	DCCO	HERG	OTHER	Former # of colony site
41J001	GC	0	1	0	BE	0	0	0	----
41J002	GC	0	1	0	BE	0	0	0	----
41J003	GC	0	2	0	GC	0	12	0	J5019
41J004	BE	0	0	0	GC	0	0	3 COTE	J5018
41J005	GC	0	3	0	BE	0	0	0	----
41J006	GC	0	14	0	GC	0	12	0	J5017
41J007	GC	0	1	0	BE	0	0	0	----
41J008	BE	0	1	0	BE	0	0	0	----
41J009	GC[c]	0	27	0	GC	0	69 T	0	J5016[a]
41J010	GC[c]	0	7	0	GC	0	----	0	J5016
41J011	GC[c]	0	4	0	GC	0	----	0	J5016
41J012	GC	0	61	0	GC	0	37	0	J5015
41J013	GC	0	5	0	BE	0	0	0	----
41J014	GC	0	40	652 RBGU	GC	0	10	12 RBGU	J5014
41J015	GC	0	75	0	GC	0	75	1338 RBGU	J5013
41J016	GC	0	17	0	GC	0	67	0	J5012[b]
41J017	GC	0	1	0	BE	0	0	0	----
41J018	GC	0	10	0	BE	0	0	0	----
41J019	GC	0	57	0	GC	0	61	0	J5011
41J020	GC	0	3	4 RBGU 2 COTE	BE	0	0	0	----
41J021	GC[c]	0	19	0	GC	0	11	0	J5010
41J022	GC[c]	184	32	0	GC	52	25	0	J5009
41J023	GC[c]	0	1	0	BE	0	0	0	----
41J024	GC[c]	104	39	0	GC	19	36	0	J5008
41J025	GC[c]	0	8	0	BE	0	0	0	----
41J026	GC[c]	0	50	0	GC	0	31	0	J5006
41J027	GC[c]	0	67	0	GC	0	24	0	J5007
41J028	GC[c]	0	7	0	BE	0	0	0	----
41J029	BE	0	0	0	GC	0	0	67 COTE	J5005
41J030	GC	0	6	0	BE	0	0	0	----
41J031	GC	0	7	0	GC	0	0	836 RBGU	J5003
41J032	GC	0	1	0	GC	0	0	158 RBGU	J5002

a - Referred to as 5 islands in 1980 (Weseloh *et al.*, 1986); 3 islands were occupied in 1989
b - Referred to as "I. NE of McPhail Rk." in 1980 (Weseloh *et al.*, 1986)
c - Censussed only early in the 1989 season; data unreliable for terns

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41J033	i. in middle of Thessalon Brw.	46°15'12"	83°32'48"
41J034	i. NE of Thessalon Dock	46°15'18"	83°33'00"
41J035	i. E of Smelter Bay Aggregate	46°15'48"	83°32'12"
41J036	w. i. of 2 is. SE of Smelter Bay Aggregate	46°15'36"	83°32'06"
41J037	Salt I.	46°07'36"	83°47'48"
41J038	Perrique I.	46°08'24"	83°45'42"
41J039	Ironside Rf.	46°11'06"	83°46'12"
41J040	i. SE of Birch I.	46°14'42"	83°40'42"
41J041	Serpent I.	46°10'30"	83°41'18"
41J042	Kangaroo Rk.	46°11'42"	83°38'24"
41J043	Gull I.	46°09'48"	83°37'12"
41J044	Maggs I.	46°08'54"	83°36'48"
41J045	Sulphur I.	46°08'54"	83°36'30"
41J046	Dyment Rk.	46°14'42"	83°31'42"
41J047	i. W of Clinton I.	46°14'54"	83°31'36"
41J048	Clinton I.	46°14'54"	83°31'24"
41J049	Bigsby I.	46°10'18"	83°25'48"
41J050	i. 3.2 km W of Dobie Pt.	46°13'18"	83°21'12"
41J051	i. 1.5 km W. of Dobie Pt.	46°13'06"	83°19'24"
41J052	Horne Rk.	46°07'48"	83°21'30"
41J053	Anchor I.	46°08'12"	83°20'42"
41J054	Bird I.	46°08'24"	83°20'30"
41J055	Middle Grant I.	46°08'12"	83°19'24"
41J056	W-most i. of the Ivor Rks.	46°08'42"	83°17'54"
41J057	N i. of the Ivor Rks.	46°08'30"	83°17'30"
41J058	SE i. of the Ivor Rks.	46°08'24"	83°17'30"
41J059	Fishery I.	46°08'48"	83°17'06"
41J060	i. N. of East Grant I.	46°08'54"	83°16'12"
41J061	East Grant I.	46°08'24"	83°06'12"
41J062	i. N of Herbert I.	46°08'18"	83°16'06"
41J063	Herbert I.	46°08'06"	83°16'18"
41J064	Talon Rk.	46°09'54"	83°09'54"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41J033	GC	0	3	0	GC	0	0	108 RBGU	J5001
41J034	GC	0	0	0	GC	0	0	564 RBGU 661 COTE	J5004
41J035	GC	0	4	14 RBGU	BE	0	0	0	----
41J036	GC	0	2	0	BE	0	0	0	----
41J037	GC[a]	0	32	0	GC	0	49	0	J4013
41J038	GC[a]	0	117	0	GC	0	85	0	J4012
41J039	GC[a]	0	0	263 RBGU 33 COTE	GC	0	0	269 RBGU	J4011
41J040	GC[a]	0	60	0	GC	0	44	0	J4009
41J041	GC[a]	0	37	0	GC	0	8	0	J4008
41J042	GC[a]	154	0	0	GC	0	24	0	J4007
41J043	GC[a]	0	93	6 RBGU	GC	0	75	0	J4006
41J044	BE[a]	0	0	0	GC	0	2	0	J4005
41J045	GC[a]	0	19	0	GC	0	70	0	J4004
41J046	GC	0	24	0	GC	0	9	0	J4003
41J047	GC	0	7	0	GC	0	0	46 RBGU	J4002
41J048	GC	0	11	0	GC	0	20	0	J4001
41J049	GC	0	8	0	GC	0	1	1 RBGU 124 COTE	J3021
41J050	GC[a]	0	17	0	GC	0	24	0	J3020
41J051	BE[a]	0	0	0	GC	0	0	13 COTE	J3019
41J052	GC[a]	0	0	7 COTE	GC	0	0	1 RBGU 7 COTE	J3018
41J053	GC[a]	0	56	0	GC	0	69	0	J3017
41J054	GC[a]	0	120	0	GC	0	209	0	J3016
41J055	GC[a]	0	74	2305 RBGU	GC	0	156	0	J3015
41J056	GC[a]	8	48	11 RBGU	GC	0	115	0	J3014
41J057	BE[a]	0	0	0	GC	0	4	0	J3013
41J058	GC[a]	0	30	0	GC	0	65	0	J3012
41J059	BE[a]	0	0	0	GC	0	8	0	J3011
41J060	GC[a]	0	0	86 COTE	BE	0	0	0	----
41J061	BE[a]	0	0	0	GC	0	1	0	J3010
41J062	GC[a]	0	1	1 COTE	GC	0	0	54 RBGU 2 COTE	J3009
41J063	GC[a]	446	103	0	GC	0	177	0	J3008
41J064	GC[a]	0	1	0	GC	7	3	0	J3007

a - Censussed only early in the 1989 season; data unreliable for terns

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41J065	Richelieu I.	46°09'54"	83°09'30"
41J066	1st i. W of La Salle I.	46°09'54"	83°09'12"
41J067	La Salle I.	46°09'54"	83°08'54"
41J068	De Caen Rk.	46°10'12"	83°07'54"
41J069	i. N of Sayers I.	46°11'06"	83°08'06"
41J070	i. W of West I.	46°06'36"	83°01'24"
41J071	West I.	46°06'42"	83°01'18"
41J072	Suzanne I.[a]	46°10'30"	82°57'36"
41J073	1st i. W of 41J074	46°10'42"	82°56'18"
41J074	E most i. of 3 is. SE of Caribou Pt. (= Louis I.)	46°10'42"	82°56'12"
41J075	W i. in Hoffman Bight	46°10'48"	82°55'36"
41J076	W i. of Double Is.	46°10'24"	82°51'54"
41J077	E i. of Double Is.	46°10'24"	82°51'48"
41J078	Doucet Rk.	46°08'24"	82°51'18"
41J079	i. WSW of Struthers I. (= Jane Rk)	46°08'30"	82°50'30"
41J080	Black Rk.	46°07'00"	82°50'06"
41J081	N-most i. SE of Loughlin I.	46°07'48"	82°49'36"
41J082	S i. of the Chrysler Rks.	46°07'06"	82°49'18"
41J083	S i. of the middle is. of the Chrysler Rks.	46°07'12"	82°49'06"
41J084	N i. of the middle is. of the Chrysler Rks.	46°07'12"	82°49'06"
41J085	N i. of the Chrysler Rks.	46°07'18"	82°48'54"
41J086	W i. of the Cousins Is.	46°05'00"	82°48'42"
41J087	E i. of the Cousins Is	46°04'54"	82°48'30"
41J088	2nd i. SSW of 41J090	46°07'36"	82°48'24"
41J089	1st i. SSW of 41J090	46°07'42"	82°48'18"
41J090	N i. of the Fortin Rks.	46°07'48"	82°48'12"
41J091	Small i. ENE of Sanford I. (= i. NW of Vaux I.)	46°09'12"	82°47'30"
41J092	W i. of the Magazine Is.	46°10'42"	82°46'48"
41J093	E i. of the Magazine Is.	46°10'42"	82°46'42"
41J094	1st i. WSW of SW tip of Turnbull I.	46°08'36"	82°46'00"
41J095	Minstrel Rk.	46°08'18"	82°43'54"
41J096	W i. of the Robb Rks.	46°08'30"	82°43'42"

a - Referred to as "Susanne I. W" in 1980 (Weseloh *et al.* 1986)

Colony site ident. #	1989 Results M	DCCO	HERG	OTHER		1980 Results M	DCCO	HERG	OTHER		Former # of colony site
41J065	GC[a]	0	93	0		GC	0	143	0		J3006
41J066	GC[a]	0	16	0		GC	0	52	0		J3005
41J067	GC[a]	0	15	0		BE	0	0	0		----
41J068	GC[a]	0	41	0		GC	0	24	0		J3003
41J069	BE[a]	0	0	0		GC	0	0	4	COTE	J3004
41J070	GC[a]	126	15	0		GC	0	27	0		J3002
41J071	GC[a]	575	40	3650	RBGU	GC	0	109	3030	RBGU	J3001
41J072	GC[a]	0	16	2587	RBGU	GC	0	8	1028	RBGU	J2029
									65	COTE	
41J073	GC	0	1 T	285 T	COTE	GC	0	0	227 T	COTE	J2028
41J074	GC	0	---	----		GC	0	0	----		J2028
41J075	GC[a]	0	18	0		BE	0	0	0		----
41J076	GC[a]	0	102	0		GC	0	121	0		J2027
41J077	GC[a]	0	95	3	RBGU	GC	0	128	0		J2026
41J078	GC[a]	134	0	17	RBGU	GC	47	26	0		J2025
41J079	GC[a]	0	16	0		GC	0	22	0		J2024
41J080	GC[a]	0	0	36	RBGU	GC	0	60	0		J2022
41J081	BE[a]	0	24	0		GC	0	13	0		J2023
41J082	GC[a]	0	26	0		GC	0	21	0		J2019
41J083	GC[a]	0	22	0		GC	0	22 T	0		J2018
41J084	GC[a]	0	6	0		GC	0	----	0		J2018
41J085	GC[a]	0	46	0		GC	0	53	0		J2017
41J086	GC[a]	0	0	78	RBGU	GC	0	30	0		J2021
41J087	GC[a]	114	0	775	RBGU	GC	0	69	2035	RBGU	J2020
				379	CATE[b]				395	CATE	
41J088	GC[a]	0	31	0		GC	0	32	0		J2016
41J089	BE[a]	0	16	0		GC	0	14	0		J2015
41J090	GC[a]	0	71	444	RBGU	GC	0	112	0		J2014
41J091	NV	-	-	-		GC	0	0	130	COTE	J2012
41J092	GC[a]	14	37	424	RBGU	GC	0	23	493	RBGU	J2011
41J093	BE[a]	0	7	0		GC	0	18	0		J2010
41J094	NV	-	-	-		GC	0	0	98	COTE	J2013
41J095	GC[a]	0	38	0		GC	0	29	0		J2009
41J096	BE[a]	0	9	0		GC	0	16	0		J2008

a - Censussed only early in the 1989 season; data unreliable for terns

b - Data are for 1990, from a survey by S. Elliott (pers. comm.) at the appropriate time of the season (Section 5.1)

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41J097	middle i. of the Robb Rks.	46°08'36"	82°43'30"
41J098	is. 0.8 km NE of Godfrey I.	46°09'54"	82°41'30"
41J099	E i. of the Page Rks.	46°09'18"	82°40'00"
41J100	Turtle Rk.	46°09'06"	82°39'00"
41J101	is. NE of Mulock I.	46°09'54"	82°35'06"
41J102	Tern I.	46°07'36"	82°33'54"
41J103	Mouse I.	46°07'18"	82°30'42"
41J104	i. 1.2 km NE of Bartlett Pt.	46°10'36"	82°30'24"
41J105	I. W of Rykert Pt.	46°11'30"	82°27'36"
41J106	2nd i. W of main i. of the Dennis Is.	46°07'48"	82°29'24"
41J107	Fawcett I.	46°07'30"	82°28'42"
41J108	i. NE of Conmee I.	46°07'36"	82°27'06"
41J109	Egg I.	46°03'36"	82°28'36"
41J110	N. rk. of the Howland Rks.	46°02'54"	82°26'06"
41J111	S. rk. of the Howland Rks.	46°02'54"	82°26'06"
41J112	i. E of Whiteaves I.	46°10'30"	82°22'36"
41J113	i. 0.3 km NE of E tip of main I. of the Ferguson Is.	46°07'36"	82°21'48"
41J114	i. 0.6 km NE of tip of main i. of of the Ferguson Is.	46°07'42"	82°21'42"
41J115	i. 0.3 km W of Hoskin Is.	46°07'48"	82°21'18"
41J116	W. rk. of the Hiesordt Rks.	46°07'54"	82°20'12"
41J117	3rd i. W of Hagerly I.	46°07'30"	82°18'30"
41J118	Gull Rk.	46°05'42"	82°19'06"
41J119	shoal W of Courtney I.	46°00'54"	82°17'48"
41J120	rk. S of Spilsbury I.	46°00'06"	82°17'00"
41J121	largest i. of the Sow and Pigs (= The Sow)	46°04'06"	82°14'42"
41J122	1st i. SE of 41J123	46°04'00"	82°14'36"
41J123	2nd i. SE of 41J123	46°04'00"	82°14'30"
41J124	W-most i. W of Ritchie Rk.	46°06'06"	82°13'06"
41J125	Ritchie Rk.	46°06'12"	82°12'06"

Colony site ident. #	1989 Results M	DCCO	HERG	OTHER	1980 Results M	DCCO	HERG	OTHER	Former # of colony site
41J097	GC[a]	0	56	171 RBGU	GC	0	78	0	J2007
41J098	BE[a]	0	0	0	GC	0	8	0	J2006
41J099	GC[a]	0	7	0	BE	0	0	0	----
41J100	BE[a]	0	15	0	GC	0	10	0	J2005
41J101	BE[a]	0	0	0	GC	0	0	52 COTE	J2004
41J102	GC[a]	0	26	0	GC	0	45	0	J2002
41J103	GC[a]	0	272	385 RBGU	GC	0	240	10 RBGU	J2001
41J104	BE[a]	0	0	0	GC	0	0	20 COTE	J2003
41J105	BE[a]	0	0	0	GC	0	0	23 COTE	J1027
41J106	BE[a]	0	0	0	GC	0	11	91 COTE	J1025
41J107	GC[a]	0	40	0	GC	0	24	0	J1024
41J108	BE[a]	0	0	0	GC	0	0	72 COTE	J1023
41J109	NV[b]	-	-	-	GC	0	146	5410 RBGU	J1022
41J110	NV	-	-	-	GC	0	114 T	0	J1021
41J111	NV	-	-	-	GC	0	----	0	J1021
41J112	NV	-	-	-	GC	0	0	37 COTE	J1026
41J113	GC[a]	0	25	1 RBGU	GC	0	13	0	J1020
41J114	GC[a]	0	19	39 RBGU	GC	0	18	0	J1019
41J115	GC[a]	0	0	8 COTE	BE	0	0	0	----
41J116	BE[a]	0	0	0	GC	0	75	0	J1018
41J117	BE[a]	0	0	0	GC	0	27	0	J1017
41J118	GC[a]	100	25	0	GC	34	44	0	J1016
41J119	GC[a]	0	0	40 COTE	BE	0	0	0	----
41J120	GC[a]	0	0	136 COTE	BE	0	0	0	----
41J121	GC[a]	0	27	0	GC	0	42	0	J1014
41J122	GC[a]	0	15	0	BE	0	0	0	----
41J123	GC[a]	0	43	0	GC	0	48	0	J1015
41J124	BE[a]	0	0	0	GC	0	7	0	J1013
41J125	GC[a]	0	3	0	BE	0	0	0	----

a - Censussed only early in the 1989 season; data unreliable for terns
b- NV--not visited

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41J126	West Rk.	46°06'18"	82°11'36"
41J127	rk. E of West Rk.	46°06'12"	82°11'06"
41J128	rk. W of East Rk.	46°06'06"	82°11'00"
41J129	East Rk.	46°06'06"	82°10'36"
41J130	i. N of Gisborne Pt., Crocker I.	46°05'06"	82°12'06"
41J131	Elm I.	46°00'54"	82°08'12"
41J132	is. 0.4 km NE of Matheson I.	46°06'00"	82°05'30"
41J133	Chatwin Rk.	46°05'36"	82°04'48"
41J134	rk. 0.2 km NE of Lampey Rk.	46°05'24"	82°04'06"
41J135	Nisbet Rk.	46°05'18"	82°02'54"
41J136	i. NE of Barren I.	46°05'42"	82°01'42"
41J137	W rk. of the Louisa Rks.	46°04'30"	82°00'06"
41J138	E rk. of the Louisa Rks.	46°04'30"	82°00'00"
41J139	MacPherson Ledge	46°02'36"	82°01'42"

Colony site ident. #	1989 Results M	DCCO	HERG	OTHER	1980 Results M	DCCO	HERG	OTHER	Former # of colony site
41J126	BE[a]	0	0	0	GC	0	0	115 COTE	J1012
41J127	GC[a]	0	1	0	BE	0	0	0	----
41J128	GC[a]	0	10	0	GC	0	10	0	J1011
41J129	GC[a]	0	30	30 COTE	GC	0	21	0	J1010
41J130	BE[a]	0	0	0	GC	0	0	54 COTE	J1009
41J131	GC[a]	0	21	2738 RBGU 224 CATE	GC	0	77	2462 RBGU 152 CATE	J1008
41J132	BE[a]	0	0	0	GC	0	11	0	J1007
41J133	BE[a]	0	0	0	GC	0	11	0	J1006
41J134	GC[a]	0	2	0	BE	0	0	0	----
41J135	GC[a]	0	40	0	GC	0	36	0	J1005
41J136	BE[a]	0	0	0	GC	0	34	0	J1004
41J137	BE[a]	0	0	0	GC	0	0	26 COTE	J1003
41J138	GC[a]	0	46	0	GC	0	21	0	J1002
41J139	NV[b]	--	--	--	GC	0	9	0	J1001

a- Censussed only early in the 1989 season; data unreliable for terns
b- NV = not visited

Appendix 6. Waterbird colonies present on Canadian Lake Huron in 1989 and 1980 in the area covered by 1:250,000 Map 41I. See Appendix 3 for explanation of Appendices 4-10.

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41I001	W-most i. NE of Eastern I.	46°05'24"	81°56'06"
41I002	W rk. of Gordon Rk.	46°04'18"	81°53'30"
41I003	i. 1.4 km SW of Flat Rk.	46°05'12"	81°54'24"
41I004	i. 0.6 km W of Flat Rk.	46°05'30"	81°53'54"
41I005	i. 0.2 km NNE of Carpmeal I. (= Whitby I.)	46°04'54"	81°53'24"
41I006	i. W of Carpmeal I.	46°04'12"	81°54'00"
41I007	Carpmeal I.	46°04'12"	81°53'48"
41I008	1st i. ENE of Carpmeal I.	46°04'18"	81°53'06"
41I009	2nd i. ENE of Carpmeal I.	46°04'18"	81°53'00"
41I010	SW rk. of Caroline Rks.	46°00'12"	81°43'00"
41I011	shoal NW off 41I010	46°00'12"	81°43'00"
41I012	NW rk. of Caroline Rks.	46°00'12"	81°43'00"
41I013	NE rk. of Caroline Rks.	46°00'12"	81°43'00"
41I014	S i. of 3 E-most is. N of McGregor Pt.	46°01'12"	81°42'30"
41I015	E i. of 3 E-most is. N of McGregor Pt.	46°01'12"	81°42'30"
41I016	W-most i. of 4 is. S of McGregor Pt.	46°00'00"	81°41'36"
41I017	rk. S of Fraser Pt.	46°00'06"	81°40'12"
41I018	W-most i. of is. SW of Jumbo I.	46°02'30"	81°40'06"
41I019	Rf. 0.8 km SW of Jumbo I.	46°02'24"	81°39'12"
41I020	1st rk. S of Jumbo I.	46°02'36"	81°38'24"
41I021	2nd rk. S of Jumbo I.	46°02'24"	81°38'36"
41I022	3rd rk. S of Jumbo I.	46°02'24"	81°38'48"
41I023	i. 1.0 km S of Pardsay Crag I.	46°02'12"	81°38'00"

Colony site ident. #	1989 Results M	DCCO	HERG	OTHER	1980 Results M	DCCO	HERG	OTHER	Former # of colony site
41I001	GC	0	0	5 COTE 3 RBGU	GC	0	0	37 COTE	I4015
41I002	GC	0	9	0	GC	0	6	0	I4012
41I003	BE	0	0	0	GC	0	30	0	I4014
41I004	GC	0	15	57 COTE	GC	0	0	175 COTE	I4013
41I005	GC	50	86	0	GC	0	50	0	I4008
41I006	GC	0	8	1 RBGU	GC	0	17	0	I4010
41I007	GC	0	88	543 RBGU	GC	0	111	0	I4009
41I008	BE	0	0	0	GC	0	0	34 T COTE	I4011
41I009	BE	0	0	0	GC	0	0	----	I4011
41I010	GC	0	54	0	GC	0	70 T	0	I4003
41I011	GC	0	1	0	GC	0	----	0	I4003
41I012	GC	0	15	0	GC	0	----	0	I4003
41I013	GC	0	8	0	GC	0	----	0	I4003
41I014	GC	0	55	0	GC	0	43 T	0	I4004
41I015	GC	0	5	0	GC	0	----	0	I4004
41I016	GC	0	21	0	GC	0	42	0	I4002
41I017	GC	0	19	0	GC	0	19	0	I4001
41I018	GC	0	3	0	GC	0	18	0	I4007
41I019	BE	0	0	0	GC	0	7	0	I4006
41I020	GC	0	9	0	BE	0	0	0	----
41I021	GC	0	1	0	BE	0	0	0	----
41I022	GC	0	1	0	BE	0	0	0	----
41I023	GC	0	11	0	GC	0	0	101 COTE	I4005

Appendix 7. Waterbird colonies present on Canadian Lake Huron in 1989 and 1980 in the area covered by 1:250,000 Map 41G. See Appendix 3 for explanation of Appendices 4-10.

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41G001	Wheeler Rf.	45°53'54"	83°30'36"
41G002	W. i. of the is. NW of Steevens I.	45°51'48"	83°08'06"
41G003	middle i. of the is. NW of Steevens I.	45°51'48"	83°07'54"
41G004	Green I.	45°50'18"	83°07'00"
41G005	Batture I.	45°58'18"	83°04'12"
41G006	NE pt. of Western Duck I.	45°45'54"	82°58'42"
41G007	SE pt. of Western Duck I. (Blake Pt.)	45°44'18"	82°58'48"
41G008	N end of Inner Duck I. (= Thibault I.)	45°46'18"	82°55'30"
41G009	S end of Inner Duck I. (= Thibault I.)	45°45'30"	82°55'48"
41G010	is. N of Buller Rf.	45°47'24"	82°48'00"
41G011	Buller Rf.	45°47'12"	82°47'48"
41G012	Gertrude I.	45°55'24"	82°46'30"
41G013	i. SW of Henry I.	45°54'12"	82°47'00"
41G014	i. in Murphy Hbr.	45°46'42"	82°40'30"
41G015	Little Island Bank	45°58'54"	82°16'30"
41G016	Meredith Rk.	45°58'54"	82°14'24"
41G017	Gooseberry I.	45°57'00"	82°14'00"
41G018	Martin Reef (= Seagull I.)	45°56'54"	82°13'30"
41G019	The Tooth	45°55'42"	82°12'42"
41G020	Manitoba Rf.	45°41'54"	82°57'54"
41G021	Middle Duck I.	45°42'12"	82°55'30"
41G022	i. E of Great Duck I.	45°40'06"	82°56'06"
41G023	SW tip of Outer Duck I.	45°37'42"	82°55'24"
41G024	Rk. at Simcoe Pt. (= Black Rk.)	45°39'36"	82°17'06"
41G025	Everett Reefs	45°38'12"	82°14'36"
41G026	W i. of the 2 is. S of Timber Bay	45°37'54"	82°13'18"
41G027	E i. of the 2 is. S of Timber Bay	45°37'54"	82°13'12"
41G028	6 is. off Michael Pt.	45°34'36"	82°08'00"
41G029	i. W of Maiden I.	45°34'24"	82°06'48"
41G030	i. E of Maiden I.	45°34'24"	82°06'00"
41G031	i. 1.2 km ESE of 41G030	45°34'06"	82°05'06"
41G032	i. NNW of Walker Pt.	45°33'48"	82°05'00"

Colony site ident. #	1989 Results M	DCCO	HERG	OTHER	1980 Results M	DCCO	HERG	OTHER	Former # of colony site
41G001	GC	220	40	0	GC	0	185	0	G14005
41G002	GC	0	12	0	BE	0	0	0	----
41G003	GC	0	7	6 COTE	GC	0	5	8 RBGU 83 COTE	G14003
41G004	NV[a]	--	--	--	GC	0	3	0	G14002
41G005	GC	149	146	5701 RBGU	GC	0	289	3967 RBGU	G14001
41G006	BE	0	0	0	GC	0	1	0	G15008
41G007	GC	0	2	0	GC	0	1	0	G15009
41G008	GC	0	185 T	1 T RBGU	GC	0	89	0	G15006
41G009	GC	0	---	---	GC	0	45	0	G15007
41G010	BE	0	0	0	GC	0	87	0	G15005
41G011	GC	0	16	0	GC	0	9	0	G15004
41G012	GC	0	0	15584 RBGU	GC	0	273	13866 RBGU	G15003
41G013	GC	0	0	6 RBGU 534 COTE	GC	0	0	2 RBGU 78 COTE	G15002
41G014	GC	0	67	21 RBGU	GC	0	30	0	G15001
41G015	GC	0	6	0	GC	0	48	0	G16005
41G016	GC	0	0	1 RBGU 45 COTE	GC	0	1	29 COTE	G16004
41G017	GC	0	5	2774 RBGU	GC	0	51	2257 RBGU	G16003
41G018	GC	0	2	1583 RBGU	GC	0	17	941 RBGU	G16002
41G019	NV	--	--	--	GC	0	0	33 COTE	G16001
41G020	GC	185	3	5 RBGU	GC	0	174	3 RBGU	G10003
41G021	NV	--	--	--	GC	0	109	1 RBGU	G10001
41G022	NV	--	--	--	GC	0	1	0	G10002
41G023	GC	0	1	0	BE	0	0	0	----
41G024	GC	0	13	141 RBGU 3 COTE	GC	0	1	41 RBGU 1 COTE	G9013
41G025	GC	0	37	0	GC	0	44	0	G9012
41G026	GC	0	19	0	GC	0	66 T	0	G9011
41G027	BE	0	0	0	GC	0	----	0	G9011
41G028	GC	0	51	0	GC	0	219	0	G9010
41G029	GC	0	26	0	GC	0	41	0	G9009
41G030	BE	0	0	0	GC	0	1	0	G9008
41G031	BE	0	0	0	GC	0	1	0	G9006
41G032	BE	0	0	0	GC	0	40	2 RBGU	G9005

a - NV = not visited

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41G033	2 E-most is. of the is. W of Walker Pt.	45°33'18"	82°05'06"
41G034	4 is. 0.8 km W of Birch Pt.	45°33'12"	82°03'54"
41G035	SW-most i. of the is. off Birch Pt.	45°33'06"	82°03'12"
41G036	Scotchie Rf.	45°33'18"	82°01'30"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41G033	GC	0	219	294 RBGU	GC	0	357	0	G9004
41G034	NR[a]	--	--	--	GC	0	150	0	G9003
41G035	GC	0	4	0	GC	0	14	0	G9002
41G036	GC	0	56	0	GC	0	22	0	G9001

a - NR = no record

Appendix 8. Waterbird colonies present on Canadian Lake Huron in 1989 and 1980 in the area covered by 1:250,000 Map 41H. See Appendix 3 for explanation of Appendices 4-10.

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41H001	i. in N end of Strawberry Channel (= i. N of Thompson Pt.)	45°56'54"	81°53'06"
41H002	i. N of N tip of Strawberry I. = (Garden I.)	45°58'48"	81°51'30"
41H003	i. N of Ten Mile Pt. (= Loon I.)	45°53'30"	81°49'48"
41H004	i. SW of West Mary I.	45°58'06"	81°46'24"
41H005	West Mary I.	45°58'24"	81°46'06"
41H006	East Mary I.	45°58'06"	81°44'54"
41H007	i.off NE tip of Heywood I. (= Heywood Rk.)	45°56'18"	81°44'12"
41H008	i. N of Badgeley Pt. (= Quartz Rk.)	45°58'42"	81°36'48"
41H009	is. at E end of Frazer Bay	45°59'54"	81°35'30"
41H010	1st rk. NNE of Maxwell Pt. (= SW - most rk. of Badgeley Rks.)	45°58'24"	81°33'48"
41H011	2nd rk. NNE of Maxwell Pt. (= NW - most rk. of Badgeley Rks.)	45°58'24"	81°33'48"
41H012	s. i. of Twin Is.	45°57'30"	81°34'00"
41H013	Kokanongwi Shingle	45°56'12"	81°33'18"
41H014	i. NNE of Northwest Burnt I.	45°54'18"	81°37'24"
41H015	shoal W of 41H014	45°54'18"	81°37'30"
41H016	East Mound	45°51'00"	81°37'42"
41H017	1st rk. E off Northeast Pt.	45°58'06"	81°29'54"
41H018	2nd rk. E off Northeast Pt.	45°58'06"	81°29'54"
41H019	West Rk.	45°49'54"	81°29'00"
41H020	Young Squaw I.	45°50'36"	81°27'12"
41H021	Rannie Rks.	45°58'48"	81°27'18"
41H022	rk. ENE of Rannie Rks.	45°58'54"	81°26'48"
41H023	i. ENE of Rannie Rks.	45°59'06"	81°26'42"
41H024	2nd i. W of Flat Rk.	45°59'00"	81°26'18"
41H025	Pinch I.	45°59'12"	81°25'30"
41H026	Flat Rk.	45°59'00"	81°25'42"
41H027	One Tree I.	45°58'54"	81°25'18"
41H028	Red Rk.	45°57'18"	81°25'24"
41H029	S rk. of the Celtic Rks.	45°58'06"	81°24'54"
41H030	N rk. of the Celtic Rks.	45°58'06"	81°24'54"
41H031	Mocking Bird I.	45°58'24"	81°24'42"
41H032	1st i. NE of Mocking Bird I.	45°58'30"	81°24'12"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41H001	GC	0	2	0	GC	0	1	0	H13013
41H002	BE	0	0	0	GC	0	41	0	H13014
41H003	GC	0	31	39 RBGU	GC	0	64	0	H13012
41H004	NV[a]	-	-	-	GC	0	36	0	H13011
41H005	GC	0	78	6302 RBGU 91 COTE	GC	0	164	14757 RBGU 302 COTE	H13010
41H006	GC	0	32	1265 RBGU	GC	0	4	0	H13009
41H007	GC	19	19	0	GC	0	30	0	H13008
41H008	GC	0	18	0	GC	0	39	0	H13002
41H009	NV	-	-	-	GC	0	40	0	H13001
41H010	GC	0	29	0	GC	0	21 T	0	H13003
41H011	GC	0	31	0	GC	0	----	0	H13003
41H012	GC	0	22	0	GC	0	38	0	H13004
41H013	GC	0	107	43 COTE 82 RBGU	GC	0	173	0	H13005
41H014	GC	0	10	0	GC	0	2	0	H13006
41H015	GC	0	1	0	BE	0	0	0	----
41H016	GC	0	33	0	GC	0	54	0	H13007
41H017	BE	0	1	0	BE	0	0	0	----
41H018	BE	0	1	0	BE	0	0	0	----
41H019	GC	650	65	0	GC	0	221	44 RBGU	H14031
41H020	GC	0	0	330 COTE	GC	0	0	234 COTE	H14030
41H021	GC	0	1	0	BE	0	0	0	----
41H022	GC	0	21	0	BE	0	0	0	----
41H023	BE	0	0	0	GC	0	0	40 COTE	H14027
41H024	BE	0	0	0	GC	0	12	0	H14026
41H025	BE	0	0	0	GE	0	1	0	H14025
41H026	GC	0	2	0	GE	0	1	0	H14024
41H027	GC	0	23	0	GC	0	41	0	H14023
41H028	GC	0	57	0	GC	0	48	0	H14022
41H029	GC	0	16	0	GC	0	167 T	0	H14021
41H030	GC	0	124	0	GC	0	----	0	H14021
41H031	GC	0	115	25 RBGU	GC	0	106	0	H14019
41H032	GC	0	0	1 COTE	BE	0	0	0	----

a - NV = not visited

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41H033	2nd i. NE of Mocking Bird I.	45°58'36"	81°24'18"
41H034	i. W of W tip of Martins I.	45°57'42"	81°21'48"
41H035	i. N of Martins I.	45°57'30"	81°21'24"
41H036	rk. W of NW tip of West Fox I.	45°56'42"	81°22'06"
41H037	W-most rk. of the rks. SE of West Fox I.	45°56'30"	81°21'36"
41H038	The Foxes (= Fox Islands)	45°57'00"	81°21'42"
41H039	Scarecrow I.	45°54'24"	81°22'06"
41H040	Papoose I.	45°51'30"	81°21'24"
41H041	Smooth Rk.	45°55'06"	81°19'30"
41H042	Southwest Hawk I.	45°55'18"	81°20'12"
41H043	i. NE of Southwest Hawk I.	45°55'24"	81°20'06"
41H044	rk. N of 41H043	45°55'30"	81°20'00"
41H045	i. 1.5 km N of Smooth Rk. (= part of Hawk Is).	45°55'54"	81°19'30"
41H046	rk. W of 41H045	45°55'54"	81°19'36"
41H047	i. 2.4 km N of Smooth Rk. (part of Hawk Is.	45°56'24"	81°19'00"
41H048	i. N of NW tip of 41H047	45°56'24"	81°19'18"
41H049	i. N of centre of 41H047	45°56'24"	81°19'06"
41H050	Gull I.	45°51'18"	81°16'30"
41H051	rk. SW of Toad I. (A)	45°56'24"	81°13'06"
41H052	rk. SW of Toad I. (B)	45°56'24"	81°13'06"
41H053	rk. SW of Toad I. (C)	45°56'24"	81°13'06"
41H054	rk. SW of Toad I. (E)	45°56'24"	81°13'06"
41H055	i. S of Toad I.	45°56'18"	81°12'36"
41H056	is. around MacFarlane I.	45°56'42"	81°11'54"
41H057	is. around Fleming I.	45°58'06"	81°10'36"
41H058	Draper I.	45°55'42"	81°08'48"
41H059	Grondine Rk.	45°55'48"	81°08'36"
41H060	i. SW of Indian Bight	45°55'54"	81°06'30"
41H061	i. SE of Indian Bight	45°55'12"	81°06'00"
41H062	i. NW of Eagle Nest Pt.	45°56'00"	81°04'54"
41H063	2nd i W of Eagle Nest Pt.	45°55'42"	81°04'48"
41H064	1st i W of Eagle Nest Pt.	45°55'42"	81°04'48"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41H033	BE	0	0	0	GC	0	1	2 RBGU 132 COTE	H14020
41H034	GC	0	1	0	BE	0	0	0	----
41H035	GC	0	1	0	GC	0	0	6 COTE	H14018
41H036	GC	0	13	0	BE	0	0	0	----
41H037	GC	0	9	0	BE	0	0	0	----
41H038	BE	0	0	0	GC	0	37	0	H14017
41H039	GC	0	126	102 RBGU	GC	0	253	0	H14016
41H040	GC	0	259	4988 RBGU 14 COTE 220 CATE	GC	0	469	202 CATE 3293 RBGU	H14029
41H041	GC	0	20	0	GC	0	31	0	H14012
41H042	GC	0	156	0	GC	0	592 T	0	H14013
41H043	GC	0	230	0	GC	0	----	0	H14013
41H044	GC	0	32	0	GC	0	----	0	H14013
41H045	GC	0	144	0	GC	0	193 T	0	H14014
41H046	GC	0	11	0	GC	0	----	0	H14014
41H047	GC	0	127	0	GC	0	565 T	0	H14015
41H048	GC	0	10	0	GC	0	----	0	H14015
41H049	GC	0	1	0	GC	0	----	0	H14015
41H050	GC	201	215	0	GC	0	537	19 RBGU 134 CATE	H14028
41H051	GC	0	1	0	BE	0	0	0	----
41H052	GC	0	1	0	BE	0	0	0	----
41H053	GC	0	1	1 COTE	BE	0	0	0	----
41H054	GC	0	1	0	BE	0	0	0	----
41H055	GC	0	0	5 COTE	BE	0	0	0	----
41H056	BE	0	0	0	BE	0	1	1 COTE	H14010
41H057	BE	0	0	0	GE	0	2	1 COTE	H14009
41H058	BE	0	0	0	GE	0	1	0	H14008
41H059	GC	0	8	0	BE	0	0	0	----
41H060	BE	0	0	0	GE	0	1	0	H14007
41H061	GC	0	1	0	BE	0	0	0	----
41H062	GC	0	1	0	GE	0	2	0	H14006
41H063	GC	0	25	0	BE	0	0	0	----
41H064	GC	0	1	0	BE	0	0	0	----

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41H065	White Rk.	45°55'24"	81°04'36"
41H066	i. NE of White Rk.	45°55'24"	81°04'36"
41H067	i. N of White Rk.	45°55'30"	81°04'36"
41H068	i. W of White Rk.	45°55'24"	81°04'48"
41H069	i. NW of White Rk.	45°55'42"	81°04'54"
41H070	i. NW of Temple Rks.	45°55'06"	81°01'12"
41H071	i. N of Temple Rks.	45°55'00"	81°00'18"
41H072	NE rk. (largest) of the Temple Rks.	45°54'36"	81°00'24"
41H073	SW rk. (second largest) of the Temple Rks.	45°54'36"	81°00'24"
41H074	i. NE of Temple Rks.	45°54'54"	80°59'48"
41H075	i. W of Bad River Pt.	45°54'42"	80°59'30"
41H076	i. S of Bad River Pt.	45°54'42"	80°58'54"
41H077	Barclay Rk.	45°55'00"	80°56'18"
41H078	Southwest Rk.	45°53'06"	80°57'54"
41H079	centre i. of the Bustard Rks. (with 3 lighthouses)	45°53'24"	80°57'06"
41H080	i. SW off SW tip of 41H079	45°53'24"	80°57'06"
41H081	i. N of 41H079	45°53'24"	80°57'06"
41H082	i. 1 km NE of 41H079 (= Castle I.)	45°53'48"	80°56'24"
41H083	is. S of Gooseberry I.	45°52'54"	80°55'54"
41H084	is. N of Gooseberry I.	45°53'36"	80°56'12"
41H085	i. 0.5 km SE of mouth of Sand Bay (= Borron Rk.)	45°55'30"	80°54'42"
41H086	i. NE of 41H085 (= Macoun Rk.)	45°55'42"	80°54'12"
41H087	i. S of Graburn I.	45°55'06"	80°54'30"
41H088	i. W of Cantin Pt.	45°54'42"	80°54'24"
41H089	largest i. of the Gull Rks.	45°52'48"	80°51'48"
41H090	Southeast Rk.	45°52'30"	80°51'18"
41H091	i. NE of the Shirt Tails (= Turning Rk.)	45°59'00"	80°49'36"
41H092	rk. W of N tip of Dead I.	45°53'36"	80°48'24"
41H093	main i. of the N is. of the Murray Rks.	45°52'12"	80°48'00"
41H094	i. W of Cherry I.	45°51'54"	80°47'54"
41H095	Cherry I.	45°51'54"	80°47'42"
41H096	Elgin Rk.	45°51'48"	80°47'24"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41H065	GC	0	2	0	GC	0	14 T	8+ T RBGU 19 T COTE	H14003
41H066	GC	0	9	0	GC	0	----	----	H14003
41H067	GC	0	2	0	GC	0	----	----	H14003
41H068	GC	0	27	0	GC	0	21	0	H14004
41H069	BE	0	0	0	GC	0	22	0	H14005
41H070	GC	0	1	0	BE	0	0	0	----
41H071	GC	0	1	0	BE	0	4	1 COTE	H14002
41H072	GC	0	1	4 COTE	GC	0	1 T	41 T COTE	H14001
41H073	GC	0	1	0	GC	0	----	----	H14001
41H074	GC	0	1	0	BE	0	0	0	----
41H075	GC	0	1	0	BE	0	0	0	----
41H076	BE	0	0	0	GE	0	2	0	H15035
41H077	GC	0	20	0	GC	0	36	0	H15034
41H078	GC	159	22	0	GC	9	40	0	H15033
41H079	GC	0	14	0	GC	0	63 T	2T RBGU	H15032
41H080	GC	0	14	0	GC	0	----	----	H15032
41H081	GC	0	18	0	GC	0	----	----	H15032
41H082	GC	26	63	10 RBGU	GC	0	95	0	H15031
41H083	GC	0	22	0	GC	0	39	0	H15030
41H084	GC	0	1	3 COTE 9 RBGU	GC	0	7	20 COTE	H15029
41H085	GC	0	0	9 COTE	GC	0	0	22 COTE	H15027
41H086	BE	0	0	0	GE	0	1	0	H15028
41H087	BE	0	0	0	GC	0	2	12 COTE	H15026
41H088	GC	0	1	31 RBGU	BE	0	0	0	----
41H089	GC	8	43	1207 RBGU 47 CATE 40 COTE	GC	0	203	2043 RBGU	H15024
41H090	GC	241	60	16 RBGU	GC	55	104	0	H15025
41H091	GC	0	0	4 COTE	BE	0	0	0	----
41H092	GC	0	1	19 COTE	BE	0	0	0	----
41H093	GC	0	18	0	GC	0	33	0	H15021
41H094	GC	0	31	0	GC	0	27	0	H15020
41H095	GC	0	1	2132 RBGU	GC	0	8	2853 RBGU	H15019
41H096	GC	0	0	2666 RBGU	GC	0	2	2370 RBGU	H15017

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41H097	i. E of Elgin Rk.	45°51'48"	80°47'12"
41H098	Keefer Is.	45°52'36"	80°46'36"
41H099	is. S. of Keefer Is.	45°52'12"	80°46'42"
41H100	Solitary Rk.	45°50'54"	80°47'54"
41H101	i. N of One Tree I.	45°51'12"	80°47'06"
41H102	is. SW of One Tree I.	45°50'36"	80°47'24"
41H103	is. NW of Salisbury I.	45°50'06"	80°45'54"
41H104	Salisbury I.	45°49'30"	80°45'30"
41H105	is. W of Salisbury I.	45°49'42"	80°46'00"
41H106	is. between Salisbury I. and Champlain I.	45°49'18"	80°44'54"
41H107	Porcupine Is.	45°48'42"	80°44'48"
41H108	large i. between Bessener Rk.and Champlain I.	45°48'42"	80°43'36
41H109	Bessener Rk.	45°48'24"	80°43'12"
41H110	Flat Rk.	45°47'42"	80°43'42"
41H111	i. E of Flat Rk.	45°47'42"	80°43'36"
41H112	is. between Potvin Pt.and Bessener Rk.	45°47'42"	80°41'54"
41H113	islet SW of Silent I.	45°46'48"	80°41'18"
41H114	Silent I.	45°46'48"	80°41'18"
41H115	i. NE of Silent I.	45°47'06"	80°39'54"
41H116	i. E of Lombiere I.	45°46'48"	80°41'18"
41H117	McNab Rks.	45°45'36"	80°39'42"
41H118	Mayflower I.	45°32'12"	81°55'18"
41H119	i. E of Mayflower I.	45°32'12"	81°54'48"
41H120	Channel Rk.	45°30'06"	81°49'06"
41H121	i. NE of Owen I.	45°31'24"	81°48'54"
41H122	West Flat I.	45°33'36"	80°41'36"
41H123	S. tip of Wall I.	45°33'30"	81°41'12"
41H124	i. E of Wall I.	45°33'30"	81°41'30"
41H125	i. in mouth of Club Hrbr., Club I. (= North Rf.)	45°34'06"	81°35'30"
41H126	Erie Shingle	45°34'30"	81°37'30"
41H127	W. point of Rabbit I.	45°37'36"	81°39'18"
41H128	Old Tower Rks.	45°44'36"	80°40'06"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41H097	GC	0	1	0	GE	0	4	0	H15018
41H098	GC	0	85	0	GC	0	103	0	H15022
41H099	GC	0	3	0	GE	0	5	0	H15023
41H100	GC	0	18	0	GC	0	31	0	H15015
41H101	BE	0	0	0	GE	0	4	0	H15016
41H102	GC	0	70	39 RBGU	GC	0	113	2+ RBGU 89 COTE	H15014
41H103	GC	0	0	8 COTE	GC	0	4	29 COTE	H15012
41H103	GC	0	0	0	GC	0	4	0	H15011
41H105	GC	0	48	223 RBGU	GC	0	93	0	H15013
41H106	GC	0	0	15 COTE	GE	0	7	0	H15010
41H107	GC	0	3	739 RBGU	GC	0	36	6+ RBGU	H15009
41H108	BE	0	0	0	GC	0	27	0	H15008
41H109	GC	0	1	0	GC	0	3	3542 RBGU	H15006
41H110	GC	204	68	33 RBGU	GC	0	72 T	0	H15007
41H111	GC	14	10	0	GC	0	----	0	H15007
41H112	GC	0	32	0	GC	0	31	50 COTE	H15005
41H113	GC	0	0	25 COTE	BE	0	0	0	----
41H114	GC	0	8	126 RBGU 22 COTE	GC	0	8	41 RBGU 68 COTE	H15002
41H115	BE	0	0	0	GE	0	1	0	H15004
41H116	BE	0	0	0	GE	0	1	0	H15003
41H117	BE	0	0	0	GE	0	10	0	H15001
41H118	GC	168	42	2044 RBGU	GC	0	126	3864 RBGU	H12009
41H119	BE	0	1	0	GC	0	2	0	H12010
41H120	GC	0	3	0	GC	0	23	0	H12008
41H121	GC	0	0	156 COTE	GC	0	1	26 RBGU 199 COTE	H12007
41H122	GC	0	29	0	GC	0	39	0	H12006
41H123	GC	0	74	0	GC	0	220	1 RBGU	H12004
41H124	GC	0	3	0	GC	0	9	18 RBGU	H12005
41H125	NV[a]	--	--	--	GC	0	5	153 RBGU 33 COTE	H12001
41H126	GC	78	54	0	GC	0	171	5 RBGU	H12002
41H127	GC	0	69	179 RBGU	GC	0	125	0	H12003
41H128	GC	0	1	0	GC	0	2	0	H10007

a - NV = not visited

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41HI29	McHugh Rk.	45°42'48"	80°40'00"
41HI30	Red Rk.	45°42'30"	80°39'36"
41HI31	Norgate Rks.	45°42'18"	80°39'30"
41HI32	Black Rk.	45°38'48"	80°35'30"
41HI33	O'Brien Is.	45°32'24"	80°34'06"
41HI34	Doran Rk.	45°31'54"	80°31'42"
41HI35	Blackbill Is.	45°30'48"	80°32'06"
41HI36	Perseverance I.	45°28'00"	81°50'36"
41HI37	James I.	45°26'06"	81°44'24"
41HI38	Lucas I.	45°23'36"	81°45'48"
41HI39	White Shingle Is.	45°21'18"	81°39'48"
41HI40	Snake I. and NW shoal	45°20'18"	81°37'30"
41HI41	Middle I.	45°16'48"	81°38'42"
41HI42	i. 2 km NW off NW tip of Russel I. (= White Rk.)	45°16'30"	81°43'48"
41HI43	i. 0.7 km WSW of SW tip off Russel I. (= i. NE of Devil I.)	45°15'24"	81°42'54"
41HI44	i. 0.5 km SSW of SW tip of Russel I. (= i. E of Devil I.)	45°15'18"	81°42'30"
41HI45	Halfmoon I.	45°26'18"	81°28'06"
41HI46	large i. NE of Colin Rk. (= Colin Rk.)	45°28'06"	80°30'06"
41HI47	Colin Rk.	45°28'00"	80°30'18"
41HI48	is. NE of Southwest I.	45°27'30"	80°30'06"
41HI49	Southwest I.	45°27'12"	80°30'18"
41HI50	i. between Southwest I. and Chippewa I.	45°27'12"	80°29'18"
41HI51	i. N of Bassett Rk.	45°26'48"	80°29'30"
41HI52	is. between Champion I. and Big McCoy I.	45°26'42"	80°28'12"
41HI53	is. W of Lawson I.	45°27'30"	80°27'24"
41HI54	3 is. 1.1 km N of Garland I. (= is. SW Birnie I.)	45°26'00"	80°28'00"
41HI55	North Limestone I.	45°25'00"	80°32'18"
		45°23'30"	80°31'54
41HI56	N is. of South Limestone Is.	45°23'18"	80°31'48"
41HI57	S i. of South Limestone Is.		
41HI58	i. S of South Limestone I.	45°23'06"	80°31'48"
41HI59	Wallis Rks.	45°23'00"	80°31'00"
41HI60	large i. W of Garland I.	45°25'12"	80°28'18"

Colony site ident. #	1989 Results M	DCCO	HERG	OTHER	1980 Results M	DCCO	HERG	OTHER	Former # of colony site
41HI29	GC	0	18	0	GC	0	30	0	H10006
41HI30	GC	0	50	75 RBGU	GC	0	28	0	H10005
41HI31	GC	0	13	501 RBGU 174 COTE	GC	0	15	296+ RBGU	H10004
41HI32	GC	0	13	0	GC	0	18	0	H10003
41HI33	GC	0	65	0	GC	0	116	0	H10002
41HI34	GC	0	0	16 COTE	BE	0	0	0	----
41HI35	GC	115	28	245 COTE	GC	92	111	3 COTE	H10001
41HI36	GC	0	19	0	GC	0	86	0	H5009
41HI37	GC	47	68	471 RBGU	GC	0	413	0	H5008
41HI38	GC	0	18	0	GC	0	59	0	H5007
41HI39	NV[a]	--	--	--	GC	0	35	0	H5006
41HI40	NV	--	--	--	GC	0	633	2 RBGU	H5005
41HI41	NV	--	--	--	BE	0	3	0	H5004
41HI42	NV	--	--	--	GC	0	50	0	H5003
41HI43	NV	--	--	--	GC	0	1	119 RBGU	H5002
41HI44	NV	--	--	--	GC	0	1	0	H5001
41HI45	GC	109[b]	n[c]	207[b] CATE n[c] RBGU	GC	0	1242	3352 RBGU 259 CATE	H5010
41HI46	GC	52	16	0	GC	0	36	0	H8039
41HI47	GC	104	49	0	GC	0	79	0	H8038
41HI48	GC	0	9	38 RBGU	GC	0	4	1053 RBGU	H8036
41HI49	GC	25	20	1419 RBGU	GC	0	10	5+ RBGU	H8035
41HI50	BE	0	0	0	GE	0	3	0	H8037
41HI51	GC	0	40	0	GC	0	57	0	H8034
41HI52	GC	0	3	0	GE	0	7	0	H8032
41HI53	GC	0	1	0	GE	0	1	0	H8033
41HI54	GC	0	1	45 COTE	GE	0	2	0	H8031
41HI55	GC	0	112	861 COTE	GC	0	117	15+ RBGU 1082 COTE	H8044
41HI56	GC	33	55	11146 RBGU 433 CATE	GC	0	48	7606 RBGU 334 CATE	H8041
41HI57	GC	0	60	9157 RBGU	GC	0	22	5779 RBGU	H8042
41HI58	GC	0	60	0	GC	0	103	0	H8043
41HI59	GC	63	24	0	GC	0	40	0	H8040
41HI60	GC	0	9	83 RBGU	GC	0	2	15 RBGU 1 COTE	H8028

a - NV--not visited

b - Data for 1990 (Weseloh, pers. comm.)

c - n =nesting in 1990, but nests not counted (Weseloh, pers. comm.)

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41H161	Elmtree I and i. to S.	45°24'54"	80°28'00"
41H162	is. E of Garland I and Elmtree I.	45°25'12"	80°27'06"
41H163	Goodkey/Wallbank/Raper Is. Complex	45°24'18"	80°27'12"
41H164	Green I and is. to SW	45°23'36"	80°26'48"
41H165	is. between Stalker I and Boucher I.	45°22'48"	80°25'42"
41H166	i. N of Old Tower I. (= Heron I.)	45°22'12"	80°25'06"
41H167	3 is. 0.8 km NE of Old Tower I. (= is. SE of Searle I.)	45°22'18"	80°24'36"
41H168	Old Tower I.	45°22'00"	80°25'00"
41H169	Black Rk.	45°21'36"	80°20'12"
41H170	is. N and W of Snake I.	45°20'00"	80°21'00"
41H171	N end of Snake I.	45°20'00"	80°20'42"
41H172	is. SSE of Snake I.	45°19'30"	80°20'18"
41H173	Little Snake I.	45°19'48"	80°20'18"
41H174	is. E of Little Snake I.	45°20'00"	80°20'00"
41H175	is. S of Little Snake I.	45°19'42"	80°20'12"
41H176	S. i. of Twin Rk.	45°20'18"	80°18'54"
41H177	N i. of Twin Rk.	45°20'24"	80°18'54"
41H178	Gladman Rk.	45°20'48"	80°18'48"
41H179	i. NW of The Pancakes	45°20'24"	80°18'06"
41H180	Blizzard I.	45°19'06"	80°18'48"
41H181	is. E of Blizzard I.	45°19'06"	80°19'06"
41H182	Hooper I. and is. to SSE	45°19'18"	80°18'18"
41H183	McClelland Rk.	45°19'42"	80°15'42"
41H184	Spruce Island Shoal (= Rf. SSW of Spruce I.)	45°20'00"	80°15'24"
41H185	Nias Rks.	45°19'36"	80°14'48"
41H186	Carling Rk.	45°20'00"	80°14'18"
41H187	Lyon Rks.	45°19'48"	80°15'48"
41H188	i. S of Bateau I.	45°17'36"	80°17'42"
41H189	is. E of Cathcart I. and SSW of Bateau I.	45°17'12"	80°18'00"
41H190	Kingdon I.	45°17'06"	80°19'00"
41H191	2 is. SE of Kingdon I.	45°16'54"	80°18'54"
41H192	i. S of Partridge I.	45°22'42"	80°05'36"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41H161	BE	0	0	0	GC	0	2	0	H8027
41HI62	GC	205	47	0	GC	0	81	0	H8029
41HI63	GC	0	43	12 RBGU	GC	0	62	0	H8026
41HI64	GC	0	19	0	GC	0	15	0	H8025
41HI65	GC	0	12	0	GC	0	19	0	H8024
41HI66	BE	0	0	0	GC	0	1	0	H8022
41HI67	GC	0	25	0	GC	0	34	0	H8023
41HI68	GC	0	35	2 RBGU	GC	0	7	0	H8021
41HI69	GC	0	45	0	GC	0	60	0	H8020
41HI70	GC	0	226	10 RBGU	GC	0	227	0	H8019
41HI71	GC	0	1	0	BE	0	0	0	----
41HI72	BE	0	0	0	GC	0	37	0	H8018
41HI73	GC	0	4	0	GC	0	31	0	H8015
41HI74	GC	0	63	0	GC	0	137	2 RBGU	H8016
41HI75	GC	0	33	0	GC	0	86	0	H8017
41HI76	GC	0	23	0	GC	0	27	0	H8014
41HI77	GC	0	15	0	GC	0	32	0	H8013
41HI78	GC	0	0	0	GC	0	1	0	H8012
41HI79	GC	0	1	0	GC	0	1	22 COTE	H8011
41HI80	GC	0	0	0	GC	0	4	0	H8009
41HI81	GC	0	2	0	GC	0	26	4 RBGU 21 COTE	H8010
41HI82	GC	0	2	0	BE	0	0	0	----
41HI83	GC	0	9	0	BE	0	0	0	----
41HI84	GC	0	1	0	GE	0	1	0	H8005
41HI85	GC	0	13	0	GC	0	17	0	H8006
41HI86	GC	0	26	3 COTE	GC	0	16	1 RBGU 69 COTE	H8004
41HI87	GC	0	116	52 RBGU	GC	0	102	0	H8007
41HI88	GC	0	0	0	GC	0	4	0	H8008
41HI89	GC	0	2	0	BE	0	0	0	----
41HI90	GC	0	1	0	BE	0	0	0	----
41HI91	GC	0	2	0	BE	0	0	0	----
41HI92	BE	0	0	0	GE	0	1	0	H8002

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41H193	Gull I.	45°22'12"	80°05'36"
41H194	is. N of Robertson I.	45°22'36"	80°04'24"
41H195	Baptist I.	45°11'54"	81°42'30"
41H196	Youell I.	45°11'00"	81°39'12"
41H197	i. S of Warner Pt.	45°10'48"	81°38'12"
41H198	i. in Dorcas Bay	45°10'42"	81°35'06"
41H199	largest i. of Baker Group	45°14'18"	80°16'12"
41H200	S end of largest i. of Baker Group	45°14'18"	80°16'12"
41H201	i. E of largest i. of Baker Group	45°14'24"	80°16'00"
41H202	S. most i. of Baker Group	45°14'12"	80°16'12"
41H203	Sereres I.	45°14'18"	80°15'42"
41H204	Tribune Is.	45°13'48"	80°16'12"
41H205	i. ENE of Tribune Is.	45°13'54"	80°15'36"
41H206	Chancellor Is.	45°14'06"	80°14'30"
41H207	Boyd Group	45°14'00"	80°13'48"
41H208	i. between Tribune I and Umbrella Is.	45°13'12"	80°15'30"
41H209	i. SW of Loxton I. and W of Taylor I.	45°13'12"	80°14'00"
41H210	Loxton I.	45°13'24"	80°13'54"
41H211	is. N of Umbrella Is.	45°13'06"	80°14'36"
41H212	3 N-most is. of the Umbrella Is.	45°12'48"	80°14'54"
41H213	1st i. S of largest of Umbrella Is.	45°12'30"	80°15'18"
41H214	2nd i. S of largest of Umbrella Is.	45°12'06"	80°15'06"
41H215	Tree I.	45°12'30"	80°14'36"
41H216	i. W of Tree I.	45°12'18"	80°15'00"
41H217	is. S and SSE of Tree I.	45°12'12"	80°14'30"
41H218	large i. W of 4IH217	45°12'06"	80°14'54"
41H219	Southeast Rk.	45°12'12"	80°14'36"
41H220	i. WNW of Southest Rk.	45°12'06"	80°15'06"
41H221	i. W of Southeast Rk.	45°12'00"	80°15'00"
41H222	i. N of i. W of Southeast Rk.	45°12'12"	80°15'12"
41H223	Remainder of Umbrella Is.	45°12'36"	80°14'48"
41H224	i. ENE of Rigby I.	45°12'24"	80°12'06"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41H193	GC	0	118	0	GC	0	109	0	H8001
41H194	GC	0	1	0	GC	0	2	0	H8003
41H195	AE[a]	0	0	0	BE	0	3	0	H4004
41H196	AE	0	0	0	GC	0	0	1 COTE	H4003
41H197	AE	0	20	250 RBGU	GC	0	5	49 RBGU 15 COTE	H4002
41H198	AE	0	0	0	GC	0	1	12 COTE	H4001
41H199	GC	0	3	265 RBGU	BE	0	20 T	0	H1047
41H200	GC	0	15	0	BE	0	----	0	H1047
41H201	GC	0	13	0	BE	0	----	0	H1047
41H202	GC	0	10	0	BE	0	----	0	H1047
41H203	GC	0	1	0	BE	0	0	0	----
41H204	GC	95	65	0	BE	0	36	0	H1046
41H205	GC	0	24	0	BE	0	10	0	H1045
41H206	GC	0	31	1187 RBGU	BE	0	25	463 RBGU	H1044
41H207	GC	0	3	0	BE	0	0	0	----
41H208	GC	0	4	0	BE	0	0	0	----
41H209	GC	0	9	0	GC	0	18	0	H1043
41H210	GC	0	39	0	GC	0	40	0	H1042
41H211	GC	0	38	0	BE	0	35	0	H1041
41H212	BE	0	0	0	GC	0	28	0	H1036
41H213	GC	0	1	0	GE	0	2	0	H1035
41H214	GC	0	15	0	BE	0	0	0	----
41H215	GC	0	10	0	GC	0	13	0	H1037
41H216	BE	0	0	0	GC	0	42	0	H1039
41H217	GC	0	35	0	GC	0	55	0	H1038
41H218	GC	0	31	0	BE	0	0	0	----
41H219	GC	0	2	0	BE	0	10	0	H1031
41H220	BE	0	0	0	GC	0	20	0	H1033
41H221	BE	0	0	0	GC	0	12	0	H1032
41H222	BE	0	0	0	GC	0	29	0	H1034
41H223	GC	0	26	8 RBGU	BE	0	"few"	0	H1040
41H224	GC	0	7	0	BE	0	0	0	----

a AE-aerial estimate

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41H225	Rigby and islet to SE.	45°12'18"	80°12'18"
41H226	i. W of William I.	45°12'00"	80°11'42"
41H227	i. NE of Caleb I.	45°11'48"	80°11'48"
41H228	Caleb I. and islet to S	45°11'36"	80°11'48"
41H229	Pedro I.	45°11'48"	80°09'12"
41H230	largest of 2 is. W of Willis I.	45°10'42"	80°09'48"
41H231	Bull Rk.	45°10'42"	80°08'06"
41H232	largest i. of 2 is. NE of Appelbe Is.	45°10'12"	80°09'24"
41H233	largest i. of the Appelbe Is.	45°10'00"	80°09'18"
41H234	Matches I. and associated I.	45°08'42"	80°08'24"
41H235	i. SSE of Haystack Rk. and SW of Double I.	45°08'00"	80°08'30"
41H236	2nd i. SSW of Argyle I.	45°07'48"	80°06'24"
41H237	i. W of Smooth I.	45°07'24"	80°07'24"
41H238	i. SW of Smooth I.	45°07'12"	80°07'12"
41H239	Channel Rk.	45°07'00"	80°08'30"
41H240	Passage I.	45°05'48"	80°07'12"
41H241	Clarke Rk.	45°03'36"	80°04'48"
41H242	i. E of Clarke Rk.	45°03'36"	80°04'30"
41H243	i. W of Fairlie I.	45°03'24"	80°02'48"
41H244	i. W of Northwest Pine I.	45°00'54"	80°03'36"
41H245	Northwest Pine I.	45°00'54"	80°03'30"
41H246	North Wooded Pine I.	45°00'30"	80°02'48"
41H247	Gilead Rk.	45°00'24"	80°02'30"
41H248	Allen Rks.	45°00'54"	80°01'00"
41H249	The Triplets	45°00'42"	80°00'54"
41H250	Gibson Rf.	45°00'36"	80°00'42"
41H251	largest rk. of West Rk.	45°02'24"	80°21'42"
41H252	Double Top I.	45°02'06"	80°21'30"
41H253	largest rk. of Pool Rks.	45°02'54"	80°21'30"
41H254	SE rk. of Pool Rks.	45°02'54"	80°21'30"
41H255	i. SE of Pool Rks.	45°02'36"	80°21'00"
41H256	Thumb Rk.	45°02'06"	80°20'18"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41H225	GC	0	41	0	GC	0	28	0	H1030
41H226	GC	0	1	0	BE	0	0	0	----
41H227	GC	0	1	0	BE	0	0	0	----
41H228	GC	0	57	1 COTE 398 RBGU	GC	0	33	6 RBGU 161 COTE	H1029
41H229	GC	0	1	0	BE	0	0	0	----
41H230	GC	0	1	0	BE	0	0	0	----
41H231	GC	0	1	0	BE	0	0	0	----
41H232	GC	0	19	0	BE	0	0	0	----
41H233	GC	0	1	0	BE	0	0	0	----
41H234	GC	0	29	2 RBGU	GC	0	57	0	H1028
41H235	GC	0	21	0	GC	0	26	0	H1027
41H236	GC	0	1	0	BE	0	0	0	----
41H237	GC	0	12	0	BE	0	0	0	----
41H238	BE	0	0	0	GC	0	1	23 COTE	H1026
41H239	GC	0	18	0	GC	0	26	0	H1025
41H240	GC	0	2	15 COTE	GC	0	1	0	H1024
41H241	GC	0	8	0	GC	0	12	0	H1023
41H242	GC	0	1	0	BE	0	0	0	----
41H243	GC	0	3	0	BE	0	0	0	----
41H244	GC	0	137	111 RBGU	GC	0	323 T	0	H1020
41H245	GC	0	89	0	GC	0	----	0	H1020
41H246	GC	0	2	0	GC	0	65	0	H1019
41H247	GC	0	89	0	GC	0	83	0	H1018
41H248	GC	0	25	0	GC	0	41	1 COTE	H1022
41H249	GC	0	1	0	BE	0	0	0	----
41H250	GC	0	9	0	GC	0	10	0	H1021
41H251	GC	0	37	0	BE	0	14 T	0	H1002
41H252	GC	0	17	0	BE	0	----	0	H1002
41H253	GC	0	26	0	BE	0	8 T	0	H1004
41H254	GC	0	1	0	BE	0	----	0	H1004
41H255	GC	0	91	0	BE	0	21	0	H1003
41H256	GC	0	42	0	BE	0	15 T	0	H1001

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41H257	Shoal SW of Thumb Rk.	45°02'06"	80°20'24"
41H258	Block I.	45°02'42"	80°19'54"
41H259	Gull I.	45°02'48"	80°19'30"
41H260	Jagged I.	45°03'06"	80°19'48"
41H261	rk. NE of Jagged I.	45°03'06"	80°19'48"
41H262	i. W of Long I.	45°05'06"	80°18'48"
41H263	Long I.	45°05'06"	80°18'30"
41H264	i. W of Harbour I.	45°04'54"	80°18'12"
41H265	i. WSW of Harbour I.	45°04'54"	80°18'12"
41H266	i. SW of Harbour I.	45°04'54"	80°18'12"
41H267	Harbour I.[a]	45°04'54"	80°18'00"
41H268	i. E of Harbour I.	45°04'48"	80°18'18"
41H269	i. NE of Harbour I.	45°05'00"	80°17'54"
41H270	Crescent I.	45°04'36"	80°18'30"
41H271	i. NW of Crescent I.	45°04'42"	80°18'36"
41H272	small i. N of Crescent I.	45°04'42"	80°18'30"
41H273	i. NE of Crescent I.	45°04'48"	80°18'06"
41H274	i. W of One Tree I.	45°05'18"	80°18'12"
41H275	One Tree I.	45°05'18"	80°18'06"
41H276	North I.	45°05'54"	80°18'18"
41H277	i. NW of North I.	45°05'54"	80°18'18"
41H278	i. NE of North I.	45°05'54"	80°18'18"
41H279	i. S of North I.	45°05'54"	80°18'18"

[a]- Referred to as " I. W of Harbour I." in 1980 (Weseloh *et al.* 1986).

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41H257	GC	0	3	0	BE	0	----	0	H1001
41H258	GC	0	139	0	BE	0	44	0	H1005
41H259	GC	0	245	29 RBGU	BE	0	50	0	H1006
41H260	GC	0	357	0	BE	0	88 T	0	H1007
41H261	GC	0	1	0	BE	0	----	0	H1007
41H262	GC	0	13	0	BE	0	10	0	H1014
41H263	GC	0	473	0	BE	0	258	0	H1013
41H264	GC	0	22	0	BE	0	57 T	0	H1012
41H265	GC	0	12	0	BE	0	----	0	H1012
41H266	GC	0	14	0	BE	0	----	0	H1012
41H267	GC	0	161	0	BE	0	----	0	H1012
41H268	GC	0	95	0	BE	0	38	0	H1011
41H269	GC	0	70	0	BE	0	0	0	----
41H270	GC	0	151	0	GC	0	296	0	H1008
41H271	GC	0	46	0	GC	0	56	2 RBGU	H1009
41H272	GC	0	7	0	BE	0	0	0	----
41H273	GC	0	147	0	BE	0	81	0	H1010
41H274	GC	0	108	0	GC	0	195	0	H1015
41H275	GC	0	110	0	GC	0	224	0	H1016
41H276	GC	0	527	0	BE	0	238 T	0	H1017
41H277	GC	0	8	0	BE	0	----	0	H1017
41H278	GC	0	11	0	BE	0	----	0	H1017
41H279	GC	0	64	0	BE	0	----	0	H1017

Appendix 9. Waterbird colonies present on Canadian Lake Huron in 1989 and 1980 in the area covered by 1:250,000 Map 41A. See Appendix 3 for explanation of Appendices 4-10.

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41A001	Mad Rf.	44°57'48"	81°25'30"
41A002	SE-most i. of the Knife Is.	44°57'54"	81°23'06"
41A003	Rf. S of North Star I.	44°57' 12"	81°22'06"
41A004	Dane I.	44°57'00"	81°23' 12"
41A005	Kolfage I.	44°5 1' 12"	81°20'54"
41A006	NW i. of the Chimney Rfs.	44°50'42"	81°2 1'30"
41A007	NE i. of the Chimney Rfs.	44°50'42"	81°2 1'06"
41A008	E-central i. of the Chimney Rfs.	44°50'30"	81°2 1' 12"
41A009	Shoal off S tip of 41A008	44°50'24"	81°21'24"
41A010	W-central i. of the Chimney Rfs.	44°50'30"	81°24'30"
41A011	SW i. of the Chimney Rfs.	44°50' 18"	81°24'30"
41A012	Rf. NE of Ghegheto I.	44°49' 12"	81°20'42"
41A013	Ghegheto I.	44°49'06"	81°20'42"
41A014	Cavalier I.	44°48'30"	81°2 1'06"
41A015	i. E of Cavalier I.	44°48'30"	81°20'36"
41A016	Rf. NW of Beament I.	44°47'54"	81°20'42"
41A017	Beament I.	44°47'42"	81°20'30"
41A018	i. S of Beament I.	44°47'36"	81°20'30"
41A019	i. 0.5 km SE of Beament I.	44°47'24"	81°20' 12"
41A020	is. NW of McCallum I.	44°47'42"	81° 19'42"
41A021	McCallum I.	44°47'36"	81°19'30"
41A022	Warren I.	44°47' 12"	81°20' 12"
41A023	i. 0.4 km SE of Evelyn I.	44°47'06"	81° 19'36"
41A024	i. N of the Argyle Is.	44°46'54"	81° 19'30"
41A025	W i. of the Argyle Is.	44°46'36"	81° 19'42"
41A026	E i. of the Argyle Is.	44°46'36"	81° 19'24"
41A027	i. S of W i. of the Argyle Is.	44°46'30"	81° 19'42"
41A028	i 0.6 km SSW of W i. of the Argyle Is.	44°46' 18"	81° 19'48"
41A029	Corsair Rf.	44°46'48"	81° 18'36"
41A030	i. NW of Burke I. (=Little Haystack I.)	44°46' 18"	81° 18'48"
41A031	Burke I.	44°46'00"	81° 18'30"
41A032	Basswood I. (= Deadman's I.)	44°45'42"	81°19' 12"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41A001	AE	0	250	2500 RBGU	GC	0	247	2473 RBGU	A14005
41A002	AE	0	0	0	BE	0	1	0	A14001
41A003	AE	0	0	0	GC	0	0	14 COTE	A14002
41A004	AE	0	350	0	GC	0	396	0	A14003
41A005	BE	0	12	0	GC	0	57	0	A14006
41A006	GC	0	0	165 COTE 5 RBGU	GC	0	3	0	A14007
41A007	GC	0	256	0	GC	0	508	0	A14007
41A008	GC	0	170	0	GC	0	383	398 RBGU	A14007
41A009	BE	0	0	0	GC	0	1	0	A14007
41A010	GC	0	4	75 COTE	GC	0	20	0	A14007
41A011	GC	0	29	0	GC	0	43	0	A14007
41A012	NR[a]	--	--	--	GC	0	80	0	A14009
41A013	NR	--	--	--	GC	0	39	0	A14008
41A014	GC	34	308	1 GBBG	GC	0	460	0	A14010
41A015	GC	0	95	0	GC	0	173	0	A14011
41A016	NR	--	--	--	GC	0	172	0	A14012
41A017	NR	--	--	--	GC	0	12	0	A14012
41A018	GC	0	35	0	GC	0	108	0	A14013
41A019	GC	0	160	33 RBGU	GC	0	195	0	A14014
41A020	NR	--	--	--	GC	0	65	0	A14016
41A021	GC	0	293	7060 RBGU	GC	0	512	7049 RBGU	A14015
41A022	GC	0	111	0	GC	0	90	0	A14017
41A023	GC	0	4	1598 RBGU	GC	0	15	1909 RBGU	A14018
41A024	GC	0	59	0	GC	0	51	1 COTE	A14020
41A025	GC	0	271	0	GC	0	369	1623 RBGU	A14021
41A026	GC	0	64	1542 RBGU	GC	0	0	1946 RBGU	A14019
41A027	GC	0	11	0	GC	0	7	0	A14022
41A028	GC	92	217	1 RBGU	GC	0	244	0	A14022
41A029	GC	0	9	4 RBGU	GC	0	20	0	A14023
41A030	GC	0	564	1 GBBG	GC	0	489	0	A14024
41A031	GC	0	39	11820 RBGU	GC	0	19	8305 RBGU	A14025
41A032	GC	0	302	0	GC	0	288	0	A14026

a - NR = no records

Colony site ident. #	Name or description of colony site	Latitude	Longitude
41A033	Scout Rf.	44°45' 18"	81°20 '12"
41A034	Barrier I.	44°58'36"	81°04'42"
41A035	i. W of the Table Rks.	45°00'00"	80°0 1'48"
41A036	SE i. of the Table Rks.	44°59'48"	80°0 1'48"
41A037	i. NW of Southeast Wooded Pine I..	44°59'30"	80°00'54"
41A038	Southeast Wooded Pine I.	44°59' 18"	80°00'48"
41A039	1st i. SE of Southeast Wooded Pine I.	44°59' 12"	80°00'36"
41A040	2nd i. SE of Southeast Wooded Pine I.	44°58'54"	80°00'24"
41A041	I. NW of Gray I.	44°59'06"	80°0 1'24"
41A042	Gray I.	44°58'54"	80°0 1' 12"
41A043	1st i. SE of Gray I.	44°58'42"	80°0 1'06"
41A044	2nd i. SE of Gray I.	44°58'42"	80°0 1'00"
41A045	3rd i. SE of Gray I.	44°58'36"	80°00'54"
41A046	North Watcher I.	44°57'54"	80°03'48"
41A047	South Watcher I.	44°57'06"	80°04'06"
41A048	W most i. of is. SW of Jack I.	44°44' 18"	81° 19'30"
41A049	i. SE of 41A048	44°44' 18"	8 1° 19'30"
41A050	1st i. E of Maurice Pt. (= Tiny I.)	44°43'30"	80°03'06"
41A051	i. on W side of Collingwood Hrbr. (= Hen and Chicken I.)	44°3 1'00"	80° 14'06"
41A052	Rk. off NW tip of 41A051	44°3 1'06"	80° 14' 12"
41A053	Nottawasaga I.	44°32' 12"	80° 15'36"
41A054	I. SW of Nottawasaga I.	44°31'48"	80°15'42"
41A055	Douglas Pt.	44°19'06"	81°36'24"
41A056	Chantry I.	44°29'36"	81°24'12"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
41A033	NR[a]	--	--	--	BE	0	3	0	A14027
41A034	AE	0	1000	2000 RBGU	GC	0	2416	995 RBGU	A14028
41A035	GC	0	53	0	GC	0	99	0	A16001
41A036	GC	0	9	0	BE	0	0	0	----
41A037	GC	0	18	0	GC	0	29	0	A16010
41A038	GC	0	54	223 COTE	GC	0	53	48 COTE	A16009
41A039	GC	0	45	0	BE	0	0	0	----
41A040	GC	0	43	0	BE	0	0	0	----
41A041	GC	0	49	0	GC	0	73	0	A16008
41A042	GC	0	241	0	GC	0	150	0	A16007
41A043	GC	0	151	103 RBGU	GC	0	98	0	A16006
41A044	GC	0	2	0	GC	0	93	0	A16005
41A045	GC	0	116	0	GC	0	100	0	A16004
41A046	GC	47	6	4378 RBGU 38 CATE	GC	0	5	2447 RBGU 139 CATE	A16002
41A047	GC	536	0	3582 RBGU 747 CATE	GC	20	13	3435 RBGU 523 CATE	A16003
41A048	NR	--	--	--	GC	0	32	0	A11001
41A049	NR	--	--	--	GC	0	66	0	A11001
41A050	GC	0	0	563 RBGU	BE	0	0	0	----
41A051	GC	0	1	0	GC	0	0	8 COTE	A9003
41A052	GC	0	1	0	BE	0	0	0	----
41A053	GC	0	2838	0	GC	0	616	30 RBGU	A9001
41A054	GC	0	89	1469 RBGU	GC	0	80	1 RBGU	A9002
41A055	GC	0	152	6553 RBGU	GC	0	285	5811 RBGU	A5001
41A056	GC	130	2543	2971 RBGU	GC	0	3714	2748 RBGU	A6001

a - NR = no records

Appendix 10. Waterbird colonies present on Canadian Lake Huron in 1989 and 1980 in the area covered by 1:250,000 Map 31D. See Appendix 3 for explanation of Appendices 4-10.

Colony site ident. #	Name or description of colony site	Latitude	Longitude
31D001	i. SE of Delf I.	44°59'30"	79°59' 12"
31D002	i. 0.7 km NNW of Cecil I.	44°59'24"	79°58'00"
31D003	Largest rk. of the Valentine Rks.	44°58'42"	79°58'30"
31D004	Felix Rk.	44°58'30"	79°57'54"
31D005	W. i. of the Foreman Is.	44°58'30"	79°43'24"
31D006	Largest i. of the Woore Rks.	44°58'30"	79°57' 12"
31D007	i. S of the Woore Rks.	44°58' 18"	79°59'18"
31D008	rk. NNE of Red Rk.	44°58' 18"	79°57'42"
31D009	Red Rk.	44°58' 18"	79°57'42"
31D010	Main rk. of the Donald Rks.	44°57'54"	79°57'48"
31D011	Largest rk. of the Rickford Rks.	44°58'00"	79°57' 12"
31D012	SW rk. of the Rickford Rks.	44°58'00"	79°57' 12"
31D013	Largest i. of the Warwick Rks.	44°57'54"	79°56'54"
31D014	SE i. of the Warwick Rks.	44°57'54"	79°56'48"
31D015	i. E off Mather Rk.	44°57'36"	79°57'42"
31D016	Mather Rk.	44°57'36"	79°57'42"
31D017	i. SW of Mather Rk.	44°57'36"	79°57'42"
31D018	Turtle Rk.	44°55'42"	79°58'24"
31D019	Eshpabekong I.	44°56'00"	79°57'42"
31D020	i. 0.1 km SE of Eshpabekong I.	44°55'54"	79°57'24"
31D021	i. 0.5 km SE of Eshpabekong I.	44°55'36"	79°57'00"
31D022	i. E of 31D021	44°55'36"	79°57'00"
31D023	i. SE of 31D021	44°55'36"	79°57'00"
31D024	Penetang Rk.	44°54'48"	79°53' 12"
31D025	Hotchkiss Rk.	44°54'30"	79°53'30"
31D026	i. 0.3 km S of Minnicognashene I. (= Alice Rk.)	44°53'42"	79°53'42"
31D027	i. NE of Brébeuf I.	44°52'54"	79°52'42"
31D028	3rd rk. W of Quarry I.	44°49'42"	79°50'06"
31D029	2nd rk. W of Quarry I.	44°49'54"	79°50'00"
31D030	1st rk. W of Quarry I.	44°49'48"	79°49'42"
31D031	rk. 0.8 km E of Quarry I.	44°50'00"	79°47'48"
31D032	rk. WNW of Bass Bay	44°49'36"	79°47'18"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
3ID001	GC	0	1	0	BE	0	0	0	----
3ID002	GC	0	1	0	BE	0	0	0	----
3ID003	GC	0	2	0	BE	0	0	0	----
3ID004	BE	0	0	0	GC	0	1	0	D13014
3ID005	GC	0	1	0	BE	0	0	0	----
3ID006	BE	0	0	0	GC	0	2	0	D13013
3ID007	GC	0	1	0	GC	0	2	0	D13012
3ID008	GC	0	1	0	BE	0	0	0	----
3ID009	GC	0	4	0	BE	0	0	0	----
3ID010	GC	0	1	0	BE	0	0	0	----
3ID011	GC	0	4	0	GC	0	10 T	5T COTE	D13011
3ID012	GC	0	5	0	GC	0	----	----	D13011
3ID013	GC	0	43	0	GC	0	42	0	D13010
3ID014	GC	0	1	51 COTE	GC	0	0	26 COTE	D13009
3ID015	GC	0	2	0	GC	0	3	0	D13008
3ID016	GC	0	47	0	GC	0	90	0	D13008
3ID017	GC	0	1	0	BE	0	0	0	D13008
3ID018	GC	0	63	0	GC	0	98	0	D13007
3ID019	GC	0	22	3201 RBGU	GC	0	56	2403 RBGU	D13004
3ID020	GC	0	103	0	GC	0	150	0	D13005
3ID021	GC	0	29	12100 RBGU	GC	0	18	5550 RBGU	D13006
3ID022	GC	0	21	0	GC	0	13	2 RBGU	D13006
3ID023	GC	0	71	0	GC	0	102	0	D13006
3ID024	GC	0	1	0	BE	0	0	0	----
3ID025	GC	0	21	0	GC	0	26	0	D13003
3ID026	GC	0	0	27 COTE	GC	0	1	26 COTE	D13002
3ID027	BE	0	0	0	GC	0	0	26 COTE	D13001
3ID028	GC	0	0	48 COTE	BE	0	0	0	----
3ID029	GC	0	0	7 COTE	BE	0	0	0	----
3ID030	GC	0	1	16 COTE	BE	0	0	0	----
3ID031	GC	0	0	2 COTE	NV[a]	--	--	--	----
3ID032	GC	0	1	7 COTE	NV	--	--	--	----

a - NV = not visited

Colony site ident. #	Name or description of colony site	Latitude	Longitude
3lD033	rk. NW of Flat Rk.	44°49'30"	79°48'00"
3lD034	Flat Rk.	44°49'24"	79°47'54"
3lD035	rk. 0.7 km NE of Chapelle Rk.	44°47'54"	79°47'00"
3lD036	Chapelle Rk.	44°47'42"	79°47'06"
3lD037	rk. 0.9 km ESE of Chapelle Rk.	44°47'36"	79°46'54"
3lD038	i. 0.1 km W of SW tip of Canary I.	44°46' 18"	79°44'42"
3lD039	i 0.2 km SSW of SW tip of Canary I.	44°46' 18"	79°44'42"
3lD040	i. 0.7 km SE of Murray I.	44°47' 12"	79°43'24"
3lD041	i. 1.1 km SE of Murray I.	44°47'06"	79°43'00"
3lD042	i. 1.3 km SSE of Murray I.	44°46'54"	79°43' 18"
3lD043	rk. 0.4 km W of W side of 3lD044	44°45'42"	79°42'48"
3lD044	main i. in Matchedash Bay N of Waubaushene	44°45'42"	79°42'24"

Colony site ident. #	1989 Results				1980 Results				Former # of colony site
	M	DCCO	HERG	OTHER	M	DCCO	HERG	OTHER	
31D033	GC	0	1	0	NV[a]	--	--	--	----
31D034	GC	0	0	11 COTE	NV	--	--	--	----
31D035	GC	0	1	0	NV	--	--	--	----
31D036	GC	0	1	0	NV	--	--	--	----
31D037	GC	0	1	0	NV	--	--	--	----
31D038	GC	0	1	0	NV	--	--	--	----
31D039	GC	0	1	0	NV	--	--	--	----
31D040	GC	0	1	0	NV	--	--	--	----
31D041	GC	0	0	23 COTE	NV	--	--	--	----
31D042	GC	0	1	0	NV	--	--	--	----
31D043	GC	0	1	0	NV	--	--	--	----
31D044	GC	0	1	0	NV	--	--	--	----

a - NV = not visited

Appendix 11. Explanation of mapping of colony sites in Appendices 12-18

All colony sites active in 1989 and/or 1980 are plotted by 1:250,000 maps as follows:

Appendix	Colony sites covered by Topographic Map	Colony sites listed in Appendix
Appendix 12	41K	App. 4
Appendix 13	41J	App. 5
Appendix 14	41I	App. 6
Appendix 15	41G	App. 7
Appendix 16	41H	App. 8
Appendix 17	41A	App. 9
Appendix 18	31D	App.10

All colony sites are plotted both on 1:250,000 maps and 1:50,000 maps. For example, App. 13 first shows an overview of the locations of all colony sites in the area covered by Map 41J on 1:250,000 maps and then continues by showing their detailed locations on 1:50,000 maps (e.g. 41J/5).

To find the colony site identification number of a certain plotted colony, combine the map number (given at the top of the page in the case of 1:250,000 maps and in the boxes for the 1:50,000 maps) **and** the number in the circle associated with that colony. For example, the colony site identification number of the island marked "22" on the map on the first page of App. 12 is 41K022, and App. 4 will then tell you the name or description of the colony site ("1st i. S of Pumpkin Pt.").

When plotting the colony sites we used five different symbol sizes to indicate five size classes of the waterbird colonies. These symbols are based on the total of nests of all cormorants, gulls and terns nesting at a colony site. In cases where only totals of nest counts for two or more colony sites were reported (marked by a T and a bracket in App. 4-10), we arbitrarily divided the total number of nests by the number of colony sites to arrive at a colony size (and thus a size symbol) for each colony site (e.g. 41J073 and 41J074, App. 5).

Although we present the data as much as possible for the smallest geographical unit (i.e. individual islands, islets or shoals), there were several cases in 1989 where the data were given as the total for a group or cluster of islands. In those cases we use the plural (Is. = islands) in the description column of App.4-10 and on the 1:50,000 maps of App. 12-18 the islands involved are bracketed (e.g. 41J027).

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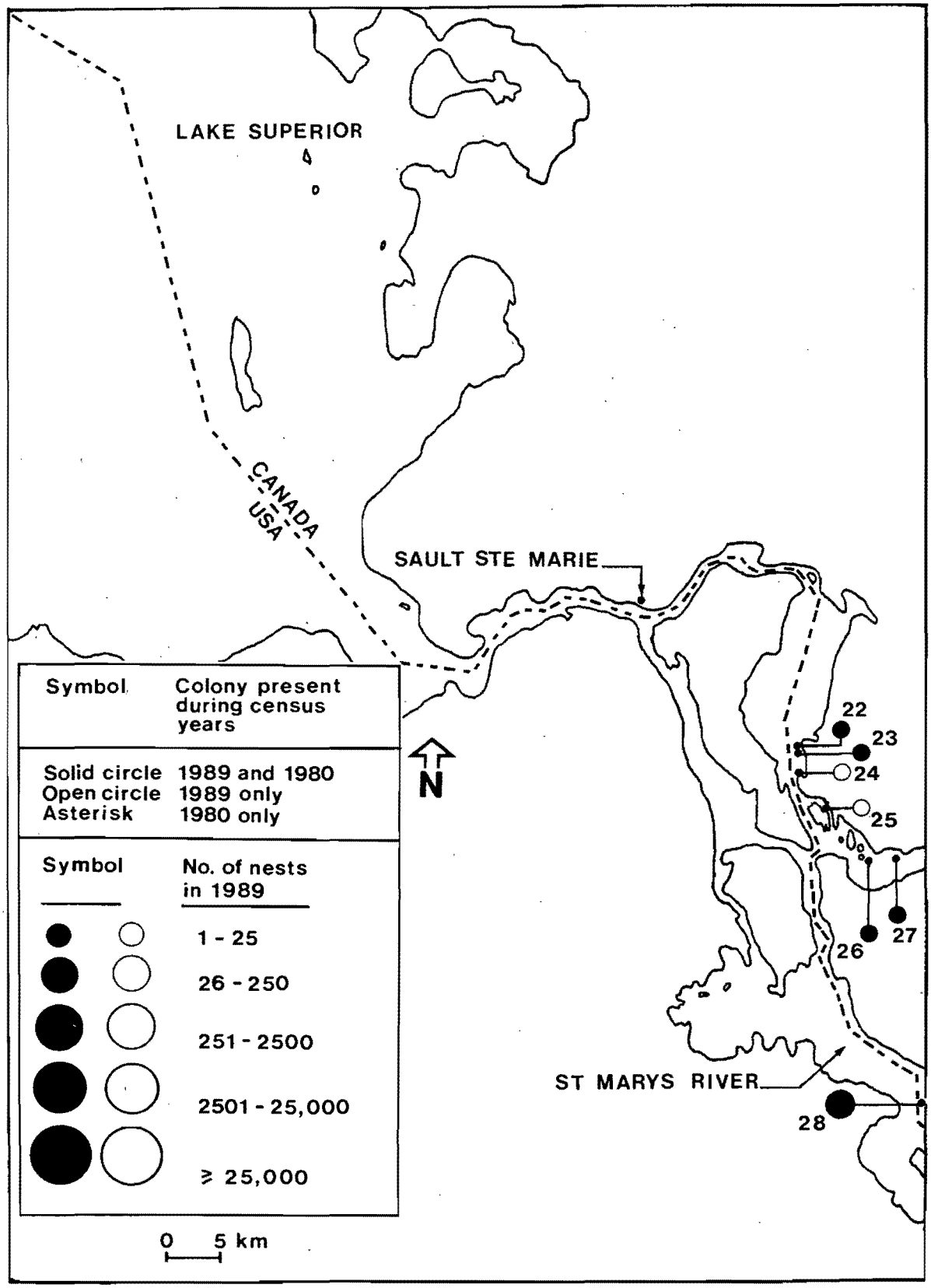
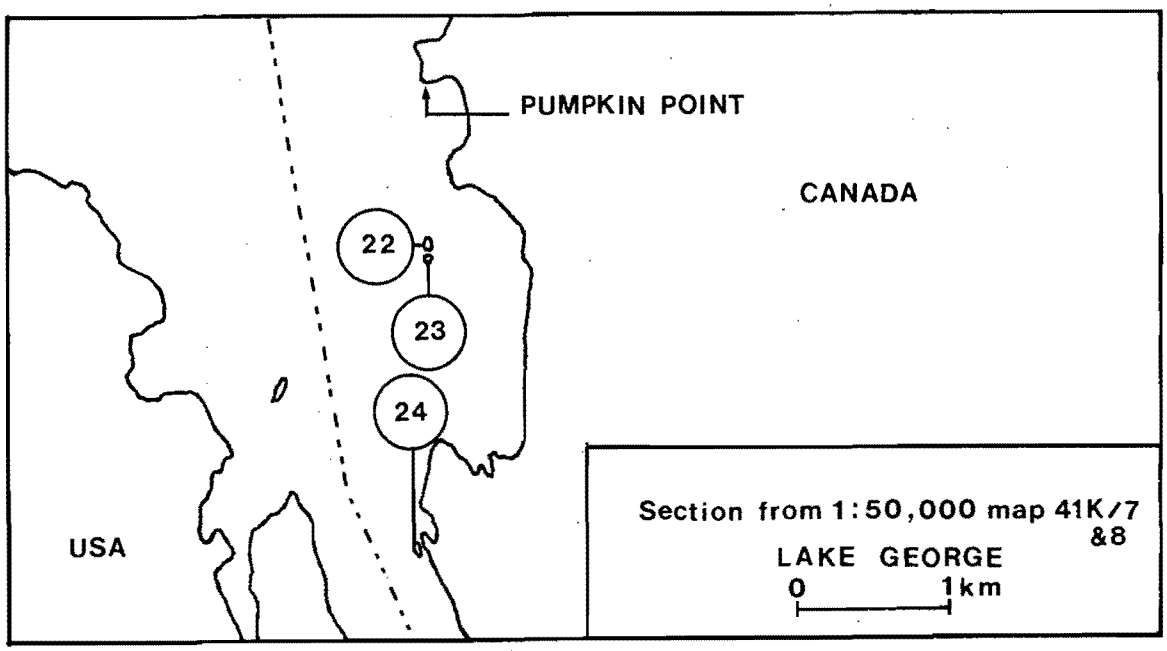
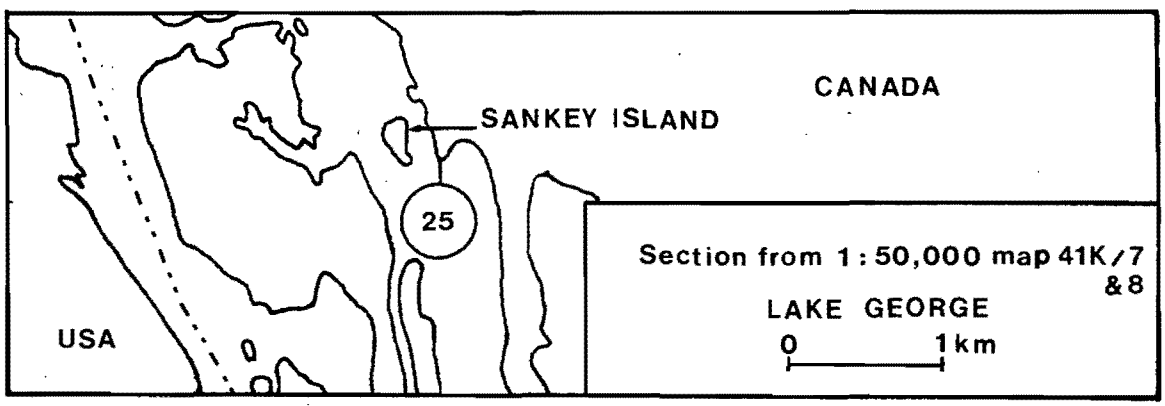
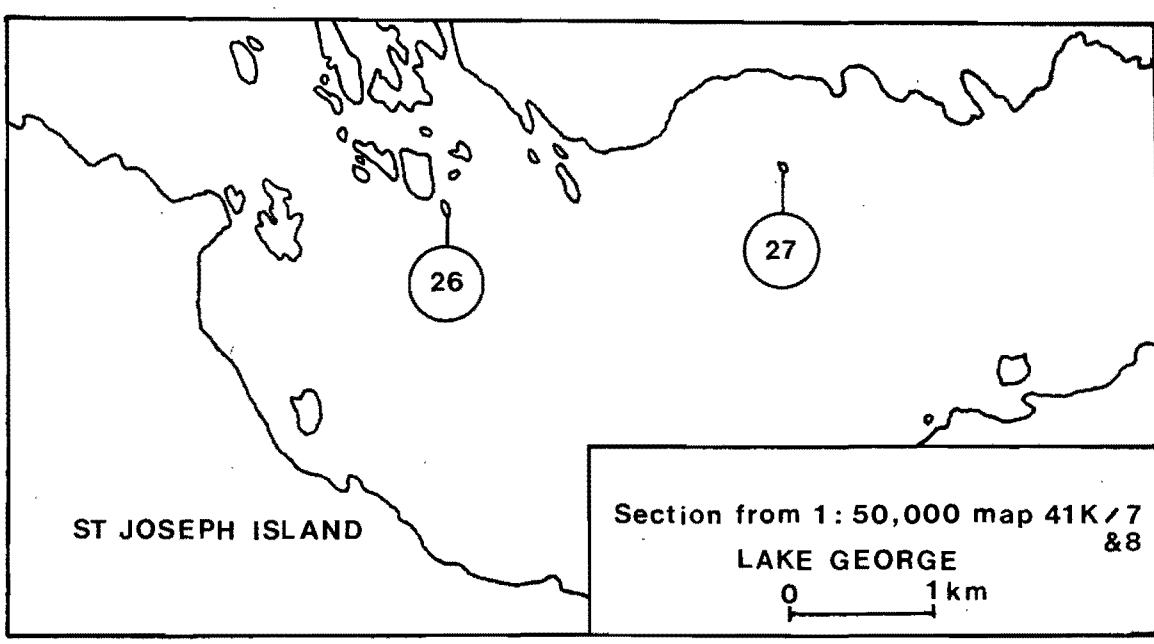
Appendix 12. Colony sites covered by 1:250,000 Topographic Map 41K (East).



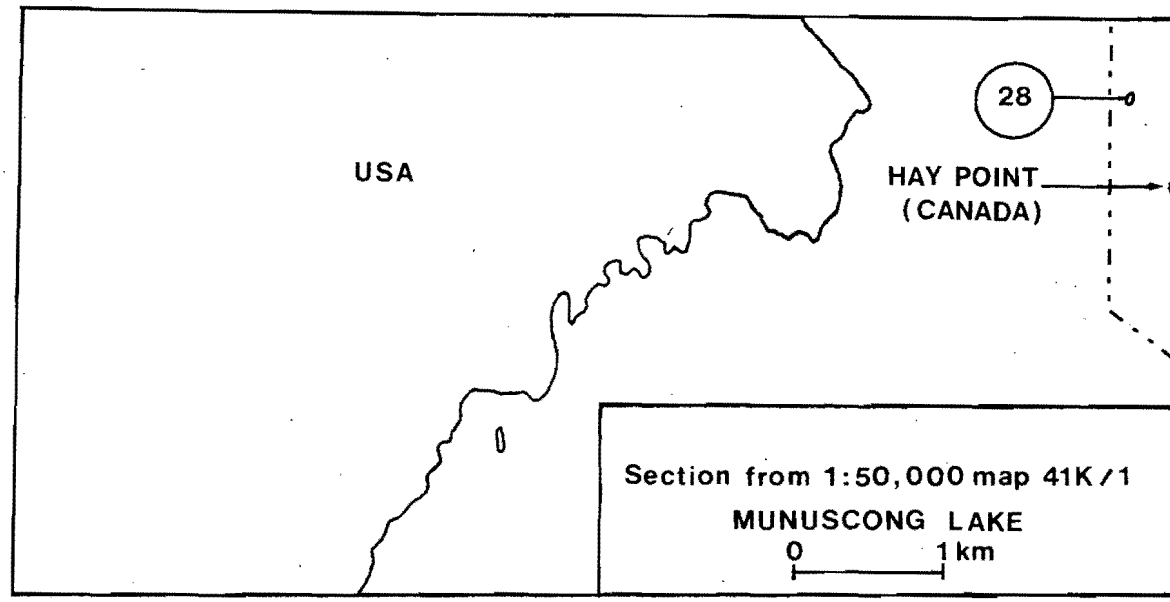
App. 12 (cont'd).


PUMPKIN POINT
CANADA
22
23
24
USA
Section from 1:50,000 map 41K/7 &8
LAKE GEORGE
0 1km


CANADA
SANKEY ISLAND
25
USA
Section from 1:50,000 map 41K/7 &8
LAKE GEORGE
0 1km


26
27
ST JOSEPH ISLAND
Section from 1:50,000 map 41K/7 &8
LAKE GEORGE
0 1km

App. 12 (cont'd).


28
USA
HAY POINT
(CANADA)
Section from 1:50,000 map 41K/1
MUNUSCONG LAKE
0
1 km

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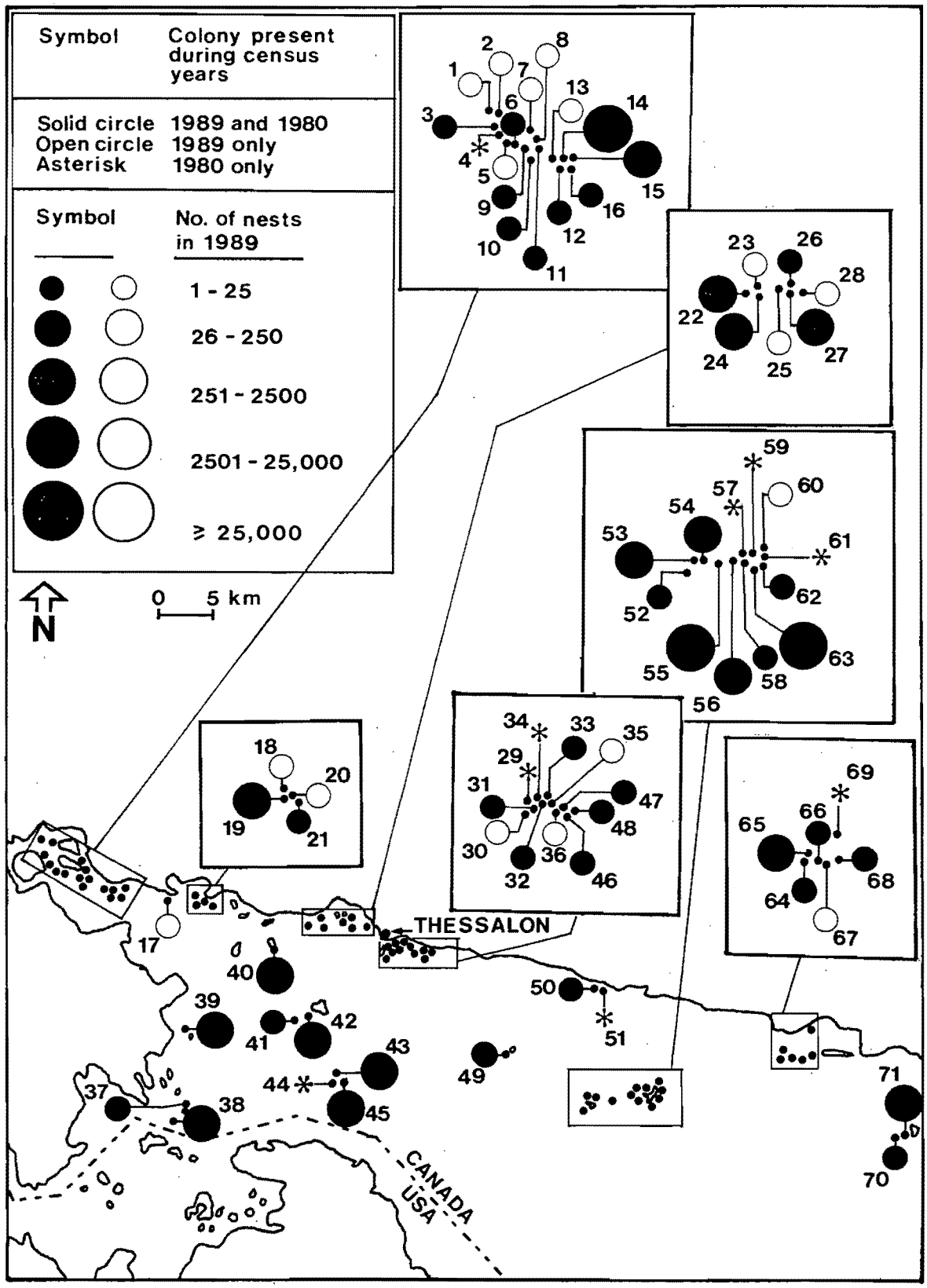
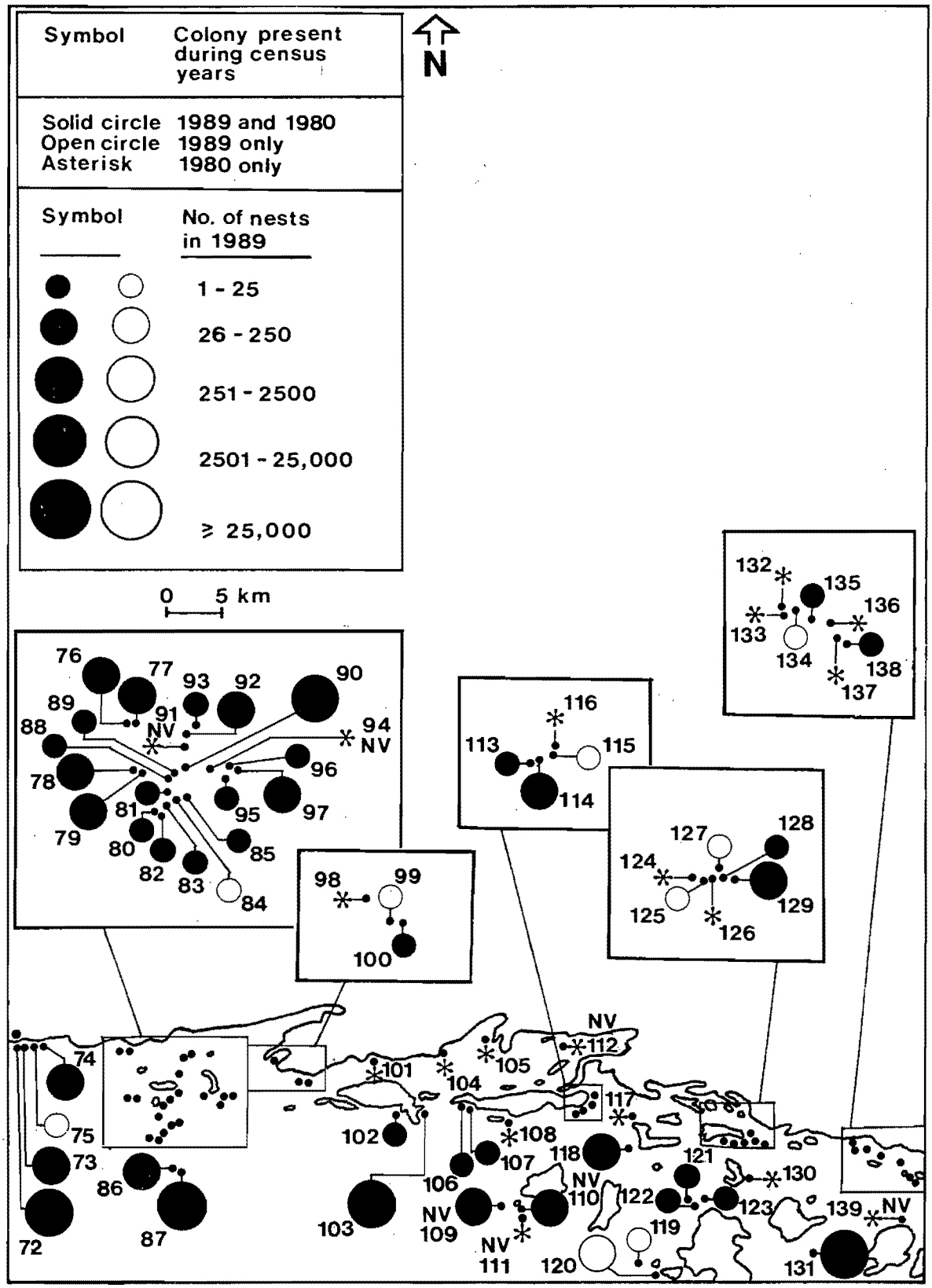
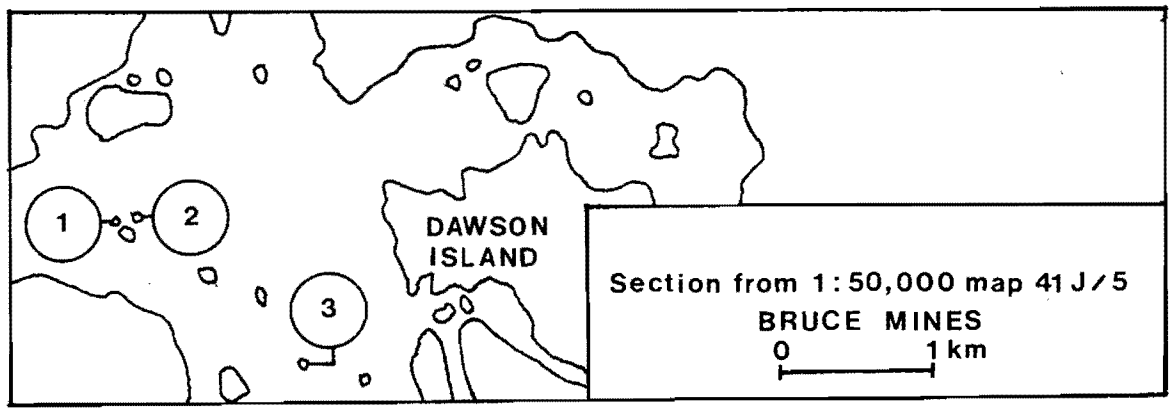
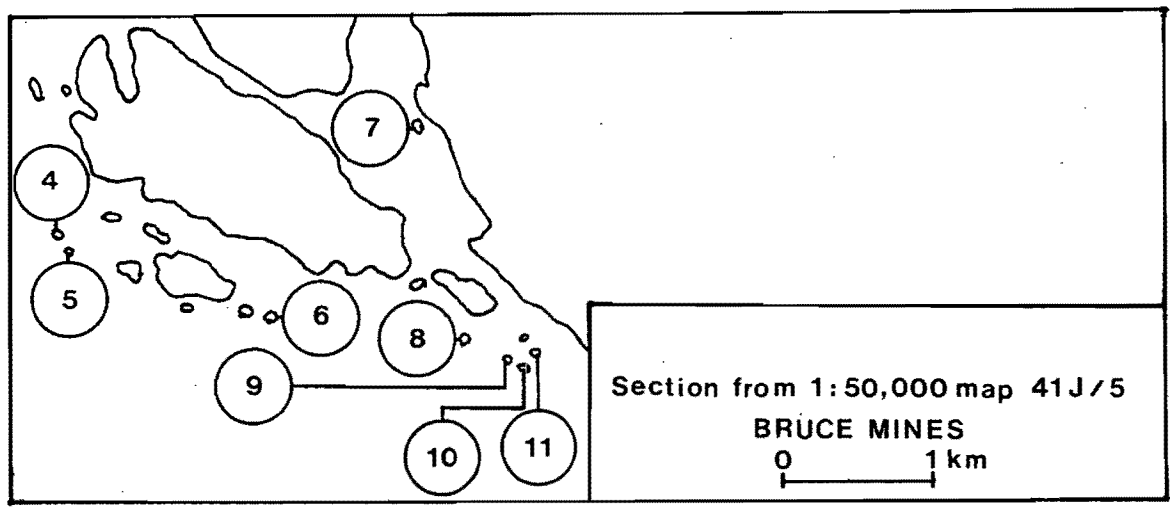
Appendix 13. Colony sites covered by 1:250,000 Topographic Map 41J (West and East).

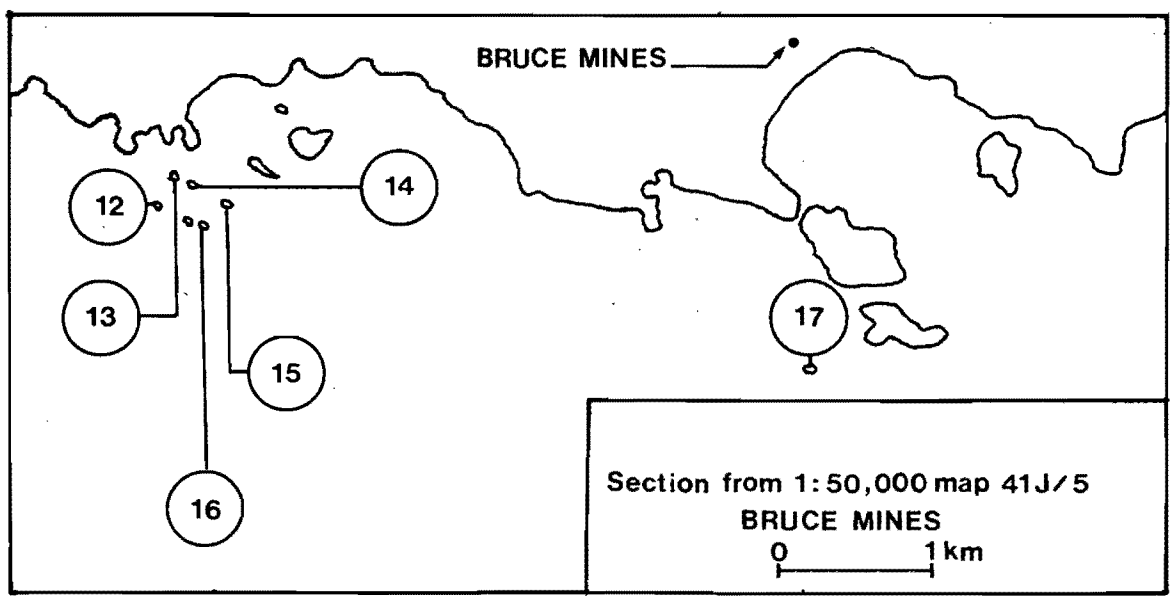


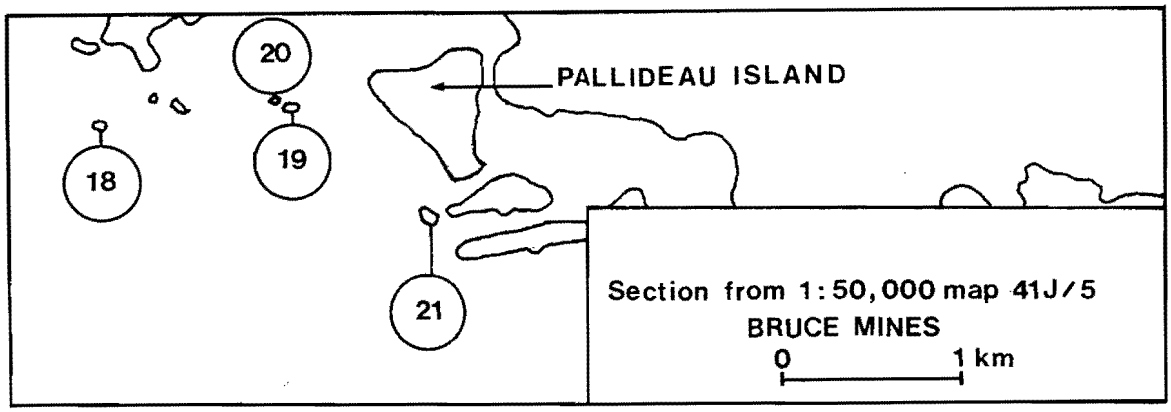

Symbol
Colony present during census years
Solid circle 1989 and 1980
Open circle 1989 only
Asterisk 1980 only
Symbol
No. of nests in 1989
1 - 25
26 - 250
251 - 2500
2501 - 25,000
≥ 25,000
N
0 5 km
NV

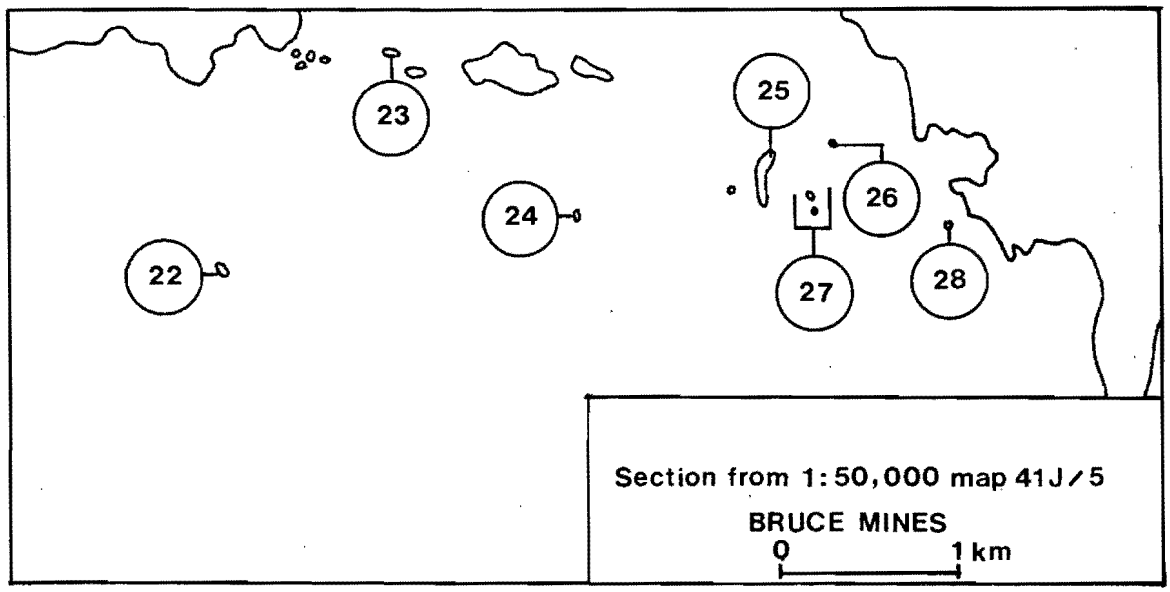
App. 13 (cont'd).

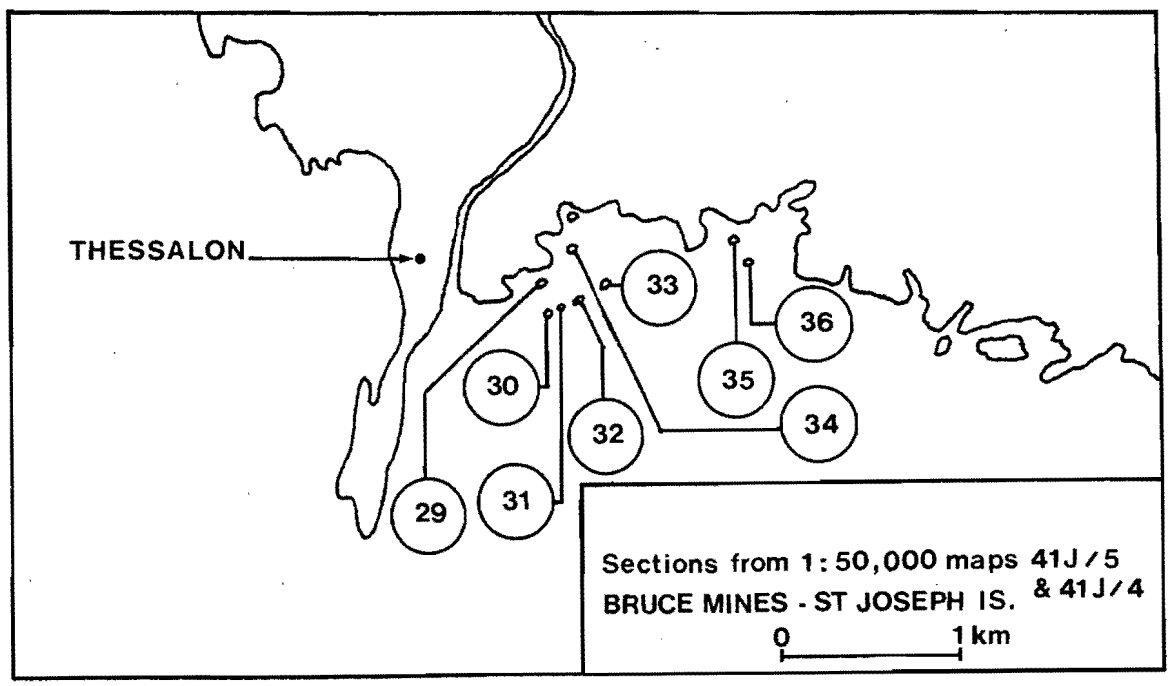

1
2
3
DAWSON
ISLAND
Section from 1:50,000 map 41J/5
BRUCE MINES
0
1 km

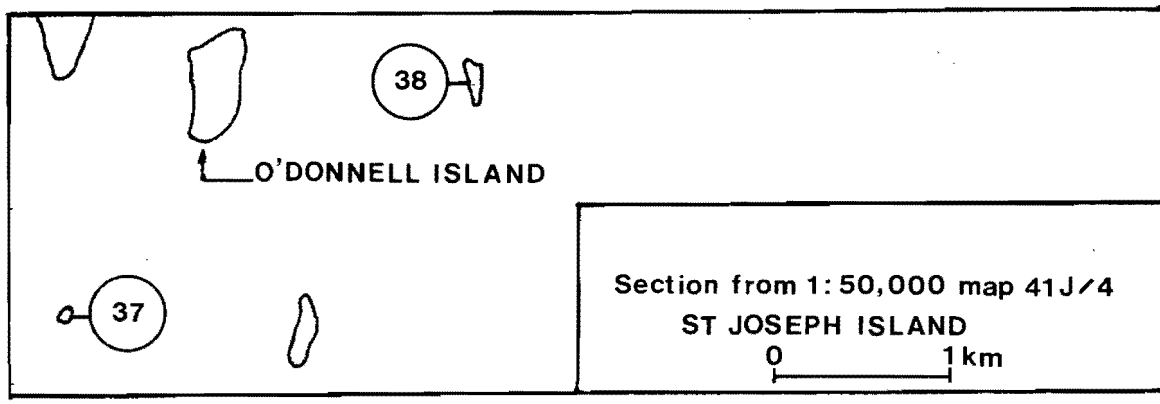

4
5
6
7
8
9
10
11
Section from 1:50,000 map 41J/5
BRUCE MINES
0
1 km

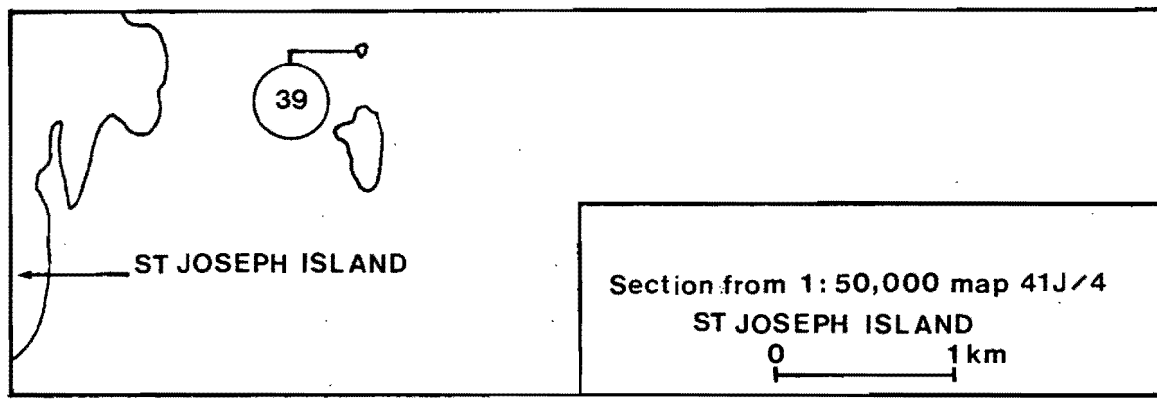

BRUCE MINES
12
13
14
15
16
17
Section from 1:50,000 map 41J/5
BRUCE MINES
0
1 km

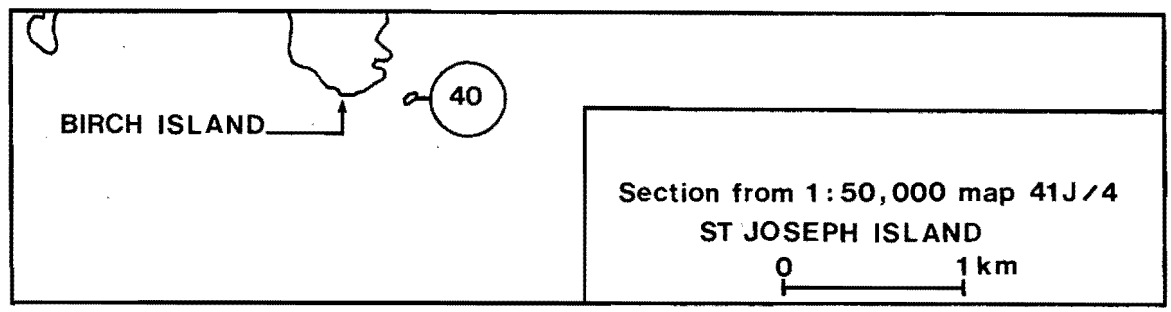

20
19
18
21
PALLIDEAU ISLAND
Section from 1:50,000 map 41J/5
BRUCE MINES
0
1 km

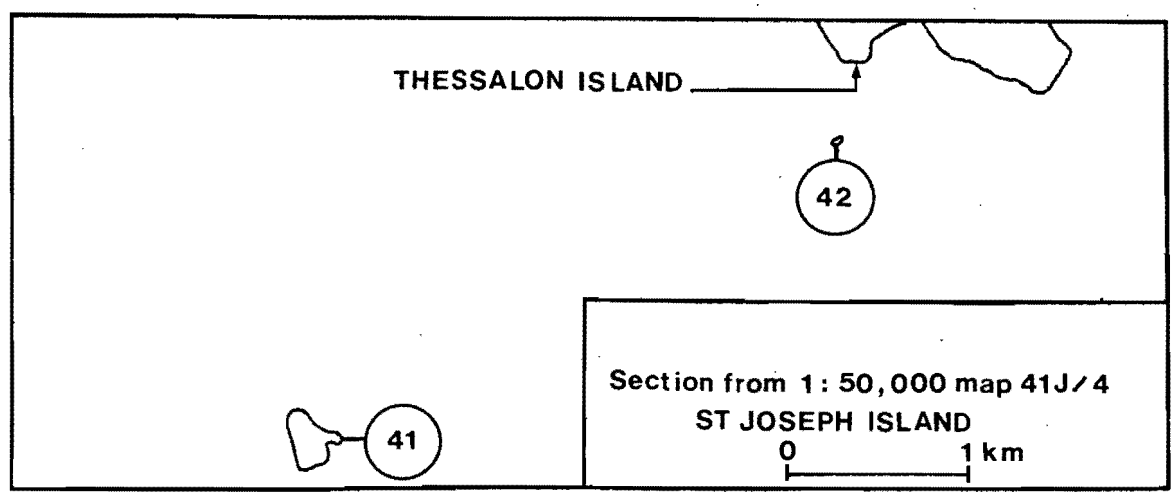

23
25
24
26
22
27
28
Section from 1:50,000 map 41J/5
BRUCE MINES
0
1 km

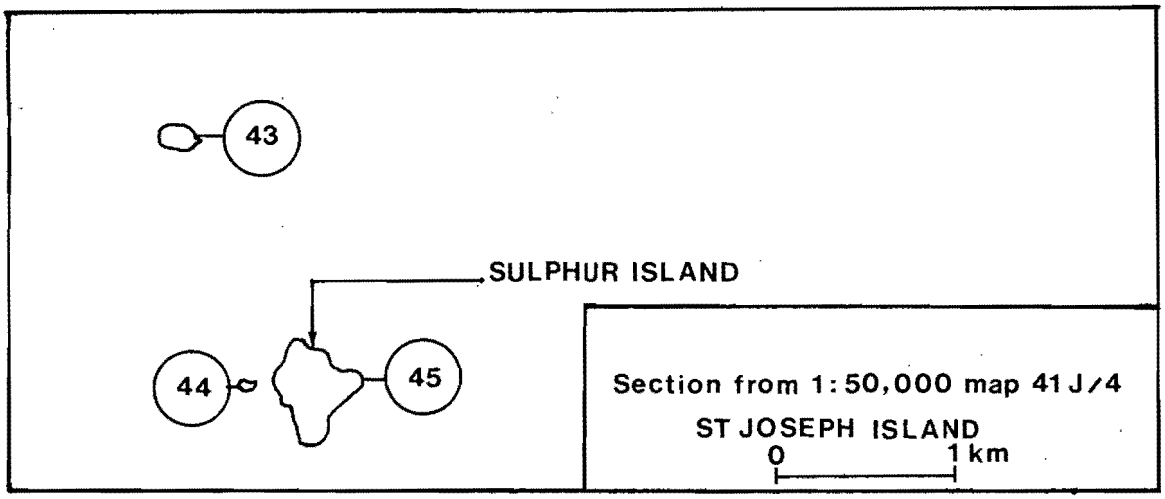

THESSALON
33
36
30
35
32
34
29
31
Sections from 1:50,000 maps 41J/5
BRUCE MINES - ST JOSEPH IS. & 41J/4
0
1 km

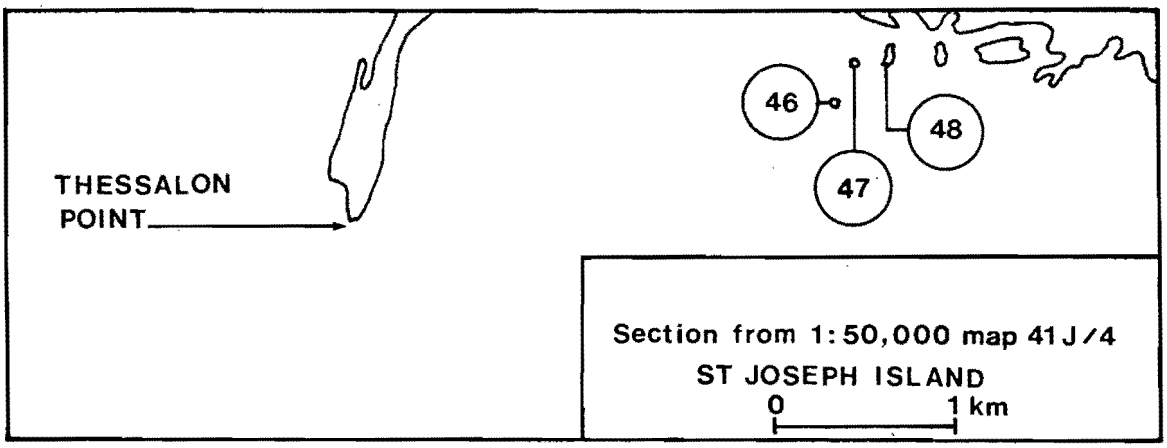

38
O'DONNELL ISLAND
37
Section from 1:50,000 map 41J/4
ST JOSEPH ISLAND
0
1 km

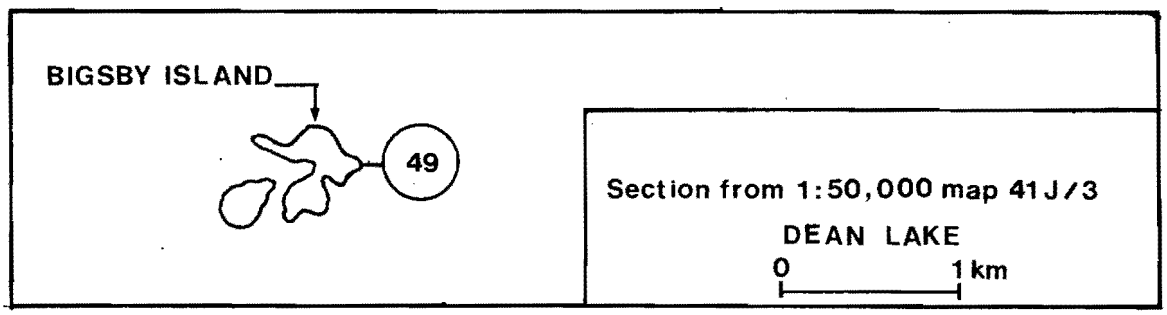

39
ST JOSEPH ISLAND
Section from 1:50,000 map 41J/4
ST JOSEPH ISLAND
0
1 km

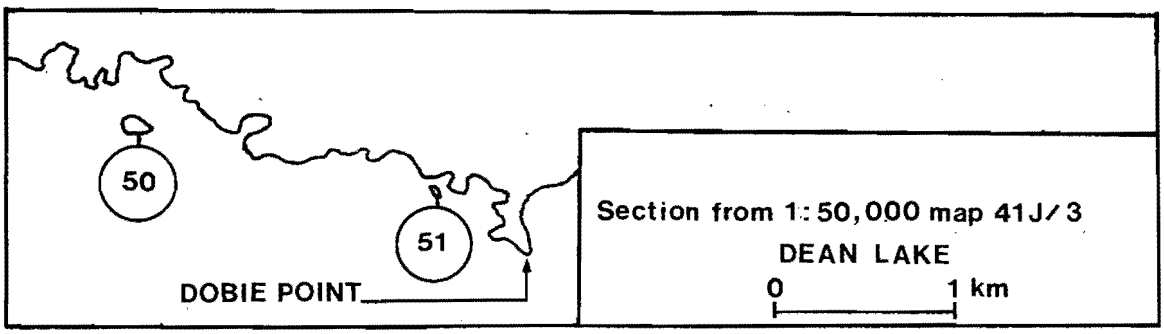

BIRCH ISLAND
40
Section from 1:50,000 map 41J/4
ST JOSEPH ISLAND
0
1 km


THESSALON ISLAND
42
Section from 1:50,000 map 41J/4
ST JOSEPH ISLAND
0
1 km
41

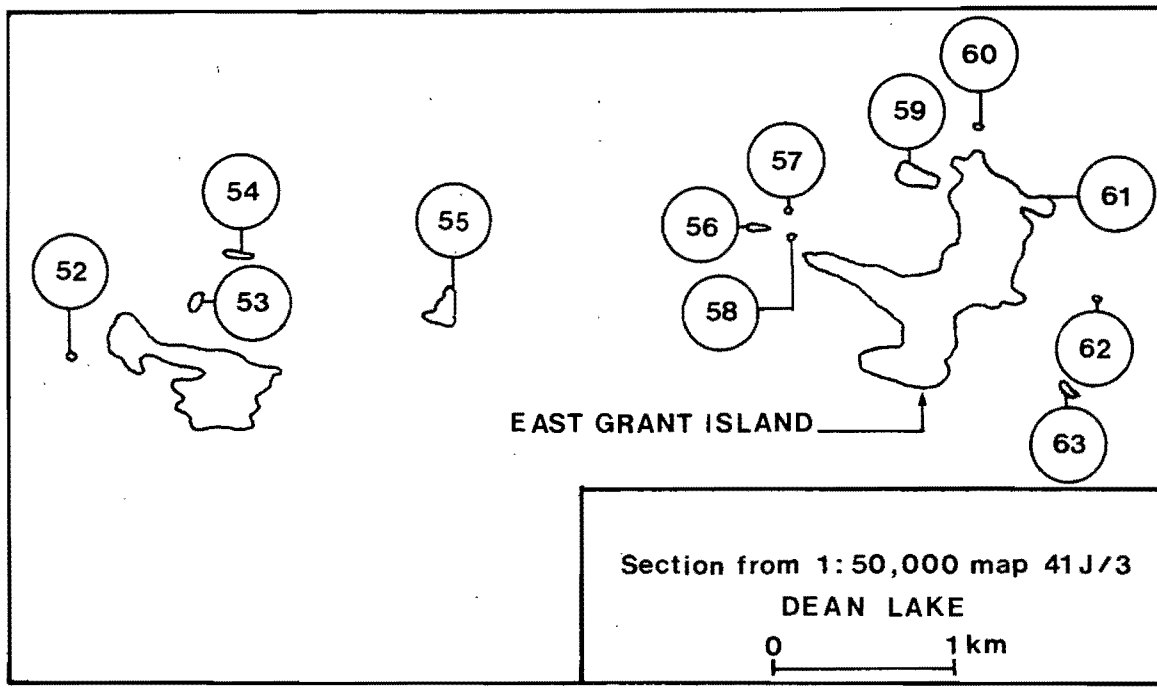

43
SULPHUR ISLAND
44
45
Section from 1:50,000 map 41 J/4
ST JOSEPH ISLAND
0
1 km

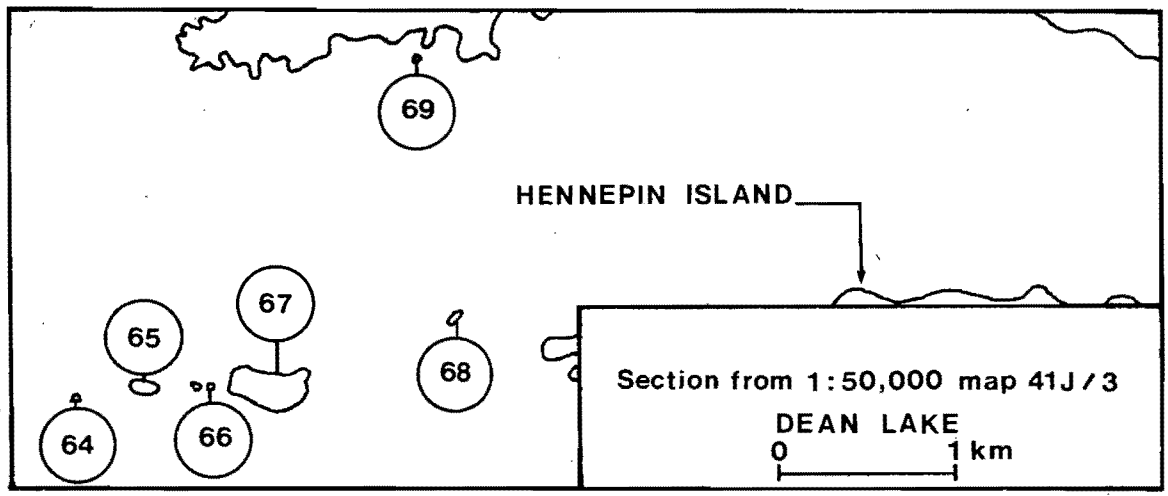

THESSALON
POINT
46
48
47
Section from 1:50,000 map 41 J/4
ST JOSEPH ISLAND
0
1 km

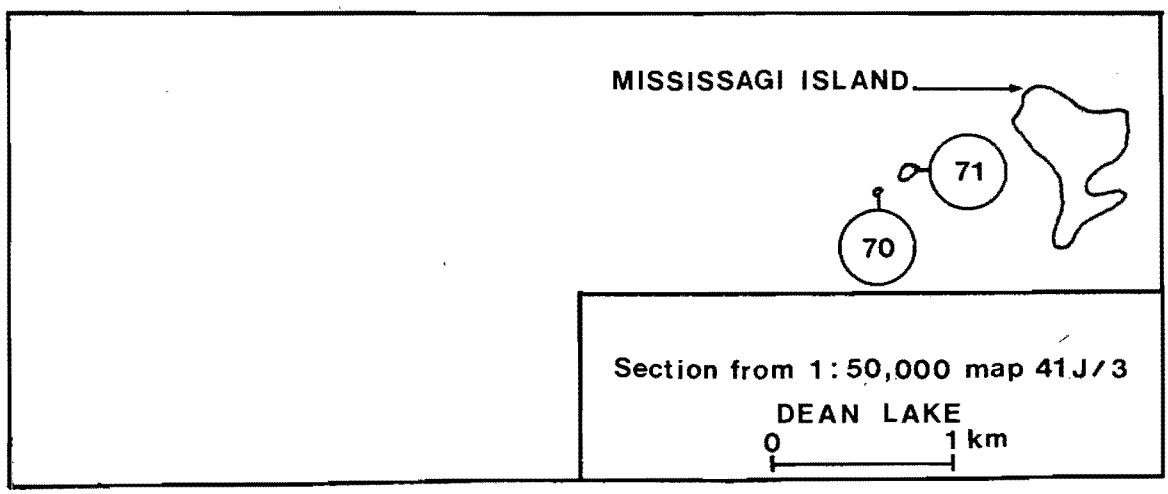

BIGSBY ISLAND
49
Section from 1:50,000 map 41 J/3
DEAN LAKE
0
1 km


50
51
DOBIE POINT
Section from 1:50,000 map 41J/3
DEAN LAKE
0
1 km

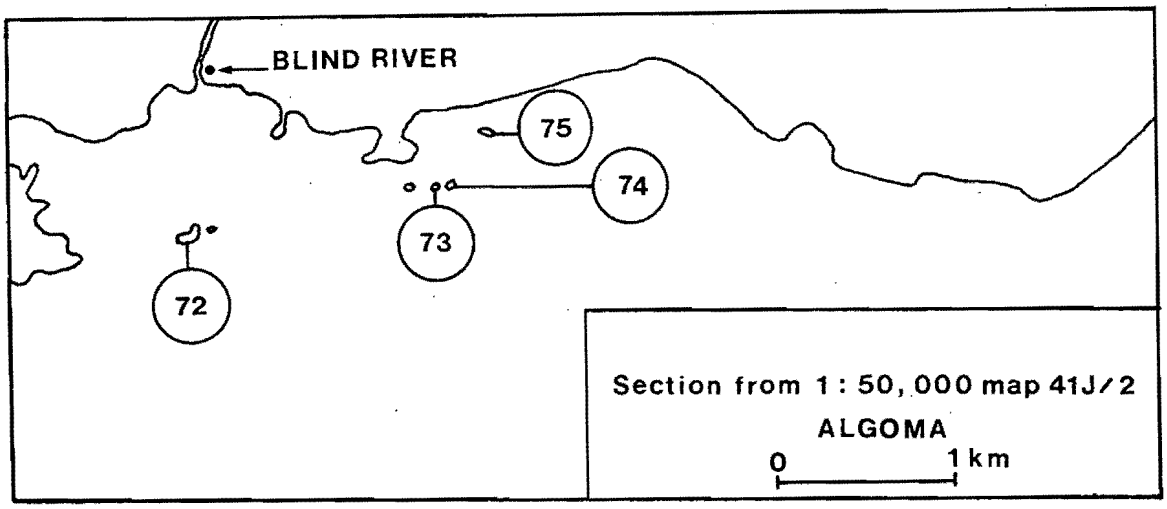
App. 13 (cont'd).

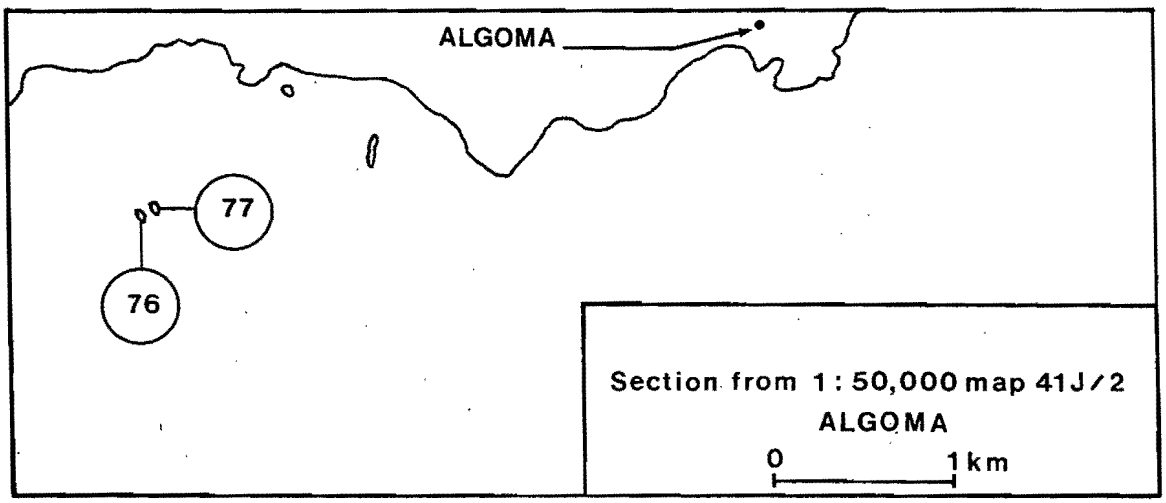

60
59
57
61
54
55
56
52
53
58
62
EAST GRANT ISLAND
63
Section from 1:50,000 map 41J/3
DEAN LAKE
0
1 km

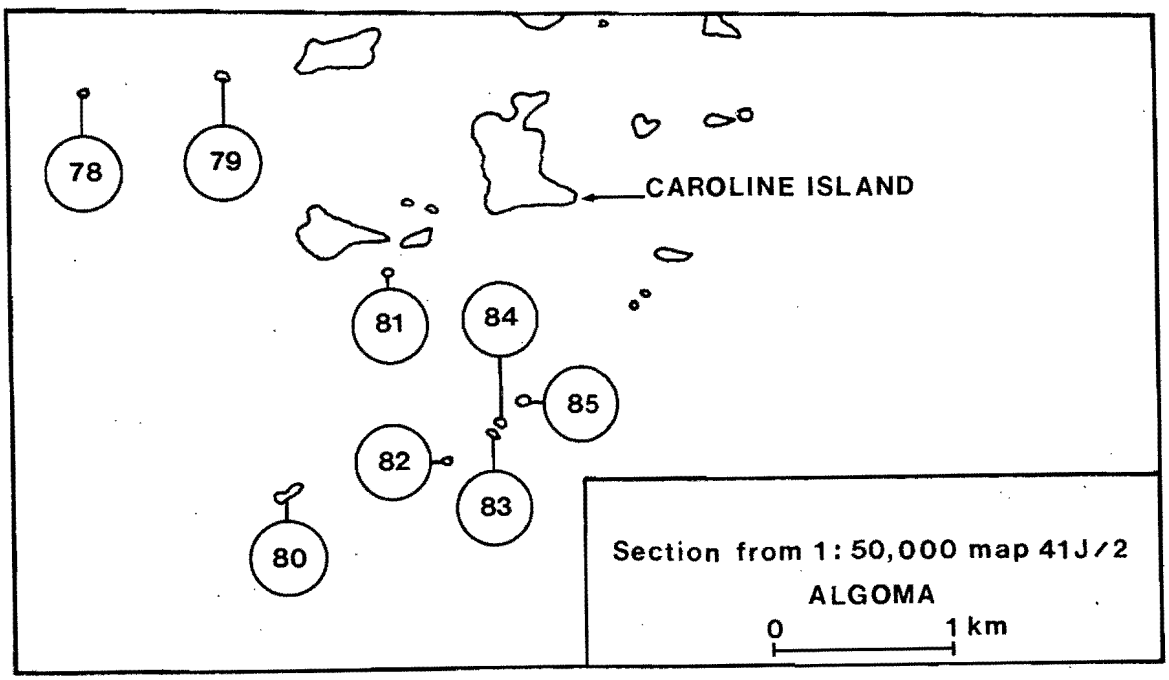

69
HENNEPIN ISLAND
67
65
68
Section from 1:50,000 map 41J/3
DEAN LAKE
64
66
0
1 km

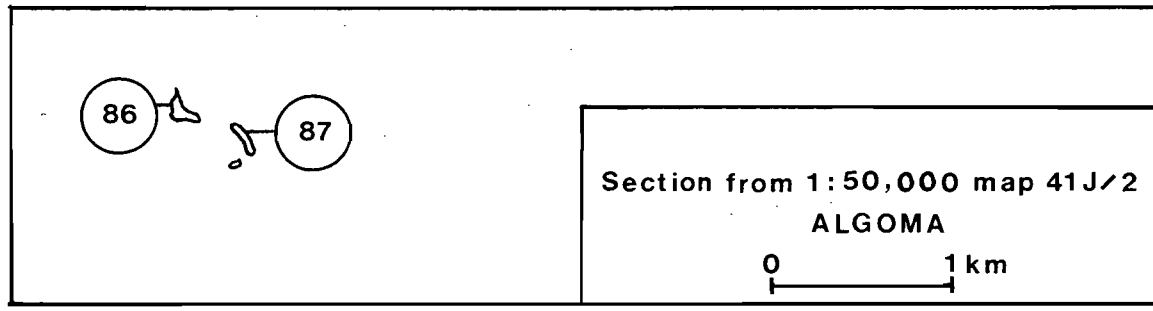

MISSISSAGI ISLAND
71
70
Section from 1:50,000 map 41J/3
DEAN LAKE
0
1 km

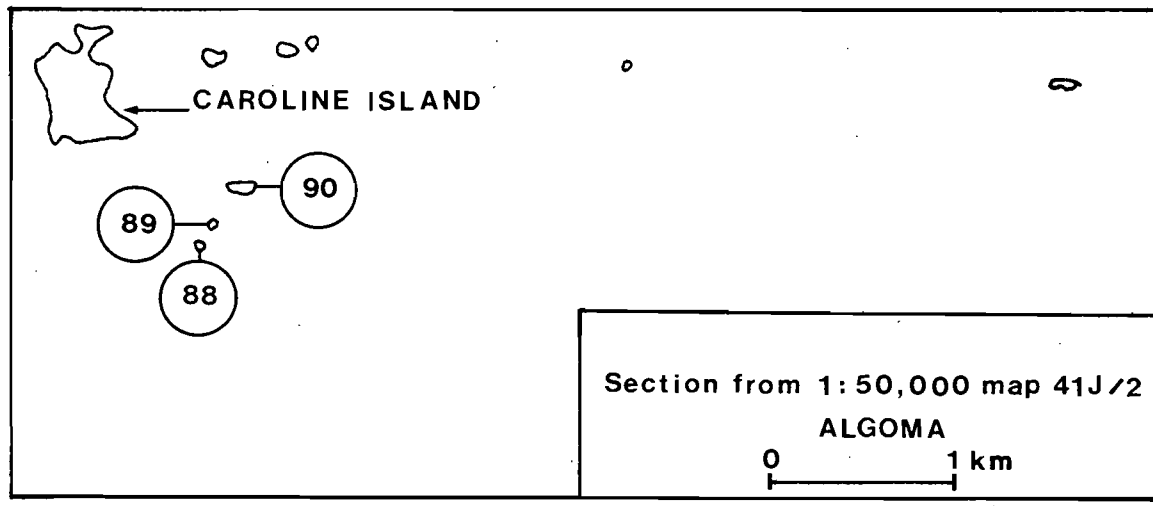
App. 13 (cont'd).

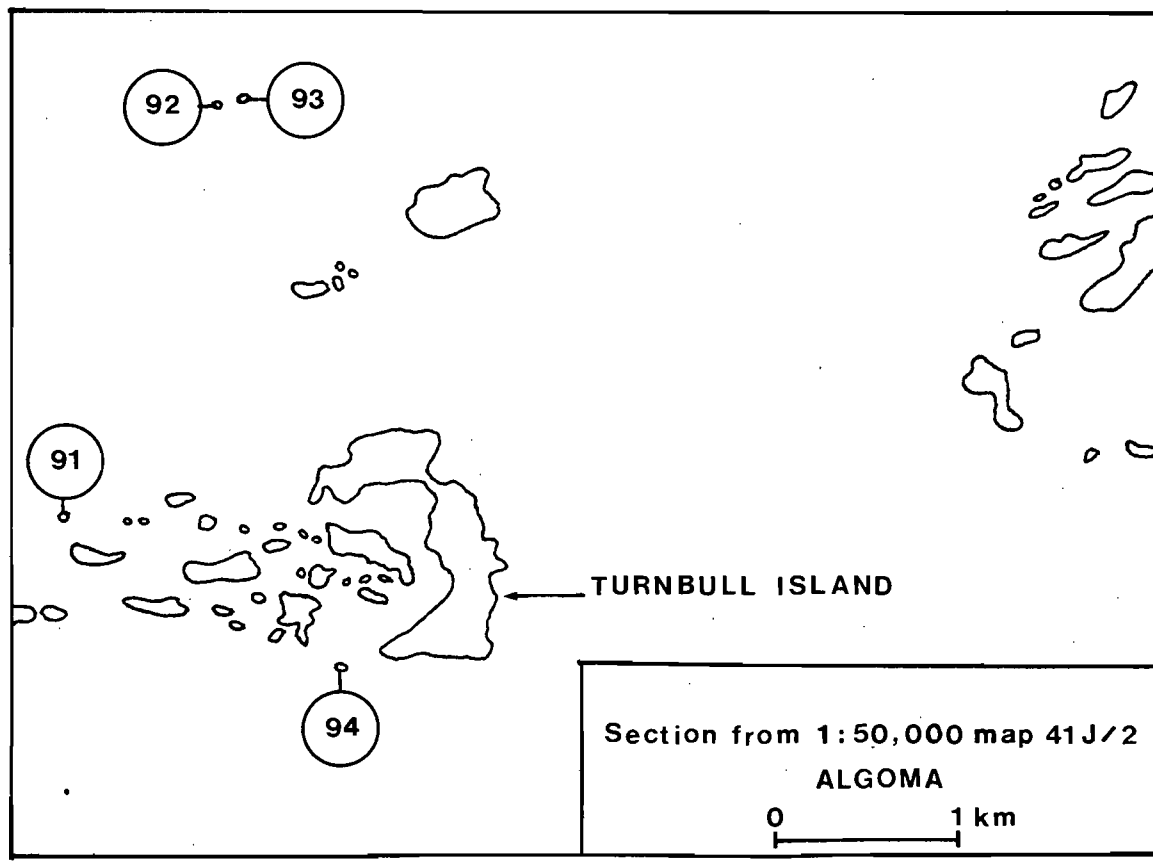

BLIND RIVER
75
74
73
72
Section from 1 : 50, 000 map 41J/2
ALGOMA
0
1 km

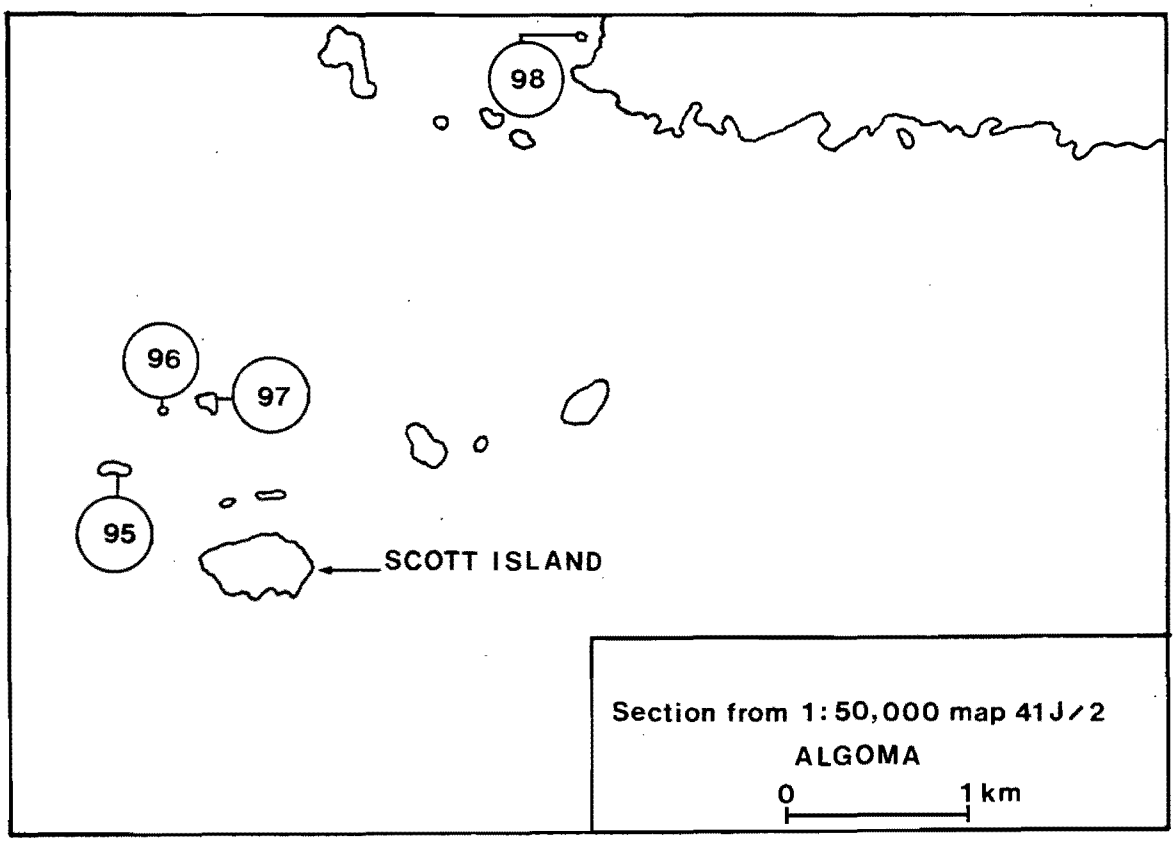

ALGOMA
77
76
Section from 1 : 50,000 map 41J/2
ALGOMA
0
1 km

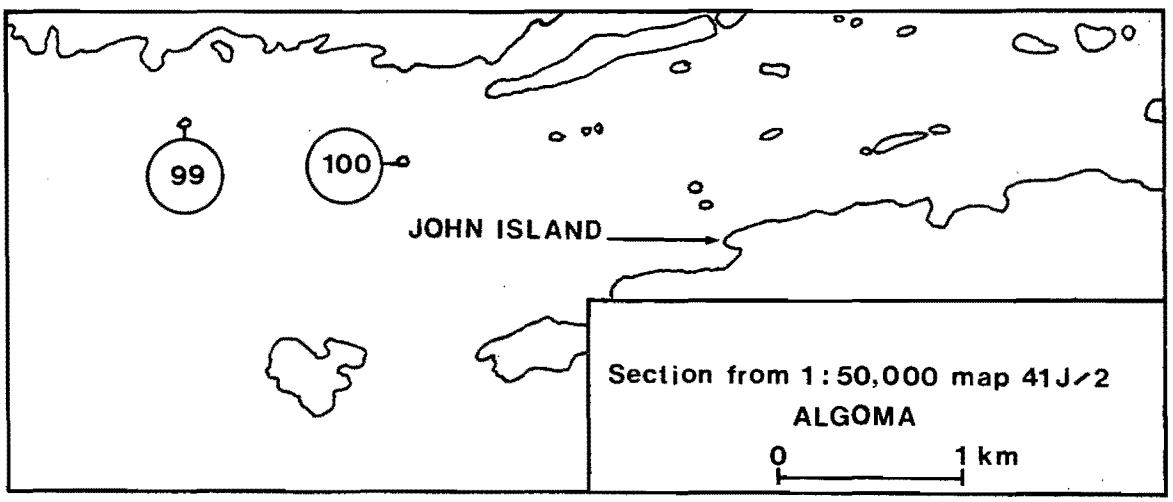

78
79
CAROLINE ISLAND
81
84
85
82
83
80
Section from 1 : 50,000 map 41J/2
ALGOMA
0
1 km

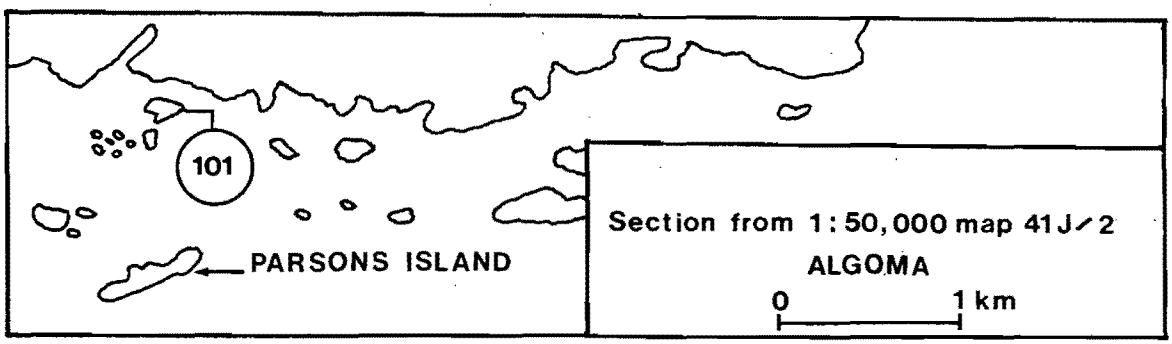

86
87
Section from 1:50,000 map 41J/2
ALGOMA
0
1 km

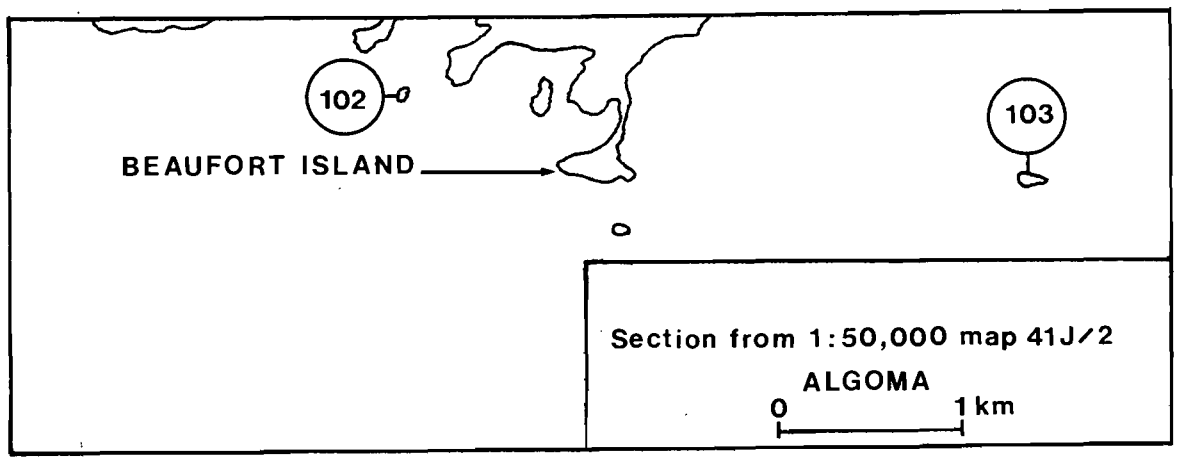

CAROLINE ISLAND
90
89
88
Section from 1:50,000 map 41J/2
ALGOMA
0
1 km

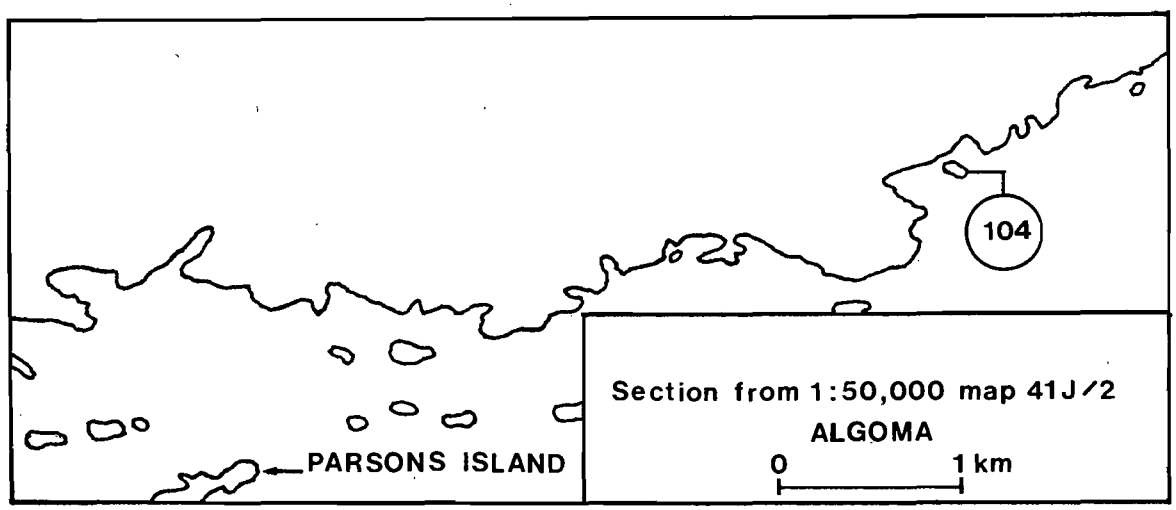

92
93
91
TURNBULL ISLAND
94
Section from 1:50,000 map 41J/2
ALGOMA
0
1 km

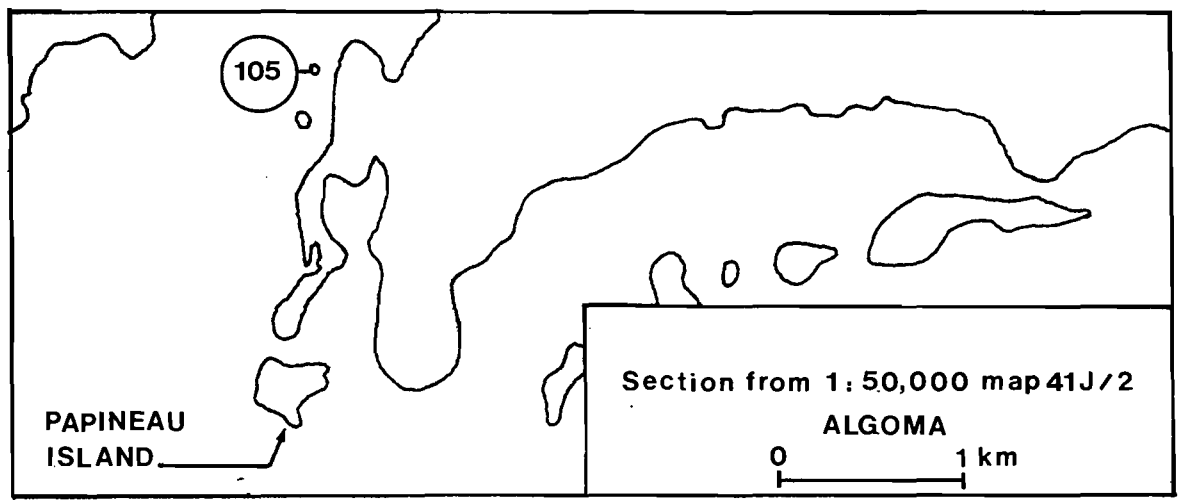

98
96
97
95
SCOTT ISLAND
Section from 1:50,000 map 41J/2
ALGOMA
0
1 km

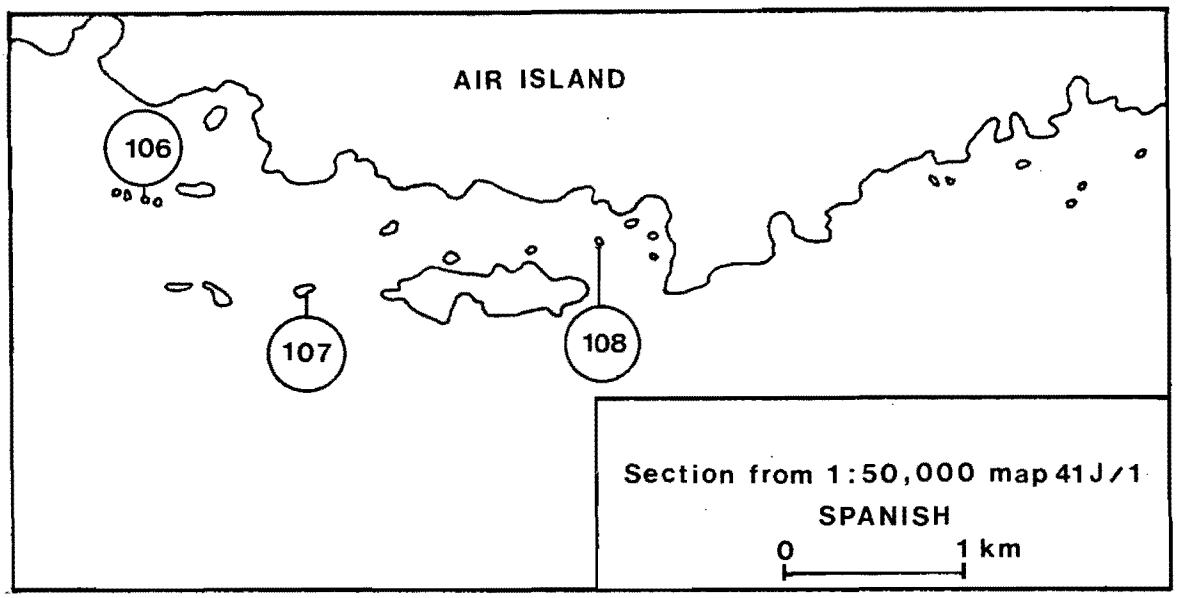

99
100
JOHN ISLAND
Section from 1:50,000 map 41J/2
ALGOMA
0
1 km

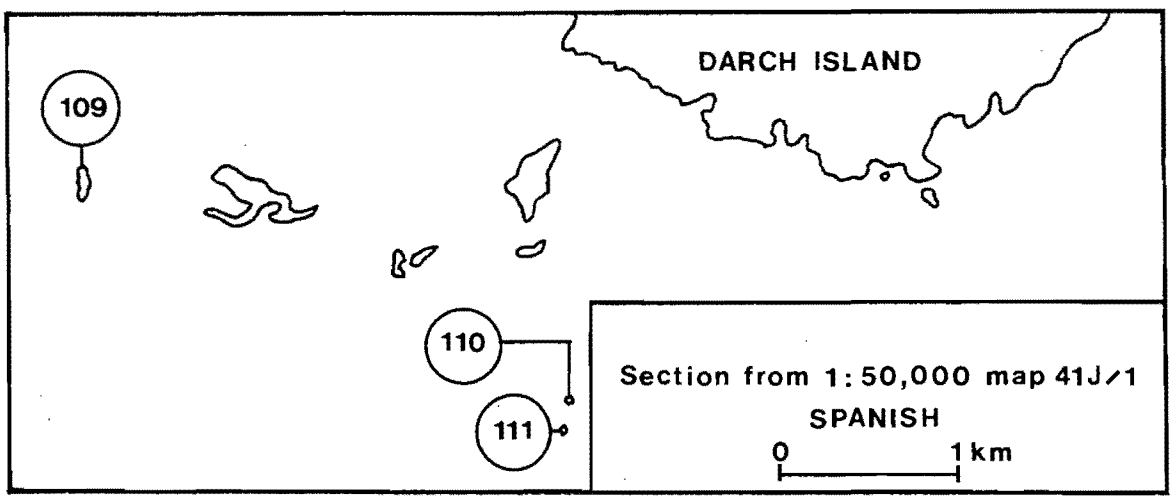

101
PARSONS ISLAND
Section from 1:50,000 map 41J/2
ALGOMA
0
1 km

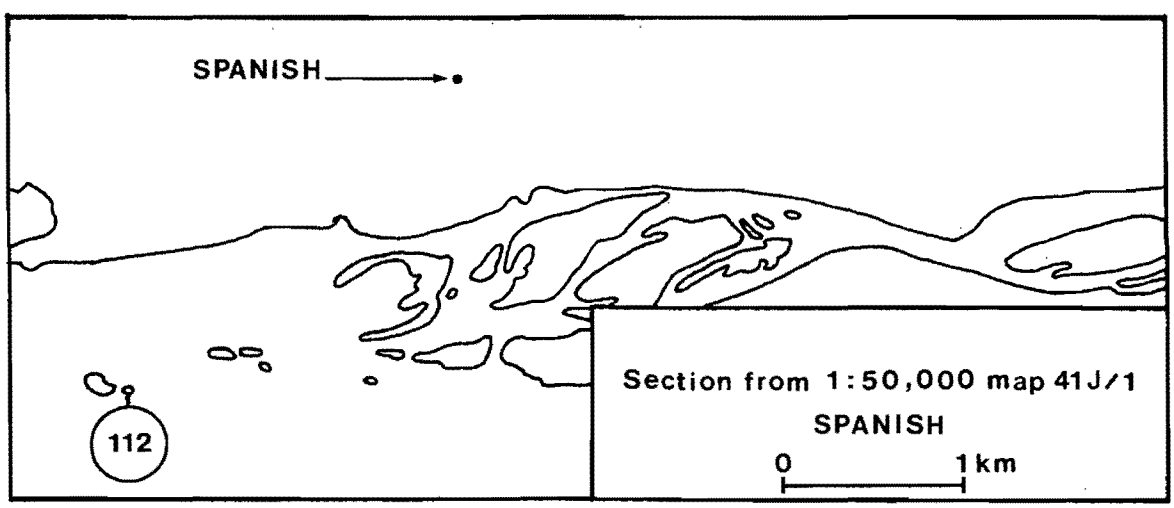

102
BEAUFORT ISLAND
103
Section from 1:50,000 map 41J/2
ALGOMA
0
1 km

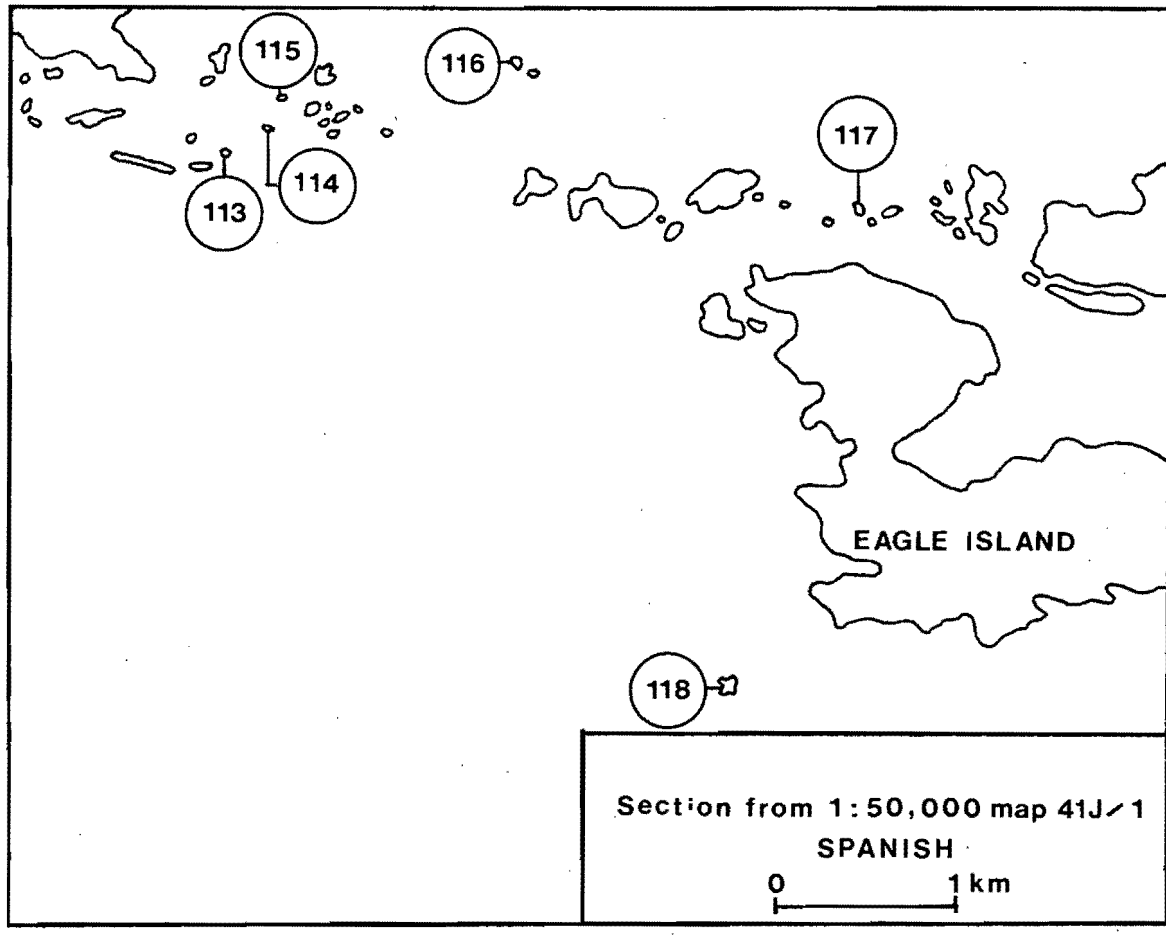

104
PARSONS ISLAND
Section from 1:50,000 map 41J/2
ALGOMA
0
1 km

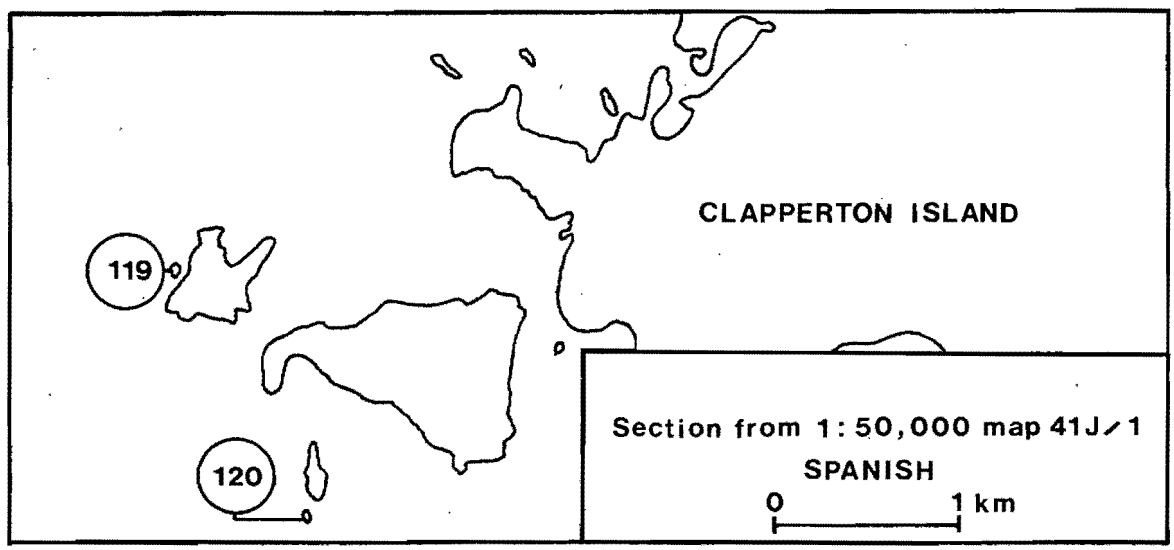

105
PAPINEAU
ISLAND
Section from 1:50,000 map 41J/2
ALGOMA
0
1 km

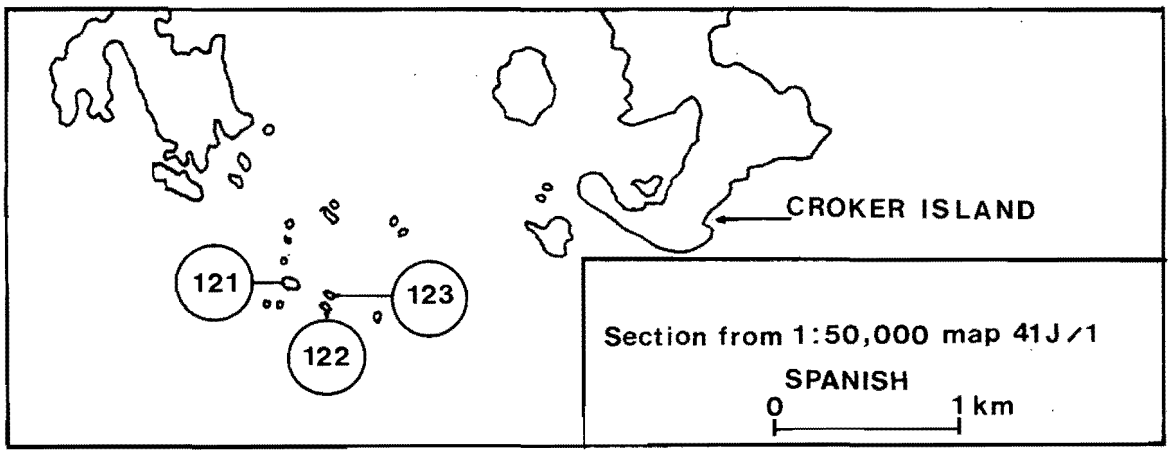

AIR ISLAND
106
107
108
Section from 1:50,000 map 41J/1
SPANISH
0
1 km

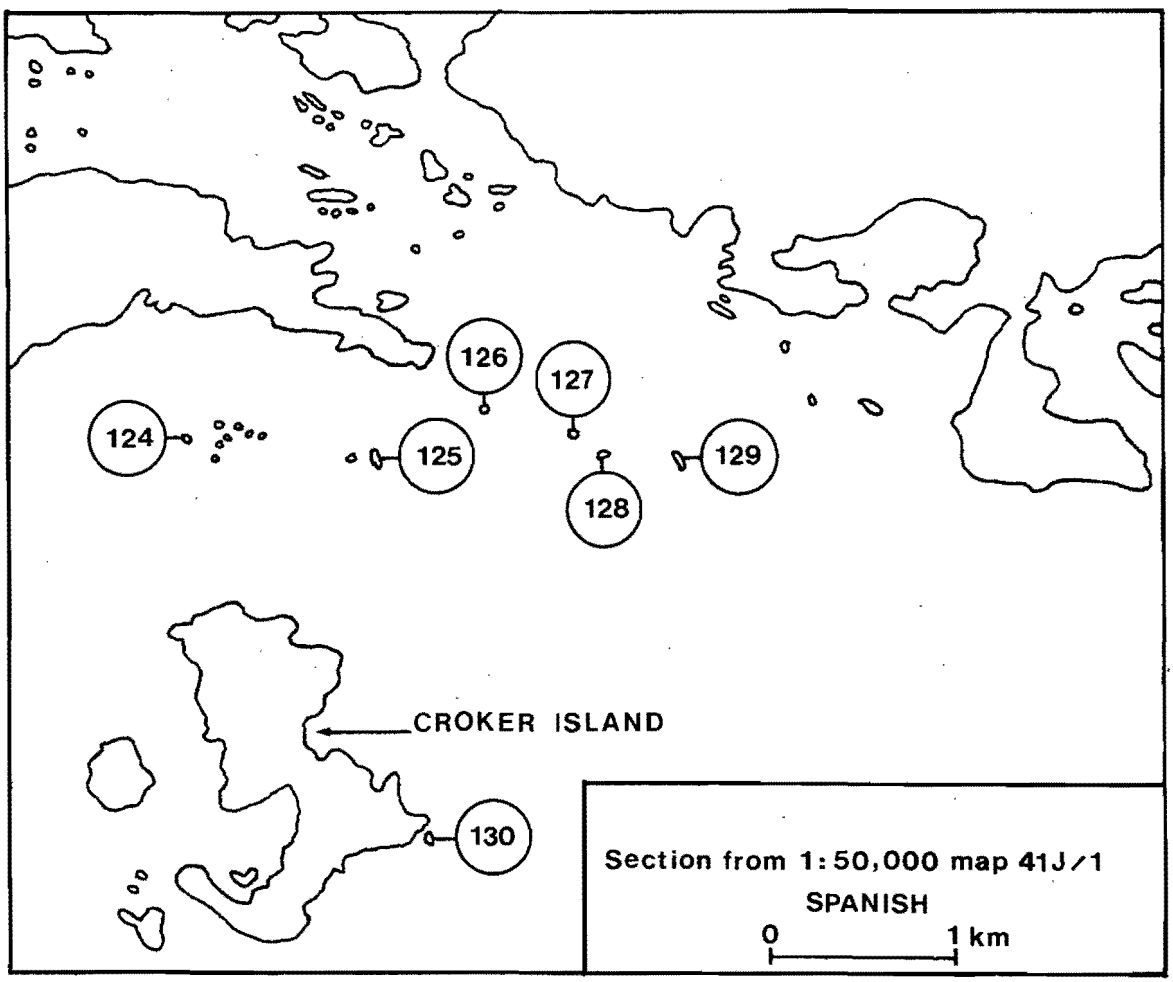

DARCH ISLAND
109
110
111
Section from 1:50,000 map 41J/1
SPANISH
0
1 km

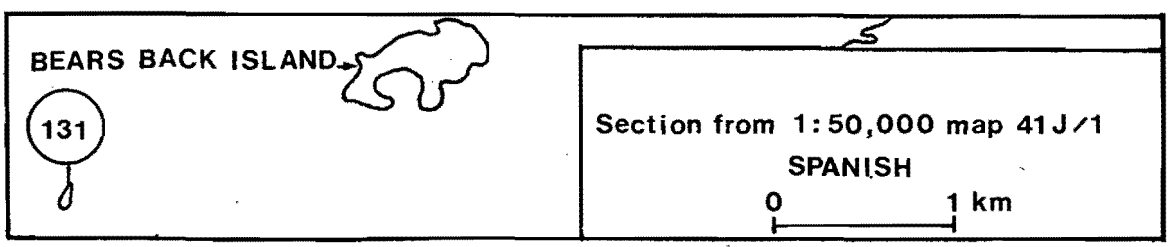

SPANISH
112
Section from 1:50,000 map 41J/1
SPANISH
0
1 km

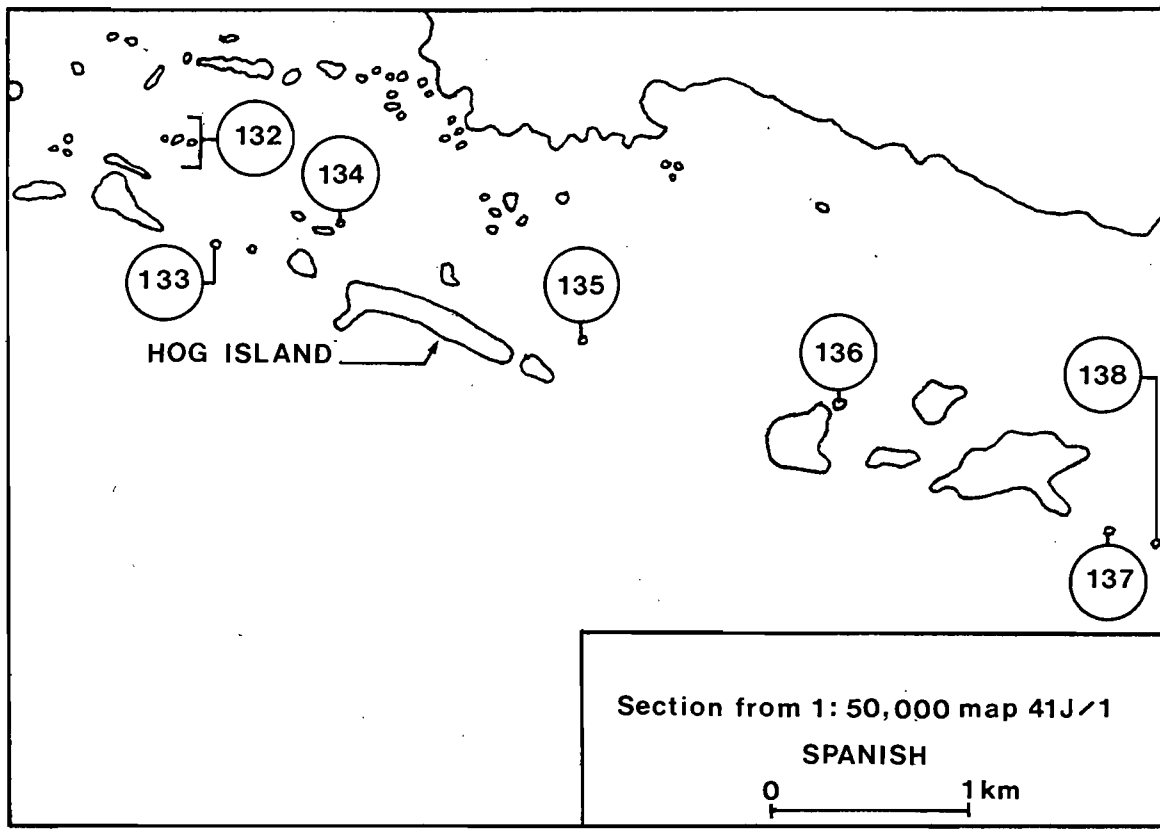

115
116
117
113
114
EAGLE ISLAND
118
Section from 1:50,000 map 41J/1
SPANISH
0
1 km

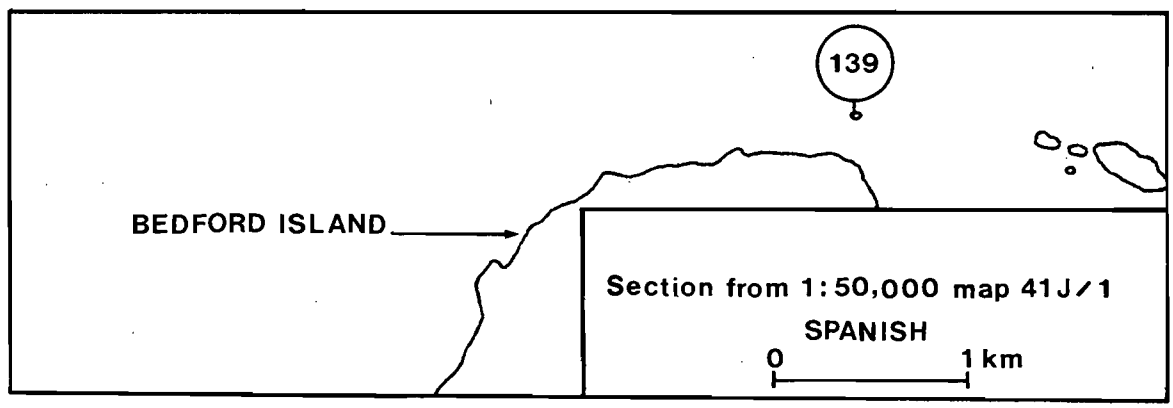

CLAPPERTON ISLAND
119
120
Section from 1:50,000 map 41J/1
SPANISH
0
1 km


CROKER ISLAND
121
123
122
Section from 1:50,000 map 41J/1
SPANISH
0
1 km


126
127
124
125
129
128
CROKER ISLAND
130
Section from 1:50,000 map 41J/1
SPANISH
0
1 km


BEARS BACK ISLAND
131
Section from 1:50,000 map 41J/1
SPANISH
0
1 km


132
134
133
135
HOG ISLAND
136
138
137
Section from 1: 50,000 map 41J/1
SPANISH
0
1 km


139
BEDFORD ISLAND
Section from 1: 50,000 map 41J/1
SPANISH
0
1 km

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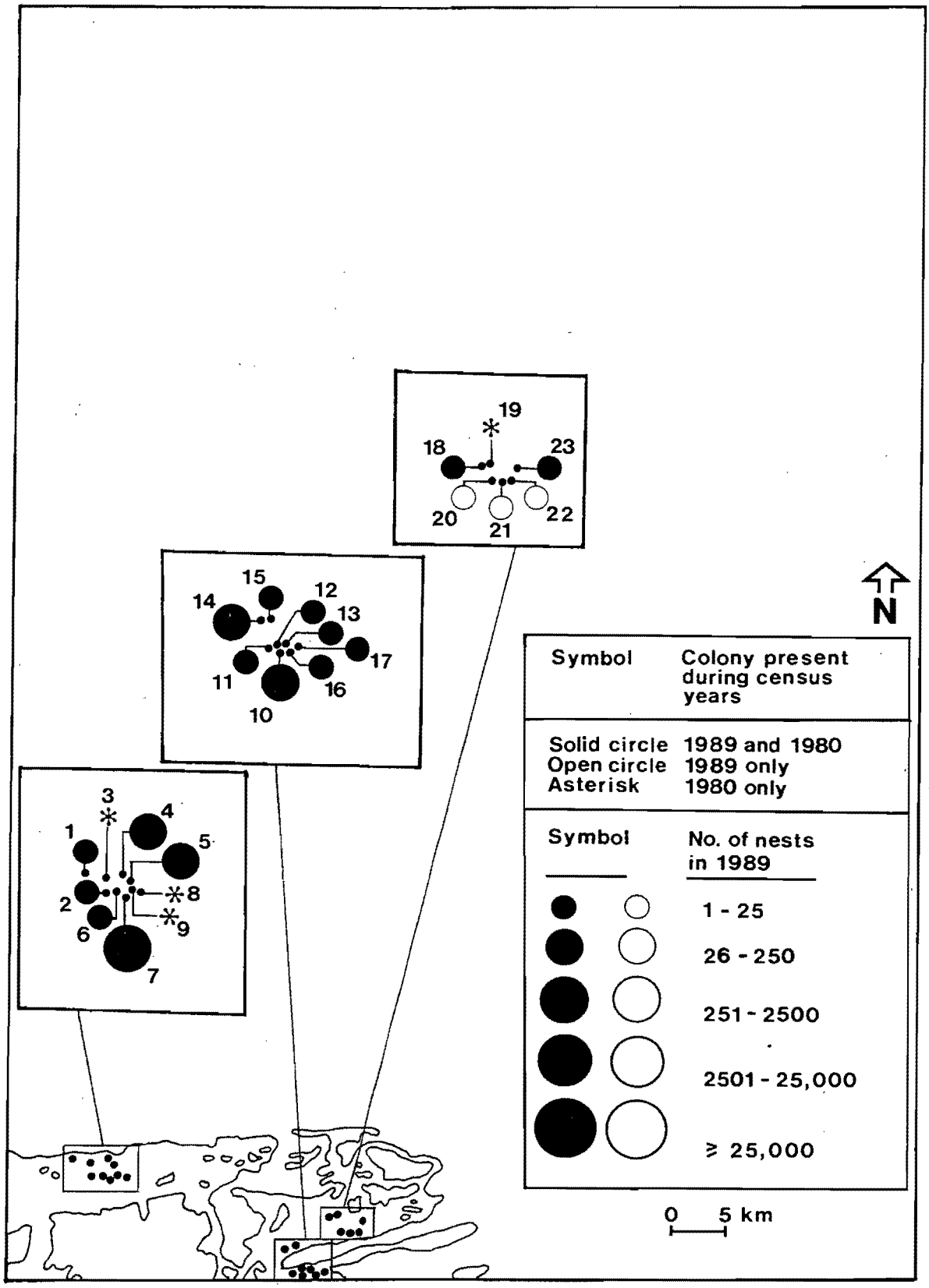
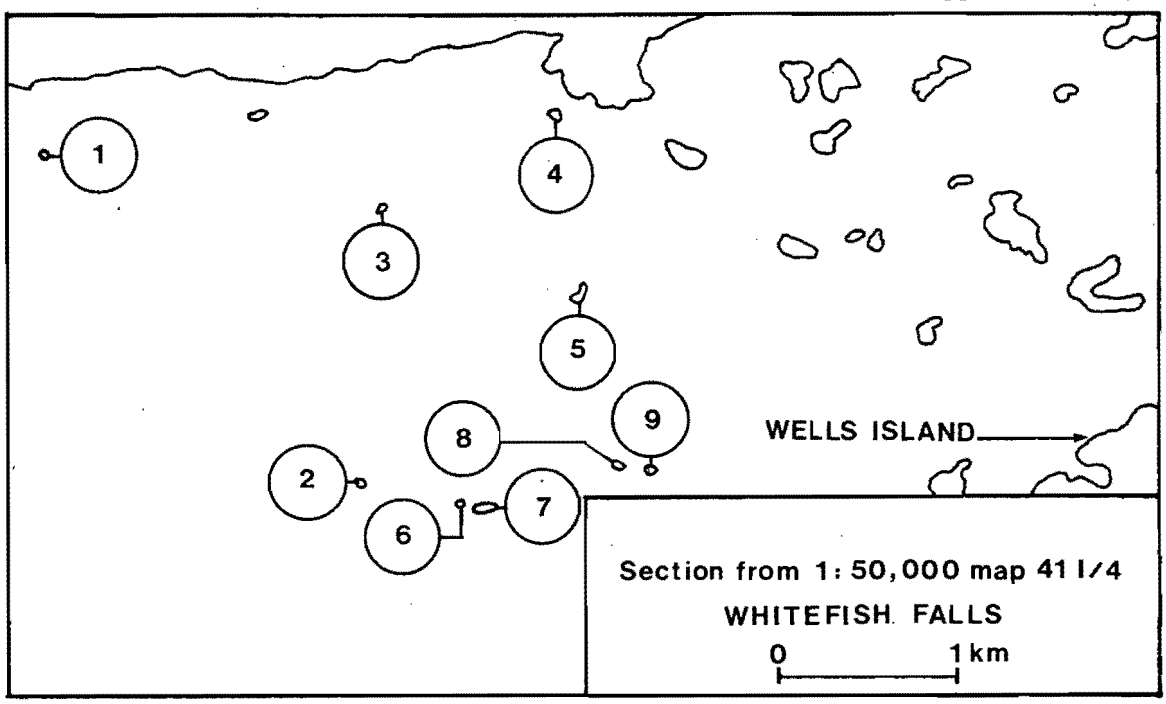
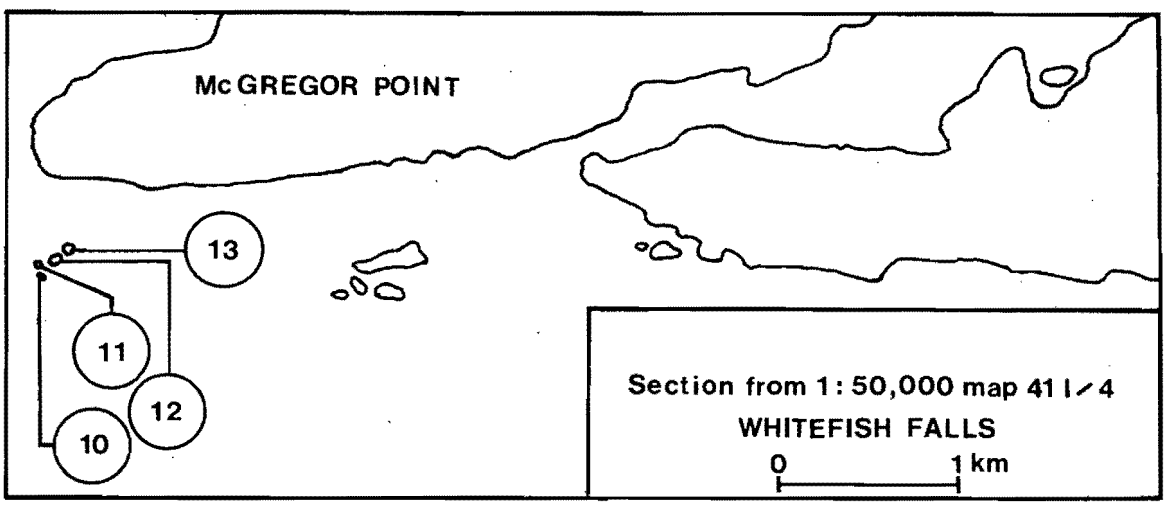
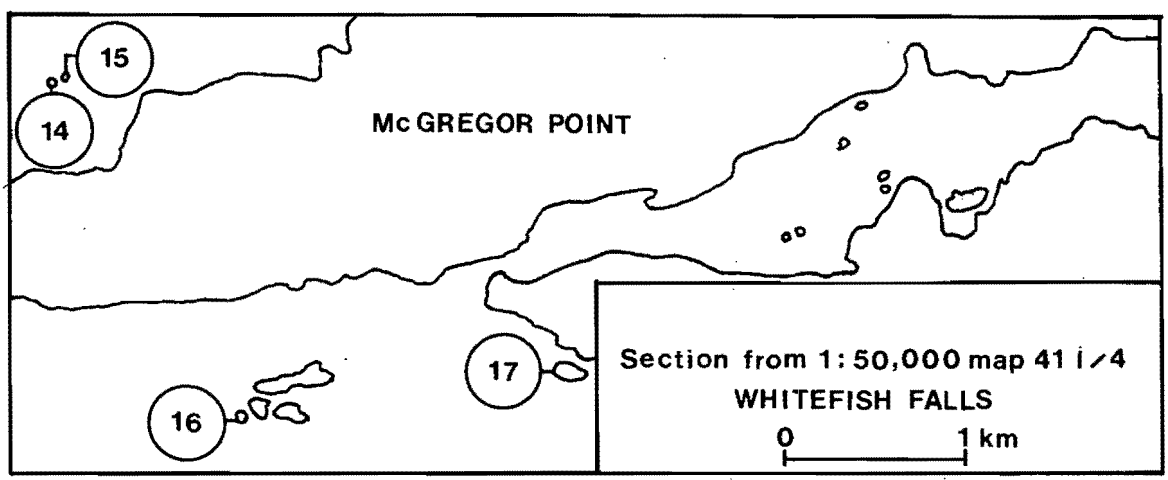
Appendix 14. Colony sites covered by 1:250,000 Topographic Map 41I (West).

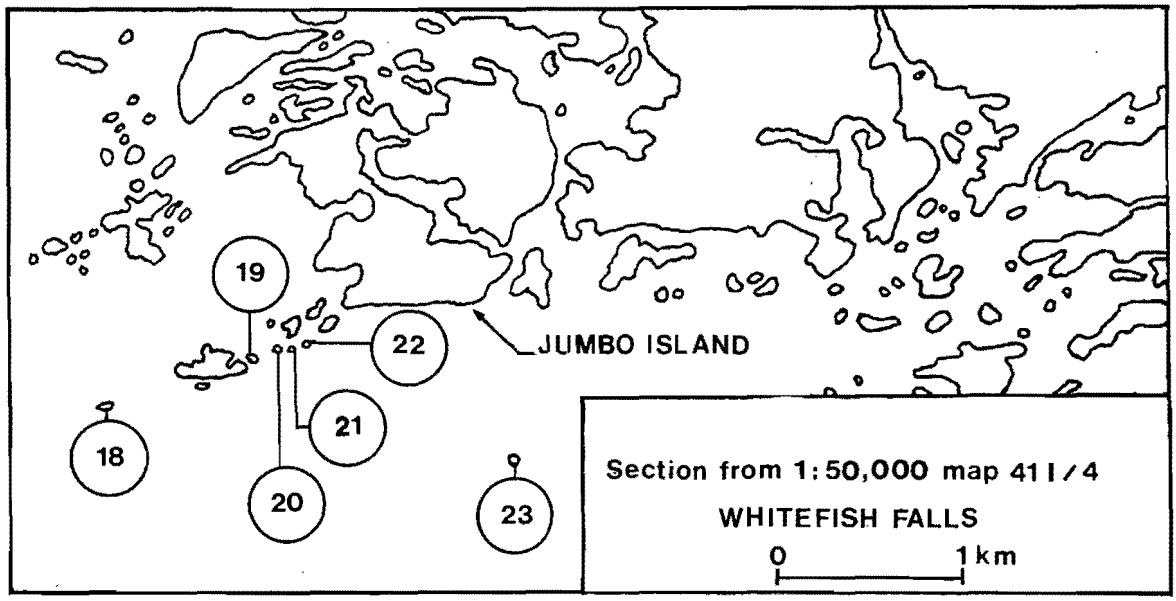


App. 14 (cont'd).


1
4
3
5
8
9
2
6
7
WELLS ISLAND
Section from 1: 50,000 map 41 I/4
WHITEFISH FALLS
0
1 km


McGREGOR POINT
13
11
12
10
Section from 1: 50,000 map 41 I/4
WHITEFISH FALLS
0
1 km


15
14
McGREGOR POINT
17
16
Section from 1: 50,000 map 41 I/4
WHITEFISH FALLS
0
1 km


19
22
JUMBO ISLAND
21
18
20
23
Section from 1:50,000 map 41 I / 4
WHITEFISH FALLS
0
1 km

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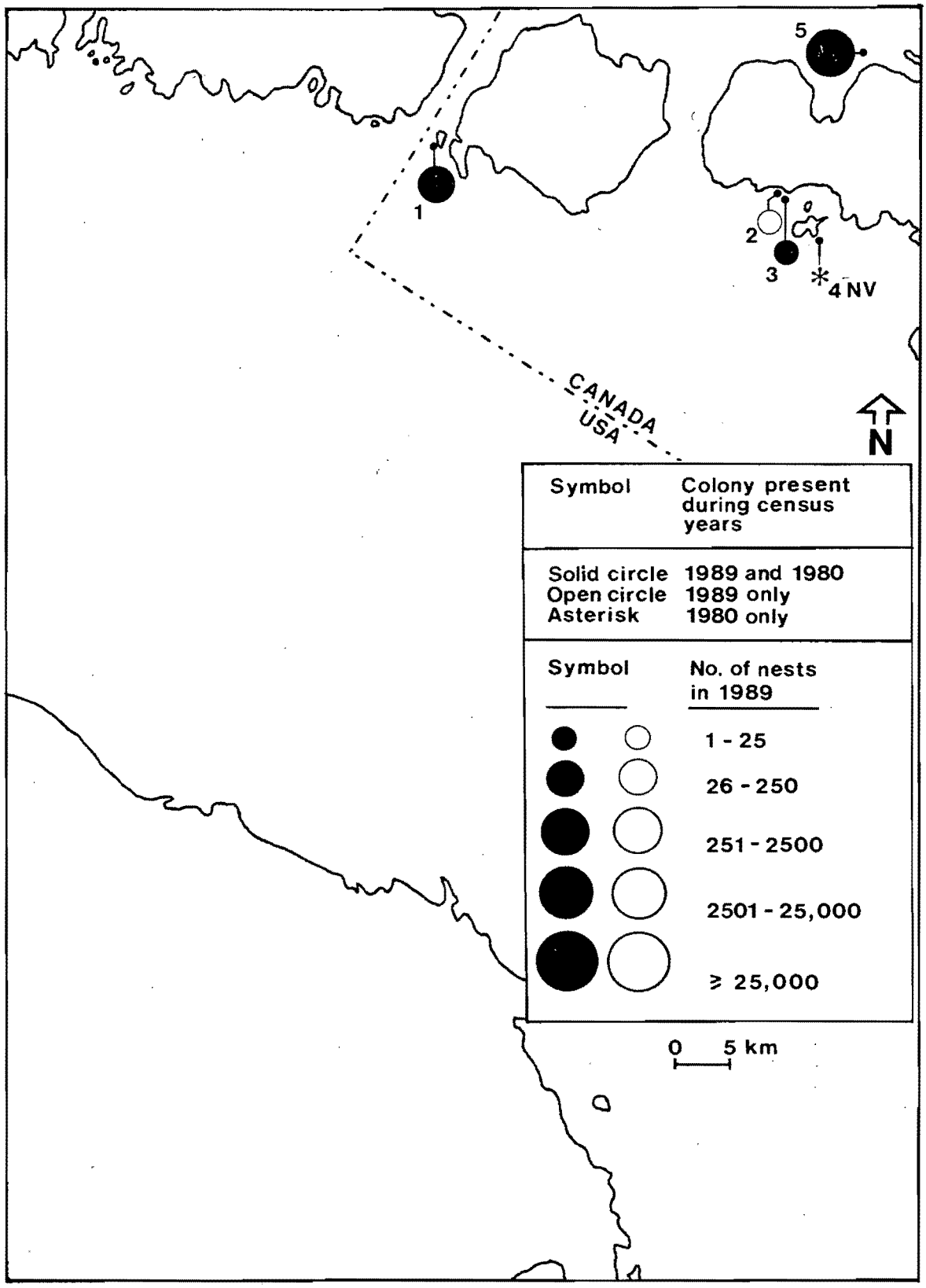
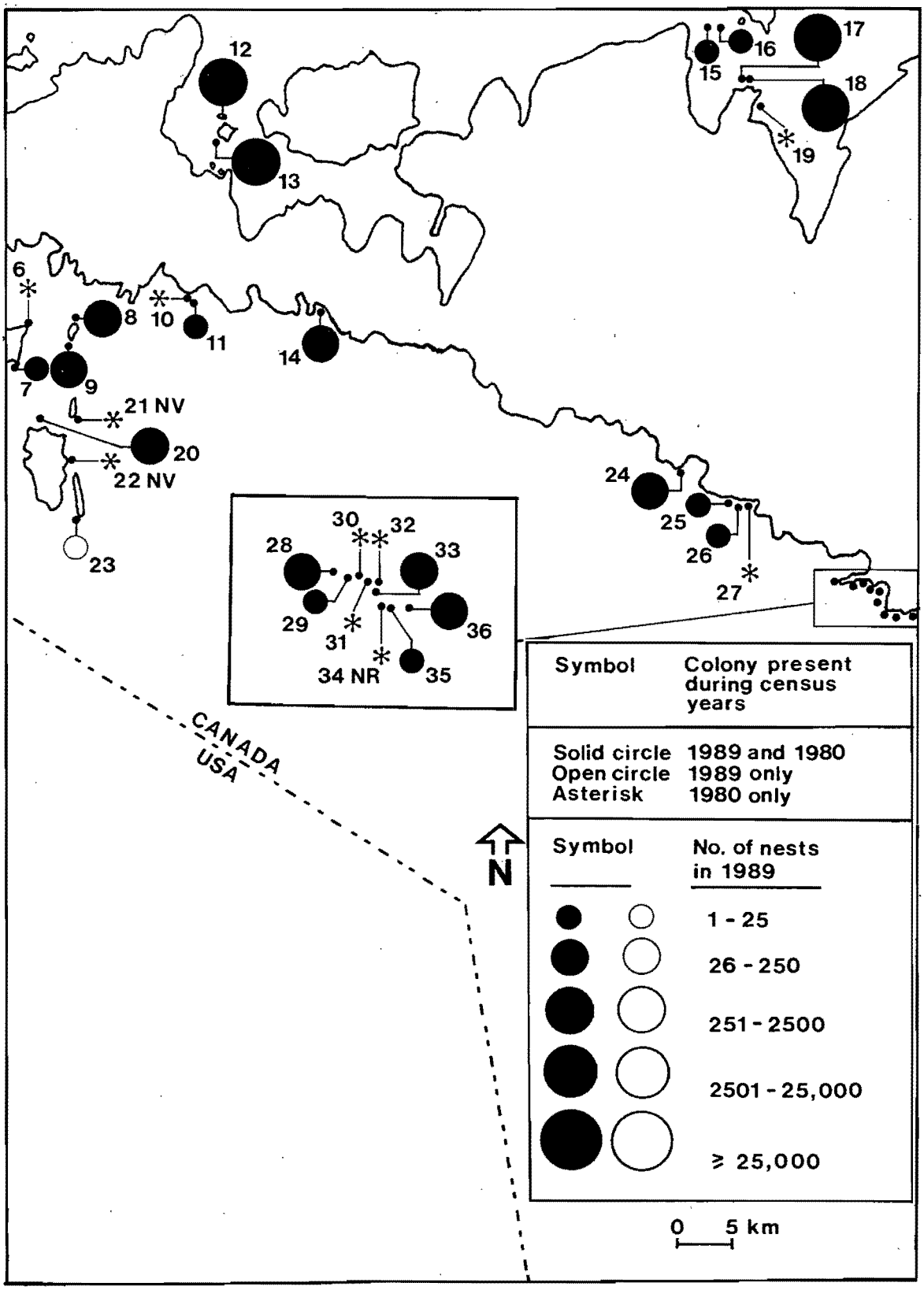
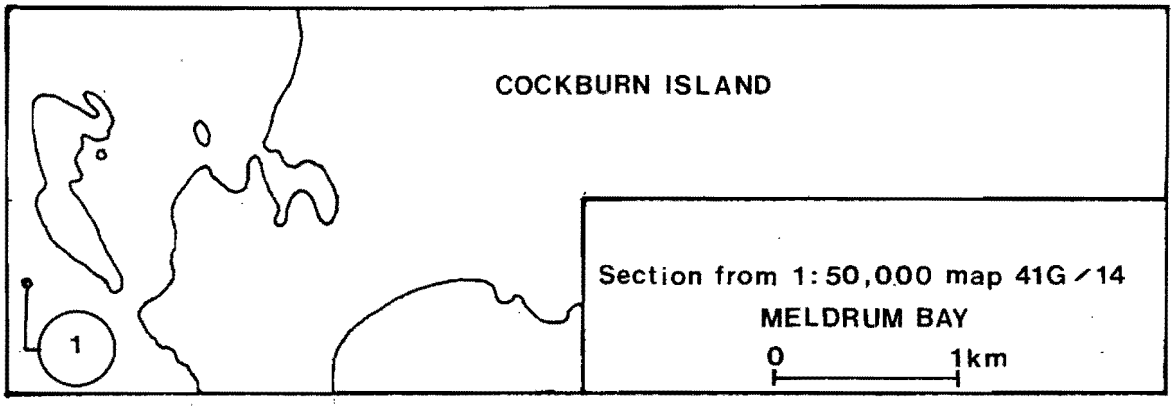
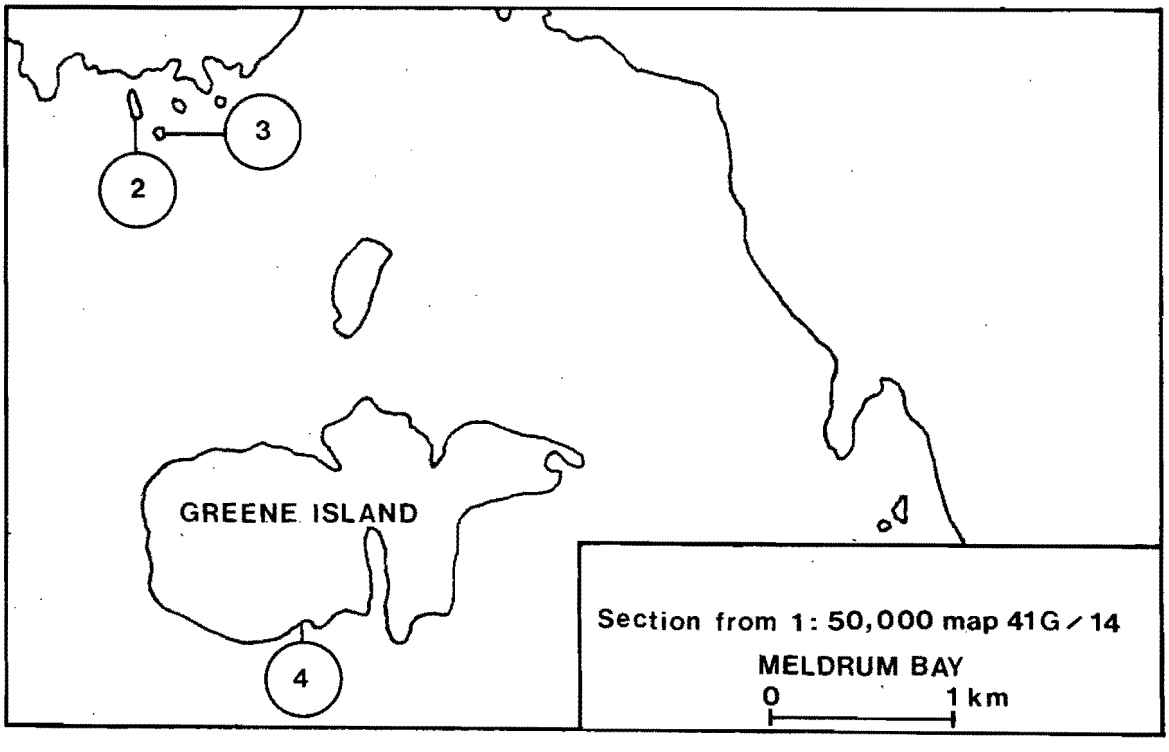
Appendix 15. Colony sites covered by 1:250,000 Topographic Map 41G (West and East).

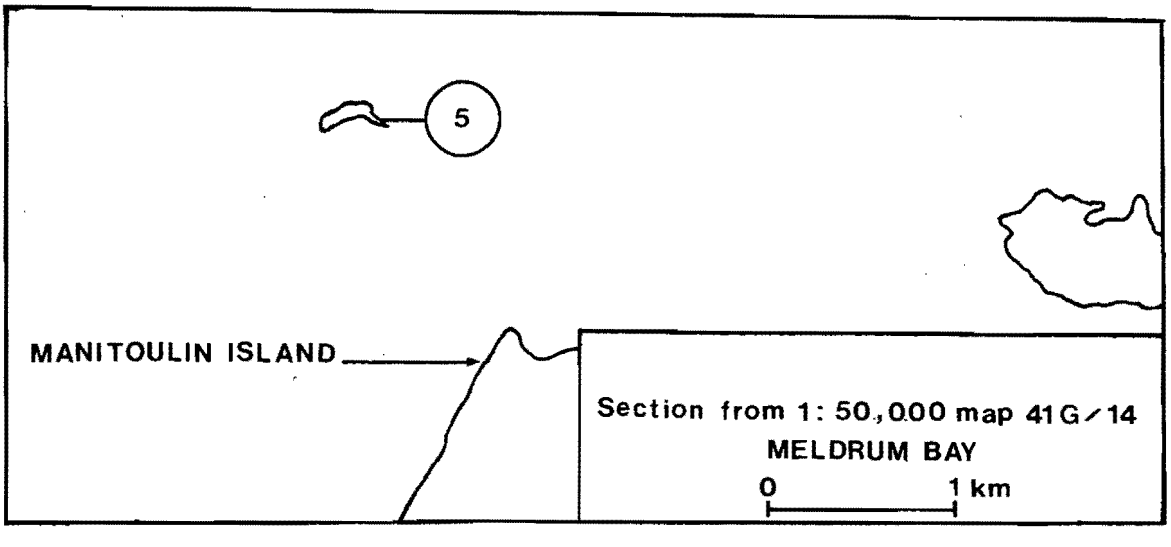


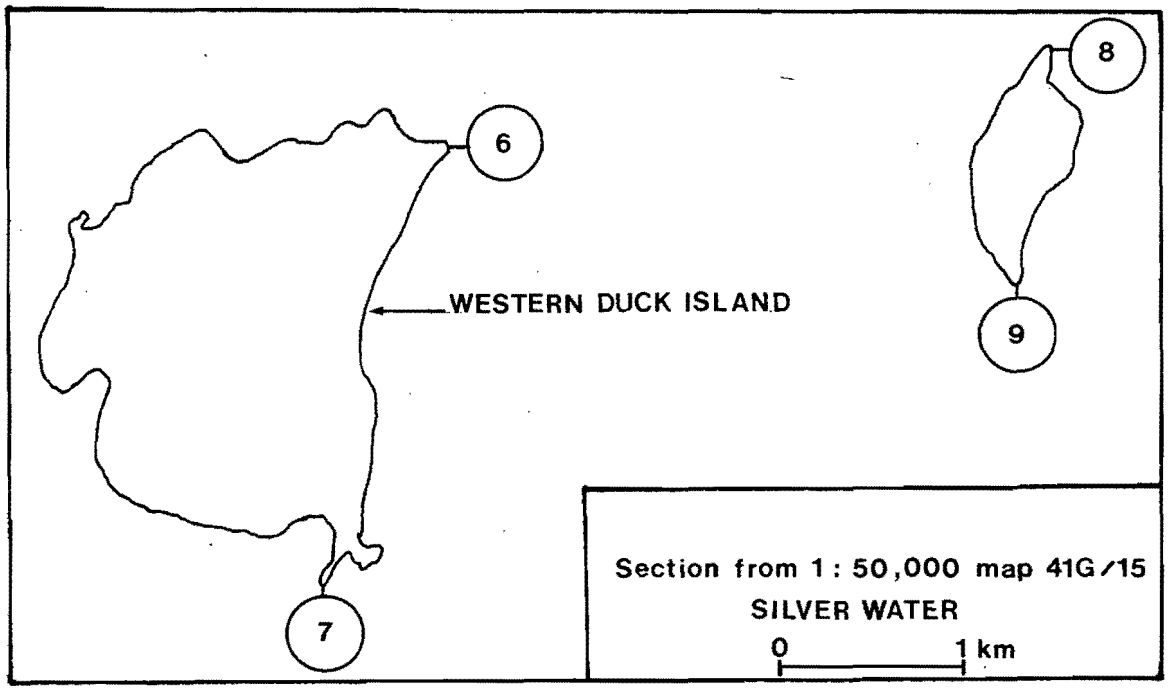

12
13
15
16
17
18
19
6
8
10
11
14
7
9
21 NV
20
22 NV
23
24
25
26
27
30
32
28
33
29
31
36
34 NR
35
CANADA
USA
N
Symbol
Colony present during census years
Solid circle 1989 and 1980
Open circle 1989 only
Asterisk 1980 only
Symbol
No. of nests in 1989
1 - 25
26 - 250
251 - 2500
2501 - 25,000
≥ 25,000
0 5 km

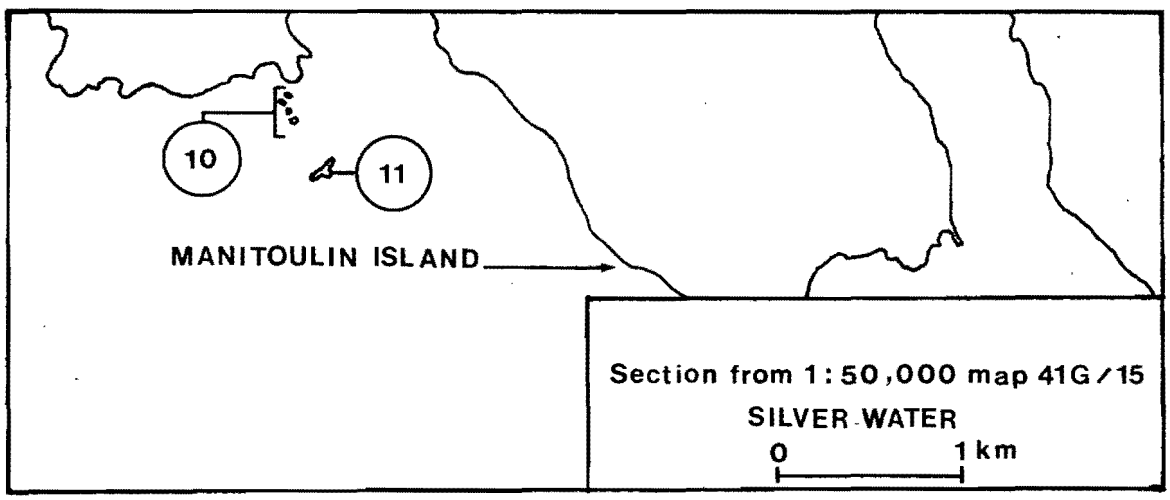
App. 15 (cont'd).

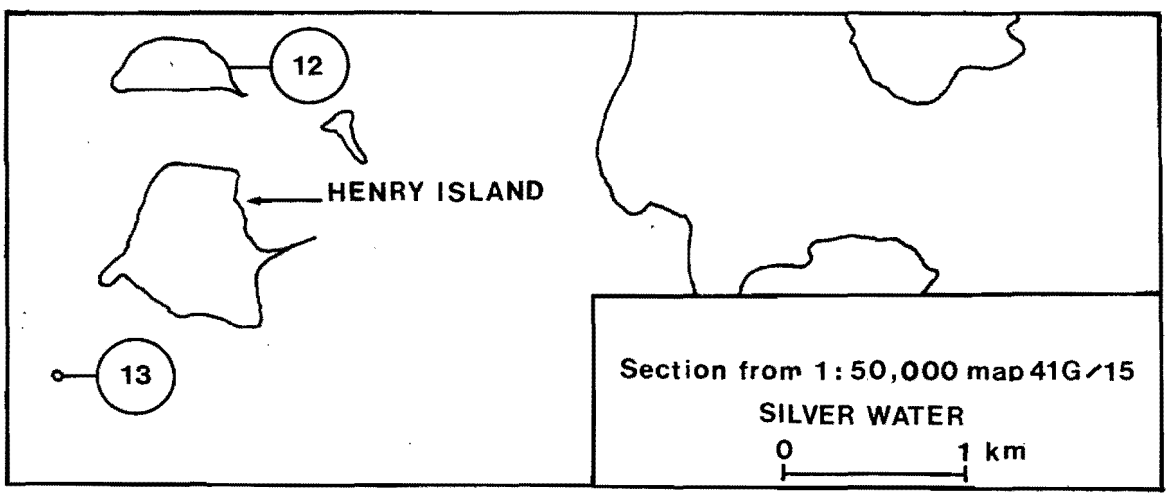

COCKBURN ISLAND
1
Section from 1:50,000 map 41G/14
MELDRUM BAY
0
1km

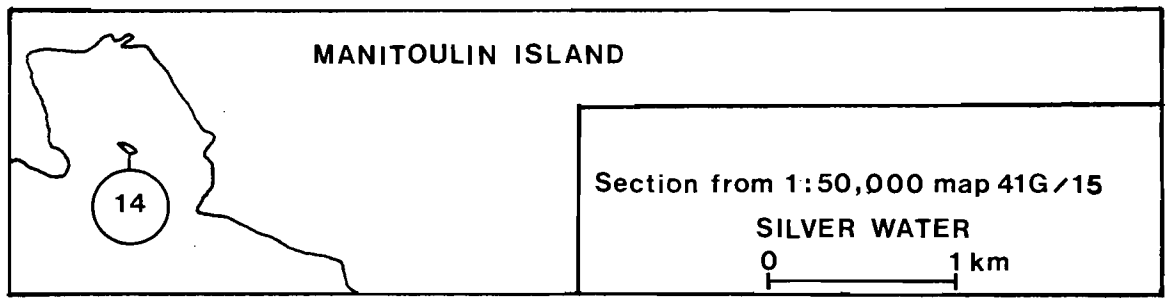

3
2
GREENE ISLAND
4
Section from 1: 50,000 map 41G/14
MELDRUM BAY
0
1 km

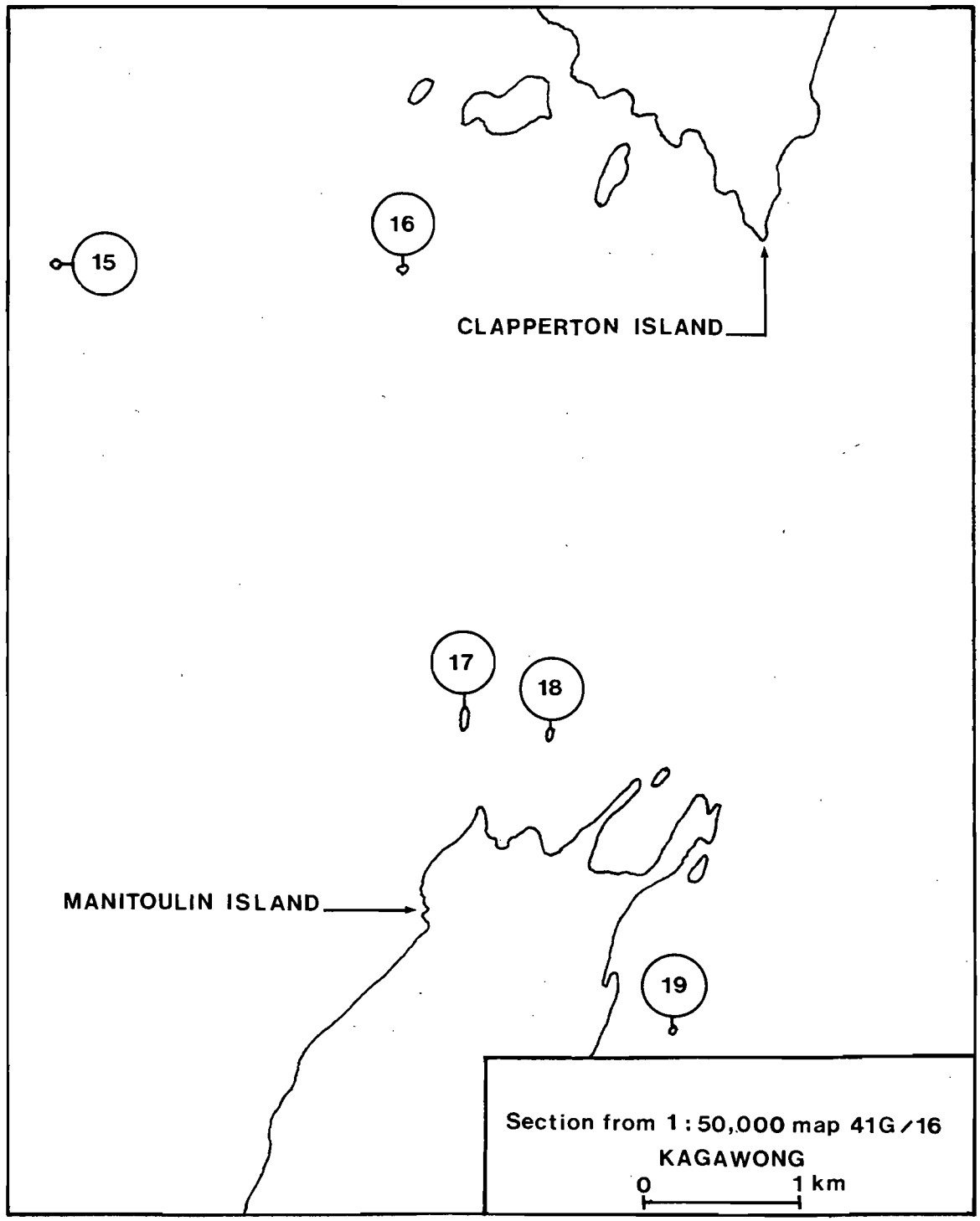

5
MANITOULIN ISLAND
Section from 1: 50,000 map 41G/14
MELDRUM BAY
0
1 km

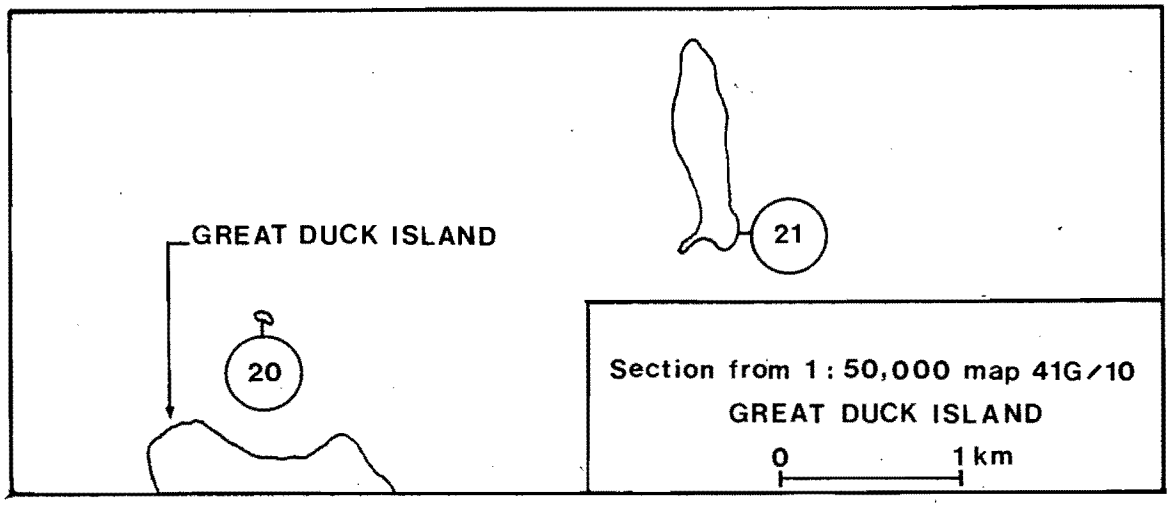

8
6
WESTERN DUCK ISLAND
9
7
Section from 1 : 50,000 map 41G/15
SILVER WATER
0
1 km

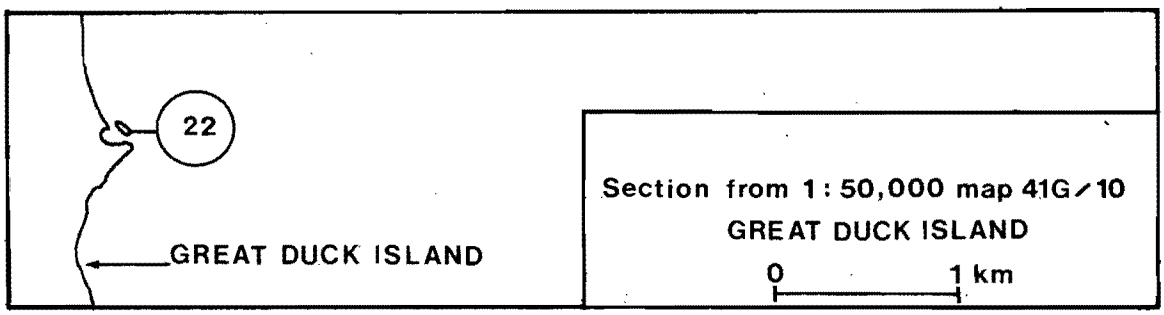

10
11
MANITOULIN ISLAND
Section from 1 : 50,000 map 41G/15
SILVER WATER
0
1 km

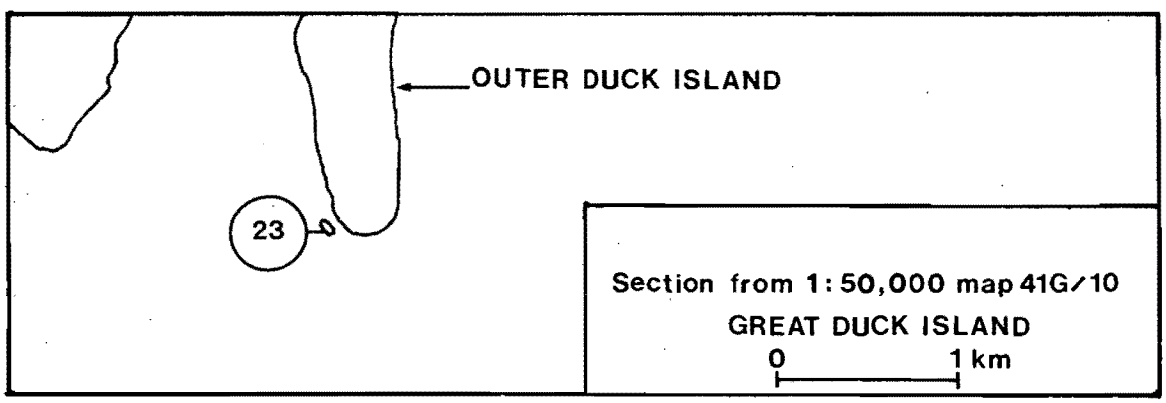

12
HENRY ISLAND
13
Section from 1 : 50,000 map 41G/15
SILVER WATER
0
1 km

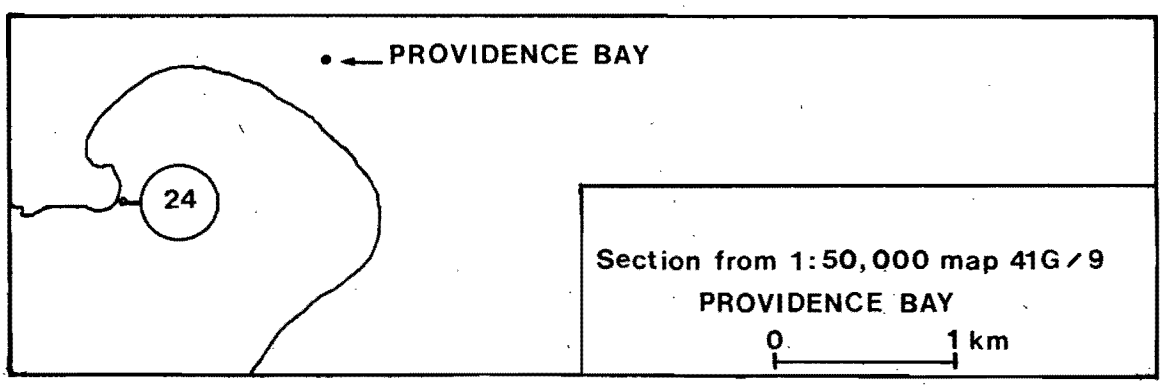

MANITOULIN ISLAND
14
Section from 1:50,000 map 41G/15
SILVER WATER
0
1 km

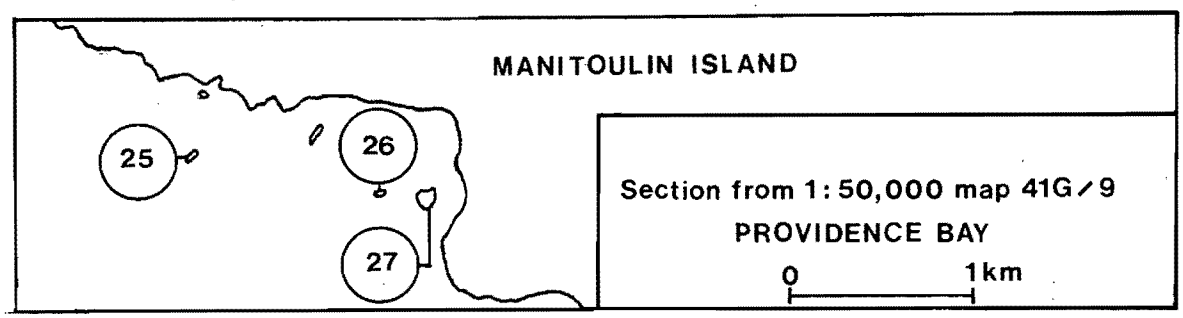

16
15
CLAPPERTON ISLAND
17
18
MANITOULIN ISLAND
19
Section from 1:50,000 map 41G/16
KAGAWONG
0
1 km

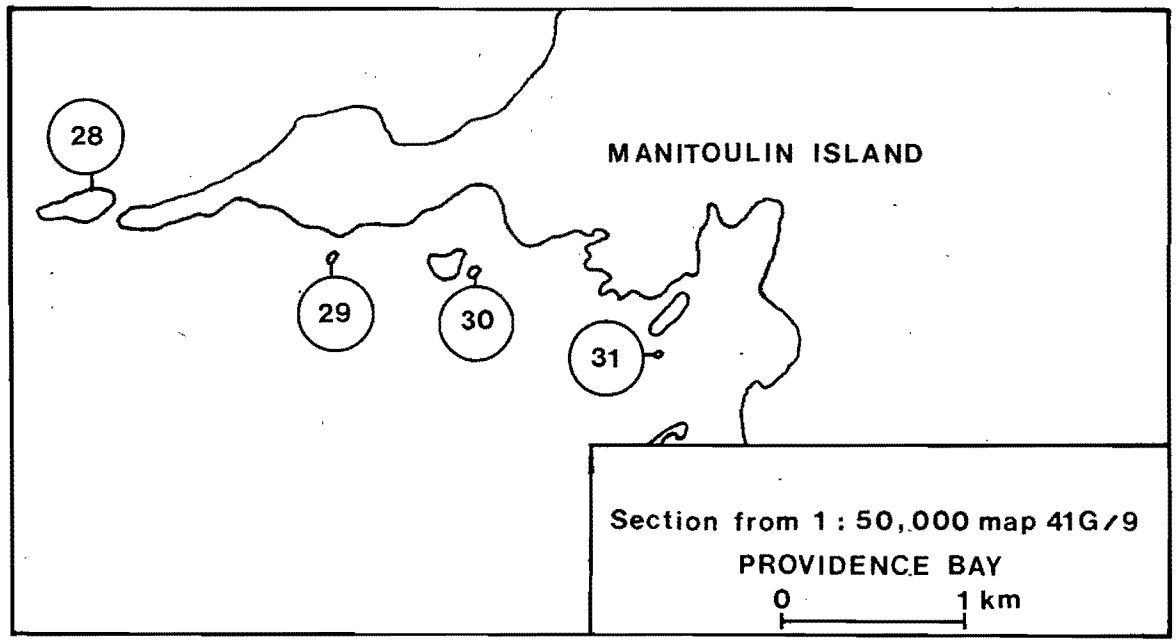

GREAT DUCK ISLAND
21
20
Section from 1 : 50,000 map 41G/10
GREAT DUCK ISLAND
0 1 km

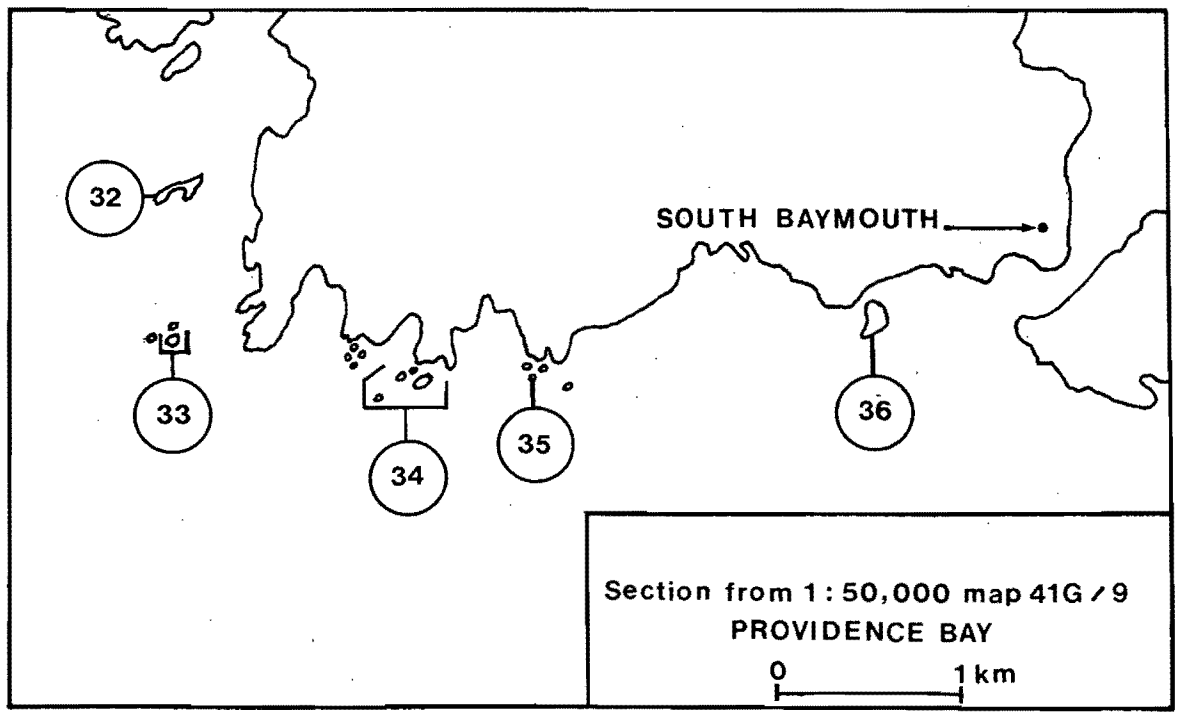

22
GREAT DUCK ISLAND
Section from 1 : 50,000 map 41G/10
GREAT DUCK ISLAND
0 1 km


OUTER DUCK ISLAND
23
Section from 1 : 50,000 map 41G/10
GREAT DUCK ISLAND
0 1 km


PROVIDENCE BAY
24
Section from 1 : 50,000 map 41G/9
PROVIDENCE BAY
0 1 km


MANITOULIN ISLAND
25
26
27
Section from 1:50,000 map 41G/9
PROVIDENCE BAY
0
1km


28
MANITOULIN ISLAND
29
30
31
Section from 1:50,000 map 41G/9
PROVIDENCE BAY
0
1 km


32
SOUTH BAYMOUTH
33
34
35
36
Section from 1:50,000 map 41G/9
PROVIDENCE BAY
0
1 km

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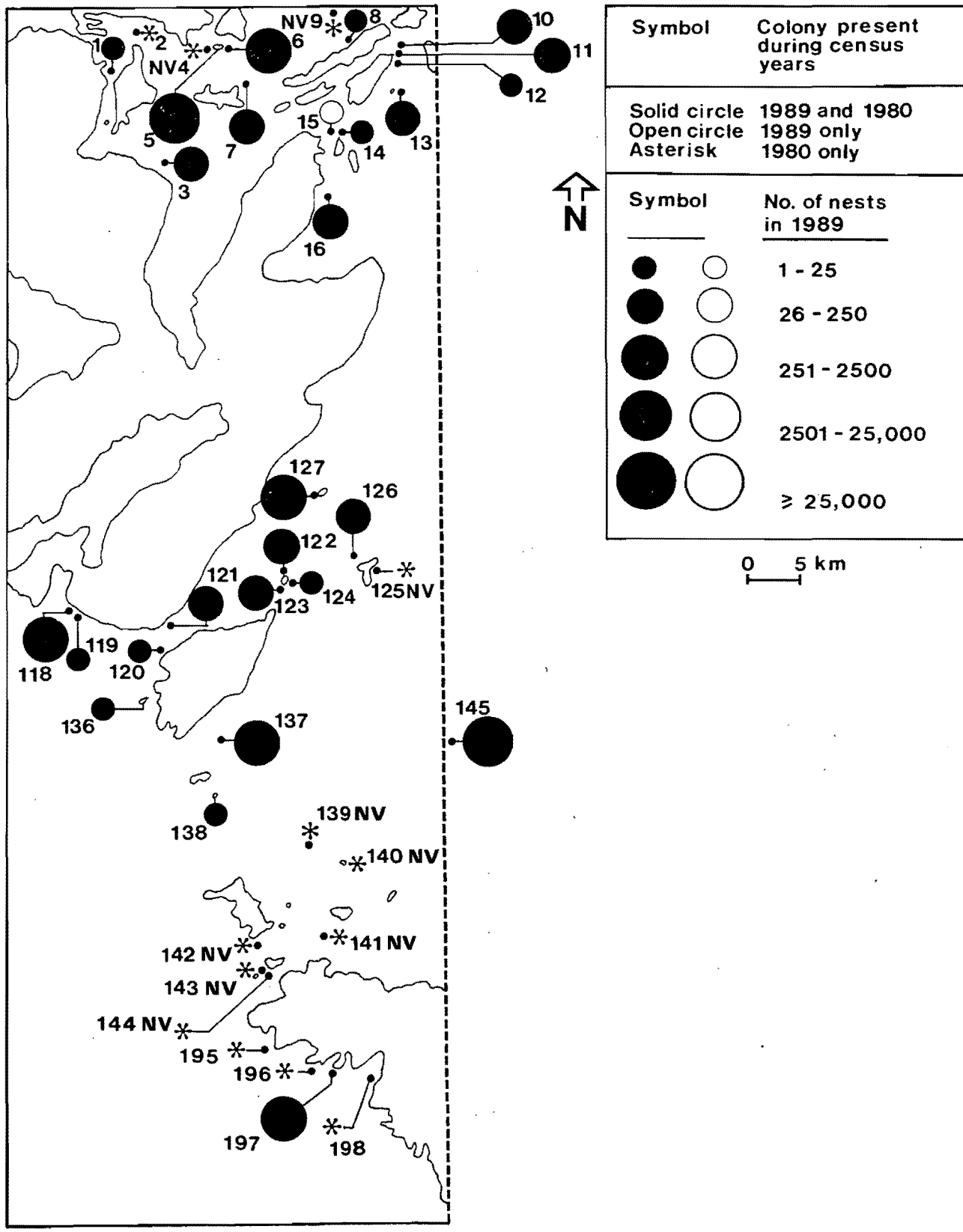
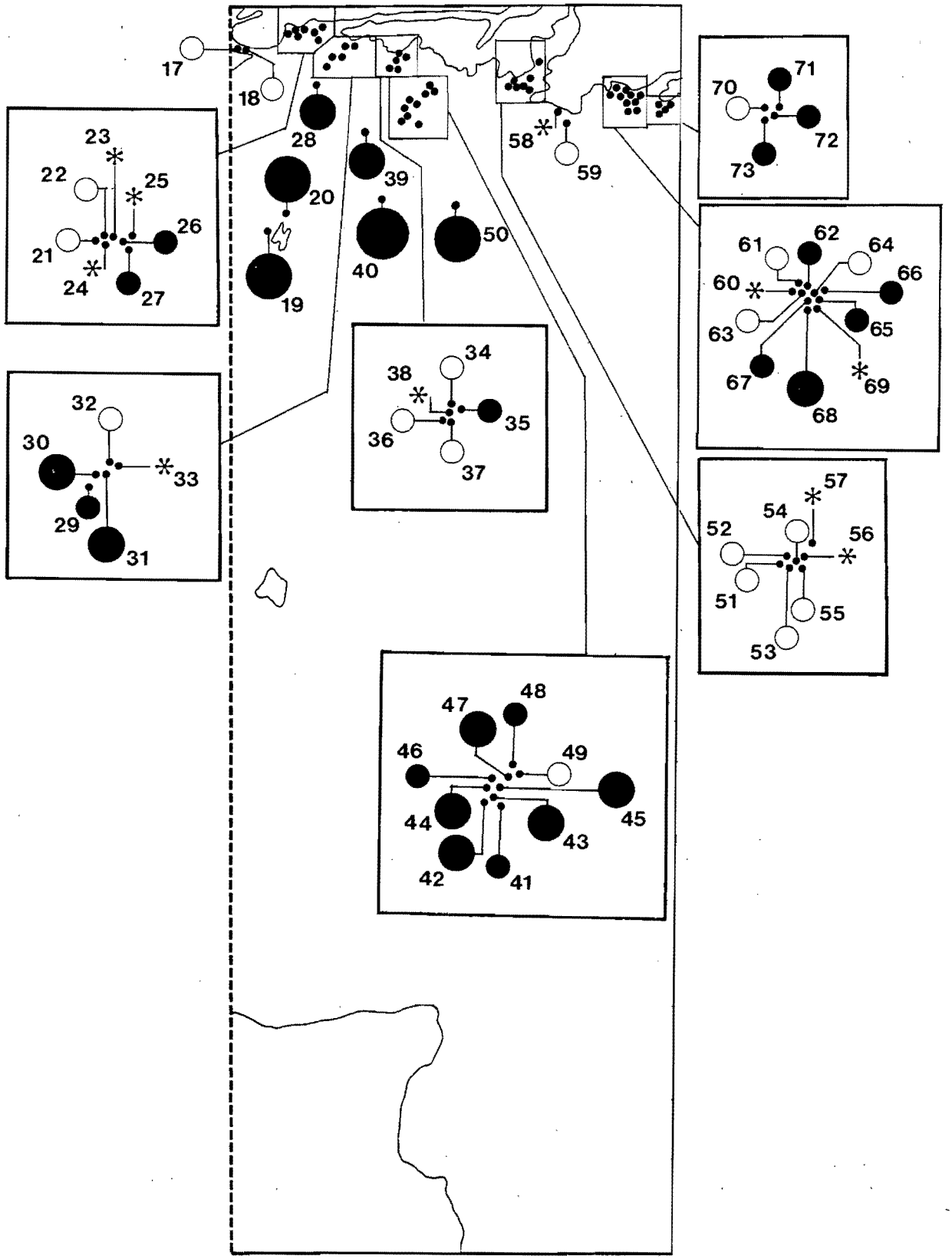
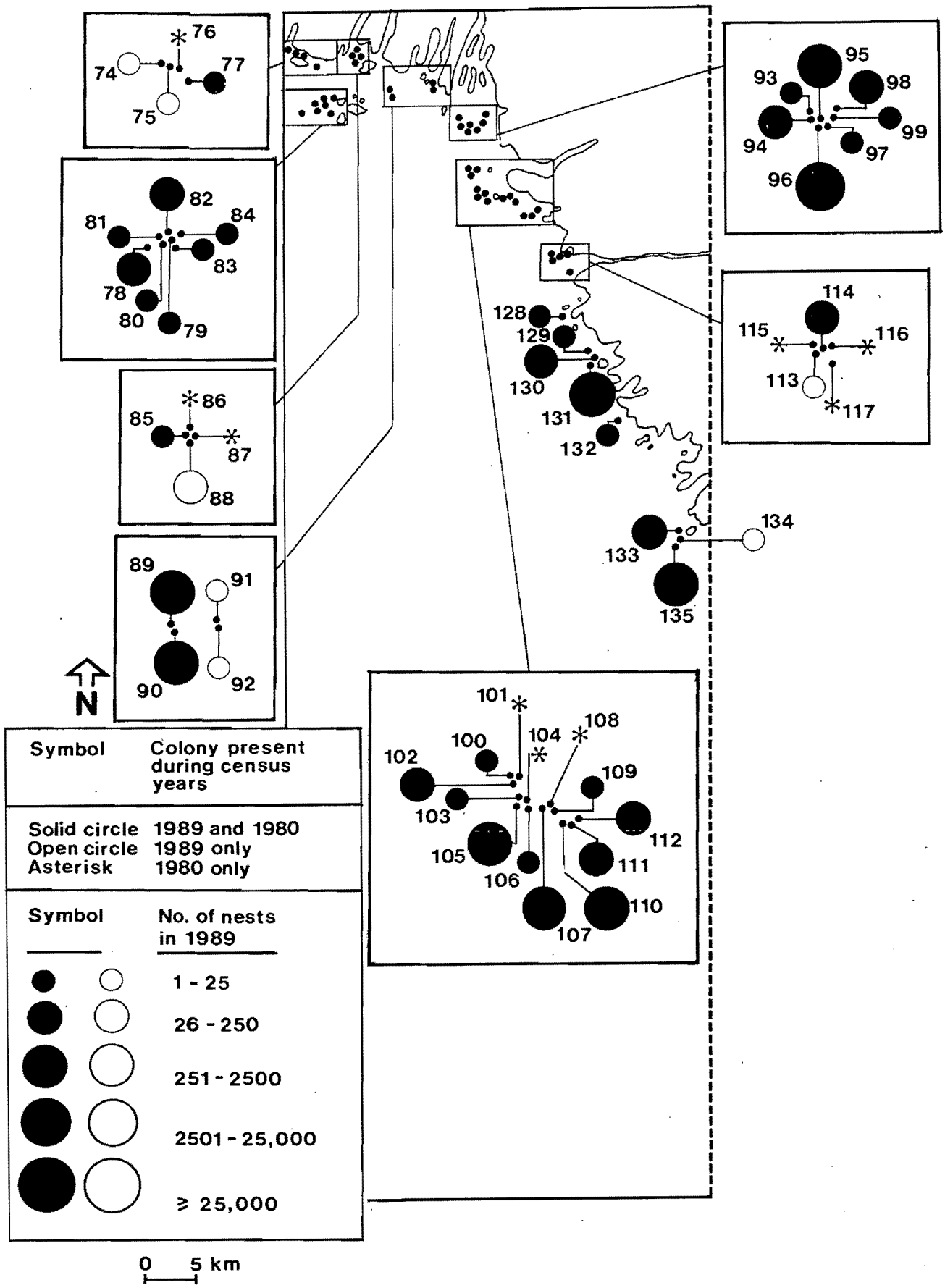
Appendix 16. Colony sites covered by 1:250,000 Topographic Map 41H (W. part of West half).



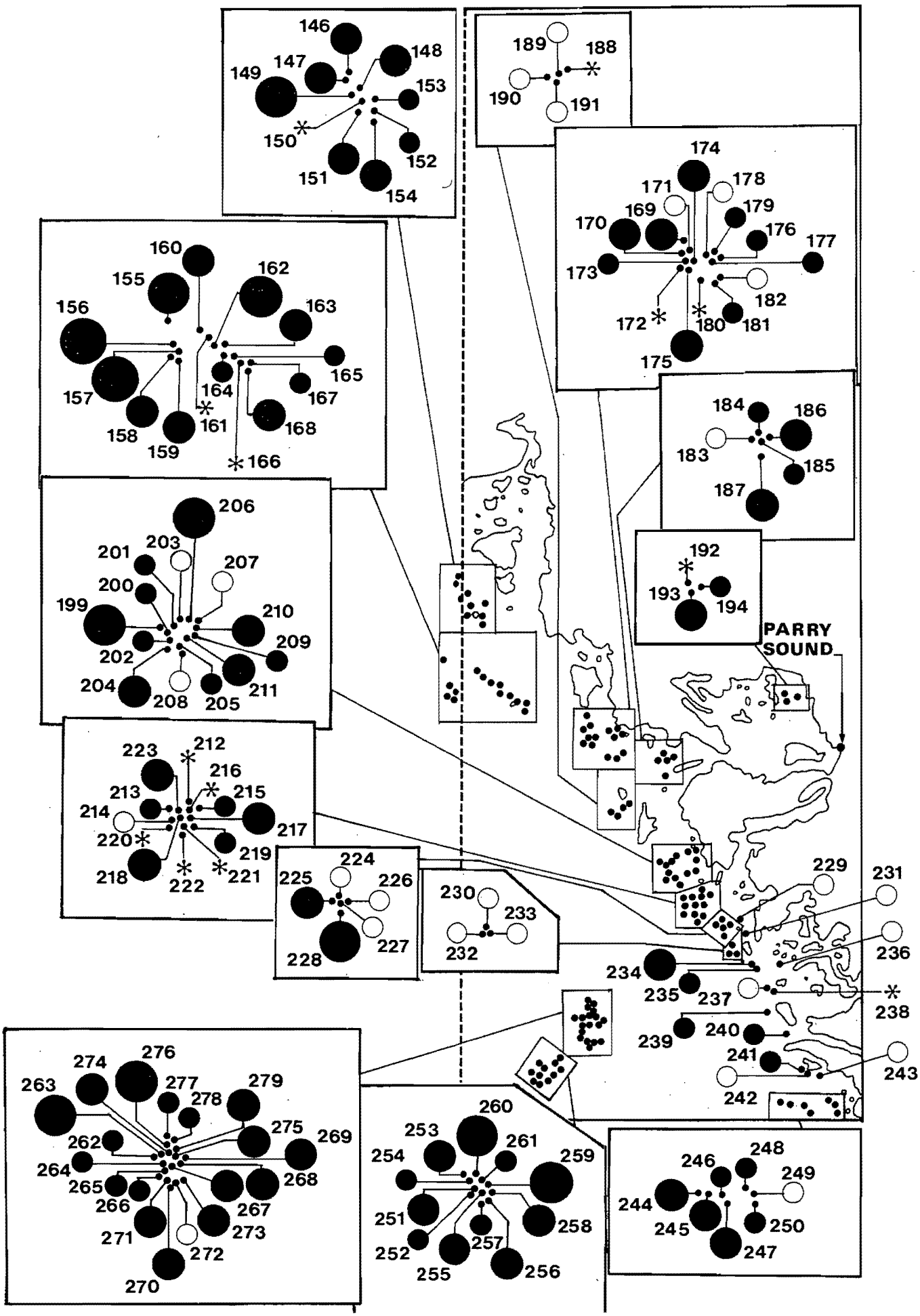
Appendix 16. Colony sites covered by 1:250,000 Topographic Map 41H (E. part of West half).

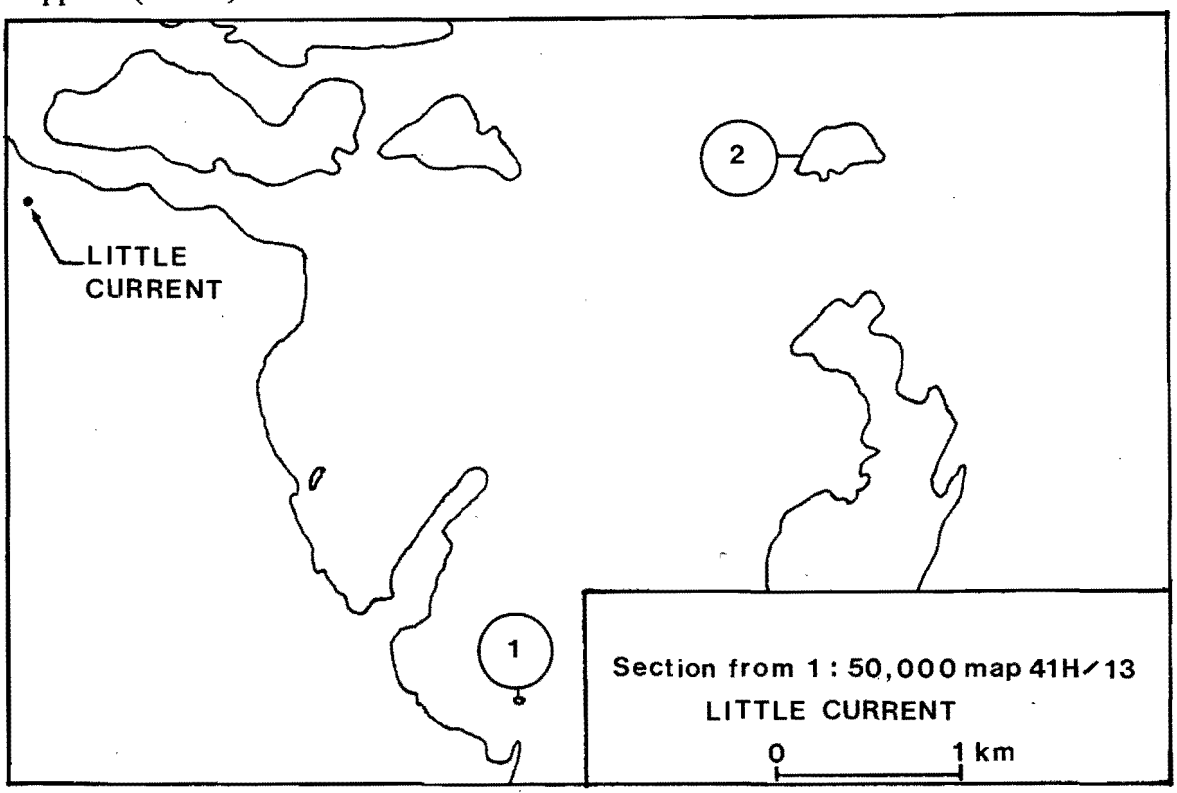


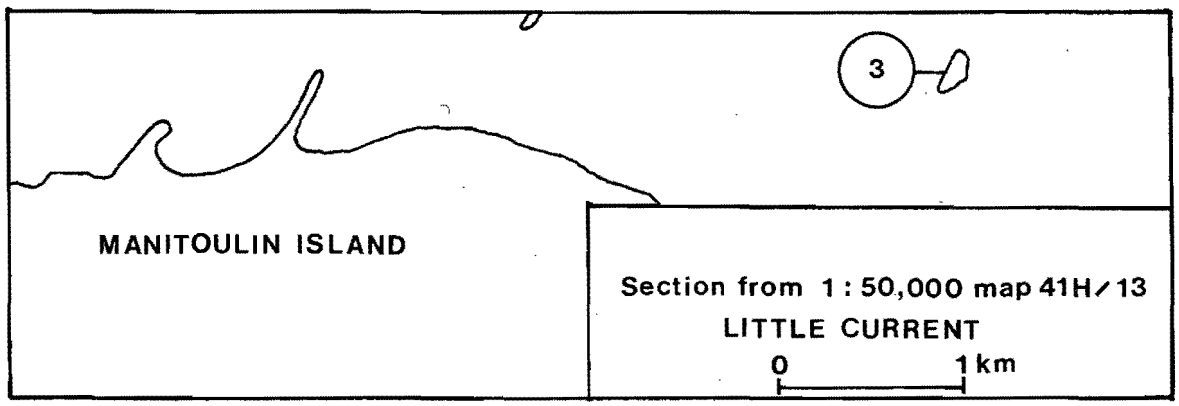
Appendix 16. Colony sites covered by 1:250,000 Topographic Map 41H (W. part of East half).

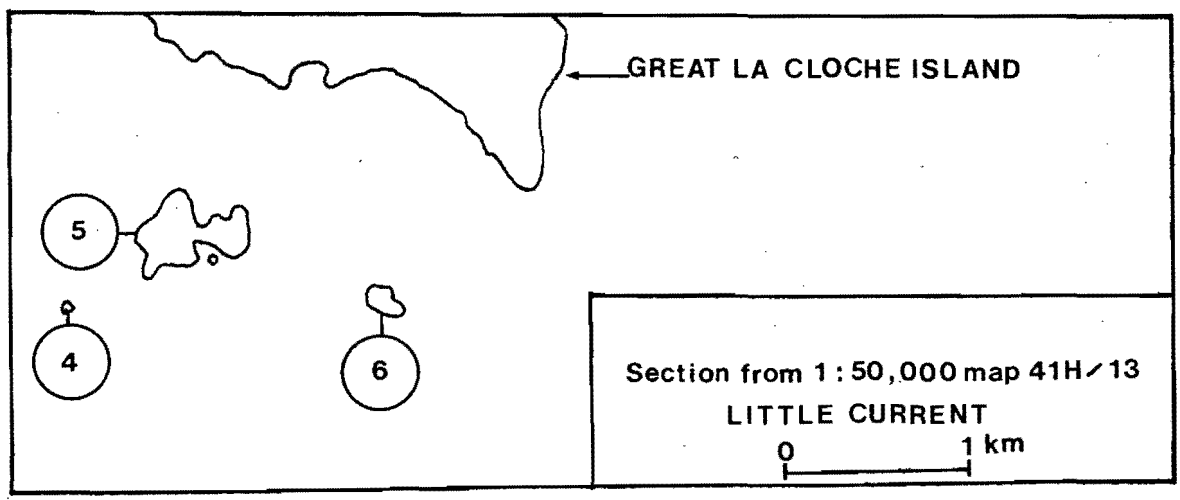


Appendix 16. Colony sites covered by 1:250,000 Topographic Map 41H (E. part of East half).

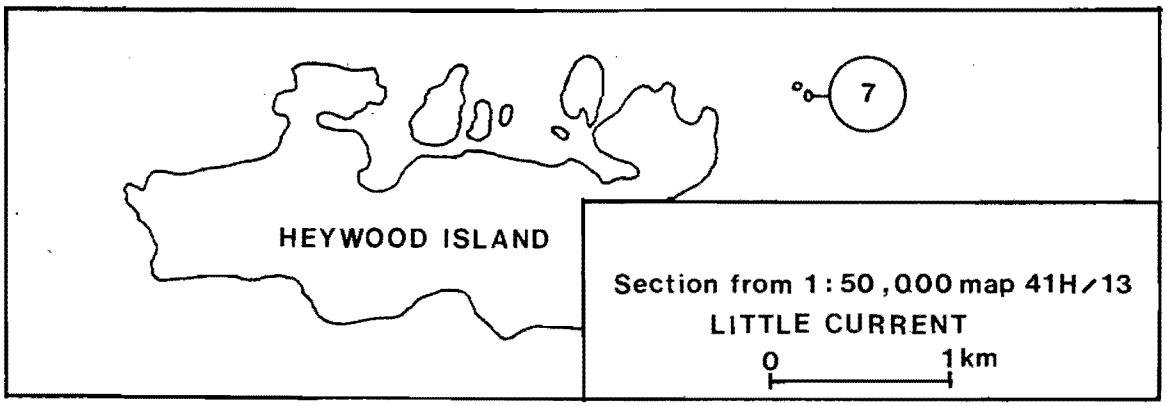


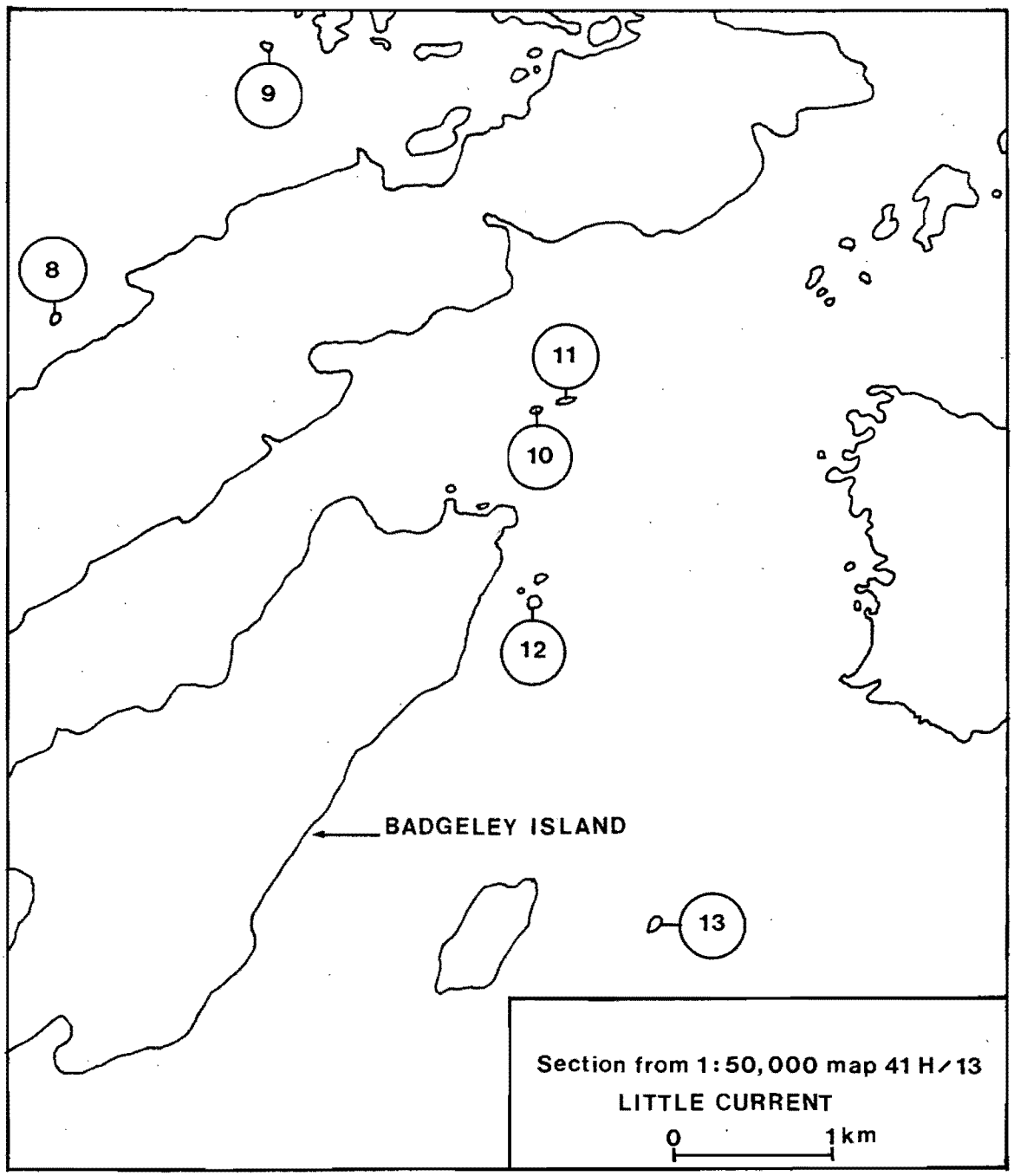

LITTLE
CURRENT
2
1
Section from 1 : 50,000 map 41H/13
LITTLE CURRENT
0
1 km


3
MANITOULIN ISLAND
Section from 1 : 50,000 map 41H/13
LITTLE CURRENT
0
1 km

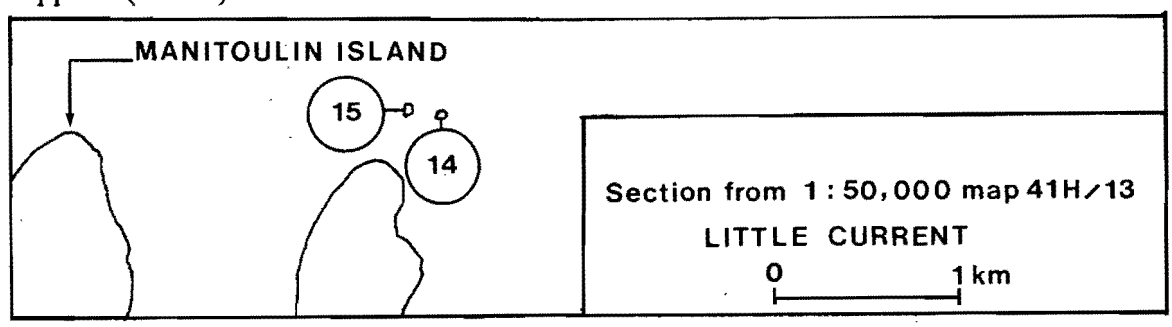

GREAT LA CLOCHE ISLAND
5
4
6
Section from 1 : 50,000 map 41H/13
LITTLE CURRENT
0
1 km

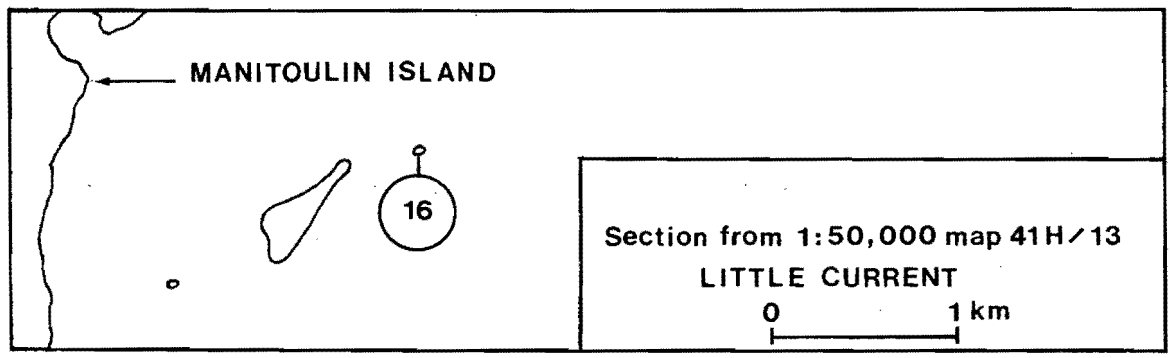
App. 16 (cont'd).

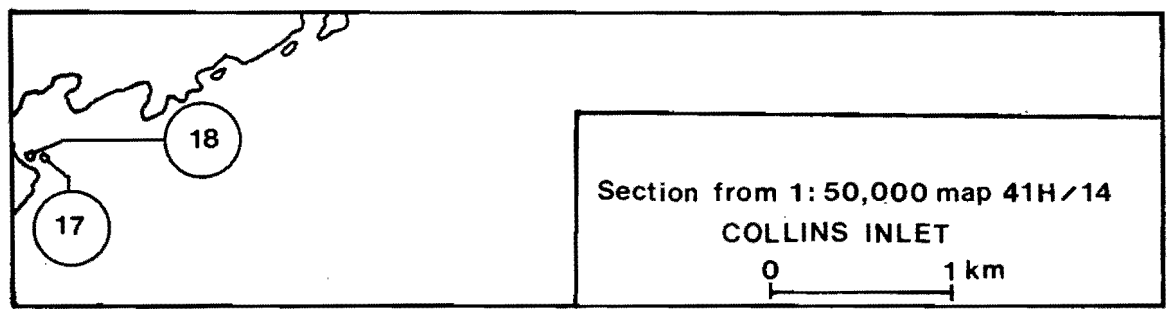

7
HEYWOOD ISLAND
Section from 1:50,000 map 41H/13
LITTLE CURRENT
0
1km

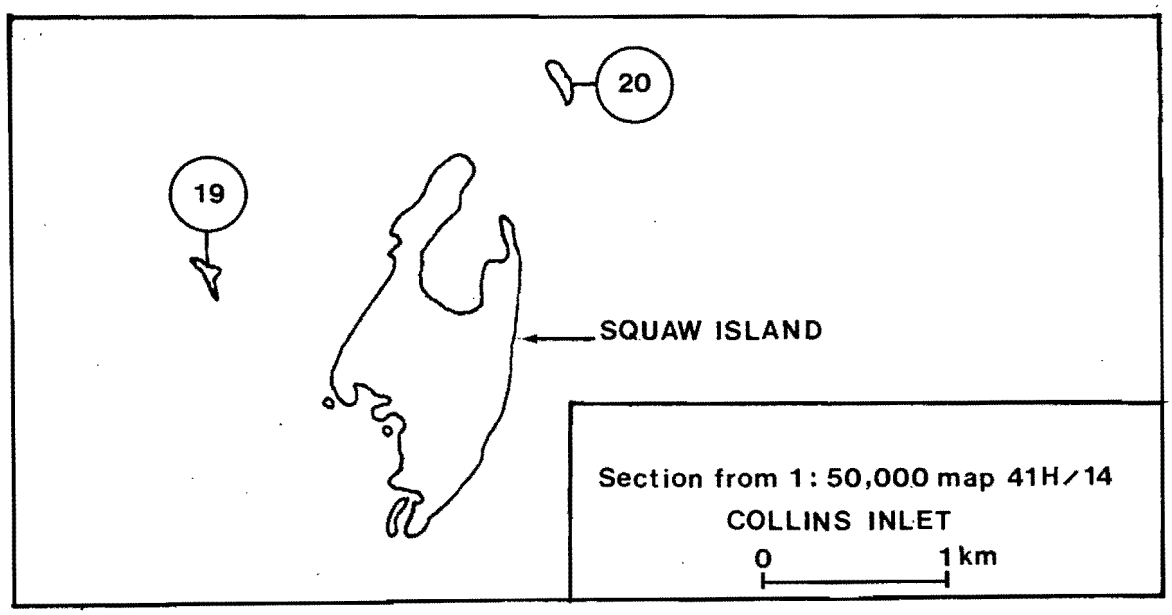

9
8
11
10
12
BADGELEY ISLAND
13
Section from 1:50,000 map 41 H/13
LITTLE CURRENT
0
1km

App. 16 (cont'd).

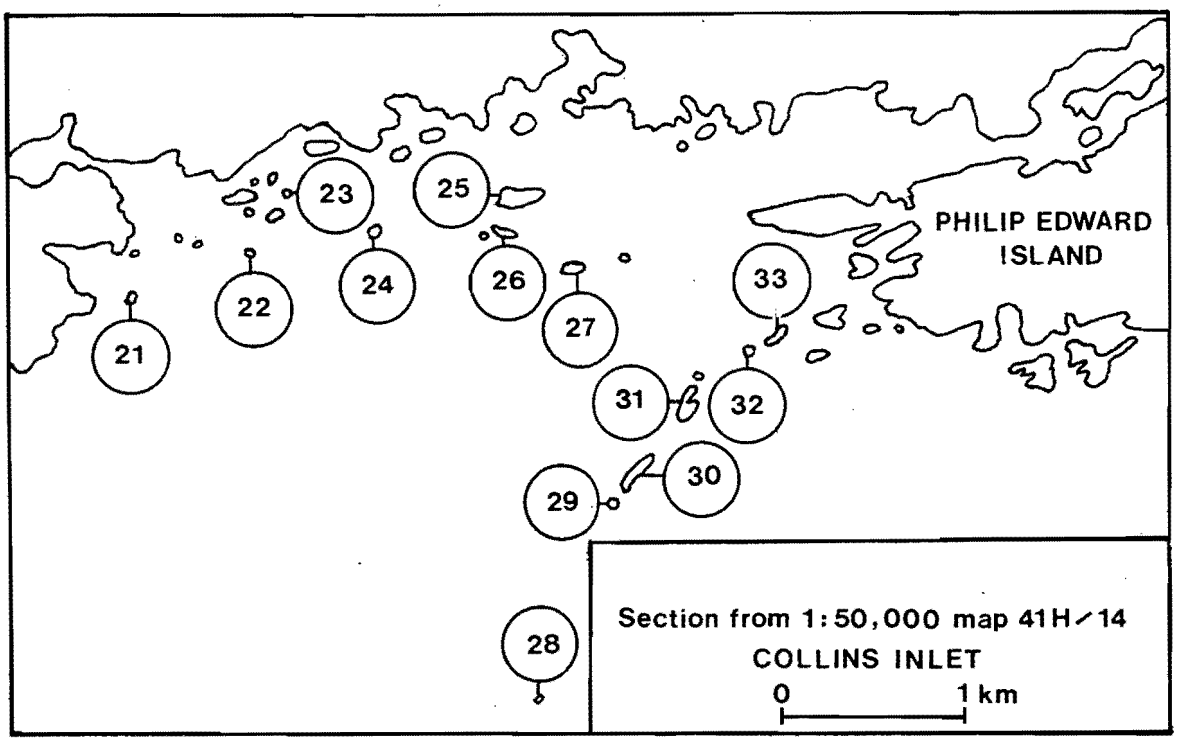

MANITOULIN ISLAND
15
14
Section from 1:50,000 map 41H/13
LITTLE CURRENT
0
1 km

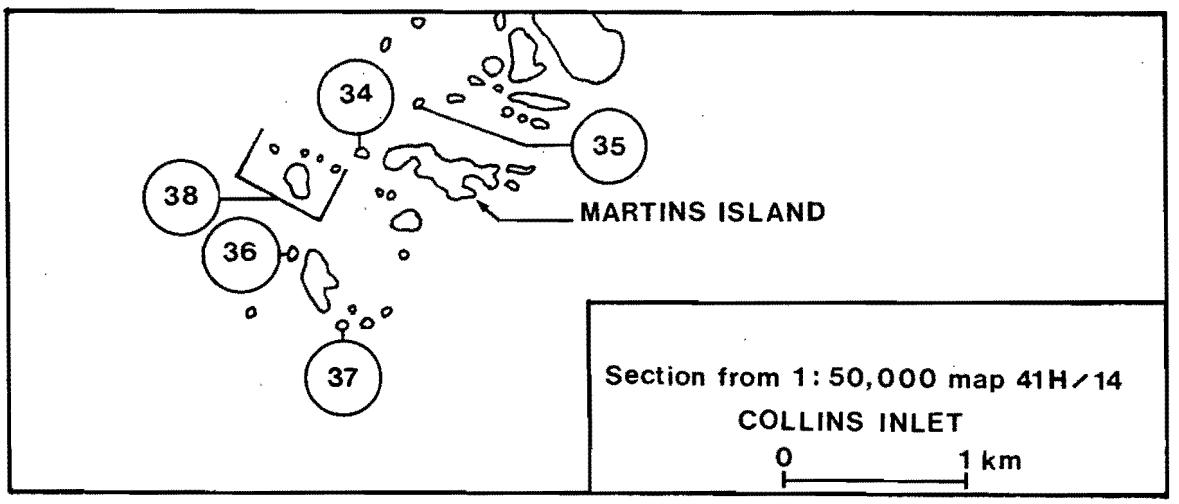

MANITOULIN ISLAND
16
Section from 1:50,000 map 41H/13
LITTLE CURRENT
0
1 km


18
17
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

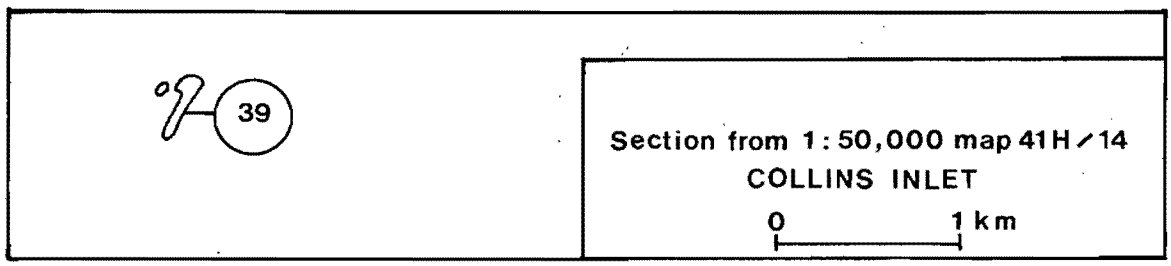

20
19
SQUAW ISLAND
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

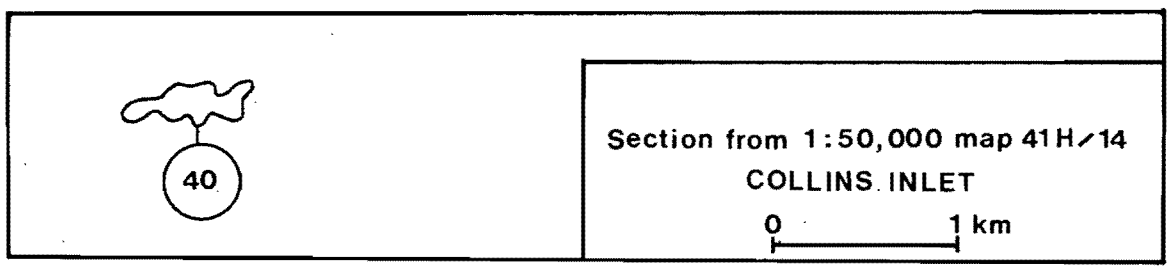
App. 16 (cont'd).

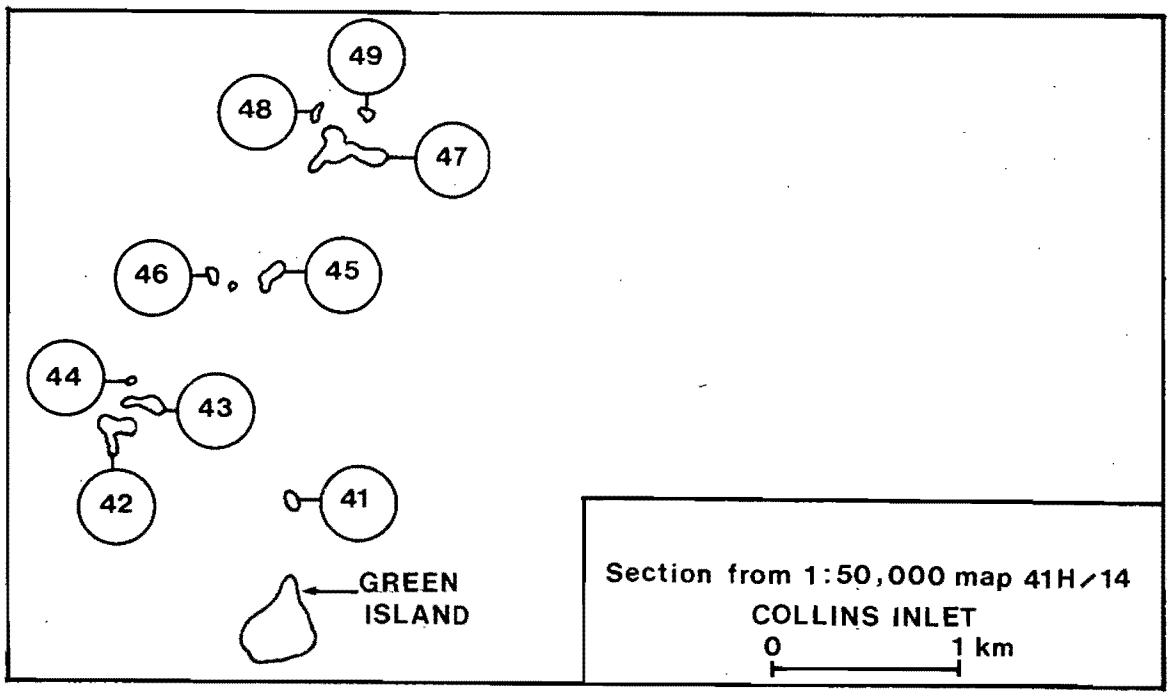

PHILIP EDWARD ISLAND
21
22
23
24
25
26
27
28
29
30
31
32
33
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

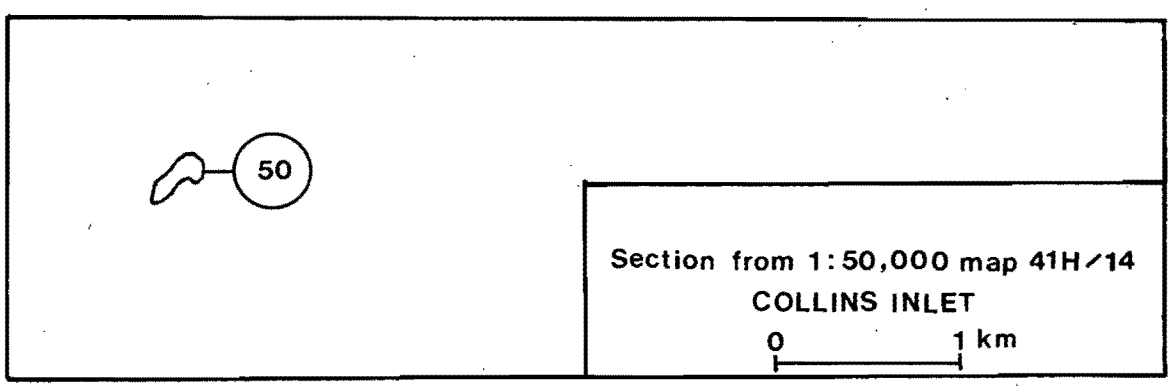

34
35
38
36
37
MARTINS ISLAND
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

App. 16 (cont'd).

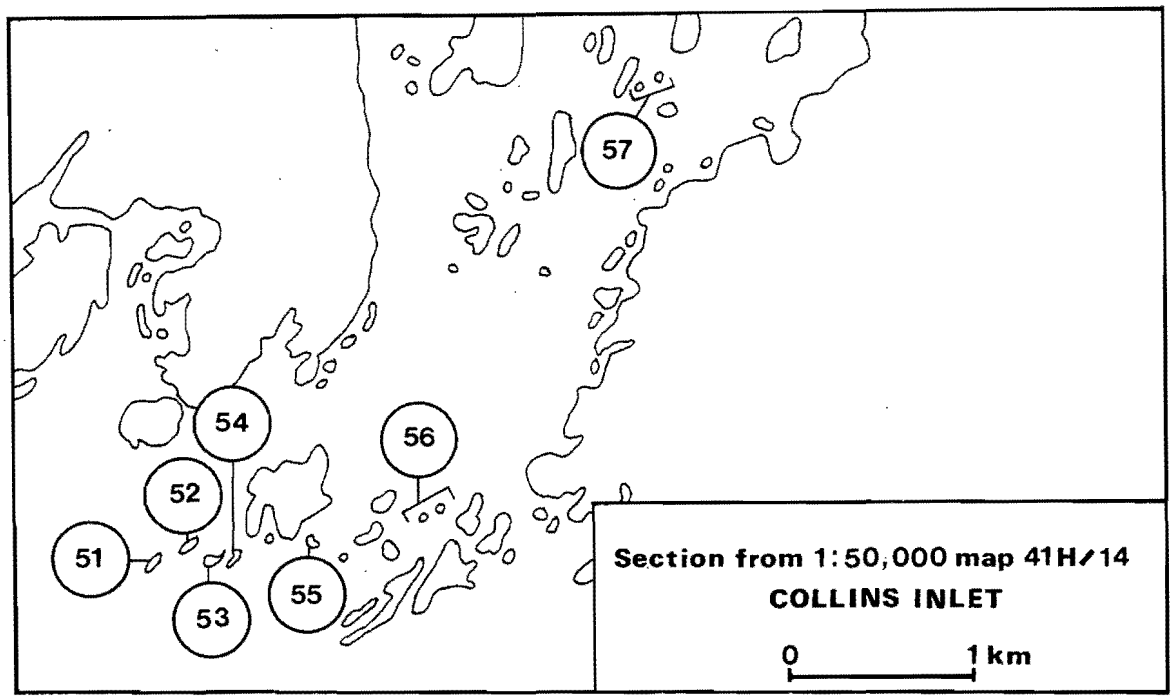

39
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

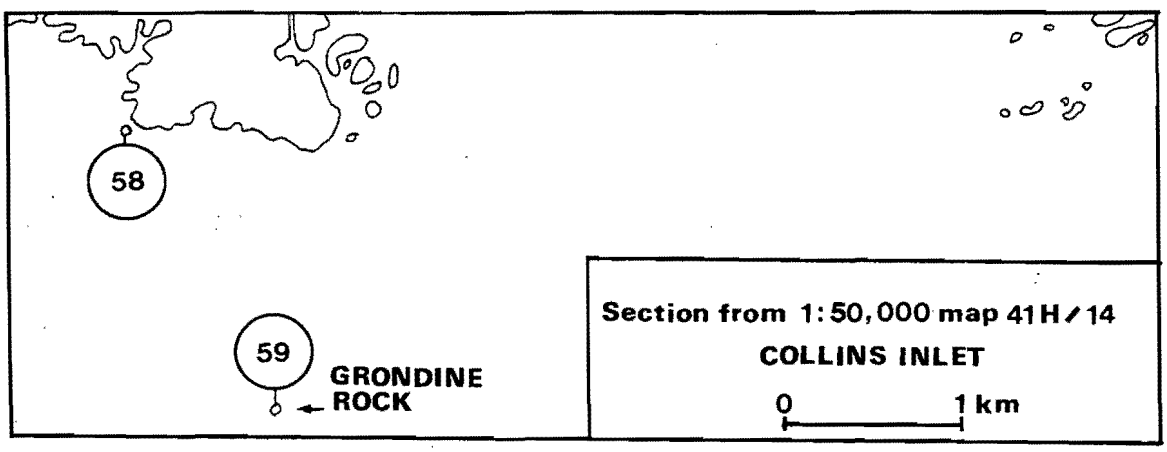

40
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

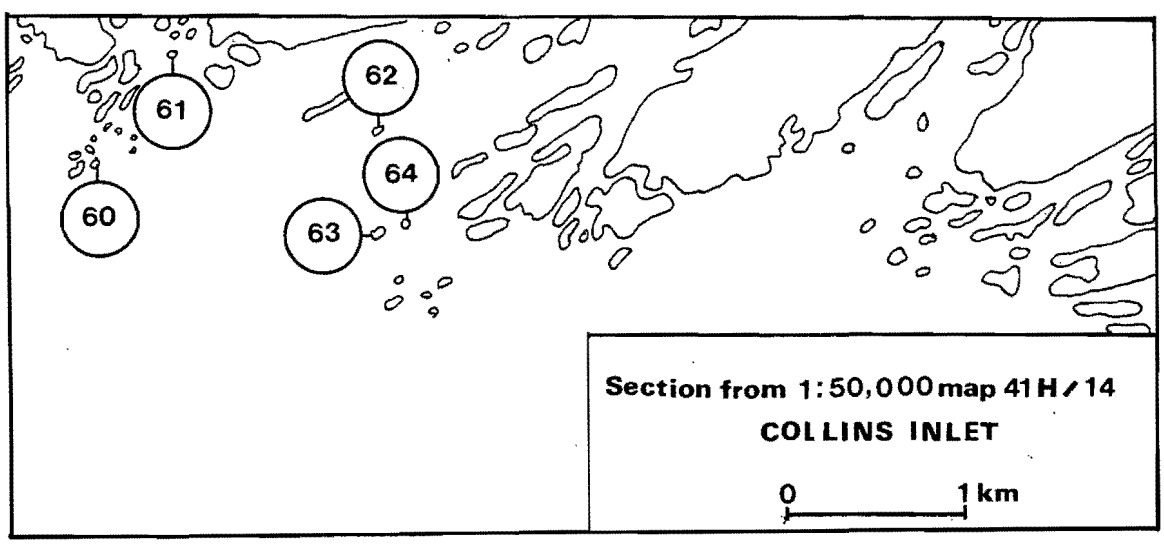

49
48
47
46
45
44
43
42
41
GREEN
ISLAND
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

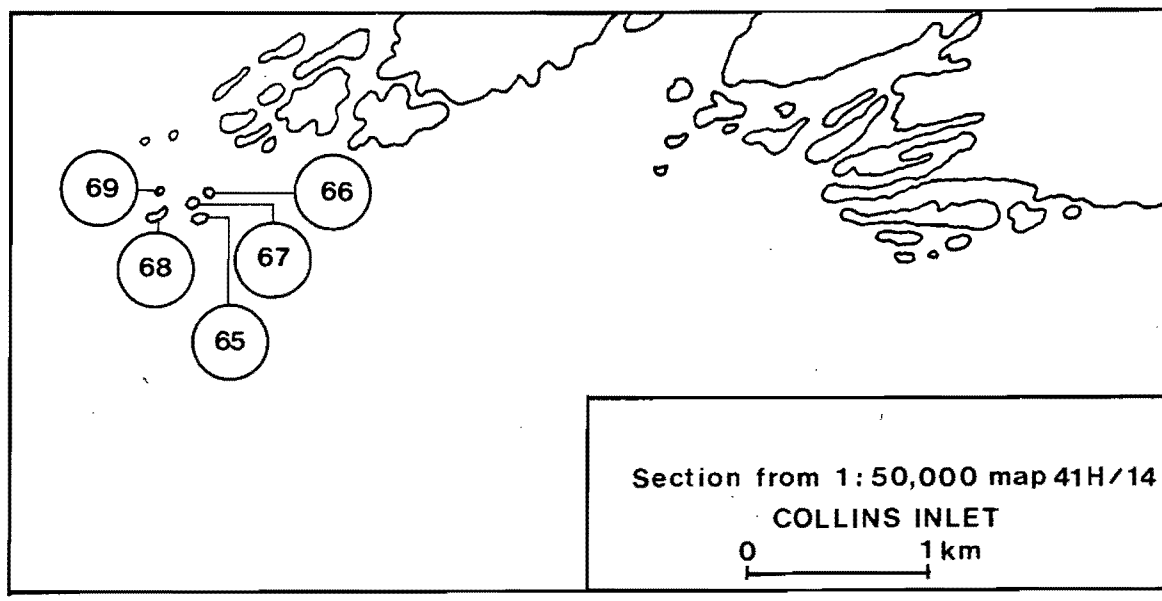

50
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

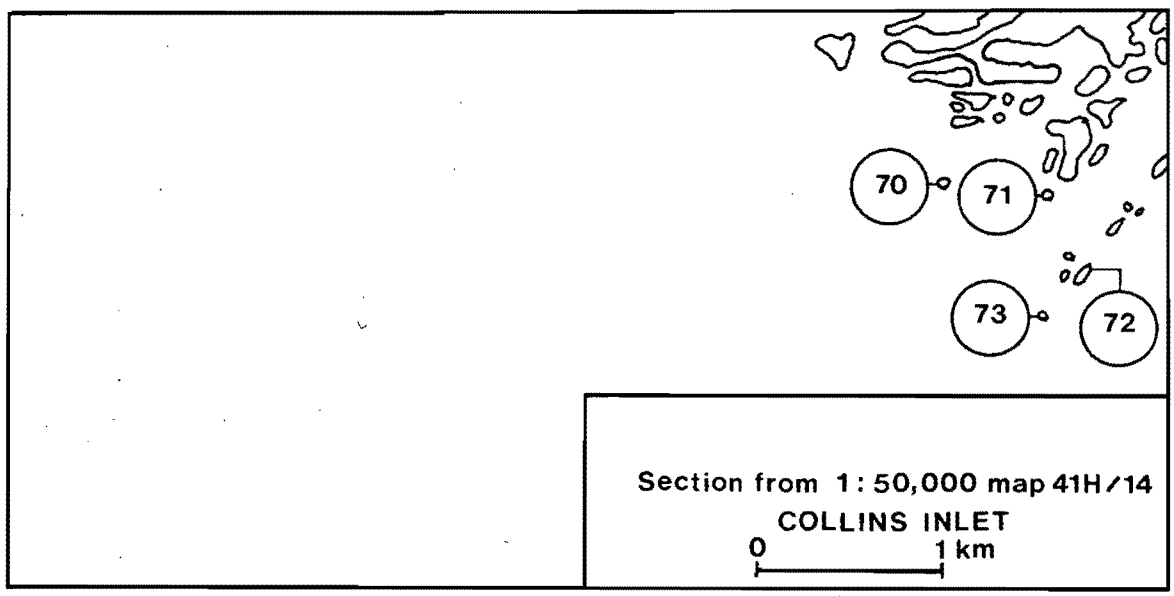
App. 16 (cont'd).

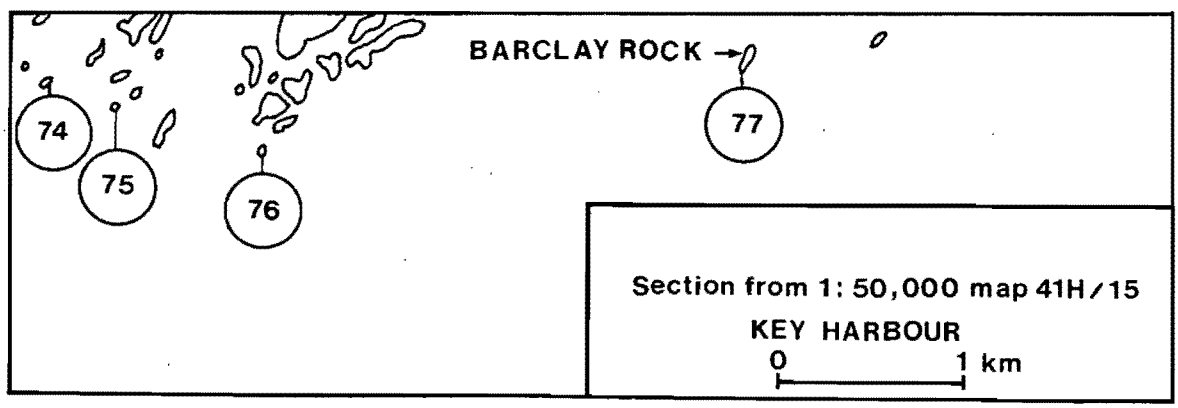

57
54
56
52
51
55
53
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km


58
59
GRONDINE ROCK
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

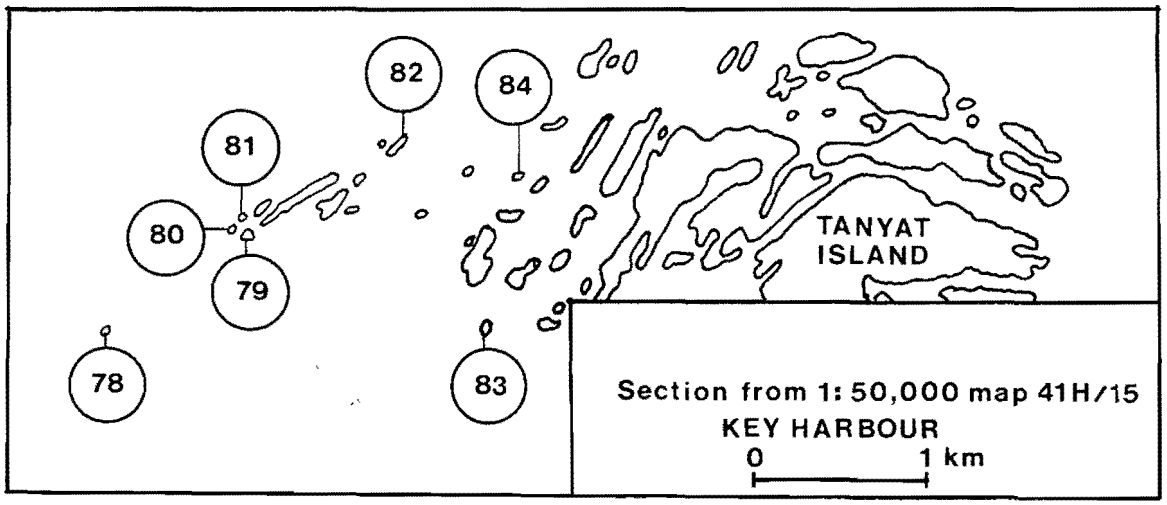

61
62
64
60
63
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

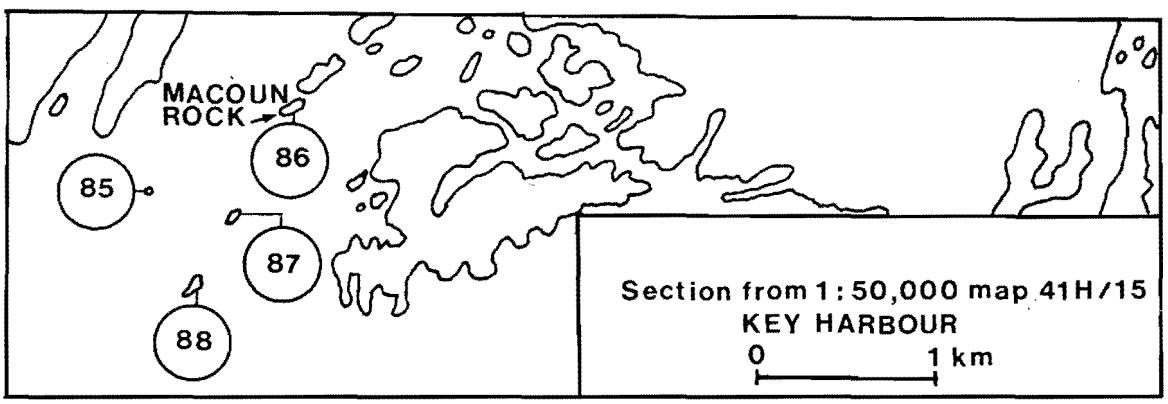

69
66
68
67
65
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km

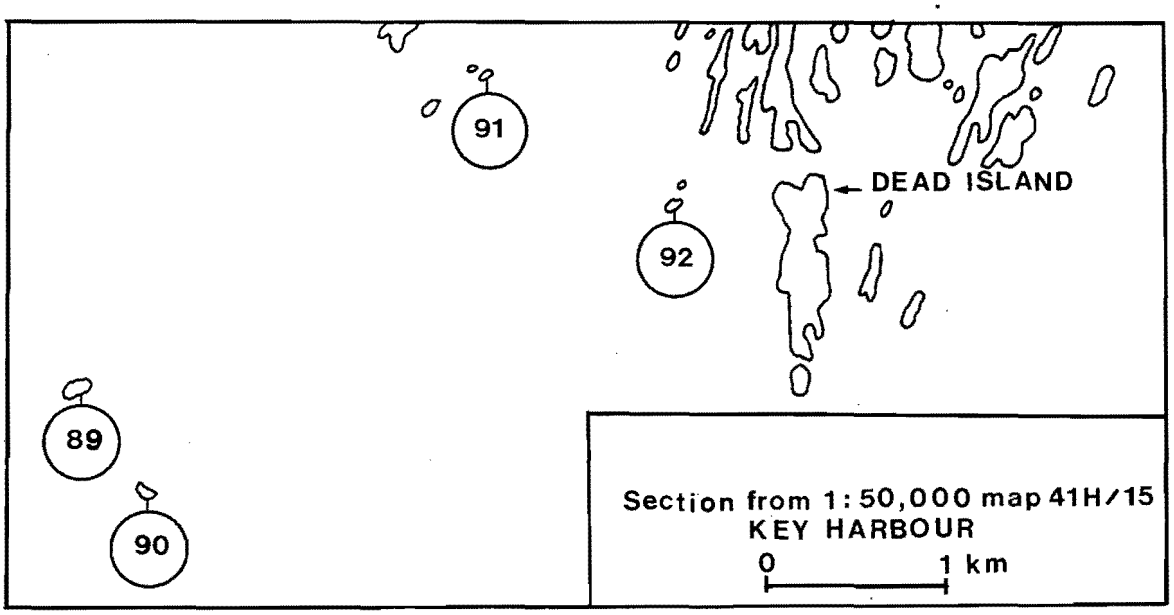

70
71
73
72
Section from 1:50,000 map 41H/14
COLLINS INLET
0
1 km


BARCLAY ROCK
74
75
76
77
Section from 1:50,000 map 41H/15
KEY HARBOUR
0
1 km

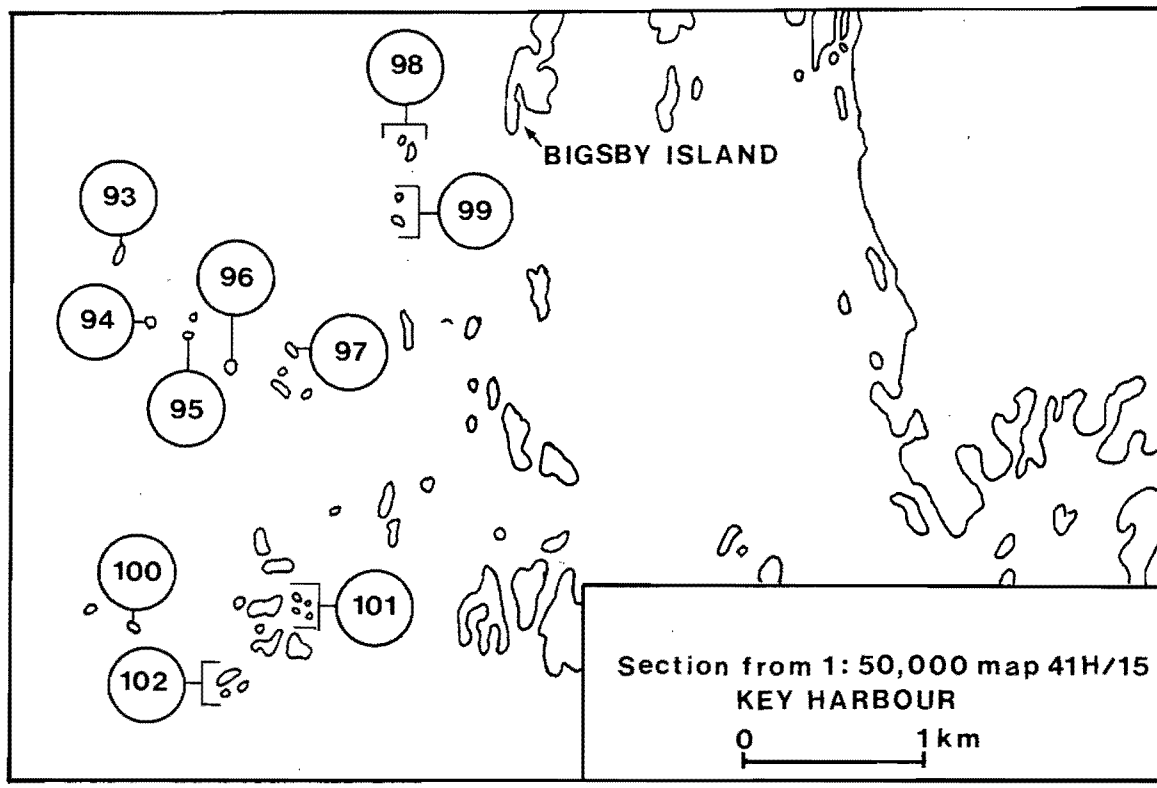
App. 16 (cont'd).

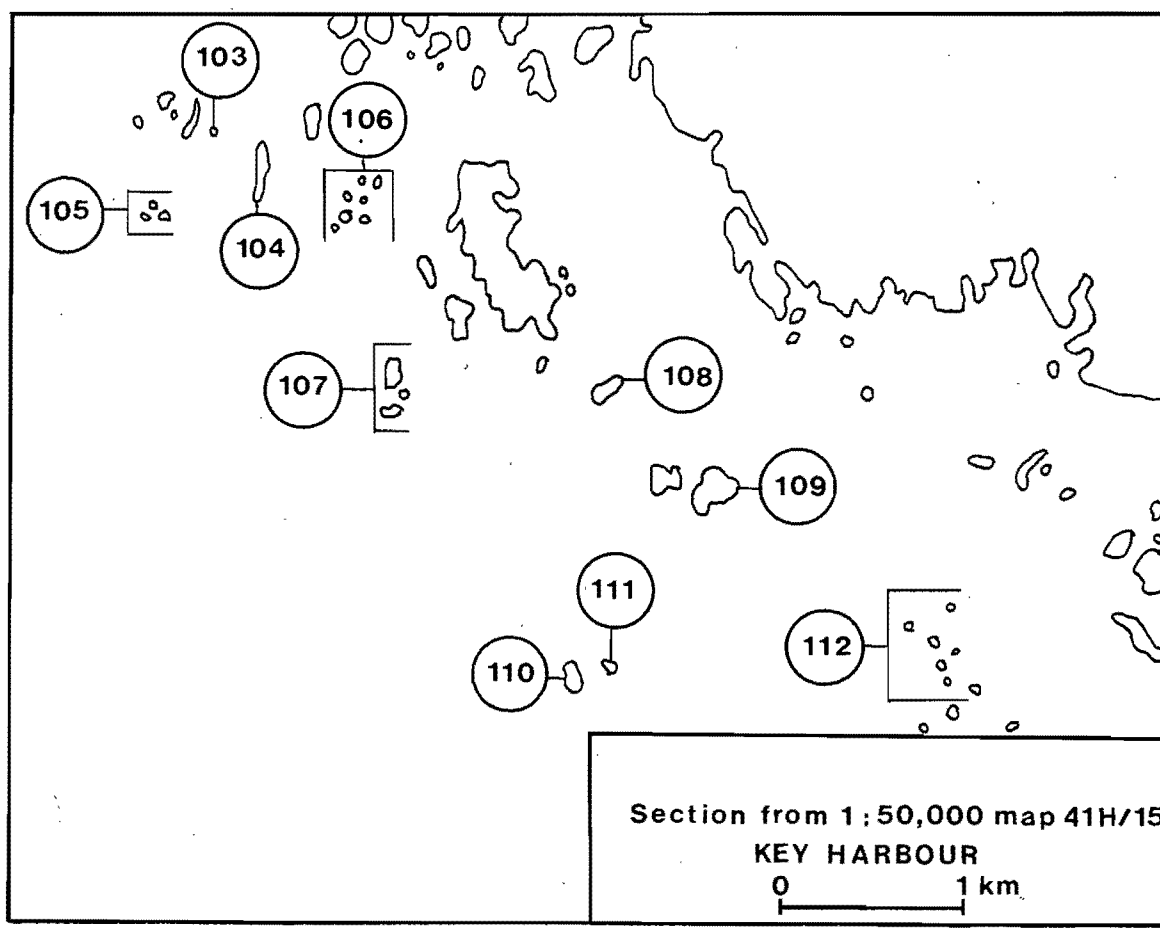

82
84
81
80
79
78
83
TANYAT
ISLAND
Section from 1: 50,000 map 41H/15
KEY HARBOUR
0
1 km


MACOUN
ROCK
86
85
87
88
Section from 1: 50,000 map 41H/15
KEY HARBOUR
0
1 km

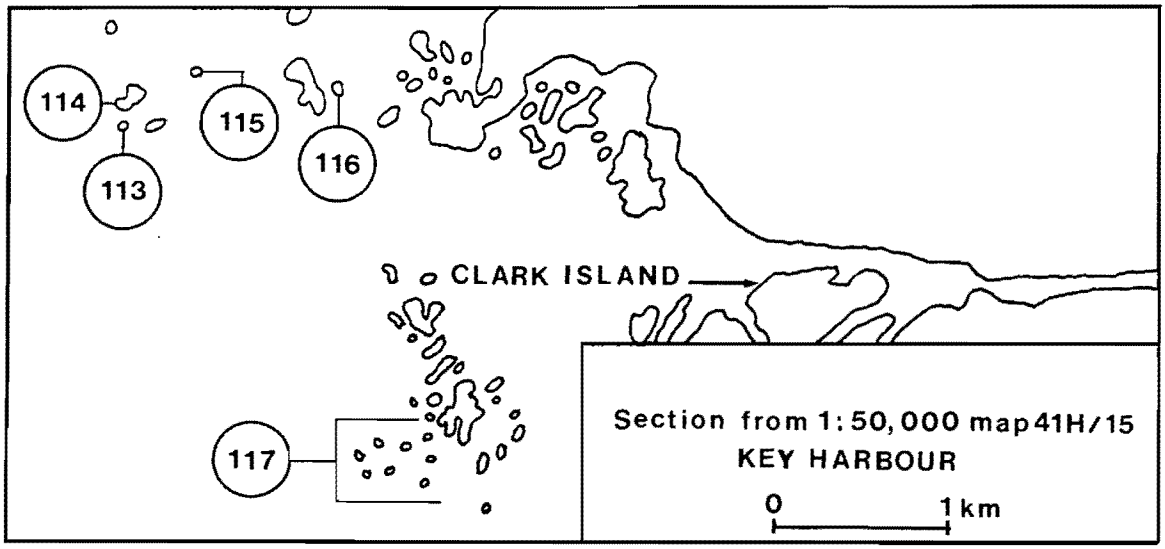

91
DEAD ISLAND
92
89
90
Section from 1: 50,000 map 41H/15
KEY HARBOUR
0
1 km

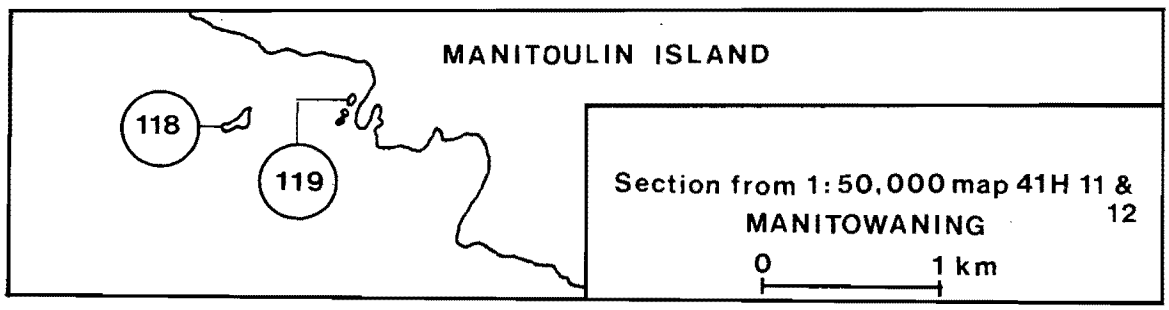
App. 16 (cont'd).

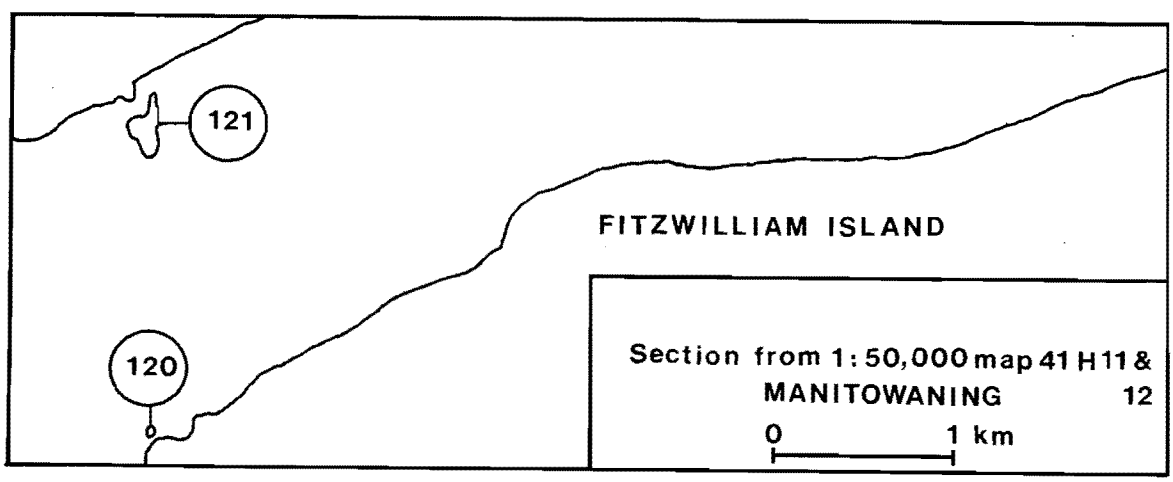

98
BIGSBY ISLAND
93
99
96
94
97
95
100
101
102
Section from 1: 50,000 map 41H/15
KEY HARBOUR
0
1 km

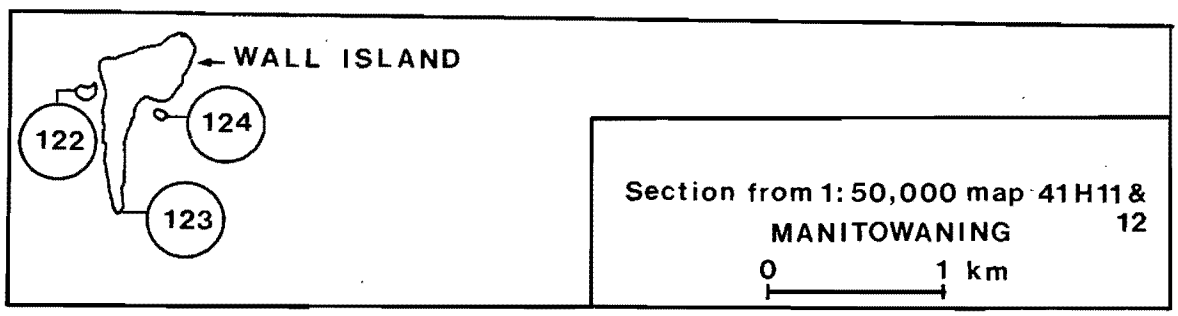

103
106
105
104
107
108
109
111
110
112
Section from 1: 50,000 map 41H/15
KEY HARBOUR
0
1 km

App. 16 (cont'd).

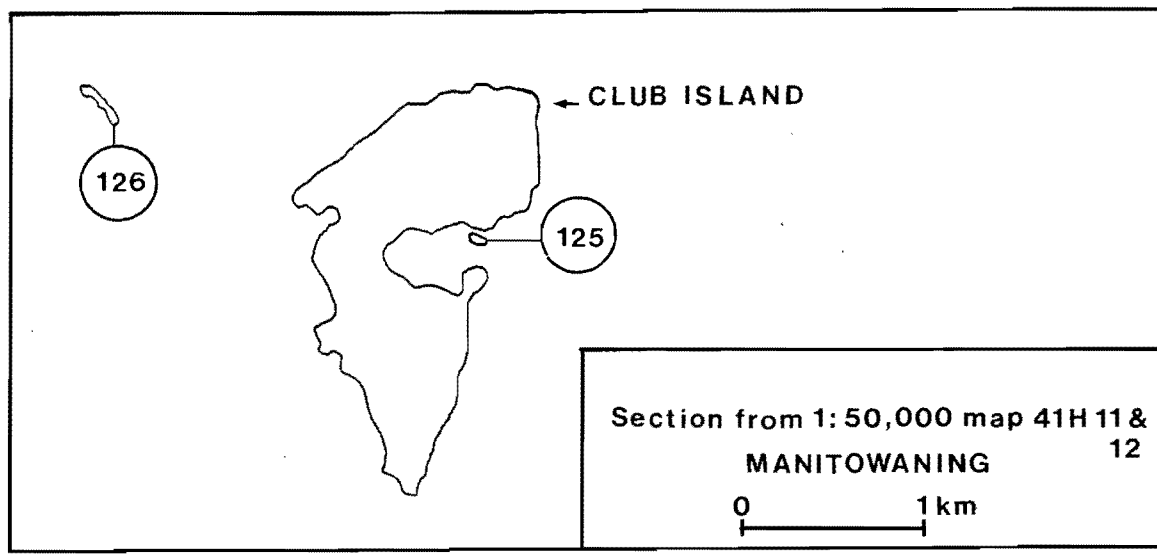

114
115
116
113
CLARK ISLAND
117
Section from 1:50,000 map 41H/15
KEY HARBOUR
0
1 km

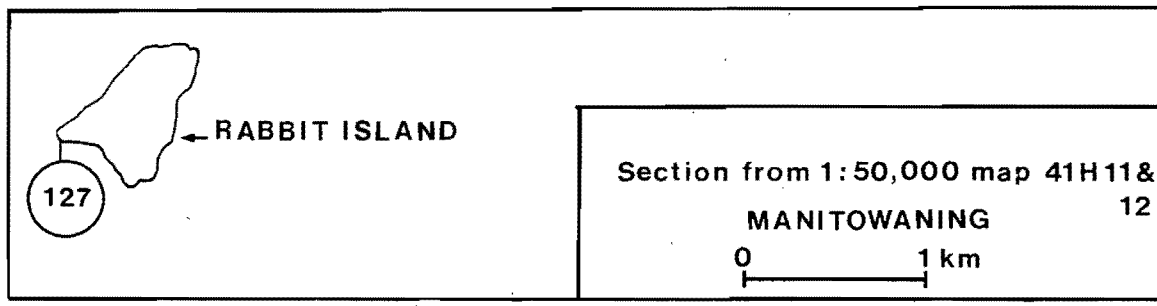

MANITOULIN ISLAND
118
119
Section from 1:50,000 map 41H 11 & 12
MANITOWANING
0
1 km

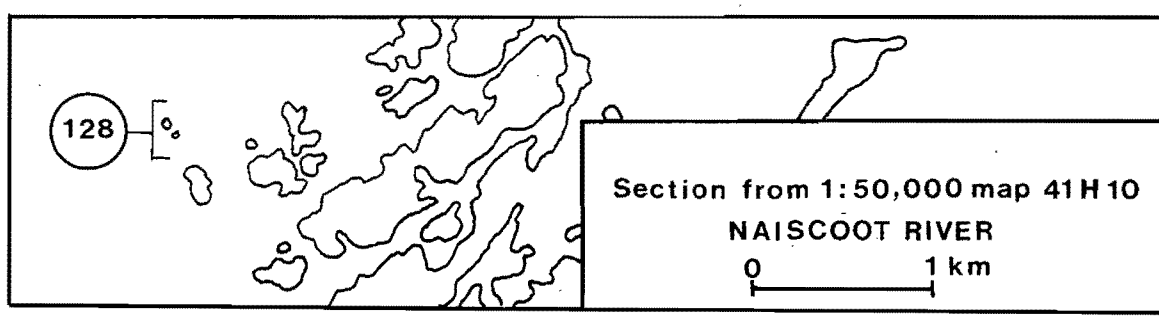

121
FITZWILLIAM ISLAND
120
Section from 1:50,000 map 41 H11 & 12
MANITOWANING
0
1 km

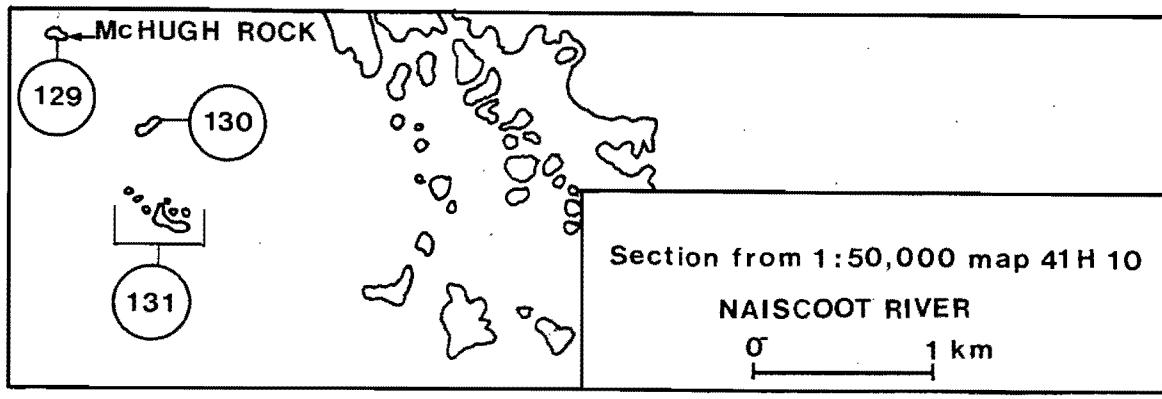

WALL ISLAND
122
124
123
Section from 1:50,000 map 41H11 & 12
MANITOWANING
0
1 km

App. 16 (cont'd).

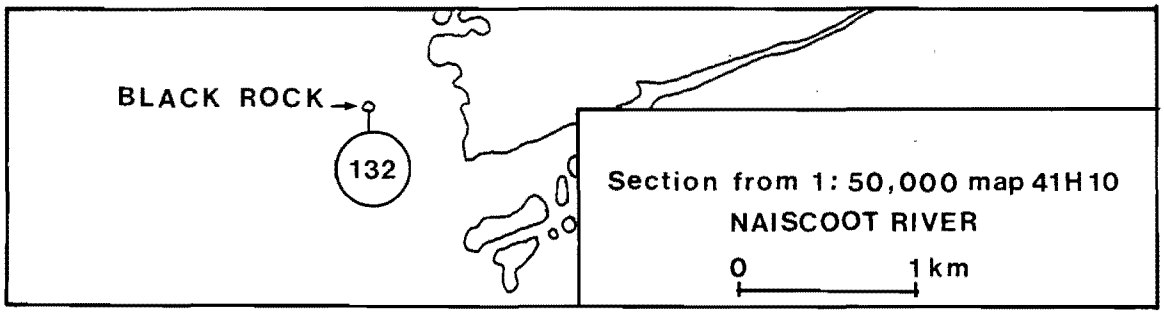

CLUB ISLAND
126
125
Section from 1:50,000 map 41H 11 & 12
MANITOWANING
0
1 km

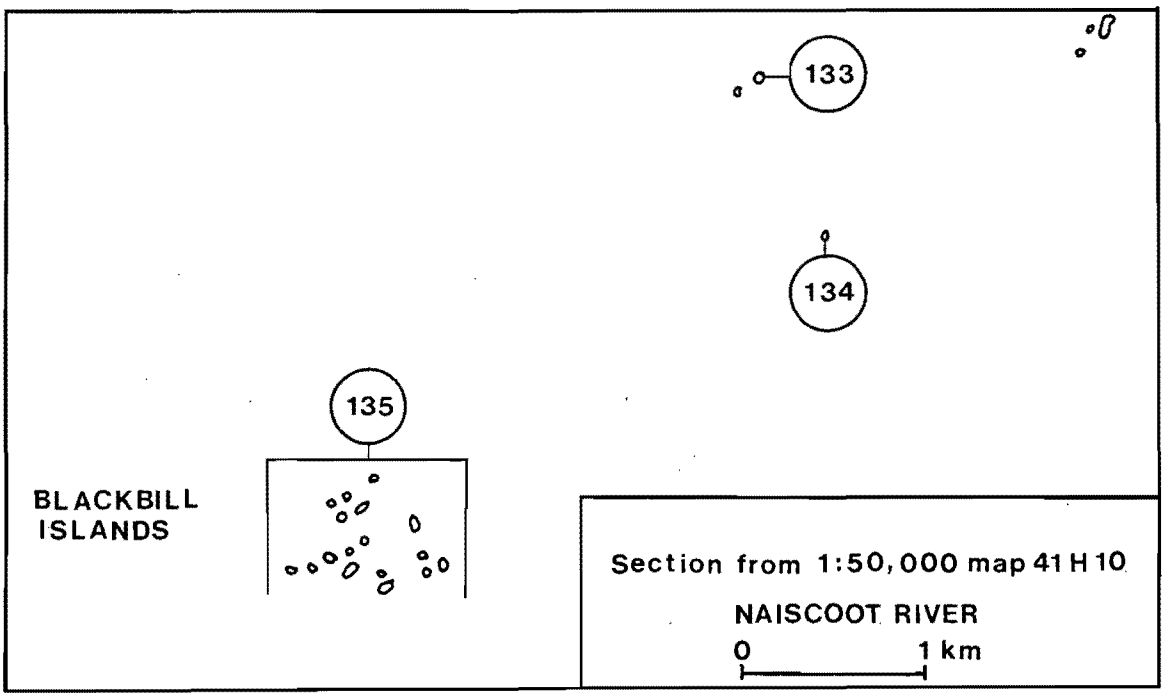

RABBIT ISLAND
127
Section from 1:50,000 map 41H 11 & 12
MANITOWANING
0
1 km

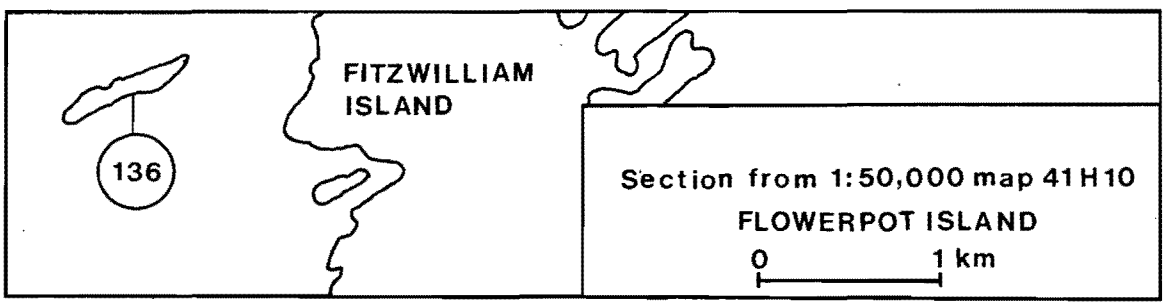

128
Section from 1:50,000 map 41H 10
NAISCOOT RIVER
0
1 km


McHUGH ROCK
129
130
131
Section from 1:50,000 map 41H 10
NAISCOOT RIVER
0
1 km

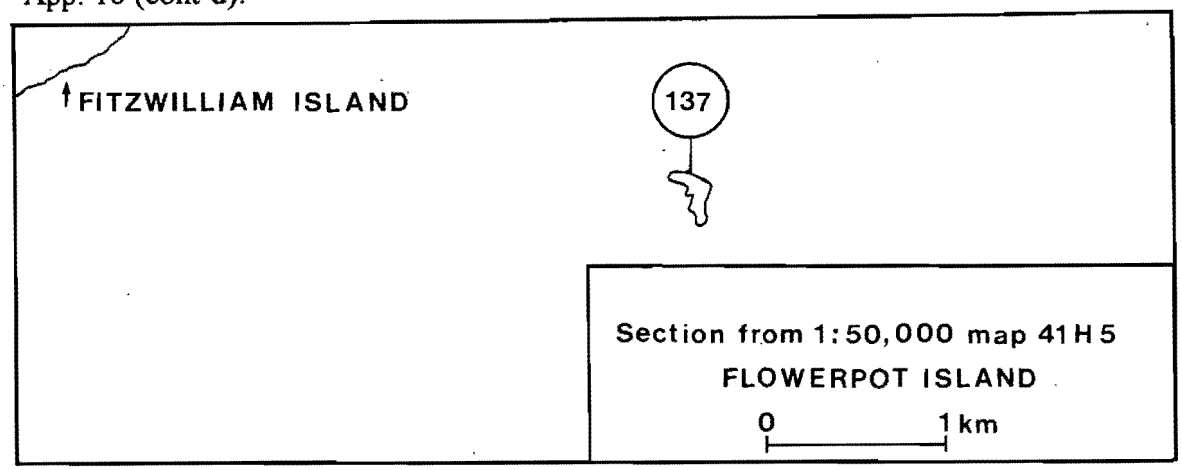
App. 16 (cont'd).

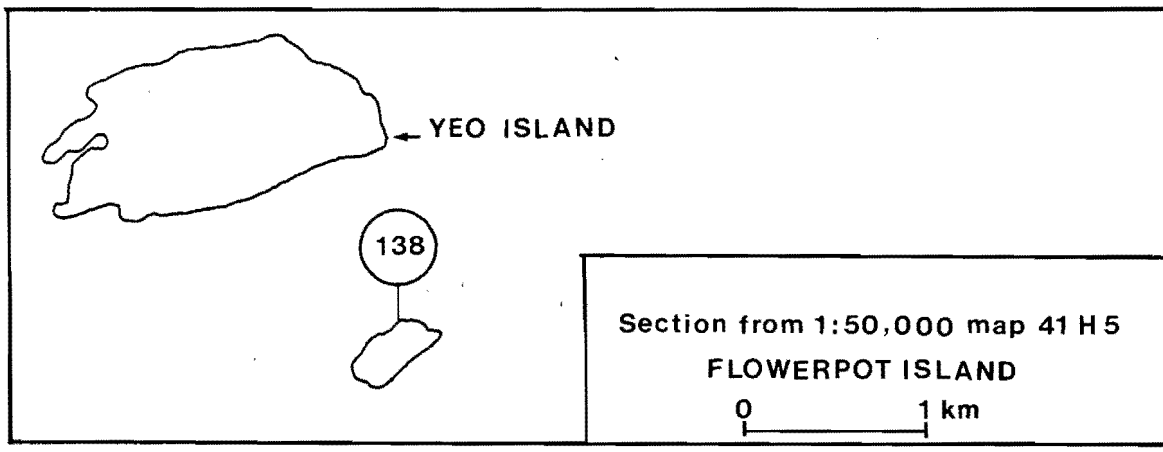

BLACK ROCK
132
Section from 1: 50,000 map 41H10
NAISCOOT RIVER
0
1 km

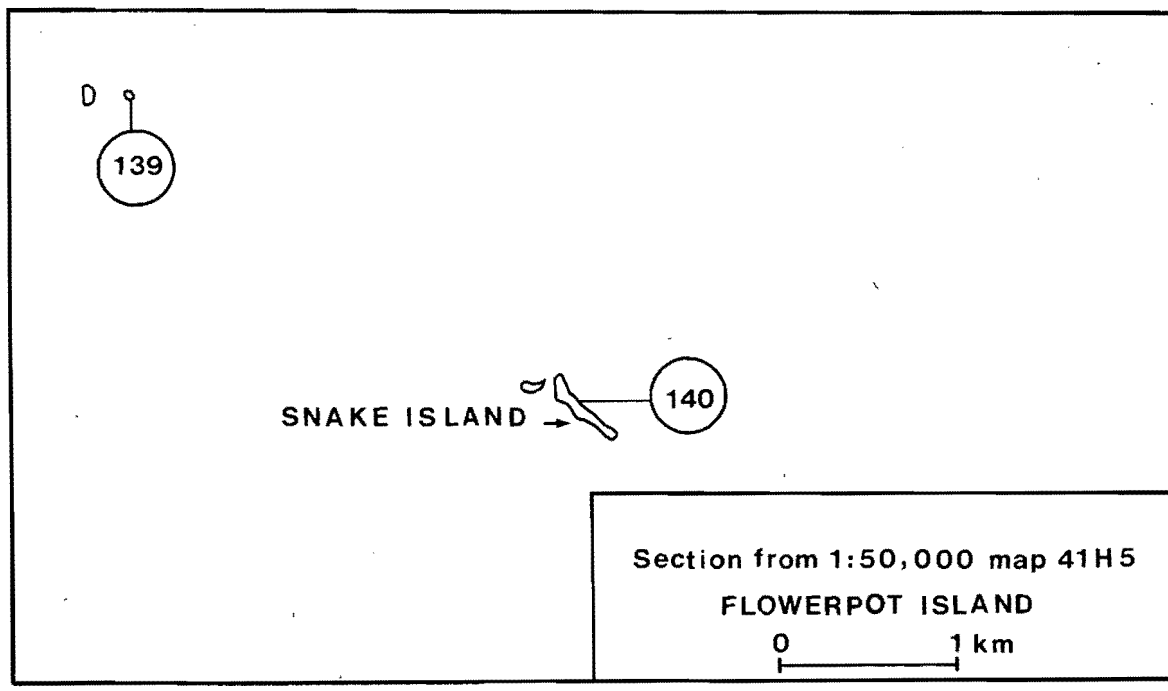

133
134
135
BLACKBILL
ISLANDS
Section from 1:50,000 map 41 H 10
NAISCOOT RIVER
0
1 km


136
FITZWILLIAM
ISLAND
Section from 1:50,000 map 41 H 10
FLOWERPOT ISLAND
0
1 km

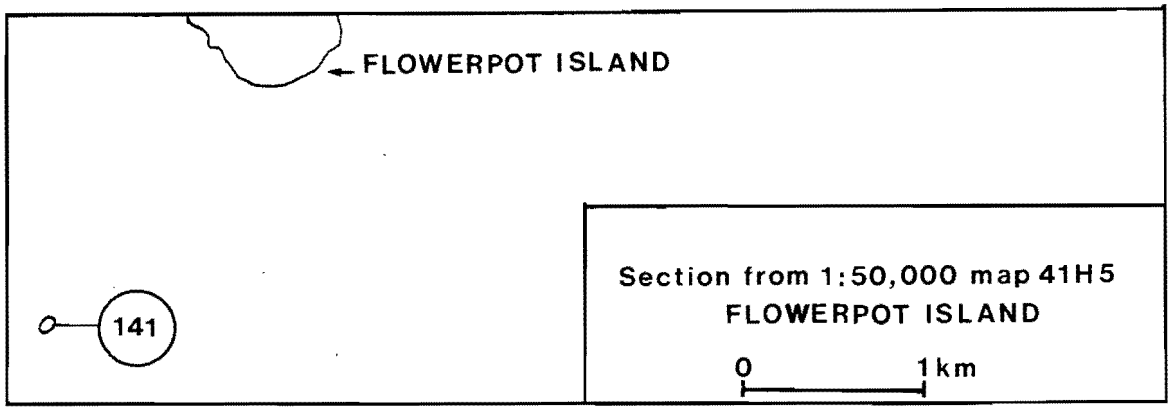
App. 16 (cont'd).

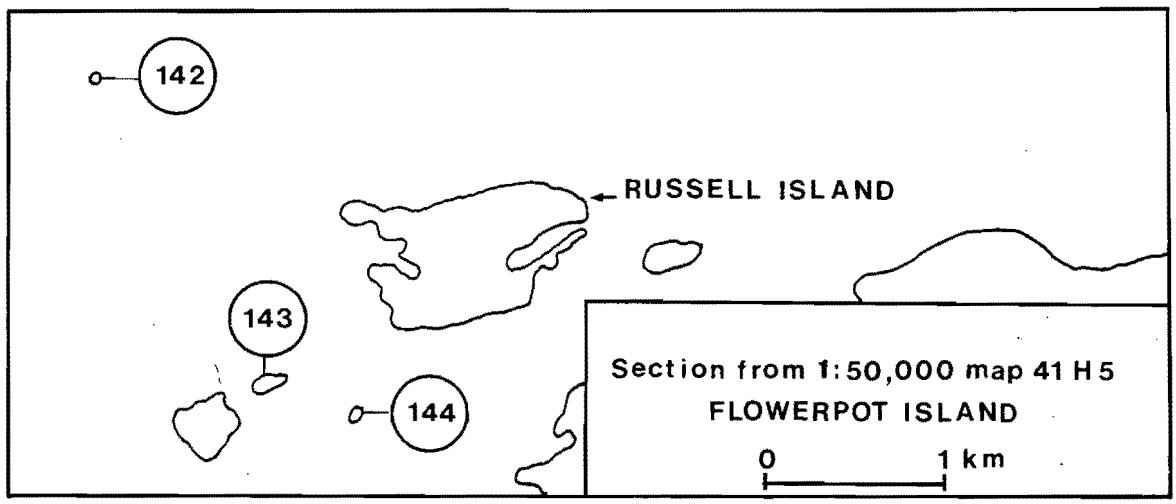

FITZWILLIAM ISLAND
137
Section from 1:50,000 map 41H5
FLOWERPOT ISLAND
0
1 km

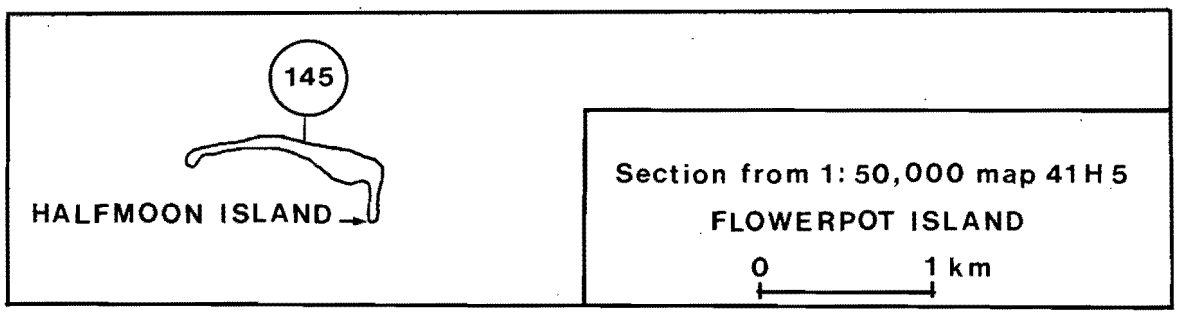

YEO ISLAND
138
Section from 1:50,000 map 41H5
FLOWERPOT ISLAND
0
1 km

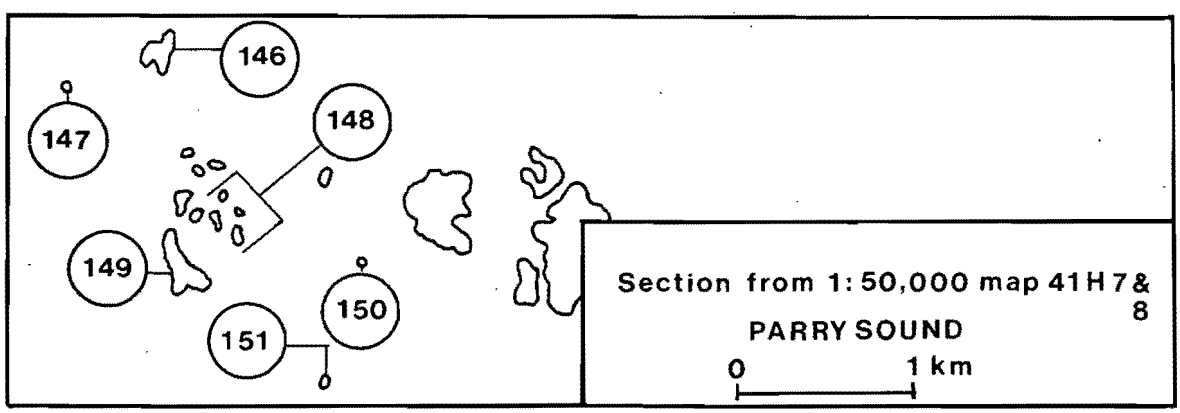

D
139
SNAKE ISLAND
140
Section from 1:50,000 map 41H5
FLOWERPOT ISLAND
0
1 km

App. 16 (cont'd).

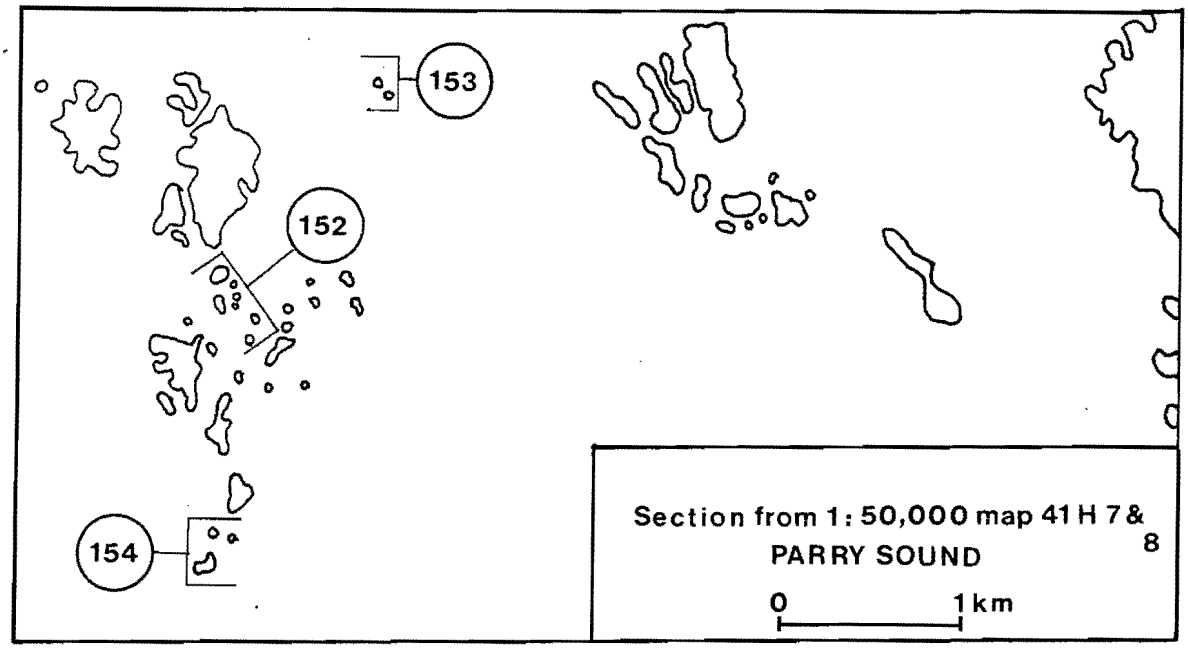

FLOWERPOT ISLAND
141
Section from 1:50,000 map 41H5
FLOWERPOT ISLAND
0
1 km

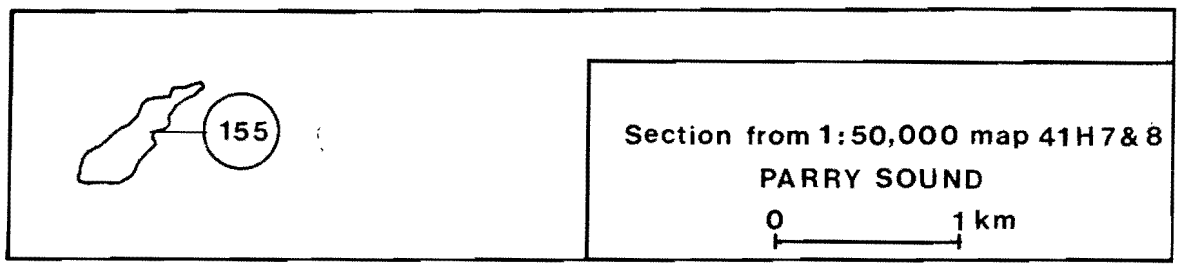

142
RUSSELL ISLAND
143
144
Section from 1:50,000 map 41 H5
FLOWERPOT ISLAND
0
1 km

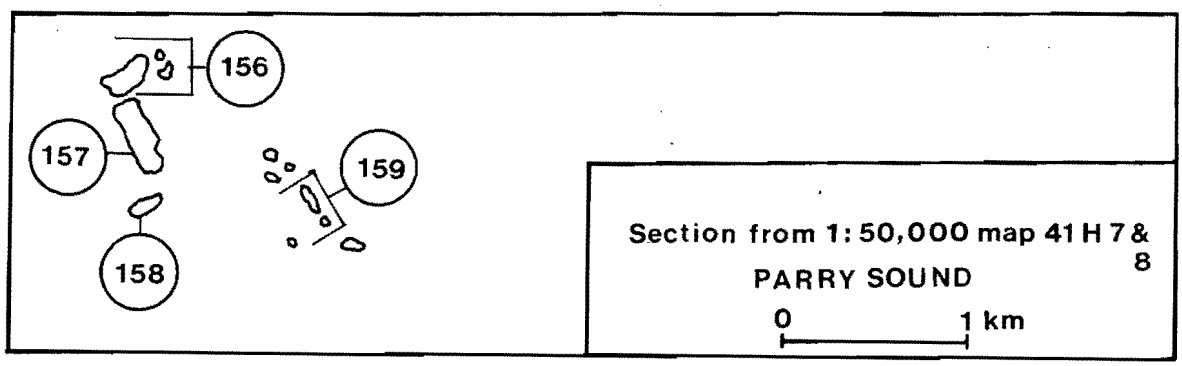

145
HALFMOON ISLAND
Section from 1: 50,000 map 41H5
FLOWERPOT ISLAND
0
1 km

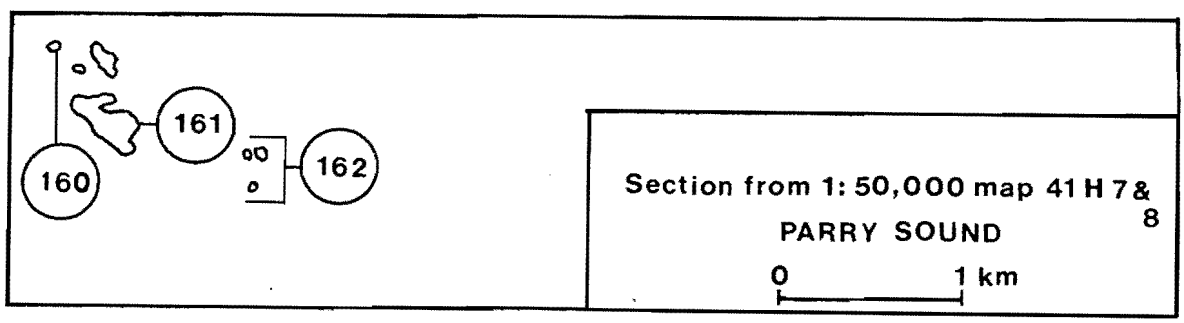

146
147
148
149
150
151
Section from 1: 50,000 map 41H7&
8
PARRY SOUND
0
1 km

App. 16 (cont'd).

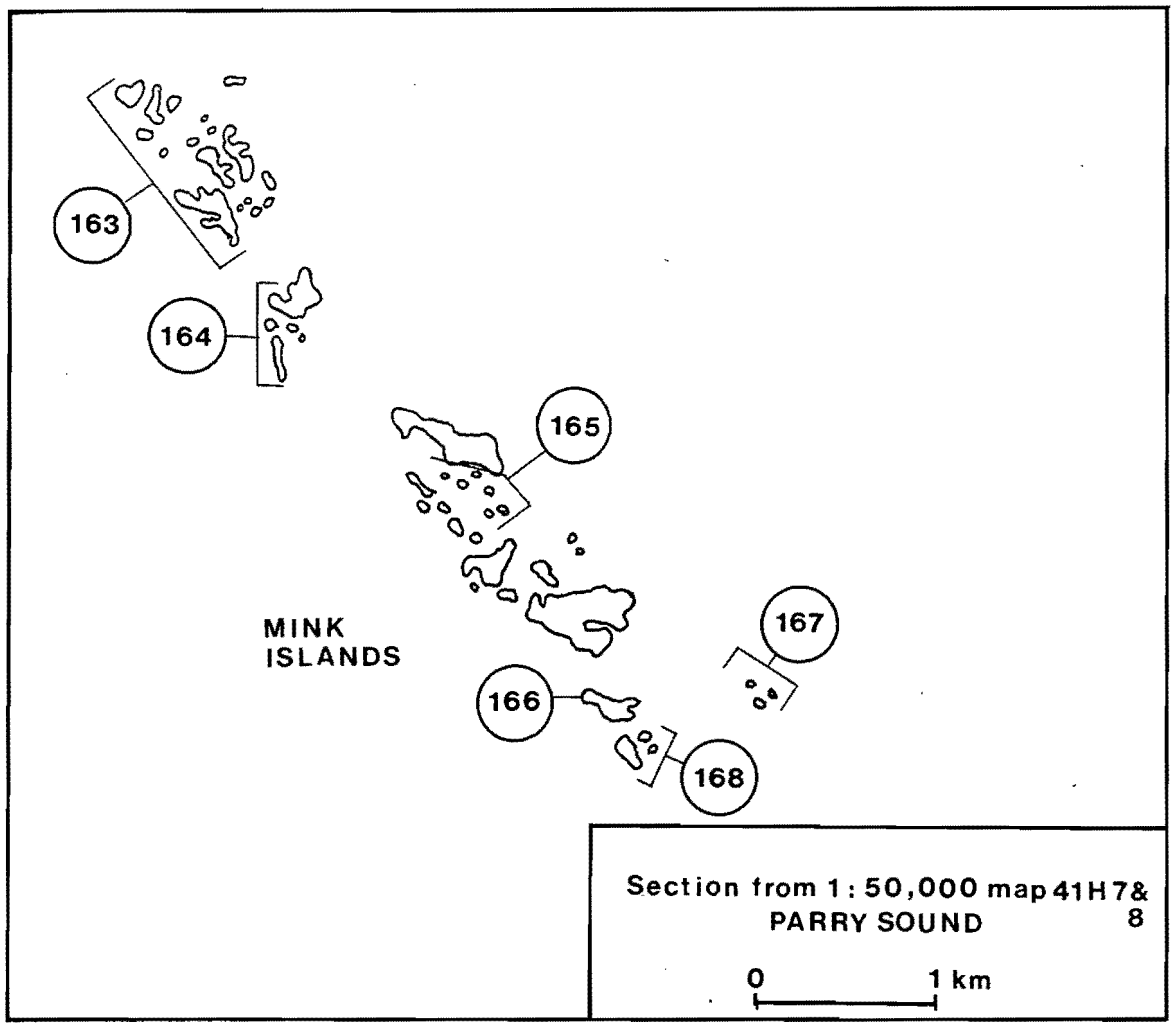

153
152
154
Section from 1: 50,000 map 41 H 7 & 8
PARRY SOUND
0
1 km

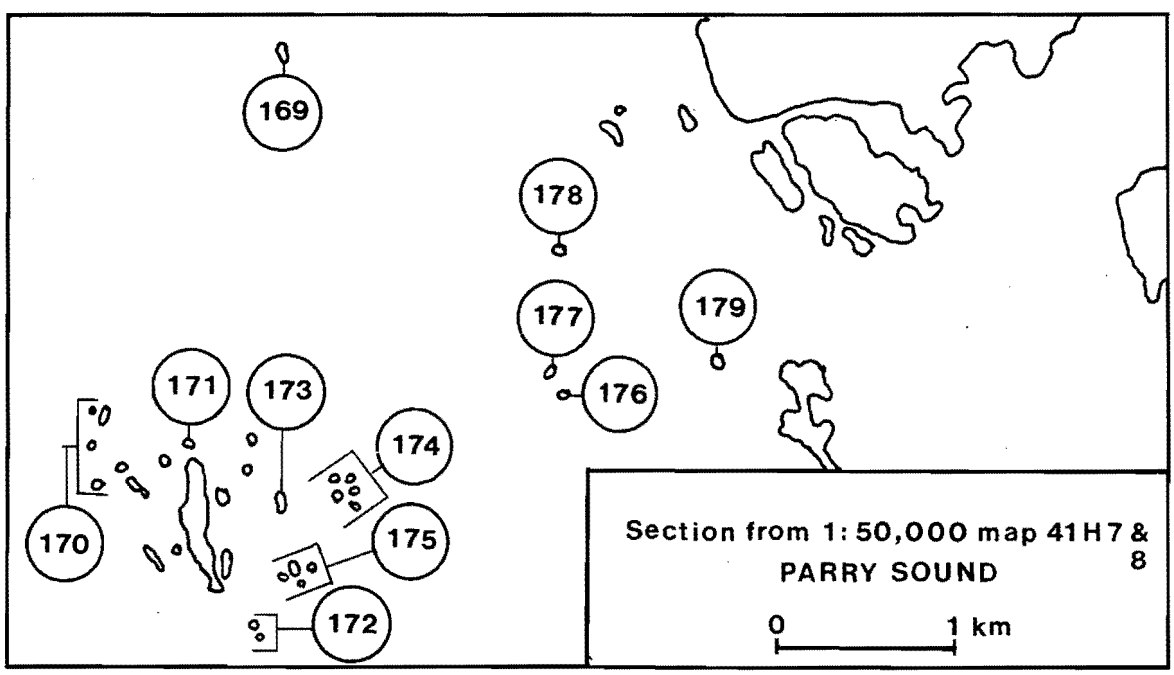

155
Section from 1: 50,000 map 41 H 7 & 8
PARRY SOUND
0
1 km

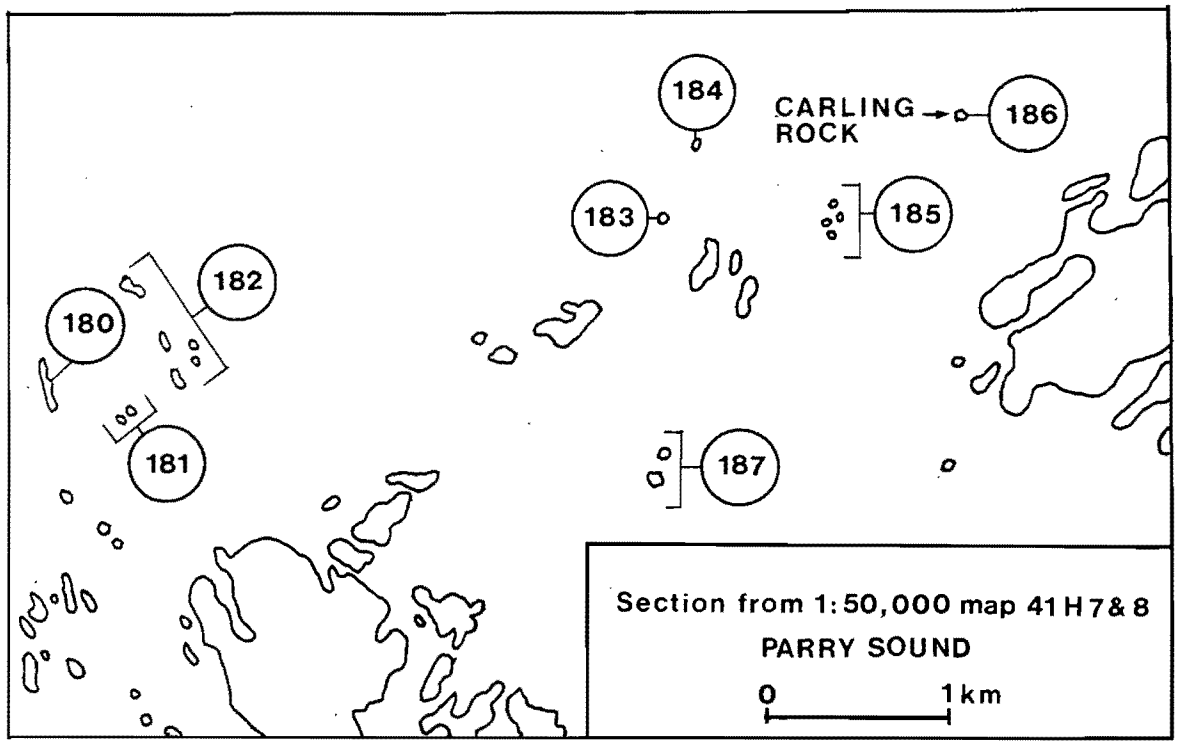

156
157
159
158
Section from 1: 50,000 map 41 H 7 & 8
PARRY SOUND
0
1 km

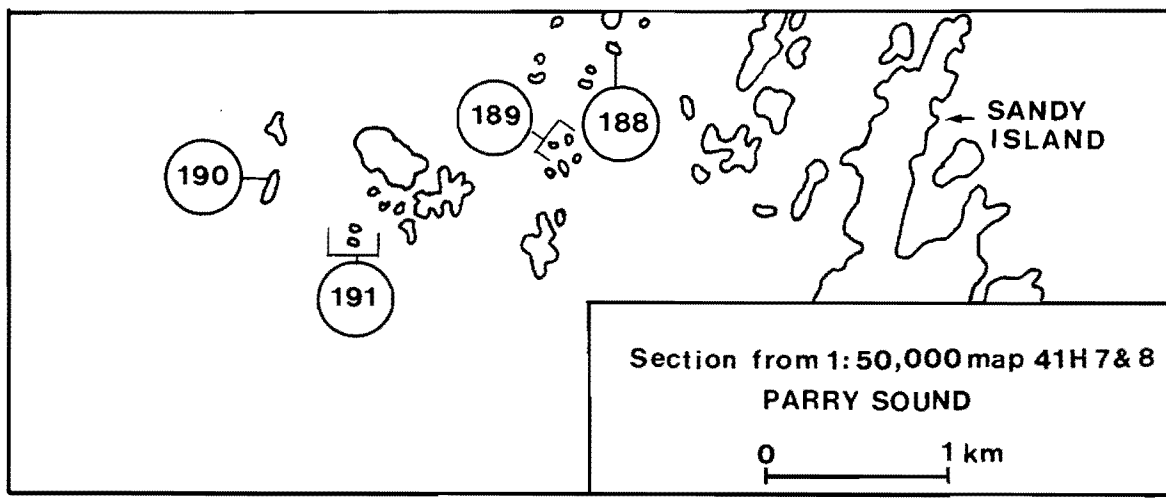

161
160
162
Section from 1: 50,000 map 41 H 7 & 8
PARRY SOUND
0
1 km

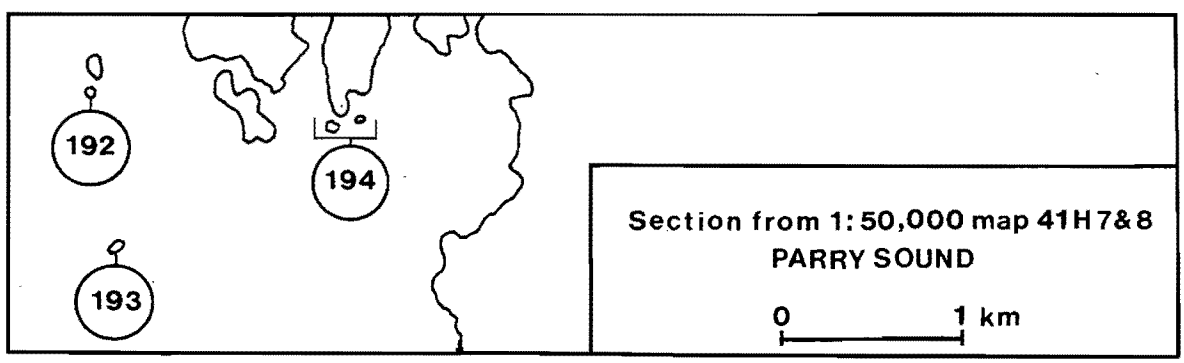
App. 16 (cont'd).

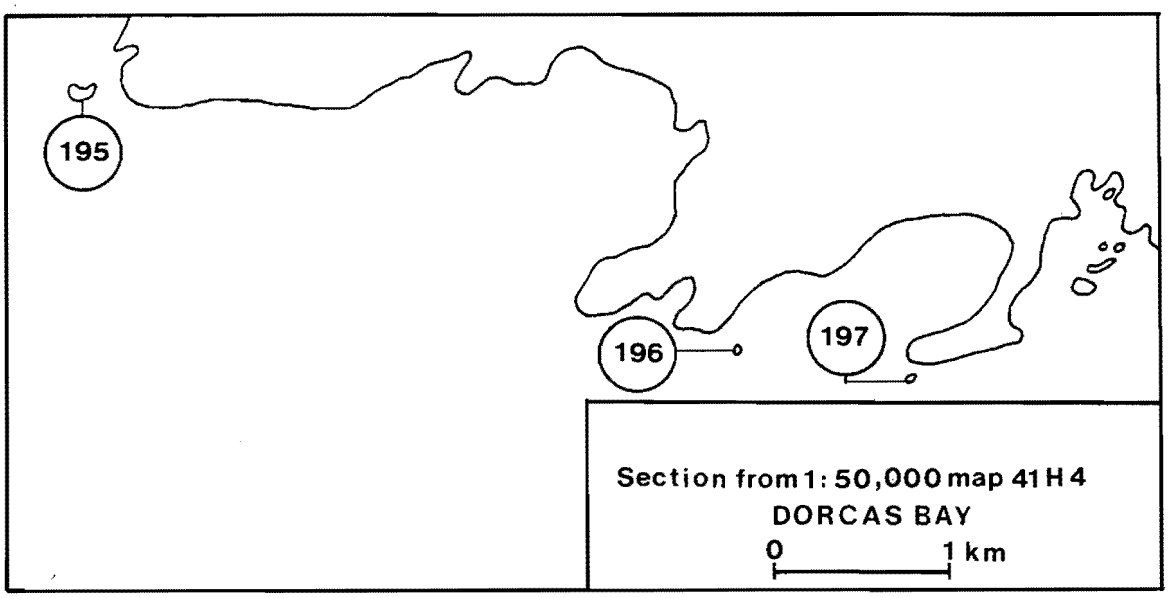

163
164
165
MINK
ISLANDS
167
166
168
Section from 1:50,000 map 41H7&
PARRY SOUND 8
0
1 km

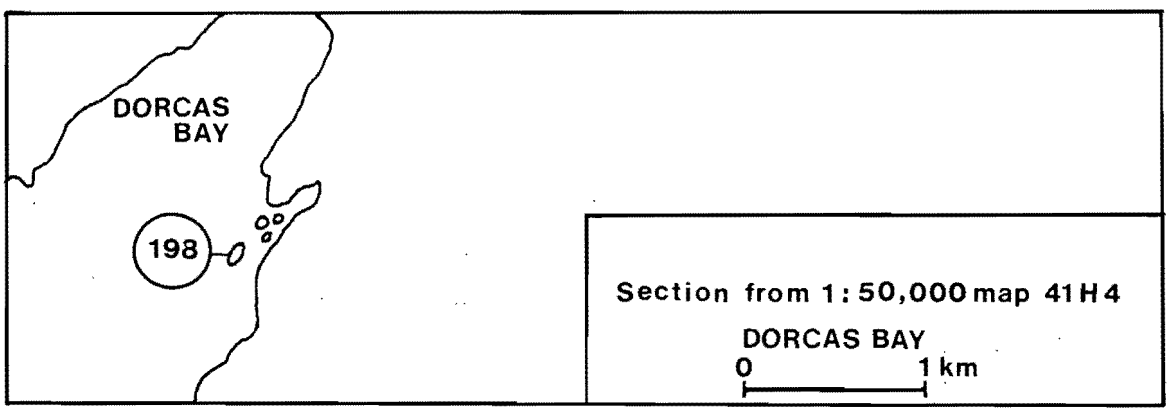

169
178
177
179
176
171
173
174
170
175
172
Section from 1:50,000 map 41H7 &
PARRY SOUND 8
0
1 km

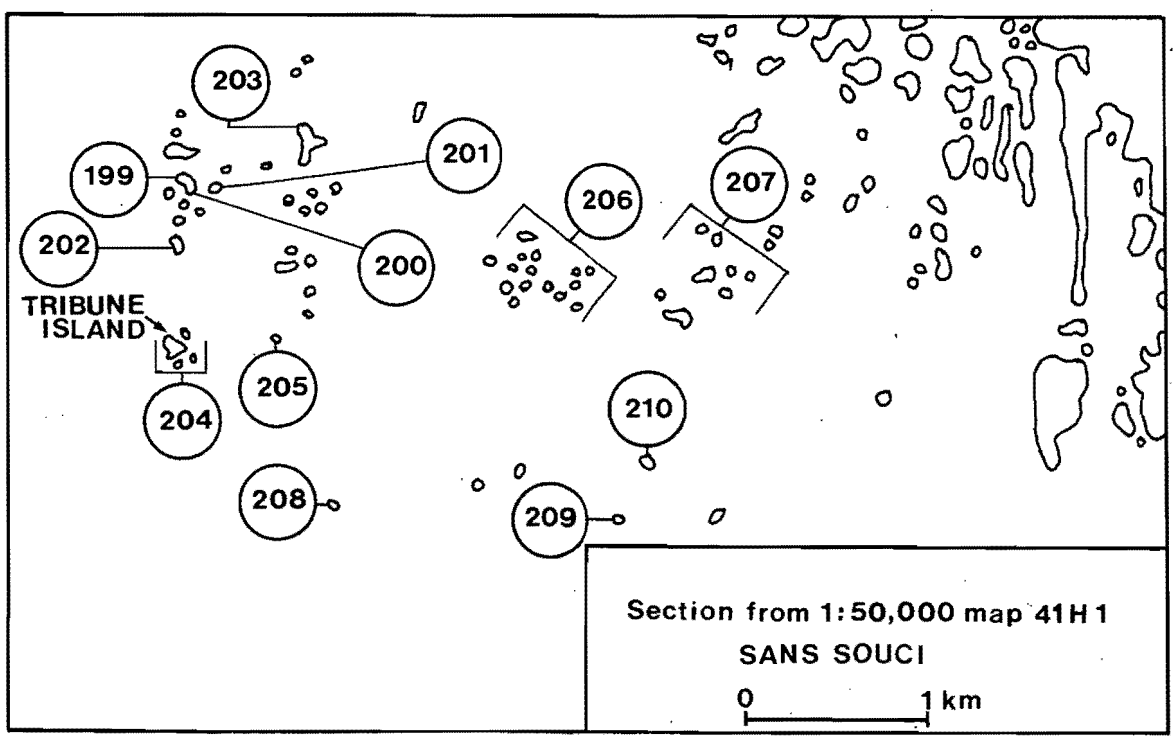

184
CARLING ROCK
186
183
185
182
180
181
187
Section from 1:50,000 map 41H7&8
PARRY SOUND
0
1 km


189
188
SANDY ISLAND
190
191
Section from 1:50,000 map 41H7&8
PARRY SOUND
0
1 km

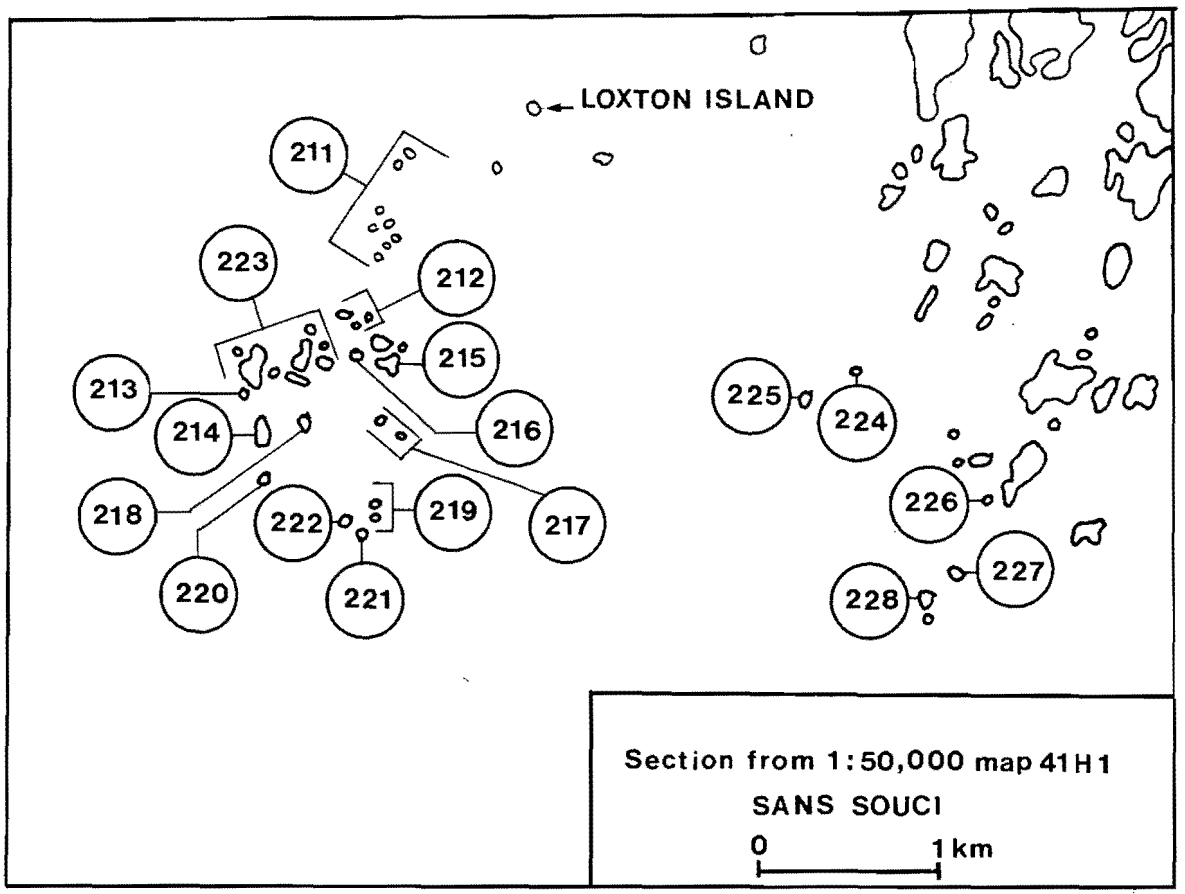

192
194
193
Section from 1:50,000 map 41H7&8
PARRY SOUND
0
1 km

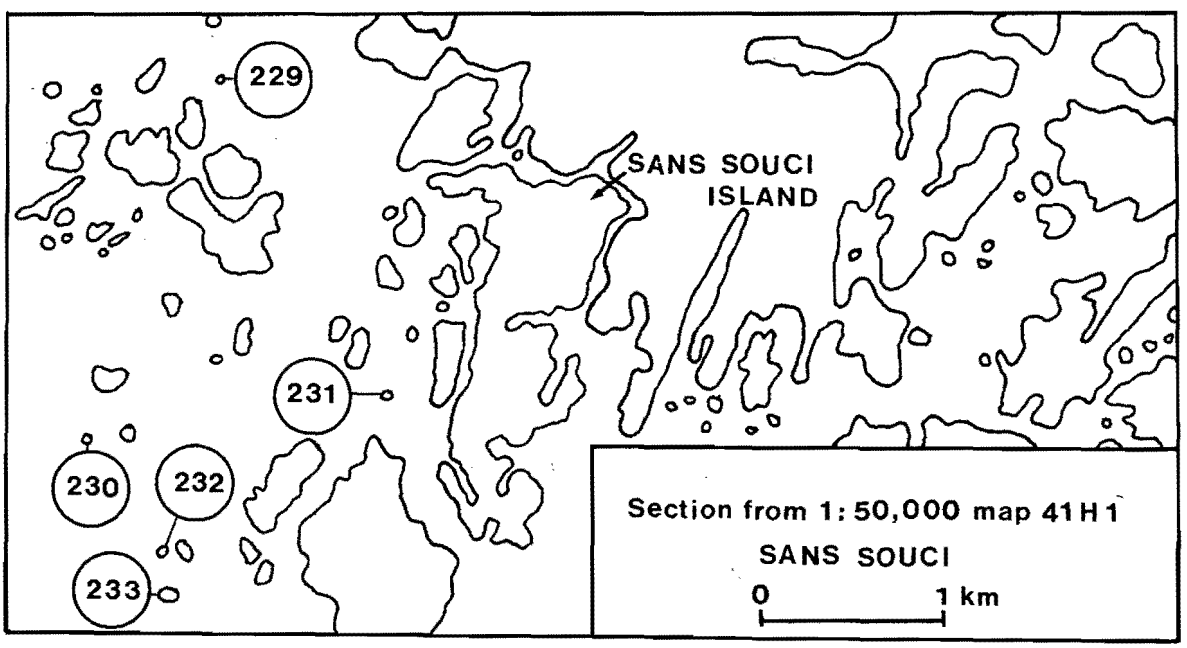

195
196
197
Section from 1: 50,000 map 41H4
DORCAS BAY
0
1 km


DORCAS
BAY
198
Section from 1: 50,000 map 41H4
DORCAS BAY
0
1 km

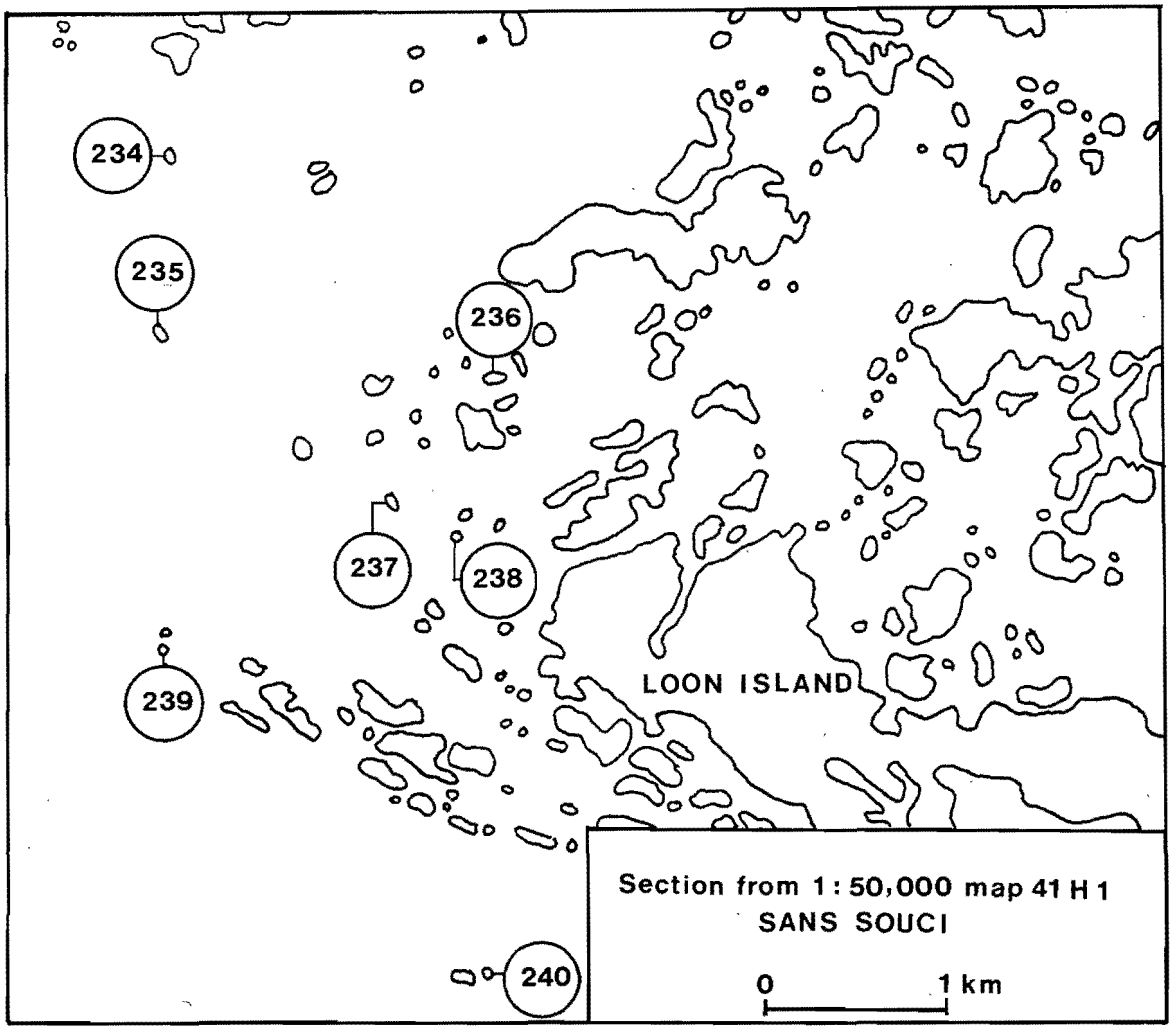

203
201
199
206
207
202
200
TRIBUNE
ISLAND
205
204
210
208
209
Section from 1: 50,000 map 41H1
SANS SOUCI
0
1 km

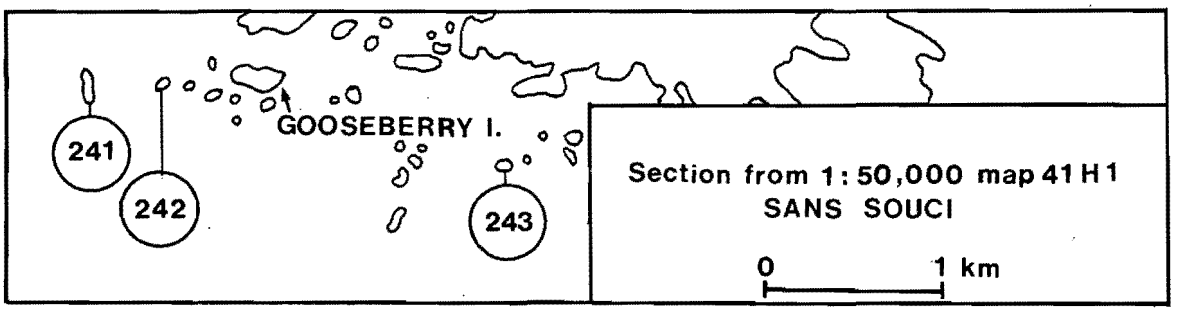
App. 16 (cont'd).

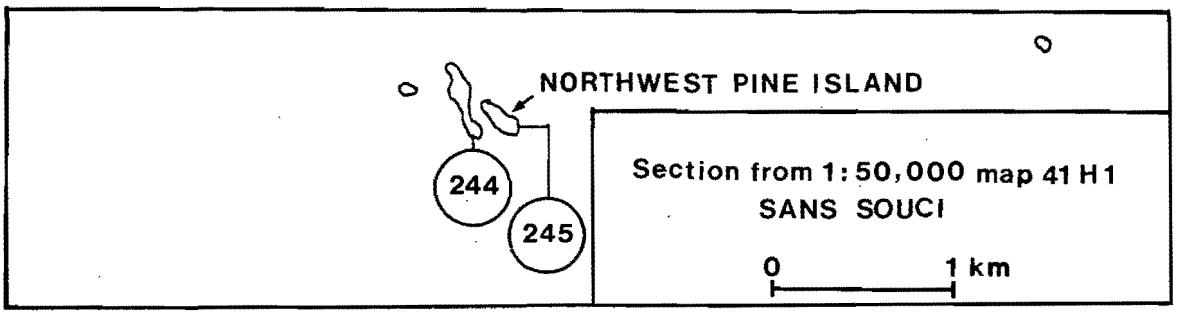

LOXTON ISLAND
211
223
212
215
213
214
216
218
222
219
217
220
221
225
224
226
227
228
Section from 1:50,000 map 41H1
SANS SOUCI
0
1 km

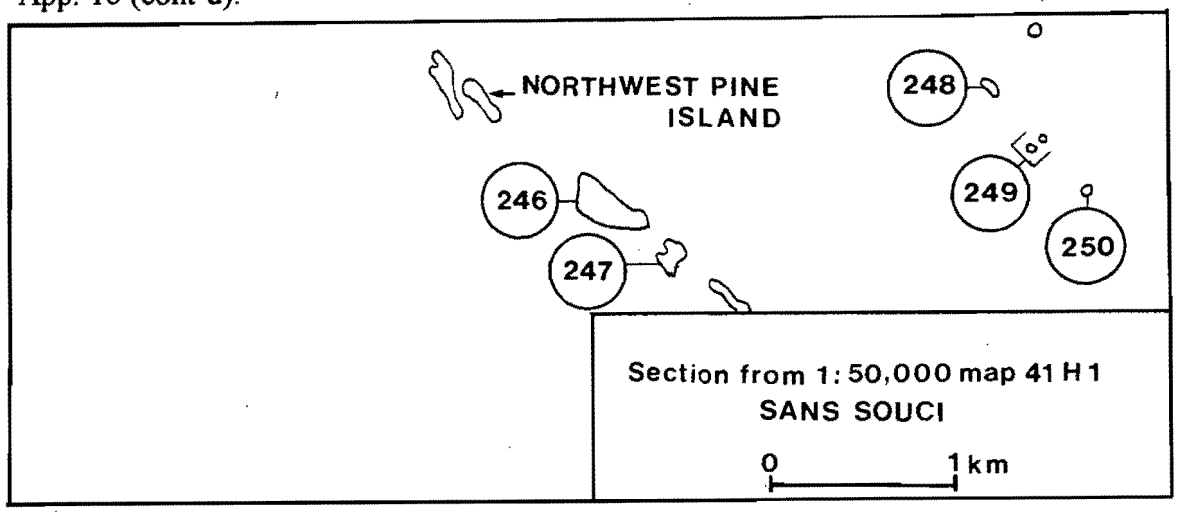

229
SANS SOUCI
ISLAND
231
230
232
233
Section from 1:50,000 map 41H1
SANS SOUCI
0
1 km

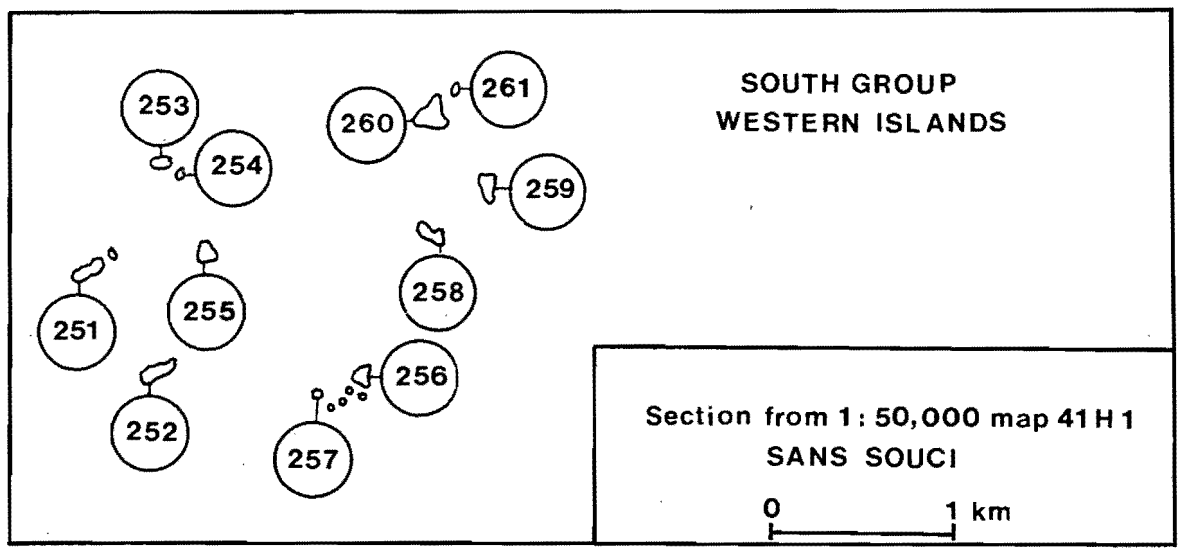
App. 16 (cont'd).

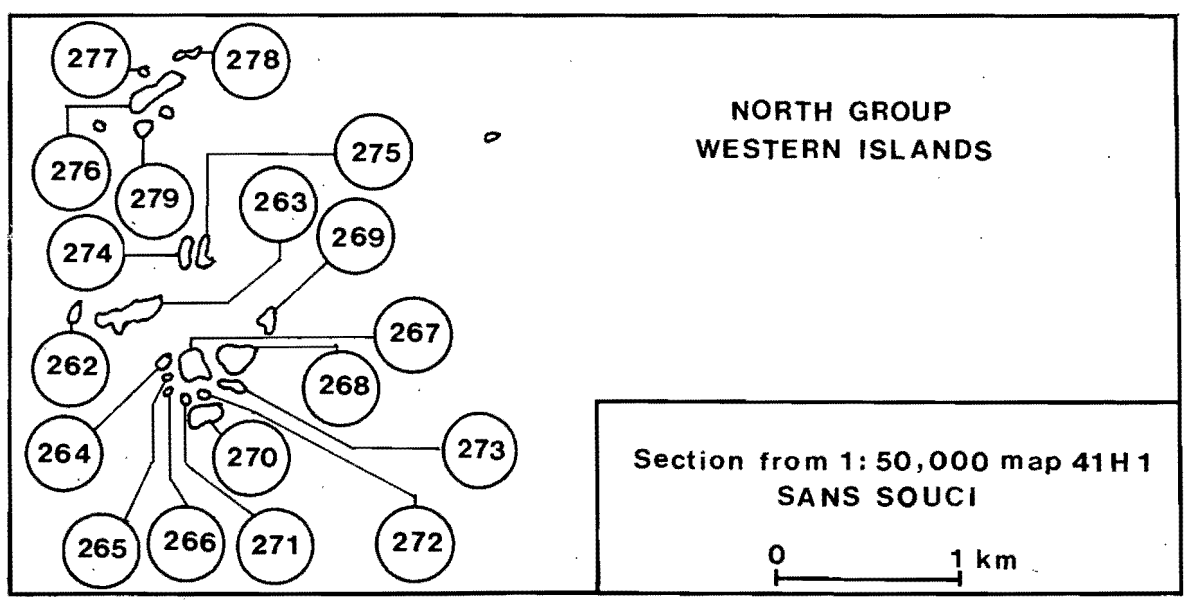

234
235
236
237
238
239
240
LOON ISLAND
Section from 1:50,000 map 41 H 1
SANS SOUCI
0
1 km


241
242
243
GOOSEBERRY I.
Section from 1:50,000 map 41 H 1
SANS SOUCI
0
1 km


NORTHWEST PINE ISLAND
244
245
Section from 1:50,000 map 41 H 1
SANS SOUCI
0
1 km

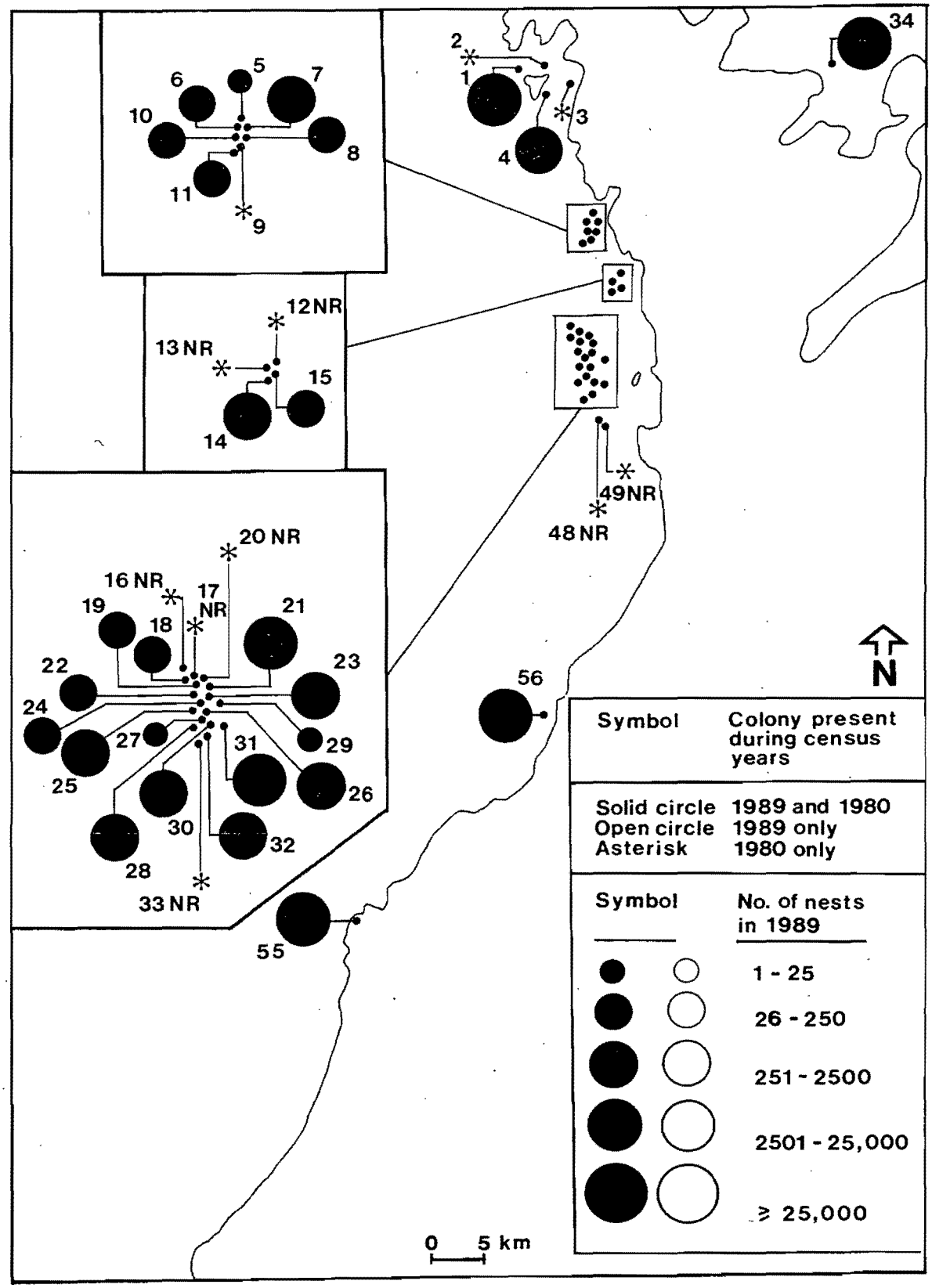

NORTHWEST PINE ISLAND
248
249
250
246
247
Section from 1:50,000 map 41 H 1
SANS SOUCI
0
1 km

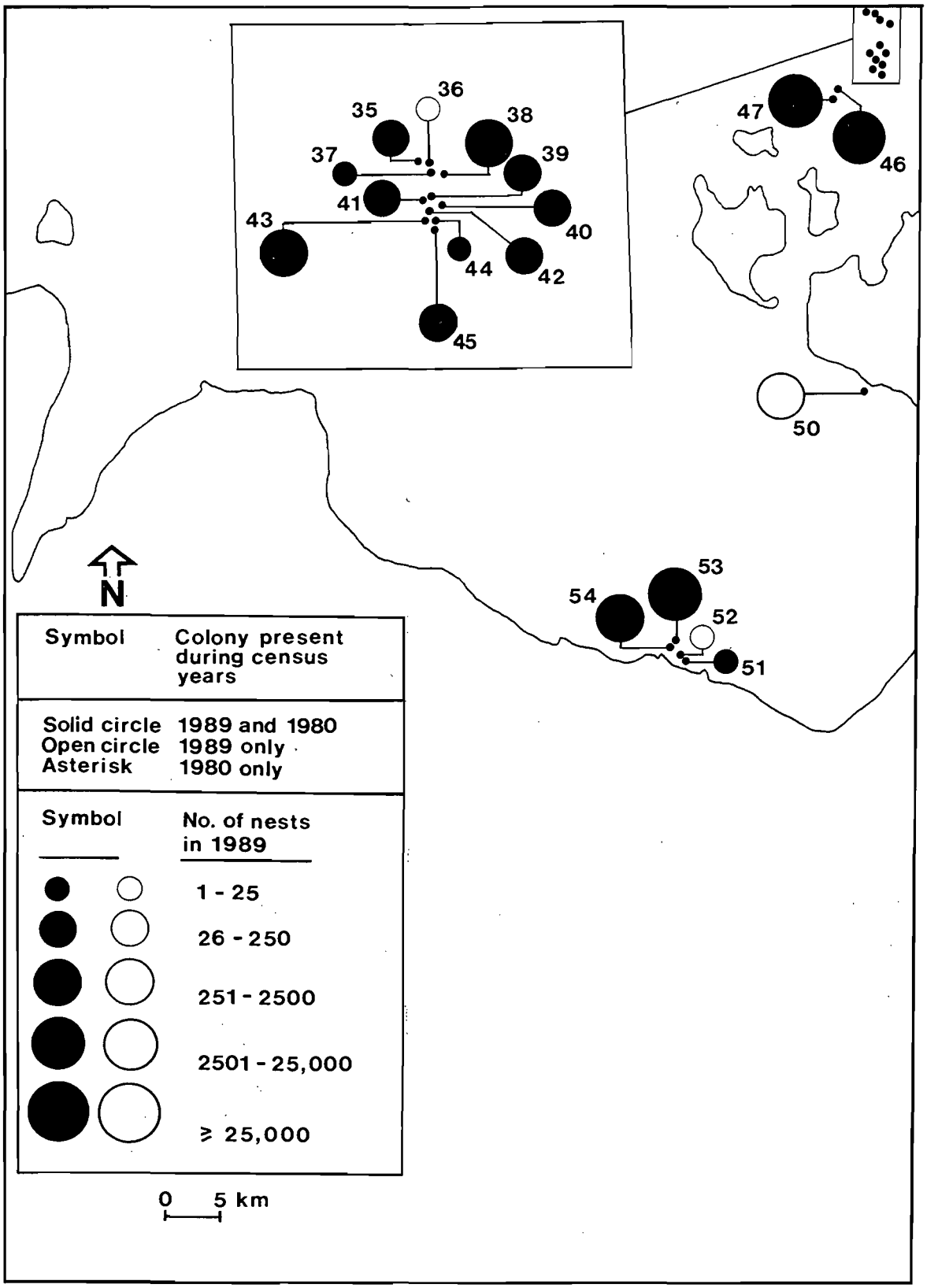

253
254
260
261
259
258
251
255
256
252
257
SOUTH GROUP
WESTERN ISLANDS
Section from 1:50,000 map 41 H 1
SANS SOUCI
0
1 km

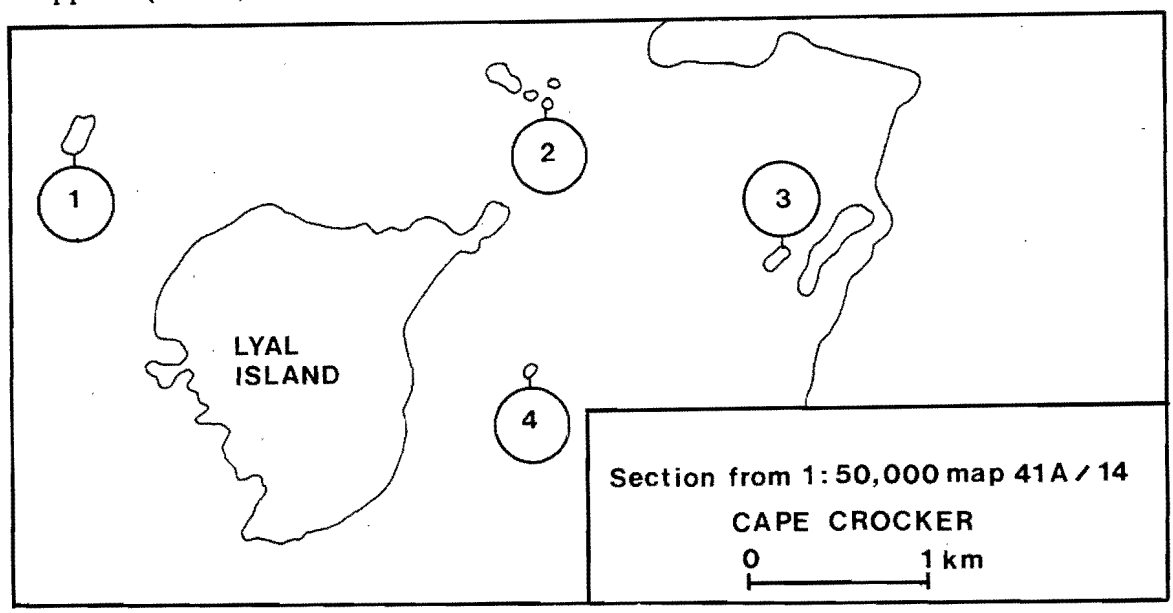

277
278
276
279
275
263
274
269
267
262
268
264
270
273
265
266
271
272
NORTH GROUP
WESTERN ISLANDS
Section from 1:50,000 map 41 H 1
SANS SOUCI
0
1 km

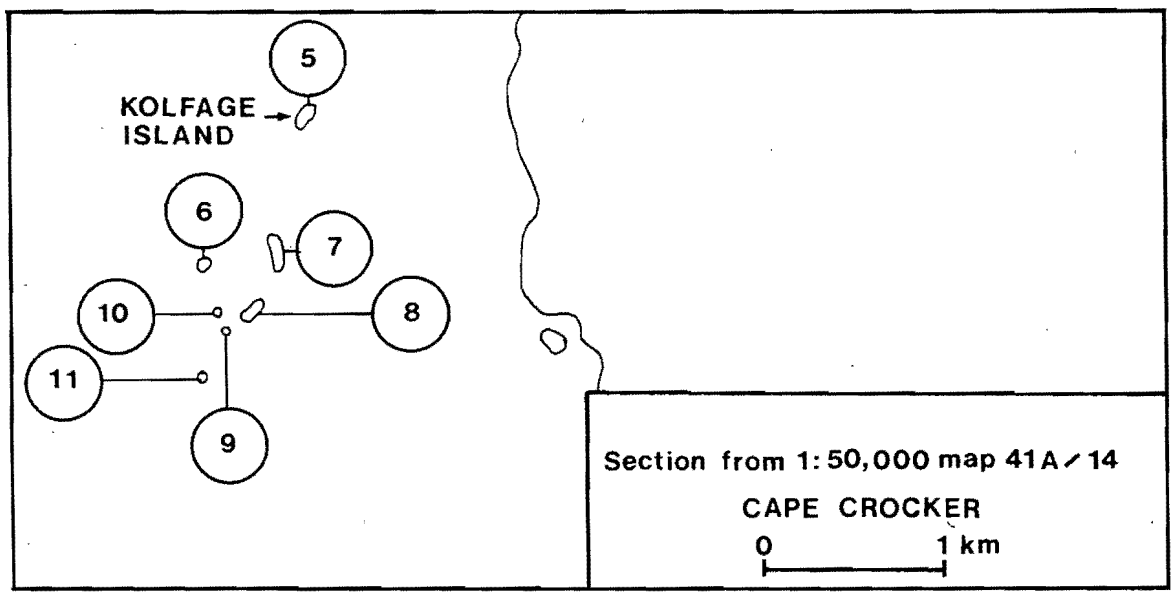
NOTE: This page was left blank intentionally

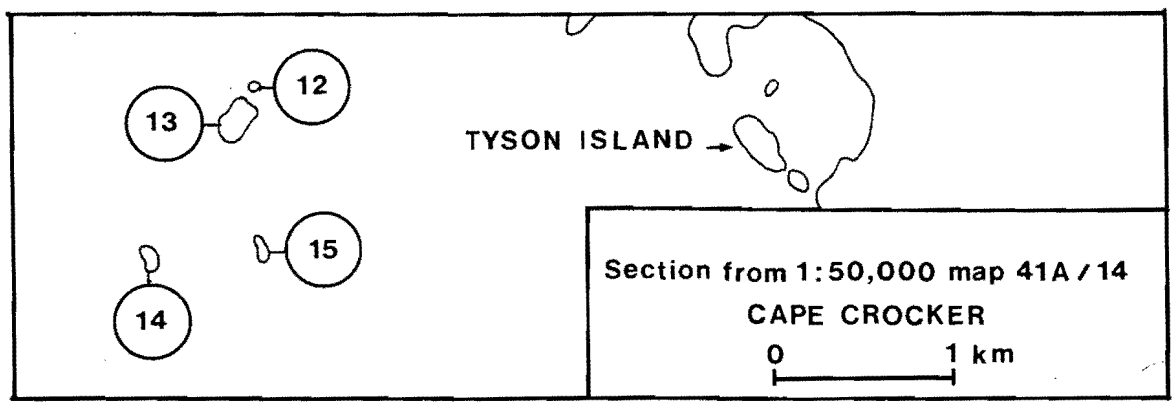
Appendix 17. Colony sites covered by 1:250,000 Topographic Map 41A (West and East).



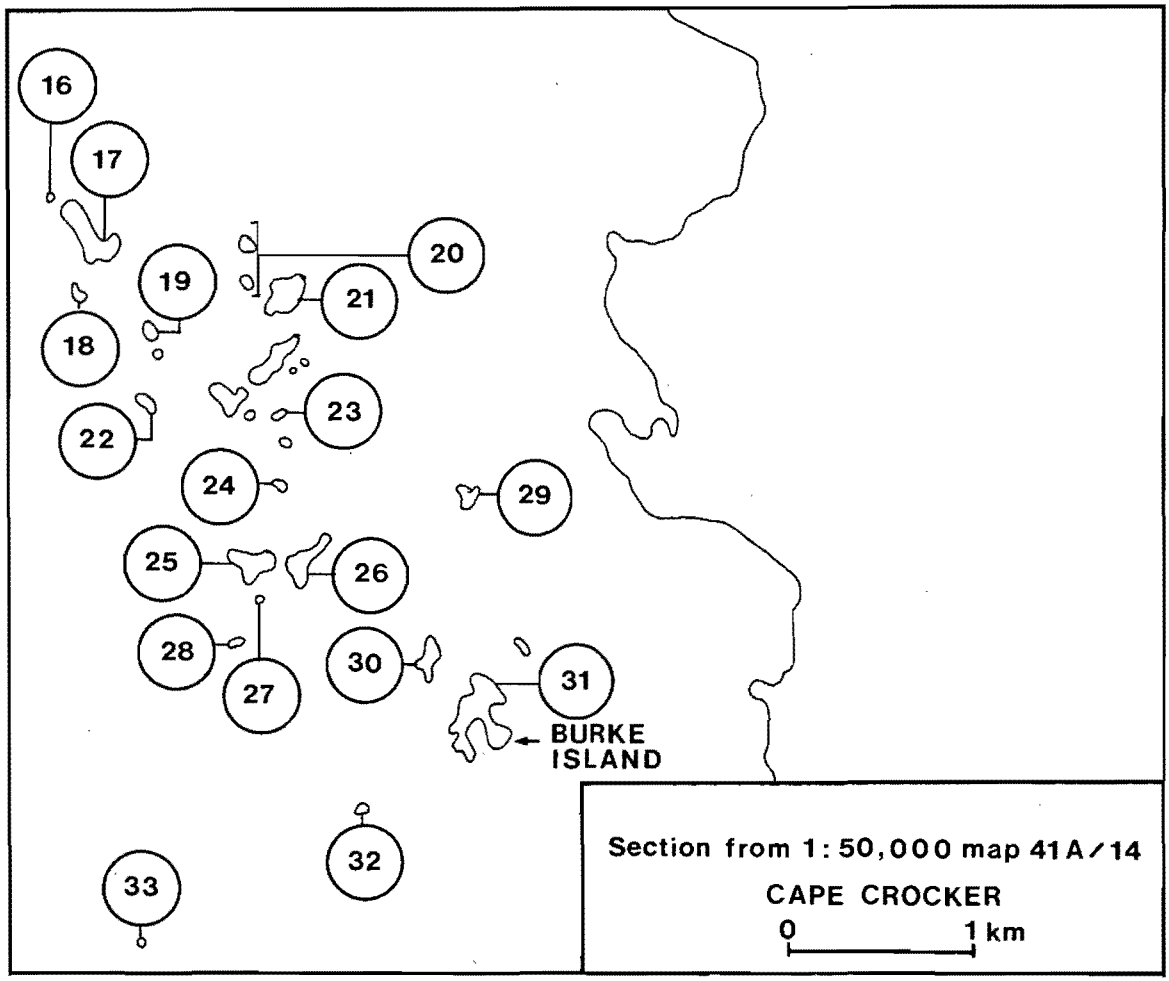

36
35
38
37
39
41
40
43
44
42
45
47
46
50
53
54
52
51
N
Symbol
Colony present during census years
Solid circle 1989 and 1980
Open circle 1989 only
Asterisk 1980 only
Symbol
No. of nests in 1989
1 - 25
26 - 250
251 - 2500
2501 - 25,000
≥ 25,000
0 5 km

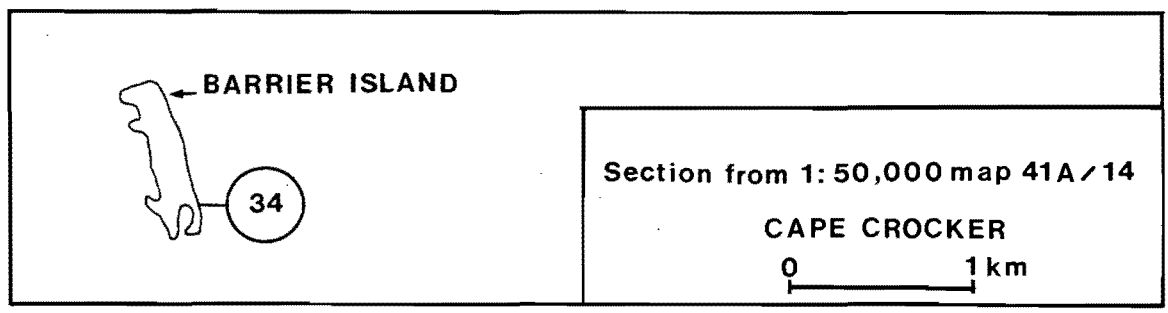

1
2
3
4
LYAL
ISLAND
Section from 1:50,000 map 41A/14
CAPE CROCKER
0
1 km

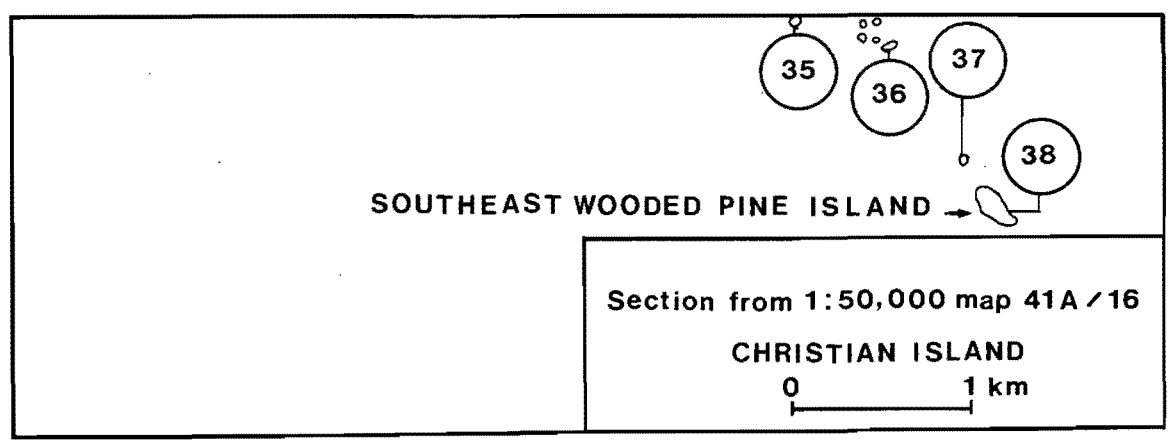

5
KOLFAGE
ISLAND
6
7
8
9
10
11
Section from 1:50,000 map 41A/14
CAPE CROCKER
0
1 km

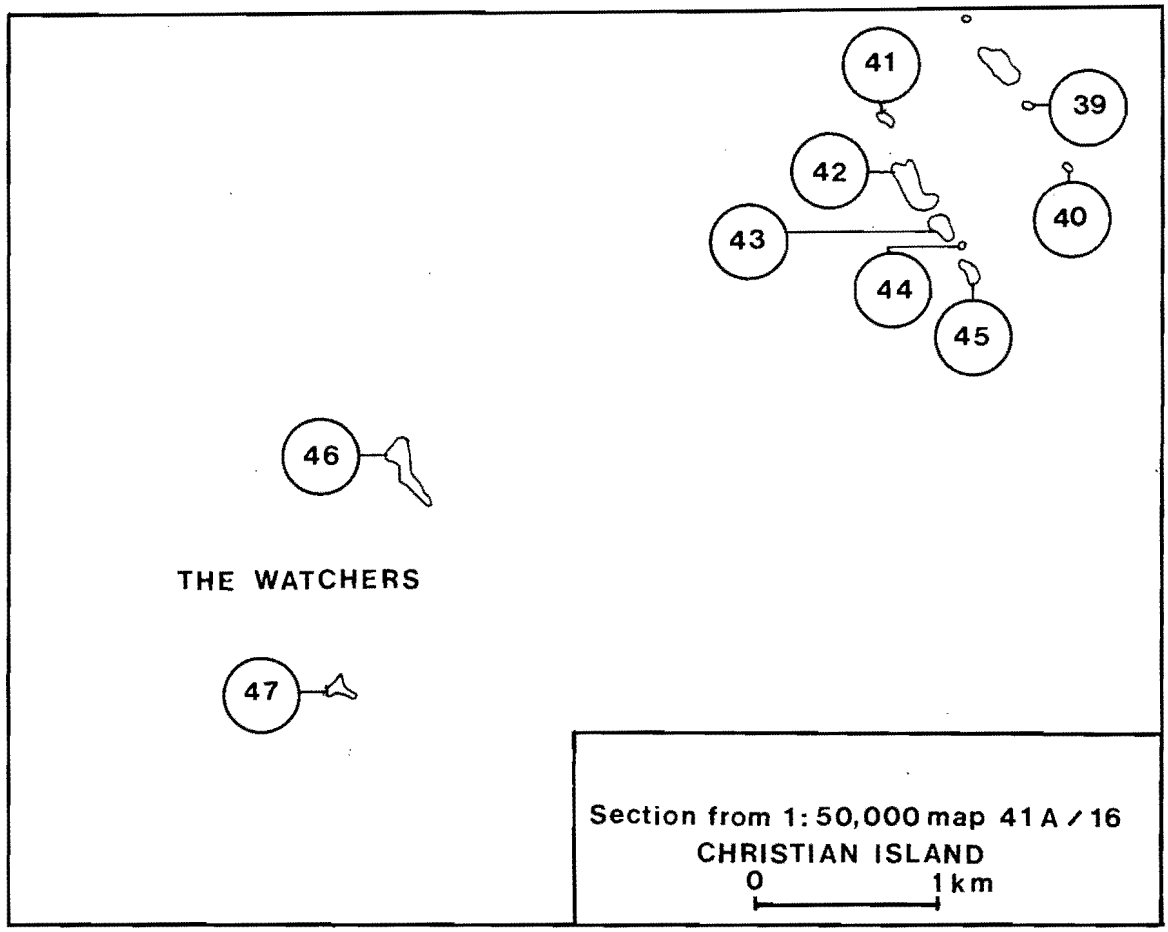

12
13
14
15
TYSON ISLAND
Section from 1:50,000 map 41A/14
CAPE CROCKER
0
1 km

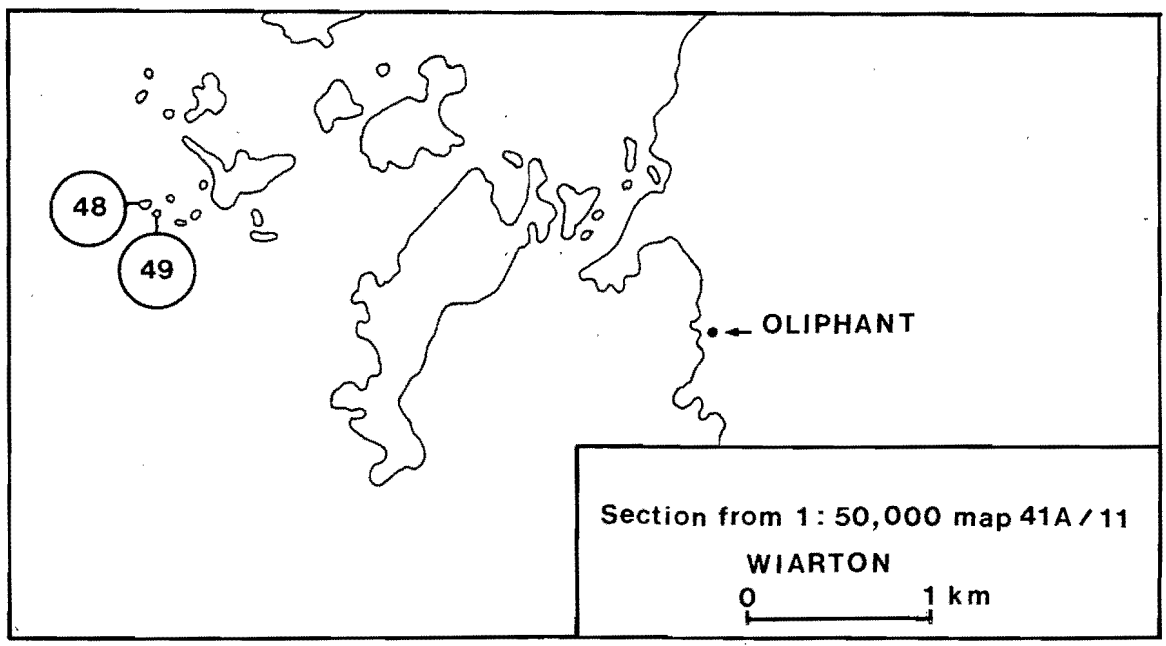
App. 17 (cont'd).


16
17
18
19
20
21
22
23
24
25
26
27
28
29
30
31
32
33
BURKE ISLAND
Section from 1:50,000 map 41A/14
CAPE CROCKER
0
1 km

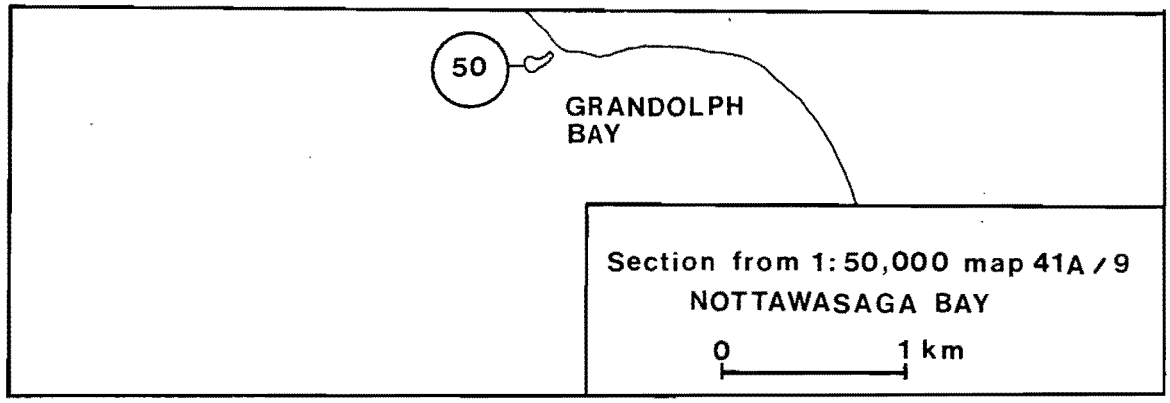

BARRIER ISLAND
34
Section from 1:50,000 map 41A/14
CAPE CROCKER
0
1 km

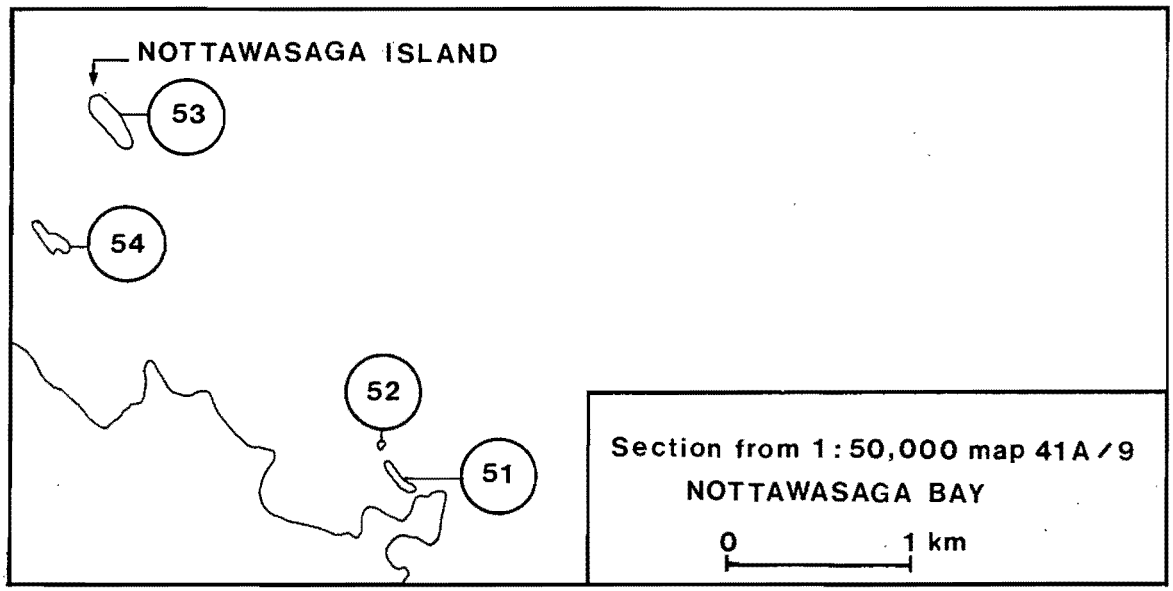

35
36
37
38
SOUTHEAST WOODED PINE ISLAND
Section from 1:50,000 map 41A/16
CHRISTIAN ISLAND
0
1 km

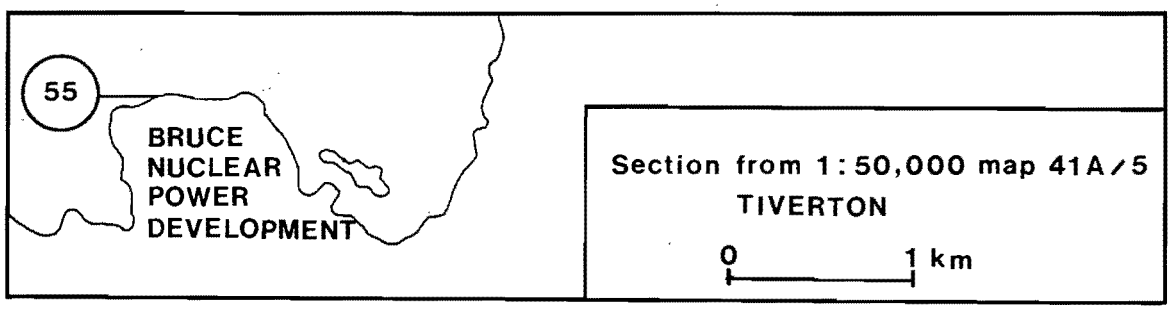

41
39
42
40
43
44
45
46
THE WATCHERS
47
Section from 1: 50,000 map 41 A / 16
CHRISTIAN ISLAND
0
1 km

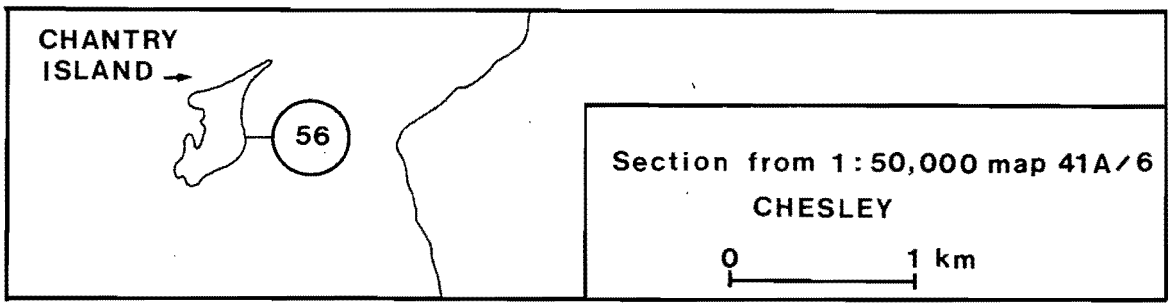

48
49
OLIPHANT
Section from 1: 50,000 map 41A / 11
WIARTON
0
1 km

App. 17 (cont'd).

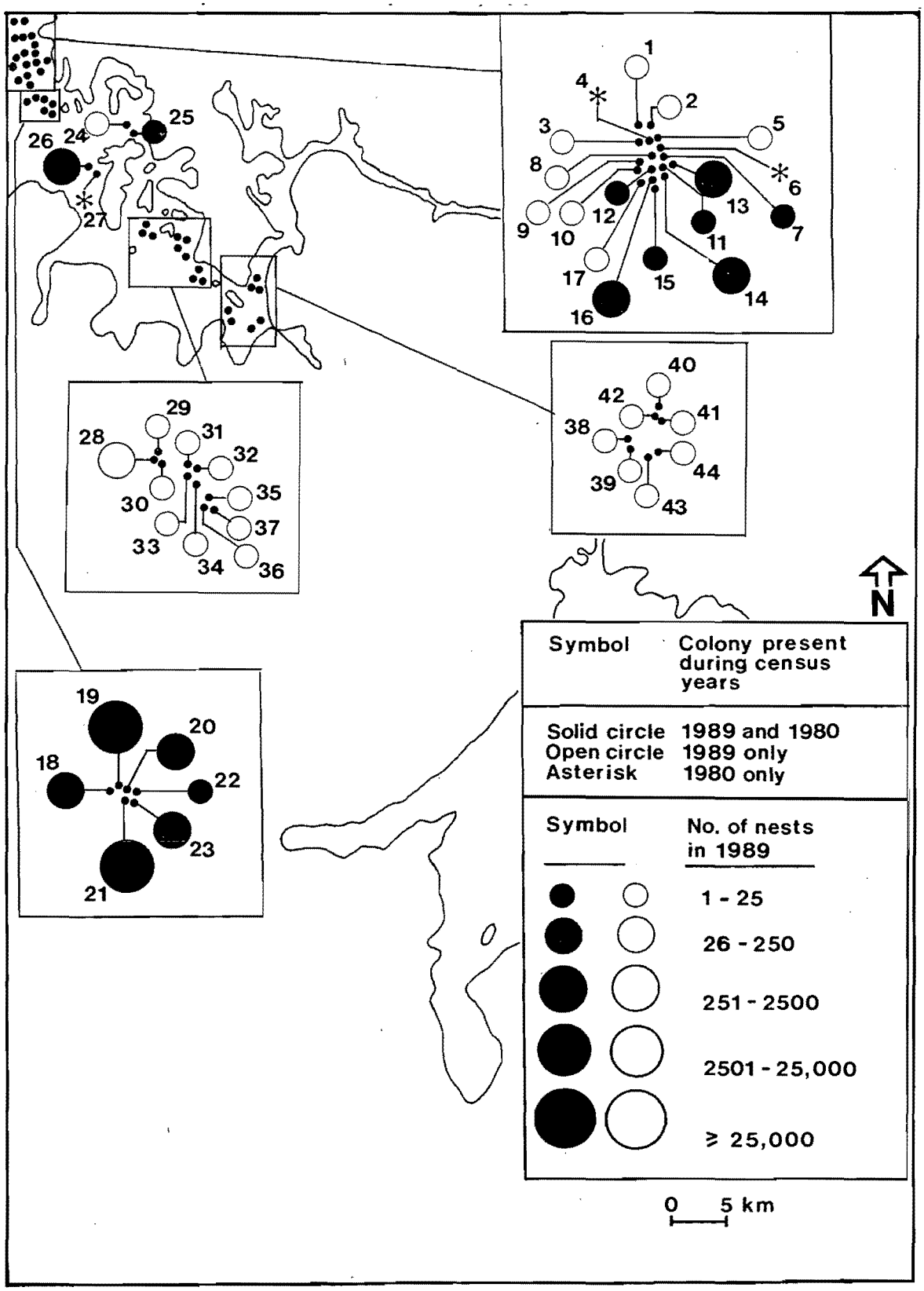

50
GRANDOLPH BAY
Section from 1:50,000 map 41A/9
NOTTAWASAGA BAY
0
1 km

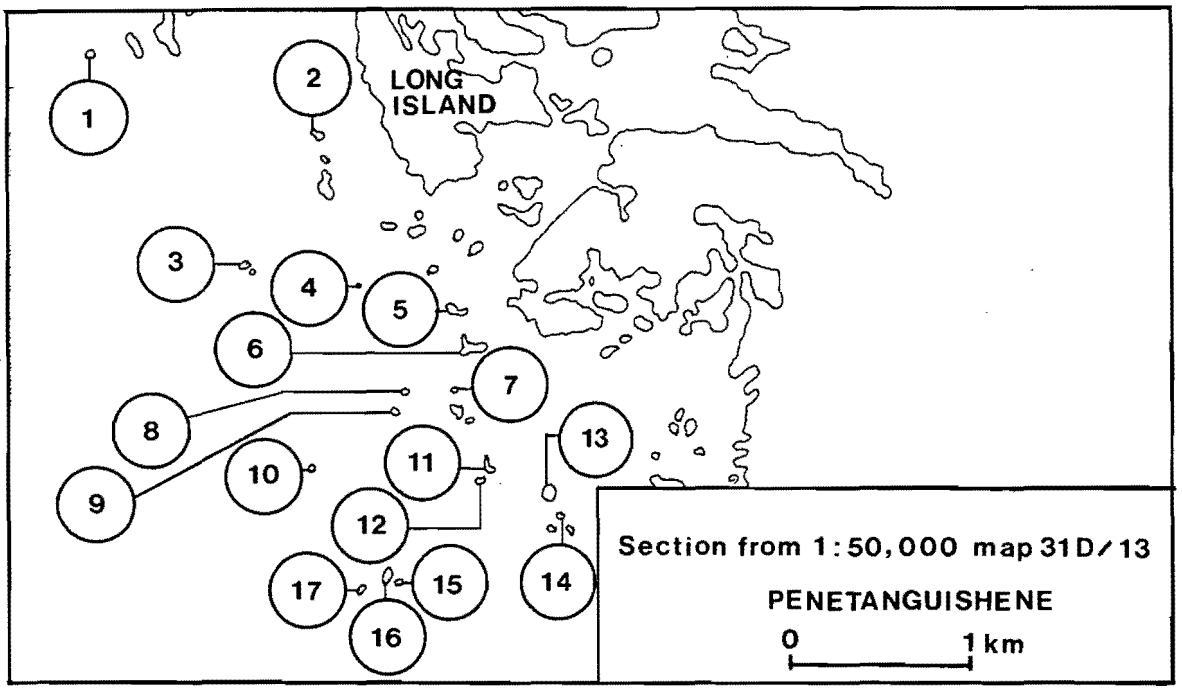

NOTTAWASAGA ISLAND
53
54
52
51
Section from 1:50,000 map 41A/9
NOTTAWASAGA BAY
0
1 km

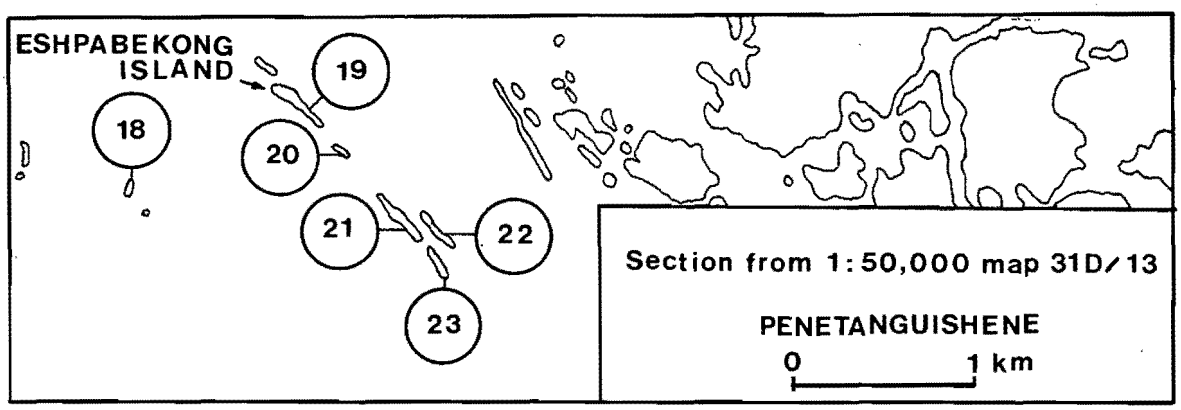

55
BRUCE NUCLEAR POWER DEVELOPMENT
Section from 1:50,000 map 41A/5
TIVERTON
0
1 km

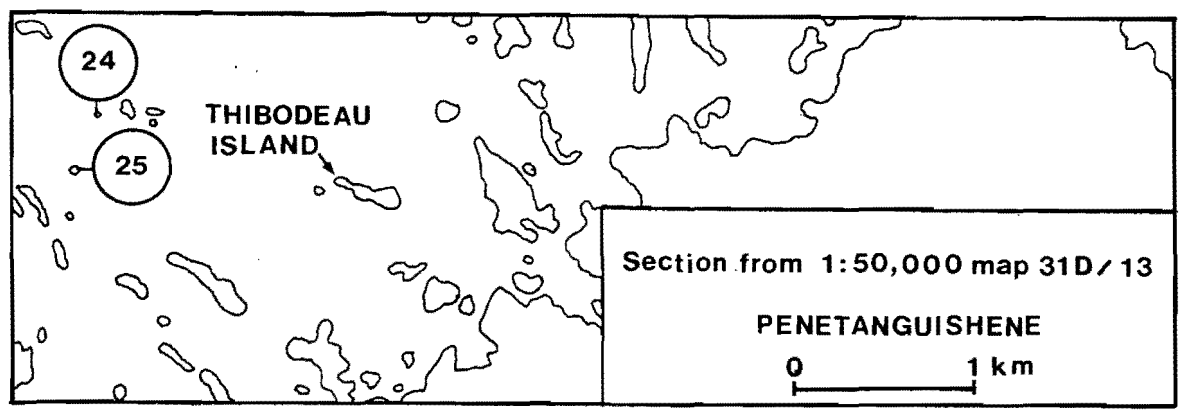

CHANTRY ISLAND
56
Section from 1:50,000 map 41A/6
CHESLEY
0
1 km

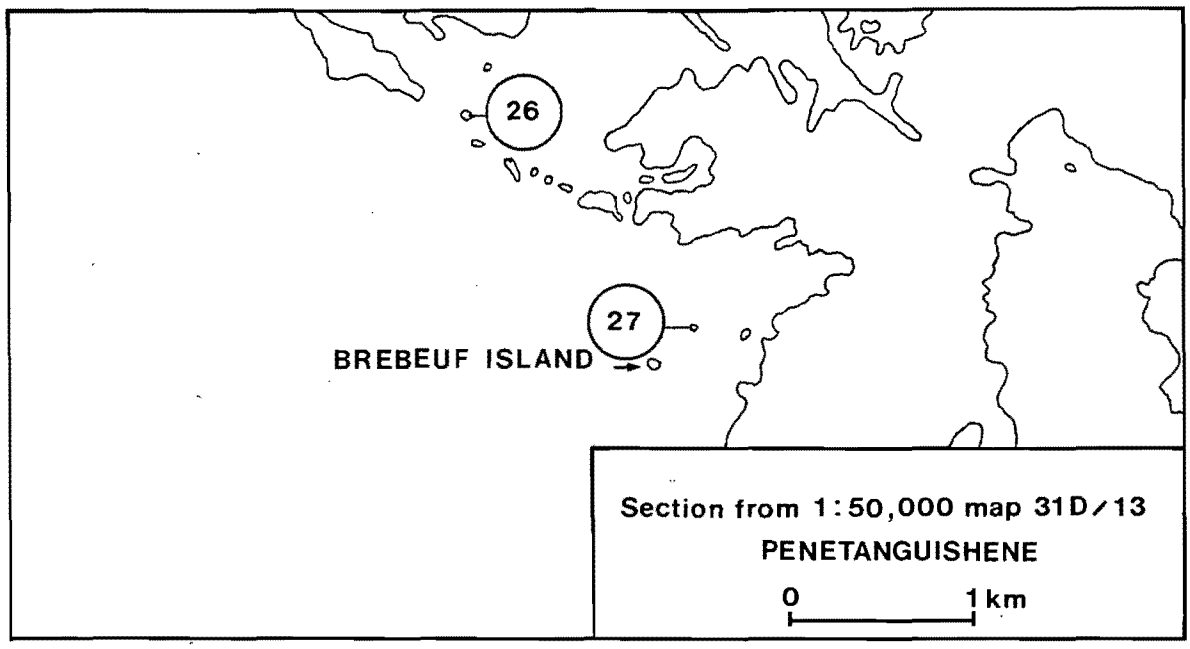
Appendix 18. Colony sites covered by 1:250,000 Topographic Map 31D (West).

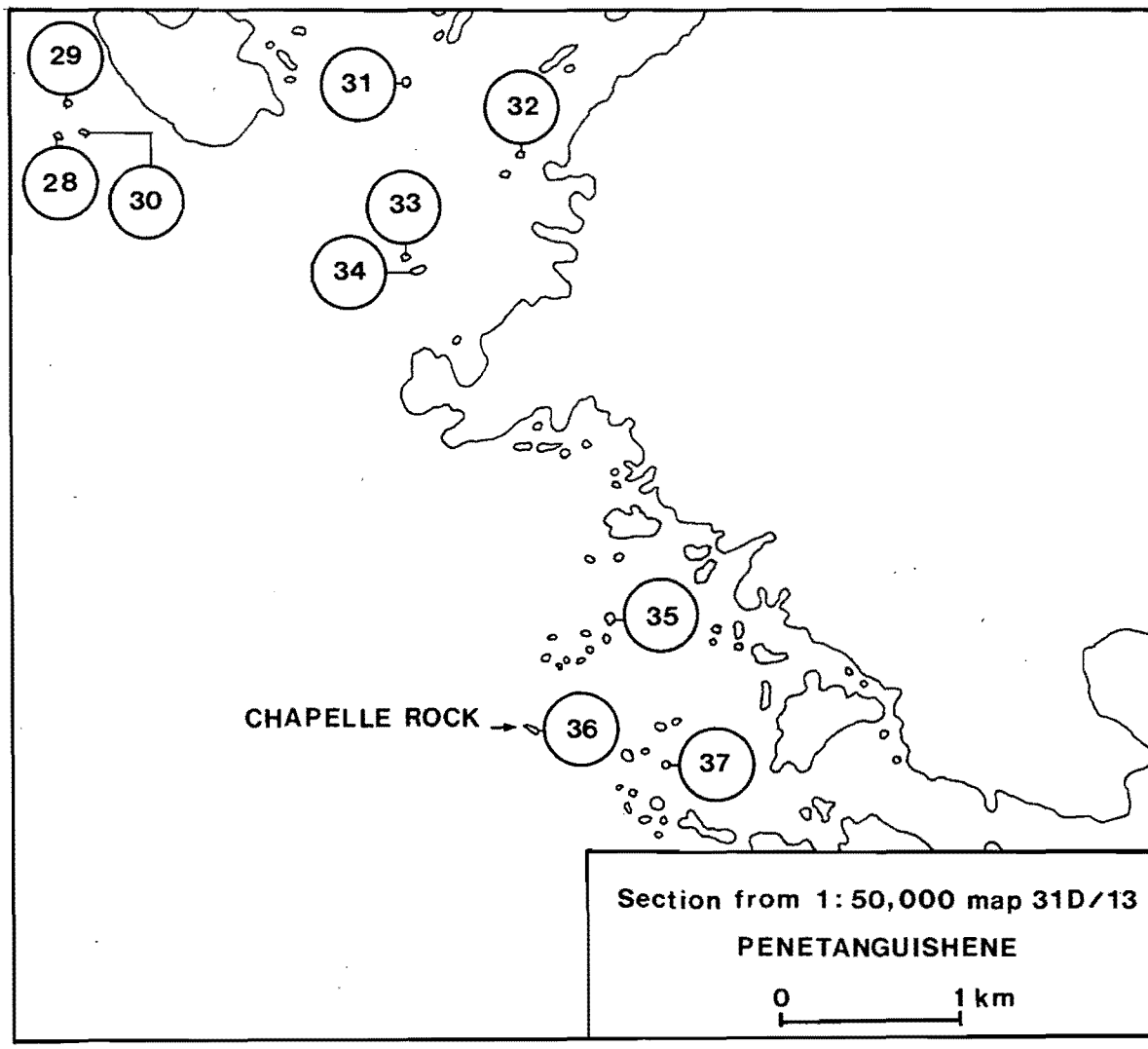



LONG ISLAND
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
Section from 1:50,000 map 31D/13
PENETANGUISHENE
0
1 km

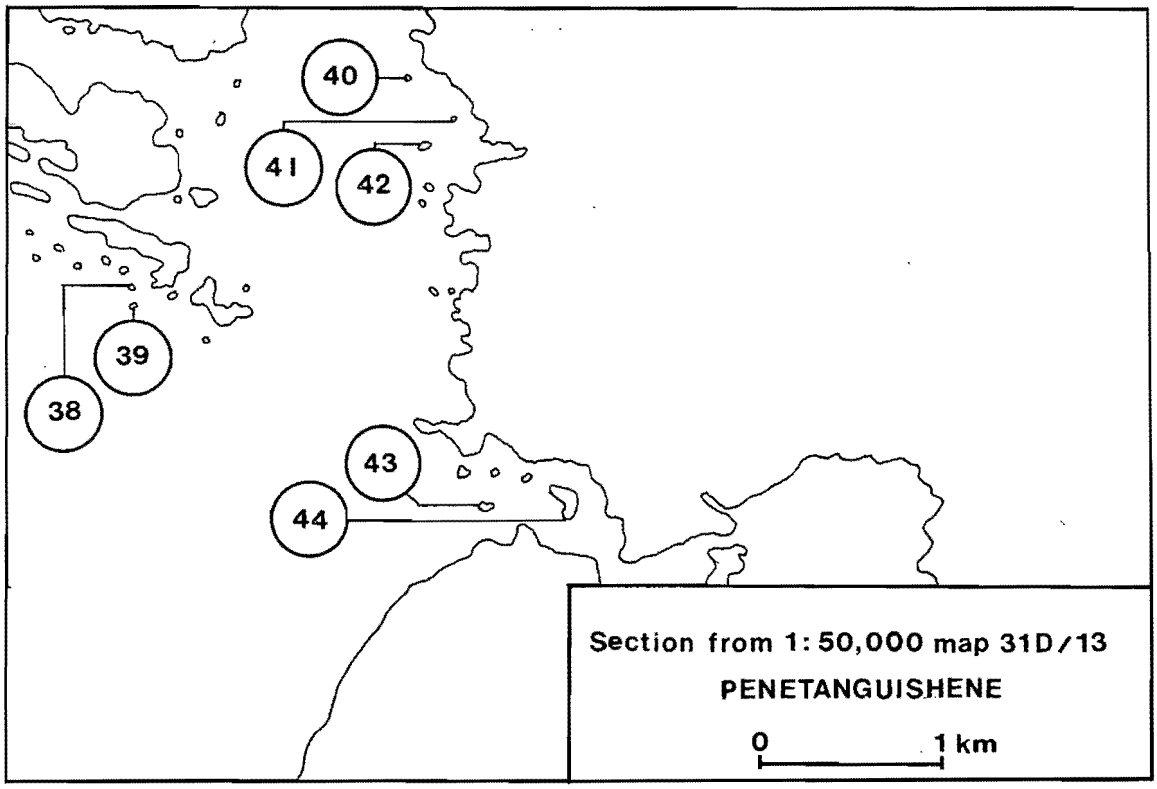

ESHPABEKONG ISLAND
18
19
20
21
22
23
Section from 1:50,000 map 31D/13
PENETANGUISHENE
0
1 km


24
25
THIBODEAU ISLAND
Section from 1:50,000 map 31D/13
PENETANGUISHENE
0
1 km


26
27
BREBEUF ISLAND
Section from 1:50,000 map 31D/13
PENETANGUISHENE
0
1 km


29
31
32
28
30
33
34
35
CHAPELLE ROCK
36
37
Section from 1:50,000 map 31D/13
PENETANGUISHENE
0
1 km

App. 18 (cont'd).


40
41
42
39
38
43
44
Section from 1: 50,000 map 31D/13
PENETANGUISHENE
0
1 km