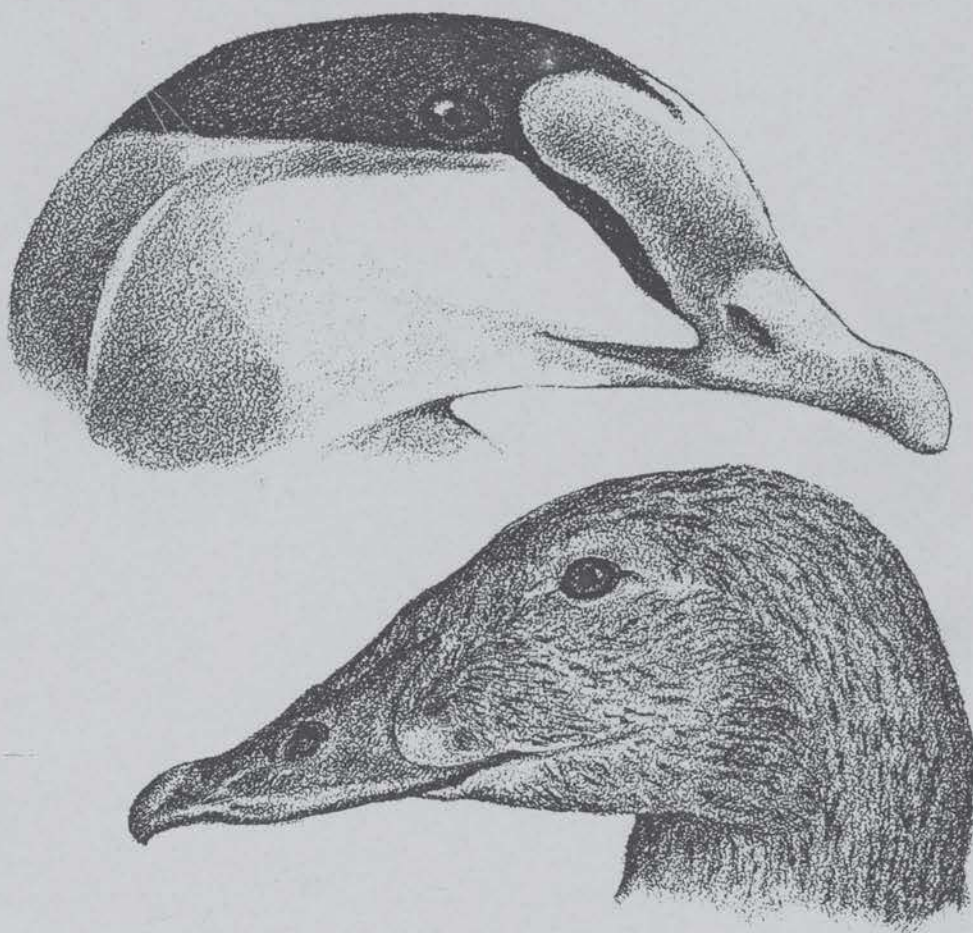


The American Eider in Maine



THE AMERICAN EIDER (Somateria mollissima dresseri) IN MAINE

and

Its Relevance to the Critical Areas Program

By

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(M. S., Wildlife Management, University of Maine, 1976)

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FOREWORD

The following report on the American eider is one of a series of reports being prepared for Maine's Critical Areas Program. This program was established by an act of the Legislature in 1974 which directed the State Planning Office to develop an official Register of Critical Areas and to encourage and coordinate the conservation of such areas as part of its overall responsibility for comprehensive statewide planning and coordination of planning activities. The Act defines Critical Areas as natural features of statewide importance because of their unusual natural, scenic, scientific, or historical significance.

The Act also created the Critical Areas Advisory Board to advise and assist the State Planning Office in the establishment of the Register and the conservation of critical areas. The program established by the Act is not regulatory, with the minor exception that notification of proposed alterations of critical areas is required of the landowners thereof. The program is primarily one of identifying critical areas and providing advice to and coordinating the voluntary activities of landowners, state and local government organizations, conservation groups and others to the end of encouraging the conservation of critical areas. The Critical Areas Program further provides a specific focus for the evaluation and coordination of programs relating to critical areas in Maine. The program also serves as a source of information on critical areas and their management.

The purpose of these reports is to present the results of thorough investigations of subject areas chosen for consideration in the Critical Areas Program. The reports are an intermediate phase in a systematic registration process which starts with the identification of subjects for consideration and concludes with the analysis of each potential critical area individually and, if appropriate, inclusion of areas on the Register.

In addition to the specific task they are intended to fulfill in the registration process, it is my hope that these reports will be useful in a more general sense as a source of information on the various topics they cover. For more information on the American eider or other aspects of the Critical Areas Program, feel free to contact me or other members of the staff at the State Planning Office.

R. Alec Giffen, Supervisor
Resource Planning Division
State Planning Office

ACKNOWLEDGEMENTS

The School of Forest Resources of the University of Maine at Orono provided my services for four months (November 1, 1976 through February 28, 1977) to research and write this report to fulfill a contractual agreement with The State Planning Office, Critical Areas Program. I wish to thank Mr. Howard L. Mendall, Leader of the Maine Cooperative Wildlife Research Unit and authority on the eider duck in Maine, who acted as project advisor and provided unpublished reports, personal expertise and editorial assistance in the preparation of this report. I am indebted to Dr. Carl E. Korschgen, Principal Investigator for the Maine colonial nesting seabird inventory¹, for allowing the compilation of historical information on the eider duck and the 1976 field information used in the preparation of this report. Other unpublished reports that were valuable in the preparation of this paper were provided by W. H. Drury, College of the Atlantic, and A. E. Hutchinson, Maine Department of Inland Fisheries and Wildlife. Messrs. Lee Perry, Fred Hurley, Jr., and Howard Spencer of the Maine Department of Inland Fisheries and Wildlife, provided valuable input in determining management suggestions. Mr. Harry Tyler, Jr., also provided valuable assistance in the preparation of this report.

¹Contract between the University of Maine at Orono and the Office of Biological Services, U.S. Fish and Wildlife Service.

ABSTRACT

The American eider, Maine's only breeding sea duck, is known to have nested on 215 coastal islands of the State in 1976. In Maine, eiders seem to prefer to nest on relatively small, uninhabited islands. The numbers of eiders on the Maine coast have fluctuated greatly since colonial days. Eider populations declined in the late 19th and early 20th century due, presumably, to egg collecting and overshooting at concentration points, especially on breeding islands in the spring. Early in this century, protective policies were implemented. As a result, the population began to increase and this trend has continued to the present. The 1976 breeding population is estimated to be a minimum of 20,000 pairs.

The major threat to breeding populations of eiders is human disturbance during the nesting season. The production of young in a disturbed colony can be seriously diminished for the breeding season. Other limiting factors include the presence of either predatory birds and mammals or domestic animals.

Criteria for determining significant nesting areas for the eider duck in Maine are defined and a historical review of eider duck nesting on the Maine coast is presented. In 1976, the birds nested on at least 215 islands in Maine of which 49 were of significance for eiders. These significant areas provided breeding habitat for at least 60 percent of Maine's 1976 eider population. It is suggested that these nesting areas be maintained in their present condition and that human disturbance on such islands be restricted during the nesting season (1 May - 15 July).

INTRODUCTION

Eider duck nesting habitat in Maine is of national importance because Maine supports the major nesting population on the Atlantic coast of the United States. Interest in the American eider (*Somateria mollissima dresseri*) has increased substantially during recent years both from the aesthetic and sporting viewpoints. Eiders are included in the sea duck hunting regulations with a larger bag limit and longer season than for other ducks breeding in Maine. With the more restrictive regulations on most waterfowl, increased activity in sea duck hunting has been noted (Spencer and Corr 1975). A substantial number of people also derive recreational value from observing, painting, carving and photographing eiders. The opportunity for natural history education is also of great value.

The growing use of the coastal area, and particularly islands, threatens the welfare of several colonial seabirds including the eider. The use of islands is crucial in the bird's life cycle. Islands that have a relatively large nesting population should be protected from disturbance and maintained in their present condition and are, therefore, recommended to be evaluated for inclusion on the Register of Critical Areas.

SPECIES ACCOUNT

Description

American eiders (*Somateria mollissima dresseri*) are among the most conspicuous seabirds on the Maine coast. They are the largest ducks in North America weighing from 1 1/2 to 2 1/2 kilos and having a total length of 59 to 73 cm (Bellrose 1976). They characteristically fly in long strings very low over the water. The drakes are sharply patterned in black and white and are unique among the waterfowl in having the combination of white back and breast plus black belly and sides (Figure 1). Females are brown or buffy and usually are heavily barred (Figure 1). Probably the most distinguishing features of the bird are the two leathery frontal processes which continue backward from the upper mandible. In the American eider male, and to a lesser extent in the female, these processes terminate in rounded tips.

Taxonomy

The American eider is a diving duck in the family Anatidae and subfamily Aythyinae (A.O.U. 1957). Geographical races of the common eider (*Somateria mollissima*) which are closely related and similar in appearance have been recognized. The principal differences among races are size, feathering along the bill and minor color markings. However, the subspecific taxonomy is presently in a state of confusion. Delacour (1959) describes five subspecies as follows: *S. m. mollissima* (L.), the European eider; *S. m. borealis* (Brehm), the northern eider; *S. m. dresseri* (Sharpe), the American eider; *S. m. faeroeensis* (Brehm), the Faroe eider; and *S. m. v-nigra* (Bonaparte), the Pacific eider.

The breeding population in Maine consists entirely of the American eider, which also winters here. During the winter, however, the population comprises a small proportion of northern eiders and occasionally a few king eiders (*S. spectabilis*).

Distribution

The common eider is widely distributed in the northern latitudes of the world, breeding from northwestern Russia westward through Canada and Alaska to eastern Siberia south to about latitude 43°N in eastern North America (Palmer 1976). The breeding and wintering distribution of the common eider in North America is presented in Figure 2.

The American race of the common eider nests on islands along the coast of Labrador south of Hamilton Inlet, Newfoundland, eastern Quebec, Nova Scotia, New Brunswick, and to islands slightly west of Casco Bay, Maine. Its wintering range extends from Newfoundland south to Massachusetts with occasional birds found as far south as eastern Long Island, New York (Palmer 1976). The breeding and wintering distribution of the American eider is presented in Figure 3.

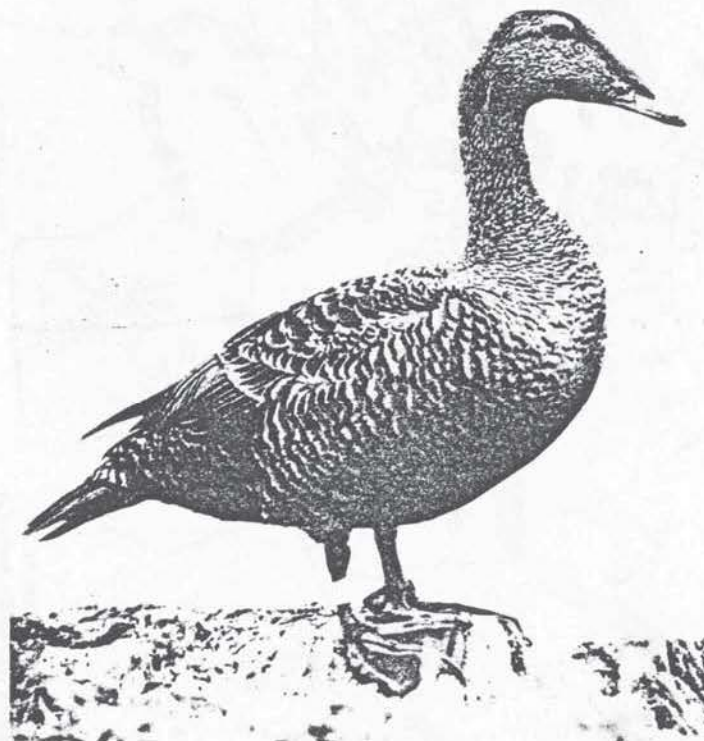
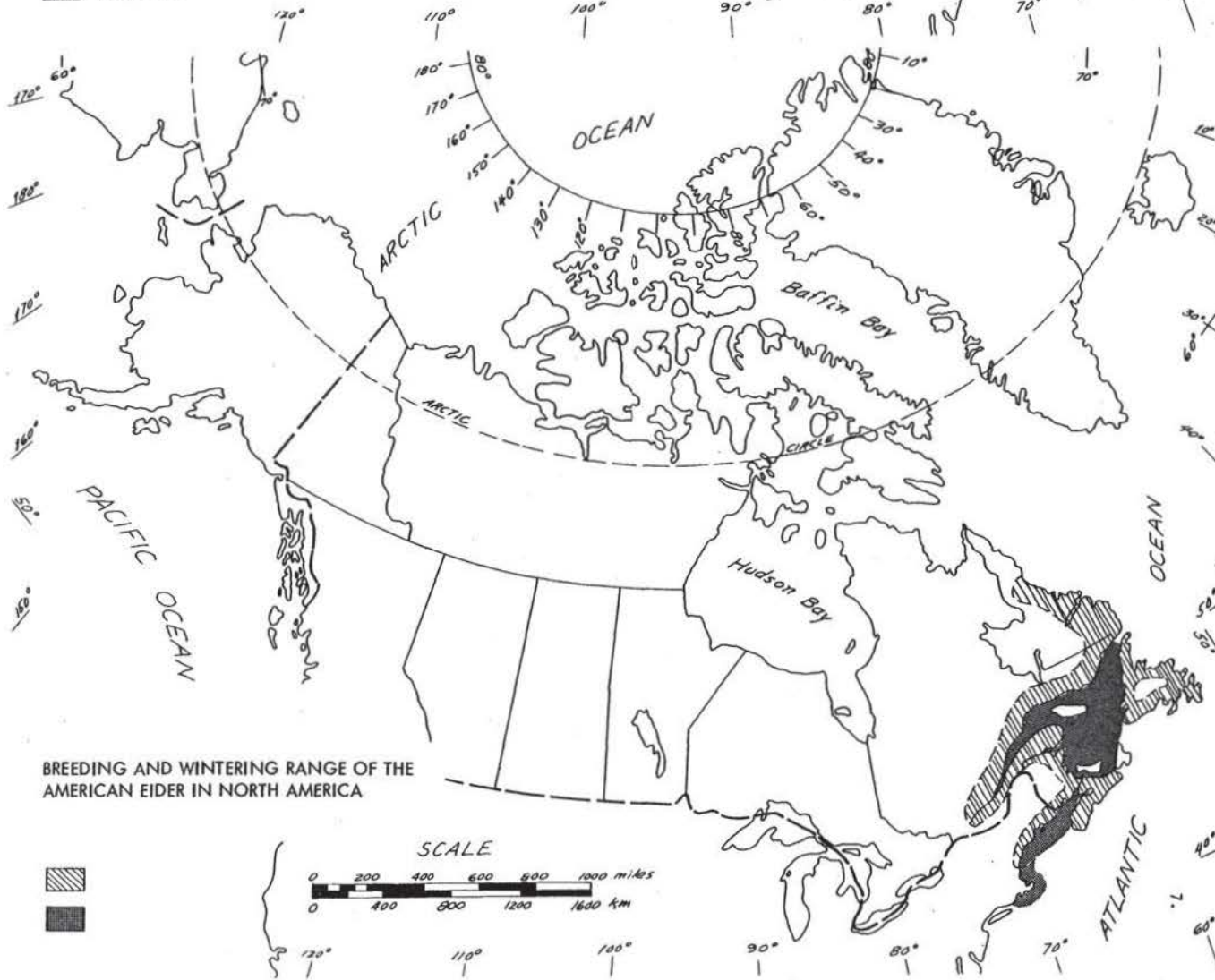
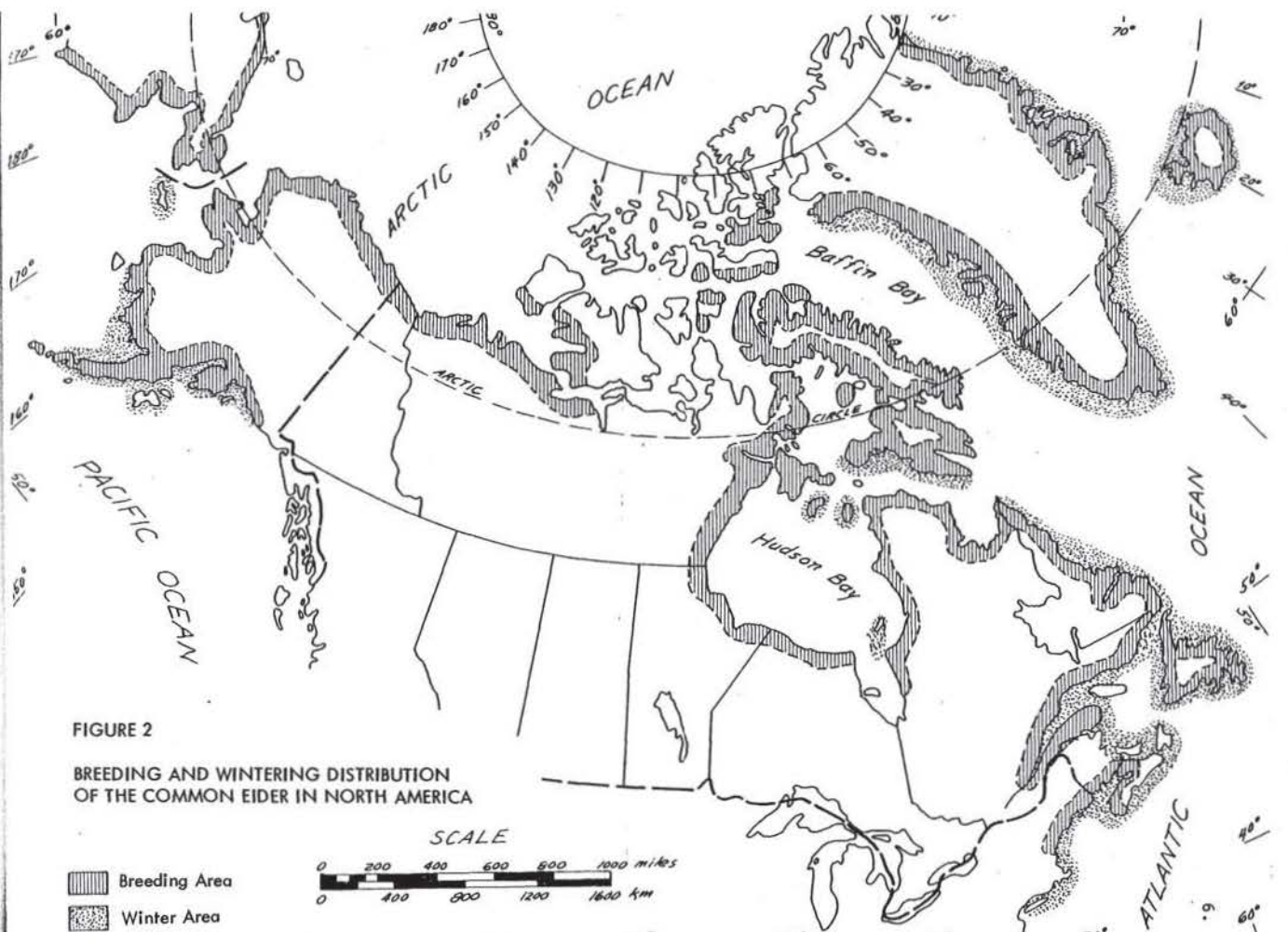
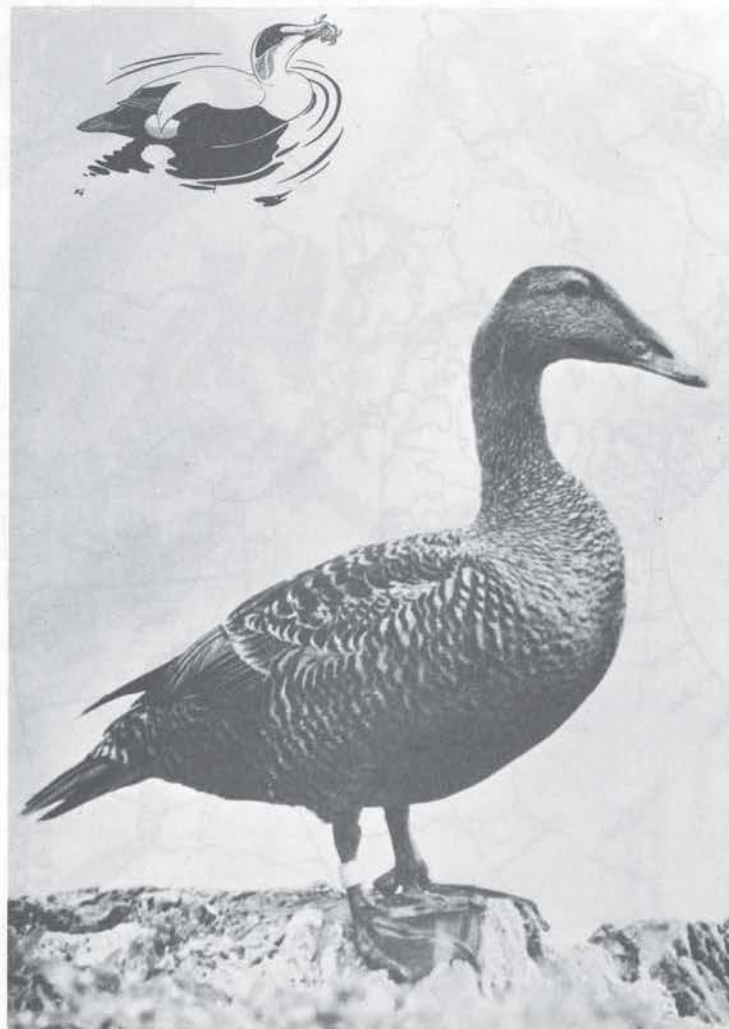


Figure 1. Male (top) and female (bottom) eider
(Photograph of female by Carl E. Korschgen
Sketch of male is from Gilmor, R. 1966. Wildfowl,
Annu. Rep. 18:159.)





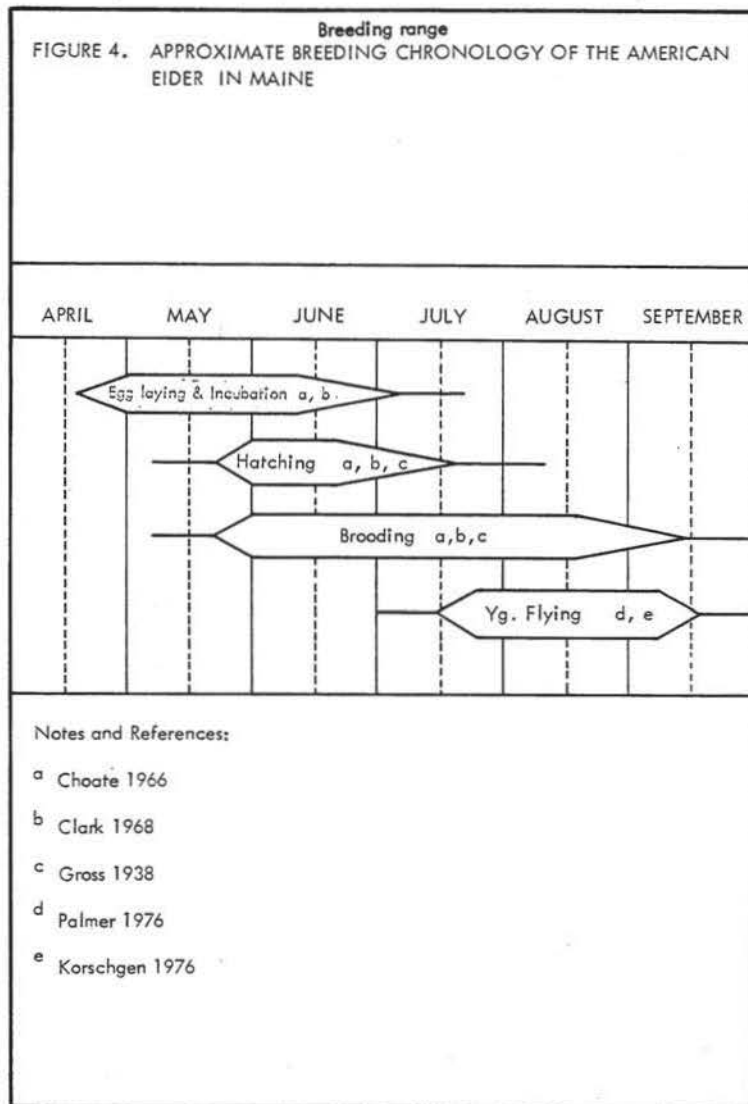
Maine is the only state in the lower 48 that supports a significant breeding population of eider ducks. Gross (1944) estimated that there are approximately 1700 vegetated islands on the Maine coast. Presently eiders nest on at least 215 of these islands. A majority of the breeding birds are in the mid-coast region, roughly from Schoodic Peninsula to Pemaquid Point (Mendall 1976). A recent westward expansion of the nesting population in Maine has been noted (Mendall 1976).

Reproduction

Among Maine waterfowl, only the eider duck nests in close association with others of its kind, i.e., it is a colonial species. Eiders are seldom seen on shore except during the nesting season. In Maine, they prefer to nest on islands which generally provide safer nesting sites than mainland locations. It is during the breeding season that the island environment is important to the welfare of Maine's seabirds.

Eiders are among the earliest seabirds to nest (Mendall 1976). In general, by the last week of April, a nest site is selected. The chosen site varies greatly from fully exposed to fully sheltered, and may be on the edge or deep in the center of an island. Nesting habitat is described in the Habitat section of this report. Initiation of egg-laying can vary by as much as three weeks in different areas of the coast, and between years, due to environmental conditions. The approximate breeding chronology of eiders in Maine is shown by a phenophase diagram (Figure 4). The American eider commonly lays 3-5 eggs, usually at a laying rate of one per day. The incubation period averages 26 days (Choate 1966, H. L. Mendall, personal communication). Eiders nesting on islands in Penobscot Bay have had recorded nest successes ranging from 15 to 40 percent (Choate 1967, and Clark 1968). Nest success often is higher than this, however, on islands not regularly visited by man. Much of the nest loss occurs prior to the incubation period when eggs are more readily lost to predatory gulls (Choate 1966). Some eiders may renest if the first clutch of eggs is destroyed (Sarbellio 1973).

Young eiders usually leave the nest within 24 hours or as soon as the natal down feathers are dry (Minot 1976). It is then that the brooding period begins (Figure 4). Young eiders are led to the water by their mother or another female. Several broods may combine and be accompanied by more than one female. It takes an average of 60 to 65 days for young eiders to reach the flying state (Palmer 1976). To date, the only study on the survival of ducklings of the American subspecies of eider has been made by McAloney (1973) in Nova Scotia. His data indicate a survival to fledging of 24.5 percent of the ducks hatched, and 50 percent of all juvenile mortality occurred before the ducklings were one week old.



Migration

After the breeding season eiders undergo a postbreeding molt (loss and replacement of feathers). In Maine, postbreeding drakes may begin to molt by the middle of June (Palmer 1976), considerably earlier than do the females. Little is known about the location of molting areas of drakes although some do remain in Maine. A great many of the young of the year and females remain and molt in Maine waters. They generally move toward the open ocean and congregate near the more isolated offshore islands and ledges in the outer parts of the bays. During this molt, eiders are flightless for a period of 3-4 weeks because all the old flight feathers are shed at the same time.

The fall migration of the American eider in Maine takes place from about mid-October through November. Maine eiders are coastal migrants. Breeding females winter along the coast from Maine to Massachusetts (Wakeley 1973). Yearlings exhibit a more scattered and irregular migrational pattern than adults; part of the immature population appears to winter along the coast of Maine and Massachusetts, while another part winters off the southern tip of Nova Scotia (Wakeley 1973).

Spring migration takes place between 1 March and mid-May. Wakeley and Mendall (1976) concluded, in Maine eiders, nearly all surviving adult females return to the same nesting island year after year. The strong tendency of the eider to home to specific nesting islands suggests the importance of safeguarding breeding islands from further exploitation. If an adequate number of breeding islands are preserved and human disturbance is restricted during the nesting season, present colonies can be maintained on a productive basis (Wakeley and Mendall 1976).

Habitat

There is no "typical" eider nesting island yet an apparent preference to nest on relatively small, uninhabited islands exists. The eider on the Maine coast nests in open forest, shrub and grassland habitats and often nest where different cover types meet (Gross 1944, Choate 1967, Bourget 1973, C. E. Korschgen, personal communication). Choate (1967) found that eiders selected the optimum concealing cover available at the time of nest initiation. This helps to conceal eider nests from predatory gulls. A seasonal difference exists in cover selection and utilization on specific islands. Grubb (1974) noted a "shift" of the eider's nesting preference on Kent Island, New Brunswick from the treeless southern end to the forested north end over a period of 25 years. This was attributed to harassment and predation by gulls in open habitats. In Maine, no actual movement has been evident but recruitment of young eiders in wooded habitat apparently has been high enough to allow the establishment of nesting populations on certain forested islands such as Little Sprucehead Island in Penobscot Bay (C. E. Korschgen, personal communication).

Gross (1944) estimated there are 1700 vegetated islands on the Maine coast. These islands are composed of bedrock covered with a layer of soil. Major plant types include grasses, herbs, shrubs and forests. These types were used during the 1976 inventory to describe the habitat on eider nesting islands. A complete list of the plants and animals occurring on Maine coastal islands is not given in this report, but a general listing has been compiled from readily available published and unpublished sources. The more common grasses include meadow foxtail (*Alopecurus pratensis*), timothy (*Phleum pratense*) and quackgrass (*Agropyron repens*). The herbs include cow parsnip (*Heracleum maximum*), goldenrod (*Solidago canadensis*), nightshade (*Solanum dulcamara*), strawberry (*Fragaria sp.*), stinging nettle (*Urtica dioica*), mustard (*Brassica Kaber*), ragweed (*Ambrosia artemisiifolia*) and pineappleweed (*Matricaria maritima*). Shrubs include bayberry (*Myrica pennsylvanicum*), raspberry (*Rubus idaeus*), rose (*Rosa virginiana*), elderberry (*Sambucus sp.*), willow (*Salix sp.*), meadowsweet (*Spiraea latifolia*), and poison ivy (*Rhus radicans*). White spruce (*Picea glauca*), black spruce (*Picea mariana*), red spruce (*Picea rubens*), and balsam fir (*Abies balsamea*), comprise the coniferous forest type. Hardwood species are similar to those found on the mainland. Mixed forest types occur on many islands. Usually the mixed hardwoods are located near the center of a forested island.

The only small mammals known to inhabit the smaller Maine islands are the meadow vole (*Microtus pennsylvanicus*), masked shrew (*Sorex cinereus*), mink (*Mustela vison*), red squirrel (*Tamias sciurus*), muskrat (*Ondatra zibethicus*), and Norway rat (*Rattus norvegicus*). Harbor seals (*Phoca vitulina*) and occasional gray seals (*Halichoerus grypus*) are observed "hauled out" in the intertidal zone of certain islands.

The following species of seabirds nest in Maine: Common puffin (*Fratercula arctica*), black guillemot (*Cepphus grylle*), razor-billed auk (*Alca torda*), great black-backed gull (*Larus marinus*), herring gull (*Larus argentatus*), laughing gull (*Larus articilla*), common tern (*Sterna hirundo*), arctic tern (*Sterna paradisaea*), roseate tern (*Sterna dougalli*), Leach's petrel (*Oceanodroma leucorhoa*), double-crested cormorant (*Phalacrocorax auritus*) and American eider (*Somateria mollissima dresseri*). The island description also contains accounts of osprey (*Pandion haliaetus*), great blue heron (*Ardea herodias*), and black-crowned night heron (*Nycticorax nycticorax*). Several species of song birds also nest on Maine islands.

Food Habits

McGillvrey (1967) and Korschgen (1976) found blue mussels (*Mytilus edulis*) to be the most important food of American eiders in Maine. Green urchins (*Strongylocentrotus drobachiensis*), periwinkles (*Littorina sp.*) and various species of crabs were also important food items (Korschgen 1976). There appear to be seasonal changes in eider food preferences (Korschgen 1976). Generally, blue mussels are important during fall and winter and are partly replaced by green urchins, periwinkles, and other foods late in the winter.

McGillvrey (1967) mentioned that wintering areas of eiders seem to be strongly influenced by the location of blue mussel beds.

Population Trends

The numbers of American eiders on the Maine coast have fluctuated greatly since Colonial days. Historical accounts mention a gradual decline from the mid-1800's to shortly after the turn of the 20th century. According to Gross (1944) the low point of breeding eiders in Maine was reached in 1907. Norton (1907) found only one breeding colony that year on Old Man Island in eastern Maine. According to the early writers, egg collecting for food and over-shooting at concentration points, especially on breeding islands in the spring, were the major factors causing the decline. Soon after, protective policies were implemented. These included abolition of spring shooting, complete closing of the eider hunting season for several years and the protection of several seabird breeding islands by the National Audubon Society (Mendall 1976). As a result, by 1915, the population of eiders (as well as certain other seabirds) began to increase. This trend has continued in the eider to the present. At first there was a gradual increase, but since the late 1930's eiders have increased rapidly except, perhaps, between 1945 and 1950 (Drury 1973). Gross (1944) surveyed seabird colonies in Maine and found definite records of eiders breeding on 31 islands and probable nesting on 14 others. He estimated the State's population as "probably" more than 2000 pairs in 1943. Mendall (1968) mentioned that eiders were nesting on at least 75 islands and he estimated the 1967 breeding population to be about 18,000 pairs. In 1970, Mendall (1976) found eiders nesting on more than 150 islands and estimated, from the spring aerial inventory, the Maine breeding population was a minimum of 20,000 pairs.

The rapid rise in the number of eiders on the Maine coast apparently has leveled off during the past five years (Mendall 1976). An aerial census in 1972 indicated about the same number of breeding pairs as in 1970 (Mendall 1976). In 1974 and 1975, Mendall (1976) estimated the population to be also in the vicinity of 20,000 pairs. In 1976 eider nesting was recorded on 215 islands with many possible breeding sites remaining to be ground-checked in 1977. The 1976 breeding population is estimated to be at least 20,000 pairs (C. E. Korschgen, personal communication). The population trend during the 20th century of eiders breeding in Maine is graphed in Figure 5.

Factors Influencing Eider Populations in Maine

Mortality: Eider adult mortality is believed to be quite low. Mortality rates of adult females, estimated from life tables based on live recaptures and on hunting season recoveries averaged 23 percent (Wakeley and Mendall 1976). This rate is lower than those published for most other waterfowl species.

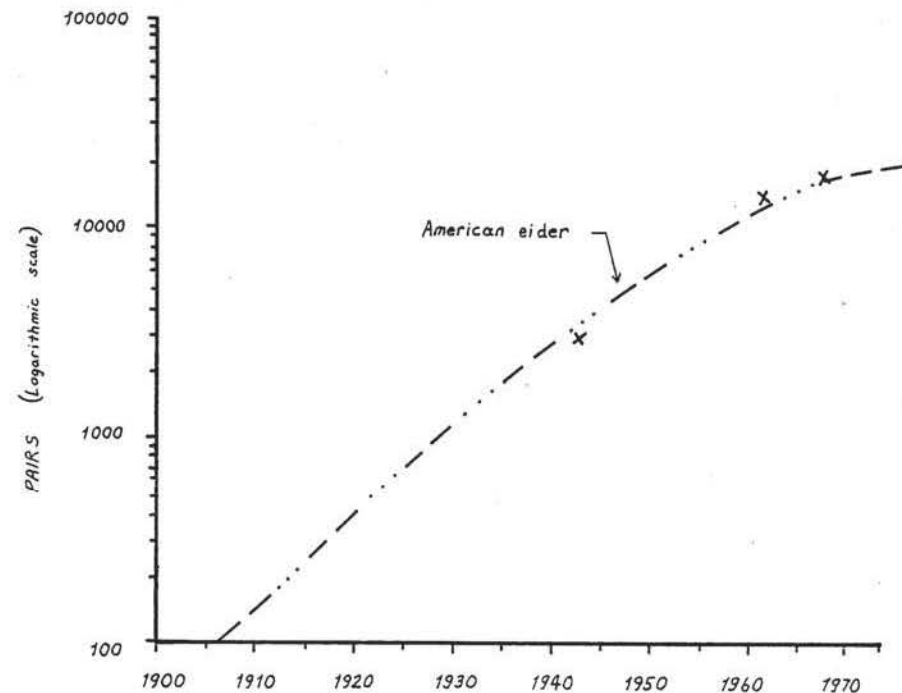


Figure 5.

Population estimate of the American eider in Maine. Breeding populations were very low prior to the first data point.

The greatest part of the mortality of eider hens probably occurs during the breeding season and the early stages of fall migration. Nesting females feed little or not at all during egg-laying and the 26-day incubation period (Korschgen 1976). During this period, the hens rely on nutrient reserves, especially the pectoral muscles and fat deposits for energy; thus, they lose much of their weight and are in the worst physical condition experienced during the annual cycle (Korschgen 1976). This great reproductive stress undoubtedly makes the nesting female highly susceptible to disease and parasite infection.

Avian cholera has been an important cause of direct mortality in Maine eiders. This disease is associated with the weakened condition of incubating females and high nest densities. In Maine, according to Mendall (1976) there have been three epidemics of cholera among eiders in certain colonies in the mid-coast region--in 1963, 1970 and 1974. The 1970 outbreak was especially widespread and an estimated loss of up to 20 percent of the nesting female eiders among several important colonies in Penobscot and Muscongus bays was recorded. One severe outbreak of an intestinal parasite occurred among Maine eiders (Clark et al. 1958).

Since the eider duck is a harvested species, the kill rate (the proportion of the population killed due to hunting in a year) is also an important mortality factor, although of less importance than with many ducks. The kill rate for adult female eiders in Maine as determined by Wakeley (1973) is 11.3 percent. The recent 5-year mean eider harvest is about 6,000 birds in Maine (Spencer and Corr 1975). According to these authors the eider is apparently being harvested at about the level supportable by the Maine breeding population.

Productivity: Predation by herring gulls and great black-backed gulls is a major source of egg loss among eiders breeding on disturbed Maine islands (Bourget 1970). Nesting success differs on individual islands due primarily to the rates of gull predation. The predation rates of gulls on eider nests is probably related to the ease at which gulls can find eider nests without an attending female present. Thus, the highest incidence of egg losses corresponds to the time of laying when females are absent from the nest more frequently than during the rest of the season. Island size, topography and vegetative cover affect eider losses through gull predation as well. Nest success was higher on relatively large islands with extensive stands of cover than on small islands which are readily investigated by predatory gulls (Bourget 1970).

Despite the physiological stress of reproduction and egg loss due to avian predators, eiders are usually quite productive in the midst of a gull colony if left undisturbed (Mendall 1976). However, the recreational use of the coastal zone has increased dramatically during the last few years. In Maine, increased use of islands by people associated with cruise schooners, survival schools, wilderness cruises, marine biological laboratories, photography workshops, natural history groups and other boating public has been noted. The

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influences of human visitors and/or their pets who roam through a seabird colony may be two fold: disturbance may increase the stress on the hen by forcing her to use valuable energy when she is frightened from the nest (Korschgen 1976); there may be extensive losses of exposed eider eggs or newly hatched ducklings to predatory gulls in a matter of minutes (Mendall 1976). The production of young in such a disturbed colony would be seriously diminished for the breeding season.

Seasonal residence on small islands without concealing nesting cover may cause eiders to abandon a nesting island permanently when residents are present during the breeding season. Other factors which may cause eiders, as well as other seabirds, to cease breeding or to produce poorly on islands in Maine include (1) the presence of rats, mink and other carnivorous mammals which may eat eggs and young, and; (2) the introduction of sheep or other domestic animals which remove vegetation from nesting sites or which accidentally trample nests (Palmer 1949, H. L. Mendall, personal communication). It is important that such animals be excluded from significant nesting areas if optimum conditions for eiders are to be maintained.

METHODS

Species Account

The information presented in this report on eider distribution, life history, habitat, food habits, population trends and factors influencing populations, is a composite account drawn from two major books (Palmer 1976, Bellrose 1976), and from University of Maine research theses; also from information in files of the Maine Cooperative Wildlife Research Unit, made available by Howard L. Mendall who has studied the eider duck on the Maine coast from 1965 to the present, and Carl E. Korschgen.¹ It must be emphasized that most studies to date have been local or of rather short duration. Thus, many sources were consulted for information on a particular subject. These papers are included in the Literature Cited section of this report.

¹Colonial nesting seabird inventory under a contract from the Office of Biological Services, U.S. Fish and Wildlife Service. Permission was obtained to use eider data in the present report from Dr. Carl E. Korschgen, Principal Investigator.

Historical Information on Individual Islands

The general literature and unpublished reports were studied and compiled by personnel of the Maine Cooperative Wildlife Research Unit¹ to provide background information on population trends of seabirds on individual islands. Seventy-five years of historical information was available for some seabird colonies (including eiders) in Maine. This information was listed by individual island and ordered chronologically so that it could serve as a baseline for eider population data (Appendix Table A). The historical information is not necessarily comparable from year to year due to numerous observers, variation in coverage and different methods of recording data. Thus, in one year, an incomplete ground check on an island may have resulted in a partial nest count. The next year, the population may have been inventoried by another observer, using a different method (total pair count, for example), and the total number of pairs in the vicinity would not be directly comparable although they would indicate island usage in the particular years. A list of unpublished reports from which seabird population data were extracted is included in Table 1.

Field Information

Seabird colonies were inventoried during the summer of 1976 by personnel of the Maine Cooperative Wildlife Research Unit. The techniques used at a given colony depended upon the susceptibility of the colony to adverse disturbance, sea conditions, the size of the island, and the nesting chronology of the birds. Island colonies were ground-checked from Cape Elizabeth to Schoodic Peninsula until 15 July. Numerical estimates of breeding pairs of eiders on an island (indicated as "Pairs" in Table 2, Appendix Table B) were determined by actual counts or estimates of total adults and by total or sample nest counts during the nesting season. From 15 July through August 1976, colonies were located east of Schoodic Peninsula but numerical estimates of breeding pairs were not made as most eiders had finished breeding for the year (indicated as "no estimate" in Table 2 and Appendix Table B). Nest bowls, runways and eggshell fragments remaining from the nesting season were used as an indication of eider nesting activity during the latter part of the breeding season. The survey will continue during the 1977 breeding season.

Island Location and Descriptive Information

Island names, sizes (except where obvious corrections were necessary) and the town and county in which the islands are located were extracted from information supplied by the State Parks and Recreation Commission. The 5 digit island number given is based upon the system established by the State of Maine Coastal Island Registry, Bureau of Public Lands, Department of Conservation. Latitude and longitude of the islands were determined by personnel of the Maine Cooperative Wildlife Research Unit. During the 1976 inventory, habitat of islands was grouped into vegetative types described in the habitat section of this report. Land use was recorded, the island sketched, and photographs were taken at most colonies.

Table 1. Unpublished file data

The following individuals or organizations provided unpublished file data which was used in this report. These reports are in the files of the Maine Cooperative Wildlife Research Unit.

Individuals	Year(s)	Organization
Various individuals		National Audubon Society Audubon Field Notes
J. M. Cadbury	1938-1960	
W. H. Drury	1965-1973	Massachusetts Audubon Society
A. O. Gross	1946-1949	Bowdoin College U.S. Fish and Wildlife Service
J. J. Hatch	1975-1976	
A. E. Hutchinson	1975	Maine Department of Inland Fisheries and Wildlife
C. E. Korschgen	1973-1976	Maine Cooperative Wildlife Research Unit
Personnel of Massachusetts Audubon Society	1975	U.S. Fish and Wildlife Service, Pilot survey of heron rookeries in coastal Maine, New Hampshire, Massachusetts and Rhode Island
H. L. Mendall	1965-1976	Maine Cooperative Wildlife Research Unit
A. H. Norton	1931	Portland Society of Natural History
A. H. Norton and R. P. Allen	1931	National Audubon Society and Portland Society of Natural History

Determining the Level of State Significance

If a given island met any or all of the following criteria, the island was considered a candidate for the Register of Critical Areas.

1. The island provided habitat for one percent (200 pairs) or more of Maine's 1976 estimated eider breeding population (20,000 pairs). Following trial tabulations, it was felt that the protection of islands which meet this arbitrary criterion would provide breeding areas for a majority of Maine's eiders on relatively few islands. This criterion is dependent upon reliable population data.
2. The island was strategically located; i.e., it was the major breeding colony in an area delineated by prominent peninsulas, points, and/or large islands.
3. The island had been recorded as having a large eider population during recent years, but was not ground-checked in 1976.
4. The island had scientific value due to previous investigations of eider biology that had been conducted.

Candidate islands were assessed on an individual basis and the islands listed in the Results section of this report were recommended to be evaluated for inclusion on the Register of Critical Areas. These islands need special protection since expansion and recruitment of the eider population may be tied directly to them.

Management Suggestions

General management suggestions for eider duck nesting areas were determined by representatives of the Maine Cooperative Wildlife Research Unit, the State Planning Office and the Maine Department of Inland Fisheries and Wildlife.

RESULTS

Aspects of the Life Cycle of Eider Ducks that Apply to the Critical Areas Program

In contrast to the situation affecting many wildlife species, management of Maine's eider population is relatively simple. The primary need during the nesting season is safeguarding breeding habitat. The present report is concerned with this aspect. The combination of strong migrational homing and high survival rates of adult eiders suggests that if an adequate number of breeding islands are safeguarded and human disturbance of the birds is restricted during the nesting season, the present colonies can be maintained on a productive basis (Wakeley and Mendall 1976).

It should be recognized that eiders need extensive protected areas for feeding, resting, bathing and molting throughout the yearly cycle. This may become especially important with the possibility of increased development along the coast--especially oil development and transport. For example, an oil spill during August in a major molting area could destroy the eider production in an area for the particular season as well as significantly reduce the number of adult hens and drakes. The above mentioned types of areas could also apply to the Critical Areas Program.

Significant Eider Duck Nesting Areas

A total of 215 colonies of eiders were located during the seabird inventory by the Maine Cooperative Wildlife Research Unit on the Maine coast east of Cape Elizabeth in 1976 (Appendix Table B). Forty-nine of these islands are considered to be significant nesting areas based on the criteria outlined under METHODS. These significant areas provided breeding habitat for at least 60 percent of Maine's 1976 eider population. Of these islands, at least 28 met the qualifications of criterion 1; 17 met the qualifications of criterion 2; 3 fulfilled criterion 3; and 2 fulfilled criterion 4. Each island recommended for evaluation for possible inclusion on the Register of Critical Areas is described and its choice justified in the following section. A listing of these islands is presented in Table 2 and their location in Figure 6. Appendix Table A includes location, historical information and 1976 field data on the significant islands.

DESCRIPTION OF SIGNIFICANT EIDER NESTING ISLANDS IN MAINE (Listed by Longitude from West to East)

1. Outer Green Island (Portland, Cumberland Co.): Outer Green Island is a small area (less than 2 hectare) which lies in the outer southern portion of Casco Bay about 10 km east of Portland. It is a high island with a level plateau covered with patches of grasses and herbs. In the central portion of this island there are several stands of shrubs. A few prominent rocky outcrops were occupied by nesting cormorant in 1976. Great black-backed gulls and herring gulls also nested on this island in 1976. Drury (1974) recorded two pairs of nesting guillemots on Outer Green Island in recent years. Breeding petrels and terns were observed here late in the 19th and early 20th centuries (Brewer 1875, Palmer 1949, A. H. Norton Unpub.). In 1976, 125 breeding pairs of eiders were recorded. This island is strategically located in western Casco Bay. The Maine Department of Inland Fisheries and Wildlife has jurisdiction over this state-owned island.

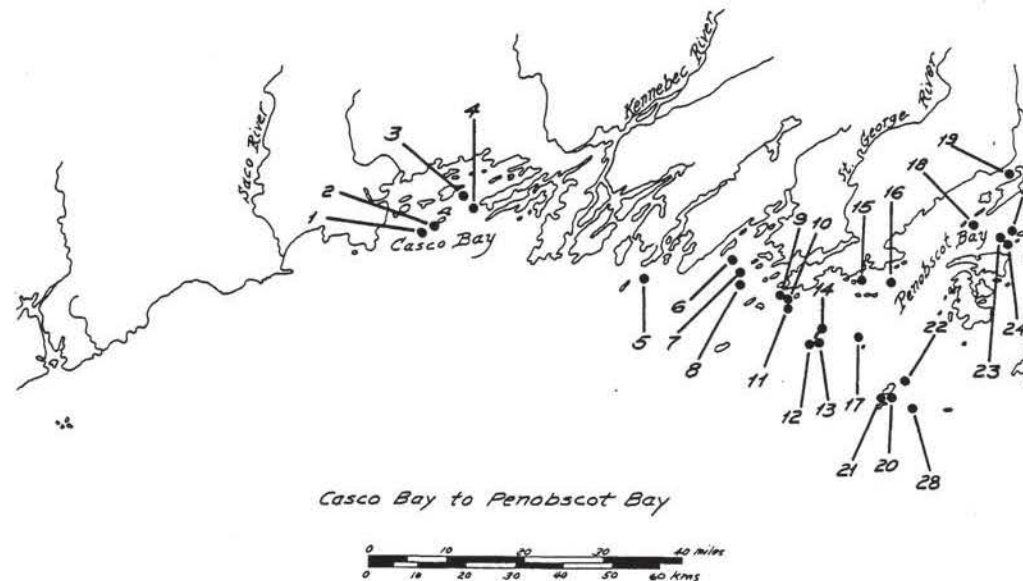
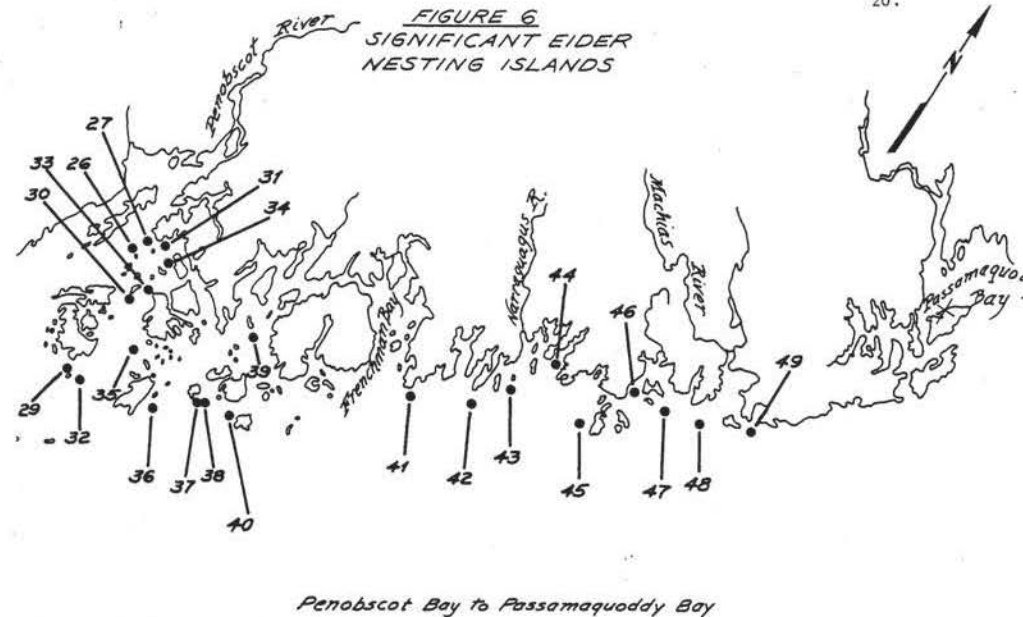


Figure 6. Location of significant eider nesting islands in Maine - 1976
(Listed by Longitude from West to East)

- | | |
|-------------------------------|-----------------------------|
| 1. Outer Green Island | 26. Barred Island |
| 2. Inner Green Island | 27. Western Island |
| 3. Stockman Island | 28. Wooden Ball Island |
| 4. Little Birch Island | 29. Roberts Island |
| 5. White Island | 30. Bald Island |
| 6. Wreck Island | 31. Spectacle Island |
| 7. Crane Island | 32. Little Brimstone Island |
| 8. Franklin Island | 33. Hardhead Island |
| 9. Hart Island | 34. Scott Island |
| 10. The Brothers Islands | 35. Sparrow Island |
| 11. Hay Ledge | 36. Great Spoon Island |
| 12. Metinic Green Island | 37. Mason Ledge |
| 13. Hog Island | 38. Heron Island |
| 14. Metinic Island | 39. Bar Island |
| 15. Garden Island | 40. John Island |
| 16. Fisherman Island | 41. Schoodic Island |
| 17. Little Green Island | 42. Green Island |
| 18. Mouse Island | 43. Jordan's Delight Island |
| 19. Flat Island | 44. Nightcap Island |
| 20. Ten Pound Island | 45. Browney Island |
| 21. Pudding Island | 46. Ballast Island |
| 22. No Man's Land Island | 47. The Brothers Island |
| 23. Compass Island | 48. Libby Island |
| 24. Grass Ledge West | 49. Old Man (East) Island |
| 25. Little Spruce Head Island | |

Table 2. Significant eider nesting islands in Maine--1976.

	Island Number	Island Name	Latitude	Longitude	Town	Size(ha)	Pairs
1	55-386	Outer Green Island	433900	700724	Portland	<2	125
2	55-499	Inner Green Island	434000	700618	Portland	<2	170
3	55-401	Stockman Island	434410	700500	Cumberland	7	450
4	55-406	Little Birch Island	434400	700305	Harpswell	3	250
5	65-278	White Island	434720	693430	Boothbay	5	150
6	65-194	Wreck Island	435430	692400	Bristol	6	250
7	63-705	Crane Island	435350	692300	Friendship	4	200
8	63-707	Franklin Island	435330	692230	Friendship	4	1300
9	63-833	Hart Island	435415	691600	St. George	4	125
10	63-579-81	The Brothers Islands	435448	691430	St. George	<2	425
11	63-582	Hay Ledge	435436	691406	St. George	3	35
12	63-585	Metinic Green Island	435148	690806	Unorganized	3	318
13	63-588	Hog Island	435224	690730	Unorganized	4	103
14	63-584	Metinic Island	435300	690730	Unorganized	120	no est.
15	63-420	Garden Island	440048	690648	So. Thomaston	<1	135
16	63-402	Fisherman Island	440236	690230	Unorganized	<2	210
17	63-654	Little Green Island	435500	690218	Unorganized	14	no est.
18	63-330	Mouse Island	441200	685642	North Haven	<1	100
19	77-047	Flat Island	441900	685554	Islesboro	<2	300
20	63-920	Ten Pound Island	435054	685312	Matinicus Plt.	11	350
21	63-924	Pudding Island	435030	685254	Matinicus Plt.	<2	250
22	63-900	No Man's Land Island	435306	685224	Matinicus Plt.	8	1000
23	59-790	Compass Island	441254	685154	Deer Isle	3	316
24	59-789	Grass Ledge West	441306	685100	Deer Isle	<1	360
25	59-772	Little Spruce Head	441354	685100	Deer Isle	18	520

Table 2. Continued.

	Island Number	Island Name	Latitude	Longitude	Town	Size(ha)	Pairs
26	59-684	Barred Island	441600	685006	Deer Isle	2	100
27	59-675	Western Island	441730	684912	Deer Isle	8	450
28	63-917	Wooden Ball Island	435118	684906	Matinicus Plt.	55	150
29	63-174	Roberts Island	440040	684830	Vinalhaven	4	350
30	59-803	Bald Island	441124	684700	Deer Isle	5	150
31	59-673	Spectacle Island	441824	684648	Brooksville	4	300
32	63-179	Little Brimstone	440030	684620	Vinalhaven	2	486
33	59-782	Hardhead Island	441330	684518	Deer Isle	3	200
34	59-709	Scott Island	441700	684420	Deer Isle	2	350
35	63-200	Sparrow Island	440700	684145	Isle au Haut	3	350
36	63-287	Great Spoon Island	440230	683330	Isle au Haut	20	400
37	59-481	Mason Ledge	440554	682924	Swan's Island	2	350
38	59-480	Heron Island	440600	682830	Swan's Island	20	500
39	59-244	Bar Island	441530	682730	Tremont	18	700
40	59-483	John Island	440645	682415	Swan's Island	12	200
41	59-062	Schoodic Island	442000	680200	Winter Harbor	26	no est.
42	79-929	Green Island	442230	675230	Milbridge	5	200
43	79-922	Jordan's Delight Island	442636	674924	Milbridge	10	no est.
44	79-748	Nightcap Island	443110	674530	Addison	<2	no est.
45	79-693	Browney Island	442745	673715	Beals	15	no est.
46	79-488	Ballast Island	443336	673312	Jonesport	<2	no est.
47	79-573	The Brothers Island	443330	672610	Jonesport	7	no est.
48	79-359	Libby Island (Inner)	443445	672120	Machiasport	36	no est.
49	79-313	Old Man (East)	443715	671415	Cutler	<2	no est.

2. Inner Green Island (Portland, Cumberland Co.): Inner Green Island is a small (less than 2 hectare) island which lies in the outer southern portion of Casco Bay about 10 km east of Portland and 3 km northeast of Outer Green Island. This low lying island is covered with patches of grasses and herbs. One hundred and seventy pairs of eiders were nesting here in 1976. This island is strategically located in western Casco Bay. Great black-backed gulls, herring gulls, and cormorants also nested on this island in 1976. Petrels and common terns nested on Inner Green Island late in the 19th century (Brewer 1875, A. H. Norton Unpub.). The Maine Department of Inland Fisheries and Wildlife has jurisdiction over this state-owned island.
3. Stockman Island (Cumberland, Cumberland Co.): Stockman Island is a 7 hectare island located in Casco Bay about 3 km southwest of Harpswell Neck, Cumberland County. It is vegetated primarily by shrubs in the central portion of the island with grasses and herbs surrounding the shrubs toward the island perimeter. This island has one of the largest nesting eider populations in Maine. Four hundred and fifty pairs of eiders were found here in 1976. This is a notable increase from the 1966 population (H. L. Mendall Unpub.). Great black-backed gulls and herring gulls also nested here in 1976. The island is privately owned.
4. Little Birch Island (Harpswell, Cumberland Co.): Little Birch Island is a 3 hectare island located in Casco Bay less than 1 km southwest of Harpswell Neck. This treeless island is vegetated by shrubs, grasses and herbs. Two hundred and fifty pairs of eiders nested on this island in 1976. Herring gulls and black-backed gulls also nested here in 1976. Little Birch Island is privately owned.
5. White Island (Boothbay, Lincoln Co.): White Island is situated due south of the mouth of the Damariscotta River and about 4 km southeast of Ocean Point. There are two islands of which the southern one is occupied by the largest population of eiders. The island has an area of 5 hectares. A large part of this island is covered with a dense stand of shrubs. A camp is situated near the center of the island but it is apparently not occupied until late in the nesting season. One hundred and fifty pairs of eiders nested on this island in 1976. Guillemots, great black-backed gulls and herring gulls also nested on this island in 1976. In 1976, White Island had the largest nesting eider population in the Sheepscot Bay, Boothbay and Johns Bay area of the Maine coast. The island is privately owned.

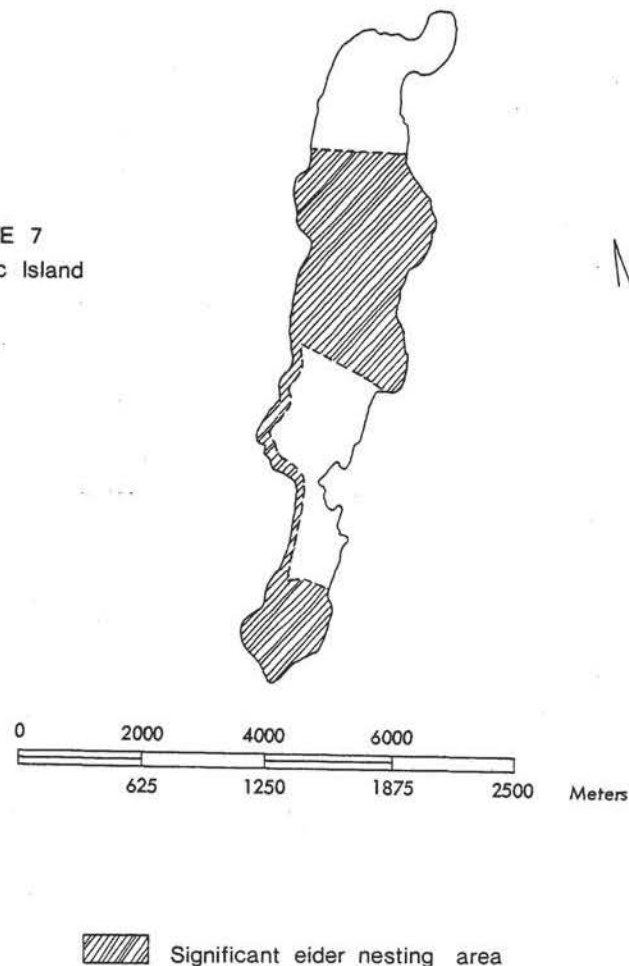
6. Wreck Island (Bristol, Lincoln Co.): Wreck is a 6 hectare island located in central Muscongus Bay about 6 km from the mainland. It is vegetated primarily by mixed forest and herbs. Two hundred and fifty pairs of eiders nested on Wreck Island in 1976. Great black-backed gulls, herring gulls and great blue herons also nested here in 1976. Black-crowned night herons and 1 pair of ospreys nested on this island in 1975 (Massachusetts Audubon Society Unpub.), although these species were not recorded in 1976. Besides the significant eider nesting population, Wreck Island supports a large diversity of bird life. Wreck Island is privately owned.
7. Crane Island (Friendship, Knox Co.): Crane Island is a 4 hectare island located in the center of Muscongus Bay about 8 km from the mainland. It is vegetated by grasses, herbs, shrubs and conifers. The 200 pairs of eiders estimated in 1976 on this island nest primarily in the grasses, herbs and shrub cover. Great black-backed gulls and herring gulls also nested here in 1976. Crane Island is privately owned.
8. Franklin Island (Friendship, Knox Co.): Franklin Island is a 4 hectare vegetated island located in central Muscongus Bay about 9 km from the mainland. One automated lighthouse and a brick shed occupy a small area in the north-central portion of the island. Generally, the vegetation is varied including grasses, herbs, shrubs and conifers. Many spruce blowdowns with raspberry growths between them provide dense thickets for eider nesting cover. Thirteen hundred pairs of eiders were estimated on this island in 1976. It is the largest eider colony known at present on the Maine coast. Guillemots, great black-backed gulls, herring gulls and one pair of ospreys nested on this island in 1976. Great blue herons have nested on Franklin Island in recent years (W. H. Drury Unpub.). The island is presently a National Wildlife Refuge under the jurisdiction of the U.S. Fish and Wildlife Service.
9. Hart Island (St. George, Knox Co.): Hart Island is a 4 hectare island located in eastern Muscongus Bay about 2 km from Port Clyde. The vegetation on this island consists of grasses and herbs. It is one of a small cluster of 6 islands (including The Brothers Islands and Hay Ledge) that are located in close proximity to one another. Considered together, this cluster of islands supports a significant nesting population of eiders and all are strategically located. These islands are also of historical significance, since population data exists for a number of years (Appendix Table A). One hundred and twenty-five pairs of eiders nested on Hart Island in 1976. Great black-backed gulls and herring gulls also nested here in 1976. The island is privately owned.

10. The Brothers (St. George, Knox Co.): The Brothers Islands are two small islands and two ledges (less than 2 hectare) located in a small cluster of islands in eastern Muscongus Bay about 2 km from Port Clyde. The islands are vegetated by shrubs, grasses and herbs. Considered together, these islands support a significant nesting population of eiders. Two hundred and fifty eiders nested on The Brothers Islands in 1976. Great black-backed gulls and herring gulls also nested here in 1976. A colony of common terns was recorded in recent years (W. H. Drury Unpub.). These islands are privately owned.
11. Hay Ledge (St. George, Knox Co.): Hay Ledge is a 3 hectare island located in a small cluster of islands in eastern Muscongus Bay about 2 km from Port Clyde. The island is vegetated by grasses and herbs. Thirty-five pairs of eiders nested on this island in 1976. Herring gulls, cormorants and great black-backed gulls also nested here in 1976. Because of its location within a cluster of significant eider islands, it is recommended that Hay Ledge be evaluated for inclusion on the Register of Critical Areas. Hay Ledge is privately owned.
12. Metinic Green Island (Unorganized, Knox Co.): Metinic Green Island is a 3 hectare area located south of Metinic Island (see 14 below). Large stands of grasses and herbs dominate the island with occasional patches of raspberry. Eiders have been recorded on this island as early as 1948 when ten nests were found (A. O. Gross Unpub.). The population apparently increased in the 1960's and has been at approximately the 1976 level (estimate of 300 pairs) for the past 10-11 years. Guillemots, great black-backed gulls, herring gulls and cormorants nested on this island in 1976. W. H. Drury (Unpub.) recently reported petrels (5-10 pairs) nesting on Metinic Green Island. Laughing gulls, common terns and arctic terns nested here around the turn of the century (Dutcher 1902, 1904, A. H. Norton Unpub.). Metinic Green Island is privately owned.
13. Hog Island (Unorganized, Knox Co.): Hog Island is a 4 hectare island located east of Metinic Island (see 14 below). Generally, the vegetative cover consists of grasses and herbs. One hundred and three pairs of eiders were estimated on this island in 1976. Herring gulls, great black-backed gulls and guillemots also nested here in 1976. Hog Island supports excellent eider duck nesting cover and is strategically located. The island is privately owned.
14. Metinic Island (Unorganized, Knox Co.): Metinic Island is a relatively large (120 hectare) offshore island 12 km south of Tenants Harbor. A stand of conifers is located in the center of the island with shrubs, grasses and herbs dominating the remaining area. Seasonally occupied houses are located on the northern and south-central sections of this island. Guillemots, great black-backed gulls, herring gulls, arctic terns, petrels and eiders have nested on the island in recent

years. Although no estimate of actual numbers of nesting eiders was recorded in 1976, a large population has been observed on this island in recent years (Appendix Table A). The significant nesting areas on Metinic Island are outlined in Figure 7. Eiders nest in grass and shrub cover on this island but most nests were located in the extensive spruce growth interspersed with blowdowns in the central portion of this area. Because of their location in proximity to one another, Metinic Island, Metinic Green Island and Hog Island should be considered as a unit in the evaluation for inclusion on the Register of Critical Areas.

15. Garden Island (South Thomaston, Knox Co.): Garden Island is a small area (less than 1 hectare) located about 2 km northeast of Sprucehead Island, Knox County. It is vegetated primarily by herbs and grasses. A long term investigation of eider nesting biology has been conducted since the mid-1960's on this island by Howard L. Mendall. Due to the large amount of information on eider biology collected here it is felt this island has special value. Eiders, guillemots, great black-backed gulls, herring gulls and cormorants nested on this island in 1976. An active common tern colony was present during 1931 and 1936 (A. H. Norton Unpub., Palmer 1949). The Maine Department of Inland Fisheries and Wildlife has jurisdiction over this State-owned island.
16. Fisherman Island (Unorganized, Knox Co.): Fisherman Island is a small island (less than 2 hectare) located on the western side of Penobscot Bay about 6 km south of Owls Head Light. It is a rather high island with knolls well covered with grasses and herbs. There are no trees and only a few shrubs. A camp is located here but the residents seldom occupy the island until late in the nesting season. An intensive investigation of eider biology has been conducted on Fisherman Island since 1965 by Howard L. Mendall. Due to the large amount of information collected on this island concerning seabird biology, it is felt that this island has special value. Two hundred pairs of eiders nested here in 1976. Guillemots, great black-backed gulls and cormorants also nested on this island in 1976. A colony of common terns was recorded in 1886 (A. H. Norton Unpub.). Fisherman Island is privately owned.
17. Little Green Island (Unorganized, Knox Co.): Little Green Island is a 14 hectare, low-lying island located well out to sea from the mouth of West Penobscot Bay about 16 km from the mainland. This island is bordered by rocky shores and sea walls. Its habitat consists primarily of grasses and herbs. A large nesting population of eiders was reported during the 1976 inventory but actual numbers were not determined. Guillemots, great black-backed gulls, herring gulls, arctic terns and cormorants also nested on this

FIGURE 7
Meticinic Island



island in 1976. Observations of nesting laughing gulls, common terns and petrels also have been recorded (Gross 1945, Nisbet 1971, Palmer 1938, H. L. Mendall Unpub., A. O. Gross Unpub., W. H. Drury Unpub.). Sheep were introduced on Little Green Island in 1940. This resulted in a decline in the laughing gull population as the vegetation had been heavily grazed (Nisbet 1971). When sheep were removed from the island, the colony of laughing gulls correspondingly increased (Nisbet 1971). A seasonally occupied camp is presently located on the island. Little Green Island is privately owned.

18. Mouse Island (North Haven, Knox Co.): Mouse Island is a small island (less than 1 hectare) located in West Penobscot Bay about 11 km from the mainland. It is vegetated by grasses, herbs and shrubs. One hundred pairs of eiders nested on this island in 1976. Herring gulls, great black-backed gulls and cormorants also nested here in 1976. A long-term investigation of eider nesting biology has been conducted on this area by personnel of the Maine Cooperative Wildlife Research Unit since the mid-1960's. Due to the large amount of information on eider biology collected here it is felt that this island has special value. Mouse Island is privately owned.
19. Flat Island (Islesboro, Waldo Co.): Flat Island is a small island (less than 2 hectare) located about 2 km west of the isthmus connecting the north and south portions of Islesboro Island in the upper portion of west Penobscot Bay. It is a low lying, level island vegetated almost entirely with a dense growth of shrubs. At its north end Flat Island supports a small stand of aspen (*Populus* sp.). Three hundred pairs of eiders were nesting on Flat Island in 1976. Black-backed gulls and herring gulls also nested here in 1976. The island is privately owned.
20. Ten Pound Island (Unorganized, Matinicus Plt., Knox Co.): Ten Pound Island is one of the Matinicus group of islands in outer Penobscot Bay about 30 km from the mainland. It is an 11 hectare island vegetated by grasses, herbs and large stands of shrubs. Three hundred and fifty eiders nested on this island in 1976. This is a substantial increase from the 54 nests observed by H. L. Mendall (Unpub.) in 1968. Guillemots, great black-backed gulls and herring gulls also nested here in 1976. The island is owned by the National Audubon Society. Strawberry picking apparently is traditional by local Matinicus residents. In the future it is hoped this activity will cause minimum disturbance to eiders and that berry pickers will not be accompanied by unleashed pets as was noted in 1976.

21. Pudding Island (Unorganized, Matinicus Plt., Knox Co.): Pudding Island is a small (less than 2 hectare) rocky area located in the Matinicus group of islands less than 1 km north of Ragged Island about 30 km from the mainland. It is vegetated primarily by herbs and grasses. In 1976, 250 pairs of eiders nested on this island. Guillemots, great black-backed gulls, herring gulls and petrels also nested here in 1976. The Maine Bureau of Public Lands has jurisdiction over this State-owned island.
22. No Man's Land (Unorganized, Matinicus Plt., Knox Co.): No Man's Land Island is one of the Matinicus group of islands in outer Penobscot Bay about 30 km from the mainland. It is a 50 hectare island with many rock outcroppings. Between the boulders, thick growths of grasses and herbs predominate with occasional stands of shrubs. Gross (1944) reported that eiders nested on this island in 1942. The nesting population of eiders has increased since that year. There were 1,000 breeding pairs of eiders present on No Man's Land Island in 1976. This is the second largest known eider colony in Maine. Guillemots, great black-backed gulls, herring gulls, cormorants and petrels nested on this island in 1976. Black-crowned night herons were observed here early in the 20th century (Dutcher 1905). The island is privately owned.
23. Compass Island (Deer Isle, Hancock Co.): Compass Island is located in upper Penobscot Bay less than 3 km north of North Haven Island and 15 km southwest of Grass Ledge West. It has an area of about 3 hectares. The eastern part of Compass Island is covered with a number of large conifers and a few hardwood trees. Bordering this growth of trees is a stand of shrubs. The rest of the island is vegetated primarily by grasses and herbs. Eiders were first reported nesting on Compass Island in 1941. The population increased in the early 1940's to 40 pairs in 1943 (Gross 1944). H. L. Mendall (Unpub.) reported higher populations in the mid-1960's. Three hundred sixteen pairs were recorded in 1976. Other species which nested on this island in 1976 include great black-backed gulls, herring gulls and guillemots. The island is privately owned.
24. Grass Ledge West (Deer Isle, Hancock Co.): Grass Ledge West is a small island (less than 1 hectare) located in upper Penobscot Bay about 4 km north of North Haven Island. It consists of two islets separated, except at very low tides, by a narrow channel. Grass Ledge has a rocky shoreline typical of islands in this region. The central portion of the northern and larger islet is comparatively level and is the only one vegetated. It is covered with the grass and herb vegetative type. At the northern end of this island is

a large stand of rose under which eiders nested in very high densities in 1976. No eiders were nesting on this island in 1931 (Gross 1944). For the next ten years the eider colony on Grass Ledge showed a slow but steady increase from 94 nests in 1933 to 123 nests in 1943 (Gross 1944). Large colonies of eiders were reported on this island in the mid-1960's (H. L. Mendall Unpub.). In 1976, 360 breeding pairs were recorded. H. L. Mendall (personal communication) noted that eiders nest on Grass Ledge West, in perhaps the highest densities observed on Maine islands in recent years. Other species which recently have nested on this island include guillemots, great black-backed gulls, and herring gulls (W. H. Drury Unpub.). The Maine Department of Inland Fisheries and Wildlife has jurisdiction over this State-owned island.

25. Little Spruce Head Island (Deer Isle, Hancock Co.): Little Spruce Head Island is located in upper Penobscot Bay about 6 km north of North Haven Island. It is an 18 hectare island vegetated primarily by conifers except at the southwestern tip which is primarily grasses and shrubs. A dramatic increase in the eider population apparently has occurred on this island. In 1976, 520 pairs of eiders were recorded. Eiders nested in a variety of sites, but the majority nested under conifers. One pair of ospreys and a pair of guillemots were also recorded on this island in 1976. The island is privately owned. A seasonally occupied camp is located on Little Spruce Head Island.
26. Barred Island (Deer Isle, Hancock Co.): Barred Island is a 2 hectare island located in East Penobscot Bay 6 km from the mainland. It consists of two islands connected by a bar at low tide and is vegetated by conifers, shrubs, grasses and herbs. One hundred pairs of eiders nested on this island in 1976. The island supports excellent eider nesting cover and is strategically located. Many historical observations of eider nesting have been recorded on this island. The Maine Department of Inland Fisheries and Wildlife has jurisdiction over this State-owned island.
27. Western Island (Deer Isle, Hancock Co.): Western Island is located in upper Penobscot Bay about 1 km south of Cape Rosier. This 8 hectare island is vegetated primarily by conifers. The northeastern and southwestern side of the island consists of grasses, herbs and large tangles of raspberries and other shrubs. It is in this area of the island that eiders are found in the greatest abundance although nests also are found on the periphery of the entire island. Four hundred and fifty pairs of eiders were observed on Western Island in 1976. Guillemots, herring gulls, black-backed gulls and black-crowned night herons also nested here in 1976. Western Island is the northeasternmost nesting area of black-crowned night herons known in the United States. The island is privately owned.

28. Wooden Ball Island (Unorganized, Matinicus Plt., Knox Co.): Wooden Ball Island is one of the Matinicus group of islands located east of Matinicus and Ragged Islands about 30 km from the mainland. It has an area of 55 hectares. Wooden Ball is an extremely rocky island vegetated primarily by grasses and herbs. A seasonally occupied house is in the central-west portion of the island and sheep are grazed on this area. One hundred and fifty eiders nested here in 1976. Wooden Ball Island supports excellent nesting cover for eiders and is strategically located. Guillemots, great black-backed gulls, herring gulls and arctic terns nested on Wooden Ball Island in 1976. It is recommended that only certain portions of Wooden Ball Island be evaluated for designation as a Critical Area for nesting eider ducks. The island should be revisited in 1977 and specific sites of most importance to eiders should be delineated.
29. Roberts Island (Vinalhaven, Knox Co.): Roberts Island is a 4 hectare island located 3 km south of Vinalhaven Island. It is vegetated primarily by grasses and herbs with a few stands of shrubs. Three hundred and fifty pairs of eiders were observed here in 1976. Guillemots, great black-backed gulls, and herring gulls nested on Roberts Island in 1976. Cormorants have nested here in recent years (W. H. Drury Unpub.). An active tern colony was present in 1885 (A. H. Norton Unpub.). The island is privately owned.
30. Bald Island (Deer Isle, Hancock Co.): Bald Island is a 5 hectare island located in East Penobscot Bay about 7 km west of Deer Isle. It is vegetated by conifers, shrubs, grasses and herbs. Numerous spruce blowdowns offer excellent nesting cover for eiders. One hundred pairs of eiders nested on Bald Island in 1976. Herring gulls, guillemots and cormorants also nested here in 1976. Bald Island is strategically located. This island is privately owned.
31. Spectacle Island (Brooksville, Hancock Co.): Spectacle Island is located in upper Penobscot Bay less than 1 km south of Cape Rosier. It consists of two islets connected by a bar except at high tide. These rocky islands comprise an area of 4 hectares vegetated with shrubs, grasses, herbs, and two small stands of conifers, one on the northern border of each island. Three hundred pairs of eiders were nesting on this island in 1976, primarily in the shrub vegetative type. Herring gulls also nested here in 1976. The island is privately owned.
32. Little Brimstone Island (Vinalhaven, Knox Co.): Little Brimstone Island is a 2 hectare island located less than 5 km south of Vinalhaven Island. This treeless island is vegetated primarily by herbs and grasses which supported an especially dense nesting population of eiders in 1976. Four hundred and eighty-six eider nests were counted on this island during the 1976 field season. Great black-backed gulls and herring gulls also

nested here in 1976. Terns nested on Little Brimstone Island in 1885 (A. H. Norton Unpub.). The island is privately owned.

33. Hardhead Island (Deer Isle, Hancock Co.): Hardhead Island is located in upper Penobscot Bay about 2 km west of Deer Isle. This 3 hectare, hilly island is surrounded by rock cliffs. The vegetation consists primarily of grasses, herbs and shrubs. Two hundred pairs of eiders nested on this island in 1976. Guillemots, great black-backed gulls, herring gulls and cormorants also nested here in 1976. The island is privately owned.
34. Scott Island (Deer Isle, Hancock Co.): Scott Island is a 2 hectare area located about 1 km west of Little Deer Isle in upper Penobscot Bay. It is vegetated primarily by conifers with tangles of shrubs growing in the understory. Three hundred and fifty eiders nested on this island in 1976. Black-backed gulls, herring gulls and 1 pair of ospreys also nested here in 1976. This island is privately owned.
35. Sparrow Island (Isle au Haut, Knox Co.): Sparrow Island is located about 3 km south of Deer Isle in east Penobscot Bay. It is a 3 hectare rocky island vegetated mainly by grasses and herbs. Three hundred and fifty eiders nested on this island in 1976. The eider population apparently has increased substantially on this island since the mid-1960's. Guillemots, great black-backed gulls, herring gulls and cormorants also nested here in 1976. An active colony of arctic terns was present on Sparrow Island in 1959 (Audubon Field Notes) although none were recorded in 1976. The Maine Department of Inland Fisheries and Wildlife has jurisdiction over this State-owned island.
36. Great Spoon Island (Isle au Haut, Knox Co.): Great Spoon Island is located about 3 km east of Isle au Haut in outer Penobscot Bay about 25 km from the mainland. It is a 20 hectare island vegetated primarily by grasses and herbs. Four hundred pairs of eiders were nesting on this island in 1976. The eider population here apparently has increased substantially since 1965 when H. L. Mendall (Unpub.) estimated 40-50 breeding pairs. Other species that nested on Great Spoon Island in 1976 include guillemots, great black-backed gulls, herring gulls and cormorants. A. H. Norton (Unpub.) mentioned that an active colony of common terns was present on this island in 1918 and 1920. The island is privately owned.
37. Mason Ledge (Swan's Island, Hancock Co.): Mason Ledge is a 2 hectare island located southwest of Swan's Island, Hancock County. This island is vegetated by grasses, herbs and shrubs. Three hundred and fifty pairs of eiders were located here in 1976. Great black-backed gulls, herring gulls and guillemots also nested here in 1976. The Maine Bureau of Public Lands has jurisdiction over this State-owned island.
38. Heron Island (Swan's Island, Hancock Co.): Heron Island is located about 1.5 km southeast of Marshall Island, Hancock County about 18 km from the mainland. It is a 20 hectare island vegetated by grasses, herbs and shrubs. A sizable population of muskrats was present on this island in 1976. Five hundred pairs of eiders nested on Heron Island in that year. Guillemots, great black-backed gulls, herring gulls and petrels have nested here in recent years (W. H. Drury Unpub.). Norton (1907) mentioned that great blue herons and black-crowned night herons nested on this island in 1907. The United States National Park Service (Acadia National Park) has jurisdiction over this federally-owned island.
39. Bar Island (Tremont, Hancock Co.): Bar Island is located in central Blue Hill Bay about 3 km west of Mount Desert Island. It is an 18 hectare island vegetated primarily by shrubs. Seven hundred pairs of eiders were observed here in 1976. These birds nested primarily on the western side of the island. Great black-backed gulls and herring gulls also nested on Bar Island in 1976. The island is privately owned. A seasonally occupied house is located on the eastern side of this island.
40. John Island (Swan's Island, Hancock Co.): John Island is a 12 hectare island located about 2 km south of Swan's Island. It is vegetated primarily by shrubs and grasses. Two hundred pairs of eiders were observed here in 1976. Great black-backed gulls, herring gulls and cormorants also nested here in 1976. Petrels have nested on John Island in recent years (Drury 1974). The island is privately owned.
41. Schoodic Island (Winter Harbor, Hancock Co.): Schoodic Island is a 26 hectare island located about 1 km east of Schoodic Point. It is vegetated by grasses, herbs, shrubs and mixed forests. The eiders nested primarily in the grass, herb and shrub portions of this island in 1976. Guillemots, great black-backed gulls, herring gulls, and cormorants also nested here in 1976. Schoodic Island supports excellent nesting cover for eiders and is strategically located. The island is privately owned.

42. Green Island (Milbridge, Washington Co.): Green Island is a 5 hectare area located about 4 km southeast of Petit Manan Point. The neighboring Petit Manan Island, a National Wildlife Refuge, lies 650 m to the southeast and is accessible by a bar except at high tide. Green Island is horseshoe-shaped and surrounds a pool that empties at low tide. The vegetation includes mostly grasses and herbs. According to J. J. Hatch (Unpub.) 200 pairs of eiders were located here in 1976. Great black-backed gulls and herring gulls also nested on this island in 1976 (J. J. Hatch Unpub.). Colonies of common and arctic terns were recorded in 1931 (Palmer 1938). The Maine Department of Inland Fisheries and Wildlife has jurisdiction over this State-owned island.
43. Jordan's Delight Island (Milbridge, Washington Co.): Jordan's Delight Island is a 10 hectare boulder strewn island located east of Bois Bubert Island, Washington County about 6 km from the mainland. There are steep cliffs on the western side of this island and a rock bridge on the northern side. It is a treeless island vegetated by shrubs, grasses and herbs. Eiders, guillemots, great black-backed gulls and herring gulls nested here in 1976. The island supports excellent eider nesting cover and is strategically located. Jordan's Delight Island is privately owned.
44. Nightcap Island (Addison, Washington Co.): Nightcap Island is a small (less than 2 hectare) area located in Pleasant Bay east of Ripley Neck, Washington County about 2 km from the mainland. It is vegetated by shrubs, grasses, herbs and conifers. Cormorants nested in the trees on this island and eider nests were found primarily in the shrub vegetative type in 1976. Great black-backed gulls and herring gulls were recently reported on this island (W. H. Drury Unpub.). The island supports excellent nesting cover for eiders and is strategically located. Nightcap Island is privately owned.
45. Browney Island (Beals, Washington Co.): Browney Island is a 15 hectare island located in Western Bay about 1 km west of Great Wass Island, Washington County. Eiders, great black-backed gulls and herring gulls nested on this island in 1976. The island supports excellent nesting cover for eiders and is strategically located. Browney Island is privately owned.
46. Ballast Island (Jonesport, Washington Co.): Ballast Island is a small area (less than 2 hectare) located in Chandler Bay southeast of Roque Island, Washington County about 2 km from the mainland. The vegetative cover primarily consists of shrubs, grasses and herbs. Ballast Island supports excellent nesting cover for eiders and is strategically located. A large number of historical observations have been recorded on this island. Besides eiders, guillemots, great black-backed gulls and herring gulls nested here in recent years (W. H. Drury Unpub.). The island is privately owned.

47. The Brothers Island (Jonesport, Washington Co.): The Brothers Island consists of two high islands connected by a low rocky bar. They are located at the entrance of Englishman's Bay about 6 km from the mainland, and are about 7 hectares in area. Eiders, guillemots, great black-backed gulls and herring gulls have nested here for many years (W. H. Drury Unpub., A. O. Gross, 1944, Unpub., Drury 1973). A. O. Gross (Unpub.) reported cormorants nesting on this island in 1947. W. H. Drury (Unpub.) mentioned that a large petrel colony was present on The Brothers Island in 1900. This island supports excellent nesting cover for eiders and is strategically located. The island is privately owned.
48. Libby Island (Machiasport, Washington Co.): Libby Island (inner of the two Libby Islands in this location) is a 36 hectare island in the outer portion of Machias Bay, Washington County about 5 km from the mainland. Shrubs, grasses and herbs provide the major vegetative cover. Besides eiders, guillemots, great black-backed gulls and herring gulls nested on this island in 1976. The island supports excellent nesting cover and is strategically located. Sheep have been present in recent years but none were on the island during the 1976 breeding season. The island is privately owned.
49. Old Man Island (Cutler, Washington Co.): Old Man Island is a small island (less than 2 hectare) which lies southeast of the entrance to Little Machias Bay. It is located 5 km southwest of Cutler and overlooks the Grand Manan Channel to the east. Old Man Island is a high rugged island with rock cliff shores. The top of the island is covered with a red soil which apparently once supported spruce trees. Most of these trees are now dead; the majority have been blown down. In the open spaces there are stands of grasses, herbs and shrubs which provide concealed nesting sites for eiders. Many observations of eider nesting have been recorded on Old Man Island. Apparently a relatively small population has nested on this island throughout most of this century, with an increase noted in recent years (Gross 1944, H. L. Mendall Unpub., W. H. Drury Unpub.). Other seabirds that nested on Old Man Island in 1976 include guillemots, great black-backed gulls, herring gulls, cormorants and razor-billed auks. In 1976, the first nesting observation of razor-billed auks on this island was recorded by the Maine Cooperative Wildlife Research Unit. This island is of historical significance as population records have existed for eiders, cormorants and guillemots for much of this century. The island is privately owned.

GENERAL EVALUATION OF EIDER DUCK NESTING AREAS FOR INCLUSION ON THE
REGISTER OF CRITICAL AREAS

1. Description of Eider Duck Nesting Areas

In Maine, eiders prefer to nest on relatively small, uninhabited islands. The chosen nest site may be just above the high tide line or deep in the center of an island and varies greatly from fully exposed to fully sheltered. The eider on the Maine coast nests in open forest, shrub and grassland habitats and often nests where different vegetative cover types meet. In general, eiders select the optimum concealing cover available at the time of nest initiation.

2. Considerations in Registration

A. Values and qualities represented by the feature (specifically including any unique or exemplary qualities of the feature).

Eider ducks are an important component of the Maine coastal ecosystem. In 1976, eiders nested on at least 215 Maine islands. Maine supports the major nesting population on the Atlantic coast of the United States and is at the southern limit of the eider duck breeding range in North America. There is substantial interest in the eider from the aesthetic, sporting and scientific viewpoint.

B. Probable effects of uncontrolled use (specifically in relation to its intrinsic fragility).

When nesting, eiders are very susceptible to disturbance by human activities. The influences of persons or free-roaming pets who travel through a nesting area may be two fold: disturbance may increase the stress on the hen forcing her to use valuable energy when she is frightened from the nest; there may be extensive losses of exposed eider eggs or newly hatched ducklings in a matter of minutes. The production of young in such a disturbed colony would be seriously diminished for the breeding season.

Seasonal residence on small islands that lack concealing cover may cause eiders to abandon a nesting island permanently when residents are present during the breeding season. Other factors which may cause eiders to cease breeding or to produce poorly on islands in Maine include (1) the presence of rats, mink and other carnivorous mammals which may eat eggs and young, and; (2) the introduction of sheep or domestic animals which remove vegetation from nesting sites or which accidentally trample nests.

C. Present and probable future use (specifically present and future threats of destruction).

The growing use of the coastal area, and particularly islands, threatens the welfare of several colonial seabirds, including the eider. In Maine, increased use of islands by people associated with cruise schooners, survival schools, wilderness cruises, marine biological laboratories, photography workshops, natural history groups, birdwatchers and other boating public has been noted. In addition, seasonal residences on islands have increased in recent years and continue to threaten seabird nesting islands. The greatest threats of disturbance to eiders occur during the nesting season (1 May-15 July) when human use of islands is prevalent.

D. Level of Significance

Eider duck nesting habitat in Maine is of national significance because Maine supports the major nesting population on the Atlantic coast of the United States.

E. Probable effects of registration - positive and negative (specifically including the economic implications of inclusion of the feature on the Register).

The expected positive effect of registration will be to give official recognition of the importance of eider nesting areas. Also, the landowner will be informed of the importance of eider nesting areas. Registration will help to encourage monitoring of the eider nesting area and also will encourage the conservation of the area.

The expected negative effect of registration would be publicity generated by the registration process. Publicity could attract visitors that might result in disturbance of nesting eiders and the destruction of eggs and young by predatory gulls. There should be minimal economic implications concerning the registration of eider nesting areas.

F. 1. U.S. Migratory Bird Act of 1918.

2. Zoning by the Land Use Regulation Commission
3. Shoreland Zoning
4. Conservation Easements

GENERAL MANAGEMENT SUGGESTIONS

G.

FOR SIGNIFICANT EIDER NESTING ISLANDS

The following management suggestions have been approved in principle by the Maine Department of Inland Fisheries and Wildlife. It is suggested that the landowner, or a designated representative of the landowner, may at his/her option carry out any or all of the following management suggestions as:

1. Designated critical areas used by eiders for nesting should be maintained in their existing condition except for management purposes as in No. 4 below.
2. No human activity except for emergency situations and by authorized personnel involved in management or research should be allowed within designated areas during the nesting period, from 1 May through 15 July. Disturbances caused by human activity during the nesting season could seriously diminish the production of young eiders on an island for the breeding season.
3. Except during the nesting period, 1 May through 15 July, primitive recreational uses could be permitted including fishing, hiking, hunting, wildlife studies and photography, picnicking, wild crop harvesting and trapping, provided no damage is done to the nesting habitat. All open fires on the island should be below the high water mark.
4. In special circumstances physical management of the habitat might be deemed advisable on an individual island basis. Eider nests can be protected from gull predation by the provision of wooden nest shelters or by the improvement of natural vegetative conditions. Reducing gull predation by these methods will increase eider production.
5. Free-roaming pets should not be permitted within critical areas during the nesting season, 1 May through 15 July. Domestic animals should not be introduced on critical areas. On islands with previous history of domestic animal pasturing it is recommended that the owners be encouraged to confine these animals by fences to those portions of the island where they will cause minimal adverse effects to the eiders. The removal of carnivorous mammals that may gain access to an island should be encouraged through licensed trapping.
6. Signs informing the boating public of policies governing the island's use (Nos. 2 and 3 above) should be erected at access points to critical areas before the nesting season and maintained on a permanent basis.

3. Conclusions and Recommendations

A. Conformance with definition contained in the Act.

The Act defines a critical area as meaning: "areas containing or potentially containing plant and animal life or geological features worthy of preservation in their natural condition, or other natural features of significant scenic, scientific, or historical value."

Significant eider nesting areas support at least 60% of Maine's eider population. These areas need special protection as expansion and recruitment of the eider population may be tied directly to them. The 49 significant nesting areas can thus be considered critical areas under the legislated definition.

B. Conformance with the Guidelines for the Registration of Critical Areas, adopted by the Critical Areas Advisory Board on September 11, 1975.

Section 1. Knowledge of the feature: The report The American Eider in Maine and Its Relevance to the Critical Areas Program of the State Planning Office, was prepared for the Critical Areas Program in order to provide detailed documentation about the eider duck and its nesting habitat in Maine.

Section 2. Representation on the Register: Eider duck nesting areas are not included on the Register of Critical Areas at this time.

Section 3. Variety of Values: Generally, eider duck nesting areas have a variety of values. They are: areas of significance to the natural sciences, ecologically sensitive areas, important habitats and scenic areas.

Section 4. Scarcity: Eider ducks nested on at least 215 islands on the Maine coast in 1976. With increased use of islands in Maine by people, nesting habitat may not be readily available in the future.

Section 5. Quality: Forty-nine nesting areas of the 215 located in Maine in 1976 met the criteria outlined in the METHODS section of this report. These areas are of significance to the eider population in Maine.

Section 6. Persistence: The numbers of eiders on the Maine coast have fluctuated greatly since colonial days. Eider populations declined in the late 19th and early 20th century. As a result of protective policies, the eider population began to increase early in this century and has continued to the present. Eider ducks have a strong migrational homing rate and they return to the same island to nest consistently.

Section 7. Geographic Distribution: The eider duck nests in every county on the Maine coast. A majority of the breeding birds are in the mid-coast region, roughly from Pemaquid Point to Schoodic Peninsula. Maine is the only state in the lower 48 that supports a significant breeding population of eider ducks.

Section 8. Use: Eider duck nesting areas have potential for scientific and educational uses.

Section 9. Manageability: Eider duck nesting areas can be easily managed to perpetuate the population of nesting eiders.

Section 10. Potential Economic Effects: Registration of eider duck nesting areas should result in little economic implications for the landowner.

Section 11. Potential Effect on the Conservation of the Feature: Registration of eider duck nesting areas is expected to have a positive effect on the conservation of eider duck nesting areas.

PROGRAM RECOMMENDATIONS

It is suggested that the State Planning Office implement the following program recommendations:

1. Because American eider nesting islands are an unusual natural feature worthy of preservation, the 49 islands listed in Table 2 should be evaluated for inclusion on the Register of Critical Areas.
2. Organizations or individuals known to utilize coastal islands during the boating season should be notified as to the designation of islands or portions of islands as Critical Areas, and the policies governing use. This list includes, in part, operators of sight-seeing boats, the Outward Bound School, University or College Wilderness Cruises, Hardwood Island Biological Station on Mt. Desert Island, Acadia National Park, National Audubon Society Hog Island Camp, Maine Audubon Society and other boating public.
3. Significant eider nesting areas should be monitored at intervals not to exceed five years to check on the status of the nesting population and breeding conditions.
4. Additional eider nesting areas listed in Appendix Table C should be monitored at intervals not to exceed five years to check on the status of the nesting population and breeding conditions.

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APPENDIX TABLE A. DESCRIPTIVE, HISTORICAL AND FIELD INFORMATION
ON SIGNIFICANT EIDER NESTING ISLANDS IN MAINE--
1976.

Each individual section of Table A (Outlined by *****) includes information on a specific island (See METHODS) listed by longitude from West to East. The size and location of the island is recorded. A synthesis of the historical information on nesting eiders for the particular island is listed. This information is grouped by species and by the chronological order of the observations. The results of the 1976 inventory are also provided with the date the island was surveyed (if blank, the island was not surveyed in 1976), the estimate of the breeding pair population of the species observed and the major island habitat types listed.

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-675	WESTERN I	DEER ISLE	44173	684912	8

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	4 BIRDS IN 1965	DRURY 1966
EIDER	20 NESTS IN 1966	H.L. MENDALL
EIDER	PRESENT 1965-1973	W.H. DRURY
EIDER	100+ NESTS IN 1975	A.E. HUTCHINSON

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/26/76	EIDER	450	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-917	WOODEN BALL I	MATINICUS PLANT	435118	684906	55

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT (1000 PAIRS) (1965-1973)	W.H. DRURY
EIDER	600 BIRDS IN 1965	DRURY 1966
EIDER	10 NESTS (EST 90-100 PAIRS) IN 1968	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
07/06/76	EIDER	150	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-174	ROBERTS I	VINALHAVEN	440040	684830	4

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT (1965-1973)	W.H. DRURY
EIDER	76-125 PAIRS IN 1967	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/02/76	EIDER	350	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-803	PAID I	DEER ISLE	441124	684700	5

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	22 PAIRS IN 1966	H.L. MENDALL
EIDER	18 NESTS (125 PR) IN 1967	H.L. MENDALL

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
55-386	QUITE GREEN I	PORTLAND	433900	700724	<2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT (50 NESTS) (1965-1973)	W.H. DRURY
EIDER	SMALL COLONY IN 1952	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/24/76	EIDER	125	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
55-499	INNER GREEN I	PORTLAND	434000	700618	<2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	0 NESTS IN 1948	A.O. GROSS
EIDER	50 PAIRS IN 1965	H.L. MENDALL
EIDER	22 NESTS IN 1966	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/24/76	EIDER	170	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
55-401	STOCKMAN I	CUMBERLAND	434410	700500	7

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT ON ISLAND (1965-1973)	W.H. DRURY
EIDER	1 NEST IN 1966	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/25/76	EIDER	450	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
55-406	LITTLE BIRCH I	HARPSWELL	434400	700305	3

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/26/76	EIDER	250	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
65-279	WHITE I	BOOTHBAY	434720	693430	5

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	150 BIRDS IN 1965	DRURY 1966
EIDER	20 NESTS (EST 26-75 PAIRS) IN 1966	H.L. MENDALL
EIDER	20 NESTS IN 1967 (INCOMPLETE)	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/28/76	EIDER	150	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
65-194	WRECK I	BRISTOL	435430	692400	6

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT	W.H. DRURY
EIDER	(1965-1973)	W.H. DRURY

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/02/76	EIDER	250	MIXED

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-705	CRANE I	FRIENDSHIP	435350	692300	4

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	0 NESTS IN 1966	H.L. MENDALL
EIDER	50+ ACTIVE NESTS IN 1974	A. E. HUTCHINSON

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/02/76	EIDER	200	MIXED

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-707	FRANKLIN I	FRIENDSHIP	435330	692230	4

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	ACTIVE COLONY IN 1952	J.M. CADRURY
EIDER	8 NESTS IN 1966 (INCOMPLETE)	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/02/76	EIDER	1300	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-833	HAPT I	ST GEORGE	435415	691600	4

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	150 BIRDS IN 1965	DRURY 1966
EIDER	20 NESTS (EST 26-75 PAIRS) IN 1966	H.L. MENDALL
EIDER	20 NESTS IN 1967 (INCOMPLETE)	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/03/76	EIDER	125	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-581	THE BROTHERS	ST GEORGE	435448	691430	2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING FEMALE PRESENT (1965-1973)	W.H. DRURY
EIDER	365 NESTS (475-550 PAIR) IN 1967	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/03/76	EIDER	425	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-582	HAY LD	ST. GEORGE	435436	691406	3

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	2 NESTS IN 1948	A.O. GROSS
EIDER	3 NESTS IN 1953	H.L. MENDALL
EIDER	PRESENT IN 1965	DRURY 1966
EIDER	78 NESTS IN 1967	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/03/76	EIDER	35	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-585	METINIC GREEN I	UNORGANIZED	435148	690806	3

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT (480 PAIRS) (1965-1973)	W.H. DRURY
EIDER	29 NESTS IN 1952	H.L. MENDALL
EIDER	5 NESTS IN 1953	H.L. MENDALL
EIDER	300 BIRDS IN 1965	DRURY 1966
EIDER	300 NESTING PAIRS IN 1967	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/23/76	EIDER	318	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-588	HCG I	UNORGANIZED	435224	690730	4

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	100 BIRDS IN 1965	DRURY 1966
EIDER	118 NESTS IN 1967	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/23/76	EIDER	133	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-584	METINIC I	UNORGANIZED	435300	690730	120

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT (1200 PAIRS) (1965-1973)	W.H. DRURY
EIDER	PRESENT IN 1965	DRURY 1966
EIDER	28 NESTS (EST 100-125 PAIRS) IN 1968	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
7 / 76	EIDER	NO ESTIMATE	MIXED

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-420	GARDEN I	SO. THOMASTON	440048	690648	<1

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	120 PAIRS IN 1965	H.L. MENDALL
EIDER	135 PAIRS IN 1966	H.L. MENDALL

SPECIES	OBSERVATION	SOURCE
EIDER	130 PAIRS IN 1967	H.L. MENDALL
EIDER	150 PAIRS IN 1968	H.L. MENDALL
EIDER	175 PAIRS IN 1969	H.L. MENDALL
EIDER	185 PAIRS IN 1970	H.L. MENDALL
EIDER	140 PAIRS IN 1971	H.L. MENDALL
EIDER	130 PAIRS IN 1972	H.L. MENDALL
EIDER	150 PAIRS IN 1973	H.L. MENDALL
EIDER	160 PAIRS IN 1974	H.L. MENDALL
EIDER	165 PAIRS IN 1975	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/09/76	EIDER	135	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-402	FISHERMAN I	UNORGANIZED	440236	690230	<2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	NC EIDERS NESTED IN 1935	GROSS 1944
EIDER	2 NESTS IN 1941	GROSS 1944
EIDER	7 NESTS IN 1943	GROSS 1944
EIDER	12 PAIRS IN 1944	GROSS 1944
EIDER	21 NESTS IN 1948	A.O. GROSS
EIDER	41 NESTS IN 1951, 26 NESTS IN 1952	H.L. MENDALL
EIDER	250 PAIRS IN 1965	H.L. MENDALL
EIDER	260 PAIRS IN 1966	H.L. MENDALL
EIDER	275 PAIRS IN 1967	H.L. MENDALL
EIDER	310 PAIRS IN 1968	H.L. MENDALL
EIDER	200 PAIRS IN 1969	H.L. MENDALL
EIDER	300 PAIRS IN 1970	H.L. MENDALL
EIDER	250 PAIRS IN 1971	H.L. MENDALL
EIDER	220 PAIRS IN 1972	H.L. MENDALL
EIDER	210 PAIRS IN 1973	H.L. MENDALL
EIDER	225 PAIRS IN 1974	H.L. MENDALL
EIDER	200 PAIRS IN 1975	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/09/76	EIDER	210	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-654	LITTLE GREEN I	UNORGANIZED	435500	690218	14

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT (500 PAIRS) (1965-1973)	W.H. DRURY

EIDER 55 NESTS IN 1968 H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/24/76	EIDER	NO ESTIMATE	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1975****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-33)	MOUSE I	NORTH HAVEN	441200	685642	<1

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT	(1965-1973) W.H. DRURY
EIDER	10 ACTIVE & 10 DESTROYED NESTS	'52 H.L. MENDALL
EIDER	67 NESTS IN 1953	H.L. MENDALL
EIDER	195 PAIRS IN 1964	CHOATE 1966
EIDER	165 PAIRS IN 1965	CHOATE 1966
EIDER	50 BIRDS IN 1965	DRURY 1966
EIDER	110 NESTING FEMALES IN 1970	BOURGET 1970
EIDER	110 PAIRS IN 1973 AND 1974	C.E. KORSCHGEN
EIDER	140 PAIRS IN 1975	C.E. KORSCHGEN

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/24/76	EIDER	100	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
77-047	FLAT I	ISLESBORO	441900	685554	<2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	55 NESTING FEMALES IN 1965	CHOATE 1966

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/24/76	EIDER	300	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-920	TEN POUND I	MATINICUS PLT	435054	685312	11

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT 200 PAIRS (1965-1973)	W.H. DRURY
EIDER	54 NESTS (EST 76-125 PAIRS) IN 1968	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/24/76	EIDER	350	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-924	PUDDING I	MATINICUS PLT	435030	685254	<2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT (70 PAIRS) (1965-1973)	W.H. DRURY

DATE	SPECIES	BREEDING PAIRS	HABITAT
07/06/76	EIDER	250	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-900	NO MAN'S LAND I	MATINICUS PLT	435306	685224	8

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	5 SEEN ALONG SHORE IN 1931	NORTON-ALLEN
EIDER	NO EIDER NESTS WERE FOUND IN 1941	GROSS 1944
EIDER	4 NESTS IN 1942	GROSS 1944
EIDER	15 NESTS IN 1943	GROSS 1944
EIDER	126 NESTS IN 1968 (700+ PAIRS)	H.L. MENDALL
EIDER	113 NESTS IN 1969	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/24/76	EIDER	1000	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-770	COMPASS I	DEER ISLE	441254	685154	3

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	5 NESTS IN 1941	GROSS 1944
EIDER	11 NESTS IN 1942	GROSS 1944
EIDER	40 NESTS IN 1943	GROSS 1944
EIDER	25+ NESTS IN 1965	H.L. MENDALL
EIDER	12 NESTS (EST 26-75 PAIRS) IN 1966	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/25/76	EIDER	316	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-789	GRASS LD W	DEEP ISLE	441376	685110	<1

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NO EIDERS NESTED HERE IN 1931	GROSS 1944
EIDER	54 NESTS IN 1933	GROSS 1944
EIDER	45 NESTS IN 1941	GROSS 1944
EIDER	89 NESTS IN 1941	GROSS 1944
EIDER	113 NESTS IN 1942	GROSS 1944
EIDER	123 NESTS IN 1943	GROSS 1944
EIDER	300 PAIRS IN 1966	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/25/76	EIDER	360	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-772	LITTLE SPRUCE HD	DEER ISLE	441354	685100	18

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	0 NESTS IN 1966	H.L. MENDALL
EIDER	2 NESTS (EST 19+ PAIRS) IN 1966	H.L. MENDALL
EIDER	150 PAIRS IN 1974	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/25/76	EIDER	520	CONIFER

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-684	PAPERED I	DEER ISLE	441600	685006	2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	2 NESTS IN 1941	GROSS 1944
EIDER	9 NESTS IN 1942	GROSS 1944
EIDER	13 NESTS IN 1943	H.L. MENDALL
EIDER	13 NESTS IN 1943	GROSS 1944
EIDER	18 NESTS (EST 26-75 PAIRS) IN 1966	H.L. MENDALL
EIDER	18 NESTS IN 1966	H.L. MENDALL
EIDER	25+ BIRDS IN 1967	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/25/76	EIDER	100	CONIFER

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/27/76	EIDER	150	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-673	SPECTACLE I	BROOKSVILLE	441824	684648	4

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	80 PAIRS IN 1966	H.L. MENDALL
EIDER	NESTS FOUND IN 1975	A.E. HUTCHINSON

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/26/76	EIDER	300	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
67-179	LITTLE PRIMSTONE I	VINALHAVEN	440030	684620	2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	60 BIRDS IN 1965	DRURY 1966
EIDER	APPROX 125 PAIRS IN 1967	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/02/76	EIDER	486	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-792	HARDHEAD I	DEER ISLE	441330	684518	3

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	H.L. DRURY
EIDER	16 NESTS (EST 26-75 PAIRS) IN 1966	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
05/27/76	EIDER	200	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-709	SCOTT I	DEER ISLE	441700	684420	2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	LARGE COLONY(100+ NESTS) IN 1975	A.E. HUTCHINSON

DATE	SPECIES	BREEDING PAIRS	HABITAT
15/26/76	EIDER	350	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-200	SPARROW I	ISLE AU HAUT	440730	684145	3

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	40 PAIRS IN 1965	H.L. MENDALL
EIDER	44 NESTS IN 1967	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/07/76	EIDER	350	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
63-287	GREAT SPOON I	ISLE AU HAUT	440230	683330	20

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	BREEDING EIDERS PRESENT (1941-1943)	GROSS 1944
EIDER	40-50 PAIRS IN 1965	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/08/76	EIDER	400	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-481	MASON LD	SWAN'S ISLAND	440554	682924	2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT	(1965-1973) W.H. DRURY

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/24/76	EIDER	350	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-483	HERON I	SWAN'S ISLAND	440600	682830	20

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER		

EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	NESTING IN 1975 (20-50 PAIRS)	ACADIA PK UNPUB

DATE	SPECIES	BREEDING PAIRS	HABITAT
16/24/76	EIDER	500	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-244	PAR I	TREMONT	441530	682730	18

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	5 NESTS (EST 6-25 PAIRS) IN 1966	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/10/76	EIDER	700	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-483	JOHN I	SWAN'S ISLAND	440645	682415	12

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT	(1965-1973) W.H. DRURY

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/24/76	EIDER	200	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
59-062	SCHODIC I	WINTER HARBOR	442000	680200	0026

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT	(1965-1973) W.H. DRURY
EIDER	NO NESTS IN 1952	H.L. MENDALL
EIDER	33 NESTS (EST 125 PAIRS) IN 1968	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
07/05/76	EIDER	NO ESTIMATE	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
79-929	GREEN I	MILBRIDGE	442230	675230	5

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	4 NESTS IN 1953	H.L. MENDALL
EIDER	NO BIRDS IN 1966	H.L. MENDALL
EIDER	10 NESTS (EST 125 PAIRS) IN 1968	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
06/14/76	EIDER	200	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
79-922	JORDAN'S DELIGHT	MILBRIDGE	442636	674924	10

SPECIES OBSERVED	NESTING	OBSERVATION	SOURCE
EIDER		FROM 1965-1973	W.H. DRURY

DATE	SPECIES	BREEDING PAIRS	HABITAT
07/10/76	EIDER	NO ESTIMATE	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
79-748	NIGHTCAP I	ADDISCON	443110	674530	<2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NO NESTS IN 1952	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
07/11/76	EIDER	NO ESTIMATE	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
79-693	BROWNIE I	BEALS	442745	673715	0015

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	17 NESTS (EST 50 PAIRS) IN 1968	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
07/15/76	EIDER	NO ESTIMATE	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
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79-488	PALLAST I	JONESPORT	443336	673312	<2
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SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING (1965-1973)	W.H. DRURY
EIDER	BREEDING EIDERS PRESENT (1941-1943)	GROSS 1944
EIDER	8 NESTS IN 1952	H.L. MENDALL
EIDER	8 NESTS IN 1953	H.L. MENDALL
EIDER	75 PAIRS IN 1968	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
07/16/76	EIDER	NO ESTIMATE	HERB-GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
79-573	THE FEATHERS I	JONESPORT	443330	672610	00 7

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING FEMALES PRESENT (1965-1973)	W.H. DRURY

DATE	SPECIES	BREEDING PAIRS	HABITAT
07/16/76	EIDER	NO ESTIMATE	GRASS

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
79-339	LIRBY I	MACHIASPORT	443445	672120	36

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	NESTING EIDERS PRESENT (1965-1973)	DRURY 1974
EIDER	57 NESTS (EST 125+ PAIRS) IN 1968	H.L. MENDALL

DATE	SPECIES	BREEDING PAIRS	HABITAT
07/16/76	EIDER	NO ESTIMATE	SHRUB

DESCRIPTION OF SIGNIFICANT EIDER ISLANDS IN MAINE-- 1976****

ISLAND	ISLAND NAME	TOWN	LAT.	LONG.	SIZE(HA)
79-313	OLD MAN (EAST)	CUTLER	443715	671415	<2

SPECIES OBSERVED	OBSERVATION	SOURCE
EIDER	PRESENT (55 PAIRS) (1965-1973)	W.H. DRURY
EIDER	ACTIVE COLONY IN 1903	DUTCHER 1904
EIDER	2 PAIRS IN 1907	GROSS 1944
EIDER	60 EIDERS BREEDING IN 1938	BOWDISH 1908
EIDER	1 NEST IN 1913	GROSS 1944
EIDER	4 NESTS IN 1931	GROSS 1944

EIDER	9 NESTS FOUND, 25 ESTIMATED IN 1943	GROSS 1944
EIDER	20 NESTS IN 1948	A.O. GROSS
EIDER	6 NESTS IN 1953	H.L. MENDALL
EIDER	17 NESTS IN 1968	H.L. MENDALL

DATE	SPECIES
07/16/76	EIDER

BREEDING PAIRS	HABITAT
NO ESTIMATE	HERB-GRASS

APPENDIX TABLE B. EIDER NESTING ISLANDS IN MAINE--1976.
(Listed in order of decreasing number of breeding pairs)

Island Number	Island Name	Latitude	Longitude	Town	Pairs
63-707	Franklin Island	435330	692230	Friendship	1300
63-900	No Man's Land Island	435306	685224	Matinicus Plt.	1000
59-244	Bar Island	441530	682730	Tremont	700
59-772	Little Spruce Head	441354	685100	Deer Isle	520
59-480	Heron Island	440600	682830	Swan's Island	500
63-179	Little Brimstone Island	440030	684620	Vinalhaven	486
55-401	Stockman Island	434410	700500	Cumberland	450
59-675	Western Island	441730	684912	Deer Isle	450
63-287	Great Spoon Island	440230	683330	Isle au Haut	400
59-789	Grass Ledge West	441306	685100	Deer Isle	360
59-481	Mason Ledge	440554	682924	Swan's Island	350
59-709	Scott Island	441700	684420	Deer Isle	350
63-174	Roberts Island	440040	684830	Vinalhaven	350
63-200	Sparrow Island	440700	684145	Isle au Haut	350
63-920	Ten Pound Island	435054	685312	Matinicus Plt.	350
63-585	Metinic Green Island	435148	690806	Unorganized	318
59-790	Compass Island	441254	685154	Deer Isle	316
59-673	Spectacle Island	441824	684648	Brooksville	300
77-047	Flat Island	441900	685554	Islesboro	300
55-406	Little Birch Island	434400	700305	Harpswell	250
63-581	The Brothers	435448	691430	St. George	250
63-924	Pudding Island	435030	685254	Matinicus Plt.	250
65-194	Wreck Island	435430	692400	Bristol	250
63-402	Fisherman Island	440236	690230	Unorganized	210
59-483	John Island	440645	682415	Swan's Island	200
59-782	Hardhead Island	441330	684518	Deer Isle	200
63-705	Crane Island	435350	692300	Friendship	200
63-860	Eastern Egg Rock	435136	692254	St. George	200
79-929	Green Island	442230	675230	Milbridge	200
55-412	Bangs Island	434330	700530	Cumberland	180

APPENDIX TABLE B. CONTINUED.

Island Number	Island Name	Latitude	Longitude	Town	Pairs
63-579	The Brothers	435448	691430	St. George	175
55-499	Inner Green Island	434000	700618	Portland	170
63-166	Carvers Island	440130	684800	Vinalhaven	160
59-340	Trumpet Island	431436	682642	Tremont	150
59-341	Ship Island	431406	682630	Tremont	150
59-803	Bald Island	441124	684700	Deer Isle	150
63-917	Wooden Ball Island	435118	684906	Matinicus Plt.	150
65-278	White Island	434720	693430	Boothbay	150
59-836	Scraggy Island	440736	684224	Stonington	140
63-420	Garden Island	440048	690648	So. Thomaston	135
55-386	Outer Green Island	433900	700724	Portland	125
63-802	Bar Island	435510	691730	St. George	125
63-833	Hart Island	435415	691600	St. George	125
65-201	Western Egg Rock	435242	692500	Bristol	120
63-588	Hog Island	435224	690730	Unorganized	103
55-415	Upper Flag Island	434330	700245	Harpswell	100
55-615	Pond Island	434400	695820	Harpswell	100
59-684	Barred Island	441600	685006	Deer Isle	100
59-933	Mahoney Island	441306	683054	Brooklin	100
59-999	Saddleback Island	440630	683220	Stonington	100
63-176	Brimstone Island	440045	684615	Vinalhaven	100
63-330	Mouse Island	441200	685642	North Haven	100
63-701	Harbor Island	435420	692300	Friendship	100
55-383	Ram Island	433815	701115	Portland	75
55-605	Ram/Sheep Island	434400	695930	Harpswell	75
59-398	Gooseberry Island	440800	682748	Swan's Island	75
59-980	Three Bush Island	440720	683130	Swan's Island	75
63-260	Southern Mark Island	440712	683430	Isle au Haut	75
63-655	Large Green Island	435424	690042	Unorganized	75
63-875	Shark Island	435048	692124	St. George	75
59-996	Shabby Island	441000	683342	Deer Isle	70
63-485	Green Island	440420	685455	Vinalhaven	68

63.

APPENDIX TABLE B. CONTINUED.

Island Number	Island Name	Latitude	Longitude	Town	Pairs
63-341	Robinson Rock	440936	685836	North Haven	67
59-669	Thrumcap Island	441918	684530	Brooksville	65
63-175	Roberts Island	440035	684840	Vinalhaven	57
55-174	Elm Island	434520	695555	Harpswell	55
59-446	Green Island	440930	682030	Brooklin	50
59-758	Torrey Island	441500	683530	Brooklin	50
63-578	Gunning Rocks	435430	691500	St. George	50
65-287	Pumpkin Island	434518	693500	Boothbay	50
73-282	Pond Island	434425	694615	Phippsburg	50
63-335	East Goose Rock	441100	685842	North Haven	44
63-637	Seal Island	435900	690720	St. George	40
63-265	So. Popplestone Ledge	440600	683400	Isle au Haut	38
63-336	Goose Island	441106	685712	North Haven	38
59-677	Pond Island	441730	684818	Deer Isle	35
63-582	Hay Ledge	435436	691406	St. George	35
65-274	Fisherman Island	434745	693600	Boothbay	35
65-279	Outer Heron Island	434630	693505	Boothbay	35
79-935	Egg Rock	442430	675205	Beals	35
59-674	Green Ledge	441724	684936	Deer Isle	33
59-359	Crow Island	441118	682618	Swan's Island	32
63-016	The Downfall	441048	684818	North Haven	31
59-478	Green Island	440654	682700	Swan's Island	30
63-015	Dagger Island	441100	684818	North Haven	30
63-930	Ragged Island	434930	685330	Unorganized	30
63-940	Matinicus Rocks	434706	685118	Matinicus Plt.	30
65-198	Ross Island	435345	692600	Bristol	30
65-276	White Island	434730	693430	Boothbay	30
55-159	Jenny Island	434550	695430	Harpswell	25
55-424	Ministerial Island	434250	700440	Cumberland	25
55-630	Mark Island	434330	695400	Harpswell	25
59-445	NN Ledge NE of 59446	440930	682030	Swan's Isle	25
63-266	Green Ledge	440530	683400	Brooklin	25
63-289	Little Spoon Island	440218	683424	Isle au Haut	25
63-398	Cutters Nubble	440354	690248	Owls Head	25

64.

APPENDIX TABLE B. CONTINUED.

Island Number	Island Name	Latitude	Longitude	Town	Pairs
63-410	Otter Island	440124	690430	Unorganized	25
63-493	Green Ledge	440400	685520	Vinalhaven	25
63-653	Two Bush Island	435754	690442	St. George	25
63-836	Cunning Rocks	435442	691506	St. George	25
65-313	Eastern Duck Rock	434640	691845	Bristol	25
65-316	Inner Duck Rock	434600	691910	Monhegan Pt	25
73-283	Wood Island	434420	694645	Phippsburg	25
59-685	Colt Head Island	441542	685030	Deer Isle	24
63-415	Tommy Island	440106	690654	S. Thomaston	23
59-837	NN LD S of 59836	440736	684224	Stonington	22
55-405	Horse Island	434400	700240	Harpswell	20
55-425	Sand Island	434248	700624	Cumberland	20
63-323	Ram Island	440812	690430	Friendship	20
65-179	Jim's Island	435730	692400	Bremen	20
55-150	Rogue Island	434620	695340	Harpswell	19
55-441	Rogues Island	434230	700640	Cumberland	19
63-183	Otter Island	440030	684754	Vinalhaven	18
55-440	Bates Island	434230	700435	Cumberland	17
59-356	Cherry Ledge	441130	682630	Swan's Island	16
59-676	Pond Island	441730	684818	Deer Isle	16
55-404	Pinkham Island	434400	700100	Harpswell	15
63-700	Black Island	435545	692230	Friendship	15
63-838	Old Hump Ledges	435230	692130	St. George	15
65-200	Haddock Island	435220	692600	Bristol	15
65-280	Damariscove Island	434600	693645	Boothbay	15
65-466	The Cuckolds Island	434645	693915	Southport	15
73-234	Middle Mark Island	434345	694145	Goergetown	15
59-681	Two Bush Island	441700	684540	Deer Isle	13
63-774	Long Ledge	435320	692200	Friendship	12
59-716	Eaton Island Ledge	441610	684350	Deer Isle	11
59-718	NN LD SW of 59-724	441612	684254	Deer Isle	11

65.

APPENDIX TABLE B. CONTINUED.

Island Number	Island Name	Latitude	Longitude	Town	Pairs
59-783	Last Chain Link	441354	684830	Deer Isle	11
55-427	Turnip Island	434254	700042	Harpswell	10
59-342	East Barge Island	441345	682630	Tremont	10
59-672	Buck Island	441848	684654	Brooksville	10
59-686	Resolution Island	441530	685140	Deer Isle	10
59-931	Smuttynose Island	441312	683124	Brooklin	10
63-403	Marbelhead Island	440209	690230	Unorganized	10
63-730	Sand Island	435820	692115	Friendship	10
65-188	Jones Garden Island	435548	692318	Bristol	10
65-189	Killick Stone	435542	692500	Bristol	10
55-400	Goose Nest Island	434420	700530	Cumberland	7
59-687	Beach Island	441530	684930	Deer Isle	7
59-713	Little Eaton Island	441618	684354	Deer Isle	7
59-770	Horsehead Island	441500	685100	Deer Isle	7
59-991	Halibut Rocks	440800	683130	Swan's Island	7
65-266	Thrumcap Island	434915	693300	S. Bristol	7
59-802	Grass Ledge	441152	684742	Deer Isle	6
79-933	Petit Manan Island	442200	675200	Milbridge	6
55-156	Duck Rock	434615	695520	Harpswell	5
55-178	Two Bush Island	434515	695615	Harpswell	5
55-271	French Island	434700	700420	Freeport	5
55-432	Jaquish Island	434240	700020	Harpswell	5
59-679	Hog Island	441700	684730	Deer Isle	5
59-714	Eaton Island	441610	684350	Deer Isle	5
59-788	Scrag Island	441324	685006	Deer Isle	5
63-418	Little Green Island	440106	690418	Unorganized	5
63-423	Little Pond Island	440045	690300	Unorganized	5
63-526	NN LD S of 63528	440206	685330	Vinalhaven	5
63-552	NN LD W of 63554	435830	690800	St. George	5
63-651	Crow Island	435800	690500	Unorganized	5
63-731	Ram Island	435800	692115	Friendship	5
63-765	Cranberry Island	435540	692200	Friendship	5

66.

APPENDIX TABLE B. CONTINUED.

Island Number	Island Name	Latitude	Longitude	Town	Pairs
63-770	Little Joe Island	435600	692120	Friendship	5
63-795	Eagle Island	435540	691800	St. George	5
63-820	Shag Ledges (East)	435315	691740	St. George	5
63-840	Allen Island	435200	691900	St. George	5
65-186	Thief Island	435554	692436	Bristol	5
65-193	Thrumcap Island	435440	692600	Bristol	5
65-258	Thread of Life Rock	434940	693300	S. Bristol	5
65-267	Thrumcap Island	434900	693300	S. Bristol	5
65-445	Cedarbush Island	434915	694115	Southport	5
59-680	Fiddle Head	441720	684700	Deer Isle	4
59-710	Sheep Island	441645	684330	Deer Isle	4
63-169	Hay Island	440055	684740	Vinalhaven	4
63-465	Sugar Loaves	440645	685445	North Haven	4
63-512	NN LD NW of 63513	440245	685445	Vinalhaven	4
55-458	West Brown Cow Island	434142	700418	Cumberland	3
63-011	Spoon Ledge	441206	684942	Deer Isle	3
63-421	Oak Island	440100	690448	Unorganized	3
63-516	NN LD W of 63528	440206	685330	Vinalhaven	3
63-825	Benner Island	435240	691900	St. George	3
73-315	Heron Island	434320	694820	Phippsburg	3
55-331	Crow Island	434230	700815	Portland	2
59-688	Spectacle Island	441824	684648	Brooksville	2
59-711	NN LD S of 59710	441645	684330	Deer Isle	2
59-724	Bar Island	441612	684254	Deer Isle	2
63-170	Deadman Ledge	440130	685230	Vinalhaven	2
63-798	Stone Island	435540	691810	St. George	2
55-144	Flash Island	434625	695440	Harpwell	1
55-437	Little Mark Island	434230	700150	Harpwell	1
59-343	West Barge Island	441345	682700	Tremont	1
59-344	Green Island	441550	682955	Brooklin	1
59-349	Eagle Island	441300	682730	Swan's Island	1
59-366	Dry Ledge	441100	682530	Swan's Island	1
59-475	Scrag Island	440700	682700	Swan's Island	1

67.

APPENDIX TABLE B. CONTINUED.

Island Number	Island Name	Latitude	Longitude	Town	Pairs
59-830	NN LD W of 59831	440900	684130	Deer Isle	1
59-833	Andrew Island	440848	684212	Stonington	1
59-946	Crow Island	441148	683312	Deer Isle	1
63-106	Flat Island	440430	685200	Vinalhaven	1
63-136	Sheep Island	440215	684730	Vinalhaven	1
63-206	W. Halibut Ledge	440636	684142	Isle au Haut	1
63-314	Goose Rocks	441100	690312	Rockport	1
63-340	NN LD N of 63341	440936	685836	North Haven	1
63-351	Dumpling Island	440742	685342	North Haven	1
63-704	Little Hall Island	435430	692220	Friendship	1
73-213	N. Sugarloaf Island	434500	694640	Phippsburg	1
73-301	Gooseberry Island	434315	695120	Phippsburg	1
59-037	Sally Island	442348	675648	Gouldsboro	no est.
59-062	Schoodic Island	442000	680200	Winter Harbor	no est.
79-313	Old Man (East)	443715	671415	Cutler	no est.
59-439	Little Duck Island	441030	681445	L.I. Pt.	no est.
63-654	Little Green Island	435500	690218	Unorganized	no est.
79-359	Libby Island	443445	672120	Machiasport	no est.
79-488	Ballast Island	443336	673312	Jonesport	no est.
79-573	The Brothers Island	443330	672610	Jonesport	no est.
79-693	Browney Island	442745	673715	Beals	no est.
79-748	Nightcap	443110	674530	Addison	no est.
79-922	Jordan's Delight Island	442036	674924	Milbridge	no est.
63-584	Metinic Island	435300	690730	Unorganized	no est.

68.

APPENDIX TABLE C. EIDER DUCK NESTING ISLANDS OF POSSIBLE FUTURE SIGNIFICANCE (1976)
(Listed by Longitude from West to East)

The following list of islands should be monitored at intervals not to exceed five years to check on the status of the nesting population and breeding conditions. If any of these islands meet the criteria for determining state significance listed in this report they should be evaluated for inclusion on the Register of Critical Areas. Additional islands may be added to this list after future breeding seabird inventories.

Island Number	Island Name	Latitude	Longitude	Town	Size (ha)
81-182	Smuttynose Island	4259	703620	Kittery	
81-181	Duck Island	430020	703620	Kittery	
81-018	Beach Island	432624	702724	Biddeford	<2
81-094	Negro Island	4327	7021	Kennebunkport	<2
81-010	Eagle Island	4329	702130	Saco	2
81-016	Stage Island	432724	702112	Biddeford	5
81-014	Negro Island	432724	702030	Biddeford	<2
81-025	Gooseberry Island	432706	702012	Biddeford	<2
81-001	Bluff Island	4331	7019	Saco	6
81-002	Stratton Island	4331	701830	Saco	11
81-011	Ram Island	4333	701536	Saco	<2
55-412	Bangs Island	434330	700530	Cumberland	23
55-415	Upper Flag Island	434330	700245	Harpswell	14
55-615	Pond Island	434400	695820	Harpswell	12
65-280	Damariscove Island	434600	693645	Boothbay	104
65-201	Western Egg Rock	435242	692500	Bristol	3
63-701	Harbor Island	435420	692300	Friendship	36
63-802	Bar Island	435510	691730	St. George	3
59-518	Little Hurricane Island	440216	685418	Vinalhaven	4
63-166	Carvers Island	440130	684800	Vinalhaven	4
63-176	Brimstone Island	440045	684615	Vinalhaven	15
59-836	Scraggy Island	440736	684224	Stonington	4
59-999	Saddleback Island	440630	683220	Stonington	<2
59-933	Mahoney Island	441306	683054	Brooklin	4
59-340	Trumpet Island	431436	682642	Tremont	5
59-341	Ship Island	431406	682630	Tremont	6
59-440	Great Duck Island	440900	681500	L.I. Plt.	88
59-439	Little Duck Island	441030	681445	L.I. Plt.	34
59-037	Sally Island	442348	675648	Gouldsboro	2

ADDENDUM

The State Planning Office and Critical Areas Advisory Board, after reviewing and evaluating this report on Eider Ducks, voted to include the following areas on its Register of Critical Areas.

	<u>Name</u>	<u>County</u>	<u>Town</u>	<u>Size (hectares)</u>	<u>Date Registered</u>
22.	John Island	Hancock	Swans Island	35	January 22, 1976
75.	Western Island Heronry & Eider Nesting Area	Hancock	Deer Isle	8	September 16, 1977
78.	Wreck Island Heronry & Eider Nesting Area	Lincoln	Unorganized	6	September 16, 1977
80.	Stockman Island Eider Nesting Area	Cumberland	Cumberland	7	October 27, 1977
81.	White Island Eider Nesting Area	Lincoln	Boothbay	5	October 27, 1977
82.	Franklin Island Eider Nesting Area	Knox	Friendship	4	October 27, 1977
83.	Hart Island Eider Nesting Area	Knox	St. George	4	October 27, 1977
84.	Metinic Green Island Eider Nesting Area	Knox	Unorganized	3	October 27, 1977
85.	Fisherman Island Eider Nesting Area	Knox	Unorganized	2	October 27, 1977
86.	Little Green Island Seabird Nesting Area	Knox	Unorganized	14	October 27, 1977
87.	Mouse Island Eider Nesting Area	Knox	Unknown	1	October 27, 1977
88.	Flat Island Eider Nesting Area	Waldo	Islesboro	2	October 27, 1977
89.	Compass Island Eider Nesting Area	Hancock	Unorganized	3	October 27, 1977
90.	Little Sprucehead Island Eider Nesting Area	Hancock	Deer Isle	18	October 27, 1977

	<u>Name</u>	<u>County</u>	<u>Town</u>	<u>Size (hectares)</u>	<u>Date Registered</u>
105.	Hog Island	Knox	Unorganized	3	December 16, 1977
106.	Roberts Island Eider Nesting Area	Knox	Vinalhaven	4	December 16, 1977
107.	Bald Island Eider Nesting Area	Hancock	Deer Isle	5	December 16, 1977
108.	Little Brimstone Isl. Eider Nesting Area	Knox	Vinalhaven	2	December 16, 1977
109.	Hardhead Island Eider Nesting Area	Hancock	Deer Isle	3	December 16, 1977
110.	Outer Scott Island Eider Nesting Area	Hancock	Deer Isle	2	December 16, 1977
111.	Heron Island Eider Nesting Area	Hancock	Swans Island	20	December 16, 1977
118.	Libby Island Eider Nesting Area	Washington	Machiasport	36.0	January 27, 1978
119.	Old Man Island Eider Nesting Area	Washington	Cutler	2.0	January 27, 1978
156.	Bar Island Seabird Nesting Area	Hancock	Tremont	47	June, 1978
192.	Crane Island	Knox	Friendship	4	October 5, 1978
259.	Big Nash Island Seabird Nesting Area	Washington	Addison	32.0	April 20, 1979
260.	Ship Island Seabird Nesting Area	Hancock	Tremont	6.5	April 20, 1979
261.	The Brothers Islands Eider Nesting Area	Knox	St. George	2.0	April 20, 1979
262.	Brimstone Island Seabird Nesting Area	Knox	Vinalhaven	15.0	April 20, 1979
263.	Western Egg Rock	Knox	Bristol	.0	April 20, 1979
264.	Outer Double Head Shot/	Washington	Cutler	6	April 29, 1979

	<u>Name</u>	<u>County</u>	<u>Town</u>	<u>Size (hectares)</u>	<u>Date Registered</u>
268.	Smuttynose Island Seabird Nesting Area	Hancock	Brooklin	1.6	April 20, 1979
269.	Eagle Island Seabird Nesting Area	Cumberland	Harpwell	4.85	April 20, 1979
287.	Hay Ledge Eider Nesting Area	Knox	St. George	3	September 7, 1979
382.	Turnip Island Seabird Nesting Area	Cumberland	Harpwell	5	January, 1982