



**MAJOR
TERN COLONIES
IN MASSACHUSETTS
(NORTH)**



KEY:
C=COMMON R=ROSEATE
A=ARCTIC L=LEAST

TERNs

del. JR

THE IDENTIFICATION AND OCCURRENCE OF "PORTLANDICA" TYPE
ARCTIC TERNS IN MASSACHUSETTS

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Massachusetts birders are fortunate to have a wide variety of terns that frequent the state on a regular basis. Four species of terns - Common (*Sterna hirundo*), Arctic (*S. paradisaea*), Roseate (*S. dougalli*), and Least (*S. albifrons*) - breed here. The Common and Least terns are numerous and fairly widespread breeders. The Roseate Tern whose population in Massachusetts is greater than anywhere else in North America is a very local breeding species with a major colony at Bird Island in Buzzards Bay. Small numbers of Roseate Terns breed on Monomoy Island, New Island in Nauset Bay, Grays Beach in Yarmouth, and at Long Beach in Plymouth. The Arctic Tern reaches its southernmost breeding station in Massachusetts. The few breeding sites include Plymouth, Nauset, Monomoy and Noman's Land with a total population of about 50 pairs. Aside from these breeding species, the Black Tern (*Chlidonias niger*), Forster's Tern (*S. forsteri*), and Caspian Tern (*S. caspia*) are regular migrants while the Royal Tern (*S. maxima*) is an annual, although very uncommon, summer visitor. As if that weren't enough to make outlanders envious, there is always the possibility of a summer visitation from Gull-billed (*S. nilotica*) or Sandwich (*S. sandvicensis*) terns and a late summer northeast storm or hurricane can produce Sooty (*S. fuscata*) or Bridled (*S. anaethetus*) terns. Obviously Massachusetts birders are fortunate to enjoy such an abundance.

Under optimum viewing conditions, identification of any of these species is routine with the aid of current field guides. However, it is obvious that field guides can not be all-inclusive when it comes to depicting all the variations that occur in nature. A case in point is the sub-adult plumages of our local nesting terns. It is widely known that the majority of our locally raised young do not return to breed on their natal beaches until at least their third year and, possibly for the majority, their fourth year. It is generally believed and substantiated to some extent by banding recoveries that non-breeding sub-adults spend their first summer on or near the wintering grounds. As a consequence, we are for the most part ignorant of their plumages during this part of their life cycle.

It appears that a small portion of these immatures returns to the northern breeding grounds with migrating adults in spring. At this time they are so strikingly different from the adults that an individual in this plumage was first described as a separate species, "*Sterna portlandica*." In time, researchers determined that the uniquely marked birds were in fact not a distinct species but represented non-breeding immatures of the local nesting species. Since that time, the term "portlandica" has been used to describe any sub-adult tern in that distinctive plumage. Originally it was thought that this plumage was restricted to only Arctic Terns, but recently it has been determined that most if not all *Sterna* terns exhibit this plumage.

IDENTIFICATION

For the unknowing, the "portlandica" Arctic Tern is a confusing but, fortunately, rarely encountered bird. Unlike breeding adults, the bill

and feet are black. The upperparts are generally gray and in this respect resemble adults, but they retain the dark carpal bar of the juvenile plumage. The underparts are clear white, unlike the underparts of adults. Although "portlandica" has a black cap, it has a white forehead, varying somewhat in extent, that clearly distinguishes it as something different. This character is not illustrated in any field guide. The familiar long tail streamers are absent in many birds, probably the result of abrasion of unmolted tail feathers. The wings are shorter and slightly more rounded than adults, giving the birds a floppy flight aspect somewhat reminiscent of the Black Tern. Finally, there is a pronounced white collar separating the black cap from the gray mantle.

The foregoing characteristics will serve to recognize a "portlandica" tern when seen but are insufficient to ascertain whether it is a Common or Arctic tern. The shorter, more rounded bill of Arctic Tern is a useful field mark only when seen in direct comparison with other adult terns. In "portlandica" terns the rump color is diagnostic - white in Arctic Terns and gray in Common Terns. The "portlandica" Arctic is identifiable overhead by the noticeable translucence of the primaries and secondaries. Also, from below, the black at the tips of the primaries appears as a narrow black line, while in the Common Tern it is broader and more diffuse, particularly on the outer primaries.

OCCURRENCE

The average observer is likely to encounter a "portlandica" tern only if he visits a breeding colony during June or July. In the past, only occasional "portlandicas" have been encountered, but in recent years - since 1976 - they have occurred in appreciable numbers, most notably at the Monomoy Island colony off Chatham on outer Cape Cod. The first influx of "portlandica" Arctic Terns was in the summer of 1976 when "portlandicas" began to appear in early June and soon built up to a maximum in late June - 550 individuals on June 24. Shortly thereafter their numbers declined; by late July most had departed. Although "portlandicas" are normally found in association with breeding colonies, they are seldom encountered in the colonies themselves but rather in the company of other terns in loafing areas adjacent to the colonies. In these loafing areas they sometimes flock in groups comprised entirely of "portlandicas". The greatest recorded number of "portlandicas" occurred in 1979 at Monomoy when 800+ were observed on July 6.

Since 1976 the appearance of large numbers of "portlandicas" has become routine on Cape Cod. Observers are most likely to see "portlandicas" at Monomoy Island, however lesser numbers have been noted at Provincetown, Nauset, and Plymouth, with rare occurrences on the North Shore in the Newburyport/Plum Island area. They begin to appear in late May or early June, build to a peak in late June-early July, with numbers dwindling before a general departure in late July-early August.

The appearance of "portlandica" Arctic Terns in Massachusetts can not be attributed to the overwhelming breeding success of our local nesters. On the contrary, our meager breeding population of Arctic Terns experiences little success and has not produced enough young in the past decade to account for the appearance of so many immature birds. The origin of the "portlandicas" must be from a more northerly breeding site. The increase of "portlandicas" coincides with the unusual

appearance of summering Black-legged Kittiwakes (Rissa tridactyla) at Monomoy. Perhaps there is some locally abundant food source that has attracted them.

In conclusion, I would like to present a totally hypothetical situation regarding the origin of these "portlandica" Arctic Terns. It is well known that some pelagic bird species that breed in the southern hemisphere spend their austral winter (our summer) in our offshore waters. Greater (Puffinus gravis) and Sooty (P. griseus) shearwaters are well-known examples of this pattern. However, the seemingly recent appearance of supposed South Polar Skuas (Catharacta maccormicki) in our waters during summer indicates a possible change in wintering patterns of southern hemisphere species. Perhaps the recent influx of "portlandica" Arctic Terns represents a small population of non-breeding Antarctic Terns that have begun wintering in our area. No matter how preposterous this supposition, it can not be categorically dismissed in light of recent developments.



"Portlandica" Arctic Tern

Photograph courtesy of the Massachusetts Audubon Society

For further reading:

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