# ALCID IDENTIFICATION IN MASSACHUSETTS

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The alcidae, a northern circumpolar family of seabirds, are members of the order Charadriiformes and thus most closely related to the gulls, skuas, and shorebirds. All alcids have approximately elliptical bodies and much reduced appendages, adaptations for insulation as well as a streamlined trajectory under water. Their narrow flipperlike wings are modified to reduce drag during underwater propulsion, and are, therefore, comparatively inefficient for flight.

Razorbills, murres, and puffins feed predominately on fish, such as the sand launce, capelin, Arctic cod, herring, and mackerel. The Dovekie, by far the smallest Atlantic alcid, eats zooplankton exclusively, such as the superabundant "krill." The Black Guillemot, unique in its confinement to the shallow littoral zone, feeds largely on rock eels or gunnel.

As with many pelagic birds, the alcids' dependence on abundant marine food restricts them to the productive waters of the high latitudes. Biological productivity of the oceans increases markedly towards the poles, largely because the low surface temperatures there maintain convection currents which serve to raise large quantities of dissolved mineral nutrients to the surface. The resultant high concentration of nutrients near the surface of polar seas supports enormous populations of plankton and, ultimately, the fish upon which the larger alcids feed.

Alcids are comparatively weak flyers and are not regularly migratory, but rather disperse from their breeding range only when forced to do so by freezing waters or food scarcity. Massachusetts lies at the periphery of the ranges of these birds, with the exception of the Razorbill. It is only under exceptional circumstances, such as southward irruptions coupled with strong northeasterly storms that substantial numbers of alcids are observed along the Massachusetts coastline.

Razorbill, or Razorbilled Auk (Alca terda):

The Razorbill is the least numerous of the Atlantic alcids and is restricted as a breeding bird in North America from Labrador south to Matinicus Rock, Maine. During the winter, a substantial but yet undetermined percentage of the western Atlantic Razorbills feed on the sand shoals south and east of Nantucket Island and on Georges Bank. In any case, Nantucket is the best locality in North America to see Razorbills from shore during winter. At that season they show a greater preference for shallower water than either the murres or the puffins.

In flight, the laterally compressed, bulbous bill of the adults gives the head a strikingly large, rectangular appearance. The bill of the immature bird is considerably smaller than that of the adult but still differs from that of the Thick-billed Murre in being deeper perpendicular to the angle of the gonys and being rounded at the tip. The tip of the bill of Thick-billed Murres is distinctly pointed. In the winter plumage of Razorbills of all ages, the white on the side of the face extends appreciably above an imaginary line running from the gape through the eye

to the nape. This is never the case with Thick-billed Murre, in which the white of the underparts is restricted to the throat, cheeks and sides of the neck. The rectrices of the Razorbill are comparatively long and strikingly wedge-shaped, such that the tail is longer than in any other alcid. The tail covers the trailing feet in flight and is frequently cocked upwards while the bird sits on the water. The feathers of the upperparts are always coal black.

Common Murre (Uria aalge):

The murres are colonial cliff-nesting seabirds, breeding largely in the arctic regions but ranging south to eastern Newfoundland. The modifier "common" is unfortunately inappropriate: the Thick-billed Murre is some 4-5 times as numerous as the Common Murre on a global scale and is far and away the more abundant species in the Gulf of Maine during the winter. However, the Common Murre is the more abundant nesting species at the southern limit of the breeding range. Of the subspecies occurring locally, the Common Murre has a noticeably longer and slimmer bill than the Thick-billed Murre, although this is not universally the case.

The Common Murre is quite readily identified in winter plumage by the warm chocolate brown (instead of black) feathering of the upper parts, which is striking when direct comparison with Thick-billed Murre is possible; the extent of white into the facial region in conjunction with the pencil-thin eye-line extending posteriorly from the eye; and, at close range, the longer slimmer bill. For distinguishing the two murres in breeding plumage, one must rely upon back color, bill structure and the sharper "peak" of white feathering extending into the black upper breast of the Thick-billed Murre.

Recent observations suggest that the Common Murre is a regular wintering species in small numbers on the Nantucket Shoals and western Georges Bank.

Thick-billed Murre (Uria lomvia):

This is the nesting murre of the high arctic, breeding sparsely with Common Murres south to eastern Newfoundland. Although it is clearly the most frequently observed alcid in the northern Gulf of Maine, it is typically outnumbered in Massachusetts waters by the Razorbill.

The Thick-billed Murre may be distinguished from the Razorbill (particularly immature birds, which it resembles closely) by the lack of white extending from the cheek above the eye (see Razorbill), the smaller-headed appearance, and, at very close range, the distinctly pointed, rather than rounded, bill. The timing of the molt of the body plumage is exceptionally variable, such that it is not unusual to see individuals in full breeding plumage between December and March, the period when they are most frequently observed in Massachusetts. Therefore, Thick-billed Murre will more often than not show black feathering profusely scattered about the throat, cheeks and upper breast during the winter; many individuals possess a complete black collar that delineates a pronounced white throat patch. In this author's experience, Razorbill does not exhibit this degree of variation in molting and is virtually always in complete winter plumage from November to April. The short (1/2") tail

of Thick-billed Murre may be of use as a field mark if the birds are flushed ahead of a ship, in that the trailing feet project beyond the tail. In the hand, the rectrices are never wedge-shaped as in Razorbill.

Dovekie (Alle alle):

This diminutive seabird is a strictly arctic nester and is particularly sporadic in its occurrence in New England waters. Like other alcids, it is not a strong flyer and is particularly susceptible to major displacement by strong winds. Unable to make headway against gale-force winds, large numbers of Dovekies are occasionally blown ashore, frequently far inland. In Massachusetts, Dovekies occur principally in November and December and are surprisingly scarce thereafter.

Dovekies are unique and unlikely to be confused with any other seabird, with the exception of Common Puffin. They are Starling-sized and appear tiny at any distance over the water. Their whirring flight carries them erratically about; gusts of wind quickly divert their course. At close range, the bill is characteristically short and conical, and each set of secondary coverts is tipped with white, giving the bird three white wingbars.

Common Puffin (Fratercula arctica):

Puffins are unique among Atlantic alcids in their selection of excavated burrows for nest sites. They breed from Labrador south to Matinicus Rock in Maine and in winter apparently disperse widely over continental-shelf waters. Other than a concentration of sightings along the continental slope from Nova Scotia to Delaware, their winter distribution is very poorly known.

Puffins are less frequently observed on the wing than other alcids and are usually encountered alighted on the water. Seated, they appear large-headed and low-sterned (as if partially submerged) and are dark to the waterline on the sides. The brightly-colored sheath of the bill is lost in the winter, but the dusky-cheeked adults and juveniles are still easily recognizable by shape, even though the bill of the juvenile is only somewhat suggestive of the adult.

In flight, the small size (2/3-size of murre), large head and bill, chunky body, the lack of a light trailing edge to the wing, and rounded instead of pointed wings all lend a unique appearance to this bird. Confusion with Dovekie in flight is surprisingly easy because of shape, but the dusky head and larger size should be evident even from a distance.

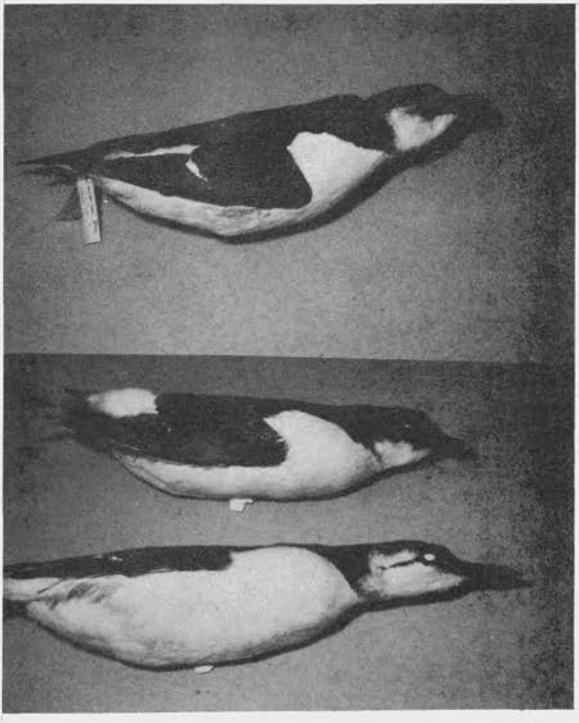
Black Guillemot (Cepphus grylle):

The Black Guillemot is restricted to the immediate proximity of the shoreline, as they feed in shallow water and are rarely seen more than a mile from land. They have an extremely broad nesting range, extending from the high arctic south to the Isles of Shoals, Maine. They are a fairly common wintering bird around rocky shores in Massachusetts and an uncommon, although regular in recent years, wintering bird in tidal rips over sand shoals of Cape Cod and Nantucket.

Black Guillemots are the most readily identifiable of all the alcids. In the breeding plumage, the black body with striking white wing patches could hardly lead to confusion with any other bird. The white secondary coverts are retained in the winter plumage, although most of the black body feathering is replaced by gray and white. They never show the contrast between upperparts and underparts characteristic of the other species.

Other unrelated seabirds are frequently mistaken for alcids. In particular, Oldsquaws are misidentified as puffins (or even large alcids) but have longer necks, broader wings, and are differently patterned. It is well worth studying flying Oldsqaws to learn the shape. Horned Grebes, with their whirring flight and white wing patches, are occasionally mistaken for Black Guillemots.

Many of the diagnostic features mentioned here are comparative, and thus less helpful to observers entirely unfamiliar with alcids.



Immature Razorbill

Thick-billed Murre (non-breeding)

Common Murre (non-breeding)

Photographs by Soheil Zendeh
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