COMMON MURRE - URIA AALGE

Distinguished from very similar Thick-billed Murre by longer, thinner bill, tapering gradually to the tip, compared to notably decurved culmen in Thick-billed Murre.

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Charadriiformes Family: Alcidae Genus: Uria Species: U. aalge

Habitat:

Biomes: The breeding habitat is islands, rocky shores, cliffs and sea stacks. Breeds on cliff ledges, sloping island surfaces, or flat areas on rocky headlands and islands in full ocean view.

Distribution:

In US: It has a circumpolar distribution, occurring in low-Arctic and boreal waters in the North Atlantic and North Pacific. Some birds are permanent residents; northern birds migrate south to open waters near New England, southern California, Japan, Korea and the western Mediterranean.

In Other Countries: Greenland, Iceland, Norway, France, Portugal, Asian Coast, Japan. PALEARCTIC.

Holistic Description: The common murre or common guillemot is a large auk. It is also known as the **thin-billed murre** in North America. An abundant, penguin-like bird of the cooler northern oceans, the Common Murre nests along rocky cliffs and spends its winter at sea.

Species Richness: 5 SUBSPECIES, 3 IN NORTH AMERICA

Population Dynamic: The population is large, perhaps 7.3 million breeding pairs or 18 million individuals. It had been stable, but in 2016 a massive die-off of the birds in the northeast Pacific was reported. The birds seem emaciated and starving; no etiology has been found. In general, potential threats include excessive hunting (legal in Newfoundland), pollution and oil spills.

Evolution and Systematics:

Evolution: Genus Uria known from late Miocene, Pliocene, and Pleistocene deposits. Uria likely originated in North Pacific; spread secondarily to Atlantic.

Systematics: Amount of spotting on underwing coverts increases north to south among w. North American populations. Alaskan birds larger (culmen, wing length) than those from British Columbia to California; Pacific birds larger on average than those of Atlantic.

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Physical Characteristics:

Size and Length: Length: 15.0-16.9 in (38-43 cm) Weight: 28.2-39.7 oz (800-1125 g)

Wingspan: 25.2-27.9 in (64-71 cm)

Coloration: In breeding plumage, the nominate subspecies (U. a. aalge) is black on the head, back and wings, and has white underparts. It has thin dark pointed bill and a small rounded dark tail.

General Body Features: Medium-sized waterbird. Black back and head, white underside. Rather long, slender, pointed bill. Face and throat white in nonbreeding plumage.

Special Features of the Body: The taller stance and superior walking ability of the Common Murre correlate with its potential for excluding thickbilleds from the broader, more suitable nesting ledges.

Special Features of the Head and Sensory Organs: NONE

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: The Common Murres ' maneuverable swimming ability is associated with its nearly exclusive dependence on pelagic fish. The Common Murre is a more proficient walker and a more agile swimmer.

Any Special Internal Anatomy: NONE

Sexual Dimorphisms: Little sexual dimorphism, but males slightly larger in culmen length, bill depth, and tarsus; females perhaps slightly larger in wing length.

Differences Between Juvenile Stage and Adult: Acquire a dark-gray mask, white throat, white cheeks, and a white line running back and down from eye; some variation in amount of white on cheeks and behind eye. Usually, the immature is similar to the nonbreeding adult and will not be differentiate other than size.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Dives underwater to capture prey, using its wings to swim. At colony during incubation and chick-brooding, breeding birds averaged 17 h incubating and 4 h and 12 h brooding chicks during day and night shifts; remaining time mostly

spent at sea. At sea, time spent by active breeders provisioning chicks, flying between colony and foraging area, diving in pursuit of prey, and sitting on sea-surface resting varies with environmental conditions, as does time spent at colony.
Locomotion: Shuffles on tarsi, sometimes aided by flapping wings. Climbs readily using toenails, aided by flapping wings. More agile than Thick-billed Murre. Owing to high wing-loading (184 Newtons/m2) and low aspect ratio (9.5) must flap wings rapidly and fly fast to stay aloft. Chicks initially dive for short periods to escape predators, but not well enough for foraging. Chicks start diving subsequently and may supplement parental feedings.
Communication and Perception: Generally silent at sea, makes guttural "urr" at colony. Communication critical in very dense breeding colonies; maintains order in this highly aggressive species. Mate and neighbor recognition especially important, with frequent reaffirmation of identity.
Home Range: No true territory; defends precise, individual space used for incubating egg and brooding chick; birds normally retain exactly same breeding site each year through life, high site fidelity. Intruders and prospectors kept at pecking distance by aggressive Jabbing.
Degree of Sociality: Among most social of colonial birds, breeding without a constructed nest, side to side in large colonies, and feeding in flocks. Usually must breed close to one another to breed suc-cessfully; otherwise large gulls take chicks and/or steal food brought to chicks. Where murres breed within boulders or other topography, densities can be much lower.
Level of Aggression: Fighting common, usually associated with territory or mate defense. Aggression level progresses: Bill-Pointing, Jabbing at opponent (especially its bill), locking of bills, beating with carpus of wing, and twisting to force rival from ledge. At highest-intensity Jabbing, bill open with low-intensity gargling. Fights may continue for hours, ending with exhaustion and invariably head-shaking, possibly as an appeasement behavior. Frequency of all interactions, including fighting, increases from prelaying to egg-laying.
Migration: High-latitude populations migratory, to escape winter sea ice, especially those nesting on coasts of Chukchi and Bering Seas and off Labrador; midlatitude populations partially migratory; and lower-latitude populations sedentary. In general, dispersal patterns complex, requiring further examination, particularly in North Atlantic and Gulf of Alaska.Other than being pushed southward by sea ice, movements of Bering Sea birds little known; large numbers winter among Aleutian Is. and in n. Gulf of Alaska.
Predators:
Predators: Bald Eagle, Gyrfalcon, Peregrine Falcon, Rough-legged Hawk, Goshawk, Snowy Owl, Red and Arctic Foxes, Polar Bear, Large Gulls, Common Raven, Crow, Short-Tailed Weasel, Gray Seal, California Sea Lion, Atlantic Cod, Domestic Dog, Rats, Ground Squirrel, Mice.
Anti-Predator Defenses: Temporarily evacuates colony when large avian and mammalian predators appear; persistent predator presence leads to colony desertion. If threat not perceived as severe, murres circle and reland; if severe, join rafts on water below cliffs; highest tendency to leave during prelaying. Colonies sensitized to aerial predators evacuate in response to any large bird. Most effective measure against gulls and corvids is for breeders to sit tightly on eggs and chicks; as a group, persistent lunging usually discourages predator.
Diet and Nutrition:
Adult Diet: Fish, squid and other marine invertebrates. Micronektonic prey, 2–25 cm in length, including fish, euphausiids, large copepods, and squid. Fish predominate during summer, small cephalopods and euphausiids during winter and early spring. In case of fish species that attain large size as adults, juveniles are important prey; e.g., Atlantic cod, rockfish, pollock; owing to growth in size, these prey become unavailable by late fall.
Juvenile Diet: ^^^^^^
Special Adaptations for Getting Prey: Prey captured in bill by diving, using wings for propulsion. Wing musculature and bones less specialized than in penguins, consistent with both aerial and underwater flight. Long, slender tongue, enclosed along entire length of bill by sharp edges, helps to “lock” prey against backward-pointing palate denticles.
Reproduction:
Mode of Reproduction: Monogamous
Mating System: Monogamous with equal sex ratio.
Mating Season: March to May
Courtship: Courtship displays including bowing, billing and mutual preening. The male points its head vertically and makes croaking and growling noises to attract the females. The species is monogamous, but pairs may split if breeding is unsuccessful.
Territoriality: No true territory; defends precise, individual space used for incubating egg and brooding chick; birds normally retain exactly same breeding site each year through life, high site fidelity. Intruders and prospectors kept at pecking distance by aggressive Jabbing.

Mating: Male initiates copulation with Crow Call and attempts to mount; female initiates with Mounting Invitation, assuming a crouched position and sometimes giving Adow Call. Females give Adow during all successful copulations, males usually switch to Barking or Laugh Call once mounted. Female fertile period, when forced extra-pair copulation most valuable to a male, begins about 25 d before laying. Males spend more time at territory then and coordinate presence with female, thus likely incurring some energetic cost. Copulation rates start to increase 25 d, and peak about 12 d, before laying.
Nesting: Usually in a small depression on broad to narrow rock ledges of steep cliffs, stacks, or gently sloping terrain on rocky headlands and low-lying islands; only rarely in crevice, caves, and under boulders; often uses a wall on one side of breeding site; avoids larger depressions where water collects.
Egg-Laying: Egg Length: 81.0 mm Egg Width: 50.3 mm Egg Mass: 103.4 g Egg Shape: CHECK NOTABLE SPECIES Egg Texture: Slightly rough; not shiny. Spotting and streaking slightly raised from background color. Egg Color: The eggs vary in colour and pattern to help the parents recognize them, each egg's pattern being unique. Colours include white, green, blue or brown with spots or speckles in black or lilac. Clutch Size: 1 egg Incubation Period: 32.4 days
Hatching and Incubation/Gestation: Covered in down, able to stand within one day. Fully covered with down, with remnants of yolk sac still attached. Feet and legs disproportionately large; tarsus about 45% that of adult. Can “stand” on tarsi (as do adults) within a day of hatching.
Development: Chicks occupy an intermediate position between the precocial chicks of genus Synthliboramphus and the semi-precocial chicks of the Atlantic puffin.
Parental Care: At first, chick visible only when parent offers food; by time of site departure, chick usually stands next to parent. At least one parent always present, except under extreme food shortage. Parent arrives with fish in bill (head in throat, tail toward tip of bill), calls, and lowers head next to chick as it takes over brooding. Chick calls in answer. Parent shields fish from neighbors with partly unfolded wings. Chick grabs fish in bill, then works with short “bites” to orient head-first to be swallowed.
Lifespan: Around 20 years.
Conservation:
Official Federal Status: Least Concern
Special Statuses in Individual States: NONE
Threats: Common Murre are numerous, but vulnerable to oil spills and gill-netting. The North American Waterbird Conservation Plan estimates a population of 4,250,000 in North America, rates the species an 11 out of 20 on the Continental Concern Score, and lists it as a Species of Moderate Concern. They are not on the 2014 State of the Birds Watch List. Pacific populations have declined and partially recovered, while Atlantic populations appear to be increasing. CHECK POPULATION DYNAMIC
Conservation Efforts: ^^^^^^
Extra Facts:

1. In the Atlantic, some populations include "bridled" or "ringed" individuals, which have a white eye-ring and a white line extending backward from the eyes. Bridled birds are more common farther north.
2. The high degree of variation in color and markings of Common Murre eggs may allow parent murres to recognize their own egg when they return to the colony from time at sea.
3. The egg of a Common Murre is so pointed at one end that when placed on a flat surface and pushed, it rolls around in a circle. Such a shape may help keep the egg from rolling off of its nesting shelf.
4. The oldest recorded Common Murre was at least 27 years, 1 month old, when it was spotted in the wild in California in 2009; the same state where it had been banded in 1985.

Notable Species:

Subspecies	**Range**	**Appearance**
Uria aalge aalge	Nominate subspecies, eastern Canada, Greenland, Iceland, northern Ireland and Britain, southern Norway, possibly New England or a separate subspecies.	
U. a. albionis	Southern Ireland and Britain, France, Germany, Spain, Portugal	Smaller than nominate, chocolate brown upperparts
U. a. hyperborea	Northern Norway, Northwest Russia,	Larger than U. a. aalge, black

	Barents Sea	upperparts
U. a. intermedia	Baltic Sea	Intermediate between U. a. aalge and U. a. albionis
U. a. spiloptera	Faroe Islands	
U. a. inornata	North Pacific, Japan, Eastern Russia, Alaska	Largest subspecies and largest auk, slightly larger than thick-billed murre
U. a. californica	California, Oregon, Washington, British Columbia	

Common murre eggs are large (around 11% of female weight), and are pointed at one end. There are a few hypotheses to explain their pyriform shape:

1. If disturbed, they roll in a circle rather than fall off the ledge.
2. The shape allows efficient heat transfer during incubation.
3. As a compromise between large egg size and small cross-section. Large size allows quick development of the chick. Small cross-sectional area allows the adult bird to have a small cross-section and therefore reduce drag when swimming.
4. Due to its pyriform shape, a higher proportion of the eggshell is in contact with the cliff minimising the effects of impact by neighbouring birds.
5. In dense colonies, there is much faeces, however the majority of faecal contamination is on the pointed end of the egg, therefore the blunt end is cleaner where the chick emerges.