GREAT BLACK-BACKED GULL - LARUS MARINUS

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Charadriiformes Family: Laridae Genus: Larus Species: L. marinus

Habitat:

Biomes: Great Black-backed Gulls forage widely over the ocean, along shorelines, and at landfills and fishing docks. They rest or "loaf" in open areas such as parking lots, fields, runways, and piers. They breed in isolated places safe from terrestrial predators, such as small islands, rocky islets, saltmarshes, and barrier beaches. They nest in relatively high, open habitat close to the water, with some vegetation for cover. During the winter Great Black-backed Gulls move more widely along the Atlantic coast and may travel inland along major rivers.

Distribution:

In US: This species can be found breeding in coastal areas from the extreme northwest portion of Russia, through much of coastal Scandinavia, on the Baltic Sea coasts, to the coasts of northwestern France, the United Kingdom and Ireland. Across the northern portion of the Atlantic, this gull is distributed in Iceland and southern Greenland and on the Atlantic coasts of Canada and the United States.

In Other Countries: Greenland, Iceland, Shetland Island, Scandinavia, Russia, France, Denmark, Germany, Estonia, Black Sea, Caspian Sea, Africa.

Holistic Description: The king of the Atlantic waterfront, the Great Black-backed Gull is the largest gull in the world, with a powerful build and a domineering attitude. They harry other birds to steal their food and even hunt adult birds such as grebes and puffins. Adults are handsome with broad black wings, gleaming white head, and big yellow bill. North American populations were once severely threatened by the feather trade, but numbers rebounded in the twentieth century and they are now a common East Coast sight.

Species Richness: NO SUBSPECIES

Population Dynamic: Historically, the great black-backed gull was harvested for its feathers, which were used in the hat-making trade, and this species was extirpated from large parts of its range as a result of this exploitation. Today, however, its adaptability to human presence and the use of urban environments as artificial nesting sites has resulted in the great black-backed gull rapidly increasing in number and range

Evolution and Systematics:

Evolution: Prehistoric findings from Green Mound middens in Florida dated to 550 and 1200. Findings from Holocene on island of Huar in Yugoslavia, where birds in general represented 0.26% of fauna uncovered.

Systematics: Monotypic. European and North American individuals found not to differ appreciably by Dwight. Some authors consider Great Black-backed and Kelp gulls to constitute a superspecies; other authors ally Kelp Gull with Western Gull. Close genetic similarity among large, "white-headed" gulls supports conclusion of recent divergence.

Number of Species: NO SUBSPECIES

Number of Genera: NO SUBSPECIES

Physical Characteristics:

Size and Length: Length: 27.9-31.1 in (71-79 cm) Weight: 45.9-70.5 oz (1300-2000 g)

Wingspan: 57.5-63.0 in (146-160 cm)

Coloration: Adults are white with slaty-black upperwings and backs. They have dull pink legs, a yellow bill with a red spot near the tip, and darkish eyes. Juveniles are checkered gray-brown and white above; they have white-based, black-tipped tails, black bills, and blackish flight feathers. Over about 4 years, these crisp, cold-toned gulls transition to dark backed adults.

General Body Features: This is the largest species of gull in the world. They are stout-bodied, with broad wings, a thick neck, and a heavy, slightly bulbous bill.

Special Features of the Body: Shorebirds are designed, or adapted, to survive in open habitats. Their brown, rust, black, and white plumage makes them less conspicuous to predators. Their bi-coloration, dark on the back and lighter on the belly, further camouflages them from predators. Their light bellies blend in against the light sky when seen from below. When observed from above, by a falcon for example, their dark backs blend in with the beach or mudflat below.

Special Features of the Head and Sensory Organs: Their bills are highly adapted tools for finding food. Some species will probe for invertebrates in mud or water, poking their bills up and down in rapid succession like a sewing machine until they feel something to eat. Others have bills perfectly adapted to swishing through the water to filter food from the water column.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: Shorebirds have long legs for wading. Their long toes give them the stability they need for their seemingly endless walking and running along the water's edge and in soft mud.
Any Special Internal Anatomy: They developed a special pair of glands that remove the salt from their system when drinking sea water. That's why they can drink fresh and salt water when by the sea. Not only used for finding food, bills are used for preening as well. A special oil gland located at the base of their tails helps to keep their feathers dry. The birds spread the oil from this gland with their bills or the backs of their heads when preening themselves. The oil repels water from the feathers, keeping them warm and dry
Sexual Dimorphisms: In a sample of 2009 adults from the North Atlantic, males were found to average 1,830 g (4.03 lb) and females were found to average 1,488 g (3.280 lb).
Differences Between Juvenile Stage and Adult: Juvenile birds of under a year old have scaly, checkered black-brown upper parts, the head and underparts streaked with gray brown, and a neat wing pattern. The face and nape are paler and the wing flight feathers are blackish-brown. The juvenile's tail is white with zigzag bars and spots at base and a broken blackish band near the tip. The bill of the juvenile is brownish-black with white tip and the legs dark bluish-gray with some pink tones. As the young gull ages, the gray-brown coloration gradually fades to more contrasting plumage and the bill darkens to black before growing paler. By the third year, the young gulls resemble a streakier, dirtier-looking version of the adult. They take at least four years to reach maturity, development in this species being somewhat slower than that of other large gulls.
Behavior:
Diurnal, Nocturnal, or Crepuscular: Diurnal
Activity: Great Black-backed Gulls nest on their own or in loose colonies, sometimes with other gulls, terns, skimmers, auks, and eiders, and rarely with cormorants and gannets. The male establishes a small breeding territory, 10 to 20 feet in diameter, and the pair defends it against other gulls. Great Black-backed Gulls are monogamous and return to the same territory year after year. When pairing, a male displays and calls to attract a female, leaning forward with his head bent toward the ground and mewing; or flying slowly with exaggerated wingbeats. The female may join him. Courting males sometimes regurgitate food for females. Aggressive individuals crouch low and jab their bill at an opponent, or pull at vegetation. They also stand, lean far forward, then throw back their head and give a long series of cries. After chicks hatch the parents become especially aggressive. When terrestrial predators approach, the gulls dive and strike with their feet or wings, or rarely with their bills. Lost chicks that stray onto an unfamiliar territory may find themselves seized by the head and shaken, or even eaten. Chicks leave the nest within 24 hours but stay in the nesting territory for 40 days. They begin to fly at 45 days but return to the territory for feedings from their parents for another 3-4 weeks. Egg predators include various gull species, ravens, crows, raccoons, and rats. Bald Eagles, Common Ravens, dogs, cats, and other gulls sometimes prey on the chicks.
Locomotion: On land, typically walks or runs with legs alternating, a more lumbering gait than that of smaller gulls. Can jump or hop onto perches by opening wings, using single beat of wings for elevation, and pushing off with legs. Hops down from perches with wings partly spread. In agonistic charges, runs with wings partly raised. Runs to take off for flight. Does not use hopping as form of locomotion. Does not climb vertical objects. To regulate speed, adjusts wing beat and orientation to wind. Spends considerable portion of flight time gliding or soaring with outstretched wings. Dives and swoops by adjusting angle of wings. Often descends by flapping wings and flying in diminishing circles when joining feeding groups on water. Swims on surface of water using paddling motion of legs for propulsion. Can dive either from surface or from short distance above water, but does not typically reach depths >1-2 m below surface.
Communication and Perception: Both male and female Great Black-backed Gulls have deep, hoarse, swallowed-sounding calls. They also give long, trumpeting calls made up of similar deep sounds combined with louder, higher-pitched notes. They make these calls while raising and lowering their heads repeatedly. The call is a deep "laughing" cry, kaa-ga-ga, with the first note sometimes drawn out in an almost bovid-like sound. The voice is distinctly deeper than most other gull species.
Home Range: Maintains breeding territory on colony during breeding season. Territory established by male; defended by pair. In winter, defends feeding or nesting sites. Breeding territories are areas of substrate defended against conspecifics or congeners. Arrives at colony already paired or forms pairs at colony. Male performs most defense and maintenance of territory. Established pair typically returns to same territory as long as they remain paired.
Degree of Sociality: Nests in loose colonies; social interactions between neighbors range from agonistic in dense breeding situations to tolerant in sparse situations. Appear to nest as far apart as limited space allows. If sufficient habitat available, nests solitarily or in small colonies. Away from breeding colony, birds loaf and roost in groups; forage in aggregations when prey is located. Foraging groups often include other Larus species, as well as kittiwakes, cormorants, shearwaters, alcids, dolphins, and whales.
Level of Aggression: Chases inter-and intraspecific intruders, both in air and on ground, and may attack them. Neighbors begin attacking each other by jabbing at opponent with beak, and grabbing opponent by tail, wing, beak, and rarely by neck.

Birds gripping each other by beak engage in extended pulling bouts, strike with wings, or peck. Attack on intruders usually begins with Charge. Bird retreating from opponent often gives Shrill Waver or Alarm Call. Bird also pursues retreating opponents by flight, or on ground with wings raised. Male engages in fights and pursuits much more often than female does; attacks and fights, although rare, can result in eye and wing injuries.

Migration: Resident to medium-distance migrant. Populations from Nova Scotia and Massachusetts remain around breeding colonies throughout the year, while birds from Maine, the Gulf of St. Lawrence, Newfoundland, and the mid-Atlantic migrate south along the coast or to the Great Lakes region.

Predators:

Predators: Bald Eagle, Domestic Dog, Conspecific Adults, Sympatric Gulls, Common Raven, Raccoons, Cats, Norway Rats, Ravens, Crows, Herring Gull.

Anti-Predator Defenses: When predator is first sighted, individual gives Alarm Call. If predator approaches, gives Warning Call, takes off, and circles overhead. Mobs flying predators (eagles, hawks, ravens) by pursuing through air. Circling individuals are silent or utter deep Warning Calls. Dives at terrestrial predators; strikes with feet, wings, and rarely beak. Defends air "territory" against strange gulls attracted to disturbances, preventing communal defense. In response to stuffed mink on territory, solitary pairs actively attacked other gulls, preventing them from mobbing model; pairs divided labor of attacking model and patrolling for other gulls.

Diet and Nutrition:

Adult Diet: Great Black-backed Gulls hunt mussels, crabs, sea urchins, other marine invertebrates, fish and birds. They also scavenge dead fish, carrion, and trash, and steal food from other animals (including diving ducks, terns, puffins, murres, shorebirds, eagles, and sharks). Along rocky shores, Great Black-backed Gulls forage for invertebrates in shallow water. On mudflats they follow the retreating tide to capture worms and small bivalves. At sea they congregate around upwellings with concentrated prey or follow fishing boats. They also forage at garbage dumps, more so during the winter than during the breeding season. Great Black-backed Gulls eat eggs, chicks, and adults of other birds, including Atlantic Puffins, Common Murres, Herring Gulls, Common Terns, Roseate Terns, Manx Shearwaters, Horned Grebes, and migrant songbirds.

Juvenile Diet: Young chicks (<10 d old) are fed small prey items (small fishes, euphausiid, shrimp, copepods, insects, earthworms), or well-digested prey that breaks into pieces small enough to be handled (e.g., fish). Small chicks (<10 d old) cannot handle entire large fish or invertebrates (mussels, crabs, squid, urchins) or human refuse. In Newfoundland, chicks are fed capelin until 2–3 wk old, squid when >2 wk old; fed refuse less than are Herring Gull chicks.

Special Adaptations for Getting Prey: In intertidal zones or mudflats, forages alone or in family groups primarily during daylight hours. In coastal areas, captures prey by walking or swimming along shore at low tide, by dipping from surface, or by shallow plunge-diving. Swallows small prey items whole; breaks up large prey items (gastropods, bivalves, sea urchins, crabs) and eats them on the site where found or drops them on rock or sand substrates to break open.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Almost exclusively monogamous. Unusual behavior reported: male and female from separate established nests on Newfoundland established third nest together. Two days of nest-building were followed by Choking but not by copulation (Pierotti 1979). Rate of mate replacement following dissolution of pair or death unknown.

Mating Season: October to February

Courtship: Territorial male attracts potential mate by assuming Oblique Posture and giving Mew Call. May also perform Advertisement Flight, flying often with slower-than-normal wing beats, head and neck outstretched, periodically giving variant of Long-Call Note; given to female on territory, who may join and follow some distance behind. Female lands on territory some distance from male, giving Facing-Away display on landing; male may give same display. If tolerated, female typically approaches male in hunched posture, giving Head-Tossing display and Begging Call. Male responds either (1) by assuming either Upright Posture or (2) by assuming Mew Call Posture and giving Mew Calls. Female circles male, increasing begging intensity if he gives Mew Calls. Male may either give Choking display (above) or regurgitate and feed female. If male regurgitates food and female accepts it by eating; often leads directly to copulation.

Territoriality: Arrives at colony already paired or forms pairs at colony. Male performs most defense and maintenance of territory. Established pair typically returns to same territory as long as they remain paired. Defends feeding or resting sites against conspecifics and congenerics using Upright Posture and Long Call; strangers at roost and feeding sites engage in elaborate meeting ceremony, involving lengthy exchange of postures and vocalizations. Some individuals or pairs defend feeding territories throughout year.

Mating: Male and female give Head-Tossing display together repeatedly, female typically more than male. Male moves behind female, mounts her with wings outspread, and wags tail rhythmically from side to side. Female continues

Head-Tossing and may pull at male's breast feathers while male continues tail-wagging and Copulation Call. Tail-wagging and accompanying Copulation Call speed up until cloacal contact is made; 1-7 cloacal contacts made. After copulation, male jumps off of female, shakes, and preens. Either male or female may terminate copulation. If female does not eat food regurgitated by male, she may prevent him from mounting by walking away.

Nesting: Great Black-backed Gulls nest on rocky outcrops, grassy knolls, barrier island dunes, and other sites above the reach of the tide. Nests are usually next to large objects such as logs, bushes, or rocks, which provide a windbreak and a visual screen from the neighbors. Each pair starts several nests, and the final site is determined by where the female lays her eggs. The pair reuses the same site, but not the nest itself, in subsequent years. The male and the female both dig several scrapes, filling them with vegetation, feathers, rope, plastic, and other materials. The female chooses one of these sites for laying her eggs. The nest is 8–20 inches wide, while the inner cup is 5–13 inches across and 2-4 inches deep.

Egg-Laying: Clutch Size: 2-3 eggs Number of Broods: 1 brood Egg Length: 2.8-3.4 in (7.1-8.5 cm) Egg Width: 2.0-2.3 in (5.1-5.8 cm) Incubation Period: 30-32 days Nestling Period: 1 day Egg Description: Pale yellowish, greenish, or brownish, with speckles of dark brown or olive.

Hatching and Incubation/Gestation: Fairly active, with open eyes, and covered in thick gray down with black spots; ready to leave nest within 24 hours.

Development: Semiprecocial with open eyes; covered with thick gray down marked with black spots over entire body; stay in nest until able to walk (nidifugous). Weigh 80–90 g; hatching weight is 5% of adult weight.

Parental Care: Both parents brood young; female spends more total time brooding than male does. Both parents feed chicks.

Lifespan: The maximum recorded age for a wild great black-backed gull is 27.1 years.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Great Black-backed Gulls are numerous on the East Coast, however, since 1966 populations have been declining according to the North American Breeding Bird Survey. For example, between 1966 and 2015, populations in Maine declined by over 8.5% per year resulting in a cumulative loss of 99% of the population. The North American Waterbird Conservation Plan estimates a total of 121,430 breeding birds on the continent. The species rates a 12 out of 20 on the Continental Concern Score, and is not on the 2016 State of North America's Birds' Watch List. Nineteenth-century feather hunters and egg collectors nearly drove the North American population of Great Black-backed Gulls to extinction. Thanks to legal protection, the population recovered during the twentieth century and perhaps exceeded its historical size by the 1960s. Taking advantage of landfills, fishing discards, and other human-made food sources, the gulls continued to increase in numbers as they expanded south into Maryland, Virginia, and North Carolina. They have displaced Herring Gulls from some breeding habitats in New England. Management officials control the breeding Great Black-backed Gull populations on some islands to give terns, puffins, and other gull species a chance to nest.

Conservation Efforts: ^^^^^^

Extra Facts:

1. This is the largest gull in the world. Its broad wings and powerful appearance give it a regal look that have impressed naturalists for years. In the words of one early observer: “It surely seemed to be a king among the gulls, a merciless tyrant over its fellows, the largest and strongest of its tribe. No weaker gull dared to intrude upon its feudal domain.”
2. The Great Black-backed Gull is one of many bird species whose feathers were used for fashionable clothing in the 1800s. After the demise of the feather trade in the early 1900s, Great Black-backed Gull populations increased and spread farther south. Garbage dumps and other sources of human refuse have contributed to their range expansion.
3. Young Great Black-backed Gulls stay in the nesting territory until they learn to fly at about 7 weeks old. They return to the nesting area to rest and get fed for another few weeks. Some young may remain with their parents for months after leaving the breeding colony, but most join up with other immature gulls in places where food is easy to find.
4. During winter, large numbers of young Great Black-backed Gulls eat fish driven to the surface by humpback whales.
5. The oldest Great Black-backed Gull on record was at least 26 years, 9 months old, when it was spotted in new Jersey in 1994 and identified by its band. It had been banded in Massachusetts in 1968.

Notable Species: NONE