# SNOWY EGRET - EGRETTA THULA

**Taxonomy**: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Pelecaniformes Family: Ardeidae Genus: Egretta Species: E. thula

**Habitat**:

*Biomes*: Snowy Egrets nest in colonies on thick vegetation in isolated places—such as barrier islands, dredge-spoil islands, salt marsh islands, swamps, and marshes. They often change location from year to year. During the breeding season Snowy Egrets feed in estuaries, saltmarshes, tidal channels, shallow bays, and mangroves. They winter in mangroves, saltwater lagoons, freshwater swamps, grassy ponds, and temporary pools, and forage on beaches, shallow reefs, and wet fields.

**Distribution**:

*In US*: Snowy egrets are permanent residents in most of South America and Central America. In the United States, they are often permanent residents along the Atlantic coast north to Virginia Beach, Virginia, along the Gulf Coast, and along the Pacific lowlands from central California southward. During the breeding season, snowy egrets wander north along the Atlantic flyway between the lower Chesapeake Bay and coastal Rhode Island, and up the Pacific Coast to northern California. Snowy egrets also breed in the lower Mississippi Valley westward into eastern Texas. Birds banded in United States have been recovered as far away as Panama and Trinidad. Snowy egret has occurred as a vagrant in Europe in Iceland, Scotland and the Azores.

*In Other Countries*: ^^^^^^^^

*Holistic Description*: Among the most elegant of the herons, the slender Snowy Egret sets off immaculate white plumage with black legs and brilliant yellow feet. Those feet seem to play a role in stirring up or herding small aquatic animals as the egret forages. Breeding Snowy Egrets grow filmy, curving plumes that once fetched astronomical prices in the fashion industry, endangering the species. Early conservationists rallied to protect egrets by the early twentieth century, and this species is once again a common sight in shallow coastal wetlands.

*Species Richness*: 2 SUBSPECIES

*Population Dynamic*: NONE

**Evolution and Systematics**:

*Evolution*: Although some specimens reportedly discovered from the Pleistocene and prehistoric sites, Olson claims fossil record historically misinterpreted and very incomplete.N

*Systematics*: Sometimes placed in monotypic genus Leucophoyx, but no author has followed this classification recently. Variation in size slight, otherwise no differences in coloration described. Although clinal variation in size suggested, no pattern clearly known, and careful study based on birds of known breeding locality needed.Two currently recognized subspecies; these are poorly differentiated, however, and based entirely on slight differences in size.

*Number of Species*: 2 SUBSPECIES

*Number of Genera*: 2 SUBSPECIES

**Physical Characteristics**:

*Size and Length*: Length: 22.1-26.0 in (56-66 cm) Weight: 13.1 oz (370 g)

*Wingspan*: 39.4 in (100 cm)

*Coloration*: Adult Snowy Egrets are all white with a black bill, black legs, and yellow feet. They have a patch of yellow skin at the base of the bill. Immature Snowy Egrets have duller, greenish legs.

*General Body Features*: These are medium-sized herons with long, thin legs and long, slender, bills. Their long, thin neck sets the small head well away from the body.

*Special Features of the Body*: A snowy egret stands in the water with its wings outstretched because fish are attracted to the shade.

*Special Features of the Head and Sensory Organs*: A fourth structural adaptation is long slim bill. This is important adaptation because it helps the snowy egret when they are fishing to catch fish by spearing the fish to death. A fifth structural adaptation is large but light flight feathers. This is an important structural adaptation because flight feathers of a snowy egret's wings and tail help propel, steer, and balance the snowy egret as it moves through the air. They also keep the snowy egret warm and dry. Third, during mating season, they help show off its elegance.

*Dentition*: Beak/Lamellae/Gizzard

*Special Features of the Limbs and Digits*: The snowy egret's long, thin toes enable it to step easily through the water. One structural adaptation of the snowy egret is its long skinny legs. This is an important adaptation because when they are standing in the water it helps their body stay out of the water. A second structural adaptation is long skinny toes. This is an

important adaptation because when they are fishing in muddy water it helps them stay on the surface of the mud instead of sinking.
*Any Special Internal Anatomy*: A third structural adaptation is hollow bones. This is an important adaptation because it helps the snowy egret be able to fly and that makes it easier to migrate.
*Sexual Dimorphisms*: Males are slightly larger than females.
*Differences Between Juvenile Stage and Adult*: CHECK COLORATION

**Behavior**:

*Diurnal, Nocturnal, or Crepuscular*: Diurnal
*Activity*: Male Snowy Egrets fight for breeding territories, choose nest sites, and perform noisy courtship displays to attract mates. A ring of other egrets often gathers around a displaying male as he pumps his body up and down, points his bill skyward, and calls. He also performs aerial displays, including one that ends with him dropping toward the ground while tumbling around and around. After pairing up, Snowy Egrets continue defending the immediate area around the nest, raising their crests and giving rasping calls. Some of their nest predators include raccoons, Great Horned Owls, Barred Owls, American Crows, Fish Crows, American alligators, and gray rat snakes. Highly social all year long, Snowy Egrets forage with gulls, terns, ibises, and other herons, and they nest in colonies alongside many other species, including Great Egrets, night-herons, Glossy Ibises, Little Blue Herons, Tricolored Herons, Cattle Egrets, and Roseate Spoonbills.
*Locomotion*: Generally walks upright with wings held close to body, neck slightly arched. Actively forages with dashes and quick direction changes; wings held slightly aloft. Occasionally forages in crouched position with head retracted. Nestlings leave the nest and climb branches to escape disturbance at approximately 10 d old; use bill as well as legs and wings to navigate nest trees. Foraging flight speed from breeding colonies measured at 38.6 km/h. Flight appears buoyant with deep wing beats; gliding confined to descent and landing.
*Communication and Perception*: Snowy Egrets are quiet except on breeding sites, where they give raspy or nasal calls, including loud, harsh squawks to signal aggression. Snowy Egrets make clicking sounds by snapping their bills closed during aggressive displays.
*Home Range*: Foraging territories observed at ponds in Florida. In New Jersey, individuals feeding solitarily defended single salt-marsh pools sporadically. Nesting territory initially defended by male always larger than that ultimately defended by pair, which is a small area around nest. No area defended in mixed-species aggregations.
*Degree of Sociality*: Highly social; engages in group behavior at nesting and foraging sites. Known to forage with numerous other aquatic birds. In s. New Jersey, participates in foraging aggregations which commonly include, in order of abundance, Laughing Gull, Great Egret, Glossy Ibis, Forster's Tern, Little Blue Heron, and Tricolored Heron. Aggregation associates in Panama include Great Egret and Little Blue and Tricolored herons. In the Venezuelan llanos, Snowy Egrets foraged with 25 other species of herons, egrets, ibises, storks, bitterns, and spoonbills.
*Level of Aggression*: Breeders in New Jersey initiated chases in colonies when intruder was 0.7 m away from the nest, on average, but won only 32% of interspecific contests. When intruding on other species' territories, Snowy Egrets were chased a mean distance of 1.3 m. Agonistic interactions with conspecifics were most frequent before eggs were laid, nonexistent by end of incubation.
*Migration*: Resident to long-distance migrant. Breeding populations in the interior of North America and along the north Atlantic coast are completely migratory. Many western birds winter in Mexico, while many eastern birds migrate to the Gulf Coast or fly across the ocean to the Caribbean islands and South America.

**Predators**:

*Predators*: Raccoon, Great Honed Owl, Barred Owl, American Crow, Fish Crow, American Alligator, Gray Rat Snake, Common Black Hawk, White Heron.
*Anti-Predator Defenses*: Increasing dependence on island nesting sites in urbanized coastal estuaries may be in response to predation pressure at less isolated locations.

**Diet and Nutrition**:

*Adult Diet*: The Snowy Egret eats mostly aquatic animals, including fish, frogs, worms, crustaceans, and insects. It often uses its bright yellow feet to paddle in the water or probe in the mud, rounding up prey before striking with its bill. Snowy Egrets feed while standing, walking, running, or hopping, and they may vibrate their bills, sway their heads, or flick their wings as part of prey gathering. They even forage while hovering. Snowy Egrets forage in saltmarsh pools, tidal channels, tidal flats, freshwater marshes, swamps, ocean inlets, and lake edges, usually preferring brackish or marine habitats with shallow water. Other foraging water birds often assemble around them to form mixed-species foraging groups.
*Juvenile Diet*: NONE

*Special Adaptations for Getting Prey*: One behavioral adaptation of the snowy egret is that it rakes or stirs the bottom of the water. This is an important adaptation because it gets the fish to swim up to the snowy egret and that helps it get food to eat. A second behavioral adaptation is that they stand still. This is an important adaptation because it helps the snowy egret get food to eat because the fish think that the snowy egret is a water plant or a stick and swim by it. The snowy egret then quickly sticks their head down to eat the fish. A third behavioral adaption is that they feed in groups. This is an important adaptation because it helps protect each other from getting eaten by a predator if they were alone. SHADE AND WINGS.

**Reproduction**:

*Mode of Reproduction*: Monogamous

*Mating System*: Few data. Seasonal monogamy suspected. Promiscuity documented in Florida.

*Mating Season*: March to June

*Courtship*: Sexual displays highly conspicuous and vocal. Pair bond established at nest site. Male performs sexual and hostile displays at selected nesting territories. Sexual displays attract a ring of conspecific observers, initially repelled from an ill-defined territory by displaying male. Primary courtship display is Stretch display, during which male pumps body up and down while holding bill pointed skyward and calling A-wah-wah-wah. At Low-intensity, pumping may be reduced or absent; High-intensity display may involve up to 10 pumps. Male may perform an Aerial Stretch display, landing at take-off location. Other aerial displays, including Circle Flight, Tumbling Flight, and Jumping-over, contribute to pair-bond formation and may also be performed by female after pairing has occurred. Tumbling Flight is most spectacular display and consists of male, and perhaps his mate, flying upward and dropping earthward, tumbling over and over until individual rights itself just before landing. Jumping-over occurs when an individual jumps, leapfrog fashion, over its mate. Changes in soft-part coloration and display of nuptial plumes are a distinctive element of courtship. Foot coloration is a sensitive indicator of onset of breeding behavior. Pair bond maintained through individual and mutual sexual displays, appeasement behavior, nest-building, copulation, and offspring production.

*Territoriality*: HOME RANGE

*Mating*: NONE

*Nesting*: Males establish nesting territories and choose nest sites within the thick vegetation of a breeding colony. The nest is usually in the top or outer branches of a woody vine, shrub, or tree. The male starts working on a nest before finding a mate. Then the female takes over and ends up doing most of the nest building, with materials supplied by the male. The nest is a shallow oval of loosely woven twigs, small sticks, grasses, sedges, rushes, and Spanish moss, about 14–18 inches across and 8–13 inches high.

*Egg-Laying*: Clutch Size: 2-6 eggs Egg Length: 1.6-1.7 in (4.1-4.4 cm) Egg Width: 0.9-1.3 in (2.3-3.3 cm) Incubation Period: 24-25 days Nestling Period: 20-24 days Egg Description: Pale greenish blue.

*Hatching and Incubation/Gestation*: Semi-helpless and covered with white down. Semi-Altricial young. Hatchlings covered by white down except on wings; pinfeathers appear by 1 wk; by 2 wk Juvenile feathers and rectrices emerging. Egg tooth disappears after 2 wk. Leg and mandible color variable from yellow to grayish to black; tarsi always darker than toes. Mouth lining pink; iris generally pale gray.

*Development*: NONE

*Parental Care*: Both parents brood continuously until young approximately 10 d old. From age 10 to 14 d old, nest attended by one parent approximately 50% of time. During storms, 2-wk-old young brooded continuously. Both parents feed young. Well-digested food regurgitated onto nest floor for hatchlings 1–5 d old. Older nestlings grasp parent's bill in scissors grip to stimulate regurgitation directly into mouth. Asynchronous hatching produces feeding hierarchy dependent on nestling size. Feeding rates not reported but nestlings 5–10 d old spent 15% of time feeding whereas 21- to 25-d-old chicks spent only 6% of time feeding. NEST SANITATION REPORTED.

*Lifespan*: Up to 16 years.

**Conservation**:

*Official Federal Status*: Least Concern

*Special Statuses in Individual States*: NONE

*Threats*: Snowy Egrets are once again numerous and their populations were stable from 1966 to 2014, according to the North American Breeding Bird Survey. The North American Waterbird Conservation Plan estimates a continental population of over 143,000 birds, rates the species a 14 out of 20 on the Continental Concern Score, and lists it as a Species of High Concern. Snowy Egret is not on the 2014 State of the Birds Watch List. Populations have rebounded from severe losses that happened in the late nineteenth century, when masses of Snowy Egrets were killed for their long breeding plumes. Concerned citizens curtailed the plume trade in 1910 within North America, although hunting continued longer in Central and South America because of demand in Europe. Once safe from plume hunters, Snowy Egrets rebounded in numbers and even

extended their original range. They can be found throughout the U.S, with the exception of some of the more northern states, Central, and South America. Their biggest continuing threat is habitat loss: more than 100 million acres of wetlands in the U.S. have been drained since colonial times (when total wetland area was estimated at 127 million acres). Since Snowy Egrets spend more time feeding than many other herons, they may be especially sensitive to environmental changes that reduce available prey. The future of this and many other wetland species depends on coastal wetland conservation across North and South America.

*Conservation Efforts*: ^^^^^^

**Extra Facts**:

1. Male and female Snowy Egrets take turns incubating their eggs. As one mate takes over for the other, it sometimes presents a stick, almost as if passing a baton. Both parents continue caring for the young when they hatch.
2. During the breeding season, adult Snowy Egrets develop long, wispy feathers on their backs, necks, and heads. In 1886 these plumes were valued at $32 per ounce, which was twice the price of gold at the time. Plume-hunting for the fashion industry killed many Snowy Egrets and other birds until reforms were passed in the early twentieth century. The recovery of shorebird populations through the work of concerned citizens was an early triumph and helped give birth to the conservation movement.
3. Adult Snowy Egrets have greenish-yellow feet for most of the year, but at the height of the breeding season their feet take on a much richer, orange-yellow hue. The bare skin on their face also changes color, from yellow to reddish.
4. Snowy Egrets sometimes mate with other heron species and produce hybrid offspring. They have been known to hybridize with Tricolored Herons, Little Blue Herons, and Cattle Egrets.
5. The oldest Snowy Egret on record was at least 17 years, 7 months old. It was banded in Colorado in 1970 and found in Mexico in 1988.

**Notable Species**:

1. **E. t. thula:** Breeds throughout e. North America south through Central America, the Greater Antilles, and all of South America. Smaller on average than brewsteri, with shorter tarsus. Breeding populations from North America south to n. South America (Venezuela, Colombia, Ecuador) possibly separable as E. t. candidissima; only those breeding in s. South America regarded as nominate thula.
2. **E. t. brewsteri**: Breeds w. North America (west of Rocky Mtns.). Larger, especially birds from Baja California. Rea restricts brewsteri to Baja, noting that birds there have more massive bill, and merges all other North American populations under nominate thula (or candidissima if that taxon recognized). Oberholser suggested that birds from the Great Basin (Utah) south through central California, Arizona, and, possibly, as far south as nw. Mexico recognizable as separate subspecies (E. t. arileuca), being intermediate in size between brewsteri and nominate thula. Measurements by Bailey, however, suggest that these populations more appropriately grouped with brewsteri