BLUE-THROATED HUMMINGBIRD - LAMPORNIS CLEMENCIAE

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Family: Trochilidae Genus: Lampornis Species: L. clemenciae

Habitat:

Biomes: Blue-throated Hummingbirds live in the understory of pine-fir and deciduous forests, preferring to live in shady, mountain canyons with running water, typically between 4,500 and 11,500 feet. Birds build nests in sheltered locations, sometimes on rock ledges or on and around human structures. During the winter, these hummingbirds migrate to lower elevations, sometimes down to sea level, and may be found in drier habitats. Summer foraging trips may also find them in drier areas. Bird feeding stations now sustain individuals at higher elevations and more northern areas during the winter.

Distribution:

In US: The blue-throated mountaingem is native to mountain woodlands of Mexico, although during the summer it is an uncommon to rare resident of moist, wooded canyons in the Madrean sky islands of southeastern Arizona, southern New Mexico, and western Texas in the United States and northeastern Sonora, Mexico. A few individuals traditionally winter at feeding stations in southeastern Arizona.

In Other Countries: NONE

Holistic Description: The largest hummingbird found north of Mexico, the Blue-throated Hummingbird is also one of the most vocal hummingbird species, and its high-pitched, monotonous peeps are a signature sound of summer. They are found in streamside habitats in mountain canyons, as far north as southeastern Arizona, where they are frequent visitors to feeders and usually the dominant hummingbird species.

Species Richness: 3 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: NONE

Systematics: Slight geographic variation in size (especially bill length and width but also wing and tail length, becoming larger to south), color of upperparts and underparts (especially female), and width of white tips on tail. Previously placed in monotypic genus Cyanolaemus but later merged into Lampornis.

Number of Species: 3 SUBSPECIES

Number of Genera: 3 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 4.3-4.7 in (11-12 cm) Weight: 0.3-0.3 oz (8.1-8.6 g)

Wingspan: 79 mm (3.1 inches) for males and 68.5 mm (2.3 inches) for females

Coloration: Dull plumage overall, except for adult male's blue throat. Green above, with gray underparts. White stripes on face.

General Body Features: Relatively small bird, but large hummingbird. **Their forked, transparent tongue is fringed with tiny hairs at the tip. It curls into a "W" shape in the back.**

Special Features of the Body: Hummingbirds have an excellent memory and can recall any feeding source they have used in the past. **The hummingbird laps up nectar with its tongue by extending it out and drawing it back? This action is the same one used by dogs and cats. However, hummingbirds do this really fast; up to 13 times per second! A hummingbird needs to eat about every 15 minutes and up to 3 times its weight in food every day! Nectar from flowers and feeders is a source of high energy food.**

Special Features of the Head and Sensory Organs: Hummingbirds have a long, narrow beak that allows them to reach the nectar from brightly colored, tubular flowers. They also feed on insects and have a flexible lower beak that allows them to grab insects from the air during flight. The tongue, like the beak, is quite long, and the tip is covered in hairs to pull more nectar from flowers. A hummingbird's eyes are located on the sides of the head and are very large in comparison to the size of the bird. The location and size of the eyes allow the bird to see both in front and to both sides simultaneously. Hummingbirds see colors similar to the ones we see, and also have the ability to see ultraviolet wavelengths. The eyes are protected by at least 12 bones called ossicles.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: The main muscles hummingbirds use in flight are the pectoralis majors. These muscles are almost entirely made up of Type I, fast-twitch muscle fibers, allowing the wings to beat up to 200 times per second. Unlike other birds, hummingbirds can fly both forward and backward and change directions quickly. The shoulder joint allows the wing to rotate up to 180 degrees, allowing for the fast and precise movements.

Any Special Internal Anatomy: Heart rate in hummingbirds is extremely high during flight, reaching up to 1,250 beats per minute. Resting heart rate drops to approximately 250 beats per minute. This allows the blood to circulate quickly, delivering oxygen to the muscles during rapid muscle movements of flight. The lungs of a hummingbird serve to both deliver oxygen into the bloodstream and help cool the hummingbird. Hummingbirds have adapted to survive in conditions with cold weather and limited food. They do this by reducing their metabolism and entering a state called torpor. Typically a hummingbird's body temperature is 105 degrees Fahrenheit. During torpor, body temperature drops to as low as 70 degrees, allowing the bird to survive until conditions improve.
Sexual Dimorphisms: Male slightly longer and significantly heavier than female. exes alike in plumage, except gray throat of females is replaced in males by cobalt-blue to cerulean-blue gorget, which is partial in immature males.
Differences Between Juvenile Stage and Adult: Juvenile resembles adult female, but with buffy edging on most feathers, especially on crown and rump.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal
Activity: These large hummingbirds are highly aggressive, usually placing them at the top of the feeding hierarchy at bird feeders and natural nectar sources. Unusually vocal for a hummingbird, both sexes have complex vocalizations and sing during the breeding season—males often using an exposed, regularly used song perch. These birds use vocalizations to defend territory and presumably for courtship. Pairs may stay together for a few days (unusual among hummingbirds) but males do not help in nest building or raising young. Torpor, a commonly used hummingbird strategy to conserve energy, is unreported in the wild for this species.
Locomotion: Walks seldom and with great difficulty. Capable of typical hummingbird flight maneuvers, including rapid direct flight, sustained hovering, and backward and lateral movements. Can glide short distances.
Communication and Perception: Male gives a "whisper song" consisting of a complex series of multiple notes. Territorial male makes peeping chip notes, about one every second or two.
Home Range: Male establishes territory by singing from established perches, calling during foraging, and flicking tail to display white tips of outer rectrices. Vocalizations vary in intensity, depending on emotional state: Volume and frequency increase in anticipation of, during, and following territorial interactions.
Degree of Sociality: Not social.
Level of Aggression: Highly aggressive and territorial in breeding season, less so in winter. Breeding male commonly engages in chases and physical combat, including stabbing with bill. Male engages in calling and tail-flicking while foraging, with rate dependent on territorial status; nonterritorial males vocalize less often during foraging. Aggressor usually fans tail in flight during chases. FEMALES exhibits significantly less territorial behavior than male, mostly around food sources. May engage in tail-fanning display similar to that of male. Female defends small area around nest against other females during period of sexual activity associated with egg-laying. In mountains of Mexico, sexes separated for most of breeding season.
Migration: Resident to short-distance migrant. Birds of the northernmost populations appear to head to southern locations, though there is evidence of year-round resident birds, mostly near feeding stations. Southern populations appear to stay in the same area, but move to lower altitudes during the winter.

Predators:

Predators: Ringtails, Snakes, Accipiters, Owls, Jays, Ravens, Flycatchers, Greater Roadrunner, Mexican Jay, Green Jay, American Robin, Spiny Lizards, Wrens, Snakes.
Anti-Predator Defenses: Females with nestlings were observed attacking mountain spiny lizards and Canyon Wrens, driving them into hiding. Two males and a bird of unknown sex were observed mobbing a Northern Goshawk, pursuing it as it flew, perching nearby, calling loudly when it perched. Five Blue-throateds, sexes unknown, flew at, flushed, and then chased a Northern Pygmy-Owl that was perched in bushes near a feeder in early morning.

Diet and Nutrition:

Adult Diet: Nectar and small invertebrates, such as flying insects and spiders. Blue-throated Hummingbirds hawk insects, catching them in midair or sallying up to grab them from perches. They also glean prey from vegetation, sometimes flying up and down trunks or along branches, picking insects from bark and leaves. They may raid spider webs for prey, and take small spiders as well. Food selection is flexible and these birds may have a diet almost exclusively of insects when nectar is unavailable.
Juvenile Diet: Young presumably fed predigested arthropods mixed with nectar by regurgitation.
Special Adaptations for Getting Prey: Hovers at flowers to drink nectar; nectar-feeding frequency highest early and late in the day and during inclement weather. Hawks flying insects from exposed perches and in sustained foraging flights over forest openings and bodies of water. Gleans vegetation for invertebrates, flying up and down trunks and main branches of trees and

hovering to pluck insects from bark and foliage, particularly during periods of low invertebrate activity; eats small spiders and raids spider webs for prey.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Few data on mating system, but observations suggest either promiscuity or polygamy.

Mating Season: Mid-March to Late-May

Courtship: Sexual activities are unusually protracted for a hummingbird, occurring over a period of several days, and consisting of a series of activities in which female plays an active role. On occasion she sings near male; role of these songs in subsequent sexual behavior is unknown. Female gives advertising call during chases with male.

Territoriality: HOME RANGE and interspecific and intraspecific territoriality appear equally well developed, on the basis of time lapse between sighting of trespasser and chase, and distance it was chased. Male capable of making distinctions among species, however; when territory size was artificially increased, males permitted other species to forage while still ejecting conspecific males.

Mating: Four copulations observed. Male chases female for short distance, then both tumble to the ground. Male is on female's back briefly, preceded by or during which he gives muted buzzy note.

Nesting: Blue-throated Hummingbirds build nests under a shelter on tree branches, rock ledges, houses, sheds, bridges, and other artificial supports. Nest are at least 6 feet off the ground and may be built on top of older nests and even nests of other species. The female builds and attends the nest with no assistance from the male. The outside of the nest is about 2 inches wide and 3 to 10 inches high (new nests may be built atop older ones). The inside cup measures 1 to 2 inches wide, and 0.6 to 1.3 inches deep. Nests consist primarily of spider silk, wrapped and stitched together, and are lined with plant fibers, animal hair, feathers, and even spider egg sacs and cocoons. Females add materials such as mosses and bark to the outside for camouflage and secured with more spider silk. Nests in drier areas may contain little or no moss and are not as well camouflaged. Unlike other hummingbirds, these birds do not use lichens. Females may reuse materials from old nests when building new ones.

Egg-Laying: Clutch Size: 1-2 eggs Number of Broods: 1-3 broods Egg Length: 0.6-0.7 in (1.5-1.8 cm) Incubation Period: 17-19 days Nestling Period: 24-26 days Egg Description: Dull white, smooth and oval.

Hatching and Incubation/Gestation: Naked except for brownish down on head and back.

Development: Altricial. Hatchlings are featherless, except for tufts of light gray-brown down in capital and dorsal tracts; bill and gape are orange-yellow, eyes are closed, egg tooth is retained briefly. Eyes open between 9 and 12 d after hatching; thermoregulation begins at about 10 d; primaries begin to open at about 13 d. Bill length and body mass increase steadily through about 15 d, when mass increase levels off.

Parental Care: Brooding begins as soon as hatchlings appear. Nearly continuous at first, decreasing in frequency and duration until nestlings are 10–12 d old and fully capable of thermoregulation. Female feeds young until they fledge and for unknown period thereafter. Young presumably fed predigested arthropods mixed with nectar by regurgitation. Female does not present whole prey items to nestlings.

Lifespan: Little is known about the average lifespan; however, the longest-living male has been recorded living for 12 years.

Conservation:

Official Federal Status: Least Concern

Special Statuses in Individual States: NONE

Threats: Blue-throated Hummingbirds are fairly numerous in Mexico but their range barely reaches the U.S. Partners in Flight estimates a global breeding population of 2 million birds, with up to 100% wintering in Mexico, and 7% breeding in the U.S. They rate a 12 out of 20 on the Continental Concern Score and are not on the 2014 State of the Birds Watch List. Though these birds' range has pushed northwards in recent decades, this may largely be due to the availability of bird feeders to sustain them during colder months. The scarcity and the specificity of the Blue-throated Hummingbird's habitat requirements make them vulnerable to habitat loss and modification in the United States portion of their range. In Mexico, logging of forest habitat also poses a threat.

Conservation Efforts: ^^^^^^^

Extra Facts:

1. The female Blue-throated Hummingbird gives a special call that appears to indicate that she is ready to mate. She makes a series of short flights that appear to be a display to the male before copulation.
2. As might be expected for the largest North American hummingbird species, the Blue-throated Hummingbird beats its wings about half as fast as the smaller species. Still, it manages to beat them 23 times a second while hovering.
3. The Blue-throated Hummingbird is about three times heavier than the Ruby-throated Hummingbird.

4. Unlike most North American hummingbirds, male Blue-throated Hummingbirds do not have an aerial display. Instead, the male uses several different vocalizations to defend its territory and attract mates.
5. These birds will mob predatory birds as big as Northern Goshawks, sometimes working cooperatively to drive away the predator.
6. The oldest known Blue-throated Hummingbird was a male, and at least 7 years, 11 months when it was recaptured and rereleased during banding operations in Arizona.
7. The blue-throated mountaingem, also known as the blue-throated mountain-gem or blue-throated hummingbird (Lampornis clemenciae) is a species of hummingbird, a member of the family Trochilidae of birds.

Notable Species:

1. L. c. bessophilus - Breeds Arizona and New Mexico south to Durango and Sinaloa; northern populations migratory, wintering southward into Mexico to unknown extent within range of species.
2. L. c. phasmorus - Breeds Chisos Mtns., w. Texas south probably as far as central-w. Nuevo León, Mexico; migratory, wintering southward to unknown extent.
3. L. c. clemenciae - Thought to be resident from the Central Plateau (from Durango and Zacatecas south) and Sierra Madre Oriental (from Nuevo León south) of Mexico south to Oaxaca.