

STELLER'S JAY - CYANOCITTA STELLERI

Taxonomy: Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Corvidae Genus: Cyanocitta
Species: C. stelleri

Habitat:

Biomes: Steller's Jays are birds of coniferous and coniferous-deciduous forests. In the southwestern U.S. and Mexico they also live in arid pine-oak woodland. You'll typically find them at elevations of 3,000-10,000 feet, and lower down in the evergreen forests of the Pacific coastal foothills. During irruptive movements in some winters, flocks may move through unusual habitats such as Sonoran desert.

Distribution:

In US: The Steller's jay occurs in most of the forested areas of western North America as far east as the eastern foothills of the Rocky Mountains from southern Alaska in the north to northern Nicaragua completely replacing the blue jay prevalent on the rest of the continent in those areas. Its density is lower in the central Rocky Mountain region (Montana, Idaho, Wyoming and eastern Utah) plus the desert or scrubland areas of the Great Basin (e.g. Nevada, western Utah, southern Arizona and parts of California). Some hybridization with the blue jay in eastern foothills of the Rocky Mountains, especially Colorado, has been reported.

In Other Countries: NONE

Holistic Description: A large, dark jay of evergreen forests in the mountainous West. Steller's Jays are common in forest wildernesses but are also fixtures of campgrounds, parklands, and backyards, where they are quick to spy bird feeders as well as unattended picnic items. When patrolling the woods, Steller's Jays stick to the high canopy, but you'll hear their harsh, scolding calls if they're nearby. Graceful and almost lazy in flight, they fly with long swoops on their broad, rounded wings.

Species Richness: 17 SUBSPECIES

Population Dynamic: CHECK THREATS

Evolution and Systematics:

Evolution: Unclear if there was a geographically widespread *Protocitta* jay in temperate zone during Pleistocene that gave rise to Steller's and Blue jays.

Systematics: Body size generally increases from south to north and varies considerably in the northwestern portion of the species' range, with birds from Alaska substantially larger than birds from southern British Columbia. The relative length of the crest is similar for populations across the United States and Canada, but very long-crested birds occur in the sw. United States and nw. and central Mexico, whereas short-crested birds occupy the remainder of Middle America, excepting a long-crested population in Oaxaca.

Number of Species: 17 SUBSPECIES

Number of Genera: 17 SUBSPECIES

Physical Characteristics:

Size and Length: Length: 11.8-13.4 in (30-34 cm) Weight: 3.5-4.9 oz (100-140 g)

Wingspan: 17.3 in (44 cm)

Coloration: At a distance, Steller's Jays are very dark jays, lacking the white underparts of most other species. The head is charcoal black and the body is all blue (lightest, almost sparkling, on the wings). White markings above the eye are fairly inconspicuous.

General Body Features: Steller's Jays are large songbirds with large heads, chunky bodies, rounded wings, and a long, full tail. The bill is long, straight, and powerful, with a slight hook. Steller's Jays have a prominent triangular crest that often stands nearly straight up from their head.

Special Features of the Body: NONE

Special Features of the Head and Sensory Organs: Steller's Jay uses its wings to fly by forcing air underneath the wing to produce lift. The breast muscles of the jay must also be strong to keep the wings moving and able to sustain flight.

Dentition: BEAK/LAMELLAE/GIZZARD

Special Features of the Limbs and Digits: When traveling on the ground, Steller's Jay uses its long legs to hop from place to place. It also uses this method to move up trees by hopping from branch to branch. This bird is equipped with four toes, three of which are located in the front and one flexible in the back called a hallux. This allows Steller's Jay to grip and maneuver tree branches effectively.

Any Special Internal Anatomy: They are also able to imitate predators such as the Red-tailed Hawk, Red-shouldered Hawk, and Osprey. Steller's Jay uses this to clear feeding areas of other birds. Steller's Jay have also developed an enhanced spatial memory. This was a result of a change in brain morphology caused by demands from the Steller's Jay's life history. The

enhanced spatial memory allows for the ability to cache food. This allows for the long term storage of food and gives Steller's Jay an advantage during rough times.

Sexual Dimorphisms: Within a subspecies, male is generally larger than the female, although there is overlap, so a large female can be larger than a small male. Plumage of sexes similar, except female may have fainter and narrower black barring on tail- and wing feathers.

Differences Between Juvenile Stage and Adult: Juvenile has sooty gray head and body; white eye-crescents indistinct or lacking; wing feathers unbarred; crest shorter than that of adult and lacking blue frontal streaks.

Behavior:

Diurnal, Nocturnal, or Crepuscular: Diurnal

Activity: Steller's Jays move around with bold hops of their long legs, both on the ground and among the spokelike main branches of conifers. They pause often to eye their surroundings, cocking their head with sudden movements this way and that. Jays have incredible spatial memories, and Steller's Jays store surplus food in caches. They also raid the caches of Clark's Nutcrackers and other jays. Steller's Jays are common nest predators, stealing both eggs and chicks from the nests of many species. They are very social, traveling in groups, sometimes playing with or chasing each other, or joining mixed-species flocks. One of the most vocal species of mountainous forests, Steller's Jays keep up a running commentary on events and often instigate mobbing of predators and other possibly dangerous intruders.

Locomotion: Hops while on ground. Climbs trees by hopping from branch to branch, spiraling near trunk. Strong and deliberate, but not sustained for long distances. In British Columbia, flocks frequently flew parallel to coastline; birds apparently reluctant to cross expanses of water.

Communication and Perception: Males and sometimes females sing a quiet series of whistled, gurgled, and, popping sounds that they string together. This song is most frequently heard during courtship. Steller's Jays give a loud and repeated shook shook shook call year-round, in flight, while perched, and during aggressive interactions. They also make a variety of guttural sounds and a harsh, nasal sounding growl. Sometimes they mimics birds, mammals, and other sounds in their environment. Researchers have heard them imitating squirrels, Northern Flickers, Northern Goshawks, White-breasted Nuthatches, and mechanical sounds such as water sprinklers.

Home Range: Pair is present in home range year-round in central California, but actual territory is not clearly defined; pair defends area centered around the nest. In this area, the resident male dominates all other jays throughout the year; female dominates all other females in same area. With increasing distance from the nest, both male and female become less dominant. These concentric zones of decreasing dominance result in complex dominance hierarchies, which change depending on where jays interact.

Degree of Sociality: Members of a pair are rarely apart. Highly social, with frequent interactions and displays among neighbors and small groups. In spring and fall, large flocks may form during irruptive movements. Even when associating with other species of jays, Steller's remain in closest contact with conspecifics.

Level of Aggression: During vigorous fights, two birds fly upward, grasping each other with feet and pecking at each other with bill; dominant bird usually supplants subordinates at feeding sites and occasionally chases them; supplanted bird jumps a few feet or flies short to long distances.

Migration: Resident. Birds that breed at high elevations may move to lower elevations in winter.

Predators:

Predators: Cooper's Hawks, Northern Goshawk, Red Squirrel, Common Raven, Gray Squirrel, Red-tailed Hawk.

Anti-Predator Defenses: Mobbing is the prominent antipredator strategy employed by Steller's Jays. Group mobs predators, giving Wah calls, producing a loud chorus. Potential predators mobbed include gray squirrel, Common Raven, Red-tailed Hawk, Cooper's Hawk, and Northern Goshawk. In one instance, 5–6 individuals dove at a perched Cooper's Hawk, striking it on the back and knocking it to ground. Steller's Jay mimics raptor calls: 33% of playbacks of Northern Goshawk calls near hawk nests elicited mimetic responses by jays.

Diet and Nutrition:

Adult Diet: A generalist forager, Steller's Jays eat insects, seeds, berries, nuts, small animals, eggs, and nestlings. Around people, they also eat garbage, unguarded picnic items, and feeder fare such as peanuts, sunflower seeds, and suet. With large nuts such as acorns and pinyon pine seeds, Steller's Jays carry several at a time in their mouth and throat, then bury them one by one as a winter food store. Steller's Jays are opportunists and will steal food from other birds or look for handouts from people.

Juvenile Diet: ^^

Special Adaptations for Getting Prey: While on ground, typically obtains food by flicking aside leaf litter with sideways swipes of its bill. Typically carries nuts or large food items to elevated perches, then holds food items under one or both feet and strikes them with slightly open bill (Brown 1964b). Will take acorns from storage trees of Acorn Woodpecker.

Reproduction:

Mode of Reproduction: Monogamous

Mating System: Appears socially monogamous. Male closely guards mate during fertile periods; agonistic interactions between males peak before egg-laying and decline sharply during incubation, increase again before renesting attempts.

Mating Season: March to May

Courtship: In spring, pair performs Sexual Sidling; similar to Aggressive Sidling, except crest angle is generally low. Male aligns sideways to a female, spreads tail, and tilts wings and body toward her, showing dorsal surfaces; Song commonly accompanies display; display may end in mounting and copulation. Courtship-Circling precedes or follows Sexual Sidling: Male circles around mate, about 1.5 cm away. Tilts wings and tail toward mate, showing dorsal surfaces.

Territoriality: HOME RANGE

Mating: NONE

Nest Placement: Both members of the pair choose the nest site, typically a conifer, and both gather nest material. Steller's Jays put their nests on horizontal branches close to the trunk and often near the top of the tree (though some nests are built much lower, even just above ground level).

Nest Description: The nest is a bulky cup of stems, leaves, moss, and sticks held together with mud. The inside is lined with pine needles, soft rootlets or animal hair. The finished nest can be 10-17 inches in diameter, 6-7 inches tall, and 2.5-3.5 inches deep on the inside.

Egg-Laying: Clutch Size: 2-6 eggs Number of Broods: 1 brood Egg Length: 1.1-1.4 in (2.7-3.5 cm) Egg Width: 0.8-0.9 in (2-2.4 cm) Incubation Period: 16 days Nestling Period: 16 days Egg Description: Bluish-green spotted dark brown, purplish, or olive.

Hatching and Incubation/Gestation: Altricial.

Development: NONE

Parental Care: Both sexes feed nestlings. Little information on food of nestlings or feeding rates.

Lifespan: Up to 16.1 years.

Conservation:

Official Federal Status: Least Concern

Special Statutes in Individual States: NONE

Threats: Steller's Jay populations remained relatively stable, showing some local declines, between 1966 and 2015, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 2.8 million with 70% occurring in the U.S., 9% in Canada, and 18% in Mexico. Steller's Jay rates an 11 out of 20 on the Continental Concern Score, and is a U.S.-Canada Stewardship species. It is not on the 2016 State of North America's Birds' Watch List.

Conservation Efforts: ^^^^^^

Extra Facts:

1. Steller's and Blue jays are the only North American jays with crests. The Blue Jay is expanding its range westward. Where they meet, the two species occasionally interbreed and produce hybrids.
2. Steller's Jays have the dubious honor of being one of the most frequently misspelled names in all of bird watching. Up close, the bird's dazzling mix of azure and blue is certainly stellar, but that's not how you spell their name. Steller's Jays were discovered on an Alaskan island in 1741 by Georg Steller, a naturalist on a Russian explorer's ship. When a scientist officially described the species, in 1788, they named it after him – along with other discoveries including the Steller's sea lion and Steller's Sea-Eagle.
3. The Steller's Jay and the Blue Jay are the only New World jays that use mud to build their nests.
4. The Steller's Jay shows a great deal of variation in appearance throughout its range, with some populations featuring black crests and backs, and others blue. One black-crested form in southern Mexico is surrounded by eight other blue-crested forms.
5. Steller's Jays are habitual nest-robbers, like many other jay species. They've occasionally been seen attacking and killing small adult birds including a Pygmy Nuthatch and a Dark-eyed Junco.
6. An excellent mimic with a large repertoire, the Steller's Jay can imitate birds, squirrels, cats, dogs, chickens, and some mechanical objects.
7. The oldest recorded Steller's Jay was a male, and at least 16 years 1 month old when he was found in Alaska in 1987. He had been banded in the same state in 1972.

Notable Species:

1. *C. s. maculophya* (central and southern Rockies)
2. *C. s. stelleri* (Pacific coast from Alaska to southwestern British Columbia)
3. *C. s. carlottae*, the largest subspecies (Queen Charlotte Islands).

