

# AMERICAN DIPPER - CINCLUS MEXICANUS

**Taxonomy:** Kingdom: Animalia Phylum: Chordata Class: Aves Order: Passeriformes Family: Cinclidae Genus: Cinclus  
Species: C. mexicanus

## **Habitat:**

**Biomes:** American Dippers live almost solely on rushing, unpolluted waters and can be found in mountain, coastal, or even desert streams of the West. Dippers forage in streams with rocky bottoms, and they use streams with overhanging banks for cover and nesting locations. American Dippers don't migrate south, though they may move to larger, unfrozen rivers in winter or follow insect hatches in spring or summer.

## **Distribution:**

**In US:** It inhabits the mountainous regions of Central America and western North America from Panama to Alaska. The American dipper is usually a permanent resident, moving slightly south or to lower elevations if necessary to find food or unfrozen water. The presence of this indicator species shows good water quality; it has vanished from some locations due to pollution or increased silt load in streams.

**In Other Countries:** NONE

**Holistic Description:** A chunky bird of western streams, the American Dipper is North America's only truly aquatic songbird. It catches all of its food underwater in swiftly flowing streams by swimming and walking on the stream bottom.

**Species Richness:** 5 SUBSPECIES

**Population Dynamic:** The presence of this indicator species shows good water quality; it has vanished from some locations due to pollution or increased silt load in streams.

## **Evolution and Systematics:**

**Evolution:** NONE

**Systematics:** Plumage color varies geographically, both in the adult (head, neck, and ventral color) and the juvenile (throat and ventral color). Body size increases from north to south, and inland birds are larger than more coastal ones.

**Number of Species:** 5 SUBSPECIES

**Number of Genera:** 5 SUBSPECIES

## **Physical Characteristics:**

**Size and Length:** Length: 5.5-7.9 in (14-20 cm) Weight: 1.5-2.4 oz (43-67 g)

**Wingspan:** 9 inches (23 centimeters)

**Coloration:** Stocky, medium-sized bird. Gray all over. Large head; short neck. Long legs. Short tail. Thin, dark bill. White eyelids obvious when it blinks. Constantly bobs body up and down.

**General Body Features:** Stocky, medium-sized bird. Gray all over. Large head; short neck. Long legs. Short tail. Thin, dark bill. White eyelids obvious when it blinks. Constantly bobs body up and down.

**Special Features of the Body:** NONE

**Special Features of the Head and Sensory Organs:** Other adaptations to an aquatic lifestyle are waterproof feathers and a nasal flap, which gives them the ability to close their nostrils in order to prevent water inhalation.

**Dentition:** BEAK/LAMELLAE/GIZZARD

**Special Features of the Limbs and Digits:** To cope with such extreme conditions, they have a slow metabolism, lots of feathers, and the ability to carry extra oxygen in their blood.

**Any Special Internal Anatomy:** This species, like other dippers, is equipped with an extra eyelid called a "nictitating membrane" that allows it to see underwater, and scales that close its nostrils when submerged. Dippers also produce more oil than most birds, which may help keep them warmer when seeking food underwater.

**Sexual Dimorphisms:** Sexes similar in plumage, but female generally smaller than male.

**Differences Between Juvenile Stage and Adult:** Similar to adult, but with faint pale barring on underside. Young birds in Juvenile and Formative Plumages much like adults, but slightly paler overall, with paler throat, and orange-based bill. Freshly molted birds of all ages show pale feather edges, resulting in a slightly scalloped pattern above.

## **Behavior:**

**Diurnal, Nocturnal, or Crepuscular:** Diurnal

**Activity:** American Dippers can wade, swim, and dive either from the water or from the air, and can move rocks on the stream-bottom to get at food. They are mainly monogamous. Though some pairs stay together in winter, the dipper is generally a solitary bird; after the chicks' fledging, parents often divide their brood and their territory and part ways.

**Locomotion:** Walks rapidly, in shallow water and along shore or ice; rapid walk looks like running, but both feet do not leave ground together. Uses toes and hallux to cling to substrate when wading. Uses wings differently in air than in water: extends

wings in air, for lift and propulsion; partly folds wings in water, for better propulsion in denser medium. Sometimes flies with rapid wingbeats for about 30 m, then glides for about 3 m with acquired momentum. In takeoff from land, bird crouches, raises wings, and uses both feet simultaneously to assist takeoff. In takeoff from water, 2–3 wingbeats sometimes strike water; bird kicks both feet to help with takeoff. From rock or ice ledge, bird dives directly into stream, head-first, legs extended and posterior elevated, propelled by partly opened wings. Will plunge both with, sideways to, and against current.

**Communication and Perception:** Song is clear and ringing, with repeated notes. Call is a sharp "zeet."

**Home Range:** Linear breeding territory along stream used for mating, nesting, and feeding. Territory embraces width of stream, sometimes includes nearby tributaries and beaver ponds. In territorial encounters, territory holder and intruder display similarly; both sing or give Alarm Call or combination. They sometimes stop display to forage. They may quickly peck at each other and move body and wings, and sometimes fight in flight. In territorial defense, males use song more than females do.

**Degree of Sociality:** Generally solitary. In some locations, pairs may stay together during the winter.

**Level of Aggression:** During Approach, which involves territorial encounters at close range, aggressor flies, walks, or swims toward opponent; after moving to within 1 m, displays at rival. Both dominant and submissive birds dip. Combat that involves body contact occurs rarely, only 5 of 36 territorial encounters. Contestants fly and peck at each other, buffet each other with wings, and even pull feathers.

**Migration:** Resident.

#### **Predators:**

**Predators:** Sharp-shinned Hawk, Cooper's Hawk, Merlin, Northern Harrier, Northern Goshawk, Common Raven, Mink, Weasel, Squirrels, Great Blue Heron.

**Anti-Predator Defenses:** Avoids predators both by flight and by remaining motionless; also dives below water or flattens itself on surface of water by extending head and neck and depressing rectrices. Fledgling became silent and motionless when nearby adult gave jik cal.

#### **Diet and Nutrition:**

**Adult Diet:** American Dippers feed on aquatic insects and their larvae, including mayflies, mosquitoes, and midges. They also eat dragonflies, worms, small fish, fish eggs, or flying insects. American Dippers rapidly duck their heads in and out of water when looking for their stream-dwelling prey.

**Juvenile Diet:** Adults feed nestlings the same food that they eat, but often in different proportions. In west-central Colorado (Gunnison County), nestlings were fed 63.5% mayflies, 24.5% stoneflies, and 11.5% caddisflies, and food was gathered within 300–400 m of nest.

**Special Adaptations for Getting Prey:** Feeds almost exclusively in water by walking, swimming, and diving; occasionally picks food from ice, snow, or streamside vegetation; sometimes flycatcher. In Wyoming, pulled up strings of dead vegetation, swam around it while picking at food items, presumably insects.

#### **Reproduction:**

**Mode of Reproduction:** Monogamous

**Mating System:** Mainly monogamous.

**Mating Season:** February to April

#### **Courtship:**

1. (1) Proximity Tolerance: in December, 2 mo before start of overt courtship in Montana, members of known pairs feed close to each other.
2. (2) Courtship Feeding: female begs, crouches, flutters wings, and gapes like a fledgling; male then feeds her; both birds dip during this activity
3. (3) Flight Chase: most frequent early in nesting season. Only a few centimeters apart, male chases female for up to 10 min, the pair twisting and turning at high speed. They usually follow the watercourse; either or both may sing, aerial acrobatics may ensue. Female may drop into stream as male flies over her

#### **Territoriality:** HOME RANGE

**Mating:** Occurs 2–4 wk after pair formation, usually on rocks in stream but sometimes as birds float downstream. Continues for about 15 s; repeated 3–4 times within 2 min. Copulation accompanied by singing and loud jik.

**Nest Placement:** American Dippers build nests on cliff ledges, behind waterfalls, on boulders, and on dirt banks or under bridges, but always above or close to the fast water of their stream habitat. Females choose a ledge or crevice that is 6–20 feet above deep water so that the nest will not be in danger of predators or flooding.

**Nest Description:** Males and females may work together to build the ball-like nest, often in freezing temperatures. Materials are dipped into water before being weaved into two layers: one, an outer shell, 8-10 inches in diameter, made of moss, and the other an inner chamber with a woven cup, 2-3 inches in diameter, made of grass, leaves, and bark. Once the nest is finished, the mossy shell absorbs moisture and the coarse grass keeps the inside dry.

**Egg-Laying:** Clutch Size: 4-5 eggs Number of Broods: 1-2 broods Egg Length: 0.9-1.1 in (2.3-2.8 cm) Egg Width: 0.7-0.8 in (1.7-1.9 cm) Incubation Period: 14-17 days Nestling Period: 24-26 days Egg Description: White.

**Hatching and Incubation/Gestation:** Helpless with only sparse down.

**Development:** Naked except for sparse down on capital, cervical, dorsal, humeral, and alar pterylae. Skin orange on flanks and abdomen, pink on back. Hatchling remains curled as in egg, makes little movement except weak waving of wings; head prone. ALTRICIAL

**Parental Care:** Female broods regularly for about 1 wk after hatching and continues to about day 16. Both parents deliver food to nestlings, the male more frequently while the female broods. Parent feeds nearest young; nestlings change places at defecation time. Older nestlings excrete from nest and frequently shift positions, so food is fairly well divided among them.

**Lifespan:** The maximum age for an American dipper is 8 years and 1 month for a bird ringed and recovered in South Dakota.

#### **Conservation:**

**Official Federal Status:** Least Concern

**Special Statuses in Individual States:** NONE

**Threats:** Though American Dipper populations are difficult to count, numbers appear to be relatively stable, though experienced a small decline from 1966 to 2014, according to the North American Breeding Bird Survey. Partners in Flight estimates a global breeding population of 190,000 with 86% living in the U.S., 8% in Canada, and 5% in Mexico. They rate a 10 out of 20 on the Continental Concern Score and are not on the 2014 State of the Birds Watch List. Bridge-building during road construction has created nesting locations that dippers seem to readily take to. Dam construction floods dipper habitat, and land uses such as logging, mining and agriculture can affect water quality and reduce the availability of their aquatic insect prey. Dippers are also susceptible to pollution in waters including organic pollutants such as PCBs and heavy metals.

**Conservation Efforts:** ^^^^^^^

#### **Extra Facts:**

1. The American Dipper chooses a nest site, invariably along a stream, that provides security from floods and predators. Availability of suitable nest sites appears to limit its populations.
2. To be able to survive in cold waters during the winter, the American Dipper has a low metabolic rate, extra oxygen-carrying capacity in its blood, and a thick coat of feathers.
3. Unlike most other songbirds, but similarly to ducks, the American Dipper molts its wing and tail feathers all at once in the late summer. The bird is flightless during this time.
4. The oldest American Dipper was over 8 years old, when it was recaptured and rereleased during a banding operation in South Dakota.

#### **Notable Species:**

1. *C. m. unicolor* Bonaparte, 1827 – Alaska, west Canada and west USA
2. *C. m. mexicanus* Swainson, 1827 – north and central Mexico
3. *C. m. anthonyi* Griscom, 1930 – southeast Mexico, southwest Guatemala, east Honduras and northwest Nicaragua
4. *C. m. dickermani* Phillips, AR, 1966 – south Mexico
5. *C. m. ardesiacus* Salvin, 1867 – Costa Rica and west Panama