Black-chinned Hummingbird

Archilochus alexandri

REGULATORY STATUS

USFWS: Migratory Bird
USFS R2: No special status
UWFS R4: No special status
Wyoming BLM: No special status
State of Wyoming: Protected Bird

CONSERVATION RANKS

USFWS: No special status
WGFD: NSSU (U), Tier II
WYNDD: G5, S2
Wyoming contribution: LOW
IUCN: Least Concern
PIF Continental Concern Score: 11

STATUS AND RANK COMMENTS

Black-chinned Hummingbird (*Archilochus alexandri*) does not have any additional regulatory status or conservation rank considerations beyond those listed above.

NATURAL HISTORY

Taxonomy:

No subspecies of Black-chinned Hummingbird are recognized. However, molecular genetic research is being conducted to assess the possibility amongst known populations [1].

Description:

Identification of Black-chinned Hummingbird is possible in the field. The species is a slender and small member of the *Trochiladae* Family. Black-chinned Hummingbird males are easier to identify in the field than females; however, where its range overlaps with Ruby-throated Hummingbird (*A. colubris)*, distinguishing between males can be challenging, especially in poor light conditions [2]. Male upperparts are a flat metallic bronze-green; the chin and upper throat are black; and the lower throat is a diagnostic metallic violet-purple. Underparts are primarily a flat grayish-white or brownish-gray. Females are more difficult to identify in the field, as they closely resemble female Anna's (*Calypte anna*) and Ruby-throated Hummingbirds [2]. Slight differences in bill length, body proportions, and feather color are typically diagnostic. Female upperparts are also a dull, metallic bronze-green. Underparts are generally a flat white with occasional dusky markings on the throat region. The three pairs of outer tail feathers are white-tipped and black subterminally. Both males and females have black, slightly decurved bills, and dark brown or black irises. Legs and feet are black to dark brown in both sexes. There is no coloration difference in nonbreeding birds; however, Black-chinned Hummingbird molts annually and the duration is about 7 to 8 months [3]. Research indicates that female length and

weight measurements tend to be greater than males; juvenile weight tends to be greater than that of adults of the same gender [2, 4, 5].

Distribution & Range:
Wyoming forms a limited portion of the eastern edge of the Black-chinned Hummingbird's breeding range [2]. Observations are largely concentrated in the western and central portions of Wyoming, and many may be associated with migrants versus breeders [6]. Black-chinned Hummingbird has been documented in 13 of Wyoming's 28 latitude/longitude degree blocks, with circumstantial evidence of breeding occurring only in degree block 23 (Green River area) [7]. Only 3 out of 28 latitude/longitude degree blocks include confirmed observations as accepted by the Wyoming Bird Records Committee (WBRC) [8]. This species winters outside of Wyoming, primarily in Mexico and southern Texas [2] and distribution in Wyoming during migration is poorly understood.

Habitat:
Limited information is known about preferred Black-chinned Hummingbird habitat in Wyoming; however, it is believed the species utilizes habitats similar to those used in other western states [6]. Black-chinned Hummingbird tends to be found in canyons and deciduous riparian forests and shrublands, as well as piñon-juniper (*Pinus* spp.-*Juniperus* spp.) woodlands, xeric desert washes and irrigated orchards [9, 10]. The species is believed to forage in open brush, meadows, and fields [11]. Black-chinned Hummingbird has also adapted readily to urban areas with mature trees, nectar-producing vegetation, and residential feeders [2]. WBRC accepted records primarily include observations with cottonwood (*Populus* spp.) riparian and canyon habitats, as well as residential hummingbird feeders.

Phenology:
Black-chinned Hummingbird has been documented in Wyoming as early as 15 May, although observations tend to be more common in June and July. Wyoming breeding records are very limited and are restricted to the southwestern region of the state [2, 7]. The species lays a clutch usually consisting of 2 eggs, infrequently 3 [12]. Typically, each egg is laid 1 day apart. Incubation duration is usually 12–14 days, followed by a 21 day nestling period. Females will feed fledglings for about a week after they leave the nest. There are no sound data on whether the species re-nests following failure [2].

Diet:
Black-chinned Hummingbird feeds primarily on flower nectar and small insects. Where nectar sources are limited, it will ingest larger quantities of protein-rich insects. The species will also consume sugar water provided at hummingbird feeders [2].

CONSERVATION CONCERNS

Abundance:
Continental: WIDESPREAD
Wyoming: RARE
Using North American Breeding Bird Survey (BBS) data, the Partners in Flight Science Committee estimated the global population of Black-chinned Hummingbird to be 5 million birds [13]. Approximately 0.10% of the global population, or an estimated 5,000 birds, breed in Wyoming [14]. However, this abundance estimate should be viewed with caution, given the very low detection rate of this species in the state. The statewide rank of UNCOMMON is based on

the limited area of the state known to be occupied in any given season, and the relatively small coverage of suitable habitat within that area. Within suitable habitat in the occupied area, Black-chinned Hummingbird also appears to be uncommon, occurring in relatively low densities and requiring intensive survey efforts to detect the species [7]. From 2009–2015, the Integrated Monitoring in Bird Conservation Regions (IMBCR) program did not detect any Black-chinned Hummingbirds on survey routes in Wyoming [15].

Population Trends:

Historic: UNKNOWN

Recent: UNKNOWN

Population trends are not available for Black-chinned Hummingbird in Wyoming due to a limited distribution in the state and low detection rates during monitoring surveys. Currently, there are no robust BBS trend data for Black-chinned Hummingbird in Wyoming due to an extremely limited observation sample size (N = 5 routes; 1968–2013) [16]. However, 1966–2013 trend analysis for Black-chinned Hummingbird in the western BBS region, United States, and survey-wide indicate a slight annual population increase of 1.01, 1.15, and 1.17%, respectively [16]. More specifically and in proximity to Wyoming, trend analyses for Idaho, Montana, and Utah indicate a slight annual population increase through 2013 (5.65, 9.50, and 2.91%, respectively); however, only the trends for Idaho and Utah are statistically significant. Colorado 1968–2013 trend data indicate a potential slight decrease of 0.44% annually; however, the data are not statistically significant. All BBS data presented in this account have been determined to fall within a credibility category containing data with 'deficiencies' or 'important deficiencies'. Low relative abundance and number of routes with Black-chinned Hummingbird detections likely contribute to this classification [16].

Intrinsic Vulnerability:

MODERATE VULNERABILITY

In Wyoming, Black-chinned Hummingbird has moderate intrinsic vulnerability to extrinsic stressors, which stems from its peripheral breeding range status, low density, and low fecundity [6, 17]. While Black-chinned Hummingbird is known to produce 2 broods per year, the productivity averages around 1.1 young fledged per female per season [18]. Additionally, the taxon's preferred breeding habitat is generally restricted to mesic riparian habitats [2].

Extrinsic Stressors:

SLIGHTLY STRESSED

Extrinsic stressors to Black-chinned Hummingbird populations in Wyoming are most likely associated with land use practices in preferred habitat, primarily riparian forest and shrubland. Riparian lands constitute a small percentage of Wyoming's landscape [19] and their importance to avian migration, nesting, and foraging is well documented [20]. While local, state, and federal measures may limit certain impacts in these areas, the cumulative effects of development (e.g., agriculture, ranching, energy extraction, urbanization, recreation), invasive species, and hydrologic regime change (e.g., impoundments, irrigation withdrawals, channel alterations) contribute to the degradation of riparian lands in Wyoming [19]. Additionally, canyon and cliff habitats are also vulnerable to human disturbances (e.g., mining, roads, recreation) in Wyoming, and efforts to minimize impacts in these areas will likely benefit Black-chinned Hummingbird populations. Despite various potential stressors, it is possible that Black-chinned Hummingbird benefits from the presence of maintained sugar water feeders and landscape plantings with preferred nectar sources in residential areas [2].

KEY ACTIVITIES IN WYOMING

Black-chinned Hummingbird is listed as a Species of Greatest Conservation Need (SGCN) in Wyoming by the Wyoming Game and Fish Department (WGFD), and as a Level II Priority Species requiring monitoring action in the Wyoming Bird Conservation Plan [20]. Existing statewide monitoring efforts for landbirds may occasionally detect Black-chinned Hummingbird, but these programs are not specifically designed to capture hummingbird observations. The annual BBS program is conducted on routes statewide, but only five Black-chinned Hummingbirds have been reported since the survey was initiated in 1968 [16]. No Black-chinned Hummingbirds have been detected during IMBCR surveys through 2015 [15]. Additionally, efforts associated with the United States Geological Survey's bird banding stations in Wyoming through 2015 produced only five Black-chinned Hummingbird records since 1960 [21]. No additional, targeted, systematic survey of Black-chinned Hummingbird has been conducted in Wyoming. Observations of this species are reported to the WGFD and vetted through the WBRC. Black-chinned Hummingbird is a species for which the WBRC requests documentation on first latitude/longitude degree block sightings and all nesting observations. Since 1991, five observations of the species from Sheridan, Uinta, Fremont, Natrona, and Washakie counties have been accepted by the WBRC.

ECOLOGICAL INFORMATION NEEDS

Knowledge of Black-chinned Hummingbird distribution during the breeding and migration seasons in Wyoming is poorly understood [6]. Better estimates of abundance and population trends are needed for this species in the state.

MANAGEMENT IN WYOMING

This section authored solely by WGFD; Andrea C. Orabona. Black-chinned Hummingbird is classified as a SGCN in Wyoming due to unknown population status and trends in the state. Two separate but compatible survey programs are in place to monitor populations of many avian species that breed in Wyoming; the BBS [16] and IMBCR [15]. While these monitoring programs provide robust estimates of occupancy, density, or population trends for many avian species in Wyoming, survey efforts do not tend to detect Black-chinned Hummingbird at adequate levels, suggesting targeted, species-specific monitoring efforts are needed. Best management practices to benefit Black-chinned Hummingbird include adequate monitoring, maintaining large continuous riparian corridors comprised of a multilayered native vegetation structure, and minimizing and/or avoiding disturbance to canyon habitats [20].

CONTRIBUTORS

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Figure 1: Adult male (left) and female (right) Black-chinned Hummingbirds at a feeder in Durango, Colorado. (Photos courtesy of Bill Schmoker)

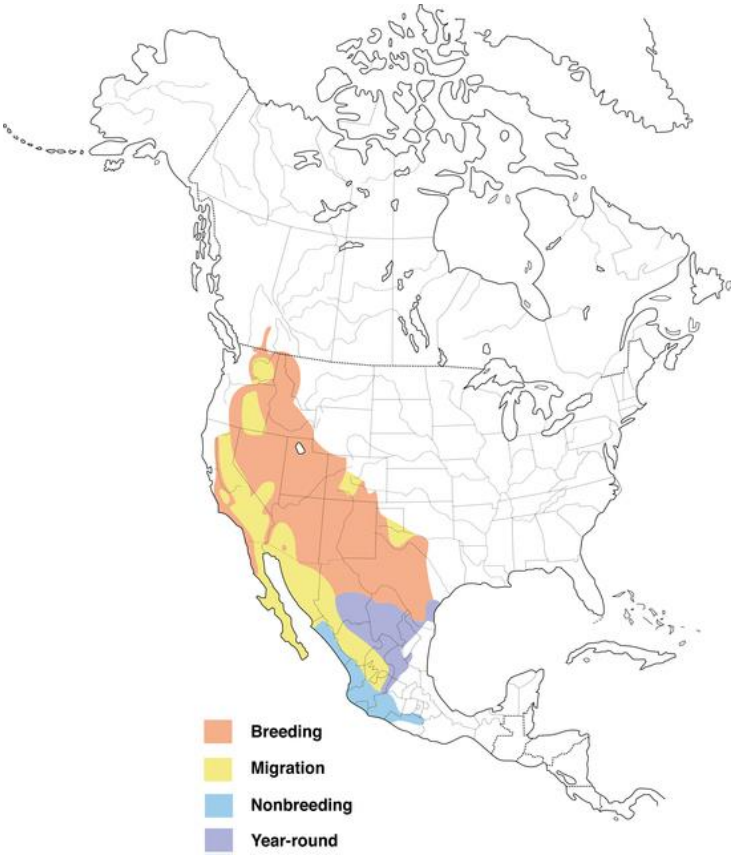

Figure 2: North American range of *Archilochus alexandri*. (Map courtesy of Birds of North America, http://bna.birds.cornell.edu/bna, maintained by the Cornell Lab of Ornithology)

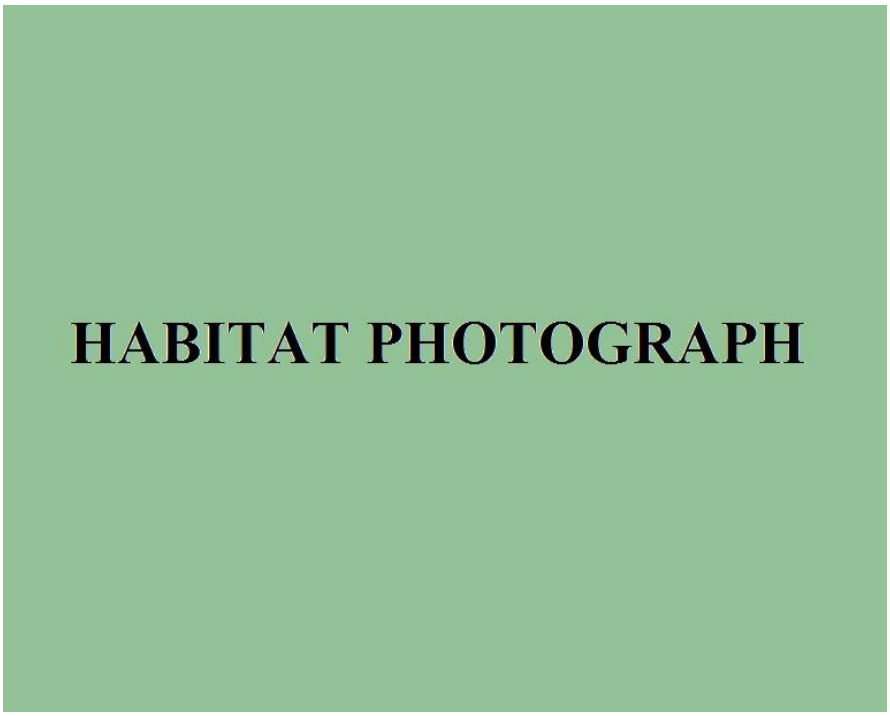

Figure 3: Photo not available.

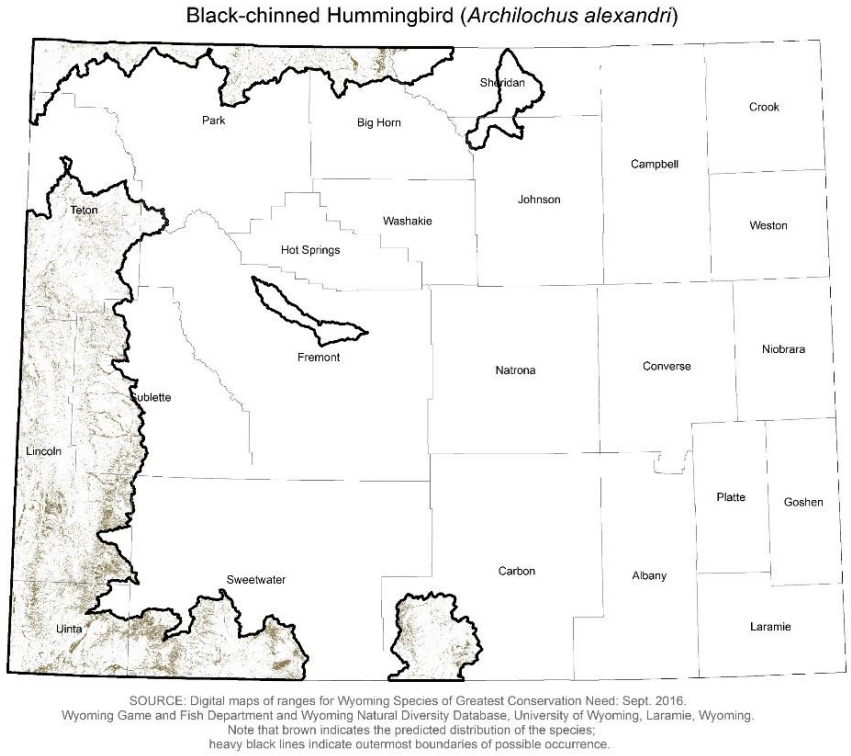

Figure 4: Range and predicted distribution of *Archilochus alexandri* in Wyoming.

Figure 5: Adult male Black-chinned Hummingbird showing its distinctive purple iridescent gorget at a feeder in Durango, Colorado. (Photo courtesy of Bill Schmoker)