

“By the Wayside”

Piggyback flight display of the Ruby-throated Hummingbird, a leucistic hummingbird in Beaver Dam, reverse migration of juvenile Broad-winged Hawks, and Pileated Woodpecker eats American grapes.

PIGGYBACK FLIGHT DISPLAY OF THE RUBY-THROATED HUMMINGBIRD

Aerial displays are part of the behavioral repertoire of the male Ruby-throated Hummingbird (*Archilochus colubris*) and function in both territorial and courtship contexts. The Shuttle flight has been described as “flying back and forth along the bottom arc of a wide circle varying from about 30 centimeters to 3 meters” (Pitelka 1942). The Shuttle is given by males and is directed at both sexes. The Dive display is a U-shaped flight that may reach heights up to 15 meters and is directed at a perching female (Robinson et al. 1996). Occasionally, the bird will arc over the top of the circle, performing a full revolution. Both Shuttles and Dives have been referred to as “pendulum” flights in the ornithological literature. Indeed, both have a pendulum type of movement as the bird arcs back and forth from one end to the other, but the amplitude of the Shuttle is much less—at times just one-tenth—of the amplitude of the Dive. Both displays can be given independently or the Shuttle flight may grade

into a Dive display and vice versa, characterized by gradual or discrete changes in the amplitude of the U-shaped motion. Finally, a Vertical flight has also been described (Pitelka 1942), in which the male and female hover in the air a short distance apart while facing each other, and while ascending or descending vertically over distances from 1.5 to 3.0 meters.

During the spring of 1999 in Mequon, Wisconsin, I observed an interesting “Piggyback” variant of the Shuttle display, which, to my knowledge, has not been described in the literature. Males arrived on 6 May 1999 and females arrived on 10 May, which is typical of this species in southeastern Wisconsin. On 26 May, two Ruby-throats approached my feeder. While in flight toward the feeder, one rode upon the back of the other. The smaller of the two birds was in the top position, but I could not determine the sex of the birds due to the speed of the display. The birds performed a Shuttle flight oriented at the feeder for six arcs; then, with a rapid change in direction, they flew away, disengaging in flight, and each bird flew off in a separate di-



Figure 1. This leucistic hummingbird (likely a Ruby-throated) was photographed by Tom and Patrice Bashynski at their feeder in Beaver Dam, Wisconsin, in early September 2001.

rection. I did not hear any sounds associated with this behavior. The Piggyback flight was observed at a time when courtship behaviors were at their peak; specifically, Shuttle and Dive flights were observed and noted on 19 May and 24 May.

Ruby-throats will chase each other, especially at feeders or when defending territories. The Piggyback flight may occur in the context of courtship, considering the seasonal timing of the behavior as well as the fact that I observed no chasing or heard any agonistic sounds. Although I could not determine the sex of the birds, the smaller hummingbird was riding on the back of the larger bird. Males weigh significantly less than females, with the greatest weight differential in June and July (Mulvihill and Leberman 1992).

Few reports exist for physical contact in Ruby-throats. Pitelka (1942) reports that a male struck a female, followed by an aerial display. On-the-ground copulation following display flights has been described (Johnsgard 1997), and copulation has been reported to occur after some vigorous grappling on the ground (Smyth 1990), although questions exist as to whether these were true copulations or aggressive behavior. Blue-throated Hummingbirds (*Lampornis clemenciae*) were reported grappling on the ground during the period of late nest building through nest completion (M. Ficken pers. obs.). Black-chinned Hummingbirds (*Archilochus alexandri*) were observed tumbling together across the ground after a long, wild chase covering about 200 meters (K. Rusch pers. obs.). The sex

of the birds was not determined in these interactions. Also, physical contact in which birds fly face-to-face while "sword fighting" with their bills (K. Rusch pers. obs.), is occasionally observed at feeders. Piggyback flight has not been reported in other hummingbird species.

In conclusion, aerial courtship displays, including the Piggyback flight, are part of the rich behavioral repertoire of Ruby-throated Hummingbirds. Pitelka (1942) noted in the introduction to his paper that "... observations are interpreted variously and considerable confusion remains as to the significance of certain traits and patterns of hummingbird behavior." Although this statement was made over 50 years ago, it is still applicable today, despite the common presence of these birds at feeders. Observations of Ruby-throated Hummingbirds will undoubtedly continue to reveal the life history of this fascinating bird.—*Kathryn M. Rusch, 1510 W. El Rancho Drive, Mequon, WI, 53029.*

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REVERSE MIGRATION OF JUVENILE BROAD-WINGED HAWKS

The morning of May 29, 2000, was sunny and in the 70s with light to moderate winds from the northeast at Rock Island off the tip of the Door Peninsula. When my family and I arrived at the Potawatomie Lighthouse at the northern tip of the island at about 11:00 A.M., we observed a hawk flying in from the north low over the water. Upon reaching the lighthouse, the bird circled upward and joined an upward-circling group of hawks. Additional birds with similar field marks arrived at low altitude from the north, forming a kettle consisting of 25-30 birds.

This apparently southward migration of hawks was unexpectedly early and raised several questions, the first of which concerned the identity of the birds. Other than one dark morph individual, each of the 10 backlit birds I could examine closely were the size and shape of a Broad-winged Hawk (*Buteo platypterus*) and had several narrow, dark tail bands; a distinctly broader, subterminal dark tail band; and a prominent pale or translucent zone between the inner and outer primaries. Such a zone in the wings of immature Broad-wings is clearly illustrated in Sibley (2000) and evidently results from ongoing molting (Burns 1911). These field marks are also noted in Dunne et al. (1988) and Sutton (2002), and clearly distinguished between the birds we had observed and immature Red-shouldered Hawks. I concluded that we had observed a flock consisting predominantly or exclusively of immature Broad-wings.

The second question concerned the apparently southward direction of the

hawks' movement. This orientation was confirmed by birds at the top of the kettle, which flapped and glided south-southwest toward Washington Island. The birds failed to reach their destination, however, and reformed a kettle over the northeast margin of Rock Island, where they tried to travel southward but failed again. This behavior was repeated several times during the approximately 60-minute observation. I did not observe newly arriving birds joining the kettles, which always consisted of 25–30 birds. The juvenile Broad-wings we had observed were, indeed, attempting to migrate in a southerly direction.

Late May is much too early to expect the southerly migration of juvenile Broad-wings hatched that spring. Using data in Goodrich, Crocoll, and Senner (1996), I estimate that south-bound juveniles would not be expected before early or mid-July, so the immature birds we had observed must have been produced in the preceding year. This interpretation is consistent with retention of the juvenile plumage through the spring following fledging (Burns 1911).

What were the birds doing over Rock Island? Their presence there could be explained by the avoidance of long overwater flights by various species of hawks. The confining effects of Lake Winnebago, Lake Michigan, and Green Bay, possibly combined with westerly winds, might have funneled northward-migrating Broad-wings onto and along the Door Peninsula. It is most likely that the 2.1–4.4 kilometers of water between the northern tip of the peninsula and Washington Island, and the 0.5–2.3 kilometers between Rock and Washington Islands, had been crossed by the birds as they

traveled northward. However, when they embarked over the approximately 11.6-kilometer expanse of water to St. Martin's Island, the nearest land to the north, they may have found it daunting and returned to Rock Island, where we observed their arrival. Thus, the puzzling southward orientation of the Broad-wings we observed was likely an example of reverse migration. Evidently, the hawks were attempting to move southward along the peninsula until a sufficient narrowing of Green Bay and/or more favorable winds permitted them to cross to the mainland and continue their northward journey.

Why were these birds predominantly or exclusively juveniles, and why were they migrating northward distinctly later than the majority of Broad-wings, which pass through Wisconsin during late April and early May? Since Broad-wings often do not breed until they are more than one year old (Burns 1911), many juvenile nonbreeders are not under the "time gun" that prompts breeding adults to arrive at their nesting sites early enough to fledge young before food becomes insufficient in September (Bildstein 1999); juvenile birds can afford to migrate north later than breeding adults. Relatively late departure of juvenile Broad-wings from their winter range is consistent with the observation that, in south Texas, migrating flocks consist predominantly of adults during April, while immature birds predominate during early May (Kerlinger and Gauthreaux 1985). However, the phenomenon of reverse migration suggests that the arrival of many juveniles in Wisconsin may be further delayed because they make more navigational mistakes en route than adults do on their northward journey of about 5,000

kilometers. It would be interesting to know how long it took our flock of reverse migrants to resume a northward course.

How frequent is reverse migration in Broad-winged Hawks? As I learned from the fascinating book *Gatherings of Angels* (Bildstein 1999), it is apparently an annual phenomenon at Cape May, New Jersey. Juvenile Broad-wings on their first southward journey often migrate so far south into eastern New Jersey in autumn that the waters of Delaware Bay and the Atlantic Ocean funnel them onto Cape May, where they can't manage the many overwater miles to the nearest land to the south. They reverse their migration by beating north up the Cape until Delaware Bay becomes narrow enough for them to cross to the west and continue their southward journey.

In Wisconsin, a chain of islands extends between the Door Peninsula and the mainland to the north. It seems possible that some Broad-wings migrating southward in the fall make the mistake of following those islands until they reach a stretch of water that deters their further progress. They might then migrate in reverse until they reach the mainland. The water between Rock and St. Martin's Islands, possibly in combination with head winds from the northeast, apparently deterred the northward-migrating hawks on the day of our observation; maybe the same expanse of water sometimes deters southward migrants in autumn, especially if the winds should happen to be from the south.

How often does reverse migration of Broad-wings occur in the spring on the Door Peninsula? Mueller and Berger (1965) described an occurrence of this phenomenon at Washington Island in-

volving 300–1,000 birds (at least 95% of them juveniles) on the remarkably late date of June 26, 1960. Hawks flying northward along the eastern shore of the island apparently balked at crossing to Rock Island, repeatedly formed kettles, failed to cross, and finally moved southward. Our flock of Broad-wings had difficulty in crossing the same passage between the islands while heading south from Rock Island as those observed in 1960, even though they must have first crossed the passage when moving north. It seems unlikely that a mere 0.5–2.3 kilometers over water deterred the birds from crossing; Broad-wings have executed much longer overwater flights than those required to cross between the islands north of the Door Peninsula (MacRae 1985). Quite possibly, other factors, such as wind direction and speed, combine with distance over water to determine the willingness of Broad-winged Hawks to migrate over water. The birds we observed forming and reforming kettles that did not cross to Washington Island probably had tail winds. It would be interesting to know the factors that would prevent Broad-wings from crossing 2.2 kilometers of water on some occasions while allowing them to embark for Cuba from Florida on others (MacRae, 1985)!—Robert DeMars, 217 Bordner Drive, Madison, WI, 53705.

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PILEATED WOODPECKER EATS AMERICAN GRAPES

I live in a residential area in east Duluth, about three blocks up from Lake Superior. A wooded corridor along the railroad tracks extends throughout east Duluth, roughly two blocks up from the lake, and consists primarily of

aspen, some remaining birch, scattered spruce, and an understory of red osier dogwood and eastern hop hornbeam. Pileated Woodpeckers (*Dryocopus pileatus*) are frequently seen utilizing this corridor.

De La Ronde (2001) observed a Pileated feeding on wild grapes and wondered if this behavior had been noted by others. About five years ago, I was watching a football game on a Sunday afternoon in January. Around 1:00 p.m., a movement out the window caught my eye. For the next four to five minutes, I watched a male Pileated Woodpecker eating frozen grapes from the top of the vine trained on a wire over the sidewalk along the side of the house. This was 12 feet from where I was sitting! The grape is a "Beta," a Concord X *Vitis riparia* hybrid, with fruit described as small (half-inch diameter), having a blue slipskin, and tart, best used for jams and jellies.—*David L. Evans, 2928 Greysolon Rd., Duluth, MN, 55812.*

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