

MELANISTIC NORTHERN HARRIER SPENDS 2 WINTERS IN SIERRA VISTA, ARIZONA

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Melanism in birds is a condition often linked to a genetic mutation, causing the bird to appear darker than its usual plumage (van Grouw 2017). In some species, it occurs often enough to be recognized as a natural color morph. In the Northern Harrier (*Circus hudsonius*) only a handful of melanistic birds have been reported in North America. Over the course of consecutive 2023-2024 and 2024-2025 winters, Arizona's first melanistic Northern Harrier was observed weekly at Sierra Vista, Cochise County. It wintered at the Environmental Operations Park (EOP), the city's sewage treatment and water recharge facility. Sunday birding walks permitted by the facility, provided an opportunity to observe the bird and its behavior over the course of both winters (Figure 1).

The melanistic harrier was first reported on 10 December 2023, by participants on the EOP Sunday birding walk. They observed a dark Northern Harrier flying low over the cattail wetland ponds, which eventually landed in one of the dry ponds providing spotting scope views. The bird continued to be reported on every Sunday walk through the winter until its last appearance on 24 March 2024. The Sunday walks provide special and extended access to the facility, but the bird was also often viewable from the facility's observation platform open to the public on weekdays. The final observation during the first winter was from this observation deck on 2 April 2024 (Goldwasser 2024).

On 10 November 2024, a dark Northern Harrier was again spotted at the EOP. The bird's characteristics indicate that it was likely the same bird returning for a second winter. It continued to be observed on the Sunday walks throughout the winter until its last sighting on 16 March 2025. The arrival and departure dates both winters were in the typical range for Northern Harriers wintering in southern Arizona. Arizona has few nesting records of this species (Wise-Gervais 2005).

The melanistic harrier was seen and photographed by many birders during both winters providing a record of the bird's unusual plumage. It is solid dark brown approaching black over most of its body with a few small areas being either white or a lighter brown. The head is dark brown except for a white feathered outline of the facial disk, which is characteristic of harriers. Its underside is solid dark brown from chin to undertail coverts. On top, the body is solid dark brown from neck to rump with a light brown to white line at the top of the rump (Figure 2). The bird does not have the typical white uppertail coverts of the Northern Harrier. The wings are solid dark brown on the coverts, both above and below, as well as on the axillaries. The primaries on the underside have 4 to 6 white bands per feather, each bordered by dark brown (Figure 3). On the top the primaries display a similar pattern as underneath but with pale bands being a light brown (Figure 4). The secondaries show the same pattern as the primaries but with only 2 to 4 white bands. The tail shows distinct white bands contrasting with dark brown bands underneath, with a similar pattern on top, albeit with the white muted to a light brown as is the case on the wings. The feet are yellow, and the bill is dark at the tip, gray at the base with a yellow cere, which is typical of all adult harriers. The bird's eye color during the first winter was dark with some medium to dark brown evident in some photos (Figure 5). During the second winter the eye showed a brighter brown (Figure 6). Another noticeable difference was damage to the ends of the right-wing primaries in the first winter, not evident during the second winter.

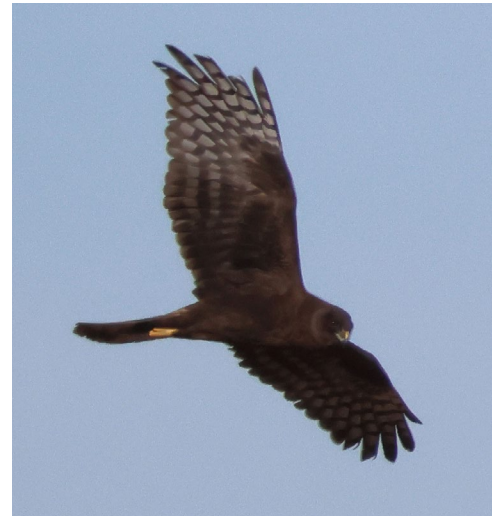


Figure 1. Melanistic Northern Harrier showing extensive dark plumage and white, heavily barred primaries, 28 January 2024. Photo by Steven Tracey



Figure 2. Dark body color above of the melanistic harrier with pale line at edge of rump, 31 December 2023. Photo by Steven Tracey



Figure 3. Extensive white barring on primary undersides and white tail banding, 24 December 2023. Photo by Steven Tracey



Figure 4. Wings and tail show lighter shades of barring and banding on top and rump is not the typical white, 22 November 2024. Photo by Steven Tracey



Figure 5. Dark eye color of juvenile female present during the first winter, 31 December 2023. Photo by Steven Tracey



Figure 6. Eye showing lighter color of adult female in second winter, 2 March 2025. Photo by Steven Tracey

The bird's physical characteristics and behavior indicate that it is a female. Typical adult female Northern Harriers show dark barring on the undersides of the remiges, particularly on the outer primaries, whereas typical adult males display solid black wing tips (Wheeler 2018). Unlike male Northern Harriers, the tips of the outer primaries aren't solid black on the Sierra Vista bird but barred like typical females. This is the most compelling evidence pointing to a female as this feature occurs even in first-year males (Smith et al. 2020). Even photos of a melanistic male seen in Idaho in 2012 show the solid black outer primaries (Miller et al. 2013). The lack of this trait was also used to identify a melanistic harrier in Montana in 1998 as a female (Olson and Osborn 2000). As mentioned above, the dark eye color in the first winter would indicate a first-year female; juvenile males have pale eyes (Wheeler 2018). The progression of the eye color becoming a bit brighter in the second winter would support this (Wheeler 2018).

The EOP is a 263-ha facility with wetland and recharge ponds surrounded by old field and Chihuahuan desert scrub and has many potential food sources for a Northern Harrier. Over a thousand blackbirds roost at night and throughout portions of the day in the cattails (Tracey 2024). Hundreds of ducks are also present both in cattail-clogged ponds as well as a few ponds with mostly open water. Although rarely seen, there are also small rodents. The harrier hunted by flying low over the ponds, both those with water and those that were dry, a behavior typical for this species (Smith et al. 2020). It often landed on low vegetation, gravel dikes between the ponds, and rarely in surrounding mesquite trees.

The EOP was the apparent wintering site for 3 presumably recurring Northern Harriers during both winters—the melanistic female, a typical adult female, and an adult male. Occasionally a juvenile bird was seen but not with the regularity of the others. The male bird made brief appearances but typically stayed at the edges of the facility. The

normally plumaged female often ventured into the main cattail pond section of the EOP. This usually prompted aggressive behavior from the melanistic bird, which became so familiar to regular observers that if the melanistic bird was seen flying straight and direct as opposed to the teetering soaring flight it used to hunt, it was likely chasing off the other female. This behavior is another sign the bird is a female (Smith et al. 2020). These chases often culminated in midair interaction, that eventually led to both birds ending up on the ground. They would stay put on the ground for a while, and then the typical female would fly away after a few minutes on the ground, exiting the facility. In addition to harassing other harriers, the melanistic bird was seen chasing and interacting with Red-tailed Hawks (*Buteo jamaicensis*) and Peregrine Falcons (*Falco peregrinus*).

Prior to the Sierra Vista report, the known number of melanistic Northern Harriers in North America was only 5. The first account was in California in 1991 of a male bird (Howell et al. 1992). The second was a female reported in Montana in 1998 (Olson and Osborn 2000). A third bird was photographed in Utah in 2008 (Liguori 2009). An adult male was the fourth discovered by a raptor survey team in Idaho in 2012 (Miller et al. 2013). The fifth was seen and sketched by a hawk-watching team in Idaho in 2022 (Grosner and Regnier 2022). The Sierra Vista bird is the sixth documented record and the first known to return to the same location for the winter. It was also by far the most seen and photographed melanistic Northern Harrier, observed by hundreds of viewers. Establishing the number of occurrences of a melanistic Northern Harrier presents a challenge. Melanism is not a trait tracked in popular birding databases like eBird, at least not in an easily searchable way. What is available are the 5 documented cases prior to the EOP bird, interestingly all were from the western United States.

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