

Northern Harrier: Hawk Stalk

--Jean Mason

Stretching sandy fingers east from the Rio Grande bosque, the land spreads wide into open fields, sun-seared, weed-rich, rising and dipping into now-and-then sandy washes. Spikey tumbleweeds, brittle and blowing in the winter wind, chase the shredding, stringy bark of screwbean mesquites, dodging tall kochia stands and piling up against clumps of sacaton bunch grass.

In the distance, a slender form appears, tail and long wings tilting side to side in languid wingbeats, white rump patch flashing. It's a yellow-eyed raptor coursing low and slow like leaves on the wind, flying face down in careful study of the land and life below. The northern harrier, unique among North American raptors for this hunting style and super-acute hearing, is an engine of ground-sensing radar, scanning and drilling the landscape for prey. Caught by his harrier eyesight, eight times sharper than that of humans, is the scurry of a white-footed mouse; its squeak has reached the hawk, directed to offset ears and an owl-like fur ruff on his face. Long, slender legs reach into the grass; claws pounce.

Rising up and flying high, the male harrier, a diurnal hunter, smoky grey on his back with a ghost-white belly (he may be cryptic when flying over a prey animal looking skyward) spots his brown-streaked mate, probably one of many. As he tosses his furry prize to her, she turns on her back, whistles, reaches out with taloned feet, and snatches it.

Then she's gone.

Globetrotter

Although northern harriers are the only representative of their cosmopolitan genus in North America, they make the most of it by roosting and breeding in wetlands throughout the



Wikimedia commons photo. Female harriers are 12% larger and 50% heavier than males.

northernmost parts of the hemisphere in Canada and the U.S. *C. cyaneus/hudsonius* is the most northerly breeding and most widely distributed of all the world's harriers. March-June breeding in Alaska suits them fine as does the searing heat of Baja California. Soaring on thermals and toughing out 930-mile migration flights in rain and snowstorms along with 77-mile

trips over water, these frost-tolerant hawks migrate alone in winter to southern Canada, to many states of the U.S. except in the Southeast, to Mexico and Central America along the Mesoamerican land corridor where many are permanent residents in several countries, and even to Colombia and Venezuela. (A small form of *C. c. hudsonius* was once a resident in Hawaii, and the modern hawk still occasionally checks in.) In Europe and Asia, northern harriers breed from Lapland to Portugal with individuals heading east to China and Siberia. Wintertime finds them in North Africa and tropical Asia.

Commonly known as marsh hawks for their bias in favor of wet meadows, marshes, and agricultural fields, northern harriers have also occupied forest clearcuts and burns, reclaimed surface mines, cold desert shrublands, and Asian steppes along with the desert lands and dry plains of New Mexico. They will reject woodland cover of over 30% which obscures their lowdown hunting style. New Mexico harriers can be a common sight during winter in lower state elevations, especially at Bosque del Apache; during migration, they sail over the state's highest mountains.

I Could Eat You Up

Hungry harriers are opportunists: They will grab, nail, clench, steal, pluck, skin, and even drown their prey. Hiding behind bushes, harriers will fly out and execute a surprise pounce; on the search, they'll circle a field or follow a distinct, prey-likely route along a ditch or hedge. Small and medium-sized mammals, including bats but especially rodents, top the capture list, along with birds – sparrows, larks, pipits – that harriers will behead, bewing, and befeet before swallowing; reptiles and frogs, they eviscerate. Grasshoppers, crickets, and other invertebrates are tide-over snacks. Harriers are also pirates of meals captured by smaller owls and raptors; they are careful (and crafty) to allow these junior-sized birds into their territories, but chase off larger raptors (rough-legged hawks, redtails) that they couldn't rob. In their northern range, voles are the harriers' number one target, to the point of threatening their survival

when vole populations crash. Harriers will take eggs and chicks from bird nests, scavenge on dead animal carcasses, drown a rabbit, rail, or duck (wood ducks at the Nature Center), and scoop up fish osprey-style, then bring it to land for a meditative feed. Flying 100 miles a day when hunting is all in a day's work for them.

Down to Business

Communal harrier flocks, averaging some 20 raptors, roost on the ground during winter migration from late October through early March in agricultural fields and sandy marshes. Settle-down sites, some of which have been occupied for many years, are typically in dense grass, even in tumbleweeds in New Mexico, with open ground nearby. Keeping roost company with the hawks may be short-eared owls; the duo are known to share or overlap territories in breeding season as well as in wintertime with few arguments, although harriers do steal owl prey. Togetherness, however, can become testy and aggressive, even in winter, if too many birds are vying for the same limited food resource.

Males generally arrive at their breeding grounds five-to-ten days before females; they scope out a one-square-mile territory of dense, tall vegetation far from disturbance. Even in dryland habitats, wet locations are preferred nest sites, apparently to reduce predation by skunks, raccoons, foxes, coyotes, and ravens. Males court females with an acrobatic sky dance: Up they fly, over 900 feet; chattering at the zenith, they swing down in a spectacular U formation, repeating the stunt up to 74 times across a half-mile area. The male ends his dance, disappearing into a possible nest site for the pair to occupy.

Both sexes pitch in to the job of building a nest on the ground or on a low bush, combining reeds, rushes, grasses, and more into a platform structure 15 to 30 inches across. After collecting material, the male passes it over to the female by aerial toss or ground level beak/talon delivery; she becomes the main builder. Two weeks of work follow, with tall thick stalks forming the base, covered by light grasses and sedges. Both will defend the nest site with high-speed, high-altitude chase and stoop flights against harrier interlopers, but only those who intrude into an area a few hundred yards near the nest itself.

Harrier males are known to be polygynous, a behavior no other raptor regularly exhibits. Males will pair with up to five mates in a season, principally when food is abundant. Some observers have suggested that polygamy may have evolved into a consolidated territorial defense strategy for harriers: Defending a smaller area will leave more time for hunting, pairing up, siring more young. Others, however, have noted that the females in his harem form a hierarchy; the status of each declines relative to that of his chosen prime mate in terms of the courtship and feeding attention they receive from him. Some extras may simply ignore him and fly away.

The female is the nest sitter of four to eight eggs, provisioned by the male who will also bring food for the chicks and watch them briefly when his mate is away, perhaps taking a bath, one of her favorite things to do. The female will stand and hold her wings over the chicks to provide shade and a rain shield. She'll also retrieve 10-day-old displaced nestlings, carrying them back by the nape of the neck. Both parents can

discriminate their own young from foreign fledglings, striking and chasing them out of their territory.

Fledging comes at 36 days with breeding maturity at age two for females and age three for males. Lifespan: 12 – 18 years.

Global populations of northern harriers is estimated at 1.3 million, with 35% of that population in the U.S. and Canada. However, Breeding Bird Survey data shows that the hawks suffered a downward trend in the 1996-2004 period of -1.7%; noting the loss of harrier habitat, the U.S. Fish and Wildlife Service has designated the species as a Bird of Conservation Concern across several regions of North America.

Northern harriers are the most abundant hawk migrating in New Mexico, but not as a breeder due to the lack of marshes and wetlands in the state. Conversion of habitat to farming along with overgrazing and widespread use of insecticides and rodenticides have affected the harriers' food supply.

New Mexico needs to safeguard the future of this magnificent hawk.



Wikimedia photo

Sources:

Jean-Luc Carton et al. *A Field Guide to the Plants and Animals of the Middle Rio Grande Bosque*, 2008; Jean-Luc E. Cartron, ed. *Raptors of New Mexico*, 2010; Pete Dunne. *The Wind Masters: The Lives of North American Birds of Prey*. David Allen Sibley. *The Sibley Guide to Bird Life and Behavior*, 2001; Kimberly G. Smith et al. *Hen/Northern Harrier *Circus cyaneus/hudsonius**. Cornell Lab of Ornithology, Birds of North America, all sections, 2011.