

Pack Monadnock Raptor Migration Observatory

Final Report

Fall, 2010



Hawkwatch counter Henry Walters celebrates the 10,000th raptor with Katrina Fenton and Julie Brown on October 13, 2010.

Prepared by

Henry Walters and Julie Brown



The 2010 Season at Pack

The sky was full this fall, playing host to a migration of which raptors constituted but a single, small piece. Hummingbirds zipped by, pausing near the Observatory to try to pull some nectar out of a piece of orange flagging. Higher up, Golden Plover were bunched up tightly, and Chimney Swifts doing their erratic dance. October brought Common Loons and White-winged Scoters on their way to the coast, and Hermit Thrushes in the spruces, and the year's first Snow Buntings. The single, small piece of sky over Pack Monadnock could not claim to be the only stage where this spectacle was playing, and yet even this fragment held, albeit fleetingly, the entirety of the whole. Or more precisely, the assembled witnesses gasping behind their binoculars—at the vast kettles of Broad-winged Hawks in mid-September, at forty Ospreys in a single day, at the arrival of the first Golden Eagle, stopping its glide southward to circle up beside the peak—these gaspers could say that their sense of that whole, their sense of the sky's fullness, was itself broadened, intensified, re-made.

2010 was the sixth consecutive season for data collection at the Pack Monadnock. The longer the period in which data is continually collected according to standardized methods, the more reliably that data may be used to draw conclusions—about trends in a species' total population, for example, or the effect of weather conditions on migration routes, or the like. Daily reports are filed on the “HawkCount” database, administered by the Hawk Migration Association of North America (HMANA), and are easily accessed by the public at www.hawkcount.org. This season, Henry Walters, a volunteer at the Pack Monadnock Hawkwatch in previous years, was the official counter, and seasoned veterans Julie Brown and Iain MacLeod split duties assisting as counters, logging 628 hours of observation between August 22 and November 11.

Education and Events

In addition to—or more properly speaking, in tandem with—the valuable scientific objectives of the site, the opportunities for environmental education at Pack Monadnock continue to multiply, supporting in important ways New Hampshire Audubon's mission at large. Somewhere over 4,350 people visited the Hawkwatch this fall, of whom nearly 1,500 came on field trips from schools near and far. From Peterborough to Staten Island to Germany, from kindergartners to home-schoolers to graduate students in Environmental Studies, a wonderful array of young people stepped onto the viewing platform to get the lay of the land and hear a bit about raptor biology, bird migration, the aims of the Hawkwatch, and the importance of conservation. Even among the older classes, these topics were new to many of them; some had had surprisingly little exposure to the natural world, period, beyond a kind of *Animal-Planet*-level familiarity with certain elements of it.

Happily, it seems an increasing number of schools, particularly in New Hampshire, are beginning to take environmental education more seriously. Nature's Classroom, a group that leads outdoor trips for school groups all over New England, has a local chapter in Greenfield, NH, and has made the Observatory a regular stop on their tours of the Monadnock region, bringing nearly 200 students a week in the latter half of October. Fourth-graders from the Mountain Shadow School, a charter school in Dublin, made multiple visits to the Hawkwatch, their teachers having designed an entire two-week unit around birds of prey, bird migration, weather data, and woodland habitats. When one girl pointed out a Peregrine Falcon circling under the lifting fog, then a Harrier, then an Osprey, one after the next, numb fingers were forgotten and the students' enthusiasm was palpable. This kind of active engagement with the environment often proves more valuable than a similar science lesson conducted through the medium of a textbook. The more encouragement Audubon can provide for these kinds of projects, the more clearly its message of concern for our natural surroundings will be heard.

Situated at the nexus of a number of great hiking trails, and easily accessed by road, the Hawkwatch remains a popular destination for families as well, though once school starts in September, the majority are weekend visitors. The annual hawk release was a great success, with over 400 people turning out on the second Saturday in September to see a rehabilitated Broad-winged Hawk return to its native environment. The first annual Soup-Off, held on the day of the nationwide “Big Sit” bird-count in October, also drew a crowd to the mountain, with volunteers from the Hawkwatch entering nine varieties of soup in hopes of being crowned the 2010 champion.

Volunteers

Even as the tree line steals a few degrees of view each year, the number—and the quality—of eyes on Pack Monadnock improves it at a steady rate. Without the dedication of all the volunteers who brave wind, cold, boredom, and fatigue to scan the skies and increase the accuracy of the overall count, the Hawkwatch would be a much more limited endeavor, and its results of much less value. And without the material support of many generous donors, the continuation of the project would itself be in doubt. Tom Baillio gave the greater portion of his fall to the Hawkwatch, and his superb eyes and unflagging interest in all the workings of the natural world were indispensable. Katrina Fenton was also a fixture there, identifying not only birds but butterflies, voles, snakes, and spiders—as always, alive to anything that moved. Her uncanny ability to call up migration data from previous years, not to mention her six pairs of raptor earrings, more than merited her nomination as Pack's Head Statistician. Her father David played his guitar through many long afternoons, improvising new verses on any sighting whatsoever, or the lack of one. Francie and Carl Von Mertens, in addition to putting up Henry in their own home for the fall, supported the Hawkwatch in myriad ways, from assembling the owl pole to printing signage. Phil Brown and the Development Department at NH Audubon work year round on the behalf of the project. David Baum donated the owl decoy and named her. The crew is too numerous to thank properly: to Alan Bostick, Janet and Tom Delaney, Ginny and Jerry Gonville, Al Grimstad, Michael Hannigan, Ken Klapper, Katie Murphy, Dawn Odams, Cliff Otto, Ann Preston, David Ross, Jim Samdahl, Don and Lillian Stokes, Mark and Julianne Timmerman, Tom Warren, and the many, many others who spent time at the Observatory, a gratitude that extends well beyond a formality. Without watchers, without your support, this fall spectacle would be going on all by its lonesome, unobserved and unappreciated. A special thanks also goes out to Jeff LaCourse, Rich Frechette and Boy Scout Troop 8 from Peterborough for their help again this year, maintaining the beautiful view! On August 28th scouts and Pack volunteers cut down several trees and hauled brush in efforts to keep the view open to the north and west.

Results

10,459 raptors were counted during the official count period of September 1-October 31, 2010. When including late August and early November hours, a total of 10,786 raptors were counted at Pack Monadnock, a new record for this hawkwatch site. Record numbers of Ospreys, Bald Eagles, Turkey Vultures, and all three species of falcons (Merlins, Kestrels, Peregrines) were recorded, and the counts for all other species (Buteos, Accipiters, Harriers) were either the second- or third-highest in the six years since the Observatory was founded. Reasons for these high numbers abound, from something as simple as weather conditions during the migration, which were nearly perfect for observation, to something as complex as slight shifts in migration routes, which can favor different “leading lines” from year to year. It seems clear, though, that this particular breeding season was a good one for raptors, with the dry spring of 2010 being conducive to breeding and fledging success. This comes in stark contrast to the wet spring of 2009, when chick mortality was high, and Pack's count registered less than 7,000 migrants. While the spike in the numbers of certain species seem encouraging—in Kestrels, for instance—a year's breeding success will be mitigated by the mortality of immature birds during their first winter: in some species, less than 30% of those first-year birds will make the return trip northward next spring. And, as noted above, very few conclusions can reliably be drawn from a single year's data: trends reveal themselves only over the course of time.

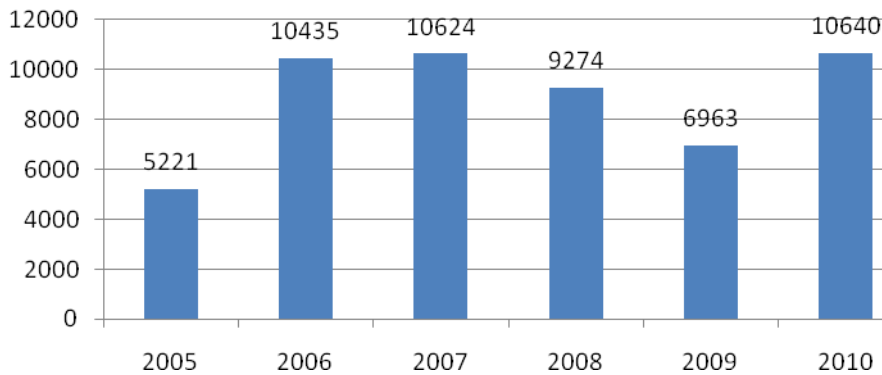
Two differences in the approach to counting the migration this year should be noted. In the interest of monitoring migrants early in the season, the count's traditional starting date of September 1 was moved back to August 22. In addition, coverage at the Observatory was extended to many early-morning hours throughout September and the first half of October. The results of these efforts may contain something of interest, and may be worth pursuing in future years, but their overall effects on the numerical results shown here are negligible. While nearly a dozen American Kestrels and a few Northern Harriers were counted between 7:00 and 9:00 a.m. in September, very few other migrants were moving so early. Similarly, the last week of August brought more migrants, perhaps, than might be expected, but subtracting the 148 birds counted in this period still leaves the 2010 total the highest to date, at 10,640.

Apart from the raptors seen annually, at least three other, less common species could reasonably be dreamed of, if not expected, at Pack Monadnock on fall migration. The Black Vulture, of which Pack has but one record (September of 2005) went unseen for another year, despite more regular appearances in New Hampshire during migration. Nor was there a sighting of the Mississippi Kite, which, though breeding near the coast, is at least a confirmed summer resident of the state—a recent and unexpected development, considering its traditional range. Perhaps the most likely of the rarities, the Rough-legged Hawk, breeding far to the north, is a regular sighting at this latitude in early November, but not one has been seen here in the six years since the Observatory was established. Swainson’s Hawks and Gyrfalcons are occasionally recorded in New England, but have not been at Pack Monadnock. For all of these birds, we hold out hope for next year.

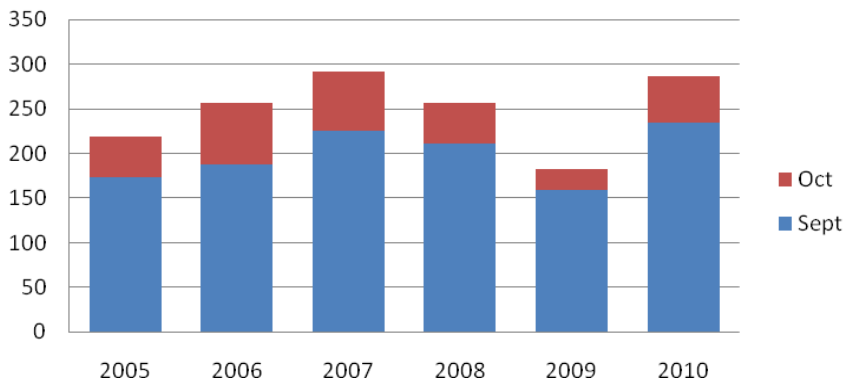
Species Reports

The seasonal total charts below reflect raptors counted during the official count season, September 1-October 31, 2010. The one exception is for Golden Eagle when November totals were included.

Yearly Raptor Totals at Pack Monadnock Raptor Migration Observatory (RMO) 2005-2010



Osprey Season Totals at Pack Monadnock RMO 2005-2010



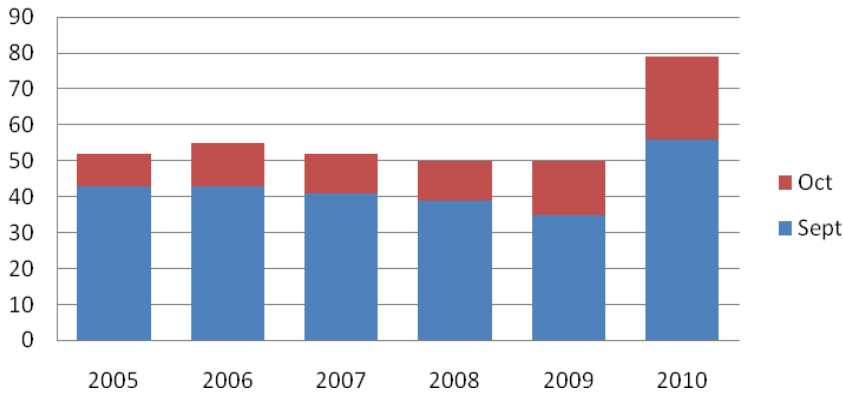
Osprey (*Pandion haliaeetus*)

2010 Season Total: 298

Slow and slender, the unmistakable profile of an Osprey breaking the horizon remains one of the migration’s enduring images. The 298 Ospreys identified this fall were the largest total since data collection began on Pack Monadnock in 2003. Throughout the Northeast, the rise in numbers of this species has been noted by breeding

bird surveys as well as by neighboring hawkwatches. Fall migration peaks at the end of September; this year, 40 birds on a single day (9/29) left all those present rubbing their eyes, a little giddy with the excess of it. Often the last bird seen before sunset, and one of the few moving in very windy, wet, or calm conditions, the Osprey can be depended on to appear on the slowest of days—once, this year, with its slippery lunch grasped firmly in its talons.

**Bald Eagle Season Totals at Pack Monadnock
RMO 2005-2010**

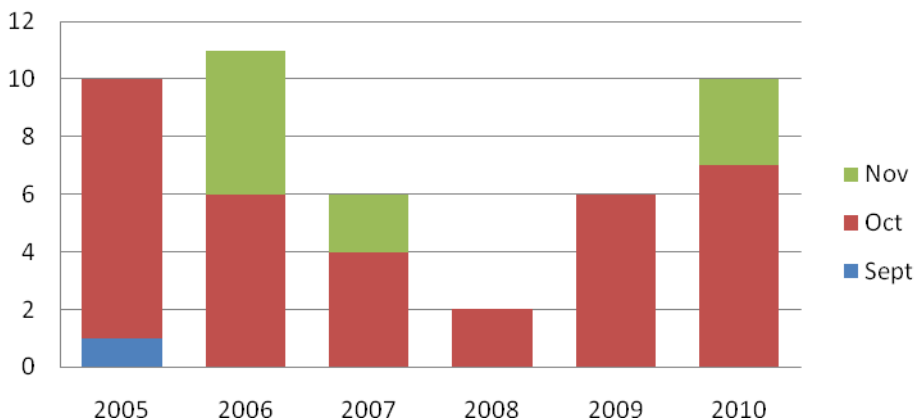


Bald Eagle (*Haliaeetus leucocephalus*)

2010 Season Total: 85

Maybe the single most surprising statistic to come out of the 2010 Hawkwatch was the number of Bald Eagles counted—30 more than in any of the previous five years, in which the total has hovered with eerie consistency between 50 and 55 birds. Beginning September 7, when six-year-old Rianna in black buckled shoes pointed to an immature eagle directly overhead and asked innocently, “Daddy, what’s that bird?” very few days passed without a good look at a Baldie—oftentimes only just above eye-level, slightly to the west of the Observatory. Most all could be accurately aged—of those, 35% were full adults, 35% were sub-adults (ages 1-4), and 30% were first-year birds. The peak migration time for this species falls in mid- to late-September, though nearly 30 eagles were recorded in October and November, most of those being full adults. An additional seven eagles, all between October 12 and October 18, passed Pack migrating *south-to-north*, an intriguing phenomenon not fully explained by current accounts of post-breeding dispersal—and only one among many reasons why first-hand observation of the fall migration is essential to our understanding of it.

**Golden Eagle Season Totals at Pack Monadnock
RMO 2005-2010**



For this chart, we've included November to show Golden Eagle movements at Pack Monadnock. The official count season ends October 31st though several counts are sometimes conducted sporadically throughout early November when Golden Eagles pass through New Hampshire.

Golden Eagle (*Aquila chrysaetos*)

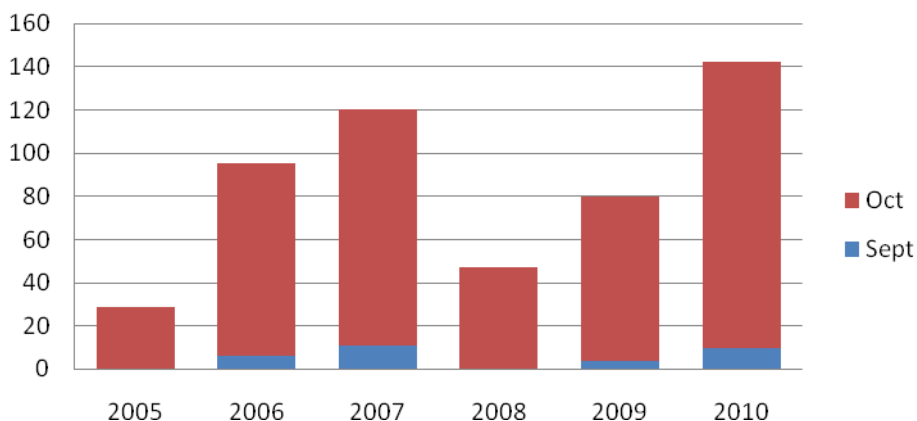
2010 Season Total: 10

Late in October, one subject, even more than wind and sky and weather, comes to the numb lips. We sigh its name the way sailors' wives speak their husbands'. But why this bird, more than another? To collectors—of stones, antiquities, baseball cards—value is in the rarity, value *is* rarity itself, and perhaps in light of that, birders may be forgiven their love of—or eagerness for—the uncommon, the unexpected, the vagrant. But something other than an acquisitive nature sends one up to the widow's walk, conjuring the horizon to produce, through some sympathetic magic, a certain mast. Why this bird? Large, yes, but hardly more than a vulture is large; beautiful, yes, but no more so than a sharpie, spreading its tail; noble, yes, but—one begins to distrust adjectives.

What one loves in birds is, at least in part, the ease with which they move. They resist the earth. The image of it happening, no matter how often, in a goose, a chickadee, a crow, becomes a kind of wing in itself, a human one. If this is true, then the nondescript brown shape you squint for over the brow of the hill, as it nears, remakes that image entirely: it's a Golden Eagle, which also resists the earth—not violently, not with a duck's spasming flight, not with the little whoosh of the chickadee taking off—but without any effort, without, seemingly, *resisting* at all. As if its very nature belonged to some other place, territory, realm, planet. One craves seeing a bird like that, in whatever form.

From Labrador, from Quebec, from as far as Greenland, the small Eastern population of the Golden Eagle wanders south, most stopping to winter in Appalachia. Of those few hundred birds, ten (five immature, five sub-adult/adult) were sighted at Pack Monadnock this year, each greeted with what one hawkwatcher called “shriek and awe.” The first, an immature on October 9, was photographed in spectacular fashion by volunteer extraordinaire Katrina Fenton. The last week of October and the first week of November is the best time to look for Goldens; this year, one bird appeared in each of the five days from October 28 to November 1. A pair of adults traveling together came through on November 6.

**Turkey Vulture Season Totals at Pack
Monadnock RMO 2005-2010**



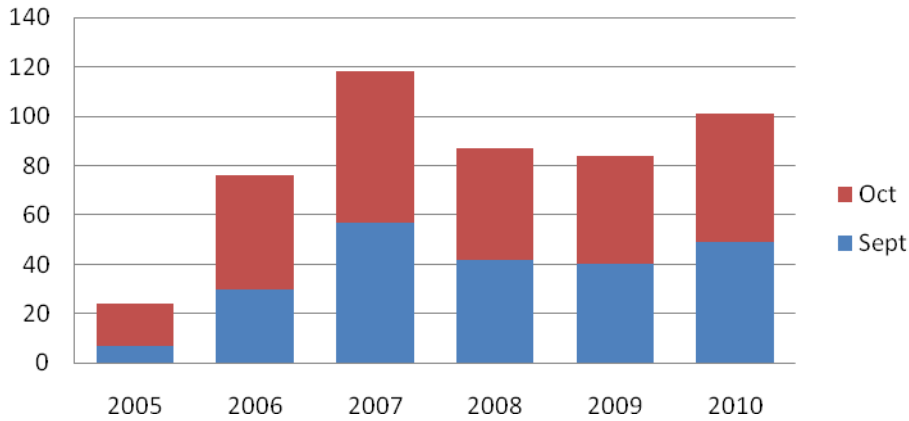
Turkey Vulture (*Cathartes aura*)

2010 Season Total: 145

A species still expanding its range to the north of us, more migrant Turkey Vultures were seen this year than in any year previous. Still, compared to the 40,000 vultures seen in a single day at some sites of similar latitude in southern Ontario, our 145 total migrants seem rather paltry. Though the bird is present in great numbers to the north, Pack Monadnock does not seem to be on a main migration route. While the characteristic silhouettes of

ten to fifteen Turkey Vultures are almost always visible sailing around Pack in September, the locals disappear at the start of October, which is the peak of their migration. (23 vultures on October 5 was the season high.) Master soarers, teetering on the stiffest winds, they have all the prowess of the raptors with whom they share the sky.

**Northern Harrier Season Totals at Pack
Monadnock RMO 2005-2010**



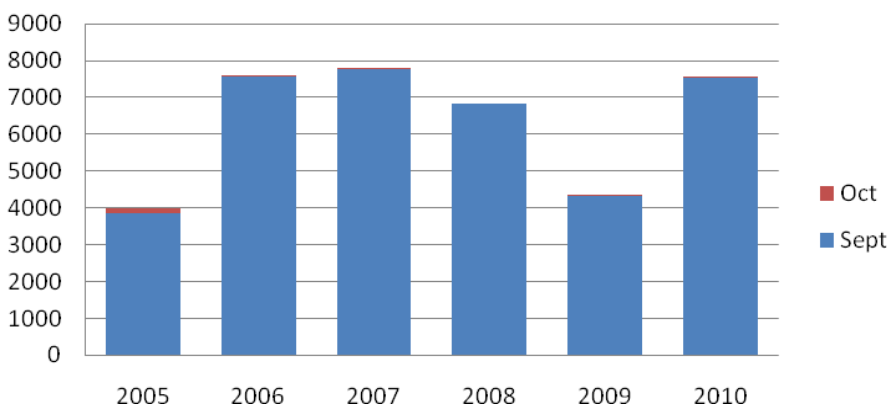
Northern Harrier (*Circus cyaneus*)

2010 Season Total: 115

However large or small the audience of hawkwatchers, sometimes a sense of the theatrical takes hold, as if every movement of bird or wind or light were choreographed for the observer’s benefit, and the landscape all the way back to Mt. Washington were simply a vast stage set. Nothing could be further from the truth: at every turn, nature shows its indifference toward the eyes trained on it. The illusion, though, is irresistible, and no less intense for being illusion. When a male Harrier suddenly swings up above the horizon, black wingtips, yellow eye glaring, and a pale glow coming off him like the sun locked behind overcast, one can’t help whispering the words “gray ghost” and, at least for a moment, believing them.

The Harrier’s migration is extremely protracted: some birds make southward movements as early as July, while many males will remain in their summer breeding territories until December. At Pack, the peak time to see them falls between mid-September and mid-October, but within that period the migration is fairly steady. A slight concentration was seen this year between October 2 and October 5, with the passing of 21 Harriers, many of them traveling in male-female pairs. The total of 115 was just shy of the 121 seen in 2007.

**Broad-winged Hawk Season Totals at Pack
Monadnock RMO 2005-2010**



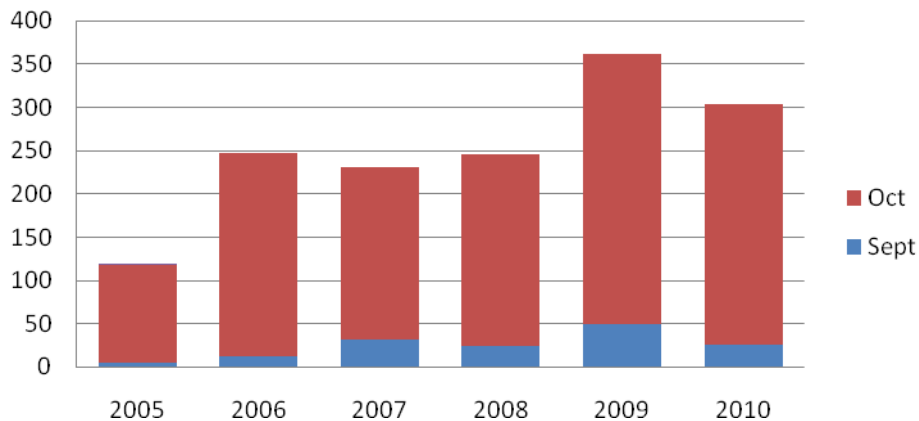
Broad-winged Hawk (*Buteo platypterus*)

2010 Season Total: 7606

Anticipation for the arrival of the Broad-wings was in the air long before they were. Despite clear weather and favorable winds throughout mid-September, the first big push of the season's most abundant migrant did not come until September 18. It came, though, in an exhilarating rush, with 3,328 Broad-wings counted in a single day, a Pack record. Weather conditions, interestingly enough, hardly suggested such a deluge: little wind, plenty of cloud-cover, and cool temperatures. The barometer, Iain MacLeod suggests, might contain part of the secret: the 18th had the highest air pressure in a ten-day span on either side of the date, and previous years' data also speaks to the importance of this factor.

The start of the big Broad-wing movement was marked, almost to the minute, by an 11:00 a.m. wedding ceremony, strangely enough, that took place on the hawkwatch platform and temporarily interrupted observation. Once the hawkwatchers assumed their positions again, however, there was superb viewing, with tight kettles of over 200 birds thermaling at low levels and naked-eye distances, against a backdrop of high clouds. The fun continued for a number of days, and a kettle of ten Broad-wings was recorded as late as October 5, bringing the year's total to 7,606 hawks, second only to the 7,776 recorded in 2007.

**Red-tailed Hawk Season Totals at Pack
Monadnock RMO 2005-2010**



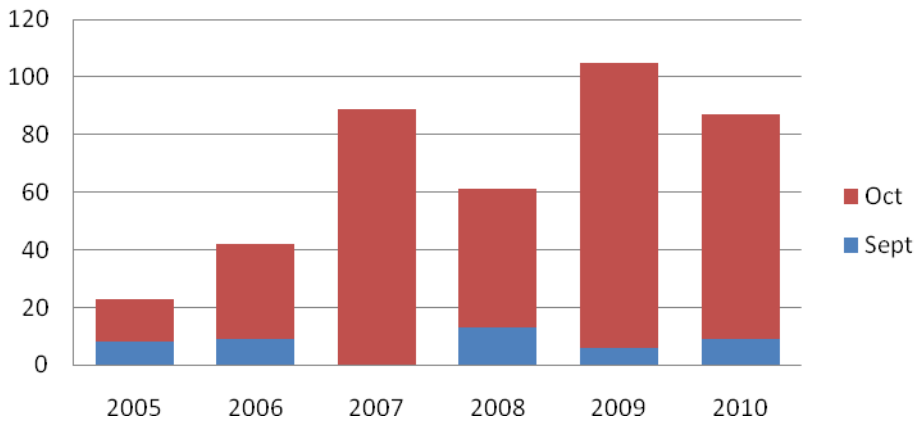
Red-tailed Hawk (*Buteo jamaicensis*)

2010 Season Total: 410

One of our most familiar and impressive hawks, the Red-tail doesn't take center-stage until October, when it is finally persuaded to make its relatively short movement southward. Before the migration, though, at least two resident pairs roamed the area, and for the last two weeks of September, one immature bird was invariably seen tagging along with an adult, as though tied to her apron strings. Although most often seen at the edges of woodland, the Red-tail is equally at home in the woods around Pack, hunting there especially in the long afternoon hours. And even for migrants, the area around the Observatory seems instantly recognizable as a prime feeding ground—frequently birds on a steady glide from the north will halt temporarily, just west or northwest of Pack, frozen in their trademark kiting position and peering down below them for red squirrels foraging in the spruce-tops.

Peak migration for the Red-tail falls at the very end of October, with a high of 50 hawks recorded on October 31. Another 100, however, were recorded in the first 11 days of November—a good reason to continue the count even after the wind starts biting and the weather takes a turn for winter.

Red-shouldered Hawk Season Totals at Pack Monadnock RMO 2005-2010

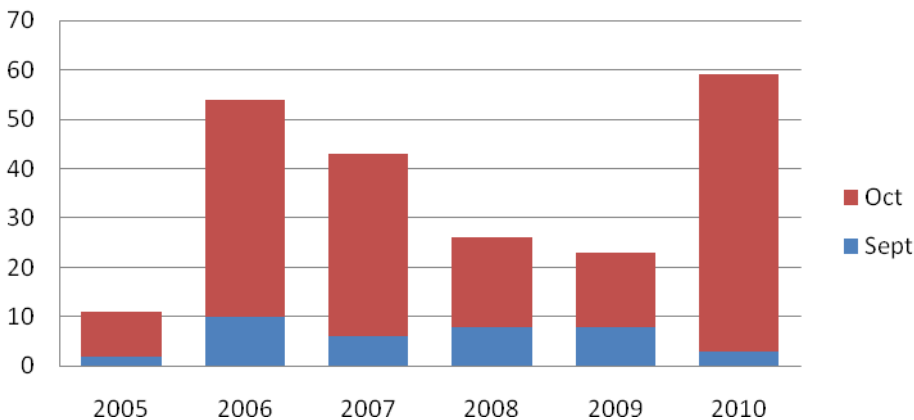


Red-shouldered Hawk (*Buteo lineatus*)

2010 Season Total: 109

A slighter, woodland Buteo, the Red-shouldered seems always to receive the most votes for Pack’s “most beautiful” bird. What this means is debatable, but scientists reared on a diet of selfless objectivity find themselves in raptures over the adult’s finely lined tail, the striking shoulders, the rusty wash on the breast, its delicate, accipiter-like build. Their flight path is often a wandering, lingering one that affords many great views, as if the bird were conscious of its star-struck audience and reluctant to leave it behind. Like other Buteos, it had a very good showing in 2010, though not a record-breaking one; this was only the third year in which the count for this species reached 100 birds. Mid-October is the best time to look for them—the peak of their migration falls slightly earlier than that of the Red-tail, its larger cousin. The best day for the species was October 13, when 12 birds were recorded. Even in September, though, local immature Red-shoulders are seen on and off, dive-bombing Ravens, other migrants, and each other.

Northern Goshawk Season Totals at Pack Monadnock RMO 2005-2010



Northern Goshawk (*Accipiter gentilis*)

2010 Season Total: 66

Pack Monadnock reaffirmed its position as one of the top sites in the Northeast to watch migrating Goshawks, with 66 of these reclusive accipiters counted this season, just short of the 68 seen in 2006. Numbers were

especially strong in the middle of October, though individuals continued to pass through well into November. The sight of an adult Gos, starkly gray-white against a backdrop of the leafless maple swamps below, forces all those bent over their spotting scopes to exhale suddenly in a low whistle.

One need not freeze to death, however, to catch a glimpse of a Goshawk. For a number of years running, local birds have been residents in the woods around the Observatory. This fall it was a young, heavily streaked female, present well into the last week of September, regularly popping up to make a circuit of the peak just before sunset like a jealous landowner conducting an inspection of her property. Whether banking around the owl decoy or chasing a Cooper's Hawk to within an inch of its life, she provided spectacular views of an uncommon raptor settled in its native habitat.

**Cooper's Hawk Season Totals at Pack
Monadnock RMO 2005-2010**



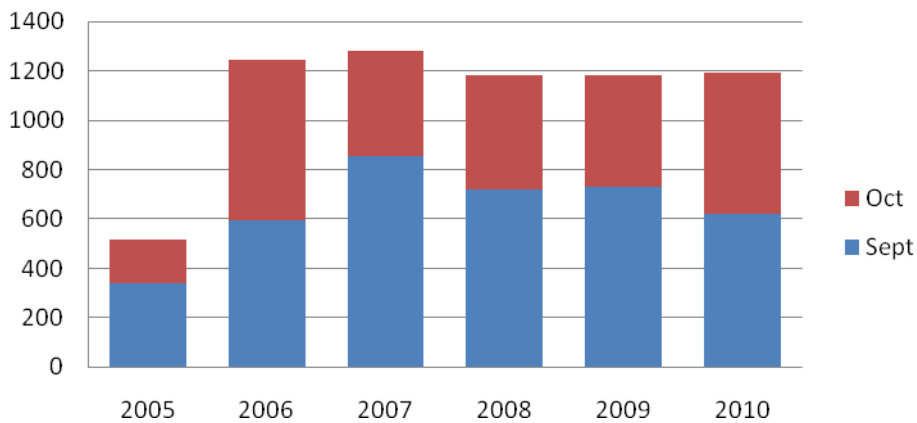
Cooper's Hawk (*Accipiter cooperii*)

2010 Season Total: 168

Though nowhere near the 212 counted in 2006, this year's 168 was a relatively high number for the Cooper's Hawk. Though the total for this species has been fairly stable here at Pack, it is on the rise in many parts of the Northeast, particularly in suburban areas, to which it has been able to adapt with success, hunting those birds that live in close proximity to human civilization, from the finches at the feeder to the pigeons in parking lots. If this single factor accounts for much of the Cooper's increase, Pack Monadnock may not see too great a rise in its own Cooper's numbers—the rate of suburban sprawl to the north of us is still relatively slow. Then, too, those city-dwelling individuals are more and more likely to stay put for the duration of the winter, having found a largely non-migratory food supply.

The migration of the Cooper's Hawk, like that of the Sharp-shinned, comes in two waves: the immature birds move first, toward late September, and the adults follow, generally in the first half of October. This year the high for the species fell on October 2, when 21 migrants were recorded.

Sharp-shinned Hawk Season Totals at Pack Monadnock RMO 2005-2010



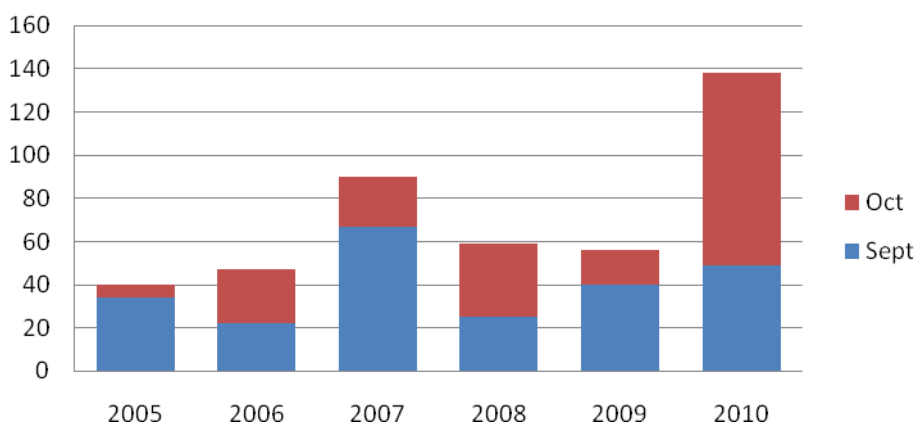
Sharp-shinned Hawk (*Accipiter striatus*)

2010 Season Total: 1248

One of our most common migrants, second only to the Broad-wing, the diminutive Sharp-shinned Hawk lacks the glamour of its larger relatives, but none of the grace. The quick wingbeat and buoyant flight seems to be nothing but tight rubber-bands underpinning a few scraps of fabric—maybe suited for mad dashes after songbirds through the woods, but hardly, it seems, for a yearly migration of many hundreds of miles to the Southern states and back again. As a result, Sharpies use all the tools at their disposal: they thermal with Buteos, or ride the updrafts off the Wapack ridge, or zip along falcon-like by hugging the spruce-tops, or use the prevailing wind to get some southward push, sometimes having to face directly into wind in order to fly sideways. While an Osprey or an eagle keeps more or less the same dignified bearing under any conditions, the full portrait of a Sharp-shinned can't be painted until the season's end, so much does each bird fit its flight to its conditions.

As with its cousin the Cooper's Hawk, the juveniles of this species precede the adults by a couple of weeks, the young birds peaking in the last ten days of September, the adults in the first ten days of October. This year the first wave reached its peak on September 15, with 78 sharpies counted; the second wave peaked on October 3, with 86 counted.

Merlin Season Totals at Pack Monadnock RMO 2005-2010



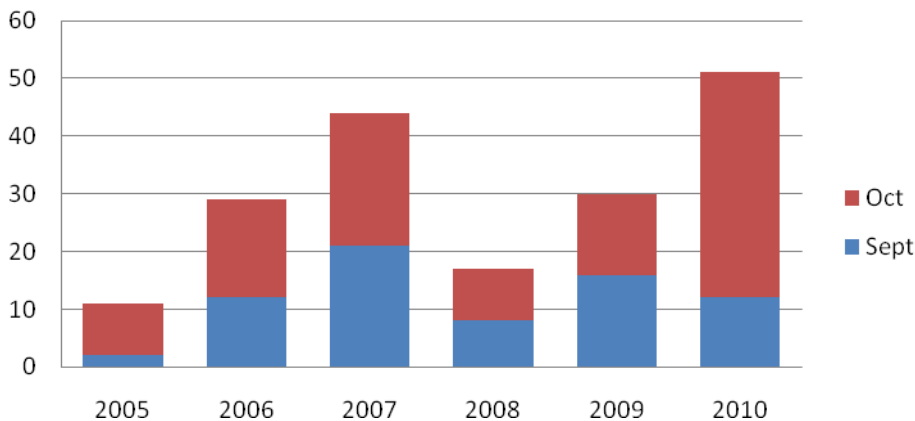
Merlin (*Falco columbarius*)

2010 Season Total: 147

For much of September, the sky around Pack was filled with dragonflies—myriad darners innocently but incessantly threading everyone’s binocular lenses. But even as the hawkwatchers cursed the confusion, these insects attracted a record number of falcons to gorge on them: as many as five Merlins at once were observed hunting, catching, and eating them on the wing. (Though to a Merlin, invariably, the presence of another Merlin proves more interesting than this relatively easy prey.) At least one adult male stopped his migration to make Pack his temporary home for eight or nine days, and others did the same for shorter periods. And since true migrants, like these temporary residents, often appear and disappear in a flash at treetop level, one of the year’s more difficult propositions was to obtain a reasonably accurate count for the species. At times there were so many Merlin sightings, a moratorium on counting any new migrants was effectively in place. This year’s final total of 147, it is safe to say, though significantly higher than that of previous years, is a conservative figure—the majority of those recorded passing in early October, well after the locals had moved on.

Arithmetic aside, this bird’s aerial maneuvers, many seen directly overhead, took plenty of breaths away. Dogfights of two and three Merlins at a time were an hourly occurrence for much of September—sleek, fearless stunt-pilots, pressing one another relentlessly, folding up till they were nothing but blue flickers of speed. From time to time, these flickers would flutter down to perch in two girdled spruces, in front of and behind the lookout platform. On more than one occasion, an immature male brought his dragonfly there and proceeded to eat, rouse, feak, preen each feather, scratch his head vigorously, rouse again, and then rest—one yellow foot balled up at the breast—the entire ritual witnessed from a mere 30 yards away. As Merlins are thriving in much of their range, we can look forward to many more of these spectacular shows.

**Peregrine Falcon Season Totals for Pack
Monadnock RMO 2005-2010**



Peregrine Falcon (*Falco peregrinus*)

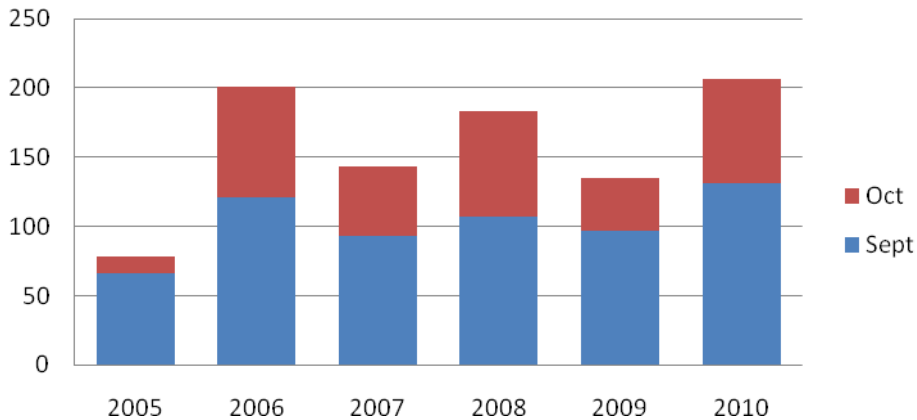
2010 Season Total: 53

As any naturalist knows, one reads the presence of a raptor in the area as much by the alarmed behavior of other birds as by feeling its shadow oneself. In the case of a Peregrine, it’s usually enough to listen to the human beings who have already spotted her: “Ay-yi-yi...Holy moly...She’s unreal...So dark...Those wings...Did you see how fast?...Whoosh...” This fall brought many opportunities for such commentary and for first-hand admiration. In August a massive adult female moseyed just thirty feet overhead, low and lazy enough to be photographed repeatedly; in early September, a tiercel held his own against five ravens, stooping on them again and again near the Observatory; while later in the month, six Peregrines shot past going flat out, separated but all within a 90-minute span. For shape, for flight, for sheer speed, few phenomena on the planet, natural or unnatural, inspire such awe.

As with the other falcons, this year brought more Peregrines than have been recorded in the past. The

first week of October is the midpoint of the bird's migration; this year, around 65% of the Peregrines seen came by between October 2 and October 13. A solid majority of those birds that could be accurately aged were adults.

American Kestrel Season Totals at Pack Monadnock RMO 2005-2010



American Kestrel (*Falco sparverius*)

2010 Season Total: 221

The smallest of our native falcons, the Kestrel enjoys plenty of motherly affection among hawkwatchers for its bright plumage and sometimes fluttery, erratic flight. When the winds sprang up this fall, though, they showed their true mettle, boring steadily southward even when it seemed, according to one observer, “their wings were about to tear off at the shoulder.”

In spite of their well-documented decline over large parts of North America in recent years, 221 Kestrels were counted this season, Pack's highest total yet. Nearly 80% of these came through between September 20 and October 4, with daily highs of 32 and 29 birds recorded on those two days, respectively. A considerably higher percentage of males were observed in the first few weeks of migration, corresponding to a higher percentage of females moving later in the season—this in contradiction to the pattern most often attested, in which female Kestrels generally precede males (Stokes and Goodrich, 1989).

Acknowledgements

The sixth season of data collection and education at Pack Monadnock could not have been achieved without the enthusiastic support of volunteers and visitors, many of whom joined New Hampshire Audubon, came to the Raptor Release, bought a raptor observatory hat or t-shirt, made a donation, helped clear brush and trees, or helped count hawks or educate the public. We are so thankful for the dedication from the local community. In addition to individual donors, who funded almost 75% of the Observatory's expenses, generous charitable gifts were made from both the Gilbert Verney Foundation and the Putnam Foundation.

Thank you to the New Hampshire Division of Parks and the staff of Miller State Park who again provided willing assistance, without which this project would not have been possible. Pack Monadnock has proven to be a great success in both raptor research and connecting people with nature, making it one of NH Audubon's most successful outreach projects.

Non-raptor Migrants

[Species given with date first seen and date last seen, and the high daily count for the species.]

Snow Goose	(<i>Chen caerulescens</i>)	[Oct. 9]	(1)
Brant	(<i>Branta bernicla</i>)	[Oct. 18-Oct. 31]	(25, 10/18)
Canada Goose	(<i>Branta canadensis</i>)	[Sept. 17-Nov. 12]	(1321, 10/9)
White-winged Scoter	(<i>Melanitta fusca</i>)	[Sept. 17-Oct. 31]	(18, 10/16)
Black Scoter	(<i>Melanitta nigra</i>)	[Sept. 21]	(10)
Common Loon	(<i>Gavia immer</i>)	[Sept. 15-Nov. 10]	(6, 10/4)
Double-crested Cormorant	(<i>Phalacrocorax auritus</i>)	[Sept. 1-Oct. 8]	(25, 10/8)
American Golden-Plover	(<i>Pluvialis dominica</i>)	[Sept. 6-Sept. 14]	(4, 9/6)
Semipalmated Plover	(<i>Charadrius semipalmatus</i>)	[Oct. 26]	(3)
Ring-billed Gull	(<i>Larus delawarensis</i>)	[Oct. 14]	(1)
Herring Gull	(<i>Larus argentatus</i>)	[Sept. 18-Nov. 6]	(16, 11/6)
Great Black-backed Gull	(<i>Larus marinus</i>)	[Sept. 10-Nov. 6]	(3, 10/26)
Common Nighthawk	(<i>Chordeiles minor</i>)	[Sept. 25]	(1)
Chimney Swift	(<i>Chaetura pelagica</i>)	[Aug. 27-Sept. 25]	(11, 9/25)
Ruby-throated Hummingbird	(<i>Archilochus colubris</i>)	[Aug. 26-Sept. 18]	(10, 8/27)
Northern Flicker	(<i>Colaptes auratus</i>)	[Aug. 25-Sept. 24]	(5, 9/24)
Olive-sided Flycatcher	(<i>Contopus cooperi</i>)	[Sept. 1]	(1)
Eastern Wood-Pewee	(<i>Contopus virens</i>)	[Aug. 24-Sept. 15]	(1)
Eastern Phoebe	(<i>Sayornis phoebe</i>)	[Sept. 13-Sept. 21]	(1)
White-eyed Vireo	(<i>Vireo griseus</i>)	[Sept. 1]	(1)
Blue-headed Vireo	(<i>Vireo solitarius</i>)	[Sept. 2-Sept. 12]	(1)
Philadelphia Vireo	(<i>Vireo philadelphicus</i>)	[Aug. 24-Sept. 9]	(2, 8/24)
Red-eyed Vireo	(<i>Vireo olivaceus</i>)	[Aug. 29-Aug. 31]	(2, 8/29)
Blue Jay	(<i>Cyanocitta cristata</i>)	[Oct. 2-Oct. 10]	(52, 10/2)
American Crow	(<i>Corvus brachyrhynchos</i>)	[Oct. 22-Nov. 10]	(114, 10/24)
Common Raven	(<i>Corvus corax</i>)	[Nov. 6-Nov. 10]	(5, 11/7)
Tree Swallow	(<i>Tachycineta bicolor</i>)	[Aug. 29-Sept. 21]	(6, 9/18)
Barn Swallow	(<i>Hirundo rustica</i>)	[Aug. 28]	(1)
Winter Wren	(<i>Troglodytes troglodytes</i>)	[Aug. 24]	(1)
Golden-crowned Kinglet	(<i>Regulus satrapa</i>)	[Aug. 25-Nov. 10]	(8, 10/26)
Ruby-crowned Kinglet	(<i>Regulus calendula</i>)	[Oct. 10-Oct. 25]	(2, 10/25)
Hermit Thrush	(<i>Catharus guttatus</i>)	[Sept. 22-Oct. 17]	(3, 10/12)
American Robin	(<i>Turdus migratorius</i>)	[Sept. 16-Oct. 30]	(4, 10/30)
American Pipit	(<i>Anthus rubescens</i>)	[Oct. 23-Nov. 2]	(6, 10/24)
Cedar Waxwing	(<i>Bombycilla cedrorum</i>)	[Aug. 29-Sept. 21]	(10, 9/5)
Blue-winged Warbler	(<i>Vermivora pinus</i>)	[Aug. 30-Oct. 3]	(1)
Tennessee Warbler	(<i>Vermivora peregrina</i>)	[Sept. 2]	(1)
Northern Parula	(<i>Parula americana</i>)	[Sept. 1]	(1)
Magnolia Warbler	(<i>Dendroica magnolia</i>)	[Aug. 29-Sept. 11]	(1)
Cape May Warbler	(<i>Dendroica tigrina</i>)	[Aug. 24-Aug. 26]	(1)
Black-throated Blue Warbler	(<i>Dendroica caerulescens</i>)	[Aug. 25-Sept. 22]	(3, 8/31)
Yellow-rumped Warbler	(<i>Dendroica coronata</i>)	[Aug. 24-Oct. 28]	(8, 10/3)

Black-throated Green Warbler	(<i>Dendroica virens</i>)	[Aug. 27-Sept. 6]	(2, 8/31)
Pine Warbler	(<i>Dendroica pinus</i>)	[Aug. 30-Sept. 26]	(1)
Palm Warbler	(<i>Dendroica palmarum</i>)	[Sept. 16-Oct. 12]	(1)
Blackpoll Warbler	(<i>Dendroica striata</i>)	[Sept. 17-Oct. 22]	(3, 10/12)
Black-and-white Warbler	(<i>Mniotilta varia</i>)	[Aug. 24-Sept. 11]	(8, 8/25)
American Redstart	(<i>Setophaga ruticilla</i>)	[Aug. 24-Aug. 25]	(2, 8/25)
Common Yellowthroat	(<i>Geothlypis trichas</i>)	[Sept. 23]	(1)
Wilson's Warbler	(<i>Wilsonia pusilla</i>)	[Sept. 17]	(1)
Fox Sparrow	(<i>Passerella iliaca</i>)	[Nov. 10]	(2)
White-throated Sparrow	(<i>Zonotrichia albicollis</i>)	[Sept. 18-Oct. 12]	(1)
Snow Bunting	(<i>Plectrophenax nivalis</i>)	[Oct. 31-Nov. 7]	(4, 10/31)
Scarlet Tanager	(<i>Piranga olivacea</i>)	[Aug. 28]	(1)
Indigo Bunting	(<i>Passerina cyanea</i>)	[Sept. 29]	(1)
Purple Finch	(<i>Carpodacus purpureus</i>)	[Sept. 2-Nov. 6]	(20, 9/2)
Pine Siskin	(<i>Spinus pinus</i>)	[Oct. 10-Nov. 10]	(15, 10/25)
American Goldfinch	(<i>Spinus tristis</i>)	[Aug. 24-Oct. 25]	(7, 9/25)
Evening Grosbeak	(<i>Coccothraustes vespertinus</i>)	[Sept. 26]	(1)

Non-migrant Sightings

[Species given with date first seen and date last seen, and the high daily count for the species.]

Chukar	(<i>Alectoris chukar</i>)	[Oct. 31]	(1)
Ruffed Grouse	(<i>Bonasa umbellus</i>)	[Oct. 31]	(1)
Wild Turkey	(<i>Meleagris gallopavo</i>)	[Sept. 17-Oct. 10]	(12, 10/10)
Mourning Dove	(<i>Zenaida macroura</i>)	[Aug. 27-Aug. 28]	(1)
Great Horned Owl	(<i>Bubo virginianus</i>)	[Oct. 10]	(1)
Downy Woodpecker	(<i>Picoides pubescens</i>)	[Aug. 28-Nov. 7]	(1)
Hairy Woodpecker	(<i>Picoides villosus</i>)	[Sept. 5-Oct. 28]	(1)
Pileated Woodpecker	(<i>Dryocopus pileatus</i>)	[Sept. 9-Oct. 30]	(1)
Common Raven	(<i>Corvus corax</i>)	[Aug. 24-Nov. 11]	(35, 10/9)
Black-capped Chickadee	(<i>Poecile atricapillus</i>)	[Aug. 24-Nov. 11]	(8, 10/8)
Tufted Titmouse	(<i>Baeolophus bicolor</i>)	[Sept. 13-Oct. 17]	(2, 10/10)
Red-breasted Nuthatch	(<i>Sitta canadensis</i>)	[Aug. 24-Oct. 12]	(5, 9/1)
White-breasted Nuthatch	(<i>Sitta carolinensis</i>)	[Aug. 31-Sept. 21]	(1)
Dark-eyed Junco	(<i>Junco hyemalis</i>)	[Aug. 24-Nov. 10]	(10, 9/21)