

Bird Observer

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HOT BIRDS



Ryan Schain, Matt Garvey, Naeem Yuseff, and Tim Factor were pleased to observe a **White-winged Dove** on the Boston Christmas Bird Count on December 21, hanging out in front of the JFK Library. Jeff Offermann was nearby and photographed it.

On Christmas Day Phil Brown celebrated by discovering a **Ross's Goose** in Ipswich.



On December 29, Mark Faherty discovered a **MacGillivray's Warbler** in Lakeville on the Taunton-Middleboro Christmas Bird Count. Lest the compiler disbelieve him, he took photos!

On December 30, Patrick Dugan and Frank Gallo discovered a **Mew Gull** at Codfish Park on Nantucket. Vern Laux reports that it is likely to be the NE Russia race that some consider a separate species, the "Kamchatka" Gull. On New Year's Day Vern Laux relocated this gull between Codfish Park and Low Beach and photographed it.



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Editorial Changes at *Bird Observer*

Marsha C. Salett, editor

As of January 2014, Paul Fitzgerald has retired as editor of *Bird Observer* after seven years at the helm of the magazine; he will remain on the editorial staff as feature editor. An associate editor for the past three years, I am looking forward to my new position as editor.

Peter W. Oehlkers took over from David M. Larson as production editor in a seamless transition last fall. David, who was production editor for 15 years, remains onboard as an associate editor and his new column, *Gleanings*, debuts with this issue.

Bird Observer editorial staff, corporate officers, and board of directors thank David and Paul for their professionalism, dedication, and the enormous amount of work they have contributed to *Bird Observer* and the birding community. The editorial staff is pleased that David and Paul have decided to stay actively involved with *Bird Observer*, and I am particularly delighted to continue to work with them.

The other major change at *Bird Observer* is that we are now available online as well as in print to our subscribers. All six of the 2013 issues are online, as is the current February 2014 issue. Future issues will be posted regularly and older issues will eventually be added.



Bird Observer

A bimonthly journal—to enhance understanding, observation, and enjoyment of birds
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Birding the Taunton River and Environs of Bristol County, Massachusetts

Jim Sweeney

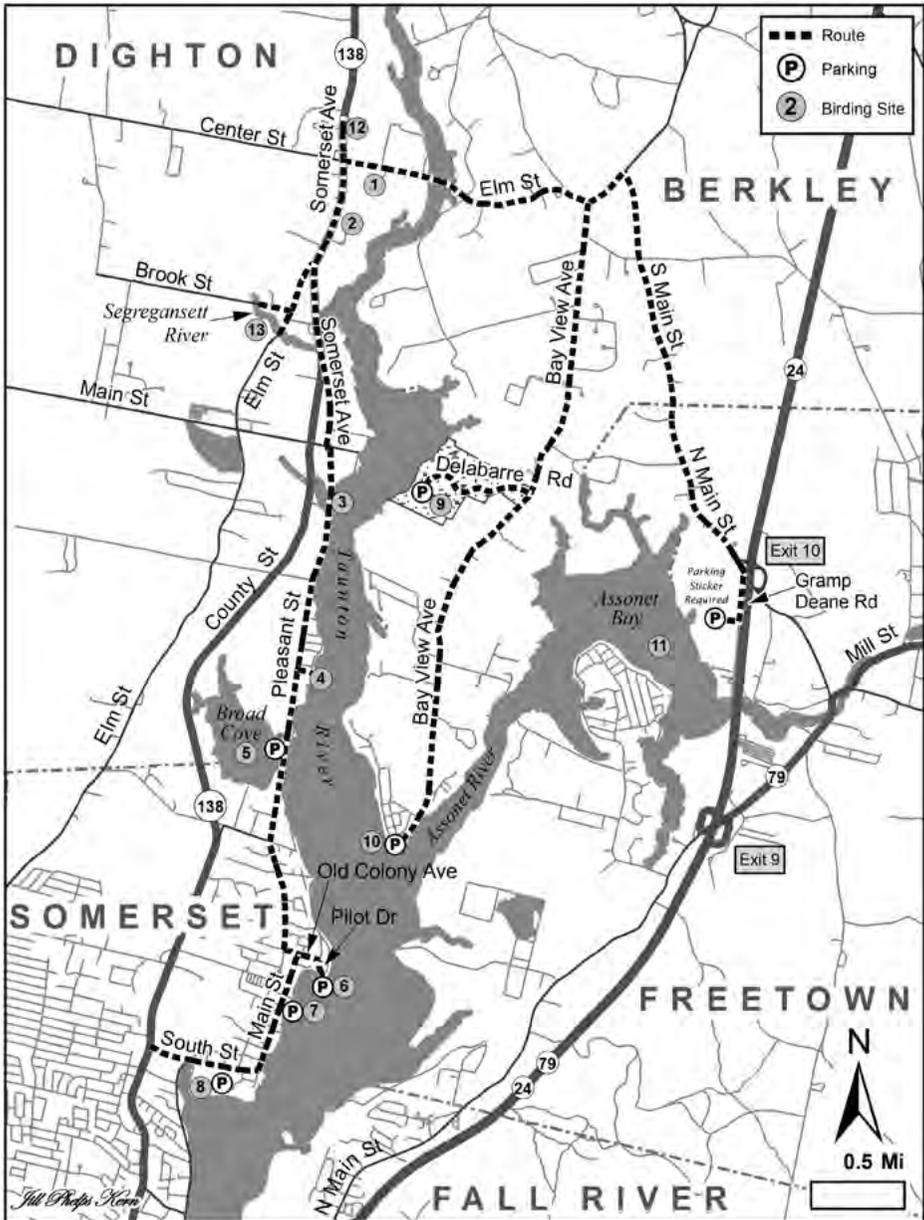
Located in the eastern portion of Bristol County, the Taunton River drains more than 300 square miles of southeastern Massachusetts. The watershed extends from the city of Attleboro in the west to the towns of Plymouth and Carver in the east. The southern boundary of the watershed is the city of Fall River where the estuary joins Mount Hope Bay, an easterly extension of Narragansett Bay, Rhode Island. The northern border lies in the communities of Stoughton and Avon. In this region, a complex of hills and ridges—some reaching an elevation of 200 feet—separates the Taunton River drainage from the watersheds of the Neponset and North rivers. The southeastern portion of the watershed includes the Lakeville ponds in western Plymouth County. Within this complex of ponds lies Assawompset Pond, the largest natural freshwater pond in the commonwealth (Johnson and Raup 1947).



The Taunton River, whose headwaters are located at the confluence of the Town and Matfield rivers in Bridgewater, flows south for approximately forty miles. The lower portions of the river are tidal and the head of the tide is in the vicinity of Taunton, about fifteen miles north of the mouth of the estuary in Fall River. This low-gradient river continues south of Fall River into Mount Hope Bay and eventually empties into Narragansett Bay. The waters of Mount Hope Bay flow into the ocean via the Sakonnet River, a saltwater sound between Aquidneck Island and the towns of Tiverton and Little Compton in Rhode Island. Typical habitats found in the areas discussed in this article include pine/oak forest, red maple and Atlantic white cedar swamps, agricultural fields, riverine cattail marshes, and spring-fed brooks.

Early colonial accounts sometimes referred to the Taunton River as the Great or Titicut River. The river and its tributaries (Segregansett, Three Mile, and Assonet rivers) saw heavy use by Native Americans in prehistoric times. There are many archaeological sites in this region, two of which warrant specific mention. The Grassy Island site, northwest of Dighton Rock State Park in Berkley, has been studied extensively. Dr. Edmund Burke Delabarre initially excavated the site in 1925. In the 1940s, Frederick Johnson and Hugh Raup re-excavated the site and conducted a botanical study of the island.

Dr. Delabarre produced many articles on the topic of Dighton Rock, a large rock formerly located close to the eastern shore of the river in Berkley. Dighton Rock, which is now housed in a museum close to its original location, has been the subject of much speculation, as it contains a number of mysterious inscriptions that have puzzled observers since it was first described by Reverend John Danforth in 1680.



Several theories have been advanced regarding the origin of the inscriptions, but most contemporary accounts have given credence to a Native American provenance. Another Native American site known as Sweet's Knoll is located on the west side of the river in Dighton. The site was excavated in the 1950s, and the Massachusetts Archaeological Society published a detailed report of the artifacts that were found.

Fifteen miles upstream, the city of Taunton—the river's namesake—was an important industrial center from the mid-18th to the early 20th century. The city and the smaller communities downriver relied on the river as a significant means of transportation. According to William Hanna's *A History of Taunton, Massachusetts*, Ebenezer Stetson owned a yard in Dighton that produced ships for commerce with the West Indies, and John Reed built ships at Muddy Cove, a section of Dighton, as early as the 1750s.

By 1820, there were twenty sloops (single-masted vessels under forty tons) docked at the Weir section of Taunton. Between 1870 and 1910, there were more than one hundred vessels in Taunton. However, only about a dozen of these vessels could navigate the river as far north as the area Tauntonians still call "the Weir." The larger ships had to unload in the towns of Somerset and Dighton and cargoes such as coal and grain were transported upstream on barges or small ships called lighters.

In April 2009, the river received a federal designation as a Wild and Scenic River through the efforts of the Taunton River Watershed Alliance. Though the river has ceased to be an important contributor to the area's remaining industry, it is still a popular recreational site for fishing, boating, kayaking, and canoe club trips.

This article is an all-season guide to birding sites on the Taunton River and environs. Its main focus is on fall and winter, since these tend to be the most productive times for birding. The article concentrates on sites on the west side of the river because the west side has easier access and superior views of the water. However, several sites on the east side are included because they offer views of the river that are not accessible from the west, or they consistently produce bird sightings of interest.

1. Bristol County Agricultural High School Fields

To access the agricultural school fields from Route 138 (Somerset Avenue) in Dighton, travel east on Center Street for 0.2 mile to the Bristol County Agricultural High School. These fields usually contain large numbers of Canada Geese and Ring-billed Gulls throughout the fall, winter, and early spring. Snow Geese have been observed here occasionally and in November 2012 three Cackling Geese were present among the Canada Geese. Be sure to scope the small pond in the eastern third of the field for Hooded Mergansers during fall migration. Scoping from the road may also yield sightings of Horned Larks, Snow Buntings, and, during milder winters, lingering American Pipits. Bald Eagles and Peregrine Falcons have been observed during the Taunton/Middleboro CBC. A careful check of the weedy mounds near the road may reveal American Tree and Savannah sparrows. The extensive narrow-leaved cattail marsh at the edge of the Taunton River is home to several pairs of breeding Marsh Wrens. Sometimes these birds are found there in early winter along with a few Swamp



Taunton River from Sweet's Knoll State Park. (All photographs by Jim Sweeney).

Sparrows. In the summer, look for breeding Ospreys on the conspicuous nesting platforms at the edges of the fields. Listen for Green Herons as they fly along the river emitting their hoarse calls.

The high school campus is home to the Bristol County Natural History Center. This museum contains an impressive exhibit of bird skins and other artifacts that belonged to renowned ornithologist Arthur Cleveland Bent of Taunton. For information about hours of operation or to schedule an appointment to visit the museum, use the following link: <<http://www.tauntonriver.org/museums.htm>>.

2. Sweet's Knoll

From the Bristol County Agricultural High School fields, return west on Center Street to Route 138. Take a left on Route 138, continue for 0.3 mile, and look for the sign for Sweet's Knoll State Park on the left (the address is 1387 Somerset Avenue). This 56-acre property in Dighton was formerly a private residence and subsequently donated to the Commonwealth of Massachusetts. Pull into the driveway of the former residence, look for the trail in the field that lies directly ahead, and follow it through the field to the edge of the Taunton River. Sweet's Knoll is on the northeast side of the property and close to the river. As previously noted, Sweet's Knoll is a Native American site that was excavated in the 1950s. At the southeast corner of the knoll you will find a trail that leads to the top. The brief hike affords a nice view of the river below. The pine/oak forest on the knoll is a good place to look for Brown Creepers and

Golden-crowned Kinglets in fall and winter. The thickets at the edges of the fields often hold semi-hardy lingering species such as Ruby-crowned Kinglets, Hermit Thrushes, Gray Catbirds, and Eastern Towhees in winter. Birding here may also reveal Eastern Bluebirds, American Tree and Fox sparrows, and flocks of Dark-eyed Juncos. Check the river for Buffleheads, Common Goldeneyes, and Belted Kingfishers throughout the fall and winter months. Cooper's and Red-shouldered hawks are also regularly observed in this area.

3. Muddy Cove

After visiting Sweet's Knoll, return to Route 138 and travel south for 0.7 mile to a fork in the road. Take the left fork to stay on Somerset Avenue—and away from Route 138, which becomes County Street at this point. Continue 0.4 mile through the junction with Main Street and take a slight left to get onto Pleasant Street. Drive 0.3 mile south on Pleasant Street, then take a left onto Water Street and look for Tricentennial Park immediately on the right and close to the river. Park in the small lot and scan the river. This section has been reliable for Barrow's Goldeneyes over the past decade or so. In addition, look for Buffleheads, Common Goldeneyes, and both Red-breasted and Hooded mergansers in fall and winter. Occasional Canvasbacks are observed from this point, especially in mid-March. In the past this section of the river—and points up to several miles south—served as a major wintering area for Canvasbacks and Greater Scaup. High counts of several thousand birds were recorded for both species during the period 1975–1981 (Veit and Petersen 1993).

Greater Scaup can still be observed farther downriver today, but high counts of several hundred birds are more typical now. Be sure to check groups of American Black Ducks that are often tucked up against the shore on the opposite side of the river, since Gadwalls and American Wigeon have sometimes been found associating with this species, especially after a cold snap has pushed ducks off the frozen interior ponds nearby.

Another productive area to check from this vantage is Grassy Island, northeast of Muddy Cove and closer to the opposite side of the river in Berkley. This small island is exposed during low tide and is occupied by large numbers of gulls late in the afternoon prior to their return to unknown roosting sites. Although most of the gulls that congregate here are Herring and Ring-billed, in the past few years the island has hosted multiple Iceland Gulls. Bald Eagles have also been spotted here in winter, so carefully scan the trees on the opposite shore.

4. Dighton Boat Launch Area

Return to Pleasant Street, continue south for 0.9 mile, and look for the aptly named Boat Launch Road on the left. Take a left and drive a short distance to the boat launching area. In the spring, the flooded sections surrounding the base of the Osprey nesting platform sometimes have American Wigeon dabbling among the more numerous American Black Ducks and Mallards. The river may also host large numbers of Greater Scaup with a few Lesser Scaup mixed in. Other species to look for

are Common and Red-throated loons. The latter is rare this far upriver, but has been observed on the CBC a few times over the past decade.

Northeast of the boat ramp, a large rock protrudes from the surface of the river that is frequently used by resting gulls in fall and winter. Check for Lesser Black-backed and Iceland gulls on or around the rock since both of these species have been observed here in the past. Buffleheads and Red-breasted Mergansers are also regular in the same seasons.

5. Broad Cove

Located on the Dighton–Somerset border, Broad Cove is one of the most productive birding areas on the Taunton River. To reach Broad Cove, continue south on Pleasant Street for 0.5 mile. Look for a small dirt parking area on the right. At the north end of the parking area, a path leads through a small wooded area with thickets extending out to Broad Cove. Check these thickets for White-throated Sparrows and Gray Catbirds in the winter. Yellow-rumped Warblers are often abundant in fall and winter. After checking the thickets, continue along the path to the edge of the cove. The weedy areas near the shore may hold a variety of sparrows during fall migration. Buffleheads and Common Goldeneyes may be the most common species here in fall and winter, but look for Barrow's Goldeneyes and Common and Hooded mergansers. This spot is also a good place to look for lingering Ruddy Ducks and Pied-billed Grebes in early winter. In early spring, kettles of Turkey Vultures regularly teeter overhead. Red-tailed Hawks are common around the perimeter of Broad Cove; Merlins and Peregrine Falcons sometimes appear closer to the river.

Before leaving, look at the river from the parking area. Concentrations of several hundred Greater Scaup are routinely observed here in the winter. Sometimes American Wigeon are pressed up against the rocks along shore just south of the parking area. Interestingly, about one mile south of Broad Cove in the vicinity of the junction of Pleasant Street and Fisher Way, a small colony of Monk Parakeets nested until about ten years ago.

6. Mallard Point

From Broad Cove, continue south on Pleasant Street for 1.3 miles and take a left onto Old Colony Avenue. Continue for 0.1 mile and take a right onto Pilot Drive. Proceed about 100 yards on Pilot Drive and park in the small lot at the trailhead for Mallard Point in Somerset. Part of the trail is the remnant of a train bridge that formerly crossed the river. Walk the trail and check the thickets for White-throated Sparrows and flocks of American Robins in winter. The end of the trail provides a decent view of the river. If the river is frozen, large numbers of gulls may be visible from this point. A careful check of any patches of open water on the frozen river will likely produce sightings of Greater Scaup, Buffleheads, and Common Goldeneyes. This area is another good place to look for Bald Eagles in winter.

7. Somerset Waterfront Park

To reach the park, backtrack on Pilot Drive and take a left on Old Colony Avenue. Travel on Old Colony Avenue for 0.1 mile and take a left onto Main Street. Continue for 0.3 mile and look for the entrance to Somerset Waterfront Park on the left. Continue down the access road to the parking lot at the edge of the river. This is one of the most reliable places on the river to find large numbers of gulls. The most common species here is Ring-billed, but it is worth checking the flocks for something more unusual such as Iceland, Lesser Black-backed, or Glaucous gulls. A short walk to the southeast corner of the park may result in sightings of Gadwalls, American Wigeon, and Northern Pintails. In the winter, these birds are often pressed tightly against the shore and easily viewed without the aid of a spotting scope. In the winter of 2011, a harbor seal was seen here. Although this mammal is rarely observed on the Taunton River, it has been reported as far upriver as Middleboro and Bridgewater.



Gadwall.

8. Pierce Beach

Return to Main Street and continue south for 0.2 mile and take a right onto South Street. Continue on South Street for another 0.2 mile and take a left into the Pierce Beach Playground. Follow the entrance road to the parking area, but travel slowly and scan the stream on the right for dabbling ducks. From the first parking area, take the short walk south to the beach. The elevation here offers a nice view of the river. Continue down toward the southwest corner of the beach and check the area where the stream flows into the Taunton River. Some years, impressive concentrations of

Mallards and American Black Ducks can be found here. In addition, this is a reliable location for wintering American Wigeon. It is also a good place to look for occasional scoters, Long-tailed Ducks, Common Loons, Red-throated Loons (rare), and Horned Grebes. The highest section of the park, east of the parking areas and playground, contains many autumn olive trees, which sometimes teem with migrant American Robins in the fall. Look for migrant Fox and White-throated sparrows and Eastern Towhees picking through the leaf litter below. Any of the open areas in the park may hold migrants like American Pipits and Savannah Sparrows in mid-April.

9. Dighton Rock State Park

Situated on the east side of the Taunton River, Dighton Rock State Park is an 85-acre property in the town of Berkley (the site of the park was formerly a part of Dighton). To reach this park, go east on Center Street from the Bristol County Agricultural High School. Continue 0.7 mile, crossing the Berkley Bridge, and take a right onto Bay View Road. Then travel 1.5 miles to the entrance of the park on the right. Follow the entrance road (Edmund B. Delabarre Road) to the parking lot. The park has a number of interesting habitats including red maple swamp, cattail marsh, and dense thickets. Most of the habitat is white pine/red oak forest; several trails meander through this common habitat of southeastern Massachusetts. Listen and look here for Hairy Woodpeckers, Northern Flickers, Brown Creepers, and Winter Wrens in the winter. Hermit Thrushes may also be found in the thickets and the tangles at the edges of red maple swamps. In spring and summer, the forested areas in the park contain Red-bellied Woodpeckers, Eastern Wood-Pewees, Eastern Phoebes, Great Crested Flycatchers, Pine Warblers, and other common woodland breeding species.

A walk from the parking area toward the river may be rewarded with sightings of Belted Kingfishers, Eastern Kingbirds, Warbling Vireos, Eastern Bluebirds, and Baltimore Orioles in summer. The small white building at the northwest corner of the park is the Dighton Rock Museum, open by appointment only from Memorial Day through Labor Day. To schedule a visit, call 508-644-5522. Many of the waterfowl described for Muddy Cove (across the river) may be observed from this park in winter. However, the park offers a better view of Grassy Island to the north as well as points north and west on the river that cannot be viewed from the opposite shore.

10. Assonet Neck

After birding Dighton Rock State Park, return to Bay View Avenue and continue south 2.0 miles to a small parking area at the confluence of the Taunton and Assonet rivers. The beach just south of the parking area is a great place to look for ducks and raptors in the winter. In 2003, a Forster's Tern was observed near this location during the Taunton/Middleboro CBC. After viewing the river, explore the side roads running east and west of Bay View Avenue as far north as the entrance to Dighton Rock State Park. Assonet Neck is reliable for early-winter lingering species such as Yellow-bellied Sapsuckers, Pine Warblers, Chipping Sparrows, and Rusty Blackbirds (look for the



Taunton River from Assonet Neck.

latter species in patches of wooded swamp habitat). Thickets in this area also warrant a look since Hermit Thrushes, Gray Catbirds, and Eastern Towhees may be present.

11. Assonet Bay

To reach Assonet Bay in the town of Freetown, travel north on Bay View Avenue to the junction of Elm Street. Take a right on Elm Street, continue for 0.2 mile, and take a right on South Main Street. Continue for 2.2 miles and look for Gramp Deane Road on the right. Take a right on Gramp Deane Road. From the road, check the field on the right for Rough-legged Hawks and Northern Shrikes. The field, which abuts the northeast shore of Assonet Bay, sometimes has large flocks of Canada Geese in fall, winter, and early spring.

Continue on Gramp Deane Road for 0.2 mile and look for the sign for the Freetown Conservation Area, which is also known as Porter Pasture. Nonresidents of Freetown must purchase a sticker for a nominal fee at the town hall (3 North Main Street, Assonet) in order to access the area. Take a right onto the dirt entrance road and continue through a wooded area to a small dirt parking lot on the right. A short walk toward the water will reveal an unobstructed view of Assonet Bay. This is a reliable area to see large numbers of migrant Common Mergansers in the fall. Look for ducks, geese, and raptors from the shore, and listen for Belted Kingfishers and flocks of wintering sparrows such as American Tree Sparrows and Dark-eyed Juncos. An immature Golden Eagle was sighted here during the Taunton/Middleboro CBC in 2011.



Bald Eagle.

Additional Areas

The following areas are not included in the suggested route because they are brief stops and most productive during the winter months only. Where there are no public trails, it is best to observe birds from the road.

12. Dighton Town Offices

This site is located on Somerset Avenue (Route 138) just 0.1 mile north of the intersection with Center Street. On the east side of the public walking track behind the town offices, check the thickets and a small marshy area. These areas, and the grassy patches nearby, have consistently hosted species such as Winter Wrens, Eastern Bluebirds, and Chipping, Fox, and Swamp sparrows in winter.

13. Brook and Elm streets

From the Dighton town offices, continue south for 0.6 mile and bear right onto Elm Street. Proceed for another 0.4 mile and take a right onto Brook Street. Travel on Brook Street as far as the Segregansett River. The wooded areas on either side of the street are good for Rusty Blackbirds. Sometimes large flocks of American Robins are also present. Continuing west a short distance will lead to a series of small agricultural fields. These fields have occasionally produced Red-winged Blackbirds and Common Grackles in midwinter.

Retrace the route back to Elm Street and drive south to the bridge over the Segregansett River. Park before the bridge and check the marshes and trees at the edge of the river. Swamp Sparrows are frequently heard and observed in the cattails in winter. Red-bellied Woodpeckers and Northern Flickers are regularly observed in the trees nearby. Look for ducks on this section of the river and be sure to check the thickets on the northwest side of the road for a variety of sparrows and semi-hardy lingering species such as Ruby-crowned Kinglets, Gray Catbirds, and Eastern Towhees.

In summer, listen for the hypnotic rising and falling song of the Yellow-throated Vireo emanating from the tops of large deciduous trees growing near the river. This species has had an incredible resurgence in the Taunton River watershed in the thirty years that have elapsed between publication of the Massachusetts Breeding Bird Atlas I in the 1970s and the Breeding Bird Atlas II that was completed in 2011. 🦉

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Jim Sweeney, of Providence, Rhode Island, has been an avid birder since 1980 and has birded extensively in New England, the mid-Atlantic states, the American Southwest desert, and Iceland. He has been fortunate to pursue his ornithological interests from the highlands of Central America to sub-Saharan Africa. Jim is a past vice-president of the South Shore Bird Club and has recently served as a council member for the Nuttall Ornithological Club. He has also been the compiler for the Taunton/Middleboro Christmas Bird Count since 2007. In addition to birds, he has a passion for dragonflies and damselflies. Jim thanks Wayne Petersen for reviewing early drafts of this article and for his many helpful comments.



RING-NECKED DUCKS BY JIM SWEENEY

Ernst Mayr: Building on Charles Darwin's Legacy in the Twentieth Century

William E. Davis, Jr.

Ernst Mayr is one of the leading evolutionary biologists of the twentieth century (Bock 1994, Diamond 2005). During the latter part of his career, he became prominent in the fields of history and philosophy of biology (Haffer 2007). In his nearly 101 years of life, he published more than 825 scientific notes, articles, and reviews, and 25 books—a prodigious accomplishment (Haffer 2005). Despite his prominence in several areas of biology, Mayr remained fundamentally a naturalist with a special interest in ornithology. It has been argued that his broadly based interest in the natural world allowed him to achieve so much (Bock 1994, Lein 2005). As Walter Bock, one of Mayr's students at Harvard and one of his biographers, states:

Absolutely fundamental to Mayr's entire career and to all his work in systematics, evolution and philosophy is the fact that he is first and foremost a naturalist and, within his interest in natural history, an ornithologist. (Bock 1994)

Another interesting aspect of Mayr's career was the series of chance events that enormously affected the trajectory of his life. The effect of these events on the career of Ernst Mayr was important (Bock 2004, Haffer 2007), but more important was his ability to capitalize on such events and use them to his advantage.

Mayr's early years—the die is cast

Ernst Mayr was born on July 5, 1904, in Bavaria, Germany to parents who had strong interests in natural history and who got young Ernst off to a flying start:

I have been a naturalist, I would say, ever since I could walk. My parents were very much interested in nature and took me and my two brothers out to watch birds, to collect fossils, to find spring flowers and everything else. So I ardently followed all of these things, but particularly birds. (Mayr 1993)

By his early teens, Mayr could identify all the local birds by sight and vocalizations. The family moved to Dresden where Ernst completed his secondary school training and received a new pair of binoculars as a graduation gift. That month, March 1923, he observed a pair of Red-crested Pochards (*Netta rufina*), a rare species in Germany at that time (Bock 2004). If Mayr's recollections were correct, this sighting had enormous consequences, because it led to an introduction to Erwin Stresemann at the Natural History Museum of Humboldt University in Berlin. Mayr, following family tradition, had decided to enter medical school and had chosen the University of Greifswald in northeastern Germany because it was located in a region

of ornithological interest. On his way to the university, he stopped in Berlin with a letter of introduction to Stresemann, and reported his sighting of the rare pochards. Stresemann was apparently impressed by the young Mayr, because he encouraged the publication of the pochard sighting—Mayr’s first publication (Mayr 1923)—and invited Mayr to work as a volunteer at the museum during his holidays. Mayr did spend his school holidays working at the museum: “It was as if someone had given me the key to heaven” (Mayr, quoted in Bock 2004). Two years later, when Mayr finished the preclinical part of medical school, Stresemann talked Mayr into changing careers by capitalizing on Mayr’s ornithological interests and promising to arrange an ornithological expedition for him when he finished his schooling. So Mayr moved to Berlin and began a Ph.D. with Stresemann. In a veritable binge of effort, Mayr completed his coursework and his dissertation in just 16 months at age 21—Ernst Mayr was no slouch, and obviously a bright young guy. Stresemann immediately offered him a job as an assistant in his museum, which Mayr accepted.

Mayr in the field: New Guinea and the Solomon Islands

Stresemann made good on his promise to arrange an expedition for the young ornithologist. When Lord Walter Rothschild, with his huge private collection of bird skins in Tring, England; Ernst Hartert, curator of Rothschild’s collection; Leonard C. Sanford, a patron of the Department of Ornithology at the American Museum of Natural History (AMNH) in New York; and Stresemann were mulling over plans to send a collecting expedition to the South Seas with a focus on New Guinea, Stresemann suggested that Ernst Mayr be the collector (LeCroy 2005). After being introduced to Lord Rothschild at the International Congress of Zoology in 1927, Mayr went to Tring to learn New Guinea birds and to plan the trip. He discussed his motivation and his plan in a 1985 interview:

I’m sometimes asked, what really was my research plan when I went out to New Guinea in 1928. To be frank, when I went out there I had very little by way of a plan. My imagination had been fired by the description of the wonders of the tropics in the writings of Alexander von Humboldt, Darwin, and Alfred Russel Wallace. I was only 23 years old at the time, and to have a similar experience seemed the most desirable of all possible goals. (Mayr 1985a)

Mayr once commented that Stresemann had told Rothschild that Mayr was an experienced collector and the perfect man for the New Guinea job. Mayr had to quickly learn the techniques of specimen preparation, something he had not done before. He was still amused by Stresemann’s tactics many decades later (R. Lockwood, pers.com.).

Mayr arrived in western New Guinea (then Netherlands New Guinea) in April 1928 and collected in a series of mountain ranges and lowlands until December. He then shifted his efforts to what is now Papua New Guinea, collecting until the end of May 1929.



Ernst Mayr (right) in New Guinea in 1928.

(All photographs courtesy of the author, William E. Davis, Jr.)

The conditions under which he worked were harsh. In an interview when asked, “How did you do it?” he replied:

I’ve wondered myself. I was 23 years old when I went out there. And I tackled one job after another for which I was not qualified. I had a self-confidence that was scandalous. I didn’t appreciate all the dangers and things that could go wrong....[there was no direct way get from Netherlands New Guinea to Papua New Guinea] And I said “I’m going to just walk over there

and take canoes or something like that.” Every person said: “You can’t do it. The natives are not friendly and you will have trouble...and you will definitely perish.” I just didn’t listen, and I nearly *did* perish! But I finally did talk my way through. (Dreifus 2002)

While working in New Guinea, Mayr received an invitation to join the Whitney South Sea Expedition of the American Museum of Natural History. He joined the expedition in the Solomon Islands in July 1929, and stayed with it until February 1930 (LeCroy 2005).

The Whitney South Sea Expedition had begun in 1920 and would continue until the outbreak of World War II. It was probably the most extensive series of ornithological expeditions ever undertaken (Lanyon 1995). As a result, the AMNH’s collection continued to swell. Under pressure to hurry along the publication of the studies of the collection to please Harry Payne Whitney, who bankrolled the Expedition, the directors brought Mayr to the AMNH for a year to produce systematic papers (such as naming new species and subspecies) as he worked up the collections. Thus, with Stresemann’s approval, Mayr became a Visiting Research Associate in the Department of Ornithology of the AMNH in 1931. During that year, Mayr—with his usual enormous energy—published six papers on the Whitney collection in the *American Museum Novitates* series (e.g., Mayr 1931) and six other papers, naming 12 new bird species and 68 new subspecies (Bock 2004).

Then an event occurred that changed Mayr’s status at the AMNH. Lord Rothschild, having been blackmailed by a mistress for a number of years, was in financial difficulty. To raise money, he decided to sell his prodigious collection of stuffed birds, the largest private collection in the world. The British Museum failed to raise the money, so Rothschild contacted his friend Leonard Sanford of the AMNH, who turned to Gertrude Vanderbilt Whitney for the funds. The collection of 280,000 bird specimens became AMNH property in early 1932 (LeCroy 2005). With the acquisition of the Rothschild collection, the task of moving the AMNH’s vast collections into the new Whitney Wing that was to house the ornithology collections became an even more laborious undertaking. The museum hired Ernst Mayr on a permanent basis as Associate Curator of Birds to help with the workload and to oversee the handling of the land bird portion of the Rothschild collection. Later, he became responsible for the development of the Sanford Hall of the Biology of Birds—another time-consuming responsibility. By 1935, Mayr had become the Whitney-Rothschild Curator, and by 1944, a full Curator— and the dominant force in the AMNH Department of Ornithology (Lanyon 1995).

When Ernst Mayr came to the United States in 1931, he was not pleased with the state of ornithology that he found here. And he was never one to shy away from expressing his thoughts on a subject. I interviewed Mayr in connection with projects of the Nuttall Ornithological Club (Davis 1987) and for a project on the history of North American ornithology with Jerry Jackson. In a 1996 interview with me, Mayr compared the study of ornithology in Europe and the United States when he arrived:

...In England there were observers, people like [Edmund] Selous and Eliot Howard who really studied birds in the field. Julian Huxley made observations in the 1920s of the Great Crested Grebe.... That sort of study was virtually unknown in the United States. If there was one thing American birdwatchers never did, it was to *watch* a bird. As soon as it was checked off the list, on they went. I always tell the story of once going on a so-called Big Day in New Jersey. We went to the Troy Marshes, and it was in early April. The marsh vegetation was still very low, and there was an American Bittern a short distance away. We were on a long dike, a party of about 20 of us...I saw this bittern displaying and I was absolutely fascinated. They just checked off "bittern" and went on. I knew that they had to come back the same way, so I just sat there for half an hour watching the bitterns and taking notes on their courtship. The others came back and they had in the meantime added another seven species to their list. They were happy and I was happy!

Clearly, Mayr was not a lister in the usual sense and didn't think birdwatching of that type was of much value. I also asked him about the American Ornithologists Union (AOU) in 1931 and got an even harsher reply:

I attended my first AOU meeting in 1931 in Detroit...I was appalled at the program. There was title after title like "A First Record of the Green-tailed something-or-other from Oklahoma," or "An Early Arrival Date for the Dickcissel for the State of Missouri"—all sort of phenology or arrival or departure of rare birds.... There was hardly a paper in the whole lot that dealt with the details of a life history study, a courtship display, anything like that....I was appalled and I remember at that meeting that I was so disgusted with the absolute vacuousness of the papers that I went over to the library of the Museum of Zoology in Ann Arbor to read the current literature. There was one other person there, a lady, and I introduced myself. She had a name tag on so I knew she was a member of the AOU. It was Mrs. [Margaret Morse] Nice. That's where I first met her. She had had the same experience. Appalled at the emptiness of the program, she also went to the library.

As it turned out, Mayr became the Editor for the *Proceedings* and *Transactions* of the Linnaean Society of New York and was influential in publishing the Song Sparrow monographs of Margaret Morse Nice (1937, 1943), which are considered by many to be the finest life history studies ever published in the United States.

In the early 1930s, the AOU was run by fellows who were aging and had little or no academic background. The young Ph.D.s generally felt that the older generation had lost touch with modern ornithological methods and it was time for a change. Mayr joined Herbert Friedmann and other more progressive ornithologists in an attempt to reform the AOU. In 1937, Mayr pushed to get a series of amendments to the AOU constitution and bylaws. Most of his proposals were rejected by the conservative organization, but Mayr and Margaret Morse Nice were elected fellows after a lot of behind the scenes manipulation. In my 1996 interview with Mayr, he gave the following account of the reform movement:

At the time, the AOU was controlled by what I called the “Washington crowd.” This group included all the people of what in those days was called the Biological Survey, now called the Fish and Wildlife Service. Among the Washington crowd were T. S. Palmer (since he was very much interested in the obituaries of ornithologists, they called him “Tombstone Palmer”), W. L. McAtee (served as President of the AOU), H. C. Oberholser, A. K. Fisher... Fred Lincoln, and a lot of other people having to do with fish and game sorts of things. They had an intimate knowledge of parliamentary proceedings and all that, and they had adjusted the AOU Constitution and Bylaws to serve their purposes. The most important thing was that they declared that the first vote for any election was a nomination vote. From that point on voting was on what came out on the nomination vote. What the Washington crowd did—and there was always a block of about 20 to 30 in the group—was to get together beforehand. They essentially would say “There’s one vacancy in the class of Fellows, let’s all vote for E. A. Preble, he’s one of our boys.” So came the first nomination ballot, and there’s 27 votes for Preble, 8 for Margaret Morse Nice, and so forth, because the people from Boston, New York, Philadelphia, Chicago, Michigan, Ohio State, California, Louisiana, all voted for their own man, each had only two, three, or five votes, while the Washington gang had 25-30 votes. So people said “Oh my God, that’s going to be a long election—let’s vote for that first one, he’s already practically in.” Now in this particular instance—E. A. Preble vs. Margaret Morse Nice—...he might not have published an ornithological paper for 20 years when he was elected. But he was one of the Washington gang.... Mrs. Nice already at that time was quite distinguished. She had published papers in foreign journals; she was a real, leading ornithologist. Yet the Washington crowd was able to work her out of there by their way of doing things.... A lot of younger people, older people too, were appalled by it. They were all opposed to it, but they did nothing about it. But I got together a group of people, particularly helpful was Joe Hickey. Of the Washington people, one was with us, and that was Herbert Friedmann.... We made up an ideal slate of people to be elected and then we talked to Grinnell from California, Taverner from Canada, and so on, Glover Allen from Boston, and said “Look here, this splitting the votes of the good people never gets us anywhere. We have to select one slate and all vote for it”.... That was the end of the power of the Washington crowd because immediately all the offices were taken away from them.

That election was in 1935. Two years later, after the reform movement was in action, both Mayr and Margaret Morse Nice were elected Fellows. (See Barrow 1998 for a full discussion of the reform movement.)

Mayr was also unhappy with the Linnaean Society of New York, which he thought emphasized listing and the rapid identification of birds in the field rather than the study of birds and their behavior. Although he was a recreational birdwatcher throughout his life, his sympathies lay with the more serious aspects of birdwatching. Mayr initiated

a monthly bird seminar at the Linnaean Society at which he and others abstracted and discussed the recent literature of field ornithology. His seminars attracted members of the Bronx County Bird Club, including Joseph Hickey, William Vogt, Allan Cruickshank, and Roger Tory Peterson, who all were to have substantial ornithological careers. It was Mayr who connected Joseph Hickey with Aldo Leopold, which eventually resulted in Hickey taking over Leopold's professorship after Leopold's death.

Despite his many responsibilities, Mayr continued to work on bird systematics, publishing during his tenure at the AMNH more than 250 scientific papers and describing 26 new bird species and 445 new bird subspecies. Part of this scientific work involved another of his specialties, biogeography, which concerns the study of the distribution and dispersal of organisms, including the expansion or contraction of ranges, in Mayr's case mostly of birds (Vuilleumier 2005). By 1939, Mayr had also laid the groundwork for the theory of island biogeography, later made famous by Robert MacArthur and E. O. Wilson (Bock 1994). This systematics and biogeography work was to provide the basis for Mayr's expanding interest outside of ornithology to evolution, and the history and philosophy of biology, where his greatest achievements lie.

The Modern Evolutionary Synthesis and the Biological Species Concept

After a decade of systematics and biogeography work at the museum, Mayr began to branch out into more theoretical work that took him beyond the boundaries of ornithology and into the limelight of twentieth-century biology.

In the 1930s, Darwinian evolution was in a muddle with the geneticists and field biologists not communicating. As Mayr described it:

We had two main branches of evolutionary biology—the laboratory geneticist and the field naturalist—and each was highly ignorant of what the other knew and the kinds of ideas, concepts, and evidence the other had. As a result, they were both one-sided in their explanations. Bringing the two branches together led to a broader, more sophisticated, more mature interpretation of evolution, though it was still within the Darwinian framework. (Mayr 1983)

This more mature model for evolution is generally referred to as the Modern Evolutionary Synthesis, and Ernst Mayr played a prominent role in its establishment. His major contribution was to solve the problem of how species originated, an area in which Darwin, despite the title of his 1859 classic, said little. In Mayr's own words:

My contribution to the evolutionary synthesis was to introduce the study of diversity, the explanation of species, of how they originate, and how one gets from there to the higher taxonomic categories. (Mayr 1993)

Mayr's contribution to evolutionary synthesis began at a symposium on speciation at the 1939 meeting of the American Association for the Advancement of Science, in

which Mayr was asked to speak on geographical variation and speciation. Mayr long held that there was no better place in the world to observe speciation than the Solomon Islands, so he had a strong firsthand knowledge upon which to draw (Mayr 1993). His talk was a great success. After the lecture, L. C. Dunn of the Zoology Department of Columbia University asked Mayr to participate in the Jesup Lectures series at Columbia. Dunn then encouraged Mayr to expand his Jesup lectures into a book. The book, *Systematics and the Origin of Species* (1942), met with great scientific acclaim; along with Theodore Dobzhansky's earlier *Genetics and the Origin of Species* (1937), and George Gaylord Simpson's later *Tempo and Mode in Evolution* (1944), it became the backbone of the modern evolutionary synthesis. One contributing factor to the success of Mayr's book was that he brought to the attention of the English-speaking audience the substantial European literature on systematics and evolution, which was largely written in German.

The heart of Mayr's contribution was the development of the biological species concept, which views species as natural biological units, with species consisting of a population (or populations) of organisms that are reproductively (genetically) isolated from all other organisms. He also emphasized that speciation occurs (in vertebrates—most of the time) when populations of a species become geographically isolated and go their own merry evolutionary way. The significance of the evolutionary synthesis is demonstrated in Mayr's own words:

Darwinian evolution was not a single theory, as Darwin always insisted, but was actually composed of five quite independent theories. Two of these were readily accepted by Darwinians: the simple fact of evolution (the "non-constancy of species" as Darwin called it) and the branching theory of common descent. The other three—gradual evolution, the multiplication of species, and natural selection—were accepted by only a minority of Darwin's followers. Indeed, these three theories were not universally accepted until the so-called Evolutionary Synthesis of the 1940s. (Mayr 2004)

The biological species concept had a profound effect on biological thinking—as Richard Schodde (2005) explained: "This concept linked the biological species to genetics and ecology, thereby anchoring it in general biological theory."

Mayr became one of the core members of a group that founded the Society for the Study of Evolution. He became the first editor of the Society's new journal *Evolution* from 1947-1949 and president in 1950.

The winds of change were blowing strong for Mayr in the early 1950s. Increasingly, he wanted to be part of an academic setting and have graduate students. Leonard Sanford, Mayr's great friend and mentor at the AMNH, died in 1950, cutting Mayr's major tie to the Museum. In 1953, when Mayr received an offer to become the Alexander Agassiz Professor of Zoology at the Museum of Comparative Zoology, Harvard University, he accepted, entering a new phase of his professional life.



Ernst Mayr at his desk at the MCZ.

The Museum of Comparative Zoology: Evolution and the History and Philosophy of Biology

During the half century following his move to Harvard, Mayr continued to produce papers and books on evolutionary subjects. His two books, *Animal Species and Evolution* (1963) and its abridgement *Populations, Species, and Evolution* (1970), solidified his position as a leading evolutionary biologist in the twentieth century, and entrenched his arguments in the thinking of countless graduate students. Haffer (2007) described these books as “masterly summations of species and speciation, and magnificent synthesis of population genetics, variation of populations, the origin of species, and adaptive specialization.” Thereafter, Mayr’s major books, *The Growth of Biological Thought* (1982) and *One Long Argument* (1991a), reinforced his importance in the field of evolutionary biology and dovetailed with his increasing interest in the history of biology. Mayr once commented that he wished he had left the AMNH earlier as his broader contributions to evolutionary biology were more intellectually satisfying and more profound than his systematic work (R. Lockwood, pers. Com.).

Mayr continued his interests in ornithology, albeit on a more limited scale. In concert with his broadening biological interests he wrote a series of papers in which he extolled the virtues of using birds as research subjects (e.g., Mayr 1963). Birds, for example, are largely diurnal so they are easier to study than the mostly nocturnal mammals; and birds use the same senses that we do—sight and hearing—which makes

interpretation of behaviors easier than with the mostly chemosensory mammals. He also stated that ornithologists were the first to consider the importance of ecological and behavioral factors in biogeography, and that that the study of biodiversity is nearly entirely based on ornithological studies (Mayr 1984). He also persisted with his biogeography work, which culminated in 2001 with *Birds of Northern Melanesia: Speciation, Ecology, and Biogeography* (Mayr and Diamond 2001).

Mayr was president of the Nuttall Ornithological Club, the oldest ornithological association in North America, from 1957-1959, where he unsuccessfully tried to get the membership involved in long-term research projects (Davis 1987). He was president of the American Ornithologists' Union from 1956-1959; on the Council of the Northeastern Bird-banding Association (now Association of Field Ornithologists); a director of the Massachusetts Audubon Society; and president of the 13th International Ornithological Congress in Ithaca, New York, in 1962; and an honorary or corresponding member of the Royal Australasian and British Ornithologists Unions—all very birdy connections. On a more cosmopolitan scale, he was an honorary or corresponding member of the Linnaean and Zoological Societies of London and the Royal Society of New Zealand; a member of the National Academy of Science; and a fellow of the American Academy of Arts and Sciences (Root and Elkins 1973).

In the last 40 years of his life, Mayr, changed his major fields of interest to the history and philosophy of biology. These fields overlap with his interests in evolution because the modern evolutionary synthesis has a strong historical component. His *The Growth of Biological Thought* (1982) is considered by many to be the best historical coverage of the evolutionary aspect of biology. In a long series of papers and books (e.g., Mayr 1985b), he delved into topics such as teleology, ethics, and the differences between the physical and biological sciences (Bock 2004). Mayr emphasized the distinctiveness of biology within the history and philosophy of science, and its emancipation from the physical sciences. As Jared Diamond summed up:

... as a historian and philosopher of science, in recent decades Mayr clarified the regularly misunderstood central concepts of biology: teleology; the foundations of biological classification; proximate and ultimate causation; the special problems posed by historical sciences to which experimental methods cannot be applied; and the distinctiveness (autonomy) of biology as a science. (Diamond 2005)

Mayr's vast achievements earned him numerous honors. He received honorary doctorates from 10 universities, including Uppsala University in Sweden, University of Melbourne in Australia, Oxford in England, University of Munich in Germany, and Yale in the United States. He received 33 awards, including the Joseph Leidy Award of the Academy of Natural Science, Philadelphia (1942); the Darwin-Wallace Medal of the Linnaean Society of London (1958); the William Brewster Memorial Medal, the highest award given by the AOU (1965); the Daniel Giraud Elliot Medal of the

National Academy of Science (1967); the Addison Emery Verrill Medal of Yale (1967); the National Medal of Science (1970), the Balzan Prize, considered the Nobel Prize of Biology (1983); and the International Prize for Biology, called the Japan Prize (1994) (Root and Elkins 1973, Pennisi 2004).



Ernst Mayr in his later years.

Why was Ernst Mayr so Successful?

Ernst was a tireless worker. For example, during his years at the MCZ (including being director from 1961-1970), Mayr would retire with his wife to their farm in southern New Hampshire on weekends and in the summer for extended periods where he could work. He usually was up early and often dictated for several hours to start his day (Lein 2005).

In a 2005 obituary, Jared Diamond explored some of the characteristics that led to Mayr's success:

When I met Mayr [at Diamond's father's home in 1953] that Sunday, I was a 16-year-old schoolboy. He later inspired me to launch a second career, parallel to my work as a membrane physiologist, on the evolutionary biology of New Guinea birds, his own early specialty. For 30 years he and I collaborated on analyzing a mammoth data base that he had accumulated on the distribution of island birds. The result was a co-authored 556-page book published soon after his 97th birthday [Mayr and Diamond 2001]. That Sunday lunch and its consequences illustrate many keys to Mayr's greatness: his capacity for close friendships and collaborations with younger scientists as well as with peers; his broad perspective that let him recognize new significance in the work of many specialists; and his capacity for sustained hard work and complex analysis....

What accounted for Mayr's remarkable originality and productivity? I came to realize that there wasn't a single explanation but a combination of a dozen of them—cognitive, organizational, emotional and social. Among the cognitive ones, he had an outstanding memory. When, in 1965, 24 years after the peak of Mayr's work on New Guinea birds, John Terborgh and I asked him to identify the stuffed bird specimens that we had just collected in New Guinea, we saw that, for each of the 1,400 species and subspecies of birds that he had discussed in his 1941 *Checklist of New Guinea Birds*, Mayr still remembered who had described it—and when and in what journal, its differences from its relatives, and its alternative names....

Mayr was also a quick learner: in the month before he reached New Guinea in 1928, he learned to speak Malay and Neo-Melanesian, to shoot a gun, and to skin and stuff birds. Like Darwin, he was a constantly curious field observer....

During Mayr's many years as a museum director at Harvard, a job that absorbed his daytime hours, he maintained his scientific output by writing each morning from 4:30 to 7:30 a.m., then spending the evening reading....

Despite not visiting an English-speaking country until his twenties, Mayr mastered English as a second language to the point where his English prose style was widely admired for its clarity. (Diamond 2005)

This certainly appears to be the description of a genius. As Jerry Coyne stated in a 2005 article, "It is not too much of an exaggeration to call Mayr the Darwin of the 20th century." Coyne also examined the parallels between the careers of Darwin and Mayr: both began their careers by going to medical school, both abandoned medicine to launch a career in what had been their avocation, and both went on extensive voyages that strongly influenced their later careers.

Another factor in Mayr's success was doggedness and bluntness that sometimes bordered on rudeness, backed by a prodigious self-confidence—he didn't back down from anything or anyone. These qualities served him well in his many battles with scientists and other people with opposing views. In a 1983 interview, Mayr responded to a question about the paleontologist-backed theory of punctuated equilibrium:

Let me put it more bluntly. Paleontologists are totally unqualified—because of their time scale, methods, and materials—to discuss this particular process. It has to be studied by population biologists.

In the same interview, responding to the topic of man's current role in the destruction of biodiversity, Mayr stated:

The worst problem is the [human] population explosion. A stable population would be the first step in the salvation of mankind. But as long as we have church authorities, especially the Popes, who proclaim "Go out and breed as much as you can," there is no hope for mankind.

Mayr also apparently gave nature a nod in the "nature vs. nurture" controversy, responding, in a 1991 interview, when asked if genetics played a role in Darwin's life and success:

Yes. I have this somewhat subversive thought that genetic constitution can be very helpful to a person, and it certainly was clear in the Darwin family. His children and grandchildren have been quite prominent too. There's no doubt about the genius of Darwin and he certainly didn't get it from his environment. That was something he was born with.

In a 1993 interview, he hinted at a similar situation for himself while revealing a sense of humor:

Omni Question: “What is the philosophy of life that keeps you so vigorous and involved at age seventy-eight?”

Mayr: “I was very careful in the selection of my ancestors.”

Mayr remained mentally sharp until the end of his life. Shortly before Mayr’s 100th birthday, there was a celebration symposium of Mayr’s lifetime achievements at which many of his former students and colleagues gave talks. Lynn Margulis mentioned (2005) that the “most moving and informative of the talks, in my opinion, was the final statement by Ernst Mayr himself!” I was also at the symposium and agree with her assessment. Margulis also relates in the same article a conversation she had with Mayr three weeks before his death:

I called him at home in Bedford and asked, “Ernst, how are you? How do you feel?” He responded cheerfully, “I feel fine. That is I feel exceptionally well given the diagnosis.” “What diagnosis?” I asked. “Didn’t I tell you? The doctors tell me I have cancer. It has already metastasized, but I don’t feel sick.” “Oh, Ernst, I’m so sorry,” I responded. “Well Lynn,” he said cheerfully, “I will have to die of something.”

Ernst Mayr was one tough evolutionary biologist. 🐦

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Ted Davis is the Cover Art Editor for Bird Observer and Professor Emeritus at Boston University. He wishes to thank John Kricher, Ron Lockwood, and François Vuilleumier for corrections and helpful comments on the manuscript.

PHOTO ESSAY

Snowy Owl Season

David M. Larson





GLEANINGS

Three Degrees of Sweetness

David M. Larson

[Editor's Note: With this issue we present a new feature, "Gleanings," by David Larson. In each issue, David will summarize an interesting recent publication from the ornithological literature. We hope that you will enjoy this feature.]



Female Ruby-Throated Hummingbird at Feeder.
Photograph by Sandy Selesky.

Hummingbirds, such as the Ruby-throated Hummingbird (*Archilochus colubris*) that we see here in New England, have a high metabolic rate even at rest; that is, they burn through energy stores quickly. At night or during migration, when they are unable to feed, the birds utilize stored fats for energy. When active, their metabolic rate is much higher, especially during hovering flight, a particularly energy-expensive activity. Much of the food energy the birds use to support body maintenance and flight comes from the sugars in plant nectar that they consume. Sugars in flower nectar include the simple monosaccharides glucose and fructose and the disaccharide sucrose, which contains a molecule each of glucose and fructose. Ingested sugars are metabolized with byproducts including carbon dioxide (CO₂) and water.

Chen and Welch (2013) tested the ability of Ruby-throated Hummingbirds to utilize these different sugars during hovering flight. Captive hummingbirds were fed defined sugar solutions (glucose, fructose, or sucrose) and glucose or fructose labeled with a stable isotope of carbon (^{13}C). The feeding stations included respiratory masks that allowed analysis of oxygen consumption and CO_2 production as the birds hovered and fed. By measuring the proportion of labeled ^{13}C in the exhaled CO_2 , the investigators could calculate the ability of the hummingbirds to utilize sugars to power hovering flight.

The results of the study indicated that the hummingbirds can quickly switch from using internal fat energy stores to using recently-ingested carbohydrates (near 100% in some birds), whether supplied with glucose or fructose. Support of metabolism by simple sugars in feeders during hovering flight averaged 81% (glucose) to 88% (fructose), indicating a near-total reliance on ingested sugar.

By direct utilization of sugar solutions in nectar or from feeders for energetically expensive hovering flight, hummingbirds avoid the waste of time and energy inherent in the classic pathway of converting sugars to fats for use as an energy source. Unlike mammals (including nectivorous bats), hummingbirds can utilize both glucose and fructose efficiently. These results imply that the flight muscles of hummingbirds have physiological pathways for direct utilization of fructose and do not need to convert fructose to glucose as in mammals.

Finally, this study confirms that hummingbirds behave as “carbohydrate maximizers” during foraging (Suarez et al. 1990). They feed to capacity on sugars, accounting for the energy content of the sugar solution. After feeding, they resume foraging just before or when the recently ingested sugars are depleted. This fine control of energy stores ensures complete carbohydrate-based metabolism and avoids the use of more energetically expensive fat reserves. In conclusion, Ruby-throated Hummingbirds have evolved behavioral, physiological, and metabolic adaptations for efficient feeding on flower nectar. 🐦

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David M. Larson, PhD, is the Science and Education Coordinator at Mass Audubon's Joppa Flats Education Center in Newburyport, the Director of Mass Audubon's Birder's Certificate Program and the Certificate Program in Bird Ecology (a course for naturalist guides in Belize), a domestic and international tour leader, and a member of the editorial staff of Bird Observer.

ABOUT BOOKS

Driven

Mark Lynch

Alexander Wilson: The Scot Who Founded American Ornithology. Edward H. Burt Jr. and William E. Davis Jr. 2013. Cambridge, Massachusetts: The Belknap Press of Harvard University Press.

“Throughout his literary career Wilson was driven to excel.” (p. 8)

“1 June 1803...I have had many pursuits since I left Scotland, Mathematics, the German Language, Music, Drawing, & cc...., and I am now about to make a collection of all our finest birds.” Alexander Wilson in correspondence to a friend in Paisley, Scotland. (p. 283)

If you bring up the subject of bird study in early America, it is safe to bet that most people, including birders, will first think of John James Audubon. People *ooh* and *aah* relentlessly over his double-elephant-sized folio prints, and almost everyone has heard of the numerous Audubon Societies. John James Audubon has become a brand name. Sadly, when talking about the history of ornithology in America, almost no one ever mentions Alexander Wilson (July 6, 1766–August 23, 1813). Wilson accomplished more for the science of ornithology than Audubon, was a more appealing person, and had a fascinating history. He was a true polymath, interested in everything. Still, most people have no idea who Wilson was. Wilson was much more than the namesake for a petrel, a phalarope, a plover, and a warbler. Few people have even read his masterwork, the nine volume *American Ornithology*. Like Rodney Dangerfield, it seems that Alexander Wilson “can’t get no respect”.

Edward H. Burt Jr. is Cincinnati Conference Professor of Zoology at Ohio Wesleyan University. William E. Davis Jr. is Professor Emeritus at Boston University. Together they have assembled a tribute to Alexander Wilson that is not just a standard biography but a scholarly appreciation of the man from multiple perspectives. *Alexander Wilson: The Scot Who Founded American Ornithology* certainly contains thorough and detailed information on Wilson’s life in the section titled “A Varied Life” (pp. 13–62). But there are also essays on “Themes in Wilson’s Life and Writing” (pp. 1–12), a thorough examination of Wilson as a “Pioneer Ornithologist” (pp. 281–330), a fine look at “Wilson’s Legacy” (p. 331), and an annotated listing of Wilson’s predecessors, contemporaries, and correspondents (pp. 355–411).

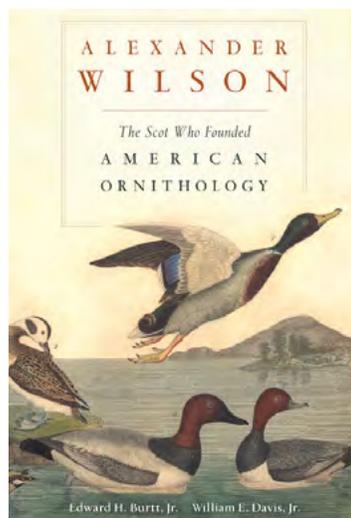
Wilson was born in Scotland, where he worked as a peddler and wrote poetry, sometimes in the Scottish dialect much like that of his muse Robert Burns. Because of his time in Scotland among the hard working “commoners,” Wilson was committed to the rights of the individual and became interested in Thomas Jefferson’s ideals of liberty. His passion for Jefferson’s ideas even led him to write a poem about Jefferson and liberty. Visual artist, poet, ornithologist, and natural historian, Wilson was a true man of the Enlightenment.

It was fortunate that when he immigrated to America, he landed in Philadelphia, at the time the intellectual center of the country. Through a fortuitous series of events, he befriended the great naturalist William Bartram (1739–1823). Bartram became Wilson’s mentor, introduced him to the wonders of American natural history, and lent him books from his extensive library. Bartram also lent Wilson prints to copy to help him improve his artwork because Wilson had had no formal art training. But he was driven to excel at everything he tried and so worked hard to perfect his drawing skills.

At the time that Wilson decided to embark on the Sisyphean task of writing and illustrating a complete ornithology of America, European natural historians looked down their collective snooty noses at wildlife in “the colonies.” Because of the writings of intellectuals like Georges-Louis Leclerc Comte de Buffon and others, there was a general disregard for the entire natural world of America. The birds, beasts, and natives of America were seen as the products of a debased creation. America was a land of evil miasmas, poisonous reptiles, and inferior birds that sang inferior songs. Nothing that lived there was worthy of the attention of a serious European naturalist except to augment the collections in his curiosity cabinet. Wilson, who knew this attitude was rubbish, wanted to set the record straight.

The story of Wilson traveling around early America by train, by boat, and on foot, learning the birds, discovering new species, and meeting the people who would later become his correspondents is one of the great tales of the history of science in America. Besides relying on the ornithological experts of the time, Wilson also depended on the observations of people like hunters and farmers, people who worked the land and knew its inhabitants intimately. They sent Wilson their notes on bird behavior, and he used them in his text. Wilson’s *American Ornithology* became a book that truly reflects the country and its people at that time.

What will be a revelation to many readers of *Alexander Wilson: The Scot Who Founded American Ornithology* is the section titled “Illustrating American Ornithology” (pp. 63–280). This long chapter forms the heart of the book. Many birders who have seen the plates of Wilson’s illustrations quickly dismiss them as simplistic, awkward, and generally lacking the pizzazz of Audubon’s monumental artwork. Furthermore, because Wilson typically puts several species on a single page, the plates can look crowded. Granted Audubon’s large plates are impressive, but they can also be overly dramatic. Wilson was interested in creating a series of books that the everyday person would find useful in identifying and learning about the birds he saw. Although not quite a field guide, *American Ornithology* was certainly meant as a publication for a more general audience than Audubon’s double-elephant-sized folio



prints, destined for the drawing rooms of the well to do. *American Ornithology* was a book for and, in a sense, by the people of America.

In the chapter about illustrating *American Ornithology*, Burt and Davis include reproductions of Wilson's original artwork. These were the paintings and drawings that were turned into printing plates by Alexander Lawson and hand colored by a variety of artisans. Though many of you have seen at least some of the finished plates from *American Ornithology*, the original artwork will likely inspire a further evaluation of Wilson's artistic skills. A number of Wilson's drawings and working sketches have copious notes written in the margins about the color and other aspects of the living bird. When Wilson finally got the artwork the way he liked, he would cut and paste drawings together to create a plate for the book. Wilson's passion for accurate detail can be seen in the meticulousness of his drawings, like that of a Great Egret's foot (p. 211). Although some of his page compositions are perhaps a bit awkward, others like his Common Nighthawk rival Audubon's best work (p. 150). By showing us Wilson's working sketches and watercolors, this section in *Alexander Wilson: The Scot Who Founded American Ornithology* gives the reader a feel for how Wilson worked as an artist and how closely he studied his subjects. Included with the illustrations are Wilson's writings about the birds pictured and Burt and Davis' comments and criticisms of each piece. This chapter alone is worth the price of the book.

As Burt and Davis make abundantly clear, though Wilson's *American Ornithology* was a landmark publication in the history of American natural sciences, Wilson shaped the course of future ornithological field work by using a more scientific approach to observation. Alexander Wilson was passionate about the study of live birds and often emphasized the importance of what he called a "personal intimacy" with birds. As Burt and Davis note, Wilson's writings about a bird's behavior and habits foreshadow the writings of later ornithologists like Arthur Cleveland Bent. Wilson undertook the first breeding bird census and was also the first author in America to write about the economic importance of birds. Wilson also resolved some confusing taxonomic issues, like discovering that the breeding and winter plumages of the Bobolink belonged to one species, not two as previous authors had described. He was also one of the first ornithologists concerned about species and habitat preservation. Along the way, Wilson was the first to describe 26 species. It is no exaggeration to call Alexander Wilson America's first true ornithologist.

For readers unfamiliar with Wilson's life and accomplishments, *Alexander Wilson: The Scot Who Founded American Ornithology* will be a real eye-opener. The book is beautifully printed and thoroughly researched. The final volume of *American Ornithology* was published posthumously under the direction of George Ord in January of 1814, making this year the bicentennial of the completion of Wilson's great work. Conferences are planned and papers will be presented to mark the event. A great way to kick off the Wilsonapalooza (my term) would be to read this book by Burt and Davis.

It is a wonderful celebration of Alexander Wilson and his important role in the scientific history of America. 

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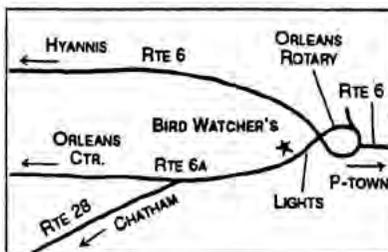
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BIRD SIGHTINGS

September/October 2013

Seth Kellogg, Marjorie W. Rines, and Robert H. Stymeist

The first two weeks of September were hot with a high reading of 97° on September 11. The low in Boston was 44 ° on September 17. September was a dry month with only 2.21 inches of rain recorded. October was much the same with an average temperature of 56.7° in Boston. The high was 82° on October 2, the low 35° on October 29. Some suburbs experienced a killing frost by October 22 and most areas other than Boston by October 29. Rainfall in October was just a little over a half inch, 3.33 inches below average for October. *R.H. Stymeist*

WATERFOWL THROUGH ALCIDS

On a gloomy September 17, Blair Nikula was seawatching in Provincetown when he spotted an immature **Brown Booby** foraging off Race Point. On October 12, he was back at Race Point when he once again saw an immature Brown Booby, then saw it again on October 13. Given the rarity of this species, it must have been the same individual, but unseen for a month.

Three **American White Pelicans** were spotted flying southeast over Dedham on October 28. The following day, three White Pelicans were seen about 100 miles southeast of Dedham at Lighthouse Point in Connecticut. It seems likely these were the same individuals.

Joey Mason, a master bander specializing in raptors, trapped and banded a **Swainson's Hawk** at her banding site at the Carver landfill on September 4. It is the first report of this species since the fall of 2007 when a bird spent nearly three weeks at the Cumberland Farms fields in Middleboro.

September 15 was a day hawkwatchers dream of as Broad-winged Hawks moved in record numbers. At Mount Wachusett, Paul Roberts reported 14,471 birds, the largest flight since September 13, 1989, when 15,916 birds were tallied. Other memorable flights on September 15 included 11,445 hawks at Barre Falls, 4,230 in Southwick, and 2,797 at Mount Watatic.

A **Purple Gallinule** was discovered in Peabody on September 16, and remained through the 22nd for many to enjoy. Two of the three **Sandhill Cranes** that spent the summer in Worthington lingered through the end of September.

American Golden-Plovers were unusually well reported this season, with double-digits in two locations. An **American Avocet** was discovered on Plum Island on November 29 and continued through the end of the month for many to enjoy.

A **Sabine's Gull** was initially discovered on North Beach in Chatham, then rediscovered a few days later at Tern Island, also in Chatham. This species is uncommon offshore and rare from shore. Little Gulls were unusually well reported during this period. A **South Polar Skua** was photographed five miles south of Nomans Land Island (south of Martha's Vineyard). The sighting of two Black Guillemots on September 2 on Plum Island was unusually early.

M. Rines

Greater White-fronted Goose			10/28	Lynn	55	R. Heil	
10/16	Lenox	1	G. Hurley	10/31	P.I.	150	T. Wetmore
10/20	Concord	1	W. Martens#	Canvasback			
10/26	Lexington	1	J. Forbes + v.o.	10/25	Cambr. (F.P.)	1	R. Stymeist
Snow Goose			Ring-necked Duck				
10/6	Cumb. Farms	8	SSBC	thr	Cambr. (F.P.)	190 max	v.o.
10/24	Concord	1	D. Swain	10/7	Turners Falls	32	J. Smith
Brant			10/21	Southboro	100	G. Gove#	
10/14	Duxbury B.	150	R. Bowes	10/26	Pittsf. (Mud Pd)	1500	S. Kellogg
10/19	Revere B.	82	K. Hartel	10/30	Holyoke	106	S. Motyl
10/23	Pittsfield	65	G. Hurley	10/30	Waltham	55	J. Forbes
10/24	P.I.	260	T. Wetmore	Greater Scaup			
10/29	S. Quabbin	12	L. Therrien	10/21	Wachusett Res.	32	M. Lynch#
Cackling Goose			10/26	Nahant	35	L. Pivacek	
10/11-31	Lexington	1	J. Forbes + v.o.	10/28	Acoaxet	76	M. Lynch#
10/18, 24	Turners Falls	1	Z. Jakub	10/29	Falmouth	99	E. Hoopes
10/22	GMNWR	1	D. Sibley	10/30	Waltham	6	J. Forbes
10/25-30	Amherst	1	I. Davies	Lesser Scaup			
10/30	Littleton	3	G. Billingham	9/29	S. Monomoy	7	B. Nikula
Wood Duck			10/15	Longmeadow	1	C. Suprenant	
9/18	Paxton	70	R. Jenkins	10/16	Waltham	2	J. Forbes
9/26	Northfield	170	Z. Jakub	10/20	Wachusett Res.	2	K. Bourinot#
10/2	October Mt.	53	E. Neumuth	10/28	Lynn	6	R. Heil
10/7	Longmeadow	86	M. Moore	Common Eider			
10/7	S. Quabbin	56	M. Lynch#	10/5	Eastham (F.E.)	750	SSBC (GdE)
10/16	Waltham	60	J. Forbes	10/19	Falmouth	191	M. Lynch#
Gadwall			Harlequin Duck				
9/24	P.I.	33	R. Heil	10/19	Nantucket	1	J. Scott
9/29	S. Monomoy	120	B. Nikula	10/19	Sandwich	1	M. Lynch#
10/6	Fairhaven	14	C. Longworth#	Surf Scoter			
10/20	S. Quabbin	7	L. Therrien	10/6	Rockport (A.P.)	1860	R. Heil
10/29	Waltham	3	J. Forbes#	10/12	Dennis	3400	P. Flood
10/31	Yarmouth	38	E. Hoopes	10/19	S. Quabbin	7	L. Therrien
Eurasian Wigeon			10/20	Wachusett Res.	6	K. Bourinot#	
10/17	P.I.	1	D. Chickering	10/20	Nantucket Sd	10000	S. Perkins
10/27	Nantucket	1	K. Blackshaw#	White-winged Scoter			
10/28	Acoaxet	2	M. Lynch#	10/6	Rockport (A.P.)	685	R. Heil
American Wigeon			10/12	Revere B.	425	R. Stymeist	
9/8	Northampton	1	L. Therrien	10/12	Dennis	900	P. Flood
9/29	S. Monomoy	15	B. Nikula	10/5-28	Reports of 1-29 ind. from 16 inland loc.		
10/17	P.I.	80	T. Wetmore	Black Scoter			
10/19	Barnstable	51	M. Lynch#	10/6	Rockport (A.P.)	190	R. Heil
10/21	Arlington Res.	25	C. Floyd	10/7	Winchester	20	R. LaFontaine#
10/27	Nantucket	40	K. Blackshaw#	10/12	Dennis	2100	P. Flood
American Black Duck			10/15	October Mt.	30	E. Neumuth	
10/22	P.I.	400	T. Wetmore	10/20	Nantucket Sd	25000	S. Perkins
10/27	S. Quabbin	118	L. Therrien	10/21	Wachusett Res.	47	A. Marble
10/28	Westport	133	M. Lynch#	10/21	S. Quabbin	18	L. Therrien
Blue-winged Teal			Long-tailed Duck				
9/3	P.I.	1	R. Heil	10/19	S. Quabbin	3	L. Therrien
9/11	Longmeadow	14	A. & L. Richardson	10/20	Wachusett Res.	1	K. Bourinot#
9/29	S. Monomoy	45	B. Nikula	10/28	Pittsfield (Onota)	6	G. Hurley
10/4	Pittsfield	23	K. Hanson	Bufflehead			
10/19	Barnstable	4	M. Lynch#	9/2	GMNWR	1	J. Trimble
Northern Shoveler			10/26	Wachusett Res.	21	M. Lynch#	
9/29	S. Monomoy	10	B. Nikula	10/26	Nahant	36	L. Pivacek
10/6	Pittsfield (Onota)	1	I. Davies	10/27	P.I.	20	J. Berry#
10/21	Turners Falls	1	J. Smith	10/29	Pittsfield (Pont.)	21	J. Pierce
10/22	P.I.	40	J. Forbes	10/30	Waltham	19	J. Forbes
10/27	Quabog IBA	4	M. Lynch#	Common Goldeneye			
10/29	Arlington Res.	4	M. Rines	10/29	Wachusett Res.	1	M. Lynch#
Northern Pintail			10/30	Lincoln	3	J. Forbes	
9/29	S. Monomoy	15	B. Nikula	Hooded Merganser			
10/12	Gloucester	14	R. Heil	9/2	Wachusett Res.	13	M. Lynch#
10/19	S. Quabbin	3	L. Therrien	10/29	Lincoln	31	P. + F. Vale
10/28	Acoaxet	62	M. Lynch#	10/30	P.I.	12	MAS (B. Gette)
10/29	P.I.	370	T. Wetmore	10/31	Worcester	21	M. Lynch#
Green-winged Teal			Common Merganser				
9/26	Northfield	39	Z. Jakub	9/7	Longmeadow	9	M. Moore
9/29	S. Monomoy	40	B. Nikula	10/14	S. Quabbin	37	L. Therrien
10/8	Ipswich	35	J. Berry	10/15	Wachusett Res.	39	M. Lynch#
10/17	Longmeadow	38	M. Moore	10/18	Lincoln	4	J. Forbes

Red-breasted Merganser				Double-crested Cormorant			
10/12	S. Quabbin	2	L. Therrien	9/18	P'town H.	825	B. Nikula
10/18	Rockport	6	J. Berry#	10/5	Eastham (F.H.)	2000	SSBC (GdE)
10/26	P.I.	10	MAS (D. Weaver)	10/12	Newbypt	2800	J. Berry#
Ruddy Duck				10/12	Holbrook	1600	G. d'Entremont
10/5, 20	W. Newbury	14, 270	P. + F. Vale	10/12	Gloucester	16,600	R. Heil
10/21	Southboro	150	G. Gove#	Great Cormorant			
10/23	Waltham	130	J. Forbes	9/11	Acoaxet	1	G. Gove#
10/26	Pittsf. (Mud Pd)	30	S. Kellogg	9/14	Cuttyhunk	2	I. Davies#
10/29	Cambr. (F.P.)	70	B. Miller	9/23	Westport	12	P. Champlin
10/30	Nantucket	35	V. Laux	10/28	Acoaxet	15	M. Lynch#
Northern Bobwhite				American White Pelican			
9/20	Wellfleet	1	M. Keleher	10/28	Dedham	3	A. O'Neill#
9/29	Truro	17	M. Faherty	American Bittern			
10/3	Mashpee	15	A. Curtis	9/9	Westport	2	P. Champlin
Ruffed Grouse				10/30	Nantucket	2	V. Laux
9/17	Westboro	1	N. Paulson	Great Blue Heron			
9/19	Ware R. IBA	1	M. Lynch#	9/13	Eastham (F.H.)	29	E. Orcutt
10/29	October Mt.	2	E. Neumuth	10/5	Orleans	60	SSBC (GdE)
Red-throated Loon				10/5	E. of Chatham	27 migr	B. Nikula#
10/6	Rockport (A.P.)	3	R. Heil	Great Egret			
10/21	Westport	12	P. Champlin	9/4	Westport	55	P. Champlin
10/30	P.I.	35	MAS (B. Gette)	9/10	P.I.	314	S. Grinley
Common Loon				9/29	S. Dartmouth	61	A. + D. Morgan
10/6	Rockport (A.P.)	32	R. Heil	10/5	Orleans	80	P. Trimble
10/12	Dennis	55	P. Flood	10/12	Gloucester	62	R. Heil
10/21	Wachusett Res.	23	M. Lynch#	Snowy Egret			
10/27	S. Quabbin	8	L. Therrien	9/2	GMNWR	4	J. Trimble
10/30	P.I.	50	MAS (B. Gette)	9/10	P.I.	176	S. Grinley
10/30	E. of Chatham	32	B. Nikula#	9/13	Eastham (F.H.)	103	E. Orcutt
Pied-billed Grebe				10/18	Nantucket	10	J. Scott
9/10	Ware R. IBA	1	M. Lynch#	Little Blue Heron			
10/6	Cheshire	5	J. Pierce	9/2	GMNWR	1	A. Bragg
10/24	Westboro	5	M. Lynch#	10/2	WBWS	2	J. Lawler
10/27	Nantucket	6	K. Blackshaw#	10/3	Ipswich	2	J. Berry
10/31	Cambr. (F.P.)	6	J. Miller	Tricolored Heron			
Horned Grebe				9/28	Essex	1	W. Webb
9/6	Duxbury B.	1	N. Blake	Green Heron			
9/7	P.I.	1	BBC (S. Grinley)	9/5	Cambr. (F.P.)	5	R. Stymeist
10/27	S. Quabbin	11	L. Therrien	9/8	Sterling Peat	8	M. Lynch#
10/29	Wachusett Res.	16	M. Lynch#	10/16	Lincoln	2	C. Gras
Red-necked Grebe				10/29	MNWS	1	D. Noble
10/8	Pittsfield (Onota)	4	T. Gagnon	Black-crowned Night-Heron			
10/15	Wachusett Res.	7	M. Lynch#	9/1	Eastham	50	D. Clapp
10/29	S. Quabbin	3	L. Therrien	9/9	P.I.	22	D. Jackson
Northern Fulmar				9/17	Yarmouth	80	E. Hoopes
10/5, 19	E. of Chatham	1, 2	B. Nikula#	10/15	Ipswich	13	R. Heil
10/9	P'town	1	B. Nikula	Yellow-crowned Night-Heron			
Cory's Shearwater				9/9	Eastham	3	E. Orcutt
10/19	E. of Chatham	1	B. Nikula#	9/15	Harwich	1	A. Curtis
Great Shearwater				10/15	Ipswich	1	R. Heil
10/5, 30	E. of Chatham	7, 125	B. Nikula#	Glossy Ibis			
10/27	P'town	15	B. Nikula	9/2	GMNWR	1	A. Bragg
Sooty Shearwater				9/4	Westport	29	P. Champlin
10/5, 30	E. of Chatham	1200, 20	B. Nikula#	9/18	P.I.	1	D. Chickering
10/24	Eastham (F.E.)	1	B. Nikula	Black Vulture			
10/27	P'town	1	B. Nikula	9/4	Northampton	3	T. Gagnon
Manx Shearwater				9/17	Mt. Tom	3	T. Gagnon
9/4	Stellwagen	1	T. Robben	10/14	Palmer	2	I. Davies
10/5, 15	E. of Chatham	250, 375	B. Nikula#	10/17	Southwick	2	S. Kellogg
10/19, 30	E. of Chatham	210, 300	B. Nikula#	Turkey Vulture			
Wilson's Storm-Petrel				10/9	Southbridge	26	M. Lynch#
9/17	Duxbury B.	1	R. Bowes	10/9	Barre Falls	24	Hawkcount (BK)
Leach's Storm-Petrel				10/15	Mt. Wachusett	62	Hawkcount (PR)
9/17	Orleans	1	M. Faherty	10/17	P.I.	10	J. McCoy
Brown Booby				10/23	Granville	68	J. Weeks
9/17	P'town	1 imm	B. Nikula	Osprey			
10/12-13	P'town	1 imm	B. Nikula	9/3-30	Mt. Wachusett	153	Hawkcount (SO)
Northern Gannet				9/5-30	Barre Falls	102	Hawkcount (BK)
9/4, 10/23	P'town	370, 1700	B. Nikula	9/14	Cuttyhunk	58	I. Davies#
10/6	Rockport (A.P.)	320	R. Heil	10/13	Wayland	6	B. Black#
10/27	P.I.	167	E. Nielsen	10/28	Lynn	1	R. Heil

Bald Eagle				9/28	Cuttyhunk	2	I. Davies#
9/4-28	Mt. Wachusett	87	Hawkcount (SO)	10/5	WBWS	2	SSBC (GdE)
9/5-28	Barre Falls	40	Hawkcount (BK)	10/18	Wellfleet	5	S. Broker
9/7-15	Mt. Watatic	17	Hawkcount (TP)	Sora			
9/15	Southwick	11	S. Kellogg	9/7	GMNWR	2	J. Forbes
9/15	Barre Falls	13	B. Kamp	9/20	Northampton	2	D. McLain
9/15	Mt. Wachusett	15	Hawkcount (SO)	9/29	Lenox	2	P. Crossen
9/18	Granville	10	J. Weeks	10/6	Cumb. Farms	2	SSBC
Northern Harrier				10/6	Fairhaven	2	C. Longworth#
9/15	Mt. Wachusett	4	Hawkcount (SO)	10/14	Truro	2	G. d'Entremont#
9/28	Cuttyhunk	3	I. Davies#	Purple Gallinule			
9/29	S. Monomoy	3	B. Nikula	9/16-22	Peabody	1 imm	P. Ruvido + v.o.
10/2	Duxbury B.	3	R. Bowes	Common Gallinule			
10/6	Cumb. Farms	5	SSBC	9/16	GMNWR	1	A. Bragg#
10/17	P.I.	8	T. Wetmore	10/2	Lenox	2	G. Hurlley
Sharp-shinned Hawk				American Coot			
9/3-30	Mt. Wachusett	286	Hawkcount (SO)	9/29	S. Monomoy	9	B. Nikula
9/4-30	Barre Falls	255	Hawkcount (BK)	10/27	Nantucket	25	K. Blackshaw#
9/13	Mt. Wachusett	29	Hawkcount (SO)	10/28	Acoaxet	137	M. Lynch#
9/14	Barre Falls	46	Hawkcount (BK)	10/29	Richmond	25	J. Pierce
10/3-29	Barre Falls	176	Hawkcount (BK)	10/30	Waltham	44	J. Forbes
10/8	Barre Falls	50	Hawkcount (BK)	Sandhill Crane			
Cooper's Hawk				9/thr	Worthington	2	E. Lewis
9/5-30	Barre Falls	62	Hawkcount (BK)	10/13	Wareham	1	G. d'Entremont
9/8-30	Mt. Wachusett	68	Hawkcount (SO)	Black-bellied Plover			
9/26	Barre Falls	10	B. Kamp	thr	P.I.	176 max	v.o.
10/3-29	Barre Falls	27	Hawkcount (BK)	9/14	Chatham (S.B.)	2400	E. Orcutt#
10/8	Barre Falls	12	B. Kamp	10/14	P'town	210	G. d'Entremont#
Northern Goshawk				10/14	Duxbury B.	96	R. Bowes
9/11-10/25	Mt. Wachusett	4	S. Olson	10/18	Ipswich	180	J. Berry#
9/13	Granville	1	S. Kellogg	American Golden-Plover			
9/16	Mt. Tom	2	T. Gagnon	9/1	Wollaston B.	9	T. O'Neill#
10/5-19	Barre Falls	4	Hawkcount (BK)	9/2	GMNWR	9	J. Trimble
10/15	Southwick	1	S. Kellogg	9/6	Hadley	8	L. Therrien
10/20	Russell	1	T. Swochak	9/11	Nantucket	10	V. Laux
Red-shouldered Hawk				9/13	Northampton	18	D. McLain
9/8-28	Barre Falls	4	Hawkcount (BK)	9/20	P.I.	7	S. Grinley#
9/15	Quabog IBA	3	M. Lynch#	10/13	Newbury	7	F. Vale
9/29	Cumb. Farms	3	G. d'Entremont#	Semipalmated Plover			
10/8-29	Barre Falls	12	Hawkcount (BK)	thr	P.I.	880 max	v.o.
10/9	Sturbridge	4	M. Lynch#	9/1	Revere B.	224	S. Zende#
10/29	Barre Falls	6	Hawkcount (BK)	9/4	Orleans	3000	C. Goodrich
Broad-winged Hawk				9/7	Chatham (S.B.)	500	B. Nikula
9/thr	Wachusett	35,049	Hawkcount (SO)	9/29	Duxbury B.	124	R. Bowes
9/thr	Barre Falls	16,106	Hawkcount (BK)	Piping Plover			
9/15	Barre Falls	11,445	Hawkcount (BK)	9/1	P.I.	13	D. Larson
9/15	Wachusett	14,471	Hawkcount (SO)	9/14	Chatham (S.B.)	6	E. Orcutt#
9/15	Southwick	4230	S. Kellogg	10/1	Westport	1	P. Champlin
9/15	Watatic	2797	Hawkcount (TP)	10/20	Edgartown	1	L. Johnson
9/16	Mt. Tom	2244	T. Gagnon	Killdeer			
9/17	Wachusett	2972	Hawkcount (SO)	9/1	Cumb. Farms	125	S. Arena#
9/18	Wachusett	12,272	Hawkcount (SO)	9/7	Hadley	65	S. Surner
9/19	Granville	2305	J. Weeks	9/11	S. Dartmouth	61	G. Gove#
Swainson's Hawk				10/12	Newbury	44	J. Berry#
9/4	Carver	1 b	J. Mason	10/27	Nantucket	10	K. Blackshaw#
Rough-legged Hawk				American Oystercatcher			
10/20	Saugus	1	S. Zende#	9/1	Revere B.	13	S. Zende#
10/20	Nantucket	1 dk	V. Laux#	9/21	Chatham (S.B.)	30	B. Nikula
10/24-31	P.I.	1 lt	v.o.	10/12	Edgartown	4	P. Gilmore#
10/25	Acton	1	R. Stymeist	10/20	Squantum	2	V. Zollo
Golden Eagle				American Avocet			
9/27	Barre Falls	1	Hawkcount (BK)	10/29-31	P.I.	1	C. Sheridan + v.o.
10/21	Pittsfield (Onota)	1	I. Davies	Spotted Sandpiper			
Clapper Rail				9/5	Ware R. IBA	3	M. Lynch#
9/5	Chatham	1	B. Nikula	9/24	Reading	4	D. Williams
9/18	Wellfleet	2 ad + 3 juv	S. Broker	10/2	Sheffield	2	G. Ward
10/30	West Harwich	1	B. Nikula	10/18	Sharon	2	L. Waters
King Rail				Solitary Sandpiper			
10/2	Wellfleet	1 dead	M. Faherty	9/3	Boston	3	P. Peterson
Virginia Rail				9/8	Sterling Peat	5	M. Lynch#
9/16	GMNWR	2	A. Bragg#	9/10	Cambr. Res.	5	R. Stymeist
9/17	Westboro	2	N. Paulson	9/17	Ware R. IBA	3	M. Lynch#

Solitary Sandpiper (continued)			9/6	Longmeadow	20	S. Kellogg	
9/26	Winchester	4		9/8	Sterling Peat	11	M. Lynch#
10/9	Easthampton	3		9/10	Cambr. Res.	14	R. Stymeist
Greater Yellowlegs			10/6	Washington	9	K. Hanson	
thr	P.I.	81 max		White-rumped Sandpiper			
9/7	Chatham	165		thr	P.I.	262 max	v.o.
10/15	Ipswich	142		9/7, 21	Chatham (S.B.)	30, 15	B. Nikula
10/22	Winthrop	30		9/29	S. Monomoy	8	B. Nikula
10/22	Lynn	43		10/14	Truro	8	G. d'Entremont#
10/23	Wachusett Res.	16		10/20	Duxbury B.	5	R. Bowes
Willet				10/29	Quabbin (G34)	2	B. Kamp
9/9	P.I.	2		Baird's Sandpiper			
9/21	Chatham	11		9/thr	Reports of indiv. from 9 locations		
10/5	Orleans	2		9/thr	P.I.	3 max	v.o.
Western Willet				10/6	Washington	1	K. Hanson
9/7	Chatham	3		Pectoral Sandpiper			
9/14	Wellfleet	1		9/4	Ipswich	6	J. Berry
9/15	Cuttyhunk	1		9/26	Northfield	20	Z. Jakob
Lesser Yellowlegs				10/2	October Mt.	7	E. Neumuth
9/1	Ipswich	4		10/5	Washington	8	J. Pierce
9/3	P.I.	23		10/6	Cumb. Farms	14	SSBC
9/21	Revere	4		10/15	Deerfield	9	Z. Jakob
10/13	WBWS	7		10/30	P.I.	11	S. Sullivan
10/28	Lynn	1		Purple Sandpiper			
Whimbrel				10/29	P.I.	1	C. Gras
9/12	Nahant	2		Dunlin			
9/14	Amherst	1		9/21	Chatham (S.B.)	150	B. Nikula
9/15	Westport	2		10/14	GMNWR	1	K. Dia#
9/16	P.I.	9		10/15	Ipswich	205	R. Heil
9/27	Yarmouth	11		10/17	P.I.	300	J. McCoy
10/2	Duxbury B.	7		10/27	Duxbury B.	854	R. Bowes
10/13	WBWS	5		10/28	S. Quabbin	1	L. Therrien
Hudsonian Godwit				Stilt Sandpiper			
9/7, 21	Chatham (S.B.)	9, 3		9/1	Ipswich	1	J. Berry
9/9	Salisbury	1		9/thr	P.I.	10 max	v.o.
9/29	Newbypt H.	1		9/29	S. Monomoy	2	B. Nikula
10/15-22	Lynn	1		Buff-breasted Sandpiper			
10/31	P.I.	3		9/1	Northampton	1	B. Zajda#
Marbled Godwit				9/1	P.I.	6	S. Arena#
9/7, 21	Chatham (S.B.)	1, 1		9/6	Concord	2	L. Hale
10/12	Edgartown	1		9/8	Mashpee	1	M. Keleher
Ruddy Turnstone				9/8	Orleans	1	P. Trull
9/1	Winthrop B.	7		9/11	Nantucket	1	V. Laux
9/1	P.I.	6		Short-billed Dowitcher			
9/21	Chatham (S.B.)	30		9/1	Ipswich	12	J. Berry
9/28	Cuttyhunk	8		9/3	P.I.	75	R. Heil
10/2	Duxbury B.	4		9/7, 21	Chatham (S.B.)	50, 20	B. Nikula
10/28	Westport	3		10/6	Duxbury B.	1	R. Bowes
Red Knot				10/19	Nantucket	2	J. Trimble
9/2	Ipswich (C.B.)	13		Long-billed Dowitcher			
9/7, 21	Chatham (S.B.)	125, 70		9/1	P.I.	2	S. Grinley
9/16	Orleans	140		9/15	Cuttyhunk	2	I. Davies
Sanderling				9/25	Newbypt H.	2	MAS (B. Gette)
9/7, 21	Chatham (S.B.)	700, 525		9/29	S. Monomoy	1	B. Nikula
9/10	Revere B.	151		Wilson's Snipe			
9/29, 10/29	Duxbury B.	525, 148		9/9	GMNWR	4	A. Bragg#
10/2	Sheffield	1		10/6	Cumb. Farms	3	SSBC
10/18	Nantucket	1658		10/18	Arlington Res.	2	K. Hartel
10/29	Wachusett Res.	1		American Woodcock			
Semipalmated Sandpiper				9/13	Cuttyhunk	3	I. Davies#
9/1	Revere B.	510		9/21	P.I.	3	N. Landry
9/2	Ipswich (C.B.)	525		10/13	Ware R. IBA	8	M. Lynch#
9/3	P.I.	1900		Wilson's Phalarope			
9/7	Chatham (S.B.)	300		9/1	Ipswich	1	J. Berry
10/6	Duxbury B.	180		9/10	P.I.	1	BBC (D. Williams)
Western Sandpiper				Red-necked Phalarope			
9/1	Squantum	2		9/4	Tillies Bank	4	K. Mueller
9/10	P.I.	2		9/14	Duxbury B.	1	S. Olanoff
9/21	Chatham (S.B.)	1		9/14	P.I.	1	T. Wetmore#
Least Sandpiper				Red Phalarope			
9/3	Northampton	11		9/4	Tillies Bank	4	K. Mueller

Red Phalarope (continued)			9/27	Boston H.	4	R. Schain
9/17 Plymouth B.	1	S. van der Veen	10/5	Westport	6	P. Champlin
Black-legged Kittiwake			10/6	Cumb. Farms	2	SSBC
10/5, 30 E. of Chatham	1, 25	B. Nikula#	Black Tern			
10/6 Rockport (A.P.)	1	R. Heil	9/2	Barnstable (S.N.)	15	P. Crosson
Sabine's Gull			9/14	Chatham (S.B.)	1	J. Hoye#
9/14-18 Chatham	1	C. Goodrich#	9/15	Cuttyhunk	5	I. Davies#
10/30 E. of Chatham	1	B. Nikula#	9/22	Haverhill	1	S. Mirick
Bonaparte's Gull			Roseate Tern			
9/7 Newbypt	300	S. Grinley	9/2	Ipswich (C.B.)	2	D. Williams
10/12 P'town	170	B. Nikula	9/10	P.I.	3	T. Wetmore
10/12 Revere B.	105	R. Stymeist	9/21	Chatham (S.B.)	20	B. Nikula
10/31 P.I.	200	J. Sender	Common Tern			
Black-headed Gull			9/2	Ipswich (C.B.)	137	D. Williams
9/14 Chatham	1	E. Orcutt	9/27	P.I.	2	T. Wetmore
Little Gull			9/28, 10/20	P'town	1400, 2150	B. Nikula
9/7 Newbypt	1 imm	S. Grinley	10/5	Westport	12	P. Champlin
9/19 Chatham	1	J. Hoye#	Forster's Tern			
10/12 Dennis (Corp. B.)	1	P. Flood	9/2	Barnstable (S.N.)	20	P. Crosson
10/12 Lynn B.	1 imm	S. Sullivan	9/7	Ipswich	4	S. Grinley
10/12-26 P'town	1 ad	B. Nikula	10/12	Fairhaven	29	M. Lynch#
10/23 N. Truro	1 imm	B. Nikula	10/13	P'town	90	B. Nikula
Laughing Gull			10/25	Westport	50	P. Champlin
9/2 P.I.	26	L. Pivacek	Black Skimmer			
9/3 Nahant	30	J. Hoye#	10/6	Dennis	5	P. Flood
9/4 P'town	400	B. Nikula	10/12	Revere B.	9	R. Stymeist
9/28 Cuttyhunk	550	I. Davies#	10/15, 27	P.I.	6, 4	v.o.
10/5, 30 E. of Chatham	2000, 700	B. Nikula#	10/18	Ipswich	6	J. Berry#
Lesser Black-backed Gull			10/22	Orleans	8	J. Leary
9/1 P.I.	1	E. Labato	10/22	Newbypt	6	J. Forbes
9/16 Orleans	6	M. Faherty	South Polar Skua			
9/21 Chatham (S.B.)	45	B. Nikula	9/3	5 m S. of Nomans	1 ph	S. Stephens
9/29 S. Monomoy	6	B. Nikula	Pomarine Jaeger			
10/5 E. of Chatham	9	B. Nikula#	10/5, 19	E. of Chatham	1, 1	B. Nikula#
10/19 Nantucket	57	J. Trimble	Parasitic Jaeger			
Least Tern			9/4	Tillies Bank	2	K. Mueller
9/7 Ipswich	2	B. Harris	9/4, 30	P'town	2, 13	B. Nikula
9/10 Chatham (S.B.)	5	E. Orcutt	9/19	Chatham	4	B. Nikula
Caspian Tern			9/21	N. Truro	5	B. Nikula
9/8 Squantum	2	R. Donovan	9/27	P.I.	1	T. Wetmore
9/16 Orleans	6	M. Faherty	10/5, 15	E. of Chatham	20, 10	B. Nikula#
9/20 Newbury	5	K. Elwell	10/6	Rockport (A.P.)	1	R. Heil
9/21 P.I.	2	E. Labato	10/6, 23	P'town	28, 17	B. Nikula
9/21 Randolph	3	L. Waters#	Black Guillemot			
9/26 Newbypt H.	3	BBC (D. Williams)	9/2	P.I.	2	T. Wetmore



SNOWY OWL BY DAVID M. LARSON

CUCKOOS THROUGH FINCHES

This period coincides with the bulk of fall migration of Northern Saw-whet Owl. Unlike last year, which was one of the best for the number of birds banded from various banding stations in the state, this season had low numbers banded. Lookout Rock in Northborough experienced the worst capture rate in all of its 11-year study, with just 48 newly banded birds compared with 106 from 2012. Normally, hatch-year birds comprise over 60% of captures, but this year Lookout Rock's captures were just 24% hatch-year and Drumlin Farm's were just 7%. These numbers suggest poor breeding success this season.

This fall was one of the best in many years for migrating Common Nighthawks. Good numbers continued into the early days of September, especially in the Connecticut River valley. As many as eight Whip-poor-wills were tallied on Plum Island on September 15, and one was last heard on September 27.

A **Calliope Hummingbird** was discovered during the third annual Nantucket Birding Festival sponsored by the Linda Loring Nature Foundation. This was the fifth record for the state; the first was from Eastham in 2002 and the second from Deerfield in 2008. A **Rufous Hummingbird**, now almost an annual visitor during the period, was banded in Brewster. Late Ruby-throats were noted from Newton and Arlington in October.

At Mount Wachusett, when observers could take their eyes off the record number of Broad-winged Hawks, they also recorded over 134 American Kestrels, 28 Merlins, and 25 Peregrines. There were three Red-headed Woodpeckers noted, down from a high of seven from the same period last year.

A cold front passed through on September 2, and the next morning birders reported large numbers of songbird migrants. Another cold front passed on September 16 with clearing skies and with the wind shifting to the north, producing a new group and a strong turnover in both numbers and composition. At Plum Island, the temperatures were in the mid 40s at dawn and hundreds of birds dropped onto the island, including as many as 18 Philadelphia Vireos, 26 Red-eyed Vireos, and 18 species of warblers, including 12 Cape May. Tree Swallows continued in large numbers during the first two weeks of September. Thirty-one species of warblers were noted during the period, including a **Golden-winged Warbler** banded at Manomet, the Center's first since September 1995. Other notable warblers observed included over 25 Orange-crowned, 39 Connecticut, 10 Hooded, 31 Cape May, and a **Black-throated Gray Warbler** photographed on Nantucket.

The sparrow migration was a highlight for birders during this period, with 17 members plus Ipswich Sparrow noted. Clay-colored Sparrows are routine now with at least 44 reported; 16 Vesper, 7 Lark, 5 Grasshopper, and 11 Nelson's were among the more unusual. Some of our common sparrows were noted in exceptional numbers, such as 175 Chipping Sparrows in Paxton and 246 Savannah from Cumberland Farms, where also an amazing number of nearly 900 Swamp Sparrows were estimated on October 6.

Unusual birds included **Western Kingbirds** in Yarmouth and Concord, a **Sedge Wren** in Northampton, a **Western Tanager** in Chatham, a **Yellow-headed Blackbird** on Cuttyhunk Island, and also on the island was a possible **Lazuli Bunting**. This bird was well described and photographed, but differentiating between Lazuli and Indigo buntings in the fall is difficult. Yet another possible Lazuli Bunting was discovered from the Honey Pot area in Hadley October 2.

R. H. Stymeist

Yellow-billed Cuckoo	9/1-10/7	Reports of indiv. from 11 locations			Peregrine Falcon			
	10/25	Brewster	1 b	S. Finnegan	9/11	P.I.	4	MAS (B. Gette)
	10/27	Concord	1	J. Winstanley	9/13-30	Mt. Wachusett	22	Hawkcount (SO)
Black-billed Cuckoo	9/14	Sudbury	1	T. Spahr	9/18	Longmeadow	3	I. Davies
	9/15	P.I.	1	N. Landry	9/18	Mt. Wachusett	3	Hawkcount (SO)
	9/23	Marlboro	1	T. Spahr	10/5	Concord	3	C. Winstanley
	9/28	Nantucket	1	V. Laux	Red-headed Woodpecker			
	9/28	Rockport	1	R. Heil	10/2	Granville	1	J. Weeks
	9/29	Gloucester	1	R. Heil	10/21	Westport	1 imm	P. Champlin
Barn Owl	9/28	Nantucket	2	V. Laux	10/25	Wellesley	1 imm	B. Harris
Eastern Screech-Owl	9/21	Braintree	4	G. d'Entremont	Red-bellied Woodpecker			
	10/5	Concord	2	S. Perkins	9/21	Braintree	5	G. d'Entremont#
Great Horned Owl	9/13	W. Gloucester	2	J. Nelson	9/26	Brookline	5	BBC (R. Stymeist)
	9/27	Cuttyhunk	2	I. Davies#	9/27	Ipswich	6	J. Berry
	10/9	Middleboro	2	K. Anderson	10/22	Southboro	6	M. Lynch#
	10/28	Woburn (HP)	2	M. Rines	Yellow-bellied Sapsucker			
Barred Owl	9/14	Sudbury	2	T. Spahr	9/28	Gloucester(E.P.)	8	S. Hedman
	10/5	Upton	4	B. Cassie	10/3	Medford	3	R. LaFontaine
Long-eared Owl	10/4	Otis	1	W. Rogers	10/4	Wellfleet	5	M. Keleher
Short-eared Owl	10/6, 29	Duxbury B.	1	R. Bowes	10/5	MNWS	4	M. Sabourin
	10/6	Northampton	1	A. & L. Richardson	10/8	Malden	3	P. + F. Vale
	10/25	Westport	1	P. Champlin	10/8	Boston (Fens)	4	P. Peterson
Northern Saw-whet Owl	10/25	DFWS	9 b	MAS (KS)	Northern Flicker			
	10/26	Belchertown	1	L. Therrien	9/26	P.I.	21	P. + F. Vale
	10/26	Gill	1	T. Bullock	10/5	Woburn	22	M. Rines#
Common Nighthawk	9/2	Southwick	505	S. Kellogg	10/17	Dover	25	B. Cassie
	9/2	Northampton	303	T. Gagnon	Pileated Woodpecker			
	9/3, 10/9	Concord	38, 1	S. Perkins#	9/15	Quabog IBA	3	M. Lynch#
	9/4	Boston	4	M. Brengle	9/22	S. Quabbin	3	M. Lynch#
	9/22	Barre Falls	3	B. Kamp	10/2	Newbypt	2	J. Berry#
Eastern Whip-poor-will	9/15, 27	P.I.	8, 1	T. Wetmore	10/4	Washington	2	E. Neumuth
Chimney Swift	9/9	Cambr. (F.P.)	10	R. Stymeist#	Olive-sided Flycatcher			
	9/11	Woburn	12	M. Rines	9/1	Bradford	1	S. + J. Mirick
	9/12	Mt. Wachusett	12	S. Olson	9/11	Longmeadow	1	A. & L. Richardson
	10/7	Concord	16	K. Dia#	9/13	Ware R. IBA	1	M. Lynch#
Ruby-throated Hummingbird	9/3-30	Quabog IBA	5	M. Lynch#	9/14	Concord	1	D. Sibley
	9/14	Westport	7	P. Champlin	9/17	Westboro	1	N. Paulson
	9/14	Cuttyhunk	9	I. Davies#	9/21	P.I.	1	BBC (I. Giriunas)
	10/10	Newton	1	M. Bakker	Eastern Wood-Pewee			
	10/13	Arlington	1	M. Rines	9/15	Cuttyhunk	5	I. Davies
Calliope Hummingbird	10/19-22	Nantucket	1 ph	V. Laux + v.o.	9/16	Northampton	3	B. Zajda
Rufous Hummingbird	10/30	Brewster	1 b	S. Finnegan	9/17	P.I.	4	R. Heil
American Kestrel	9/3-28	Barre Falls	97	Hawkcount (SO)	9/17	Lincoln	4	J. Forbes
	10/1-25	Mt. Wachusett	25	Hawkcount (PR)	9/29	Worc. (BMB)	5	S. Woodard
	10/3-20	Barre Falls	39	Hawkcount (BK)	10/6	Cambr. (F.P.)	1	J. Trimble
	10/8	Granville	22	J. Weeks	Yellow-bellied Flycatcher			
	10/8	Barre Falls	15	Hawkcount (BK)	9/1-28	Reports of indiv. from 17 locations		
	10/8	Mt. Wachusett	12	Hawkcount (PR)	Least Flycatcher			
	10/8	Russell	19	T. Swochak	9/3	P.I.	4	R. Heil
Merlin	9/3-29	Mt. Wachusett	22	Hawkcount (SO)	9/3, 10/11	Lexington	2, 1	M. Rines
	9/18	Mt. Wachusett	6	Hawkcount (SO)	9/25	Concord	2	L. Hale
	10/1	Westport	5	P. Champlin	Eastern Phoebe			
	10/3-20	Barre Falls	9	Hawkcount (BK)	9/14	Wellfleet	14	BBC (R. Stymeist)
					9/23	Boston (Fens)	14	R. Schain
					9/24	P.I.	24	R. Heil
					10/8	Burlington	14	M. Rines
					10/21	Westport	13	P. Champlin
					10/29	October Mt.	2	E. Neumuth
					10/29	MNWS	1	D. Noble
					Great Crested Flycatcher			
					9/15	Cuttyhunk	4	I. Davies#
					9/19	Quabbin Pk	1	L. Therrien
					9/23	Westport	1	P. Champlin
					Western Kingbird			
					9/18	Yarmouth	1	P. Crosson#
					10/31	Concord	1	D. Sibley + v.o.
					Eastern Kingbird			
					9/3	P.I.	22	R. Heil
					9/14	Cuttyhunk	6	I. Davies
					White-eyed Vireo			
					9/11	Acoaxet	2	G. Gove#
					9/14	Cuttyhunk	2	I. Davies#

10/19	Nantucket	2	V. Laux#	9/29	Hadley	1	B. Zajda
10/21	Manomet	1 b	T. Lloyd-Evans#	Cliff Swallow			
Yellow-throated Vireo				9/7	Gay Head	1	T. Spahr#
9/13	Ware R. IBA	5	M. Lynch#	9/14	Mt. Watatic	2	T. Pirro
9/14, 28	Cuttyhunk	2, 2	I. Davies#	9/22	Wayland	1	J. Forbes
9/16	Gloucester (E.P.)	2	J. Nelson	9/22	W. Roxbury (MP)	1	M. Iliff
9/29	Southwick	1	S. Kellogg	Barn Swallow			
Blue-headed Vireo				9/1	Quabog IBA	43	M. Lynch#
9/14	Woburn	1	M. Rines	9/2	Sterling Peat	11	M. Lynch#
9/17	P.I.	2	R. Heil	10/14	Truro	2	L. Waters
9/19	Ware R. IBA	11	M. Lynch#	10/22	Concord	1	C. Gras
9/28	Cuttyhunk	6	I. Davies#	Red-breasted Nuthatch			
10/8	Waltham	4	J. Forbes	9/5	Ware R. IBA	10	M. Lynch#
10/19	Nantucket	24	V. Laux#	9/14	Wellfleet	18	BBC (R. Stymeist)
Warbling Vireo				9/19	Arlington	3	K. Hartel
9/9	Cambr. (F.P.)	10	R. Stymeist#	Brown Creeper			
9/12	Woburn (HP)	4	M. Rines	9/17	Ware R. IBA	4	M. Lynch#
9/19	P.I.	5	T. Wetmore	9/26	P.I.	3	D. Chickering
10/2	Gloucester	3	B. Harris#	10/19	Westport	3	P. Champlin
Philadelphia Vireo				10/30	Nantucket	6	V. Laux
9/6	Gill	2	J. Smith	Carolina Wren			
9/12	Cambr. (Danehy)	2	T. Spahr	9/3	Lexington	8	M. Rines
9/15	P'town	2	BBC (R. Stymeist)	9/14	Cuttyhunk	51	I. Davies#
9/17	P.I.	18	R. Heil	9/14	Wellfleet	15	BBC (R. Stymeist)
9/20	Wellfleet	3	M. Keleher	9/21	Braintree	8	G. d'Entremont#
9/23	Sharon	2	L. Waters	10/19	Falmouth	24	M. Keleher
9/25	Northampton	2	B. Zajda	10/20	S. Dart. (A.Pd)	8	BBC (N. Paulson)
Red-eyed Vireo				House Wren			
9/5	Ware R. IBA	21	M. Lynch#	9/17	Ware R. IBA	9	M. Lynch#
9/5	Manomet	11 b	T. Lloyd-Evans#	9/27	Lexington	12	M. Rines
9/17	P.I.	26	R. Heil	9/28	Cuttyhunk	7	I. Davies#
9/28	Cuttyhunk	32	I. Davies#	10/1	Westboro	6	T. Spahr
10/19	Lexington	2	M. Rines#	10/6	Cumb. Farms	7	SSBC
10/28	Medford	1	R. LaFontaine	10/27	Newton	1	H. Miller
Fish Crow				Winter Wren			
9/2	Hadley	2	S. Surner	9/21	Petersham	2	M. Lynch#
9/4	Northampton	2	T. Gagnon	10/5	Becket	3	R. Laubach
9/21	Braintree	16	G. d'Entremont#	10/28	Winchester	2	M. Rines
10/21	Mattapan (BNC)	36	P. Peterson	Sedge Wren			
10/25	Wellfleet	35	M. Faherty	9/26	Northampton	1	D. McLain
Common Raven				Marsh Wren			
9/14	Mt. Watatic	8	T. Pirro	9/2	Bolton Flats	4	M. Lynch#
9/15	Quabog IBA	3	M. Lynch#	9/16	GMNWR	8	A. Bragg#
9/25	Mt. Wachusett	15	S. Olson	9/16	P.I.	12	R. Heil
10/5	Sudbury	3	MAS (K. Dia)	9/29	Lenox	6	P. Crossen
10/26	P.I.	3	M. Goetschkes	9/30	GMNWR	5	K. Dia#
Horned Lark				10/5	MNWS	2	M. Sabourin
9/3	Northampton	10	M. Lynch#	Blue-gray Gnatcatcher			
9/17	Plymouth B.	3	S. van der Veen	9/14	Wellfleet	2	BBC (R. Stymeist)
9/25	Newbury	3	MAS (B. Gette)	9/19	Sudbury	1	M. Clegg
10/27	Duxbury B.	9	R. Bowes	10/1	DFWS	1	P. Sowizral
10/31	Wachusett Res.	2	M. Lynch#	10/18	Nantucket	1	J. Trimble
Tree Swallow				Golden-crowned Kinglet			
9/1	Hadley	250	B. Zajda#	9/25	Mt.A.	7	M. Sabourin
9/9	Salisbury	10,000	D. Chickering#	9/26	P.I.	16	P. + F. Vale
9/11	Nantucket	3000	V. Laux#	10/2	Gloucester	65	B. Harris#
9/14	Cuttyhunk	1400	I. Davies#	10/19	Westport	24	P. Champlin
9/15	Truro	4800	BBC (R. Stymeist)	10/28	S. Peabody	11	R. Heil
9/17	P.I.	3500	R. Heil	10/30	Nantucket	30	V. Laux
10/6	Duxbury B.	2400	R. Bowes	Ruby-crowned Kinglet			
10/28	Westport	28	M. Lynch#	9/29	Quabog IBA	16	M. Lynch#
Northern Rough-winged Swallow				10/3	Mt.A.	11	M. Sabourin
9/18	Concord	3	S. Perkins	10/5	Groton	30	T. Murray
9/22	Waltham	5	J. Forbes	10/19	Lexington	12	M. Rines#
9/22	Wayland	10	J. Forbes	10/19	Westport	24	P. Champlin
10/9	GMNWR	2	S. Perkins	10/28	S. Peabody	12	R. Heil
Bank Swallow				10/30	Nantucket	12	V. Laux
9/2	Hadley	850	S. Surner	Eastern Bluebird			
9/7	Southwick	400	S. Kellogg	9/9	Falmouth	33	K. Fiske
9/22	Wayland	5	J. Forbes	9/14	Easthampton	45	B. Zajda

Eastern Bluebird (continued)				10/28	Acoaxet	40	M. Lynch#
10/17	Dover	50	B. Cassie	10/28	Dorchester	1	R. Donovan#
Veery				10/29	October Mt.	12	E. Neumuth
9/5	Ware R. IBA	2	M. Lynch#	Ovenbird			
9/7	Gay Head	2	T. Spahr#	9/5	Ware R. IBA	8	M. Lynch#
9/12	Westboro	2	N. Paulson	9/23	Westport	3	P. Champlin
9/15	Westport	5	P. Champlin	10/4	Melrose	1	D. + I. Jewell
9/28	Cuttyhunk	2	I. Davies#	10/8	Boston (F.Pk)	1	J. Young
Gray-cheeked/Bicknell's Thrush				Northern Waterthrush			
9/15	Westport	4	P. Champlin	9/10	Revere B.	2	P. Peterson
9/16	Belchertown	2	L. Therrien	9/16	Woburn (HP)	2	M. Rines
10/13	Ware R. IBA	1	M. Lynch#	9/16	P.I.	5	R. Heil
Swainson's Thrush				9/20	Wellfleet	3	M. Keleher
9/14	Sudbury	35	T. Spahr	9/28	Cuttyhunk	3	I. Davies
9/15	S. Quabbin	6	L. Therrien	10/1	Westport	2	P. Champlin
9/16	P.I.	4	R. Heil	10/1	Winchester	2	J. Kovner#
9/23	Wayland	12	J. Hoye#	Golden-winged Warbler			
10/5	Gill	5	J. Smith	10/9	Manomet	1 b	T. Lloyd-Evans#
10/20	Florida	1	R. Laubach	Blue-winged Warbler			
Hermit Thrush				9/7	Lexington	1	M. Rines
10/13	Ware R. IBA	51	M. Lynch#	9/9	Waltham	1	J. Forbes
10/14	S. Quabbin	7	L. Therrien	9/20	Boston (A.A.)	1	P. Peterson
10/19	P.I.	7	R. Stymeist	9/20	P.I.	1	T. Wetmore
10/27	Woburn	16	M. Rines	9/20	Newton	1	H. Miller
10/28	Boston (Fens)	16	P. Peterson	Black-and-white Warbler			
10/28	S. Peabody	22	R. Heil	9/3	Lexington	6	M. Rines
Wood Thrush				9/5	Ware R. IBA	11	M. Lynch#
9/14	Amherst	5	L. Therrien	9/21	Petersham	7	M. Lynch#
10/5	Groton	3	T. Murray	9/21	Braintree	6	G. d'Entremont#
10/9	Gill	1	J. Smith	9/26	P.I.	8	D. Chickering
10/16	Sharon	1	V. Zollo	10/11	Boston (Fens)	1	R. Schain
10/16	Woburn	1	M. Rines	Tennessee Warbler			
Gray Catbird				9/13	Ware R. IBA	2	M. Lynch#
9/3	P.I.	106	R. Heil	9/17	P.I.	2	R. Heil
9/13	Ware R. IBA	48	M. Lynch#	9/17	Boston (PG)	2	T. Factor
9/28	Nantucket	70	V. Laux	9/23	Amherst	8	L. Therrien
9/29	Sandwich	56	M. Keleher	9/28	Cuttyhunk	2	I. Davies#
10/6	Cumb. Farms	79	SSBC	10/3	Paxton	3	R. Jenkins
10/29	Longmeadow	1	M. Moore	10/12	Longmeadow	1	G. Kingston
10/31	P.I.	1	P. + F. Vale	Orange-crowned Warbler			
Brown Thrasher				thr	Reports of indiv. from 19 locations		
9/3	P.I.	23	R. Heil	9/27	Yarmouth	2	P. Crosson
9/20	Hadley	2	L. Therrien	10/8	Burlington	3	M. Rines
9/26	P.I.	5	P. + F. Vale	10/19	Westport	2	P. Champlin
10/20	S. Dart. (A.Pd)	5	BBC (N. Paulson)	Nashville Warbler			
American Pipit				9/17	P.I.	4	R. Heil
9/2, 10/9	Hadley	1, 65	Surner, Therrien	9/18	Waltham	3	J. Forbes
9/28	Northfield	100	B. Zajda	9/21	S. Quabbin	5	L. Therrien
10/5	Concord	75	C. Winstanley	9/23	Amherst	5	L. Therrien
10/9	Newbury	50	MAS (B. Gette)	9/29	Cuttyhunk	3	I. Davies#
10/15	Deerfield	98	Z. Jakub	10/1	Westport	5	P. Champlin
10/23	P.I.	68	D. Adrien	10/8	Boston (Fens)	3	P. Peterson
10/27	Nantucket	55	K. Blackshaw	Connecticut Warbler			
10/31	Wachusett Res.	69	M. Lynch#	9/1-10/13	Reports of indiv. from 29 locations		
Cedar Waxwing				9/16	Northampton	3	B. Zajda
9/15	Truro	48	BBC (R. Stymeist)	9/21	Lexington	4	M. Rines
9/19	Burlington	60	M. Rines	10/2	Westboro	3	T. Spahr
9/28	Cuttyhunk	64	I. Davies	Mourning Warbler			
10/17	Quabog IBA	63	M. Lynch#	9/3	Waltham	1	J. Forbes
Lapland Longspur				9/5	Manomet	3 b	T. Lloyd-Evans#
9/16, 10/23	P.I.	1, 3	Heil, Wetmore	9/11	Belchertown	1	E. Dalton
9/25	Granville	2	J. Weeks	9/14	Cuttyhunk	1	I. Davies#
10/11	Falmouth	5	J. McCumber	9/14	Boston (PG)	1	T. Factor
10/25	Dorchester	1	R. Donovan#	9/16	Northampton	1	B. Zajda
10/27	Duxbury B.	8	R. Bowes	9/16	Gloucester (E.P.)	1	J. Nelson
10/28	Turners Falls	1	J. Smith	9/26	P.I.	1 b	B. Flemer#
Snow Bunting				10/4	Westport	1	P. Champlin
10/26	Westport	2	P. Champlin	Common Yellowthroat			
10/27	P.I.	20	J. Berry#	9/3	Lexington	32	M. Rines
10/27	S. Quabbin	2	M. Lynch	9/3	P.I.	25	R. Heil

Common Yellowthroat (continued)			9/23	Sharon	52		L. Waters	
9/13	Ware R. IBA	22		M. Lynch#	10/3	Mt.A.	41	M. Sabourin
9/29	Sandwich	17		M. Keleher	10/19	Nantucket	65	V. Laux#
9/29	Quabog IBA	17		M. Lynch#		Black-throated Blue Warbler		
10/6	Cumb. Farms	20		SSBC	9/13	Ware R. IBA	6	M. Lynch#
10/8	Westboro	12		T. Spahr	9/14	Westport	22	P. Champlin
Hooded Warbler					9/18	Quabbin (G10)	5	B. Zajda
9/4	Manomet	1 b		T. Lloyd-Evans#	9/26	Waltham	4	J. Forbes
9/7	Gay Head	1		T. Spahr#	10/4	Wellfleet	3	M. Keleher
9/8, 26	Lexington	1, 1		v.o.	10/19	Nantucket	2	V. Laux#
9/27	Nantucket	1		T. Pastuszak		Palm Warbler		
9/28	Truro	1		S. Arena	9/6	Lexington	1	M. Rines
10/2	MNWS	1		D. Noble	9/25	Concord	60	L. Hale
10/4	Manomet	1 b		T. Lloyd-Evans#	9/28	Sandisfield	66	M. Lynch#
10/5	Dorchester	1		J. Taylor	9/28	Bolton Flats	50	T. Murray
10/5	Wellfleet	1		K. Miller#	10/3	Paxton	45	R. Jenkins
American Redstart					10/8	Westboro	39	T. Spahr
9/3	P.I.	11		R. Heil	10/31	P.I.	1	J. Sender
9/3	Lexington	18		M. Rines		Pine Warbler		
9/6, 10/19	Westport	18, 1		P. Champlin	9/15	Truro	26	BBC (R. Stymeist)
9/14	Cuttyhunk	21		I. Davies	9/17	Ware R. IBA	55	M. Lynch#
10/21	Northampton	1		D. McLain	9/21	S. Quabbin	22	L. Therrien
10/25	Salisbury	1		E. Labato	9/23	Wellfleet	60	E. Orcutt
Cape May Warbler						Yellow-rumped Warbler		
9/3, 9/17	P.I.	1, 12		R. Heil	9/28	Bolton Flats	100	T. Murray
9/4, 10/2	Westport	2, 8		P. Champlin	10/3	Paxton	150	R. Jenkins
9/14	Sudbury	3		T. Spahr	10/4	Westport	200	P. Champlin
9/23	Amherst	3		L. Therrien	10/5	Woburn	124	M. Rines#
10/20	Nantucket	2		J. Trimble	10/6	Cumb. Farms	234	SSBC
Northern Parula					10/19	Brewster	145 b	S. Finnegan
9/4, 10/1	Westport	7, 11		P. Champlin	10/19	Falmouth	102	M. Lynch#
9/17	Westboro	7		N. Paulson	10/26	Lexington	155	M. Rines#
9/18	Boston (F.Pk)	7		J. Young		Prairie Warbler		
9/18	Waltham	15		J. Forbes	9/5	Ware R. IBA	5	M. Lynch#
9/20	Amherst	26		L. Therrien	9/14	Westport	10	P. Champlin
9/21	S. Quabbin	18		L. Therrien	9/14	Cuttyhunk	7	I. Davies#
9/21	Braintree	9		G. d'Entremont#	9/15	Truro	6	BBC (R. Stymeist)
10/28	Winchester	1		R. LaFontaine	9/21	Chatham	3	B. Harris#
Magnolia Warbler					10/27	P.I.	2	N. Landry
9/17	P.I.	6		R. Heil		Black-throated Gray Warbler		
9/17	Ware R. IBA	6		M. Lynch#	10/14	Nantucket	1 ph	Harris, Ernst
9/23	Lexington	4		C. Floyd		Black-throated Green Warbler		
9/28	Cuttyhunk	4		I. Davies#	9/7	P.I.	10	D. Adrien
10/18	Longmeadow	1		A. & L. Richardson	9/16	Northampton	10	B. Zajda
10/19	Nantucket	1		V. Laux#	9/17	Ware R. IBA	18	M. Lynch#
Bay-breasted Warbler					9/23	Amherst	31	L. Therrien
9/5	Concord	3		C. Winstanley#	9/25	Sterling	30	M. Lynch#
9/6	Amherst	3		L. Therrien	10/19	Milton	3	L. Eyster
9/17	Westboro	2		N. Paulson	10/29	Harwich	1	P. Kyle
9/18	P.I.	2		D. Chickering		Canada Warbler		
9/23	Amherst	3		L. Therrien	9/thr	Reports of indiv. from 12 locations		
Blackburnian Warbler					10/2	Duxbury B.	1	R. Bowes
9/5	Concord	4		C. Winstanley#		Wilson's Warbler		
9/16	Northampton	2		B. Zajda	9/1	Medford	2	M. Rines
9/17	P.I.	2		R. Heil	9/7	Boston H.	2	R. Stymeist#
9/23	Amherst	5		L. Therrien	9/14	Cuttyhunk	2	I. Davies#
9/29	S. Quabbin	1		L. Therrien	9/16	Northampton	3	B. Zajda
Yellow Warbler					9/16	P.I.	2	R. Heil
9/3	P.I.	24		R. Heil	9/19	Amherst	3	L. Therrien
9/15	Worcester	4		D. Grant	9/24	Duxbury B.	2	R. Bowes
9/20	Westboro	3		T. Spahr	10/25	Westport	1	P. Champlin
10/1	Westport	3		P. Champlin		Yellow-breasted Chat		
10/20	Duxbury B.	1		R. Bowes	thr	Reports of indiv. from 14 locations		
Chestnut-sided Warbler					9/4	Manomet	3 b	T. Lloyd-Evans#
9/4	Lexington	2		M. Rines		Eastern Towhee		
9/5	Ware R. IBA	12		M. Lynch#	9/14	Wellfleet	19	BBC (R. Stymeist)
9/23	Westport	3		P. Champlin	9/14	Cuttyhunk	73	I. Davies
10/9	Cambr. (Danehy)	1		BBC (K. Hartel)	9/17	Ware R. IBA	43	M. Lynch#
Blackpoll Warbler					9/24	P.I.	26	R. Heil
9/4, 23	Lexington	1, 33		M. Rines	10/23	Westport	8	P. Champlin
9/17	Ware R. IBA	61		M. Lynch#		American Tree Sparrow		
9/23, 10/26	Westport	30, 1		P. Champlin	10/24	P.I.	1	M. Goetschkes

American Tree Sparrow (continued)			9/29	Hadley	14	B. Zajda	
10/29	Cambr. (F.P.)	1		10/3	Bolton Flats	9	M. Lynch#
10/31	GMNWR	2		10/3	Paxton	6	R. Jenkins
Chipping Sparrow				10/6	Cumb. Farms	12	SSBC
9/14	Wellfleet	105	BBC (R. Stymeist)	Swamp Sparrow			
9/28	Northfield	120	B. Zajda	9/29	Quabog IBA	89	M. Lynch#
10/3	Paxton	175	R. Jenkins	10/2	Lexington	75	M. Rines
Clay-colored Sparrow				10/3	Bolton Flats	296	M. Lynch#
thr	Reports of indiv. from 24 locations			10/6	Cumb. Farms	894	SSBC
9/20	W. Roxbury (MP)	2	M. Iliff	10/8	Westboro	89	T. Spahr
9/24	Duxbury B.	2	R. Bowes	White-throated Sparrow			
10/1	Westport	2	P. Champlin	9/17	Ware R. IBA	3	M. Lynch#
10/19	Nantucket	14	V. Laux#	9/17	P.I.	2	R. Heil
Field Sparrow				10/8	Westboro	44	T. Spahr
9/14	Wellfleet	5	BBC (R. Stymeist)	10/11	Lexington	35	C. Cook
9/15	Quabog IBA	6	M. Lynch#	10/15	Ipswich	35	R. Heil
9/23	Sharon	16	L. Waters	10/25	Malden	30	P. + F. Vale
10/19	Nantucket	8	V. Laux#	10/27	Quabog IBA	152	M. Lynch#
10/24	Mattapan (BNC)	4	P. Peterson	White-crowned Sparrow			
10/28	Westport	11	M. Lynch#	9/29	Quabog IBA	6	M. Lynch#
10/28	S. Peabody	10	R. Heil	10/3	Paxton	6	R. Jenkins
Vesper Sparrow				10/4	Uxbridge	18	J. Lawson
10/9	Hadley	9	I. Davies	10/6	Hadley	14	S. Surner
10/19	Nantucket	2	V. Laux#	10/6	New Braintree	7	R. Jenkins#
10/21	Belmont	2	J. Forbes	10/6	Cumb. Farms	13	SSBC
10/22	Concord	3	D. Sibley	10/8	Westboro	7	T. Spahr
Lark Sparrow				10/18	Concord	15	M. Rines
9/2	Neponset	1	R. Donovan	10/27	Nantucket	6	K. Blackshaw#
9/10	P.I.	1	D. Chickering	Dark-eyed Junco			
9/16	S. Monomoy	1	S. Grinley#	9/3	Mt. Wachusett	1	S. Olson
9/17	Nantucket	1	V. Laux	10/24	Malden	65	P. + F. Vale
9/21	Eastham	1	C. Goodrich	10/24	Cambr. (Danehy)	44	K. Hartel
10/1	Westport	1	P. Champlin	10/26	Wachusett Res.	241	M. Lynch#
10/30	Marblehead	1	D. Noble	10/28	S. Peabody	80	R. Heil
Savannah Sparrow				Scarlet Tanager			
9/26	Hadley	70	B. Zajda	9/3	Worcester	5	M. Lynch#
10/2	Newbury	85	J. Berry#	9/15	Quabbin Pk	5	L. Therrien
10/4	Wrentham	102	J. Sweeney	9/23	Lexington	3	J. Forbes#
10/5	Concord	70	C. Winstanley	9/28	Cuttyhunk	2	I. Davies#
10/6	New Braintree	245	R. Jenkins#	10/3	Worcester	2	M. Lynch#
10/6	Cumb. Farms	246	SSBC	10/28	Winchester	1 f	R. LaFontaine
Ipswich Sparrow				Western Tanager			
10/16	Salisbury	2	S. Sullivan	10/9	Chatham	1 ph	A. Fulcher
10/18	Westport	3	P. Champlin	Rose-breasted Grosbeak			
10/20	Duxbury B.	1	R. Bowes	9/1	Quabog IBA	5	M. Lynch#
10/30	Dorchester	1	R. Donovan	9/4	Westport	5	P. Champlin
10/31	P.I.	2	P. + F. Vale	9/9	Lexington	5	O. Burton
Grasshopper Sparrow				10/5	Eastham	1	SSBC (GdE)
9/7	Hadley	1	L. Therrien	10/17	Longmeadow	1	M. Moore
9/26	Easthampton	1	L. Therrien	Blue Grosbeak			
10/19	Lexington	1	M. Rines#	9/17	P.I.	1	R. Heil
10/26	Newton	1	M. Kaufman	10/1	Westport	1	P. Champlin
10/28	Dorchester	1	R. Donovan#	10/6	Cumb. Farms	2	SSBC
Nelson's Sparrow				10/7	Falmouth	1	G. Hirth
9/26	Hadley	1	B. Zajda	10/21	Lexington	1	J. Forbes
10/4	Falmouth	2	G. Hirth	10/24	Cambr. (Danehy)	1	R. Stymeist#
10/17	Fairhaven	3	J. Hoye#	10/28	Boston (Fens)	1	A. Morgan
10/20	S. Dart. (A.Pd)	1	BBC (N. Paulson)	Lazuli/Indigo Bunting			
10/20	Squantum	1	R. Donovan	9/15	Cuttyhunk	1 ph	I. Davies#
10/25	P.I.	2	T. Wetmore	10/2	Hadley	1	I. Davies#
10/26	Winchester	1	A. Gurka + v.o.	Indigo Bunting			
Saltmarsh Sparrow				9/17	Westboro	10	N. Paulson
9/24	P.I.	2	R. Heil	9/20	Northampton	35	D. McLain
10/3	Dorchester	1	R. Donovan	9/24	Woburn	14	M. Rines
10/18	Boston	1	E. Labato	9/28	Cuttyhunk	12	I. Davies
10/27	Fairhaven	1	C. Longworth#	10/6	Cumb. Farms	22	SSBC
Fox Sparrow				Dickcissel			
10/19	Lexington	1	M. Rines#	thr	Reports of indiv. from 17 locations		
10/24	Woburn	2	M. Rines	9/14	Wellfleet	2	M. Keleher
Lincoln's Sparrow				9/16	P.I.	2	R. Heil
9/26	Northampton	8	D. McLain	9/28	Cuttyhunk	2	I. Davies#
9/26	Easthampton	7	L. Therrien	9/29	Lexington	2	M. Rines

Dickcissel (continued)				10/26	Cheshire	20	S. Kellogg
10/9	Hadley	2	L. Therrien	10/28	Granville	20	D. McLain
Bobolink				Orchard Oriole			
9/1	Northampton	1239	T. Gagnon	9/15	Nantucket	1	V. Laux
9/5	Hadley	120	L. Therrien	Baltimore Oriole			
9/25	Newbury	50	MAS (B. Gette)	9/3	P.I.	6	R. Heil
10/1	Bolton Flats	60	J. Moosbrucker	9/4	Westport	5	P. Champlin
10/6	Cumb. Farms	82	SSBC	9/29	Cuttyhunk	3	I. Davies#
10/18	Arlington Res.	10	K. Hartel	10/7	Wellfleet	2	M. Keleher#
10/23	Aquinnah	1	R. Schain	10/22	Brewster	2 b	S. Finnegan
Eastern Meadowlark				Pine Grosbeak			
9/2	Sterling Peat	1	M. Lynch#	10/5	Windsor	3	E. Lewis
10/7	Belmont	1	J. Forbes	Purple Finch			
10/22	GMNWR	1	D. Sibley	9/3	P.I.	14	R. Heil
10/25	Ipswich	2	J. Berry#	9/28	Sandisfield	4	M. Lynch#
10/26	Dorchester	3	R. Donovan#	10/27	S. Quabbin	55	M. Lynch
10/26	Eastham (F.H.)	10	B. Lagasse#	10/31	Washington	10	E. Neumuth
10/27	S. Dart. (A.Pd)	21	B. Cassie	Pine Siskin			
10/28	P.I.	3	T. Wetmore	9/8	Merrimac	1	B. + B. Buxton
Yellow-headed Blackbird				9/12	Westboro	2	N. Paulson
9/15	Cuttyhunk	1	I. Davies#	9/26	Gloucester	1	J. Nelson
Rusty Blackbird				10/3	Carlisle	1	A. Ankers
9/28	Northfield	12	B. Zajda	10/21	Belchertown	3	L. Therrien
9/30	Concord	18	S. Perkins	10/21	Cambr. (F.P.)	1	J. Trimble
10/1	Milton	26	R. Mussey	Evening Grosbeak			
10/12	Greenfield	25	T. Bullock	9/6	Gill	1	J. Smith
10/22	Wayland	74	B. Harris				



SNOWY OWL BY DAVID M. LARSON

ABBREVIATIONS FOR BIRD SIGHTINGS

Taxonomic order is based on AOU checklist, Seventh edition, up to the 53rd Supplement, as published in *Auk* 129 (3): 573-88 (2012) (see <<http://checklist.aou.org/>>).

Locations		ONWR	Oxbow National Wildlife Refuge
Location-#	MAS Breeding Bird Atlas Block	PG	Public Garden, Boston
A.A.	Arnold Arboretum, Boston	P.I.	Plum Island
ABC	Allen Bird Club	Pd	Pond
A.P.	Andrews Point, Rockport	POP	Point of Pines, Revere
A.Pd	Allens Pond, S. Dartmouth	PR	Pinnacle Rock, Malden
B.	Beach	P'town	Provincetown
Barre F.D.	Barre Falls Dam	Pont.	Pontoosuc Lake, Lanesboro
B.I.	Belle Isle, E. Boston	R.P.	Race Point, Provincetown
B.R.	Bass Rocks, Gloucester	Res.	Reservoir
BBC	Brookline Bird Club	RKG	Rose Kennedy Greenway, Boston
BMB	Broad Meadow Brook, Worcester	S.B.	South Beach, Chatham
BNC	Boston Nature Center, Mattapan	S.N.	Sandy Neck, Barnstable
C.B.	Crane Beach, Ipswich	SRV	Sudbury River Valley
CGB	Coast Guard Beach, Eastham	SSBC	South Shore Bird Club
C.P.	Crooked Pond, Boxford	TASL	Take A Second Look, Boston Harbor Census
Cambr.	Cambridge	WBWS	Wellfleet Bay WS
CCBC	Cape Cod Bird Club	WE	World's End, Hingham
Corp. B.	Corporation Beach, Dennis	WMWS	Wachusett Meadow WS
Cumb. Farms	Cumberland Farms, Middleboro	Wompatuck SP	Hingham, Cohasset, Scituate, Norwell
DFWS	Drumlin Farm Wildlife Sanctuary	Worc.	Worcester
DWMA	Delaney WMA, Stow, Bolton, Harvard		
DWWS	Daniel Webster WS	Other Abbreviations	
E.P.	Eastern Point, Gloucester	ad	adult
F.E.	First Encounter Beach, Eastham	b	banded
F.H.	Fort Hill, Eastham	br	breeding
F.P.	Fresh Pond, Cambridge	dk	dark (morph)
F.Pk	Franklin Park, Boston	f	female
G40	Gate 40, Quabbin Res.	fide	on the authority of
GMNWR	Great Meadows NWR	fl	fledgling
H.	Harbor	imm	immature
H.P.	Halibut Point, Rockport	juv	juvenile
HP	Horn Pond, Woburn	lt	light (morph)
HRWMA	High Ridge WMA, Gardner	m	male
I.	Island	max	maximum
IRWS	Ipswich River WS	migr	migrating
L.	Ledge	n	nesting
MAS	Mass Audubon	ph	photographed
MP	Millennium Park, W. Roxbury	pl	plumage
M.V.	Martha's Vineyard	pr	pair
MBWMA	Martin Burns WMA, Newbury	S	summer (1S = 1st summer)
MNWS	Marblehead Neck WS	v.o.	various observers
MSSF	Myles Standish State Forest, Plymouth	W	winter (2W = second winter)
Mt.A.	Mount Auburn Cemetery, Cambr.	yg	young
NAC	Nine Acre Corner, Concord	#	additional observers
Newbypt	Newburyport		

HOW TO CONTRIBUTE BIRD SIGHTINGS TO *BIRD OBSERVER*

Sightings for any given month must be reported in writing by the eighth of the following month, and may be submitted by postal mail or email. Send written reports to Bird Sightings, Robert H. Stymeist, 36 Lewis Avenue, Arlington MA 02474-3206. Include name and phone number of observer, common name of species, date of sighting, location, number of birds, other observer(s), and information on age, sex, and morph (where relevant). For instructions on email submission, visit: <<http://massbird.org/birdobserver/sightings/>>.

Species on the Review List of the Massachusetts Avian Records Committee, as well as species unusual as to place, time, or known nesting status in Massachusetts, should be reported promptly to the Massachusetts Avian Records Committee, c/o Matt Garvey, 137 Beaconsfield Rd. #5, Brookline MA 02445, or by email to <mattgarvey@gmail.com>.

ABOUT THE COVER

Horned Lark

The Horned Lark (*Eremophila alpestris*), a denizen of open country, is the only member of the lark family (Alaudidae) native to North America, with a broad distribution from the Arctic to southern Mexico. It is also found in northern Eurasia. Males are brown above and white below; a boldly-marked head pattern of white or yellow contrasts with a black mask, breast band, and horns, which are tiny tufts of feathers. Females have similar but muted coloration and less prominent horns. Both have dark tails with a pale central stripe and narrow white edges. Juveniles are mostly grayish brown, with only a hint of the striking facial pattern of adults.

This highly variable species is divided into 21 subspecies in North America alone. The amount of yellow on the lark's face varies with geographic location, as does the intensity of the brown upperparts, which in some subspecies is a rich chestnut. There is a strong correlation between the color of the birds' upperparts and the soil composition of the subspecies' range. For example, the subspecies of the western deserts are generally paler than other Horned Larks.

Horned Larks breed throughout North America from the Aleutian Islands and Arctic islands to southern Mexico in habitats of sparse vegetation—typically in deserts, prairies, and farmlands. Northern populations, including most Canadian and Alaskan birds, are migratory. In winter they form large nomadic flocks, often with longspurs and Snow Buntings. The prairie subspecies of Horned Lark (*E. a. praticola*) is an uncommon breeder in Massachusetts, mostly on Cape Cod and the Islands. The larks arrive in February and leave by November. The high latitude northeastern subspecies *E. a. alpestris* is an abundant spring and fall migrant in Massachusetts, and in some years may be a common winter resident.

Horned Larks are territorial and are seasonally monogamous. Because they start breeding early, pairs may have two or more broods. They prefer to nest on barren ground, in sparse short grass, or in agricultural crop stubble. They give call notes described as *weet* or *su-weet*, and various chittering notes year-round. In winter, these act as contact calls and may help ensure flock cohesiveness. In breeding season, the calls intensify and are used in territorial disputes. Territorial conflicts involve chasing and may end in a fight—with clawing and pecking—either in the air or on the ground. In threat displays the male stands erect while calling, then runs at the intruder. Song consists of several ascending notes followed by chittering, which males may sing while gliding with spread wings and tail during a high aerial flight. They give a variation while flying with slow exaggerated wing beats. Males also sing from perches. In courtship display, males droop their wings and spread their tails, chittering and strutting with wings vibrating and the black chest patch spread.

The female selects the nest site, usually on bare ground or an agricultural field, digs a scrape, and weaves a nest of plant material that she lines with feathers, rootlets, or fur. She may construct a paving of cow dung, corn stalks, or pebbles next to the nest.

The clutch is usually 2-5 gray, brown-spotted eggs. Only the female has a brood patch and only she incubates the eggs for the 11-12 days until hatching. She generally feeds herself, foraging for part of each day. The young hatch covered with down, but their eyes are closed and they are helpless. The young leave the nest in 8-10 days, walking long before they can fly. They can do both well by the time they are one month old. The young begin to feed themselves after leaving the nest, but both adults continue to feed the young for 3-4 weeks until they become independent.

Horned Larks are visual ground foragers. In winter, they feed mostly on seeds; during the breeding season they capture insects such as grasshoppers that they flush to feed the young. In all seasons except winter they take some invertebrates. They may also dig up larvae and worms and occasionally eat fruit.

Deforestation and expanded agriculture enabled Horned Larks to expand their range and numbers in the late 19th and early 20th centuries. Since the mid-20th century, however, this trend has been reversed in many areas, including the Northeast, as abandoned agricultural land has reverted to forest. Horned Larks are subject to cowbird nest parasitism, but because they nest so early their first brood is generally free of cowbird problems. As ground nesters, Horned Larks are subject to nest predation by mammalian and avian species. Agricultural practices such as early plowing of fields and heavy pesticide use thwart successful breeding. However, Breeding Bird Survey data suggest that the continental population is stable and that the future is bright for these delightful birds. 🐦

William E. Davis, Jr.

About the Cover Artist: Barry Van Dusen

Once again, *Bird Observer* offers a painting by the artist who has created many of our covers, Barry Van Dusen. Barry, who lives in Princeton, Massachusetts, is well known in the birding world. Barry has illustrated several nature books and pocket guides, and his articles and paintings have been featured in *Birding*, *Bird Watcher's Digest*, and *Yankee Magazine* as well as *Bird Observer*. Barry's interest in nature subjects began in 1982 with an association with the Massachusetts Audubon Society. He has been influenced by the work of European wildlife artists and has adopted their methodology of direct field sketching. Barry teaches workshops at various locations in Massachusetts. For more information, visit Barry's website at <www.barryvandusen.com>. 🐦

Breeding Bird Atlas Innovations

The Birding Community E-Bulletin

State and Provincial breeding bird atlases (BBAs) have been evolving over many years, and the most recent Massachusetts entry, a project of Mass Audubon, certainly represents another leap in the genre.

Last month, iTunes made available the second Massachusetts BBA as an eBook. This is the very first BBA eBook. On iTunes, it sells for about \$25: <<https://itunes.apple.com/us/book/massachusetts-breeding-bird/id766503987?mt=11>>

For those folks who still like the “real” book option they are also offering a print-on-demand option. The publisher will be taking preorders for the book, in the \$115 range, shipping included in the US. This offers a traditional treatment of the atlas, addressing distributional shifts of more than 200 species in Massachusetts, richly illustrated with John Sill’s artwork, and featuring all maps - Atlas 1, Atlas 2 and Change Maps, as well as detailed distribution tables. See here very soon for particulars: <<http://www.scottandnix.com>>

At the same time, the Massachusetts BBA2 website has essentially all the content that is in the eBook, and that’s for free: <<http://www.massaudubon.org/bba2>>

A succinct BBA2 summary, as well as bird conservation recommendations for the state, “State of the Birds 2013 - Massachusetts, Breeding Birds: A Closer Look” also became available last year in print, and as a pdf document: <<http://www.massaudubon.org/sofb>>

The data used in the preparation of the BBA2 as well as State of the Birds 2011 and 2013 is available at the same website - just choose “Find A Bird,” and you can explore the data.

These products are a direct result of 150,000 hours in the field, 250,000 data records, 222 species, and five years of field work. Now more is known about Massachusetts breeding birds than ever before, and it is possible these data represent the most complete data library for any state in the US. This work makes informed decisions about bird conservation planning in the state possible. Indeed, this work is not just about breeding birds; ultimately, it is about maintaining healthy and sustainable communities.

In combination, these projects aim to educate and inform everyone with an interest in Massachusetts with even a mild interest in birds, from planners to foresters and students to conservation professionals. Everyone now has access to the BBA2 data and the reports across many platforms.

AT A GLANCE

December 2013



DAVID M. LARSON

On first inspection this month's field problem suggests that an experienced proctologist or a gynecologist might have an advantage when attempting to identify the mystery species! This quirky observation offers a subtle identification clue since it implies that the photograph represents a rear view of the mystery bird. Specifically, the bird in the picture is taking flight and facing away from the reader, a fact reinforced by the obvious indication of its vent/cloacal opening and the angle of its "knees" in relation to its tibia and tarsi. The bird's legs are slightly flexed as it springs into flight.

Once we establish that the mystery bird is taking flight and is facing away from the reader, we can apply other useful features to the identification process. The bird's long legs at once suggest that bird is either a long-legged wading bird species (i.e., heron, egret, ibis, etc.) or a shorebird. The slenderness of the bird's long legs, its white tail, and the symmetrical white patches on the trailing edge of its secondaries are features that eliminate all wading bird species, and point to the identification of the mystery bird as a shorebird.

The super-long legs by themselves are practically a giveaway to the identification of the mystery bird. When the long legs are combined with the bird's trailing white secondaries, totally black primaries, and white panels on the inner portion of the wings the identification is unequivocal: American Avocet (*Recurvirostra americana*).

American Avocets are rare but regular coastal migrants in Massachusetts, most often appearing in late summer and fall, often lingering for days at a time once they show up at a particular locality. Stunning in breeding plumage when their heads and necks are a rich rusty brown, most avocets observed in the state tend to have the grayish necks typical of birds in nonbreeding plumage. David Larson photographed this American Avocet in Louisiana. 

Wayne R. Petersen

Invasion of the Snowy Owls

MassWildlife News

An invasion (called an irruption by biologists) of Snowy Owls is occurring in the eastern United States, and Massachusetts is at the center of it all! Most of the Snowy Owls in Massachusetts have been reported in coastal areas, where the dunes and large grasslands mimic the tundra-like habitats where the birds usually live. Logan Airport has likely seen the highest density of these owls in eastern United States. As many as 15 owls have been seen at the airport at one time. Snowy Owls have turned up at a number of other sites in Massachusetts as well, including birds in central Massachusetts and even a bird in downtown Springfield.

“Snowy Owls are often found in Massachusetts during the winter, especially along the coast,” says Andrew Vitz, State Ornithologist for the Division of Fisheries and Wildlife (MassWildlife). “What makes an irruption year unusual is the high number of birds and the unusual places they are spotted.” Best bets for spotting owls are on public beaches and conservation lands in coastal Essex County north of Boston as well as federal, state or local beaches on Cape Cod and in Plymouth County. MassWildlife advises anyone who sees a Snowy Owl to observe from a respectful distance. In more urban areas, startled birds can easily be injured or killed upon colliding with buildings or power lines.

The Snowy Owl is North America’s largest owl (by weight). These birds feed primarily on lemmings, and when food is abundant, adults may raise up to 12 young. Last summer, according to Vitz, lemming numbers were very high in northern Quebec, and the owls likely had an extremely productive breeding season. Birds are probably moving south in large numbers because there are simply too many of them for the breeding area to support. In fact, most of the birds arriving in the lower 48 states this winter are heavily barred, suggesting they are birds that hatched last summer. The irruption of Snowy Owls this year comes as somewhat of a surprise. Generally Snowy Owls undergo large scale southern movements about once in every four winters. However, a large irruption occurred in the winter of 2011-2012 and a smaller “echo” irruption in 2012-2013. “A third consecutive irruption of Snowy Owls raises many questions about the environmental conditions in the Arctic,” says Vitz. “However, at this point there are more questions than answers.”

AT A GLANCE



DAVID LARSON

Can you identify the bird in this photograph?

Identification will be discussed in next issue's AT A GLANCE.

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