



MIGRATION MONITORING AT

CABOT HEAD

Annual Report 2021

*by*

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*prepared*

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#### **BRUCE PENINSULA BIRD OBSERVATORY**

December, 2021

Spring fieldwork began on April 15 and ended on June 10 for a total of 57 consecutive days of coverage. A total of 157 species were detected during the monitoring period, with two more species only seen in the afternoon (outside the monitoring period). A total of 1869 birds of 64 species were banded and 155birds of 18species were recaptured. In spring 2021, good weather conditions were interspaced with short and infrequent periods of high wind and\or rain. Very good coverage for banding (defined as at least 80 mist net hours, or more, out of a potential of 90 for any given day) happened in 53% of the days during the season. In spring 2021, the banding total of 1869 birds, although quite above average, is the sixth-highest spring total (average of 1556 ± 460 banded birds, low of 876 in 2014 and high of 2431 in 2002). Three species, Ruby-crowned Kinglet, Golden-crowned Kinglet, and Dark-eyed Junco (in decreasing order), account for 53% of the banding total. There were 11 days with banding totals over 50 birds (including six over 100 birds). Two days stand out for their record number of captures: 278 birds banded on April 29 (second highest daily total ever) and 205 on May 5. On May 18, 84 species were detected, the highest diversity of the spring. A new species, Laughing Gull, was observed for the first time ever at Cabot Head on June 9.

Fall fieldwork began on August 15 and ended on October 31 for a total of 78 consecutive days of coverage. A record total of 154 species were detected during the monitoring period (range of 120 to 154 species in 2002 - 20120). A total of 2301 birds of 68 species were banded and 346birds of 29species were recaptured. The defining characteristic of fall 2021 was a good migration overall, reflected both in the average numbers of birds banded and in daily observations. Bad weather completely precluding banding only for five days. Complete daily coverage for banding (i.e. 90 mist net hours, or six hours for all the 15 nets) was a record high of 47 days, representing 60% of the season (2003-2020 average of 31.3 ± 8.2 days, range 21 - 47). In fall 2021, the banding total of 2301 is the second highest in 20 years of monitoring, the fourth season with total exceeding 2000 banded birds (2002 - 2020 average of 1618 ± 350 banded birds). Over half (52%) of the banding total is made by five species: Golden-crowned Kinglet, (about 27% of the total), Slate-colored Junco (8% of the total), Myrtle Warbler and Red-eyed Vireo (about 6% each), and, finally Black-capped Chickadee (5% of the total). There were seven days with banding totals over 50 birds, with the highest total of 138 birds on October 6. On September 16, 52 species were detected, the highest diversity of the fall. There was an impressive movement of White-winged Crossbills in the very last days of monitoring. A female Redhead, a species seen only once before at Cabot Head, was observed on October 15.

The 2021 migration monitoring program was a success in no small part thanks to the efforts of the volunteers who contributed their time and enthusiasm to the project. This year, a total of eight volunteers helped for the project, totaling 120 volunteer-days. In the fall, Evan Sinclair was hired as a banding assistant through the summer student program, from August 27 to October 31.

Table 1. Summary of bird migration monitoring at Cabot Head Research Station in 2021.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Spring | Fall | Total |
| Species detected | 157 | 154 | 181 |
| Species banded | 1869 | 2301 | 4170 |
| Total banded | 64 | 68 | 79 |
| Total days of coverage | 57 | 78 | 135 |
| Number of volunteers and summer student | 4 | 5 | 9 |
| Volunteer days | 78 | 108 | 186 |

Table 2. Banding total of species in spring 2021 at CHRS, 2002 - 2019 average (and standard deviation), maximum and minimum totals for 2002 - 2019, and number of springs with captures.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Family | Species | 2021 | Av. | StDev | Max. | Min. | Nb. of springs with capture |
| Cuckoos | Black-billed Cuckoo | 1 | 2 | 1 | 4 | 1 | 5 |
| Hawks | Sharp-shinned Hawk | 21 | 19 | 7 | 34 | 10 | 18 |
| Woodpeckers | Yellow-bellied Sapsucker | 1 | 2 | 1 | 5 | 1 | 12 |
| Hairy Woodpecker | 2 | 2 | 1 | 3 | 1 | 6 |
| Yellow-Shafted Flicker | 1 | 5 | 3 | 12 | 1 | 17 |
| Tyrant Flycatchers | Eastern Wood-pewee | 1 | 2 | 1 | 3 | 1 | 13 |
| Yellow-bellied Flycatcher | 4 | 13 | 6 | 24 | 3 | 18 |
| Traill’s Flycatcher | 4 | 14 | 9 | 32 | 4 | 18 |
| Least Flycatcher | 1 | 13 | 5 | 23 | 6 | 18 |
| Vireos | Blue-headed Vireo | 2 | 4 | 2 | 8 | 1 | 15 |
| Red-eyed Vireo | 6 | 15 | 8 | 39 | 6 | 18 |
| Crows & Jays | Blue Jay | 21 | 61 | 85 | 264 | 10 | 18 |
| Chickadees | Black-capped Chickadee | 23 | 49 | 89 | 365 | 2 | 18 |
| Nuthatches | Red-breasted Nuthatch | 22 | 11 | 15 | 57 | 1 | 17 |
| White-breasted Nuthatch | 1 | 1 | 0 | 1 | 1 | 2 |
| Creepers | Brown Creeper | 58 | 48 | 47 | 200 | 8 | 18 |
| Wrens | Winter Wren | 5 | 2 | 1 | 4 | 1 | 15 |
| Kinglets | Golden-crowned Kinglet | 250 | 146 | 168 | 666 | 3 | 18 |
| Ruby-crowned Kinglet | 610 | 137 | 76 | 292 | 55 | 18 |
| Thrushes | Eastern Bluebird | 1 | 2 |  | 2 | 2 | 1 |
| Veery | 3 | 10 | 6 | 22 | 1 | 18 |
| Gray-cheeked Thrush | 2 | 3 | 2 | 8 | 1 | 16 |
| Swainson’s Thrush | 14 | 25 | 10 | 43 | 9 | 18 |
| Hermit Thrush | 11 | 15 | 7 | 32 | 6 | 18 |
| Wood Thrush | 1 | 2 | 2 | 6 | 1 | 17 |
| American Robin | 3 | 7 | 4 | 16 | 1 | 18 |
| Mockingbirds & Thrashers | Gray Catbird | 2 | 11 | 5 | 19 | 1 | 18 |
| Brown Thrasher | 2 | 6 | 3 | 12 | 1 | 18 |
| Finches | American Goldfinch | 1 | 6 | 11 | 41 | 1 | 15 |
| New World Warblers | Orange-crowned Warbler | 3 | 10 | 8 | 31 | 2 | 18 |
| Nashville Warbler | 28 | 51 | 57 | 237 | 11 | 18 |
| Northern Parula | 1 | 4 | 4 | 15 | 1 | 11 |
| Yellow Warbler | 3 | 10 | 7 | 25 | 1 | 16 |
| Chestnut-sided Warbler | 3 | 14 | 7 | 30 | 4 | 18 |
| Magnolia Warbler | 23 | 89 | 41 | 198 | 29 | 18 |
| Cape May Warbler | 2 | 5 | 7 | 28 | 1 | 15 |
| Black-throated Blue Warbler | 7 | 27 | 11 | 64 | 18 | 18 |
| Myrtle Warbler | 123 | 63 | 56 | 246 | 16 | 18 |
| Black-throated Green Warbler | 17 | 25 | 8 | 41 | 13 | 18 |
| Family | Species | 2021 | Av. | StDev | Max. | Min. | Nb. of springs with capture |
| New World Warblers | Blackburnian Warbler | 4 | 6 | 5 | 18 | 1 | 16 |
| Pine Warbler | 24 | 2 | 2 | 10 | 1 | 15 |
| Palm Warbler | 96 | 79 | 57 | 219 | 34 | 18 |
| Bay-breasted Warbler | 2 | 4 | 4 | 14 | 1 | 14 |
| Black and White Warbler | 41 | 54 | 17 | 91 | 25 | 18 |
| American Redstart | 88 | 179 | 53 | 273 | 74 | 18 |
| Ovenbird | 17 | 28 | 10 | 53 | 12 | 18 |
| Northern Waterthrush | 7 | 4 | 3 | 13 | 1 | 18 |
| Mourning Warbler | 1 | 8 | 4 | 17 | 1 | 18 |
| Common Yellowthroat | 21 | 38 | 12 | 66 | 23 | 18 |
| Wilson’s Warbler | 2 | 14 | 8 | 34 | 4 | 18 |
| Canada Warbler | 5 | 16 | 5 | 26 | 8 | 18 |
| New World Sparrows | American Tree Sparrow | 14 | 10 | 12 | 52 | 1 | 18 |
| Chipping Sparrow | 19 | 24 | 26 | 101 | 5 | 18 |
| Field Sparrow | 3 | 4 | 7 | 26 | 1 | 11 |
| Savannah Sparrow | 2 | 2 | 2 | 10 | 1 | 15 |
| Fox Sparrow | 1 | 2 | 1 | 4 | 1 | 14 |
| Song Sparrow | 15 | 16 | 10 | 34 | 4 | 18 |
| Lincoln’s Sparrow | 3 | 12 | 7 | 25 | 3 | 18 |
| Swamp Sparrow | 14 | 6 | 3 | 13 | 3 | 18 |
| White-throated Sparrow | 70 | 56 | 24 | 104 | 13 | 18 |
| White-crowned Sparrow | 2 | 24 | 17 | 69 | 4 | 18 |
| Slate-coloured Junco | 126 | 54 | 39 | 150 | 15 | 18 |
| Cardinals | Indigo Bunting | 7 | 3 | 2 | 6 | 1 | 15 |
| New World Blackbirds | Baltimore Oriole | 1 | 4 | 3 | 9 | 1 | 6 |

For 2021, record high captures in red, near record high in orange, record low in blue.

Av.: average; stdev: standard deviation; Max: Maximum; Min: Minimum; Nb.: Number

Spring 2020 is excluded because coverage was different.

Table 3. Season Total of species observed in spring 2021 at Cabot Head Research Station, with maximum and minimum daily totals, number of days with observation, and dates of first and last observation.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Group | Species | Season Total | Daily max. | Daily min. | Days with obs. | First day | Last date |
| Ducks, Geese & Swans | Canada Goose | 1039 | 210 | 1 | 45 | 15 April | 10 June |
| Wood Duck | 9 | 4 | 1 | 5 | 18 April | 10 June |
| American Wigeon | 14 | 8 | 6 | 2 | 25 April | 8 May |
| Mallard | 110 | 6 | 1 | 37 | 15 April | 7 June |
| Blue-winged Teal | 2 | 2 |  | 1 | 25 April |  |
| Greater Scaup | 17 | 14 | 3 | 2 | 25 April | 8 May |
| Surf Scoter | 2 | 2 |  | 1 | 25 April |  |
| White-winged Scoter | 118 | 73 | 1 | 6 | 15 April | 10 May |
| Black Scoter | 1 | 1 |  | 1 | 8 May |  |
| Long-tailed Duck | 99 | 86 | 13 | 2 | 25 April | 8 May |
| Bufflehead | 143 | 26 | 1 | 18 | 18 April | 14 May |
| Common Goldeneye | 8 | 3 | 2 | 3 | 16 April | 19 April |
| Hooded Merganser | 20 | 3 | 1 | 15 | 15 April | 10 June |
| Common Merganser | 366 | 26 | 1 | 49 | 15 April | 10 June |
| Red-breasted Merganser | 225 | 73 | 1 | 31 | 15 April | 10 June |
| Grouse & Turkeys | Ruffed Grouse | 64 | 5 | 1 | 34 | 15 April | 8 June |
| Wild Turkey | 29 | 5 | 1 | 12 | 17 April | 12 May |
| Grebes | Pied-billed Grebe | 20 | 1 | 1 | 3 | 15 April | 7 June |
| Horned Grebe | 39 | 17 | 1 | 8 | 17 April | 4 May |
| Red-necked Grebe | 16 | 13 | 3 | 2 | 15 April | 25 April |
| Pigeons and Doves | Mourning Dove | 5 | 1 | 1 | 5 | 19 April | 30 May |
| Cuckoos | Black-billed Cuckoo | 43 | 5 | 1 | 18 | 18 May | 10 June |
| Goatsuckers | Eastern Whip-poor-will | 13 | 2 | 1 | 11 | 18 May | 10 June |
| Hummingbirds | Ruby-throated Hummingbird | 84 | 6 | 1 | 29 | 7 May | 10 June |
| Cranes | Sandhill Crane | 117 | 5 | 1 | 43 | 15 April | 9 June |
| Sandpipers & Phalaropes | Killdeer | 22 | 3 | 1 | 16 | 19 April | 24 May |
| Greater Yellowlegs | 18 | 5 | 1 | 12 | 19 April | 22 May |
| Lesser Yellowlegs | 2 | 1 | 1 | 2 | 18 May | 19 May |
| Spotted Sandpiper | 60 | 4 | 1 | 29 | 4 May | 10 June |
| Wilson's Snipe | 8 | 2 | 1 | 7 | 15 April | 8 June |
| American Woodcock | 2 | 1 | 1 | 2 | 15 April | 9 May |
| Gulls & Terns | Laughing Gull | 1 | 1 |  | 0 | 9 June |  |
| Ring-billed Gull | 551 | 110 | 1 | 45 | 15 April | 10 June |
| Herring Gull | 203 | 13 | 1 | 50 | 15 April | 10 June |
| Caspian Tern | 2 | 1 | 1 | 2 | 18 May | 31 May |
| Common Tern | 34 | 4 | 1 | 20 | 8 May | 10 June |
| Loons | Red-throated Loon | 1 | 1 |  | 1 | 8 May |  |
| Common Loon | 308 | 74 | 1 | 49 | 15 April | 10 June |
| Cormorants | Double-crested Cormorant | 187 | 59 | 1 | 31 | 18 April | 10 June |
| Group | Species | Season Total | Daily max. | Daily min. | Days with obs. | First day | Last date |
| Herons & Bitterns | American Bittern | 1 | 1 |  | 1 | 18 May |  |
| Great Blue Heron | 16 | 4 | 1 | 9 | 28 April | 9 June |
| Green Heron | 0 | 0 |  | 1 | 15 May |  |
| Vultures | Turkey Vulture | 268 | 21 | 1 | 41 | 16 April | 10 June |
| Osprey | Osprey | 4 | 1 | 0 | 6 | 28 April | 10 June |
| Hawks, Kites & Eagles | Bald Eagle | 94 | 6 | 1 | 50 | 15 April | 10 June |
| Northern Harrier | 17 | 3 | 1 | 13 | 15 April | 25 May |
| Sharp-shinned Hawk | 259 | 27 | 1 | 32 | 16 April | 4 June |
| Cooper's Hawk | 5 | 2 | 1 | 4 | 4 May | 2 June |
| Red-shouldered Hawk | 7 | 2 | 1 | 6 | 17 April | 10 June |
| Broad-winged Hawk | 75 | 34 | 1 | 13 | 19 April | 2 June |
| Red-tailed Hawk | 34 | 6 | 1 | 16 | 17 April | 10 June |
| Rough-legged Hawk | 10 | 3 | 1 | 6 | 1 May | 24 May |
| Golden Eagle | 0 | 0 |  | 1 | 5 May |  |
| Typical Owls | Snowy Owl | 1 | 1 |  | 1 | 23 April |  |
| Great Horned Owl | 3 | 1 | 1 | 3 | 15 April | 3 June |
| Kingfishers | Belted Kingfisher | 26 | 2 | 1 | 23 | 17 April | 17 May |
| Woodpeckers | Red-headed Woodpecker | 2 | 1 | 1 | 2 | 16 May | 30 May |
| Red-bellied Woodpecker | 1 | 1 |  | 1 | 21 May |  |
| Yellow-bellied Sapsucker | 20 | 10 | 1 | 9 | 15 April | 16 May |
| Downy Woodpecker | 9 | 2 | 1 | 8 | 15 April | 8 May |
| Hairy Woodpecker | 13 | 3 | 1 | 11 | 19 April | 5 June |
| Northern Flicker | 223 | 29 | 1 | 41 | 15 April | 10 June |
| Pileated Woodpecker | 48 | 3 | 1 | 37 | 15 April | 9 June |
| Falcons | American Kestrel | 22 | 4 | 0 | 13 | 20 April | 16 May |
| Merlin | 39 | 3 | 0 | 31 | 18 April | 10 June |
| Peregrine Falcon | 3 | 1 | 1 | 3 | 26 April | 14 May |
| Tyrant Flycatchers | Olive-sided Flycatcher | 1 | 1 |  | 1 | 1 June |  |
| Eastern Wood-Pewee | 11 | 3 | 1 | 8 | 20 May | 10 June |
| Yellow-bellied Flycatcher | 9 | 3 | 1 | 5 | 30 May | 8 June |
| Tyrant Flycatchers | Alder Flycatcher | 2 | 2 |  | 1 | 3 June |  |
| Least Flycatcher | 19 | 8 | 1 | 6 | 14 May | 2 June |
| Eastern Phoebe | 73 | 3 | 1 | 50 | 15 April | 10 June |
| Great Crested Flycatcher | 16 | 3 | 1 | 12 | 18 May | 10 June |
| Eastern Kingbird | 21 | 5 | 1 | 11 | 14 May | 4 June |
| Traill's Flycatcher | 4 | 1 | 1 | 4 | 19 May | 8 June |
| Vireos | Blue-headed Vireo | 7 | 2 | 1 | 5 | 27 April | 21 May |
| Warbling Vireo | 2 | 2 |  | 1 | 19 May |  |
| Red-eyed Vireo | 124 | 11 | 1 | 23 | 18 May | 10 June |
| Crows & Jays | Blue Jay | 3080 | 251 | 1 | 35 | 6 May | 10 June |
| American Crow | 380 | 30 | 1 | 52 | 15 April | 10 June |
| Common Raven | 121 | 29 | 1 | 39 | 15 April | 9 June |
| Group | Species | Season Total | Daily max. | Daily min. | Days with obs. | First day | Last date |
| Larks | Horned Lark | 3 | 3 |  | 1 | 23 May |  |
| Swallows | Tree Swallow | 241 | 28 | 1 | 42 | 17 April | 10 June |
| N. Rough-winged Swallow | 24 | 5 | 1 | 14 | 7 May | 9 June |
| Bank Swallow | 1 | 1 | 0 | 2 | 7 May | 18 May |
| Cliff Swallow | 1 | 1 |  | 1 | 3 May |  |
| Barn Swallow | 21 | 6 | 0 | 13 | 3 May | 2 June |
| Chickadees | Black-capped Chickadee | 690 | 49 | 1 | 52 | 15 April | 10 June |
| Nuthatches | Red-breasted Nuthatch | 379 | 48 | 1 | 43 | 19 April | 10 June |
| White-breasted Nuthatch | 2 | 1 | 1 | 2 | 19 April | 14 May |
| Creepers | Brown Creeper | 130 | 18 | 1 | 25 | 15 April | 15 May |
| Wrens | House Wren | 6 | 1 | 1 | 6 | 20 May | 9 June |
| Winter Wren | 26 | 4 | 1 | 16 | 15 April | 5 June |
| Kinglets | Golden-crowned Kinglet | 899 | 183 | 1 | 29 | 15 April | 14 May |
| Ruby-crowned Kinglet | 2157 | 361 | 2 | 34 | 15 April | 20 May |
| Thrushes | Eastern Bluebird | 79 | 12 | 1 | 23 | 18 April | 10 June |
| Veery | 4 | 1 | 1 | 4 | 14 May | 2 June |
| Gray-cheeked Thrush | 2 | 1 | 1 | 2 | 30 May | 31 May |
| Swainson's Thrush | 15 | 4 | 1 | 8 | 17 May | 31 May |
| Hermit Thrush | 17 | 3 | 0 | 12 | 15 April | 15 May |
| Wood Thrush | 3 | 2 | 1 | 2 | 9 May | 16 May |
| American Robin | 873 | 685 | 1 | 48 | 15 April | 10 June |
| Mockingbirds & Thrashers | Gray Catbird | 12 | 2 | 1 | 9 | 15 May | 9 June |
| Brown Thrasher | 45 | 6 | 1 | 25 | 2 May | 9 June |
| Starlings | European Starling | 51 | 15 | 1 | 8 | 27 April | 20 May |
| Waxwings | Cedar Waxwing | 319 | 104 | 1 | 14 | 20 May | 10 June |
| Old World Sparrows | House Sparrow | 8 | 1 | 1 | 8 | 20 May | 10 June |
| Pipits | American Pipit | 30 | 15 | 1 | 8 | 9 May | 22 May |
| Finches | Purple Finch | 181 | 91 | 1 | 21 | 27 April | 5 June |
| White-winged Crossbill | 1 | 1 |  | 1 | 17 May |  |
| Red Crossbill | 3 | 1 | 1 | 3 | 29 May | 31 May |
| Pine Siskin | 55 | 27 | 1 | 5 | 2 May | 21 May |
| American Goldfinch | 383 | 36 | 1 | 34 | 18 April | 10 June |
| Evening Grosbeak | 1 | 1 |  | 1 | 13 May |  |
| New World Warblers | Tennessee Warbler | 29 | 21 | 1 | 6 | 16 May | 21 May |
| Orange-crowned Warbler | 7 | 2 | 1 | 6 | 7 May | 18 May |
| Nashville Warbler | 129 | 26 | 0 | 36 | 28 April | 10 June |
| Northern Parula | 36 | 8 | 1 | 13 | 28 April | 9 June |
| Yellow Warbler | 53 | 7 | 1 | 21 | 7 May | 8 June |
| Chestnut-sided Warbler | 51 | 7 | 1 | 24 | 15 May | 10 June |
| Magnolia Warbler | 70 | 14 | 1 | 18 | 13 May | 4 June |
| Cape May Warbler | 40 | 9 | 1 | 11 | 28 April | 20 May |
| Black-throated Blue Warbler | 21 | 4 | 1 | 11 | 9 May | 31 May |
| Group | Species | Season Total | Daily max. | Daily min. | Days with obs. | First day | Last date |
| New World Warblers | Myrtle Warbler | 1944 | 942 | 1 | 34 | 15 April | 23 May |
| Black-throated Green Warbler | 205 | 18 | 1 | 44 | 27 April | 10 June |
| Blackburnian Warbler | 49 | 13 | 1 | 14 | 5 May | 1 June |
| Pine Warbler | 282 | 96 | 1 | 24 | 19 April | 25 May |
| Western Palm Warbler | 643 | 102 | 1 | 26 | 27 April | 24 May |
| Bay-breasted Warbler | 16 | 4 | 1 | 6 | 15 May | 23 May |
| Blackpoll Warbler | 7 | 3 | 1 | 5 | 19 May | 10 June |
| Black-and-white Warbler | 175 | 32 | 1 | 37 | 27 April | 10 June |
| American Redstart | 661 | 39 | 9 | 29 | 13 May | 10 June |
| Ovenbird | 76 | 11 | 1 | 25 | 7 May | 10 June |
| Northern Waterthrush | 12 | 2 | 1 | 10 | 5 May | 4 June |
| Mourning Warbler | 5 | 1 | 1 | 5 | 22 May | 8 June |
| Common Yellowthroat | 155 | 15 | 1 | 26 | 14 May | 10 June |
| Wilson's Warbler | 7 | 2 | 1 | 4 | 19 May | 1 June |
| Canada Warbler | 8 | 2 | 1 | 6 | 18 May | 7 June |
| New World Sparrows | Eastern Towhee | 7 | 2 | 1 | 5 | 15 May | 10 June |
| American Tree Sparrow | 42 | 5 | 1 | 19 | 15 April | 9 May |
| Chipping Sparrow | 103 | 13 | 1 | 30 | 15 April | 10 June |
| Field Sparrow | 7 | 2 | 1 | 6 | 2 May | 25 May |
| Savannah Sparrow | 8 | 3 | 1 | 6 | 5 May | 19 May |
| Fox Sparrow | 2 | 1 | 1 | 2 | 18 April | 28 April |
| Song Sparrow | 120 | 8 | 1 | 47 | 15 April | 10 June |
| Swamp Sparrow | 19 | 6 | 1 | 9 | 28 April | 17 May |
| White-throated Sparrow | 282 | 35 | 1 | 35 | 27 April | 10 June |
| Lincoln's Sparrow | 5 | 1 | 1 | 5 | 14 May | 19 May |
| White-crowned Sparrow | 43 | 11 | 0 | 12 | 6 May | 20 May |
| Dark-eyed Junco | 489 | 75 | 1 | 34 | 15 April | 19 May |
| Cardinals & allies | Scarlet Tanager | 11 | 2 | 1 | 8 | 18 May | 5 June |
| Northern Cardinal | 1 | 1 |  | 1 | 19 May |  |
| Rose-breasted Grosbeak | 8 | 4 | 1 | 5 | 16 May | 8 June |
| Indigo Bunting | 35 | 7 | 1 | 14 | 14 May | 10 June |
| New World Blackbirds | Bobolink | 6 | 2 | 1 | 4 | 1 May | 9 June |
| Red-winged Blackbird | 382 | 70 | 1 | 35 | 15 April | 9 June |
| Eastern Meadowlark | 5 | 1 | 1 | 5 | 15 April | 25 May |
| Rusty Blackbird | 164 | 115 | 1 | 8 | 27 April | 17 May |
| Common Grackle | 1136 | 300 | 2 | 40 | 18 April | 10 June |
| Baltimore Oriole | 35 | 9 | 1 | 10 | 14 May | 3 June |

Table 4. Banding total at CHRS in fall 2021, with 2002 - 2020 average (and standard deviation), maximum and minimum totals for 2002 - 2020, and number of previous falls with captures.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Group | Species | 2021 | Av. | StDev. | Max. | Min. | # |
| Hawks, Kites & Eagles | Broad-winged Hawk | 1 |  |  |  |  |  |
| Typical Owls | Northern Saw-whet Owl | 1 | 1,1 | 0,4 | 2 | 1 | 8 |
| Kingfishers | Belted Kingfisher | 2 | 1,5 | 0,7 | 3 | 1 | 11 |
| Woodpeckers | Downy Woodpecker | 15 | 10,0 | 7,6 | 31 | 1 | 19 |
| Hairy Woodpecker | 2 | 5,3 | 3,0 | 12 | 1 | 16 |
| Yellow-Shafted Flicker | 1 | 4,2 | 2,1 | 8 | 1 | 18 |
| Tyrant Flycatchers | Traill’s Flycatcher | 8 | 5,7 | 3,7 | 16 | 1 | 19 |
| Least Flycatcher | 5 | 5,0 | 1,9 | 9 | 3 | 18 |
| Shrikes | Northern Shrike | 1 | 1,7 | 0,8 | 3 | 1 | 7 |
| Vireos | Blue-headed Vireo | 11 | 6,4 | 3,7 | 13 | 1 | 19 |
| Philadelphia Vireo | 2 | 2,4 | 1,6 | 6 | 1 | 15 |
| Red-eyed Vireo | 131 | 76,3 | 49,6 | 239 | 24 | 19 |
| Crows & Jays | Blue Jay | 9 | 4,9 | 3,5 | 16 | 1 | 18 |
| Chickadees | Black-capped Chickadee | 105 | 144,5 | 168,0 | 717 | 11 | 19 |
| Nuthatches | Red-breasted Nuthatch | 51 | 52,3 | 43,9 | 160 | 2 | 19 |
| Creepers | Brown Creeper | 83 | 40,7 | 17,3 | 75 | 19 | 19 |
| Wrens | Winter Wren | 5 | 4,4 | 2,2 | 8 | 1 | 18 |
| Kinglets | Golden-crowned Kinglet | 628 | 314,8 | 157,7 | 758 | 113 | 19 |
| Ruby-crowned Kinglet | 93 | 61,1 | 29,0 | 122 | 20 | 19 |
| Thrushes | Veery | 4 | 3,7 | 2,7 | 10 | 1 | 16 |
| Gray-cheeked Thrush | 8 | 14,0 | 9,2 | 41 | 1 | 19 |
| Swainson’s Thrush | 48 | 33,4 | 19,5 | 79 | 10 | 19 |
| Hermit Thrush | 39 | 37,1 | 18,3 | 87 | 15 | 19 |
| Wood Thrush | 3 | 1,2 | 0,4 | 2 | 1 | 5 |
| American Robin | 5 | 16,6 | 9,1 | 36 | 1 | 19 |
| Mockingbirds & Thrashers | Gray Catbird | 4 | 4,7 | 3,1 | 12 | 1 | 19 |
| Waxwings | Cedar Waxwing | 1 | 28,7 | 34,0 | 117 | 1 | 18 |
| Finches | Purple Finch | 4 | 4,2 | 4,4 | 17 | 1 | 17 |
| Common Redpoll | 1 | 3,4 | 2,3 | 6 | 1 | 5 |
| Pine Siskin | 3 | 24,6 | 47,3 | 170 | 2 | 12 |
| American Goldfinch | 24 | 7,5 | 9,8 | 30 | 1 | 12 |
| New World Warblers | Tennessee Warbler | 11 | 9,8 | 11,7 | 44 | 2 | 18 |
| Orange-crowned Warbler | 9 | 14,8 | 8,0 | 28 | 3 | 19 |
| Nashville Warbler | 59 | 32,4 | 15,3 | 78 | 14 | 19 |
| Northern Parula | 1 | 1,5 | 0,5 | 2 | 1 | 6 |
| Chestnut-sided Warbler | 2 | 1,8 | 1,1 | 5 | 1 | 17 |
| Magnolia Warbler | 15 | 20,1 | 6,3 | 34 | 11 | 19 |
| Cape May Warbler | 5 | 3,5 | 3,3 | 12 | 1 | 14 |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
| Group | Species | 2021 | Av. | StDev. | Max. | Min. | # |
| New World Warblers | Black-throated Blue Warbler | 14 | 13,1 | 4,5 | 21 | 2 | 19 |
| Myrtle Warbler | 141 | 78,9 | 39,8 | 204 | 34 | 19 |
| Black-throated Green Warbler | 74 | 56,7 | 31,7 | 116 | 14 | 19 |
| Blackburnian Warbler | 7 | 3,1 | 2,3 | 10 | 1 | 14 |
| Pine Warbler | 1 | 1,7 | 0,7 | 3 | 1 | 9 |
| Palm Warbler | 10 | 7,2 | 5,3 | 22 | 1 | 19 |
| Bay-breasted Warbler | 25 | 7,7 | 6,0 | 23 | 1 | 17 |
| Blackpoll Warbler | 13 | 11,3 | 8,0 | 31 | 3 | 19 |
| Black and White Warbler | 91 | 22,6 | 8,0 | 37 | 9 | 19 |
| American Redstart | 62 | 95,6 | 41,4 | 198 | 44 | 19 |
| Ovenbird | 16 | 17,8 | 5,1 | 31 | 10 | 19 |
| Northern Waterthrush | 4 | 5,8 | 3,6 | 15 | 1 | 19 |
| Mourning Warbler | 3 | 2,4 | 1,1 | 4 | 1 | 14 |
| Common Yellowthroat | 32 | 25,5 | 6,3 | 39 | 17 | 19 |
| Wilson’s Warbler | 4 | 6,3 | 3,4 | 12 | 1 | 19 |
| Canada Warbler | 2 | 3,9 | 1,9 | 7 | 1 | 19 |
| New World Sparrows | Eastern Towhee | 4 | 1,0 | 0,0 | 1 | 1 | 2 |
| American Tree Sparrow | 37 | 27,2 | 25,4 | 94 | 2 | 19 |
| Chipping Sparrow | 4 | 2,4 | 1,7 | 6 | 1 | 16 |
| Savannah Sparrow | 2 | 3,2 | 3,2 | 11 | 1 | 12 |
| Fox Sparrow | 3 | 2,5 | 1,8 | 7 | 1 | 17 |
| Song Sparrow | 16 | 13,4 | 5,4 | 23 | 5 | 19 |
| Lincoln’s Sparrow | 11 | 5,5 | 3,2 | 13 | 1 | 18 |
| Swamp Sparrow | 5 | 4,6 | 2,4 | 11 | 1 | 18 |
| White-throated Sparrow | 77 | 72,8 | 43,3 | 199 | 27 | 19 |
| White-crowned Sparrow | 53 | 45,0 | 28,4 | 126 | 17 | 19 |
| Slate-coloured Junco | 184 | 82,5 | 28,5 | 141 | 24 | 19 |
| Cardinals & allies | Scarlet Tanager | 1 | 1,5 | 0,5 | 2 | 1 | 11 |
| Indigo Bunting | 4 | 2,1 | 1,7 | 5 | 1 | 13 |
| New World Blackbirds | Rusty Blackbird | 1 | 1,0 | 0,0 | 1 | 1 | 2 |

For 2021, record high captures in red, record low in yellow.

Av.: average; stdev: standard deviation; Max: Maximum; Min: Minimum; #: Number of previous fall seasons with captures.

Table 5. Season Total of species observed in fall 2021 at Cabot Head Research Station, with maximum and minimum daily totals, number of days with observation, and dates of first and last observation.

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Group | Species name | Season Total | Daily Max. | Daily Min. | Days with obs. | First date | Last date |
| Ducks, Geese & Swans | Cackling Goose | 2 | 1 | 1 | 2 | 10 Se. | 11 Oc. |
| Canada Goose | 1564 | 350 | 1 | 41 | 26 Au. | 28 Oc. |
| Wood Duck | 3 |  |  | 1 | 12 Oc. |  |
| Gadwall | 3 |  |  | 1 | 22 Se. |  |
| Mallard | 51 | 14 | 1 | 11 | 27 Au. | 28 Oc. |
| Northern Pintail | 3 |  |  | 1 | 20 Oc. |  |
| Green-winged Teal | 8 | 4 | 1 | 4 | 9 Se. | 31 Oc. |
| Redhead | 1 |  |  | 1 | 15 Oc. |  |
| Greater Scaup | 1 |  |  | 1 | 20 Oc. |  |
| Surf Scoter | 1 | 1 |  | 2 | 28 Se. | 12 Oc. |
| White-winged Scoter | 128 | 35 | 1 | 17 | 25 Se. | 29 Oc. |
| Black Scoter | 2 |  |  | 1 | 20 Oc. |  |
| Long-tailed Duck | 58 | 22 | 2 | 8 | 15 Oc. | 31 Oc. |
| Bufflehead | 1 |  |  | 1 | 31 Oc. |  |
| Common Goldeneye | 1 |  |  | 1 | 28 Oc. |  |
| Hooded Merganser | 53 | 5 | 1 | 26 | 15 Au. | 21 Oc. |
| Common Merganser | 203 | 39 | 1 | 34 | 17 Au. | 31 Oc. |
| Red-breasted Merganser | 80 | 21 | 1 | 19 | 14 Se. | 31 Oc. |
| Grouse & Turkeys | Ruffed Grouse | 74 | 5 | 1 | 31 | 18 Se. | 31 Oc. |
| Grebes | Pied-billed Grebe | 3 | 2 | 1 | 2 | 28 Se. | 6 Oc. |
| Horned Grebe | 17 | 4 | 1 | 8 | 5 Oc. | 27 Oc. |
| Red-necked Grebe | 17 | 4 | 1 | 10 | 26 Au. | 29 Oc. |
| Cuckoos | Black-billed Cuckoo | 2 |  |  | 1 | 23 Au. |  |
| Goatsuckers | Eastern Whip-poor-will | 2 | 1 |  | 3 | 4 Se. | 11 Se. |
| Swifts | Chimney Swift | 1 |  |  | 1 | 29 Au. |  |
| Hummingbirds | Ruby-throated Hummingbird | 79 | 6 | 1 | 29 | 15 Au. | 27 Se. |
| Cranes | Sandhill Crane | 6 | 2 | 2 | 3 | 11 Se. | 15 Se. |
| Sandpipers & Phalaropes | Killdeer | 1 |  |  | 1 | 17 Se. |  |
| Greater Yellowlegs | 9 | 2 | 1 | 9 | 15 Au. | 20 Oc. |
| Lesser Yellowlegs | 3 | 2 | 1 | 4 | 18 Au. | 9 Oc. |
| Solitary Sandpiper | 3 | 1 |  | 4 | 7 Se. | 16 Se. |
| Spotted Sandpiper | 11 | 2 | 1 | 9 | 19 Au. | 11 Oc. |
| Semipalmated Sandpiper | 1 | 1 |  | 2 | 15 Au. | 18 Au. |
| Least Sandpiper | 1 |  |  | 1 | 5 Se. |  |
| Sandpipers | American Woodcock | 1 |  |  | 1 | 12 Oc. |  |
| Gulls & Terns | Ring-billed Gull | 597 | 53 | 1 | 69 | 15 Au. | 30 Oc. |
| Herring Gull | 267 | 20 | 1 | 64 | 15 Au. | 31 Oc. |
| Great Black-backed Gull | 1 |  |  | 1 | 8 Se. |  |
| Caspian Tern | 2 | 1 |  | 2 | 16 Au. | 4 Se. |
| Loons | Common Loon | 384 | 72 | 1 | 61 | 15 Au. | 31 Oc. |
| Cormorants | Double-crested Cormorant | 111 | 28 | 1 | 28 | 15 Au. | 6 Oc. |
| Herons & Bitterns | Great Blue Heron | 8 | 3 | 1 | 6 | 19 Au. | 17 Se. |
| Green Heron | 1 |  |  | 1 | 3 Se. |  |
| Vultures | Turkey Vulture | 53 | 9 | 1 | 19 | 17 Au. | 29 Se. |
| Hawks, Kites & Eagles | Bald Eagle | 145 | 6 | 1 | 70 | 15 Au. | 31 Oc. |
| Northern Harrier | 5 | 1 |  | 5 | 22 Au. | 17 Oc. |
| Sharp-shinned Hawk | 43 | 4 | 1 | 31 | 17 Au. | 28 Oc. |
| Cooper's Hawk | 2 | 1 |  | 2 | 28 Se. | 28 Oc. |
| Red-shouldered Hawk | 1 |  |  | 1 | 12 Se. |  |
| Broad-winged Hawk | 68 | 30 | 1 | 12 | 17 Au. | 13 Se. |
| Red-tailed Hawk | 11 | 4 | 1 | 7 | 17 Au. | 10 Oc. |
| Rough-legged Hawk | 1 |  |  | 1 | 31 Oc. |  |
| Typical Owls | Eastern Screech-Owl | 1 |  |  | 1 | 16 Se. |  |
| Great Horned Owl | 1 |  |  | 1 | 13 Oc. |  |
| Northern Saw-whet Owl | 1 |  |  | 1 | 4 Oc. |  |
| Kingfishers | Belted Kingfisher | 75 | 5 | 1 | 55 | 15 Au. | 15 Oc. |
| Woodpeckers | Red-bellied Woodpecker | 2 | 1 | 1 | 2 | 20 Oc. | 28 Oc. |
| Yellow-bellied Sapsucker | 1 |  |  | 1 | 12 Se. |  |
| Downy Woodpecker | 158 | 7 | 1 | 54 | 24 Au. | 31 Oc. |
| Hairy Woodpecker | 46 | 3 | 1 | 31 | 19 Au. | 31 Oc. |
| Northern Flicker | 132 | 15 | 1 | 38 | 15 Au. | 15 Oc. |
| Pileated Woodpecker | 56 | 4 | 1 | 40 | 18 Au. | 31 Oc. |
| Falcons | American Kestrel | 3 | 1 |  | 3 | 15 Au. | 27 Se. |
| Merlin | 123 | 6 | 1 | 64 | 15 Au. | 28 Oc. |
| Peregrine Falcon | 13 | 2 | 1 | 11 | 29 Au. | 12 Oc. |
| Tyrant Flycatchers | Eastern Wood-Pewee | 1 | 1 |  | 2 | 20 Au. | 4 Oc. |
| Yellow-bellied Flycatcher | 3 | 1 |  | 3 | 22 Au. | 8 Se. |
| Traill's Flycatcher | 15 | 3 | 1 | 11 | 16 Au. | 6 Se. |
| Least Flycatcher | 28 | 5 | 1 | 14 | 16 Au. | 18 Se. |
| Eastern Phoebe | 3 | 1 |  | 4 | 15 Se. | 8 Oc. |
| Great Crested Flycatcher | 2 |  |  | 1 | 29 Au. |  |
| Eastern Kingbird | 3 | 2 | 1 | 2 | 21 Au. | 23 Au. |
| Shrikes | Northern Shrike | 1 | 1 |  | 2 | 17 Oc. | 29 Oc. |
| Vireos | Blue-headed Vireo | 30 | 3 | 1 | 23 | 23 Au. | 27 Oc. |
| Warbling Vireo | 2 | 1 |  | 2 | 20 Au. | 23 Au. |
| Philadelphia Vireo | 5 | 1 |  | 6 | 28 Au. | 16 Oc. |
| Red-eyed Vireo | 441 | 27 | 1 | 48 | 15 Au. | 4 Oc. |
| Crows & Jays | Blue Jay | 1398 | 100 | 1 | 71 | 15 Au. | 31 Oc. |
| American Crow | 226 | 12 | 1 | 59 | 15 Au. | 25 Oc. |
| Common Raven | 162 | 9 | 1 | 62 | 17 Au. | 31 Oc. |
| Larks | Horned Lark | 23 | 10 | 1 | 8 | 14 Oc. | 28 Oc. |
| Chickadees | Black-capped Chickadee | 1616 | 48 | 2 | 78 | 15 Au. | 31 Oc. |
| Nuthatches | Red-breasted Nuthatch | 838 | 43 | 1 | 74 | 15 Au. | 31 Oc. |
| White-breasted Nuthatch | 4 | 1 | 1 | 4 | 7 Oc. | 15 Oc. |
| Creepers | Brown Creeper | 228 | 26 | 1 | 45 | 29 Au. | 28 Oc. |
| Wrens | House Wren | 7 | 2 | 1 | 6 | 28 Au. | 21 Se. |
| Wrens | Winter Wren | 49 | 4 | 1 | 24 | 19 Se. | 27 Oc. |
| Gnatcatchers | Blue-gray Gnatcatcher | 3 | 1 |  | 4 | 28 Au. | 10 Se. |
| Kinglets | Golden-crowned Kinglet | 2251 | 199 | 1 | 50 | 16 Au. | 31 Oc. |
| Ruby-crowned Kinglet | 382 | 31 | 1 | 37 | 13 Se. | 27 Oc. |
| Thrushes | Eastern Bluebird | 1 |  |  | 1 | 13 Oc. |  |
| Veery | 4 | 1 |  | 4 | 22 Au. | 7 Se. |
| Gray-cheeked Thrush | 9 | 3 | 1 | 6 | 7 Se. | 27 Se. |
| Swainson's Thrush | 50 | 6 | 1 | 22 | 5 Se. | 2 Oc. |
| Hermit Thrush | 67 | 11 | 1 | 24 | 16 Au. | 28 Oc. |
| Wood Thrush | 5 | 1 |  | 6 | 19 Au. | 24 Se. |
| American Robin | 150 | 18 | 1 | 46 | 16 Au. | 31 Oc. |
| Mockingbirds & Thrashers | Gray Catbird | 12 | 2 | 1 | 10 | 16 Au. | 24 Oc. |
| Brown Thrasher | 1 |  |  | 1 | 28 Au. |  |
| Waxwings | Bohemian Waxwing | 3 |  |  | 1 | 29 Oc. |  |
| Cedar Waxwing | 156 | 19 | 1 | 29 | 17 Au. | 7 Oc. |
| Pipits | American Pipit | 104 | 21 | 1 | 24 | 10 Se. | 31 Oc. |
| Finches | Pine Grosbeak | 1 |  |  | 1 | 28 Oc. |  |
| Purple Finch | 29 | 6 | 1 | 14 | 16 Au. | 31 Oc. |
| White-winged Crossbill | 3904 | 2500 | 1 | 27 | 20 Au. | 31 Oc. |
| Red Crossbill | 1 |  |  | 1 | 3 Se. |  |
| Common Redpoll | 327 | 80 | 1 | 12 | 17 Oc. | 31 Oc. |
| Pine Siskin | 263 | 29 | 1 | 31 | 11 Se. | 31 Oc. |
| American Goldfinch | 648 | 150 | 1 | 41 | 15 Au. | 31 Oc. |
| Longspurs & Snow Buntings | Snow Bunting | 92 | 49 | 2 | 7 | 23 Oc. | 31 Oc. |
| New World Warblers | Blue-winged Warbler | 1 |  |  | 1 | 21 Au. |  |
| Tennessee Warbler | 47 | 7 | 1 | 22 | 17 Au. | 15 Oc. |
| Orange-crowned Warbler | 20 | 4 | 1 | 11 | 20 Se. | 20 Oc. |
| Nashville Warbler | 104 | 6 | 1 | 44 | 15 Au. | 21 Oc. |
| Northern Parula | 3 | 1 |  | 4 | 29 Au. | 5 Oc. |
| Yellow Warbler | 2 | 1 |  | 2 | 17 Au. | 30 Au. |
| Chestnut-sided Warbler | 4 | 1 |  | 4 | 17 Au. | 2 Se. |
| Magnolia Warbler | 29 | 3 | 1 | 17 | 18 Au. | 30 Se. |
| Cape May Warbler | 13 | 2 | 1 | 11 | 20 Au. | 7 Oc. |
| Black-throated Blue Warbler | 18 | 3 | 1 | 14 | 19 Au. | 12 Oc. |
| Myrtle Warbler | 842 | 60 | 1 | 72 | 15 Au. | 30 Oc. |
| Black-throated Green Warbler | 289 | 25 | 1 | 42 | 15 Au. | 16 Oc. |
| Blackburnian Warbler | 13 | 4 | 1 | 7 | 18 Au. | 29 Au. |
| Pine Warbler | 5 | 1 |  | 5 | 26 Au. | 14 Se. |
| Western Palm Warbler | 91 | 36 | 1 | 22 | 31 Au. | 8 Oc. |
| Bay-breasted Warbler | 97 | 55 | 1 | 19 | 19 Au. | 30 Se. |
| Blackpoll Warbler | 28 | 3 | 1 | 17 | 24 Au. | 2 Oc. |
| Black-and-white Warbler | 260 | 24 | 1 | 33 | 15 Au. | 4 Oc. |
| American Redstart | 378 | 30 | 1 | 43 | 15 Au. | 1 Oc. |
| Ovenbird | 47 | 9 | 1 | 23 | 16 Au. | 24 Se. |
| Northern Waterthrush | 5 | 1 |  | 5 | 20 Au. | 7 Se. |
| Mourning Warbler | 5 | 2 | 1 | 4 | 19 Au. | 10 Se. |
| Common Yellowthroat | 209 | 16 | 1 | 47 | 15 Au. | 4 Oc. |
| Wilson's Warbler | 12 | 2 | 1 | 10 | 23 Au. | 18 Se. |
| Canada Warbler | 2 | 1 |  | 2 | 15 Au. | 29 Au. |
| New World Sparrows | Eastern Towhee | 148 | 5 | 1 | 52 | 15 Au. | 28 Oc. |
| American Tree Sparrow | 91 | 20 | 1 | 14 | 18 Oc. | 31 Oc. |
| Chipping Sparrow | 19 | 2 | 1 | 15 | 18 Au. | 19 Oc. |
| Savannah Sparrow | 4 | 1 |  | 4 | 16 Se. | 8 Oc. |
| Fox Sparrow | 6 | 3 | 1 | 4 | 3 Oc. | 31 Oc. |
| Song Sparrow | 145 | 5 | 1 | 63 | 15 Au. | 28 Oc. |
| Lincoln's Sparrow | 24 | 3 | 1 | 17 | 7 Se. | 13 Oc. |
| Swamp Sparrow | 8 | 2 | 1 | 7 | 17 Se. | 17 Oc. |
| White-throated Sparrow | 435 | 26 | 1 | 53 | 28 Au. | 31 Oc. |
| White-crowned Sparrow | 397 | 34 | 1 | 36 | 19 Se. | 31 Oc. |
| Dark-eyed Junco | 628 | 56 | 1 | 48 | 19 Au. | 31 Oc. |
| Cardinals & allies | Scarlet Tanager | 1 | 1 |  | 2 | 23 Au. | 24 Au. |
| Northern Cardinal | 2 | 1 |  | 2 | 4 Se. | 23 Oc. |
| Rose-breasted Grosbeak | 1 |  |  | 1 | 23 Au. |  |
| Cardinals & allies | Indigo Bunting | 4 | 2 | 1 | 3 | 16 Au. | 20 Au. |
| Dickcissel | 1 |  |  | 1 | 11 Se. |  |
| New World Blackbirds | Red-winged Blackbird | 1 |  |  | 1 | 19 Se. |  |
| Rusty Blackbird | 26 | 4 | 1 | 9 | 11 Se. | 19 Oc. |
| Baltimore Oriole | 1 |  |  | 1 | 17 Au. |  |