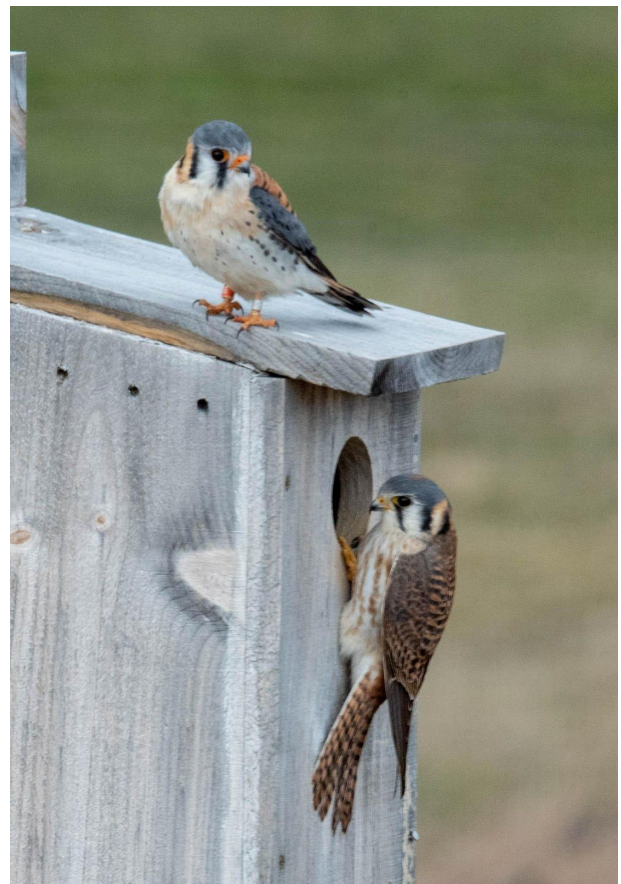




Maine Nest Box Monitoring Project 2020 Year End Report Maine Natural History Observatory

Introduction

Each breeding season, Maine experiences an influx of migratory breeding birds, many of which utilize cavities in which to nest. Many of these species will readily take to man-made nest boxes in lieu of naturally-occurring nest sites, presenting a unique opportunity to observe breeding success or failure. This willingness to inhabit man-made cavities is also of conservation significance as some species suffer declines attributed to increased competition for suitable nest sites. Threats such as invasive species, habitat destruction, and climate change all present challenges for cavity-nesting species which demand monitoring efforts with a focus on conservation. Despite some cavity-nesting species being listed as of conservation concern in Maine, there has not been a comprehensive effort to monitor cavity-nesting breeding birds in Maine. To address this gap in knowledge, the Maine Natural History Observatory (MNHO) initiated a nest box monitoring effort throughout Maine in 2019 in partnership with the Maine Department of Inland Fisheries and Wildlife's Maine Bird Atlas project, a comprehensive, 5-year, volunteer-driven atlas effort.



2020 Project Summary

In 2019, MNHO launched a state-wide nest box monitoring project. The goal of this project was to build and distribute a number of nest boxes to volunteer monitors throughout Maine. During this first field season, the project was focused primarily on three focal species: American Kestrel, Eastern Bluebird, and Northern Saw-whet Owl. Following the 2019 field season, a goal to expand the project to cover additional priority species was established. Tree



Swallows and Cliff Swallow were identified as priorities for the 2020 field season.

A combination of MNHO staff and volunteers met in early spring of 2020 to construct nest boxes designed specifically to accommodate nesting Tree Swallow. A total of 27 were constructed. Additionally, MNHO initiated a partnership with the Massachusetts-based nonprofit, Swallow Conservation, who provided artificial, clay Cliff Swallow nests. These artificial nests were provided by Swallow Conservation at cost and were paid for by a charitable contribution. Additionally, MNHO staff created two monitoring handbooks which were distributed to volunteer monitors receiving boxes and clay nests and volunteers who sought to participate in the project using their own boxes. These handbooks detailed when and where the nest boxes/clay nests should be deployed,

monitoring protocols, and species profiles for the target bird species. Boxes and clay nests were distributed to volunteers by project staff and the Maine Bird Atlas regional coordinators throughout the spring.

A total of 59 MNHO built nest boxes were delivered to project monitors during the 2019 field season and assembled an additional 27 swallow nest boxes in 2020. Additional nest boxes were monitored by project volunteers who either already owned or built their own boxes during this first field season. Breeding was confirmed for American Kestrel, Eastern Bluebird, Tree Swallow, and House Wren.

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Species	# of Target Boxes Deployed in 2019	# of Target Boxes Deployed in 2020	# of Boxes with Confirmed Breeding in 2019	# of Boxes with Confirmed Breeding in 2020
American Kestrel	20	21	1	4
Eastern Bluebird	31	36	6	5**
Northern Saw-whet Owl	11	12	0	0
Black-capped Chickadee	0*	0	1	0
Tree Swallow	1	10	8	6
House Wren	1*	0	3	2

*Although not a designated focal species, boxes created for Eastern Bluebird and Tree Swallow were suitable for use by other cavity-nesting songbirds. **One box supported a double brood of Eastern Bluebirds during the 2020 field season.

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Species	# of sites where artificial nests were deployed in 2020	# of sites with confirmed use of artificial nests in 2020
Cliff Swallow	3	0

The project's expansion was promoted through a variety of channels including social media, the MNHO website, and Maine Bird Atlas training workshops. Nest boxes were distributed to project volunteers either at Maine Bird Atlas workshops or were delivered to volunteers by MNHO staff. The distribution of boxes throughout the state was



dictated by volunteer interest. Volunteers who received boxes were instructed to deploy their box according to the habitat and nest cavity requirements of the bird species of interest. Nest boxes were distributed within 12 of Maine’s 16 counties.

In October, MNHO hosted a well-attended virtual presentation by Mara Silver of Swallow Conservation focused on swallow monitoring and conservation via Zoom. This event was held to raise awareness about widespread swallow declines and increase public interest in the swallow-focused projects.

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County	American Kestrel	Eastern Bluebird	Northern Saw-whet Owl	Tree Swallow
York	0	0	0	0
Cumberland	1	3	0	0
Sagadahoc	0	0	0	0
Androscoggin	0	0	1	0
Kennebec	6	6	3	5
Lincoln	0	0	1	0
Knox	2	0	0	0
Waldo	5	10	0	1
Hancock	2	9	3	0
Washington	1	0	1	0
Oxford	2	3	3	1
Franklin	1	1	0	0
Somerset	1	4	0	1
Penobscot	0	0	0	2
Piscataquis	0	0	0	0
Aroostook	0	0	0	0

