

The Kestrel Project

*Bringing falcons back to
Grafton*



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Agenda

- Introduction
- Differences between Falcons and Hawks
- Why the American Kestrel?
- Site Selection
- Installation
- Monitoring
- Challenges
- Banding
- Call for Volunteers



Introduction

- The Kestrel Project is a community wide effort led by the Grafton Land Trust to increase nesting opportunities for the American Kestrel.

- Project Partners

- Grafton Land Trust



- Town of Grafton / Conservation Commission

- Massachusetts Division of Fisheries & Wildlife

- Private Landowners

- Volunteers!

Difference between Hawk & Falcon

Hawk	Falcon
Accipitridae family	Falconidae family
Shorter wings (twist and turning in woodland/forest habitat)	Long, narrow, tapered and thin wings (diving in field/grassland habitat)
Robust bird	Slim bird
Smooth beak with a simple curve; capture and kill prey with talons	Shorter beaks with notch/angular bend; capture and kill prey with beaks
Fly at moderate speed; gliding on descent	Fly at high speed (Peregrine Falcon dives up to 200 mph)
Larger bird of prey	Small bird of prey

Difference between Hawk & Falcon



Red-tailed Hawk



Photo credits: Google Images



American Kestrel





ADULT (M)



ADULT (M)



JUVENILE (M)

ADULT (M)



ADULT (F)



Why Kestrels?

- The American Kestrel is among the most precipitously declining birds in Massachusetts.
- Distribution shrunk by more than 50% in 30 years (Mass Audubon: State of the Birds)

Breeding Bird Atlas

↓ Strong Decline

Breeding Bird Survey

↓ Strong Decline

Christmas Bird Count

↓ Strong Decline

- Cavity nesting; does not excavate
- Open space / grassland / field habitat

Conservation Status

**Conservation
Action Urgent**



Site Selection in August 2014

- Referred to USDA NRCS Pamphlet
- Sought advice from MassWildlife
- Identified 10 locations with suitable habitat



Photo by Troy Gipps

Pell Farm

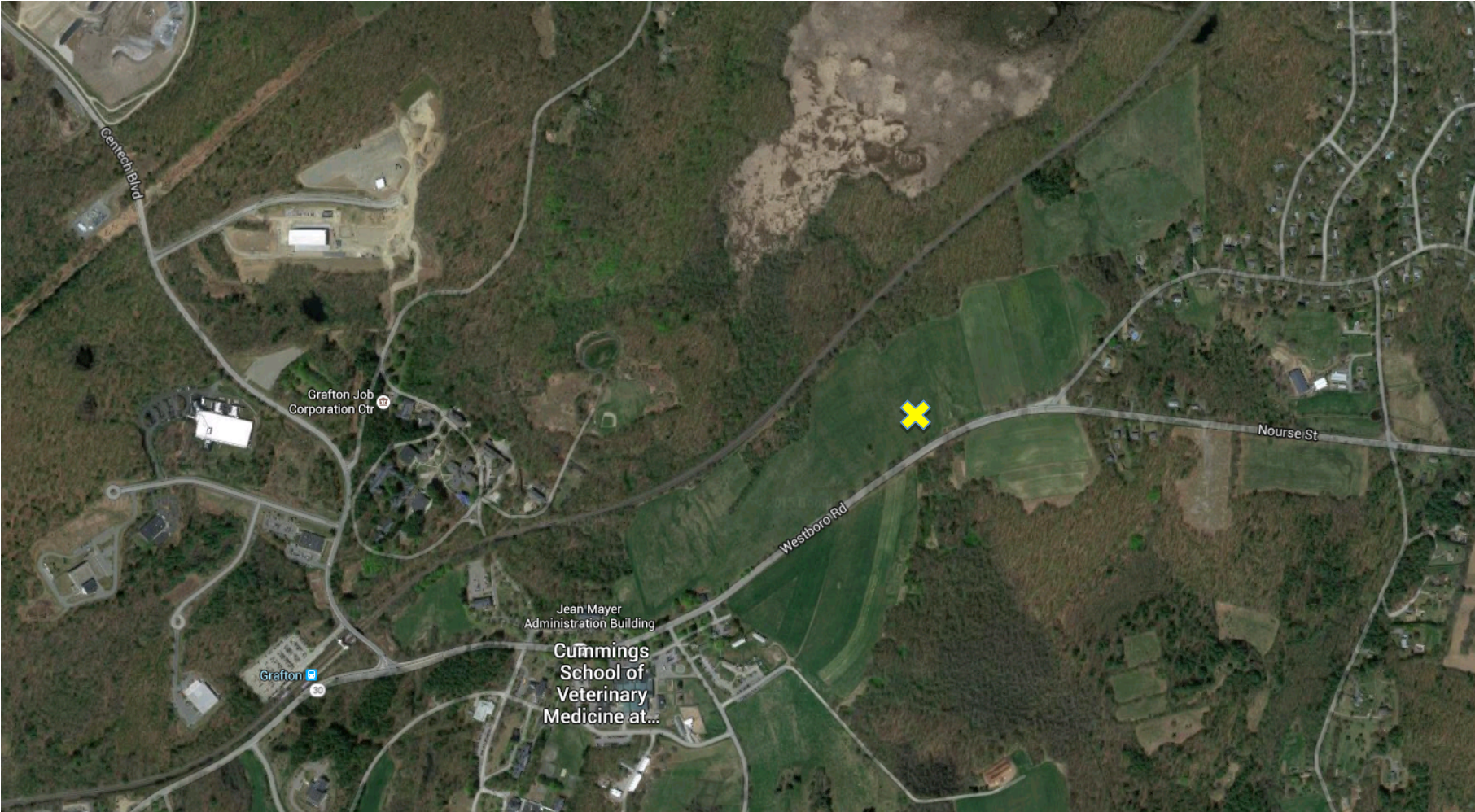


Pell Farm



Photo by Troy Gipps

Tufts Vet School



Tufts Vet School



Photo by Troy Gipps

Potter Hill Meadows



Potter Hill Meadows



Photo by Troy Gipps

Hennessey I










Hennessey I



Photo by Troy Gipps

Nest Box Locations

Location		GPS Coordinates	Property Owner
Potter Hill Meadows		42.206167, -71.718472	Grafton Land Trust
Pell Farm		42.202453, -71.646916	Town of Grafton (Con Com)
Webber CR		42.236514, -71.697501	Town of Grafton
Hennessey I		42.223732, -71.652484	Town of Grafton (Con Com)
Hennessey I		42.219401, -71.649745	Town of Grafton (Con Com)
Merriam Road Conservation Area		42.217104, -71.664687	Town of Grafton (Con Com)
Tufts Veterinarian School		42.250198, -71.672323	Tufts University Vet School
North Brigham Hill Road			Crater/Ferraro
North Brigham Hill Road			White
Old Upton Road			Holberger

Installation on Nov. 8-9

- 25 volunteers installed 10 boxes
- Boxes supplied by MassWildlife



Installation Orientation



Photo by Christine Thurber



Photo by Troy Gipps



Photos by Troy Gipps



Photos by Troy Gipps



Photos by Troy Gipps



Photo by Troy Gippis



Photo by Troy Gipps



Photos by Troy Gipps



Photos by Troy Gipps

Winter



Photo by Troy Gipps

Volunteer Orientation on 3/26



Volunteer Orientation on 3/26



Monitoring

- Phases:
 - Pre-season check
 - Early breeding season
 - From late March onward
 - Focus on breeders
 - Mid-season
 - Post-season
 - After birds depart

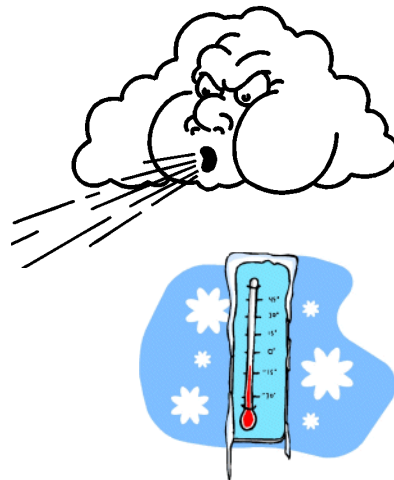


Photo from Google Images

The Nitty-gritty of Monitoring



Photos by Christine Thurber



Kestrel Project Nest Box Data Sheet			
<i>Send all reports to kestrel@griftonland.org</i>			
Monitor(s):	Christine and Cecelia Thurber		
Location:	Hennessey		
Date:	6/7/15	Start Time: 12:33 PM	End Time: 1:33 PM
Weather (condition, temp, wind):	68 deg F, 3 mph winds, clear		
Observations			
Kestrels present? (List #, age, sex):	2, M, F adults		
Status:	courtship	incubation	nestlings fledglings occupied but inactive unknown
Activities: Record instances/frequency of male/female/offspring (M/F/O) flight (FL), hunting (HU), feeding (FE), prey exchange (PX), incubation (IN), grooming (GR), etc. over an hour. Define additional abbreviations & list prey items. Record presence of competitors & predators.			
12:33 2 Red-winged blackbirds (RWBB), 1 male, 1 female			
12:40 Male red-winged blackbird returned to woodline east. Northern-flicker (YSFL) flew southwest to woods. Kestrel prey items (dragonflies, butterflies) flying around field.			
12:45 American tree swallow (TRES) flew from behind box over us, hunting around field, RWBB flying around too. YSFL flew over wetland beyond box.			
12:55 AMERICAN KESTREL! (AMKE) spotted in swamp, being harassed by RWBB male. Flew out of view behind treeline east. Not sure if male or female.			
12:59 "", by 2 RWBB. Flew from open swamp behind line to dead snags on right (gap) between stand in field and swamp.			
1:02 Common grackle perched in snags.			
1:03 AMKE perched in snag bordering field. Flew off behind treeline @ 1:04.			
1:07 AMKE flew from behind treeline, RWBB chasing, perched in middle, hen took off. Both male and female AMKE flew from behind treeline, 1 perched on short snag. Other in big snag against field. Both flew out of view to right treeline.			
1:14 AMKE flew across swamp, behind box, to treeline beyond, back across southwest, then out of view beyond treeline to right, chased by RWBB. Mourning dove perched in big snag @ 1:15.			
1:18 AMKE chased again by 2 RWBB, perched in swamp on snags, then flew back to treeline.			
1:19 AMKE flew from right, perched in small snag directly right of big one, ignoring 1 RWBB. Took off 1:21, RWBB followed. American crow calling.			
1:27 AMKE flew from behind treeline on right, low behind treeline in center, behind box to treeline, then back, out of view.			
1:32 Flew from right, perched on forked snag behind big one where perched several mins earlier (got photos) for 30 seconds then took off to right. Very red breast - female?			
Any change in habitat/box condition or human activity? List # ppl, vehicles, vehicle type.			

Kestrel Life Cycle

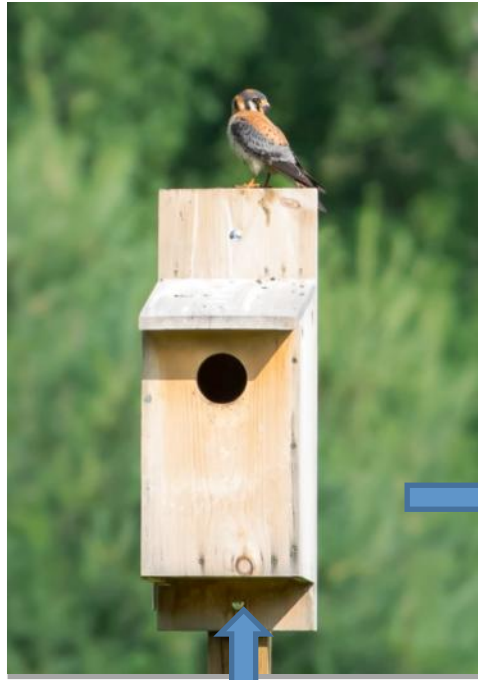


Photo by Dean Cerratti

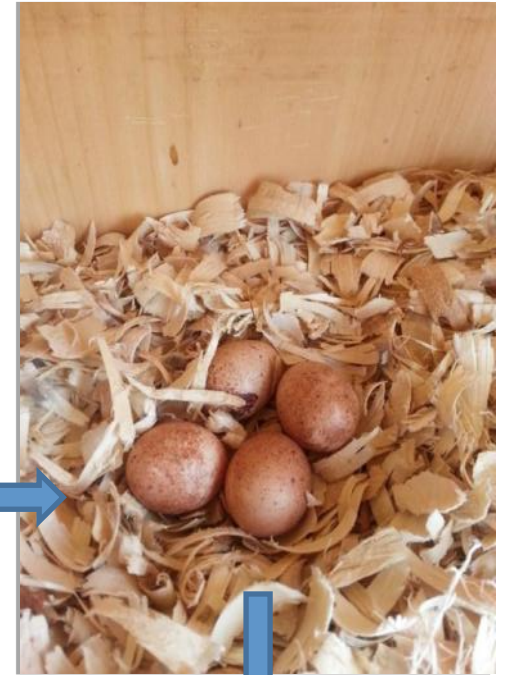


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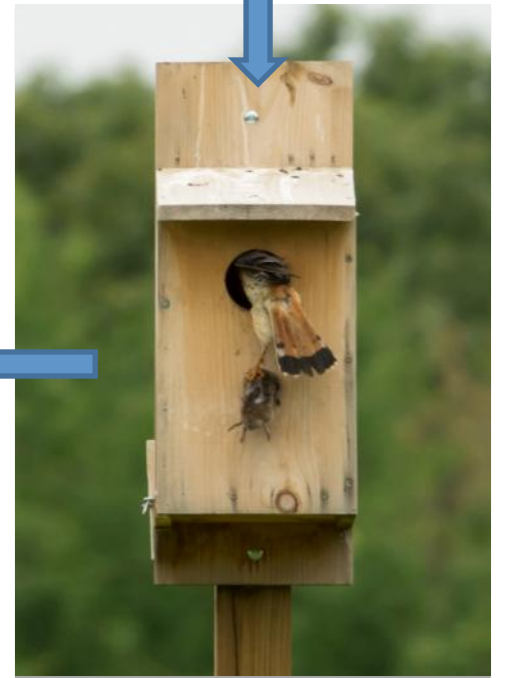


Photo by Dean Cerratti



Photo by Dean Cerratti



Photo by Troy Gipps

Volunteer Monitor Appreciation

We couldn't have done it without you!

Alex Molnar
Cecelia Thurber
Claire Straus
Travis Mast
Ruth Mazzeo
Amelia Walters
Dan Hastings
Troy Gipps



Helen Cheney
Nathan Withman
Narmada Shenoy
Tom Miele
Sean & Shana Kelley
Peg Ferraro
Heather Graham
Ken Holberger

Also Dean Cerrati for his excellent photos, Drew Vitz & Rob Aberg for nest checks, and Steven Molnar for assisting with boarding up boxes.

Nest Checks



Image by Sean Kelley



Photo by Troy Gipps



Photo by Christine Thurber

Checking for Kestrels with MassWildlife



Photo by Troy Gips



Nest Check Results

- Native non-target species
 - Tree swallows



Nest Check Results

- Invasive species!



Photo by Troy Gipps

House Sparrow



Photo by Dean Cerrati

European Starling

Removing Starling Nests on 5/2



Boarding up boxes repeatedly infested by House Sparrows on 6/20



Avian Species Reported for 2015 Monitoring Season

Species Using Nest Boxes	Predators/Brood Parasites	Others Present	Others Present, continued
Eastern Bluebird	Blue Jay	Red-winged Blackbird	Yellow Warbler
European Starling	American Crow	American Robin	Northern Cardinal
House Sparrow	Cooper's Hawk	Turkey Vulture	Field Sparrow
Tree Swallow	Red-tailed Hawk	American Woodcock	Ruffed Grouse
Eastern Phoebe	Brown-headed Cowbird	Northern Flicker	Ovenbird
American Kestrel		Gray Catbird	Osprey
Red-tailed Hawk		Mourning Dove	Canada Goose
		Black-capped Chickadee	Ducks
		Tufted Titmouse	
		Song Sparrow	

Monitoring Season Recap

- 16 volunteers
 - Submitted 38 forms from 3/15-6/7
- 58 checks 3/15-7/18
- 10 boxes
 - 7 had Tree Swallow nests
 - 2 had House Sparrow nests
 - 1 had American Kestrels!
 - 4 males fledged



Photo by Troy Gipps

Found Kestrel eggs on 5/29

- Hennessey I
 - North side of property
- Three weeks prior we removed a European starling nest from this box.



Photo by Troy Gipps

Hennessey I



Hennessey I



Photo by Troy Gipps

Hennessey I



Photo by Troy Gipps

Hennessey I



Photo by Troy Gipps

The Kestrel eggs hatch on 6/23



Photo by Troy Gipps

Monitoring Feeding Activity

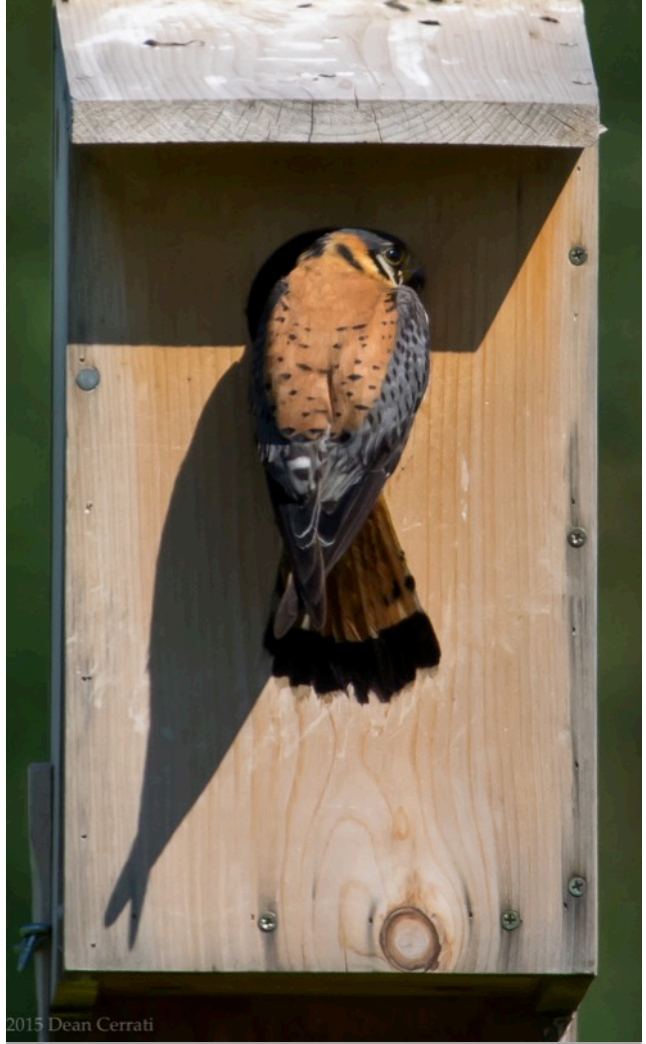


Photos by Troy Gipps



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Photos by Dean Cerrati



Photo by Dean Cerrati



Photos by Dean Cerrati



Photo by Troy Gipps



Photos by Dean Cerrati

Banding chicks on 7/13



Photo by Troy Gipps



Photo by Troy Gipps



Photo by Troy Gipps



Photo by Troy Gipps



Photo by Troy Gipps



Photo by Rob Aberg



Photo by Troy Gipps



Photos by Troy Gipps



Photos by Troy Gipps





Photo by Rob Aberg



Photo by Rob Aberg



Photos by Troy Gipps



Preparing to fledge



Photos by Dean Cerrati

A banded male fledges



Photo by Dean Cerrati

Public Relations

- Local media coverage
 - The Grafton News
 - Community Advocate
 - Worcester T&G
- Social Media
 - Facebook
 - Posts reached 1,700 – 3,500
- Video
 - Produced videos to promote project (Vimeo)



Project Budget

Category	Item	Cost
Materials	Nest Boxes (10)	FREE
	4x4x16 pressure treated (10), Carriage bolts, washers, nuts, screws, wood shavings	\$240
	Werner 10-ft Fiberglass Type 1A Ladder	\$190
	Power Auger rental (two days)	\$216
Volunteer Orientation	Guest Speaker: Keeping Company with Kestrels	\$200
	Food/beverages	\$70
	TOTAL:	\$916

Future Plans

- Monitor and maintain existing boxes
- Place additional boxes on suitable habitat
- Recruit additional volunteers



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Photo by Troy Gipps

BECOME A VOLUNTEER TODAY: kestrel@griftonland.org 508-887-0065