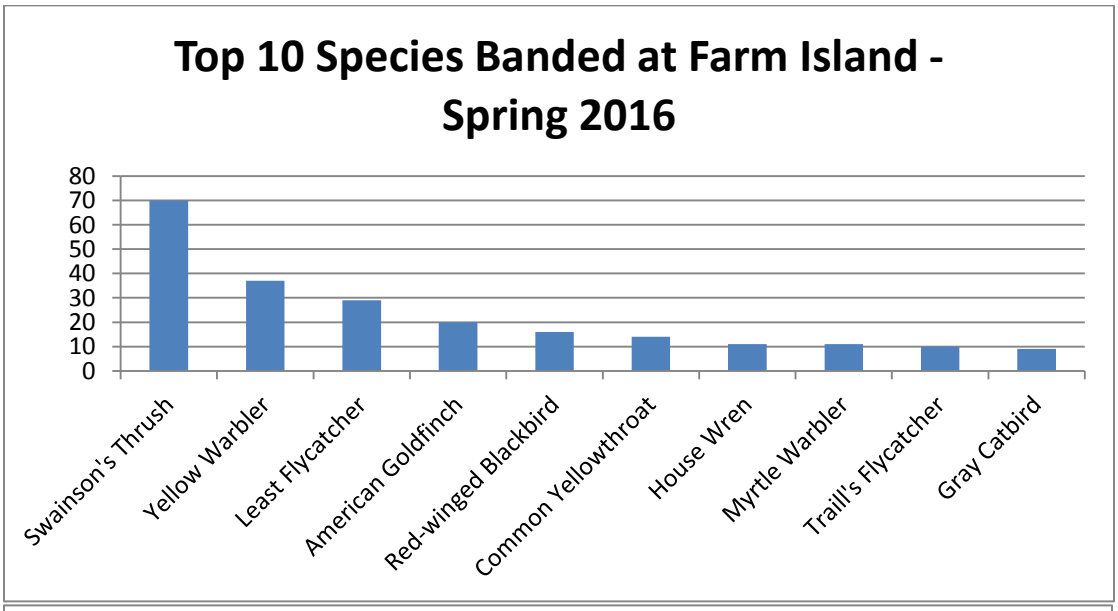
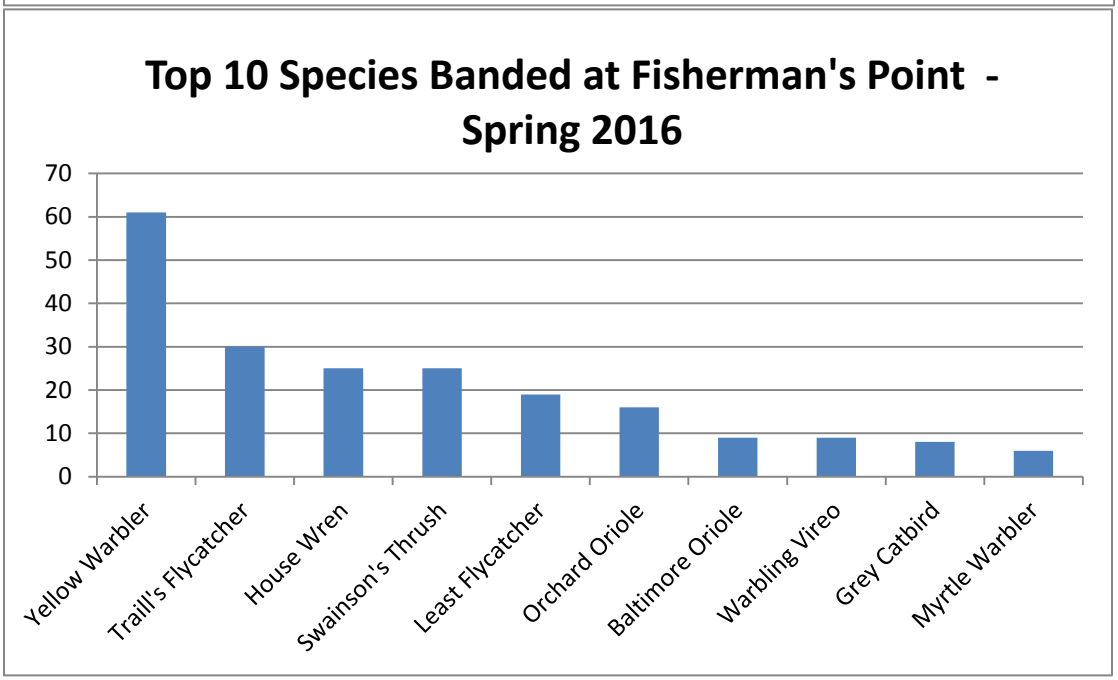
# Bird banding update for spring of 2016
# Farm Island and Oahe Downstream, South Dakota

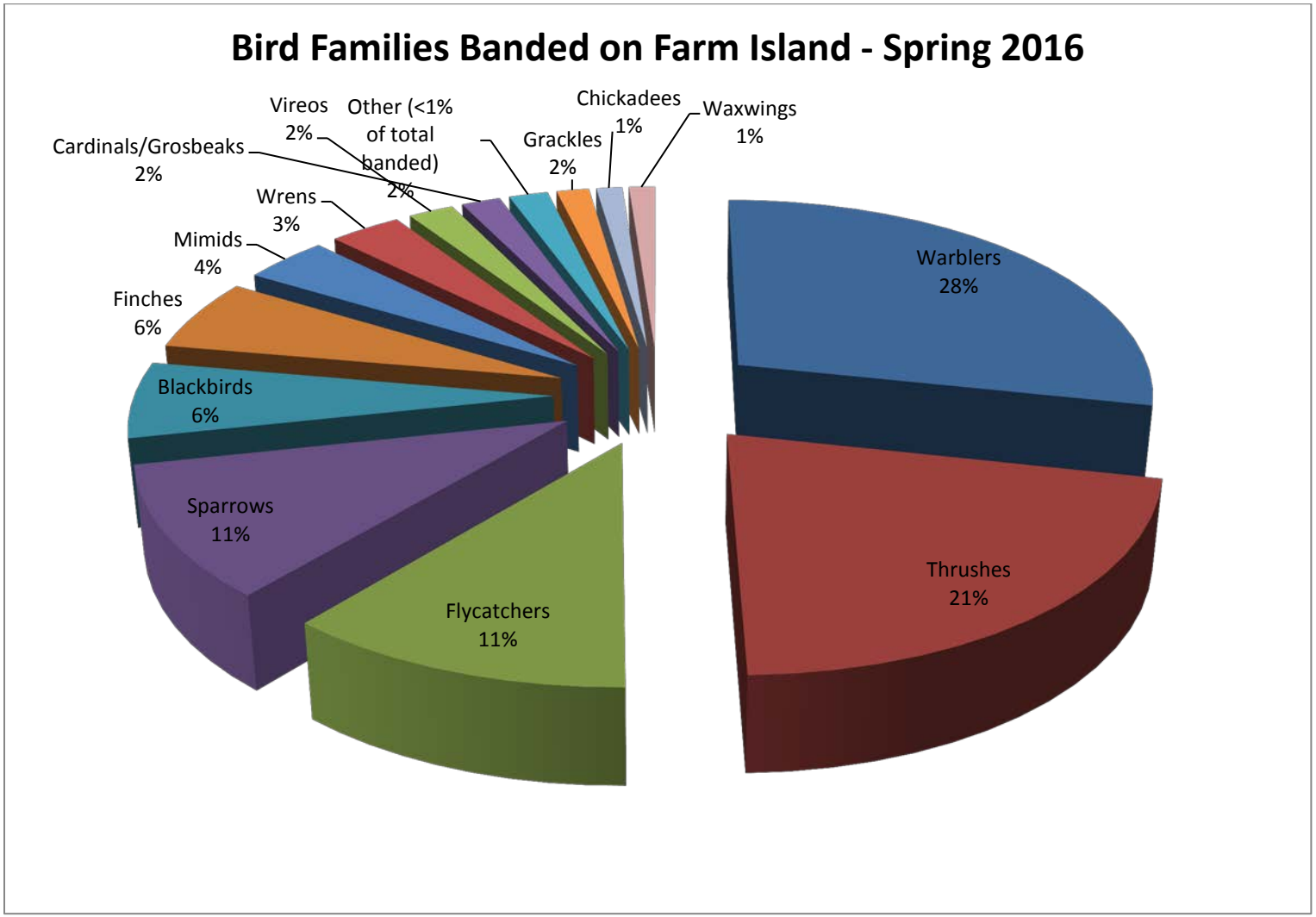
South Dakota Game, Fish and Parks' Wildlife Diversity Program staff band birds during the peak of spring and fall migration at 2 sites in central South Dakota. The Farm Island State Recreation Area site was established in 1993. The Oahe Downstream Recreation Area site (called Fisherman's Point) was added in 2004. With the exception of 2011, when extreme flooding prevented access to the sites, we have banded at both sites since their establishment.

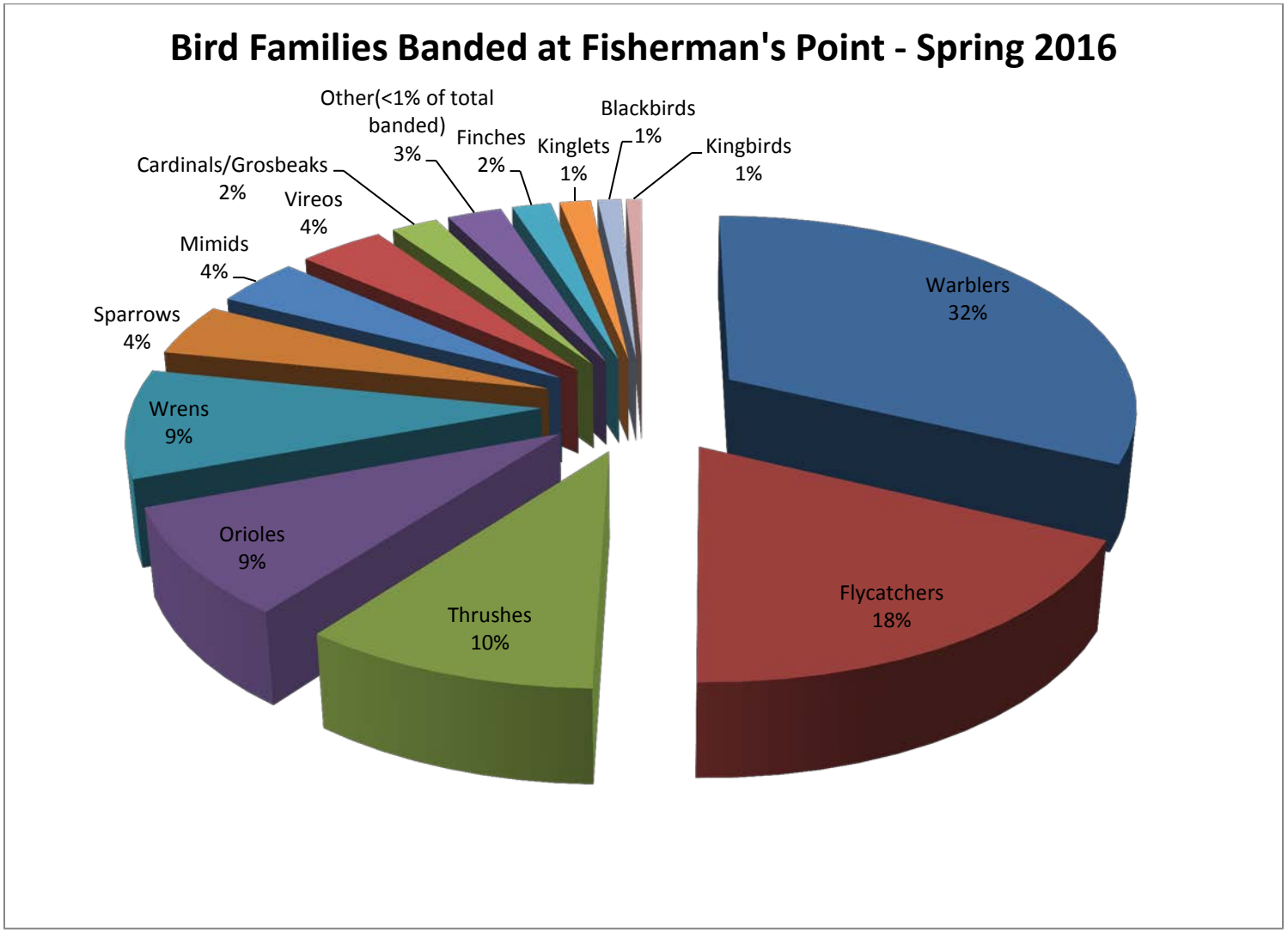
The Yellow Warbler is a common migrant and breeder in this area, reflected in the charts below, although more Swainson's Thrushes were banded at Farm Island during this season.



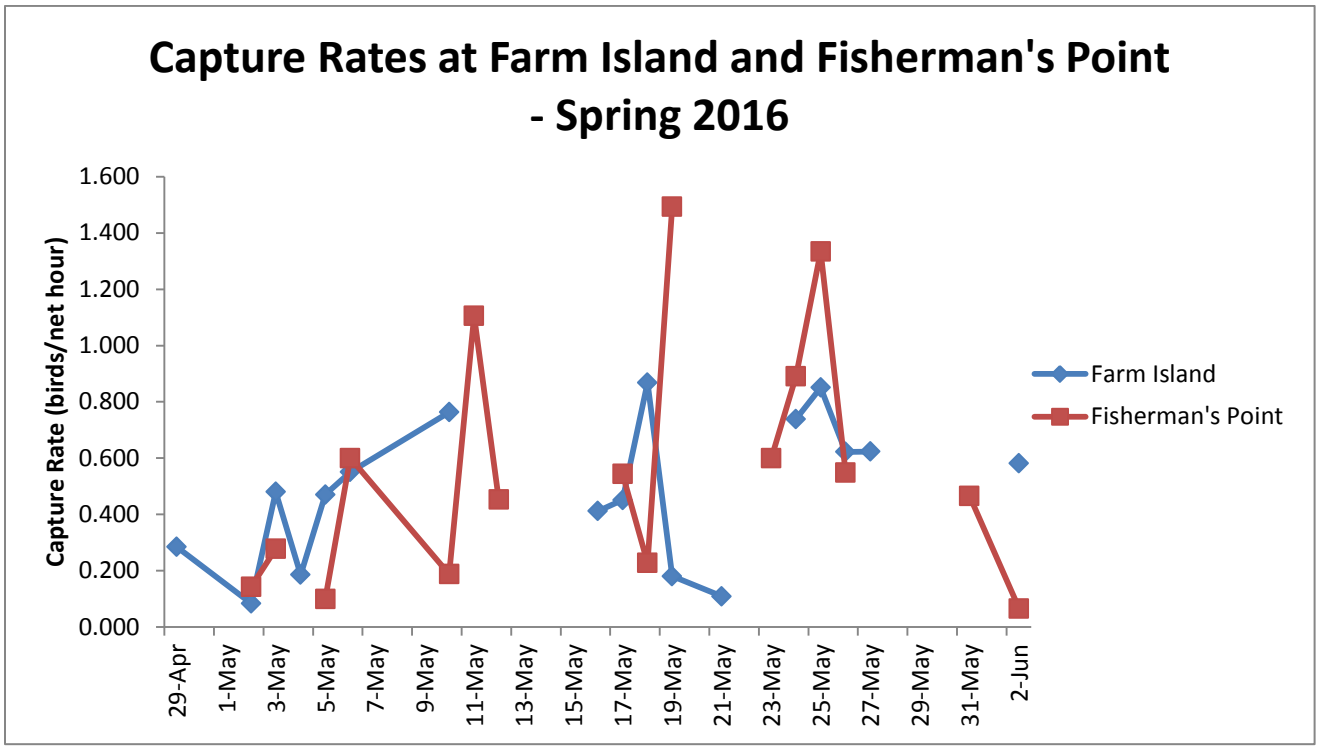
Distribution by bird families illustrates how birds respond to available habitats at the two sites. The Farm Island banding area has more open habitats than Fisherman's Point, reflected in the higher prevalence of thrushes and sparrows.




Bird Families Banded at Fisherman's Point - Spring 2016
Other(<1% of total banded) 3%
Blackbirds 1%
Finches 2%
Kinglets 1%
Kingbirds 1%
Cardinals/Grosbeaks 2%
Vireos 4%
Mimids 4%
Sparrows 4%
Wrens 9%
Orioles 9%
Thrushes 10%
Flycatchers 18%
Warblers 32%

## Capture Rates:

Capture rate (number of birds captured/net hour) peaked on May 18 at Farm Island and on May 19 at Fisherman's Point. **In all, we banded 639 birds during the spring of 2016**; 347 birds at Farm Island and 292 birds at Fisherman's Point.




## Recaptures:

**Local Recaptures:** Ninety-one birds were recaptured. All were birds we originally banded, with the majority being birds newly-banded during the spring of 2016.

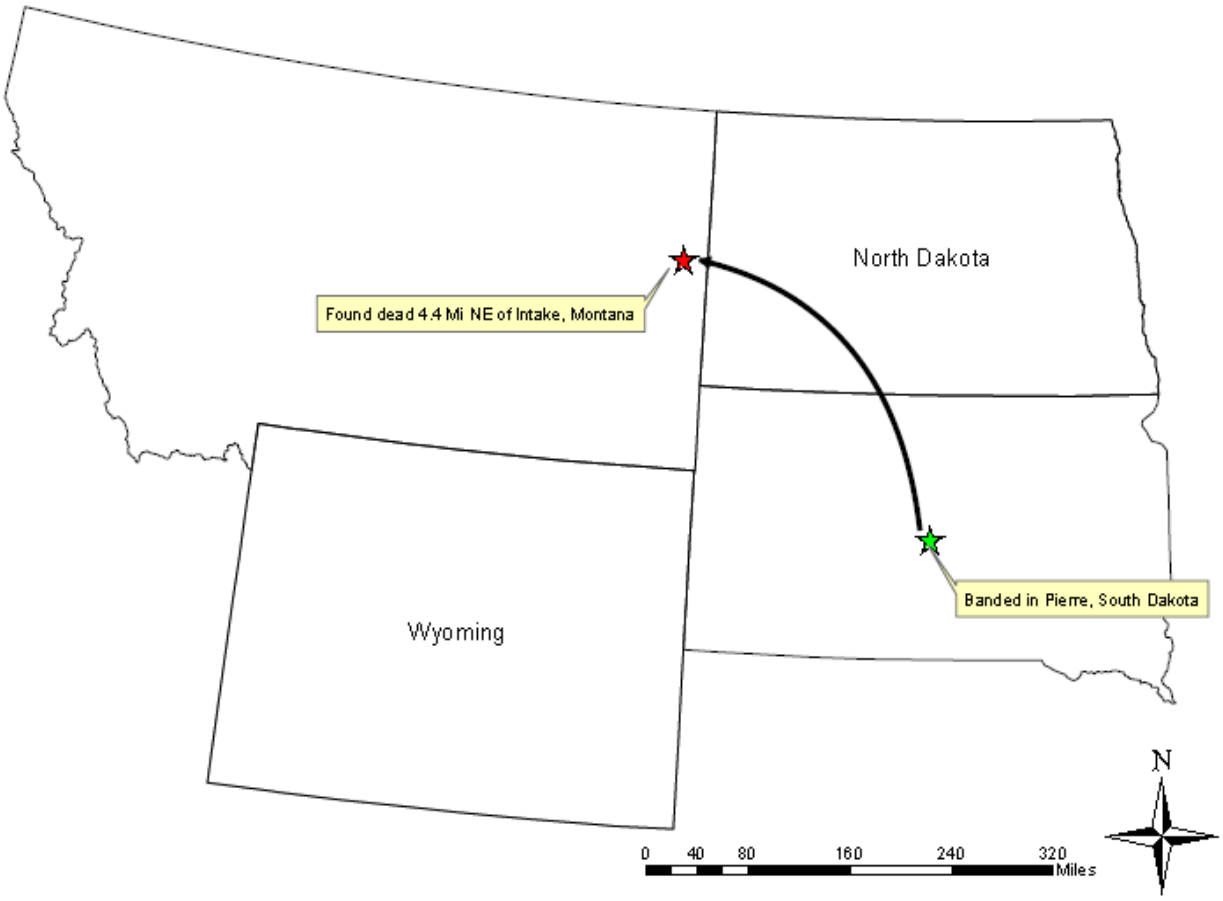
Breakdown by years birds were previously banded:

- 2015 – 35
- 2014 – 13
- 2013 – 1
- 2012 – 4, including a Northern Cardinal banded in September 2012 (Farm Island), a House Wren banded in May 2012, a Yellow Warbler banded in May 2012, and a Great Crested Flycatcher banded in May 2012 (all at Fisherman's Point).

In addition, the Farm Island State Recreation Area Manager found a dead Brown Thrasher on June 23, 2016. We banded this individual at the Farm Island banding site on June 3, 2015 as an after-second-year male. This individual was likely hatched in 2014.

**Foreign Recapture** is defined by the Bird Banding Lab as a previously banded bird captured and released by a different permit than originally banded it.

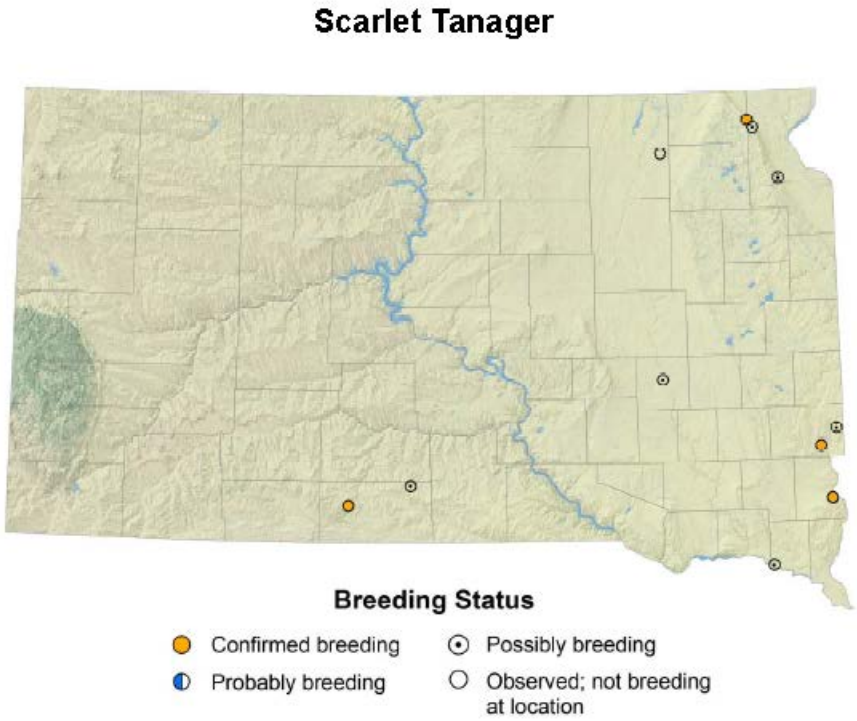
We have had very few foreign recaptures of birds we banded, but were informed by the Bird Banding Lab that a female Yellow Warbler banded as an after-second-year age at Farm Island on May 24, 2016 was found dead in Montana on May 29, 2016. The cause of death code was: Caught due to striking: stationary object other than wires or towers. The map below shows the relationship between the banding and recovery sites, with an approximate distance of 300 miles between the 2 sites.




Both local and foreign recaptures prove the importance of these sites for species that spend all or part of the year at these areas.

## Highlights:

This male Scarlet Tanager was banded at Fisherman's Point on May 23, 2016, the first of the species to be banded at either banding site. Scarlet Tanagers breed primarily in the eastern and Midwestern U.S., with a few breeding records in South Dakota.




Scarlet Tanager map from South Dakota Breeding Bird Atlas2 results. To learn more about this project, visit:

http://gfp.sd.gov/images/WebMaps/Viewer/WAP/Website/SWGSummaries/SDBBA2%20Final%20Report%20T-41-R.pdf

## More Highlights:

This grosbeak was banded at Fisherman's Point on May 24, 2016. It is presumed to be a hybrid of Black-headed and Rose-breasted grosbeaks. Central South Dakota is an area where these species hybridize, in addition to Lazuli and Indigo buntings and Northern Flicker yellow-shafted and red-shafted forms.

Also at Fisherman's Point, a male Ruby-throated Hummingbird was captured on May 31, 2016. Special authorization is needed to band hummingbirds, which is not allowed under our permit. The bird was released unharmed.

We were invited to participate in the first Bioblitz at Wind Cave National Park during the spring of 2016. Casey Heimerl displays a Yellow Warbler to staff and visitors during the event.

Brent Deschamp prepares to release a Yellow-breasted Chat banded at Farm Island.

## Aging Swainson's Thrushes in the spring:

The greater coverts are feathers that cover the bases of the secondary flight feathers. The greater coverts may provide clues to whether an individual is a second-year-bird (hatched the previous year) or an after-second-year bird. Greater coverts of second-year Swainson's Thrushes often have pale tips (see arrow on photo at left), which after-second-year birds lack (photo at right). In combination with other characteristics, this helps us categorize age for Swainson's Thrushes as they migrate north through central South Dakota during their spring migration.

The Veery (left) is a rarer migrating thrush species in central South Dakota than is the Swainson's Thrush. This bird was banded at Farm Island on May 26, 2016, just the 11th Veery banded at either of our banding sites.

## Bird species banded during spring 2016 at both sites:

| Species | total number banded |
|---|---|
| Yellow Warbler | 100 |
| Swainson's Thrush | 95 |
| Least Flycatcher | 48 |
| Traill's Flycatcher | 40 |
| House Wren | 36 |
| American Goldfinch | 23 |
| Common Yellowthroat | 18 |
| Gray Catbird | 18 |
| Orchard Oriole | 18 |
| Myrtle Warbler | 17 |
| Red-winged Blackbird | 16 |
| Warbling Vireo | 14 |
| Orange-crowned Warbler | 12 |
| Lincoln's Sparrow | 10 |
| American Redstart | 9 |
| American Robin | 9 |
| Baltimore Oriole | 9 |
| Spotted Towhee | 9 |
| Brown-headed Cowbird | 8 |
| Song Sparrow | 8 |
| Tennessee Warbler | 8 |
| White-crowned Sparrow | 8 |
| Brown Thrasher | 7 |
| Chipping Sparrow | 7 |
| Northern Cardinal | 7 |
| Black-capped Chickadee | 6 |
| Yellow-breasted Chat | 6 |
| Common Grackle | 5 |
| Northern Waterthrush | 5 |
| Ovenbird | 5 |
| Ruby-crowned Kinglet | 5 |
| Black-headed Grosbeak | 4 |
| Blackpoll Warbler | 4 |
| Cedar Waxwing | 4 |
| Clay-colored Sparrow | 4 |
| Bell's Vireo | 3 |
| Eastern Kingbird | 3 |
| Harris's Sparrow | 3 |
| Mourning Warbler | 3 |
| Black-and-white Warbler | 2 |
| Downy Woodpecker | 2 |
| Great Crested Flycatcher | 2 |

| | |
|---|---|
| Magnolia Warbler | 2 |
| Pine Siskin | 2 |
| White-throated Sparrow | 2 |
| American Kestrel | 1 |
| Chestnut-sided Warbler | 1 |
| Field Sparrow | 1 |
| Flicker intergrade | 1 |
| Gray-cheeked Thrush | 1 |
| Hybrid grosbeak | 1 |
| Red-bellied Woodpecker | 1 |
| Red-eyed Vireo | 1 |
| Rose-breasted Grosbeak | 1 |
| Scarlet Tanager | 1 |
| Veery | 1 |
| Western Palm Warbler | 1 |
| White-breasted Nuthatch | 1 |
| **TOTAL** | **639** |

**Banders:** Eileen Dowd Stukel, Silka Kempema, and Casey Heimerl. U.S.G.S. Banding Permit #21966.

**Acknowledgements:** The following assisted during the spring of 2016:
Pat Buscher
Doug Backlund
Brent Deschamp and parents
Ricky Olson
Maya

Figures prepared by Casey Heimerl.

Photos by Eileen Dowd Stukel, Casey Heimerl and Silka Kempema.

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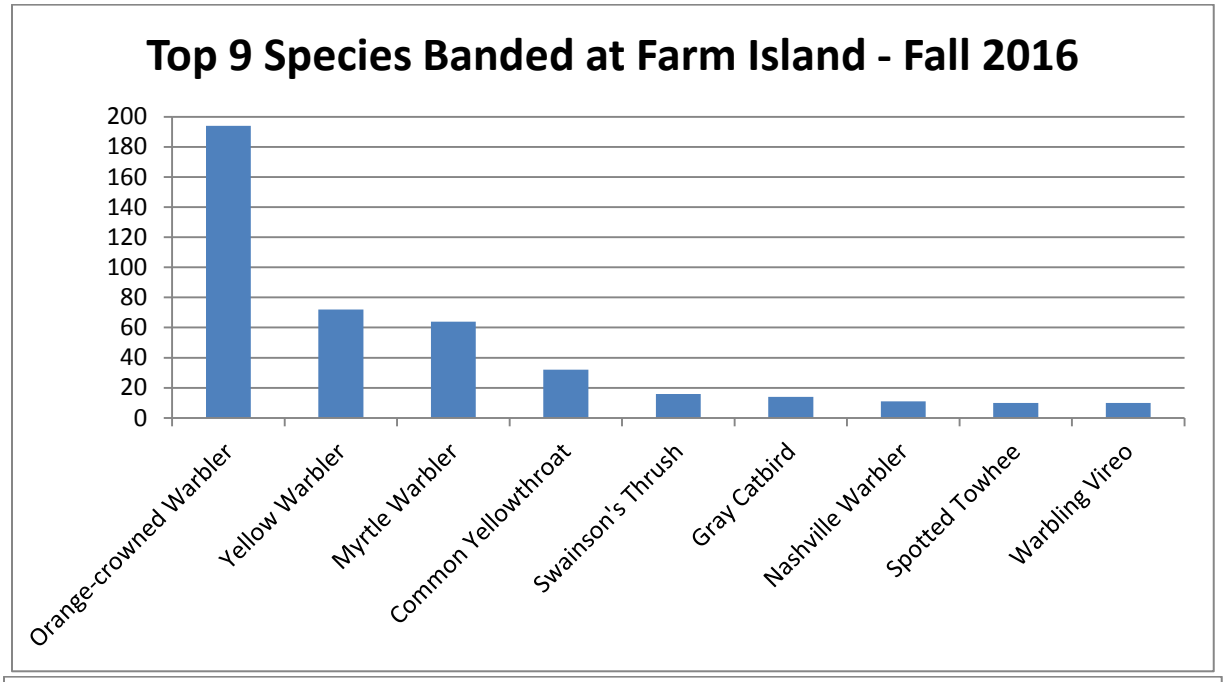
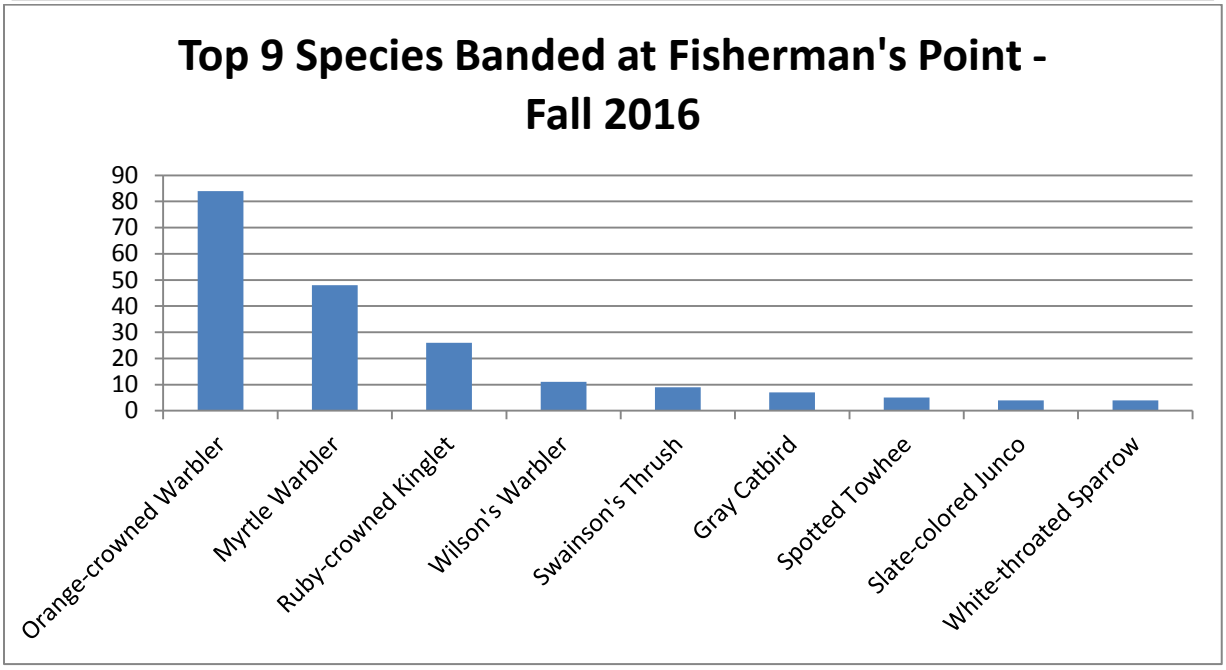
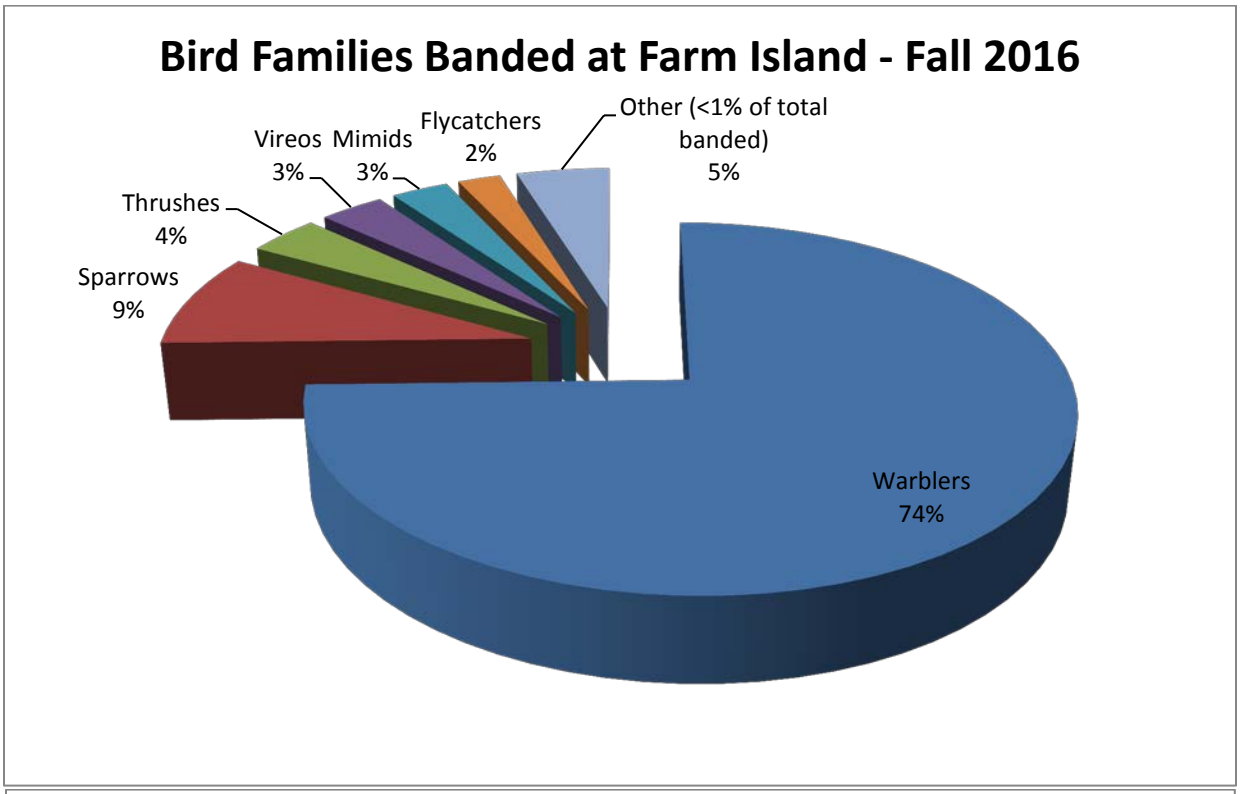
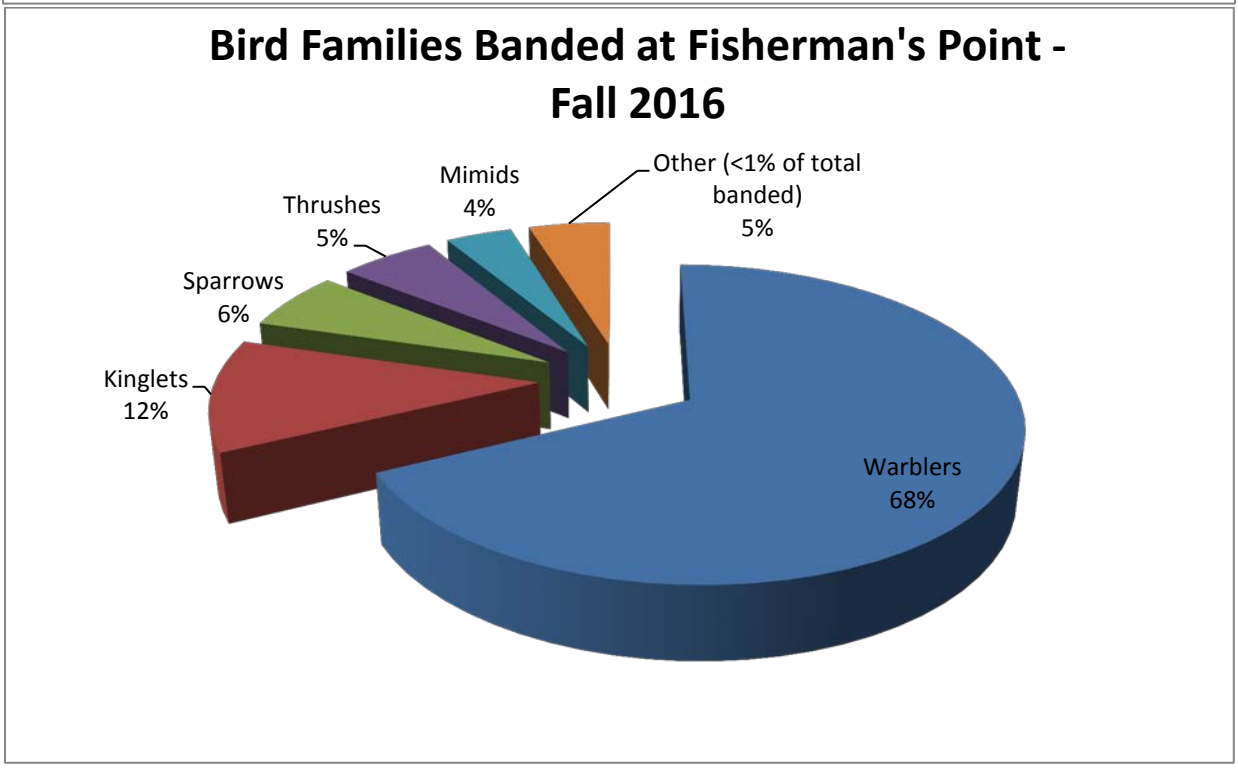
As was true during the fall of 2015, the most common species banded at both sites this season was the Orange-crowned Warbler, which is also the most common species banded since this banding effort began.

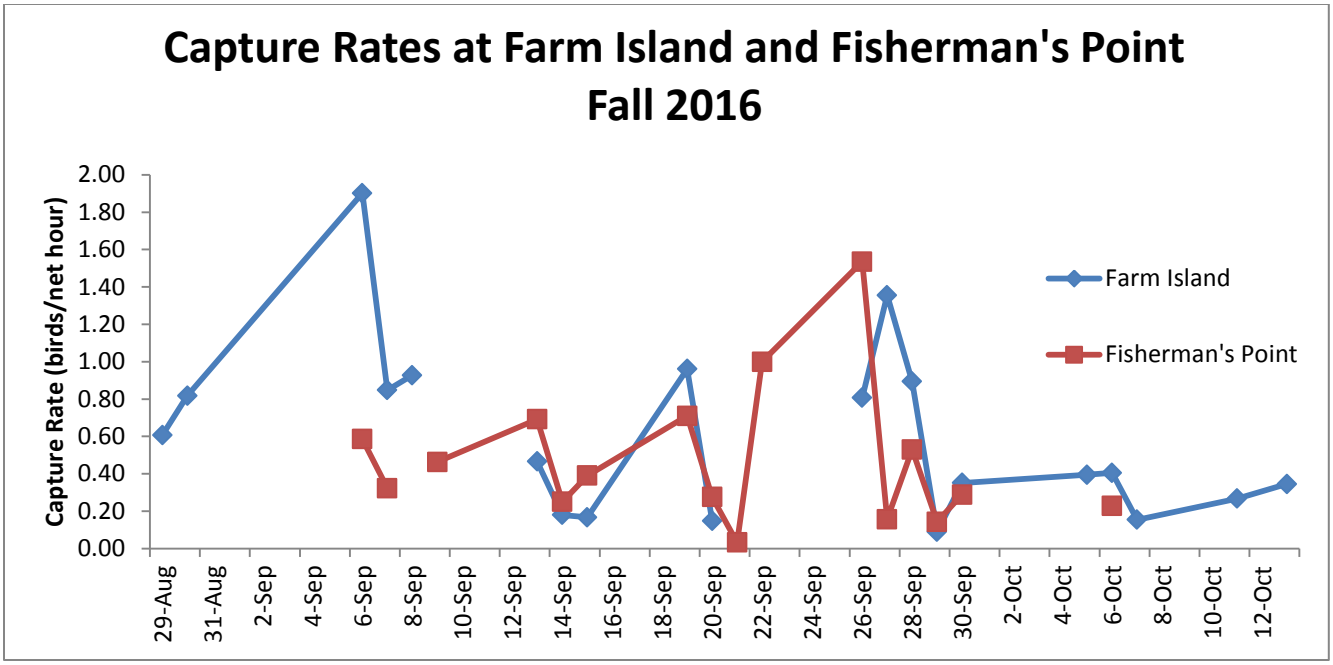


Distribution by bird families illustrates how birds respond to available habitats at the two sites. Typically, more sparrows are mist-netted at Farm Island during the fall, but warblers dominated at both sites during this season.






The capture rate (number of birds/net hour) at Farm Island peaked on September 6, 2016, with a value of 1.90 birds per net hour. Fisherman's Point's peak occurred on September 26, 2016, with 1.54 birds per net hour.

**In all, we banded 777 birds during the fall of 2016; 547 birds at Farm Island and 230 birds at Fisherman's Point.**

**Recaptures:** We recaptured 40 birds, all birds we originally banded.

| When banded | Farm Island | Fisherman's Point |
|---|---|---|
| **fall 2016** | 11 | 19 |
| **spring 2016** | 3 | 1 |
| **fall 2015** | 2 | |
| **spring 2015** | 2 | |
| **fall 2014** | 1 | |
| **spring 2014** | 1 | |
| **TOTAL** | **20** | **20** |

A Song Sparrow banded at Farm Island on April 22, 2015 was recaptured later that spring (6/3/2015) and the following spring (5/3/2016) and fall (9/26/2016).

A Black-capped Chickadee banded at Farm Island on September 1, 2015 was recaptured later that fall (9/25/2016) and the following spring (6/2/2016) and fall (9/27/2016).

These recaptures prove the importance of these sites for birds that need to rest and refuel during migration, individuals that return to these areas to breed each spring and birds that are permanent residents of these areas.

## Highlights:

This Townsend's Solitaire was banded at Fisherman's Point on September 28, 2016. This was the first of this species banded at either site.

This juvenile Sora was banded at Farm Island on October 13, 2016, only the second of this species banded at either site.

The Orange-crowned Warbler is the most common species banded at our sites in central South Dakota. Although they can vary in plumage, the female (above left) typically has a grayish head without orange feathers and paler yellow plumage overall than the male (above right), which is brighter colored, more yellowish overall and with bright orange feathers on the head. In the field, the orange feathers on the male's head are not as visible as they are when birds are in hand.

In the image at left, the orange head feathers of the male (bird on the right) are visible.

Another common migrant at our sites is the Yellow-rumped Warbler (Myrtle). Compared to the brilliant plumage of a spring male, fall birds have much more subtle characteristics. Among the features we examine to determine sex in the fall are the uppertail coverts (yellow arrow), the outer tail feathers (red arrow), the rump (green arrow), and the feathers at the top of the wing (orange arrow). In this photo, the female is at left and male at right, determined by the following:

- The edges of the female's uppertail coverts are brown, surrounding black centers. The larger black centers of the male's uppertail coverts are bordered by gray.
- The female's rump is a pale yellow color, compared to the brighter yellow of the male's rump.
- Females often have white in only the outer two tail feathers, compared to white in the male's outer three tail feathers.
- The feathers at the top of the female's wings are brownish; they are bluish-gray on the male.

## Aging birds in the fall:

Skulling is a technique used to age birds in the fall. This technique allows banders to classify some birds as hatch year (for instance, hatched in 2016) or after hatch year (hatched prior to 2016). By examining the top of the skull under magnification, banders can judge the extent of skull pneumaticization, or filling in of bone layers as a bird ages from hatching through their first fall. This technique does not work for all individuals or all species for various reasons.

A second method of aging birds in the fall can help us identify age or confirm skulling results by examining molt limits, particularly among the greater coverts (see pink area in image below). The greater coverts are a group of feathers that cover the secondary flight feathers. A molt limit is the in-between point between feathers that have been replaced and feathers that have been retained. Examining molt limits is a useful aging technique for many North American songbirds. Two examples are included below.

The red arrow marks the molt limit on this Gray Catbird. The older juvenal feathers are to the top or moving right from the arrow. The newer adult feathers are to the bottom or moving left from the arrow. The newer feathers are fresher, shinier, more bluish and, in this case, longer than the older feathers of the greater coverts.

The molt limit on this female Nashville Warbler is subtle. The older juvenal feathers (to the right of the arrow) have yellowish corners and edges that are somewhat frayed. The longer, fresher, newer adult feathers (to the left of the arrow) lack the yellowish corners.

**Number of birds banded by species at Farm Island, fall of 2016**

| | |
|---|---|
| Orange-crowned Warbler | 194 |
| Yellow Warbler | 72 |
| Myrtle Warbler | 64 |
| Common Yellowthroat | 32 |
| Swainson's Thrush | 16 |
| Gray Catbird | 14 |
| Nashville Warbler | 11 |
| Spotted Towhee | 10 |
| Warbling Vireo | 10 |
| Lincoln's Sparrow | 9 |
| Song Sparrow | 9 |
| Traill's Flycatcher | 9 |
| Wilson's Warbler | 8 |
| Northern Waterthrush | 6 |
| Ruby-crowned Kinglet | 6 |
| Slate-colored Junco | 6 |
| Ovenbird | 6 |
| American Redstart | 4 |
| American Robin | 4 |
| Black-and-white Warbler | 4 |
| Bell's Vireo | 4 |
| House Wren | 4 |
| White-throated Sparrow | 4 |
| Black-capped Chickadee | 3 |
| Least Flycatcher | 3 |
| Northern Cardinal | 3 |
| Red-eyed Vireo | 3 |
| American Goldfinch | 2 |
| Brown Thrasher | 2 |
| Clay-colored Sparrow | 2 |
| Chestnut-sided Warbler | 2 |
| Downy Woodpecker | 2 |
| Field Sparrow | 2 |
| Harris's Sparrow | 2 |
| White-breasted Nuthatch | 2 |
| Western Palm Warbler | 2 |
| Yellow-breasted Chat | 2 |
| Blackpoll Warbler | 1 |
| Chipping Sparrow | 1 |
| Indigo Bunting | 1 |
| Marsh Wren | 1 |
| Mourning Warbler | 1 |
| Philadelphia Vireo | 1 |
| Sora | 1 |
| Sharp-shinned Hawk | 1 |
| White-crowned Sparrow | 1 |
| **TOTAL** | **547** |

Philadelphia Vireo (above) and Western Palm Warbler (below)

**Number of birds banded by species at Fisherman's Point, fall of 2016**

| | |
|---|---|
| Orange-crowned Warbler | 84 |
| Myrtle Warbler | 48 |
| Ruby-crowned Kinglet | 26 |
| Wilson's Warbler | 11 |
| Swainson's Thrush | 9 |
| Gray Catbird | 7 |
| Spotted Towhee | 5 |
| Slate-colored Junco | 4 |
| White-throated Sparrow | 4 |
| American Robin | 3 |
| House Wren | 3 |
| Northern Cardinal | 3 |
| Yellow Warbler | 3 |
| Black-and-white Warbler | 2 |
| Brown Thrasher | 2 |
| Common Yellowthroat | 2 |
| Nashville Warbler | 2 |
| Baltimore Oriole | 1 |
| Black-capped Chickadee | 1 |
| Downy Woodpecker | 1 |
| Great Crested Flycatcher | 1 |
| Least Flycatcher | 1 |
| Lincoln's Sparrow | 1 |
| Magnolia Warbler | 1 |
| Ovenbird | 1 |
| Tennessee Warbler | 1 |
| Townsend's Solitaire | 1 |
| Warbling Vireo | 1 |
| Yellow-breasted Chat | 1 |
| **TOTAL** | **230** |

Orange-crowned Warbler with deformed bill

**Banders**: Eileen Dowd Stukel, Silka Kempema, and Casey Heimerl.
U.S.G.S. Banding Permit #21966.

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Doug Backlund
Cindy Longmire
Ricky Olson
Chelsey Pasbrig
Maya

Figures prepared by Casey Heimerl.

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