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Site Fidelity and a Longevity Record of Wintering Hermit Thrushes in Maryland

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ABSTRACT

Hermit Thrushes (Catharus guttatus) are common wintering passerine in much of the southeastern United States, but few studies have been done on their site fidelity on the wintering grounds both within and between seasons. Foreman's Branch Bird Observatory near Chestertown, MD, has banded 1,502 Hermit Thrushes since 1998. Seventy-one birds have been recaptured as repeats and 59 of those were overwintering individuals. Twenty-six birds have returned in a subsequent winter (some for several years). One of these individuals represents a new longevity record (10 yr, 10 mo). Although anecdotal, these data indicate at least some site fidelity both within and between winter seasons for Hermit Thrushes in Maryland.

INTRODUCTION

Many migratory passerines breeding in northern latitudes are known to exhibit site fidelity and defend territories on their wintering grounds (Rohwer et al. 2005). Here we add observations on the Hermit Thrush (*Catharus guttatus*) that provide evidence of local site fidelity in winter and document a new longevity record for the species.

Among previous studies that have been reported on Hermit Thrush fidelity to wintering areas, Nickell (1968) found returning birds in Georgia, and Gram and Faaborg (1997) observed returns in Tamaulipas, Mexico. Hermit Thrushes returned at rates of 13% in South Carolina (Bent 1964) and 18% in California (Jones and Donovan 1996). Brown et al. (2000) found a return rate of 18% in wintering birds in Louisiana and also described territorial birds that remained throughout the season.

The Neotropical, migratory eastern population of Hermit Thrushes breeds throughout forested southeastern Canada and New England and south along the Appalachian Mountains to central West Virginia. The nearest breeding localities to our study site are in the farthest west corner of Maryland and northern Pennsylvania and New Jersey, hundreds of kilometers away. Hermit Thrushes are present at our study site for much of the year as migrants both in spring and fall and as overwintering birds (Blom 1996). Most migrant Hermit Thrushes pass through our area from mid-October through mid-November. We encounter this species throughout the winter and spring with their migratory movement picking up again in April through the first week of May.

METHODS

Study Site - Foreman's Branch Bird Observatory (FBBO) is located on Chino Farms on the eastern shore of the Chesapeake Bay in Queen Anne's County, MD, about 8 km east of Chestertown (39°15'N, 76°05'W). In the Atlantic Coastal Plain Physiographic Province and adjacent to the Chester River (a major tributary of the Chesapeake Bay), the landscape is mostly a rural mosaic of row-crop agricultural fields and both upland and wetland woodlots. Chino Farms comprises over 891 ha of production farming and over 1336 ha of diverse wildlife habitat, including 92 ha restored native grasslands (Gill et al. 2006). The 23 ha FBBO grounds include fallow and successional fields,

hedgerows, some well-established second growth woodlots, and a man-made lake. The entire property was designated an Audubon Important Bird Area in Nov 2006.

The wood lots attracting Hermit Thrushes are dominated by loblolly pine (*Pinus taeda*), Virginia pine (*P. virginiana*), several oak species (*Quercus* spp.), two hickory species mockernut (*Carya tomentosa*) and pignut (*C. glabra*), sweetgum (*Liquidambar styraciflua*), and American beech (*Fagus grandifolia*). Dominant understory species include American holly (*Ilex opaca*), sumac (*Rhus* spp.), greenbrier (*Smilax rotundifolia*) and several *Rubus* species. Recovering from a long history of disturbance including logging, these stands have received periodic prescribed understory burns for decades.

Banding - FBBO has operated since 1998 and has served primarily as a migration monitoring station, but has intercepted many of the breeding and wintering birds in the area as well. The station operated up to 100 mist nets (6- and 12-m length, 2.6-m high, 4-shelf, 30-mm mesh, nylon Japanese mist nets), depending on conditions and available staff. Our protocol dictated that nets were open from sunrise until early afternoon, March through May and August through November. Nets were sometimes opened December through February for occasional winter banding. All captured birds were banded with standard numbered aluminum bands from the US Bird Banding Laboratory (BBL) and sexed and aged to the extent possible using Pyle (1997). Standard biometric data were collected including wing chord, fat, and weight. Birds that were recaptured during the same winter season (not calendar year) were considered to be overwintering if the capture dates were at least two weeks apart and those dates were beyond the normal expected window of migration. Individuals whose status was uncertain were excluded from this analysis.

RESULTS

In 10 years of operation, FBBO has banded 1,502 individual Hermit Thrushes; adding recaptures, we

have 1,713 handlings. Seventy-one Hermit Thrushes at FBBO have been recaptured after their initial banding; 59 of these were determined to be overwintering birds (repeats), indicating at least some site fidelity during the season. For these purposes, a return is a bird that was recaptured after one or more intervening breeding seasons. Twenty-six birds were returns, including the bird holding the longevity record (Table 1).

Table 1. Number of seasons individual Hermit Thrushes returned.

	Number of Years Returned					
	1	2	3	4	5	6
No. of Individuals	21	2	0	1	1	1

Hermit Thrush #1641-20616 was originally banded as a second-year bird of undetermined sex (SY-U) on 9 Mar 1999 and was recaptured 11 subsequent times (Tables 1 and 2). The most recent recapture on 12 Apr 2009 provided an age of 10 yr and 10 mo old, assuming a hatch date of 1 Jun (Lutmerding and Love 2010) and is the new longevity record for North America.

Table 2. Recapture History of Hermit Thrush #1641-20616

1999	18 Mar, 29 Mar, 15 Apr
2003	07 Mar
2005	21 Mar
2006	27 Mar
2007	08 Mar, 09 Apr
2008	16 Mar
2009	13 Jan, 12 Apr

DISCUSSION

Jones & Donovan (1996) suggested that Hermit Thrushes are territorial in California in winter because 18% of banded birds in Monterey, CA, returned the following winter and that "many" individuals were recaptured in the same mist net during the winter. These data were further supported by work done by Brown et al. (2000) in

which 18% of birds in Louisiana returned in subsequent winters.

Most of our Hermit Thrushes were captured only once, in the autumn months of October and November (Fig.1) and were never recaptured or resighted later in winter or spring. We infer that the majority of these birds were on their southward migration and not wintering locally at FBBO. Although the peak of local fall Hermit Thrush migration was consistently in mid October (Fig. 1), those thrushes that remained and those who returned for the winter at FBBO usually arrived after the peak migratory movement.

The 59 records of Hermit Thrushes recaptured several times at FBBO during the same winter provide evidence that some Hermit Thrushes are site faithful at the scale of a few hectares within the winter season on the mid-Atlantic coast. In addition, the 26 returns captured during a

subsequent winter seem to also indicate site fidelity between winter seasons. Among the return records, the majority of birds were recorded in only one subsequent season ($n=21$). Two birds returned for two years and one bird each returned for four, five and six winters (Table 1).

Hermit Thrush #1641-20616 first became the age-record bird on 6 Mar 2008 when it was 9 yr and 9 mo. The prior record had been 9 yr and 8 mo held by a California bird in 1942 (Lutmerding and Love 2010). When #1641-20616 was next captured on 12 Apr 2009 it surpassed its own record, which now stands at 10 yr and 10 mo and constitutes a new record for the oldest known Hermit Thrush. This bird showed winter site fidelity between years.

Interestingly, this bird was never captured in the autumn months of September through December. The earliest in the winter it was captured was 13 Jan and the latest was 15 Apr (Table 2).

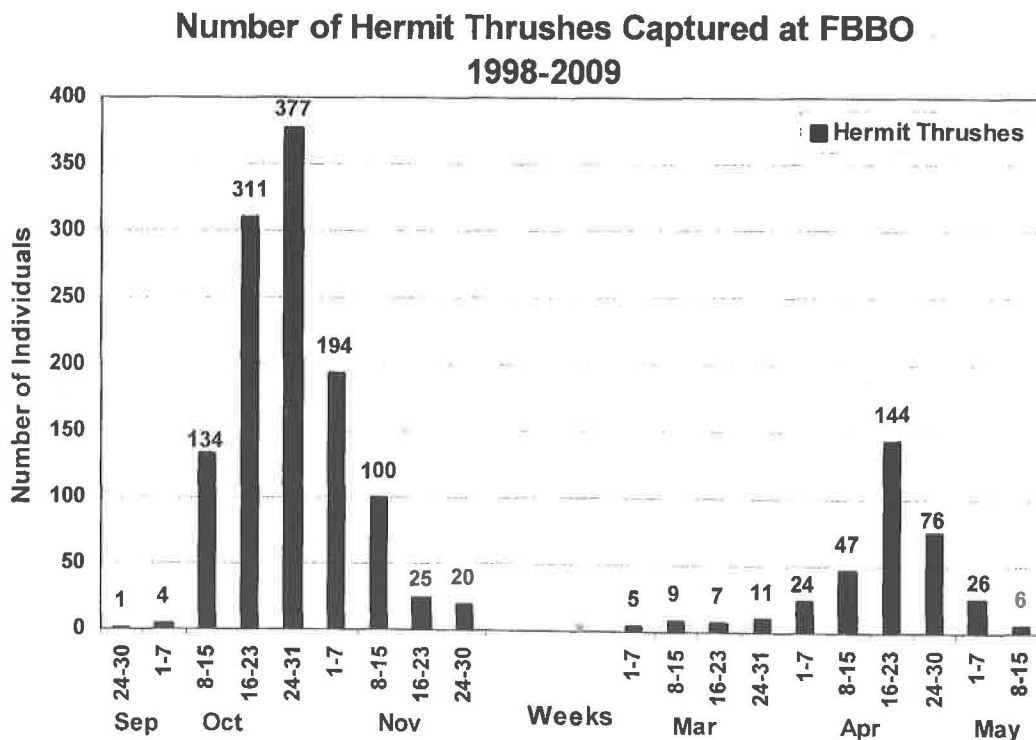


Fig. 1. Frequency distribution of captures of Hermit Thrushes at FBBO by week 1998-2009. Irregular operations occurred in the winter months December through February. The peaks represent fall and spring migrations.

While capture in December, January or February was less likely because we were not operating the banding station in those months regularly, we were surprised that the bird was never captured in fall migration or in residence in November.

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Hermit Thrush
by George West