

Longevity Records for Acadian Flycatcher and White- eyed Vireo following Prescribed Timber Harvest

Conservation partners in the Mississippi Alluvial Valley have recently defined desired forest conditions for wildlife habitat in bottomland forests and recommended the use of "wildlife-forestry" silviculture to achieve these conditions (Lower Mississippi Valley Joint Venture Forest Resource Conservation Working Group 2007). On Tensas River National Wildlife Refuge in northeast Louisiana, wildlife-forestry silvicultural prescriptions have resulted in variable-retention or clustered-thinning treatments. These treatments promote increased structural heterogeneity within 30 - 200 ha forest stands by retaining large live trees, snags, and coarse woody debris while concurrently reducing forest canopy and creating canopy gaps for understory development.

To assess avian response to these wildlife-forestry treatments, birds were monitored from 1994 through 1997 by spot-mapping (I.B.C.C. 1970) and via constant-effort mist netting (MAPS; DeSante 1992) within treated and untreated stands on Tensas River National Wildlife Refuge. Density of Acadian Flycatcher (*Empidonax virescens*) on untreated stands averaged 132 birds/100 ha but was reduced to 81 birds/100 ha on stands 1-2 yr after prescribed treatments. There were markedly fewer White-eyed Vireos (*Vireo griseus*) on untreated stands (36 birds/100 ha) but 1-2 yr after treatment their density increased to 57 birds/100 ha (Twedt et al. 1999).

Birds continued to be captured and banded under MAPS protocols on untreated stands through 1999, after which banding ceased. However, during summer of 2002, 50 ha within one of the original untreated stands were treated via a wildlife-forestry prescription. Before treatment (1994 - 1999), annual effort averaged 716 ± 109 (mean \pm SE) net-hours which resulted in annual capture of 35.4 ± 3.2 Acadian Flycatchers and 21.3 ± 3.5 White-eyed Vireos per 1000 net-hours. Three years after treatment, banding was renewed within this stand with an annual effort (2005 - 2007) of 623 ± 11 net

hours, resulting in an annual capture of 32.4 ± 7.8 Acadian Flycatchers and 46.5 ± 5.4 White-eyed Vireos per 1000 net hours.

Remarkably, two birds captured during 2005 had been originally banded before the prescribed timber harvest: a female Acadian Flycatcher (band 2050-21981) originally captured on 4 May 1996 as an after-hatching year (AHY) bird and a male White-eyed Vireo (band 2390-78555) originally captured on 27 May 1998 as an after-second year (ASY) bird (Table 1). This vireo was also recaptured during 2006, but more notably both individuals were again recaptured on 9 May 2007. This was 11 yr 0 mo after the flycatcher was originally banded, and 8 yr 0 mo after the vireo was originally banded. As of May 2007, the reported longevity records for Acadian Flycatcher and White-eyed Vireo were 10 yr 11 mo and 7 yr 11 mo, respectively (Klimkiewicz 2008). Thus, new longevity records were established for both species on the same day at the same location.

Table 1. Capture history for an Acadian Flycatcher and a White-eyed Vireo at Tensas River National Wildlife Refuge in northeast Louisiana (32.347 N, 91.329 W).

Date	Wing (mm)	Mass (g)
Acadian Flycatcher (2050-21981)		
04 May 1996	73	12.4
10 May 2005	72	12.2
09 May 2007	74	12.3
10 Jul 2007	74	12.3
White-eyed Vireo (2390-78555)		
27 May 1998	60	11.2
08 Jun 1998	59	13.1
06 Jul 1999	60	11.1
14 Jul 1999	60	12.0
02 Jun 2005	60	10.9
14 Jun 2006	60	11.2
09 May 2007	61	11.3
29 May 2007	61	11.7

Both individuals were recaptured subsequently during 2007: the White-eyed Vireo on 29 May and the Acadian Flycatcher on 10 Jul (adding 2 mo to

her longevity record). Thus, based on their ages at initial capture and an assumed June hatch (Klimkiewicz 2008), the White-eyed Vireo was aged at least 10 yr 11 mo whereas the Acadian Flycatcher was aged at least 12 yr 1 mo. Although strictly anecdotal, the fidelity of these two individuals to this location after completion of prescribed treatments suggests that timber harvest that follows wildlife-forestry prescriptions can retain suitable breeding habitat for birds using these stands before harvest, while concurrently enhancing habitat for priority species.

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