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Dear David, Marc and Sandra,

Here is our 2015 Colby Hill Ecological Project letter summarizing the data on bird abundance and distribution along the transect that runs along the old road northwesterly from the northwestern end of the large Guthrie-Bancroft field through mixed northern hardwoods to Route 17. 2015's data are attached.

Barry and I use the 10-minute point count protocol adopted by the Vermont Center for Ecostudies (VCE) for their Forest Bird Monitoring Program (FBMP). This was our 18<sup>th</sup> year of CHEP and the 18<sup>th</sup> year of our participation in the FBMP. For the last year VCE biologist Steve Faccio has been undertaking an intensive analysis of 18 to 25 years of data from the 31 protected forest tracts in the FBMP across Vermont as a complement to the national Breeding Bird Survey and other bird population assessments. (These capture numbers close to roads but not forest interiors.) Steve Faccio's analysis will be released sometime this year.

My increasing inability to hear many bird songs, even with hearing aids in both ears, has limited my participation to one of passive cheerleader. Barry has been doing the identifying and mapping for a decade now or longer, and she would like to continue. She would appreciate the participation of another birder when I'm not able to fill that role. This year on our second monitoring day we invited Chris Runcie of Starksboro to join us. Chris has a PhD in biology and continues to play a prominent role in the programs of the Four Winds Nature Institute, formerly the educational outreach arm of VINS. Chris enjoyed the experience and would like to continue her participation.

Steve Faccio laid out the transect points in 1998. The protocol calls for 10-minute point counts at each of the identified sites. Steve marked five points at intervals of roughly 200 meters, starting 200 meters into the forest from the edge of the Bancroft field and ending 50 meters from the west end of the property and about 300 meters from the junction of the old road with Route 17 at the second pull-off on the right from the junction of Routes 116 and 17. He marked fairly mature healthy trees along the northern side of the old road with orange flagging and an aluminum tag with the point numbers scratched onto the surface. The flagging needs replacement every other year. Tree growth has swallowed a quarter of the length of the aluminum tags.

In 1998, after we had made our first trip along the transect, a heavy storm prevented us from making a second visit within the window of time required by the protocol. Judy Peterson accompanied me on the first visit. Barry accompanied me thereafter. After the first two years it became apparent to us that access to the transect was more convenient from Route 17 rather than from Guthrie Road off Quaker Street in Lincoln. We now start at point 5, the lowest point, not point 1, the highest. Start time has continued to be 5 am, give or take ten minutes. We return to the car by about 7 am.

The dates of our 2015 monitoring were 4 June and 17 June, within the two-week window. Both days were cool and clear with little wind, if any.

We recorded 23 species in 2015, 19 in the first session, 16 in the second, 12 in both sessions. We had 22 species in 2014, 21 in 2013 and 22 in 2012, all except this year slightly below the 18-year average of 23. A few more species are seen on the first session than on the second session as a rule.

We recorded no species new to the study this year, so the total for the transect remains at 46 species.

Six species have been recorded at least once every year of the study: Yellow-bellied Sapsucker, Eastern Wood Pewee, Veery, Red-eyed Vireo, Black-throated Blue Warbler and Ovenbird. Blackburnian Warbler was recorded twice this year, but only seven times previously. Given the widespread occurrence of Blackburnian Warblers in Vermont's forests, it surprises us they are so uncommon along the transect. Purple Finch was recorded this year and previously only one other time, in 2007.

Some species occur disproportionately often at certain points and seldom or not at all at others. Although the forest along the transect appears rather uniform, there are subtle differences in the age of trees, in the density of the understory and the midstory, in slope, in soil moisture and soil pH, and doubtless other aspects of forest ecology that my eyes aren't picking up. And, of course, the elevation decreases modestly from point 1 at ca. 1280 feet to point 5 at ca. 800 feet.

The following species have noticeably changed in abundance over the 18 years of the study:

|                           |  |
|---------------------------|--|
| Yellow-bellied Sapsucker: | Increasing to 2009, then a moderate decline.   |
| Eastern Wood Pewee:       | Increasing since 2010.   |
| Least Flycatcher:         | Increasing to 2009, then a moderate decline.<br>This is a species of young woods. I have been saying that it is a good candidate for loss from the active list, but the data disagree. |
| Blue Jay:                 | Increasing from 2004 to 2009, then declining.  |
| Brown Creeper:            | Eight records before 2008, none thereafter.<br>The species should benefit from increasing forest maturity.   |
| Winter Wren:              | Nineteen records by 2004, 3 after 2004.  |
| Veery:                    | Increasing during 2004-2009, then declining.   |
| Wood Thrush:              | Increasing during 2004-2009, then declining.   |
| Red-eyed Vireo:           | Slight decrease during 2004-2009, then increasing.   |
| American Redstart:        | 100 percent increase after 2003.   |
| Scarlet Tanager:          | Increasing after 2003, declining after 2009.   |
| Rose-breasted Grosbeak:   | Increasing after 2003, declining after 2009.   |

These species select or avoid certain points:

|                               |  |
|-------------------------------|--|
| Yellow-bellied Sapsucker:     | Significantly fewer records at point 4.  |
| Eastern Wood Pewee:           | One record at point 1, 24 records at point 5, the only species most abundant at point 5. |
| Least Flycatcher:             | No records at point 1, 10 at point 3.  |
| Blue Jay:                     | More than half of the records are from point 1.  |
| Black-capped Chickadee:       | Two records at point 3, 3 records at point 4, 18 records at point 1.                     |
| Brown Creeper:                | Only records at points 1 and 2.  |
| Winter Wren:                  | No records at point 5.   |
| Veery:                        | Most records at point 3, the driest, most mature forest.                                 |
| Hermit Thrush:                | Fewest records at point 3.   |
| Black-throated Blue Warbler:  | Records increase with elevation from 3 at point 5 to 19 at point 1.                      |
| Black-throated Green Warbler: | Most records at point 2.   |
| American Redstart:            | Twenty records at point 3, 1 each at points 1 and 5.                                     |
| Rose-breasted Grosbeak:       | Most records at point 3, decreasing at points 2 and 4 and fewest at points 1 and 5.      |

The following appear to have dropped off the list of species active along the transect:

|                           |   |
|---------------------------|---|
| Great Crested Flycatcher: | Last recorded in 2006 and 2013.   |
| Brown Creeper:            | Last recorded 2008, only recorded at points 1 and 2.  |
| Canada Warbler:           | Last recorded 2008, only found at point 1, close to a shrubby wooded wetland from which territorial singing took place. |
| White-throated Sparrow:   | Last recorded 2011, only from point 1.  |

Work on this report has brought to mind Lester and Monique's focal role in CHEP's existence. David, your work in putting together Lester's service was extraordinary. Many thanks to you and to those who cared for him, and for Monique, day by day.

We're looking forward to bird monitoring in 2016.

Best regards,

Warren King

Cc: Chris Runcie