Ketterson / Nolan Research Group Collection

This document is part of a collection that serves two purposes. First it is a public archive for data and documents resulting from evolutionary, ecological, and behavioral research conducted by the Ketterson-Nolan research group. The focus of the research is an abundant North American songbird, the dark-eyed junco, *Junco hyemalis*, and the primary sources of support have been the National Science Foundation and Indiana University. The research was conducted in collaboration with numerous colleagues and students, and the objective of this site is to preserve not only the published products of the research, but also to document the organization and people that led to the published findings. Second it is a repository for the works of Val Nolan Jr., who studied songbirds in addition to the junco: in particular the prairie warbler, *Dendroica discolor*. This site was originally compiled and organized by Eric Snajdr, Nicole Gerlach, and Ellen Ketterson.

**Context Statement**

This document was generated as part of a long-term biological research project on a songbird, the dark-eyed junco, conducted by the Ketterson/Nolan research group at Indiana University. For more information, please see IUScholarWorks (https://scholarworks.iu.edu/dspace/handle/2022/7911).

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For additional information, visit the Ketterson/Nolan Lab community on the IUScholarWorks repository.
APRIL 17
Page 7

19 10 MD56(1) (old MD40) arrives.
20 12 MD56(1) on territory.
21 15, 16 " " "
22 19, 21, 23 MD56(1) fights MD66.
24 30 On territory.
25 32 Female, probably D56F, present.
26 34, (40) MD56(1) seen. (Nest probably begun.)
27 36 D56F builds undiscovered nest.
28 38, 40 First nest being built. Interesting behavior.
29 40 Probably building.
30 42 Nest progresses.

MAY 1
Page 8

2 14 Nest complete by 0700.
3 16 No eggs. Song.
4 18 No eggs.
5 20 No eggs. Pair together.
6 22 Egg 1.
7 24 Egg 2.
8 26 Egg 3.
9 28 Egg 4. Eggs cold; FW's not seen.
10 30 Eggs cold, unincubated.
11 32 " "
12 34 Incubation begins. MD56(1) encounters MD57.
13 36 Silence. MD56(1) may be gone.
14 38 Incubation.
15 40 " "
16 42 " "
17 44 " "
18 46 " "
19 48 MD56(2) may be heard. Incubation.
20 50 MD56(2) present. Incubation.
21 52 4 eggs. MD56(2) fights MD57.
22 54 Evening singing timed.
23 56 Eggs 1, 2, 3 hatch, 0630-1230.
24 58 4 hatches 1230-1745.
25 60 Catch D56F.
26 62 Brooding. MD56(2) not feeding.
27 64 Brooding.
28 66 Brooding. MD56(2) encounters MD57.
29 68 D56F feeds 4 nestlings.
30 70 Band 4 nestlings.
31 72 Nestlings ok.

JUNE 1
Page 9

72a Catch MD56(2) at D53 nest.
100, 101 4 nestlings.
<table>
<thead>
<tr>
<th>June 2</th>
<th>Page 113</th>
<th></th>
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<tbody>
<tr>
<td>3</td>
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<td>D56F tends D56S (described); MD56(2) nearby.</td>
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<tr>
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<td>MD56(2) seen.</td>
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<tr>
<td>5</td>
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<tr>
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<td>D56F tends D56Y and G (described). MD56(2) nearby. Strange male here.</td>
</tr>
<tr>
<td>7</td>
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<td>Pair together. MG8 here. D56F tends D56Y and G. D56F tends D56Y (described).</td>
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<td>MD56(2) probably tends young.</td>
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<td>MD56(2) probably tends young.</td>
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<td>D56F tends D56Y and G (described). D56F tends D56Y and G; MD56(2) nearby. Strange male here.</td>
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<td>15</td>
<td>139</td>
<td>Pair courting; nest-shaping.</td>
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<td>MD56(2) and D56Y and G (described) seen.</td>
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<td>17</td>
<td>143</td>
<td>D56F tends D56Y and G; MD56(2) nearby. Strange male here.</td>
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<tr>
<td>18</td>
<td>146</td>
<td>MD56(2) seen.</td>
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<td>19</td>
<td>147, 148</td>
<td>MD56(2) seen.</td>
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<td>20</td>
<td>149</td>
<td>MD56(2) and D56Y and G (described) seen.</td>
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<tr>
<td>21</td>
<td>150</td>
<td>MD56(2) and D56Y and G (described) seen.</td>
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<tr>
<td>22</td>
<td>150</td>
<td>D56G attracted by D65Y; MD56(2) alarmed.</td>
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<td>MD56(2) and D56Y and G (described) seen.</td>
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<td>MD56(2) and D56Y and G (described) seen.</td>
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<td>MD56(2) seen.</td>
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<td>29</td>
<td>162</td>
<td>MD56(2) fights MD57.</td>
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<td>30</td>
<td>164</td>
<td>MD56(2) sings.</td>
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<td>August 1</td>
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**PAIR D57**

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**MD57 (old M70)** arrives on T70 at I.U. and ranges to V.  
**MD57** on V at I.U.  
**MD57** on old T70.  
**MD57 moves to TD57, Dunn tract.**  
**MD57** on TD57.  
No female.  
Loud regular song.  
No female.  
**MD57 with bright female.**  
**MD57** courts young D57F(1).  
Not found.  
Little song.  
Silence.  
Pair together.  
Pair together. **MD57 encounters MD56(1).**  
Only **MD57** seen.  
**D57F(1)** builds undiscovered nest.  
Song.  
Find nest shell.  
Building.  
Nest unlined.  
Cowbird egg in nest.  
No change. (Nest abandoned and new one begun probably today.)  
**MD57** fights **MD56(2).** Find nest being built.  
Nest demolished before complete.  
**MD57** seen.  
**MD57 encounters MD67. D57F(1)** seen; she begins to build.  
Pair together.  
**MD57** encounters **MD56(2).**  
**D57F(1)** in empty complete nest at 0556.  
No egg.  
**Egg 1.** Catch **MD57** at D58 nest.  
**Egg 2.**  
**Egg 3.**  
(Egg 4.) Incubation.  
Incubation.
<table>
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</table>

*4 eggs.*

**Incubation.**

""

*Nest fails without evidence.*

**Song.**

*Female gone. MD57 watches D56's.*

""

**No female.**

""

**Songs.**

*MD57 with PW, probably D57F(2).*

**Songs.**

*D57F(2) seen for first time.*

**First nest found, begun 6/20.**

**Nest being lined. D57F(2) afraid of hoop net.**

*Nest complete, empty.*

""

**No egg.**

""

**Egg 1.**

**Egg 2.**

**Egg 3.**

*(Egg 4 ?) Incubation. MD57 fights MD56(2).*

**Incubation.**

*Nest fails, is tilted.*

**D57's seen. See no building.**

*Not found in search.*

**Pair seen.**

**MD57 sings.**

*Silence.*

**MD57 sings.**

*Silence.*

""

**No information.**

""

**MD57 (ragged plumage) fights MD65.**

**MD57 sings.**

*Not found.*

**Second nest found with 3 young in 14th day. Both D57's feed.**

**MD57 feeds.**

*Nestlings ok.*

""

""
PAIR D57 - 3

July 28    Page 201

Young killed by heat in course of manipulation. Replace with young D7h's. MD57 shows little interest in nest.

29        204
2 of 3 young D7h's alive. Unsuccessful attempt to catch D57F(2).

30        206
2 nestlings ok after extensive manipulation of nest.

31        207
1 nestling alive. Remove it and catch D57F(2). MD57 never appears.

August 1  208
D57F(2) alarmed, near nest.
2         208

3         209

11        214
D57F(2) (neat plumage) in SE corner of field; alarmed.

15        217
MD57 (molt complete) on T70 at I.U.

September 15  239
MD57 back on TD57; sings.

18        243
D57F(2) (molt complete) on TD66.

25        250

28        254

October 4  258
D57F(2) in wooded field. Last PW seen in 1960.
| April 16 | Page 3 | MD58 may arrive on territory. |
| 17 | 6 | MD58(?) fights another male. |
| 18 | 8 | MD58 probably on territory. |
| 20 | 13 | MD58 fights MD60. |
| 21 | 15, 16 | MD58 present. |
| 22 | 19, 20, 21, 22, 23 | MD58 courts D42F(3), fights MD66. |
| 23 | 25, 26 | Dawn singing. MD58 loses ground to MD59. |
| 24 | 30 | MD58 may fight MD65. |
| 25 | 32 | MD58 follows old D42F. |
| 26 | 34, (38) | MD58 behaves as if mated. (Nest begun.) |
| 27 | 36 | MD58 with a female, encounters D59's. |
| 28 | 38, 40 | Nest found. Building. |
| 29 | 42 | Little progress. |
| 30 | 44 | Nest progresses. |
| May 1 | | Nest complete. Song. |
| 2 | 46 | No egg. (Nest never used.) No egg. |
| 3 | 49 | No egg. Regular song. |
| 4 | 51 | No egg. |
| 5 | 54 | No female found. |
| 6 | 57 | No egg. |
| 7 | 61 | Female seen. |
| 8 | 63 | No egg. |
| 9 | 65 | Song. |
| 10 | 67 | Pair seen. |
| 11 | 68 | Only MD58 seen. |
| 12 | 70 | First nest found, recently begun. Building. |
| 13 | 72a | Nest nearly complete. |
| 14 | 74 | Nest complete. |
| 15 | 77 | No egg. |
| 16 | 79 | " |
| 17 | 81 | Egg 1. |
| 18 | 83 | Egg 2. |
| 19 | 85 | Egg 3 at 0625. Incubation begins at 1935. |
| 20 | 86 | Egg 4. |
| 21 | 87 | Introduce young D59. |
| 22 | 89 | Catch D58F. |
| 23 | 92 | Brooding. |
| 24 | 94 | " |
| 25 | 96 | Catch MD65 at D58 nest. Young D59 ok. |
| 26 | 98 | Band young D59. |
| 27 | 101 | |
| 28 | 102 | |
| 29 | 104, 105 | |
### Pair D58 - 2

<table>
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<tr>
<th>Date</th>
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<th>Information</th>
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<td><strong>May 30</strong></td>
<td>106</td>
<td>Brooding. Catch MD58, also MD56(2), MD57. Return young to nest.</td>
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<tr>
<td>31</td>
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<td>Young D59 in nest. Young D59 fledges.</td>
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<td>3</td>
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<td>Song. &quot;</td>
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<tr>
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<td>127</td>
<td>&quot;</td>
</tr>
<tr>
<td>10</td>
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<td>MD58 in encounter, probably with MD65.</td>
</tr>
<tr>
<td>11</td>
<td>130</td>
<td>MD58 tends young.</td>
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<td></td>
<td>Second brood nest found, empty; D58F on nest.</td>
</tr>
<tr>
<td>13</td>
<td>131</td>
<td>Egg 1.</td>
</tr>
<tr>
<td>14</td>
<td>132</td>
<td>Egg 2; egg 1 gone.</td>
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<tr>
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<td>Egg 2 present; D58F on at 1320. Nest falls without evidence.</td>
</tr>
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<td>134</td>
<td>Second brood nest found, begin 6/25; building.</td>
</tr>
<tr>
<td>17</td>
<td>135</td>
<td>Some lining in nest. Nest (nearly) complete, empty.</td>
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<td>Egg 2.</td>
</tr>
<tr>
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<td>Egg 2; D58F on at 1200. (Egg 3); incubation begins.</td>
</tr>
<tr>
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<td>3 eggs.</td>
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<td>Incubation.</td>
</tr>
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<td>22</td>
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<td>MD58 on TD57. Incubation.</td>
</tr>
<tr>
<td>23</td>
<td>141</td>
<td>Nest has been demolished. See only MD58. (D58F not seen again.)</td>
</tr>
<tr>
<td>24</td>
<td>142</td>
<td>MD58 sings. &quot;</td>
</tr>
<tr>
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<tr>
<td>26</td>
<td>144</td>
<td>Silence. &quot;</td>
</tr>
<tr>
<td>27</td>
<td>145</td>
<td>Song on TD58. No information.</td>
</tr>
<tr>
<td>28</td>
<td>146</td>
<td>Song.</td>
</tr>
<tr>
<td>29</td>
<td>147</td>
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</table>

**July 1**

<table>
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<th>Information</th>
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<td>August 3</td>
<td>209</td>
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<td>April 22</td>
<td>Page 18</td>
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</table>

**PAIR D59**

**April 22**

MD59 (old MD5h) arrives, fights MD68, MD69; then goes to 1959 territory.

MD59 seen on old territory, then moves to E field and takes TD59 from MD58.

MD59 on TD59.

MD59 may have a female.

Female probably here.

Female present, MD59 fights MD58. (D59F(A) begins nest.)

Female (A) building first nest.

Female (A) in nest at 0908.

Song.

Nest nearly complete.

Nest probably complete.

No egg.

""

Egg 1.

Egg 2.

Egg 3.

Egg 4. No incubation. MD59 in flight.

Incubation.

""

1 egg.

Incubation.

1 egg.

Eggs 1, 1 hatch, 1200-1930.

1 nestlings at 0630. Catch D59F(A). Transplant a nestling to D65's.

Transplant a nestling to D58's.

Brooding. Nestling to D63's.

Feeding.

Nestling ok.

Band the nestling.

Nestling ok.

Remove nestling, catch female (A), keep them all day to catch other PW's.
<table>
<thead>
<tr>
<th>June 2</th>
<th>Page 113</th>
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<tbody>
<tr>
<td>3</td>
<td>115</td>
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<td>4</td>
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<td>157, (159)</td>
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<td>16</td>
<td>191</td>
</tr>
</tbody>
</table>

**Only D59 seen. Female (A) and young probably dead.**

MD59 seen.

Find D59F(B) (old D43B) building 2-day old **first** nest.

Nest progresses.

Nest complete.

No egg.

Egg 1.

Egg 2.

Egg 3. Incubation begins.

Catch D59F(B) after introducing young D70.

Remove D70. Incubation.

Incubation.

D59F(B) near nest. MD59 on MD59.

Incubation. MD59 near nest.

Incubation.

Nest fails without evidence.

MD59 in fight.

(D59F(B) begins **second** nest.)

Find second nest; building.

Nest probably complete.

Nest complete, empty.

No egg.

Egg 1.

Egg 2; female on at 1100.

Egg 3.) Incubation.

Incubation; 3 eggs.

Incubation.

""

""

""

3 eggs.

Eggs 1, 2 hatch, 1000-2000.

3 nestlings at 12h5.

3 nestlings.

Band 3 young.

3 nestlings.

Young ok. D59F(B) followed by strange male.

At 15h5 fledgling is in progress.

Last of 3 fledglings roosts on rim of nest.

Nest destroyed. Young not seen (but alive).
| July 19 | Page 193 | D59 sings.  
<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td>20</td>
<td>194</td>
<td>Not found.</td>
</tr>
</tbody>
</table>
| 23     | 197      | D59F(B) on TD59; alarmed.  
| 26     | 199      | Not found.       |
| 27     | 200      | "                 |
| 28     | 202      | D59F(B) on TD59; alarmed.  
| 30     | 206      | Not found.       |
| 31     | 207      | "                 |
| August 3 | 209  | D59F(B) (molting) on TD59; alarmed. |
| 7      | 212      | "                 |
| 11     | 214      | D59F(B) and D59R (described) on TD60. |
| 22     | 221      | D59F(B) (molting) on TD59.  
| September 2 | 226 | D59F(B) forages on TD59.  
| 1      | 229      | D59F(B) (some molt) on TD59. |
| 13     | 237      | MD59 heard singing on TD59.  
| 20     | 246      | MD59 sings, is aggressive on TD59.  
<p>| 26     | 252      | D59Y (a female?) in chases with young male on TD73. |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Page 3</th>
<th>MD60 (old MD45) returns to territory.</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 16</td>
<td></td>
<td>MD60 on territory.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MD60 fights MD58.</td>
</tr>
<tr>
<td>19</td>
<td>11</td>
<td>MD60 on territory.</td>
</tr>
<tr>
<td>20</td>
<td>13, 14</td>
<td>MD60 courts DL2F(B).</td>
</tr>
<tr>
<td>21</td>
<td>15, 16</td>
<td>&quot;</td>
</tr>
<tr>
<td>22</td>
<td>19, 23</td>
<td>&quot;</td>
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<tr>
<td>23</td>
<td>27</td>
<td>&quot;</td>
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<tr>
<td>24</td>
<td>30</td>
<td>DL2F(B) is gone.</td>
</tr>
<tr>
<td>25</td>
<td>32</td>
<td>No female.</td>
</tr>
<tr>
<td>26</td>
<td>34</td>
<td>MD60 fights newly arrived MD61.</td>
</tr>
<tr>
<td>27</td>
<td>37</td>
<td>Female present.</td>
</tr>
<tr>
<td>28</td>
<td>38, 41</td>
<td>No information.</td>
</tr>
<tr>
<td>May 1</td>
<td>42</td>
<td>MD60 follows a female.</td>
</tr>
<tr>
<td>29</td>
<td>44</td>
<td>Pair together. D60's meet D65's.</td>
</tr>
<tr>
<td>30</td>
<td>46</td>
<td>MD60 fights MD61.</td>
</tr>
<tr>
<td>2</td>
<td>49, 54</td>
<td>Pair together. MD60 encounters MD59.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Nest probably begun.)</td>
</tr>
<tr>
<td>3</td>
<td>51</td>
<td>Pair together. MD60 chases MD61.</td>
</tr>
<tr>
<td>4</td>
<td>54</td>
<td>Nest discovered. MD60 fights MD61.</td>
</tr>
<tr>
<td>5</td>
<td>57</td>
<td>Nest incomplete.</td>
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<tr>
<td>6</td>
<td>60</td>
<td>Nest progresses.</td>
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<td>7</td>
<td>61</td>
<td>Nest complete.</td>
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<tr>
<td>8</td>
<td>63</td>
<td>Water in empty nest.</td>
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<td>9</td>
<td>65</td>
<td>&quot;</td>
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<tr>
<td>10</td>
<td>67</td>
<td>No egg; (none ever laid).</td>
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<tr>
<td>11</td>
<td>68</td>
<td>No egg.</td>
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<tr>
<td>12</td>
<td>70</td>
<td>No change. Song heard.</td>
</tr>
<tr>
<td>13</td>
<td>72a</td>
<td>MD60 seen.</td>
</tr>
<tr>
<td>14</td>
<td>74</td>
<td>Not building.</td>
</tr>
<tr>
<td>15</td>
<td>75</td>
<td>Recent nest being dismantled.</td>
</tr>
<tr>
<td>16</td>
<td>79</td>
<td>Silence.</td>
</tr>
<tr>
<td>17</td>
<td>81</td>
<td>MD60 seen.</td>
</tr>
<tr>
<td>18</td>
<td>83</td>
<td>First nest found; lining incomplete.</td>
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<tr>
<td>19</td>
<td>85</td>
<td>Nest complete.</td>
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<tr>
<td>20</td>
<td>86</td>
<td>No egg.</td>
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<tr>
<td>21</td>
<td>87</td>
<td>Egg 1.</td>
</tr>
<tr>
<td>22</td>
<td>89</td>
<td>Catch D60F as she lays to examine for incubation patch.</td>
</tr>
<tr>
<td>23</td>
<td>93</td>
<td>Nest abandoned with 1 egg.</td>
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<td>24</td>
<td>94</td>
<td>MD60 seen.</td>
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<td>26</td>
<td>98</td>
<td>Song.</td>
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<td>27</td>
<td>100</td>
<td>No information.</td>
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<tr>
<td>28</td>
<td>102</td>
<td>MD60 seen.</td>
</tr>
<tr>
<td>30</td>
<td>106</td>
<td>&quot;</td>
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<tr>
<td>31</td>
<td>108</td>
<td>MD60 watches D61's building.</td>
</tr>
<tr>
<td>June 1</td>
<td>110</td>
<td>MD60 caught on TD61.</td>
</tr>
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<td>Event</td>
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<tr>
<td>June 2</td>
<td>113</td>
<td>Song.</td>
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<tr>
<td></td>
<td></td>
<td>Pair together.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MD60 seen.</td>
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<tr>
<td></td>
<td>115</td>
<td>Second nest found; 1 cowbird and 4 PW eggs; about 5 days advanced.</td>
</tr>
<tr>
<td></td>
<td>117</td>
<td>Incubation.</td>
</tr>
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<td></td>
<td>119</td>
<td>Incubation; 1 cowbird, 4 PW eggs.</td>
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<td></td>
<td>121</td>
<td>Nest fails; 1 PW egg left.</td>
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<tr>
<td></td>
<td>123</td>
<td>(Egg weighed.)</td>
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<td></td>
<td>127</td>
<td>D60 not found; (never seen).</td>
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<td></td>
<td>129</td>
<td>Unsuccessful search for D60;</td>
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<td>MD60 seen.</td>
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<td></td>
<td>131</td>
<td>MD60 sings.</td>
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<td>133</td>
<td>Not visited.</td>
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<td>&quot;</td>
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<tr>
<td>July 1</td>
<td>166</td>
<td>MD60 seen.</td>
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<tr>
<td></td>
<td>167</td>
<td>MD60 sings.</td>
</tr>
<tr>
<td></td>
<td>169</td>
<td>Not found.</td>
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<tr>
<td></td>
<td>174</td>
<td>Song.</td>
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<tr>
<td></td>
<td>177</td>
<td>Not found.</td>
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<tr>
<td></td>
<td>178</td>
<td>MD60 sings.</td>
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<tr>
<td></td>
<td>180</td>
<td>MD60 carries food, probably to young D65 on TD60.</td>
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<tr>
<td></td>
<td>182</td>
<td>Not found.</td>
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<td></td>
<td>184</td>
<td>MD60 sings.</td>
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<tr>
<td></td>
<td>186</td>
<td>Silence.</td>
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<td></td>
<td>188</td>
<td>Not found. Neighbors on edge of TD60.</td>
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<td></td>
<td>190</td>
<td>Song perhaps heard.</td>
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<tr>
<td></td>
<td>191</td>
<td>Not found.</td>
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<td>193</td>
<td>&quot;</td>
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<td>Date</td>
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<td>Notes</td>
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<tr>
<td>July 26</td>
<td>199</td>
<td>Not found.</td>
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<td>200</td>
<td>&quot;</td>
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<tr>
<td>27</td>
<td>202</td>
<td>Recent nest with 1 egg found.</td>
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<td>28</td>
<td>206</td>
<td>Not found.</td>
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<tr>
<td>30</td>
<td>209</td>
<td>&quot;</td>
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<td>August 3</td>
<td>209</td>
<td>MD60 (molt complete) on TD60.</td>
</tr>
<tr>
<td>September 12</td>
<td>235</td>
<td></td>
</tr>
</tbody>
</table>
| April 28 | Page 41 | MD61 possibly on territory.
| May 1   | 47     | MD61 on territory but flies from MD60.
|         | 50     | MD61 fights MD62.
| 3       | 51, 52 | MD61 fights MD60, MD62.
| 4       | 54     | Female possibly present. MD61 fights MD60.
| 5       | 57     | Probably no female.
| 6       | 60     | MD61 with a young female; encounters.
| 7       | 61     | MD61 perhaps seen. Not found.
| 8       | 63     | "
| 9       | 65     | "
| 10      | 67     | "
| 11      | 68     | "
| 12      | 70     | "
| 13      | 72a    | D61F (old D467(B)) present. Encounters with D62's.
| 14      | 74     | D61F builds a slight fragment.
| 15      | 77     | D61F builds another fragment.
| 16      | 79, (81) | Fragment abandoned, (first nest begun).
| 17      | 81     | Find first nest, a shell.
| 18      | 83     | Nest being lined.
| 19      | 85     | Lining incomplete.
| 20      | 86     | Nest complete, empty.
| 21      | 87     | No egg.
| 22      | 89     | "
| 23      | 92     | Egg 1, by 0640.
| 24      | 95     | Egg 2.
| 25      | 96     | Egg 3; D61F on at 0940.
| 26      | 98     | Egg 4.
| 27      | 100    | Introduce Field Sparrow. 4 eggs.
| 28      | 102    | Field Sparrow gone; D61F on 4 eggs.
| 29      | 104    | Nest fails without evidence.
| 30      | 106    | Pair together, clearly building. MD62 interested.
| 31      | 108    | MD60, MD61 interested in probable building.
| June 1  | 110    | Catch both D61's with caged FW's.
| 2       | 113    | Song.
| 3       | 115    | "
| 5       | 119    | "
| 6       | 121    | Not found.
| 7       | 123    | Song.
| 9       | 127    | "
| 10      | 129    | "
| 11      | 132    | Not found.
| 12      | 133    | "
| 13      | 135    | "

<table>
<thead>
<tr>
<th></th>
<th>June 16</th>
<th>Page 140</th>
<th></th>
<th></th>
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<td>140</td>
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<td>164</td>
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<tr>
<td></td>
<td>July 1</td>
<td></td>
<td>2</td>
<td>166</td>
<td>3</td>
<td>169</td>
<td>4</td>
<td>172</td>
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<td>200</td>
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<td>201</td>
<td>30</td>
<td>206</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>August 3</td>
<td>209</td>
<td>16</td>
<td>216</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PAIR D61 - 2

- **June 16**: Not found.
- **June 17**: Probably hear song.
- **June 19**: Not found.
- **June 20**: Search probable nest area; both D61's alarmed.
- **June 21**: MD61 alarmed at my presence. MD61's behavior indicates nest has failed.
- **June 22**: Unsuccessful search; (D61F gone).
- **June 23**: MD61 encounters female on TD60.
- **June 24**: MD61 sings; unmated.
- **June 25**: Not found.
- **June 26**: Constant song.
- **June 27**: Silence.
- **June 28**: MD61 sings regularly.
- **June 29**: MD61 accompanies D65's on TD60.
- **June 30**: MD61 accompanies D65's on TD61.

**July 1**: MD61 sings, is not with D65.'s. MD61 probably tends a young D65.

**July 2**: Not found; D65's not on TD61.

**July 3**: Not found.

**July 4**: Not found.

**July 5**: Not found.

**July 6**: Not found.

**July 7**: Not found.

**July 8**: Not found.

**July 9**: Not found.

**July 10**: Not found.

**July 11**: Not found.

**July 12**: Not found.

**July 13**: Not found.

**July 14**: Not found.

**July 15**: Not found.

**July 16**: Not found.

**July 17**: Not found.

**July 18**: Not found.

**July 19**: Not found.

**July 20**: Not found.

**July 21**: Not found.

**July 22**: Not found.

**July 23**: Not found.

**July 24**: Not found.

**July 25**: Not found.

**July 26**: Not found.

**July 27**: Not found.

**July 28**: Not found.

**July 29**: Not found.

**July 30**: Not found.

**August 3**: MD61 (in advanced molt) on TD61.
<table>
<thead>
<tr>
<th>April 22</th>
<th>Page 20</th>
<th>MD62 (old MD46) returns, fights MD63.</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>27</td>
<td>MD62 on territory.</td>
</tr>
<tr>
<td>24</td>
<td>31</td>
<td>MD62 watches D63's.</td>
</tr>
<tr>
<td>25</td>
<td>33</td>
<td>MD62 on TD62.</td>
</tr>
<tr>
<td>26</td>
<td>34</td>
<td>No female.</td>
</tr>
<tr>
<td>27</td>
<td>37</td>
<td>Probably no female.</td>
</tr>
<tr>
<td>28</td>
<td>38</td>
<td>&quot;</td>
</tr>
<tr>
<td>29</td>
<td>42</td>
<td>Not found.</td>
</tr>
<tr>
<td>30</td>
<td>44</td>
<td>Female present.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>May 1</th>
<th></th>
<th>MD62 with D62F; MD62 fights MD61. (Nest begun.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>46</td>
<td>Nest found.</td>
</tr>
<tr>
<td>3</td>
<td>52</td>
<td>D62F lines nest.</td>
</tr>
<tr>
<td>4</td>
<td>54</td>
<td>Nest complete.</td>
</tr>
<tr>
<td>5</td>
<td>57</td>
<td>No egg.</td>
</tr>
<tr>
<td>6</td>
<td>60</td>
<td>&quot;</td>
</tr>
<tr>
<td>7</td>
<td>61</td>
<td>No change; (nest abandoned).</td>
</tr>
<tr>
<td>8</td>
<td>63</td>
<td>No change.</td>
</tr>
<tr>
<td>9</td>
<td>65</td>
<td>Nest together. D62F eats chick.</td>
</tr>
<tr>
<td>10</td>
<td>67</td>
<td>Song.</td>
</tr>
<tr>
<td>11</td>
<td>68</td>
<td>&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>June 1</th>
<th></th>
<th>Song. D62's encounter D61's.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>70</td>
<td>Only MD62 seen. (First nest begun.)</td>
</tr>
<tr>
<td>2</td>
<td>72a</td>
<td>First nest found.</td>
</tr>
<tr>
<td>3</td>
<td>74</td>
<td>Nest unlined.</td>
</tr>
<tr>
<td>4</td>
<td>78</td>
<td>No egg.</td>
</tr>
<tr>
<td>5</td>
<td>79</td>
<td>Cowbird egg in nest.</td>
</tr>
<tr>
<td>6</td>
<td>81</td>
<td>PW egg and cowbird egg.</td>
</tr>
<tr>
<td>7</td>
<td>83</td>
<td>Cowbird egg remains; (nest abandoned).</td>
</tr>
<tr>
<td>8</td>
<td>85</td>
<td>&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>June 2</th>
<th></th>
<th>Song. Second nest found, a shell begun 5/23.</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>87</td>
<td>Some lining in nest.</td>
</tr>
<tr>
<td>10</td>
<td>89</td>
<td>No egg. (Lining added.)</td>
</tr>
<tr>
<td>11</td>
<td>95</td>
<td>No egg.</td>
</tr>
<tr>
<td>12</td>
<td>96</td>
<td>Egg 1.</td>
</tr>
<tr>
<td>13</td>
<td>98</td>
<td>Egg 2.</td>
</tr>
<tr>
<td>14</td>
<td>100</td>
<td>Egg 3. MD62 interested in D61's building.</td>
</tr>
<tr>
<td>15</td>
<td>102</td>
<td>(Egg h.) Incubation.</td>
</tr>
<tr>
<td>16</td>
<td>104</td>
<td>Incubation.</td>
</tr>
<tr>
<td>17</td>
<td>106</td>
<td>h eggs.</td>
</tr>
<tr>
<td>18</td>
<td>108</td>
<td>Incubation.</td>
</tr>
<tr>
<td>19</td>
<td>110</td>
<td>h eggs.</td>
</tr>
<tr>
<td>20</td>
<td>112</td>
<td>Incubation.</td>
</tr>
<tr>
<td>21</td>
<td>113</td>
<td>&quot;</td>
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<tr>
<td>22</td>
<td>115</td>
<td>&quot;</td>
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<tr>
<td>23</td>
<td>117</td>
<td>&quot;</td>
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<td>24</td>
<td>119</td>
<td>&quot;</td>
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<tr>
<td>25</td>
<td>121</td>
<td>&quot;</td>
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<td>26</td>
<td>123</td>
<td>&quot;</td>
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</tbody>
</table>
PAIR D62 - 2

June

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July

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August

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14

Page

125
127
129
132
133
135
138
140
142
143
145
147
149
150
152
153
155
156
159
161
162
164
166
167
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177
178
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182
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193
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206
209
214
216

D62F at nest.

4 eggs.

Egg 3 undeveloped.

4 eggs.

3 young at 10:45. Catch D62F.

Brooding 3 young.

Nest fails without evidence.

MD62 sings, flights MD63.

Pair seen. Strange male present.

Only MD62 seen.

Third nest found, unlined.

Some lining in nest.

No egg.

Egg 1.

Apparently no new egg laid.

Egg 2. Incubation begins.

Incubation; eggs 1 and 2.

Incubation.

Incubation of 2 eggs.

2 nestlings.

Band 2 nestlings.

2 nestlings.

Young fledge. MD62 seen.

D62F seen; tail molting. No mites in nest.

No information.

D62F (molting) on TD63; alarmed.

D62F and D62G in N field.
PAIR D63

April 20  Page 14
21 15 MD63 probably on territory.
22 20, 23 " "
23 27 MD63 fights MD62.
24 31 MD63 on territory.
25 33 Female present.
26 34 MD63 sings.
27 37 MD63 with a female, meets MD64.
28 38, 41 Irregular song.
29 42 Pair together. MD63 extends
30 44 territory in to far N field.
31 46 No information.
May 1 48 Pair seen.
2 50 D63's encounter D64's.
3 52 Nest found, begun today.
4 55 Song.
5 57 Progress at nest slow.
6 60 Nest incomplete.
7 61 Nest complete.
8 63 No egg; (none ever laid).
9 65 No change.
10 67 " "
11 68 Few songs.
12 70 Pair together.
13 72a MD63 seen.
14 74 " "
15 76 First nest found; no eggs.
16 79 No egg.
17 81 " "
18 83 Egg 1.
19 85 Egg 2.
20 86 Egg 3.
21 87 D63F on at 0610.
22 89 Nest up.
23 95 Catch D63F, Introduce nest-
24 96 ling D59.
25 98 MD63 not yet feeding.
26 100 " "
27 102 MD63 feeds nestling.
28 104 Brooding.
29 106 Catch MD63; band young, return
30 108 it to nest.
31 110 Young gone (dead). Nest aban-
June 1 112 doned with 1 egg.
3 113 Silence.
4 115 Song.
5 117 No information.
6 119 Song.
7 121 Not visited.
PAIR D63 - 2

June 7
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Page
123
127
129
132
133
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138
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152
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166
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206
209
261

MD63 seen.
Not visited.
""
""
MD63 seen.
No information.
Not visited.
MD63 fights MD62 at N end of TD62.
MD63 sings N of TD62.
""
Not visited.
""
""
No information.
Frequent songs.
Not visited.
Nest with 2 eggs found.
Nest unchanged; pair nearby.
Nest still with 2 eggs.
Egg 3 in nest.
Egg 1; female on at 1205.
Egg 5; D63F on on 1 visit.
Incubation of 5 eggs.
Incubation. MD63 seen on TD77.
Incubation.
Incubation. Song.
Incubation.
3 eggs in nest; 1 undeveloped.
Incubation.
Egg 1 undeveloped; 3, 4 alive.
Nest fails without evidence.
MD63 seen; (D63F never seen).
Not found; (MD63 never seen again).
Not visited.
""
Not found.
""
""
""
Early June nest (probably) found.
PAIR D64

April 16

Page 4

16
17

MD64 (old MD69) arrives.

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On TD64 MD64 chases unbanded male.

MD64 ranges.

MD64 on TD64.


No female. MD64 meets D63's.

Probably no female.


No information.

Song. D64F (old D49F(3)) arrives.

D64's encounter D63's.

Not visited.

Pair together.


Nest found, a shell.

Nest progresses a little.

No progress.


A little progress.

D64F calls near nest.

Nest lacks lining.

Little progress.

Nest perhaps complete.

Nest complete, empty.

No egg; (none ever laid).

No change.

No change. D64F calls at MD64's songs.

No change.

First nest found, complete.

Egg 1, cold by 0605.

D64F near nest, alarmed.

Eggs 2 and 3.

Egg 4.

Incubation.


Song.

Incubation.


MD64 interested in D61's building.

Incubation.

Incubation; 2 eggs remain.

Incubation.

Nest fails without evidence.

Second nest begun.
<table>
<thead>
<tr>
<th>June 6</th>
<th>Page 121</th>
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<tbody>
<tr>
<td>7</td>
<td></td>
<td>Not visited.</td>
</tr>
<tr>
<td>9</td>
<td></td>
<td>Nest looks complete.</td>
</tr>
<tr>
<td>10</td>
<td>123</td>
<td>Not visited.</td>
</tr>
<tr>
<td>11</td>
<td>127</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>12</td>
<td>129</td>
<td>Nest not in use. (D64F never seen again.)</td>
</tr>
<tr>
<td>13</td>
<td>132</td>
<td>Not found.</td>
</tr>
<tr>
<td>15</td>
<td>136</td>
<td>Not visited.</td>
</tr>
<tr>
<td>16</td>
<td>140</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>17</td>
<td>142</td>
<td>Not found.</td>
</tr>
<tr>
<td>18</td>
<td>144</td>
<td>Not visited.</td>
</tr>
<tr>
<td>19</td>
<td>146</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>20</td>
<td>147</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>22</td>
<td>150</td>
<td>Not found.</td>
</tr>
<tr>
<td>23</td>
<td>152</td>
<td>Regular songs.</td>
</tr>
<tr>
<td>24</td>
<td>153</td>
<td>Not visited.</td>
</tr>
<tr>
<td>25</td>
<td>154</td>
<td>MD64 sings often.</td>
</tr>
<tr>
<td>26</td>
<td>156</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>27</td>
<td>159</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>28</td>
<td>161</td>
<td>Not visited.</td>
</tr>
<tr>
<td>29</td>
<td>162</td>
<td>MD64 sings constantly.</td>
</tr>
<tr>
<td>30</td>
<td>164</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td></td>
<td>164</td>
<td>Unsuccessful search.</td>
</tr>
<tr>
<td></td>
<td>168</td>
<td>Not found.</td>
</tr>
<tr>
<td>1</td>
<td>169</td>
<td>Silence.</td>
</tr>
<tr>
<td>4</td>
<td>174</td>
<td>Not visited.</td>
</tr>
<tr>
<td>7</td>
<td>177</td>
<td>Silence.</td>
</tr>
<tr>
<td>8</td>
<td>178</td>
<td>MD64 sings on TG11.</td>
</tr>
<tr>
<td>9</td>
<td>180</td>
<td>MD64 probably sings on TG11; later is on TD64.</td>
</tr>
<tr>
<td>11</td>
<td>182</td>
<td>Songs on TD64, not on TG11.</td>
</tr>
<tr>
<td>13</td>
<td>186</td>
<td>Not found (and never seen again).</td>
</tr>
<tr>
<td>14</td>
<td>188</td>
<td>Not visited.</td>
</tr>
<tr>
<td>15</td>
<td>190</td>
<td>Near type-3's; singer not seen.</td>
</tr>
<tr>
<td>19</td>
<td>193</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>20</td>
<td>194</td>
<td>Not found.</td>
</tr>
<tr>
<td>23</td>
<td>197</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>27</td>
<td>200</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>30</td>
<td>206</td>
<td>&quot; &quot;</td>
</tr>
<tr>
<td>August 3</td>
<td>209</td>
<td>&quot; &quot;</td>
</tr>
</tbody>
</table>
# PAIR D65

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 24</td>
<td>Page 30</td>
</tr>
<tr>
<td>25</td>
<td>MD65 probably arrives on TD65.</td>
</tr>
<tr>
<td>26</td>
<td>MD65 on TD65.</td>
</tr>
<tr>
<td>27</td>
<td>Female probably present.</td>
</tr>
<tr>
<td>28</td>
<td>MD65 with a female.</td>
</tr>
<tr>
<td>29</td>
<td>Pair together; exploring.</td>
</tr>
<tr>
<td>30</td>
<td>Nest begun.</td>
</tr>
<tr>
<td>May 1</td>
<td>Little progress.</td>
</tr>
<tr>
<td>2</td>
<td>Building continues slowly.</td>
</tr>
<tr>
<td>4</td>
<td>Nest progresses.</td>
</tr>
<tr>
<td>5</td>
<td>Nest complete.</td>
</tr>
<tr>
<td>6</td>
<td>No eggs.</td>
</tr>
<tr>
<td>7</td>
<td>Cowbird egg in nest.</td>
</tr>
<tr>
<td>8</td>
<td>2nd cowbird egg; 1st has break.</td>
</tr>
<tr>
<td>9</td>
<td>No change.</td>
</tr>
<tr>
<td>11</td>
<td>Pair together. No change.</td>
</tr>
<tr>
<td>12</td>
<td>MD65 probably fights MD60.</td>
</tr>
<tr>
<td>13</td>
<td>First nest begun.</td>
</tr>
<tr>
<td>14</td>
<td>Nest progresses.</td>
</tr>
<tr>
<td>15</td>
<td>Little progress.</td>
</tr>
<tr>
<td>16</td>
<td>Nest not fully lined.</td>
</tr>
<tr>
<td>17</td>
<td>Nest complete.</td>
</tr>
<tr>
<td>18</td>
<td>&quot;</td>
</tr>
<tr>
<td>19</td>
<td>Egg 1.</td>
</tr>
<tr>
<td>20</td>
<td>Egg 2.</td>
</tr>
<tr>
<td>21</td>
<td>Egg 3. D65F to nest at 1935.</td>
</tr>
<tr>
<td>22</td>
<td>Egg 4, by 0620.</td>
</tr>
<tr>
<td>23</td>
<td>Introduce young D59, catch D65F.</td>
</tr>
<tr>
<td>24</td>
<td>MD65 not yet feeding nestling.</td>
</tr>
<tr>
<td>25</td>
<td>&quot;</td>
</tr>
<tr>
<td>27</td>
<td>D65F on nest.</td>
</tr>
<tr>
<td>28</td>
<td>Nest fails without evidence.</td>
</tr>
<tr>
<td>29</td>
<td>Catch MD65 at D58 nest.</td>
</tr>
<tr>
<td>30</td>
<td>D65F builds second nest, begun on 5/29.</td>
</tr>
<tr>
<td>June 1</td>
<td>Not visited.</td>
</tr>
<tr>
<td>2</td>
<td>&quot;</td>
</tr>
<tr>
<td>3</td>
<td>Song.</td>
</tr>
<tr>
<td>4</td>
<td>No activity at nest.</td>
</tr>
<tr>
<td>5</td>
<td>D65F on nest.</td>
</tr>
<tr>
<td>6</td>
<td>&quot;</td>
</tr>
<tr>
<td>7</td>
<td>Incubation.</td>
</tr>
<tr>
<td>8</td>
<td>4 eggs, seen with mirror.</td>
</tr>
<tr>
<td>9</td>
<td>Incubation.</td>
</tr>
<tr>
<td>10</td>
<td>&quot;</td>
</tr>
<tr>
<td>11</td>
<td>Song.</td>
</tr>
<tr>
<td>12</td>
<td>Incubation.</td>
</tr>
<tr>
<td>13</td>
<td>&quot;</td>
</tr>
<tr>
<td>15</td>
<td>Incubation of 4 eggs.</td>
</tr>
<tr>
<td>16</td>
<td>2 eggs hatch, 0900-1915.</td>
</tr>
<tr>
<td>17</td>
<td>3 nestlings at 1330.</td>
</tr>
</tbody>
</table>
PAIR D65 - 2

June 18  Page 144  3 nestlings. MD65 on TD58.
19       146       MD65 feeds nestlings.
20       147       3 nestlings.
21       149       Brooding.
22       150       Band 3 young; 1 developed egg.
23       152       Nestlings ok.
24       153
25       154
26       156
27       159
28       161
29       162
30       164

July 1   166
2        168
3        169
4        174
7        177
8        178
9        180
11       182
12       185
13       186
14       188
16       191
19       193
23       197
27       200
29       204
30       206

August 3
September 17
20

3 nestlings. MD65 on TD58.
MD65 feeds nestlings.
3 nestlings.
Brooding.
Band 3 young; 1 developed egg.
Nestlings ok.

July 2
3 nestlings.

Band 3 young; 1 developed egg.
Nestlings ok.

July 3
Only part of brood fledges.
Rest of brood fledges.
Fledglings heard.
MD65 on TD66. D65F gives distraction display.
No information.

July 4
Song.

July 7
No information.
MD65 seen.

July 8
D65F tends young.

July 9
Song.
D65F tends D65Y on TD60.
D65F tends on TD61. MD65 on TD65. Young described.

July 11
Song on TD65.
D65F, D65Y on TD65.

July 12
D65F tends D65R.

July 16 MD65 (neat plumage) with young S of TD65.
No information.

July 19
MD65 tends D65B (nearly full immature plumage).
MD65 (neat) tends D65B. D65B not in full plumage.
D65B approaches D57 nest. MD65 probably seen.

July 23
D65F (neat) tends D65R, D65Y.

July 27
Not found.

July 29
D65F (molt complete) on TD65.

July 30
MD65 (molt complete) on TD65; aggressive toward PW.
PAIR D66

April 22

21, 22

MD66 (old MD61) returns. Details on behavior. Fights MD56, MD56(1).

23

25, 26, 27, 30

Dawn singing. MD66 on territory, ranges to E off TD66.

24

30

MD66 on TD66.

25

32

" Probably no female.

26

34

" MD66 follows a female, defends TD66 against persistent male.

27

36

No female.

28

38, 40

Probably no female.

May 1

42

Female present.

30

44

Song.

46

51

Probably no female.

May 2

55

Young female present.

57

60

" "

9

63

Not found.

8

65

Pair together.

10

67

Not found.

11

68

MD66 fights male, probably MD65. Pair together.

12

70

Pair together.

13

72a

Song.

14

75

D66F may be building.

15

77

MD66 sings. D66F not found.

17

81

No information.

18

83

First (?) nest found, just begun.

20

86

Building.

21

87

Nest advanced. MD66 perhaps seen.

22

90

Nest has been added to. MD67 has taken over TD66; D67F(B) here. (MD66 never seen.)

24

94

Egg 1.

25

95 96

Egg 2. Young female nearby.

26

98

Cowbird egg and egg 2 present.

27

100

Only cowbird egg left. (D66F disappears permanently, and TD66 is shared by neighboring males for rest of summer.) Recent nest fragment found.

28

102
PAIR D67

April 16

Page 2

17 6
18 8
19 10
20 12, 13
21 15
22 18, 19
23 27
24 29
25 32
26 34
27 36
28 37
29 42
30 45

May 1

1 47
2 49
3 51
4 54
5 56
6 59
7 62
8 63
9 65
11 68
12 70
13 72
14 75
15 77
16 79
17 82
18 84
19 85
20 86
21 88
24 94
25 96
26 98
27 100
28 103
29 104, 105

MD67 (old MD51) arrives, fights unbanded male for territory.

MD67 on TD67.

MD67 probably encounters MD68.

MD67 ranges.

MD67 on TD67.

MD67 yields ground to MD50.

MD67 on TD67.

MD67 fights other males on TD69 while MD69 is away.

MD67 on TD67.

No female.

MD67 courts unbanded female. Loud song.

D67F(A) (old D51F(2)) returns.

MD67 with D67F(A), unbanded female.

MD67 again with 2 females.

MD67 seen.

MD67 encounters D70's.

Not found.

D67F(A) calling on TD67.

D67F(A) sings. Pair separate.

Pair together.

D67F(A) building fragment; distraction display. D67's encounter D70's.

Fragment lacks rim.

Fragment abandoned.

Pair together.

Not found.

Song.

MD67 in E field with second female, (B). She builds undiscovered nest.

Find (B) nest with cowbird egg.

D67F(B) building. MD67 fights MD57 in E field.

Pair together, in E field.

MD67 in E field with D67F(B) and in W field on TD67.

PW egg and cowbird egg in (B) nest. MD67 fights MD69, stays in W field.
<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 30</td>
<td>2nd PW egg in (B) nest. No information.</td>
</tr>
<tr>
<td>31</td>
<td>Nest unchanged. MD67 in E field.</td>
</tr>
<tr>
<td>June 1</td>
<td>Nest unchanged (abandoned). No useful information.</td>
</tr>
<tr>
<td>2</td>
<td>MD67 in E field.</td>
</tr>
<tr>
<td>3</td>
<td>MD67 in E field. D67F(B) perhaps seen.</td>
</tr>
<tr>
<td>4</td>
<td>MD67 in W field.</td>
</tr>
<tr>
<td>5</td>
<td>First nest of D67F(A) found: 5 eggs. MD67 nearby.</td>
</tr>
<tr>
<td>6</td>
<td>5 eggs.</td>
</tr>
<tr>
<td>7</td>
<td>2 young, 3 eggs at 0945.</td>
</tr>
<tr>
<td>8</td>
<td>5 nestlings.</td>
</tr>
<tr>
<td>9</td>
<td>Nestlings ok.</td>
</tr>
<tr>
<td>10</td>
<td>Brooding.</td>
</tr>
<tr>
<td>11</td>
<td>Probably 5 nestlings.</td>
</tr>
<tr>
<td>12</td>
<td>Band the 4 remaining young.</td>
</tr>
<tr>
<td>13</td>
<td>Nest tilted, some nestlings missing. MD67 stays on TD67.</td>
</tr>
<tr>
<td>14</td>
<td>2 nestlings seen.</td>
</tr>
<tr>
<td>15</td>
<td>2 nestlings present.</td>
</tr>
<tr>
<td>16</td>
<td>Young fledge by 0620. Re-band 1.</td>
</tr>
<tr>
<td>17</td>
<td>Not visited.</td>
</tr>
<tr>
<td>18</td>
<td>D67F(A) seen.</td>
</tr>
<tr>
<td>19</td>
<td>MD67 on TD50.</td>
</tr>
<tr>
<td>20</td>
<td>No information.</td>
</tr>
<tr>
<td>21</td>
<td>D67F(A) alarmed on TD67.</td>
</tr>
<tr>
<td>22</td>
<td>Song on TD50.</td>
</tr>
<tr>
<td>23</td>
<td>Song. MD67 seen on TD50.</td>
</tr>
<tr>
<td>24</td>
<td>MD67 seen, fights MD69; on TD50.</td>
</tr>
<tr>
<td>25</td>
<td>D67F(A) on TD50.</td>
</tr>
<tr>
<td>26</td>
<td>MD67 sings on TD67.</td>
</tr>
<tr>
<td>27</td>
<td>No information.</td>
</tr>
<tr>
<td>29</td>
<td>No information.</td>
</tr>
<tr>
<td>30</td>
<td>D67F(A) tends D67R, D67bB. Not found.</td>
</tr>
<tr>
<td>July 1</td>
<td>D67bB on TD74.</td>
</tr>
<tr>
<td>2</td>
<td>Both adults (molt complete) on TD67 but not together.</td>
</tr>
<tr>
<td>3</td>
<td>Find nest, probably D67F(B)’s.</td>
</tr>
<tr>
<td>Date</td>
<td>Page 10</td>
</tr>
<tr>
<td>--------</td>
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</tr>
<tr>
<td>April 19</td>
<td>Page 10</td>
</tr>
<tr>
<td>20</td>
<td>12</td>
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<tr>
<td>21</td>
<td>15, 16</td>
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<td>22</td>
<td>18, 19</td>
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<td>25</td>
<td>32</td>
</tr>
<tr>
<td>26</td>
<td>34, (42)</td>
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<tr>
<td>May 1</td>
<td>47</td>
</tr>
<tr>
<td>2</td>
<td>49</td>
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<tr>
<td>3</td>
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<td>21</td>
<td>88</td>
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<td>99</td>
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<td>June 1</td>
<td>110</td>
</tr>
<tr>
<td>2</td>
<td>113</td>
</tr>
<tr>
<td>3</td>
<td>116</td>
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<td>4</td>
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<td>5</td>
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</tr>
<tr>
<td>Date</td>
<td>Event Description</td>
</tr>
<tr>
<td>------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>June 6</td>
<td>Nest fails; egg or eggs in it; stuck to nest.</td>
</tr>
<tr>
<td>7</td>
<td>Fourth nest found; begun 6/6. Building.</td>
</tr>
<tr>
<td>8</td>
<td>Nest complete.</td>
</tr>
<tr>
<td>9</td>
<td>No egg.</td>
</tr>
<tr>
<td>10</td>
<td>Egg 1.</td>
</tr>
<tr>
<td>11</td>
<td>Egg 2.</td>
</tr>
<tr>
<td>12</td>
<td>136, (137) (Egg 3); D68F on at 1400.</td>
</tr>
<tr>
<td>13</td>
<td>Egg 4. Introduce Field Sparrow.</td>
</tr>
<tr>
<td>14</td>
<td>Catch MD60. MD59 near nest.</td>
</tr>
<tr>
<td>15</td>
<td>Catch D68F.</td>
</tr>
<tr>
<td>16</td>
<td>Field Sparrow ok.</td>
</tr>
<tr>
<td>17</td>
<td>Remove Field Sparrow.</td>
</tr>
<tr>
<td>18</td>
<td>4 eggs. Songs.</td>
</tr>
<tr>
<td>19</td>
<td>Incubation has been resumed.</td>
</tr>
<tr>
<td>20</td>
<td>D68F near nest.</td>
</tr>
<tr>
<td>21</td>
<td>Incubation.</td>
</tr>
<tr>
<td>22</td>
<td>2 nestlings; egg pipped.</td>
</tr>
<tr>
<td>23</td>
<td>Brooding 3 young.</td>
</tr>
<tr>
<td>24</td>
<td>3 nestlings.</td>
</tr>
<tr>
<td>25</td>
<td>Not visited.</td>
</tr>
<tr>
<td>26</td>
<td>Remove 1 nestling, put in nest of D74's.</td>
</tr>
<tr>
<td>27</td>
<td>Band nestlings. Nestling in D74; nest transferred to D72's.</td>
</tr>
<tr>
<td>28</td>
<td>Not visited. (Nestling in D77 nest.)</td>
</tr>
<tr>
<td>29</td>
<td>Remaining nestling fledged, as revealed by D68F's distraction behavior.</td>
</tr>
<tr>
<td>30</td>
<td>Song. D68F on TD67.</td>
</tr>
<tr>
<td>September 27</td>
<td>Not visited.</td>
</tr>
<tr>
<td>27</td>
<td>MD68 on TD68, molt complete.</td>
</tr>
<tr>
<td>April 21</td>
<td>Page 15, 16</td>
</tr>
<tr>
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<tr>
<td>22</td>
<td>18</td>
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<td>23</td>
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<td>29</td>
<td>42</td>
</tr>
<tr>
<td>30</td>
<td>45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>May 1</th>
<th>47</th>
<th>MD69 seen, once near young female.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>49, 50</td>
<td>MD69 present, explores.</td>
</tr>
<tr>
<td>3</td>
<td>51</td>
<td>MD69 present, may be MD69's mate.</td>
</tr>
<tr>
<td>4</td>
<td>54</td>
<td>Probably no female. MD69 encounters strange male.</td>
</tr>
<tr>
<td>5</td>
<td>56</td>
<td>No sign of a female.</td>
</tr>
<tr>
<td>6</td>
<td>59</td>
<td>MD69 with young female.</td>
</tr>
<tr>
<td>7</td>
<td>61</td>
<td>MD69 seen.</td>
</tr>
<tr>
<td>8</td>
<td>63</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>66</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>68</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>69</td>
<td>D52Y calls near a fragment; MD69 close by. Old female seen.</td>
</tr>
<tr>
<td>12</td>
<td>72</td>
<td>Find (abandoned) nest with 1 cowbird egg. Also find a second fragment.</td>
</tr>
<tr>
<td>13</td>
<td>75</td>
<td>No developments.</td>
</tr>
<tr>
<td>14</td>
<td>76</td>
<td>MD69 seen.</td>
</tr>
<tr>
<td>15</td>
<td>79</td>
<td>MD69 seen.</td>
</tr>
<tr>
<td>16</td>
<td>81</td>
<td>MD69 seen.</td>
</tr>
<tr>
<td>17</td>
<td>84</td>
<td>MD69 seen.</td>
</tr>
<tr>
<td>18</td>
<td>85</td>
<td>MD69 seen.</td>
</tr>
<tr>
<td>19</td>
<td>86</td>
<td>MD69 seen.</td>
</tr>
<tr>
<td>20</td>
<td>88</td>
<td>MD69 seen.</td>
</tr>
<tr>
<td>21</td>
<td>99</td>
<td>MD69 seen.</td>
</tr>
<tr>
<td>22</td>
<td>100</td>
<td>MD69 seen.</td>
</tr>
<tr>
<td>23</td>
<td>103</td>
<td>D69F found, building nest.</td>
</tr>
<tr>
<td>24</td>
<td>105, 104</td>
<td>MD69 fights MD67.</td>
</tr>
<tr>
<td>25</td>
<td>107</td>
<td>Silence.</td>
</tr>
<tr>
<td>26</td>
<td>113</td>
<td>D69F on.</td>
</tr>
<tr>
<td>27</td>
<td>116</td>
<td>Song.</td>
</tr>
<tr>
<td>28</td>
<td>117</td>
<td>D69F on.</td>
</tr>
<tr>
<td>29</td>
<td>119</td>
<td>&quot;</td>
</tr>
<tr>
<td>30</td>
<td>121</td>
<td>Nest has failed.</td>
</tr>
<tr>
<td>June 8</td>
<td>Page 125</td>
<td>D69F builds nest begun 6/7.</td>
</tr>
<tr>
<td>--------</td>
<td>------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>9</td>
<td>127</td>
<td>Nest lacks lining.</td>
</tr>
<tr>
<td>10</td>
<td>130</td>
<td>Nest complete.</td>
</tr>
<tr>
<td>11</td>
<td>132</td>
<td>No egg.</td>
</tr>
<tr>
<td>12</td>
<td>133</td>
<td>Egg 1.</td>
</tr>
<tr>
<td>13</td>
<td>136</td>
<td>Egg 2; egg 1 gone.</td>
</tr>
<tr>
<td>14</td>
<td>137</td>
<td>Only cowbird egg and egg 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(punctured) present.</td>
</tr>
<tr>
<td>15</td>
<td>138</td>
<td>Only cowbird egg; (abandoned).</td>
</tr>
<tr>
<td>16</td>
<td>140</td>
<td>D69F builds nest begun 6/15.</td>
</tr>
<tr>
<td>17</td>
<td>142</td>
<td>Nest progresses.</td>
</tr>
<tr>
<td>18</td>
<td>145, (146)</td>
<td>(Lining complete.)</td>
</tr>
<tr>
<td>19</td>
<td>146</td>
<td>No egg.</td>
</tr>
<tr>
<td>20</td>
<td>147</td>
<td>Egg 1.</td>
</tr>
<tr>
<td>21</td>
<td>149</td>
<td>Egg 2.</td>
</tr>
<tr>
<td>22</td>
<td>151</td>
<td>Egg 3.</td>
</tr>
<tr>
<td>23</td>
<td>152</td>
<td>Egg 4 (despite storm).</td>
</tr>
<tr>
<td>24</td>
<td>153</td>
<td>Incubation; 4 eggs.</td>
</tr>
<tr>
<td>25</td>
<td>154</td>
<td>Incubation.</td>
</tr>
<tr>
<td>26</td>
<td>156</td>
<td>&quot;</td>
</tr>
<tr>
<td>27</td>
<td>159</td>
<td>&quot;</td>
</tr>
<tr>
<td>28</td>
<td>163</td>
<td>4 eggs.</td>
</tr>
<tr>
<td>29</td>
<td>164</td>
<td>Incubation.</td>
</tr>
<tr>
<td>30</td>
<td>166</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>168</td>
<td>Nest fails without evidence.</td>
</tr>
<tr>
<td>July</td>
<td>169</td>
<td>MD69 fights MD67.</td>
</tr>
<tr>
<td>1</td>
<td>174</td>
<td>MD69 moves, sings.</td>
</tr>
<tr>
<td>2</td>
<td>178</td>
<td>Song.</td>
</tr>
<tr>
<td>3</td>
<td></td>
<td>MD69 probably heard.</td>
</tr>
<tr>
<td>4</td>
<td>183</td>
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<tr>
<td>8</td>
<td>185</td>
<td>&quot;</td>
</tr>
<tr>
<td>11</td>
<td>186</td>
<td>Not visited.</td>
</tr>
<tr>
<td>12</td>
<td>188</td>
<td>Song.</td>
</tr>
<tr>
<td>13</td>
<td>191</td>
<td>No information.</td>
</tr>
<tr>
<td>14</td>
<td>193</td>
<td>Not found.</td>
</tr>
<tr>
<td>16</td>
<td>195</td>
<td>MD69 seen singing on TD69.</td>
</tr>
<tr>
<td>19</td>
<td>198</td>
<td>Not found.</td>
</tr>
<tr>
<td>21</td>
<td>199</td>
<td>&quot;</td>
</tr>
<tr>
<td>24</td>
<td>202</td>
<td>Song heard.</td>
</tr>
<tr>
<td>25</td>
<td>206</td>
<td>MD69 (molting) on TD69.</td>
</tr>
<tr>
<td>26</td>
<td>207</td>
<td>Not found.</td>
</tr>
<tr>
<td>28</td>
<td>211</td>
<td>MD69 (tail-less) on TD69.</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>MD69 (molt complete) forages on TD68.</td>
</tr>
<tr>
<td>April 21</td>
<td>Page 16</td>
<td></td>
</tr>
<tr>
<td>----------</td>
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<tr>
<td>May 1</td>
<td>48</td>
<td></td>
</tr>
<tr>
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<td>49</td>
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<td>65, 66</td>
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<td>81, 82</td>
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<td>83</td>
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<tr>
<td>30</td>
<td>107</td>
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</tr>
<tr>
<td>June 1</td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>111a</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>116</td>
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</tr>
<tr>
<td>4</td>
<td>117</td>
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<td>7</td>
<td>121a</td>
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<td>8</td>
<td>125</td>
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<tr>
<td>9</td>
<td>127</td>
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</tr>
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<td>10</td>
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<tr>
<td>11</td>
<td>132</td>
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<tr>
<td>12</td>
<td>133</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>136</td>
<td></td>
</tr>
</tbody>
</table>

MD70 may be on territory S of fence.

MD70 on territory, on Allen's. No female.

Silence.

MD70 may be extending to N.

MD70 ranges.

No sign of a female.

Much song, movement.

D70's seen, not together.

Few songs.

D70's encounter Md67.

Both D70's seen.

MD70 seen.

Both D70's seen.

D70F builds undiscovered nest. D70's encountered.

MD70 sings on TD50, now his.

MD70 seen.

D70F seen.

No information.

Silence.

Song.

MD70 carrying food. D70F seen.

MD70 carrying food to nest.

Nest found; 1 cowbird, 1 PW about 2-3 days old. Catch both D70's.

Nestlings ok.

Transfer young D70 to D73 nest.

Cowbird ok.

Return young D70 to nest, band cowbird.

Cowbird has left nest and nestling PW been allowed to starve. Many mites present.
| June 15 | Page 138 | Song.  
| June 16 | 139 | No information.  
| June 18 | 145 | Song.  
| June 20 | 147 | No information.  
| June 21 | 149 | Song.  
| June 22 | 150 | MD70 probably heard.  
| June 23 | 152 | No information.  
| June 26 | 156 |  
| June 27 | 159 |  
| June 29 | 162 |  
| June 30 | 164 |  
| July 1 | 166 |  
| July 2 | 168 | MD70 tends cowbird on TD70.  
| July 3 | 169 | No information.  
| July 4 | 171 | MD70 tends cowbird on TD72.  
| July 8 | 178 | MD70 on TD70.  
| July 13 | 186 | MD70 sings on TD70.  
| July 14 | 188 |  
| July 16 | 191 | No information.  
| July 19 | 193 | MD70 on TD70.  
| July 21 | 195 | MD70 not found (and never seen again).  
| August 2 | 208 | Not found.  

- Song.
- No information.
- MD70 seen.
- MD70 not found (and never seen again).
<table>
<thead>
<tr>
<th>Date</th>
<th>Page</th>
<th>Description</th>
</tr>
</thead>
</table>
| May 4 | 53 | MD71 courts young female on newly found territory. Female has disappeared. No male. Not visited. 
|      |      | " Incubation. 5 eggs. Incubation. " 
<p>| June 2 | 114 |
| 3     | 116 |
| 4     | 117 |
| 5     | 119 |
| 6     | 122 |
| 7     | 124 |
| 8     | 125 |
| 9     | 127 |
| 10    | 130 |
| 12    | 134 |
| 13    | 136 |
| 15    | 138 |
| 16    | 140 |
| 17    | 142 |
| 18    | 145 |
| 19    | 146 |
| 20    | 147 |
| 24    | 153 |
| 25    | 154 |
| 26    | 156 |
| 27    | 160 |
| 29    | 163 |
| 30    | 164 |</p>
<table>
<thead>
<tr>
<th>Date</th>
<th>Page</th>
<th>Observation</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 1</td>
<td>166</td>
<td>Not visited.</td>
</tr>
<tr>
<td>2</td>
<td>168</td>
<td>Constant song.</td>
</tr>
<tr>
<td>3</td>
<td>169</td>
<td>D71 probably heard.</td>
</tr>
<tr>
<td>4</td>
<td>173</td>
<td>D71 sings regularly. (Last sighting on territory.)</td>
</tr>
<tr>
<td>8</td>
<td>178</td>
<td>Not visited.</td>
</tr>
<tr>
<td>20</td>
<td>194</td>
<td>Not found.</td>
</tr>
<tr>
<td>22</td>
<td>196</td>
<td>&quot;</td>
</tr>
<tr>
<td>23</td>
<td>197</td>
<td>&quot;</td>
</tr>
<tr>
<td>25</td>
<td>199</td>
<td>&quot;</td>
</tr>
<tr>
<td>27</td>
<td>200</td>
<td>&quot;</td>
</tr>
<tr>
<td>August 2</td>
<td>208</td>
<td>&quot;</td>
</tr>
<tr>
<td>September 1</td>
<td>225</td>
<td>D71 (nearly through molt) forages on TGll.</td>
</tr>
<tr>
<td>April 26</td>
<td>Page 34</td>
<td></td>
</tr>
<tr>
<td>----------</td>
<td>---------</td>
<td></td>
</tr>
<tr>
<td>27</td>
<td>36</td>
<td>MD72 takes territory after my morning visit.</td>
</tr>
<tr>
<td>28</td>
<td>39</td>
<td>MD72 fights MD73.</td>
</tr>
<tr>
<td>29</td>
<td>42</td>
<td>No female.</td>
</tr>
<tr>
<td>30</td>
<td>45</td>
<td>Regular song.</td>
</tr>
<tr>
<td>May 1</td>
<td>18</td>
<td>Song.</td>
</tr>
<tr>
<td>2</td>
<td>49</td>
<td>No female.</td>
</tr>
<tr>
<td>3</td>
<td>51, (56)</td>
<td>MD72 with a female. (Nest probably begun.)</td>
</tr>
<tr>
<td>4</td>
<td>53</td>
<td>Details of a male-male fight.</td>
</tr>
<tr>
<td>5</td>
<td>56</td>
<td>D72F seen.</td>
</tr>
<tr>
<td>6</td>
<td>59</td>
<td>Nest found.</td>
</tr>
<tr>
<td>7</td>
<td>61</td>
<td>Nest unlined.</td>
</tr>
<tr>
<td>8</td>
<td>63</td>
<td>Nest completed.</td>
</tr>
<tr>
<td>9</td>
<td>65</td>
<td>No egg; (none ever laid).</td>
</tr>
<tr>
<td>10</td>
<td>67</td>
<td>No change.</td>
</tr>
<tr>
<td>12</td>
<td>69</td>
<td>Nest torn from tree.</td>
</tr>
<tr>
<td>13</td>
<td>72</td>
<td>D72's encounter D73's.</td>
</tr>
<tr>
<td>14</td>
<td>74</td>
<td>Not found.</td>
</tr>
<tr>
<td>15</td>
<td>76</td>
<td>Song.</td>
</tr>
<tr>
<td>16</td>
<td>79</td>
<td>D72F builds first nest.</td>
</tr>
<tr>
<td>18</td>
<td>83</td>
<td>D72F on nest at 0700.</td>
</tr>
<tr>
<td>19</td>
<td>85</td>
<td>Not visited.</td>
</tr>
<tr>
<td>20</td>
<td>86</td>
<td>1 egg in nest.</td>
</tr>
<tr>
<td>21</td>
<td>87</td>
<td>No activity at nest (high).</td>
</tr>
<tr>
<td>22</td>
<td>90</td>
<td>D72F near nest.</td>
</tr>
<tr>
<td>26</td>
<td>99</td>
<td>1 egg; (nest has failed). MD72 seen.</td>
</tr>
<tr>
<td>28</td>
<td>103</td>
<td>D72F builds a fragment.</td>
</tr>
<tr>
<td>29</td>
<td>104</td>
<td>Fragment abandoned. Pair together.</td>
</tr>
<tr>
<td>30</td>
<td>107</td>
<td>D72F begins second nest.</td>
</tr>
<tr>
<td>31</td>
<td>109 (119)</td>
<td>Nest complete.</td>
</tr>
<tr>
<td>June 1</td>
<td>111</td>
<td>Egg 1.</td>
</tr>
<tr>
<td>2</td>
<td>114</td>
<td>Egg 2.</td>
</tr>
<tr>
<td>3</td>
<td>115, 116</td>
<td>Egg 3; D72F on at 1600. (Egg h.) Incubation.</td>
</tr>
<tr>
<td>4</td>
<td>117</td>
<td>&quot;</td>
</tr>
<tr>
<td>5</td>
<td>119</td>
<td>Introduce cowbird into nest; try unsuccessfully to catch D72F.</td>
</tr>
<tr>
<td>6</td>
<td>122</td>
<td>Catch MD72.</td>
</tr>
<tr>
<td>7</td>
<td>124, (11)1</td>
<td>Cowbird disappears in morning; 4 eggs remain.</td>
</tr>
<tr>
<td>8</td>
<td>125</td>
<td>Nest abandoned; D72F explores.</td>
</tr>
<tr>
<td>9</td>
<td>127</td>
<td>D72F builds third nest. (Egg weights for second nest.)</td>
</tr>
<tr>
<td>10</td>
<td>130</td>
<td>D72F building.</td>
</tr>
<tr>
<td>11</td>
<td>132</td>
<td>Song.</td>
</tr>
<tr>
<td></td>
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<td>&quot;</td>
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</table>
PAIR D72 - 2

June 12 Page 133
13 136
14 137
15 138
16 139
18 145
19 146
20 147
21 149
22 151
23 152
24 153
25 154
26 156
27 160
28 161
29 163
30 164

July 1 166
2 168
3 170
4 173
5 177
6 178
7 180
11 183
12 185
13 186
14 188
16 191
23 197

August 1 208
2 208

Song.
No activity at nest.

Incubation.
MD72 flies MD73.
D72F on nest.
Incubation.

Nest destroyed by storm.
Probably building.
D72F builds nest begun 6/24.
Nest destroyed before complete.
D72F begins nest.
Building despite rain.
Not visited.
Nest destroyed. Pair together.
D72F begins fourth nest.
Nest progresses.

Egg 1. Details on responses to introduced nestling.
D72F on 2 eggs, much stained.
MD72 probably tending, but I do not find fledgling.
Nest has failed: 2 eggs remain.
MD72 seen. No evidence that he is tending.
MD72 probably heard.

A few songs.

Songs.

Not found.
<table>
<thead>
<tr>
<th>April 21</th>
<th>Page 15</th>
<th>MD73 on territory; short rectrices.</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>16</td>
<td>&quot;</td>
</tr>
<tr>
<td>23</td>
<td>26</td>
<td>MD73 fights a PW.</td>
</tr>
<tr>
<td>24</td>
<td>29</td>
<td>MD73 on territory.</td>
</tr>
<tr>
<td>25</td>
<td>32</td>
<td>&quot;</td>
</tr>
<tr>
<td>26</td>
<td>35</td>
<td>Not found.</td>
</tr>
<tr>
<td>27</td>
<td>36</td>
<td>Female present. MD73</td>
</tr>
<tr>
<td></td>
<td></td>
<td>fights MD72.</td>
</tr>
<tr>
<td>28</td>
<td>39</td>
<td>D73F bathes. MD73 seen.</td>
</tr>
<tr>
<td>29</td>
<td>42</td>
<td>D73F explores.</td>
</tr>
<tr>
<td>30</td>
<td>45</td>
<td>D73F builds undiscovered nest.</td>
</tr>
<tr>
<td>May 1</td>
<td>48</td>
<td>First nest found; D73F builds.</td>
</tr>
<tr>
<td>2</td>
<td>49</td>
<td>Nest progresses.</td>
</tr>
<tr>
<td>3</td>
<td>51</td>
<td>D73F at completed nest.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Preening described.</td>
</tr>
<tr>
<td>4</td>
<td>53, (56)</td>
<td>No egg; (nest being worked).</td>
</tr>
<tr>
<td>5</td>
<td>56</td>
<td>MD73 perhaps seen.</td>
</tr>
<tr>
<td>6</td>
<td>59</td>
<td>No egg. MD73 seen.</td>
</tr>
<tr>
<td>7</td>
<td>61</td>
<td>No egg.</td>
</tr>
<tr>
<td>8</td>
<td>63</td>
<td>Egg 1.</td>
</tr>
<tr>
<td>9</td>
<td>65</td>
<td>Egg 2.</td>
</tr>
<tr>
<td>10</td>
<td>67</td>
<td>Nest fails; disarranged between 0610-0800. Eggs remain.</td>
</tr>
<tr>
<td>12</td>
<td>69</td>
<td>No eggs left.</td>
</tr>
<tr>
<td>13</td>
<td>72</td>
<td>D73's encounter D72's.</td>
</tr>
<tr>
<td>14</td>
<td>74, (76)</td>
<td>D73F builds fragment.</td>
</tr>
<tr>
<td>15</td>
<td>76</td>
<td>Fragment abandoned. MD73 ranges.</td>
</tr>
<tr>
<td>16</td>
<td>79</td>
<td>(Nest begun.)</td>
</tr>
<tr>
<td>17</td>
<td>81</td>
<td>Nest found; D73F building.</td>
</tr>
<tr>
<td>18</td>
<td>83</td>
<td>Nest unlined at 0645.</td>
</tr>
<tr>
<td>19</td>
<td>85</td>
<td>Nest complete, empty.</td>
</tr>
<tr>
<td>20</td>
<td>86</td>
<td>No egg; (none ever laid).</td>
</tr>
<tr>
<td>21</td>
<td>87</td>
<td>No change.</td>
</tr>
<tr>
<td>22</td>
<td>90</td>
<td>&quot;</td>
</tr>
<tr>
<td>23</td>
<td>93</td>
<td>&quot;</td>
</tr>
<tr>
<td>24</td>
<td>97</td>
<td>&quot;</td>
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<tr>
<td>25</td>
<td>99</td>
<td>&quot;</td>
</tr>
<tr>
<td>June 3</td>
<td>115</td>
<td>Second or third nest found; D73F building.</td>
</tr>
<tr>
<td>4</td>
<td>117</td>
<td>Nest lacks lining.</td>
</tr>
<tr>
<td>5</td>
<td>119</td>
<td>Egg 1.</td>
</tr>
<tr>
<td>6</td>
<td>122</td>
<td>Egg 2.</td>
</tr>
<tr>
<td>7</td>
<td>124</td>
<td>Egg 3; D73F on at 0800.</td>
</tr>
<tr>
<td>8</td>
<td>125</td>
<td>No record of an egg 4. I introduce a young D70 into nest.</td>
</tr>
<tr>
<td>9</td>
<td>127</td>
<td>Catch both D73's. Remove D70.</td>
</tr>
<tr>
<td></td>
<td>Page 130</td>
<td>Incubation.</td>
</tr>
<tr>
<td>-------</td>
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<td>-------------</td>
</tr>
<tr>
<td>June 10</td>
<td>130</td>
<td>D73F near nest.</td>
</tr>
<tr>
<td>13</td>
<td>136</td>
<td>Incubation.</td>
</tr>
<tr>
<td>15</td>
<td>138</td>
<td>MD73 fights MD72.</td>
</tr>
<tr>
<td>16</td>
<td>141</td>
<td>D73F on only 2 eggs.</td>
</tr>
<tr>
<td>18</td>
<td>145</td>
<td>Not found. 1 egg left.</td>
</tr>
<tr>
<td>19</td>
<td>146</td>
<td>Silence.</td>
</tr>
<tr>
<td>20</td>
<td>147</td>
<td>Not found.</td>
</tr>
<tr>
<td>21</td>
<td>149</td>
<td>MD73 sings.</td>
</tr>
<tr>
<td>25</td>
<td>154</td>
<td>&quot;</td>
</tr>
<tr>
<td>26</td>
<td>156</td>
<td>&quot;</td>
</tr>
<tr>
<td>27</td>
<td>160</td>
<td>Song.</td>
</tr>
<tr>
<td>28</td>
<td>161</td>
<td>&quot;</td>
</tr>
<tr>
<td>29</td>
<td>163</td>
<td>Not visited.</td>
</tr>
<tr>
<td>30</td>
<td>164</td>
<td>&quot;</td>
</tr>
<tr>
<td>July 1</td>
<td>166</td>
<td>&quot;</td>
</tr>
<tr>
<td>2</td>
<td>168</td>
<td>&quot;</td>
</tr>
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<td>171</td>
<td>&quot;</td>
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<tr>
<td>4</td>
<td>174</td>
<td>&quot;</td>
</tr>
<tr>
<td>8</td>
<td>178</td>
<td>Not found.</td>
</tr>
<tr>
<td>9</td>
<td>180</td>
<td>Silence.</td>
</tr>
<tr>
<td>12</td>
<td>185</td>
<td>Pair carrying food to undiscovered nest.</td>
</tr>
<tr>
<td>13</td>
<td>186</td>
<td>&quot;</td>
</tr>
<tr>
<td>14</td>
<td>188</td>
<td>Third or fourth nest found with 2 young 8 days old.</td>
</tr>
<tr>
<td>16</td>
<td>191</td>
<td>Band young.</td>
</tr>
<tr>
<td>23</td>
<td>197</td>
<td>Nestlings dead at nest. Adults present. Nest full of cal- liphorids.</td>
</tr>
<tr>
<td>August 1</td>
<td>208</td>
<td>Not found (and D73F never seen again).</td>
</tr>
<tr>
<td>September 11</td>
<td>238</td>
<td>Not found.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>MD73 (molt complete) on TD73.</td>
</tr>
</tbody>
</table>
PAIR D74

April 29

Page 42

Unbanded male found on my first visit to field.

D7h's seen.
D7h's seen. Scratching described.
D7h's seen.
Song.
Not found.

Irregular song.

**First (?) nest found; D7hF on egg 1 at 1200.**

I introduce Field Sparrow.

Catch D7hF. Both D7h's feed.

Field Sparrow gone; 4 eggs present in evening.

Nest abandoned with 4 eggs.

Not found.

Silence.

Song.

Pair seen.

Nest with 1 egg found.

**Egg 2.**

D7hF on twice.

I introduce young D68. 2 eggs in nest. Catch MD7h.

Introduced nestling removed.

Nest deserted with 2 eggs.

D7hF picks at first nest.

Song.

Not visited.

Song.

Nest found; 3 young in 3rd day. Both D7h's feeding.

D7hF at nest.

Take nest (calliphorids) and put all 3 young in D57 nest.

Not found.

D7hF (molting) on TD7h.

MD7h (traces of molt) on TD7h.

D7hF (molting) on TD7h.

D7hF (traces of molt) on TD7h.

**D7hF with immature male on TD7h. MD7h also present.**

MD7h (traces of molt) on TD7h.

D7hF (molt complete?) on TD7h.
PAIR D75

June 7 Page 123

On first visit to TD75, find
nest about 1 day old.

Nest complete.

No egg.

Egg 1; D75F on at 11h5.

Egg 2; D75F on at 11h40.

Egg 3; cowbird egg here and
egg 2 gone.

D75F on 1 cowbird, 2 PW

eggs. I introduce a

Field Sparrow.

Nest deserted with same eggs
and dead Field Sparrow.

Find no PW's but discover re-

cent nest with 1 cowbird

and 3 PW eggs. Eggs

weighed, measured.

Not found.

Silence.

Not found.

A male seen.

Not found.

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### PAIR D76

<table>
<thead>
<tr>
<th>Date</th>
<th>Page</th>
<th>Event</th>
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<tbody>
<tr>
<td>June 12</td>
<td>134</td>
<td>Hear a male singing on territory.</td>
</tr>
<tr>
<td>14</td>
<td>137</td>
<td>Find nest with 4 eggs. Introduce Field Sparrow in morning and see D76's feeding in evening.</td>
</tr>
<tr>
<td>15</td>
<td>138</td>
<td>Catch D76F.</td>
</tr>
<tr>
<td>16</td>
<td>140</td>
<td>Catch MD76. Remove young Field Sparrow.</td>
</tr>
<tr>
<td>17</td>
<td>142</td>
<td>Incubation.</td>
</tr>
<tr>
<td>18</td>
<td>145</td>
<td>D76F on 4 eggs.</td>
</tr>
<tr>
<td>19</td>
<td>146</td>
<td>2 eggs. 2 young at 11:15.</td>
</tr>
<tr>
<td>21</td>
<td>148</td>
<td>Nest fails without evidence.</td>
</tr>
<tr>
<td>22</td>
<td>149</td>
<td>Pair together.</td>
</tr>
<tr>
<td>25</td>
<td>154</td>
<td>Not found.</td>
</tr>
<tr>
<td>26</td>
<td>156</td>
<td>Not visited.</td>
</tr>
<tr>
<td>29</td>
<td>163</td>
<td>Not found.</td>
</tr>
<tr>
<td>July 20</td>
<td>194</td>
<td>MD76 (molting) on TD76.</td>
</tr>
<tr>
<td>22</td>
<td>196</td>
<td>D76F (traces of molt) on TD76.</td>
</tr>
<tr>
<td>25</td>
<td>199</td>
<td>MD76 (molt complete) on TD76.</td>
</tr>
<tr>
<td>August 1</td>
<td>208</td>
<td>D76F (molt complete) on TD76.</td>
</tr>
<tr>
<td>6</td>
<td>211</td>
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<tr>
<td>September 12</td>
<td>235</td>
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<td>17</td>
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PAIR D77

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<td>17</td>
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<td>172</td>
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<td>175</td>
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<tr>
<td>3</td>
<td>227</td>
</tr>
<tr>
<td>12</td>
<td>235</td>
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</tbody>
</table>

- Male seen on Doerr's.
- MD77 sings regularly on TD77.
- Not found.
- Silent.
- Find D77F, lining nest.
- D77F too shy to permit nest inspection.
- Song.
- D77F on at 1145.
- D77F on. MD63 comes to nest, is chased by MD77. I introduce young D68.
- 4 eggs.
- D77F caught.
- Catch MD77.
- D77F tends fledgling D68.
- D77F tends on TD69.
- D77F (neat plumage) tends on TD69.
- MD77 (molt complete) on TD67.
- MD77 possibly seen on TD76.
PAIR G8

<table>
<thead>
<tr>
<th>Month</th>
<th>Day</th>
<th>Reference</th>
<th>Notes</th>
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<tbody>
<tr>
<td>April</td>
<td>26</td>
<td>Page 35</td>
<td>MG8 probably on territory.</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>37</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>42</td>
<td>No female.</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>45</td>
<td>Irregular songs.</td>
</tr>
<tr>
<td>May</td>
<td>1</td>
<td>46</td>
<td>No female.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>52</td>
<td>Find G8F beginning first nest.</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>54</td>
<td>Nest progresses.</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>57</td>
<td>Building.</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>61</td>
<td>Nest appears complete from below.</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>72</td>
<td>G8F near nest.</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>75</td>
<td>No eggs.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>76</td>
<td>Egg 1 by 0615.</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>79</td>
<td>Egg 2 by 0600.</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>82</td>
<td>Egg 3.</td>
</tr>
<tr>
<td></td>
<td>18</td>
<td>83, (85)</td>
<td>(4 eggs.) Incubation.</td>
</tr>
<tr>
<td></td>
<td>19</td>
<td>85</td>
<td>4 eggs.</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>86</td>
<td>Incubation.</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>88</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>90</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>23</td>
<td>92</td>
<td>Introduce young Chipping Sparrow.</td>
</tr>
<tr>
<td>June</td>
<td>1</td>
<td>111, 112</td>
<td>Nest fails without evidence.</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>114</td>
<td>Song.</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>115</td>
<td>Very little song.</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>124</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>125</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>128</td>
<td>Silence.</td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>129</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>11</td>
<td>131</td>
<td>&quot;</td>
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<td>12</td>
<td>133</td>
<td>Silence.</td>
</tr>
<tr>
<td></td>
<td>13</td>
<td>135</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>14</td>
<td>137</td>
<td>Song.</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>139</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>16</td>
<td>141</td>
<td>MG8 seen on TG8.</td>
</tr>
<tr>
<td></td>
<td>20</td>
<td>148</td>
<td>Silence.</td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>149</td>
<td>MG8 on TD56, stays despite chases by MD56(2).</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>150</td>
<td>MG8 seen on TG8.</td>
</tr>
<tr>
<td></td>
<td>25</td>
<td>154</td>
<td>Song.</td>
</tr>
<tr>
<td></td>
<td>26</td>
<td>156</td>
<td>MG8 seen on TG8.</td>
</tr>
<tr>
<td></td>
<td>27</td>
<td>158</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>162</td>
<td>MG8 attracted by calls of captive D65Y.</td>
</tr>
<tr>
<td></td>
<td>30</td>
<td>164</td>
<td>MG8 seen; frequent song.</td>
</tr>
<tr>
<td>July</td>
<td>2</td>
<td>167</td>
<td>Silence.</td>
</tr>
<tr>
<td></td>
<td>7</td>
<td>177</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>MG8 sings.</td>
</tr>
<tr>
<td></td>
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<td>Page</td>
<td>Notes</td>
</tr>
<tr>
<td>----</td>
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<td>------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td></td>
<td>July 9</td>
<td>161</td>
<td>MG8 sings.</td>
</tr>
<tr>
<td>11</td>
<td></td>
<td>182</td>
<td>&quot;</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>184</td>
<td>MG8 seen singing; (last time found).</td>
</tr>
<tr>
<td>13</td>
<td></td>
<td>187</td>
<td>Silence.</td>
</tr>
<tr>
<td>14</td>
<td></td>
<td>189</td>
<td>&quot;</td>
</tr>
<tr>
<td>22</td>
<td></td>
<td>196</td>
<td>Not found.</td>
</tr>
<tr>
<td>30</td>
<td></td>
<td>206</td>
<td>&quot;</td>
</tr>
<tr>
<td></td>
<td>August 4</td>
<td>210</td>
<td>Find recent nest.</td>
</tr>
<tr>
<td>10</td>
<td></td>
<td>213</td>
<td>&quot;</td>
</tr>
<tr>
<td>Date</td>
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<td>Notes</td>
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</tr>
<tr>
<td>-------</td>
<td>-------</td>
<td>----------------------------------------------------------------------</td>
<td></td>
</tr>
</tbody>
</table>
| April 23 | 26 | A male sings here.  
| 27 | 37 | MG9 probably on territory.  
| 29 | 42 | No female.  
| 30 | 45 | Irregular songs.  
| May 1 | 46 | No female.  
| 3 | 52 | No female, MG9 in flutter-ups with Blue-winged Warbler.  
| | | Constant song.  
| 4 | 54 | MG9 acts unmated.  
| 5 | 57 | MG9 with bright female.  
| 6 | 61 | MG9 and (young) female seen.  
| 13 | 72, (103) | First nest found; just beginning.  
| 14 | 75 | Little progress on nest.  
| 15 | 76 | Nest nearly complete.  
| 18 | 83 | Nest complete.  
| 19 | 85 |  
| 20 | 86 |  
| 21 | 88 |  
| 22 | 90 |  
| 23 | 92 |  
| 21 | 94 |  
| 25 | 97 |  
| 26 | 99 | Introduce Field Sparrow at 09:45; both adults feeding at 19:00.  
| 27 | 100 | Feeding.  
| 28 | 103 | Catch G9F. Nest destroyed in afternoon.  
| 29 | 105 | Song.  
| 30 | 106 | Pair together.  
| 31 | 109 | G9F builds undiscovered second nest.  
| June 1 | 111 | Find second nest; G9F builds.  
| 2 | 114 | Bring caged PW's to TG9 and get interesting responses.  
| 3 | 115 | Building. Song.  
| 7 | 124 | Silence.  
| 8 | 125 | G9F goes to nest.  
| 9 | 128 | Nest has failed.  
| 10 | 129 | Both G9's perhaps seen.  
| 11 | 131 | Situation obscure; a male seen.  
| 12 | 133 | Not found.  
| 13 | 135 | A few songs heard.  
| 14 | 137 | G9F seen. A few songs heard.  
| 15 | 139 | No information.  
| 16 | 141 | Silence.  
| 27 | 158 | Male heard singing here is probably MD36.  
| 29 | 162 | MD36 sings constantly on TG9.  

<table>
<thead>
<tr>
<th>Date</th>
<th>Page</th>
<th>Notes</th>
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<tbody>
<tr>
<td>June 30</td>
<td>164</td>
<td>MD36 sings constantly on TG9.</td>
</tr>
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<td>July 2</td>
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</tr>
<tr>
<td>7</td>
<td>177</td>
<td>Silence.</td>
</tr>
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<td>11</td>
<td>182</td>
<td>&quot;</td>
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<tr>
<td>12</td>
<td>184</td>
<td>Not found.</td>
</tr>
<tr>
<td>22</td>
<td>196</td>
<td>&quot;</td>
</tr>
<tr>
<td>30</td>
<td>206</td>
<td>&quot;</td>
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<td>August 1</td>
<td>210</td>
<td>MD36 (molt complete) is on TG9.</td>
</tr>
<tr>
<td>September 1</td>
<td>225</td>
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<td>Date</td>
<td>Page</td>
<td>Event Description</td>
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<td>----------------------------------------</td>
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<tr>
<td>April 16</td>
<td>4</td>
<td>MGIO may arrive on territory.</td>
</tr>
<tr>
<td>April 16</td>
<td>5</td>
<td>MGIO with young female.</td>
</tr>
<tr>
<td>May 5</td>
<td>56</td>
<td>MGIO probably heard.</td>
</tr>
<tr>
<td>May 13</td>
<td>72</td>
<td>&quot;</td>
</tr>
<tr>
<td>May 14</td>
<td>75</td>
<td>Bright female seen.</td>
</tr>
<tr>
<td>May 18</td>
<td>83</td>
<td>Long silence.</td>
</tr>
<tr>
<td>June 2</td>
<td>114</td>
<td>Song.</td>
</tr>
<tr>
<td>June 3</td>
<td>115</td>
<td>MGIO with GIOF(A).</td>
</tr>
<tr>
<td>June 7</td>
<td>124</td>
<td>Nest of GIOF(A) found with 3 eggs.</td>
</tr>
<tr>
<td>June 9</td>
<td>128</td>
<td>Introduce young D70.</td>
</tr>
<tr>
<td>June 10</td>
<td>129</td>
<td>1 or 2 eggs hatch; egg under nest is dead but may have fallen out today. MGIO is not feeding.</td>
</tr>
<tr>
<td>June 11</td>
<td>131</td>
<td>GIOF(A) caught. MGIO not feeding; D70 removed.</td>
</tr>
<tr>
<td>June 12</td>
<td>133</td>
<td>Nest fails without evidence.</td>
</tr>
<tr>
<td>June 13</td>
<td>135</td>
<td>Not found.</td>
</tr>
<tr>
<td>June 14</td>
<td>137</td>
<td>MGIO tends newly fledged young of a 2nd female (inferred). GIOF(A) carries nest material. Catch fledgling and MGIO.</td>
</tr>
<tr>
<td>July 21</td>
<td>139</td>
<td>Songs heard by Schneider.</td>
</tr>
<tr>
<td>July 16</td>
<td>141</td>
<td>Silence.</td>
</tr>
<tr>
<td>July 25</td>
<td>195</td>
<td>Not found.</td>
</tr>
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<td>July 31</td>
<td>199</td>
<td>&quot;</td>
</tr>
<tr>
<td>August 1</td>
<td>207</td>
<td>GIOF(A) (molting) on TD64.</td>
</tr>
<tr>
<td>August 7</td>
<td>210</td>
<td>GIOF(A) (molting) on TD64.</td>
</tr>
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<td></td>
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<td>GIOF(A) (molting) on TD64.</td>
</tr>
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<td>May 25</td>
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<td>31</td>
<td>109</td>
<td></td>
</tr>
<tr>
<td>June 1</td>
<td>111</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>115</td>
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PAIR Gll

Songs from TGll heard from TG6.
Discover pair. GllF on first (? ) nest, (with four fresh eggs).
4 eggs.
Incubation.

Not visited.
Nest fails during day; contains wet yolk.
GllF builds undiscovered second nest.
Nest found; building.
No activity at (high) nest.

GllF on nest.
No activity at nest.
Pair near nest; distraction display.

Nest has failed; (building begun). Cage FW's attract no attention, not heard.
Third nest found; building.
Nest progresses.
Pair together.
Incubation.
Incubation. Type-8's heard.
Incubation. Silence.
D65Y put near nest. GllF reacts interestingly; MGll surely has gone.
Incubation.

Band 3 young. MD6h sings on TGll.
GllF feeds nestlings. MD6h's songs probably heard.
Catch GllF (not molting).
Nestlings present at 1900.
GllF tend fledged young.
GllF (neat plumage) tends young (number ?) on TG6.
GllF (neat plumage) tends GllbB (described) on TG6; (last record for her).
Not found
MD71 on TGll.
**MD50**

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**MD50** returns to old territory.
**MD50** fights **MD69** and another.
**MD50** fights males on **TD69** while **MD69** is off territory.
**MD50** on territory.
No female.

**MD50** disappears permanently.
**TD50** is taken over by other, neighboring males.

**M69**

| April 25 | 33    |

**M69** is on V at I.U.; **T69** was taken early by another male.
**M69** is with unbanded female on V.
**M69** is on female.
**MD50** disappears permanently.

**MD36**

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Songs from **TG9** are probably **MD36**'s.
**MD36** sings constantly on **TG9**.

**Silence on TG9**.
**MD36** (molting) is on old **TD36**.
**MD36** is back on **TG9**.
**MD36** (traces of molt) has returned to old **TD36**.

**Djhf**

| April 25 | 32    |

**Djhf** is on **N** end of **TD58**, being followed by **MD58**. (She was not seen again, although at time I thought she built first nest found here.)
**Dh2F(B)**

**April 22**

Page 20, 23

- Dh2F(B) returns, is courted by MD60 and MD58.
- Dh2F(B) is with MD60.
- Dh2F(B) disappears permanently.

**D52Y**

**April 28**

- 40
- 42
- May 13

- 72

- D52Y is on TD69, exploring.
- D52Y is near MD69. Nest fragment close by. She calls. (Last time seen.)

**Dh9Y**

**August 3**

- 209
- 7

- 212

- Dh9Y (molt nearly complete) is on TD64. She is a female.
- Dh9Y (traces of molt) is on TD64 with G10F(A). (Last time seen.)

**Dh6B**

**August 30**

- 22h

- Dh6B, a female, is in E field; molt complete.

**D3F**

**September 11**

- 23h
- 2h8

- D3F (traces of molt) is on TD29.
- D3F (head still molting) is on TD29.
April 14

Sunny most of the time, warm, pleasant. Present at Dunn from 0800 to 0930.

No PW's. A number of Blue-gray Gnatcatchers and a Louisiana Water-thrush have come in. Saw a muddy, sluggish 3' racer, a tick. Bob-Whites have begun to sing.

April 15

Warm with a S wind, a changeable sky; shower from 1130 to 1200 but otherwise mostly sunny. Cover E, N, far N fields. Present at Dunn from 0800 to 0930.

No PW's but Frey thought he heard one in his area. Found years' first box turtle, a dragonfly. Pine-woods Sparrow singing for first time, in E field. Pair of Bob-Whites in our yard.

Vegetation: Small green leaves just opening on cherries and 1 or 2 scrub elms have small leaves. Buckeye leaflets are 1" long and the trees are green. Maple buds have begun to lengthen and are green; white pine buds began to grow a little today or yesterday. Antennaria about 1/2" high. Redbud buds are purple but very small. Some dogwood buds are opening enough to show insides of flowers.
April 16

Very changeable. Calm and gray w/a S wind at dawn; 64° at 0600. It then clears slowly, showers at 1000 for a few minutes, gets hot, threatens to rain heavily at 1500 but in fact only blows and thunders a lot w/a light rain, clears somewhat. Present at Dunn, I.U., Griffey numerous times all day from 0630 to 1700, w/ exceptions from 0930-1000, 1230 to 1345, 1415 to 1600.

PW's arrived, as did House Wrens, a Black-throated Green Warbler, a Myrtle, Chimney Swifts, Grasshopper Sparrow; big movement of Ruby-crowned Kinglets.

Cover W field slowly and carefully from 0630 to 0720 and then hear PW insipids and a Black-throated Green song. Find 2 male PW's, one of them MD51 [new MD67] (R-L, B-R), the other unbanded, at the hilltop, just W and NW of MD51's successful nest. They could have been singing here as I passed to N on TD 50-52 some minutes ago, but I doubt it. They are having an encounter, and this continues without interruption till 0830, when I leave with the fight still going on. It is the circling chase type, with MD67 always the pursued except for perhaps once at 0830; I can identify the birds individually on about 15 pursuits. Often MD67 seems to try to elicit a chase. There are no lines; the area is an oblong 80 x 50 yards, with the two concentrating in 1 or another part from time to time. Flights are neither fast nor slow, just a methodical pursuit for sometimes as long as 20 or 30 seconds at heights of from 3 to 15', mostly at about 6-8'. Vegetation is relatively thick here, and they weave through trees, separated by from 5 to 25', usually 10 to 15'. The course curves a lot, is not a true circle; often when a flight is about to end, the pursuer will pull out by executing a tighter curve than the
other. Little or no unusual wing movements. Most of the time the two
sing a lot, singing only insipids and slow buzz songs with distinct notes.
The rate is 3-4 per minute except when the flights are long; some normal
song in flight, but it may be begun while birds are perched. No calling.
Have neglected to mention that not all flights involve long pursuit: a
bird will fly to where the other is seen or heard and the other will fly
10 or 20 yards on; presumably the unbanded male does most of this flying
toward the other, though MD67 also flies on a tangent toward the unbanded
male and sometimes elicits pursuit in this way.

Did the unbanded male arrive earlier and take up a position from
which MD67 seeks to dislodge him? Have I ever seen a pursuit like this
between 2 last year’s neighbors? Is the pursued bird always the newcomer,
and does he ever lose in the sense of disappearing completely; doesn’t
this sort of flight mean that he is determined to stay?

At 1630 I return to the W field. There is very little song, a few
faint insipids from the vicinity of the TD 50 elm (singer unseen) and
later about 5 chatters from MD67 some 40 yards NE of the W sycamore.
MD67 is foraging in a leisurely way at about 2’ in the haws; once he
gets something in the grass. Silence after his 5 songs.

Old TD 54: Silence at 0830.

E field at 0845: An unbanded male [possibly MD58] chatters in the
TD 43 tree row and in the S end of the N field, and MD45 [new MD60]
(S-R) sings type-8’s and Field Sparrow insipids opposite him just N of
the depression in the N field, i.e., at the S end of TD 45. The birds
seem to sing antiphonally at a minimum of 30 yards apart; the unbanded
male calls a few "checks." MD60 then drifts NW, goes on to W woods, hawking for food once. He sings type-8's as he goes. When I return from the N at 0915 the 2 males are both singing type-8's and insipids at each other; MD60 is 30 yards W of the tree row, where the other is. MD60 flies to the tree row and they sit at 20', some 8' apart, relatively still except for tail bobbing and a little hopping. MD60 drops at the other but misses him by 1', and the two then move along S through the tree row at heights of 6-25' and from 8' to 10 yards apart. Both sing faint insipids. MD60 drifts toward his old territory, and the unbanded male (very well marked) forages slowly around on TD 43 till I leave at 0930.

Far N field at 0900: MD49 [new MD64] (ROS-L) sings type-8's, some rather weak, through the W side of the field.

TD 39 from 1000 to 1010 and from 1600-1615: No Pw's.

Griffey from 1020 to 1040 and from 1340 to 1400: No Pw's, although Schneider heard one [possibly MG10].

T70 at 1045: No Pw's during 10 minutes.

T72, 73, 69, V from 1110 to 1215: No Pw's. In the valley between T 69 and V is a dead elm stub w/ a freshly made hole, beveled below; a male Pileated sits motionless, facing straight out and thus giving a peculiar striped appearance.

Cardinal male at Griffey w/ S-L makes what looks like a sortie into another's territory, his wings fluttering like a male Pw's in courtship; shallow beats. See a female Cardinal building on next territory.

Vegetation: Progress has been fast last 3 days. By end of day beech woods have a brownish look from swelling buds, some maples are tinged green from buds and flowers, and redbud flowers are emerging
from buds. Elms, haws, and cherries all are leafing out, so that W field looks light green. Antennaria as high as 2 1/2". Rest as described yesterday.

Summary: I saw 5 males and Schneider may have found a sixth: old MD45, 49, and 51, and unbanded males on old TD 43 and 50.
April 17

Drizzling from 0530 to 0830 w/ a heavy S wind wh/ began at least as early as 0200 and lasts all day; 70° at 0500, slightly cooler during day. Rain at 1300, clearing but blowing violently at 1600. Present at Griffey from 0530 to 0545, at I.U. from 0545 to 0615 and from 1045 to 1145, at Dunn from 0745 to 1030. Not much migration.

Griffey: Silence.

I.U. (T 70, IV) at 0545: Silence.

W field: MD67 is only male seen here, though I may hear one once in SE corner. MD67 chatters irregularly, sometimes often, moves constantly over whole field; hard to follow, with some flights 50 yards and 5’ high. E.g., I find him at 0745 at old TD 16 cherry and follow him to chinquapin oak, then S along E edge to path, where he falls silent briefly; this takes 20 minutes. From 0835 to 0845, a similar series of constant movements. He stays low nearly all the time, from 3 to 15’, I’d guess. Note MD67’s movements are confined to W field.

MD67’s return is important because he moved off territory in late summer last year.

Far W field: Careful walk to N end of TD 39, w/ no Pw’s. See dead 3 1/2’ milk snake somone killed.

E field: As I go N I find unbanded male chattering often high in tree row on TD 41. A male wh/ may be he chatters a few minutes later in the TD 42 thicket in N field, staying at 20’ in a 28’ cherry and singing as regularly as if on territory. When I return at 0945 there are 2 unbanded males, one [possibly MD58] at the N woods edge of TD 44 and then moving S to have an encounter w/ the male on TD 41. The place is at the TD 41-42 line in the W tree row. Once I seem to flush them up
from about the same spot on the ground, but I get no idea what was going on. Then they perch 4' apart at 8', move 20 yards S, one about 20' behind the other. There they perch at 20', then separate. This was all w/o display or nervousness, only a few insipids.

Just before foregoing encounter the male to the S flew S to the old TD 8 tree clump. MD40 [new MD56(1)] (S-L,B-R) was there, perched quietly at 2'. The two sat normally, 10' apart, and in 20 seconds or so the unbanded male went N. MD56(1) sang 1 rasping song, 1 faint insipid; foraged, once on ground. Note his silence; I found him by chance.

N field: MD60 sings a few type-8's as I return, in center of TD 45.

Far N field: MD64 sings frequent type-8's, moves little, in N center of field on old TD 49. At 0920 an unbanded male chatters twice, a minute apart, in NW corner of field. MD64 immediately begins moving in this direction, coming by stages, to judge from his song. Unbanded male seems to disregard MD64's songs, disappears behind a thicket. Just then MD64 flies to the same spot in the thicket, sings there 3-4 times, then sings once well to E. Silence after this (0933).

I.V. (T 72,73,69) at 1045: Silence.

Summary: Little sign of migration of any species. Old MD40 appeared, and there are apparently 2 unbanded males in E field, an increase of 1. However, male in W field seems gone. Saw 4 banded and 3 unbanded males.
April 18

Clear, 34° at 0500, slight dew, light frost on W hilltop at Dunn. There was a strong NW wind to at least 2000 last night, and a NW breeze rises at 0600. Present at Dunn from 0530 to 0715 and w/ R.A. Johnson from 0930 to 1145, at Griffey from 0715 to 0735, and at I.U. from 0740 to 0800.

No migration at all last night.

West field: MD67 found only on my first visit when alone; not a sound in late morning though it's sunny and about 70°. At 0545 he is foraging on bare twigs and branches at 2-8', apparently not going especially to leaf buds; he seems to find little. Hear 5 chatters in 5 minutes; it's 40°. Place is 30 yards E of W sycamore. At 0630, I find him in very SE corner of field, S of patch, foraging slowly at 3'. He sings 2-3 times in 5 minutes.

Far W field: No PW's.

E field: An unbanded male [probably MD58] chatters in fence row on TD 43 at 0645, and later I hear 2 chatters at sink hole. At 0930 a male [probably MD58] is N of the sink hole, chatters, gives big response to my hiss, turning in flight to come to me.

N field: No PW's on either visit.

Far N field: No PW's on either visit.

Griffey: No PW's.

I.U.: No PW's on IV, T'70.

Idea from Johnson: Re male PW's' moving to new territories; the nature of PW habitat and its early stages of plant succession would make it advantageous to species not to become too attached to a place; it could stay w/ pioneer plants invading fields, etc. It seems to me that
flexibility in territory lines (e.g., MD12, 21, 43; MD31, 53, etc.) is another aspect of same thing, as may be M70's moving off an isolated territory. Note fact that M72 and MD37's territories had been disturbed when they moved. Was M48's departure from V followed immediately by the years in which only 1 pair nested there? I think not.

At 1130 we hear many loud squeaks followed by recognizable towhee notes. Two males and 2 females are in a skirmish. A male follows a female 20', lands on her, stands about at base of tail and picks or pulls violently at upper back. Clearly an attack, not copulation.

Gray fox on TD 60.

Summary: Only 1 banded and 1 unbanded PW seen. Brisk NW wind and cool night probably responsible.
April 19

Moon visible through light overcast at 0430, after a clear night; 40° at 0500; no wind till daylight when SE breeze rises and it clears completely and warms up; light frost on hills. Present at Dunn from 0530 to 0745 and from 1315 to 1430, at Griffey from 0745 to 0810, at I.U. from 0815 to 0840 and from 1045 to 1200.

No migration during night.

E field: At 0540 there are 2 unbanded males chattering in SW corner and temporarily holding land divided about by E-W path. One feeds persistently in a cedar. There is a 15-minute (at least) series of silent back and forth flights over a 30-yard straight course, at 4-10' high; bobbing flight, no fast pursuits. Also some backing and filling in berries and a few faint insipids. One gave big response to hiss when I arrived.

When I pass again at 0650, 1 unbanded male chatters SW of tree row and MD56 (l) (S-R, B-L) gives chatters and rasping insipids 40 yards E of old TD 8 tree clump, at W edge of last year's territory. Forages low, then sings several times at 15' in top of bare tree. At 1315, MD56 (l) chatters just W of tree row between E and wooded field, flies W in 2 flights to SW corner of field, falls silent there.

An unbanded male was chattering in the W tree row at about the TD 41-42 line at 0730. He called many "checks" at 35' in a big tree, sang once, in 1 minute flew far W high, at least as far as W field.

Two female and 7 male cowbirds in noisy early morning flight.

W field: At 0600, MD67 forages actively on SE hillside, chatters 3 times a minute or more. At 0640 he sings loud chatters every 15 seconds on TD 50, then goes NW. At 1350, he and an unbanded male [probably
MD68] are 35 yards S of W sycamore. There is much silent flouncing
(looks almost like hawking insects) w/o any attempt to stay close; however, there is a 15' flutter-up. Then comes a long flight NW by both, not a close pursuit, followed 1 minute later by insipids by the strange male and chatters by MD67 near the D 51 successful nest.

Far W field: No Pw’s.

N field: Silence in morning. At 1330, MD64 sings type-8’s on S end of TD 46. Some 40 yards to S, an unbanded male sings chatters, type-8’s, and double songs composed of these two run together. To S, at N end of new TD 60, MD60 sings type-8’s; first sign of him in 3 days. MD64 flies N, and the three have no close contacts.

Far N field: MD64 sings type-8’s, forages at 4-10' in NE corner of field, moves SE to NW corner of N field, then goes E along fence row and falls silent; this all lasted 5 minutes.

Griffey: No Pw’s.

I.U.: An unbanded male skids on T69 at 1120, the first skid songs of year. Cover T 70, 69, 72-73, IV, V.

Vegetation: Very little change during last 2 days. A dogwood has open flowers 3/4” across, but others still have small buds.

A Carolina Wren nest in our garage has egg 1 at 0900 after none last night; female on at 0528 while another wren sang near garage. Saw one carrying material to nest on 4/15; no eggs since then, till today.

Summary: About as on 4/17, w/ same 4 banded males seen today plus perhaps 4 more unbanded ones. These latter are presumably not all the same as those of 4/17; e.g., for first time, one was on T 69 (wh/ is unchanged since last year but is now bordered by golf course).
April 20

Clear calm night w/ light overcast beginning at sunrise, when a cool SE breeze rises; 48° at 0500. At 0700 it clears and at about 1030 a hot SW wind begins and brings a light hazy overcast; hot. Present at Dunn from 0530 to 0715 and from 0800 to 0915, at Griffey from 0915 to 0930, at I.U. from 0930 to 1030 and from 1245 to 1315.

Very little migration. As yet no Wood Thrushes, Catbirds, Kentucky or Yellow Warblers, etc.

**TD 56**: MD56(1) chatters and forages at 0540 in the large tree row maple on W TD 41. He goes S to TD 8 tree clump and then E to his own territory at 0545, but when I pass N at 0800 he is again foraging and singing in the big maple. This tree is budding and has flowers and must be a good source of food. MD56(1) is not in evidence at 0915.

Flight of 4 female and 2 male cowbirds.

**W field**: At 0600 MD67 chatters on old TD 51, and an unbanded male [hereafter called MD68] chatters and sings insipids on TD 52. At this time a second unbanded male passes silently and nervously N out of sight through TD 52. MD68 then seems to go into the tree tops in the ravine W of the W sycamore. His loud songs are audible as long as I'm near, and he's still singing here at 0650 as I return. At 0655 he moves E across TD 52, then N to the very tip of the field, singing loudly the whole time. He then goes NW into the tree tops of the ravine or beyond, and I quit trying to find him.

**Far W field**: A Field Sparrow begins its song w/ 3 and sometimes 4 notes so much like the beginning of a type-8 that he causes me to follow him. Notes are somewhat faint and switch into the normal end
of a Field Sparrow song.

A female towhee attacks and chases another female. A male then attacks the attacker and a second male darts at him. Much normal calling and sputtering. Height is 1' and less, in grassy berry patch.

Hear 2 or 3 weak chatters and finally see a PW, wh/ is silent but probably did the singing. He has an oddly shaped upper mandible, wh/ looks like a vireo's, only more so: . It is symmetrical when seen from in front, may be slightly browner than the normal part of the bill. He forages typically.

TD 67: See above under W field. At 0700, MD67 sings loudly 4 times a minute for 2-3 minutes on old TD 50 and 51. He then flies SW to area of big elm at Allen's fence and sings there as I go.

E field (in addition to TD 56): An unbanded male [hereafter called MD58] chatters in the TD 43 tree row, probably the one that has been here since 4/16. MD60 sings type-8's to the NW, comes to TD 44's NW corner and encounters MD58 (wh/ now is singing rasping insipids). The two flounce back and forth mildly in a parallel course S along the tree row, staying 10' to 5 yards apart, 20 to 25' high. Once MD60 pulls his head in and hunches his back, then sings quietly very like a Field Sparrow. They drop to field cover height. MD60 then moves NW into the cherries in mid-TD 60, sings loud type-8's often, as though in full territorial behavior. I can hear MD58 singing too, and at 0900 when I return to S both are still singing. The effect of the weather seems to be to contribute to territorial behavior in the few males here.

MD58 sings in tree row as I return and comes 20 yards toward me when I hiss. He turns and starts to fly back, sees a brown moth (like
noctuid or geometrid) flying by. He turns in flight, chases it, gets it, goes low out of sight. I hiss and he rises to 8', drops moth, dives and recovers it, eats it wings and all. The moth's wingspread is about 1".

**TD 60:** See just above.

**N field (except TD 60):** An unbanded male [probably MD63] begins to chatter at 0830 at the TD 46-47 line toward E side of field, at 0855 is singing loudly in mid-field.

Idea: It may be impossible to class males as early and late arrivers on migration, in view of the evidence that males take up temporary territories.

**TD 64:** MD64 sings steady frequent type-8's.

Griffey: No PW's.

T 69, 72, 73: No PW's at I.U.

T 70 at 1245: No PW's.

**Summary:** Still the 4 banded males on territory, plus 5 unbanded males seen. Of these, 2 were not behaving at all territorially and 3 were singing loudly and often.

Carolina Wren on nest at 0518, other singing in yard. Egg 2 at 1130.
April 21

Raining lightly and steadily till 1200, beginning w/ a thunder shower, last night at 0030 and continuing ever since; 57° at 0500; no wind. At about 1230 it clears somewhat and from 1400 on is clear and fresh, 70°. Present at Dunn from 0530 to 0730 and from 1330 to 1600, at Griffey from 1230 to 1255, at I.U. from 1300 to 1330.

Some migration; this is a period of good conditions. Arriving last night were 2 Wood Thrush, 2 Yellowthroat, a kingbird, a Palm Warbler, some 3-5 Prairies, and many WeV’s.

**Morning trip to Dunn:**

**TD 56:** MD56(1) singing and feeding in the same maple tree on W edge. Also feeding there in tops are chickadee, gnatcatcher, and titmouse.

**TD 67:** MD67 sings as usual.

**TD 68:** MD68 chatters here.

**TD 58:** MD58 chatters on TD 43-44.

**TD 60:** MD60 sings type-8’s in mid-field.

**Old TD 46-47:** The unbanded male [probably MD63] chatters well into TD 47, in the NE corner of the field. He then moves S singing.

**TD 64:** MD64 sings type-8’s on territory.

**Griffey:** No Pw’s.

**I.U.:** No Pw’s on T 70 or IV.

**Afternoon trip to Dunn:**

**Far W field:** Hear “checks” and hiss, and an unbanded male comes. Some of his left rectrices are about 15 mm. short. [This was MD73]. He forages in a big maple and attacks a gnatcatcher.

**TD 53:** MD53 [new MD69] (GR, YL) is skidding about where his first nest was last year; it’s 1415. MD68 chatters loudly, centering his
territory just E of the W sycamore and often going W into the treetops in the ravine. MD69 and he have a brief silent encounter, MD69 singing chatters and insipids. MD69 then goes S and covers his territory of last year. See TD 69, below.

S of fence: An unbanded male [possibly MD70] chatters on Allen’s land. I hiss and he comes immediately, coming straight to the spot from some 30-40 yards away. I’ve noticed before how directly Pw’s can fly toward a brief sound.

TD 50: An unbanded male chatters and forages here. At 1500 he acts territorial and has evidently come to terms w/ MD67, wh/ sings from just S of the big cherry and on to N.

TD 68 and 69: At 1445, MD69 and 68 are chasing each other back and forth across a zone that divides them. The flights, many 25’ high, are too straight to be the circling type; i.e., there is some straight crossing and recrossing, some parallel moving, no true circling.

All 5 males from Allen’s on N are singing loudly at 1500, as though fully established on territory.

TD 56: MD56(1) chatters in SW corner of E field.

TD 58: MD58 chatters in E-W fence row.

TD 60: MD60 is in his NW corner, singing type-8’s at 8-12’ in the W edge.

TD 64: MD64 sings type-8’s at the N edge of his 1959 territory, at 1530.

Vegetation: Redbud is not quite at its peak, cherry is fairly well developed, and maple trees show a light green from flowers and buds. Tulip trees have an occasional leaf, and most elms and haws have small leaves.
Summary: Old MD53 came in, so there are 5 banded males. In addition, there are unbanded males clearly on territory on old TD 52, 43-44; there were males today on TD 54, TD 50, and TD 47; a male appeared on old TD 35. Thus, a moderately good migration of PW's and other birds last night.

Horned owl on TD 60.

Eastern and tiger Swallowtail seen.

Carolina Wren went to nest between 0518 and 0521, and the male began to sing near the garage for the first time then. Egg 3 at 0700.

Black hog-nosed snake found.
April 22

Clear and windless all last night and clear and hot all day; small moon; heavy dew. Present at Dunn from 0515 to 0900 and from 1400 to 1645, at Griffey from 0930 to 0950, at I. U. from 1000 to 1145.

Big migration of PW’s and of first Red-eyed Vireo, Yellow-throated Vireo, Cerulean Warbler, Scarlet Tanager. Also more Wood Thrushes and Yellowthroats.

TD 39 at 0515: A poorly marked male forages and calls “check” frequently as for 10 minutes he moves in front of me, goes to TD 35. No songs. At 0900 MD73 (short left rectrices) calls and chatters in the E edge, goes into the ravine trees.

TD 67: As I come to W field, MD67 may have a few seconds’ encounter w/ MD69. MD67 chatters as usual on his old territory the rest of the time.

TD 54: I hear MD54’s [new MD59] peculiar song as I arrive, and I find him (R-R) having a long circling encounter w/ MD68. MD59 is always the pursued, and he persistently flies far into the territory of MD68; his long flights circle over it, and he won’t stay out. He sings his old song when he stops a moment to perch, and MD68 chatters and sings insipids. Some “seeps” in flight. Flights seem to last as long as 10 seconds, cover perhaps 200 yards of circling at 5 to 15’. The center is about 30 yards SW of the W sycamore.

At 0600 I leave the scene after 15 minutes to see if old TD 54 is occupied; the unbanded male [probably MD70 or 71] is on Doerr’s chattering loudly. Why is MD59 fighting for a new territory?

At 0615 the encounter continues at the same place, but now MD69 has begun to guard his N line (about where it was last year) against
invasions. MD69 drives out whichever fighter is on his territory and is largely responsible for the many high "seeps" heard. He seems to call when he sees an encroachment and flies to it. He doesn't circle or join the long flights. All 3 males sing their normal main songs and also insipids. At 0630, I leave with the encounter continuing.

At 0815, MD59 has disappeared from the W field and the other males are singing. I go S to old TD 54 and at 0830 find MD59 there, on his last year's territory, chattering on Doerr's. (Note, I have never heard him sing the peculiar song when on his own territory.) The unbanded male [thought to be MD70 or 71] has disappeared; he isn't S of Doerr's either.

**TD 69**: See above. MD69 skids regularly on his territory.

**TD 68**: See TD 54. MD68 seems fully entrenched on old TD 52.

**TD 50**: MD50 [no new designation] (Y-R) is back, skidding steadily on his old territory at 0545. He moves at a slow pace over his regular hillsides and sings as he goes. Note that MD67 seems to have given up TD 50 to MD50 w/o a struggle; I'm here about 30-45 minutes after daylight, and MD67 is well to N. I see no contacts between the 2 males at all.

It must be significant that old MD50, 51, and 53 resumed old territories w/ no fighting observed and that all fighting seems to be between strangers.

**TD 56**: MD56(1) chatters regularly in small trees at 0635. See below under TD 41.

**TD 58**: Regular chatters around sink hole.

**TD 60**: Loud regular type-8's in cherries on mid-territory. At
0710 I see him chase a PW wh/ lands in a little tree at 3' and sits quietly next to the trunk. It is D42F(B) [no new designation] (25's R). She disappears and he moves about, singing constantly, 2 or 3 times fluttering a little. Note that this is 150 yards from D42F(B's) nest of last year, and that she was the first female to return last year too. See TD 58, below.

**TD 46 at 0645:** MD46 [new MD62] (B-L) is back, and he is having an encounter w/ MD63 on old TD 47. It is not a circling fight but a series of backings and fillings with backs hunched (singing insipids) at the N line of old TD 46. MD62 sings type-8's. Once he drives MD63 from a perch by a dash at him. MD62 is never seen encountering MD60.

At 0700, MD62 moves over territory and sings.

**TD 63:** See TD46. [At this date MD63 holds only old TD47.]

**TD 64:** MD64 sings loud type-8's, covers all of far N field. See TD64, below.

**TD 58 at 0723:** I'm watching this male singing in the tree tops of the N-S row when D42F(B) appears, foraging about 150 yards from where she was at 0710. She is at 5', 30 yards from him, and he is singing; I'm convinced he doesn't see her at first. He sings, back to her, and looking W, and she moves along 5' or so at a time, in the scrub E of the tree row; her direction is toward him. He seems to be looking back over his shoulder at her; I saw nothing to mark his sighting her. She moves little, is silent (I'm w/i a few yards), is in open and and completely visible to him, is calm, does not display. He's at 35', she at 6'. After some 45 seconds or more of this quiet perching 30 yards from him, she starts to fly N on a long low flight. He drops immediately and follows, pulls out after 40 yards and flutters in a curve.
to a perch. There he sings constantly. I don’t see her. It’s clear he responded to her as to a female, not just as to a Pw. Did he recognize her simply because she didn’t give some pronounced male response? Are all Pw’s initially treated as females?

**TD 41:** At 0735 while I’m writing just S of E-W fence row I hear “seep” and see MD41 [new MD66] (G each leg) move quietly and quickly out of sight through berries, going NE. At 0743 I’m still looking for him, and he sings a loud short chatter just S of the fence row, on old

**TD 42.** This may have been his first song after arriving. Was his quiet movement some sort of reconnoitering? After 2-3 chatters he sings his unusual rasp or buzz song preceded by little calls; he also “seeps” 2 or 3 times.

After 1 1/2 minutes of this singing MD66 is attacked from the N by MD58 and he retreats 30 yards. There the two face off for 10 seconds 3 feet apart. Then MD58 flies at MD66, and they bob on to S to the big maple. Here MD58 w/ tail spread bobs in flight before MD66, but MD66 does not chase. MD58 flies N at 0749 and chatters at E fence corner, while MD66 sings at the maple.

I go part-way into the field to see the meeting of MD56(1) and 66. At 0755, MD56(1) begins to get closer to the big maple, a major foraging spot of his to date and now occupied by MD66. I don’t see him enter, but at 0757 the 2 males flutter down kicking at each other, landing in the berries after a 30’ descent. I can’t see them and go up. In 30 seconds MD56(1) flies up w/ a very bobbing (tail down) flight about 2’ high, moves S 5 yards at a time. MD66 follows about 5 yards behind, pulls out. MD56(1) in a minute or less goes S to the TD 8
clump where he sings constant chatters. After 2 minutes he heads slowly E. At 0810 he's chattering loudly, probably from 1 of 4 big budding maples at S end of field.

The foregoing episode suggests that the whole territory question between these 2 former neighbors was settled in 1 meeting lasting about 2 minutes.

In the encounters described above MD66 about 5 times sang skids which suddenly switched into chatters in the middle. He also sang some 5 of his typical call-song combinations.

At 0800 I saw 2 warblers fly high from the W tree row toward the E; at least one was a PW. Were they migrants?

Griffey from 0930 to 0950: No PW's.

I-U. T 70 at 1005: M70 [new MD57] sings irregular, occasional skids, moves around a lot in tree tops, falls silent (2 S's-L).

T 69 at 1030: An unbanded male sings very frequent skids.

V at 1115: There are skids here and on X, and I find MD57 (2 S's-L) on V. At 1130 he flies far toward NW, falls silent. T 70 is probably 1/3 of a mile away. [700 yards on map].

TD 66 at 1430: MD66 and MD58 are having an encounter about at D4ZP(A)'s first nest site, in NW corner of field. Both sing insipids, and MD66 gives his peculiar call-song and his skid-chatter combination. Once the two sit 3-4' apart w/ MD66 at 1 1/2', his back to the other, wh/ is at 4'. For 1 1/2 minutes they perch thus, motionless. Does the red in the back have some function in this rather tense perching? MD58 turns and flies 10 yards N, goes on far N. Note MD66's holding the NW corner.
TD 58: See just above.

TD 60: MD60 at 1435 flutters W from the fence row, goes to a tree top and looks alertly around. D42F(B) (2 S's-R) forages silently just inside the woods N of old TD 44. In 5 minutes I see MD60 dive on her; there is a 20-yard twisting pursuit in the woods; he goes on beyond her and lands w/ tail bobbing, perched tensely. I go on.

TD 64: MD64 sings several series w/ long breaks. He also sings insipids in the NW corner of the tree row, probably because MD63 from the S is foraging and calling in the NW corner of the N field.

TD 63: See just above.

TD 56: MD56(L) sings.

I collected insects at 1430 by beating, getting mostly beetles and many spiders. The maple flowers yielded nothing; but there are many flying insects at them, and these must be what the birds are eating. Hot, clear when I collected.

Summary: Four unbanded males arrived on Dunn, making the number there 9; and M70 appeared at I.U. Also holding territory on Dunn are an unbanded male [MD73] in the far W field, MD68 in the W field, MD58 in the E field, MD63 in the N field, a male on T 69.

The first female of the year (D42F(B)) returned.

Other notes: The Carolina Wren was not on her nest at 0508, although she spent the night there; there were 3 eggs then, 4 at mid-morning.

Zebra Swallowtail; many butterflies.

A male towhee hangs below a female and pulls her tail hard, the way a PW male does. She is at 3' in a bush; this lasts 30 seconds. There are loud calls.
Two male cowbirds have a struggle on the ground at Griffey at 0950. At first they thrash around; then one gets the advantage and stands on the other, wh/ lies on its back w/ its wings spread. The one on top pecks hard and repeatedly at times, and there are periods of little action. After about 1 minute the victim escapes and starts to fly. The aggressor catches up after about five yards, and they fall to the ground and seem to repeat the first performance. However, it lasts only 15 seconds this time, and I see it less clearly. The lower again escapes and the two fly out of sight in close twisting pursuit. The whole thing happens in silence.
April 23

Clear night w/ very little wind; 64° at 0400. At about 0900 it gets humid, partly cloudy, and windy and looks as if a thunderstorm might develop; the rest of the day is hot, w/ a clear afternoon.

Present at Dunn from 0423 to 0450, from 0600 to 0945, and from 1730 to 1815; at Griffey from 0955 to 1010; at I.U. from 1030 to 1130.

Fair migration last night, but no new PW's. New species are Catbird, Crested Flycatcher, Blue-winged Warbler, Nashville Warbler, Yellow Warbler.

I arrive early to hear first songs but more especially to see if there is excitement and dawn calling by newly arrived males. Cardinals, towhees, thrashers, Field Sparrows, doves, and a Great Horned Owl are all singing at 0423.

At 0430, MD56(1) begins to skid, slows down to a chatter. There is enough light to write by w/ ease, probably 2-3 F.C. He first sings nearby at the S edge of the field, moves W across it about 0431. I go N.

MD66 and MD58 are some yards apart at the E fence corner, MD66 nearer the W corner. Both sing buzz songs w/ the little call notes preceding, ie., the song wh/ MD66 often gives. There are no excitement notes between, but their songs are probably a manifestation of aggressiveness. MD58 gives some typical insipids and MD66 some skids. MD66 moves through low berries in dim light.

MD56(1) is at SW corner at 0442, giving some insipid type songs w/ buzzes, some chatters, no calls. No other PW's are near him.

At 0447, I go to the W field, where all 4 males sing their usual songs. No calls and no insipids.
TD 73 at 0600: MD73 skids constantly on S TD 39, goes to TD 35. He starts to fly across field to SW, and I see a PW some 100 yards from him, at 20' in a bare tree. MD73 drives it out of sight. At 0715, he's singing steadily on TD 35.

TD 59: Silence at 0630. I go to Brown's w/o finding a PW. At 0650, MD59 chatters in Allen's trees. At 0905, I'm on TD 43-44, and hearing nothing I sit to wait. About 0915, MD66, wh/ has skidded constantly to S, calls in the tree row on TD 58, then flies well out on to old TD 43 and out of sight. I'd guess he became aware of the silence here and came over.

At 0916-17, I heard MD59's odd song N of the sink hole, 850-900 yards from his territory. He and MD58 are having a typical circular flight, w/ MD59 always the pursued. I note MD59 sings much the most (his odd song and a few chatters), while the other sings a few Golden-wing type songs. If MD58 fails to keep up active pursuit MD59 makes passes at him, flying to w/ 1'. The fight lasts only 8 minutes, and MD59 wins, for MD58 quits pursuing and pulls back 30-40 yards. MD59 advances, and the other retires more. Then for 5-6 minutes the two sing from 20-45 yards apart. MD59 sings about where the path forks (the center of the circular encounter), moves into the tree tops of the sink hole, and also comes due W of the sink hole. At 0921, MD59 draws closer to MD58, wh/ makes 1 mild dart at him. From 0930 to 0937 the two sing chatters, MD59 NW of the sink hole. Note again that the odd gurgling song seems reserved for fighting [error]. At 0937, there is a face-off in the berries where the path divides, the two 5 yards apart. MD59 now sings many of his odd songs, resuming
normal chatters when MD58 goes SW. At 0940 the two are spaced out about
on old TD 43 and 44; MD59 forages in field cover on TD 44. I leave him
at 0945.

MD58 probably used the N area, wh/ he relinquished, less than he
did the S area. Note that circular flights aren’t used only to reclaim
old territories.

At 1745 one male is chattering in the N part of the E field, but I
can’t be sure wh/ one.

TD 67: MD67 sings on territory.
TD 50: MD50 is on TD 50 at 0630, is in a 3-way melee at the TD 69
cherry at 0645. One male is MD69, wh/ MD50 fights (probably touches)
for 2-3 seconds. The third I couldn’t be sure of.

TD 69: See just above and below.
TD 68: Much moving and chattering, w/ an encounter w/ MD69 S of
the W sycamore.

TD 56: MD56(1) chatters in tops of E tree row.
TD 66: See TD59. MD66 is in the NW corner of the field most of
the times I’m here, but in the evening is in the center and the NE corner.

TD 60 at 0820: MD60 chases a small yellow bird SW from the gun
trees and D42F(B) “checks” here; her calls attracted me. MD60 returns
quickly and sings irregular type-8’s, at first is tense, flutters w/
small beats on some flights. The female calls occasionally and forages
in low cover.

TD 62: Loud type-8’s on territory.
TD 63: Skids in N field.
TD 64: Full territorial behavior; high perches, loud frequent song.
See TD 59 above.
Griffey at 0955: A male chatters on TG 7.

T 70: No PW's (I.U.).

T 72-73: No PW's (I.U.).

T 69: An unbanded male skids constantly.

V: At 1110, MD57(245's-L) skids loudly here, 700 yards from T 70.

Vegetation: Maple leaves are small but developing fast; red bud at peak; apple blossoms have just opened. You can still see through a woods.

Idea: My seeing D42F(B) every day suggests that I'm reasonably efficient in finding females by watching males, i.e., that other females haven't begun to come yet.

Summary: No arrivals but MD59 has moved, MD57 seems to be on territory on V, and D42F(B) must be forming a pair w/ MD60.

Other notes: Carolina Wren on at 0419, off at 0511 w/ only 4 eggs at that time. Egg 5 found later in day. Male sang outside garage at 0506.

I see courtship feeding between the female Cardinal w/ the yellow and silver bands and an unbanded male. She may do the feeding.
April 24

Clear and warm w/ a SW breeze; 68° before sunrise. Present at Dunn from 0645 to 1045 and at Griffey from 1130 to 1200. All times today and hereafter are daylight saving.

Good migration conditions but no big developments.

**TD 73:** MD73 skids often on the whole far W strip N of MD55’s sycamore.

**TD 69:** MD69 is on territory at 0700, but at 0710 when I’m S of the fence on Allen’s I hear “checks” there and find MD69. He flies SW to Doerr’s, calls and skids 2-3 times in a tree there, goes SW out of sight. (MD59 has moved permanently and MD69 may be exploring because of the silence to the S of him.) I go S to Brown’s but find no PW’s, return to TD 69 at 0722. I then decide to wait and time MD69’s absence.

At 0823 there is still no sign of him, and MD50 goes on to TD 69. An unbanded male (not MD68, wh/ I hear) is here, as is MD67. MD50 sings loud regular insipids while the other two have an encounter (backing and filling, parallel moving) in the berries. The fighters sing insipids (MD67) and buzzes (the other, wh/ also gives moderate anger calls). At 0832, MD67 withdraws 30 yards and MD50 shortly attacks the unbanded male, flying in a slow way w/ a shallow wing beat. As the other male sees MD50 closing in on him he gives a loud burst of anger calls (remarkably like a young bird’s notes), and MD50 calls too. They perch w/ legs crouched, wings half open. MD67 then returns, MD50 withdraws; and the backing and filling, calling, and singing of insipids begin again.

At 0840 I leave this, all of which occurred in the middle of TD 69. MD69’s long absence suggests how territory switching can take place, how MD49 could have 2 separate territories last year, etc. Exploration goes
on at all times, I'd say.

At 1022, I return to this field and find all males but MD69 singing. At 1036, MD69 sings for the first time and I find him under attack from MD67. They engage in a long flutter-up which they keep renewing, so that it lasts about 8 seconds. This ends with the two fluttering out, flying slowly with arched backs and wings spread and beating only a little. There is a song duel as I go.

**TD 50**: See TD69. MD50 spends most time just W of the hilltop.

**TD 67**: See TD69. MD67 concentrates on the area of the cherry, on the E hillside. I probably see a female here briefly, legs unseen.

**TD 58**: Full territorial behavior, mostly on the W hillside.

**TD 56**: Territorial behavior.

**TD 56**: Skids in NE and central part of field.

**TD 58**: Silent at first; then MD58 chases a P NW SW, sings loudly on old TD 43. At 1000, he is silent again and I wait. He sings, and I find him fighting an unbanded male [probably MD65] just W of him and S of TD 60. They have typical face-offs W of the tree row, and the new male sings many insipids and gives anger calls.

**TD 65**: See just above for this new bird.

**TD 59**: MD59 chatters constantly around the sink hole and seems to be here to stay.

**TD 60**: After a long silence I hear D42F(B) "check" and find her foraging on mid-TD 60 w/ MD60 watching her 10 yards away. He dives at her and after a 2- or 3-second fast twisting pursuit she evades him. He lands, w/ wings spread well out, sings a type-8, flies normally 20 yards to the E woods, sits w/ wings partly open. His bill opens twice for 1-2 seconds w/ a second between.
MD60 may chase a Black-poll.

**TD 62:** Constant song all over TD 62, wh/ this year may extend farther N. See below under TD 63.

**TD 63:** MD63 after skidding in old MD47's cherries flies down to a bright female sitting quietly at 4'. She sits w/o yielding or flying and he goes on. He returns to her, and she drives him a few inches. This is repeated. MD62 has now come to the scene, and all move NW. MD62 sings normally there w/o being repulsed; both sing. Then they separate, sing normally.

**TD 64:** Constant type-6's all over the E 3/4 of far N field.

Idea: A good check on the percent of banded birds returning is the percents of unbanded birds to banded birds per year on a given area; but this also reflects territory changes of banded birds.

**Summary:** A second female has appeared (w/ MD63) and a new male is on territory on the S end of the N field, MD65. MD59 is settling down on his new territory.

**Other notes:** No more Carolina Wren eggs.
April 25

High, thin overcast at dawn, clearing early; hot day w/ little wind; 68° at 0530 (DST). Present at Dunn from 0600 to 0800, at Griffey from 0800 to 0815, at I.U. from 1500 to 1630.

Good migration conditions last night, w/ a number of PW’s, Myrtles, the first chat, a Baltimore Oriole, and an Olive-backed Thrush.

TD 73: Constant skids.
TD 50: Loud songs from tree tops as I pass.
TD 67: Typical territorial behavior.
TD 68: See and hear MD68 briefly.
TD 69: Loud frequent skids.
TD 56: As I come on to the SW corner of the E field there is a loud squeaky fight between a male PW and probably another; they disappear quickly. A bright unbanded female “checks” here, goes E along S edge of field. The males don’t return, but MD56(1) chatters to the N and is watching the female; he flutters a little. [He probably paired w/ this female.]

TD 66: MD66 skids in NW corner.
TD 58: MD58 is watching and following old D44F (B-R), wh/ is moving very fast from the E-W fence toward the big sycamore. He sings, flies along, parallel. She is only 50 yards from her 1959 home.
TD 65: Loud chatters.
TD 59: MD59 sings only a little most of the time I’m near, acts as if a female is present. At 0655 there is a circling flight w/ an unbanded male the pursuer (I think, though this would be odd). Once MD59 caught many insects by hawking. At 0740, regular chatters.

TD 60: MD60 and D42F(B) are 10 yards apart in mid-field.
TD 62: Frequent type-8's; see MD62.

TD 63: MD63 skids, is high in the cherries.

TD 64: Little song and much movement at first, then regular singing.

Griffey: An unbanded male chatters constantly on TG 6 and 7.

T 70 at 1515: MD57 skids loudly.

IV: A male sings type-8's on IV S while I'm on IV N, and there is a chatter on IV N. I then see a very long chase out across the valley, possibly all the way to V. Then 1 male sings both type-8's and chatters on both parts of IV; no bands.


T 69: The unbanded male skids constantly.

V at 1620: M69 is back (2 S's-R) and is skidding here. If he should stay on V, ought he be regarded as a male that changed territory? He may have done so only because he couldn't regain his old field from another male.

Summary: Probably a number of females come in, though I actually saw only 2 new ones (4 to date). One was old D44F. M69 returned, making 11 banded males.
April 26

Thunderstorm w/o much rain at 0530 after a clear night to at least 2000; showers to 0800, w/ overcast all day and a cold front passing through probably about 1630. Present at Dunn from 0620 to 0810 and from 1800 to 1900, at Griffey from 0810 to 0820.

Palms numerous, a male Ruby-throated Hummingbird, Kentucky Warbler.

**TD 56:** Silence for 5 minutes, then irregular songs. See MD56(3) fly silently N in stages along E part of field, probably to TD 58.

**TD 66:** Skids are so regular that I suspect no female is here.

**TD 58:** Very hard to stay with MD58 because he is silent and moves a lot. Probably has a female.

**TD 59:** MD59 is mostly silent; hard to see. Probably w/ a female.

**TD 60:** MD60 never quits singing. I don’t look, but suspect D42F(3) is gone.

**TD 65:** Irregular song. MD65 seems to have a female.

**TD 62:** Seems unmated.

**TD 63:** MD63 follows a female into the far N field and encounters MD64 on the E end.

**TD 64:** See above. No sign that MD64 has a female.

**TD 59:** MD59 behaves as though unmated.

**TD 67:** No sign of a female.

**TD 69:** Constant song: no female.

**TD 68:** Song pretty regular, but I can’t be sure if he’s mated.

[He was; nesting began today.] Some type-8’s.

**S of fence:** An unbanded male chatters on Allen’s [Probably MD70.]

**TD 55:** Silent in morning, but in late afternoon a new unbanded male [MD72] sings insipids and chatters here.
TD 73: Not found in late afternoon.


Summary: Probably two new males found, one in far W field, one on Allen's. Females are here in numbers, probably 3 in E field, 2 in N, and 1 in W. [Nest-building began today; see notes for 4/27 and 4/28.]
April 27

Clear, cool morning w/ a light frost and heavy dew; probably about 35° at dawn, calm; warming and remaining clear all day. Present at Dunn from 0615 to 0800 and from 1415 to 1515; at Griffey from 1400 to 1415; and at I.U. from 1330 to 1400.

No big migration. Pine and Orange-crowned Warblers, many Nashville.

**TD 73:** MD73 is w/ a bright female; occasional chatters. See a second female feeding alone. See just below.

**TD 72:** MD72 chatters, comes N from the sycamores to the top of the Bell's Vireo hill. MD73 is here. They are 10 yards apart. As MD72 closes to 8 yards, MD73 begins to "chur." MD72 attacks and they flutter up to 15', kicking at each other and MD73 "churring." They break out and MD73 retreats 15 yards in a very slow, bouncing flight about 2' high; his tail is down and spread. MD72 follows in the same way, then goes S and sings.

**TD 69:** Regular skids.

**TD 60:** No female.

**TD 67:** No female.

**TD 68:** Irregular song.

S of fence: No visit.

**TD 56:** In morning see nothing to indicate a female is here, but in afternoon find a bright female carrying to an undiscovered nest.

**TD 66:** Probably unmated, judging from song.

**TD 58:** In morning MD56 and a female whose legs I can't see are in a long melee in the sink hole trees w/ MD59 and a bright unbanded female. In the afternoon a female is seen building on this territory, but I don't find the nest.
TD 59: See just above. MD59 now has a mate. In the melee he sometimes sang his odd song.

TD 65: See MD65 w/ a bright female in N-S fence row; no bands.

TD 60: MD60 sings so loudly and regularly he must be unmated. I see him stretch to the right, dropping his right wing and extending it a little, spreading his tail to the right, and kicking his right foot out and back till it's straight and perhaps touches his tail feathers.

TD 62: Much song; probably no female.

TD 63: Very irregular song; no afternoon visit.

TD 64: Probably no female.

T 70: MD57 sings regularly on T 70 at 1330.

Griffey: A second unbanded male is here. Both males chatter. One catches insects at or in a sassafras flower.

Summary: A new male has appeared on Griffey. There are probably 7 or 8 females paired w/ some of the 17 males on Dunn and Griffey; 2 banded females have been seen, but both probably have disappeared. Females seem to be pairing unusually promptly; at least two are building.

Vegetation: Much development in the last 3 days, w/ redbud fading, dogwood blooming, and beech, maple, haw, and elm all approaching full summer condition.
High, thin overcast and slight NE breeze at dawn, clearing and remaining largely clear all day; 48° at 0400, in 70's during day. Present at Dunn from 0615 to 0745 and from 0945 to 1300.

Summer Tanager and White-throats today. Pine Warbler in yard.

**TD 56:** Songs in center and SW corner of field at 0615. At 0745, MD56(1) and D56F (bright) are in W part of field, about half-way N. She calls and he probably sings *sotto voce*. See TD 56, below.

**TD 66:** MD66 at 0615 sings irregularly in NW corner of field, follows a bright female wh/ calls and stays low. At 0730, MD66 is skidding occasionally in the clump of trees projecting from the woods in the middle of the E line of the field. See TD 66, below.

**TD 65:** MD65 calls, chatters a few times in the N field. Bright female nearby. See TD 65, below.

**TD 58:** A nest is found; the walls are thick but not full height; begun 4/26. See TD 58, below.

**TD 59:** MD59 chatters a very few times, stays w/ a bright female. At 0640 she picks up nest material and drops it, on ground. See TD 59, below.

**TD 60:** In early morning MD60 sings constantly at 45’ in top of leafless walnut in E edge. See TD 60, below.

**TD 62:** Constant type-8’s on both visits, w/ no sign of a female.

**TD 63:** At 0700, MD63 is w/ a bright female. She goes to a crotch and he lands beside her. She drives him out; (saw a female drive a male yesterday w/o recording it). They move out of sight after he sings insipids at MD62, wh/ is singing constantly nearby; MD63 then goes to N to E-W tree row. He sits at 30’ paying no attention to 2 Myrtles, but
he may have chased them a moment ago; they are 2-3' away. He then goes N to some 50 yards N of tree row, skids there in E 1/2 of far N field. He then moves (in 10 minutes) to NW corner of N field. His occupation of far N field may be result of MD64's spending time yesterday and today in W part of that field. See TD 63 below.

**TD 64:** See sentence just above. Constant type-8's; no female. Note that the only males w/o females are the type-8 singers.

Leave at 0745, return at 0945.

**TD 73:** A bright female perches quietly alone by a trickle of water wh/ in places forms little ponds 1' in diameter and 1/2" deep. Twice she drops and goes into the ponds, crouches, and shakes her wings to get wet. The second time her bill opens and moves, so she may have drunk water too. After the first time she goes to a branch and for 3 minutes preens w/ quick head motions involving inserting the bill and then raising the head and thrusting it out or forward. (same type motion for primaries, breast, wing linings). Also much shaking or shivering of the rear half of the body and the wings, in 1-second spurts. She leans slightly forward and raises her hind quarters, then quivers. After first time, MD73 comes and skids; she calls, goes to water for 5 seconds (about same as first time), preens very briefly, and I lose her.

**TD 72:** Many chatters. No female.
TD 69: D52Y of 1959 (Y-R, YOS-L), very gray looking, is on TD 69, some 60 yards from her nest. She is quite tame, explores slowly while MD69 sings Golden-wing songs.

TD 50: MD50 sings in tree tops; no sign of a female.

TD 60: No sign of a female, [but there was one building].

TD 57: Much song; no sign of a female.

TD 66: Find nest, begun 4/26; loose and flimsy. See female gather about 120 yards SW of it at TD 8 tree clump. MD56(1) dives on her, forces her to ground, pulls her tail, flies away from the encounter slowly and w/ stiff wings, as males do from a fight. He sings a lot, whispers once near her, doesn’t fly quickly around nest or follow her.

TD 66: MD66 is silently chasing a bright male wh/ is trying to get ground N of the TD 8 clump; the new male step-buzzes. The flights involve less circling (perhaps because ground is open) than usual; long, slow pursuits at 3-4’, 100 yards long, MD66 about 7’ behind. After 5 minutes I see MD66 alone. He skids normally in flight, head thrown back. At 1245, MD66 sings alone at scene of chase.

TD 57: At 1125 MD57 has appeared in the E field N of TD 56, about at the little clump of trees on the E side of the field. Constant skids. Once he pecks 4-5 times at his bands. He has moved 1600 yards from the golf course. [I.e., this is old M70.]

I work out distance in M72’s move last year: 3400 yards.

TD 58: D58F is building at 1130; legs not seen.

TD 59: D59F(A) is building a nest begun yesterday. MD59 sings his fight song in NW corner of field at an unbanded male chattering on TD 60.
TD 60: An unbanded male [probably MD61] chatters on NE TD 60. MD60 is to S, where he sings. An unbanded young female calls near him, and he chases her to ground and pulls her tail. She drives him 2 feet and each lands, a foot or so apart; this is repeated twice more, covering some 10-15'; she won't let him land. He goes N and has squeaky fight w/ the unbanded male, returns and sings type-8's where female was.

TD 61: See TD60 above.

TD 63: After 15 minutes' silence, regular song both in N field and far to NW in far N field.

TD 65: MD65 sings, watches a bright female wh/ explores.

Summary: Old M70 has moved to Dunn area, and 2 other unbanded males sang briefly there, so territories are still being taken up. More females are appearing (e.g., today on TD 60, 66) and a young female hatched here last year is back. Four females are building, on TD 56, 58, 59 and 68.

Exclusive of males wh/ may be S of the fence, not visited today, there are 2 males at Griffey, 5 in the E field (not counting TD 65 in that field), 4 in the N field (counting TD 65 there), 1 in the far N field, 4 in the W field, and 2 in the far W field. This totals 18 males.
April 29

Cloudy after a clear night at least as late as 2300; 58° at 0730; steady soaking rain from 1000 till early afternoon, then cool and cloudy. Present at Griffey from 0745 to 0800, at Dunn from 0800 to 1030 and from 1615 to 1715.

No sign of a migration, but coverage of N and far N fields both in morning and afternoon was much hindered by rain.

TG 8: MG8 chatters, seems unmated.
TG 9: MG9 chatters, is unmated.
TD 74: An unbanded male chatters here, [old BV6 territory].
TD 73: Female moves a lot, fast, explores. MD73 stays near, sings little, once dives on her, flutters as he quits chasing her.
TD 72: Loud regular chatters.
TD 50: Follow MD50, wh/ sings regularly, gets insects around haw flowers, clearly has no female.
TD 67: Loud regular song; no female.
TD 69: D52Y is still here. MD69 skids a few times.
TD 68: I find D68F for the first time. She is lining (or padding) a well-built nest begun on 4/26. She uses both bright blue and brown feathers. MD68 moves a lot, sings frequent chatters and a few type-8's.
TD 56: D56F is in nest at 0930, probably building.
TD 66: No sign of a female.
TD 57: MD57 sings loud regular song in place where he was yesterday, so move may be permanent.
TD 58: Not much progress on nest.
TD 60, 62, 63, 64: Nothing learned - rain.
TD 65: At 1700 I find D65F carrying spider webs to a nest which she has only just begun; i.e., only a few fibers.
Summary: No developments noted. Still a number of unmated males.

Idea: Males seem to pay less attention to nest-building on adjacent territories early in the year.
April 30

Cloudy w/ a gusty SE wind, after rain and wind all night; occasional very light rain during morning and shower at 1415; 60° at 0900. Present at Dunn from 0900 to 1215 and from 1315 to 1340, at Griffey from 1345 to 1415.

Some migration, including my first Nighthawk, Alder Flycatcher, and Black and White Warbler.

**TD 56**: Nest still has gap in 1 side but may be partly lined. Type-8's at noon.

**TD 57**: Loud skids; no female.

**TD 66**: MD 66 seems to have no female. Most of the time he forages, sings skids, type-8's, and his peculiar song.

**TD 59**: Nest being worked on; feathers added.

**TD 59**: D59F(A) in nest at 0908. Chatters and skids.

**TD 65**: Nest still very slight.

**TD 60**: MD60 (silent) follows a young female wh/ occasionally "checks." No building.

**TD 62**: MD62 is silent. At 0935 a bright female is calling and moving a lot, a little NW of his 1959 line.

**TD 63**: Obscure. An unbanded male (possibly more than one but I doubt it) skids a few times in the cherries where MD47 sang, later sings in SE quarter of far N field, then sings a lot on W half of far N field. [This was MD63.] MD64 is silent for 30 minutes, never claims these areas, finally sings type-8's in NE quarter of field. There is a long melee involving an unbanded male (or 2?) and a female, covering the S part of the far field. [The D63's were shifting to NW.]
TD 63: See above; D49F(3) [new D64F] (2 Y's-R) is back, and I see her several times in an hour in the far N field. She is near the melee described above. MD64 is never with her and they are not re-mated yet, at least.

TD 50: In 1 hour in this field, no sign of MD50. MD67 encroaches. [MD50 was gone permanently.]

TD 69: Constant song; all indications are no female present.

TD 67: Constant song, sometimes on TD 50. No female.

TD 68: Nest complete. D68F is young. She calls to me twice, 3 minutes apart, when I go near nest. Irregular song.

TD 72: No visit, but chatters heard constantly.

TD 70: Constant chatters on Allen’s. Once the male comes N to the big elm and calls loudly; MD69 is skidding nearby.

TD 73: At 1315 D73F is gathering tent caterpillar webs. She won’t go to the nest because of me, so I leave. A few songs.

TG 8: Irregular songs; it has begun to rain. Nothing learned.


Summary: MD50 has moved away or died; no other male changes. Only 1 new female known: D49F(3) is on her old territory.

Idea: Is it significant that both MD31 and 54 moved off the area S of the fence in successive years?

Other notes: Towhee nest on ground w/ 3 cowbird and 2 towhee eggs; 2 cowbird eggs probably from same female. First cowbird eggs of year and first nest on study area.
May 1

Clear and calm w/a NW breeze and a light dew; 38° at 0545. Day is clear, warming at mid-day. Present at Griffey from 0615 to 0645, at Dunn from 0645 to 1045 and 1330 to 1515, at I.U. from 1100 to 1200.

No big migration. Golden-winged Warbler.

TG 8: No female.

TG 9: No female.

TD 56: Nest being worked on. Few songs.

TD 66: In morning I follow MD66 for 5 minutes as he forages, skids steadily and weakly. No female. In afternoon he skids near E fence corner, later flies out of his tree row toward E, circles in air, flies high across valley to TD 50.

TD 57: Loud regular skids. A Field Sparrow tries to land in tree w/ MD57, is chased out. Skids in afternoon too.

TD 58: Nest complete, lined w/ feathers. In afternoon MD58 sings insipids at E fence corner, singing at MD65, 66.

TD 65: No progress on nest in morning and pair together at 0700. Building resumed by afternoon.

TD 59: Nest has some grassy lining, is virtually complete.

One song.

TD 60: Little song. MD60 and young female are together, both calling a good deal. Mild encounter w/ D65’s at S edge of TD 60. See TD 61, below.

TD 62: Type-8’s in both morning and afternoon. See no female. MD62 flies all over S half of territory in morning.

TD 63: MD63’s territory is now clear to me. It is very long and runs from the center of MD47’s old territory NW to the NW part of the far field, where MD63 now spends most of his time. NW corner
of N field is unused. MD63 and MD64 have a long boundary encounter in far N field, after wh/ MD63 skids frequently on all of territory. The females were present at the fight.

**TD 64:** MD64 is now mated with old D49F(3), his mate of last year. See TD 63. MD49's 2 territories last year measure 1450 yards apart.

**TD 61:** At 0805 there are chatters 30 yards SE of gun trees, and I find an unbanded male at 20'. He suddenly quits singing, sidles along his branch, hunches. In 45 seconds I see MD60 about 20 yards away; he has come N from the S end of his territory, where I saw him a minute or two ago. The new male turns and flies 30 yards to W edge, where he hops through trees. In 30 seconds MD60 flies over and I hear a fight.

[This male must have been MD61, wh/ held territory. His song began suddenly while I was in the field, and I ran over immediately. If the observations above were of the first encounter w/ MD60, they suggest that MD61 was not yet quite ready to fight (i.e., circle) for a territory.]

**TD 60:** MD50 is gone; 45 minutes here. At 0830 a young unbanded male [not seen again] chatters in SE corner SE of path, and later MD69 chatters here.

**TD 67:** After constant chatters MD67 glides down on set, barely moving wings and chases a female. I lose them, then follow him for 10 minutes. At the end of this period of his singing, a female flies up to him and seems to land on him or beside him. He flutters away in 1 second, moves a lot, sings loudly. The female flies to him at every move, and he goes on. She is old.

**TD 68:** No eggs. At 0845, MD68 sings 15 yards from nest.

**TD 69:** Female probably gone. MD69 skids irregularly over the
whole territory and to SE corner of TD 50. Many quick, long flights.

TD 70: Much chattering on Allen's; no female.

TD 73: Find nest begun yesterday, w/ female building at 1030 in strong wind.

TD 72: Loud chatters while perched quietly. No female.

TD 69: Unbanded male skids constantly (I.U.).

V: M69 is here w/ an old female. He skids occasionally. M69's move (150-250 yards) is more interesting from standpoint of total population mobility than from that of individual exploratory activity, since he may have been forced off territory.

T 70: No PW's (I.U.).

IV S: Unbanded type-8 singer and bright female here. He flutters with big, slow, stiff beats which taper off into little stiff beats as he gets ready to land.

Summary: There is still male movement, w/ MD61 appearing today. MD67 is w/ a female. Unmated males are MD66, 62, 69, 72, MG8 and 9.

I saw a Palm Warbler preening and shaking its wings and hind quarters laterally like a PW.
May 2

Clear, calm; low 40's at dawn w/ a dew and in some places a frost.

Present at Dunn from 0615 to 0815 and from 1530 to 1830.

**TD 73:** Nest a well-developed shell.

**TD 72:** No female in morning. Silent in afternoon.

**TD 50:** M50 still gone. No further mention will be made of him unless he returns.

**TD 69:** Many step-buzzes, once probably from TD 50. See TD 69 below.

**TD 67:** Loud songs.

**TD 68:** No eggs in nest. MD68 seen.

**TD 70:** Silence; Allen's not visited.

**TD 56:** Nest complete at 0700, empty.

**TD 66:** MD66 skids often in middle of W tree row. An unbanded female is here. She goes to mid-field, but he seems to pay little attention. See no female near him in afternoon.

**TD 58:** Nest empty.

**TD 57:** Loud skids. No female.

**TD 59:** Some grass in nest; probably complete.

**TD 65:** Nest developing.

**TD 60:** MD60 is w/ the female, wh/ moves a lot in morning. He probably courts her. In an encounter w/ MD59 he droops his wings. In the afternoon on the W edge of the field he stays in one area, sings insipids and a few chatters. I can't find female building there [but the nest when found on 5/4 was close enough to have been associated w/ his behavior].

**TD 62:** MD62 and a female are in SE corner of territory. See below. Not concentrating on 1 place.
TD 61: In afternoon MD61 fights MD62 in a manner suggesting MD61 has already established himself.

TD 63: MD63 stays in far N field. At 1700 I find nest there, probably begun today. Discover it by hearing faint songs near it; female building.


TD 69: At 1800, MD69 is singing many step-buzzes, moving a lot within a limited area on hilltop. Glimpse a young female; can’t see legs. MD69 then goes to TD 50 and sings, then goes to the big elm at Allen’s fence and sits quietly in the top, skidding.

Summary: MD72 and MD61 may be only unmated males, but can’t be sure about MD67, 66, 69. Nests are built or in progress on TD 56, 58, 65, 59, 63, 68, 73.

Other notes: Cardinal on 2 eggs, TD 50, 6’ in cedar.
May 3

Clear, calm, 45° at 0600 but w/ a pretty heavy frost (31° re-
ported last night). Present at Dunn from 0615 to 0815 and from 1615
to 1930, at Griffey from 1800 to 1815.

Black-throated Greens came in last night.

**TD 73:** At 0640, D73F is deep in empty, complete nest. She leaves Y
at sight of me and male, wh/ was singing insipids, quits singing. D73F
on leaving nest goes 12 yards, preens back and breast. Preening mo-
tion for back is to thrust bill into feathers, and to lift it and simul-
taneously to push it farther toward rear.

**TD 72:** Female here, male w/ her. While watching BV-7 heard a
fight on this territory.

**TD 70:** Chatters heard well to W on Allen's or possibly on old
TD 29.

**TD 68:** Egg 1, first egg of year. Female on at 0650 and 0750;
find egg at 0750. Female, unmistakeably young, calls at me.

**TD 67:** Chatters around cherry and in evening S of path on old
TD 27.

**TD 69:** Slow step-buzzes in morning on hilltop on TD 50.

**TD 56:** At 0700 MD56(l) chatters near empty nest.

**TD 66:** Songs heard.

**TD 57:** MD57 perches on banded leg and sings a long series.

**TD 58:** Nest empty at 0710. Silence.

**TD 59:** Nest empty; MD59 chatters a few yards away.

**TD 60:** MD60 and D60F are in an encounter w/ MD61, 30 yards SE
of gun trees. The males dart at and displace each other, both chattering
(MD61 very loudly). MD60 chases the female (surely his mate) in a
very aggressive way 2-3 times. She calls, always avoids his charges at her. MD60 then sings weak type-8’s in W edge.

**TD 61:** See TD 60. MD61 is wedged into a very narrow strip between MD60 and 62. See TD 62.

**TD 62:** MD62 sings loud type-8’s just N of gun trees [near nest found 5/4]. A bright unbanded female flies E from his area and an unbanded male, probably MD61, flies at her, suddenly turns in flight and flutters to a perch. In a few seconds she lands at 12’ and MD62 approaches and the 2 males fight and call in a boundary fight. Why didn’t MD61 take up NW corner of N field, wh/ is unoccupied?

**TD 63:** Hear 1 skid NW of nest.

**TD 64:** The pair is on NW corner of territory. A few type-8’s.

**TG 8:** G8F builds a nest begun today.

**TG 9:** MG9 is silent, then chatters often. Probably no female. See him in 2 flutter-ups, surely w/ a male Blue-wing wh/ then flies from the little tree where both landed. Later see MG9 hover at a spider web, presumably pick out spider, fly backward a few inches like a humming bird.

**Summary:** First PW egg of year. G8F is building. Not enough field work to be sure of other developments.
May 4.

Clear w/a S breeze; 55° at 0630, warm all day. Present at Dunn from 0745 to 1115 and from 1145 to 1400, at Griffey from 1130 to 1145.

**TD 74:** MD74 chatters, watches a bright female. See below.

**TD 73:** At 0830, a male and a young female are on N end of this territory. He sings chatters and she follows him and calls. Once he flutters in flight as she follows; she may fly slowly. Then a second unbanded male comes and there is a noisy fight w/ the males supplanting each other and the female once landing beside them. One flies from a close encounter and w/ head back sings a chatter; the wings beat as in flutter, perhaps necessarily because of position of head and back. Second male may have been MD73; other PW's unknown. (but possibly the D74's).

No eggs in D73 nest. A few songs.

**TD 72:** MD72 chatters and a second male flies up while I'm watching. MD72 is 6' above him and newcomer looks up w/ open bill. Newcomer flies up to level of MD72, wh/ flies up 5' higher. New male flies up to MD72's level again, crouches and opens bill. MD72 then drives the other well N, sings there. In 5 minutes there is another encounter on TD 72 w/ 2 males singing; one is driven off.

A bright female is here, moving a lot.

**TD 70:** MD70 chatters from the big hackberry at Allen's fence S to Brown's E line. Song constant.

**TD 71:** (new): An unbanded male I didn't know about until today sings on the W half of Brown's and Franklin's. A young female is here. As she forages he floats down to her, chases her 15 yards to a bush about 1' high. There he takes her rectrices near the base
and pulls, chattering normally once. Twice she struggles about 2' forward while he hangs on and pulls. He pulls her tail for 5 seconds. When he releases her, she turns on him but doesn't advance toward him.

TD 68: D68F on at 1000; egg 2 seen at 1015. Much song.

TD 69: While I follow MD69, an unbanded male flies into a tree at 14', some 2' below MD69. Both sit tensely, MD69 facing away from other, head slightly raised, looking back over shoulder at times. They separate w/o more.

MD69 sings constant skids and step-buzzes, ranges far and fast (no longer going N much, now that TD 50 is open). No female.

TD 67: Last years D51F(2) [new D67F] is back (2 G's-R) and she and her old mate are together at 1030; some fluttering. Earlier I saw a female by the E-W path, but I learned nothing about her. Does MD67 have an unbanded mate? Return of former mates may account for some polygyny.

TG 8: Nest progressing.

TG 9: Constant chatters while perched quietly.

TD 56: No eggs.

TD 57: Loud song; no female.

TD 58: No eggs.

TD 59: No eggs.

TD 60: Find nest, a shell probably begun on 5/2. MD60 sings type-8's and chatters, moves a lot, fights MD61. In the fight MD61 drives a young female wh/ is probably D60F.

TD 61: See just above. Can't tell much, but suspect there is a female here too.

TD 62: Find nest begun 5/2, near scene of yesterday's activity. Irregular song.
TD 63: Nest shows considerable development since 5/2 but still is not progressing at a normal rate. Brief series of skids.

TD 64: At first MD64 sings type-8's rather widely. I find and follow D64F for 10 minutes. He stays near her, sometimes 1-2' away, both silent. Once when he's 1' away, she turns and displaces him as though made nervous by nearness.

TD 65: Nest complete.

TD 66: Many skids; probably no female. An unbanded male sings loud chatters in SW corner [not seen again].

Summary: There are unbanded males today on established territories, suggesting a migration last night. D51F(2) returned to her old mate. Unmated males are MD66, 69, 57, and MG9. Nesting going on now on TD 60, TD 62, and [TD 72], as well as on territories summarized on 5/2 and 5/3.

Other notes: The towhee nest found on 4/30 has been torn from the ground. Gnatcatcher on 5 eggs, 6' high.

Note: D67F in these notes was for a time one of two mates of MD67. She should be called D67F(A).
May 5

High clouds at dawn, clearing; 62° at 0600; S breeze turning to strong S wind w/a light haze during morning. Present at Dunn from 0645 to 1000 and from 1100 to 1245, at Griffey from 1030 to 1100.

**TD 74:** Both sexes seen, male (young looking) singing fairly regularly. He scratches, once over wing but once possibly under it. Bill wiping from back to front on both sides.

**TD 73:** MD73 (short rectrices seen) sings N to N end of old TD 39. Nest is empty, contains more lining.

**TD 72:** Find nest, a well-developed shell probably begun on 5/3.

**TD 68:** Egg 3. If the hatching period of a clutch is shorter for later clutches, would the female’s lack of a developed patch tend to reinforce the effect of weather, i.e., tend to make any difference smaller in early sets, greater in late?

**TD 67:** See MD67 w/ D67F on their 1959 territory; frequent but irregular chatters. Later, 0930, he sings at S end of TD 50 near an unbanded female [wh/ possibly became D70F]. No sign that she is building. Feel he is following her. Thorough nest search S of path.

**TD 69:** Constant song (half of them skids, half step-buzzes) over N part of old TD 29, old TD 53 (except N end of it), and W half of TD 50; i.e., he covers about 6 acres. No sign of a female in a careful search.

**TD 70:** No sign of a female. This male covers the E half of the lots S of the fence.

**TD 71:** Watch MD71 perch quietly and sing constantly on Brown’s, then go due N to Daugherty’s. Yesterday’s female seems to have gone.

**TD 10:** Heard insipids here yesterday in the pines behind Walstrom’s and today find an unbanded male and a young female. Frequent
chatters. Schneider heard a male here on 4/16 and seems to feel the habitat has had a male on it regularly this spring.

**TG 8:** Female is padding nest. Song.

**TG 9:** MG9 acts unmated.

**TD 56:** No eggs. At 1130, MD56(1) sings often and irregularly in SW corner of field. Nearby is a bright female; he flutters. At 1245 I can't find them.

**TD 57:** MD57 flutters near a fast-moving bright female.

**TD 58:** No eggs. Regular song.

**TD 59:** Loud skids at 1115, a few at 1245. Once a young female flies to a perch at 3', sits tensely; there are loud "seep" calls but not from her. She goes on and there is complete silence.

**TD 60:** Nest finished, empty. Silence.

**TD 61:** Nest incomplete; male singing insipidly near it.

**TD 62:** Nest being lined. At 1230 a bright female [surely D62F] picks up grass in a thicket at E edge of field, opposite but distant from nest. MD62 is near her. She heads W.

**TD 63:** MD61 seems unmated, sings regularly but only about 2.5 per minute. I follow him, see nothing.

**TD 64:** Find nest, a cradle about half built up. MD64 sings near it but also ranges widely.

A male Pw seen today seemed to call nervously ("seep") when a Blue Jay flew up.

**Summary:** Only MG9 and MD69,70, 71, and 71 seem unmated. Nesting on TD 64.
Other notes: Flycatcher heard. Indigo migration.

Blue-gray Gnatcatchers flush from the nest like Indigos and PW's, w/ tail up (not spread) back arched, wings fluttering stiffly.

First spittle-bug today.
May 6

Cloudy, ca. 68°, w/a cool SE wind; this weather began about 1530 on 5/5; threat of a drizzle; probably there has been a little rain locally but it's dry here so far. At 1000 it rains steadily for an hour. Present at Dunn from 0630 to 1030.

TD 74: Chatters. See a young (?) female.

TD 73: No eggs. MD73 skids on S end of old TD 39, goes S, chases a PM toward N.

TD 72: Nest unlined.

T 68: Egg 4. D68F on at 0735 and 3 times in next hour.

TD 67: Pair together. D67F nest-shapes and MD67 may. MD67 chatters S of path several different times. A bright female here may be a second mate [she probably began as that, but became MD70's by the time she laid]. MD67, 69, an unseen male, 2 females are in a melee about at path.

TD 69: MD69 sings irregularly, spends most of time on his original territory of 2 weeks ago. A young female wh/ I think is unbanded is w/ him.

TD 70: Much song over whole Doerr-Allen area. Can't be sure, but I think he's unmated.

TD 71: No female.


TD 66: MD66 is w/ a young female near E fence corner. Little courtship.

TD 57: MD67 is in early stage of courtship w/ a young female. [D57F(1)].

TD 58: No egg.
TD 59: Egg 1.

TD 65: Cowbird egg in nest.

TD 61: MD61 is w/ a young female. Encounter w/ MD60 or 62 in E part of field.

TD 60: Nest incomplete but progressing. MD60 seen.

TD 62: Nest complete, empty.

TD 63: Nest not quite complete. Song nearby.

TD 64: Nest a full unpadded shell.

Summary: MD70 and 71 unmated. First eggs on TD 56 and 59, so 3 females have laid at this point.

Magnolia Warbler.
May 7

Cool and cloudy w/ temperature in 40's all day; SW wind in early morning, dying down in a few hours; cool weather began after a storm and heavy rain from 2030 to 2130 last night. Present at Griffey from 0845 to 0900, at Dunn from 0900 to 1000 and from 1030 to 1230. Very few songs of any kind.

**TG 8:** Nest (high) looks complete.

**TG 9:** MG9 w/ a bright female for first time.

**TD 74:** A male sings E of road here.

**TD 73:** Egg 1.

**TD 72:** Nest complete. A few insipids.

**TD 56:** Egg 2. MD56(1) chatters often at old TD 8 clump of trees; nothing unusual seen.

**TD 57:** Not found.

**TD 66:** MD66 w/ a young female, weak skids. No building.

**TD 58:** No eggs. MD58 chatters. Watch him and see no female.

**TD 65:** A second cowbird egg is here, probably from a different female. First egg has a small concave break.

**TD 59:** Egg 2.

**TD 60:** No egg; nest full of water. MD60 calls a lot in open woods just N of tree row. Unbanded male is there too, probably MD61.

**TD 61:** No sign of a PW, except as indicated just above.

**TD 62:** No egg. Silence.

**TD 63:** Nest complete.

**TD 64:** Nest looks abandoned [wrong]; a leaf has opened out inside it.

**TD 68:** D68F on 4 eggs (seen).

**TD 69:** MD69 sings infrequent skids and step-buzzes. See TD 67.
TD 67: Infrequent chatters. MD67 and 69 aren't keeping to territories very carefully; probably both are following females wh/ aren't building. See TD 70.

TD 70: Chatters on Allen's and N of fence to part of TD 50. This territory is beginning to be same as old TD 27. See a female on TD 50; she could be MD67's or MD70's [MD70's].

TD 71: Not visited.

Summary: No male is known to be unmated. D73F began to lay.

Other Notes: Tennessee warbler, Bobolink, Orchard Oriole.

At 1000 Carolina Wren in garage on 5 eggs. On at 1230. At 1700 eggs 1,2,3 were hatched, w/ large half of egg 3 still present. At 1800, egg 4 was hatched. At 0730 on 5/8 all were hatched.
May 8

After a clear cold (30’s) night and a clear dawn, a front passed at 0615 bringing clouds and a light rain all day; temperature in 40’s.

Present at Dunn from 0900 to 1200.

TD 73: Egg 2.

TD 72: No eggs.

TD 56: Egg 3.

TD 66: No PW’s.

TD 58: No eggs.

TD 57: Perhaps 1 song.

TD 59: Egg 3.

TD 65: Still 2 cowbird eggs.

TD 60: Water in empty nest.

TD 61: No PW’s.

TD 62: No eggs.

TD 63: Nest complete, empty.

TD 64: No development of nest, a flimsy half of a shell.

TD 67: MD67 is at N end of 1959 territory.

TD 69: MD69 seen near MD67; see above.

TD 68: At 1000, I cautiously flush D68F and put day old Carolina Wren in nest. D68F deserts, probably w/o ever returning to nest. At 1130 wren is dead. [Later developments on other territories indicate that this weak bond with nest may have been caused by the continued bad weather.]

TD 70: Few songs.

TD 71: Silence.
Only 3 male PW's seen today.

Other notes: Cardinal nest in cedar on Daugherty's; 2 Cardinal eggs, 1 possible cowbird egg.
May 9

Weather unchanged, w/ temperature in low 40’s, cold drizzle most of day. Present at Dunn from 0600 to 0800.

**TD 73**: D73F on at 0610. At 0800 nest has had rim ripped off, and eggs 1 and 2 are only ones there.

**TD 72**: No eggs.

**TD 56**: Egg 4, but eggs are cold and I can’t find D56’s.

**TD 57**: Silence.

**TD 66**: In W fence corner see MD66 and probably a female. The D65’s are nearby, and I hear a few faint “checks.” Does the weather inhibit fighting?

**TD 65**: Still 2 cowbird eggs. See TD66.

**TD 58**: No eggs. A bright female calls on NW part of TD 58. She has no bands. Is D44F here? [No; D44F probably did not stay, probably did not build the D58 nest.]

**TD 59**: Egg 4; D59F(A) is not on at about 0715. A young female is some 25 yards from nest. MD59 fights in NW corner near nest; opponent unknown. Are females straying away from territories because of weather? [Not sure.]

**TD 60**: No eggs; water in nest.

**TD 61**: No Pw’s.

**TD 62**: No eggs.

**TD 63**: No eggs.

**TD 64**: No work on nest.

**TD 67**: MD67 and a male wh/ is probably MD70 are in an encounter at S end of N-S path. A bright female is just S of them. Suspect MD67
lost this female to MD70.

TD 70: See TD 67. This territory seems to be shifting to N.

TD 68: Nest contains egg 2, a broken PW egg, and a cowbird egg laid since yesterday’s desertion. Egg 2 weighed on lab balance: 1.062 g.

TD 69: See MD69 at hilltop.

Summary: No purpose in further summarizing.
May 10

Cold, cloudy, drizzling most of day; temperature in 40's. Present at Dunn from 1530 to 1730. In 2 hours hear 1 PW song, a few songs of towhees, meadowlarks, and perhaps of 1 or 2 other species.

TD 73: No eggs left in disarranged nest.

TD 72: Nest has been torn from tree, w/ a little of the padding remaining and rest of nest a few yards away.

TD 56: Eggs cold; no incubation on 2 visits.

TD 66: No PW's.

TD 57: No PW's.

TD 58: No eggs.

TD 59: Scare female off 4 eggs.

TD 60: No eggs. Silence.

TD 61: No PW's.

TD 62: No eggs. Silence.

TD 63: No eggs. Silence.

TD 64: No development of nest.
May 11

Weather cool, cloudy, drizzling a little in morning, but moderating somewhat. In afternoon it's not raining and temperature is in 50's; foliage wet. Present at Dunn from 1500 to 1700.

TD 56: No incubation of the 4 eggs, to judge from their coldness to touch.

TD 57: See MD57 w/ young D57F(l).

TD 66: MD66 fights an unbanded male, probably MD65, in W fence corner. Young female w/ MD66.

TD 65: See just above.

TD 58: No eggs; probably none will be laid [none were; nest checked daily to 5/19]. MD58 sings; no sign of a female.

TD 59: Incubation.

TD 60: No eggs.

TD 61: No PW's.

TD 62: Pair together at E edge of field where D62F eats many chermid pupae (nymphs?) on dwarf sumac.

TD 63: Song 1 or 2 times.

TD 64: Surprisingly, D64F has developed nest a little, calls at me when I approach it.

TD 67: No PW's.

TD 68: No PW's.

TD 69: No PW's.
May 12

Cloudy and 40° at 0700, clearing slowly so that it's sunny w/ a haze at 1030; partly cloudy at 1230 w/ a N wind; cool, cloudy, 55° by 1400. Present at Dunn from 1030 to 1145 and from 1230 to 1615.

PW song in our yard, so males still on move.

TD 73: MD73 sings insipids (w/ a buzz) near first nest, then at maple stub on hill. MD72 probably encountered at valley near first nest. See TD 72.

TD 72: MD72 sings insipids near nest, then on to S. At the N line I watch a bright female, Suddenly MD73 and a male (MD72?) get into a loud squeaky fight with low fluttering chases through the brush. Re the vocalizations: the fight calls turn into high squeaks. Twice it's the chaser wh/ squeaks, once the chased bird may, and once he doesn't. It seems the chaser sees something wh/ arouses his excitement and he immediately chases and squeaks. There is much tail flipping when perched. Once one bill-wipes.

A second female, young, arrives w/ nest material, nest-shapes (so probably not building). The males fight on, the 2 females calling. MD73 (known by his tail) sings insipids w/ little squeaks before each song (fast, like a Ruby-crown but higher).

A female PW scratches w/ foot over wing.

1145: In.
1230: Return.

TD 56: Eggs warm; D56F off from 1230-1250, then on. MD56(1) and 57 are in a mild, silent encounter 20 yards N of woods corner. They perch 20 yards apart, maybe a little hunched. Bouncing flight w/ tails spread; a little slow retreating. Then they go separately into woods, sing faint insipids.
It looks as if D56F has begun to incubate possibly after staying off the nest during the cold. Note that I've not seen her on the nest until today.

**TD 57**: See TD56. Before meeting MD56(l), MD57 may have nest shaped while D57F(l) called in the E edge S of the projecting trees. Not building much, if any. Ten minutes of song, than a few squeaky fight notes.

**TD 58**: No egg. MD58 and MD59 sing insipids S of sink hole, then at about mid-field. No female seen till 1430. when I'm passing again; a female is on SW part of territory near fence corner.

**TD 59**: Incubation. See TD 58.

**TD 60**: No egg. Hear a few skids.

**TD 61**: Not found.

**TD 62**: No egg. Buzz songs on NW part of TD 62 and W edge.

**TD 63**: No egg. Skids in far N field, also NW part of N field. MD63 looks for a second into an old goldfinch nest. Once he approaches D63F; she tenses and he goes no closer than 2'.

**TD 64**: D64F "sips" as I get near nest, so I withdraw.

**TD 65**: No egg. Find trace of a nest. MD65 is probably the singer N of nest.

**TD 66**: MD66 skids occasionally W of fence, where D66F forages. No concentration to suggest she is building.

**TD 67**: D67F(A) "checks" a lot at hilltop on mid-territory. No song.

**TD 68**: D68F (young) is at N end, apparently not building. MD68 sings type-8's there.

**TD 69**: A few skids. No sign of a female.
TD 70: Hear a few chatters on Allen's. An unbanded female is S of path on old TD 27. [At time I thought she might be a second female of MD67.]

Other notes: Towhee nest found on ground; 4 eggs.
May 13

Mid-30's at 0500; dewy; dark in E w/ high clouds elsewhere, clearing steadily till nearly clear by 0715; breeze from N and E. Present at Griffey from 0715 to 0745, at Dunn from 0755 to 1330.

TG 8: G8F calls when I get near nest. Hear type-8's.


TG 10: Hear 2-3 chatters to W.

TD 74: Not seen.

TD 73: At 0830, D73F tears up tent caterpillar web and builds a slight cradle [fragment] probably begun yesterday, MD73 skids.

TD 72: Not found.

TD 69: Hear skids on TD 29. S of W sycamore find cradle begun yesterday. Hear calls and MD69 and the young D52 appear. She seems alarmed, so I go. I was 10 yards from the nest [fragment]. She preened once and seemed to have a large bare patch on belly.

At 1300 I see an old female on TD69. Is MD69 polygynous? [I never saw the young D52 again and don’t know whether she ever nested on TD69; if she did, the pair was very short-lived.]

TD 68: Pair SW of the chinquapin oak. MD68 gives slow chatters. D68F seems not to be building.

TD 67: MD67 sings frequent insipids between the E sycamore and the oak, as though he had no female or one was incubating. Later I probably see MD67, on TD 27, sing insipids. Meanwhile, at 0945, D67F(A) seems to explore well to S on TD 67.

Once D67F(A) sings. She throws her head back like a male, opens
her bill fairly wide, gives 2 squeaky notes that sound like "sick sick."

**TD 70:** MD70 chatters and sings Field Sparrow-like songs [characteristic of him all summer] on Allen's, Doerr's, TD 50. No sign that he has a female.

**TD 71:** MD71 moves a lot from Browns to Daugherty's, chatters constantly, seems unmated.

**TD 66:** MD66 skids irregularly by maple at 1045; some songs faint. He then goes N and skids. No sign of building.

**TD 56:** Silent. Not visited. [MD56(1) may have disappeared at this time.]

**TD 57:** Weak skids N and S of trees. See no female and feel building is not going on.

**TD 58:** No egg. MD58 followed as he moves over territory, sings irregularly. See no female.

**TD 59:** Incubation. Hear MD59's song which I associate w/ fighting.

**TD 60:** No egg. MD60 seen once at N end of TD 60; insipids. He may be watching the D61's, wh/ are nearby.

**TD 61:** Old D46F(B) [new D61F] (2 B's-L) is here, and MD61 and the D62's are in an encounter; i.e., the D62's call from their side of the territory line, as does D61F from hers. They move E along line. She is all around site of her last year's nest. Very interesting to see if she will mate w/ MD61 or MD62, her last year's mate.

**TD 62:** See above. Probably not building.

**TD 63:** No egg. MD63 skids all over N part of territory. No sign
of building a new nest.

TD 64: Nest unfinished, lacks lining. MD64 chatters against MD63.

TD 65: The nest beginning found yesterday is now well along.
May 14

probably a clear night, w/a few high clouds at dawn; 58° at 0630.

huge migration last night (I.B., grosbeak, BV, Least Flycatcher, pewee,
Bobolink, Golden-wing, Magnolia, Yellow, etc.). present at dunn from
0715 to 0830, 0915 to 1230, and from 1430 to 1600; at griffey from
1400 to 1430.

TD 74: Not found.

TD 73: Yesterday’s fragment has been abandoned w/o progress.

MD73 skids near ash N of stub, W nearly to road, morning and afternoon.

TD 72: Song in sycamores, morning and afternoon.

TD 56: Incubation.

TD 57: Female gathers webs while male sings skids and insipids.

nest not found.

TD 58: Find female carrying grass to new nest, wh/ I don’t in-
spect. She is unbanded; where is D44F?

TD 59: Incubation: MD59 chatters nearby.

TD 60: Follow D60F for 100 yards, see no building. MD60 sings
insipids, 1 or 2 type-8’s constantly in W woods edge.

TD 61: MD61 and 62 both sing insipids wh/ rise in pitch at end.

Note how often 2 males in encounters sing the same songs. D61F puts
fibers in a fork where there are 4-5 strands. MD61 holds the gun trees.

TD 62: See TD61. I follow MD62 in W edge but see no female.

Idea: Females seem to be very slow in recovering from effects of
cold, during wh/ so many nests were abandoned. There is little build-
ing; see also the number of fragments.

TD 63: No sign of a female during 30 minutes of following MD63
as he sings constantly in NE corner of N field, SW corner of far N
field.
TD 64: Nest shows little progress, but a leaf I inserted yesterday is gone. See MD64.

TD 65: Nest shows little progress. Insipids.

TD 66: See both birds. MD66 is high, skids, buzzes, acts as though female is building at 1130.

TD 67: Pair near the cherry at 1200, D67F(A) calls, isn't near yesterday's spot.

TD 68: MD68 sings type-8's far to N in morning, and D68F puts first fibers or webs in a haw there. Many songs near W sycamore in afternoon.

TD 69: Situation obscure. Find fragment by row of cedars in morning. Little song, all on TD 29. In afternoon, constant skids on and near TD 29. Find a nest on TD 29 w/ 1 cowbird egg; nest looks as though it has been built since the rain.

TD 70: Songs from Allen's and as yesterday, TD 50. See a chase. An old female flies to w/ 5' of me as though to gather, then forages for chermids.

TD 71: Not visited.

TG 8: No egg.

TG 9: A few chatters. Find a nest beginning.

TG 10: Songs heard N of Schnedier's.

Other notes: Find a last year's Field Sparrow nest, 4', w/ an unusually small cowbird egg in it.
May 15

Clear all day; 52° at 0545, hot during day. Present at Griffey from 0615 to 0630 and from 1515 to 1530, at Dunn from 0630 to 1200 and from 1230 to 1515.

TG 8: Egg 1 at 0615. Male seen.

TG 9: M29 chatters near the slight nest in the morning. At 1515 he chatters about it while she builds. The nest has scarcely developed since I found it.

TD 73: MD73 sings regular skids and insipids, N of and at stub. MD72 sings at stub too when MD73 goes N. D73F forages in trees and brush for 10-15 minutes E of big ash. Twice she hangs upside down, once sidles along a branch w/ head cocked to look up at leaves 5" above her. Once while nearly vertical w/ head down she beats a caterpillar. When hammering a caterpillar while perched horizontally, she leans slightly backward.

At 1130, D73F is building a well developed nest, begun yesterday or day before, in berries near parking spot. MD73 skids up and down the little E-W valley running beside the stub.

TD 72: D72F is building in a round elm top while MD72 sings around her collecting area.

TD 68: MD68 sings many type-8's near nest as D68F builds.

TD 69: No developments at nest found yesterday [and none ever]. No search. Skids.

TD 70: My major morning effort was to find D70F's nest, to wh/ she twice carried. No success. Once she pulled up wiry grass stems from bare ground, pulling so hard she nearly fell over. MD70 stayed mostly N of fence, went to Doerr's twice, sang chatters and his Field
Sparrow song w/ the rising final notes. Once the D67's and D70's fought at the E-W path, the females calling behind the lines.

**TD 67:** See just above. At 1500 I return and find MD67 singing chatters and insipids faintly in the cherry. D67F(A) begins loud "check" calls, comes up to w/ 8 ' of me, begins a full-scale distraction display. I see a nest 20' from me, near where they were yesterday and probably begun then.

**TD 56:** Incubation at 1230.

**TD 66:** MD66 sings loud type-8's (not his usual song) ranging steadily through tops of tree row. No female seen in short search.

**TD 57:** Insipids to N near big sycamore.

**TD 58:** Nest complete, lined w/ same kinds of feathers as was first nest. I conclude D44F did not build the first and that the un-banded D58F has been here all along. D44F must have gone on shortly after I saw her.

**TD 71:** MD71 chatters on E part of Brown's, so MD70's withdrawal to N may have let MD71 move to E [later he held all of Brown's].

MD71 dives and chases D71F to ground, pulls her tail there (brushy area). The vane of the feather is disarranged. He flutters out w/ big, chat-like wing beats, goes 30', lands, holds body rigid for 10-15 seconds, keeps bill open for total of 30 (counted) seconds. D71F is probably an old bird.

**TD 59:** Incubation at 1345. Hear MD59's odd song.

**TD 60:** Nest being dismantled. Hear insipids and skids in SW edge.

**TD 65:** Nest not quite fully lined. Pair together in W fence corner at 1430; skids.

**TD 61:** D61F is found building some 30 yards from her 1959 nest; began today. MD61 chatters, sings short rising insipids.
TD 62: Find unlined nest, begun 5/14 or 13. MD62 sang nearby yesterday and sings short high insipids there today too. Last nest being dismantled.

TD 63: Irregular high insipids in far N field, moving SE to NW through field. No tendency to stay in 1 place and no sign of a female.

TD 64: Nest being lined, possibly complete. MD64 sings skids (odd for him) and insipids in far N field.

Idea: I hear so many different males singing insipids this afternoon that I wonder if it's significant, e.g., related to time of day.

A male stretched upward today as follows: legs were straightened completely or nearly so, head was thrust forward and I think downward (back was clearly humped looking), tail was slightly (or more) depressed, forearms were raised but the thrust did not extend to the hands \( \sqrt{ } \).
May 16

High overcast at 0530, clouding more and more till it rains at 1500; 62° at 0530, warm day. Present at Griffey from 0545 to 0600, at Dunn from 0600 to 0815 and from 1415 to 1530.

**TD 8:** Egg 2 at 0600.

**TD 73:** Nest unlined at 0645. Song.

**TD 72:** Female on nest at 0700.

**TD 69:** Still only a cowbird egg in TD 29 nest. This could represent a cowbird-caused or a weather-caused failure, like D65F's first nest. No further mention will be made of this nest. See MD69 on regular territory.

**TD 68:** Nest probably incompletely lined (some feathers). MD68 sings near it at 0730.

**TD 67:** Nest a shell w/ rim not built yet.

**TD 70:** Chatters and probably skids on W TD 50, this male’s main range now.

**TD 71:** At 0740, silence for 15-20 minutes. D71F, on Franklin’s, may drop wings while in a tree. MD71 chatters, goes to Brown’s; female goes after him.

**TD 56:** D56F on at 1410.

**TD 57:** MD57 sings type-8’s by a thin complete shell.

**TD 58:** Nest has more lining, is complete.

**TD 59:** Four eggs. Song.

**TD 60:** Silence.

**TD 61:** Nest walls only half up; may be abandoned. Silence.

**TD 62:** Nest unlined.

**TD 63:** Find complete empty nest at 6 1/2' in SW corner of far N field. Skids, insipids.
TD 64: Nest complete, empty.

TD 65: Nest more fully lined, complete.
May 17

Clear after rain again at 1900 and into the night; 64° at 0600.

Present at Dunn from 0630 to 0845, from 1230 to 1500, and from 1515 to 1700; at Griffey from 1700 to 1715.

Big warbler migration, w/ Redstart, Black-poll, and Black and White in the yard.

TD 74: Irregular chatters.

TD 73: Nest complete, empty. MD73 chased by BV 10 male.

TD 69: Skids on TD 29.

TD 70: Songs on TD 50. See TD 71 and TD 70, below.

TD 71: Here from 0800 to 0840 and 1230 to 1400. Songs erratic, w/ a series on Daugherty's in morning, then silence. In afternoon the female is just S of Brown's hut in 45 minutes I see her only once (near ground). MD71 ranges N to Daugherty's, fights MD70 there, does not concentrate, is silent a lot. Probably no building.

TD 56: Incubation at 1515.

TD 57: D57F(1)(young) carries grass to nest.

TD 58: No egg.

TD 59: Four eggs warm. MD59 sings very rasping step.

TD 60: MD60 is on S end of territory.

TD 61: Nest she was working on is abandoned, a fragment. Find a shell begun yesterday.

TD 62: No egg.

TD 63: No egg.

TD 64: No egg.

TD 65: No egg.

TD 66: No information.
TD 67: No progress on nest [abandoned, never completed].

TD 68: Nest complete; no egg.

TD 70: MD 70 is on old TD 27.

TG 8: Three eggs at 1700.

Other notes: A chat was seen building. Found a Field Sparrow's nest w/ 3 eggs, on ground.
May 18

Clear dawn w/ a heavy wet mist coming in at daylight and burning off at 1100; 52° at 0615. Present at Dunn from 0645 to 0730 and from 1030 to 1245, at Griffey from 0815 to 1000.

Big migration of Black-polls, Redstarts, Olive-backs, especially of Black-throated Greens. See Mourning, Wilson’s, Philadelphia.

TD 56: Incubation at 0650.

TD 57: Nest unlined.

TD 58: No egg.

TD 59: Incubation at 0655. The odd song by MD59.

TD 60: Find nest, not quite lined, far to SE on TD 60. Skid songs.

TD 61: Lining in progress.

TD 62: Cowbird egg. Rabbit fur in nest lining.

TD 63: No egg. See a PW near nest, "checking."

TD 64: No egg. Silence.

TD 65: No egg. A male at N end of depression is probably MD65.

TD 66: Not found.

TD 67: G6F on nest.

TD 68: Nest complete. MG9 sings above it.

TD 69: See bright female. Male sings from Schneider’s W field to the field E of house, constant chatters; most of time in yard.

TD 70: Find D71F building high nest begun yesterday. Only a few chatters.

TD 71: See female on TD 27; song there. [Nest is on TD 27.]

TD 72: No egg. [None ever laid in blackberry nest.]

TD 73: Not visited; song frequent.

TD 63: No egg.
TD 69: Skids on TD 50.

TD 68: No egg [none ever laid in this nest].

TD 67: Fragment now abandoned. See pair; D67F(A) probably nest shapes.

Other notes: Field Sparrow on 4 eggs.
May 19

Nearly clear dawn, clouding early w/ a high overcast, a cool SE breeze; 62°. Hard rain from 0830 to 1030, then a drizzle, changeable w/ a gusty SW wind during rest of day. Present at Dunn from 0745 to 0830 and from 1515 to 1730, at Griffey from 1730 to 1745.

TD 56: Incubation. A male chatters [MD56(2) ?].

TD 57: Silence. A cowbird egg in nest.

TD 58: No egg. Slow chatters near nest.

TD 59: Four warm eggs.

TD 60: Nest well lined w/ grass.

TD 61: Nest probably complete, not thoroughly lined.

TD 62: PW egg and cowbird egg. Insipids.

TD 63: Egg 1.

TD 64: No egg. See female on W edge of territory. She calls when she hears a male sing insipids and Field Sparrow songs nearby.

TD 65: Egg 1 at 0830, when I go.

TD 67: Fragment clearly abandoned. No PW's.

TD 68: No egg.

TD 69: No information.

TD 70: No information.

TD 71: No visit.

TD 72: One egg.

TD 73: No egg.

TD 74: Hear 2 or 3 songs from 1515 to 1545.

TG 8: Four eggs.

TG 9: Nest more fully lined.
May 20

Clear dawn w/ heavy dew, clouding by 0630 and raining hard from 1215 to 1430, 64° at dawn. Present at Dunn from 0600 to 0720 and from 1515 to 1700, at Griffey from 1700 to 1715.

TD 73: No egg. One or 2 skids on my arrival.

TD 72: Female not on at 0645.

TD 56: At 1510, D56F on. A male w/ more immature characters than any I've seen chatters here [MD56(2)]. Note that his back is quite red.

TD 57: Still a cowbird egg. Silence.


TD 59: D59F(A) on at 1515; 4 eggs.

TD 60: No egg.

TD 61: Nest well lined, empty.

TD 62: Only the cowbird egg at 1535.

TD 63: Egg 2.

TD 64: No eggs; lining wet.

TD 65: Egg 2.

TD 66: Find a cradlet about 1/2-day old in mid-afternoon. Songs heard [MD66's or possibly MD67's?].

TD 67: Not found.

TD 68: No egg. Silence.

TD 69: MD69 sings on TD 29.

TD 70: Silence.

TD 71: Nest lacks lining.

TG 8: G6F on at 1700.

TG 9: No egg at 1715.

Other notes: See female Yellow-throat building at 0705. In afternoon I may see a male w/ a fecal sac.
May 21

Cloudy dawn after a very windy night; clear by 0615 w/ very gusty wind from mid-morning; 58° at 0600; clouding at 1400, drizzling from 1700 into night, very strong wind about 1600 for short time. Present at Dunn from 0615 to 1215 and from 1900 to 1940, at Griffey from 1945 to 2000.

**TD 56**: MD56(2) and MD57 have the territory of MD56(1) in morning, fight each other in evening. Four chalky eggs at 0620.

**TD 57**: See above. MD57 skids in mid-field at 1200, and I find a nest shell begun on 5/20 or 19.

**TD 58**: Egg 2 at 0630. D58F is not on at 1912 or between 1930 and 1935. Song near nest in evening.

**TD 59**: Female on 4 eggs at 0633, 1200, 1930. Constant chatters in morning, the odd (aggressive?) song plus calls from 1915 to 1920.

**TD 60**: Egg 1. I rig a net here in evening to catch D60F tomorrow.

**TD 61**: No egg.

**TD 62**: Nest has been abandoned w/ cowbird egg in it. MD62 sings insipid at N end of territory.

**TD 63**: Egg 3 at 0645. Silence.

**TD 64**: Find complete empty nest at exact location of D24F’s second nest of 1958. Type-8’s.

**TD 65**: Egg 3. D65F on at 1935.

**TD 66**: Young female building at 0705.

**TD 73**: No egg at 0845. Search w/o seeing a PW from 0845 to 0900 and from 1100 to 1130.

**TD 72**: Female comes to tree and “checks” mildly when I climb it. Frequent irregular chatters.
TD 71: Nest unlined, 1130-1200. See no female. Male erratic chatters in valley near nest.

TD 70: Search 30 minutes w/o luck. Irregular chatters, most of them from TD 27.

TD 69: Hear songs on TD 29.

TD 68: D68F builds near W sycamore; MD68 sings constant type-8's.

TD 67: Hear only 1-2 songs.

TG 8: G8F on at 1940.

TG 9: No egg.
Rain all night, stopping by dawn but resuming from 0900 to 1930; changeable and threatening to 1400, then clearing and mostly warm and sunny. Present at Dunn from 0500 to 1030 and from 1900 to 2030, at Griffey from 1200 to 1230.

Migration of Least Flycatchers, Blackburnians, Wilson’s, Mourning.

Arrive to catch D60F. All males are singing insipids and calling, w/ MD59 singing both insipids (I think they are his) and his odd song. At about 0540 MD59 or 60 chatters, the first non-insipid songs of the morning.

TD 60: D60F comes to nest at 0525. I catch her; the egg is just beneath the skin and I let her go for fear she’ll be unable to lay it. When released she flies w/ a weighted-down appearance. I band her S-R, 32-01503. She opens bill at me.

TD 59: See second paragraph, above; also material on evening songs.

D59F(A) on 4 eggs at 0510, 0555, 1200. At 1930 there are young from eggs 1 and 4, one in a large half of shell; eggs 2 and 3 are unhatched. Shell is probably part of egg 4.

TD 58: Egg 3 at 0625. D58F is off and nest is dry. She comes to nest at about 1935 in evening; light meter shows 70+ F.C.

TD 61: No egg. Water standing in nest at 0555.

TD 62: MD62 sings insipids high in W edge.

TD 63: D63F on at 0610.

TD 64: Egg 1 at 0605. D64F is already off the nest, egg cold.

TD 65: Egg 4; 4 warm eggs at 0620.
TD 57: Nest under construction has been torn from tree. Weak skids and step-buzzes well to SW, 20 yards N of E-W path.

TD 66: MD66[did I really see him? Notes indicate I did.] chatters (odd) to NW in tree row, goes N, may be giving up SW part of field because of nest location. Nest much advanced but needs padding.

TD 72: One egg left. Female not on; male sings by nest at 0715.

[Note: Nest had failed.]

TD 73: Not found [thought they were gone].

TD 71: Fragment abandoned. MD71 chatters often on E part of Brown's and S of it. Find him to S. Don't see female.

TG 8: Female on at 1200.

TG 9: Egg 1 at 1230.

I get data on evening song in E field; it's 67°, windless w/a few clouds on N and W horizon at about 1930. From 1920 onward only insipids and MD59's odd song are heard, with exception of a few songs at about 2005.

1950: 58 F.C. See an old female at path SE of E fence corner. Two males have squeaky fight.

1958: 50 F.C. (all are taken w/ meter pointed straight upward). Singing are MD58, 59, 65.


2002 1/2: 30 F.C. I.B. flight song.

2004: 25 F.C. Chat and I.B. flight songs, a different I.B. than last one. MD65 chatters.


2006: 17 F.C. MD57 and 58 skid. MD59 and 65 chatter. Note that insipids have stopped for a moment.
2009: 14 F.C. MD59's insipids are regular, about every 20 seconds. Only towhee, Field Sparrow, Cardinal, Yellow-throat sing.
2011: 10 F.C. Two males' insipids.
2013: 7 F.C. Two males' insipids. MD59's odd song. See a Field Sparrow hawk an insect, like a flycatcher. I.B., towhee, Yellowthroat sing.
2014: 6 F.C. MD59's odd song. Last I.B.
2017: 3.5 F.C. PW insipid heard once a minute for last 3 minutes now heard for final time. Towhees call. Singing are Yellow-throat, Field Sparrow, chat, Catbird.
2025: 1 F.C. No songs.
May 23

Clear w/ a heavy dew; 62°F at 0600; warm day w/ a few high clouds.

Present at Dunn from 0630 to 0645, from 0840 to 1230, from 1330 to 1530, and from 1745 to 1945; at Griffey from 0800 to 0830.

**TD 56:** D56F on 4 eggs at 0630. MD56(2) sings. At 1230 there are 3 young and egg 4; female off; song. At 1745, egg 4 has hatched.

**TD 57:** See MD57 in mid-field.

**TD 58:** Egg 4. D58F on at 0845; see egg 4 in evening.

**TD 59:** Brooding 4 young at 0630. At 0900 I catch D59F(A), an old female, and band her Y-R, S-L, 32-01506. She reacts strongly to bands when she flies. MD59 sings insipids, gives distraction display. I take a nestling and put it in D65F’s nest at 0955. Many of MD59’s odd songs in evening.

**TD 61:** Egg 1 at 0640.

**TG 8:** MG8 sings at 0800 and female leaves nest 1 1/2 minutes later. I introduce a Chipping Sparrow about 6 days old; banded on left 32-01505.

**TG 9:** Egg 2. Song.

**TD 65:** D65F on 4 eggs at 0840 and from 0855 to 0955. I then introduce a young D59 into nest. She feeds it at 1745. I rig hoop net and catch her at 1945. She is SOR-R, 32-01507, an old bird.

**TD 64:** D64F calls as I approach nest, so I leave.

**TD 70:** Many Field Sparrow-type songs.

**TD 71:** MD71 sings steadily for 1 1/2 hours, chatters (some weak) and insipids. He is excited, doesn’t concentrate. See D71F several times, once w/ material. See TD 71, below.
TD 72: D72F builds slowly in a haw at 1400 or so (3 trips in 20 minutes). Nest probably just begun. Regular chatters.

TD 73: Irregular songs. See a male but can’t see tail.

TD 71: Find female, wh/ acts now as if she’s not building or is just beginning. She picks up material once, or tries to, w/o keeping it. She isn’t in same place as during morning. Whenever male sings, she “checks.”

TD 60: Nest abandoned w/ egg 1 in it.
May 24

Clear windless dawn w/ a heavy dew; 52° at 0500. Clouding at 1200, w/ rain beginning at 1530 and becoming heavy at 1700. Present at Griffey from 0530 to 0545 and from 1845 to 1900, at Dunn from 0545 to 0745, 0815 to 1215, and from 1900 to 2000.

TG 8: Nest has failed w/o evidence, at 0530. Song.

TG 9: Egg 3 at 1845. Insipids nearby.

TD 56: Four young. Put up mist net and get D56F by hissing. She is old. Band her S-L, R-R, 32-01509. She goes right back to brood. MD56(2) sings around nest but shows no concern at my net or at D56F's alarm.

TD 58: D58F on at 0640. See male chattering slowly nearby. Insert a young D59 at 0745. Attempt to mist net pair at dusk, w/o success.

TD 59: D59F(A) broods. MD59 gives many of his odd songs. Remove a nestling and put it in D58 nest.

TD 65: Nestling ok. Put up hoop net to try to catch MD65. After 12 minutes of alarm at me, D65F goes to brood. MD65 is not seen for about an hour, during which MD60 sings type-8's near this nest and S to the W fence corner. My first idea was that MD65 was gone. No feeding, so I don't catch him.

TD 60: See TD65. Constant type-8's. [At time I thought there might be no female.]

Weigh the first nest's lone egg, which is fresh: 1.128 gm.

TD 66: Nest possibly more lined. No egg. MD67 chatters very regularly just E of the TD66 maple (in row). No challenge. He goes out E to mid-field. A female [D67F(B)], probably old, calls and forages in mid-field for 10 minutes; I see no gathering. MD67 has sung
10 minutes to 0833; now silence. He has been just N of the center of MD57's activity of the last few days, just S of MD66's center. MD67's behavior is interesting; it may have been he heard singing here on 5/22.

**TD 57:** I begin to search for MD57 after the episode just above, finally find him just S of TD 58 nest. He sings skids and insipids.

**TD 61:** Egg 2.

**TD 64:** Eggs 2 and 3.

**TD 63:** D63F on. I put up hoop, cutting away several branches. She quickly returns. During 20 minutes MD63 skids by nest some 6 times, goes on W. No other songs. Miss D63F in net.

**TD 62:** D62F is padding a shell begun yesterday by gun trees. MD62 sings insipids there.

**TD 67:** See TD 66, above.

**TD 71:** D71F is building a nest begun probably on 5/22, padding it w/ *Antennaria* down. MD71 follows her excitedly on each trip. Once he dives and chases and catches her as she carries down. He drives her into a tree 2' high, pulls her tail for 2-3 seconds, flutters out and sings just as he quits pulling. Another time he flips his tail and wings and practically jumps up and down as she gathers.

**TD 74:** Find nest here w/ female on 1 egg at 1200, male in nest tree.

**Other notes:** Field Sparrow nest w/ 3 young 6 days old.
May 25

Cloudy and wet after at least 1 rain during night; 60°F at 0500. Present at Dunn from 0545 to 1045, from 1130 to 1215, and from 1900 to 1945; at Griffey from 1045 to 1130.

**TD 56:** Female broods 4 young. MD56(2) sings constantly, seems not to feed nestlings. Songs at 1900.

**TD 58:** Catch D58F at 0730; she is young w/ very worn plumage. Band her SOC-R, 32-01510. Many chatters, some types-8's. She is on nest at 1915.

**TD 59:** Between 0615 and 0645, many of the peculiar songs. Female on at 0945. Odd songs at 1915.

**TD 65:** Net up at 0610 till 0645, when I remove net. D65F is on nest. MD65 moves over all of S end of N field, never goes S of fence. But from 1900 to 1940 I try again and he does go S; never to nest; mostly sings in E row. I think male's failure to feed means young is undiscovered so far; hence no anticipatory food-bringing yet.

**TD 66:** Egg 1. See TD 57 below.

**TD 62:** A little lining in nest.

**TD 63:** D63F is on. I get her in hoop. She is old; B-R, S-L, 32-01511. Had introduced a young D59.

**TD 64:** Four warm eggs.

**TD 61:** Egg 3; D61F on at 0940. She is off at 0945 and eggs are cool.

**TD 57:** MD57 and MD67 are having an encounter in mid-field E of maple at about 0950. There is chasing and supplanting, and MD67 seems to hold the ground; he is the aggressor at times. An old female here finally carries material W to the maple. A search turns up a nest w/ a cowbird egg; did I really see her carry?
The situation seems to be this: MD57 sings normally and seems to have a female. At 1910, a female's "checks" are heard when he sings in E edge. MD66 is gone, probably leaving the female wh/ today laid egg 1 (her nest is way off TD 57). MD67 has a territory in the E field as well as the W and must be the mate of the old female seen today, wh/ is probably laying [no; began on 5/29]. MD67 also sings in the valley to W and SW of the maple, i.e., down by the E-W path.

**TD 67**: See TD 57, above.

**TG 8**: Infrequent songs, at N edge of TG 8.

**TG 11**: [Songs to far N on this still unknown territory.]

**TG 9**: Four cold eggs at 1110. Songs nearby.

**TD 73**: Constant skids at S end of TD 73, later type-8's near maple tree parking spot.

**TD 72**: Nest a shell w/ little padding, probably built yesterday and abandoned. See female to S, male chattering occasionally there.

**Other notes**: Field Sparrow nest just off ground, 3 young about 3 days old. Towhee nest, 3 eggs, on ground.
May 26

Wet and gray after a storm last night with heavy rain from 2030 to 2300 and again later; 62° at 0615; rain at 1800 today. Present at Dunn from 0615 to 0830 and from 1030 to 1215; at Griffey from 0900 to 1030 and from 1900 to 2000.

TD 56: D56F on at 0615. Chatters.

TD 57: Type-B’s at 3/4 volume. MD57 is at 7’, looking about tensely in NE edge of field. At 0800 I return and see MD57 with a female with a pronounced immature plumage. She “checks” a good deal; erratic infrequent song. Near E clump. Probably not building.

TD 58: D58F on. See MD58.

TD 59: MD59 feeds. D59F(A) on.

TD 60: Songs.

TD 61: D61F on at 0700. Egg 4 at 0730. See MD61.

TD 62: No egg.

TD 63: D63F feeds. Probably hear MD63. [At time I had impression that males were not feeding nestlings, and I thought this might be related to the factors causing desertions of MD66 and 56 of their females. Now I think the matter is related to lack of knowledge of presence of young.]

TD 64: Female on at 0725.

TD 65: Egg 2. Young female near nest.

TD 66: At 0800, MD67 sings insipids on SW corner of E field, beyond tree row. The female, D67F(B) calls nearby. Both go to mid-field, where MD67 chases another male, probably MD57. MD67 goes to W row, sings insipids while D67F(B) forages in berries in field for 10 minutes. No sign of building. Once she scratches w/ left foot over wing and her mouth flies open.
TG 9: G9F on at 0915. M39 chatters just above her, then moves over TG9 singing regularly every 12-15 seconds for 15 minutes. See her bill move as though she grabs at a passing insect while she sits. I introduce 2 young Field Sparrows at 0945, 4 days old. Four eggs in nest.

At 1900 both Pw's feed Field Sparrows. I catch G9F but let her get away.

TG 8: From 0945 to 1030 I cover territory, hearing only 2-3 songs entire time. See a male N of last nest. In evening I'm on TG 9 from 1900 to 2000 and hear nothing from TG 8. The male may have moved temporarily [or the male caught later may have been a replacement].

TD 73: May hear song.

TD 72: D72F at 1200 builds a nest probably begun today. MD72 watches, follows, chatters (sometimes whispers).

TD 69: Skids on TD 29 and TD 69 (wh/ probably includes TD 29).

TD 68: Nest that D68F was building is gone. Find a new empty nest, complete.

Other notes: House Wren in yard laid egg 1 by 0900. Twghee nest on ground, 3 eggs.
May 27

Rain till 0700 after rain last night; rest of day highly changeable w/a wind at 1500 drying things a little; it has gotten very sodden. Present at Griffey from 0600 to 0800, from 1200 to 1215, and from 1900 to 1930; at Dunn from 1000 to 1200.

TG 8: In 2 hours on TG 9 in morning hear only 2-4 songs from TG 8.

TG 11: Find a male chattering N of TG 8 and female on nest at 1200 and 1930. New pair.

TG 9: Make great effort to catch pair, w/o luck.

TD 72: Building.

TD 70: See and hear male singing Field Sparrow-like songs by path.

TD 69: Skids.

TD 68: Egg 1 in the nest found yesterday.

TD 67: MD67 sings insipids in SW corner of E field at 1030; DG67(B) "checks" there. At 1130 I see MD56(2) and later MD57 go W to the TD 8 clump and sit quietly, while many "checks" are audible from W of row. See 3 or 4 fibers in a tree by the clump.

TD 66: The nest of the young female in the NW corner now has a cowbird egg and only egg 2.

TD 65: D65F on.

TD 64: Incubation.

TD 63: D63F at nest.

TD 62: Nest more fully lined; no egg.

TD 61: D61F on 4 eggs. I add a 5-day old Field Sparrow.

TD 60: No information.

TD 59: Young ok.
**TD 58:** Female on nest.

**TD 57:** See TD 67. D57F(1) works on a nest begun yesterday by the path, while MD57 skids at E side of field, apparently not staying near her.

**TD 56:** Brooding. See TD 67.
May 28

Completely overcast, still, w/ hard rain in afternoon; 58° at 0530. Present at Dunn from 0545 to 1030, from 1100 to 1200, and from 1920 to 1950; at Griffey from 1030 to 1100 and from 1200 to 1245.

TD 56: D56F feeds 4 young. MD56(2) chatters regularly in SW corner. [Note that D66F has left even though MD56(2) is singing on an adjacent territory and would surely mate w/ her.]

TD 57: D57F(1) is in nest at 0556. At 0700 I examine it; it is complete, empty. See MD57.

TD 58: Great effort to catch MD58, w/o luck. Net up at 0600.

At 0915 I have MD65 in it. Introduce! PW ok.

TD 59: Young ok.

TD 60: MD60 seen.

TD 61: D61F is on 4 eggs; Field Sparrow gone. Did she remove it? Cf. disappearance of young cowbird from a nest several years ago, [TD74 this year].

TD 62: Egg 1. MD62 sings high insipids at MD63 in middle of N field, later sings to SW.

TD 63: D63F on. See TD 62.

TD 64: Type-8's heard.

TD 65: Nest has failed w/o evidence at 0600. At 0915, MD65 has been caught in a mist net put up at the D58 nest. He has come about 150 yards from his own nest on to the adjacent territory. He is bright. Band him silver each leg, 32-01512 and -13.

TD 66: Only the cowbird egg remains. No sign of D66F, whose mate was probably MD66. Find a well developed fragment near D49F(A)'s last 1959 nest site; it is probably old, built back in the cold weather.
[D66F not known to have been seen again.]

**TD 67:** MD67 is seen on his W territory, but songs and female's calls in SW corner of E field at 0815 probably came from MD67 and D67F(B). At 1000 the pair is in E field. D67F(B) "checks" at me near the big maple.

**TD 68:** Egg 2. Song.

**TD 69:** See MD69.

**TD 70:** Chatters and Field Sparrow-like songs.

**TD 72:** Nest complete. MD72 is silent, wh/ is interesting.

**TD 74:** Put a 5-day old Field Sparrow in nest.

**TG 9:** Catch G9F in mist net at 1200. She is young; Y-L, S-R, 32-01514. Return at 1900 to try for male, but nest has failed since 1245, w/ lining a little disarranged. Insipids.

**TG 11:** Four fresh-looking eggs in nest. Female is young.

*Other notes:* Field Sparrow nest at 1 1/2' in 3' haw; 4 eggs. See a fledgling towhee, tailless but able to fly, surely one of early nests of the year.
May 29

Clear but w/ a mist and very heavy dew; clouding at 1830. Present at Dunn from 0630 to 1000 and from 1815 to 1945, at Griffey from 1000 to 1030.

**TD 74:** Both D74’s feed the Field Sparrow. Catch D74F, a young bird w/ worn flight feathers. She is SOB-L, 32-01515.

**TD 72:** Egg 1. See female, hear male.

**TD 56:** Band the 4 young GOS-R, color-L. 32-01516 and -17 is S, -18 is G, -19 is Y, -20 is R. See MD56(2); song.

**TD 57:** No egg. Song.

**TD 58:** Young ok. MD58 sings chatters, type-8’s. See TD58, below.

**TD 59:** Band the nestling ROS-L, R-R, 32-01521.

**TD 61:** Nest has failed w/o evidence. MD61 sings a few chatters near it.

**TD 62:** D62F on at 0845. Egg 2, cold, at 0900. Type-8’s nearby.

**TD 63:** MD63 is feeding the introduced nestling.

**TD 64:** D64F on at 0850.

**TD 65:** D65F builds (0915) a cradle begun yesterday. MD65 chatters slowly nearby. The nest is in the fence row and both D65’s go E of the row, a territory extension I think.

**TD 66:** No information. [No further developments on TD 66 during summer.]

**TD 67:** D67F(E) calls at me at maple. See no nest. Note that MD67 no longer seems to come to the E field much. He engages in a flying, bill-snapping encounter w/ MD69 on the hilltop of the W field near the D69’s’ new nest. See TD67, below.
TD 68: Nest fails w/o evidence.

TD 69: Find an old female building a high well developed nest, carrying grass. See TD 67 above.

TD 70: Frequent Field Sparrow-like songs.

TD 71: D71F on at 1830. Song.

TD 74: Young Field Sparrow gone at 1815, but 4 eggs remain. D74F calls at me.

TD 67: In evening I idly check nest found by maple on 5/25, when it held a cowbird egg. D67F(3) may have added to it that day. Today it holds a FW egg wh/ is surely hers. Note nest is near places where she has "checked" at me recently.

TG 11: Female on at 1010. Type-8's nearby and to S.

TG 9: MG9 sings erratically at 1030. No sign of building.

TD 58: I try to mist net MD58, w/o luck, in the evening. Catch male I.B. Band the nestling D59 wh/ the D58's are raising. It is ROS-L, S-R, 32-01522 and -23.
May 30

Steady rain from 2000 on last night; cloudy dawn, clearing somewhat at 0930, w/ rest of day changeable, warm, w/ a SW wind. Present at Griffey from 0930 to 1000, at Dunn from 1000 to 1230 and from 1345 to 1615.

TG 9: M39 follows G9F at a distance of from 1 to 10'; once she turns on him aggressively when he's about 2' away. She "tsips" all the time, seems not to be building. Irregular song. In 15 minutes at 1445, no sign of building.

TG 11: Incubation. Song.

TD 56: Young ok. A few chatters. See TD 56, below.

TD 57: No egg. Songs. See TD 56, below.

TD 58: D58F on at 1015. Young ok.

TD 59: Young ok.

TD 60: See MD60 in morning in NW corner of N field, in woods. He chatters, a most unusual song for him. Not seen in afternoon.

TD 61: MD61 skids and chatters about where D46F(A) had her successful nest in 1959. MD61 and MD62 have an encounter there. D61F shows much alarm at me at the spot, calling "sips" and going into the early stages of a distraction display. Surely building [correct]. In afternoon MD61 sings high insipids where he was this morning.


TD 63: Female on.

TD 64: Incubation.

TD 65: No visit.

TD 67: Egg 2 in nest in E field, so laying is in progress. Nest now holds cowbird egg and 2 PW eggs. No sign of MD67. See TD56, below.
TD 68: Find pair together far to N; no concentration on a spot. Only 10 songs in 30 minutes.

TD 69: Silent.

TD 70: Usual song.

TD 72: Egg 2.

TD 74: Nest has been abandoned w/ 4 eggs in it. Presumably failure is due to loss of Field Sparrow to a predator. Skids.

TD 56: Four young at 1500. At 1600, MD56 and 57 fight N of path in SW corner of field, about 30 yards from D67F(B)'s nest. An old female there is probably she. Males may be meeting and fighting because of attraction to her. If so, it's interesting that MD67 has pulled out and left her to other males.

Other notes: Field Sparrow nest at 6"; bird on 3 eggs. Field Sparrow nest on ground; 4 young about 6 days old.
May 31

Clear, calm, warm day; heavy dew. Present at Dunn from 0545 to 1700, except for 1400 to 1445 at Griffey.

**TD 56:** D56F feeds 4 young and MD56(2) once follows her to trees where nest is; he carries no food. Irregular song. Position of young in nest: they face all directions, not necessarily facing outward.

At 1500 I catch MD56(2) in a mist net placed near a carrying cage w/ the young D58 in it. Band him S-L, 32-01526. He shows much immature plumage.

**TD 57:** Egg 1. See and hear MD57 near D67F(B)'s nest in morning. At 1500, catch him in mist net by young D58; his bands are 25-66087 and -88.

**TD 58:** Put up mist net at 0805, catching D58F. At 1030 I move net, take out young D58 and put it in carrying cage. At 1500 I find I have caught MD56(2), MD57, and D58F, but not MD58. I then put young in a Potter trap and hold female, getting MD58 at 1700. He is bright; band him ROS-R, 32-01527. Young is returned to nest and stays in it.

**TD 60:** See MD60 apparently watching activity on TD 61 [building going on there].

**TD 61:** MD64 is here, 200 yards off territory; see also TD 60, above. Find both D61's, MD61 skidding sometimes faintly; they stay near the place where they were yesterday.

**TD 62:** [Egg 4.] D62F has begun to incubate.

**TD 63:** Mist net MD63 by removing young when MD63 arrives w/ food at 0700 or so. He is bright; band him SOY-R, 32-01524. Young banded ROS-L, G-R, 31-01525. I restore young to nest, and it sits on rim. D63F is not near when I remove young, and I neglected to note if I saw her earlier.
TD 64: See TD 61.

TD 67: Neglect to visit (or to note observations of) nest of D67F(E). MD67 not in E field; not seen on brief trip to W field.

TD 68: MD68 sings type-3's and chatters on NW part of field. Find a fresh nest shell there (1 day old), D68F near it.

TD 71: Inspect nest; 5 eggs.

TD 72: Egg 3. Female on at 1600. Regular chatters above nest.

TD 74: Not found.

TG 9: Irregular frequent chatters. G9F is carrying outer shell material high into trees of E ravine.

TG 11: Not visited.
June 1

Clear day w/ dew after a night in low 50's. Present at Dunn from 0615 to 1700, except for 1300 to 1530 at Griffey and 1530 to 1600 at home.

**TD 56:** Young in nest all day. All four face same direction. They call noisily.

**TD 57:** Egg 2.

**TD 58:** Young in nest w/ both adults near.

**TD 59:** Remove young, catch D59F(A), and use the two to catch other PW's. Return them to TD 59 at 1700. Young is ok at time but female is exhausted. No sign of MD59 in evening; he is alarmed at me in morning.

**TD 60:** Catch MD60 in mist net on TD 61. He is 27-69479.

**TD 61:** Put mist net and the D59's near to where D61F is building; time is 0700. In 30 minutes return and have caught MD60, D61F, and MD61. Both D61's are bright. Band him GOS-L, 32-01528.

**TD 62:** Incubation at 0730.

**TD 63:** Young not in or around nest, wh/ holds only 1 egg. Skids. Can conclude young is dead. [correct].

**TD 64:** Incubation at 0715.

**TD 65:** No visit.

**TD 67:** Nest contains cowbird egg, PW eggs 1,2, and unmarked PW egg. At 1700, MD67 sings in E field. Not seen on regular TD 67.

**TD 68:** Put net up in open edge of woods about 30 yards from a nest under construction (found today, begun yesterday or day before). Two males come to the cages, one of wh/ has young D59 and other D59F(A). Most interest is displayed in the female. They hit and bounce off the net. The males, probably MD68 and 72, have an encounter and I hear
bill-snapping and a slight twitter. Yesterday's fragment of a nest has been abandoned.

**TD 70:** Put up net w/ D59's in cages. MD70 is immediately but only moderately interested; he comes and looks at them, soon leaves and sings nearly constantly.

**TD 72:** Incubation at 1000.

**TG 11:** Nest has failed at 1330 w/ very fresh wet egg yolk in it. Gl1F is near, and MG 11 sings.

**TG 9:** Mist net and D59's put in shaded valley near location of G9F's nest, wh/ she is building. She is carrying padding to nest at 1400, and I find it, high. Young calls for 30 minutes w/o causing the G9's to do more than to "check," wh/ they begin to do almost immediately. They are clearly interested in the call the minute they hear it. G9F goes on building though. Then after 30 minutes G9F suddenly gets extremely excited and begins a distraction display, following me. She must have just caught sight of the young (cf. MD18 in 1958). MG9 becomes excited now, possibly in response to her behavior. She quits building and treats the young D59 as though it were her own; I'm sure she feeds it, though I never see it. She is caught twice in the net just at the young's cage.

When G9F began her distraction, a male flew up to w/ i 3" of her and fluttered its wings in and out, flounced its tail up and down, opened its bill at her. A third PW came up, probably a male, and there was a chase and an excited fight.

MG8 was caught in the net about 45 minutes after I set it up but probably came to the scene shortly after I put the D59's in place. He
must have been the third FW above.

TG 8: See just above. MG8 is bright; R-L; S-R, 32-01529.
June 2

Clear dawn w/ a thin high haze forming; heavy rain from 1215 to 1315; clear from 1500 on. Present at Dunn from 0630 to 1200, except for 1000 to 1100 at Griffey.

TD 56: Young present at 0630, calling noisily in nest at 0915, all 4 fledged by 1200. Catch D56R and feed it all afternoon on spittle bugs; it becomes tame. Keep it over night. MD56(2) silent; he has quit his constant singing but so far as I know hasn’t begun to feed the family of young.

TD 57: Egg 3.

TD 58: Young has left nest. Don’t see it, but MD58 scolds me well NW of nest.

TD 59: Silence for 10 minutes; then irregular chatters at N end of TD 59. No sign of young [wh/ MD59 seems to have neglected and let die because of his interest in MD59(B)].

TD 60: Song probably heard.

TD 61: May hear insipids.

TD 62: Four cold eggs at 0700. Female on at 0730. Insipids at gun trees.

TD 63: Silence.

TD 64: Only 2 eggs left at 0710; warm. MD64 sings type-8’s, buzzes in E woods.

TD 65: MD65 sings 10’ above nest.

TD 67: Eggs in D67F(3)’s nest cold on 2 visits; female not seen.

MD67 sings in W tree row of E field.

TD 68: Nest complete; male sings near it.

TD 69: Female on nest. See MD69.
TD 70: Very regular loud chatters.

TD 71: Five warm eggs at 0900.

TD 72: D72F on at 1100.

TD 74: Silence.

TG 8: An unbanded male sings E of road and SE of place where I park. He has been here off and on all week. Between 1000 and 1100 I'm on TG 8 and TG 11 for 30 minutes, walk the whole path twice. No PM's.


TG 10: Silence during 30 minutes here.
June 3

Clear but wet after yesterday's rain; 58° at dawn. Present at
Dunn from 0515 to 0730, from 1030 to 1245, and from 1530 to 1600; at
Griffee from 0815 to 1030 and from 1600 to 1630.

TD 72: Song. D72F on at 0630. Make brief unsuccessful attempt
to lure MD72 into net by young D56. See TD 72, below.

TD 73: MD73 skids regularly in the edge growth. Find a shell
begun on 6/1. D73F gathers and builds at 0627; she probably is old.

TG 8: Silence at 0815. Then find M38 on his usual territory.

TG 9: Silence.

TG 10: Silence at 0845. Schneider says a male sang W of house
last evening. Songs in W pines at 1630.

TG 11: MG11 chatters and I see G11F carry webs. Work to 1030
but don't find nest. See only male in afternoon.

TD 56: Young D56 died this morning at 0645; it had eaten well at
0615, so I don't know cause. MD56(2) ranges W to TD 8 clump.

TD 57: Female on.

TD 58: MD58 sings.

TD 59: See MD59. Frequent song N of sink hole.

TD 60: Both D60's are in N center of TD 60; he's excited.

TD 61: MD61 is chattering just S of gun trees.

TD 62: Incubation.

TD 63: MD63 skids often in W center of far N field, then goes E.
Probably D63F is building, but I don't see her [never did at this place].

TD 64: Incubation. Type-8's nearby.

TD 65: No activity at nest, wh/ is too high to see into. MD65
sings in edge near SW corner of N field.

**TD 67:** Female(B)'s nest has clearly failed; female not seen and eggs cold. Hear a male singing near nest.

**TD 68:** No egg. Songs.

**TD 69:** Skids.

**TD 70:** MD70 chatters in SE corner of TD 50, then on usual part of territory.

**TD 71:** Incubation at 1540; 5 eggs.

**TD 72:** Wait from 1200 to 1235 to introduce a 3-day old cowbird into nest, finally scaring female off to do so. MD72 goes to nest at 1220, but I can't see if he has food. D72F stays on. He sings before AFB coming, leaves and sings 15' away, moves on farther and sings. I visit nest at 1545; cowbird ok.

**Other notes:** A pair of Blue-winged Warblers is on TD 64 in a moderately thick patch of small (average about 10') saplings. They act as if they have a nest, the female giving a wing-fanning distraction display at 20'. Much calling; calls sound not quite like PW's.
June 4

Clear, hot, windless. Present at Dunn from 0630 to 1000, from 
1200 to 1315, and from 1845 to 1945; at Griffey from 1000 to 1130.

TD 72: Put up net early. MD72 to nest at 0645. I miss him. Once 
while he is here a strange male dives on him and there is a chase.

Yesterday D72F seemed to be standing over eggs when I came up, per-
haps shading them. She got into nest and sat as I approached.

At 1935 I catch MD72 in hoop; he is tame. Band him G-R, S-L, 
32-01530; bright. Once he approached w/ a song that sounded like a 
series of fight notes.

TD 73: Nest now lacks only final lining.

TD 71: Incubation at 0945.

TD 70: MD70 carries food. See D70F.

TD 69: D69F on nest.

TD 68: Egg 1. MD68 sings 40 yards from nest.

TD 67: Not definitely seen.

TD 65: D65F on at 1215. Song.

TD 64: Nest fails w/o evidence. MD64 flutters, sings type-6’s 
on SE TD 64.

TD 63: No information.

TD 62: Four warm eggs.

TD 60: MD60 sings Field Sparrow-like insipids in E tree row. No 
activity at place where I saw D60’s yesterday.

TD 59: D59F(B) found for first time, on an empty probably un- 
lined nest at 1200. She is B-L, SOB-R, an offspring of the D43’s. 
She hatched only 50-75 yards from TD 59. Her plumage is bright; she 
looks old. MD59 chatters irregularly near nest, where he has been during
last 2 days. This is a case of polygyny.

TD 58: Song.

TD 57: D57F(1) incubates. MD57 seen.

TD 56: No search.

TG 11: Find nest, a thin shell high in top of a redbud, in canopy of a woods. M3ll sings irregularly, behaves typically as G11F builds.

Other notes: Blue-wings on TD 64 again alarmed at me.
June 5

Hot, clear, fresh; SW breeze; some clouds about 1200. Present at Dunn from 0830 to 1245.

**TD 73**: Egg 1 at 1230. MD73 skids 40 yards away, and D73F calls at me 20 yards from nest.

**TD 72**: The cowbird is present at 0840, gone at 1245; 4 eggs still here.

**TD 71**: Five eggs. D71F returns to nest, and MD71 skids 40 yards away as she does.

**TD 70**: MD70 seen carrying food several times. Sings little, probably mostly just before going to nest. See TD 69.

**TD 69**: Female on. MD69 fights a male (MD70?) in SE corner.

**TD 68**: Egg 2 and a cowbird egg present w/ egg 1.

**TD 67**: MD67 almost surely seen on TD 66; sings there. Not found in W field.

**TD 65**: Female on.

**TD 64**: D64F, wh/ is extremely shy, builds a nest begun today. MD64 sings type-8's and chatters (unusual for him) nearby most of time, ranges somewhat.

**TD 63**: Probably hear MD63.

**TD 62**: Incubation.

**TD 61**: Songs.

**TD 60**: Find nest w/ 1 cowbird and 4 PW eggs; PW eggs just becoming chalky. D60F at nest. MD60 sings faint insipids every 10 seconds in tree row.

**TD 59**: Nest more fully lined.

**TD 58**: No information.
TD 57: Incubation; 4 eggs. Song.

TD 56: MD56(2) chatters at TD 8 clump; don't see young D56's.

Other notes: Four Field Sparrows about 6 days old in a nest.
June 6

Clear, about 52° at 0600; N breeze. Present at Dunn from 0630 to 1215 and from 1730 to 1930.

TD 56: MD56(2) skids at 0630 in SE corner, at noon chatters in SW corner.

TD 57: Incubation.

TD 58: No visit.

TD 59: No egg.

TD 60: Incubation.

TD 61: Chatters on W part of territory. MD61 and 62 seem to have split the field here somewhat on a N-S basis.

TD 62: Incubation.

TD 63: No visit.

TD 64: No visit.

TD 65: Incubation. MD65 sings.

TD 67: MD67 is not in W field from 0630 to 0830 but later is in E field singing insipids by big maple. A female (?) checks me often here, as though she had a nest. See page 262, below.

TD 68: Nest must have failed yesterday, contains cowbird egg and 2 PW eggs, one of the latter broken and dried hard by 0800; probably a cowbird failure. Slow chatters.

TD 69: Incubation. Song.

TD 70: Find nest, w/ 1 cowbird about 4 days old and 1 PW about 2-3 days old. Put up hoop and catch female, wh/ jumps into net w/o my doing anything. She is old; ROS-L, 32-01531. At 1900 get MD70 when he comes to feed. He is bright; 3-R, G-L; 32-01532. Chin is almost bare of feathers. He keeps snapping bill and erecting crown.
feathers at me.

TD 71: Incubation. Song.

TD 72: Nest deserted w/ 4 eggs in it. At 0800, D72F explores as MD72 follows and flutters at times. D72F driven by BVll female.

TD 73: Egg 2. MD73 sings near nest.
June 7

Cloudy; 52° at 0630. Present at Dunn from 0630 to 1215 and at 1530, at Griffey from 1415 to 1515. Explore TD 74 and beyond in early morning.

**N of TD 74:** Unbanded type-8 singer here. Find old nest w/ 1 well-incubated egg. No other PW’s to N and NW.

**TD 75 and 76:** These are new territories for pairs on the remnant of habitat left in Blue Ridge development. Find a day-old nest w/ MD75 (young) behaving typically near it; female unseen. MD75 chases a goldfinch; hear bill snapping.

**TD 56:** At 1200, find D56F tending D56S while MD56(2) sings infrequently near them in wooded field. D56S has 1/2" tail, all rectrices same length. It moves freely, looks like a newly fledged young except for its tail; rictal region yellow. Once it picks at something on a leaf. It is at 10-12' in top of a sumac, then moves on 5 yards.

**TD 57:** Female on. Songs.

**TD 58:** MD58 sings often SE of sink hole.

**TD 59:** No egg. MD59 sings his odd song in sink hole trees. D59F(B) sometimes calls after his songs, from below him.

**TD 60:** Incubation; 1 cowbird, 4 PW eggs.

**TD 61:** No information.

**TD 62:** Incubation.

**TD 63:** See MD63, center of N field.

**TD 64:** Nest looks complete (it is high). Type-8’s.

**TD 65:** Incubation.

**TD 67:** MD67 sings insipids near his cherry in W field at 1000.

See TD67 below.
TD 68: At 1000 find nest, a slight cradle begun yesterday. D68F is in it, lets me get 3-4' away, flutters out.

TD 69: No incubation on 3 visits. Only 1-2 skids. [Nest has failed.]

TD 70: Young ok.

TD 71: Incubation at 1530.

TD 72: D72F is building a high nest in woods' edge. Step-buzzes, some chatters nearby.

TD 73: D73F on at 0800. Return at 1030 to mark egg 3, but she is near and alarmed; so I go. MD73 seen.

TD 74: Heard.

TG 8: Silence.

TG 9: Female goes to nest, "tsips" at me.

TG 10: Pair together in afternoon, female moving as though she is incubating. MD10 tries to land on her as though to copulate, but she won’t let him.

TG 11: One chatter. No activity at nest.

TD 67: I was directly below MD67 when he stretched. He either raised his right wing a little or extended it to the side, fanned his tail at the right, kicked his right foot out and backward. He then scratched, opening his bill at the first move but closing it thereafter.
June 8

Clear, cool, fresh, w/ a NE breeze, at times very strong.

Present at I.U. from 0915 to 1000, at Griffey from 1000 to 1100, at Dunn from 1115 to 1515 and at 2000. Explore N end of golf course.

I.U.: Three unbanded males on IV and T 70. On IV S a bright female is much concerned at my first 2 hisses, then disregards me.

TG 8: Hear 1 chatter.

TG 9: Nest seems to have failed; female not on it for 30 minutes. Many chatters on W edge of territory.

TG 11: No activity at nest. A few chatters.

TD 70: Young ok. See below, TD 70.

TD 69: At 1200, D69F builds a nest begun yesterday. MD69 ranges widely, skids very regularly.

TD 68: Near full size; building. Silence.

TD 67: Because male calls at me, I search and find D67F(A)’s nest near cherry. It’s only 18 yards from her last year’s successful nest. Five chalky eggs.

TD 70: Remove young PW to catch D73’s. It is very small, apparently very hungry. Doubt if it would have lived.

TD 71: Female at nest at 1500. Songs.

TD 72: Building at 1300.

TD 73: Female on from 1305 to 1325. Introduce young D70.

TD 65: Four PW eggs seen by mirror, not yet chalky. MD65 sings chatters and rasping buzz songs above nest.

TD 62: D62F just below nest at 1400.

TD 60: Nest fails; 1 egg left.

TD 59: Egg 1. D59F(B) near nest at 1345. She preens and I see
no patch; interval till egg 1 suggests she hasn't had prior clutch.

TD 58: Insipids SE of sink hole.

TD 57: Incubation.

TD 75: Nest complete at 1500.
June 9
Clear, windless, 64° at 0700. Present at Dunn from 0645 to 0845, from 1200 to 1215, and from 1330 to 1545; at Griffey from 0915 to 1115 and from 1215 to 1315.

TD 73: D73F on at 0650. Net up. At 0815 catch male as he feeds. Seven rectrices to the left are slightly short, except for the 2 outer left rectrices. He is bright; ROS-L, 32-01533. Catch female next; she is bright; YOS-L, 32-01535. Remove young w/o being seen at 1210. Discard band 32-01534.

TD 72: Loud songs.

TD 71: Nest torn from tree at 1200. Male chatters far to E and SE.

TD 70: Cowbird ok.

TD 69: Nest lacks final lining. Skids.

TD 68: Nest heavily lined by 1500.

TD 67: D67F (A) on 5 eggs.

TD 65: Incubation. MD65 sings many insipids by and N of nest, than rasps in W edge, goes S in W fence row of E field to the dead elm. He may join in mobbing something, w/ chickadees and titmice; don't see object.

TD 64: No visit.

TD 63: No visit.

TD 62: Four warm eggs. MD62 at gun tree.

TD 61: Song probably heard.

TD 60: Search for hour w/o definitely seeing a D60.

TD 59: Egg 2. Hear chatters and odd song.

TD 58: Chatters by sycamore.
TD 57: Nest fails w/o evidence.

TD 56: No information.

TG 8: MG8 sings at S end of field.

TG 9: MG9 chatters often, then is silent for a long time. See a second PW, probably G9F. At noon when I come back I see MG9 stretch: right wing out and back, tail and right foot stretched as usual; left wing slightly raised. [ ] MG9 sings constant regular chatters from 1 spot, some faint. He dives on something, goes to TG 8. There seems to be no female here.

TG 10: MG10 sings type-8's when I arrive. Later I see a female sitting stiffly at 35' in a tree in a position inviting copulation (but not as extreme as I have seen). MG10 lands on her for 1 second, probably too briefly to copulate. Then for 5-6 minutes the two move at 35-50' in big sycamore. I may see a third PW. Pair then into Schneider's orchard; female feeds rapidly in meadow, hovering. MG10 leaves her here, goes N. She feeds for 30 to 60 seconds, goes 40 yards E to a nest. In nest are 3 well-incubated eggs. I put the young D70 in nest at 1230; female doesn't see me.

TG 11: No activity at nest.

Idea: Nest failures due to cowbird breakage ought to be separated from other desertions.
June 10

Clear, fresh, calm; 60° at 0530. Present at Dunn at 0630, from 0830 to 1100, from 1330 to 1530, at 1930; at Griffey from 0645 to 0800, from 1100 to 1145, from 1830 to 1915.

TG 11: Silence. No activity at nest.

TG 10: Net up at 0645. One or 2 eggs have hatched. M310 sings faintly in W pines, does not feed. At 0800, I notice an egg is gone from nest, wh/ tilts badly. There is an egg w/ a 5-6 day embryo under the nest; it may have fallen out earlier. Return through day; M310 still not feeding at 1915.

TG 9: Complete silence for 15 minutes at 0715. At 1120 a male chatters in a long series (once whispers), moving over all of TG9 and staying high. Occasional silences. He probably leaves TG 9 at times [and may not have been M39].

TG 8: Few songs.

TD 56: MD56(2) sings over S end of field at 1100 and 1530.

TD 57: MD57 skids weakly in mid-field in early morning, is silent at 1530. See no female.

TD 58: MD58 is near E edge.

TD 59: Egg 3, warm at 1530. Female was on at 0850, 0915.

TD 60: After long search, find MD60 skidding weakly in SW quarter of TD 60. See no female.

TD 61. Songs.

TD 62: Eggs warm; egg 3 is dead.

TD 63: No visit.

TD 64: No visit.

TD 65: Incubation. At 1530, MD65 sings only 30 yards N of big
maple in W edge of E field.

**TD 67**: At 0945, 3 eggs and 2 young.

**TD 68**: No egg. Song.

**TD 69**: Nest lined. MD69 seen.

**TD 70**: Cowbird ok. MD70 sings on Allen’s, feeds cowbird.

**TD 71**: Much moving, singing from high up; long series. See no female.

**TD 72**: Song.

**TD 73**: Incubation at 1015. See MD73 to S.

**TD 75**: No egg.
June 11

Clear after grayish haze at dawn; storms at 1300 and 1500. Present at Dunn at 0545, from 0800 to 1000, from 1030 to 1200, from 1230 to 1330, and from 1400 to 1500; at Griffey from 0645 to 0800 and from 1830 to 1930.

TG 11: G11F incubates.

TG 10: Visit nest all day; male isn’t feeding. Remove young D70 at 0800. At 1930, I catch female in hoop, band her 2 R’s-R, R-L. Her plumage shows some few traces of immaturity.

TG 9: Silence at 0705, 0725.

TG 8: M38 sits high and sings insipids at S end. Must have a nest there [?].

TD 56: Insipids in SE tree row, 0830. At about 1500 find D56F much alarmed on TD 56, calling many “tsips.” MD56(2) is w/ her. They seem to be paired, though I have no reason to think he is caring for her family.

TD 57: At 1500, MD57 skids on E side of field, goes to TD 56 to watch the D56’s; see above. No sign of a female.

TD 59: No egg 4; I’m confident this is a 3-egg set. Female on at 0810. I put young D70 in. At about 1400 I catch D59F(B) to see her bands and plumage: she is 29-01146. She looks bright enough to be an old bird. [One test of my aging of females is whether adult females in fall ever show gray in plumage.]

Young D70 does something I’ve seen before in nestlings: It keeps kicking its tarsus out and back until it finds support, a brace for it.

TD 60: MD60 sings where he was yesterday. I suspect D60F is nesting in woods. [I never saw her again.]
TD 61: MD61 sings in mid-field and near gun tree.

TD 62: Incubation; 4 eggs at 0930.

TD 63: No visit.

TD 64: No visit.

TD 65: Song.

TD 67: Brooding. Five young at 0930.

TD 68: Egg 1.

TD 69: No egg.


TD 71: MD71 sings very faintly while D71F builds a nest begun today. One loud song in 40 minutes. She is very timid. He follows her much of time, once for 8 minutes perches in clump where nest is, only 5' above it (unusual).

TD 72: Song.

TD 75: Egg 1; female on at 1145. Insipids.
June 12

Rain much of time from 1900 yesterday to 1430 today. Present at Dunn from 0915 to 0925, 1045 to 1200, and 1300 to 1645; at Griffey from 1000 to 1045.

TD 72: Song heard near nest, also well to S.

TG 8: Silence.

TG 9: At 1045 hear 3-4 weak chatters on W edge; may be MG10.

TG 10: Nest fails w/o evidence, by 1000. Looks too dry to have failed during night. Much dog hair in lining.

TG 11: GllF not on during 15 minutes. MG11 heard.

TD 56: At 1045, song in SW corner. Again in afternoon.

TD 57: MD57 sings just NE of MD56(%), then covers TD 57.

TD 59: Incubation at 1100, 1200. Remove young D70 at 1300, w/o being seen.

TD 60: No visit.

TD 61: Song.

TD 62: At 1045 there are 3 young; one is clearly larger than other two, wh/ probably just hatched. At 1300 I catch D62F in hoop. She is old but w/ rectrices much worn, the outer left rectrix is broken at about half its length. She is ROS-L, 32-01537 (unintentional duplication of D70F's colors).

TD 63: See MD63 skidding in woods E of N field.

TD 64: Female not on at 1130.

TD 65: Incubation.

TD 67: Five young.

TD 68: Egg 2.

TD 69: Egg 1. Song.
TD 70: Band cowbird (27-145084) wh/ jumps out when I try to restore D70G. Put D70G in nest, cowbird near it. Very sultry, cloudy, 86°, sun shining through cloud filter for 1 minute on D70G; it began to pant and looked nearly prostrate till sheltered, when it quickly recovered (this was before I put it in nest.)

TD 71: Building at 1430, despite rain wh/ falls and has on and off all day. D71F quite nervous about me. MD71 fights something to W toward valley, twitters.

TD 75: Egg 2. D75F on at 1440. Hear male.

TD 76: Hear.
June 13

Sun through a haze after a long heavy rain from 1800 yesterday far into night; heavy rain today at 1800. Present at I.U. from 0800 to 0930, at Griffey from 1000 to 1200, at Dunn from 1330 to 1600. Explore V and the territories S and SE of golf course.

I.U.: There is an unbanded male on T72-73. On old T66 an unbanded male skids, and I find an overturned nest w/ old eggs under it, about 7-8 days incubated; nest 1 1/2' high in 3' maple. On V, M69 sings regularly. An unbanded type-8 singer is just W of the pines W of V.

TG 8: Song.

TG 9: G9F is seen briefly. A male sings only 2-3 times in 50 minutes, never in same spot; he is unbanded. [It is possible that M39 had gone.]

TG 10: Two short series in 45 minutes. No sign of male; rain might have prevented rebuilding.

TG 11: In effort to see if female is on high nest, I hiss. Male comes up and begins full distraction display, calling and crawling along; he "tsips" for 5 minutes after display quits. G11F is w/ him at first and seems to want to go to nest; I retire and on return can't find her. She may be on.

TD 56: Not seen.

TD 57: Constant song all over TD 57, not loud and usually not while perched for long, but I suspect female is gone.

TD 58, 60, 61, 63: No information.

TD 59: Incubation. Peculiar song.

TD 62: Brooding 3 young.
TD 64: No activity at nest, wh/ probably has failed [correct].
[D64F not seen again.]

TD 65: Incubation.

TD 67: Young ok.

TD 68: D68F on at 1400.

TD 69: Egg 2. Egg 1 is gone.

TD 70: Young D70 is dead in nest, neglected by parents in favor of the fledged cowbird. MD70 alarmed at me. Hear cowbird. Nest has many mites in it.

TD 71: Nest at least partly lined.

TD 72: D72F not on. Song.

TD 73: D73F near nest; alarm.

TD 75: Egg 3 and cowbird egg present today; egg 2 gone.

Other notes: Towhee on nest at 3' in cedar; 3 eggs.
June 14

Very fine rain at 0630, after drenching rain during much of night; cloudy and cool w/ brief light rains throughout day; windy. Present at Dunn from 0630 to 0900 and from 1830 to 1945, at Griffey from 1330 to 1700.

TD 69: Cowbird egg and PW egg 2, latter w/ a puncture and crack. D69F must have laid egg 3 off the nest today.

TD 67: Brooding.

TD 68: Egg 4. Introduce 4-day old Field Sparrow at 0700. D68F returns to nest. MD68 probably not feeding at 1830.

TD 72: No incubation. MD72 seen.

TD 76: Find nest when I see pair together, alarmed at me; 4 eggs. Introduce 4-day Field Sparrow at 0715. Both adults are feeding at 1900.

TD 75: D75F on, leaving at 0855. Nest holds 1 cowbird, 2 PW eggs. Introduce 4-day Field Sparrow.

TG 8: Song.

TG 9: No information.

TG 10: Find M310 tending a fledgling about 1 day out of nest, w/ the banded female carrying nest material or toying w/ it. Clearly M310 is polygynous. Schneider and I catch young, get male in mist net. Banded female comes up while I have young in carrying cage, showing little alarm.


I use G10’s to try to catch G11’s, return them to TG 10 after 1 hour.

TG 11: Put G10’s by net below nest for 1 hour but see no G11. Quite windy, wh/ drowns out noise of young G10.
June 15

Clear and fresh all day, windy and cool. Present at Dunn from 0645 to 1000 and from 1300 to 1600, at Griffey from 1015 to 1145.

TD 76: Both adults feed. Catch female, wh/ is old; she is bright BOS-L, 32-01544. MD76 sings chatters and type-8's, covers field S of nest as well as N.

TD 75: Nest deserted w/ dead Field Sparrow and eggs in it. Silence at 0700.

TD 73: D73F on.

TD 72: Incubation.

TD 71: Egg 1.

TD 70: Field Sparrow song heard.

TD 69: Nest now has only cowbird egg, stuck to bottom. MD69 skids from hilltop well S on TD 50 across to TD 29.

TD 68: Catch male in hoop, but D68F will never quite come to nest, always eating food she carries. MD68 is old, has protuberance at cloaca. Band him bright B-R, S-L; 32-01545. Once he lands on a limb at 3', slightly lowers wings, raises tail, perhaps crouches; looks like a mild imitation display by a female.

Once D68F comes up w/ food while I have MD68 in cage. A third PW flies up to her some 10-15 yards from nest. She turns on it and drives it away; it goes E into trees and MD59's peculiar song sounds at same time. He was some 300-to 400 yards off TD 59, at 1430.

TD 67: Five nestlings (I think).

TD 65: Incubation; 4 eggs. Song.

TD 63, 64: No visit.

TD 62: Nest fails w/o evidence.
TD 59: See TD 68. D59F(B) calls as I go to nest.

TD 58: Song.

TD 57: Regular skids.

TD 56: At 1530, MDS6(2) and D56F are near each other. She nest-shapes in little haw, goes on 20 yards. He flutters before her in flight. I don’t stay.

TG 8: MG8 sings insipids high in NW corner of TG 8, watches something below and in woods. [Later found nest fairly near this, already failed. At time thought G9F might have come to this territory, but got no evidence of it.]

TG 9: Silence.

TG 10: No visit. Schneider heard the male.

TG 11: Nest has failed. G11F is building a thin shell begun yesterday. M311 is near, “tsipping” at me very noticeably when I arrive in general vicinity and thus attracting me (odd behavior).
June 16

Clear, turning extremely windy from 0900 on, showering at 1530 and raining at 2015. Present at Dunn from 0515 to 0600, from 0800 to 1200, at 1530, and from 1900 to 2015; at Griffey from 1430 to 1530.

**TD 76:** Catch MD76 by hissing him into mist net. He is probably young; protuberance at cloaca. Band him SOY-L, 32-01545. Remove young unseen at 1200.

**TD 56:** MD56(2) is near young D56's wh/ beg noisily. See no feeding but at time am sure he is tending.

**TD 57:** Regular skids. No female.

**TD 58:** MD58 seen, W to tree row at S end.

**TD 59:** D59F(B) on, male near.

**TD 60, 61:** No information.

**TD 62:** One or 2 songs in 20-30 minutes. See TD63, below.

**TD 63:** MD63 is at N end of TD 62, probably fights MD62.

**TD 64:** No visit.

**TD 65:** Four eggs at 0900; 2 young and 2 eggs at 1915.

**TD 67:** Four young in nest at 1930. Band them YOS-R, color L; 32-01547 is Y; -48 is R; -49 is G; -50 is S (wh/ is -51). At 2015, D67F(A) is on nest; it is much tilted.

**TD 68:** At 2000 when D68F is brooding, scare her into hoop. She is young; band her SOY-R, 32-01552.

**TD 69:** D69F builds day-old nest in morning, MD69 sings steadily, never near nest; but he sang there a lot yesterday.

**TD 70:** No information.

**TD 71:** Eggs are gone at 1530; MD71 sings constantly nearby. At 2000 I introduce 2 dead eggs to try to keep D71F laying.
**TD 72:** MD72 joins a mob against something at maple stub. He also fights MD73 there at 1030.

**TD 73:** See TD72, above.

**TD 75:** Search for 30 minutes and find no PW’s. Find deserted nest of 3 PW eggs and 1 cowbird egg, PW egg just like those in recent nest of D75F. D75F’s 2 live eggs were weighed and measured on 6/15, thus: egg 1, 1.005 g., 15.1x11.7 mm.; egg 3, 1.140 g., 15.3x12.2 mm. Today’s old eggs were small too: 14.5x11.7, 15.1x12.3, 14.6x12.4.

**TG 8:** Silence.

**TG 9:** Silence.

**TG 10:** Silence during 15 minutes.

**TG 11:** Nest well developed.

**Note:** I also weighed and measured D72F’s eggs on 6/7 at 0600, in order in which they were laid: 1.270 g., 16.4x12.7 mm.; 1.310 g., 16.4x12.6 mm.; 1.330 g., 16.8x12.8 mm.; 1.310 g., 16.4x12.9 mm.

D60F’s remaining egg on 6/8 weighed 1.170 g. All these weights were taken on the lab balance.
June 17

Gray, cool (56 early), w/a N breeze; misty rain for 20 minutes at 0900; wind and rain last night. Present at Dunn from 0900 to 1330.

TD 76: Incubation. MD76 seen.
TD 75: No sign of a FW in 30 minutes.
TD 71: Egg 3 laid w/ eggs I introduced.
TD 77: [See unbanded male on Doerr's and it turns out probably to be male of this new pair.]

TD 69: Nest progressing but is w/o much padding.
TD 68: Field Sparrow ok. I try to remove it but an adult sees me each time I approach, so I leave.

TD 67: Some young gone. Nest extremely badly tilted; they surely fell out.
TD 65: Three young, 1 egg at 1200, 1330. I put mirror to nest and D65F gets off only about 2 inches; she snapped at mirror the first time. Tamest FW I have seen. Second time I look MD65 is there; he gives a big distraction display while D65F reluctantly moves over to make room for mirror.

MD65 earlier was to S at old TD 66-67 maple. MD67 now probably concentrates on his nestlings and leaves E field to other males. [At time it seemed possible D67F(B) was still here.] See TD 58, below.

TD 64: No information.
TD 63: MD63 sings just N of D62's.
TD 62: Very little song; a few in NW corner. See D62F; she may be slowed down in building by the wet weather.

Several times see a silent unbanded male moving along low in brush here.

TD 61: No information.
TD 60: MD60 sings in gun trees.

TD 59: Incubation.

TD 58: MD58 sings W to E fence corner, S into the brushy area [where D57F(2) later built].

TD 57: Regular song, once near the W tree row maple. No mate.

TD 56: No information.
June 18

Clear, fresh; slight E breeze. Present at Dunn from 0800 to 1245.

TD 56: D56F tends D56Y and G in S end of wooded field at 0800; they are full-size. Young have wide yellow marks on breasts, commis-sures as in adults but light in color. Both scratch over wing; little movement. A male rasps very nearby.

TD 57: At 0815, MD57 flutters, chases a PW, flutters at end of chase. I follow for 15 minutes, and for 10 more at 1030, see no female. He skids constantly, covers TD 57.

TD 58: MD58 sings over TD 58 S into the berry patch. At 0820, MD65 silently comes to this patch, then goes E into woods. There is much silent chasing and darting by the males. Every time I see a male’s bands, it’s MD58. Did D58F build here? [No.]

TD 59: Nest fails w/o evidence. D59F(B) is W of path. There is a male-male fight, almost surely between MD59 and 65; D59F(B) “checks.”

TD 60: Songs.

TD 62: MD62 sings constant rasping insipids on W half of TD 62. I follow for 45 minutes but never see D62F. He never concentrates, and I learn nothing.

TD 63: Skids heard just N of TD 62.

TD 64: No visit.

TD 65: See TD 58, above. Three young at 0900. Female scoots over for mirror.

TD 67: Nest practically on its side. Two bills seen, but there could be 3 young. Both adults feed.

TD 68: D68F on at 1205. Remove young at 1230; probably I was not seen, but I was noticed on 2 attempts, at 1205 and 1215.
TD 69: No egg.

TD 70: Song.

TD 71: D71F on at 1045. Introduce 2-day Field Sparrow.

TD 72: D72F on. MD72 sings about 20 yards away.

TD 73: Flush D73F from nest; 2 eggs. Song.

TD 75: Silence at 1100.

TD 76: Flush D76F from 4 chalky eggs.
June 19

Clear, hot, calm, w/ a few high white clouds. Present at Dunn from 0800 to 1200, from 1300 to 1600, and from 1830 to 1930.

TD 76: Four eggs.
TD 75: Nothing learned.
TD 73: Nest has failed; 1 cool egg left. Song.
TD 72: Incubation. Song.
TD 71: Net up at 0825. Catch D71F, a young bird w/ rectrices much worn. She is SOR-R, 32-01553. Can’t catch MD71, wh/ once sings a quiet chatter while perched on rim, w/ D71F and me near. Field Sparrow ok.
TD 69: No egg. Nest more fully lined.
TD 68: Four eggs present at 1140. Constant chatters, as if there were no female. Can’t tell if eggs are warm.
TD 67: Two young at 1130.
TD 65: MD65 feeds.
TD 64, 63: No visit.
TD 62: Find unlined nest.
TD 61: Probably hear song.
TD 59: D59F(B) builds at 1330 but is so shy she won’t go to nest while I’m here.
TD 58: MD58 seen w/ young D58. Only glimpse young, but when I hiss MD58 is much alarmed.
TD 57: Songs, some on W side of field.
TD 56: At 0800 there are 2 males in wooded field, one an unbanded male chattering in SE corner. Also on 3 visits to TD 56 throughout day D56Y and G are in SW part of territory. D56F is tending, and on all 3 occasions MD56(2) is quite near them.
June 20

Moderate and clear, clouding in late afternoon. Present at Dunn from 0545 to 0930 and from 1200 to 1245.

TD 73: Silence from 1215 to 1230.

TD 72: Incubation.

TD 71: Catch male in mist net. He has worn rectrices; band him YOG-R, 32-01554. Field Sparrow ok.

TD 70: No information.

TD 69: Egg 1; D69F on at 0620.

TD 68: D68F on at 0700. Song.

TD 67: Young have fledged by 0620, are low, about 15 yards from nest; weak flight. Catch one, hear probably 1 other. One caught has lost its color band, and I add bright B but neglect to get its number correctly. Adults call and display for 45 minutes before I catch young, wh/ remains completely silent. MD67 once gives a frightened twitter.

TD 65: D65F snaps at mirror when I push her off 3 young.

TD 64, 63: No visit.

TD 62: Nest has some lining.

TD 61, 60: No information.

TD 59: D59(F) works on nest begun yesterday; very shy.

TD 58: D58F found on an empty nest, a second brood nest apparently just built. MD58 flies over nest, wh/ is how I find it.

TD 57: D57F(2) found for first time, a bright female. MD57 sings constantly, flutters mildly. Female flies busily through low growth.

TD 56: D56F tends D56Y and G in TD8 clump, MD56(2) always staying
near them. See TG8, below.

**TG 8:** At 0800, MG8 is quietly watching the D56's, about 750 yards (verified) off territory. MD56(2) twice chases MG8 in low, circling, fairly fast flights. MG8 is silent, for at least 5 minutes won't be driven off the territory.
June 21

Cool morning, clearing after an apparently heavy rain at night.

Present at Griffey from 0730 to 0815, at Dunn from 0830 to 1200.

TG 8: MG8 chatters constantly after initial silence. He now stays at N end of territory instead of S.

TG 11: No activity at nest. Pair together, near last nest much of time; one of them may approach it. MG11 sings and after each song G11F "seeps" from 1 to several times.

TD 73: No sign of them.

TD 76: At 1145 there are 2 young and 2 eggs w/ cracks.

TD 72: D72F on. Song.

TD 70: Type-8's.

TD 69: Egg 2.

TD 65: Brooding.

TD 62: No egg.

TD 61: Search w/o luck for 45 minutes at spot where D61's showed alarm when building. Both greatly alarmed today; MD61 gives distraction display.

TD 59: Nest looks complete; I stay away.

TD 58: Egg 1.

TD 57: D57F(2) builds a nest begun yesterday. She perhaps arrived on 6/18.

TD 56: D56F tends D56Y (noisy) in SW corner. D56Y is nearly all yellow on breast; wing shows typical bar, perhaps for first time. MD56(2) is seen to NE.
June 22

Hot, sunny day, extremely humid; it may have rained last night. There is a violent storm beginning at 2230 today; see tomorrow's notes. Present at Griffey at 0800, at Dunn from 1015 to 1215 and from 1800 to 1830; explore N of Griffey Lake from 0830 to 1000.

TG 8: Regular chatters from MG8.
TG 11: G11F on at 0745.

Explored area: In large tract N of lake I find 2 unbanded males, and an unbanded female tending young about 1 week out of nest. There has been a good deal of clearing here, so that tract may not hold over 2 or 3 pairs.

TG 56: Young D56's are in S end of field in morning, in wooded field in evening; D56F tends and they beg noisily. An unbanded male may have been glimpsed watching family at 1015.

TD 57: Put hoop at nest, but female is so shy she won't go to it if I'm in sight. By evening nest may be complete; there is some lining. MD57 sings little, never near nest. Remove hoop.

TD 58: Egg 2; egg 1 gone.
TD 59: Nest complete, empty.
TD 60: No information.
TD 61: Again both adults are greatly upset when I search for nest.
TD 62: Egg 1. MD62 at N end of TD 62.
TD 65: At 1815 band nestlings S-R, G over color L; 32-01555 is R; -56 is B; -57 is Y. Also in nest is 1 well developed egg, which I leave.

TD 63, 64, 67: No visit.
TD 68: D68F near nest.

TD 69: Egg 3.

TD 70: Probably hear MD70.

TD 72: Female on.
June 23

One of the heaviest storms in years, consisting really of 3 storms, between 2200 and about 0500, occurred during night, w/ rain till 1200 today and violent wind all day. Rainfall from 2200 to 0830 was 4.25”, supposedly a local record. At various places in southern Indiana, and undoubtedly here too, wind gusts were 60 m.p.h. Damage to trees, utilities, property was very great; storm was perhaps as heavy as any ever known here. Clearing in the afternoon. Present at Dunn from 1230 to 1400.

TD 56, 60, 53, 64, 70: No information.
TD 57: Nest complete, very flimsy; no egg.
TD 58: Egg 2 only one here; D58F on at 1320.
TD 59: No egg.
TD 61: MD61 shows alarm at place where I think nest is.
TD 62: Egg 1 only one here.
TD 65: Young ok.
TD 68: Incubation.
TD 72: Nest apparently washed or blown away, or perhaps whole nest branch (dead, creeper-covered) was. No sign of nest.

[Note: Nests on TD 72 and perhaps TD 61 [never found] were destroyed by the storm. D58F and D62F seem to have missed laying an egg in middle of clutch and D59F(B) to have delayed laying by 1 day. BV7 female should have laid egg 4 today and seems not to have; no other certain 3-egg sets for BV’s. D69F spent the night on the nest (presumably) and laid egg 4. Storm was heaviest at about 0430, so females may have stayed under cover and not ventured out to lay.]
June 24

Cool and clear most of time after a steady rain last night. Present at Dunn from 1230 to 1700.

TD 55: MD56(2) sings.

TD 57: No egg.

TD 58: Nest fails w/o evidence. MD58 seen.

TD 59: Egg 1. Peculiar song.

TD 60: MD60 sings.

TD 61: MD61 sings a lot (some pauses), is uninterested when I explore his nest area and hiss; nest must have failed. [D61F was never seen again.]

TD 62: Egg 2. D62F on at 1500, 1530.

TD 63: Frequent skids, N end of N field.

TD 64: Regular type-8’s.

TD 65: Nestlings ok.

TD 67: D67F is 65 yards S of nest, by path.


TD 69: Incubation; 4 eggs.

TD 71: Nest has failed. When I caught MD71 I had removed the dead eggs put in earlier to stimulate laying, so nest held the introduced young and 2 PW eggs when it failed. Today 1 egg is left in nest, and there is a broken dried shell on the ground.

TD 72: MD72 skids near sycamore; D72F is near, apparently not building.

TD 73: MD73 skids here. I had thought he was gone.

TD 75: See a male here. Song.

TD 76: Nest fails w/o evidence.
June 25

Clear, rather cool; dew. Present at Griffey from 0815 to 0630, at Dunn from 0830 to 1230.

TG 8: MG8 seen; sings.
TG 11: G11F on. Hear type-8's.
TD 73: Song.
TD 72: D72F builds nest begun early yesterday. MD72 very irregular in song; long series and silences. Unbanded male near maple stub; silent.

TD 71: MD71 sings constantly, ranges to S pines and orchard; then silence.

TD 69: Incubation.
TD 68: Three eggs warm. Song.
TD 77: [New pair]. Unbanded male chatters on Doerr's regularly for at least 30 minutes.

TD 76: At 1230 find pair just N of nest, male silent and female so nervous at me that there is no point in my staying.

TD 67: MD67 sings insipids on SE TD 50.
TD 65: Young ok.
TD 63, 64: No visit.
TD 62: Incubation of eggs 1 and 2; this is a 2-egg set because of storm, I'm sure.

TD 61: Long search; no PM's.
TD 60: Song.
TD 59: Egg 2; D59F(B) on at 1100.
TD 58: MD58 seems to be watching silently as D58F moves around in low bushes.
TD 57: No egg. MD57 seen.

TD 56: MD56(2) sings. D56 Y and R are very noisy in SE corner of TD 56. D56F may have quit tending in order to build; don't see her, and young can feed selves. Breasts are yellow, bellies whitish w/a few juvenile streaks. Heads and chins are scrawny and messy. Backs are molting, and I think wing coverts are.
June 26

Clear, calm, hot. Present at Griffey from 0800 to 0820, at Dunn from 0830 to 1230.

**TG 8:** M38 seen, singing.

**TG 11:** Incubation. Silence.

**TD 77:** Silence. Is this male periodically leaving Doerr’s? He is a very recent arrival there, I’m sure.

**TD 76, 75, 73, 70, 67:** Visited; no information.

**TD 72:** Nest destroyed before completed. Songs.

**TD 71:** No visit.

**TD 69:** Incubation.

**TD 68:** D68F on 3 eggs. Song.

**TD 65:** Young [not all; see 6/27] leave nest between 1030 and 1200. Catch D65Y and take it home, feed it on lepidopterous larvae from galls on goldenrod.

**TD 64:** Constant song.

**TD 63:** Find nest in N field; 2 cold eggs. Constant skids at N end of field.

**TD 62:** Incubation.

**TD 61:** MD61 is in a squeaky fight as I come up, near D60F’s last known nest. Don’t see other, but in 30 seconds a male (probably MD61) and a female (may glimpse dark bands) are 1’ apart and 1’ high. Male is on a vertical weed stem. Wings are spread wide, perhaps beating a little. He is turned toward female, wh/ sits tensely. They break apart after 1-2 seconds. Then for 20 minutes MD61 covers his whole territory chattering constantly. Thirty minutes later he is silent; don’t see him.
TD 60: See TD 61, since the action occurred on TD 60.

TD 59: Incubation.

TD 58: D58F builds a nest wh/ is well along; begun yesterday.

TD 57: Egg 1. Note long interval between building and laying.

MD57 seen.

TD 56: MD56(2) chatters regularly in NW part of wooded field.
June 27

Cloudy w/ some sun; showers in afternoon and rain in evening.

Present at Griffey from 0530 to 0730, at Dunn from 0830 to 1200.

**TG 11:** Take D65Y here early, putting it in cage by a mist net 20 yards from nest. MG11 is gone; never a sign of him. Gl1F is incubating when net and young are put out. Nothing happens for 5 minutes, so I go to TG 8 for 5-10 minutes. Returning, I find Gl1F about 5' from cage; she starts to "tsip" at me; she is quite alarmed, though not to the maximum. She seems to know where net is very well, so she probably has already been at the cage. No display; no response to hiss. I withdraw to watch. She drops or dives from her tree perch toward cage, bounces off net. I walk up to net and she twitters a lot at me. I withdraw. Twice more she tries to go toward cage and hits and bounces off net. Finally I walk up and she is on nest. Had I simply released young there is a good chance she'd have tended it.

**TG 8:** M38 chatters. I carry D65Y through TG 8; it calls, and M38 flies up immediately. May see a female here when I carry calling young out to car.

**TG 9:** Chatters at 0615. I don't go to look. [Must have been MD36.] Note the moving about of unattached males at this time. Is it because they are just losing their mates or are they moving now though they have been mateless for a long time?

**TD 56:** D56G is calling in dense growth in SE part of field. I have D65Y w/ me, and I walk up to see D56G. D65Y calls and D56G pretty clearly seems interested and attracted to approach the call. MD56(2) comes and "tsips" in alarm, perhaps my best evidence that he is part of the D56 family. D56Y calls at MD56(2), but I see no tending.
TD 57: Egg 2.

TD 58: Some lining; probably not complete.

TD 59: D59F(B) on 3 eggs.

TD 60: No information.

TD 61: MD61 flies all over TD 61, singing loudly and regularly.

No female.

TD 62: Incubation.

TD 63: Same 2 eggs in nest, cold. D63F moves in leisurely way nearby. Then MD63 skids quite near nest, and in 10-15 minutes I find D63F again, moving slowly in NE corner of field. Meanwhile MD63 skids constantly, moves steadily, stays high, acts unmated. Behavior of D63's is consistent only w/ their being in egg-laying stage.

TD 64: MD64 seen; frequent type-8's.

TD 65: At 0845, D65F is feeding D65R in or just at nest. I have D65Y, and D65B is just W of nest. I release D65Y; both adults give distraction display. This clear case in wh/ fledging took 2 days. One egg left in nest.

Behavior of D65Y: It gave begging calls when dozing w/ both eyes shut; also, when I had it in my study yesterday, it seemed to give calls even though full. It fell silent when it heard me approach. In the field, it redoubled its calls when it heard a male sing.

TD 68: At 1130, there are 2 newly-hatched young; the 1 egg is pipped, w/ convex bumps. Song.

TD 69: Incubation.

TD 70: MD70 sings Field Sparrow-like songs on TD 70. Chin and top of throat are bare of feathers.
TD 71: No visit.

TD 72: Building at 1130; nest just begun. MD72 sings nearby; usual behavior.

TD 73: Song.

TD 77: Silent.
June 28

Rain during night and steadily today into early afternoon. Present at Dunn from 1130 to 1330.

TD 56, 60: No information.

TD 57: Egg 3.

TD 58: Nest lined, empty.

TD 59: Incubation. Peculiar song.

TD 61: Loud regular song. No female.

TD 62: Incubation.

TD 63: Still only 2 eggs in nest. D63’s not seen.

TD 64: No visit.

TD 65: Fledglings heard.

TD 72: At 1230, D72F builds a nest wh/ is wet. Not raining, but nest is well along, so she must have built in rain today. Song.

TD 73: Songs heard.

TD 74: MD74 fights a male, probably from N. D74F calls a little at me. Pair’s behavior suggests they have nestlings.
June 29

Mostly cloudy through day. Present at Griffey from 0730 to 0800 and at Dunn from 0830 to 1230.

TG 8: MD38 seen singing often.

TG 9: MD36 (YR, S-L) sings constant chatters, moves a lot. Very unusual, so great care taken with bands.


TD 56: MD56(2) rasps and chatters during several of my passages through territory. He fights MD57 on W side, sings in TD 8 clump. The young female described under TD 57 may attract him; see TD 57. No sign of young.

TD 57: D57F(2) on nest; contents not seen. MD57 skids W of tree row from maple on S, fights MD56(2). N of maple and E of tree row a young female moves slowly along, after 10 minutes goes far S. Later I see MD65 near spot where she was. [No later developments.]

TD 58: Egg 1. Nest probably worked on since last inspection.

MD58 is between nest and sink hole.

TD 59: Incubation.

TD 60, 70: No information.

TD 61: MD61 chatters, is unmated.

TD 62: Incubation. MD62 rasps at gun trees.

TD 63: A third egg is here; clutch will probably be double (like D15F(2)'s). Skids.

TD 64: Constant type-8's, as always since I resumed visits to TD 64.

TD 65: See TD 57. D65F gives intensive distraction display 30 yards from nest, in E-W tree row. MD65 skids in a dead tree S of nest.
TD 67: D67F(A) shows alarm at E sycamore, 35-40 yards from nest and 65-70 yards from last sighting.

TD 68: Brooding; 3 young.

TD 69: Incubation.

TD 71, 72, 73, 75, 76: No visit.

TD 74: Both adults are near a nest wh/ holds 1 large cold egg.

TD 77: Find a female D77, on a nest wh/ she is building in pine tree. She is beginning to line it at 1200. MD77 flies a lot, sings sometimes faintly, is clearly much excited. Pair is probably very recently formed.
June 30

Cloudy all day, threatening to rain in the morning; signs of rain last night. Present at Griffey from 0900 to 0930, at Dunn from 0930 to 1230.

**TG 8:** Silence.

**TG 9:** MD36 chatters constantly all over TG 9, covering more area than MG9 did.

**TD 56:** MD56(2) sings rasping buzzes in SW corner of E field.

**TD 57:** Incubation at 1100, 1200. MD57 skids often W of and near the W maple, later sings constantly E of nest.

**TD 58:** Egg 2. D58F on at 1200.

**TD 59:** Incubation. Odd song.

**TD 60, 65, 70:** No information.

**TD 61:** Constant chatters. No female.

**TD 62:** Incubation. Type-8's.

**TD 63:** A fourth egg; D63F on at 1205; eggs probably cool at 1220.

**TD 64:** No pause in-type-8's during 15 minutes.

**TD 67:** Regular chatters in SE corner of TD 50 and probably on SE into woods. No response to hiss.

**TD 68:** Three young. MD68 sings near nest.

**TD 69:** Four eggs.

**TD 71:** No visit.

**TD 72:** Nest has been destroyed; a few fragments left. MD72 sings regularly, follows D72F through field cover. While D72F is 3' from him, MD72 nest-shapes for 2 seconds at 2'. She doesn't nest-shape.

**TD 73:** Songs.
TD 74: Egg 2. D74F is at (not on) nest at 0935, flying out as I come up.

TD 77: D77F is much alarmed as I walk to w/i 15' of nest, so I don't inspect it.
July 1

Cloudy most of the day after a heavy rain and storm which lasted much of night. Present at Dunn from 1115 to 1415.

TD 56: Song.

TD 57: Nest fails, is slightly tilted. Hear 1 or 2 songs.

TD 58: D58F is on on 3 visits, so incubation seems to have begun; [3-egg set].

TD 59: Incubation. MD59 sings his odd song but I see no signs that he has anything to be aggressive about.

TD 60: MD60 seen. He chatters.

TD 61: No sign of MD61 on 2 passes through territory, of 5 minutes each.

TD 62: Incubation. MD62 seen.

TD 63: A fifth egg. D63F on nest on my first visit, eggs cold on my second.

TD 64: Loud regular type-8's.

TD 65, 67: Songs heard.

TD 68, 71: No visit.

TD 69: Incubation.

TD 70: No information.

TD 72: D72F at 1200 has just begun a nest, a few fibers. MD72 sings regularly about 15 yards away.

TD 73: MD73 sings a lot near S line, perhaps influenced by building there.

TD 74: D74F on nest on 2 visits. Song.

TD 77: Think I hear male.
July 2

Clear, dewy, humid in early morning, clouding at 1000. Present at Griffey from 0845 to 0915, at Dunn from 0915 to 1400 and from 1830 to 1930.

TG 8: Silence.

TG 9: MD36 chatters, sitting quietly most of time, 45' high. No sign he has a female here.


TD 56: MD56(2) chatters. D56F calls at me in mid-field. MD56(2) comes up and flutters at her. She soon goes to an empty nest, leaves, returns, each time perching on rim. I inspect it; it is soft and fresh. She sees me at nest. Note that if MD56(2) isn't tending young, they have become independent at an early age (or are dead). [Nest never held eggs. D56F's nervous behavior and returning to nest, and male's fluttering, all strongly indicate it had just failed. Check records of last few days to see if they are consistent w/ this possibility.]

MD56(2) is interested in D57's, may be chased by MD57.

TD 57: At 0945, D57F(2) feeds low, flycatches, calls a good deal, isn't alarmed at me, seems not to be building at moment. MD57 is sometimes near her and once probably drives away MD56(2), wh/ watches D57F(2).

TD 58: Three eggs (complete set). Song.

TD 59: Incubation. Song.

TD 60: MD60 sings type-8's in SW corner of field.

TD 61: No sign on two 10-minute visits.

TD 62: Incubation. MD62 sings insipids.

TD 63: Incubation from 1020 to 1030. Later find the 5 marked eggs present, so case seems exactly parallel to D15F(2)'s of 1958.
TD 64: No sign in 30 minutes.

TD 65: Song.

TD 67: MD67 seen; chatters on SE part of TD 50.

TD 68: Three nestlings. Song. Remove 1 young for D74 nest; it is not well developed.

TD 69: Incubation. Skids.

TD 70: Cowbird heard on SE part of TD 70 and MD70 carries food. MD70 alarmed at me. His throat is messy.

TD 71: MD71 sings constantly near last nest.

TD 72: Nest much developed at 1400; full shell.

TD 73: Song.

TD 74: D74F on, male chattering nearby at 1400. I introduce young D68; 2 eggs in nest. D74F sees me at nest, but both adults go to it in 3 minutes. In evening I put up hoop and MD74 jumps into net w/o my doing anything. He is bright; protuberance at cloaca. Band him SOR-R, 32-01559. He has only 10 rectrices, but I doubt if others were lost (if lost) as part of a molt.

TD 77: D77F on at 1145. Silence.
July 3

Cloudy and threatening at dawn after rain last night; drizzle from 0730 to 0800; clears at 1100, w/ strong wind. Present w/ R. Johnson at Griffey from 0630 to 0700 and at Dunn from 0700 to 1230; alone at Dunn from 1530 to 1630 and from 2000 to 2030.

TD 56: Nest empty [as always; no further mention]. Songs in afternoon.

TD 57: Thirty-minute search in morning; no sign of D57's.

TD 58: Incubation. Song.

TD 59: Incubation. Song.

TD 60: No information.

TD 61: MD61 chatters constantly, must have been away for last few days.

TD 62: Incubation.

TD 63: Incubation. At 1600, see MD63 at nest of D77F, about 1100 yards off his territory; very careful to verify both bands and distance.

TD 64: No visit.

TD 65, 70: No information.

TD 67: Glimpse MD67 on TD 50. See TD 69 below.

TD 68: Band, all young R over color-R, S-L; 32-01558 is R; -60 is Y; -61 is G. D68R is bird used in D74 nest yesterday; remove him today and at 0840 put him in D72F's nest, wh/ she is still building. D68G I take from D68 nest at 1600 and introduce into D77F's nest.

TD 69: Nest fails w/o evidence. MD69 in afternoon sings, probably fights MD67.

TD 71: At 1600, I probably hear MD71.
TD 72: At 0840 nest is unlined w/ grass but there are some feathers. Johnson and I introduce D68R. We withdraw about 20 yards and sit low to watch. In following observations there was no suggestion that our presence was noticed:

0841: D72F arrives w/ grass, stays on rim 45 seconds, goes 40 yards but we can't see if she still has the grass.

0916: D72F to nest, we both think w/ grass. She stays on rim for 4 1/2 minutes, goes away low, about 35 yards. MD72 chatters some 40 yards away part of time, once w/ anger-like calls.

0936: D72F is in a sycamore 30 yards from nest, w/ grass. At 0941, to nest, builds w/ bill and body, using all normal building motions including body-shaping. Head of young sticks up between her breast and nest rim. MD72 fluttered over nest as she came, sings overhead now. She goes in 1 1/2 minutes.

0958: D72F w/ material, wh/ she builds into nest for 4 minutes, going through complete motions, w/ head and bill fashioning rim and body shaping shell. Nothing in her behavior suggests a young is there, but once its head sticks up while she's in nest. D68R's head was seen once when she was away.

1000: We go.

1222: We return and again sit to watch.

1230: MD72 after 2-3 songs goes to nest for 10 seconds, probably feeds D68R.

1233: MD72 feeds young, stays 30 seconds.

1235: MD72 feeds; 20 seconds.

1245: We leave.

1615: I return, watch.
1616: MD72 sings, feeds, stays 10 seconds.

1616 3/4: MD72 sings twice, feeds. He gathered this food 20-25 yards from nest. Consider relationship between the facts I'm getting today and the differences in behavior of the sexes in connection w/ second broods.

1620: MD72 sings once, feeds for 10 seconds, carries away a fecal sac.

1621: MD72 comes silently, feeds for 10 seconds.

1623: MD72 after 1-2 songs feeds for 10 seconds. After leaving nest he may encounter another male nearby.

1640: I go.

2000: I return and watch. It is clear.

2003: MD72 sings twice, approaches nest w/ food, sings 2-3 faint songs, at 2005 goes to nest. He stays 7 seconds, probably takes a sac.

2011: MD72 feeds for 5 seconds; silent.

2017 1/2: MD72 feeds for 30 seconds; 1 insipid.

2021: MD72 feeds for 10 seconds; silent.

2024: It's quite dusky. MD72 chatters once, feeds for 10 seconds.

No further sign of him today.

2034: I remove D68R and take it home to protect it from exposure.

I never saw D72F today after 0958.

At 2030 w/ probably about 2-3 F.C. of light, heard chat, Yellow-throat, I.B., Field Sparrow, towhee (call), Wood Thrush.

TD 73: Heard.

TD 74: Remove nestling D68 at 0815; D74F probably sees me.

MD74 is heard.
TD 77: D77F on at 1530. I watch nest. MD63 comes to nest and MT77 chases him away. Song. D77F leaves normally, and I introduce young D68 w/o being seen, at 1600.
July 4

Cool at dawn w/ a dew; partly cloudy. Present at Dunn from 0445 to 0500, from 0600 to 0900, and from 1015 to 1230. Injure back too badly to stay out.

TD 72: Restore young D68 at 0455; it is dim, about 2 F.C. of light. Nest empty. At 0458, MD73 (probably) is rasping to N. Leave territory, returning at 0747 to watch; egg 1 has been laid, and D68 R is ok.

0749: MD72 feeds.
0754: One song; he feeds.
0801: One song; he feeds.
0803: D72F brings a piece of grass and perches on rim, poking it into nest for 1 minute. She then jumps in and sits.
0804: MD72 approaches, sings once. D72F rises, pokes in nest. He comes and she turns at him w/ open bill. He feeds young. She looks in, leaves about 0805.
0810: D72F comes w/o food, perhaps w/ webs or fine material. She perches on rim and for 40 seconds makes web-fastening or poking motions around rim and once or twice into cup. She goes.
0812: MD72 brings a large green caterpillar and when young raises itself takes a large sac.
0825: MD72 silently brings food. He removes a strand of nest material, leaning over backwards and pulling it out w/ the motion of a female pulling bast off a weed stem. He goes.
0830: I mark egg 1 and go.

TD 77: Nest holds 4 eggs. I put up hoop at 0630 but get no chance at the D77's.

TD 71: Regular chatters. See MD71 and check band colors to be sure
it was really MD63 I saw yesterday.

**TD 70:** At 0815, while I’m watching D72’s nest, MD70 and his cowbird come to one of the big sycamores. Bands of both seen, as well as MD70’s bare throat. They go NW to the maple stub. See MD70 feed cowbird there as it perches at 50’. He is 450 yards (verified) off territory.

**TD 73:** MD73 seen; heard often.

**TD 69:** MD69 sings everywhere. Don’t see D69F, but search is short.

**TD 68:** No visit.

**TD 67:** D67F(A) is in SE corner of TD 50. Song heard from same place. Note how often MD67 is found here.

**TD 65:** MD65 seen. Songs.

**TD 64:** At 1200, silence for 20 minutes.

**TD 63:** D63F incubates. Silence. Note MD63’s departure from territory yesterday.

**TD 62:** Scare D62F off 2 eggs. MD62 seen.

**TD 61:** Follow HD61 as he sings loud regular chatters. No female, I’m pretty sure.

**TD 60:** Songs.

**TD 59:** Nest holds 3 eggs. Much song.

**TD 58:** See TD 57, below. Incubation. Songs.

**TD 57:** Find D57’s near little E woods after 30-35 minutes. MD57 sings very faintly 2-3 times, the only songs from him today. MD58 flies up silently and fast from N, looks around, disappears to S; I don’t see him again but I am unable to move around.

**TD 56:** Spend 25 minutes looking for some sign that D56F is rebuilding; no luck. [Never saw her again; she undoubtedly left after nest failed.] MD56(2) behaves normally for this date, w/ series of songs and periods of silence.
July 5

Clear. Unable to go out.

Schneider went to TD 77 for me, caught D77F in mist net. She is old. Banded her ROS-R, 32-01564. MD77 very shy. Schneider removed nestling D68 but replaced it in D77 nest before leaving.
July 5

Sunny but w/ a very heavy rain storm at 1715. Present at Dunn w/ Schneider from 1530 to 1730 and at 1900.

TD 77: On our arrival the transplanted young is out of the nest, 15-20' away, at 1 1/2'. We put it in a Potter trap and soon catch D77F; I confirm Ray's aging and banding. We leave, have MD77 when we return after rain. He is dull in color; band him GOS-R, 32-01562.
July 7

wet but clear; moderate. Present at Griffey from 0730 to 0800, at Dunn from 0830 to 1015 and at 2000. Still not able to move much.

TG 8: M38 sings. I follow, learn nothing re possible presence of a female.

TG 9: Silence.

TD 56: MD56(2) sings.

TD 57: MD57 sings.

TD 58: Nest has been demolished. MD58 sings near path; D65F and young are close to him.

TD 59: At 1000, there are 3 eggs. At 2000, egg 3 and 2 young present.

TD 60: No information.

TD 61: Silence.

TD 62: Nest holds 2 young.

TD 63: Incubation. MD63 skids near nest.

TD 64: No visit.

TD 65: D65F tends fledglings E of nest.

TD 72: At 0830, D72F is on 2 eggs. MD72 is near, carrying food (I think) and showing great alarm at me. Young D68 must have fledged.

She stays on nest till flushed.

TD 74: Nest deserted w/ 2 cold eggs in it.
July 8

Sunny, moderate. Present at Dunn from 1230 to 1515.

TD 56: MD56(2) sings 1 long series of regular chatters all over part of TD 56.

TD 57: Songs.

TD 58: MD58 sings by path. D58F seems to be gone [probably correct; not seen again].

TD 59: D59F(5) on 3 young at 1245.

TD 60: MD60 sings type-8's on N end of TD 60.

TD 61: MD61 chatters regularly in mid-field, E of gun trees. No sign of a female.

TD 62: D62F on 2 young. Hear and see MD62.

TD 63: Incubation.

TD 64: Silence for 20 minutes.

TD 65: Song.

TD 67: MD67 sings in cherry on TD 67.

TD 68: Young has fledged. D68F goes into a strong distraction display about 25 yards from the nest. I hiss and she floats down 15' w/ extended wings; she then gives a wings-up display on a low branch. Songs.

TD 69: Songs.

TD 70: See MD70 on TD 70. Chin and upper throat bare.

TD 71: No visit.

TD 72: The 2 eggs (one is egg 1) have some sort of brown stain. I see no breaks, but ants are on the eggs. Nest must have failed.

TD 73: No information.

TD 77: Fledgling ok; D77F calls at me w/ green caterpillar in
her bill as I go to Allen’s.

Other notes: Two Field Sparrow nests at about 3’; 3 eggs in each.
Partly cloudy, rather hot; dew. Present at Griffey from 0830 to 0930, from 1530 to 1600, and at 1930; at Dunn from 0930 to 1045 and from 1130 to 1300.

**TD 56, 57, 73:** Silence.

**TD 58:** Song.

**TD 59:** Three nestlings. Odd song later in day.

**TD 60:** Arrive on TD 60 and hear fight calls and calls of young in elm area in mid-field. MD60 and MD61 fly out, as does the nearly grown D65Y (S-R, GOY-L). Don’t see MD65. Hear several feedings; is it MD60? Lose them, then hear chatters in E tree row. Find MD60, MD65 there, MD65 well to S and not near where young was. I follow MD60 to N. He catches a brown moth 3/4" long, kills it at 25', flies 30 yards or more into field. I follow, soon hear young and find MD60 and MD61 there. I think MD60 (and perhaps MD61) is feeding D65Y. [No later evidence that MD60 had young in a nest to wh/ he was carrying.]

**TD 61:** See TD 60, above.

**TD 62:** D62F on 2 young.

**TD 63:** Nest holds 3 eggs, 1 undeveloped. Don’t see D63F.

**TD 64:** MD64 (BOS-L) sings many regular type-8’s in afternoon on TG 11, most of time high in trees. Not heard at 1930. Probably he’s been here all week, 1100 yards off TD 64, just N of his second territory of 1959.

**TD 65:** See TD 60, above.

**TD 72:** Nest as on yesterday. MD72 sings 2 long series w/ long silence between; regular chatters from high up. No response to hiss. Think young is gone, but that it must have fledged or MD72 (usually very
tame) would not have shown such alarm. D72F must be gone; [unbanded, but no later sign of a female here].

**TD 74**: MD74 chatters loudly. D74F twice goes to her first nest and picks a little at it; no details.

**TG 8**: MG8 sings loudly every time I pass, except at 1930.

**TG 9**: A silent, probably young female w/ molt on back, flanks (much) and crown (some) is here. Her buzzy flight suggests a wing molt. Movements deliberate.

**TG 11**: MD64 is here in afternoon but not morning. No interest in young. Band young S-L, bright B over color -R; 32-01566 is R; -67 is Y; -68 is bright B. G11F gives a few alarm calls near nest.

**July 10**

Light rain much of the day. No field trip.
July 11

Very foggy and dewy, clearing enough to let some sunlight through from mid-morning on. Present at Griffey from 0800 to 0830, at Dunn from 0830 to 1030 and from 1930 to 2000.

TG 8: MD58 sings regularly.

TG 9: Silence.

TG 11: G11F is feeding. Hear type-8's; then silence; singer surely must be MD64.

TD 56: Only songs heard on several trips through are chatters in wooded field in evening.

TD 57: MD57 skids a good deal, goes W to tree row.

TD 58: MD58 seen skidding S of sink hole.

TD 59: Three nestlings.

TD 60: Chatters heard. D65's are on TD 61, and MD60 is not seen near them.

TD 61: MD61 stays w/ D55F (wh/ is molting on nape) and D55Y at S end of TD 61. I follow them, occasionally losing them briefly when they move, and each time I find them again MD61 is always there too. He is very probably tending the young. A few songs in morning and evening.

TD 62: D52F is on 2 young. I return in evening and band them 2 S's-R, color -L; S is 32-01570 (and -72 and -73); G is -69 (and -74). Don't see MD62.

TD 63: Incubation at 1000.

TD 64: See TG 11, above, re male's probable singing there at 0815.

At 1000 I see MD64 singing regular type-8's on TD 64.

Hear TD 65: See TD 61, above. D55F was probably with D55Y on 7/9 too.

Hear MD65 by W fence corner.
D65Y shows quills or yellow feather ends just appearing on ventral tract; its outer rectrices are 3/8 to 1/2" short, and next pair is about 1/4" short. It is noisy, active, and 2 or 3 times tries to pull a brown discolored spot (3/16") off the margin of a green sassafras leaf.

TD 69: From far W field I can hear skids across on TD 69.

TD 72: Hear a series of loud chatters by sycamores; then when EV-7's scold me at their nest MD72 comes up and watches.

Other notes: See a Worm-eating Warbler.
July 12

Sky clear but it’s so humid that it looks overcast in early morning; dew. Present at Griffey from 0630 to 0700, from 0745 to 0815, and from 1900 to 1915; at Dunn from 0830 to 1015 and from 1915 to 2015.

TG 8: MG8 chatters all the time in the morning, on TG 8 and SE of it across the road. Silent at 1900.

TG 9: Silence, but I don’t visit TG 9.

TG 11: Young are noisy when fed. Catch G11F in mist net; she is young but w/o much gray; inner rectrices worn down to rachis. Band her SOY-L; 32-01575. She is not molting (close examination).

Young still in nest at 1915.

TD 56, 57, 58: Silence.

TD 59: Band 3 young S over color-L, bright B-R; 32-01576 is R; -77 is Y; -78 is G.

D59Y is bleeding from a wound between toes on right foot, and there are many mites in the nest.

Try to catch D59F in hoop at dark; no luck. Both adults are nervous at me.

TD 60: MD 60 sings many chatters in trees at far N end of tree row. I doubt if he’s carrying food any longer.

TD 61: MD61 sings several series. D65’s not seen on or near TD 61, and MD61 seems to have separated from them.

TD 62: Two young, not well developed for age 8 days. Silence.

TD 63: At 0900 I inspect nest, and D63F calls. Egg 1 is undeveloped and eggs 3 and 4 are alive. At 1930, D63F incubates the eggs. MD63 chattered several times near nest at 0900; saw him.

TD 64: Many type-8’s on TD 64; silence on TG 11.
TD 65: Chatters heard at W fence corner.

TD 69: From far W field hear skids.

TD 72: At BV-7 nest I hear many chatters from sycamores; then long silence.

TD 73: At 1000, I find both D73's carrying food near the big walnut; no search for nest.

Other notes: At Griffey I see a Worm-eating Warbler in the upland scrub.
July 13

Cloudy day w/ a heavy downpour from 1330 to 1430; clearing in evening w/ a cold front passing. Present at Dunn from 0900 to 1130, at Griffey from 1900 to 1915.

Note: There is little if any waning of song in Pw's. Most silences can be explained by particular males' stages in nest cycle (feeding).

TD 77: D77F carries food and calls in alarm from the TD 69 cherry to 30 yards S of it.

TD 73: Adults carry food, but I don't find nest.

TD 72: A few songs.

TD 70: MD70 chatters constantly on TD 70, must have a nest [error, so far as I know; more likely he was mateless and his duties to cowbird were over]. No feathers on chin, upper throat.

TD 69: Skids heard on TD 29.

TD 67: No sign.

TD 65: MD65 chatters in maple area of W tree row. No alarm at my hisses. D65F is on TD 61 (almost certain identification), where D65Y is at its usual spot. MD61 is near the young, probably tending it.

TD 64: No visit. Silence on TG 11.

TD 63: Nest fails w/o evidence. MD63 is singing halves of songs in woods just to E of nest.

TD 62: Two young in nest. MD62 "tsips" in alarm at me.

TD 61: MD61 sings step-buzzes on S end of TD 61. I hear and see young there; once it calls and MD61 flies away from it, so it's nearly certain MD61 is tending.

TD 60, 58, 57: Silence.

TD 59: Three young in nest, placed at random. Last night they sat w/ bodies parallel, center bird's head pointing in 1 direction, the 2
outer heads in the other.

**TD 56:** Chatters in evening.

**TG 8:** Silence in evening.

**TG 11:** G1LF calls at me and mirror shows young in nest at 1900.
July 14

Cool, fresh, dewy; sunny from 0900 on. Present at Dunn from 0530 to 0700 and from 0830 to 1130, at Griffey from 1130 to 1200.

TD 56: An unbanded male chatters here at 0830. I now realize that I haven’t seen (or looked at the bands of) MD56(2) for 4 or 5 days.

TD 57: No information.

TD 58: MD58 chatters, sometimes faintly, in S end of his tree row.

TD 59: Three nestlings. An unbanded male follows D59F(B) as she gathers food at 1030 in the walnut at N end of the tree row.

TD 60: Can’t find him in 30 minutes or so. D65F, D59F(B), and an unbanded male are all on E edge of TD 60.

TD 61: No sign of MD61. Since D65F is S of TD 61, this may mean that the association of MD61 and D65F is over.

TD 62: Two nestlings, w/ D62F sitting on the nest at 1020. MD62 seen.

TD 63, 64: Spend 30 minutes on these territories w/o a sign of a PW [no D63 or D64 ever seen again].

TD 65: D65F is 40 yards N of her nest and over on TD 60 a little. She is tending D65R. See no male w/ her.

TD 67: Song.

TD 69: No visit.

TD 70: MD70 sings regularly here.

TD 72: A few songs at 0600.

TD 73: Find nest at 0600; in it are 2 young in their eighth day. I band them S-L; color under G-R; 32-01579 is R; -60 is Y. Both parents feed.

TD 74: Regular songs here.
TG 8: Silence at 1130.

TG 11: At 1130 the young have fledged and G1LF tends. One or more fledglings are just N of nest and one or more well to S (30 yards or more). Nest checked; empty.
July 15

Clear after a cool night; heavy dew. Present at Dunn from 1430 to 1730 and from 1930 to 2030.

**TD 56:** The unbanded male sings a few chatters, later some insipids.

**TD 57, 58, 61:** No information.

**TD 59:** At 1545, there is 1 nestling left in nest, one apparently away from the vicinity of it, and one sitting 1' from it, below it in the nest tree. I catch this and put it in a Potter trap, catching both parents within an hour (male first). MD59 shows no molt, hasn't much wear on flight feathers; cloacal protuberance. D59F(B) (29-01146) is my objective, to look once more for signs of her age. Her head looks old. Her tail has 9 rectrices; one of central pair is gone and other is greatly worn; 2 other inners are broken. Condition of rectrices is probably a good test for young birds, when added to the plumage test.

I return at 2000; the last nestling is now on the rim. At 2030, quite dusky w/ little bird activity still going on, nestling is still there w/ its eyes closed, so doubtless it will stay there all night.

**TD 60:** Hear a male singing Field Sparrow-like songs.

**TD 62:** At 1630, the young have left the nest and MD62 is much excited. Don't see D62F. At least 1 young is probably well to the S of the nest.

**TD 63, 64:** No visit.

**TD 74:** MD74 is closely following a ragged female (unbanded) w/ molting rectrices and body.

**Evening:** Not a PW song heard in evening, although all other scrub species sing. Many Pine-woods songs.
July 16

Clear, moderate, dewy. Present at Dunn from 0900 to 1230.

From now to the end of the year the notes will include a paragraph mentioning all PW's that were not attending young or nests and were thus potentially "free" to move away.

**TD 56, 58, 60, 61, 70:** No information.

**TD 57:** MD57 is at the W maple, as is MD65. MD57 gives many fight calls, and once MD65 supplants him; otherwise the two pay no attention to each other. A young D65 may be here, and MD57 may be interested in it. MD57 is in ragged plumage.

**TD 59:** Young bird is gone from rim; adults alarmed at me. Nest has had bottom torn out since last night. No mites show on my hand when I touch it.

**TD 62:** D62F shows some tail molt; alarmed at me. No mites in nest.

**TD 65:** MD65 (neat plumage) sings in W tree row near maple. See TD57, above. Almost surely hear a young bird here once, wh/ would explain why MD65 has been staying here.

**TD 67:** Find all D67's (the 2 young are R and bB) in E woods edge on TD 67. D56F tends for over 25 minutes, so there is no second brood. Young are in full plumage, except that cheeks are slightly messy and heads may be not quite neat. Young and D67F go SE to open woods in valley, where the horses graze. She responds to hisses.

D67F's tail probably is molting.

**TD 68, 69:** Songs.

**TD 72:** A few songs.

**TD 73:** At 0900, young are dead. One is in the nest w/a wing
stretched over the rim; the other is on the ground below the nest w/ food in its bill. The latter may have fallen out in some sort of effort. Neither is very stiff; both are cool. Plumage is in normal condition for age. Both adults are alarmed at me, stay around nest.

Find calliphorids in nest; bring nest and young home. Calliphorid larvae present on 7/18; no examination on 7/19; well hardened pupae on 7/20. No adults at 0800 on 7/28; 10 or so at 1700. There are 11 flies, 12 puparia (2 clusters of pupae (3 and 5).

July 17

Clear, warm. No field trip.

July 18

Cloudy; light rain till 1030, then getting harder w/ a downpour at 1130. Present at Griffey from 1000 to 1115.

No P's w/o young.

TG 11: G11F is on TG 8, 325 yards (paced) from her nest. A young bird is w/ her (or perhaps the brood is); it calls. She is alarmed at me.
July 19

Clear and hot. Present at Dunn from 0915 to 1215.

See 2 unbanded females, the unbanded male from TD 56, and MD70.

**TD 56**: At 0915, frequent chatters from the unbanded male here.

**TD 57**: MD57 (molt not very noticeable) skids on W side of field.

**TD 58**: Song.

**TD 59**: The odd song heard.

**TD 60**: Thorough coverage; no Pw's.

**TD 61, 62, 63, 65, 67**: No information.

**TD 64**: Hear several type-8's in middle of territory. Then long silence during careful search.

**TD 68**: D66F (plumage neat) is in E woods edge just SE of TD 67 cherry.

**TD 69**: No information despite 20-minute search.

**TD 70**: MD70 seen; appearance unchanged. Sings a series of regular chatters, then a few Field Sparrow songs.

1) Unbanded Pw's: /An old female on TD 29 is molting on head, body, probably tail. Leisurely behavior. 2) A female on TD 67 in woods edge is molting like preceding bird. Much interested in a hiss.
July 20

Clear, hot, dry. Present at Dunn from 0845 to 1215.

See 1 unbanded female. Hear 2 singers.

TD 75, 76: Walk over territory carefully to be sure that there are no young here. [For about 1 month, to 8/15, I made a very careful effort to find fledglings in order to be sure wh/ females were successful and wh/ were not.] I hiss frequently, don’t produce any reaction. Once hear 2-3 insipids NE of nest of D75’s, but see no Pw’s.

TD 71: Search for 1 hour. D71’s not seen [never found].

TD 56, 57, 58, 59, 60, 61, 62, 63: No Pw’s.

TD 64: Hear a few scattered type-8’s, too far apart to let me find singer.

Unbanded birds: 1) A young female wh/ is molting generally is on TD 71.

Other notes: Field Sparrow nest, 3 eggs. During past week have found 2 others w/ 3 eggs each.
July 21

Hot, clear, dry. Present at Dunn from 0915 to 1015 and from 1115 to 1215, at Griffey from 1030 to 1115.

No Pw's w/o young.

TD 74: A number of chatters on TD 74. To N of it a male sings very erratically, w/ half-songs and full songs run together; he sings steps, insipids, etc. (This male not counted in my late summer sex and age survey because he's not on regular study area.)

TD 10: Careful search. No Pw's.

TD 56: Silence.

TD 67: D67F, D67R, D67bB are at stream between fields at 1200. D67F appears unchanged by molt; D67R, wh/ preens a lot, is almost through molt; D67bB shows traces of messines on head. A good deal of independence, w/ calls, some begging notes; sometimes the three are close together.

TD 69, 70: No Pw's between 1120 and 1200.
July 22

Sunny, hot, sultry. Present at Dunn from 1400 to 1600, at Griffey from 1600 to 1700.

Cover TD 75-76 and TD 71, TG 8-9. No P's.

Other notes: Yellow-billed Cuckoo on 2 eggs in 7' nest in 10' haw; TD 75. Goldfinch nest (third found this week) unlined. First nest of summer was found on 7/19.
July 23

Hot, sunny but sultry and threatening to storm in afternoon. Present at Dunn from 0815 to 0930, from 1030 to 1230, and from 1930 to 2030.

See an unbanded male and MD58.

TD 56, 61, 63, 72, 73: No Pw's.

TD 57: Find nest w/ 3 young in fourth day. Both D57's feed. In evening put up net, w/o success. D57F(2) is very shy; she twitters in alarm.

TD 58: MD58, MD65, and D65B are in same little clump in tree row, at about the territorial line of the males, between D65 nest and fence corner. The three are w/i 10'; no fighting. Hear begging calls, but can't see wh/ male tends. D65B and perhaps both males fly SW to the thicket N of the E-W fence. Are they a unit of three?

D65B has nearly perfect body plumage w/ a little raggedness; head is gray, messy.

TD 59: D59F(B) calls at fork of path; is alarmed at hiss.

TD 60: No Pw's found in careful search.

TD 64: Very careful search. No D64.

TD 65: See TD 58, above.

TD 71: Careful search. No Pw's.

TD 74: Find nest w/ 3 young in third day. Both adults feed. MD74 chatters fairly often.

Unbanded Pw's: 1) A male singing 3-4 insipids in SE corner of far N field almost surely is unbanded.

Other notes: Pine-woods Sparrow becomes very vocal (songs) from 2005 to deep dusk at 2025. More songs than earlier in season.
July 24

Hot, sultry. Present at Dunn from 0600 to 0715.

See MD69 and an unbanded male on TD 57, but he may be the bird that has been on TD 56 recently.

**TD 56**: See just above.

**TD 57**: Put up hoop w/ net tied shut. MD57 skids often near nest; he has food.

**TD 70**: Silence for 40 minutes.

**TD 69**: MD69 sings insipids and step-buzzes, preens at length at 20'. Twice he stretches, once w/ wings up, thus: \[
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\] Four skids at 0700. Once when MD69 is at 18' a Field Sparrow flies in 3-4' below him. MD69 jerks body and head to horizontal position and moves his body up and down about twice; this seems to be a scanning or searching movement like a sandpiper's. Nest search here is unsuccessful. [There was no nest.]
July 25

Sultry; mostly clear till 2000, when it begins to rain. Present at Dunn from 0930 to 1115 and from 1930 to 2030, at Griffey from 1115 to 1200.

Cover TD 71, 75-76, and TG 10, all w/ great care. No PW’s. In evening try to net D57F(2).

TD 57: D57F(2) is too shy to catch.

July 26

Rain most of time from 2000 yesterday to 1300 today; then very changeable. Present at Dunn from 1430 to 1700.

Cover E field and TD 69-70, concentrating on determining whether there are any unknown broods of young. See 1 unbanded female.

TD 56, 58, 59: No PW’s.

TD 57: Nestlings ok.

TD 60: No PW’s in careful search.

Unbanded PW’s: 1) A female on TD 70 is molting slightly. She acts lethargic, almost rather unwilling to fly, watches me w/ her tail wagging, stays in 1 bush longer than usual. This behavior is often seen in females (and males?) at this time of year.

Other notes: See a female Goldfinch on a nest for first time this year, at 10’.
July 27

Sunny, moderate. Present at Dunn from 0900 to 1200.

Cover E, N, far N fields, and TD 71 and TD 74. No PW’s except those w/ young.

TD 55, 58, 59, 60, 61, 62: No PW’s.

TD 57: Three nestlings ok. Primaries are only just emerging, so I don’t remove them.

TD 63, 64: Careful search; no PW’s.

TD 65: MD65 (neat plumage) at 0900 tends D65B at S edge of wooded field, some 300 yards off territory. D65B begs loudly, at times moves its wings, stays between 5 and 10'; it’s nape and cheeks are slightly messy. See several feedings.

TD 71: No PW’s in careful search. I measure distance w/ D71F travelled w/ material for first nest w/ eggs: 163 yards.

TD 74: D74F is at nest.

Idea: Reason D27F in each of last 2 years has moved from territory of preceding year may be that she arrives so early, perhaps before males are ready.
Clear, dry, hot. Present at Dunn from 0900 to 1245, from 1600 to 1700, and from 1845 to 2030.

Cover E, N, and W fields. Find 1 unbanded female.

TD 56, 61, 62, 67: No PW's.

TD 57: Try unsuccessfully to catch D57F(2) from 0900 to 2030, putting young in Potter trap. Two young are 9 days old, one is 8. D57F(2) calls and twitters at me.

MD57's behavior is very significant: During first 3 hours I never see him at nest. Once he sings 4 weak, toneless skids at mid-field; I watch him. At 1200 he is near nest, calls at me in alarm as I handle young. On 2 visits in next 30 minutes, I don't see him at nest, nor is there any sign of him during my many trips during the rest of the day. [In all the hours on TD 57 during next few days, I never saw MD57. This is my best clear case of male loss of interest in the family.]

A 9-day young in the trap preens a primary w/ movements like an adult's. It sits w/ a wing stretched forward and out, gets the base of the feather in its bill, raises its head and thrusts it out so that bill runs along length of feather to its tip. The movement is a little slower than an adult's. This bird later escapes from the trap on the ground and I find it 3' away and 2' high in a bush; note its climbing.

At 1240 I leave trap, sheltering it w/ leaves. At 1600 all young are long dead (eyes and numbers of ants and flies show this). Heat is responsible. D57F(2) still brings food, so I decide to keep trying to get her.

At 1630 I take the 3 young D74's and put them in the trap by the
D57 nest. They are at 6-day old stage, and since this is slow development I search nest for Protocalliphora larvae and find them (see below at end of day's notes.) Young D74's call little at first. I dump them into the trap and they spread out but later are heaped up on top of each other. This clustering is repeated several times and must be significant.

In the evening after dark I take the young home to keep them warm. I put them in a nest, and they sink into it as deeply as possible, silent and sleepy. At 2300 I look in and they gape silently in the half-darkness. This is repeated at 0430.

D57F(2) never seems to react to the age difference of the young supplied her. She probably got tamer as the day went on, coming closer despite my presence.

**TD 58:** Probably see MD58 in evening; no binoculars.

**TD 59:** D59F(B) "tsips" in alarm at me, 55 yards N of nest.

**TD 60:** Find a nest no longer in use, at 9' in a 12' elm. It holds 1 undeveloped egg w/ a heavy wreath; it is dead but from its appearance was laid in July.

**TD 68:** No visit.

**TD 69:** During a careful search, see an unbanded female; see below.

MD69 not found.

**TD 70:** Careful search; no Pw's.

**TD 74:** See TD 57, above. See TD 74 below.

**TD 77:** D77F and her foster-young (D68Y) are on NW TD 29, 200 to 250 yards from nest. D77F is neat. Young calls.

Unbanded Pw's: 1) A female w/ a general but slight body molt begins to "check" on TD 69, when I hiss; she goes on for about 1 minute.
TD 74: Bring nest in today. Calliphorids haven't pupated by 0800 on 7/31 but there are both brown and whitish-gray pupae at 0630 on 8/1. When I look on 8/9 all flies have emerged. There are 15 flies and 12 puparia found.

Nest is dissected. It contains horse hair, spider egg cases, and 176 grayish feathers from 1/4 to 2" long (most of them 1/2-3/4").
July 29

Clear, w/ a very heavy dew, becoming hot. Present at Dunn from 0500 to 0730, from 1045 to 1115, and from 1230 to 1330.

Cover only E field in effort to catch D57F(2). See 1 unbanded male.

**TD 57**: Put young in trap at 0500; they are deep in the nest I’ve kept them in, and I have to turn it over to dump them out. D57F(2) appears, probably at about 0515. By 0600 the young are losing vitality; the youngest is quite weak. I assume this is because of the coolness. I’m cold and wet, and though I try to warm the bird in my hand it doesn’t seem to help much. A second young is quite cold too.

At 0700, there is a chipmunk caught in the trap, pretty good evidence that they will try to get young birds if they have a chance.

I leave at 0730, taking smallest young. As I get warm, it warms up and immediately revives. At 1030 I return it to the trap. At 1230, 2 young are much weakened, and one of these is dying. I force-feed the other w/ larvae from galls on goldenrod and in 25 minutes it revives from near death to apparently normal vigor. Probably the 2 weak birds reached the point where they couldn’t compete w/ the third for food passed through the trap mesh.

At 1300 I put the 2 survivors back in D57F(2)’s nest (having to replace it in its site in the tree). She seems to be feeding them at 1330. They probably reveal their location there by calling.

**TD 65**: At 1300 while I’m at the D57 nest and young are calling, D65B comes up to w/ a few yards of the nest, probably out of curiosity. It then goes S along woods edge giving food call. I think I see MD65. Also, I heard begging calls earlier (today and yesterday) in the wooded
field, near where the D65's were on 7/27.

**Unbanded Ph's**: 1) A male w/ only 2 or 3 rectrices (outers) sings insipids fairly often on TD 56 at about 1630.
July 30

Hot and clear until late afternoon, when it nearly rains. Present at Dunn from 0900 to 1115, at Griffey from 1115 to 1200.

Cover E, N, far N, and W fields, as well as TG 8-9-11. No Pw’s w/o young.

TD 57: Nestlings (2) ok. D57F(2) near.

TD 58, 59, 60, 61, 67, 70: No Pw’s.

TD 62: D62F (messy, some central rectrices gone) "tsips" in alarm at me in far N field near D63F’s fragmentary nest. She is about 250 yards from her nest.

TD 63, 64: Careful search; no Pw’s.

TD 65: D65F (pretty neat) tends very noisy D65R and Y, wh/ seem to be male and female respectively. They move through a dwarf sumac stand between 2 and 4′, W of the TD 60 elms in the N field. The young have slightly thin feathers on napes and probably are molting a little on heads. Once D65F flies 25 yards, and the young follow about 2-3′ behind her.

TD 68: No visit.

TD 69: Hear 3 skids. Cover territory carefully, especially spot where female “checked” yesterday; find nothing.

TG 8, 9: No Pw’s.

TG 11: G11F tends G11bB near ravine in NE corner of TG 8. She "tsips"; neat plumage. Young is full size, shows a faint touch of yellow at top of ventral tract. It perches normally, looks at me, probably still is enough unsure of itself to avoid much flight.

Other notes: Field Sparrow nest w/ 1 fresh egg. Goldfinch nest w/ 4 eggs.
July 31

Sunny, hot, and dry. Present at Dunn from 0845 to 1100, at 1200, 1400, and 1700, and from 1900 to 1930; at Griffey from 1100 to 1140.

Cover E and W fields, TG 10. Find MD69.

TD 56, 58, 59: No PW's.

TD 57: One young is left, and I use it to catch D57F(2) in mist net. It is in ninth day; it begs from me, flapping both wings. Once D57F(2) escapes me, and it takes all day to get and band her. She has bright plumage but worn central rectrices. Band her bright B-each leg, no silver. Nestling held bottom of nest tightly when I took it. I band it bright BOS-L, S-E; 32-01535 and -86.

Note again that MD57 has not been seen despite all the noise at and around his mate's nest.

TD 69: Hear sharp "checks" on SW hillside, find MD69. He is songless, rather sedentary, messy, has only 2 rectrices (outer). I follow him for 5-10 minutes.

TD 70: No PW's; good search.

TG 10: No PW's.
August 1

Hot and clear. Present at Dunn from 0800 to 1100.

Cover S end of E field, far W field, TD 74, and TD 75-76. See D67bB, no other Fw's w/o young.

TD 56, 72, 73, 75, 76: No Fw's.

TD 57: At 0800, D57F(2) "tsips" in alarm, near nest.

TD 67: On TD 74, about at the D74 first nest, I find D67bB, wh/ is probably a female. She is moderately interested in my hisses, calls "check" twice. She is 900 yards from her nest.

TD 74: No D74's.

Idea: Males desert nestlings. Do they ever desert fledglings and thus let them die? Consider MD59's apparent desertion of his young when D59F(B) was building.

August 2

Clear, hot, w/a S wind. Present at Dunn from 0915 to 1130.

Cover TD 57, W and far W fields, and TD 71. No Fw's w/o young.

TD 57: D57F(2) "tsips" at me 30 yards S of nest. No calliphorids in nest.

TD 69, 70, 71: Very careful search. No Fw's.

TD 72: No Fw's.
Hot, sultry, partly cloudy. Present at Dunn from 0800 to 1130 (but from 0800 to 0930 was devoted largely to BV’s).

Cover E, N, far N fields, and BV territories wh/ are also TD 72, 73, and 74. See last year’s D49Y (a female), no other PW’s w/o young.

TD 56, 58, 60, 61, 63, 64, 65: No PW’s.

TD 57: D57F(2) begins to “tsip” the minute I appear at the little projecting woods, where she was yesterday.

Can probably treat her nest as a 3-young success, since I found it on 7/23 w/ nestlings 3 or 4 days old and the nest was unmolested by predators as late as 7/31.

TD 59: D59F(B) calls at me 75 yards N of her nest. Some of her rectrices are gone.

TD 62: D62F (only 4 rectrices left) shows alarm at me in NW corner of N field, about 70 yards from where I last saw her.

TD 49: D49Y (S-R, YOS-L), A-female, is on TD 64 at the W edge. She is very interested in hissing, peeks at me. Her molt is nearly complete; the outer rectrices are 1/2” short, and the nape and sides of the head are a little messy. Note this early molt in a yearling female. She is about 65 yards from the nest where she hatched late last season.

Idea: With males wh/ leave a territory in mid-season, i.e., after they have acquired a mate, it may be questioned whether I should expect them to turn up there next year or to go to their presumed second territory. (Note MD64 this year was on both of his last year’s territories at times. See also MD36.) This may argue that I cannot separate my survival data on returning males into those wh/ shift territories and those wh/ do not, and that I should include all males regardless of whether their territories of the preceding year were known.
August 4

Rain last night and early this morning. Present at Griffey from 1030 to 1215.

Cover all of Griffey well. No PW's.

TG 8, 9, 10: No PW's.

TG 11: Inspect nest for fly puparia: none present, but there are 3 large brown caterpillars.

August 5

Hot, humid, w/ a heavy rain at 1500. No field trip.
August 6

Rain last night, w/ light rain much of time to 0900. Present at Dunn from 1030 to 1200 and from 1415 to 1615.

Cover TD 75-76, TD 74, far W field, and W field. See MD69, MD76, perhaps another male. Hereafter notes will indicate coverage and will not show negative results unless there is something of special interest about them.

TD 76: MD76 is 120 yards N of the nest where I caught him. He is at 4-7'; silent; little response to hiss. Body and head are molting somewhat; only outer pair of rectrices remains, and these are crossed when tail is in the normal position.

TD 69: MD69 (no tail) is just SE of his cherry on the TD 69-70 line, about 35 yards from the last sighting. He is silent, moves little.

At 1530 I hear 4 normal step-buzzes SE of W sycamore. A male flies at me when I hiss, but he veers off, and I can't find him again.

Chat: 1) On TD 76-76 I see a chat wh/ shows no molt. Note that I caught a male on 7/31. It was not molting. A hippoboscid flew out from him.
August 7

Cloudy, hot, threatening to rain all day and doing so lightly at 0900 and at night. Present at Dunn from 0900 to 1215.

Cover E, N, far N fields. See D49Y, G10F(A).

TD 59: D59F(B) is seen twice, once in NW corner of E field, then 45 minutes later 20 yards W of her nest. Both times she "tsips" at me. Her flanks show small gray patches of molt; 1 pair of rectrices is probably gone.

TD 49: D49Y is in center of far N field, about 30 to 40 yards from the sighting on 8/3. Her tail is complete; traces of molt on head and nape. W/ her, staying 3 to 10' away, is G10F(A). Her tail is half its full length and she is molting generally. The spot is 1500 yards from her nest, a good record of a female molting off her breeding site. The two are at 4-8', are silent, show interest in hisses and squeaks. They seem to be associated. (Note G10F(A) is a young female, molting early.)

Chat: 1) Hear a call. 2) See a bird w/ a messy head, a full tail (old or new?).

Chat vocalizations were fairly frequent till mid-July. E.g., in the evening on about 7/14 they made normal sounds.

Other notes: Field Sparrow on 3 well-incubated eggs at 5 1/2'. See 3 Purple Martins (at least one w/ a whitish breast) zoom a young Cooper's Hawk in flight several times.

TG 10: See TD 49, above.
August 8

Hot, mostly sunny. Present at Dunn from 0930 to 1100.

Cover TD 71, BV territories in far W field, and old TD 36. No PW's.

Chat: 1) See a young w/ gray head and grayish brown throat. It eats a 3/16" round fruit like a Smilax berry.

August 9

Mostly clear, rather dry. Present at Dunn from 0845 to 1130.

Cover TD 74, W and far W fields w/ care. No PW's.

Chat: See 4, at least 2 of them young birds.

Other notes: A male flicker eats cherries at 50'.

August 10

Rain last night and to 0700 today; clearing at 0900. Present at Dunn from 0900 to 0930 and at Griffey from 0945 to 1130.

Cover TD 36 and all of Griffey but TG 10; much care. No PW's.

TG 8: Find an inactive nest about 20 yards into the thick stand of saplings on N part of TG 8. It must be a June nest of the GB's.

Chat: None at Griffey. 1) Probably hear one on TD 36, 2 series of calls. (The difficulty is that thrashers and Catbirds sometimes sound somewhat like chats and at this time skulk like them.)
Gray and misty at 0800, about 62°, w/ a N breeze. Present at Dunn from 0845 to 1200.

Cover TD 36, E, N, far N fields. See no PW's except females tending young.

TD 57: D57F(2) "tsips" at me in extreme SE corner of E field. She is neat; traces of a body molt beginning to show.

TD 62: A young D62 has lost its right band and has only 2 S's-R; it must be D62G, because the only other young had a S-L (which wouldn't have come off). It is in neat plumage. It calls just N of NW corner of N field. Hear "tsips," so D62F is probably nearby.

TD 59: D59R (bB-R, SOR-L) is 100 yards N of TD 59 in E edge of N field, w/ D59F(B) "tsipping" near it. The young is silent, comes to my hissing; only head is still in molt. Female won't respond to hiss or squeak.

Chat: 1) A chat calls "scamp" on TBV-7. 2) Another w/ a grayish brown throat calls "scamp" on TD 60. 3) Also in N field see a molting adult chat w/ no tail and a messy head. 4) On TD 64, 2 chats (one seen, an adult) call "scamp" and chatter a little. The adult is in heavy body and head molt but has its old tail.

Other notes: A cicada killer carries a cicada 200 or more yards. Several Pine-woods Sparrow songs at 0930 and 1200. I hiss and a female Yellowthroat gives a very low intensity distraction display (like a PW's), flying to me with her wings and tail set during the last few yards. Yellow-billed Cuckoo carrying food; both cuckoos' numbers seem down. See a flock of 12 Robins; first flock of summer was of 8 or 9 on 8/5.
August 12

Fresh, cool last night; fair to cloudy today. No field trip.

August 13

Clear, hot, dry. Present at Dunn from 0945 to 1100 and at Griffey from 1100 to 1200.

Cover TD 36, TD 39, TD 74, and Griffey. See MD36.

TD 36: ND36 is on TD 36 in SE corner of field, 1 mile from TG 9. He is silent, perhaps a little interested in my hiss; at 6-10’. His body and head are molting; I think his tail is new, and the outer rectrices may be short; flight may be buzzy. Note he apparently is not molting on either of his 1960 territories (I assume he had two); this is first male I’ve seen molting probably a considerable distance from his territory.

Chat: Probably 1 note heard.
August 14

Clear and fresh w/ a S breeze until 0945; then partly cloudy.

Present at Dunn from 0930 to 1300.

Cover E, N, far N fields thoroughly. MD61 only PW not w/ young.

TD 61: MD61 is in dense berries in center of TD 61. He is silent.

Outer rectrices are 3/4" short; nape and head a little messy. Might be good idea to check to see if males newly banded on study area molt earlier than males known to be old.

TD 62: D62young w/ the missing band begs pazisly, and D62F tends it in NW corner of N field. Much moving about. Young probably has a slightly incomplete molt on nape. Can’t get a look at D62F, wh/ doesn’t respond to hisses. Young is probably a female.

Chat: 1) An unaged chat w/ only 2 rectrices but no other signs of molt calls “scamp” and “cheh” at my hisses and squeaks.

Other notes: A male Yellowthroat carries a green caterpillar to a full-grown young w/ a yellow V nearly covering the belly. Find 3 Gold- finch nests; in far N field are 2 nests exactly 30 yards apart, w/ 5 eggs in each. On TD 60 a female leaves a high nest and goes into a distraction display.

Idea: If a species’ clutch size is adapted to the ability of the adults to feed the young, my cases of the females’ doing all the feeding of nestlings indicate that the limit is met during the post-fledgling period. Then what of second brood situations? Can a male tend a 4-young first brood and raise all? Have I a case of a female’s tending 4 late fledglings? There may be a correlation between small late clutches and female-reared broods at that time. (Note D56F’s loss of D56S.)
August 15

Gray, rain-like mist in morning, cloudy until 1500. Present at Dunn from 1015 to 1415.

Cover TD 74, S and E field, W field. D74F is only Pm, w/o young, seen.

TD 74: D74F responds to hisses and perhaps to Screech Owl imitations, in a berry thicket near where I caught the male. She is silent. General body and head molt; 3 pairs of old rectrices; flight buzzy, so wings are molting. Note she is in rare category of unsuccessful females molting on the nesting range. If she returns in 1961, compare her to D46B, wh/ failed, was seen after molt near her nesting range, and returned next year.

TD 57: D57F(2) “tsips” in alarm at 4’ in SE corner of E field where I last saw her. Don’t search for young; female is in a little thicket. She shows a few gaps in color on body; old tail is still complete.

No unbanded immatures to date. Note that if I did see many in fall, this could indicate a subsequent high mortality. If I assume all unbanded immatures seen were raised off the study area, I could then tabulate the sightings and perhaps draw conclusions re migration dates, etc.

Chat: 1) Unaged chat on TD 74 has full tail; “scamp.”
August 16

Dewy and misty until 0900, after a cool night, sunny w/ a high haze during rest of day. Present at Dunn from 0945 to 1215.

Cover E, N, and far N fields w/ care. No Pm's.

Chat: Chats are noisier than Pm's but skulking habits may compensate for this conspicuousness. Hard to examine, e.g., to age.

1) See adult chat w/ molt apparent only in loss of 1 or 2 rectrices; "scamp."

Have twice found hippoboscids on chats.

Other notes: Find a goldfinch nest w/ 3 eggs embedded in it; one is shaken out and broken (fresh) in removing nest. Another nest at 7 1/2' has 5 young about 6 days old.

August 17

Cool w/ a heavy mist until 0945; then quickly it clears and gets hot. Present at Dunn from 0900 to 0915.

Cover TD 36. No Pm's.
August 18

Clear after a cool night; heavy dew. Present at Dunn from 0715 to 0930.

Cover TD 75-76, TD 74, and TD 39. See 2 unbanded female and 1 unbanded male Pw's, but all N of TD 74 at a location which I rarely visit (and perhaps should not count).

Unbanded Pw's: 1) Male w/ molt on head and a full tail (old or new?), in the field N of TD 74. 2) A post-molt female is w/i 5 to 20' of, 3) a female w/ neck still scrawny looking. Both are silent.

Chat: 1) A silent adult seen in a deep thicket is messy, seems to be molting generally, has a 3/4" tail. 2) Another, probably an adult but molting on its chin and showing some white on the belly, is molting also on head and neck; tail is full (old or new?). 3) A full-plumaged bird on TD 39, probably young, flies from 2 to 20 yards across open ground.

August 19

Mostly sunny, w/ threats of showers. No field trip.
August 20

After rain last evening and night, cloudy and changeable today w/ rain again at night. No field trip.

August 21

Hot, mostly clear, fresh and breezy after last night's rain. Present at Dunn from 0915 to 1215.

Cover far W field, TD 36, TD 29. No Pw's.

Chat: See adult chat w/ head and nape molting, tail probably full.

Other notes: Field Sparrow song in yard. On TD 39, 3 Field Sparrow nestlings 6 days old, in nest 3 1/2' up in 6 1/2' haw. One young gapes at my finger.
August 22

Clear, misty, wet dawn after a rain last night, probably a heavy one. Present at Dunn from 0730 to 1030.

Cover E, N, far N fields carefully. See D59F(B).

TD 59: Glimpse D59F(B) (see only B-L, S over unseen band R) in N-S fence row on TD 59. She is silent and fast-moving, at about 20'. Her tail is about 1/2" short, and her nape is molting.

Chat: 1) A chat gives several "scamps." 2) A chat shows no molt, is whitish on rear of belly, grayish on chin and throat. 3) Chat; plumage details unsee. 4) Chat, probably young, w/ yellow breast, white belly, gray chin, messy head. 5) Two young chats together, uttering faint "chuck" calls. Yellow ventral tract beginning to appear, as 2 patches slanting toward each other at their tops, 35-40 x 15-20 mm.

Other notes: A female towhee carries a green caterpillar. See a female Cardinal scratch w/ foot over wing and a male w/ front half of head bare, dark bluish black skin; no crest. Adult gnatcatcher tends full-grown brood of fledglings.

Migrants: First migrants, a young Nashville (tail fan-shaped), a young Canada, an unaged Wilson's.
August 23 to 27

Generally hot, in 80's. Overcast in afternoon of 8/24 and hazy and humid on 8/26 and 27; otherwise clear.

No important frontal activity or other weather developments likely to affect normal migration. Out of town; no field trips.
August 28

Hot and dry, w/ high clouds and a SW breeze. Present at Dunn from 1200 to 1400.

Cover TD 36, W field carefully. See an unbanded female. Note that since 8/22 there has been much drying out of the elm foliage in PW fields, a very noticeable change in greenness of vegetation.

Unbanded PW's: 1). A silent post-molt female forages actively at 3' in small dense elms on TD 69. Once she flies 20 yards.

Chat: 1) A bird w/ yellow venter, full tail, an eye ring, head not quite right for an adult is probably a molting adult.

Other notes: Goldfinch nest w/ 4 fresh eggs. Field Sparrow carries food.

August 29

Hot and sultry, w/ light rain from 1330 to 1500, heavy rain to 1600 (total 1.25") and rain from 2000 on. Present at Dunn from 0930 to 1000 and from 1330 to 1430.

Cover TD 36, TD 74, and E field. No PW's. Virginia creeper, dwarf sumac, and sassafras are reddening.

Chat: 1) Two chats heard on TD 74.
August 30

Cloudy, sultry, windless; clears at noon. Present at Dunn from 0850 to 1250.

Cover TD 36, TD 74 (to 1100 concentrate on BV's), and E and N fields. See an unbanded immature and D46B, a female hatched here last year.

TD 46: At 1245 in SW corner of E field, about 600 yards S of her birthsite, is D46B (B-R, BOS-L). She is in full post-molt plumage, foraging silently at 3-5' in moderately dense saplings 6-15' high.

Unbanded P%'s: 1) An immature, probably a male, forages silently at 5-8' in the wooded field. No response to hiss.

Chat: 1) An adult w/ a 3/4" tail, body and head not well seen.
2) A messy unaged bird w/ a full tail gives a short, chattering call.
3) A tailless chat calls "scamp" and chatters.

Migrants: Olive-sided Flycatcher, male Mourning, a few Empidonaces.

Others: Field Sparrow song heard.
August 31

Clear and hot. Present at Dunn from 0900 to 1145.
Cover TD 74, TD 36, far W and W fields. No PW's.

Chat: None.

R-hW: First Red-headed Woodpeckers of fall, an adult perched at 1000 and an immature at about 1100.

Migrants: Olive-sided.

Others: A male Yellowthroat and a female Cardinal scratched over their wings. Find Goldfinch nest begun yesterday. Two box turtles in position to copulate; one on bottom has red eyes.

September 1

Hot and cloudless. Present at Griffey from 0930 to 1230.
Cover Griffey w/ great care. See MD36, MD71.

TD 36: MD36 is back here, foraging in moderately dense cover on SW TG 9. Full plumage; red much masked. "Checks" once after I find him.

TD 71: MD71 (YG3-R) is on TG 11, a measured 1500 yards off territory. He is feeding rapidly and silently at 3-9', at 1115 and 1215. To be sure of such an unusual record I follow him and see the following details: new bands, whitish under tail coverts, slight traces of molt in the thin feathers of the sides of the neck and the lack of full clear face patterns. No response to hiss.

Chat: None.

R-hW: None.

Migrants: Two Olive-sides, 1 singing, Wilson's.

Others: Find Yellow-billed Cuckoo on 2 eggs.
September 2

Hot and clear w/ a slight haze. Present at Dunn from 1000 to 1400.

Cover TD 74, E, N, and far N fields. See D59F(B) and an unbanded male.

TD 59: D59F(B) forages slowly and silently, almost skulking, at 2-4' in a dense dwarf sumac thicket (5 x 5 yards, 5' high) 40 yards N of her successful nest and 40 yards E of the fence row. See a good deal of head and cheek molt; body not well seen; tail probably fully grown.

Unbanded Fm's: 1) A post-molt male "seeps" and "checks" and I turn and find him at 20' in woods edge of TD 61. In 1 1/2 minutes, 2 "seeps" and 3 "checks."

Ideas: 1) Measure eggs in 3-egg sets. 2) Might try to put 2 nests of young together side by side and see if adults would care for both, thus enlarging the brood.

Chat: 1) Hear many "scamp" calls in N field depression.

R-HW: 1) Unaged; SW at 1105.

Migrants: Magnolia Warbler.
September 3

Hot w/ a high haze till 1000, then cloudy. Present at Dunn from 0930 to 1330.

Cover wooded, E, W fields, TD 36. See MD77, D67F(A), MD67, 2 unbanded adult males, and a probably unbanded, unaged, unsexed bird.

TD 67: MD67 is at 5-20' on center of TD 67, SW of the E sycamore; note that he left TD 67 to molt in 1959. He is post-molt. Find him when I hear 4 or 5 insipids at 1215 and search; w/i 120 yards is an unbanded male, wh/ may have been the singer.

D67F(A) is also on TD 67, foraging silently at 6-8' under the top of a large stand of dwarf sumacs. Molt is complete. No response to hisses. See TD 77 below.

TD 77: MD77 (post-molt) is in the same patch of sumacs as D67F(A), some 5 yards from her, also foraging silently at 6-8'. No response to hisses. He is about 500 yards off territory.

Unbanded PW's: 1) A post-molt adult male is on TD 56 in the berry thicket. Magnolia and Tennessee nearby. 2) A post-molt adult male may sing 4-5 insipids on TD 67 at 1215. MD67 is w/i 120 yards and may be the singer. 3) A PW flies E across E field at 35' at about 1045, perches for 5 seconds in a large bare tree, drops toward E.

Chat: 1) Several "scamp" calls on TBV-7. 2) Chatter calls in E field.

R-MW: 1) Immature at 1230, SE at 100', 2) Probable adult at 1330, SE from a perch.

Migrants: Several Tennessees and Magnolias (immature w/ molt on forehead).
Other notes: Pine-woods Sparrow: At about 1045 see a bird on TD 56 at 4-6' in thick berry patch. Molting on cheeks, probably slightly on body; old tail, upper breast buffy, belly whitish. In 5 minutes of watching it I hear 4 or 5 very faint songs w/ warbles in between, like rehearsed song. Between 1100 and 1110 are several more weak songs w/ Goldfinch-like warbles separating the songs.

Towhee: A female towhee is at a nest of 3 young, 4' high in 8' haw. Young have primaries 3 mm. beyond 15 mm. quills. Quills and down on heads. They crouch in nest but permit me to handle them. Venters mostly bare; quills of ventral tract have small feather ends.

Field Sparrow: One tends young. At 1230, I find 2 newly fledged young at 4 and 6 1/2', 30 yards apart and calling constantly. I catch them and put them in a plastic bag for 30 minutes but this attracts no clear attention from any adults. May adults have deserted them for some reason connected with the date? Cf. my WeVs of about 8/20. Young respond to each other's distress calls. Plumage details in my rough notes.

Hear full Field Sparrow song.
September 4

Hot, clear, windless; light dew. Present at Dunn from 0815 to 1230. Cover E, N, far N fields, and TD 36 and TD 74. See D59F(B) and hear an unseen male.

TD 59: D59F(B) forages silently in berries W of path on SW TD 59. Tail is complete; head and neck are molting and wing coverts may be.

At 1045 hear 3 faint insipids in N-S tree row here but don't find singer.

Chat: 1) Single loud "scamp" on TD 74. 2) Three or 4 "scamps" in N field.

R-hW: 1) Unaged at 0915, heads W low.

Others: Female towhee w/ 1" tail. Yesterday saw a Wood Thrush w/ a 1" tail. Tailless Yellowthroat.

Meadowlark sings. Field Sparrow sings.
September 5

Hot, clear, windless; light dew. Present at Dunn from 0730 to 1200.

Cover E and W fields well, also TD 36 and TD 72. See an unbanded male and an unbanded female.

**Unbanded Pw’s:** 1) A post-molt adult male is W of the W tree row of the E field. Heard him "check" before I saw him. 2) A well-marked post-molt adult female forages silently at 1-5' in the dwarf sumac patch on TD 67. Neither Pw responds to hisses.

**Chat:** 1) Bird w/ full tail calls 1-2 times. 2) Bird w/ 1 1/2" tail.

**R-hw:** 1) Adult at 0800, SW. 2) Unaged bird at 0805, goes E and lands. 3) Adult at 0825, SW. 4) Immature at 0923, N. 5) Adult at 0925, S, bill open 3/8".

**Migrants:** Magnolias. A thrush. Two Olive-sideds, Young female Black and White.

**Others:** Two Field Sparrow are in full song, audible to each other.
September 6

Hot, clear, windless; dew. Present at Dunn from 0645 to 0800.

Cover TD 36, TD 74, and look briefly at wooded field. See MD74 and an unbanded male.

**TD 74:** MD74, w/ molt complete except for a messy head, is near his first nest site.

**Unbanded PM's:** 1) At 0648 on TD 36 a post-molt adult male is at 35' in E-W tree row at S edge of field. It quickly flies NW, going to 60 or more feet high. After about 250 yards it turns W, may make a small circle, heads NW again. Then at several hundred yards it turns W, may circle again, gradually goes W out of sight. Sun is well up at time.

**Chat:** 1) Call on TD 74. 2) See a chat w/ a full tail in wooded field, about 0745. At about same time and place several other unseen birds skulk in brush; possibly these are migrant chats.

**R-bW:** 1) Two immatures together at 0737, S. 2) Unaged bird at 0740, SE.

**Migrants:** Several Tennesssees and a female or young Golden-wing.

September 7

Hot. No field trip.
September 8

Very hot and windless. Present at Dunn from 0930 to 1230.

Cover E, N, far N fields, TD 36 and TD 74. No PW's.

Chats: None.

R-hW: 1) Immature at 1055, SE.

Other notes: Pine-woods Sparrow: A bird w/ sides of head, throat, and upper breast buffy flies from a low goldenrod and broomsedge patch to a drying haw 20 yards away. There it perches 1 minute, bobbing its head and body, its bill 1/4" open. It would stay indefinitely, but I move on.

Field Sparrow has center rectrices full, rest graded down to outers, wh/ are 1 1/2" shorter.

Cardinal male in ratty plumage, old tail.
September 9

Shower in early morning; hot and cloudy thereafter. Present at Dunn from 0900 to 1015, at I.U. from 1015 to 1115, at Griffey from 1130 to 1230.

Cover TD 36, TD 74, T 70 (I.U.), TG 8 and TG 11, all carefully. See an unbanded female.

Unbanded P"s: 1) A post-molt female is near the S TD 74 fence row at 3-8'; silent. No response to hisses.

Ideas: 1) Do females drift S during molt, or leave sooner after molt? 2) Are all males' late summer range changes pre-molt?

Chat: None.

R-hws: None.

Migrants: See a male Redstart, a Baybreasted.

Others: Cuckoo nest found on 9/1 holds 1 unpipped egg, 1 nestling of a total volume about twice egg size. It gapes wildly, utters low-pitched rather cat-like noise. When adult leaves nest it looks as though center pair of rectrices is gone.

A female Cardinal carries food; rattly plumage; old tail, w/ outer 2 rectrices on right 3/4" short. Banded female in yard (Y-R, S-L) has old tail.

September 10

Cloudy, cool, after heavy rains in S Indiana yesterday and a little rain here. No field trip.
Clear and fresh; cool last night, w/ wind in N. Present at Dunn from 0845 to 1230.

Cover far W and N fields well and TD 36 and TD 74. See D74F, old D3F, MD69. Note that despite good conditions there are no signs of a migration last night. For several days it has been very dry and leafless.

TD 69: MD69 is foraging silently (and preening) at 2-5', about 40 yards off TD 69, some 25 yards S of W sycamore. He is post-molt, bright. No response to hiss.

TD 74: D74F silently forages at from 3 to 10' between her first 2 known nests; she ranges very little. Molt on sides of neck; outer rectrices probably 1/2" short. No response to hiss.

TD 3: D3F (YOS-R, the yellow band very much beaten down) flies up to w/i 10' of me on NE TD 29, quickly leaves; get a second brief sighting. Silent; 4-8'; no response to hiss. She seems to have a somewhat messy head. Note she has molted here and w/i a few yards of here for 4 years.

Chat: None.

R-bW: 1) Adult at 0900, W to E, low. Outdoors most of day; watched sky but saw nothing.

Other notes: A Catbird has a molting head, probably a full tail. Another w/ a head molt. A young Yellow-billed Cuckoo w/ a 2" tail can hardly fly through a tree, then has a hard time landing and holding on. An adult is carrying a large mantis, I think not the Chinese species. Whip-poor-will sings in evening.
September 12

Clear, cool night; dew; high clouds all morning, w/ a gusty N wind getting stronger toward noon and hindering work. Present at Dunn from 0815 to 1245.

Cover E field w/ great care; also cover wooded field, TD 36, TD 75-76, TD 74. See D76F, MD74, MD60, possibly MD77.

TD 60: At 1205 find MD60 (post-molt) at N end of N-S tree row, i.e., E edge of TD 60. He forages silently at 4-6'. He stretches upward w/o any wing movements. Some interest in a hiss.

TD 74: MD74 forages silently at 2' and 20' in same place in his S fence row; seen twice, 30 minutes apart. His nape is slightly scrawny and his head molt may be a little incomplete.

TD 76: When I get to TBV-9 (TD 36) I see a PW wh/ I register as a male, GOS-R, old band. This would most likely be MD77. I search to corroborate and find D76F on S edge of TD 76, i.e., center of TD 36. See her 3 times in 1 hour, twice in same patch, third time 30 yards away. She is silent, at 2-20'. Some traces of molt remain in her cheeks.

Ideas: 1) Inject the age factor into my data of female returns. 2) Is there a correlation between male brood desertions and shifts in home range (e.g., MD57)? 3) Note how resident PW's of both sexes tend to forage in same thicket at this season.

Chat: None.

R-hW: None.

Migrants: Black-poll, young male Redstart, Olive-backed Thrush, many Catbirds (during last 3-4 days and today), 2 Magnolias.
Others: Male Cardinal in yard (S-L, R-R) undergoing heavy face molt; old tail. Field Sparrow in full song. See a tailless Yellow-throat which looks like a young male. A Field Sparrow is molting on its head.
Clear and fresh after a cool night. Present at Dunn from 0815 to 1100 and from 1215 to 1245.

Cover E, N, far N fields, TD 36 and TD 74. See MD59. Biggest migration of year, but not unusually large.

**TD 59:** At 0950, about 20 yards from DS9F(B)’s first nest, MD59 sings 20 of his peculiar songs, loudly and unmistakably. I don’t see him.

**Chat:** None.

**R-hw:** None.

**Migrants:** Many Tennessees; one each of Nashville, Black-throated Green, Olive-back, a few Magnolias. An Empidonax hawks an insect from a goldenrod.

**Others:** A male towhee has a somewhat short new tail. A female Cardinal shows much body molt.
September 14

Clear day after a cool, clear night. Present at Dunn from 0730 to 1130.

Cover TD 36, TD 74, W and far W fields thoroughly. See D74F, MD73, an unbanded adult male, and an unbanded immature male. Normal good migration last night.

TD 74: D74F forages slowly and silently at 12' in a cherry in SW corner of TD 74. She covers 10 yards in 10 minutes, catches 3 green caterpillars in one 3-minute span. She is quite bright (note her age), has a full tail, but shows a little molt on sides of neck, crown, nape, possibly chin. She hopped into view at my squeak.

TD 73: MD73 is on TD 73, at 2-7' in a haw in the little valley just N of the maple stub, at its E end. He is silent; molt complete. He disregards an immature male also here.

Unbanded PW's: 1) A silent adult male, post-molt, is in male BV-8's old berry patch on TD 39. 2) A silent immature male near MD73 is disregarded by him.

Chat: None.

R-hW: 1) Unseen bird calls 3 times at 0840.

Migrants: First Rose-breast. At 0750, a flock of some 50 swallows flies over at 10-40', passing in 30 seconds. Two or 3 are Rough-wings; one perhaps a Barn. See several Tennesses, Redstarts, Magnolias, 1 Blackburnian.

Others: Female Goldfinch on 4 eggs on TD 67; the nest is probably the one I saw being built on 8/31. [Rest of its history is traced in following days.] Field Sparrow seen dew-bathing; another carries 2-3 green caterpillars. A Yellowthroat (sex?) w/ much head molt, a 1/2" tail, flies as though wings also are molting.
September 15

Cool w/ high clouds and a brief light rain at 0700; then clearing. Present at Dunn from 0815 to 0905, at I.U. from 0910 to 1030, at Griffey from 1030 to 1200.

Cover TD 36, TD 74; T 70 (I.U), all of Griffey except TG 10. See MD57 on his old territory at I.U. Large flocks of migrant warblers.

TD 57: At 0920, MD57 (2 S’s-L) forages silently between 2-7’ in dwarf sumacs on the NW corner of T 70, his old territory; eats a brown caterpillar. Black marks are very dark; there may be a little molt on his neck. Very important record.

Compare the leisurely behavior of resident PW’s w/ the great activity of migrant warblers.

Chat: None.

R-bw: 1) Unaged bird at 1120, high, S. 2) Probable adult at 1127, high, NW. 3) Immature at 1140, medium, E.

Migrants:

See an Ovenbird. Two Olive-backs eat sassafras fruits. At I.U. see year’s biggest warbler flocks, of Tennesses, Black-throated Greens, Blackburnians, Bay-breasted, Magnolias.

Others: A pair of Bob-whites seen; note date. Silent Whip-poor-will flushed from ground. The Yellow-billed Cuckoo nest on TG 11 still holds 2 young.
September 16

Warm and clear. Present at Dunn from 0800 to 0900, at Griffey from 0900 to 1000.

Cover TD 36, TD 74, TG 8, TG 11. No PW's.

Chat: 1) Full-plumaged bird at Griffey.

R-hw: 1) Unaged bird at 0835, high, S. 2) Three adults, 1 immature at 0845, low, SE; fly on a diagonal front of about 100 yards.

3) Adult at 0847, high SSE; much looking to right and left in flight.

4) Adult at 0850, medium, SE, then E. 5) Three immatures, 1 adult, 1 unaged (probably adult) at 0910, low to medium, SE; fly on a 400-yard front; much looking around. 6) One adult and 1 unaged at 0950, low, E.

Others: Field Sparrow tends grown young. See a young towhee w/ a 2" tail.
September 17

Misty rain from 0700 to about 1100, clearing at 1400; warm. Present at Dunn from 0745 to 0920 and from 0945 to 1300.

Cover TD 36, TD 75-76, TD 74, and E, wooded, N, and far N fields; last two very well covered. See MD76, D74F, D65F, and an unbanded adult male. Migration last night.

TD 76: MD76 is 35 yards N of his nest, at 6-8'. Silent; post-molt. In 7 minutes I see him 40 yards beyond to NE. Here he chases a young towhee 2-4 yards.

Re a male's molting on or off territory, one problem is to know if he's simply back on a former territory. In time, w/ all males banded each year, I should solve this. (See MD36, MD57; compare MD67, wh/ molted off territory last year and on it this.) Also, is there any difference in impulse or function in males' moves before mating, after mating, and before molt?

TD 74: D74F forages silently in berries in SW corner of TD 74, some 10 yards from last sighting. Neck (sides and nape) and back of crown are still molting.

TD 65: At 1240, D65F forages at 2-5' in dwarf sumacs, 30 yards from her successful nest. She is very bright; molt complete. She is extremely active, constantly flying up and hawking food from under-sides of leaves over her head.

Unbanded Pa's: 1) Post-molt adult male, silent, 2-5', wooded field.

Chat: None.

R-hW: 1) Adult at 1200, low, SE.
Migrants: Movement of Catbirds, thrashers, Olive-backs, ReV's. Olive-back song fragments are nearly perfect. See 1 Blackthroated Green, 7 Tennessee's, 2 Magnolias, 2 Wilson's, 3 Redstarts.

Others: Field Sparrow w/o a tail; another tends young (see no molt); another has 3 old rectrices. A Robin has about half his rectrices, but these are half-length and look like the outer feathers.
September 18

Clear, hot, sultry, w/ some clouds and a vague threat of rain from 0930 on. Present at Dunn from 0715 to 0830 and from 0900 to 1230. From 1345 to 1500 I watch a migration of some 322 Broad-winged Hawks, 1 Sharp-shinned, 1 vulture over our yard.

Cover TD 74, wooded and W fields. See D74F, MD74, MD57, an unbanded immature male.

TD 74: D74F is w/ an unbanded immature male at 0725 in berries between her first 2 known nests. Male is silent, active, chases her. They move together for 2 minutes at 2-4'; each chases (or follows close after) the other. Lose them when male flies and she immediately follows. All this looks more sexual than hostile. At 0750 I see D74F 50 yards on, hawking in silence from a goldenrod. She seems to be through her molt.

MD74 forages silently in the fence row in the very SE corner of TD 74.

TD 57: Hear faint skid in middle of TD 57 at 0930, find MD57 (post-molt). He forages at 4-10' in elm and sassafras in the open, "checks" 5 or 6 times. Note his return.

Unbanded Ph's: 1) See TD 74, above, re immature male.

Chat: None.

R-bW: 1) Unaged bird at 0823, high, SE; saw it after it called once. 2) Unaged bird at 1430, low, S.

Migrants: Palm Warblers for first time, about 6. Much chasing by three. Big responses to hissing. Persistent, typical dew-bathing

Others: Male Cardinal tends young in nearly full red plumage, w/ gaps in it. A male towhee (black) w/ a 1" tail.
September 19

Cloudy until 1200 after heavy rains sometime before 0700; hot, clear afternoon. Present at Dunn from 1345 to 1515.

Cover TD 36, TD 72, TD 29. No PW's.

What is the bearing of the fact that MD36 and MD57, wh/ molted off their territories (or one of them) are also territory shifters? Consider the bearing of PW's' constant pair switching on the theory that there is a floating population; data of others in theory could be explained merely by much switching of mates.

Chat and R-hW: None.

Other: Adult Mourning Dove on 2 large nestlings wh/ are still young enough to handle.
September 20

Heavy mist till about 0730, clearing but w/ high clouds from 0830 on; cool early. Present at Dunn from 0715 to 1100.

Cover TD 36, TD 74, E and N fields thoroughly. See D76F, MD36, MD74, MD59, MD65, and a male wh/ is unbanded at least on left leg.

Migration (not of Pm's).

**TD 76**: D76F forages silently at 10-20' in the TD 36 thicket where I last saw her. Bright full plumage.

**TD 36**: At 0742, MD36 forages at 6-15' in osage orange in SE corner of TBV-9 (TD 36). Repeated faint "checks" and after I find him 3 faint but complete insipids in 1 minute. Traces of messiness on nape.

**TD 74**: MD74 forages at 2-10' in sassafras and berries about 20 yards from last sighting. Two or 3 "checks" after I see him. Possibly a trace of messiness on nape.

**TD 59**: Hear 7-8 hoarse step songs near D58F's first second-brood nest. Finally find MD59 at top of 30' sassafras in E fence corner. He sings 2-3 times there, hops down 3'. A warbler flies up to the tree. In 10 seconds there is a 3-bird chase, 40' high; MD59 and a second bird suddenly zoom down to 10' and MD59 pulls up while the other keeps going, far. MD59 then forages at 4' in berries, moves N and E along tree row on TD 59. Hear 4 more hoarse steps. At 0910 I quit following him but hear about 5 more songs as I move on. He is in full plumage.

None of males today have responded to hisses. Not tried on D76F.

**TD 65**: Hear "checks" in SW corner of N field and at 1015 find a male w/ no bands on left tarsus, the only one seen. I lose him in the
thicket of the E-W fence row. At 1025 hear 1 song at 20' in SW edge of N field. Immediately MD65 (post-molt) flies to general location of the song, coming from the same thicket the other male disappeared into. MD65 looks around and in 10 seconds chases a P# at a height of 50', NE over TD 60. They are 10 yards apart. The pursued turns back toward SW, and MD65 chases it down to 10'. The two dive into the edge trees, and I can't find them again. No response to hiss.

Chat: None.

R-hW: 1) Immature at 0855, low, NW, 2 calls in flight. 2) Four unaged birds at 0900, medium, WNW.

Others: Robin songs and cowbird whistles heard for first time this fall. Yellowthroat song, w/ the notes added to the end wh/ usually signify a flight song. Male towhee w/ a 1 1/2-2" tail. A female Cardinal is bald. At 1019, 3 Broad-wings soar SW high, then circle for a few minutes.

Migrants: Olive-backed Thrushes, many Tenessees, a few Black-throated Greens, Black-polls, Bay-breasts, Redstarts.
September 21

Cloudy and dewy at dawn, high clouds till 1200, then clearing and sultry. Present at Dunn from 0735 to 1045.

Cover TD 74, TD 72, TD 29, TD 77, TD 71, W field. See D74F, D3F, an unbanded adult male.

TD 74: D74F forages silently in berries at 2-3', in exact place in SW corner where I've seen her twice before. Some slight appearance of incomplete molt on nape. Responds to squeaks.

TD 3: D3F feeds silently at 5-15' on TD 29, at edge of valley on SE part. Cheeks and nape still molting.

Unbanded Fw's: 1) A post-molt adult male at Allen-Doerr line for 20-25 seconds engages in an encounter w/ a Goldfinch, a male, I think. They are perched 1-3' apart and 3 times there are displacements, each species the aggressor at least once. Silent.

Note I'm seeing more different males than female Fw's. Are females easier to see? Can check by counting number of sightings of banded birds known to have been more or less continuously present.

Chat: 1) A chat in perfect body plumage has outer pair of rectrices 1" short, next 1/2", third pair probably a little short.

R-HW: None.

Others: Field Sparrow w/ outer pair of rectrices 1 1/2" short, next 1", next somewhat short.

Goldfinch nest on TD 68 has 4 young about 2 days old.

A Yellow-billed Cuckoo flycatches (or perhaps retrieves an escaped) whitish insect. Cuckoo makes 2-3 twists and turns in a horizontal plane 10' square, dropping in altitude a little.
September 22, 23, 24

Hot, dry, almost constantly sunny. No field trip.
September 25

Clear, fresh, warm. Present at Dunn from 0700 to 1200. All times hereafter are CST; change was last night.

Cover TD 74, E, N, far N fields w/ much care. See D57F(2) and a banded adult male wh/ is very likely MD57.

TD 57: D57F(2) forages silently at 2-6' in NW corner of E field, probably 40 yards off TD 57. Bright post-molt plumage. In immediate vicinity of her are Tennessees and Bay-breasts, Empidonaces.

At 0850 in SW corner of E field a male w/ 2 bands left, probably light colored, flies 30 yards as I spot him. I hiss and he returns 10 yards, suddenly raises both wings so they are spread and held above his back. He moves 2-3" (walks?) toward an unseen bird beside him. In 1 second there is a chase out of sight. Silent. Very careful search w/o success.

Chat: None.

R-bw: 1) One adult and 1 immature at 0720, low, SW, 20 yards apart; 3 calls w/i 25 seconds. 2) One adult and 1 immature at 1100, adult low toward NE, young low toward E; young called once.

Migrants: A Tennessee responds when I hiss, flies toward me and towers over me, rising with the bouncy, tail-down, pumping flight of a PW in similar circumstances.

Grosbeak sings a long, faint, normal song, gives a few calls.

Others: House Wren sings a 1-second fragment of a song. Three towhees fly up from ground or low perch where they were together; 2 nearly full-plumaged males (young?) and a nearly full-plumaged female (old?). Two male Yellowthroats in full plumage, one probably young. See Yellow-billed Cuckoo.
Find a sassafras w/ hundreds of empty fruit cups or follicles, no fruit on or under it, bird droppings below. Some 100 yards away is a similar tree w/ all its fruit apparently untouched.
Clear and warm after a clear night. Present at Dunn from 0630 to 0830.

Cover TD 36, TD 29, far W field. See D59Y, an unbanded immature male. Little evidence of a migration.

TD 59: At the E-W valley by the maple stub D59Y (SOY-L, bB-R) forages in the ash; it looks like a female. An unbanded immature male flies up and the two fly 10-20 yards out of sight in a twisting chase. During next 5-8 minutes I see them foraging and chasing intermittently, w/ each the aggressor on occasion. D59Y is also in a chase w/ a young Myrtle. Place is 750 yards from D59 nest.

Chat: None.

R-hw: 1) Two unaged at 0708, high, SE. 2) Adult at 0709, low, S, steady wing beat. 3) Adult at 0710, medium and climbing, SW.


Others: Yellowthroat male rises to 20’, gives full flight song w/ 4 phrases plus other notes; at 0715. Another does this at 0745; 3 phrases. Later see a male w/ a very black mask, w/ a young male; hear a song about this time. A Mockingbird (one of 4 chasing each other in a tree) fights a female Red-belly. She gets behind branches and sits hiding quietly.
September 27

Warm and cloudy, w/ rain most of time from 1430 on. Present at Dunn from 0800 to 1100.

Cover wooded field, give much care to W field. See MD68.

TD 68: MD68 forages rapidly and silently at 3-7' about 40 yards ENE of W sycamore, on TD 68. Molt probably complete.

Chat: None.

R-hW: 1) Immature at 0925, medium, SE. 2) Unaged at 0934, medium, SE; 1 call. 3) Adult at 0945, perched and chattering; at 0952 it joins those in items 4 and 5 below. 4) Immature at 0947, flying in low (toward NW) and probably landing and chattering; at 0952 going SE w/ those in 3 and 5. 5) Three unaged, joining the two just above at 0952 and going SE low. Probably all five were foraging in woods before moving. 6) Adult at 1017, low, S. 7) Adult at 1104, low, SE, landing at 45'.

Migrants: Myrtle, probably adult.

Others: Goldfinch nest on TD 68 w/ 4 young (facing same direction) w/ quills scarcely broken, primary feathers barely showing at quill ends.
September 28

Gray w/ high clouds, cool and damp; clearing at 1200. Present at I.U. from 0700 to 0800, at Dunn from 0800 to 1030.

Cover T' 70 (I.U.), wooded, E, and S half of N fields. See D57F(2).

Migration of warblers and others.

TD 57: D57F(2) forages silently at 3-15' in NW corner of E field, W of fence. She is about 150 yards from her last nest.

Chat: None.

R-hW: 1) An adult and an immature at 0912, medium, SE; 1 call.
2) Immature at 0914, medium, SE. 3) Immature at 0915, medium, S.
4) Unaged bird at 0930, high, S. 5) Five unaged, together, at 0933, medium, SE. 6) Three immatures and 1 adult at 0935, medium, SE; w/i 30 yards of each other. 7) Unaged bird at 0958, medium, E. 8) Unaged bird at 1000, low, E.

Migrants: Many Magnolias (last few days' birds seem brighter - an age class?), several Palms, both red and yellow-colored Redstarts, 5-6 White-throats, an Osprey.

At 0935 I see 7 Buteos circling for 10 minutes before going SW high; probably Red-tails. At 0955, three more probable Red-tails pass.

Others: Scarlet Tanager in female or immature plumage. Male Summer Tanager.
September 29

Clear w/ a brief shower at night; then clearing quickly. No field trip.

September 30

Clear and getting cold at night. No field trip.

October 1

Clear after a cool night. No field trip.
October 2

Warm and mostly sunny after a moderate night w/ some moonlight but occasional thunder; strong W and SW wind. Present at Dunn from 0900 to 1200.

Cover TD 74, wooded, E, N, far N fields. See unbanded immature male. Many signs that resident scrub species have left within last 3-4 days.

Unbanded PW's: 1) In wooded field is an immature male w/ less white than I’ve ever seen on a young bird: a trace on the chin, a normal amount replacing the adult’s yellow under the eye, possibly some whitish ends on auriculars. Bird forages silently at 4-8'. Big response to hiss. See at 1000 and 1015 in same place.

Chat: None.

R-hW: 1) Unaged bird at 0942, low, S; probably landed. Watched sky from 1400 to 1630 and saw nothing.

Migrants: Young Myrtle, Lincoln’s Sparrow, Ruby-crown.

Others: Female Yellowthroat w/ gap in center of tail, I’m pretty sure; another female. Summer Tanager in olive plumage. Young male Cardinal w/ a few brown spots in red plumage. Yellow-billed Cuckoo.
October 3

Cool, gray dawn w/ a light steady rain from 0730 to 1100. Present at Dunn from 0715 to 0930.

Cover TD 36, far W and W fields. No Pw's.

Chat: None.

R-hW: 1) Adult at 0835, low, E; probably flew from a perch.
2) Probable immature at 0905, low, N.

Migrants: Lincoln's Sparrow, Golden-crowned.

Others: House Wren. Once hear 2 Yellow-throat songs and once an apparent flight song. A field Sparrow sings a series.

Goldfinch nest on TD 68 has a fully feathered young bird high in cavity w/ head over rim; I get to w/1 yard of nest, then withdraw. As I came up a brownish bird, presumably a nest-mate, flew 25 yards from the nest w/ a buzzy flight. I was 12 yards away when it left.
October 4

Clear, dewy, cool at night. Present at Griffey from 0800 to 0920, at Dunn from 0920 to 1100.

Cover all Griffey but TG 10; also wooded, E, and S 1/2 of N fields. See D57F(2). Large migration.

TD 57: D57F(2) forages silently at 1-4' in SE corner of wooded field. She is in bright complete plumage w/ some yellow on her crown (possibly a sign of age). [She was the last PW of 1960.]

Chat: None.

R-hW: 1) Immature at 0825, SE. 2) Probable adult at 0930, low.

Migrants: First juncos (2-3). Flock of 40-50 Crows may be migrants. Myrtles, Palms, Black-throated Greens, Ruby-crowns, White-throats, many Blue Jays.


Note: Scrub vegetation is leafless in many places, very dry. Large trees green. PW's, chats, and WeV's seem gone; probably few insects to be found on scrub plants. Brown Myrtles and Palms numerous.
October 5

Clear and warm, clouding at 0930. Present at Dunn from 0830 to 1130.

Cover W field very well. No PW's. Very few birds, in contrast to yesterday.

Chat and R-bW: None.

Migrants: Duck Hawk, Ruby-crown, White-throats, 1 flock of Palms and Tennessees, sapsucker. Many flickers in last 10 days. Blue-headed Vireo.

Others: Scarlet Tanager in olive plumage. Male towhee in full plumage scratches over wing. Goldfinch nest on TD 68 is empty; a few mites in it. Young WeV.

October 6

Warm, clear day after a cool night w/ a full or nearly full moon. No field trip.

October 7

Weather as yesterday. No field trip.

October 8

Warm w/ a steady rain from early hours to 1100; cloudy rest of day w/ signs of a light rain again during night. No field trip.
October 9

Cloudy, wet, and warm till 1330, then clearing somewhat. Present at Dunn from 1430 to 1545.

Cover wooded and E fields. No PW’s. Signs of a migration of a few species; no wave.

Chat:
R-hW: 1) Immature at 1505, high, N. 2) Unaged at 1505, medium, E.


October 10

Clear and hot after a clear night and a misty early morning. Present at Dunn from 1000 to 1130.

Cover W field. No PW’s. Few birds seen.

Migrants: See 25-30 White-throats w/ some 10 towhees, wh/ are probably migrants too.

Others: A Field Sparrow twice sings a faint, not-quite-full song.
October 11

Clear, hot, dewy. Present at Dunn from 0800 to 0900 and from 1045 to 1145.

Cover far W and E fields. No PW's.

Migrants: Many White-throats, some Myrtles. A junco or two w/ Field Sparrows and White-throats.

Others: Field Sparrow song 2-3 times.

October 12

Sunny and clear after a clear, moderate night. Present at Dunn from 0830 to 1030.

Cover wooded and W fields. No PW's. This will be last field trip.

Scrub exceedingly dry.


Myrtles, many White-throats.

Others: Young male Cardinal w/ some small brown patches showing; outline of black area on face now visible.

Field Sparrow at 0905 sings a series of 18 songs every 10-15 seconds, apparently at 25' in a tree top; usual interval is 10 seconds. Waits 1 minute and begins again.

Winter

In S center of far N field found a PW nest with fragments of possibly 2 egg shells. Location is exact area in which MD63 concentrated after nest 1 failed. Spot could also be at S edge of TD 64, but I judge nest was D63's'.
June 7, 1961

On TD80 I find a PW nest which I never saw last year and which is just W of the tree row, by the big maple. This is the precise spot in which D67F(B) behaved as though she had a second nest on June 6, 1960 and at other times close to that date. The nest is at 8' in a scrawny 12 1/2' red cedar. It was unsuccessful.
APPENDIX I

Nest Sites by Pairs

Pair D56 (both males) -

Nest 1 (successful): At 1' in 5' American elm; against leader and on very small twigs.
Tree is 1 of about 30 in 5 x 5 yard cluster, at S edge of cluster; maximum height in cluster is 15'; field cover and small elms scattered to S. Concealment medium; shade not quite full.

Nest 2 (second brood): At 3' in 6' Crataegus; against a leader and also against a diagonal from a second leader, on 2 diagonal twigs. In center of tree. Tree in open among scattered elms and hawthorns; closest is 2 yards away. Concealment medium; shade moderate.

Pair D57, female 1 -

Nest (parasitized by cowbird; no P. eggs): At 3' in 4 1/2' American elm in fork of a leader and against a fork which develops in 1 of the 2 divisions formed by the first fork. Tree in loosely scattered elms of similar size. Concealment medium; shade moderate.

Nest (destroyed during building): At 30" in center of 4' Crataegus which grows in open.

Nest 1: At 23" in 3' American elm; in a symmetrical fork of leader and on twigs. Tree in open. Concealment poor; shade moderate.

Pair D57, female 2 -

Nest 1: At 15" in 3' tulip poplar which forks into 4 diagonals at height of 1' from ground; nest in center of tree between 2 of the diagonals. Tree in exposed open spot with only low grasses and sedges near it. Concealment good from above, poor from below; shade complete.

Nest 2 (successful): At 5'8" in 6 1/2' American elm; in vertical fork of a diagonal in tree top. Tree 1 of about 10 in a tight 7 x 4 yard clump, in N center of clump; highest of the 10 trees is 12'. Concealment medium; shade moderate.
Pair D56 -
Nest (not laid in): At 41" in 54" American elm; in a diagonal fork. Tree in little stand of 2-6' elms with a clump of sassafras 22' high 7 yards to S. Concealment poor (early date); little shade.

Nest 1 (successful; accelerated by me): At 29" in 50" American elm; against a fork of the leader and on a little twiggy branch from leader; N side of leader. Tree in open but with scattered similar elms and some blackberries N of it. Concealment medium; shade moderate.

Nest 2 (first attempt at second brood): At 2' in 47" American elm; on a diagonal which grows SE; diagonal splits, so nest is on 1 twig, against another; 3" from center of tree, 5" from tip of branch. Tree is 3 yards NE of a rounded tulip, otherwise in open. Concealment poor; shade moderate.

Nest 3 (second attempt at second brood): At 63" in 7' American elm; in a vertical fork of leader, 1 branch of which again forks and gives support to side of nest. Tree is in little stand of similar and smaller elms (in same clump that first nest, above, was in); nest at level of tops of surrounding trees. Concealment poor; shade medium or poor.

Pair D59, female A -
Nest 1: At 26" in 4' American elm; in symmetrical vertical fork of leader. Tree in dense tangle of similar elms and berries, which are all about 5' high. Concealment good; shade medium at time nest was built.

Pair D59, female B:

Nest 1: At 44" in 59" American elm; tree zig-zags E and W but is flat when measured along its N-S axis; nest is in diagonal fork of a diagonal from leader, in E top of tree, fully exposed to S. Tree is among a few 2-4' sumacs and is 2 yards S of 13' tulip. Concealment poor; shade slight.
Pair D59, female B - (cont'd)

Nest 2 (successful): At 64" in 8' American elm; in a cluster of twigs and against (and N of) a diagonal from leader, 2" from leader itself. Tree is 1 of 20 in a dense, 10 x 10 yard patch of elms, hawthorns, blackberries; nest tree is in center of clump, with nest at level of top of surroundings, exposed to S. Concealment medium; shade medium.

Pair D60

Nest (no eggs): At 36" in 7' American elm; against leader. All details typical.

Nest 1 (where caught): At 29" in 4' American elm; against a diagonal fork from leader and against W side of leader, with little support from below. Tree in center of fairly dense growth of 2-8' elms, blackberries. Concealment medium; shade moderate.

Nest 2: At 6' in 9' American elm; on a diagonal fork of a diagonal from leader, against leader itself; 3" N of center axis of tree, which is a pole. Tree at E edge of a stand of similar trees, but nest is at level of top of surroundings. Concealment medium; shade moderate.

Nest (found with egg on 7/28): At 8'2" in 12' American elm; against leader and on twigs. Nest tree a pole in dense stand of similar elms on W edge of clump; nest at level of top of surrounding growth. Concealment poor; shade moderate.

Pair D61

Nest 1: At 32" in 4' American elm; in vertical fork of N leader (of 2). Nest tree is in center of dense elms and berries, with nest just at or below level of top of surrounding growth (i.e., as usual, it is at point where the continuous or nearly solid mass of leaves, etc., breaks off and is replaced by more scattered, open branches). Concealment medium; shade moderate.

Nest 2: Not found.

Pair D62

Nest (no eggs): At 41" in 6' American elm. Entirely typical.
Pair D62 - (cont'd)

Nest 1: At 25" in 4' American elm; against thick spot on leader where it forks into 3, supported on twig. Tree alone among blackberries; nest about 1' below level of top of field cover. Concealment good (less so from animal on ground); shade moderate.

Nest 2: At 39" in 4 1/2' American elm; against W side of leader and in a cup formed by twigs from it. Tree in scattered stand of similar elms and 1 1/2 yards E of 9' redbud. Concealment medium; shade moderate.

Nest 3 (successful): At 46" in 76" American elm; in fork of diagonal S from leader and against leader, i.e., in 3-way fork. Tree 4 yards S of 18' rounded cherry, exposed to W; similar elms to E and S. Concealment medium; shade moderate.

Pair D63

Nest (no eggs): At 88" in 13' American elm which is dead from height of 8' up; against E side of leader in brushy cup of twigs. Tree at E edge of open stand of elms; nest at level of top of surrounding growth. Concealment poor; shade slight.

Nest 1: At 81" in 9' American elm; in 3-way fork of leader. Tree in middle of a row of similar elms, row 5-10 yards wide; nest at level of top of surrounding dense vegetation. Concealment good; shade moderate.

Nest 2 (probable; discovered in winter in area MD63 concentrated on after nest 1 failed): At 30" in 45" American elm and 50" blackberry; built in berry fork and against elm leader. Nest plants in elm-berry thicket averaging about 4 1/2' high. Concealment and shade unknown.

Nest 3: At 5'7" in 8' American elm; in a vertical fork formed by diagonal from leader. Tree in open stand of similar elms. Concealment medium; shade moderate.

Pair D64

Nest (no eggs): At 43" in 68" American elm; in 3-way upright fork of a diagonal from S one of 2 leaders; 2" S of center axis of tree. Tree is at S
Pair D64 - (cont'd)
edge of dense stand of similar elms with thinner stand to S of tree. Concealment medium; shade probably complete.

Nest 1: At 58” in 7 1/2’ American elm at exact point in which D24F nested on 5/18/58; in a dense growth of Virginia creeper on S leader of tree (but built over center axis of tree as a whole). Tree is 4-5 yards N and NE of 7-15’ hawthorns. Concealment good; shade complete.

Nest 2: At 25’ in 30’ sugar maple covered with grape; in a nearly upright fork in tree top, supported by grape. Tree on E-sloping hill at W edge of a dense mature woods, with 40-60’ trees to N, S, E; nest some 20’ above ground of the scrub field where territory is, but 25’ above base of nest tree. Concealment probably good; shade probably incomplete.

Pair D65:
Nest (cowbird eggs): At 70” in 7 1/2’ American elm; in 3-way vertical fork of 1 of 2 leaders. Tree in dense blackberry-elm stand; nest at level of top of surrounding cover. Concealment poor (partly time of year); shade moderate.

Nest 1: At 27” in 39” American elm; in 4-way upright fork. Tree is at N edge of fairly open blackberry-elm thicket about 6 1/2” high. Concealment medium; shade moderate.

Nest 2 (successful): At 10’4” on a horizontal American elm leader which stands in a 30-40’ tree row; tree pulled horizontal by Virginia creeper and perhaps by growth toward light. Tree between 30’ trees on each side and with little 20-30’ elms near it. Concealment good (vine, branches of nest tree and nearby trees): shade full.

Pair D66 -
Fragment (found 5/28): At 26” in 38” American elm; between 2 leaders which are 2 1/2” apart. Tree 1 of 6 in 2 x 2 yard square in open field. Concealment medium; shade moderate.

Nest 1: At 64” in 7 1/2’ American elm; on a twig and against fork of leader. Tree 1 of about 20 in
Pair D66 - (cont'd)
4 x 8 yard clump with 45' walnut in fencerow 15 yards to SE; nest at level of top of surrounding growth. Concealment medium; shade moderate.

Pair D67, female A -
Fragment: At 4' in 58" Crataegus; on twigs and thorns and between 2 parallel leaders; in center of tree, which is unthrifty. Tree alone on hillside. Concealment medium; shade moderate.

Nest 1: At 9' in 11' Crataegus; in a 2-way fork and on a separate crossing branch. Tree on S edge of a 6 x 5 yard elm-hawthorn thicket and 2-3 yards N of 1 dogwood and 1 hawthorn; nest about at level of top of thick vegetation. Concealment medium; shade moderate. (Successful.)

Pair D67, female B -
Nest 1: At 67" in a 73" walnut which is pulled to a 45° angle by Virginia creeper and by growth toward sun; nest on the walnut and in a dense saddle formed by creeper. Tree is 1 yard W of a N-S fence row with 10-45' trees in it; full exposure to W. Concealment good; shade complete.

Nest 2: At 8' in a 12 1/2' red cedar.

Pair D68 -
Nest 1: At 44" in 68" Crataegus; in a major fork and on twigs and thorns, in center of tree. Tree in open hawthorn stand with 28' sassafras clump 8 yards to NE. Concealment medium; shade moderate.

Nest (no eggs): At 59" in 8 1/2' Crataegus; in wide major upright fork, on twigs, in center of tree. Tree in typical open hawthorn stand in W field. Concealment medium; shade moderate.

Nest (destroyed during building): At 15' in 19' sugar maple; in typical 3-way upright fork. Tree in fairly dense mixed deciduous stand; nest a little above most tree tops. Concealment medium; shade moderate.

Nest 2: At 69" in 9' Crataegus; in fork of a diagonal and against a leader, in center of tree. Tree exposed to S, E, W, with hawthorns to N. Concealment medium; shade moderate.
Pair D68 - (cont'd)

Fragment: At 2' in 4 1/2' American elm.

Nest 3 (cowbird parasitized): At 9'1" in 11' Crataegus; against and on a 3/8" diagonal, supported by twigs and thorns; in E top of rounded tree. Tree in rather thick stand of similar hawthorns; nest at level of tops of nearby trees. Concealment medium; shade moderate.

Nest 4 (successful): At 77" in 8 1/2' Crataegus; in 2-way upright fork and supported by twigs, in E side of tree 6" from its center axis. Tree unthrifty, in typical W field open hawthorn stand. Concealment medium, shade moderate.

Pair D69

Nest (with cowbird egg): At 5' in 8' American elm; in 3-way upright fork of a diagonal. Tree in moderately open stand of similar elms. Concealment poor; shade moderate.

Nest (first found): At 18' in 23' American elm; in vertical fork of leader. Tree in SE center of 15 x 15 yard elm stand; a pole at point where nest is; nest above level of surrounding dense vegetation. Concealment probably moderate; shade only part of day, probably.

Nest (found 6/16): At 63" in 22' red maple; on a major 7' diagonal to S%, 2' cut on it and 18" across from trunk; supported by side twigs. Tree in open, fully exposed to S, with nest above grassy floor. Concealment poor; shade less than moderate.

Nest (last): At 2' in 4 1/2' American elm; in upright fork of leader. Elm in thin stand of similar very small elms, in open. Concealment poor; shade moderate.

Pair D70

Nest 1 (successful): At 5' in 8' American elm; in fork of diagonal and leader. Tree in center of a dense E-W strip some 10-20 yards wide; nest below top of dense vegetation, so in unusual site in center of thicket. Concealment good; shade moderate or heavier but not complete.
Pair D71 -

Fragment: At 7 1/2' in 20' black locust; in fork of diagonal from leader. Tree in typical locust stand.

Nest 1: At 7' in 15' American elm; in 3-way diagonal fork of a S branch, about 1 1/2' from center axis of tree. Tree is in S edge of a 15' high fence row, exposed to S. Concealment medium; shade moderate.

Nest 2: At 59" in 11' American elm; on NW side of leader, which slopes SE, and supported by twigs. Tree on W side of a loose clump running N-S, exposed to W and SW. Concealment medium; shade moderate.

Pair D72 -

Nest (no eggs): At 38" in 6' American elm; in 3-way fork formed by leader and 2 diagonals from it, on W side of leader. Tree in open grassy field with some blackberries; similar elm 3' to N; brushy lower branch of nest tree gives some concealment at level of nest.

Nest 1: At 10' 8" in 14' American elm; in 3-way fork of a diagonal in top center of rounded, bushy tree. Tree in open grassy area except for 17' osage orange 3 yards to SW. Concealment medium; shade moderate.

Fragment: At 9' in 14' Crataegus; in typical dense cradle in E center of tree. Tree in open, 8 yards W of woods edge.

Nest 2: At 35" in a blackberry; in a fork and against 2 canes. Berry plant in open patch; no trees near. Concealment medium; shade moderate.

Nest 3: At 20' in 22' honey locust covered with and pulled nearly horizontal by grape; also tree grows in this way to reach light; on the tree's bent over leader and in grape. Tree at W edge of woods with 35' honey locusts, osage oranges, etc., to E; on hillside, so nest not much above average level of field. Concealment good; shade full.

Fragment (built after storm, destroyed during building): At 15' in 28' American elm with
Pair D72 - (cont'd)
grape on it; in fork of diagonal and 2 twigs from N of 2 large leaders; not in grape.
Tree in open.

Fragment (destroyed during building): At 4 1/2" in 7 1/2' American elm; in fork of diagonal and leader. Tree in open, berry-grown field.

Nest 4: At 35" in 47" American elm; against leader and on twigs. Tree in open blackberry patch, with 4' elm 2' to S. Concealment poor; shade scanty.

Pair D73 -

Nest 1: At 33" in 4 1/2' Crataegus; in center, in typical vertical fork with thorns and twigs around it. Tree alone in field with blackberries around it. Concealment medium; shade moderate.

Fragment: At 27" in 54" American elm; in 3-way fork of leader. Tree stands in an open elm - blackberry patch, all about 4-5' high, with a 3' wide path just to N.

Nest (no eggs): At 2 1/2' in 4' blackberry; in fork, against 2 canes. Plant in a dense berry patch; no trees. Concealment medium; shade moderate.

Nest (where caught): At 4' in 8' American elm; in fork, against leader. Tree in heavy tangle of blackberries and similar elms; some grape but not on nest tree, which is at S edge of patch. Concealment good; shade moderate.

Nest (last): At 43" in 7' American elm; in a diagonal fork formed by leader and twig from it. Tree in center of a dense blackberry patch 4-7' high; nest at level of top of dense growth. Concealment medium; shade moderate.

Pair D74 -

Nest 1: At 7 8" in 14' American elm; on leader, which slants to W, and against a diagonal fork from it; on twigs. Tree is 1 of 8 in a little clump; on SW side of clump; nest a
Pair D74 - (cont'd)

little above level of top of dense growth. Concealment medium; shade scanty.

Nest (where male caught): At 6'9" in 10' American elm; on leader, which slants to E, and supported by 2-3 twigs. Tree at S edge of clump of 4 similar elms, which are in open. Concealment medium; shade moderate.

Nest (last): At 8' in 12' American elm which divides into 2 leaders at height of 4'; on a fork of a leader which slants to E, with some Virginia creeper on it. Tree is 10 yards N of 50' spreading weeping willow, on E edge of 6 x 8 yard thicket of elms 10-20' high; thick blackberry patch around tree; nest exposed to E and SE. Concealment poor; shade moderate.

Pair D75

Nest (found 6/16): At 49" in 7' Crataegus; in 4-way upright fork of 1 of 2 leaders (which are 4" apart). Tree in open stand of redbuds, hawthorns, elms of about same size, with 12' redbud 2 yards to SE. Concealment poor; shade moderate.

Nest 2: At 4' 3" in 8 1/2' American elm; in fork of leader and diagonal from it. Tree at S end of extensive loose stand of similar trees, with a few smaller elms in open field S of it. Concealment medium; shade moderate.

Pair D76

Nest: At 78" in 7 1/2' redbud covered with grape; on SE leader of 6-7 leaders; it slants SE; supported by grape. Tree fully exposed, in open field. Concealment medium; shade moderate.

Pair D77

Nest 1: At 78" in 10' red pine; on NE side of tree in whorl which is second highest. Tree is on NE edge (not quite the outermost though) of a 15 x 40 yard N-S planting; nest at level of top of dense growth. Concealment good; shade moderate.
Pair G8 -

Nest 1: At 9' in 11' in American elm; in vertical 3-way fork of diagonal in SW part of scrubby tree. Tree in open. Concealment poor; shade only partial.

Nest (possibly a G8 nest): At 17' in 24' walnut; on a major diagonal growing toward NW, in Virginia creeper. Tree in moderately thick stand of 10-25' ash and tulip; nest in open, exposed, above surrounding dense vegetation. Concealment medium; shade moderate.

Pair G9 -

Nest 1: At 51" in a 55" Crataegus covered with Virginia creeper; in a cup formed by creeper, at top of tree. Tree in center of triangle formed by 12-20' redbud, cherry, and elm which overhang it and are 2-4 yards away; some exposure, especially to S. Concealment good; shade complete.

Nest 2: At 20' in a 26' ash with grape on it; on a diagonal from leader, supported in grape. Tree in an open stand of 20-25' ash and dogwood adjoining mature woods along a ravine to E; nest at level of top of dense growth. Concealment medium; shade complete.

Pair G10, female A -

Nest: At 37" in 8' Virginia pine; 4" out on nearly horizontal branch, with support from twigs; 2 1/2' from branch end. Tree is in E row of 2 S-S rows, with trees planted about 3 yards apart; nest thus in center of dense pine tangle with some berry canes from between rows. Concealment good; shade moderate.

Pair G11 -

Nest 1: At 77" in 17' red maple, which has very little body; in a 2-way, nearly horizontal fork of a diagonal to NE; 3' from base of branch, 18" from trunk, and 2' from branch end. Tree is on E edge of 25-30'-high sassafras stand, with 6-10 yards of open space to E. Concealment poor; shade moderate.
Pair Gll - (cont’d)

Nest 2: At 28’ in 30’ redbud; against a diagonal and in a fork. Tree is one of a dense stand of high pole-like redbuds with a few taller trees among them; nest is in the top of this canopy. Concealment probably good; shade moderate.

Nest 3 (successful): At 10 1/2’ in 15’ Carpinus; in 3-way fork formed by a forking diagonal from a leader and by the leader itself. Tree has some 9 leaders emerging from ground; nest in N center of tree. Tree is 6 yards NE of dense, 20’-high screen of oak, sassafras, tulip; exposed to S. Concealment good; shade complete.
APPENDIX II

Summary of Nest Sites

The following list of sites includes all known nests, regardless of whether eggs were laid in them; nests not completed for any reason are excluded.

- American elm - 45
- *Crataegus* spp. - 10
- blackberry - 3
- black walnut - 2
- redbud - 2
- red maple - 2
- tulip - 1
- sugar maple - 1
- black locust - 1
- honey locust - 1
- ash - 1
- red pine - 1
- Virginia pine - 1
- *Carpinus* - 1

Ten nests were built at least partly in vines, 3 in grape and 7 in Virginia creeper.
### APPENDIX III

**Relationships of Nest Locations**

**Distances Apart**

The following data include only cases in which nest sequences are known beyond doubt. Measurement was by pacing after the leaves had fallen.

<table>
<thead>
<tr>
<th>Pair</th>
<th>Nest</th>
<th>to Nest</th>
<th>Yards</th>
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<tbody>
<tr>
<td>D56</td>
<td>1</td>
<td>2, second brood</td>
<td>50</td>
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<tr>
<td>D57(1)</td>
<td>first, parasitized</td>
<td>destroyed in building</td>
<td>101</td>
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<td></td>
<td>1</td>
<td>25</td>
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<td>D57(2)</td>
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<td>2</td>
<td>121</td>
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<td>D58</td>
<td>unused</td>
<td>1, second brood</td>
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<td>3, second brood re-nesting</td>
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<td>1, second brood</td>
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<td>to Nest</td>
<td>Yards</td>
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<td></td>
</tr>
<tr>
<td>D72</td>
<td>unused</td>
<td>1</td>
<td>50</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>fragment (haw)</td>
<td>2</td>
<td>75</td>
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<tr>
<td></td>
<td>3</td>
<td>87</td>
<td></td>
</tr>
<tr>
<td></td>
<td>destroyed in</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>building, no. 1</td>
<td>destroyed in</td>
<td>168</td>
</tr>
<tr>
<td></td>
<td>building, no. 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>D73</td>
<td>1</td>
<td>fragment</td>
<td>102</td>
</tr>
<tr>
<td></td>
<td>fragment</td>
<td>unused</td>
<td>190</td>
</tr>
<tr>
<td></td>
<td>gap in my information</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td></td>
<td>nest where caught</td>
<td>last</td>
<td>152</td>
</tr>
<tr>
<td>D74</td>
<td>nest where MD74 caught</td>
<td>last</td>
<td>100</td>
</tr>
<tr>
<td>09</td>
<td>1</td>
<td>2</td>
<td>54</td>
</tr>
<tr>
<td>G11</td>
<td>1</td>
<td>2</td>
<td>75</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>210</td>
<td></td>
</tr>
</tbody>
</table>

**Locations re Territory Lines**

**Pair D56**
Both nests in mid-territory.

**Pair D57 (1)**
Parasitized nest 20 yards from line; others in mid-territory. ("Line" is E line.)

**Pair D57(2)**
1 was 25 yards from S edge; 2 was 20 from NE corner.

**Pair D58**
First try at second brood was 5-10 yards from SW corner; rest in mid-territory.
Nests clustered: second brood renesting was 9 yards from unused and 10 from nest 1.

**Pair D59(A)**
20 yards E and S of NW corner.

**Pair D59(B)**
1 was 10 yards S of line; 2 in mid-territory.

**Pair D60**
2 was 20 yards S of line; others in mid-territory.
Pair D61: 1 was in mid-territory.

Pair D62: All in mid-territory.

Pair D63: All well away from territory lines, but first and last about 225 yards apart.

Pair D64: All in mid-territory, except last; last on line in NE corner.

Pair D65: All in mid-territory.

Pair D66: Nest about 25 yards from NW corner.

Pair D67(A): Nest 30-35 yards from NW corner.

Pair D67(B): Difficult to say what should be considered territory, but nest probably at center.

Pair D68: Nest destroyed during laying about 20 yards from SW corner; others not near lines.

Pair D69: All in mid-territory.

Pair D70: Nest in mid-territory.

Pair D71: Nest 1 caused territory to be extended, probably by about 30-40 yards. Rest in mid-territory.

Pair D72: First nest destroyed during building at or perhaps beyond extreme SE corner. All others along E half, but vegetation there much more suitable.

Pair D73: Fragment at N line; nest where caught about 25 yards from E line; last nest in extreme SW corner; unused nest in extreme SW corner. (Note above is not in correct sequence.)

Pair D74: All in mid-territory.

Pair G8: 1 in mid-territory; possible nest at very N edge.

Pair G9: 2 at (20 yards?) E line; other in middle.

Pair G10: Nest at edge of UT, i.e., very near active part of Schneider’s yard.

Pair G11: Last at extreme N tip; others in mid-territory.
Territory Sizes

Territory sizes were calculated by pacing off the length of an axis roughly N-S and another roughly E-W. Allowances were made for the fact that the territory was not perfectly regular in shape. The size measured for each was that acreage held at the time that the male was most closely circumscribed by the presence of neighbors; i.e., land occupied after the disappearance of an adjoining male is not included unless the contrary is indicated. The E-W dimension appears first in the statement of distances; the unit is yards.

**TD56:** 3.8 acres (probably for both males but reference is to MD56(2)); 160x125 on E end and 100 on W end; UT about 3.

**TD57:** 3.2 acres; 5 acres if I include 1.8 acres temporarily held by MD66 and then MD67; 100x150, or 160x150 if the 1.8 acres are included; UT 3.2.

**TD58:** 1.5 acres; 110x75; UT same.

**TD59:** 5 acres; 180x135; UT about 3.

**TD60:** 3.8 acres; 135x130; UT smaller.

**TD61:** 1.5 acres; 100x75; UT same.

**TD62:** 2.5 acres; 120x100; UT about same. Room for at least 1 more territory in 50 unused yards to N and 80 to W.

**TD63:** 4.3 acres; an irregular parallelogram about 225x90; UT smaller.

**TD64:** 4.3 acres; 150x140; UT smaller.

**TD65:** 2.9 acres; another .5 acre after MD66's departure; 135x100; UT about same.

**TD66:** Not clear, but about 3.5 acres.

**TD67:** 3 acres, not including about 2 acres used temporarily in E field and including part of TD50 held most of season by MD67 but sometimes invaded by MD69; 90x150; UT about 3 acres.

**TD68:** 4.1 acres; about same as TD45 and TD52, q.v.; UT smaller.

**TD69:** 2.5 acres; 120x100; UT about same. On W half of territory, 30-50 yards of nearly unused land between this territory and TD68.
TD70: 2.7 acres, including .5 acre S of fence used very little after early in season; 135x80, which excludes the area S of the fence; UT about 2.

TD71: 6 acres; 275xirregular distance, 150 at maximum; UT not much smaller at time nest 1 was active, because MD71 did not let nest location hold him in the immediate vicinity.

TD72: 6.1 acres; 165x225; UT 2.75.

TD73: 5.5 acres; 150x175; UT smaller. Note that territory was very open in character of vegetation.

TD74: 5 acres, of which nearly 2 acres is nearly bare ground; 150x160; UT smaller.

TG8: 4 acres; 125x160; UT about 3 acres.

TG9: 3.7 acres; 145x125; UT 2.8.

TG10: 6.8 acres, less than half of it covered by male because of presence of Schneider's house and yard; therefore territory size was for many purposes about 3.3 acres; 165x200; UT about 3.

TG11: 3.4 acres; 75x220; UT about 1.7. First year area in full use by a pair; vegetation higher and denser than on most territories; separated from TG8 by 50 yards of woods.

In the following summary, TD66 is omitted. The size of TD57 was taken at 3.2, of TD65 at 2.9, of TD67 at 3.0, and of TG10 at 3.3. TD75, TD76, and TD77 were too little known to be included on this page. A question to consider is whether years of high population density may produce bigger territories because birds take marginal or submarginal habitat and require more of it.

Extremes: 6.1 and 1.5 acres.

Average: 3.6 acres.

Median: 3.8 acres.
## APPENDIX V

**Distances from Successful to Second Brood Nests**

<table>
<thead>
<tr>
<th>Pair</th>
<th>Year</th>
<th>Distance</th>
<th>Comment</th>
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<tbody>
<tr>
<td>9</td>
<td>1952</td>
<td>166 yards</td>
<td></td>
</tr>
<tr>
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<td>50</td>
<td></td>
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<tr>
<td>2a</td>
<td>1953</td>
<td>67</td>
<td></td>
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<tr>
<td>16</td>
<td>1953</td>
<td>120</td>
<td></td>
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<td>21</td>
<td>1953</td>
<td>116</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td>1954</td>
<td>160</td>
<td>only a fragment built</td>
</tr>
<tr>
<td>34</td>
<td>1954</td>
<td>200</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td>1954</td>
<td>45</td>
<td></td>
</tr>
<tr>
<td>50*</td>
<td>1955</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>53*</td>
<td>1956</td>
<td>47</td>
<td>no eggs laid</td>
</tr>
<tr>
<td>54</td>
<td>1956</td>
<td>58</td>
<td></td>
</tr>
<tr>
<td>D2</td>
<td>1957</td>
<td>85</td>
<td>remated with MD28</td>
</tr>
<tr>
<td>D3</td>
<td>1957</td>
<td>34</td>
<td></td>
</tr>
<tr>
<td>D30*</td>
<td>1958</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>D41*</td>
<td>1959</td>
<td>49</td>
<td>first brood a Field Sparrow</td>
</tr>
<tr>
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<td>1959</td>
<td>120</td>
<td></td>
</tr>
<tr>
<td>D48*</td>
<td>1959</td>
<td>91</td>
<td></td>
</tr>
<tr>
<td>D50*</td>
<td>1959</td>
<td>94</td>
<td></td>
</tr>
<tr>
<td>D52*</td>
<td>1959</td>
<td>57</td>
<td></td>
</tr>
<tr>
<td>D56*</td>
<td>1960</td>
<td>50</td>
<td>with a replacement male</td>
</tr>
<tr>
<td>D58*</td>
<td>1960</td>
<td>49</td>
<td>first brood a fostered FW</td>
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</table>

* indicates female was banded.
## APPENDIX VI

### 1960 Returns and Bandings

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<th>Designations</th>
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<td>MD40</td>
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<td>1958</td>
</tr>
<tr>
<td>M70</td>
<td>4/22</td>
<td>1957</td>
</tr>
<tr>
<td>MD54</td>
<td>4/22</td>
<td>1959</td>
</tr>
<tr>
<td>DL3B</td>
<td>6/4</td>
<td>1959</td>
</tr>
<tr>
<td>MD95</td>
<td>4/16</td>
<td>1958</td>
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<tr>
<td>DL6F(B)</td>
<td>5/13</td>
<td>1959</td>
</tr>
<tr>
<td>MD66</td>
<td>4/22</td>
<td>1958</td>
</tr>
<tr>
<td>MD49</td>
<td>4/16</td>
<td>1959</td>
</tr>
<tr>
<td>DL9F(3)</td>
<td>4/30</td>
<td>1959</td>
</tr>
<tr>
<td>MD41</td>
<td>4/16</td>
<td>1959</td>
</tr>
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<td>D51F(2)</td>
<td>5/4</td>
<td>1958</td>
</tr>
<tr>
<td>MD53</td>
<td>4/21</td>
<td>1958</td>
</tr>
<tr>
<td>MD50</td>
<td>4/22</td>
<td>1957</td>
</tr>
<tr>
<td>MD69</td>
<td>4/25</td>
<td>1957</td>
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<td>DL2F(B)</td>
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<td>1958</td>
</tr>
<tr>
<td>D52Y</td>
<td>4/28</td>
<td>1959</td>
</tr>
<tr>
<td>--</td>
<td>6/27</td>
<td>1958</td>
</tr>
<tr>
<td>DL9Y</td>
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</tr>
<tr>
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<td>D3F</td>
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<td>1957</td>
</tr>
<tr>
<td>DL4F</td>
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## Adult Bandings

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<td>yg</td>
<td>32-01503</td>
<td>S-R</td>
<td>5/22</td>
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<tr>
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<td>Y-R, S-L</td>
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<td>SOB-R</td>
<td>5/23</td>
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<tr>
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<td>32-01509</td>
<td>S-L, R-R</td>
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<td>D58F</td>
<td>old</td>
<td>32-01510</td>
<td>SOG-R</td>
<td>5/25</td>
</tr>
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<td>B-R, S-L</td>
<td>5/25</td>
</tr>
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<td>D7LF</td>
<td>yg</td>
<td>32-01515</td>
<td>SOB-L</td>
<td>5/29</td>
</tr>
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<td>MD56(2)</td>
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<td>S-L</td>
<td>5/31</td>
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<td>MD58</td>
<td></td>
<td>32-01527</td>
<td>ROS-R</td>
<td>5/31</td>
</tr>
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<td></td>
<td>32-01528</td>
<td>SOY-R</td>
<td>5/31</td>
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<td>ROS-L</td>
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<tr>
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<td>Colors</td>
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<td>-------------</td>
</tr>
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<td>YOS-L</td>
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<td>32-01542</td>
<td>bBOS-R</td>
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**Nestling Bandings**

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<th>Colors</th>
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<td>32-01516 (-17)</td>
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<tr>
<td>D56G</td>
<td>32-01518</td>
<td>GOS-R, G-L</td>
<td>5/29</td>
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<td>D56Y</td>
<td>32-01519</td>
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<td>32-01520</td>
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<td>5/29</td>
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<td>32-01521</td>
<td>ROS-L, R-R</td>
<td>5/29</td>
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<td>D5859L59</td>
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<td>ROS-L, S-R</td>
<td>5/29</td>
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<td>D63D59G*7</td>
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<td>ROS-L, G-R</td>
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<td>D70G*</td>
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</tr>
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<td>D65B</td>
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<td>S-L, bBOB-B-R</td>
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</tbody>
</table>

In "Designation" column, * means nestling is known to have died; numbers in [ ] are numbers of natural parents; designation in ( ) is that of a replacement band.
### Designation

<table>
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<tr>
<th>Designation</th>
<th>Number</th>
<th>Colors</th>
<th>Date banded</th>
</tr>
</thead>
<tbody>
<tr>
<td>D62S</td>
<td>32-01570, (-72, -73)</td>
<td>SOS-R, S-L</td>
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<td>D62G</td>
<td>32-01569, (-74)</td>
<td>SOS-R, G-L*</td>
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</tr>
<tr>
<td>D59R</td>
<td>32-01576</td>
<td>SOR-L, bB-R</td>
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In "Designation" column, * means nestling is known to have died; numbers in [ ] are numbers of natural parents. In "Colors" column, * means bird lost the color band.
APPENDIX VII

Distances Separating Females in Successive Years

In list A, the distance given is the yardage between the last nest of the earlier year and the first nest of the succeeding year. In the cases of females reappearing but not nesting in a later year (list B), the yardage is the distance between the last nest and the point of observation in the following year. List C contains birds banded as nestlings. For those returning to nest, the yardage is that from the hatching site to the first breeding site. For those returning but not nesting, the yardage is that from the hatching site to the point of subsequent observation.

Each individual female is numbered, at the left. Seventeen different birds have been seen in a year or years following banding.

**List A**

1. D6F’s nest of 1957 to her nest as D14F, in 1958 - 332 yards.
   D14F’s nest of 1958 to her nest as D50F, in 1959 - 29 yards.
2. D39F’s nest of 1958 to her nest as D55F(A), in 1959 - 325 yards.
3. D36F’s nest of 1958 to her nest as D51F(2), in 1959 - 825 yards.
   D51F(2)’s nest of 1959 to her nest as D67F(A), in 1960 - 12 yards and 16 yards to a preliminary fragment.
4. D46F(5’s nest of 1959 to her nest as D61F, in 1960 - 73 yards.
5. D49F’s nest of 1959 to her nest as D64F, in 1960 - 17 yards but 63 yards to an earlier nest which never held eggs.
6. 53F’s nest of 1956 to her nest as 61F, in 1957 - 37 yards.
   61F’s nest of 1957 to her nest as 71F, in 1958 - 22 yards.
7. 66F’s nest of 1957 to her nest as 69F, in 1958 - unknown, but mated with same male on same territory.
   69F’s nest of 1958 to her nest as 69F, in 1959 - unknown, but again mated with same male on same territory.
8. D10F’s nest of 1957 to her nest as D22F, in 1958 - 125 yards.
   D22F’s nest of 1958 to her nest as D43F, in 1959 - 230 yards.
9. D27F’s nest of 1958 to her nest as D42F(B), in 1959 - 450 yards.

See list B for a 1960 record of this bird.

**List B**

9. D42F(B)’s nest of 1959 to point of sighting as D42F(B), in 1960 - 100 yards.
10. D44F’s nest of 1959 to point of observation as D44F, in 1960 - 75 yards.
12. 60F’s nest of 1956 to point of observation as 60F, in 1957 - 300 yards, and from her range during molt in 1956, 150 yards.

**List C**

13. 54G’s hatching site of 1956 to her nest as 62F(2), in 1957 - 700 yards.
14. D43B’s hatching site of 1959 to her nest as D59F(B), in 1960 - 100 yards. Next nest only 40 yards from hatching site.
15. D46B's hatching site of 1959 to her point of observation as D46B, in 1960 - 600 yards.
16. D49Y's hatching site of 1959 to her points of observation as D49Y in 1960 - 50 yards (her range during molt).
17. D52Y's hatching site of 1959 to her points of observation as D52Y, in 1960 - 150 yards.
APPENDIX VIII

1960 Bloomington Weather

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Most of the foregoing figures are from the Indiana University Station (3911 8631), as recorded in Climatological Data. The exceptions, which are marked in red, are taken from the same publication's records of a station 5 miles SE of Spencer (3911 8642). Temperature averages for September exclude Spencer data; precipitation records for that month are complete for Bloomington.
### APPENDIX IX

**Distances Separating Nests of Polygynous Females**

Distances are in yards and are given only between nests which were active simultaneously.

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1) MD51 in 1959 probably had 2 females simultaneously.

2) An * beside a number in the "Number" column indicates that the male and at least one female were color=banded at the time of the polygynous matings.