Notes on the vocalizations of Varied Sittella (*Daphoenositta chrysoptera*)

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In the following we briefly analyze and compare voice of the different races of Varied Sittella (*Daphoenositta chrysoptera*). We also try to quantify the extent of any vocal differences using the criteria proposed by Tobias *et al.* (2010), as a support for taxonomic review. We have made use of sound recordings available on-line from Xeno Canto (XC) and Macaulay Library (ML).

Most common vocalization seems to be a constant chipping, a single note repeated for a long period with somewhat irregular short intervals. These notes can be found in most recordings:

### 'Black-capped': *pileata* (n=4)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>max. freq.</td>
<td>6000 - 8300Hz</td>
</tr>
<tr>
<td>min. freq.</td>
<td>1900 - 3500Hz</td>
</tr>
<tr>
<td>note length</td>
<td>0.05 - 0.11s</td>
</tr>
<tr>
<td>pace</td>
<td>0.12 - 0.35s</td>
</tr>
<tr>
<td>freq. range</td>
<td>3100 - 5600Hz</td>
</tr>
<tr>
<td>shape</td>
<td>consistently dagger-shaped</td>
</tr>
</tbody>
</table>

![Black-capped example](black-capped-example.png)

### 'Orange-winged': *chrysoptera* (n=4)

<table>
<thead>
<tr>
<th>Feature</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>max. freq.</td>
<td>7400 - 7500Hz</td>
</tr>
<tr>
<td>min. freq.</td>
<td>2500 - 3000Hz</td>
</tr>
<tr>
<td>note length</td>
<td>0.02 - 0.15</td>
</tr>
<tr>
<td>pace</td>
<td>0.07 - 0.25</td>
</tr>
<tr>
<td>freq. range</td>
<td>4500 - 5000Hz</td>
</tr>
<tr>
<td>shape</td>
<td>occasionally some short symmetrical overslurred notes, but invariably combined with lower-pitched long uplurred notes</td>
</tr>
</tbody>
</table>

![Orange-winged example](orange-winged-example.png)
'White-headed': *leucocephala* (n=1)
- max. freq. 7700Hz
- min. freq. 3000Hz
- note length 0.06 - 0.19s
- pace 0.18 - 0.25s
- freq. range 4700Hz
- shape Here the chip notes seem to have a burry plateau

'Striated': *striata* (n=1)
- max. freq. 7900Hz
- min. freq. 2500Hz
- note length 0.03 - 0.045s
- pace 0.12 - 0.25s
- freq. range 5400Hz
- shape dagger-shaped, like black-capped

'Papua': *papuensis* (n=4)
- max. freq. 8150 - 9200Hz
- min. freq. 3400 - 3700Hz
- note length 0.07 - 0.10s
- pace 0.18 - 0.44s
- freq. range 5000 - 5700Hz
- shape dagger-shaped, but higher freq. than Black-capped/Striated
Differences in these homologous call notes are clearly subtle, and are mainly apparent in note shape rather than in basic parameters. A larger sample size would be needed to confirm if these differences are consistent, but tentatively we could say:
- race *chrysoptera* differs from all other races by the combination of short overslurred chip notes and upslurred whistles (score 2)
- race *leucocephala*: differs from all other races by chip notes which have a burry appearance on sonogram (score 1-2)
- race *papuensis*: differs from all other races in the slightly higher frequencies (score 1-2)
- races *pileata* and *striata*: no obvious vocal differences.

This note was finalized on 8th October 2015, using sound recordings available on-line at that moment. We would like to thank in particular the sound recordists: Patrik Åberg, Benjamin Freeman, Emma Greig, Frank Lambert, Fred Loetscher, Linda Macaulay, Mark Robbins, Nick Talbot and Fred Van Gessel.

References


Recommended citation