Song Divergence in Passerines

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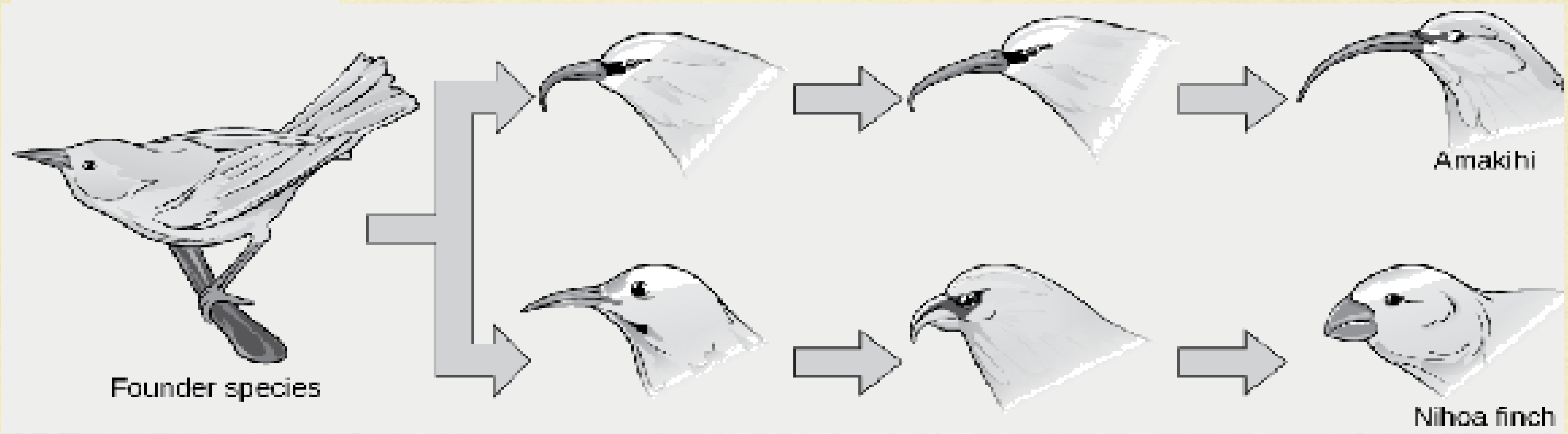
Speciation



OpenStax College, Biology.

Reproductive isolation

Ecological

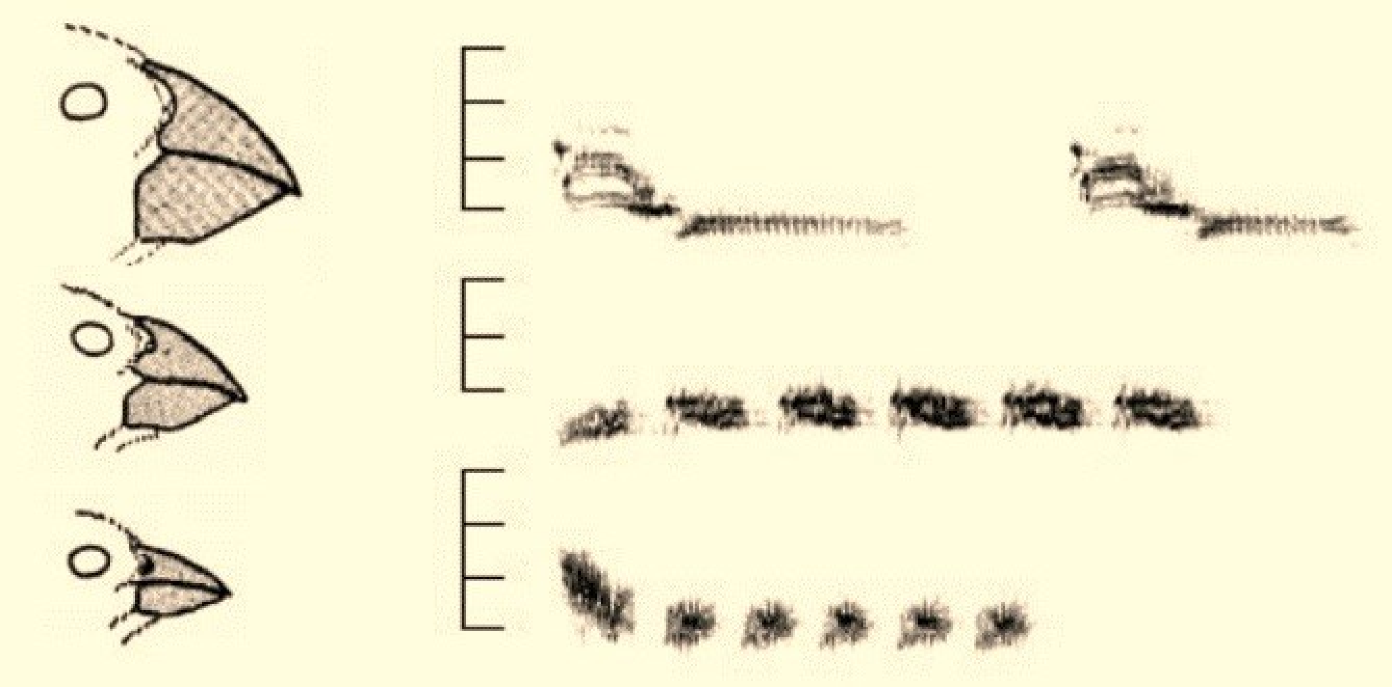
Barrier

Podos 2001 *Nature* Darwin's finches

Podos 2001 *Nature* Darwin’s finches

http://schoolbag.info/biology/living/103.html



Podos 2001 *Nature* Darwin’s finches

Reproductive isolation

Behavioral

Barrier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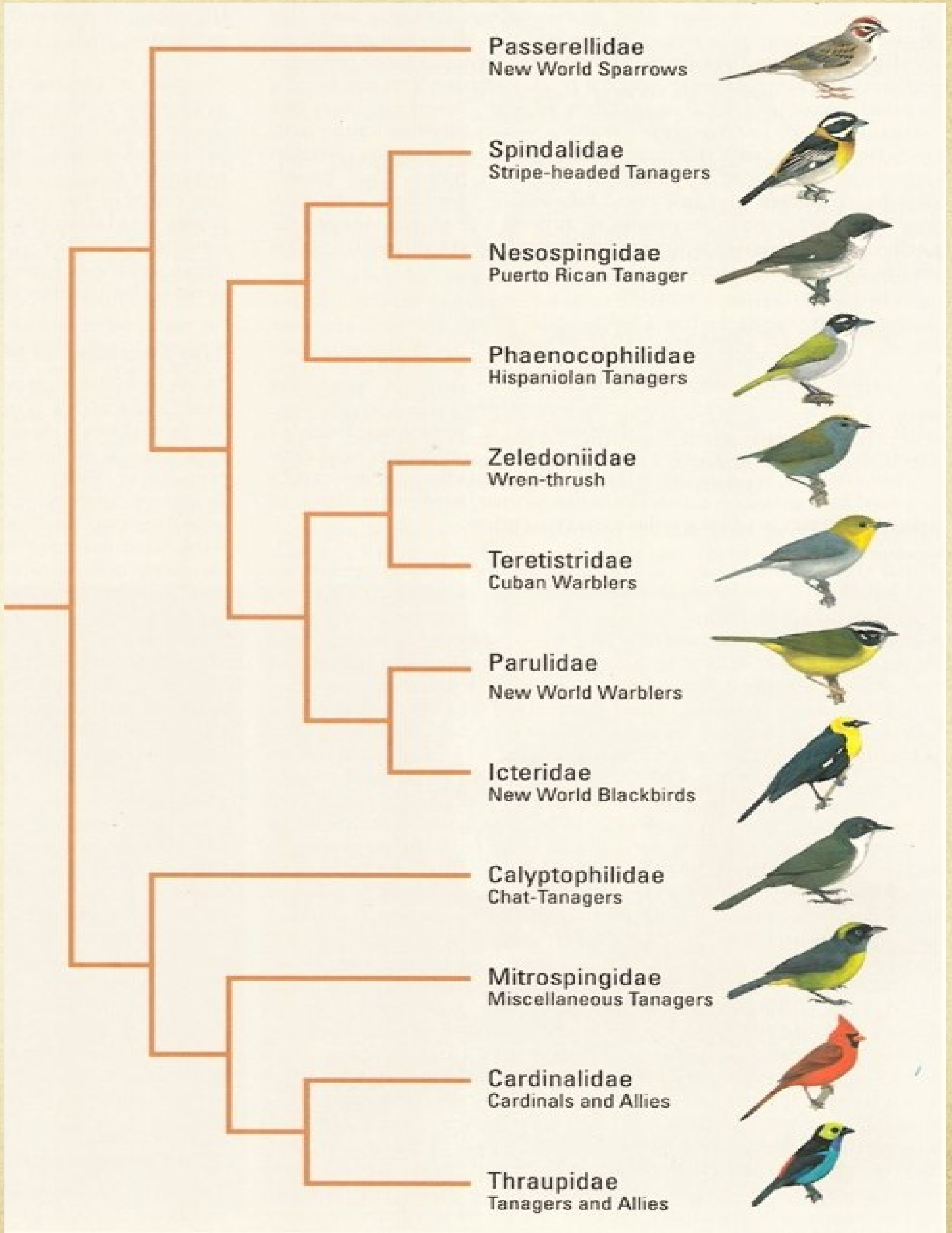
Slabbekoorn and Smith 2002 Royal Society
White-crowned sparrow

Passerines

Perching or Song Birds

Barrier: Song?



Stanford University URL https://web.stanford.edu/group/stanfordbirds/text/essays/Passerines_and_Songbirds.html

Hybridization Prevalent in Passerines

Hypothesis: Hybridizing species have similar songs

Icteridae

Paridae

Cardinalidae

Passerellidae

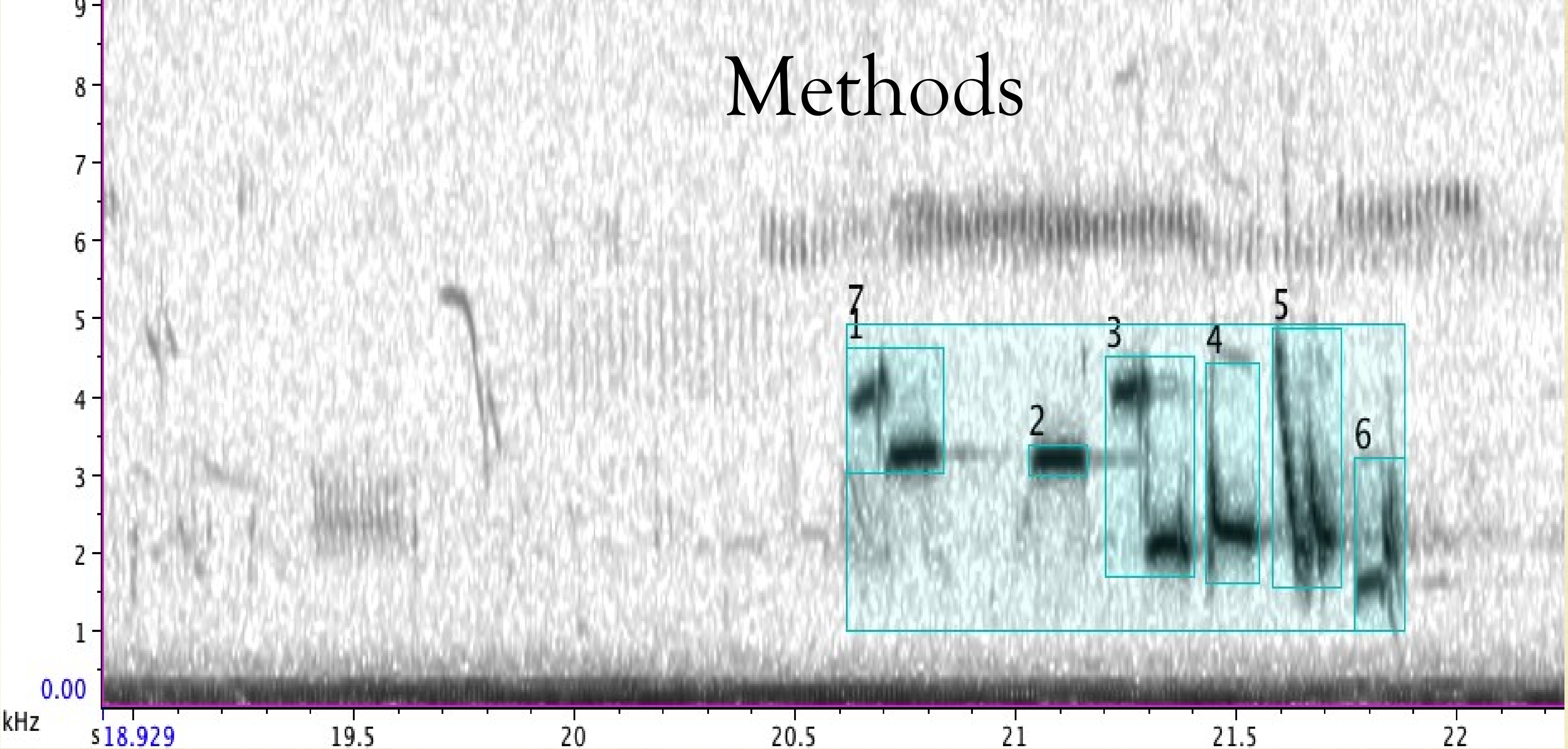
Fringillidae

Others: Vireonidae, Parulidae

Hybridizing Pair:
Black-headed and Rose-breasted Grosbeaks

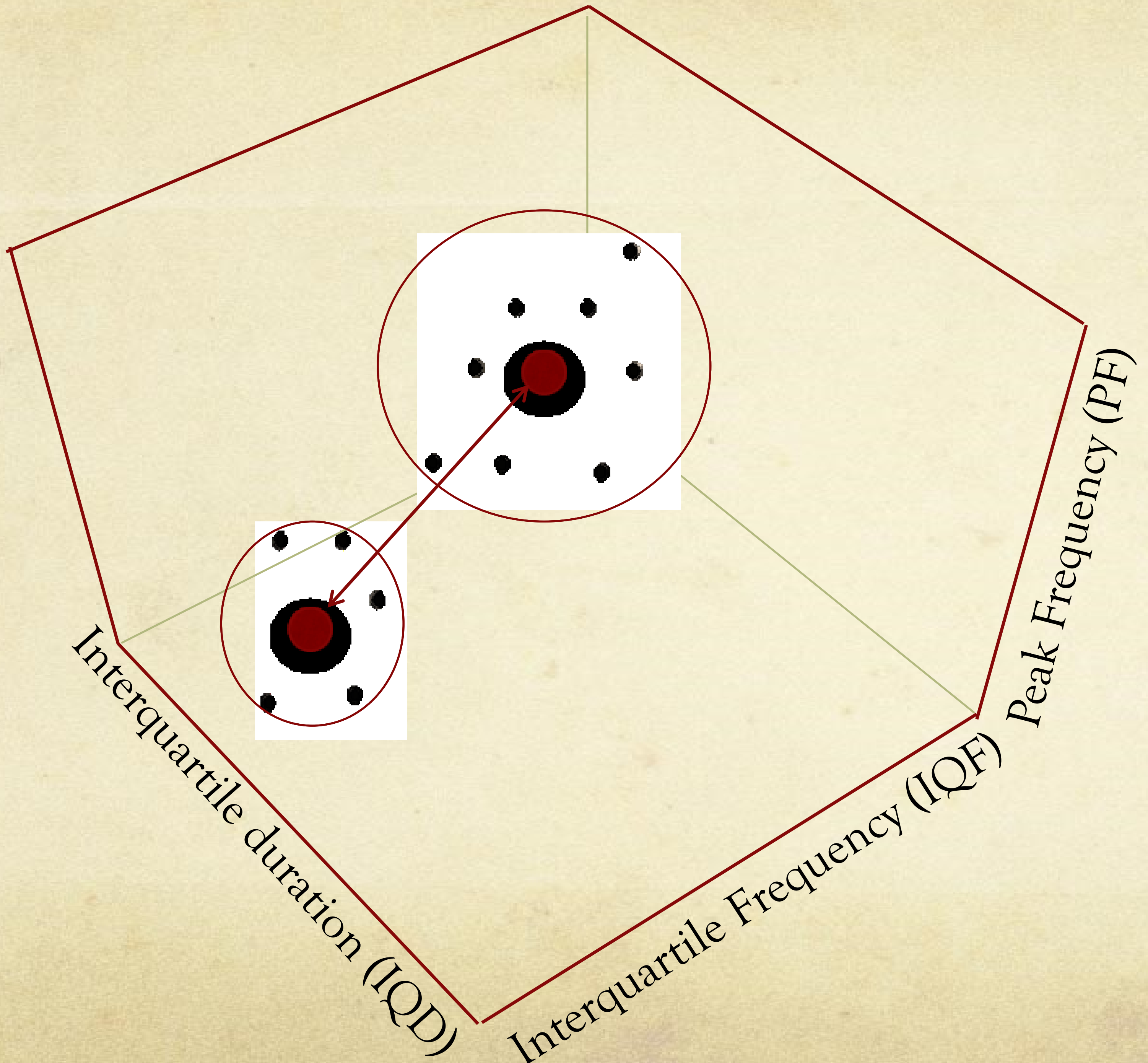
Non-Hybridizing Pair:
Veery and Swainson's Thrush

Methods

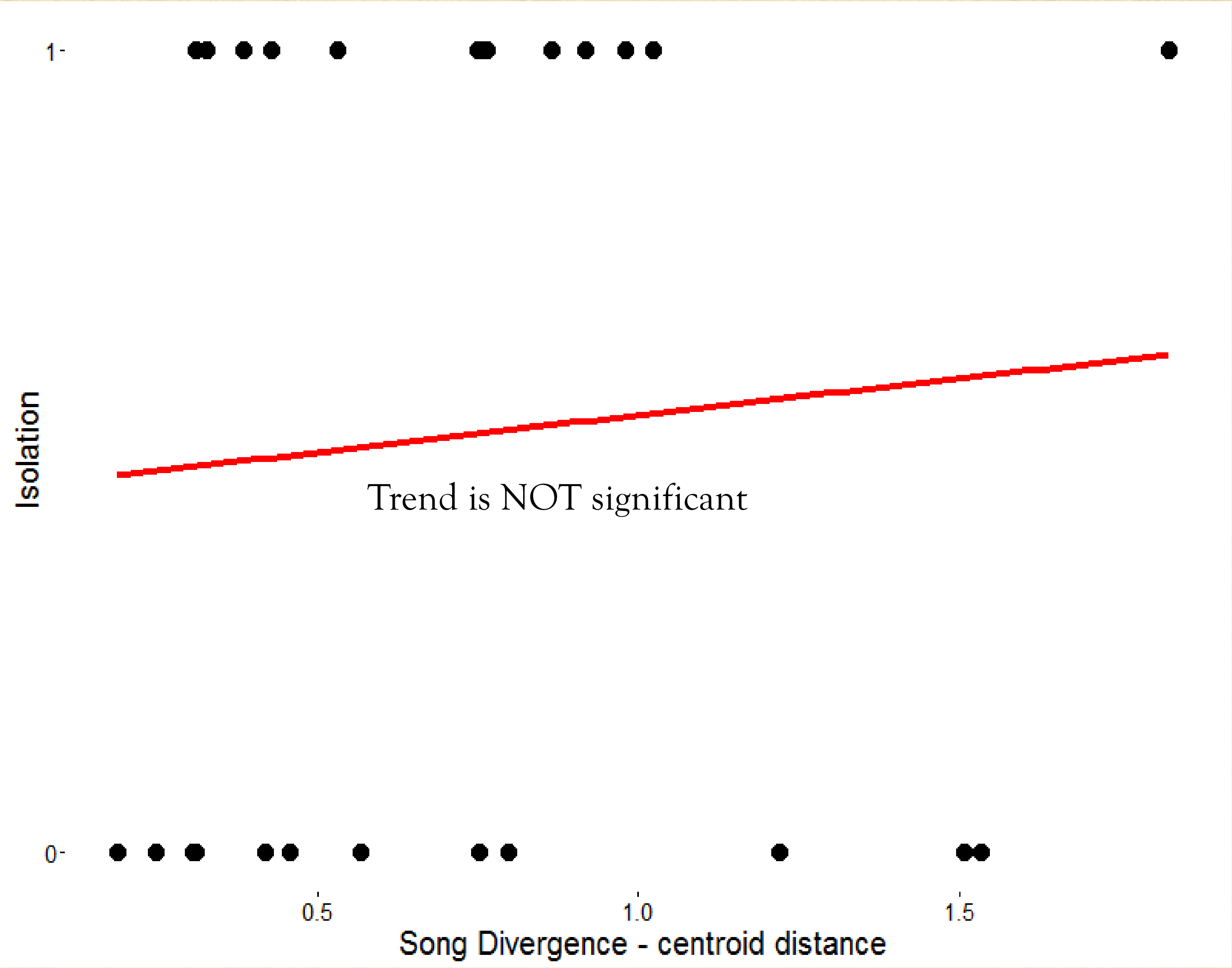


Raven Pro: Interquartile Duration (IQD),
Interquartile Frequency (IQF)
Peak Frequency (PF)

Hypervolumes



Non-Hybridizing



Hybridizing

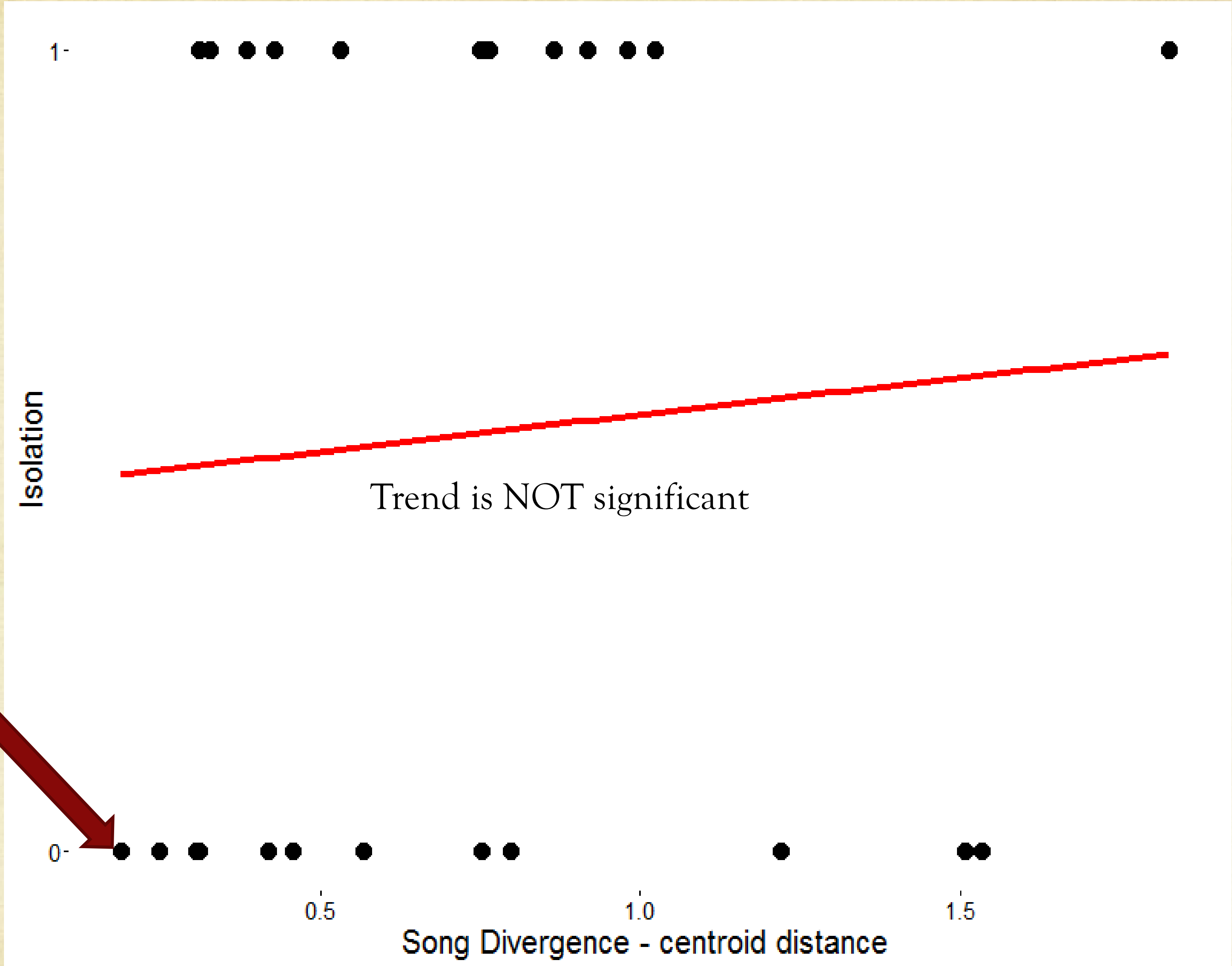
More Similar

Less Similar

Non-Hybridizing

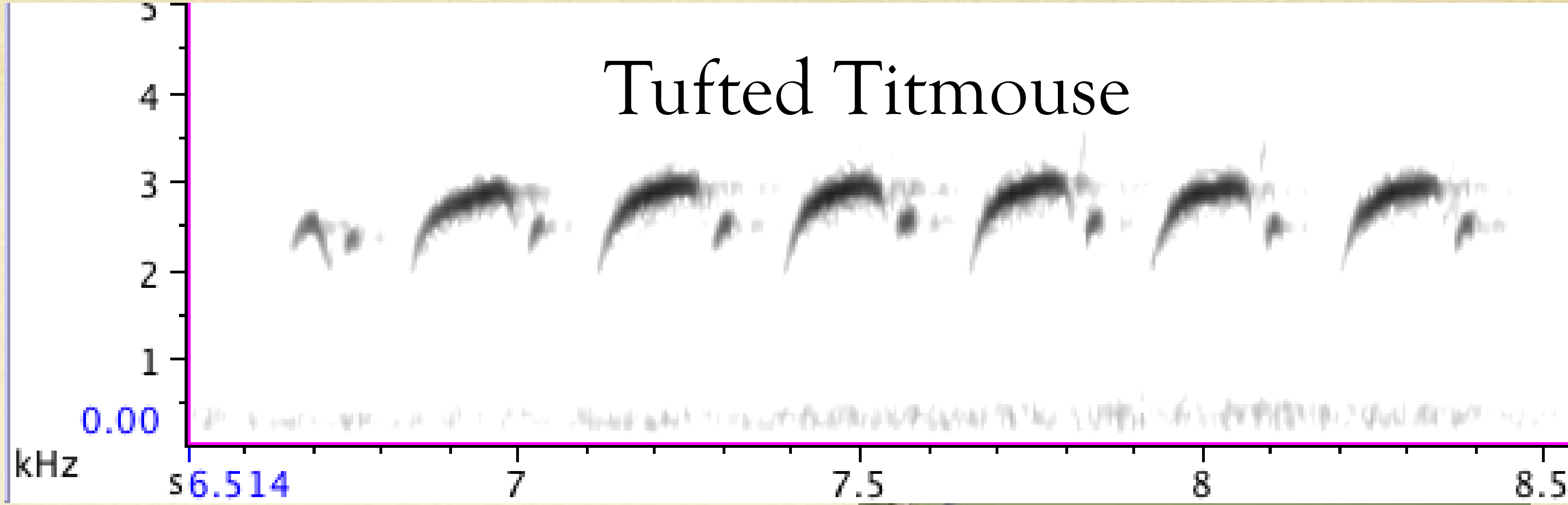
Tufted and Black-crested Titmice

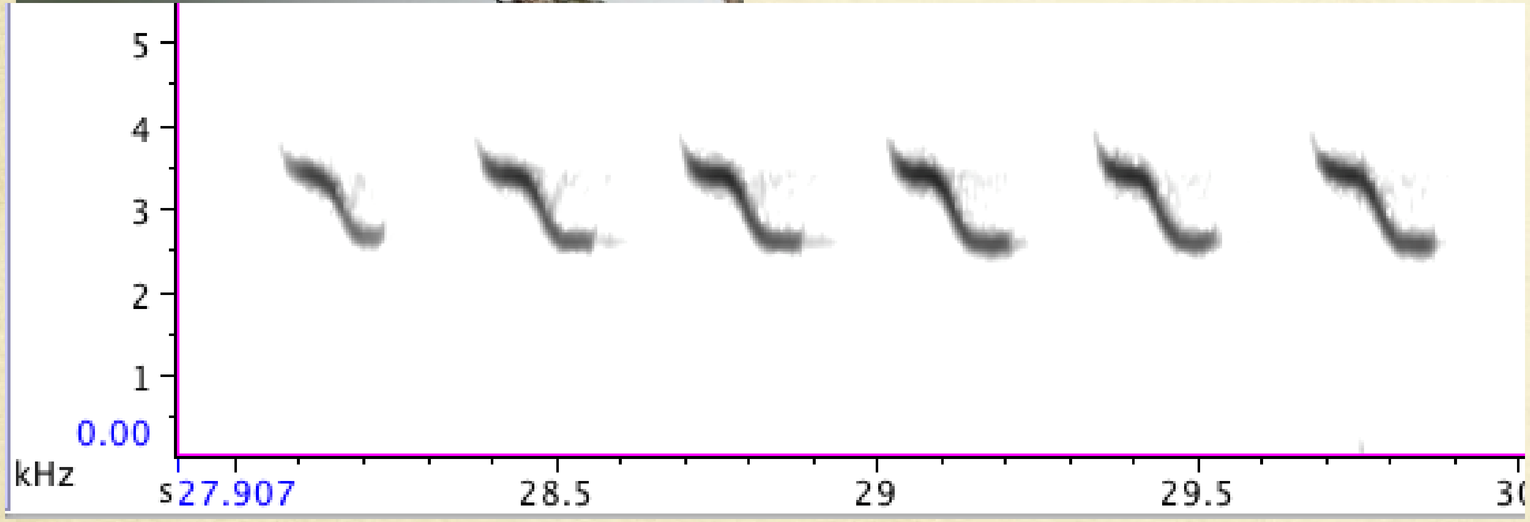
Hybridizing



More Similar

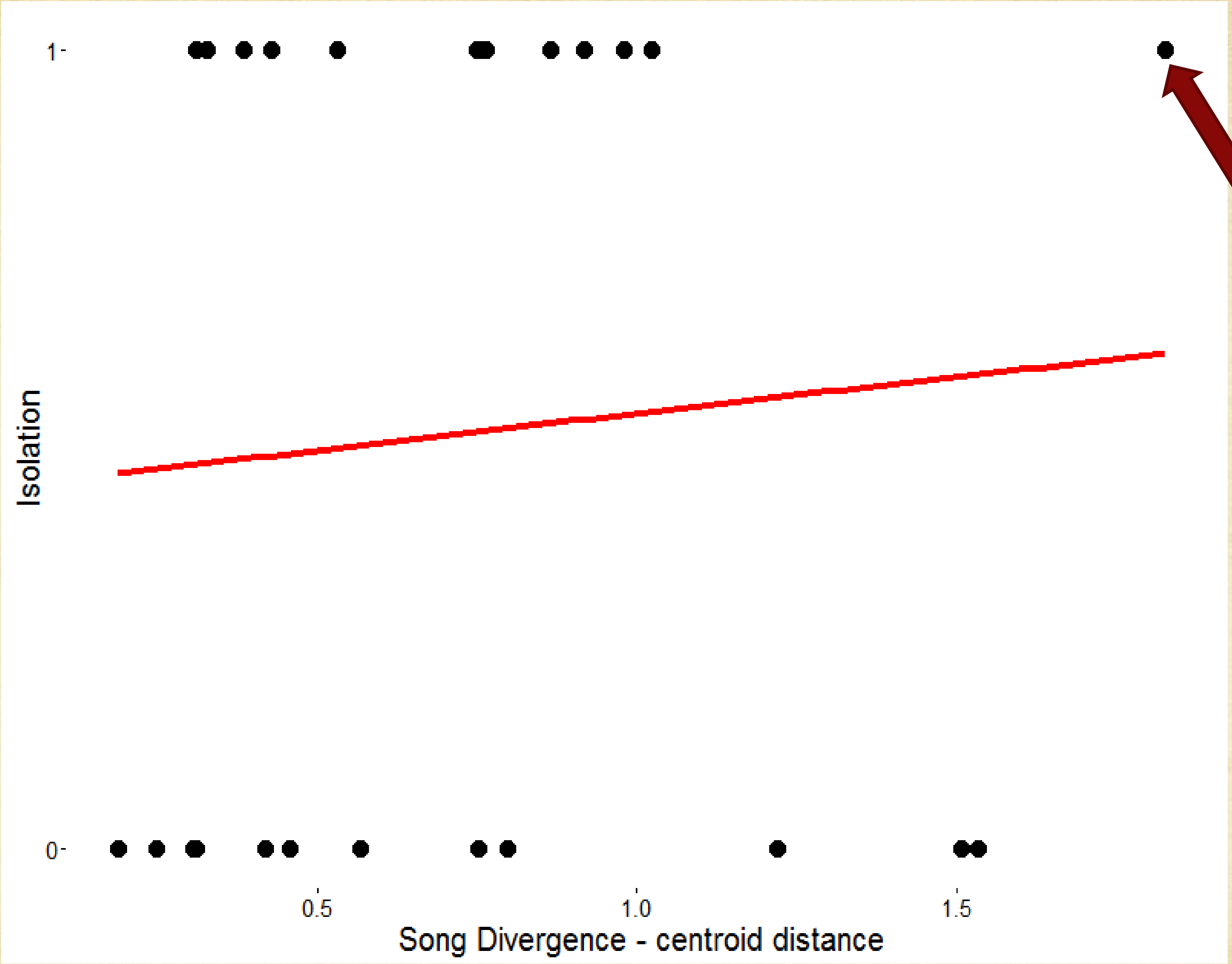
Less Similar





Black-crested Titmouse

Non-
Hybridizing

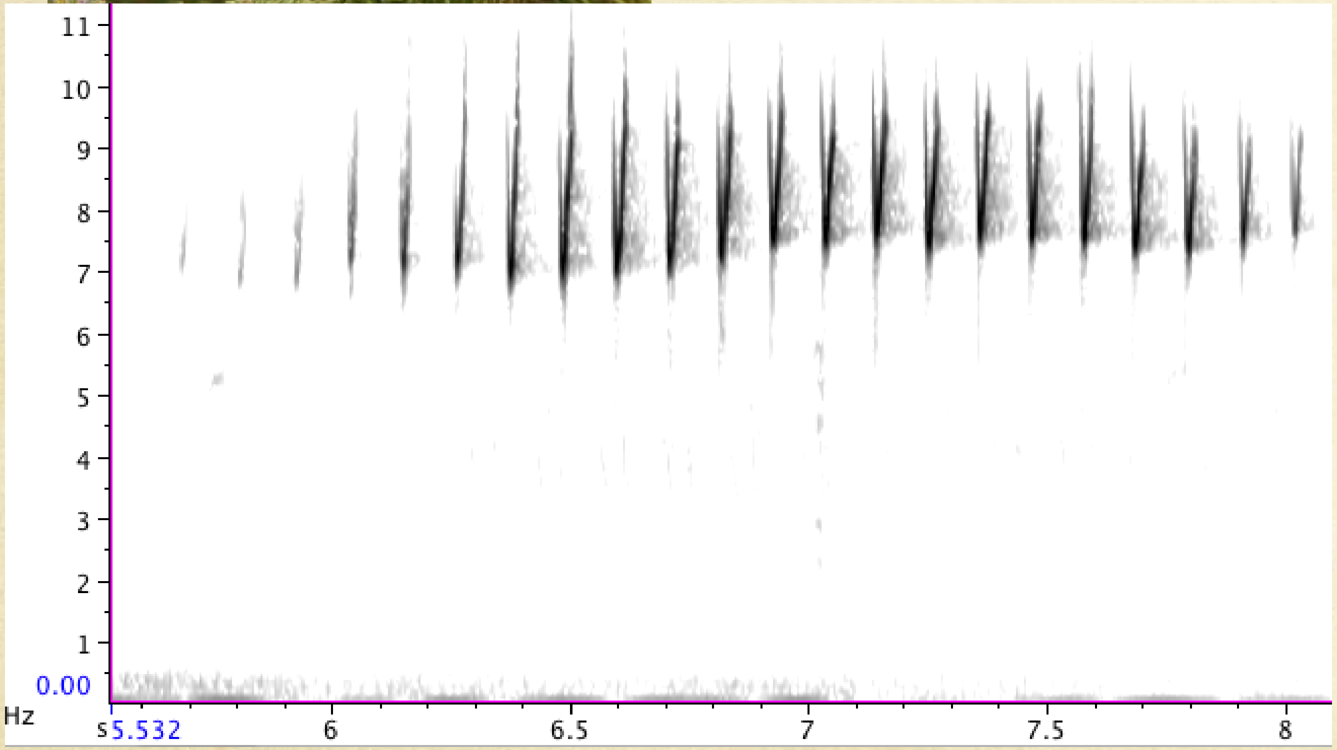


Yellow and
Blackpoll
Warblers

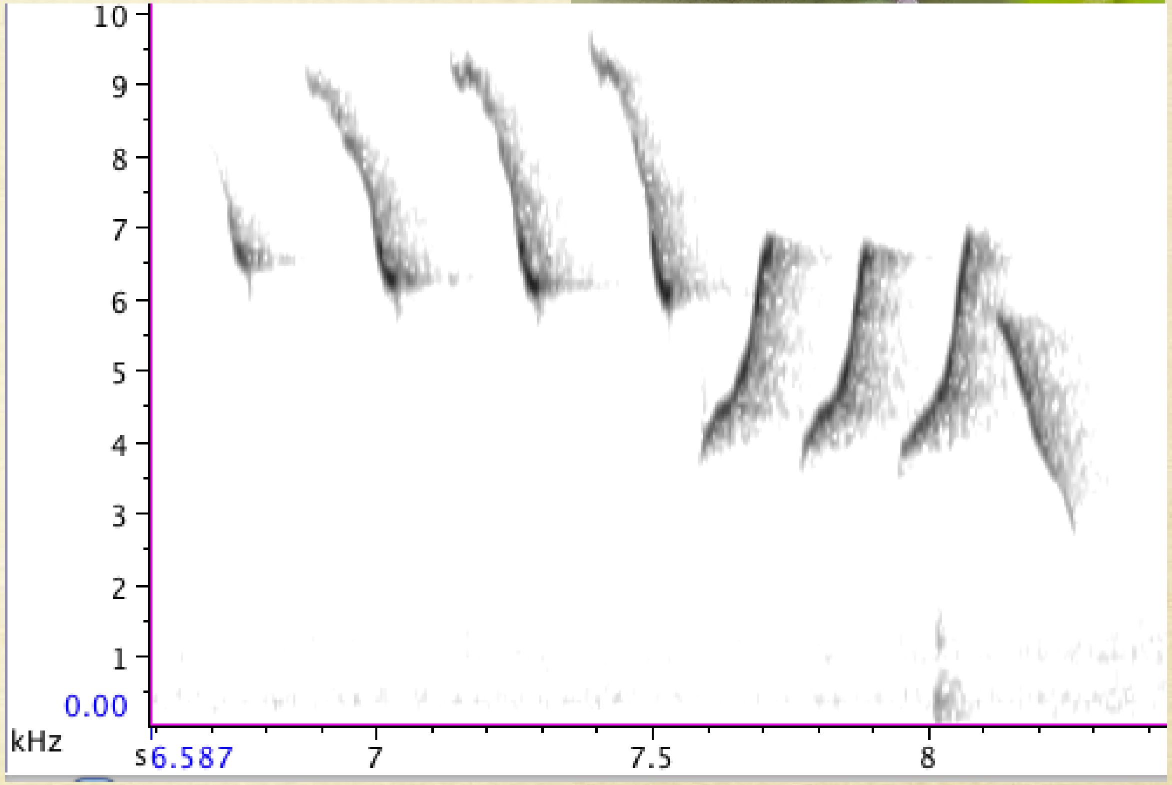
Hybridizing

More Similar

Less Similar

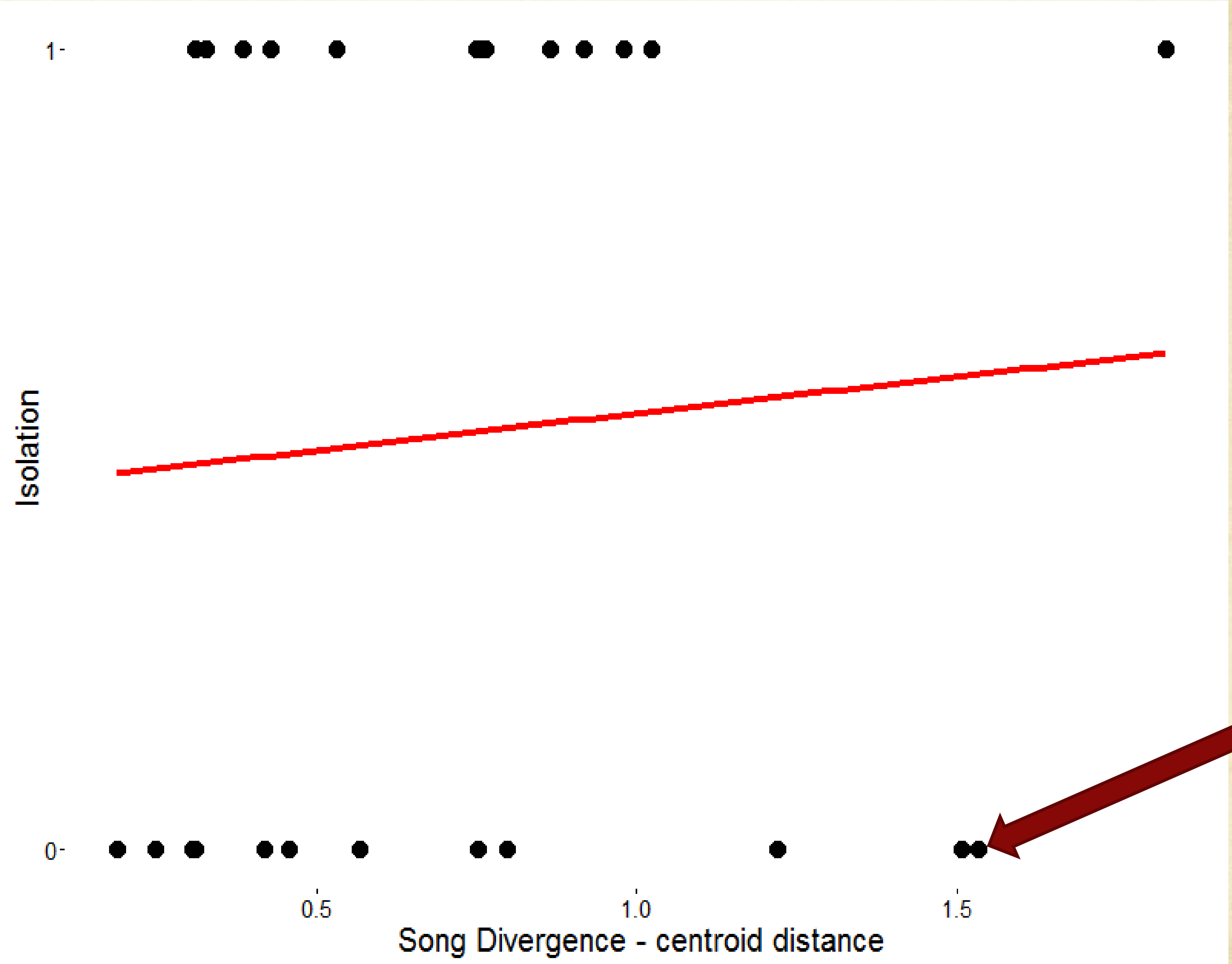


Blackpoll Warbler



Yellow Warbler

Non-
Hybridizing

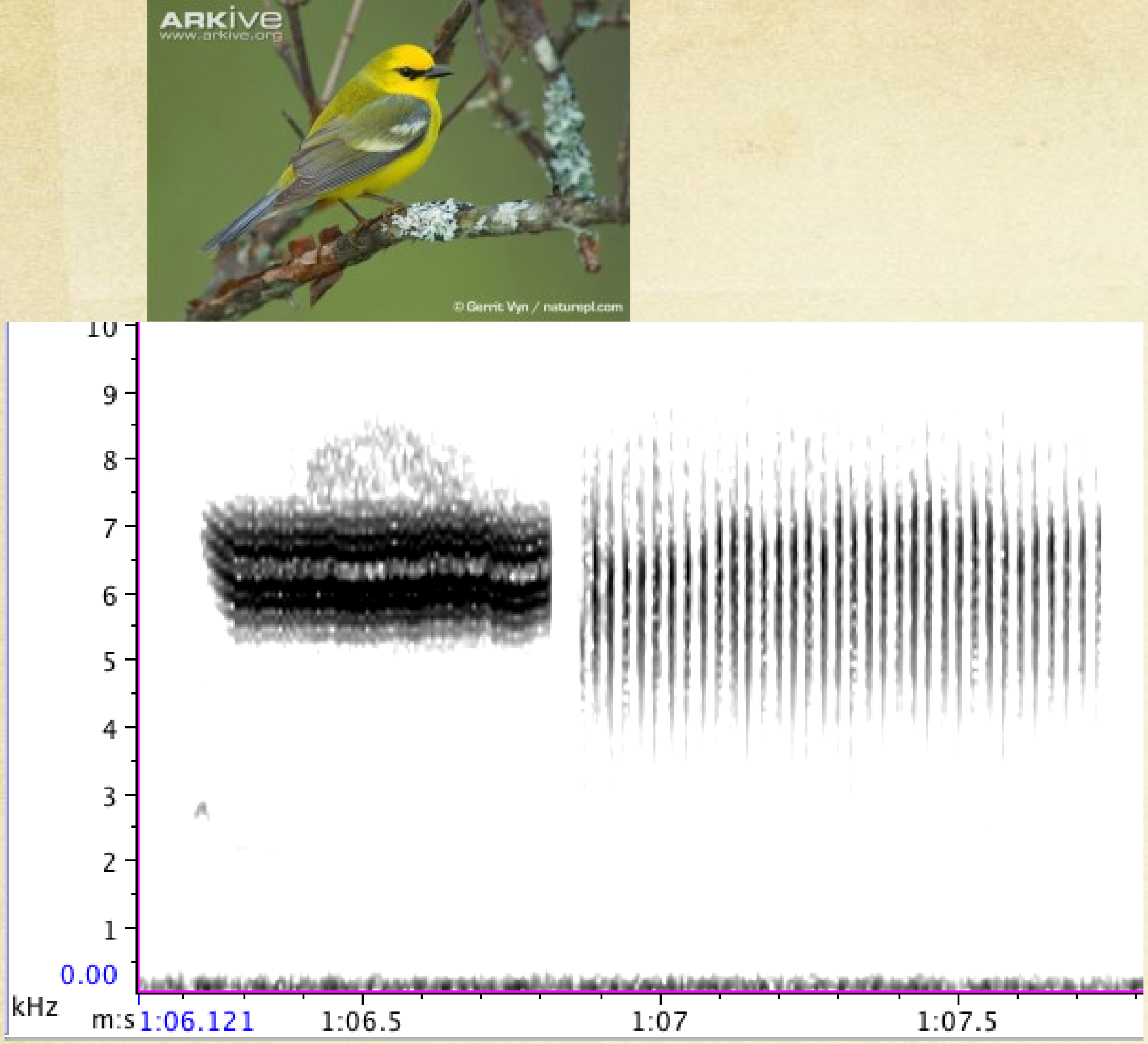


Hybridizing

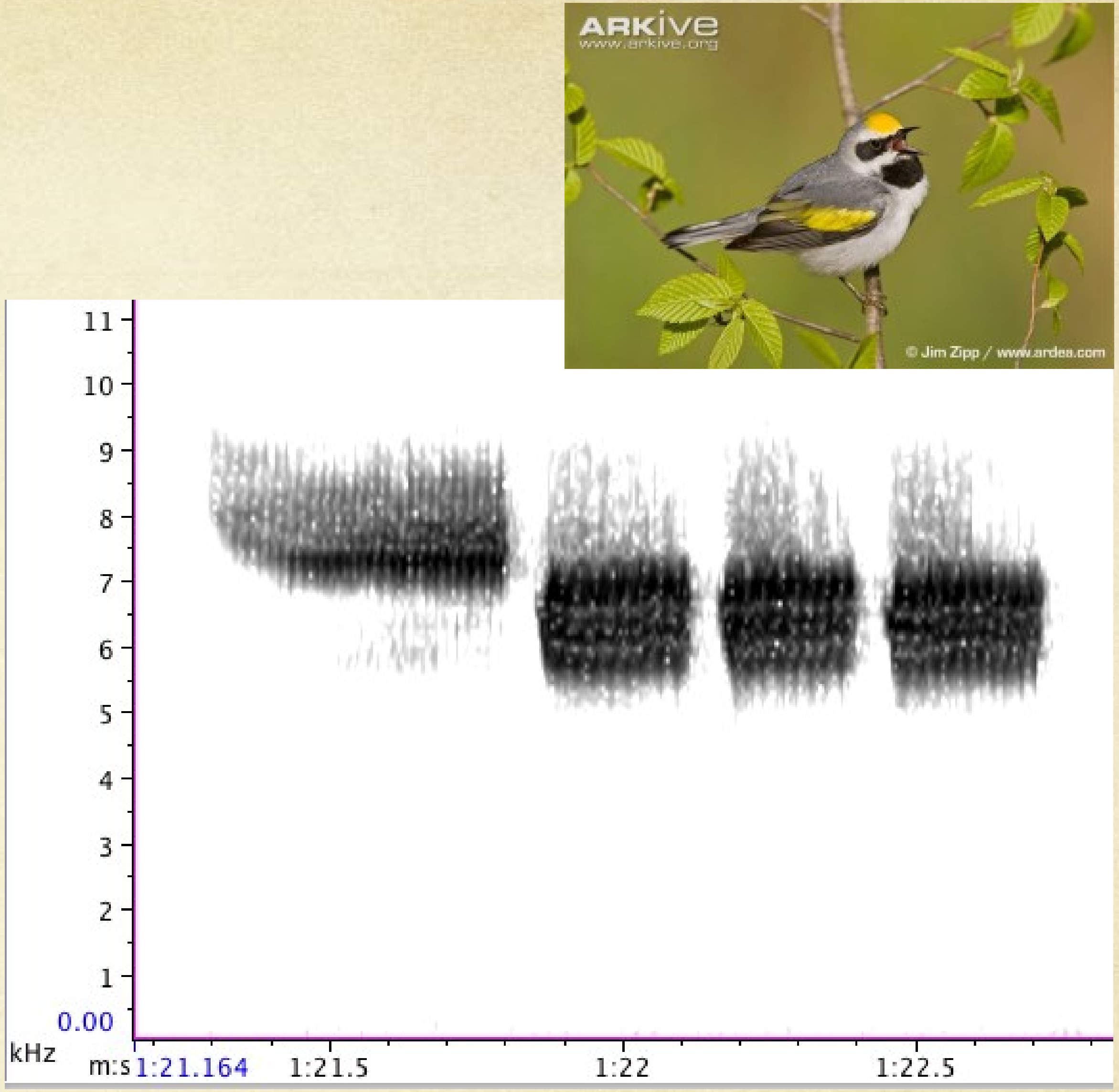
Blue- & Golden-Winged Warblers

More Similar

Less Similar



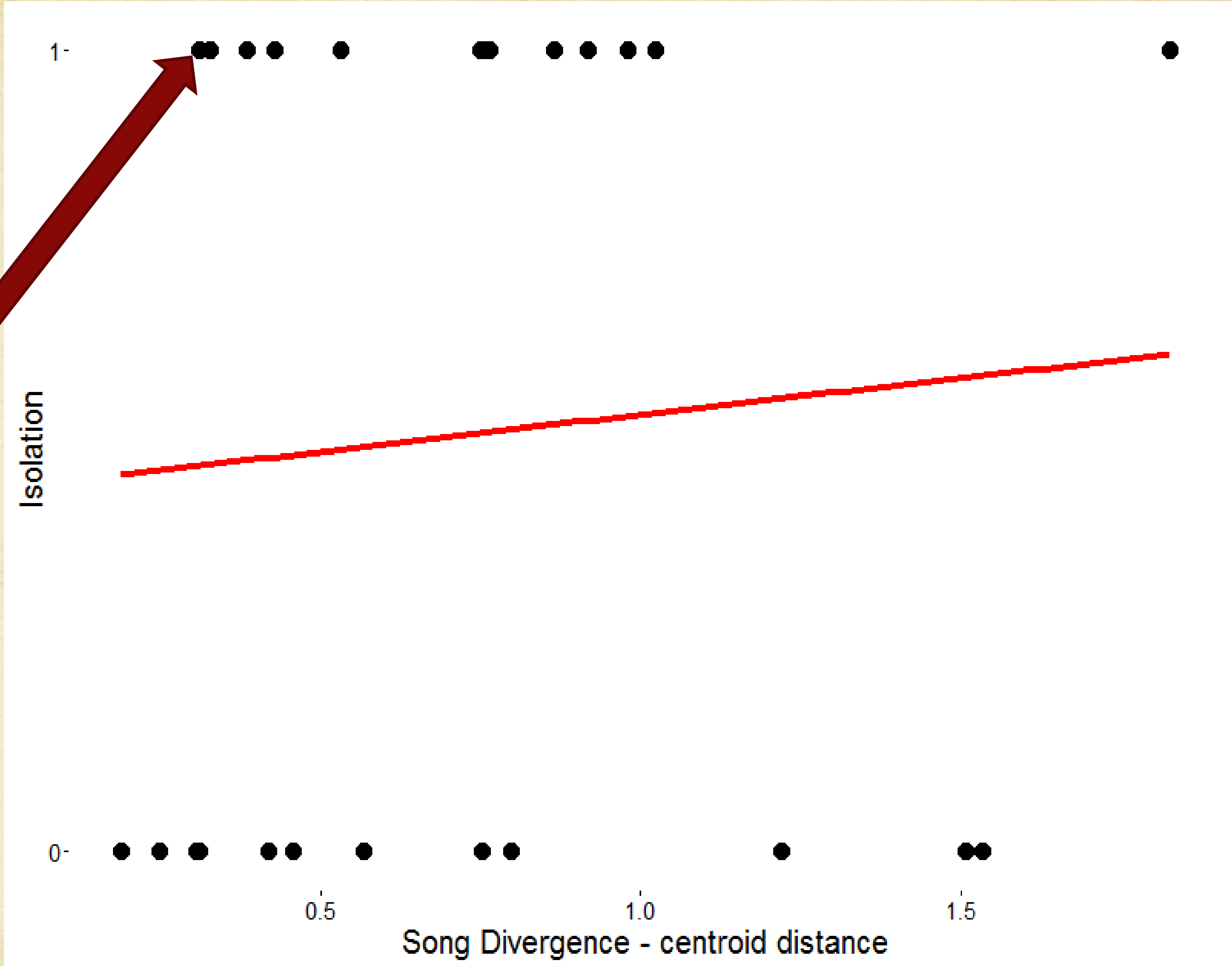
Blue-winged Warbler



Golden-winged Warbler

Non-
Hybridizing

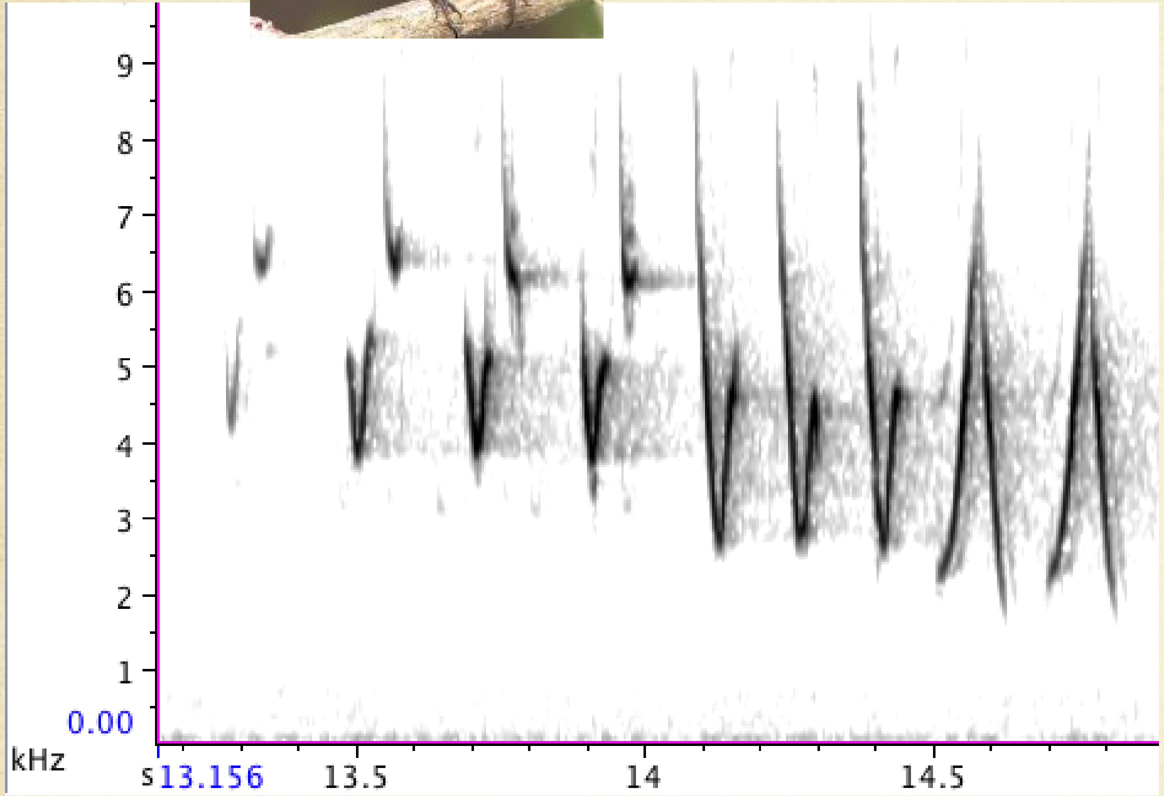
Bay-breasted &
Blackburnian
Warblers



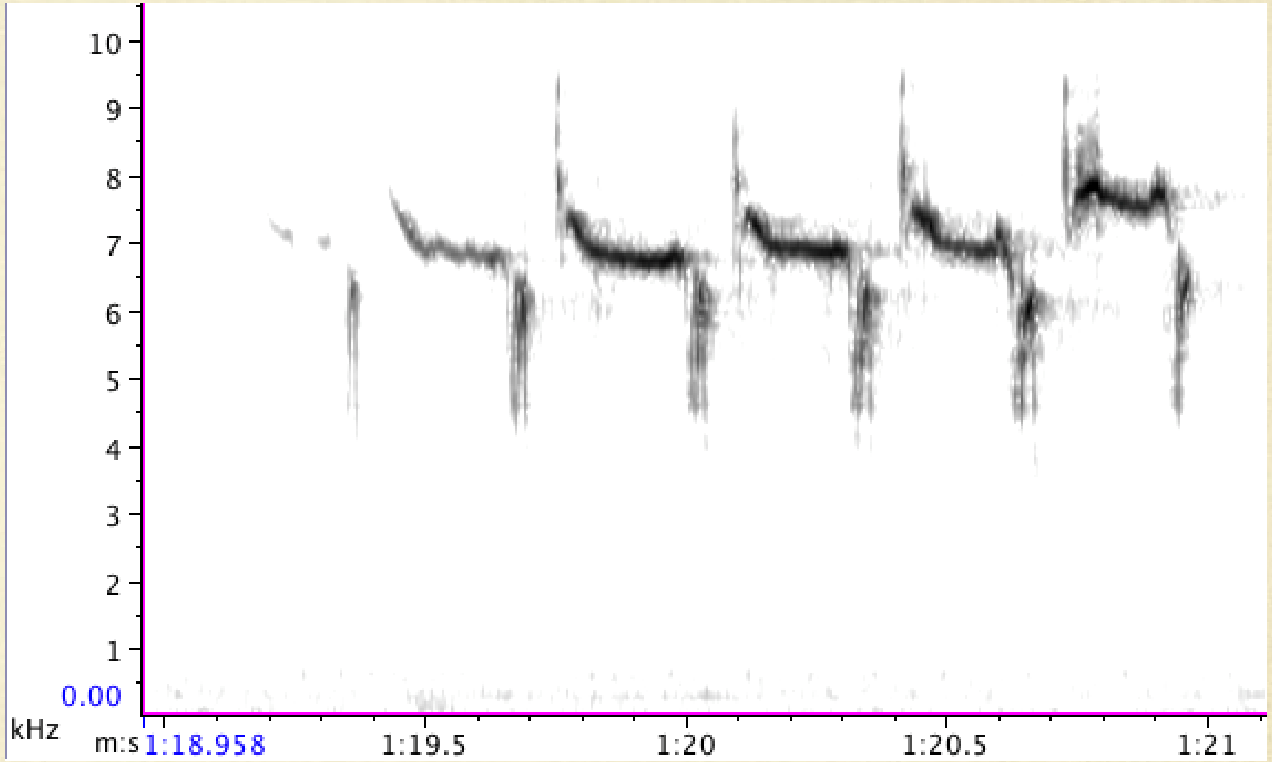
Hybridizing

More Similar

Less Similar



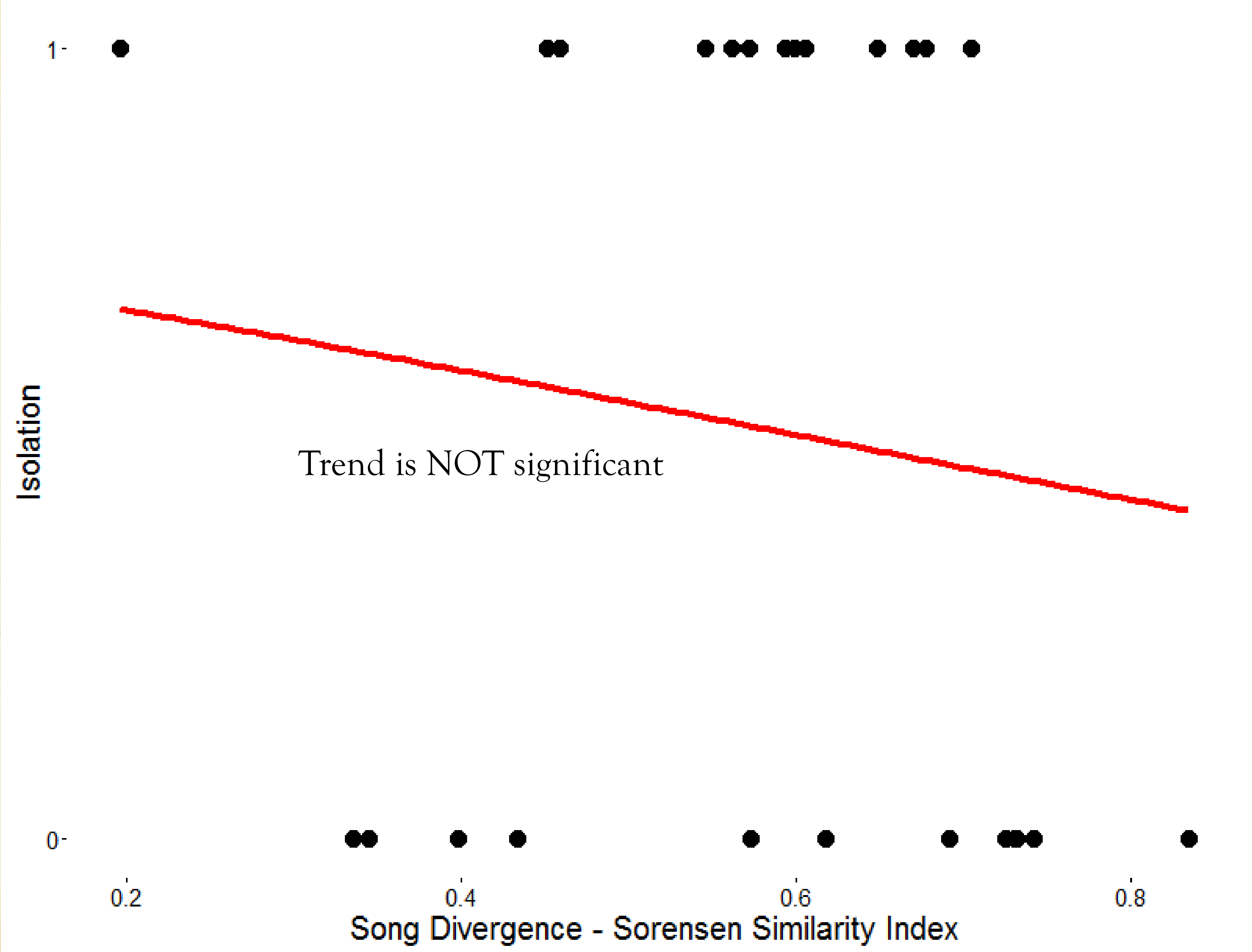
Bay-breasted Warbler



Blackburnian Warbler

Non-Hybridizing

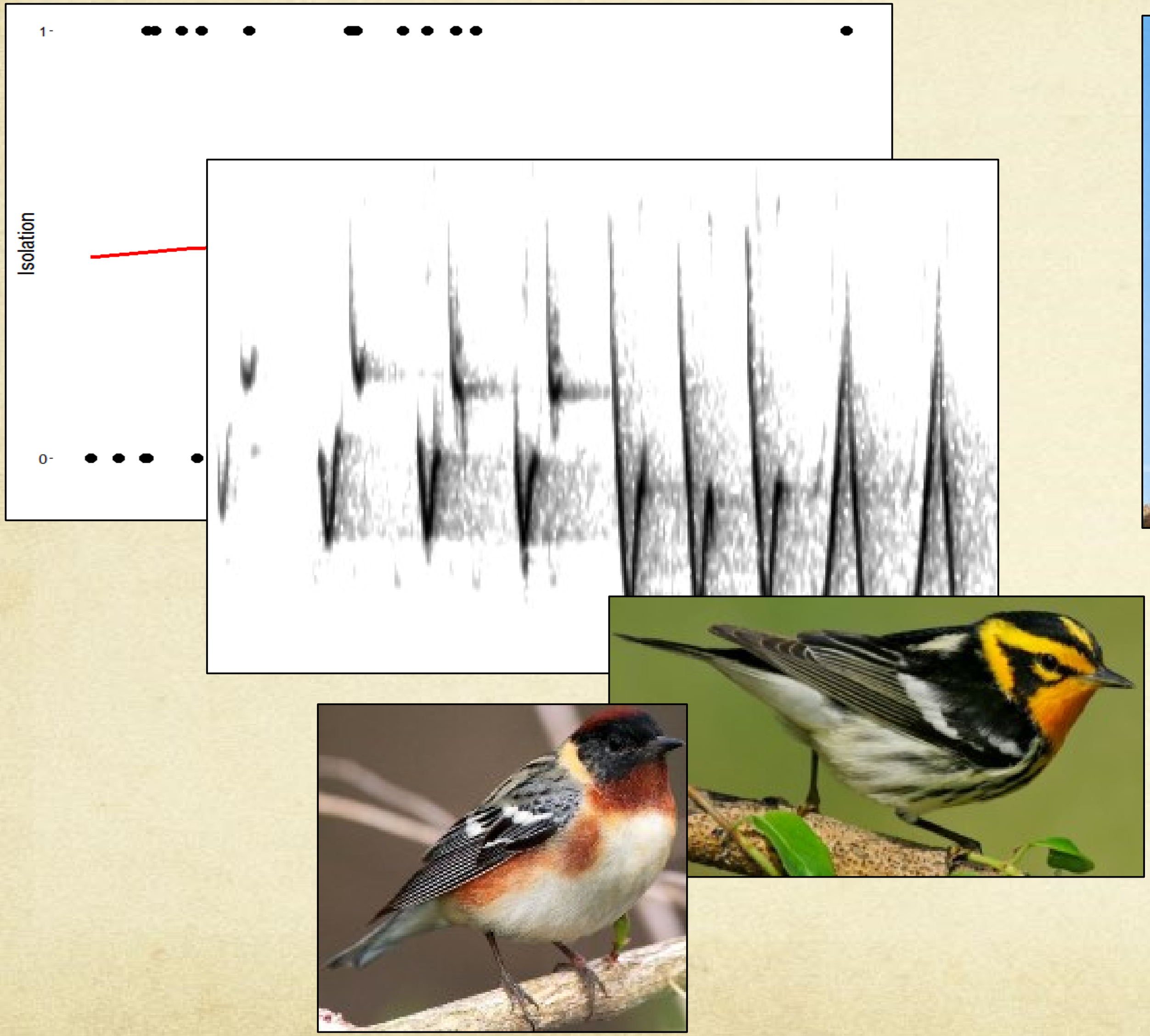
Hybridizing



Less Similar

More Similar

Conclusions



Acknowledgements:

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Carling Lab

THANK YOU!

Questions?