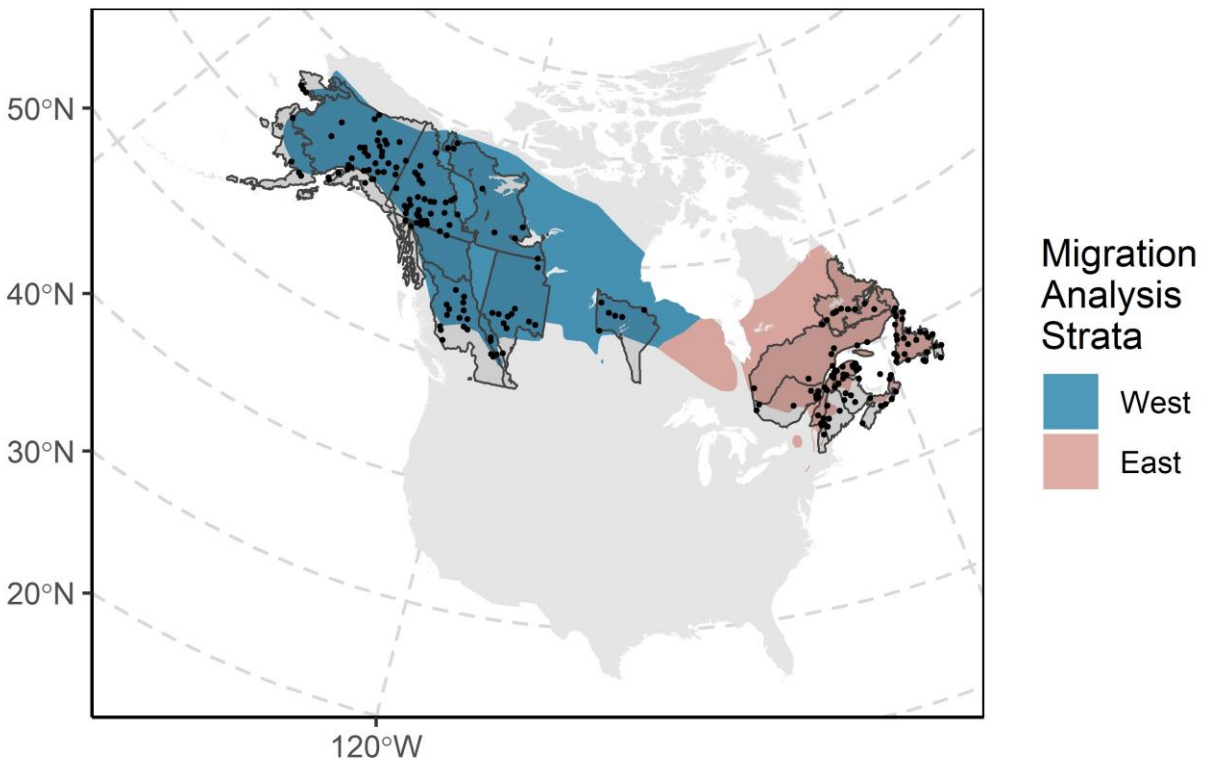


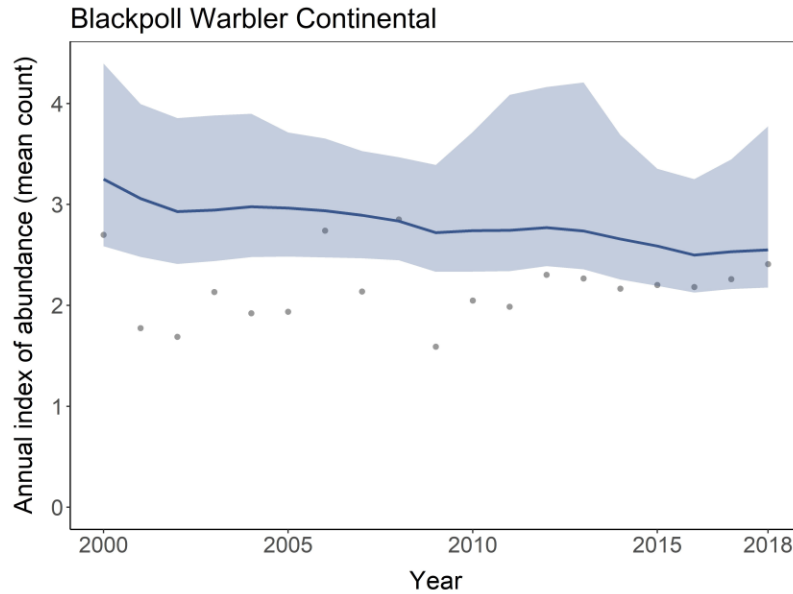
1 **Appendix 4.** Data and results of analysis of North American Breeding Bird Survey data.  
2 Strata and locations of routes contributing data to analysis of the North American Breeding Bird Survey  
3 (BBS) are illustrated in Figure A4.1. In total, Blackpoll Warblers were detected at 226 routes between  
4 2000 and 2018, in 19 analytical strata.

### North American Breeding Bird Survey analytical strata and route locations contributing data to analysis



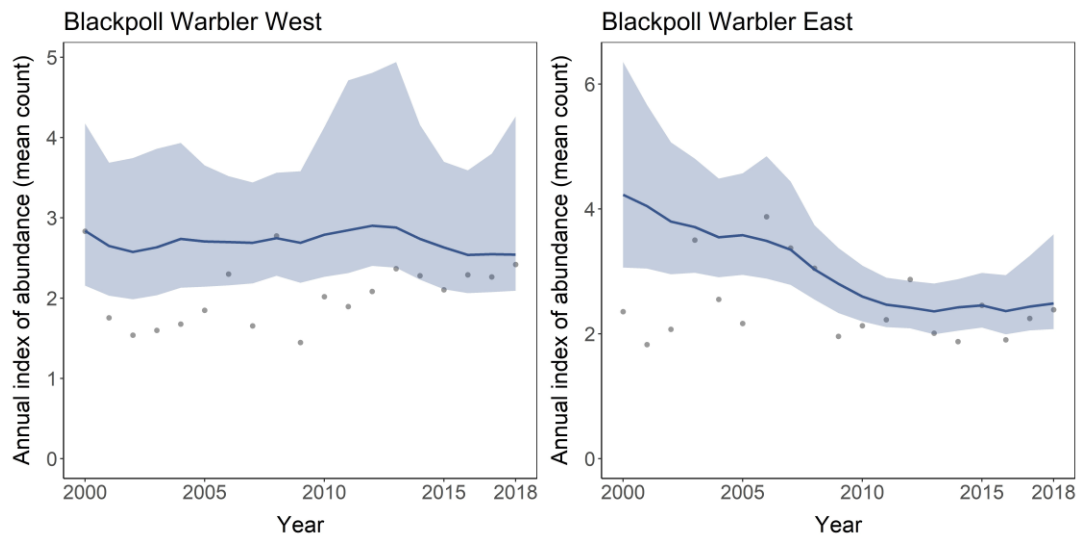
5  
6 **Fig. A4.1. Locations of routes contributing to continental trend analysis of Blackpoll Warbler between**  
7 **2000 and 2018. USGS analytical strata are overlaid.**  
8

9 North American Breeding Bird Survey data were analyzed using a ‘first difference’ model (Link et  
10 al. 2017; Smith et al. 2014), fit using the ‘*bbsBayes*’ R package described in Edwards and Smith (2020).  
11 The estimated Blackpoll Warbler continental trajectory for the period of 2000-2018 is illustrated in  
12 Figure A4.2.



13  
 14 **Fig. A4.2.** Estimated continental trajectory of Blackpoll Warbler from 2000 to 2018 based on analysis  
 15 of Breeding Bird Survey.  
 16

17 The estimated trajectories of Blackpoll Warbler in eastern and western BBS strata are illustrated in  
 18 Figure A3.3. Regional estimates were generated by aggregating area-weighted annual indices within  
 19 USGS analytical strata, which were grouped into “east” and “west” categories based on geographic  
 20 overlap with the corresponding strata used in migration analysis (see Fig. A4.1). Methods for estimating  
 21 trajectories within custom strata are described by Edwards and Smith (2020) and example code is  
 22 available on <https://github.com/bbsBayes/bbsBayes>.



23  
 24 **Fig. A4.3.** Estimated population trajectories of Blackpoll Warbler from 2000 to 2018 based on analysis of  
 25 Breeding Bird Survey, by aggregating estimated annual indices in “eastern” and “western” strata.

26 *Literature Cited*

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