

**Supplementary material**

1 Appendix 1.  
 2 Table A1. Candidate Binomial generalized linear models comparing Blackpoll Warbler  
 3 *Setophaga striata* and Red-eyed Vireo *Vireo olivaceus* probability of stopover flight versus  
 4 migratory departure from a coastal stopover site.

Models	sex (M)	Species (REVI)	AIC <sub>c</sub>	Δ AIC <sub>c</sub>	ω <sub>i</sub>
species + sex	-0.80 ± 0.52	-2.09 ± 0.51 *	95.75	0.00	0.53
species		-2,14 ± 0.54 *	96.0	0.47	0.47

5 NOTE. — Beta estimates ± 1 standard error are shown and represent males relative to females,  
 6 and Red-eyed Vireos relative to Blackpoll Warblers. AIC<sub>c</sub> = Akaike’s information criterion  
 7 corrected for small sample sizes, Δ AIC<sub>c</sub> = the difference between the AIC<sub>c</sub> of the top-ranked  
 8 model and the corresponding model, and ω<sub>i</sub> = Akaike Weight. The species differed significantly  
 9 in mean capture date and δ<sup>2</sup> H values, so we did not include these variables in models. Data are  
 10 from automated telemetry conducted in the Gulf of Maine in fall, 2014.  
 11 \* Parameter estimates have 99% confidence intervals that do not include zero.

12 Table A2. Candidate Binomial generalized linear models relating Blackpoll Warbler *Setophaga*  
 13 *striata* probability of stopover flight versus migratory departure from a coastal stopover site to  
 14 sex, capture date (day), and age.

Models	sex (M)	day	age (HY)	AIC <sub>c</sub>	Δ AIC <sub>c</sub>	ω <sub>i</sub>
sex	-1.02 ± 0.97			34.25	0.00	0.26
day		0.14 ± 0.13		34.63	0.09	0.24
age			0.83 ± 0.99	35.01	0.47	0.20
age + sex	1.05 ± 1.04			35.86	1.32	0.13
age + day	0.79 ± 1.00	0.13 ± 0.13		36.33	1.79	0.10
age + day + sex	-1.16 ± 1.04	0.14 ± 0.15	0.94 ± 1.05	37.40	2.86	0.06

15 NOTE. — Beta estimates ± 1 standard error are shown and represent males relative to females,  
 16 and juveniles relative to adults. AIC<sub>c</sub> = Akaike’s information criterion corrected for small  
 17 sample sizes, Δ AIC<sub>c</sub> = the difference between the AIC<sub>c</sub> of the top-ranked model and the  
 18 corresponding model, and ω<sub>i</sub> = Akaike Weight. Data are from automated telemetry conducted in  
 19 the Gulf of Maine in fall, 2014.

20 \* Parameter estimates have 90% confidence intervals that do not include zero.

21 \*\* Parameter estimates have 95% confidence intervals that do not contain zero.

22 Table A3. Candidate Binomial generalized linear models relating Red-eyed Vireo *Vireo*  
 23 *olivaceus* probability of stopover flight versus migratory departure from a coastal stopover site to  
 24 sex and capture date (day).

Models	sex (M)	day	AIC <sub>c</sub>	Δ AIC <sub>c</sub>	ω <sub>i</sub>
sex	-0.89 ± 0.65		58.57	0.00	0.46
day		-0.06 ± 0.06	59.33	1.60	0.31
sex + day	-0.85 ± 0.65	-0.06 ± 0.06	59.92	5.74	0.23

25 NOTE. — Beta estimates ± 1 standard error are shown and represent males relative to females.  
 26 AIC<sub>c</sub> = Akaike’s information criterion corrected for small sample sizes, Δ AIC<sub>c</sub> = the difference  
 27 between the AIC<sub>c</sub> of the top-ranked model and the corresponding model, and ω<sub>i</sub> = Akaike  
 28 Weight. Data are from automated telemetry conducted in the Gulf of Maine in fall, 2014.

29 Table A4. Candidate ordered logistic regression models relating sex, capture date (day), and  
 30 stable isotope value ( $\delta^2$  H; as a proxy for breeding latitude) to the probability of inland, coastal or  
 31 offshore orientation for Red-eyed Vireo *Vireo olivaceus* during migratory departure from a  
 32 coastal stopover site.

Models	sex (M)	day	$\delta^2$ H	AIC <sub>c</sub>	$\Delta$ AIC <sub>c</sub>	$\omega_i$
day		0.19 ± 0.09 *		41.54	0.00	0.67
day + sex	0.83 ± 0.96	0.20 ± 0.10 *		43.73	2.19	0.22
sex	0.80 ± 0.85			46.68	2.90	0.05
$\delta^2$ H			-0.02 ± 0.03	47.23	0.56	0.04
sex + $\delta^2$ H	0.76 ± 0.85		-0.02 ± 0.03	49.39	2.17	0.01

33 NOTE. — Beta estimates ± 1 standard error are shown and represent males relative to females.  
 34 AIC<sub>c</sub> = Akaike’s information criterion corrected for small sample sizes,  $\Delta$  AIC<sub>c</sub> = the difference  
 35 between the AIC<sub>c</sub> of the top-ranked model and the corresponding model, and  $\omega_i$  = Akaike  
 36 Weight. Capture date was correlated with  $\delta^2$  H values, so we did not combine these variables in  
 37 models. Data are from automated telemetry conducted in the Gulf of Maine in fall, 2014.  
 38 \* Parameter estimates have 95% confidence intervals that do not contain zero.