
Article:
Evans, K.L., Greenwood, J.J.D. and Gaston, K.J. (2005) Dissecting the species–energy relationship. Proceedings of the Royal Society B: Biological Sciences, 272 (1577). pp. 2155-2163. ISSN 1471-2954

https://doi.org/10.1098/rspb.2005.3209

ELECTRONIC APPENDIX

This is the Electronic Appendix to the article

Dissecting the species–energy relationship

by

Karl L. Evans, Jeremy J. D. Greenwood and Kevin J. Gaston

Proc. R. Soc. B (doi:10.1098/rspb.2005.3209)

Appendix A Minimum Adequate Models of species-energy relationships amongst British breeding birds obtained using step-wise selection in General Linear Models. Either summer or annual measures of energy availability are used according to which measure provides the best fit to the data in tests that used a single energy metric as a predictor (see Table 1). ++++P<0.0001, +++P<0.001, ++P<0.01, +P<0.05; Negative effects ----P<0.0001, ---P<0.001, --P< 0.01, - P<0.05.

Response	Temperature	Temperature^2	NDVI	NDVI^2	r^2
All species	$F_{1,2257}$=141.71++++	$F_{1,2257}$=118.28----	$F_{1,2257}$=173.58++++	$F_{1,2257}$=167.04----	30.4%
Non-passerines	$F_{1,2257}$=59.61++++	$F_{1,2257}$=50.92----	$F_{1,2257}$=186.80++++	$F_{1,2257}$=196.37----	16.0%
Passerines	$F_{1,2257}$=205.16++++	$F_{1,2257}$=168.46----	$F_{1,2257}$=88.30++++	$F_{1,2257}$=71.51----	43.1%
Long distance resident	$F_{1,2257}$=171.71++++	$F_{1,2257}$=149.66----	$F_{1,2257}$=198.10++++	$F_{1,2257}$=193.91----	28.4%
Long distance migrant	$F_{1,2257}$=176.88++++	$F_{1,2257}$=157.80----	$F_{1,2257}$=97.20++++	$F_{1,2257}$=89.84----	26.0%
Partial resident	$F_{1,2257}$=187.57++++	$F_{1,2257}$=145.16----	$F_{1,2257}$=198.65++++	$F_{1,2257}$=187.06----	45.6%
Partial migrant	$F_{1,2257}$=49.47++++	$F_{1,2257}$=52.52----	$F_{1,2257}$=93.82++++	$F_{1,2257}$=95.47----	7.2%
Red list	$F_{1,2257}$=67.16++++	$F_{1,2257}$=35.38----	$F_{1,2257}$=242.39++++	$F_{1,2257}$=236.29----	53.0%
Amber list	$F_{1,2257}$=86.66++++	$F_{1,2257}$=98.45----	$F_{1,2257}$=174.08++++	$F_{1,2257}$=177.06----	15.1%
Green list	$F_{1,2257}$=146.72++++	$F_{1,2257}$=119.12----	$F_{1,2257}$=108.44++++	$F_{1,2257}$=100.83----	33.2%
1st population quartile	$F_{1,2257}$=533.25++++	$F_{1,2257}$=440.20----	$F_{1,2257}$=267.04++++	$F_{1,2257}$=238.93----	62.2%
2nd population quartile	$F_{1,2257}$=161.13++++	$F_{1,2257}$=152.68----	$F_{1,2257}$=88.97++++	$F_{1,2257}$=82.33----	18.4%
3rd population quartile	$F_{1,2257}$=3.81 –ns	$F_{1,2257}$=6.02+	$F_{1,2257}$=89.17++++	$F_{1,2257}$=95.80----	8.6%
4th population quartile	ns	ns	$F_{1,2259}$=7.23++	$F_{1,2259}$=12.57----	7.9%
1st mass quartile	$F_{1,2257}$=108.51++++	$F_{1,2257}$=79.47----	$F_{1,2257}$=60.44++++	$F_{1,2257}$=49.01----	40.6%
2nd mass quartile	$F_{1,2257}$=148.15++++	$F_{1,2257}$=134.01----	$F_{1,2257}$=118.07++++	$F_{1,2257}$=112.84----	21.2%
3rd mass quartile	$F_{1,2257}$=91.9++++	$F_{1,2257}$=62.35----	$F_{1,2257}$=287.34++++	$F_{1,2257}$=290.19----	42.5%
4th mass quartile	$F_{1,2257}$=56.03++++	$F_{1,2257}$=67.74----	$F_{1,2257}$=61.50++++	$F_{1,2257}$=63.88----	12.2%
Farmland	$F_{1,2257}$=195.96++++	$F_{1,2257}$=107.87----	$F_{1,2257}$=291.38++++	$F_{1,2257}$=286.10----	72.7%
Woodland	$F_{1,2257}$=68.01++++	$F_{1,2257}$=46.92----	$F_{1,2257}$=90.41++++	$F_{1,2257}$=71.31----	40.8%
Other habitats	$F_{1,2257}$=82.87++++	$F_{1,2257}$=93.52----	$F_{1,2257}$=60.60++++	$F_{1,2257}$=67.27----	10.8%
Niche breadth (broad)	$F_{1,2257}$=324.54++++	$F_{1,2257}$=192.07----	$F_{1,2257}$=203.65++++	$F_{1,2257}$=185.21----	78.5%
Niche breadth (narrow)	$F_{1,2257}$=282.09++++	$F_{1,2257}$=315.90----	$F_{1,2257}$=104.41++++	$F_{1,2257}$=97.27----	27.2%
Niche position (low)	$F_{1,2257}$=462.75++++	$F_{1,2257}$=373.01----	$F_{1,2257}$=243.33++++	$F_{1,2257}$=215.99----	62.3%
Niche position (high)	$F_{1,2257}$=201.45++++	$F_{1,2257}$=165.73----	$F_{1,2257}$=55.67++++	$F_{1,2257}$=46.19----	41.6%
Herbivores	$F_{1,2257}$=108.69++++	$F_{1,2257}$=67.25----	$F_{1,2257}$=250.16++++	$F_{1,2257}$=254.97----	52.1%
Omnivores	$F_{1,2257}$=98.6++++	$F_{1,2257}$=63.05----	$F_{1,2257}$=223.58++++	$F_{1,2257}$=213.07----	49.7%
Predators - inverts	$F_{1,2257}$=172.1++++	$F_{1,2257}$=162.2----	$F_{1,2257}$=79.4++++	$F_{1,2257}$=76.94----	16.9%
Predators - verts	$F_{1,2257}$=29.95++++	$F_{1,2257}$=38.12----	$F_{1,2257}$=34.40++++	$F_{1,2257}$=82.36----	9.7%