

**Review articles**

- Earthworm genomes, genes and proteins: the (re)discovery of Darwin's worms** 789  
S. R. Stürzenbaum, J. Andre, P. Kille & A. J. Morgan

**Research articles**

- Multiple origins of deep-sea Asellota (Crustacea: Isopoda) from shallow waters revealed by molecular data** 799  
M. J. Raupach, C. Mayer, M. Malyutina & J.-W. Wägele
- Distance from Africa, not climate, explains within-population phenotypic diversity in humans** 809  
L. Betti, F. Balloux, W. Amos, T. Hanihara & A. Manica
- Relict or colonizer? Extinction and range expansion of penguins in southern New Zealand** 815  
S. Boessenkool, J. J. Austin, T. H. Worthy, P. Scofield, A. Cooper, P. J. Seddon & J. M. Waters
- Periodic temperature-associated drought/flood drives locust plagues in China** 823  
Z. Zhang, B. Cazelles, H. Tian, L. C. Stige, A. Bräuning & N. Chr. Stenseth
- Haemoglobin polymorphisms affect the oxygen-binding properties in Atlantic cod populations** 833  
Ø. Andersen, O. F. Wetten, M. C. De Rosa, C. Andre, C. C. Alinovi, M. Colafranceschi, O. Brix & A. Colosimo
- Gourds afloat: a dated phylogeny reveals an Asian origin of the gourd family (Cucurbitaceae) and numerous oversea dispersal events** 843  
H. Schaefer, C. Heibl & S. S. Renner
- Echolocating bats emit a highly directional sonar sound beam in the field** 853  
A. Surlykke, S. B. Pedersen & L. Jakobsen
- Wholes and subparts in visual processing of human agency** 861  
P. Neri
- Warning displays may function as honest signals of toxicity** 871  
J. D. Blount, M. P. Speed, G. D. Ruxton & P. A. Stephens
- A new stem turtle from the Middle Jurassic of Scotland: new insights into the evolution and palaeoecology of basal turtles** 879  
J. Anquetin, P. M. Barrett, M. E. H. Jones, S. Moore-Fay & S. E. Evans
- Marine mammals through time: when less is more in studying palaeodiversity** 887  
F. G. Marx
- Range-wide mtDNA phylogeography yields insights into the origins of Asian elephants** 893  
T. N. C. Vidya, R. Sukumar & D. J. Melnick
- On the relationship between farmland biodiversity and land-use intensity in Europe** 903  
D. Kleijn, F. Kohler, A. Báldi, P. Batáry, E. D. Concepción, Y. Clough, M. Díaz, D. Gabriel, A. Holzschuh, E. Knop, A. Kovács, E. J. P. Marshall, T. Tschamtké & J. Verhulst
- A phenomenological model for the collective landing of bird flocks** 911  
I. Daruka
- Evidence for harvest-induced maternal influences on the reproductive rates of fish populations** 919  
P. A. Venturelli, B. J. Shuter & C. A. Murphy
- Lifetime reproductive success is maximized with optimal major histocompatibility complex diversity** 925  
M. Kalbe, C. Eizaguirre, I. Dankert, T. B. H. Reusch, R. D. Sommerfeld, K. M. Wegner & M. Milinski
- Pollinator experience, neophobia and the evolution of flowering time** 935  
J. Forrest & J. D. Thomson
- Diversification trajectories and evolutionary life-history traits in early sharks and batoids** 945  
J. Kriwet, W. Kiessling & S. Klug
- The optimal coyness game** 953  
J. M. McNamara, L. Fromhage, Z. Barta & A. I. Houston
- No energetic cost of anthropogenic disturbance in a songbird** 961  
I.-A. Bisson, L. K. Butler, T. J. Hayden, L. M. Romero & M. C. Wikelski
- What does testosterone do for red deer males?** 971  
A. F. Malo, E. R. S. Roldan, J. J. Garde, A. J. Soler, J. Vicente, C. Gortazar & M. Gomendio
- A female songbird out-sings male conspecifics during simulated territorial intrusions** 981  
A. E. Illes & L. Yunes-Jimenez
- Symbiotic bacteria enable insect to use a nutritionally inadequate diet** 987  
E. A. Gündüz & A. E. Douglas



Founded in 1660, the Royal Society is the independent scientific academy of the UK, dedicated to promoting excellence in science

Registered Charity No 207043



[journals.royalsociety.org](http://journals.royalsociety.org)

Published in Great Britain by the Royal Society,  
6–9 Carlton House Terrace, London SW1Y 5AG