

- Animal behaviour**
- 453 Raising the level: orangutans use water as a tool
N. Mendes, D. Hanus & J. Call
- 456 Functionally independent components of prey capture are architecturally constrained in spider orb webs
T. A. Blackledge & C. M. Eliason
- 459 Long-term memory of individual identity in ant queens
S. Dreier, J. S. van Zweden & P. D'Etterre
- 463 Female preferences drive the evolution of mimetic accuracy in male sexual displays
S. W. Coleman, G. L. Patricelli, B. Coyle, J. Siani & G. Borgia
- 467 'Megapclicks': acoustic click trains and buzzes produced during night-time foraging of humpback whales (*Megaptera novaeangliae*)
A. K. Stimpert, D. N. Wiley, W. W. L. Au, M. P. Johnson & R. Arsenault
- 471 Individual recognition in crayfish (*Cherax dispar*): the roles of strength and experience in deciding aggressive encounters
F. Seebacher & R. S. Wilson
- 475 Smaller beetles are better scramble competitors at cooler temperatures
J. Moya-Laraño, M. E. T. El-Sayyid & C. W. Fox
- Community ecology**
- 479 Promotion of ecosystem carbon sequestration by invasive predators
D. A. Wardle, P. J. Bellingham, T. Fukami & C. P. H. Mulder
- 483 Species richness and abundance of forest birds in relation to radiation at Chernobyl
A. P. Møller & T. A. Mousseau
- 487 Heterotrophic microbial communities use ancient carbon following glacial retreat
R. D. Bardgett, A. Richter, R. Bol, M. H. Garnett, R. Bäumler, X. Xu, E. Lopez-Capel, D. A. C. Manning, P. J. Hobbs, I. R. Hartley & W. Wanek
- Evolutionary biology**
- 491 Sons are made from old stores: sperm storage effects on sex ratio in a lizard
M. Olsson, T. Schwartz, T. Uller & M. Healey
- 494 Frequency-dependent physiological trade-offs between competing colour morphs
S. R. Pryke, L. B. Astheimer, W. A. Buttemer & S. C. Griffith
- 498 Effects of age and gender on success and death of mountaineers on Mount Everest
R. B. Huey, R. Salisbury, J.-L. Wang & M. Mao
- 501 Symbiotic complexity: discovery of a fifth symbiont in the attine ant–microbe symbiosis
A. E. F. Little & C. R. Currie
- 505 Relative time scales reveal multiple origins of parallel disjunct distributions of African caecilian amphibians
S. P. Loader, D. Pisani, J. A. Cotton, D. J. Gower, J. J. Day & M. Wilkinson
- 509 Things fall apart: biological species form unconnected parsimony networks
M. W. Hart & J. Sunday
- 513 Worker caste determination in the army ant *Eciton burchellii*
R. Jaffé, D. J. C. Kronauer, F. B. Kraus, J. J. Boomsma & R. F. A. Moritz
- 517 Adaptive modulation of sperm production rate in *Drosophila bifurca*, a species with giant sperm
A. Bjork, R. Dallai & S. Pitnick
- 520 Male crickets adjust ejaculate quality with both risk and intensity of sperm competition
L. W. Simmons, A. Denholm, C. Jackson, E. Levy & E. Madon
- 523 Secondary chemicals protect mould from fungivory
M. Rohlf, M. Albert, N. P. Keller & F. Kempken
- 526 Genetic dissimilarity predicts paternity in the smooth newt (*Lissotriton vulgaris*)
R. Jehle, M. Sztatecsny, J. B. W. Wolf, A. Whitlock, W. Hödl & T. Burke
- Global change biology**
- 529 Climate-driven range expansion of a critically endangered top predator in northeast Atlantic waters
R. B. Wynn, S. A. Josey, A. P. Martin, D. G. Johns & P. Yésou
- Marine biology**
- 533 Climate change causing starvation in harbour porpoises?
P. Thompson, S. Ingram, M. Lonergan, S. Northridge, A. Hall & B. Wilson
- 535 Starvation and sandeel consumption in harbour porpoises in the Scottish North Sea
C. D. MacLeod, G. J. Pierce & M. Begoña Santos
- 537 First human-caused extinction of a cetacean species?
S. T. Turvey, R. L. Pitman, B. L. Taylor, J. Barlow, T. Akamatsu, L. A. Barrett, X. Zhao, R. R. Reeves, B. S. Stewart, K. Wang, Z. Wei, X. Zhang, L. T. Pusser, M. Richlen, J. R. Brandon & D. Wang
- 541 Genetic bottlenecks and successful biological invasions: the case of a recent Lessepsian migrant
D. Golani, E. Azzurro, M. Corsini-Foka, M. Falautano, F. Andaloro & G. Bernardi
- Molecular evolution**
- 546 Evolution of Pinnipedia lactation strategies: a potential role for α -lactalbumin?
C. M. Reich & J. P. Y. Arnould
- 550 Ancient human mtDNA genotypes from England reveal lost variation over the last millennium
A. L. Töpf, M. T. P. Gilbert, R. C. Fleischer & A. R. Hoelzel
- 554 Rare and fleeting: an example of interspecific recombination in animal mitochondrial DNA
K. L. Ciborowski, S. Consuegra, C. García de León, M. A. Beaumont, J. Wang & W. C. Jordan
- Palaeontology**
- 558 Growth patterns in brooding dinosaurs reveals the timing of sexual maturity in non-avian dinosaurs and genesis of the avian condition
G. M. Erickson, K. C. Rogers, D. J. Varricchio, M. A. Norell & X. Xu
- Phylogeny**
- 562 Save Isoptera: A comment on Inward *et al.*
N. Lo, M. S. Engel, S. Cameron, C. A. Nalepa, G. Tokuda, D. Grimaldi, O. Kitade, K. Krishna, K.-D. Klass, K. Maekawa, T. Miura & G. J. Thompson
- 564 Response to Lo *et al.*
P. Eggleton, G. Beccaloni & D. Inward
- 566 Steady diversification of derived liverworts under Tertiary climatic fluctuations
R. Wilson, J. Heinrichs, J. Hentschel, S. R. Gradstein & H. Schneider
- 570 *Annuloneurtes* (phylum Nemertea): when segments do not count
P. Sundberg & M. Strand
- Physiology**
- 574 When cormorants go fishing: the differing costs of hunting for sedentary and motile prey
L. G. Halsey, C. R. White, M. R. Enstipp, D. R. Jones, G. R. Martin & P. J. Butler
- Population ecology**
- 577 Increasing abundance of bowhead whales in West Greenland
M. P. Heide-Jørgensen, K. Laidre, D. Borchers, F. Samarra & H. Stern
- 581 Short-term climate change and the extinction of the snail *Rhachistia aldabrae* (Gastropoda: Pulmonata)
J. Gerlach
- Population genetics**
- 585 Increase of heterozygosity in a growing population of lesser kestrels
J. Ortego, J. M. Aparicio, G. Calabuig & P. J. Cordero



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

Registered Charity No 207043



www.journals.royalsoc.ac.uk

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