



- 1 Editorial**
B. Charlesworth
- Animal behaviour**
- 2 Environmental motion delays the detection of movement-based signals**
R. A. Peters
- 6 Cross-generational fitness benefits of mating and male seminal fluid**
N. K. Priest, D. A. Roach & L. F. Galloway
- 9 Grooming reciprocity among female primates: a meta-analysis**
G. Schino & F. Aureli
- 12 The cheek plumage patch is an amplifier of dominance in great tits**
I. Galván & J. J. Sanz
- 16 Lateralization of visual learning in the honeybee**
P. Letzkus, N. Boeddeker, J. T. Wood, S.-W. Zhang & M. V. Srinivasan
- 19 Ultrasonic signalling by a Bornean frog**
V. S. Arch, T. U. Grafe & P. M. Narins
- 23 Parental aggression against dependent young results in task partitioning in a cooperatively breeding bird**
N. J. Raihani & A. R. Ridley
- 27 Rapid facial mimicry in orangutan play**
M. Davila Ross, S. Menzler & E. Zimmermann
- 31 Driving a hard bargain: sex ratio and male marriage success in a historical US population**
T. V. Pollet & D. Nettle
- 34 African elephants have expectations about the locations of out-of-sight family members**
L. A. Bates, K. N. Sayialel, N. W. Njiraini, J. H. Poole, C. J. Moss & R. W. Byrne
- 37 Social learning of novel route preferences in adult humans**
S. M. Reader, M. J. Bruce & S. Rebers
- Biomechanics**
- 41 Functional diversification within and between muscle synergists during locomotion**
T. E. Higham, A. A. Biewener & J. M. Wakeling
- Evolutionary biology**
- 45 Symbiont acquisition alters behaviour of stinkbug nymphs**
T. Hosokawa, Y. Kikuchi, M. Shimada & T. Fukatsu
- 49 Evolutionary associations between nectar properties and specificity in bird pollination systems**
S. D. Johnson & S. W. Nicolson
- 53 An AMP nucleosidase gene knockout in *Escherichia coli* elevates intracellular ATP levels and increases cold tolerance**
B. A. Morrison & D. H. Shain
- 57 The effect of spatial structure on adaptation in *Escherichia coli***
L. Perfeito, M. I. Pereira, P. R. A. Campos & I. Gordo
- 60 Temperature-related birth sex ratio bias in historical Sami: warm years bring more sons**
S. Helle, S. Helama & J. Jokela
- 63 Comment. Is Chernobyl radiation really causing negative individual and population-level effects on barn swallows?**
J. T. Smith
- 65 Reply. Anecdotes and empirical research in Chernobyl**
A. P. Möller, T. A. Mousseau, F. de Lope & N. Saino
- 67 Comment. Kin recognition in plants?**
J. A. Clemens
- 69 Reply. Yes, kin recognition in plants!**
S. A. Dudley & A. L. File
- 71 Polyphyletic origin of toxic Pitohui birds suggests widespread occurrence of toxicity in corvoid birds**
K. A. Jönsson, R. C. K. Bowie, J. A. Norman, L. Christidis & J. Fjeldså
- 75 Marrying women 15 years younger maximized men's evolutionary fitness in historical Sami**
S. Helle, V. Lummaa & J. Jokela
- 78 Comment. Does parental age difference affect offspring count in humans? Comment on Fieder and Huber**
E. Lindqvist, D. Cesarini & B. Wallace
- 80 Reply. Reply to Lindqvist *et al.* 'Does parental age difference affect offspring count in humans: comment on Fieder and Huber'**
M. Fieder, S. Huber & F. L. Bookstein
- 82 Comment. Optimal age difference cannot differ between monogamous males and females: a comment on Fieder and Huber**
A. R. Boyko
- 83 Reply. Reply to Adam R. Boyko 'Optimal age difference cannot differ between monogamous males and females: a comment on Fieder and Huber'**
M. Fieder, S. Huber & F. L. Bookstein
- 84 Integrated diversification of locomotion and feeding in labrid fishes**
D. C. Collar, P. C. Wainwright & M. E. Alfaro
- Evolutionary developmental biology**
- 87 Early Palaeozoic dentine and patterned scales in the embryonic catshark tail**
Z. Johanson, M. Tanaka, N. Chaplin & M. Smith
- Genome biology**
- 91 Ploidy reduction in *Saccharomyces cerevisiae***
A. C. Gerstein, R. M. McBride & S. P. Otto
- Global change biology**
- 95 Native Great Lakes wolves were not restored**
J. A. Leonard & R. K. Wayne
- 99 Thermal tolerance, acclimatory capacity and vulnerability to global climate change**
P. Calosi, D. T. Bilton & J. I. Spicer
- Palaeontology**
- 103 Comment. Placoderm muscles and chordate interrelationships**
M. Friedman & M. Brazeau
- 104 Reply. Response to Friedman and Brazeau**
K. Trinajstic, C. Marshall, J. Long & K. Bifield
- 106 Giant claw reveals the largest ever arthropod**
S. J. Braddy, M. Poschmann & O. E. Tetlie
- 110 Number and arrangement of extraocular muscles in primitive gnathostomes: evidence from extinct placoderm fishes**
G. C. Young
- Phylogeny**
- 115 Origin of tropical American burrowing reptiles by transatlantic rafting**
N. Vidal, A. Azvolinsky, C. Cruaud & S. B. Hedges
- Physiology**
- 119 Aggressive and non-aggressive personalities differ in oxidative status in selected lines of mice (*Mus musculus*)**
D. Costantini, C. Carere, D. Caramaschi & J. M. Koolhaas
- 123 Energetic constraints on an early developmental stage: a comparative view**
J. F. Gillooly, G. A. Londoño & A. P. Allen
- 127 Scaling of gas exchange cycle frequency in insects**
J. S. Terblanche, C. R. White, T. M. Blackburn, E. Marais & S. L. Chown
- Population ecology**
- 130 Landscape genetics and the spatial distribution of chronic wasting disease**
J. A. Blanchong, M. D. Samuel, K. T. Scribner, B. V. Weckworth, J. A. Langenberg & K. B. Filcek
- Population genetics**
- 134 Rapid loss of genetic variation in an endangered possum**
P. Mitrovski, A. A. Hoffmann, D. A. Heinze & A. R. Weeks
- 139 Islands in the sea: extreme female natal site fidelity in the Australian sea lion, *Neophoca cinerea***
R. A. Campbell, N. J. Gales, G. M. Lento & C. S. Baker



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

Registered Charity No 207043



FirstCite®
e-publishing

journals.royalsociety.org

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