



**Cover:** Sociable weavers are highly social passerines from the arid zones of southern Africa. Cunningham et al. (pp. 1558–1562) suggest that social status affects thermoregulatory ability in these and two other desert passerine species from Africa, with implications for the stability of societies under climate change. Photo credit: Marietjie Oosthuizen.

### INSIDE JEB

- 1543** Parasitic wasp hypodermic needle sniffs out larvae to lay eggs; Do flies over-generalise memories like PTSD sufferers?; Impulse gives best bounce cost

### OUTSIDE JEB

- 1545** Doped to the bills – dopamine helps birds sing in tune; Turtle shells have built-in shock absorbers; Blubber news: whale fat is active!; Salmon pay a price for costly carotenoids

### SHORT COMMUNICATIONS

- 1548** Aversive olfactory associative memory loses odor specificity over time  
**König, C., Antwi-Adjei, E., Ganesan, M., Kilonzo, K., Viswanathan, V., Durairaja, A., Voigt, A. and Yarali, A.**
- 1554** The insect ovipositor as a volatile sensor within a closed microcosm  
**Yadav, P. and Borges, R. M.**
- 1558** It's cool to be dominant: social status alters short-term risks of heat stress  
**Cunningham, S. J., Thompson, M. L. and McKechnie, A. E.**
- 1563** An evolutionary solution of terrestrial isopods to cope with low atmospheric oxygen levels  
**Horváthová, T., Antoń, A., Czarnoleski, M., Kozłowski, J. and Bauchinger, U.**

### RESEARCH ARTICLES

- 1568** Self-fertilization, sex allocation and spermatogenesis kinetics in the hypodermically inseminating flatworm *Macrostomum pusillum*  
**Giannakara, A. and Ramm, S. A.**
- 1578** Compass cues used by a nocturnal bull ant, *Myrmecia midas*  
**Freas, C. A., Narendra, A. and Cheng, K.**
- 1586** Visual acuity in ray-finned fishes correlates with eye size and habitat  
**Caves, E. M., Sutton, T. T. and Johnsen, S.**
- 1597** The cues of colony size: how honey bees sense that their colony is large enough to begin to invest in reproduction  
**Smith, M. L., Koenig, P. A. and Peters, J. M.**
- 1606** Jumping performance of flea hoppers and other mirid bugs (Hemiptera, Miridae)  
**Burrows, M. and Dorosenko, M.**
- 1618** Propulsion in hexapod locomotion: how do desert ants traverse slopes?  
**Wöhr, T., Reinhardt, L. and Blickhan, R.**

- 1626** Acoustic measurements of post-dive cardiac responses in southern elephant seals (*Mirounga leonina*) during surfacing at sea  
**Day, L., Jouma'a, J., Bonnel, J. and Guinet, C.**
- 1634** Is human Achilles tendon deformation greater in regions where cross-sectional area is smaller?  
**Reeves, N. D. and Cooper, G.**
- 1643** Comparison of human gastrocnemius forces predicted by Hill-type muscle models and estimated from ultrasound images  
**Dick, T. J. M., Biewener, A. A. and Wakeling, J. M.**
- 1654** Metabolic cost of human hopping  
**Gutmann, A. K. and Bertram, J. E. A.**
- 1663** Waveform sensitivity of electroreceptors in the pulse-type weakly electric fish *Gymnotus omarorum*  
**Rodríguez-Cattaneo, A., Aguilera, P. A. and Caputi, A. A.**
- 1674** Dynamic changes in cardiac mitochondrial metabolism during warm acclimation in rainbow trout  
**Pichaud, N., Ekström, A., Hellgren, K. and Sandblom, E.**
- 1684** Effects of photophase illuminance on locomotor activity, urine production and urinary 6-sulfatoxymelatonin in nocturnal and diurnal South African rodents  
**van der Merwe, I., Oosthuizen, M. K., Ganswindt, A., Haim, A. and Bennett, N. C.**
- 1693** Short-term and long-term effects of transient exogenous cortisol manipulation on oxidative stress in juvenile brown trout  
**Birnie-Gauvin, K., Peiman, K. S., Larsen, M. H., Aarestrup, K., Willmore, W. G. and Cooke, S. J.**
- 1701** Regional differences in the preferred e-vector orientation of honeybee ocellar photoreceptors  
**Ogawa, Y., Ribi, W., Zeil, J. and Hemmi, J. M.**
- 1709** The sphingosine rheostat is involved in the cnidarian heat stress response but not necessarily in bleaching  
**Kitchen, S. A. and Weis, V. M.**
- 1721** Proteome stability, heat hardening and heat-shock protein expression profiles in *Cataglyphis* desert ants  
**Willot, Q., Gueydan, C. and Aron, S.**
- 1729** Modulation of upper limb joint work and power during sculling while ballasted with varying loads  
**Lauer, J., Rouard, A. H. and Vilas-Boas, J. P.**
- 1737** Crying a river: how much salt-laden jelly can a leatherback turtle really eat?  
**Davenport, J.**