

# Contents

Volume 215 (16) August 2012



**Cover:** Predation attempt of a dusky cardinalfish, *Phaeoptyx pigmentaria*, on the luminescent ostracod *Photeros annecohenae*. The ostracod was expectorated, and is seen swimming away unharmed at the bottom of the luminescent cloud. Male *P. annecohenae* also use luminescence for highly complex courtship displays, and Rivers and Morin (pp. 2860–2868) discuss the relative costs of the mating and defensive displays. The image was taken using a specially built 'colour'-intensified camera, where light is split into two streams for two different image intensifiers, one sensitive to infrared to illuminate the organisms without detection, and the other to blue to simultaneously capture luminescence. Photo © Martin Dohrn, Ammonite Films.

## ▼ Inside JEB

**Flies anti-track to evade foul smells i; Sandhoppers use skylight gradient to recognise sun i; Kinin mechanism in house cricket Malpighian tubules ii; Diving dolphins raise exercise heart rate iii**

## Methods & Techniques

**Cousin, X., Daouk, T., Péan, S., Lyphout, L., Schwartz, M.-E. and Bégout, M.-L.** Electronic individual identification of zebrafish using radio frequency identification (RFID) microtags. 2729-2734

## Research Articles

► **Noren, S. R., Kendall, T., Cuccurullo, V. and Williams, T. M.** The dive response redefined: underwater behavior influences cardiac variability in freely diving dolphins. 2735-2741

**Meadows, M. G., Roudybush, T. E. and McGraw, K. J.** Dietary protein level affects iridescent coloration in Anna's hummingbirds, *Calypte anna*. 2742-2750

**Mitamura, H., Uchida, K., Miyamoto, Y., Kakihara, T., Miyagi, A., Kawabata, Y., Ichikawa, K. and Arai, N.** Short-range homing in a site-specific fish: search and directed movements. 2751-2759

**Saarinen, P., Pahlberg, J., Herczeg, G., Viljanen, M., Karjalainen, M., Shikano, T., Merilä, J. and Donner, K.** Spectral tuning by selective chromophore uptake in rods and cones of eight populations of nine-spined stickleback (*Pungitius pungitius*). 2760-2773

► **Coast, G. M.** Intracellular Na<sup>+</sup>, K<sup>+</sup> and Cl<sup>-</sup> activities in *Acheta domesticus* Malpighian tubules and the response to a diuretic kinin neuropeptide. 2774-2785

**Tripathi, R., Boschetti, C., McGee, B. and Tunnacliffe, A.** Trafficking of bdelloid rotifer late embryogenesis abundant proteins. 2786-2794

**Ortiz-Rodríguez, R., Dao, T. S. and Wiegand, C.** Transgenerational effects of microcystin-LR on *Daphnia magna*. 2795-2805

**Withers, P. C., Cooper, C. E. and Nespolo, R. F.** Evaporative water loss, relative water economy and evaporative partitioning of a heterothermic marsupial, the monito del monte (*Dromiciops gliroides*). 2806-2813

► **Ugolini, A., Galanti, G. and Mercatelli, L.** The skylight gradient of luminance helps sandhoppers in sun and moon identification. 2814-2819

► Article featured 'Inside JEB'

**Costantini, D., Monaghan, P. and Metcalfe, N. B.** Early life experience primes resistance to oxidative stress. 2820-2826

**Toshima, N. and Tanimura, T.** Taste preference for amino acids is dependent on internal nutritional state in *Drosophila melanogaster*. 2827-2832

► **Wasserman, S., Lu, P., Aptekar, J. W. and Frye, M. A.** Flies dynamically anti-track, rather than ballistically escape, aversive odor during flight. 2833-2840

**Ueno, R. and Nagayama, T.** Interlocking of chelae is a key factor for dominance hierarchy formation in crayfish. 2841-2848

**Volodin, I. A., Zaytseva, A. S., Ilchenko, O. G., Volodina, E. V. and Chebotareva, A. L.** Measuring airborne components of seismic body vibrations in a Middle-Asian sand-dwelling Insectivora species, the piebald shrew (*Diplomesodon pulchellum*). 2849-2852

**Hu, Z., Liu, F., Xu, X., Chen, Z., Chen, J. and Li, D.** Spectral transmission of the principal-eye corneas of jumping spiders: implications for ultraviolet vision. 2853-2859

**Rivers, T. J. and Morin, J. G.** The relative cost of using luminescence for sex and defense: light budgets in cyprinid ostracods. 2860-2868

**Chadwell, B. A., Standen, E. M., Lauder, G. V. and Ashley-Ross, M. A.** Median fin function during the escape response of bluegill sunfish (*Lepomis macrochirus*). I: Fin-ray orientation and movement. 2869-2880

**Chadwell, B. A., Standen, E. M., Lauder, G. V. and Ashley-Ross, M. A.** Median fin function during the escape response of bluegill sunfish (*Lepomis macrochirus*). II: Fin-ray curvature. 2881-2890

**Vesala, L., Salminen, T. S., Košťál, V., Zahradníčková, H. and Hoikkala, A.** Myo-inositol as a main metabolite in overwintering flies: seasonal metabolomic profiles and cold stress tolerance in a northern drosophilid fly. 2891-2897

**Tarttelin, E. E., Frigato, E., Bellingham, J., Di Rosa, V., Berti, R., Foulkes, N. S., Lucas, R. J. and Bertolucci, C.** Encephalic photoreception and phototactic response in the troglolobiont Somalian blind cavefish *Phreatichthys andruzzii*. 2898-2903

**Lang, S. L. C., Iverson, S. J. and Bowen, W. D.** Primiparous and multiparous females differ in mammary gland alveolar development: implications for milk production. 2904-2911

**Talaei, F., Bouma, H. R., Hylkema, M. N., Strijkstra, A. M., Boerema, A. S., Schmidt, M. and Henning, R. H.** The role of endogenous H<sub>2</sub>S formation in reversible remodeling of lung tissue during hibernation in the Syrian hamster. 2912-2919

**Fokidis, H. B., Burin des Roziers, M., Sparr, R., Rogowski, C., Sweazea, K. and Deviche, P.** Unpredictable food availability induces metabolic and hormonal changes independent of food intake in a sedentary songbird. 2920-2930

## Erratum

**Tirrell, T. F., Cook, M. S., Carr, J. A., Lin, E., Ward, S. R. and Lieber, R. L.** Human skeletal muscle biochemical diversity. 2931