



**Cover:** Fan worms, such as *Acromegalomma vesiculosum* from Cornwall, UK, are marine polychaetes that live in protective tubes and project feathery tentacles up into the water column to filter feed. Because these valuable appendages are vulnerable to predation, the fan worms have evolved unique compound eyes on the tentacles that detect looming threats and initiate a startle withdrawal response. Bok et al. (jeb212779) present the first electroretinographic investigations of these eyes, describing their dynamic range, spectral sensitivity and temporal resolution. They consider the implications of these properties for governing a startle response in dynamic, coastal marine habitats. Photo credit: Michael J. Bok.

### INSIDE JEB

Springy bamboo poles help villagers carry more than their own body weight

**Knight, K.**

jeb216721

Bottlenose dolphins turn up the volume less than other cetaceans

**Knight, K.**

jeb218594

Madagascar cockroaches survive freezing despite tropical heritage

**Knight, K.**

jeb218115

### OUTSIDE JEB

Flour beetles evolve to arrest their killers

**Rozen, D. E.**

jeb193169

Why a sea snake needs a hole in its head

**Joyce, W.**

jeb193185

Starved snails move slowly through resource-rich environments

**Mantica, G.**

jeb193177

Smart suit reduces energy of both walking and running

**Stenum, J.**

jeb193151

### OBITUARY

Charles Porter Ellington (1952–2019)

**Dudley, R. and Wootton, R. J.**

jeb218628

### REVIEW

Mixing it up: the biological significance of hybrid skeletal muscle fibers

**Medler, S.**

jeb200832

### SHORT COMMUNICATIONS

Nitrite-induced reductions in heat tolerance are independent of aerobic scope in a freshwater teleost

**Rodgers, E. M. and De Boeck, G.**

jeb212035

XROMM kinematics of ventilation in wild turkeys

(*Meleagris gallopavo*)

**Brocklehurst, R. J., Moritz, S., Codd, J., Sellers, W. I. and Brainerd, E. L.**

jeb209783

Configural learning in freshly collected, smart, wild *Lymnaea*

**Kagan, D. and Lukowiak, K.**

jeb212886

### METHODS & TECHNIQUES

Tunnel-tube and Fourier methods for measuring three-dimensional medium reaction force in burrowing animals

**Moore Crisp, A., Barnes, C. J. and Lee, D. V.**

jeb213553

A low-cost, open-source inertial movement GPS logger for eco-physiology applications

**Fahlbusch, J. A. and Harrington, K. J.**

jeb211136

Controlling and measuring dynamic odorant stimuli in the laboratory

**Gorur-Shandilya, S., Martelli, C., Demir, M. and Emonet, T.**

jeb207787

### RESEARCH ARTICLES

Experimental evidence that physical activity affects the multivariate associations among muscle attachments (entheses)

**Karakostis, F. A., Wallace, I. J., Konow, N. and Harvati, K.**

jeb213058

Habitual foot strike pattern does not affect simulated triceps surae muscle metabolic energy consumption during running

**Swinnen, W., Hoogkamer, W., De Groote, F.**

**and Vanwanseele, B.**

jeb212449

Photoresponses in the radiolar eyes of the fan worm

*Acromegalomma vesiculosum*

**Bok, M. J., Nilsson, D.-E. and Garm, A.**

jeb212779

Temporal integration of conflicting directional cues in sound localization

**Reichert, M. S. and Ronacher, B.**

jeb208751

Load carrying with flexible bamboo poles: optimization of a coupled oscillator system

**Schroeder, R. T., Bertram, J. E. A., Son Nguyen, V.,**

**Vinh Hac, V. and Croft, J. L.**

jeb203760

Effects of environmental enrichment on forebrain neural plasticity and survival success of stocked Atlantic salmon

**Mes, D., van Os, R., Gorissen, M., Ebbesson, L. O. E.,**

**Finstad, B., Mayer, I. and Vindas, M. A.**

jeb212258

Communication versus waterproofing: the physics of insect cuticular hydrocarbons

**Menzel, F., Morsbach, S., Martens, J. H., Räder, P., Hadjaje, S., Poizat, M. and Abou, B.**

jeb210807

Clutter negotiating ability in an ensemble of forest interior bats is driven by body mass

**Senawi, J. and Kingston, T.**

jeb203950

Signal-specific amplitude adjustment to noise in common bottlenose dolphins (*Tursiops truncatus*)

**Kragh, I. M., McHugh, K., Wells, R. S., Sayigh, L. S., Janik, V. M., Tyack, P. L. and Jensen, F. H.**

jeb216606

A critical role for Dop1-mediated dopaminergic signaling in the plasticity of behavioral and neuronal responses to sex pheromone in a moth

**Gassias, E., Durand, N., Demondion, E., Bourgeois, T., Aguilar, P., Bozzolan, F. and Debernard, S.**

jeb211979

Complementary effect of attachment devices in stick insects (Phasmatodea)

**Büscher, T. H. and Gorb, S. N.**

jeb209833

Nasal airflow in the pygmy slow loris (*Nycticebus pygmaeus*) based on a combined histological, computed tomographic and computational fluid dynamics methodology

**Smith, T. D., Craven, B. A., Engel, S. M., Bonar, C. J. and DeLeon, V. B.**

jeb207605

Thermal stress causes DNA damage and mortality in a tropical insect

**Lubawy, J., Daburon, V., Chowański, S., Słocińska, M. and Colinet, H.**

jeb213744

An amino-acid mixture can be both rewarding and punishing to larval *Drosophila melanogaster*

**Toshima, N., Kantar Weigelt, M., Weiglein, A., Boetzi, F. A. and Gerber, B.**

jeb209486