



Cover: The larva of a marine snail (*Crepidula fornicata*) generates powerful currents in the water around itself as it swims in search of food. Inserting brightly colored particles into the water near the animal allows these currents to be easily visualized using time-lapse photography, resulting in two large vortices becoming visible near the animal. Gilpin et al. (pp. 3411–3418) introduce a general visualization technique to identify large-scale coherent patterns generated by the motions of organisms at a variety of scales, a potentially new technique for analyzing locomotion, flocking and swimming without the need for more intensive computational tools. Photo credit: William Gilpin.

INSIDE JEB

- 3399** Fruit flies strengthen leg muscles when they gain weight; Turbulent oyster larvae at risk of starvation; Fastest whales and dolphins reinforce diaphragms; Hot crocs can't hide for as long

OUTSIDE JEB

- 3402** Fearful fairy-wrens have the blues; A new PDH leaves *Carassius* drunk and breathless; Fighting the cold as pigs do; People power reveals startling secrets; Honeybees remember that size matters

SHORT COMMUNICATION

- 3406** Phenotypic plasticity of muscle fiber type in the pectoral fins of *Polypterus senegalus* reared in a terrestrial environment
Du, T. Y. and Standen, E. M.

METHODS & TECHNIQUES

- 3411** Flowtrace: simple visualization of coherent structures in biological fluid flows
Gilpin, W., Prakash, V. N. and Prakash, M.

RESEARCH ARTICLES

- 3419** Turbulence induces metabolically costly behaviors and inhibits food capture in oyster larvae, causing net energy loss
Fuchs, H. L., Specht, J. A., Adams, D. K. and Christman, A. J.
- 3432** Changes of loggerhead turtle (*Caretta caretta*) dive behavior associated with tropical storm passage during the inter-nesting period
Wilson, M., Tucker, A. D., Beedholm, K. and Mann, D. A.
- 3442** Thermal imprinting modifies bone homeostasis in cold-challenged sea bream (*Sparus aurata*)
Mateus, A. P., Costa, R., Gisbert, E., Pinto, P. I. S., Andree, K. B., Estévez, A. and Power, D. M.
- 3455** The nervous system does not compensate for an acute change in the balance of passive force between synergist muscles
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- 3464** Controlling thoracic pressures in cetaceans during a breath-hold dive: importance of the diaphragm
Lillie, M. A., Vogl, A. W., Raverty, S., Haulena, M., McLellan, W. A., Stenson, G. B. and Shadwick, R. E.
- 3478** Honeybees in a virtual reality environment learn unique combinations of colour and shape
Rusch, C., Roth, E., Vinauger, C. and Riffell, J. A.
- 3488** Avian thermoregulation in the heat: evaporative cooling capacity of arid-zone Caprimulgiformes from two continents
Talbot, W. A., McWhorter, T. J., Gerson, A. R., McKechnie, A. E. and Wolf, B. O.

- 3499** Role of outstretched forelegs of flying beetles revealed and demonstrated by remote leg stimulation in free flight
Li, Y., Cao, F., Vo Doan, T. T. and Sato, H.
- 3508** Molecular plasticity and functional enhancements of leg muscles in response to hypergravity in the fruit fly *Drosophila melanogaster*
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- 3519** Maximum thermal limits of coral reef damselfishes are size dependent and resilient to near-future ocean acidification
Clark, T. D., Roche, D. G., Binning, S. A., Speers-Roesch, B. and Sundin, J.
- 3527** Chronic warm exposure impairs growth performance and reduces thermal safety margins in the common triplefin fish (*Forsterygion lapillum*)
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- 3536** A mosquito entomoglyceroporin, *Aedes aegypti* AQP5, participates in water transport across the Malpighian tubules of larvae
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- 3545** Three-dimensional trajectories affect the epaxial muscle activity of arboreal snakes crossing gaps
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- 3556** Physiological mechanisms constraining ectotherm fright-dive performance at elevated temperatures
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- 3579** DNA methylation profiles in red blood cells of adult hens correlate with their rearing conditions
Pértille, F., Brantsæter, M., Nordgreen, J., Coutinho, L. L., Janczak, A. M., Jensen, P. and Guerrero-Bosagna, C.
- 3588** A peculiar mechanism of bite-force enhancement in lungless salamanders revealed by a new geometric method for modeling muscle moments
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- 3598** Virus interferes with host-seeking behaviour of mosquito
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