Cover: A juvenile Nile crocodile (Crocodylus niloticus) floats with his head half-submerged in the water. The bodies of crocodilians are dotted with thousands of small, domed skin elevations that have been hypothesized to have a variety of sensory functions. Using alligators and crocodiles, Leitch and Catania (pp. 4217–4230) have explored the structure and innervation of these receptors and have recorded neural activity related to their stimulation. They have found that the organs act as sensitive touch receptors – even surpassing the sensitivity of the human fingertip – and act in a number of predatory behaviors. Photo credit: D. Leitch.

Inside JEB

Croc jaws more sensitive than human fingertips i; Cuttlefish embryos learn before hatching i; Crabs smell fear through antennules ii; Gregarious electric fish adjust to maintain social envelope iii

Outside JEB

Warmer nurseries, fitter fish iv; The fly eye: a model for retinal degeneration v; The gene that gates horse gaits v; Beetles use bubbles to stick underwater vi

Editorial

Biewener, A. A., Dickinson, M. H. and Lauder, G. V. Editorial policy on computational, simulation and/or robotic papers. 4051

JEB Classics

Wang, T. and Malte, H. A JEB Classic on fish exercise. 4052–4054

Research Articles

Stoessel, A. and Fischer, M. S. Comparative intralimb coordination in avian bipedal locomotion. 4055–4069


Veilleux, C. C. and Cummings, M. E. Nocturnal light environments and species ecology: implications for nocturnal color vision in forests. 4085–4096


Berg Robertson, A. M. and Biewener, A. A. Muscle function during takeoff and landing flight in the pigeon (Columba livia). 4104–4114

Provini, P., Tobalske, B. W., Crandell, K. E. and Abourachid, A. Transition from leg to wing forces during take-off in birds. 4115–4124

► Romagny, S., Darmeillaq, A.-S., Guibé, M., Bellanger, C. and Dickel, L. Feel, smell and see in an egg: emergence of perception and learning in an immature invertebrate, the cuttlefish embryo. 4125–4130

► Tremblay, I., Guderley, H. E. and Himmelman, J. H. Swimming away or clamming up: the use of phasic and tonic adductor muscles during escape responses varies with shell morphology in scallops. 4131–4143

► Biancardi, C. M. and Minetti, A. E. Biomechanical determinants of transverse and rotary gallop in cursorial mammals. 4144–4156

► Rodriguez, E. C. and Robertson, R. M. Protective effect of hypothermia on brain potassium homeostasis during repetitive anoxia in Drosophila melanogaster. 4157–4165


► Weissburg, M., Atkins, L., Berkenkamp, K. and Mankin, D. Dine or dash? Turbulence inhibits blue crab navigation in attractive–aversive odor plumes by altering signal structure encoded by the olfactory pathway. 4175–4182


► Stamper, S. A., Madhav, M. S., Cowan, N. J. and Fortune, E. S. Beyond the Jamming Avoidance Response: weakly electric fish respond to the envelope of social electro sensory signals. 4196–4207

Ho, D. H. and Burggren, W. W. Parental hypoxic exposure confers offspring hypoxia resistance in zebrafish (Danio rerio). 4208–4216


Erratum

Yanase, K., Herbert, N. A. and Montgomery, J. C. Disrupted flow sensing impairs hydrodynamic performance and increases the metabolic cost of swimming in the yellowtail kingfish, Seriola lalandi. 4231

► Article featured ‘Inside JEB’