



Cover: Action sequence of the medicinal leech, *Hirudo verbana*, showing its stereotypical arched feeding posture, which was elicited by placing a layer of Parafilm wax on top of a warmed surface. The leech first explores the warmed surface (left), then attaches its sucker (middle) and finally everts its three jaws within its sucker (right). Coordinated pharyngeal pumping movements are eventually elicited, as shown by the body constriction present in the anterior half of the animal (right). Mesce et al. (jeb175687) describe, for the first time in any leech species, the anatomical and physiological aspects of the stomatogastric nervous system that controls feeding-related behaviours. Photo credit: Morgan Newhoff, Joshua Puhl, Anthony Auletta and Karen Mesce.

INSIDE JEB

Many head designs, one super slurp

Knight, K.

jeb180315

Wriggling sea squirt larvae teach us how nerves control behaviour

Knight, K.

jeb180299

Splayed legs allow flattie spiders to turn in the blink of an eye

Knight, K.

jeb177634

Hive-bound worker bees lose sense of taste thanks to insecticides and weed killers

Knight, K.

jeb180307

Proline protects frozen malt fly larvae from damage

Knight, K.

jeb179556

Pythons build up brains after digesting dinner

Knight, K.

jeb180281

OUTSIDE JEB

Polar bears in action!

Alderman, S.

jeb169987

Mantis shrimp are the key to smashing new materials

Evans, A.

jeb169953

Redband trout thrive in a hot desert stream

Zhang, Y.

jeb178590

In rough waters, sea bass should stick together

Amador, M. H. B.

jeb169979

What eyes can tell

Nowack, J.

jeb169961

COMMENTARY

Robotics-inspired biology

Gravish, N. and Lauder, G. V.

jeb138438

REVIEW

The tongue as a gripper

Noel, A. C. and Hu, D. L.

jeb176289

SHORT COMMUNICATION

Food consumption increases cell proliferation in the python brain

Habroun, S. S., Schaffner, A. A., Taylor, E. N. and Strand, C. R.

jeb173377

METHODS AND TECHNIQUES

A new research paradigm for bivariate allometry: combining ANOVA and non-linear regression

Packard, G. C.

jeb177519

Measuring metabolic rates of small terrestrial organisms by fluorescence-based closed-system respirometry

Tomlinson, S., Dalziell, E. L., Withers, P. C., Lewandrowski, W., Dixon, K. W. and Merritt, D. J.

jeb172874

RESEARCH ARTICLES

Conserved spatio-temporal patterns of suction-feeding flows across aquatic vertebrates: a comparative flow visualization study

Jacobs, C. N. and Holzman, R.

jeb174912

Photoreceptor specialization and the visuomotor repertoire of the primitive chordate *Ciona*

Salas, P., Vinaithirthan, V., Newman-Smith, E., Kourakis, M. J. and Smith, W. C.

jeb177972

The effect of air resistance on the jump performance of a small parasitoid wasp, *Anagyrus pseudococcii* (Encyrtidae)

Urca, T. and Ribak, G.

jeb177600

Patterns of mitochondrial membrane remodeling parallel functional adaptations to thermal stress

Chung, D. J., Sparagna, G. C., Chicco, A. J. and Schulte, P. M.

jeb174458

Biomechanics of omnidirectional strikes in flat spiders

Zeng, Y. and Crews, S.

jeb166512

Impaired associative learning after chronic exposure to pesticides in young adult honey bees

Mengoni Goñalons, C. and Farina, W. M.

jeb176644

Fight, fatigue and flight: narrowing of attention to a threat compensates for decreased anti-predator vigilance

Ota, K.

jeb168047

High activity before breeding improves reproductive performance by enhancing mitochondrial function and biogenesis
Zhang, Y., Brasher, A. L., Park, N. R., Taylor, H. A., Kavazis, A. N. and Hood, W. R.
jeb177469

Anti-diuretic action of a CAPA neuropeptide against a subset of diuretic hormones in the disease vector *Aedes aegypti*
Sajadi, F., Curcuruto, C., Al Dhaheri, A. and Paluzzi, J.-P. V.
jeb177089

Three-dimensional analysis of the fast-start escape response of the least killifish, *Heterandria formosa*
Fleuren, M., van Leeuwen, J. L., Quicazan-Rubio, E. M., Pieters, R. P. M., Pollux, B. J. A. and Voesenek, C. J.
jeb168609

Emptying and refilling of slime glands in Atlantic (*Myxine glutinosa*) and Pacific (*Eptatretus stoutii*) hagfishes
Schorno, S., Gillis, T. E. and Fudge, D. S.
jeb172254

Thermal analysis of ice and glass transitions in insects that do and do not survive freezing
Rozsypal, J., Moos, M., Šimek, P. and Koštál, V.
jeb170464

Molecular and functional characterization of the Gulf toadfish serotonin transporter SLC6A4
Amador, M. H. B. and McDonald, M. D.
jeb170928

Miniaturisation decreases visual navigational competence in ants
Palavalli-Nettimi, R. and Narendra, A.
jeb177238

The membrane pacemaker hypothesis: novel tests during the ontogeny of endothermy
Price, E. R., Sirsat, T. S., Sirsat, S. K. G., Curran, T., Venables, B. J. and Dzialowski, E. M.
jeb174466

The stomatogastric nervous system of the medicinal leech: its anatomy, physiology and associated aminergic neurons
Mesce, K. A., Alania, M., Gaudry, Q. and Puhl, J. G.
jeb175687

Environmental calcium and variation in yolk sac size influence swimming performance in larval lake sturgeon (*Acipenser fulvescens*)
Deslauriers, D., Svendsen, J. C., Genz, J., Wall, A. J., Baktoft, H., Enders, E. C. and Anderson, W. G.
jeb164533

CORRECTION

Correction: Are we what we eat? Changes to the feed fatty acid composition of farmed salmon and its effects through the food chain (doi: 10.1242/jeb.161521)
Sissener, N. H.
jeb180976