



**Cover:** Springtails (Collembola) are ancient hexapods living primarily in the upper layer of the soil. However, some species, like the water springtail (*Podura aquatica*), live on the surface of calm waters. This is the only springtail species that has been shown behaviourally to be able to detect the polarization of light, which is a typical ability of many aquatic insect species. Egri and Kriska (Jeb199760) demonstrate that the positive polarotaxis of *P. aquatica* functions in the blue spectral range but that longer wavelengths may also mediate important visual information for this species. Photo credit: Imre Potyó.

## INSIDE JEB

Clownfish larvae J-curl to catch copepods

**Knight, K.**

jeb206177

Castaway cottonmouths depend on rain to slake thirst

**Knight, K.**

jeb205526

Tropical paper wasps serve long apprenticeships

**Knight, K.**

jeb204230

Hikers trade speed and efficiency for stability

**Knight, K.**

jeb204222

## OUTSIDE JEB

Genes of the world's coolest fish

**Borowiec, B. G.**

jeb192757

Are fish self-aware?

**McCallum, E.**

jeb192781

It's a small world on a hot leaf

**Turner, J. M.**

jeb192773

The vertebrate story lies in the fossil of a slimy fish

**Birceanu, O.**

jeb192799

Singing mice take turns talking

**Vahaba, D. M.**

jeb192765

## CONVERSATION

Early-career researchers: an interview with Heath MacMillan

jeb205476

## OBITUARY

Ewald R. Weibel (1929–2019)

**Hoppeler, H. and Lindstedt, S. L.**

jeb205260

## SHORT COMMUNICATION

Predatory posture and performance in a precocious larval fish targeting evasive copepods

**Fashingbauer, M. C., Tuttle, L. J., Robinson, H. E., Strickler, J. R., Hartline, D. K. and Lenz, P. H.**

jeb191411

## METHODS AND TECHNIQUES

A new, practicable and economical cage design for experimental studies on small honey bee colonies

**Sonter, C. A., Rader, R. and Wilson, S. C.**

jeb200998

## RESEARCH ARTICLES

Selection for longer limbs in mice increases bone stiffness and brittleness, but does not alter bending strength

**Cosman, M. N., Britz, H. M. and Rolian, C.**

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Cranial kinesis in the miniaturised lizard *Ablepharus kitaibelii* (Squamata: Scincidae)

**Handschuh, S., Natchev, N., Kummer, S., Beisser, C. J., Lemell, P., Herrel, A. and Vergilov, V.**

jeb198291

Effects of group size on learning and memory in the honey bee *Apis mellifera*

**Tsvetkov, N., Cook, C. N. and Zayed, A.**

jeb193888

Fatigue and recovery measured with dynamic properties versus isometric force: effects of exercise intensity

**Krüger, R. L., Aboodarda, S. J., Jaimes, L. M., MacIntosh, B. R., Samozino, P. and Millet, G. Y.**

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Renal acid excretion contributes to acid–base regulation during hypercapnia in air-exposed swamp eel (*Monopterus albus*)

**Thin, P. V., Thanh-Huong, D. T., Gam, L. T. H., Damsgaard, C., Phuong, N. T., Bayley, M. and Wang, T.**

jeb198259

Ammonia-N exposure alters neurohormone levels in the hemolymph and mRNA abundance of neurohormone receptors and associated downstream factors in the gills of *Litopenaeus vannamei*

**Si, L., Pan, L., Wang, H. and Zhang, X.**

jeb200204

Avian surface reconstruction in free flight with application to flight stability analysis of a barn owl and peregrine falcon

**Durston, N. E., Wan, X., Liu, J. G. and Windsor, S. P.**

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Water relations of an insular pit viper

**Sandfoss, M. R. and Lillywhite, H. B.**

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Dim-light vision in jumping spiders (Araneae, Salticidae): identification of prey and rivals

**Cerveira, A. M., Jackson, R. R. and Nelson, X. J.**

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Phenotypic plasticity in locomotor performance of a monophyletic group of weevils accords with the 'warmer is better' hypothesis  
**Treasure, A. M. and Chown, S. L.**  
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Getting older, getting smarter: ontogeny of foraging behaviour in the tropical social wasp *Ropalidia marginata*  
**Mandal, S. and Brahma, A.**  
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Stiffness gradients facilitate ovipositor bending and spatial probing control in a parasitic wasp  
**Cerkvenik, U., van Leeuwen, J. L., Kovalev, A., Gorb, S. N., Matsumura, Y. and Gussekloo, S. W. S.**  
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Autonomic cardiac regulation facilitates acute heat tolerance in rainbow trout: *in situ* and *in vivo* support  
**Gilbert, M. J. H., Rani, V., McKenzie, S. M. and Farrell, A. P.**  
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Cost of transport is a repeatable trait but is not determined by mitochondrial efficiency in zebrafish (*Danio rerio*)  
**Jahn, M. and Seebacher, F.**  
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Joint angular excursions during cyclical behaviors differ between tetrapod feeding and locomotor systems  
**Granatosky, M. C., McElroy, E. J., Laird, M. F., Iriarte-Diaz, J., Reilly, S. M., Taylor, A. B. and Ross, C. F.**  
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How does the water springtail optically locate suitable habitats? Spectral sensitivity of phototaxis and polarotaxis in *Podura aquatica*  
**Egri, Á. E. and Kriska, G.**  
jeb199760

Severe thermoregulatory deficiencies in mice with a deletion in the titin gene *TTN*  
**Miyano, C. A., Orezza, S. F., Buck, C. L. and Nishikawa, K. C.**  
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Is conservation of center of mass mechanics a priority in human walking? Insights from leg-length asymmetry experiments  
**McDonald, K. A., Devaprakash, D. and Rubenson, J.**  
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Preferred walking speed on rough terrain: is it all about energetics?  
**Gast, K., Kram, R. and Riemer, R.**  
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Respiratory sinus arrhythmia is a major component of heart rate variability in undisturbed, remotely monitored rattlesnakes, *Crotalus durissus*  
**Sanchez, P. V. W., Taylor, E. W., Duran, L. M., Cruz, A. L., Dias, D. P. M. and Leite, C. A. C.**  
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