



**Cover:** The crab *Neohelice granulata* inhabits intertidal environments where light reflections provide a strong horizontally polarized light field. Like other semi-terrestrial crabs living in flat habitats, *Neohelice* tends to keep its eyes aligned with the visual horizon. Laboratory-based studies performed in this crab species by Basnak et al. (jeb173369) show maximum contrast sensitivity for objects and background e-vectors aligned with the vertical and horizontal orientations. Thus, maintaining a stable state of the eye likely ensures maximum polarization sensitivity in the animal's natural environment. Photo credit: Verónica Pérez-Schuster.

## INSIDE JEB

Choosy hoverflies make swift exit to evade predator wasps  
**Knight, K.**  
jeb183004

Brains, not biochemistry, speed up hot flies  
**Knight, K.**  
jeb183020

Harassed nestlings boost immune system when danger is at hand  
**Knight, K.**  
jeb183012

Protein synthesis marks out fastest growing oyster larvae  
**Knight, K.**  
jeb181867

## COMMENTARY

Of what use is connectomics? A personal perspective on the *Drosophila* connectome  
**Meinertzhagen, I. A.**  
jeb164954

## REVIEWS

Scaling of avian bipedal locomotion reveals independent effects of body mass and leg posture on gait  
**Daley, M. A. and Birn-Jeffery, A.**  
jeb152538

Passive water collection with the integument: mechanisms and their biomimetic potential  
**Comanns, P.**  
jeb153130

## SHORT COMMUNICATIONS

Reduced non-bicarbonate skeletal muscle buffering capacity in mice with the mini-muscle phenotype  
**Kay, J. C., Ramirez, J., Contreras, E. and Garland, T., Jr**  
jeb172478

IGF-1 induces SOCS-2 but not SOCS-1 and SOCS-3 transcription in juvenile Nile tilapia (*Oreochromis niloticus*)  
**Liu, C.-Z., Luo, Y., Limbu, S. M., Chen, L.-Q. and Du, Z.-Y.**  
jeb179291

## RESEARCH ARTICLES

Sensitive high-frequency hearing in earless and partially eared harlequin frogs (*Atelopus*)  
**Womack, M. C., Christensen-Dalsgaard, J., Coloma, L. A. and Hoke, K. L.**  
jeb169664

Polarized object detection in crabs: a two-channel system  
**Basnak, M. A., Pérez-Schuster, V., Hermitte, G. and Berón de Astrada, M.**  
jeb173369

Acid–base regulation in the air-breathing swamp eel (*Monopterus albus*) at different temperatures  
**Thinh, P. V., Phuong, N. T., Brauner, C. J., Thanh Huong, D. T., Wood, A. T., Kwan, G. T., Conner, J. L., Bayley, M. and Wang, T.**  
jeb172551

Combined use of two supervised learning algorithms to model sea turtle behaviours from tri-axial acceleration data  
**Jeanet, L., Dell'Amico, F., Forin-Wiart, M.-A., Coutant, M., Bonola, M., Etienne, D., Gresser, J., Regis, S., Lecerf, N., Lefebvre, F., de Thoisy, B., Le Maho, Y., Brucker, M., Châtelain, N., Laesser, R., Crenner, F., Handrich, Y., Wilson, R. and Chevallier, D.**  
jeb177378

Visual approach computation in feeding hoverflies  
**Thyselius, M., Gonzalez-Bellido, P. T., Wardill, T. J. and Nordström, K.**  
jeb177162

Gestational low-protein intake enhances whole-kidney miR-192 and miR-200 family expression and epithelial-to-mesenchymal transition in rat adult male offspring  
**Sene, L. B., Rizzi, V. H. G., Gontijo, J. A. R. and Boer, P. A.**  
jeb171694

Multiple spectral channels in branchiopods. I. Vision in dim light and neural correlates  
**Lessios, N., Rutowski, R. L., Cohen, J. H., Sayre, M. E. and Strausfeld, N. J.**  
jeb165860

Multiple spectral channels in branchiopods. II. Role in light-dependent behavior and natural light environments  
**Lessios, N., Rutowski, R. L. and Cohen, J. H.**  
jeb165878

The effect of rearing environment on memory formation  
**Rothwell, C. M., Spencer, G. E. and Lukowiak, K.**  
jeb180521

Cues for cavity nesters: investigating relevant zeitgebers for emerging leafcutting bees, *Megachile rotundata*  
**Bennett, M. M., Rinehart, J. P., Yocum, G. D., Doetkott, C. and Greenlee, K. J.**  
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Thermosensory perception regulates speed of movement in response to temperature changes in *Drosophila melanogaster*  
**Soto-Padilla, A., Ruijsink, R., Sibon, O. C. M., van Rijn, H. and Billeter, J.-C.**  
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Kinematics of burrowing by peristalsis in granular sands  
**Dorgan, K. M.**  
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Expression of calcium channel transcripts in the zebrafish heart: dominance of T-type channels  
**Haverinen, J., Hassinen, M., Dash, S. N. and Vornanen, M.**  
jeb179226

Biochemical bases of growth variation during development: a study of protein turnover in pedigreed families of bivalve larvae (*Crassostrea gigas*)  
**Pan, T.-C. F., Applebaum, S. L., Frieder, C. A. and Manahan, D. T.**  
jeb171967

Nest predation risk modifies nestlings' immune function depending on the level of threat  
**Roncalli, G., Colombo, E., Soler, M., Tieleman, B. I., Versteegh, M. A., Ruiz-Raya, F., Gómez Samblas, M. and Ibáñez-Álamo, J. D.**  
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Behavioral and physiological adaptations to high-flow velocities in chubs (*Gila* spp.) native to Southwestern USA  
**Moran, C. J., Gerry, S. P., O'Neill, M. W., Rzucidlo, C. L. and Gibb, A. C.**  
jeb158972

#### CORRECTIONS

Correction: Sex reversal induces size and performance differences among females of the African pygmy mouse, *Mus minutoides* (doi: 10.1242/jeb.157552)  
**GINOT, S., CLAUDE, J., PEREZ, J. and VEYRUNES, F.**  
jeb183392

Correction: Take-off mechanisms in parasitoid wasps (doi: 10.1242/jeb.161463)  
**BURROWS, M. and DORSENKO, M.**  
jeb184697