



**Cover:** Several groups of nocturnal insects have independently evolved ultrasound hearing so that they can detect echolocation calls of approaching bats and evade capture. Amongst the many neuropteran insects, only certain green lacewings (Chrysopidae) were known to share this ability. Holderied et al. (jeb189308) have investigated several members of the large neuropteran family of antlions (Myrmeleontidae; ~2000 species) and discovered that they all respond to ultrasound with similar evasive flight responses. Antlions, however, lack the ear of green lacewings. Where could the unknown antlion ear be located on this microCT false colour image of an adult antlion (*Creoleon irroratus*)? Photo credit: Marc Holderied.

### INSIDE JEB

Super freezing larvae survive despite incurred damage  
**Knight, K.**  
jeb192542

Listening antlions drop to evade dining bats  
**Knight, K.**  
jeb192559

### OUTSIDE JEB

Caution! A firefly approaches...  
**McCallum, E.**  
jeb170266

Eating poop makes naked mole-rats motherly  
**Rozen, D. E.**  
jeb170183

Hibernating squirrels tweak sodium channels to rest their brain  
**Vahaba, D. M.**  
jeb170258

Widespread 'gassing off' in killifishes  
**Borowiec, B. G.**  
jeb170340

Enemy at the bat cave door  
**Birceanu, O.**  
jeb170274

### COMMENTARY

Deciphering  $\dot{V}_{O_{2,max}}$ : limits of the genetic approach  
**Hoppeler, H.**  
jeb164327

### REVIEW

Can variation among hypoxic environments explain why different fish species use different hypoxic survival strategies?  
**Mandic, M. and Regan, M. D.**  
jeb161349

### SHORT COMMUNICATION

An exercise-induced improvement in isolated skeletal muscle contractility does not affect the performance-enhancing benefit of 70  $\mu\text{mol l}^{-1}$  caffeine treatment  
**Tallis, J., Higgins, M. F., Cox, V. M., Duncan, M. J. and James, R. S.**  
jeb190132

### RESEARCH ARTICLES

Neuromechanical coupling within the human triceps surae and its consequence on individual force-sharing strategies  
**Crouzier, M., Lacourpaille, L., Nordez, A., Tucker, K. and Hug, F.**  
jeb187260

Effects of temperature on survival, moulting, and expression of neuropeptide and mTOR signalling genes in juvenile Dungeness crab (*Metacarcinus magister*)  
**Wittmann, A. C., Benrabaa, S. A. M., López-Cerón, D. A., Chang, E. S. and Mykles, D. L.**  
jeb187492

Effects of both cold and heat stress on the liver of the giant spiny frog (*Quasipaa spinosa*): stress response and histological changes  
**Liu, Z.-P., Gu, W.-B., Tu, D.-D., Zhu, Q.-H., Zhou, Y.-L., Wang, C., Wang, L.-Z. and Shu, M.-A.**  
jeb186379

Taurine activates glycine and GABA<sub>A</sub> receptor currents in anoxia-tolerant painted turtle pyramidal neurons  
**Miles, A. R., Hawrysh, P. J., Hossein-Javaheri, N. and Buck, L. T.**  
jeb181529

Electrical interactions between photoreceptors in the compound eye of *Periplaneta americana*  
**Saari, P., Immonen, E.-V., French, A. S., Torkkeli, P. H., Liu, H., Heimonen, K. and Frolov, R. V.**  
jeb189340

Insect fat body cell morphology and response to cold stress is modulated by acclimation  
**Des Marteaux, L. E., Štětina, T. and Košťál, V.**  
jeb189647

Limits to sustained energy intake. XXIX. The case of the golden hamster (*Mesocricetus auratus*)  
**Ohrnberger, S. A., Hambly, C., Speakman, J. R. and Valencak, T. G.**  
jeb183749

Controlled feeding experiments with diets of different abrasiveness reveal slow development of mesowear signal in goats (*Capra aegagrus hircus*)  
**Ackermans, N. L., Winkler, D. E., Schulz-Kornas, E., Kaiser, T. M., Müller, D. W. H., Kircher, P. R., Hummel, J., Clauss, M. and Hatt, J.-M.**  
jeb186411

Aerobic capacities and swimming performance of polar cod (*Boreogadus saida*) under ocean acidification and warming conditions  
**Kunz, K. L., Claireaux, G., Pörtner, H.-O., Knust, R. and Mark, F. C.**  
jeb184473

Optomotor steering and flight control requires a specific sub-section of the compound eye in the hawkmoth, *Manduca sexta*  
**Copley, S., Parthasarathy, K. and Willis, M. A.**  
jeb178210

How temperature influences the viscosity of hornworm hemolymph  
**Kenny, M. C., Giarra, M. N., Granata, E. and Socha, J. J.**  
jeb186338

Aquatic versus terrestrial crab skeletal support: morphology, mechanics, molting and scaling  
**Taylor, J. R. A.**  
jeb185421

Physiological responses of ionotropic histamine receptors, P<sub>x</sub>HCLA and P<sub>x</sub>HCLB, to neurotransmitter candidates in a butterfly, *Papilio xuthus*  
**Akashi, H. D., Chen, P.-J., Akiyama, T., Terai, Y., Wakakuwa, M., Takayama, Y., Tominaga, M. and Arikawa, K.**  
jeb183129

Head width influences flow sensing by the lateral line canal system in fishes  
**Yanagitsuru, Y. R., Akanyeti, O. and Liao, J. C.**  
jeb180877

No short-term physiological costs of offspring care in a cooperatively breeding bird  
**Guindre-Parker, S. and Rubenstein, D. R.**  
jeb186569

Comparing the impacts of macronutrients on life-history traits in larval and adult *Drosophila melanogaster*: the use of nutritional geometry and chemically defined diets  
**Jang, T. and Lee, K. P.**  
jeb181115

Ultrasound avoidance by flying antlions (Myrmeleontidae)  
**Holderied, M. W., Thomas, L. A. and Korine, C.**  
jeb189308