



**Cover:** During their migrations, many fishes including Arctic char (*Salvelinus alpinus*) often encounter rapid increases in temperature that can impair their heart function. Gilbert et al. (jeb244055) used a mobile Arctic laboratory to determine whether wild migrating Arctic char could rapidly acclimate to warm temperatures and partially mitigate such impairments. Following just 3 days of warm acclimation, Arctic char reset their heart rate to help counteract the effects of warming and improved the heat tolerance of their hearts. Such rapid plasticity may help migratory fish partially mitigate the negative impacts of high temperatures. Photo credit: Matthew J. H. Gilbert.

### INSIDE JEB

Wildflower flavonoids could protect neonicotinoid-ravaged bee memories

**Knight, K.**  
jeb244913

Thirst protects cottonmouths from infection

**Knight, K.**  
jeb244896

### OUTSIDE JEB

Hibernating ground squirrels keep their mitochondria supercomplex

**Chung, D. J.**  
jeb243512

Dinosaurs weren't so cool

**Country, M. W.**  
jeb243511

Birds get a leg-up from their beaks

**Basu, C.**  
jeb243510

Crowded three-spined stickleback embryos are at a disadvantage

**Murillo, A.**  
jeb243513

Friends warn friends about feasts and famines

**Rossi, G.**  
jeb243514

### SHORT COMMUNICATIONS

Rapid cardiac thermal acclimation in wild anadromous Arctic char (*Salvelinus alpinus*)

**Gilbert, M. J. H., Middleton, E. K., Kanayok, K., Harris, L. N., Moore, J.-S., Farrell, A. P. and Speers-Roesch, B.**  
jeb244055

Sea turtle hatchlings can distinguish between coastal and oceanic seawaters

**Soeiro, G., Mendes da Silva, E. and Leduc, A. O. H. C.**  
jeb244702

### RESEARCH ARTICLES

Orientation in the European common frog *Rana temporaria* during the first wintering migration

**Shakhparonov, V. V., Golovlev, A. P., Grytshyshina, E. E. and Bolshakova, A. A.**  
jeb243761

The flavonoid rutin protects the bumble bee *Bombus impatiens* against cognitive impairment by imidacloprid and fipronil

**Riveros, A. J. and Gronenberg, W.**  
jeb244526

Seasonal adjustments in body mass and basal thermogenesis in Chinese hwameis (*Garrulax canorus*): the roles of temperature and photoperiod

**Li, C., Liu, C., Hu, P., Zheng, X., Li, M. and Liu, J.**  
jeb244502

The role of neuropeptides in regulating ecdysis and reproduction in the hemimetabolous insect *Rhodnius prolixus*

**Sterkel, M., Volonté, M., Albornoz, M. G., Wulff, J. P., Sánchez, M. H., Terán, P. M., Ajmat, M. T. and Ons, S.**  
jeb244696

Development of dim-light vision in the nocturnal reef fish family Holocentridae. I: Retinal gene expression

**Fogg, L. G., Cortesi, F., Lecchini, D., Gache, C., Marshall, N. J. and de Busserolles, F.**  
jeb244513

Development of dim-light vision in the nocturnal reef fish family Holocentridae. II: Retinal morphology

**Fogg, L. G., Cortesi, F., Lecchini, D., Gache, C., Marshall, N. J. and de Busserolles, F.**  
jeb244740

Protein storage and reproduction increase in grasshoppers on a diet matched to the amino acids of egg yolk protein

**Hatle, J. D., Maslikova, V., Short, C. A., Bracey, D., Darmanjian, M., Morningstar, S., Reams, B., Mashanov, V. S., Jahan-Mihan, A. and Hahn, D. A.**  
jeb244450

Head removal enhances planarian electrotaxis

**Sabry, Z., Wang, R., Jahromi, A., Rabeler, C., Kristan, W. B. III and Collins, E.-M. S.**  
jeb243972

Intraspecific investigation of dehydration-enhanced innate immune performance and endocrine stress response to sublethal dehydration in a semi-aquatic species of pit viper

**Sandfoss, M. R., Brischoux, F. and Lillywhite, H. B.**  
jeb243894

Early exposure to UV radiation causes telomere shortening and poorer condition later in life

**Lundsgaard, N. U., Cramp, R. L. and Franklin, C. E.**  
jeb243924

Defensive shimmering responses in *Apis dorsata* are triggered by dark stimuli moving against a bright background

**Vijayan, S., Warrant, E. J. and Somanathan, H.**  
jeb244716

Spatial uniformity of action potentials indicates base-to-apex depolarization and repolarization of rainbow trout (*Oncorhynchus mykiss*) ventricle

**Badr, A., Hassinen, M. and Vornanen, M.**  
jeb244466