



**Cover:** Psittaciform birds synthesize exclusive pigments called psittacofulvins. Psittacofulvin-based colors partly overlap with those produced by the sulfurated form (pheomelanin) of melanins, the most abundant pigments in animals, as exemplified by the psittacofulvin-containing reddish feathers of Bourke's parrots *Neopsephotus bourkii* with the *opaline* mutation (pictured). Neves et al. (jeb225912) show that psittaciforms do not color their plumage with pheomelanin, probably driven by the benefits of avoiding functional redundancy between pigments. This contrasts with other animal melanins, which are composed of sulfurated and non-sulfurated forms in different ratios, and constitutes unique evidence of impairment of the mixed melanin-based pigmentation system. Photo credit: Philippe Rocher.

## INSIDE JEB

Pygmy mice whistle for the audience

**Knight, K.**

jeb229427

Surfing behind rocks costs trout dear when feeding

**Knight, K.**

jeb230086

Potassium leak short circuits trout heart at high temperatures

**Knight, K.**

jeb230169

Parrots discard dowdy pigments in favour of own brand

**Knight, K.**

jeb229591

Zebra finches adapt to cope well with extreme conditions

**Knight, K.**

jeb228981

Why bark beetles roam near and far

**Knight, K.**

jeb227991

## COMMENTARY

Improving estimates of diving lung volume in air-breathing marine vertebrates

**Fahlman, A., Sato, K. and Miller, P.**

jeb216846

## SHORT COMMUNICATIONS

Environmental estrogen exposure disrupts sensory processing and nociceptive plasticity in the cephalopod *Euprymna scolopes*

**Bazarini, S. N. and Crook, R. J.**

jeb218008

The teleost fish intestine is a major oxalate-secreting epithelium

**Whittamore, J. M.**

jeb216895

## METHODS & TECHNIQUES

A simple device to immobilize protists for electrophysiology and microinjection

**Kulkarni, A., Elices, I., Escoubet, N., Pontani, L.-L., Prevost, A. M. and Brette, R.**

jeb219253

## RESEARCH ARTICLES

Walking with added mass magnifies salient features of human foot energetics

**Papachatzis, N., Malcolm, P., Nelson, C. A. and Takahashi, K. Z.**

jeb207472

Oxygen consumption of drift-feeding rainbow trout: the energetic tradeoff between locomotion and feeding in flow

**Johansen, J. L., Akanyeti, O. and Liao, J. C.**

jeb220962

The sonar beam of *Macrophyllum macrophyllum* implies ecological adaptation under phylogenetic constraint

**Olsen, M. N., Surlykke, A. and Jakobsen, L.**

jeb223909

Pygmy mouse songs reveal anatomical innovations underlying acoustic signal elaboration in rodents

**Riede, T. and Pasch, B.**

jeb223925

Functional effect of vaterite – the presence of an alternative crystalline structure in otoliths alters escape kinematics of the brown trout

**Vignon, M. and Aymes, J.-C.**

jeb222034

Reduced ventricular excitability causes atrioventricular block and depression of heart rate in fish at critically high temperatures

**Haverinen, J. and Vornanen, M.**

jeb225227

Body temperature maintenance acclimates in a winter-tenacious songbird

**Stager, M., Senner, N. R., Tobalske, B. W. and Cheviron, Z. A.**

jeb221853

Discrete modulation of anti-predatory and agonistic behaviors by sensory communication signals in juvenile crayfish

**Exum, A. C., Sun, L. M. and Herberholz, J.**

jeb226704

Vitellogenin offsets oxidative costs of reproduction in female painted dragon lizards

**Lindsay, W. R., Friesen, C. R., Sihlbom, C., Bergström, J., Berger, E., Wilson, M. R. and Olsson, M.**

jeb221630

Effects of membrane fatty acid composition on cellular metabolism and oxidative stress in dermal fibroblasts from small and large breed dogs

**Jimenez, A. G., Winward, J. D., Walsh, K. E. and Champagne, A. M.**

jeb221804

Sex-specific molecular specialization and activity rhythm-dependent gene expression in honey bee antennae

**Jain, R. and Brockmann, A.**

jeb217406

Spatial orientation based on multiple visual cues in non-migratory monarch butterflies  
**Franzke, M., Kraus, C., Dreyer, D., Pfeiffer, K., Beetz, M. J., Stöckl, A. L., Foster, J. J., Warrant, E. J. and el Jundi, B.**  
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Impairment of mixed melanin-based pigmentation in parrots  
**Neves, A. C. de O., Galván, I. and Van den Abeele, D.**  
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Physiological responses of wild zebra finches (*Taeniopygia guttata*) to heatwaves  
**Cooper, C. E., Hurley, L. L., Deviche, P. and Griffith, S. C.**  
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Stable mitochondrial CICIII<sub>2</sub> supercomplex interactions in reptiles versus homeothermic vertebrates  
**Bundgaard, A., James, A. M., Harbour, M. E., Murphy, M. P. and Fago, A.**  
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Immunosenescence and its influence on reproduction in a long-lived vertebrate  
**Judson, J. M., Reding, D. M. and Bronikowski, A. M.**  
jeb223057

Oxygen supply capacity in animals evolves to meet maximum demand at the current oxygen partial pressure regardless of size or temperature  
**Seibel, B. A. and Deutsch, C.**  
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Mechanisms and consequences of flight polyphenisms in an outbreaking bark beetle species  
**Jones, K. L., Rajabzadeh, R., Ishangulyyeva, G., Erbilgin, N. and Evenden, M. L.**  
jeb219642

Impact of temperature on bite force and bite endurance in the leopard iguana (*Diplolaemus leopardinus*) in the Andes Mountains  
**Vicenzi, N., Laspiur, A., Sassi, P. L., Massarelli, R., Krenz, J. and Ibargüengoytí, N. R.**  
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Asymmetrical gait kinematics of free-ranging callitrichine primates in response to changes in substrate diameter and orientation  
**Dunham, N. T., McNamara, A., Shapiro, L. J., Phelps, T. and Young, J. W.**  
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A rapid intrinsic heart rate resetting response with thermal acclimation in rainbow trout, *Oncorhynchus mykiss*  
**Sutcliffe, R. L., Li, S., Gilbert, M. J. H., Schulte, P. M., Miller, K. M. and Farrell, A. P.**  
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## CORRESPONDENCE

The spleen as an unlikely source of red blood cells during activity in fishes  
**Hedrick, M. S., Olson, K. R. and Hillman, S. S.**  
jeb223586

## CORRESPONDENCE RESPONSE

Response to 'The spleen as an unlikely source of red blood cells during increased activity in fishes'  
**Brijs, J., Axelsson, M., Rosengren, M., Jutfelt, F. and Gräns, A.**  
jeb226498

## RETRACTIONS

Retraction: Whale jaw joint is a shock absorber  
**Werth, A. J. and Ito, H.**  
jeb230763

Retraction: Shock-absorbing pad protects whales' jaws when dining  
**Knight, K.**  
jeb230771

## CORRECTION

Correction: The neonicotinoid imidacloprid impairs honey bee aversive learning of simulated predation  
**Zhang, E. and Nieh, J. C.**  
jeb230060