



Cover: A male hoverfly *Eristalis tenax*, showing enlarged facets of the fronto-dorsal eye. The diameter of facet lenses is larger here than elsewhere, leading to increased light capture and thus contrast sensitivity (facet diameter eyemap, below right). The region of greatest spatial acuity is closer to the visual equator (interommatidial angle eyemap, below left). Straw, Warrant and O'Carroll (pp. 4339–4354) show that motion-detecting neurons with receptive fields corresponding to this bright zone exhibit faster temporal tuning than similar neurons in females. This sexual dimorphism may be a male specialization for chasing and intercepting females while flying. *f*, frontal; *d*, dorsal; *l*, lateral. (Photo: Andrew Straw)

▼ Inside JEB

Cocaine Stops Victims From Masking Memories i; How Spiders Spin i; Deep Sea Divers ii; Toadfish Cloaked In Urea iii

Outside JEB

I Feel Your Pain iv; Keeping Track Of The Steps v; How To Tell Whose Bite Is Biggest v; Male Neurons Respond To Female Pheromone vi; Acidic Absorbate Integral To Osmoregulation vii

Research Articles

Nieh, J. C., León, A., Cameron, S. and Vandame, R. Hot bumble bees at good food: thoracic temperature of feeding *Bombus wilsoniae* foragers is tuned to sugar concentration. 4185-4192

Smith, M. E., Coffin, A. B., Miller, D. L. and Popper, A. N. Anatomical and functional recovery of the goldfish (*Carassius auratus*) ear following noise exposure. 4193-4202

Rivera, G., Rivera, A. R. V., Dougherty, E. E. and Blob, R. W. Aquatic turning performance of painted turtles (*Chrysemys picta*) and functional consequences of a rigid body design. 4203-4213

McNeill, B. and Perry, S. F. The interactive effects of hypoxia and nitric oxide on catecholamine secretion in rainbow trout (*Oncorhynchus mykiss*). 4214-4223

Mailleux, A.-C., Detrain, C. and Deneubourg, J.-L. Starvation drives a threshold triggering communication. 4224-4229

Elofsson, H., Van Look, K. J. W., Sundell, K., Sundh, H. and Borg, B. Stickleback sperm saved by salt in ovarian fluid. 4230-4237

► **Tyack, P. L., Johnson, M., Aguilar Soto, N., Sturlese, A. and Madsen, P. T.** Extreme diving of beaked whales. 4238-4253

► **Barimo, J. F. and Walsh, P. J.** Use of urea as a chemosensory cloaking molecule by a bony fish. 4254-4261

Kleinlogel, S. and Marshall, N. J. Electrophysiological evidence for linear polarization sensitivity in the compound eyes of the stomatopod crustacean *Gonodactylus chiragra*. 4262-4272

► **Carter, K., Lukowiak, K., Schenk, J. O. and Sorg, B. A.** Repeated cocaine effects on learning, memory and extinction in the pond snail *Lymnaea stagnalis*. 4273-4282

Lester, C. W. and Costa, D. P. Water conservation in fasting northern elephant seals (*Mirounga angustirostris*). 4283-4294

Layne, J. E., Chen, P. W. and Gilbert, C. The role of target elevation in prey selection by tiger beetles (Carabidae: *Cicindela* spp.). 4295-4303

Chuang, S.-C., Lai, W.-S. and Chen, J.-H. Influence of ultraviolet radiation on selected physiological responses of earthworms. 4304-4312

Uriona, T. J. and Farmer, C. G. Contribution of the diaphragmaticus muscle to vital capacity in fasting and post-prandial American alligators (*Alligator mississippiensis*). 4313-4318

Andruchov, O., Andruchova, O. and Galler, S. The catch state of mollusc catch muscle is established during activation: experiments on skinned fibre preparations of the anterior byssus retractor muscle of *Mytilus edulis* L. using the myosin inhibitors orthovanadate and blebbistatin. 4319-4328

Hörak, P., Zilmer, M., Saks, L., Ots, I., Karu, U. and Zilmer, K. Antioxidant protection, carotenoids and the costs of immune challenge in greenfinches. 4329-4338

Straw, A. D., Warrant, E. J. and O'Carroll, D. C. A 'bright zone' in male hoverfly (*Eristalis tenax*) eyes and associated faster motion detection and increased contrast sensitivity. 4339-4354

► **Kojić, N., Bico, J., Clasen, C. and McKinley, G. H.** *Ex vivo* rheology of spider silk. 4355-4362

Dangles, O., Pierre, D., Magal, C., Vannier F. and Casas, J. Ontogeny of air-motion sensing in cricket. 4363-4370

Lin, D., Barnett, M., Lobell, S., Madgwick, D., Shanks, D., Willard, L., Zampighi, G. A. and Takemoto, D. J. PKC γ knockout mouse lenses are more susceptible to oxidative stress damage. 4371-4378

Lichtwark, G. A. and Wilson, A. M. Interactions between the human gastrocnemius muscle and the Achilles tendon during incline, level and decline locomotion. 4379-4388

Witte, T. H., Hirst, C. V. and Wilson, A. M. Effect of speed on stride parameters in racehorses at gallop in field conditions. 4389-4397

Steinmann, T., Casas, J., Krijnen, G. and Dangles, O. Air-flow sensitive hairs: boundary layers in oscillatory flows around arthropod appendages. 4398-4408

► Article featured 'Inside JEB'