



Cover: How other animals see the world has always intrigued us, not least because their eyes are often notably different from ours. In visually mediated decision making, regional specialisations of eyes largely determine the information animals have for critical judgements. Bagheri et al. (jeb210195) present a new method for estimating the spatial resolution of compound eyes, using 3D micro-CT images of preserved animals. This method estimates the way in which a compound eye samples the visual field by mapping the viewing directions of individual photoreceptors (white dots) and calculating spatial resolution in different directions of view. This study reveals that fiddler crabs see the world with two parallel streaks located just above and below the visual horizon. Picture credit: Zahra Bagheri and Jeremy Shaw.

INSIDE JEB

Leaping small fish out-power breaching whales

Knight, K.

jeb219436

Male flower beetles' massive femora clamp females in place

Knight, K.

jeb219428

Falcons' vision up to speed for fast lifestyle

Knight, K.

jeb219493

OUTSIDE JEB

Moles power-walk with their thumbs

Basu, C.

jeb211391

A new spin on flight control

Lesser, E.

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Rising CO₂ saves lives

Harter, T.

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Electric fish turn down the power

Turko, A.

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The big problem with microplastic pollution

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EDITORIAL

The changing face of peer review

Hoppeler, H. and Handel, M.

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The stalk-eyed fly as a model for aggression – is there a conserved role for 5-HT between vertebrates and invertebrates?

Bubak, A. N., Watt, M. J., Yaeger, J. D. W., Renner, K. J. and Swallow, J. G.

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SHORT COMMUNICATIONS

The energetics of 'airtime': estimating swim power from breaching behaviour in fishes and cetaceans

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Why do muscles lose torque potential when activated within their agonistic group?

de Brito Fontana, H., de Campos, D., Sawatsky, A., Han, S.-won and Herzog, W.

jeb213843

A selfish genetic element linked to increased lifespan impacts metabolism in female house mice

Lopes, P. C. and Lindholm, A. K.

jeb212704

RESEARCH ARTICLES

A new method for mapping spatial resolution in compound eyes suggests two visual streaks in fiddler crabs

Bagheri, Z. M., Jessop, A.-L., Kato, S., Partridge, J. C., Shaw, J., Ogawa, Y. and Hemmi, J. M.

jeb210195

History-dependent perturbation response in limb muscle

Libby, T., Chukwueke, C. and Sponberg, S.

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Maternal glucocorticoids promote offspring growth without inducing oxidative stress or shortening telomeres in wild red squirrels

Dantzer, B., van Kesteren, F., Westrick, S. E., Boutin, S., McAdam, A. G., Lane, J. E., Gillespie, R., Majer, A., Haussmann, M. F. and Monaghan, P.

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Establishment of correctly focused eyes may not require visual input in arthropods

Owens, M., Giordullo, I. and Buschbeck, E. K.

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Experience-dependent tuning of early olfactory processing in the adult honey bee, *Apis mellifera*

Jernigan, C. M., Halby, R., Gerkin, R. C., Sinakevitch, I., Locatelli, F. and Smith, B. H.

jeb206748

Whistling is metabolically cheap for communicating bottlenose dolphins (*Tursiops truncatus*)

Pedersen, M. B., Fahlman, A., Borque-Espinosa, A., Madsen, P. T. and Jensen, F. H.

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Comparing perineuronal nets and parvalbumin development between blackbird species with differences in early developmental song exposure

Cornez, G., Langro, J., Cornil, C. A., Balthazart, J. and Lynch, K. S.

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Do the enlarged hind legs of male thick-legged flower beetles contribute to take-off or mating?

Burrows, M.

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A fitness cost resulting from *Hamiltonella defensa* infection is associated with altered probing and feeding behaviour in

Rhopalosiphum padi

Leybourne, D. J., Valentine, T. A., Bos, J. I. B. and Karley, A. J.

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Tissue-specific expression of 11 β -HSD and its effects on plasma corticosterone during the stress response

Pérez, J. H., Swanson, R. E., Lau, H. J., Cheah, J., Bishop, V. R., Snell, K. R. S., Reid, A. M. A., Meddle, S. L., Wingfield, J. C. and Krause, J. S.

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How fast can raptors see?

Potier, S., Lieuvin, M., Pfaff, M. and Kelber, A.

jeb209031