



Cover: Northern clingfish (*Gobiesox maeandricus*) in the marine intertidal of San Juan Island, WA, USA. Tides, continually pounding waves and stones of varying surface roughness make the intertidal a challenging environment. Clingfish have a suction cup on their belly with which they can attach to stones. Ditsche et al. (pp. 2548–2554) show that clingfish can hold on to extremely rough surfaces, even those that are covered with slippery microorganisms and algae. On these fouled surfaces, this small benthic fish can hang on tightly enough to launch attacks on the archetypal attached mollusk, the limpet. Photo credit: P. Ditsche.

INSIDE JEB

- 2431** Arm swinging saves energy; Clingfish grip reduced by algae; p53 not effective in hibernation; Termite legs sense super-short time differences
Knight, K.

CLASSICS

- 2434** Revisiting the positive aspects of negative work
Elmer, S. J. and LaStayo, P. C.

SHORT COMMUNICATIONS

- 2437** Lateral line analogue aids vision in successful predator evasion for the brief squid, *Lolliguncula brevis*
York, C. A. and Bartol, I. K.
- 2440** Ambient noise causes independent changes in distinct spectro-temporal features of echolocation calls in horseshoe bats
Hage, S. R., Jiang, T., Berquist, S. W., Feng, J. and Metzner, W.

- 2445** Highly extensible skeletal muscle in snakes
Close, M., Perni, S., Franzini-Armstrong, C. and Cundall, D.

METHODS & TECHNIQUES

- 2449** Using accelerometers to determine the calling behavior of tagged baleen whales
Goldbogen, J. A., Stimpert, A. K., DeRuiter, S. L., Calambokidis, J., Friedlaender, A. S., Schorr, G. S., Moretti, D. J., Tyack, P. L. and Southall, B. L.

RESEARCH ARTICLES

- 2456** The metabolic cost of human running: is swinging the arms worth it?
Arellano, C. J. and Kram, R.
- 2462** Null point of discrimination in crustacean polarisation vision
How, M. J., Christy, J., Roberts, N. W. and Marshall, N. J.
- 2468** Rapid swimming and escape movements in the aquatic larvae and pupae of the phantom midge *Chaoborus crystallinus*
Burrows, M. and Dorosenko, M.
- 2480** Gait-specific adaptation of locomotor activity in response to dietary restriction in *Caenorhabditis elegans*
Lüersen, K., Faust, U., Gottschling, D.-C. and Döring, F.
- 2489** A systems-level approach to understanding transcriptional regulation by p53 during mammalian hibernation
Pan, P., Treat, M. D. and van Breukelen, F.
- 2499** Living in warmer, more acidic oceans retards physiological recovery from tidal emersion in the velvet swimming crab, *Necora puber*
Rastrick, S. P. S., Calosi, P., Calder-Potts, R., Foggo, A., Nightingale, G., Widdicombe, S. and Spicer, J. I.

- 2509** Multitasking in an eye: the unusual organization of the *Thermonectus marmoratus* principal larval eyes allows for far and near vision and might aid in depth perception
Stowasser, A. and Buschbeck, E. K.

- 2517** Hearing capacities and otolith size in two ophidiiform species (*Ophidion rochei* and *Carapus acus*)
Kéver, L., Colleye, O., Herrel, A., Romans, P. and Parmentier, E.

- 2526** Directional vibration sensing in the termite *Macrotermes natalensis*
Hager, F. A. and Kirchner, W. H.

- 2531** Manipulation of BK channel expression is sufficient to alter auditory hair cell thresholds in larval zebrafish
Rohmann, K. N., Tripp, J. A., Genova, R. M. and Bass, A. H.

- 2540** Ant-fungus species combinations engineer physiological activity of fungus gardens
Seal, J. N., Schiøtt, M. and Mueller, U. G.

- 2548** Attachment to challenging substrates – fouling, roughness and limits of adhesion in the northern clingfish (*Gobiesox maeandricus*)
Ditsche, P., Wainwright, D. K. and Summers, A. P.

- 2555** Metabolic suppression during protracted exposure to hypoxia in the jumbo squid, *Dosidicus gigas*, living in an oxygen minimum zone
Seibel, B. A., Häfker, N. S., Trübenbach, K., Zhang, J., Tessier, S. N., Pörtner, H.-O., Rosa, R. and Storey, K. B.

- 2569** Circadian rhythms are not involved in the regulation of circannual reproductive cycles in a sub-tropical bird, the spotted munia
Budki, P., Malik, S., Rani, S. and Kumar, V.

- 2580** Ontogenetic investigation of underwater hearing capabilities in loggerhead sea turtles (*Caretta caretta*) using a dual testing approach
Lavender, A. L., Bartol, S. M. and Bartol, I. K.

- 2590** Jumping mechanisms in flatid planthoppers (Hemiptera, Flatidae)
Burrows, M.

- 2601** Chronic stress alters concentrations of corticosterone receptors in a tissue-specific manner in wild house sparrows (*Passer domesticus*)
Lattin, C. R. and Romero, L. M.

- 2609** Variation in body condition during the post-moult foraging trip of southern elephant seals and its consequences on diving behaviour
Richard, G., Vacquié-Garcia, J., Jouma'a, J., Picard, B., Génin, A., Arnould, J. P. Y., Bailleul, F. and Guinet, C.