

Cover: Tunu, a young spotted seal (*Phoca largha*), is pictured with the experimental apparatus used for his behavioral hearing tests. Sills et al. (pp. 726–734) measured the auditory sensitivity of two spotted seals under various environmental conditions, and demonstrated that these amphibious seals possess auditory capabilities comparable to those of hearing specialists both in air and under water. This study provides new understanding of spotted seal auditory biology and the effects of noise on hearing, and informs best management practice for these seals in a rapidly changing Arctic environment. Photo credit: Brendan Wakefield.

INSIDE JEB

631 Spotted seal hearing impressive in air and water;
Future halibut are slow-growing aerobic champions;
Crocodile lumbar vertebrae joints stiffer than thought;
Correction: Corals trap light for algal lodgers; Settling barnacle cyprids home in on fluorescence

OUTSIDE JEB

634 Youth lead the way in climate change response; Female frogs only have ears for their potential mates; Arboreal locomotion: aye, there's the rub!; The smell of blood

EDITORIAL

637 Marking the 'retirement' of Chris Wood from McMaster University Perry, S. F.

COMPARATIVE PHYSIOLOGY – A TRIBUTE TO CHRIS WOOD

- 639 Gill cell culture systems as models for aquatic environmental monitoring Bury, N. R., Schnell, S. and Hogstrand, C.
- The physiology of fish at low pH: the zebrafish as a model systemKwong, R. W. M., Kumai, Y. and Perry, S. F.
- 663 Established and potential physiological roles of bicarbonate-sensing soluble adenylyl cyclase (sAC) in aquatic animals
 - Tresguerres, M., Barott, K. L., Barron, M. E. and Roa, J. N.
- 673 Ontogeny of O₂ and CO₂/H⁺ chemosensitivity in adrenal chromaffin cells: role of innervation Salman, S., Buttigieg, J. and Nurse, C. A.
- Epigenetics as a source of variation in comparative animal physiology or Lamarck is lookin' pretty good these days **Burggren, W. W.**
- 690 The phylogeny and ontogeny of autonomic control of the heart and cardiorespiratory interactions in vertebrates Taylor, E. W., Leite, C. A. C., Sartori, M. R., Wang, T., Abe, A. S. and Crossley, D. A., II

METHODS & TECHNIQUES

704 Ultra-miniature force plate for measuring triaxial forces in the micronewton range Reinhardt, L. and Blickhan, R.

RESEARCH ARTICLES

Sundell, K. and Axelsson, M.

711 Aerobic scope fails to explain the detrimental effects on growth resulting from warming and elevated CO₂ in Atlantic halibut
 Gräns, A., Jutfelt, F., Sandblom, E., Jönsson, E., Wiklander, K., Seth, H., Olsson, C., Dupont, S., Ortega-Martinez, O., Einarsdottir, I., Björnsson, B. T.,

- 718 Thyroid hormone regulates cardiac performance during cold acclimation in zebrafish (*Danio rerio*)
 Little, A. G. and Seebacher, F.
- 726 Amphibious hearing in spotted seals (*Phoca largha*): underwater audiograms, aerial audiograms and critical ratio measurements
 - Sills, J. M., Southall, B. L. and Reichmuth, C.
- 735 A comparative study of single-leg ground reaction forces in running lizards
 McElroy, E. J., Wilson, R., Biknevicius, A. R. and Reilly, S. M.
- 743 Larval vision contributes to gregarious settlement in barnacles: adult red fluorescence as a possible visual signal
 Matsumura, K. and Qian, P.-Y.
- 751 Function and control of the fish secondary vascular system, a contrast to mammalian lymphatic systems Rummer, J. L., Wang, S., Steffensen, J. F. and Randall, D. J.
- 758 An experimental and morphometric test of the relationship between vertebral morphology and joint stiffness in Nile crocodiles (*Crocodylus niloticus*)

 Molnar, J. L., Pierce, S. E. and Hutchinson, J. R.
- 769 Steller sea lions (Eumetopias jubatus) have greater blood volumes, higher diving metabolic rates and a longer aerobic dive limit when nutritionally stressed Gerlinsky, C. D., Trites, A. W. and Rosen, D. A. S.
- 779 Form and metabolic scaling in colonial animals Hartikainen, H., Humphries, S. and Okamura, B.
- 787 Factors affecting metabolic cost of transport during a multi-stage running race
 Lazzer, S., Taboga, P., Salvadego, D., Rejc, E., Simunic, B., Narici, M. V., Buglione, A., Giovanelli, N., Antonutto, G., Grassi, B., Pisot, R. and di Prampero, P. E.
- 796 Molt regulation in green and red color morphs of the crab Carcinus maenas: gene expression of molt-inhibiting hormone signaling components Abuhagr, A. M., Blindert, J. L., Nimitkul, S., Zander, I. A., LaBere, S. M., Chang, S. A., MacLea, K. S., Chang, E. S. and Mykles, D. L.
- 809 Oxygen delivery does not limit thermal tolerance in a tropical eurythermal crustacean Ern, R., Huong, D. T. T., Phuong, N. T., Wang, T. and Bayley, M.