



Cover: Adult male sea otters, unlike terrestrial carnivores of similar size, may spend over half of their day foraging and consuming prey. L. C. Yeates, T. M. Williams and T. L. Fink investigated the energetic costs of such a ravenous appetite in wild otters diving along the California coast (pp. 1960–1970). The largest energetic expenditure was associated with foraging but was counterbalanced by periods of low-cost rest dispersed throughout the day and night. Such an interrupted pattern of eating and sleeping enabled sea otters to maintain a marine lifestyle despite their relatively small size. Photo credit: Bryant Austin (www.studiocosmos.com).

▼ Inside JEB

Cornering Cockatoos i; Lungfishes' Balancing Act ii; How Sharks Sense Smells iii

Outside JEB

Iguanas Are Too Tame For Their Own Good iv; Evolution Of Endurance Athletes v; Naked Carp Take A Salty Holiday v; Fast Fathers Father More vi; Keeping The Memory Alive vii

Commentary

Nikinmaa, M. and Waser, W. Molecular and cellular studies in evolutionary physiology of natural vertebrate populations: influences of individual variation and genetic components on sampling and measurements. 1847-1857

Research Articles

Gilman, C. A. and Wolf, B. O. Use of portable ultrasonography as a nondestructive method for estimating reproductive effort in lizards. 1859-1867

Dabiri, J. O., Colin, S. P. and Costello, J. H. Morphological diversity of medusan lineages constrained by animal–fluid interactions. 1868-1873

Boller, M. L. and Carrington, E. Interspecific comparison of hydrodynamic performance and structural properties among intertidal macroalgae. 1874-1884

Bobbert, M. F., Gómez Álvarez, C. B., van Weeren, P. R., Roepstorff, L. and Weishaupt, M. A. Validation of vertical ground reaction forces on individual limbs calculated from kinematics of horse locomotion. 1885-1896

► **Hedrick, T. L. and Biewener, A. A.** Low speed maneuvering flight of the rose-breasted cockatoo (*Eolophus roseicapillus*). I. Kinematic and neuromuscular control of turning. 1897-1911

► **Hedrick, T. L., Usherwood, J. R. and Biewener, A. A.** Low speed maneuvering flight of the rose-breasted cockatoo (*Eolophus roseicapillus*). II. Inertial and aerodynamic reorientation. 1912-1924

► **Gardiner, J. M. and Atema, J.** Sharks need the lateral line to locate odor sources: rheotaxis and eddy chemotaxis. 1925-1934

Lewis, J. M., Costa, I., Val, A. L., Almeida-Val, V. M. F., Gamperl, A. K. and Driedzic, W. R. Responses to hypoxia and recovery: repayment of oxygen debt is not associated with compensatory protein synthesis in the Amazonian cichlid, *Astronotus ocellatus*. 1935-1943

► **Gilmour, K. M., Euverman, R. M., Esbaugh, A. J., Kenney, L., Chew, S. F., Ip, Y. K. and Perry, S. F.** Mechanisms of acid–base regulation in the African lungfish *Protopterus annectens*. 1944-1959

Yeates, L. C., Williams, T. M. and Fink, T. L. Diving and foraging energetics of the smallest marine mammal, the sea otter (*Enhydra lutris*). 1960-1970

Bystriansky, J. S., Frick, N. T. and Ballantyne, J. S. Intermediary metabolism of Arctic char *Salvelinus alpinus* during short-term salinity exposure. 1971-1985

Santini, M. S. and Ronderos, J. R. Allatotropin-like peptide released by Malpighian tubules induces hindgut activity associated with diuresis in the Chagas disease vector *Triatoma infestans* (Klug). 1986-1991

Matsumura, K., Matsunaga, S. and Fusetani, N. Phosphatidylcholine profile-mediated group recognition in catfish. 1992-1999

Nespolo, R. F. and Franco, M. Whole-animal metabolic rate is a repeatable trait: a meta-analysis. 2000-2005

de Heij, M. E., van der Graaf, A. J., Hafner, D. and Tinbergen, J. M. Metabolic rate of nocturnal incubation in female great tits, *Parus major*, in relation to clutch size measured in a natural environment. 2006-2012

Vaanholt, L. M., De Jong, B., Garland, T., Jr, Daan, S. and Visser, G. H. Behavioural and physiological responses to increased foraging effort in male mice. 2013-2024

► Article featured 'Inside JEB'