



Cover: Unable to break the water's surface tension, young tadpoles breathe air by bubble-sucking – attaching to the water's undersurface, drawing air into the mouth and forcing it into the lungs. Phillips and colleagues (jeb219311) show, however, that gray tree frog (*Hyla versicolor*) tadpoles continue bubble-sucking through metamorphosis (pictured), even though they have grown sufficiently large to breach the surface and breathe air directly, as in other tadpoles. Rather, these bubble-sucking specialists transition from typical bubble-sucking to double bubble-sucking, a newly described breathing behavior that increases the efficiency of gas exchange by eliminating mixing of expiratory and inspiratory air-streams. Photo credit: Kurt Schwenk.

INSIDE JEB

African pygmy mouse upgrades mitochondria to compensate for size

Knight, K.
jeb223693

Ringtail possums let their temperature rise to save water when Australia gets hot

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Cameras do not lie: elephant seals prefer fish

Knight, K.
jeb222976

OUTSIDE JEB

Different strokes for balanced birds

Stenum, J.
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Honeybees on treadmills uncover natural remedy for fungicide effects

Mantica, G.
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Flies walk the line for serotonin

Nadler, L.
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Drag lifts birds to the skies

Putney, J.
jeb211490

Fish larvae are oxygen fans

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Connecting brain to behaviour: a role for general purpose steering circuits in insect orientation?

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REVIEW

Surprising simplicities and syntheses in limbless self-propulsion in sand

Astley, H. C., Mendelson, J. R. III, Dai, J., Gong, C., Chong, B., Rieser, J. M., Schiebel, P. E., Sharpe, S. S., Hatton, R. L., Choset, H. and Goldman, D. I.
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SHORT COMMUNICATION

Facultative hyperthermia during a heatwave delays injurious dehydration of an arboreal marsupial

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The startle reflex in echolocating odontocetes: basic physiology and practical implications

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Assessing intracellular pH regulation in H⁺-ATPase-rich ionocytes in zebrafish larvae using *in vivo* ratiometric imaging

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Improved mitochondrial coupling as a response to high mass-specific metabolic rate in extremely small mammals

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Choice consequences: salinity preferences and hatchling survival in the mangrove rivulus (*Kryptolebias marmoratus*)

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Hypoxia tolerance is unrelated to swimming metabolism of wild, juvenile striped bass (*Morone saxatilis*)

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Ontogenesis of evolved changes in respiratory physiology in deer mice native to high altitude

Ivy, C. M., Greaves, M. A., Sangster, E. D., Robertson, C. E., Natarajan, C., Storz, J. F., McClelland, G. B. and Scott, G. R.
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Stroke effort and relative lung volume influence heart rate in diving sea lions

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Cardiovascular responses to progressive hypoxia in ducks native to high altitude in the Andes

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jeb211250

A salamander that chews using complex, three-dimensional mandible movements

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The mechanics of air breathing in gray tree frog tadpoles, *Hyla versicolor* (Anura: Hylidae)

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Hyperbaric tracheobronchial compression in cetaceans and pinnipeds

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The shape effect of flagella is more important than bottom-heaviness on passive gravitactic orientation in *Chlamydomonas reinhardtii*

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Fatty acid composition and N₂ solubility in triacylglycerol-rich adipose tissue: the likely importance of intact molecular structure

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Dynamic changes in cytoskeleton proteins of olfactory ensheathing cells induced by radiofrequency electromagnetic fields

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Analysis of ants' rescue behavior reveals heritable specialization for first responders

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Honeybees fail to discriminate floral scents in a complex learning task after consuming a neonicotinoid pesticide

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