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EDITORIAL

Introducing Classics

Back in 2004, when *The Journal of Experimental Biology* was a mere 80 years old, we launched a new section revisiting classic papers from the journal that created paradigm shifts in understanding and established new fields. Over the past nine years, JEB Classics has highlighted the journal's expansive breadth: from James Gray's studies of the kinematics of eel locomotion to Bob Josephson's seminal paper on the muscle work loop, and many other topics in between, such as Donald Kennedy and Kimihisa Takeda's crayfish abdominal motor control and Dave Randall's suite of 1967 papers on *in vivo* blood-and-guts fish physiology. In turn, the section has gone on to become a staple of the journal's output in its own right, appearing six times each year until the final contribution, 'A JEB classic on fish exercise', by Tobias Wang and Hans Malte in December 2012.

In addition to introducing younger scientists to the journal's impressive and diverse legacy, JEB Classics has allowed friends and colleagues of the journal to discuss much-valued treasures from the JEB archive. In addition to placing papers, some with more than half a century of influence, in a modern context, authors have also pointed out logistical and technical shortcomings – due to the antiquity of the research – that it is now possible to rectify, as well as highlighting yet-unanswered questions to inspire the next generation.

Owing to the popularity of the section in print and online, we have also compiled two booklets of the earliest JEB Classics articles, covering the literature from 1923 to 1968. These booklets have proved a popular resource for students and young postdocs and we are planning a third booklet for 2013 to complete the collection.

However, having made the editorial decision to define 1985 as the final year of publication when a JEB paper could truly be considered a 'Classic', we were faced with the dilemma of what should follow such a well-established and valued section. It was Hans Hoppeler, JEB Editor-in-Chief, who suggested that we broaden the remit to cover all of the integrative and comparative literature. So, this time, we asked the JEB community to recommend highly valued papers from the broader literature and, with over 40 recommendations from luminaries in the field, we have prepared the way for many more years of Classics to come.

Launching the new section in this issue with her discussion of Homer Smith's 1929 *J. Biol. Chem.* paper, entitled, 'The excretion of ammonia and urea by the gills of fish,' Tammy Rodela from The University of British Columbia, Canada, eloquently discusses Smith's discovery that gills are the site of nitrogen excretion in freshwater fish. Of course we will be featuring other ground-breaking publications in the future, such as August Krogh's 1929 *Am. J. Physiol.* paper, where he defined the guiding Krogh Principle that underpins the journal's scientific ethos, and the landmark *Philos. Trans. R. Soc. Lond. B* issue in which Charlie Ellington laid the groundwork for all subsequent insect flight biomechanics studies.

Having edited almost every JEB Classics article since its inception, I am now looking forward to discovering new classics, working with more inspiring authors and introducing the next generation of integrative biologists and comparative physiologists to the wealth of literature that lies buried in journal archives the world over.

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