

## Invertebrates

### **1. Generic Concepts, By William I. Ausich**

The position of *Dizygocrinus* is problematic. Page 40

### **2. A New Arthropod From The Early Cambrian, By Dongjing Fu**

The accurate phylogenetic assessment will remain the subject of **debate** until more information becomes available. Page 567

### **3. Small Shelly Fauna From North-East Greenland, By Christian B. Skovsted**

Thus, an arthropodan origin remains uncertain. Page 1088

Furthermore, at least 24 taxa, whose relationship to extant groups is uncertain, have also been recovered. Page 1089

These triangular fossils are always broken, and their affinity to other fossil remains from the Early Cambrian is uncertain. Page 1107

### **4. Relationships And Classification Of Scleractinia, By Jaroslaw Stolarski**

There are no clear cut arguments that would support one of these hypotheses; however, the traditional paradigm that microstructures are the most conservative and thus the most useful characters in higher-rank classification supports the hypothesis of a polyphyletic origin of traditional guyniids. Because most of the traditional guyniids are living taxa, molecular studies or other biologically oriented approaches could provide new input to this **debate**. Page 1101

Despite the fact that this new area of research wrestles with very basic interpretative problems, one hopes that a new generation of molecular paleobiologists will solve most of these initial difficulties and will provide reliable cross-checking tools, independent of typical biological-based and purely geometrical microstructural approaches. Page 1106

### **5. Conodonts: Past, Present, Future, By Walter C. Sweet**

Consequently, combined with their rich fossil record, conodonts can now make a significant contribution to the **debate** about the relative importance of stratigraphic and morphologic data in phylogenetic reconstruction (e.g., Smith, 1998, 2000). Page 1182

### **6. Eggs and embryos, By Simon Conway Morris**

At the heart of this **debate** concerning the phylogenetic importance of metazoan larva is the problem of how best to interpret their anatomy. Page 679

This is certainly what happens in living larva, but how relevant are such observations to unravelling metazoan phylogeny? The battle-lines are now being drawn. Page 680

### **7. It's a long way from amphioxus, By Jordi Garcia-Fernandez**

Initial molecular analyses of the Hox cluster and other regulatory genes in amphioxus, together with the first synteny analyses of the human genome, excitingly generated the modern 2R hypothesis, with two full polyploidisation events from invertebrates to mammals. For years, '2R or not 2R' has been a subject of hot **debate**. Page 671

### **8. Complete nucleotide sequences, By Shin-ichi Yokobori**

Morphological studies have aroused controversy on the phylogenetic relationship of entoprocts to other metazoan taxa. Page 613

The relationships among the lophotrochozoan phyla are still under **debate**. Page 623

### **9. Ribosomal RNA genes, By Jon Mallatt**

However, the relative positions of Ophiuroidea (brittle stars) and Asterozoa (sea stars) within Eleutherozoa are **debated**. The most extensive morphological and molecular-phylogenetic studies have had difficulty distinguishing between two preferred arrangements. Page 1015

### **10. Phylogenetic analysis with multiple markers, By Annette F. Govindarajan**

Much of the **debate** between these hypotheses centers on the nature of the *Obelia* medusa. Page 821

Future research on the genetic mechanisms of medusa development will be helpful in evaluating the evolutionary relationship between these morphologies. One missing piece of information concerns the phylogenetic placement of *Hartlaubella*, a monotypic genus which could not be obtained for this study. Page 832

### **11. Nearly complete rRNA genes, By Jon Mallatt**

Acoelomorpha, consisting of acoels and nemertodermatids, is a controversial group. Debate has raged over whether the Acoelomorphs are the most basally arising Bilateria, and whether they are diphyletic. Page 14

The tree calculated from all 197 taxa (Fig. 2) recovers many accepted clades but fails to show key groups of the new animal phylogeny. Page 14

### **12. Symbiodinium-like dinoflagellates, By Mauricio Rodriguez-Lanetty**

To date, there is still a **debate** upon which circumstances either sexuality or asexuality is favored by natural selection. Page 166

### **13. Relationships among sea anemones, By M. Daly**

The phylogenetic position of the athenarian family Edwardsiidae has long been the subject of **debate** (see Daly et al., 2002), and it remains unclear. Page 299

### **14. Phylogenomic Taxon Sampling, By K.S. Pick**

A recent phylogenomic analysis adds further controversy to this **debate** (Dunn et al. 2008) (c.f., Hejnol et al. 2009). Page 1983

## References

1. Generic Concepts, By William I. Ausich, *Journal of Paleontology*, 2010, Volume 84, Number 1, Pages 32 To 50
2. A New Arthropod From The Early Cambrian, By Dongjing Fu, *Journal of Paleontology*, 2011, Volume 83, Number 3, Pages 567 To 586
3. Small Shelly Fauna From North-East Greenland, By Christian B. Skovsted, *Journal of Paleontology*, 2006, Volume 80, Number 6, Pages 1087 To 1112
4. Relationships And Classification Of Scleractinia, By Jaroslaw Stolarski, *Journal of Paleontology*, 2001, Volume 75, Number 6, Pages 1090 To 1108
5. Conodonts: Past, Present, Future, By Walter C. Sweet, *Journal of Paleontology*, 2001, Volume 75, Number 6, Pages 1174 To 1184
6. Eggs and embryos, By Simon Conway Morris, *Bio Essays*, 1998, Volume 20, Pages 676–682
7. It's a long way from amphioxus, By Jordi Garcia-Fernandez, *Bio Essays*, 2009, Volume 31, Pages 665–675
8. Complete nucleotide sequences, By Shin-ichi Yokobori, *Molecular Phylogenetics and Evolution*, 2008, Volume 47, Pages 612–628
9. Ribosomal RNA genes, By Jon Mallatt, *Molecular Phylogenetics and Evolution*, 2007, Volume 43, Pages 1005–1022
10. Phylogenetic analysis with multiple markers, By Annette F. Govindarajan, *Molecular Phylogenetics and Evolution*, 2006, Volume 38, Pages 820–834

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11. Nearly complete rRNA genes, By Jon Mallatt, *Molecular Phylogenetics and Evolution*, 2010, Volume 55, Pages 1–17

12. Symbiodinium-like dinoflagellates, By Mauricio Rodriguez-Lanetty, *Molecular Phylogenetics and Evolution*, 2003, Volume 28, Pages 152–168

13. Relationships among sea anemones, By M. Daly, *Molecular Phylogenetics and Evolution*, 2008, Volume 48, Pages 292–301

14. Phylogenomic Taxon Sampling, By K.S. Pick, *Molecular Biology And Evolution*, 2010, Volume 27, Number 9, Pages 1983–1987 Page 100

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