

## Origin of vertebrates confirmed in the Early Cambrian

Michael J Oard

It was not that long ago when the origin of the first vertebrate (fish) was pushed back into the Late Cambrian within the evolutionary time scale.<sup>1-3</sup> Then several years ago, two fish-like fossils *Myllokunmingia* and *Haikouichthys*, with some surprisingly advanced features were discovered from the Early Cambrian in China.<sup>4,5</sup> Recently, more than 500 fossils of *Haikouichthys* have been unearthed in Early Cambrian strata in China.<sup>6</sup> These fish somewhat resemble the larva of modern lampreys, a jawless fish (class Agnatha).

The upshot of this discovery is to push back the supposed evolution of fish to a very short period during the very beginning of the Cambrian. Vertebrates join other existing phyla, as well as many extinct phyla, in the great and mysterious Cambrian ‘big bang’ in the evolutionary story—the sudden existence of so many different types of fossils with few if any supposed ancestors. This is clear evidence that evolution never happened.

### Elimination of possible transitional species

It is well known that a major gap exists between invertebrates and vertebrates.<sup>7</sup> Supposedly, some invertebrate had to evolve into a vertebrate in the late Precambrian or very Early Cambrian. For a long time evolutionists had no candidate for a transitional fossil. However, in recent years they have consider Branchiostoma (previously known as Amphioxus) as a living representative of a transitional organism to the first vertebrate.<sup>8</sup> Branchiostoma is a lancelet with a notochord, no brain, no eyes and no sense of smell (see figure 1).<sup>9</sup> It is soft bodied and, therefore, the evolutionists believed that its vertebrate ancestors

would also be soft bodied and unable to be fossilized. Evolutionists have used this strange little organism to dodge the implications of this tremendous gap in the fossil record and to provide a reason for the lack of transitional fossils (due to their lack of preservation). In answer to the evolutionary problem, that Branchiostoma is a living organism and not a fossil

from way back; evolutionists have presented *Pikaia* as a transitional fossil.<sup>10</sup> *Pikaia* is an exotic vertebrate-like organism from the Middle Cambrian Burgess shale of southern British Columbia, Canada<sup>11</sup> and possibly also from the Early Cambrian of China.<sup>12</sup>

*Haikouichthys* and likely *Myllokunmingia* carry a number of puzzling features contrary to previous expectations. They possess eyes and possibly olfactory organs, which are ahead of their time in the evolutionary story:

‘The possession of eyes (and probably nasal sacs) is consistent with *Haikouichthys* being a craniate, indicating that vertebrate evolution was well advanced by the Early Cambrian.’<sup>13</sup>

The discovery of sense organs in fish so Early in the supposed evolution of life seems to knock out Branchiostoma as a model for the evolution of the vertebrates since this living creature has neither eyes nor a sense of smell. In referring to the two earlier discoveries in China, Shu *et al.* state: ‘... they seem to be significantly different from the Recent amphioxus.’<sup>14</sup> They further state that *Pikaia* probably should be eliminated from the supposed ancestral line:

‘It is possible that *Pikaia*, until



Figure 1. Branchiostoma, commonly known as Amphioxus.

Department of Biological Sciences, University of Paisley, UK.

now the cynosure of Cambrian chordates, is peripheral to the lineage leading to the vertebrates.’<sup>15</sup>

Furthermore, the 500 plus fish are soft bodied, as is *Pikaia*. This diminishes their ‘soft bodies’ excuse for the lack of a vertebrate ancestor. Thus, the discovery of these new Early Cambrian fish should remove both Branchiostoma and *Pikaia* as representing a living analogue and a supposed transition, respectively, between invertebrates and vertebrates.

### Fish buried in a flood

Although the paleontologists do not provide a great deal of information on the geological setting, it is interesting that they conclude that the fish were buried rapidly in a storm: ‘The specimens may have been buried alive, possibly as a result of storm-induced burial.’<sup>16</sup> How about burial in a giant global Flood?

### Acknowledgement

I thank Dr. Duane Gish for calling my attention to the article on 500 Early Cambrian fish.

## References

1. Carroll, R.L., *Vertebrate Paleontology and Evolution*, W. H. Freeman and Company, New York, pp. 26–39, 1988.
2. Oard, M.J., Evolution pushed further into the past, *TJ* **10**(2):171–172, 1996.
3. Young, G.C., Karatajute-Talimaa, V.N. and Smith, M.M., A possible Late Cambrian vertebrate from Australia, *Nature* **383**:810–812, 1996.
4. Shu, D.-G., Conway Morris, S., Zhang, X.-L., Hu, S.-X., Chen, L., Han, J., Zhu, M., Li, Y. and Chen, L.-Z., Lower Cambrian vertebrates from south China, *Nature* **402**:42–46, 1999.
5. Janvier, P., Catching the first fish, *Nature* **402**:21–22, 1999.
6. Shu, D.-G., Conway Morris, S., Han, J., Zhang, Z.-F., Yasui, K., Janvier, P., Chen, L., Zhang, X.-L., Liu, J.-N., Li, Y. and Liu, H.-Q., Head and backbone of the Early Cambrian vertebrate *Haikouichthys*, *Nature* **421**:526–529, 2003.
7. Gish, D.T., *Evolution: The Fossils Still Say No!* Institute for Creation Research, El Cajon, pp. 74–76, 1995.
8. Strahler, A.N., *Science and Earth History: The Evolutionary/Creation Controversy*, Prometheus Books, Buffalo, New York, pp. 404–406, 1987.
9. Carroll, ref. 1, pp. 18–19.
10. Strahler, ref. 8, pp. 405–406.
11. Gould, S.J., *Wonderful Life—The Burgess Shale and the Nature of History*, W.W. Norton & Company, New York, pp. 321–323, 1989.
12. Shu, D.-G., Conway Morris, S. and Zhang, X.-L., A *Pikaia*-like chordate from the Lower Cambrian of China, *Nature* **384**:157–158, 1996.
13. Shu *et al.*, ref. 6, p. 529.
14. Shu *et al.*, ref. 4, p. 42.
15. Shu *et al.*, ref. 4, p. 46.
16. Shu *et al.*, ref. 6, p. 527.