

Awards and Citations

Presentation of the 2016 Paleontological Society Medal to Richard A. Fortey

Derek E.G. Briggs

Department of Geology & Geophysics, and Yale Peabody Museum of Natural History, New Haven, Connecticut 06520-8109, USA
(derek.briggs@yale.edu)

Richard Fortey is one of the world's leading paleontologists. His research is remarkable for its breadth, covering topics as diverse as Paleozoic biostratigraphy and biogeography (with a focus on the Ordovician), the evolutionary history and biology of trilobites and graptolites, and the diversification of major groups during the Cambrian explosion. He has made major contributions to the use of faunal evidence for reconstructing the former position of the Paleozoic continents. He has led efforts to correlate the Ordovician across the world. He is a leading authority on trilobites. He used arthropod relationships and morphology to quantify disparity following the Cambrian radiation and compare it to that today. He has published more than 200 scientific papers as well as numerous other articles and books, and his work continues to have a major impact on the development of biostratigraphy and paleobiology. He has served as president of the Palaeontological Association, the Geological Society of London, and the Palaeontographical Society.

Richard Fortey led a revolution in trilobite systematics, providing new characters, particularly those relating to the hypostome, and generating testable hypotheses of relationships where earlier classifications were based primarily on traditional methods and the authority of the specialist! He pioneered the application of phylogenetic methods to both trilobites and graptolites. His uncanny ability to sniff out fossils in the field is the envy of his collaborators. His research on Svalbard identified trilobite biofacies related to water depth in an approach that has been widely applied subsequently. He has published a number of elegant analyses of trilobite functional morphology—his research on the Ordovician trilobite *Opipeuterella*, for example, combined information on morphology, including the eyes, with distributional data and comparisons with modern arthropods to demonstrate its pelagic mode of life. He subsequently applied similar methods to interpreting pelagic trilobites in general, even drawing inferences about the relative depths they occupied.

Richard Fortey has made seminal contributions to our understanding of Ordovician biostratigraphy and paleobiogeography. His classic work with Robin Cocks used fossil distributions to constrain the separation and movement of the continents incorporated into Britain during the Paleozoic. With

a similar approach (using occurrences of shallow-water taxa), they extended this study to a global synthesis of faunal evidence for continental distributions during the Ordovician and Silurian, which provides a basis for testing tectonic models based on geophysical data.

Richard Fortey is the author of *Fossils: The Key to the Past*, now in its fifth edition, published in the USA as *Fossils: The History of Life*. In addition to his achievements in paleontology, he has published seven major books that communicate scientific ideas to the public. *The Hidden Landscape* (1993), an account of how the topography and scenery of Britain reflects the underlying geology, won the Natural World Book of the Year Award. *Life: A Natural History of the First Four Billion Years of Life on Earth* (1998), which tells the story of the evolution of life on Earth as seen through Fortey's scientific experience, was shortlisted for the Rhone Poulenc Prize and listed as one of the ten books of the year by the New York Times. *Trilobite, Eye Witness to Evolution* (2000), which brought paleontology to a wider audience based on one aspect of Fortey's scientific expertise, was shortlisted for the Samuel Johnson award for all non-fiction. *The Earth: an Intimate History* (2004), which developed the ideas in *The Hidden Landscape* on a global scale, was shortlisted for the Aventis Prize. *Dry Store Room No. 1, the Secret Life of the Natural History Museum* (2008), provided an entertaining historical account of science and some of its more eccentric practitioners at the institution where Fortey spent his professional career, and *Horseshoe Crabs and Velvet Worms* (2012), based on so-called living fossils, was published as *Survivors: The Animals and Plants that Time Has Left Behind* (2011) in the United Kingdom. His most recent book, *The Wood for the Trees* (2016) is an account of a patch of beech woodland in the Chiltern Hills in England, which he purchased with the proceeds of one of his natural history series for the BBC. Not only have Fortey's books won recognition, so too has their author, with a string of awards, including the Royal Society's Michael Faraday Prize (2006), and the Lewis Thomas Prize for science writing (2003), as well as numerous other accolades and honorary degrees. Through his popular science writing and presentations to lay audiences, Fortey has done more than any professional paleontologist since Steve Gould to bring paleontology and earth science to public attention.

Richard Fortey's science has always been rooted in data from specimen and outcrop while, at the same time, embracing bigger questions. He has contributed papers on many of the major issues in paleontology, including the stratigraphic basis for distinguishing gradualism and punctuated equilibria, the nature of extinction metrics and how they are influenced by hypotheses of classification, and the Cambrian and Ordovician radiation of the major groups. While the Natural History

Museum provided limited opportunities for advising students, Richard Fortey has always been generous with his knowledge and expertise. Serving on committees is not his favorite pastime, but he has done Trojan service to a number of scientific societies and has been a tireless promoter of paleontology. It is an honor to present him as the 2016 Paleontological Society Medalist.

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