

Streszczenie wykładu prof. Jennifer A. Clack, który odbędzie się 24 listopada 2009
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Jennifer A. Clack
**On the 'imperfection of the Geological Record':
recent palaeontological discoveries to delight Darwin.**

Two chapters of 'On the Origin of Species' addressed arguments related to the fossil record and its sparse and spotty nature, and the lack of many 'intermediate forms'. Darwin's explanations have largely been proved correct, and since 1859, a vast amount of corroborating data and information has accumulated, both in the geological and palaeontological realms, that would have delighted him. This lecture focuses on a few of the palaeontological advances that have been made recently in some of the areas of his concern, in terms of the wealth of specimens discovered and the use of new techniques to interpret them. In 1859, few if any fossil organisms older than the Silurian were known: since then, vertebrates, invertebrates and even animal embryos have been discovered from earlier deposits, some with soft parts represented. Other areas that concerned Darwin included the distinction between 'fish and reptiles', and how large groups like these arose. Transitional fossils between 'fish' and 'tetrapods' are now well documented, as are those between 'reptiles' and 'birds'. The former have been discovered almost worldwide, represented by three-dimensional fossils, and the latter are represented by the late Mesozoic localities in China preserved in rich lake bed deposits. A lament from Darwin over the lack of lake deposits from the Mesozoic has been magnificently overcome. These deposits have yielded early mammals, also on his wish-list. The origin of whales and the origin of teleosts were other concerns, equally of interest and importance today, and about which recent discoveries offer fundamental insights.

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