Fossil magnetism helps prove mass extinction theory

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(PhysOrg.com) -- Were major extinction events real biological catastrophes or were they merely the result of gaps in the fossil record? Research by a team of geologists from the Universities of Bristol, Plymouth, and Saratov State in Russia, has shed new light on a debate that has divided scientists of late and was recognised as far back as Darwin's Origin of Species.

The team has uncovered evidence in the Russian Urals that demonstrates the presence of the world's single most severe mass extinction event which took place at the end of the Permian and start of the Triassic ages, some 250 million years ago. The extinction event, thought to be the result of runaway global warming, wiped out between 80-95 per cent of the planet's species.

This highly significant research disproves the currently accepted idea that in Russia this mass extinction event was not recorded and the apparent disappearance in species during this time was in fact due to a gap in the fossil record. Lead researcher, Dr Graeme Taylor of the University of Plymouth explains: “Leading authorities including the authors of the International Timescale suggested that ten million years worth of rock was missing in Russia and that the rocks present were thought to be ten million years older than they are. This would mean that the fossil disappearance in Russia would then pre-date that of everywhere else, seriously undermining the idea of a single mass extinction event.”

The scientists matched the magnetic record fossilised within the disputed Russian rocks with those from the rest of the globe, demonstrating that the Russian rocks do indeed record the run-up to the event and the Permian - Triassic period and therefore the fossil losses in these rocks are part of the mass extinction. Explaining the significance of the findings, Dr Taylor said: “There is in fact no Permian-Triassic gap. The record is complete and the mass extinction event is further strengthened as being a major turning point in the history of life on Earth and as the most catastrophic event to have, so far, affected our planet.”

More information: The research was recently published in the journal, *Earth and Planetary Science Letters.*
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