Paleontology in Earth and Planetary Science Teaching Materials, and Proposals for Next-Generation Teaching Materials.

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In recent years, groundbreaking research results on paleontology have occurred. Archeopteryx, for example, has been analyzed by scanning electron microscopy, suggesting that at least some feathers may have been black, as traces of organelles called melanosomes have been found in fossils. Similarly, the feather color of some feathered dinosaurs has been estimated, and the color of archeology, which had to be drawn by estimation in previous reconstructions, can be unified. It is beginning to affect science education and outreach.

Also, research on fossils in Japan is continuing vigorously. For example, the Geological Society of Japan created the “Prefectural Stones” list in 2016, with items for fossils. Thus, educational content reflecting the diversity of paleontological species in Japan.

In addition, photographs of specimens of minerals, rocks, and fossils held by the Geological Museum are published as a “Geological specimen database” by the Government of Japan Standard Terms of Use ver. 2.0. I would like to introduce such high-quality open data and how actually to use them with actual examples and discuss the possibilities of new teaching materials for Earth and planetary science.

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