Call for Papers

The 100s: Significant Exposures of the World

This scientific photo-essay series introduces 100 representative geological/geographical outcrops on the Earth, from which we can understand the fundamental structures and evolutionary history of the planet. Studies of geology and geography have brought and bring us not only new concepts for understanding the Earth, but also the unbelievable beauty of nature. We hope all our readers will enjoy and learn a lot by reading this series.

To maintain quality and quantity, each report should contain the following items, besides the 2- to 3-line abstract, five key words, main text and references.

1. Index map in the given format.
2. Geologic map of area.
3. High-resolution photograph of outcrop (in color).
4. Explanatory figure(s) for details.

The main text needs to be in English with a summary in Japanese given at the end. The total length of a manuscript is no more than six pages; *i.e.*, four pages in color printing and two pages in black/white. Submitted manuscripts are reviewed by a special task force (reviewing committee) set up for this series before final acceptance. A summary in Japanese will be translated by the editors should foreign contributors require it.

I. Civilization over the last 10000 years

001	Bottom-up revolution of democracy in northern African countries since 2011	014	East African rift valley and birthplace of human beings
002	Information revolution, first computer, Internet, and Google from the USA	015	Zhoukoudian Cave of Beijing ancient man
003	Drilling oil technology, Oklahoma, USA	016	Java ancient man in Indonesia
004	Extensive industrial use of iron from Big Five Great Lakes district, North America	017	Neanderthal man in France
005	Industrial Revolution, the first railway, aircraft, automobile	018	First wall paintings in Altamira, France
006	Inca culture in Chile	019	First super-architecture built by humans: Pyramids and Sphinx in Egypt
007	Mesopotamian civilization, and wet climates (5000 years ago)	020	The Great Barrier Reef along the eastern margin of Australia, Reefs in the Central Pacific, and Darwins' speculation of the history of reefs
008	Nazca, huge monuments in Peru, Pyramids in Mexico	021	Modern analog of 600 Ma-old special environment for the origins of metazoans, examples from Tasmania
009	Indus Civilization	022	Hydrothermal bio-communities in active geothermal fields, New Zealand
010	Yellow River Civilization	023	Mat-formed ecosystem at mid-oceanic ridge on-land, Iceland
011	Noah's Flood and northern coast of Black Sea (10000 years ago, the beginning of agriculture and birth of primitive civilization).	024	Bio-communities in extremely cold environments, Antarctica and elsewhere, and also in extreme environments such as Amazon equatorial rainforests, subtropical, deserts, warm middle latitude zone, tundra, and glaciers.

II. Living creatures, ecosystem, topography, and active volcanoes

012	Living stromatolites in Hamelin Pool, western Australia	025	Aurora borealis in Yellowknife, central north Canada
013	Non-flying birds in New Zealand	026	Topography; glaciers in New Zealand, Alaska, and Patagonia

- 027 Fault topography; active strike-slip fault Median tectonic Line, SW Japan
 028 San Andreas Fault, California, USA
 029 African Rift Valley (step-wise topography) in East Africa with active volcanoes such as carbonatite
 030 Grand Canyon, USA; rifting of continent with rising plume head and high-speed erosion
 031 Glacial topography, (1) U-shaped fjord, (2) huge stray rocks, gravel beds (morain), and (3) drumlins
 032 Niagara Falls near Big Five lakes, North America
 033 Dead Sea and the oldest book of the Bible
 034 Sahara and Gobi Deserts
 035 Migrating Lake Lop Nor, western China
 036 Spectacular tower-like A-type granite in Rio de Janeiro, Brazil
 037 Angel Falls in the Guinea highlands, and origin of carbonate platforms in Late to Early Cambrian
 038 Meteorite craters created by (icy) meteorite bombardment
 039 Active volcanoes, (1) Hawaiian shield volcanoes, (2) Strato-volcanoes, such as Mt. Fuji, caldera-shaped double-ring volcanoes such as Mt. Aso, Japan, Lake Taupo, New Zealand, or Yellowstone National Park, (3) hot-spot volcano in Iceland, (4) flood basalts, Deccan Plateau, India, (5) Superplume volcanoes in Tahiti, southern central Pacific, (6) highly explosive eruption and resultant shape of volcano, Mt. Bandai, central Japan, (7) Mt. Vesuvius, Italy and Pompeii (buried Roman town in Italy), (8) Subduction process along Pacific margins

III. Plate Boundary processes

- 040 Active Plate Boundary processes, (1) collision of intra-oceanic arc against Honshu arc, Japan, (2) Collision of India against Asia; Himalayan mountains, (3) Tibetan plateau, (4) Alps (Europe), (5) New Zealand (transform F), (6) San Andreas F. (7) Iceland hotspot with mid-oceanic ridge

IV. Classical localities in the history of the Earth

- 041 Volcanic neck; Edinburgh Castle, Scotland, and development of geologic concepts in UK
 042 Hutton's Unconformity
 043 Geomagnetic reversals discovered by Prof. Matsuyama of Kyoto University
 044 Huge thrust planes at the Matterhorn, Swiss Others: Steno, Italy (Firenze), Lyell, Stille (Germany), Greenly (mélange, Anglesey, England)

- 045 Barrow's mineral zones, southern Scotland, UK

V. Outcrops providing significant evidence of the history of life and the planet

1) Mantle-derived rocks

- 046 Peridotite body at St. Pole Island, Central Atlantic
 047 Mantle-derived rock xenoliths from Lesotho south Africa, Solomon Islands, and Hawaiian Islands
 048 Tibet, a huge plateau formed by the delamination of subducted lithosphere

2) Cenozoic

- 049 Nummulites from the Pyramids (Egypt)
 050 Paris basin with vertebrates (France)
 051 Alpine folding (Switzerland)
 052 Matterhorn-doubled crusts (Italy)
 053 Tauern Fenster (Switzerland)
 054 Evaporite in the whole Mediterranean sea: Messinian crisis
 055 Himalayan orogeny (Nepal)
 056 Last Glacial Maximum in New York (USA)
 057 Continental rifting of Basin & Range (USA)
 058 Columbia River Basalt (USA)
 059 Snake River Basalt and hotspot track (USA)
 060 Phosphorite nodules (New Zealand)
 061 Barringer Meteorite Crater (USA)
 062 Antarctic meteorites: largest collection of meteorites
 063 Remnants of erosion of 1 m diameter sandstone sphere on a beach, New Zealand
 064 Evolving life: (1) African rifts, (2) Lake Victoria and Tanganyika and evolving fishes, on-land Galapagos, (3) Galapagos Islands, tortoise, iguana, (4) Short-range species improvements by human beings

3) Mesozoic

- 065 Hallstadt limestone (Austria)
 066 Triassic bedded chert and accretionary complex in Inuyama (Japan)
 067 Triassic reptiles: evidence for continental drift (Brazil)
 068 Petrified forest in Arizona (USA)
 069 Jurassic Solenhofen limestone with Archaeopteryx (Germany)
 070 Jurassic feathered bird in Liaoning (China)
 071 Cretaceous dinosaur graveyard in Utah (USA)
 072 Kimberlite at Kimberley (S. Africa)
 073 Semail Cretaceous ophiolite (Oman)
 074 Jadeite-bearing blueschists in California (USA)
 075 Turbidite in Calavaca (Spain)
 076 Cretaceous chalk at Dover Strait (UK/France)

- 077 Porphyry Copper deposits (Bolivia)
 078 Chixulub crater: dinosaur-killer (Mexico)
 079 K-T boundary at Gubbio (Italy)
 080 Kimberlite pipes, South Africa, and mantle processes
 081 First flying dinosaur fossils, China (origin of birds)
 082 The oldest bird fossils from Germany
 083 World's largest T-Rex (Sue specimen), Kansas, USA
 084 Ammonite fossil walls from S. America
 085 Fossils of Cretaceous forests near North Pole, Ellesmere island, North Pole Sea
 086 Trilobites from Morocco
 087 Fossil walls along the Dover Strait (World Heritage)
- 4) Paleozoic**
 088 Phosphorite deposits/nodules in Yunnan (S. China)
 089 The Burgess Shale (Canada)
 090 The Ordovician gigantic trace fossil (Spain)
 091 Larvikite-moonstone (Norway)
 092 Skaeagard complex (Greenland)
 093 Barrovian metamorphic belt (UK)
 094 The first land plants (UK)
 095 Devonian ocean anoxic event (Czech)
 096 Catskill delta (USA)
 097 Amphibian's land invasion
 098 Carboniferous cyclothems
 099 Footprint of Pederupus (Ireland)
 100 Gondwana glaciation (Brazil)
 101 Karoo basin (S. Africa)
 102 Capitan reef (USA)
 103 P-T Boundary event on the platform at Meishan (China)
 104 Diamond-bearing regional metamorphic belts of the world, Kazakhstan, Central Asia
 105 P/T Boundary event in open sea, Inuyama, Japan
 106 V/C Boundary, S China, Three Gorges Region
 107 Devonian Carbonate platform, Guiliin, S. China
 108 Old red sandstones (Devonian) dragonfly and centipede
- 5) Late Proterozoic**
 109 Ediacaran fauna from Flinders Range (Australia)
 110 Snowball Earth II in Three Gorges area (China)
- 111 Dropstone (Namibia)
 112 The first geological map of Anglesey (UK)
 113 Cradle of animals at Grand Canyon (USA)
 114 Ediacaran-Cambrian boundary in Avalon (Canada)
- 6) Middle Proterozoic**
 115 Grypania: The first eukaryote from Michigan (USA)
 116 Carbonates in Baffin Island (Canada)
 117 Acritarch fossils (algal plankton etc.)
 118 Proterozoic juvenile crust in Yavapai-Mazatzal belt (USA)
 119 Tidal rhythmites in Utah (USA)
- 7) Early Proterozoic**
 120 The first snowball Earth: Huronian diamictite (Canada)
 121 Sudbury meteorite impact Crater (Canada)
 122 The oldest megafossil (Gabon)
 123 Shungite (Finland)
 124 Uranite beds (Canada)
- 8) Archean**
 125 The Earth's oldest rock: Acasta gneiss (Canada)
 126 The oldest sedimentary rocks in Isua (Greenland)
 127 The oldest microfossils at the North Pole (W. Australia)
 128 Komatiite along Komati river (S. Africa)
 129 Archean flood basalt: Mt. Roe basalt (W. Australia)
 130 The oldest stromatolite swarm: onset of photosynthesis (W. Australia)
 131 Banded iron formation in Pilbara (W. Australia)
 132 The oldest glaciation in Pongola (S. Africa)
 133 2.6-2.7 Ga Stromatolites along the continental platform suggesting large-scale photosynthesis and resultant O₂-increase, Redmont Western Australia
 134 2.7 Ga mantle overturn and layered intrusion of mafic magma into the craton, Zimbabwe, Africa, Great Dyke
- 9) Hadean**
 135 Narrier Complex, W. Australia; Hadean zircons back to 4.4 Ga
 136 Anorthosites on the Moon (Photo)

Handling Editors:

Yukio ISOZAKI (Department of Earth Science and Astronomy, The University of Tokyo, Tokyo, 153-8902, Japan)

Shigenori MARUYAMA (Department of Earth and Planetary Sciences, Tokyo Institute of Technology, Tokyo, 152-8551, Japan)

Hiroyuki KAMEI (Graduate School of Information Science and Engineering, Tokyo Institute of Technology, Tokyo, 152-8551, Japan)

Toshio KIKUCHI (Graduate School of Urban Environmental Sciences, Tokyo Metropolitan University, Hachioji, 192-0397, Japan)