Prelim Bits 12-05-2018

Tiny fossil shells- clue to ancient climate

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- Scientists have discovered tiny fossil shells that unveil details about the Earth’s climate over half a billion years ago.
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- The hard-bodied fossils that the scientists used in their study belong to animal groups which were the first organisms to produce shells.
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- The research suggests that early animals diversified within a climate similar to that in which the dinosaurs lived.
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- The time interval to which this fossil belongs is known for the ‘Cambrian explosion’.
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- It is the time during which representatives of most of the major animal groups first appear in the fossil record.
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- Analyses of the oxygen isotopes of these fossils suggested very warm temperatures for high latitude seas.
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Carbon Monitoring System and Oribiting Carbon Monitoring 3 (OCO-3)

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- A NASA program that cost $10 million per year to track carbon and methane, key greenhouse gases that contribute to global warming, has been cancelled.
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- The Carbon Monitoring System (CMS) tracked sources and sinks for carbon and made high-resolution models of the planet’s flows of carbon.
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- The Orbiting Carbon Observatory 3, or OCO-3, is a space instrument designed to investigate important questions about the distribution of carbon dioxide on Earth.
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- OCO -3 is climate mission by NASA.
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Rare Butterflies

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- The black windmill butterfly (Byasa crassipes) was spotted in Arunachal Pradesh's Dibang Valley in the Lower Dibang Valley district.
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- A scarce siren butterfly (Hestia nicevillei) was spotted in the Daranghati Wildlife Sanctuary in Himachal Pradesh in 2012.
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- Both butterfly species are listed under Schedule I of India's Wildlife Protection Act (1972).
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- This ensures the insects the same protection as that given to tigers.
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- Collecting of butterflies for sale as dead specimens is a big threat in the Himalayas and north-east India,
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- So the precise location of the black windmill is being withheld until the local police and forest departments have some safety measures in place to protect the insect from butterfly collectors.
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Daranghati Wildlife Sanctuary

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- The Sanctuary is located near Rampur Bushahr, in Shimla District, Himachal Pradesh.
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- It was an erstwhile hunting reserve of the Rampur Bushahr royal family.
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- The Sanctuary receives good amount of Snowfall in winters.
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- Himalayan Black Bear, Brown Bear, Himalayan Palm Civet, Barking Deer, Musk Deer, Flying Fox, Goral, Indian Hare, Serow, Blue Sheep and Himalayan Weasel are the fauna.
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Research and Information System for Developing Countries (RIS)

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- (RIS) is a New Delhi-based autonomous policy research institute that specializes in issues relating to international economic development
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- Its special focus is on trade, investment and technology.
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- RIS is envisioned as a forum for fostering effective policy dialogue and capacity-building among developing countries on global and regional economic issues.
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- The focus of the work program of RIS is to promote South-South Cooperation (SSC) and collaborate with developing countries in multilateral negotiations in various fora.
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- RIS seeks to enhance policy coherence on international economic issues and the development partnership canvas.
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Nanofertilizers to boost zinc uptake

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- Researchers showed that by using nanofertilizers in right doses nutritional quality of wheat can be enhanced by increasing its zinc content.
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- Micronutrient deficiency is a major challenge in India.
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- Majority of Indian soils are zinc deficient and soil zinc application is highly recommended along with application of NPK fertilizer.
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- The increased zinc content in the grain improved its protein content and other micronutrients like iron and manganese.
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- Agronomic fortification of food grains could be used to compensate micronutrient levels in grains.
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- However it leads to nutrient wastage as well as environmental pollution resulting from excessive use of minerals and fertilizers.

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Source: PIB, The Hindu

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