

RED RAIN CELLS RECOVERED FROM INTERIOR OF THE POLONNARUWA METEORITE

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ABSTRACT

Red rain cells were discovered in extracts from the Polonnaruwa (Aralaganwila) meteorite that fell nearly ten days before a red rain event in the same location in Sri Lanka. A causal connection is speculated.

Keywords: Meteorites, Red Rain, Red rain cells, Panspermia

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Red rain cells that first fell over Kerala, India in 2001, and in Sri Lanka in December 2012/January 2013 appear to have been preceded by evidence of some form of cometary/meteoritic activity. The Kerala red rain first came down after a sonic boom was heard over a wide area, attributed to the explosion of a small cometary bolide (Louis and Kumar, 2003). The Sri Lankan red rain events of November/December 2012 and January 2013 were similarly presaged by a spate of fireball sightings and meteorite falls. In general the meteorite falls took place some 7-10 days before red rain events, which is a time interval consistent with the fall of micron-sized dust through the troposphere.



Fig. 1 Large fragment of Polonnaruwa meteorite

We report here a light microscope study of an interior sample of a meteorite fragment from the Aralaganwila fall on 29 December 2012. The meteorite fragment studied was part of the larger structure shown in Figure 1. A sterile distilled water-filled wide-bore hyperdermic syringe was inserted several millimetres into the porous structure of the meteorite. The surface area into which the needle was inserted was flame sterilised beforehand. A suspension of fine-grain meteoritic dust was drawn out into the syringe and a drop placed on a glass slide for examination under a light microscope. This is similar to the procedure used earlier for the detection of living diatoms (Wickramasinghe, Wallis, Wallis et al, 2013).

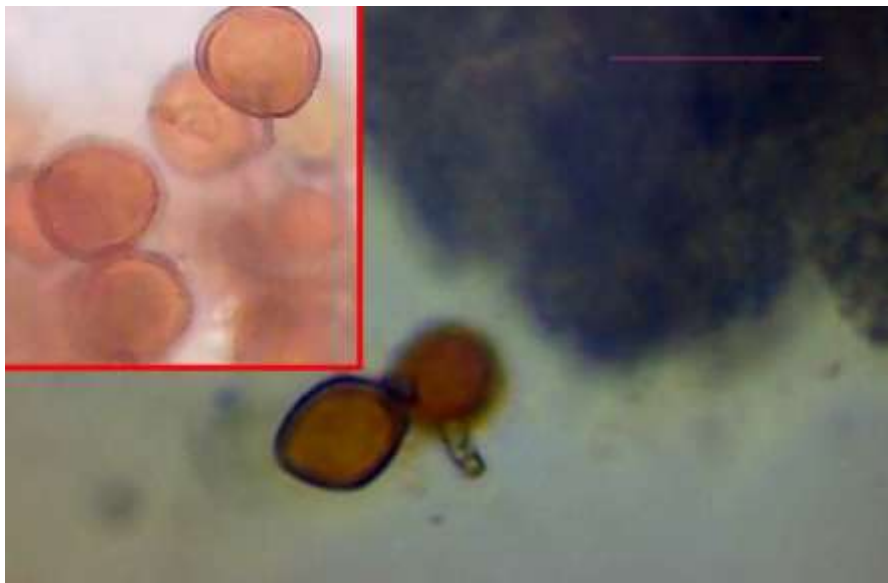


Fig. 2 Top left inset: Red rain cells from Sri Lankan red rain fall, January 2013. Main picture: Pair of red rain cells extruding from material extracted from the interior of the meteorite. Pink bar represents 10 micrometres.

A small number of red rain cells were found extruding from aqueous suspension of the meteor dust, an example of which is shown in Figure 2. The top left inset of Figure 2 is a light microscope image of Sri Lankan red rain cells recovered in early January, *nearly 10 days after* the meteorite fall from which the material shown in the main part of Figure 2 was extracted. This remarkable conjunction of red rain cells recovered *earlier* in the meteorite and the *later* fall of red rain is an indication of a causal connection between the two events. The hypothesis is that the main bulk of the red rain cells carried within a cometary bolide could have been released into the stratosphere on 29 December 2012 to serve as nuclei of red rain that fell over the same area many days later.

REFERENCES

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