

Cosmopolitan microbes -- hitchhikers on Darwin's dust

Scientists have analysed aerial dust samples collected by Charles Darwin and confirmed that microbes can travel across continents without the need for planes or trains - rather bacteria and fungi hitch-hike by attaching to dust particles.

In a paper published in *Environmental Microbiology*, Dr. Anna Gorbushina (Carl-von-Ossietsky University, Oldenburg, Germany), Professor William Broughton (University of Geneva, Switzerland) and their colleagues analysed dust samples collected by Charles Darwin and others almost 200 years ago.

Geo-chemical analyses showed that these samples contained wind-fractionated dust from West Africa and some travelled as far as the Caribbean. Their results clearly show that diverse microbes, including ascomycetes, and eubacteria can live for centuries and survive intercontinental travel.

Desert storms stir up and deposit 50million tonnes of dust particles from the Sahara to the Amazon every year. The largest, single source of dust on the planet is the Bodélé Depression in Northern Chad. As surface sand is whipped up into the air, larger particles are continually lost, and only the finest (“These findings push forward our understanding of planetary microbial ecology.” said Professor Broughton.

But could inter-continental spread of microbial hitch-hikers lead to the spread of contaminants or disease? “Obviously, intercontinental spread of micro-organisms has been with us for a very long time, so unless land-use patterns in the Western Sahara have changed recently, disasters like the demise of coral in the Caribbean, cannot be ascribed to the intercontinental travel of desert bugs” said Professor Broughton.

Source: Wiley-Blackwell

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