

*Copy sent w/permission of Dr. Knight, Chasson*

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Dear Bob:

I had been following the series of yellow rain letters and news articles in Science, so it was interesting to read the material you sent. It certainly is an interesting example of the interaction of science and politics.

With regard to Meselson's question, the answer is a qualified "no." (It's too bad everything has to be qualified, isn't it?) Particularly when one is dealing with rare events, one's estimation of "reasonable upper limits" for things like dust particle concentration in air may not apply very well. I don't quite understand the last sentence in Meselson's letter. Coagulation rates of dust particles in air are highly dependent upon concentration, but also upon size. Even if the raindrops pick up aggregates of original dust particles, the dust might very well redisperse within the drops or upon their surfaces, so as to give a distinct color. (Drop a little clump of talc particles on water, for instance.)

Muddy rain associated with dust storms is not terribly rare (or such is my impression without doing some sort of literature search). If that's true, then whatever "theoretical limit" there might be, based upon whatever set of assumptions, should allow for the possibility of colored rain from the scavenging of dust.

Nancy is in Siberia right now. She'll be back (presumably) in 10 days or so, with a new set of tales.

Regards,

*Charlie*

Charles A. Knight ✓

CAK:sb

*Note: Knight is one of the world's ranking experts on atmospheric condensation processes.*