



DIVISION OF  
BIOLOGICAL SCIENCES  
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August 31, 1983

Dr. Matthew Meselson  
Department of Biochemistry  
Harvard University  
Cambridge, Mass.

Dear Dr. Meselson:

I've been away from my desk for the last several months and am just now catching up with unfinished business.

I've been annoyed at much of the coverage of the "yellow rain" story because of the appearance of a lack of objectivity of most of the participants. Whether this is simply due to the manner of reporting or is really representative of the positions taken by those interviewed is hard to determine. However, if the Science article (24 June) represents accurate reporting then we appear to have another case in which science and politics do not mix. There seems to be a strong inclination to want to "prove" the yellow rain theory rather than to objectively test a series with alternative hypotheses. This comes out clearly in many of the statements attributed to the State Departments' experts.

I am also puzzled by tendency of the press and/or the experts to expect that a miscellaneous collection of spots collected under a variety of conditions in the field should all represent the same phenomena. It seems likely that several different types of sources could be represented in such samples. Based on what I have seen in the press all that can be said of this story is that many of the samples probably represent bee excrement. The evidence also seems to indicate that some other phenomena (perhaps man assisted) is involved but it is not yet apparent whether this represents bone fide mycotoxin warfare or some other process.

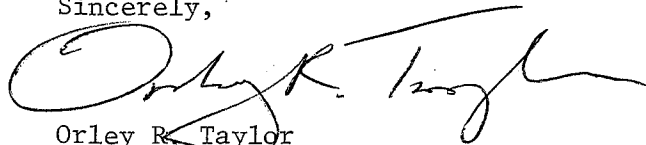
I could comment much more extensively on this controversy but I will get on with the main purpose of this note which is to suggest that it may be possible to establish the source of the bee hairs. Bee hairs have not been examined extensively but in some cases are known to vary among species. A careful study of bee hairs from Apis mellifera, A. cerana, A. dorsata and A. florea might reveal differences in their length or branching etc. Failing this, it should be possible to characterize biochemically the hairs to species. Races of mellifera have been characterized G. C. analysis of surface hydrocarbons and such distinctions between species should be even clearer. Results indicating mellifera hairs in samples from S.E. Asia would strongly support the State Department's case. Hairs from Asian species especially dorsata or florea would weaken their case since there is no technology for collecting pollen from these species. Hairs from cerana would not be as easy to interpret. About a million colonies of these bees are maintained in S.W. China. These are highly nervous bees easily given to absconding when disturbed or when pollen and nectar are in short

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supply. I am doubtful whether pollen can be collected in large quantities from these bees but if cerana hairs show up in the samples I would also want to determine if any of the pollen might have originated in China.

Perhaps, you have already thought of these possibilities. I would appreciate it if you would send me reprints of any technical papers you publish on this subject.

Sincerely,

A handwritten signature in cursive script, appearing to read "Orley R. Taylor". The signature is written in dark ink and is positioned above the typed name.

Orley R. Taylor

ORT/dm:m