COMPARISON OF YELLOW RAIN AND BEE EXCREMENT

CONTENTS

Data from forthcoming report by P.S. Ashton (Harvard University), M. Meselson (Harvard University), J.W. Nowicke (Smithsonian Institution), J.P. Robinson (University of Sussex) and T.D. Seeley (Yale University)

May 31, 1983

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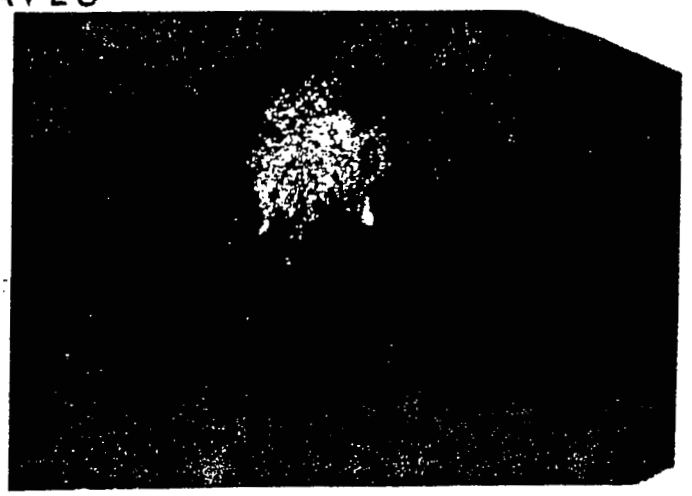
Yellow Rain and Bee Excrement Compared

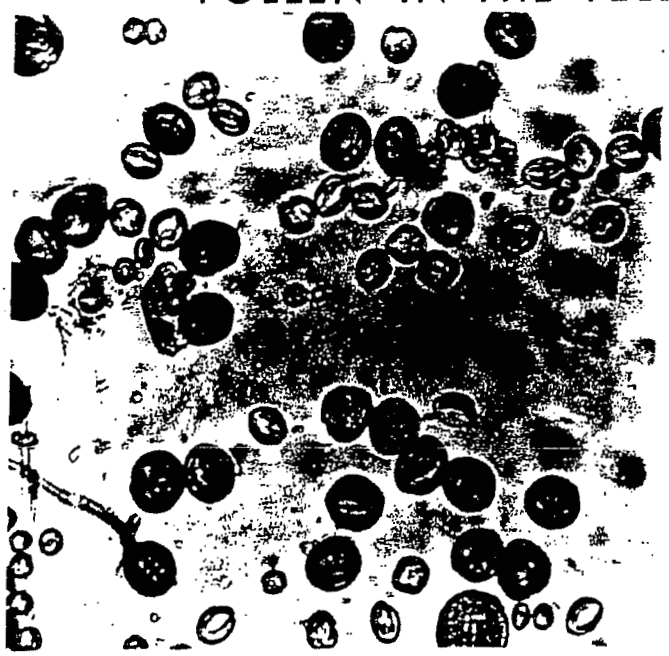
YELLOW RAIN
from alleged chemical attack
Thailand, February 1982

BEE EXCREMENT
from prunus leaf
Massachusetts, 1983

YELLOW SPOTS ON LEAVES



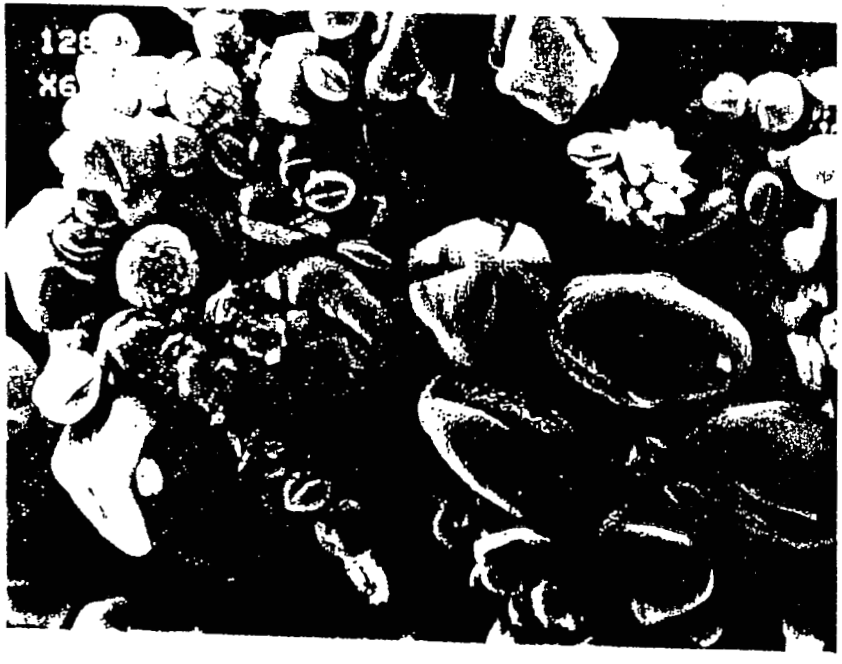
POLLEN IN THE YELLOW SPOTS (photomicrographs)



DATA FROM FORTHCOMING REPORT BY P.S. ASHTON (HARVARD UNIV.), M. MESELSON (HARVARD UNIV.), J.W. NOWICKE (SMITHSONIAN INST.), T.D. SEELEY (YALE UNIV.) AND J.P. ROBINSON (UNIV. OF SUSSEX).

Electron Micrographs of Pollen in Yellow Rain and Bee Excrement

YELLOW RAIN
from alleged chemical attack
Laos, March 1981



POLLEN
from spot on automobile
Massachusetts, May 1983

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ENVIRONMENTAL SAMPLES FROM SOUTHEAST ASIA REPORTED TO CONTAIN TRICHOTHECENE MYCOTOXINS

Nature	Origin	Date of Collection	Reported by	Pollen
Leaf and stem	Kampuchea	March 1981	State Dept	not looked for
Water and floating material from same site as above				not looked for
Yellow-green powder scraped from rock	Laos	March 1981	State Dept	yes
Rock scraping	Laos	April 1981	State Dept	not looked for
Yellow powder scraped from vegetation	Laos	March 1981	ABC Television News	yes
Spots on vegetation	Thailand	February 1982	State Dept	yes

ADDITIONAL SAMPLES EXAMINED FOR POLLEN

Leaf samples		received April 1982	Australian Defense Dept	yes
Leaf samples		received April 1982	Australian Defense Dept	yes
Pebbles		received April 1982	Australian Defense Dept	yes
Leaf samples	Thailand	received April 1982	Australian Defense Dept	yes
Yellow powder scraped from rock	Laos	received November 1981	United Nations	yes
Leaf and stem	Laos	October 1981	United Nations	yes

Total Examined for Pollen: 9
Total Containing Pollen: 9

EVIDENCE REGARDING THE ORIGIN OF YELLOW RAIN

Evidence Consistent with the Natural Origin of Yellow Rain as Bee Excrement

1. Yellow color, size (a few millimeters in diameter) and general appearance of spots
2. Approximate area in which spots are found in an occurrence (a few adjacent houses in a village)
3. Approximate spacing of spots in affected area, several per square foot
4. Continued appearance of spots over a period of days in an affected area
5. High pollen content of all spots examined
6. Variable diversity of pollen types and sizes in spots from different sites
7. Different pollen types in spots from different sites
8. Pollen in spots from plant families common in Southeast Asian tropics
9. Pollen in spots from plant families visited by bees
10. Bee hairs present in spots

Evidence and Reports Not Explained by Natural Origin of Yellow Rain as Bee Excrement

1. Tricothecene mycotoxins in samples of yellow rain
2. Tricothecene mycotoxins in samples of blood, urine, and tissues of alleged victims
3. Tricothecene mycotoxin on Soviet gas mask from Afganistan and possibly on an additional gas mask and on vegetation
4. Refugee reports of illness and death associated with occurrence of yellow rain
5. Refugee reports of yellow rain following overflights or attacks by aircraft and attacks by artillery and rockets

Conclusion

Whatever the source of mycotoxins in various samples, it is possible that yellow rain is bee excrement.