

water will have flowed under the bridge before the noble lord's money risks leaving his pocket, despite the improvements effected by the GLC.

The Thames, like the Chelmer, has not been without cyanide problems. Three drums each containing a hundredweight of cyanide were recently dropped into the water at a London dock, but the Thames so rapidly dispersed the chemical that it was undetectable two days later.

Red Rain

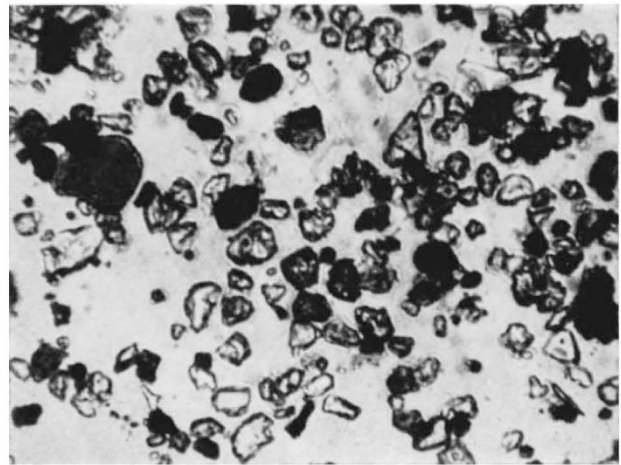
MOTORISTS in south and central England who cleaned their cars during the last weekend of June regretted their diligence when they rose on Monday, July 1, to find deposits of orange coloured dust over every exposed surface. The explanation was an early morning shower of rain, laden with dust swept up probably from somewhere in North Africa. The suspicion that this was an unusual event, even for a country which prides itself on the peculiarities of its climate, was soon verified by the Meteorological Office. Thumbing rapidly through the record books, it turned out that the last time a dust fall like this happened was in 1903. (There was, it is true, another dust storm in the 1930s, but not on the same scale.) The factors in the weather pattern for late June which led to this phenomenon are being investigated by the Meteorological Office. To help, there are weather satellite pictures of what seems to be the dust cloud moving north towards Britain.

On the same day as the widespread dust fall, Minehead and Dulverton in Somerset, and Burnley in Lancashire, were bombarded by hailstones the size of golf balls, according to a report in *The Times*. That this was no ordinary hailstorm is clear from the reports of smashed windows and dented cars, and damage done to an aircraft on the ground not far from Cardiff. The Meteorological Office is keeping an open mind on whether this is a coincidence or whether there was a causal relationship between the dust and the hail.

The dust itself is being examined by a number of research establishments. The Geochemical Division of the Institute of Geological Sciences, particularly quick off the mark, examined a sample which fell in North Wembley. Microscope and X-ray techniques show that the grains are chiefly quartz and feldspar, with smaller amounts of calcite and some mica. Its colour comes, it seems, from the presence of finely divided iron oxides, chiefly as a coating on the grains. Because there are no fragments of volcanic origin, the dust cannot have been carried into the upper atmosphere after a volcanic eruption, something which has been known to happen in the past. The presence of feldspar and calcite, minerals which break down rapidly in normal chemical weathering conditions, suggests that the dust comes from a desert region. A further clue is given by the microscopic appearance of the dust. Most of the grains are angular, although some of the coarser material is rounded. This is typical of the periphery of deserts; the sand from dunes in the central regions of deserts tends to be more rounded. The conclusion of the Institute of Geological Sciences is that the dust is a wind blown silt, known to geologists as loess, and may well have come from the margins of the Sahara desert.

The laboratories at Harwell, well equipped to deal with this kind of airborne fallout, have so far concentrated more on a study of the sizes of the dust particles.

Mr M. J. Heard and Mr R. D. Wiffen of the Health Physics and Medical Division sent to the *Nature* office their preliminary observations. They were particularly fortunate in collecting a sample of the rainfall on a clean glass slide, and so do not have to rely completely on more or less contaminated samples from motor cars claimed to have been clean before the shower. There seem to have been considerable local variations in the amount of the deposition, but the Harwell measurements, believed to represent the highest values, correspond to about 500 kg km⁻² (1.5 tons per square mile). One interesting observation is that the quantity of material carried varied considerably from one raindrop to another; some of the smallest drops contained very large amounts of dust.



"Sahara dust"—magnified 100 times.

The deposit from a large drop was examined in detail to obtain the sizes of the dust particles. The size measurements fitted a log-normal distribution, yielding a geometric mean diameter of 0.47 microns and a mass median of 4.0 microns. There seems to have been some variation between individual droplets of the relative frequency of the larger particles. The largest particle measured was 48 × 29 microns. Optical microscope showed particles with sharp outlines, well rounded at the larger sizes and progressively more angular as size decreased. An electron microscope revealed the considerable variety of particle and mineral types present.

What they Earn

EXECUTIVES in British companies are paid less than their opposite numbers in Europe and the United States. Scientists who work in research and development seem to do worse than executives who concentrate on marketing, finance or production; only the luckless personnel officers are worse off. These results have emerged from a survey of executive salaries produced by United States consultants Towers, Perrin Forster and Crosby, recently published in *Business Week*.

Despite the increasing mobility of executives in Europe, and the penetration of American companies, both of which might be expected to create greater uniformity, there are still substantial differences between European countries. In Italy, for example,