

reaction and one wonders whether a similar situation obtains in some other systems. Since prostaglandin synthesis (hence endoperoxide generation) can be initiated by damage to cells and tissues, workers from each group have pointed out that endoperoxides are most likely the trigger for platelet thrombus formation at wound sites.

Doses of aspirin which block PG synthetase are (generally speaking) well tolerated, implying that prostaglandin synthetase is not an enzyme vital to the existence of the organism. This accords with the view that prostaglandins are modulators of physiological processes, perhaps mainly involved in local communication between cells, especially in defensive reactions induced by damage or stress. But, because of the exponential increase in prostaglandin literature, a few more years will have to elapse before prostaglandins are assigned a definite role among the body's homeostatic mechanisms.

Ecologists classifying plants

from Peter D. Moore

It is said that when a soldier is confronted by a static object he will be inclined to paint it; a biologist placed in the same situation will attempt to classify it. By the beginning of this century, when the vast bulk of larger animals and plants had been placed into seemingly appropriate taxonomic pigeonholes, a rising breed of biologists, now classified as ecologists, began the formidable task of sorting entire communities of species into meaningful groups. Starting with the belts of climatically determined vegetation on a global scale, they worked their way down to the level of habitats. In Britain this descriptive age culminated in the production of Tansley's *The British Islands and their Vegetation* (Cambridge, 1939), in which vegetation types were defined on simple criteria, mainly the dominant species. On the Continent a more elaborate system was developed by Braun Blanquet in which vegetation types were characterised by plant species which were confined to any given association (so-called 'faithfuls'); these were considered to be of narrower ecological amplitude and therefore more specific indicators of the environment than were the dominants used in the British system. In a modified form, this system remains the standard approach to vegetation description and classification throughout the European mainland.

In Britain the Braun Blanquet system has never really established itself, partly because of the general poverty

Another rock term bites the dust

from L. F. Penny

At last the enigma of the Hesse Till is solved. This, the topmost member of the Devensian (last glaciation) boulder clays on the east coast of England, which most geologists have hitherto regarded as a till sheet in its own right, is now shown by Dr Madgett to be nothing more than the soil profile at the summit of the succession (this issue of *Nature*, page 105).

To be sure, this solution has occasionally been suggested before. Eighty years ago Carvill Lewis suspected it (*Glacial Geology of Great Britain and Ireland*, 209; 1894); Bisat was getting warm in 1940 when he found that the Hesse Till inland (Madgett's Zone C) was different from that on the coast (Zone A), but he was not thinking of a pedological explanation (*Proc. Yorks. geol. Soc.*, 24, 148; 1940); and more recently the same doubt has been expressed by Fenton (*E. Yorks. Field Studies*, 2, 3; 1969). But suspicion is one thing, and proof is another; it is this that is now presented, as a result of the application of modern pedological methods to what was previously regarded as a purely geological problem. Briefly, the so-called Hesse Till in Yorkshire lies sometimes on the Drab Till and sometimes on the Purple Till; and it is now identified, where it overlies the Drab, as weathered Drab; and where it overlies the Purple Till, as weathered Purple. And this is why Bisat's "inland Hesse" "which lies on Drab or directly on Chalk" was different from the "coastal Hesse" (which lies on Purple).

If we ask why such a neat and satisfactory solution has never been proved before, the answer must be that the wrong people have been looking at it. Madgett is a pedologist, who has brought a pedological

eye to the examination of that part of the succession which geologists usually dismiss in their field note-books as "Soil . . . 2 m". The story of the Hesse Till shows how dangerous it is for geologists to draw conclusions about superficial deposits without taking pedological advice (as indeed it would be for a pedologist to interpret a soil profile without an understanding of the geological history of the area). In several countries it is now normal practice for Pleistocene sections to be examined simultaneously by geologist and pedologist, who write it up together; in Britain we are moving toward this more integrated approach, largely due to the activities of interdisciplinary groups such as the Quaternary Research Association, but it is still true to say that much more could be done (and mistakes avoided) by a greater awareness in each group of what the other can contribute.

Clearly, as Madgett suggests, the term Hesse Till should now be dropped. Hesse has never been a good type locality, and if the till there is really weathered Drab, there is no point in perpetuating the name. Perhaps these discoveries will stimulate a more comprehensive revision of the nomenclature of the east coast tills. Are "Drab" and "Purple" really satisfactory as stratigraphical names? Is "Hunstanton" any better than "Hesse", if there too the till is weathered Drab? Probably the time has come to redefine them according to modern usage, in which each lithostratigraphical division is "designated by a distinctive proper name and defined in a specified place or region" (*Int. geol. Correlation Programme*, UK Contribution; Royal Society, 1968).

of our flora and partly as a consequence of the penetrating critique directed at it by Poore (*J. Ecol.*, 43, 226; 1955). Unconvinced about the real existence of plant communities as definable entities, researchers in Britain and in the United States and Australia have preferred to regard vegetation as a continuum of variation in its specific composition. This being so, the most convenient approach to classification has been the erection of reference points within the continuum at appropriate locations (Poore, *J. Ecol.*, 44, 28; 1956). As an aid in this task, the tech-

nique of ordination has been used extensively; in essence this involves the comparison of stands of vegetation on the basis of their floristics and the construction of geometrical, spatial models which can best account for the various similarities and differences observed (for example, Bray and Curtis, *Ecol. Monogr.*, 27, 325; 1957).

Hierarchical classification of stands, reminiscent of the Braun Blanquet type, has found a place in British plant ecology mainly as a result of the work of Williams and Lambert (*J. Ecol.*, 47, 83; 1959), who initially used a chi-