Volume 2 includes papers on reproductive biology, growth, physiology, and behaviour in captive lions and tigers, on the evolution of reproductive behaviour, on interpreting mating behaviour in bob-cats from tracks, on artificially induced oestrus and captive breeding, and more about captive cheetahs, plus a lot of unedited discussion. There is some pointed criticism about conditions under which cats are kept in some zoos.

Dr Eaton is to be congratulated on organising these symposia. But the style of the papers is often anecdotal (sometimes very much so), the discussions are reported verbatim, and few papers are summarised. This presentation is not good enough in volumes costing $10 and $12.50, even though the proceeds go to research. The symposia no doubt served their primary purpose in getting scientists together to exchange information, and they encourage a wider use of zoo animals for research; but few people have the time and energy to wade through lengthy accounts and discussions, and these volumes may fail to communicate their information to a wider audience, especially when the shoddily bound, unindexed paperback comes to bits in their hands.

The initiative is to be encouraged, but let us hope for better, and more timely, productions as a result of subsequent symposia with contributions from Continental and Russian scientists. However, quantitative data on predators, and particularly on their physiology and behaviour, are scarce, and these volumes should be studied by all biologists and managers interested in this group.

DAVID JENKINS

An Ecological Atlas of Grassland Plants, by **J. Philip Grime** and **Philip S. Lloyd.** Arnold, £6.

The book's title is perhaps misleading. It consists largely of data, presented in the form of graphs and tables, on the autecology of ninety-five common British grassland plants, but the data were collected entirely from one region of Britain, that round Sheffield, from Castleton in the west to Bawtry in the east, and Doncaster in the north to Matlock in the south. It could be objected that it is unsafe to draw conclusions from such a limited area of north central England, and the authors recognise the possibility of limitations in their conclusions. On the other hand, the region studied is central and is a particularly varied one in its soils, topography and vegetation types. The intensive nature of the survey (covering some 600 field recording sites) makes it one from which reasonably reliable conclusions can be drawn.

Localities in the study area were selected on the basis of a fairly uniform scatter, and one-square-metre quadrats were selected in each at random. Within these, percentage frequency for each species was calculated by an objective technique. A table indicates the species-occurrence figure on each geological formation, subdividing these according to pH values of the soil. The proportion of occurrences in grazed, ungrazed, burned or unburned grasslands, and possible combinations of these, is given, and histograms show constancy in each pH class in (0.5 pH units) and for frequency. A polarograph diagram displays the occurrence of each species in relation to slope on the concentric axis and to aspect on the radial axes. Thus one can see at a glance whether the species in question has any preference for slopes of a particular aspect or steepness.

The authors hope that their study will be useful in connection with landscape design, nature conservation, and the management of marginal land. Certainly, within the limits of a purely regional study, it can be recommended to both plant ecologists and also all those concerned with land-use management. One would however have liked more information on such things as the effect of trampling by man and on the actual degree of association of the species concerned in nature.

FRANCIS ROSE