Excelsa. The third number of the journal of the Aloe Cactus and Succulent Society of Rhodesia splendidly maintains the standard that has been set from the start. There are articles for all tastes. The major formal contribution is a check-list and annotated index of *Lithops* (accompanied by coloured illustrations) by D. T. Cole. Other papers deal with *Aloe*, *Cycas*, *Pachypodium* and *Adenium*; there is an extract from Bunbury's Cape journal of 1838, with his observations on some plants of the Port Elizabeth area; and by way of contrast there is a fascinating article on microclimates in relation to plant growth by M. W. Kamstra.

I hope the reading of E. J. Bullock's "Thoughts on the status of Aloe lutescens" will not be restricted to those who are interested in this particular plant. Mr Bullock interweaves with his aloes a philosophy on the important role of the part-timer in advancing our knowledge of plants and on the value of the field observations he can make. I heartily endorse every word of this. As a full-timer may I add that I have received enormous help from Mr Bullock's counterparts elsewhere: people who have roamed their own farms and countryside and know their plants; and who are able to make observations all the year round. These people are first-class naturalists and *Excelsa* is clearly a journal that will help to recruit and encourage them.

B. L. BURTT

Numerical Taxonomy.* The last decade has seen a veritable explosion in the use of numerical methods in science generally and in biological taxonomy in particular. This explosion has been accompanied by an intense debate on the value of such applications to taxonomy. It is fitting therefore that Sneath & Sokal should decide to update their original work first published in 1964. *Numerical Taxonomy* sets out to describe the various numerical methods that are available to the taxonomist and to give the necessary theoretical background so that they can be used effectively. This admirable compendium must surely be considered an essential text for all taxonomists who intend to use or have an interest in numerical methods.

We have learnt to expect an almost messiacal dedication to the subject from Sneath & Sokal. The sceptics will therefore be pleased to find that they have retreated from some of their more extreme views (on, for instance, the use of overall similarity as a measure of taxonomic affinity and the rigid acceptance of phenon levels for different ranks). The section entitled 'A critical examination of numerical taxonomy' is a brave attempt to put the subject in perspective though I am sure that it does not go far enough to satisfy many of the doubting Thomases.

In short, this book is an absolute must for serious students of numerical taxonomy even if they have little or no mathematical background.

D. F. CHAMBERLAIN

* Numerical Taxonomy. The Principles and practice of numerical classification. By Peter H. A. Sneath and Robert R. Sokal. xv + 573 pp. 81 illustr. 9 tables. W. H. Freeman & Co., England. 1973. £9.40.

Shedding of Plant Parts. The concept of this new volume* in the Physiological Ecology series is wholly admirable: it embraces every aspect of the separation of parts from the parent plant. Naturally the centre of the stage is held by the active physiological process we call abscission; but, as Addicott & Lyon point out (p.86), the boundary between physiological and physical causes of shedding is not a sharp one. Therein lies an immediate justification for this wide treatment.

The first chapter, 'Extent and significance of shedding of plant parts', by T. T. Kozlowski, the editor, both outlines his wide concept and gives detail (e.g. seasonal and quantitative aspects of litter formation) on subjects not covered later. Then follow three chapters on the anatomy and physiology of abscission by Barbara D. Webster, F. T. Addicott & J. L. Lyon, and Daphne J. Osborne. These are written clearly and with authority. They cover just about 100 pages, and any botanist who has not specialised on abscission may be really grateful for these. 'Shedding of shoots and branches' (W. F. Millington & W. R. Chaney) is interesting and wide-ranging, even to the extent of recognizing the scars of natural branch-shedding in fossils.