vegetation, geological formations, and soil groups. Considerable is also said regarding the use of the soils.

The author presents two tentative classifications, differing in detail. The following accompanies the map:

(A) Summer-rainfall area:
   a) Desert soils: (1) Soils with lime horizon. (2) Brak soils. (3) Very shallow soils. (4) Rock (Hills and plains).
   b) Solonetzic soils: (1) Alkali soils.
   c) Kalahari soils: (1) Kalahari sand. (2) Kalahari sand on lime.
   d) Unleached subtropical soils: (1) Black clay soils. (2) Reddish-brown sandy soils (Low Veld).
   e) Lithological types: (1) Waterberg and Zoutpansberg light brown sandy soils and Waterberg sandstone. (2) Lydenburg dark brown sandy soils and Pretoria quartzite. (3) Drakensberg black clay soils and basalt.
   f) Gley-like podzolic soils: (1) High Veld prairie soils. (2) Eastern province semi-coastal belt soils. (3) Natal coastal belt soils (Sugar belt).
   g) Laterite and lateritic soils: (1) Laterite and lateritic red earths. (2) Lateritic yellow earths.
   h) Ferruginous lateritic soils: (1) Grey ferruginous lateritic soils. (2) Brown to reddish-brown ferruginous lateritic soils.
   i) Miscellaneous types: (1) Eastern littoral light brown sandy soils. (2) Aeolian sandy soils (North-Western O.F.S.)

(B) Winter-rainfall area:

Although the book contains a wealth of chemical data of great interest to soil scientists, it is obvious from the foregoing that these and the field data have not been systematically arranged. As in many regions, extremes of parent material are reflected in the soil, thus tending to obscure the more general regimes of soil development. The classification is an incoherent pattern of inconsistently defined and named categories based, unevenly, upon climate, parent material, texture, color, genetic soil characteristics, and regional geographic features. These inconsistencies reduce the value of the map.

Too much should not be made of the weakness in classification, because of the importance of the basic data presented for South Africa. With more study, especially in the field, the boundaries between types can be located more precisely and the groups more carefully defined in relation to one another and to the soil groups of the world. The book is a valuable contribution to soil geography.—Charles E. Kellogg.

**HANDBOOK OF CHEMISTRY**


During the past two decades those dealing with the natural sciences have come to regard handbooks as essential tools. While we now take them for granted, this may be a good occasion to realize the important services which they render in our daily work.