first time that a survey has been taken, and that data showing the load on general practitioners have become available on this scale. The present publication shows consultation rates, and rates of patients consulting for different age and sex groups and different diseases. It is expected that a further volume which will contain figures on occupational morbidity will be issued in the future.

Mammals of the Belgian Congo

A PAPER by J. Verschuren on the ecology and biology of the larger mammals of the Garamba National Park in the north-east of the Belgian Congo forms the ninth fascicle of the results of H. de Saeger's expedition for the exploration of the park (Exploration du Parc National de la Garamba : Mission H. de Saeger. Fascicule 9 : Écologie et Biologie des Grands Mammifères (Primates, Carnivores, Ongulés). Par Jacques Verschuren. Pp. 225 + 2 planches. Bruxelles : Institut des Parcs Nationaux do Congo Belge, 1958). In the region studied the larger mammals are much more difficult to observe than in East Africa owing to the much denser vegetation in which they seek refuge, but the author has made good use of the two years that he was in the field and has collected much valuable information about their biology. After a short introduction describing the country and the methods employed the work is arranged systematically, and each species is dealt with under the headings : particulars of specimens examined, local names, geographical distribution, systematics and morphology, and ecology and biology. For most species the last section is by far the largest and is full of carefully recorded observations of the greatest interest. Fifty-one species are dealt with, distributed among the Primates, Pholidota, Carnivora, Tubulidentata, Proboscidea, Hyracoidea, Perissodactyla and Artiodactyla. The author adds that his lengthy experience of mammals in the wild has convinced him of the invalidity of many of the innumerable forms, subspecies, and races that have been so profusely described by some writers—a remark that will be heartily endorsed by other field zoologists. The value of the paper is enhanced by a large number of photographic illustrations, including two plates in colour.

Collision Broadening of Spectral Lines

COLLISION broadening is an important process in the formation of stellar absorption lines, and collision shifts have been discussed as a possible explanation of that part of the red shift of solar lines which is unaccounted for by the Einstein gravitational shift. W. R. Hindmarsh (*Mon. Not. Roy. Astron. Soc.*, **119**, 11 ; 1959) has recently reported the results of the first of a series of measures of collision effects in atomic spectra. The collision shift and broadening of the neutral calcium line λ 4227 A. due to an external pressure of helium have been measured. The line was formed in absorption by passing white light through calcium vapour in the presence of helium at various pressures less than one atmosphere. The half-intensity damping width of the line was found to be $1{\cdot}72 \times 10^{-20}$ cm.$^{-1}$ per atom per cm.^{3} of helium, and the shift $0{\cdot}05 \times 10^{-20}$ cm.$^{-1}$ per atom per cm.^{3} towards the violet. The ratio of broadening to shift on the Lindholm theory is 2·76, and the shift is predicted to be towards the red. The observed ratio is much larger and the observed shift is in the opposite direction. This discrepancy must be due to the involvement of the short-range repulsive forces between calcium and helium atoms as well as the long-range van der Waals forces. Hindmarsh also shows that the collision shift of the calcium line is a negligible component of the solar red shift and cannot account for the difference between observed and predicted solar red shifts. In the second paper following the above, W. R. Hindmarsh and K. A. Thomas show that for two argon lines the collision shifts are in reasonable agreement with the Lindholm theory.

Hot Laboratory Equipment

"HOT Laboratory Equipment" is a revised and enlarged second edition of the "Hot Laboratory Catalogue", which constituted the major portion of "Chemical Processing and Equipment" (*TID*-5276), published by the U.S. Atomic Energy Commission as one of the several volumes for the 1955 International Conference on the Peaceful Uses of Atomic Energy. The new edition (pp. viii + 429. Washington, D.C. : Government Printing Office, 1958. 2.50 dollars), which is fully illustrated, contains descriptions of facilities, equipment and accessories for handling moderate to large amounts of radioactive materials. It lists 229 items compared with 126 in the first edition, and includes newly developed items as well as items omitted for various reasons from the first edition. Acknowledgment is made wherever possible to the organization responsible for the development of the particular equipment described. Most of the equipment listed was developed by national laboratories or contractors to the Commission, but some were developed by private firms. The contents is confined to hot laboratory equipment produced in the United States, but the reader is referred in the preface to two British publications ("Remote Handling Equipment", by A. Apperly, Atomic Energy Research Establishment, *E/R* 1291 ; and "Radioisotope Instrumentation and Accessories", by D. Taylor and A. G. Peacock, Scientific Instrument Manufacturers' Association, 1955) for information on similar equipment available in Great Britain.

Textiles and Dyes at the University of Leeds

THE eighty-fourth report of the Textile Industries and Dyeing Advisory Committee on the work of the Departments of Textile Industries and Colour Chemistry and Dyeing in the University of Leeds (pp. 47. Leeds : The University, 1959) covers the session 1957–58, in which applications for admission greatly exceeded places and very full programmes of teaching and research were maintained. In the Textile Industries Department, full-time students numbered 351 and in that of Colour Chemistry and Dyeing 50. Lists of publications are included. In textile physics work continued in X-ray diffraction, electron microscopy, infra-red absorption, and sedimentation in the ultracentrifuge. A second electron microscope was installed. In textile chemistry a method of producing a permanent lustre on all-wool fabrics has been developed and the chemical mechanism of permanent set, especially that obtained with sulphite–bisulphite solutions, was re-examined. Work on the effect of variations in the nature of the keratin in the assessment of wool quality continued. The constitution of some suint pigments which may be involved in the staining of wool, the surface activity of steroids and pyrolytic degradation of cholesterol are being studied, and a brief examination of the dielectric properties of lanosterol indicated its suitability for use in impregnated paper capacitors.