

he got hold of a gardener to give him some practical advice. However, with this slight drawback, the book is admirably designed for the teacher who wishes to work out an elementary course of instruction for a country school, either as an introduction to practical life or to a more special study of agriculture and horticulture.

I. *Clinical Lectures on Diseases of the Nervous System*. Pp. 279; price 7s. 6d. II. *Lectures on Diseases of the Nervous System*. Second series. Pp. 250; price 6s. net. By Sir William R. Gowers, M.D., F.R.C.P., F.R.S. (London: J. and A. Churchill, 1895 and 1904.)

In these two volumes Sir William Gowers has collected in revised form a number of clinical lectures which have appeared in various medical journals. In the latter volume he has also printed the Bowman lecture on subjective visual sensations delivered to the Ophthalmological Society, and the Bradshaw lecture on the subjective sensations of sound. The clinical lectures deal with many subjects in neurology; some are mainly descriptive, some speculative. In reading them one not only appreciates the original and suggestive way in which the facts are presented, but also the finished literary style. In a short notice it is impossible to deal with them in detail. The two lectures on the subjective sensations of vision and hearing are perhaps of wider scientific interest than the clinical lectures. In the first the visual phenomena experienced by sufferers from migraine are described and figured, and there is an admirable *résumé* of physiological teaching with reference to vision. In the second lecture the phenomena of tinnitus, of auditory vertigo, and other labyrinthine sensations are discussed in a luminous and attractive way. Both neurologists and physiologists will find much in these volumes to assist and to stimulate them in researches into nervous phenomena.

*Lectures Scientifiques*. A French Reader for Science Students containing Extracts from Modern French Scientific works in Chemistry, Physics, Mathematics, Physiology and Botany, with a Glossary of Technical Terms. By W. G. Hartog, B.A. Pp. vii+371. (London: Rivingtons, 1904.) Price 5s.

THE University of London now insists that candidates for a degree in science shall be able to read and understand accounts in the original of French and German scientific work. In compiling this book Mr. Hartog has had the needs of such students in mind so far as French is concerned, and he has succeeded in bringing together a varied and representative collection of extracts from French scientific works and scientific periodicals. Among the latter the *Revue générale des Sciences* takes a very prominent position, contributing to Mr. Hartog's collection as many as fifteen extracts. The book should be of service not only to the undergraduates referred to, but also to students of science everywhere, for it is now more than ever necessary that the man of science should be able to acquaint himself at first hand with the results of fellow-workers abroad.

*L'Industrie oléicole (Fabrication de l'Huile d'Olive)*. By J. Dugast. Pp. 176. (Paris: Gauthier-Villars and Masson et Cie., n.d.) Price 3 francs.

THIS little volume, which belongs to the Aide-Mémoire series, is a practical account of the manufacture of olive oil, and indicates several directions in which the results of scientific research have been utilised to improve technical processes. The formation and composition of olives are first explained, then the methods of extracting the oil are described and an account given of the appliances necessary for the purpose. The properties and methods of preservation of olive oil and the utilisation of the oil-cake are also considered.

## LETTERS TO THE EDITOR.

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### A Note on the Coloration of Spiders.

IT is well known that in a large number of animals, both vertebrate and invertebrate, the colour of the flanks and ventral side of the body differs from that of the dorsal. In the majority of cases the dorsal surface is most darkly tinted, the ventral palest, and the flanks intermediate in depth of tone between these two. This gradation of colouring has the effect of neutralising the shadows that are cast by the upper upon the lower portions of the body. Thus the animal does not stand out in prominent relief, but is, so to speak, artistically flattened, and thereby rendered less conspicuous.

To this general rule I have recently observed an interesting exception which affords strong evidence in favour of the truth of the above interpretation. The spiders belonging to the genus *Linyphia* are, almost without exception, darkly coloured upon the ventral surface; their flanks are variously slashed with oblique white bars and stripes, while their dorsal surface is yet more freely speckled with white or pale spots and lines. In these spiders, then, the scheme of coloration is the exact opposite to that which prevails elsewhere. Now the *Linyphiidæ* spin horizontal webs, in the centre of which they rest *inverted*, clinging to the lower side. Thus it is the ventral side of a *Linyphia* that is exposed to the strongest light, the dorsal side being in the deepest shadow. The inversion of attitude at once fully explains the inverted shading of the body.

OSWALD H. LATTER.

Charterhouse, Godalming, October 30.

### Sir J. Eliot's Address at Cambridge.

AGAINST some of the main conclusions of Sir J. Eliot's opening address before Section A (subsection: cosmical physics) may be set the facts that south-east winds are rare on the south-east coast of South Africa, and that the rain of the greater part of the tableland and south-east coast comes mostly from some northerly direction.

My concern, however, is chiefly with the following remarks, reported in NATURE of August 25 last:—

"The chief features of the rainfall of the period 1895-1902, in the Indo-oceanic region were as follows:— . . . There was a marked tendency in each year for late commencement and early withdrawal of the monsoon currents, and for deficient rainfall throughout the whole season over the greater part of India. These features were very pronounced in the years 1896, 1899, and 1901. The most remarkable feature of the period was that the region to the south of the equator, including South and East Africa, Mauritius, and Australia, was similarly affected. . . Mr. Hutchins, Conservator of Forests, Cape Town, states that drought prevailed more or less persistently over the Karroo region in South Africa from 1896 to 1903, and that cattle and sheep perished by millions. He also states that the drought extended to British Central Africa from 1898 to 1903. The previous statements evidence the continuity, extension, and intensity of the drought. . . The preceding statements have shown that variations of rainfall for prolonged periods similar in character have occurred, and may hence occur again, over the very large area including the Southern Asian peninsulas, East and South Africa, Australia, and perhaps the Indian Ocean. The abnormal actions or conditions giving rise to these large and prolonged variations must hence be persistent for long periods, and be effective over the whole of that extensive area."

Now the question is, what is a drought? From one point of view there is nothing but drought over a very large area of South Africa. But I gather from the table you print, showing the variation of the mean actual rainfall from the normal in India, that by drought is meant unusual and prolonged general dryness setting up marked economic results such as "large loss of cattle and great loss of