tracks of the centres of 620 typhoons which have been reported in the Far East during the twenty-six years, 1893–1918. The original purpose of the author was to issue these charts as an appendix to a more general study of the subject, but since the publication of this more comprehensive report has been considerably delayed, it was decided that the appendix should appear at once. Consequently, the atlas contains little more than the charts themselves, with brief explanatory notes on each. It lays no claim to be a theoretical treatise on the structure and origin of these revolving storms. No attempt at classification is made, since the charts are intended solely for the nautical guidance of sailors. The cases are enumerated month by month as they occur, and to avoid confusion and overlapping of the tracks, three charts are allotted to each of the months of maximum frequency (July to October inclusive). The maps cover a wide geographical area, from Cochin China and the Philippines in the south, to Manchuria and the Kurile Islands in the north, while embracing a vast stretch of the Pacific eastwards from the Asiatic mainland to 150° E. longitude. The irregular west-south-westerly motion of occasional storms in this region—chiefly in the China Sea—is clearly shown in the charts, and the author lays stress on the point that navigators should be familiar with the possibility of this unusual movement, even though the vast majority of the storms follow a general north-westerly track, such as is customary in the northern hemisphere. In conclusion, twelve summary maps are given, showing the dangerous zones and the successive changes which take place throughout the year. The atlas is of additional value in that it gives a trustworthy and up-to-date measure of typhoon frequency.

WE have received a copy of Catalogue No. 23 of second-hand books in science just issued by Mr. R. S. Frampton, 37 Fonthill Road, Finsbury Park, N.4. The works listed (some 1100 odd) range over most of the sciences, and the prices asked are very reasonable. The catalogue will be sent free upon application.

DR. WALTER KIDD is publishing through Messrs. H. F. and G. Witherby a work entitled "Initiative in Evolution," which will contribute to the evidence in favour of Neo-Lamarckism, and give especial consideration to the arrangement of the hair in mammals. Messrs. Witherby also give notice of "A Naturalist in Himalaya," by Capt. R. W. G. Hingston, in which attention is given, among other subjects, to geometrical spiders and their work, various species of ants and their organisations, and the nesting instincts of birds.

THE reviewer of "Smithsonian Meteorological Tables" in NATURE of September 30, p. 142, stated that the Tables are not obtainable in the ordinary way. Messrs. W. Wesley and Son, 28 Essex Street, Strand, W.C.2, remind us, however, that they are the agents for the Smithsonian Institution in London, and that the Tables can be purchased from them. The Tables form vol. lxix. of the Smithsonian Miscellaneous Collections, and not vol. lix., as given at the head of the review.

Our Astronomical Column.

PROF. PICKERING'S LUNAR OBSERVATIONS.—Prof. W. H. Pickering has for many years been making a careful study of certain lunar formations under all angles of illumination, finding striking changes of relative luminosity of adjacent markings in the course of the lunar day, which he ascribes to the presence of snow or hoar-frost, or in some cases to vegetation. There can be only one opinion as to the interest and value of the observations, whether Prof. Pickering's conclusions are accepted or not. His latest study (*Popular Astronomy*, August and September) is of the region round the crater Conon in the Apennines and the neighbouring formation of Bradley. He asserts that this region contains snowfields, clouds, and tracts covered with vegetation. He distinguishes the clouds from the snowfields as being more yellowish, less brilliant, and more subject to change. One note that he makes about them would seem to throw some doubt on their assumed nature. "No clear evidence of motion due to wind has ever been seen in the lunar clouds, which apparently merely form and dissolve *in situ*." The white snow-patches, on the other hand, which appear hazy at sunrise, are stated to show some drift; the "vegetation" regions darken conspicuously as the sun rises higher upon them. The author asserts that volcanic activity is by no means extinct on the moon, the floor of Plato being stated to be an active region emitting many steam-jets.

There cannot be much doubt about the relative change of brightness of the different markings, but it does not appear that the author has given enough consideration to the possibility that it may arise from differences in the composition of the rocks or of their degree of slope and of smoothness. While the occurrence of snow, cloud, and vegetation cannot be ruled out as impossible, it is at least somewhat difficult to reconcile with the tenuity of atmosphere that is demonstrated by the practical absence of refraction in occultations and eclipses.

THE SUN'S MAGNETIC FIELD.—The *Observatory* for September contains an article by Dr. F. H. Seares, written at Prof. Hale's request, giving an account of the researches made at Mount Wilson since 1908 on the sun's magnetic field. The investigation was suggested by the discovery of the Zeeman effect in the spectra of sun-spots, which were surrounded by hydrogen vortices. In the case of the general field the spectral shifts are extremely minute, less than one-thousandth of an angstrom, and it is only the remarkable accordance in the results that gives confidence that the effect is a real one, the shifts being of the same order as accidental errors in the measures. The precaution was taken that the measurer should not know in which direction the shift on any plate was likely to be, so that all bias was eliminated. Comparatively few of the spectral lines were found to be suitable for the research, and the results depend chiefly on iron and chromium lines. A first solution showed that the northern hemisphere had negative polarity, and that the magnetic axis was close to the rotational one. It was afterwards found that the inclination of axes is about 6°, and that the magnetic axis revolves about the other in 31·44 days. The investigation indicates that the field strength diminishes rapidly with increasing elevation, falling from 50 to 10 gausses in 200 km. It will be noted that the shifts in this investigation are much smaller than in the Einstein spectral test; but differential measures suffice here, while in the other case absolute ones are required.