

## OUR ASTRONOMICAL COLUMN.

THE USE OF A PLANE GRATING IN STELLAR SPECTROSCOPY.—In No. 5, vol. vi., of the Journal of the Royal Astronomical Society (Canada) there is an interesting note describing some preliminary tests, made at the Dominion Observatory, Ottawa, of a plane grating used as the dispersion piece of a stellar spectrograph. The grating used is one ruled by Dr. J. A. Anderson, who is now regularly ruling excellent gratings at the Johns Hopkins University, and has a ruled surface of  $2\frac{1}{2} \times 3\frac{1}{2}$  in., with 15,000 lines to the inch. It was employed in the Littrow form of spectrograph, giving a linear dispersion of 17.5 Angströms per millimetre, and gave excellent definition over a nearly flat field extending from  $\lambda 4800$  to  $\lambda 3500$ . The photographs secured show a much more uniform intensity over a wide range than do those taken with a three-prism spectrograph, and for this reason will be especially useful. In the red, where the prismatic spectrum is so compressed, and in the violet and ultra-violet, where it suffers considerable absorption, the grating spectrograph will prove very advantageous, and the results of the further experiments to be made will be awaited with interest.

OBSERVATIONS OF THE ZODIACAL LIGHT.—The February number of *L'Astronomie* contains two striking drawings of the zodiacal light as seen by Lieut.-Col. Pachine at Essentouki (Caucasus) on January 28, 1911. This observer has seen the phenomena many times, and in various countries, but had never before seen it so bright. At 6h. 30m. p.m., the base of the luminosity extended along the western horizon for a distance of some  $30^\circ$  from  $\alpha$  Piscis Austr. towards Aquila, and the cone reached upwards to a point a little to the south of  $\alpha$  Arietis, the brightness from the base to  $\gamma$  Pegasi being more than twice that of the Milky Way in its brightest parts. Many curious fluctuations took place, and at 9h. 40m. the apex of the cone enveloped the Pleiades. The colour of the light generally was from a pale-yellow to a bluish-grey.

ASTRONOMICAL TIME-INSTALLATIONS.—A brochure published by the Royal Observatory of Belgium contains a very detailed and well-illustrated account of the installations employed for the time-service in that observatory, written by MM. Philippot and Delporte. The various means employed to secure the necessary constancy of pressure and temperature in the underground chamber containing the installation are very interesting, as are also the various devices for automatic regulation and registration, and it would appear that the Belgian authorities have established an ideal installation for their time-service.

Amateur astronomers will find a useful note, by M. Jonckheere, in the January number of *L'Astronomie*, describing a device he employs for keeping his sidereal clock at constant temperature. The clock is placed in a double case, and should a change of temperature occur, a current is sent automatically through a heating circuit (an incandescent lamp bulb) until equilibrium is restored. With this apparatus M. Jonckheer keeps the temperature constant within  $0.25^\circ$  C.

## ORNITHOLOGICAL NOTES.

IN the fifth part (vol. i.) of *The Austral Avian Record* the editor executes a complete *volte face* in the matter of the classification of Australian birds. Hitherto he has used generic terms in a wide and comprehensive sense; he now employs them in a much more restricted signification, and accordingly

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proposes no fewer than forty-eight new genera in this issue. Whether such changes be expedient or not (there is no right or wrong in the matter), they have the great disadvantage of rendering standard works, like Sharpe's "Hand-list of Birds," more or less obsolete.

In *The Zoologist* for December, 1912, Mr. F. J. Stubbs gives reasons for regarding migration as a cosmical function, which plays an important part in regulating the present balance of life on the globe. The prevalence of continuous sunlight during the Arctic summer and its absence in winter is regarded as the primary controlling factor of the phenomenon.

Bird-migration in Lindisfarne forms the subject of an editorial article in *British Birds* for December, 1912. Rather more than a hundred kinds of birds were observed on the island, of which not more than thirty seemed to be resident. Although no great inrush of birds was noticed, migration was going on during twenty-six out of the forty days of the visit. Bird-life in the south-west of Ireland and the recovery of birds marked in 1912 form two of the chief items in the January issue of the same journal.

Bird-marking in the Netherlands forms the subject of an article by Dr. E. D. Van Oort in *Notes Leyden Mus.*, vol. xxxiv., p. 243. The number of birds marked in 1912 was considerably greater than in the preceding year. The record includes such birds of both years as have been recovered up to date, but the returns from correspondents were not complete when the article was written.

In the course of a narrative of a trip through South America, including a visit to Tierra del Fuego, which deals chiefly with ornithology, Mr. F. W. Blaauw (*Notes Leyden Mus.*, vol. xxxv., No. 1) describes the nestling plumage of the so-called Coscoroba swan (*Coscoroba candida*), and its bearing on the affinities of the genus. The colour-pattern is intermediate between those of sheldrake and tree-duck chicks, the head-markings approximating to, and the body-markings being almost identical with, those of the latter. This tends in some degree to confirm the author's view that Coscorobas are practically overgrown tree-ducks.

It is satisfactory to learn, from a report by Mr. G. Bolam on the natural history of Hornsea Mere, published in the January number of *The Naturalist*, that the local birds are most efficiently protected by the keeper, who has occupied his post for thirty-two years. It may be noted that in 1911 fourteen bearded tits were introduced, some of which have nested and reared young.

In a long article on the "Hand-list of British Birds," by Dr. Hartert and others, published by Messrs. Witherby, *The Field* of March 8 strongly condemns the great changes in familiar nomenclature which form one of the most striking features in that work, referring especially to the inconvenience caused by transferring names long associated with well-known species to others. At the conclusion of the article it is suggested that those "who may be in doubt whether to accept or reject the list now under consideration will do well to await the appearance of a new edition of the B.O.U. List, which, we understand, is in active preparation. The simplest way out of the difficulty, as it seems to us, is to ignore the new list."

Last year schedules were distributed throughout the country with the object of obtaining data with regard to the alleged decrease during the last few years in the numbers of certain migratory species which regularly visit the British Islands. Although the returns are not so full or so numerous as is desirable, they afford a considerable amount of in-