

A JOINT commission appointed by the Royal Society and the London School of Tropical Medicine has been investigating the African sleeping sickness. This disease, endemic in the Congo basin, has recently been spreading eastwards with great rapidity, causing a terrible mortality. Of the commissioners, Dr. Christie and Dr. Low (Craggs research student of the London School of Tropical Medicine) are returning home, but Dr. Castellani is remaining to complete his investigations. The latter has isolated a streptococcus which seems to be the specific cause of the disease. The rôle of the *Filaria perstans* as the causative agent has been disproved by the commission.

A NUMBER of cases of serious anæmia having occurred in the Dalcoath mine, Cornwall, an inquiry was instituted by the Home Office into the cause of the affection. Dr. Haldane, with whom was afterwards associated Dr. Boycott, made the interesting discovery that the condition was one of ankylostomiasis, which is due to the presence of an intestinal parasite, the *Ankylostomum duodenale*. This disease is almost confined to tropical countries, though it was met with among the navvies employed in the piercing of the St. Gothard tunnel. Doubtless, in the present instance, some of the miners who had been working abroad contracted the disease and brought the infection home with them.

IN the December number of the *Entomologist*, Mr. E. Bagwell-Purefoy gives further information with regard to the successful introduction of the brimstone butterfly into Tipperary, which was accomplished in 1894, after its feeding-plants had been planted a few years previously in the county. This butterfly—the *Gonepteryx rhamni* of some authors and the *Colias rhamni* of others—is found at Killarney and has been reported from Wicklow, but is not a native of any other part of Ireland. In 1896, the colony of Tipperary was found to be in a flourishing condition, and in 1901 and the present year had still further multiplied. During the past summer, Mr. Purefoy has attempted to introduce the handsome Mediterranean brimstone *G.* (or *C.*) *cleopatra* into the same district—an experiment which will be watched with interest.

IN the September issue of the *Proceedings* of the Philadelphia Academy, Miss A. M. Fields records the results of experiments made with a view of ascertaining the cause of the hostility to one another displayed by different colonies of ants of the same species, and likewise the influence of light of different colours on these insects. The chief cause of the hostility of one colony to another appears to be a difference of odour accompanied by a difference in the age of the individuals composing the two colonies. As regards colours, it is inferred that ants are able to distinguish some of these, but may have no preference for one more than another. Also that these insects gradually lose their natural dislike of light by exposure to its influence.

THE remarkable differences in the life-history of different colonies of an American land-planarian (*Planaria maculata*) form the subject of a paper by Mr. W. C. Curtis in a recent issue (vol. xxx. No. 7) of the *Proceedings* of the Boston (U.S.A.) Natural History Society. In certain localities, the creature apparently reproduces its kind exclusively by fission, while in others sexual reproduction occurs. There are yet other districts in which both modes take place. It is suggested that the asexual may replace the sexual mode of reproduction in the same individuals, but to confirm or disprove this, an extended period of observation is essential.

THE third volume of Mr. W. S. Taggart's "Cotton Spinning" (Messrs. Macmillan and Co., Ltd.) has reached a second edition. The first two volumes deal with the preparing processes in cotton spinning, while this part takes up the subject of spinning and the preparation of yarns. Necessary additions have been made to the new edition so as to bring the book up to date.

NO. 1729. VOL. 67]

IN the Christmas number of *Photography*, Messrs. Iliffe and Sons, Ltd., have presented us with an excellent and inexpensive publication, printed on good paper and studded with numerous fine illustrations by various processes. This number has set itself the task of reviewing and displaying the most choice samples that have been shown to the public at the two great exhibitions held at the New and Dudley Galleries this year. A short but interesting monograph accompanies each illustration, drawing the reader's attention to the chief points. The publishers seem to have spared no pains to make the production, as a whole, high class in every respect, and the book will be found useful and valuable as illustrating types of subjects and treatments which are utilised and cultivated at the present time.

THE additions to the Zoological Society's Gardens during the past week include a Ring-tailed Coati (*Nasua rufa*) from South America, presented by Mr. E. Bieber; a Banded Ichneumon (*Crossarchus fasiatus*) from Mozambique, presented by Mr. F. D. Samuel; a Raven (*Corvus corax*) British, presented by Mrs. Rose Haig Thomas; a Douglass's Horned Lizard (*Phrynosoma douglassi*) from the Rocky Mountains, presented by Mr. C. W. H. Doubler; a Hog Deer (*Cervus porcinus*) born in the Gardens.

ERRATUM.—In letter on p. 126, col. 2, l. 45, for "red out" read "red."

OUR ASTRONOMICAL COLUMN.

COMET 1902 *b* (GIACOBINI).—Further observations of this comet have been communicated to the *Astronomische Nachrichten* (No. 3833).

Mr. C. F. Pechule, of Copenhagen, made the following observation on December 3:—

14h. 38m. 20s. M.T. Copenhagen. $\Delta\alpha = -1m. 22s. 00.$ $\Delta\delta = +1' 53''.7.$ α (app.) = 7h. 17m. 26s. 756. δ (app.) = $-1^\circ 51' 18''.0$, faint, 12th magnitude, small, diffuse.

NEW VARIABLE STARS.—*Algol Variable*, 20, 1902, *Cygni*.—From photographs obtained by M. S. Blakjo, Madame Ceraski has found that the star having the position (1855) $\alpha = 21h. 0m. 44s. 6,$ $\delta = +45^\circ 11' 53''$, is a variable, and a further examination of ten plates indicates that it is a variable of the Algol type.

18, 1902, *Coronae*.—Mr. Thomas Anderson has observed that the star having the approximate position R.A. = 16h. 10m. 3, Dec. = $+38^\circ 8'$, (1855), has been rapidly decreasing in brightness during November.

The following magnitudes have been observed:—November 1, 8.5; November 7, 8.7; November 18, 9.2; November 21, 9.3.

19, 1902, *Pegasi*.—Mr. Anderson also records the variability of the star having the position R.A. = 21h. 57m. 8, Dec. = $+34^\circ 25'$ (1855). At maximum, its magnitude is midway between 9.1 and 9.9, whilst at minimum it is only 0.2m. brighter than a neighbouring 11th-magnitude star. Its period is seven months (*Astronomische Nachrichten*, No. 3831).

HERSCHEL'S NEBULOUS REGIONS OF THE HEAVENS.—Dr. Isaac Roberts has recently completed his photographic survey of the fifty-two regions of the heavens described by William Herschel, in his paper "The Construction of the Heavens" (*Phil. Trans.*, 1811), as exhibiting extensive diffused nebulosity, and has communicated the results of this survey to the Royal Astronomical Society (*The Observatory*, No. 325).

Using a 20-inch reflector and a 5-inch Cooke lens to obtain simultaneous photographs, he has obtained negatives showing stars of magnitude 16–17 with the former, and of magnitude 14–15 with the latter instrument, thus securing images of objects at least as faint as those shown by Herschel's telescopes.

These photographs show that in forty-eight cases out of the fifty-two there is no trace of the extensive diffused nebulosity described by Herschel. On the remaining four, there is nebulosity which forms parts of three extensive nebulous clouds, which, however, Herschel could not have seen in so complete a form as they are shown on the photographs.

NEW MINOR PLANETS.—Prof. Max Wolf announces, in No. 3831 of the *Astronomische Nachrichten*, the discovery of