

terest because of its close resemblance to *E. histolytica*, which causes dysentery in man, and has been found in about nine per cent. of all human beings examined.

Recently the writer has discovered Euglena-like flagellates in the rectum and intestine of tadpoles. One species has many of the characteristics of free living Euglenæ including green chromatophores, a reservoir and a red stigma. This species possesses three flagella. Another species resembles *Euglena spirogyra* and a third species is similar to *Phacus pleuronectes*.

The following references contain detailed information concerning some of the organisms mentioned above:

Tadpoles. Wright, A. H., 1914. Pub. 197, Carnegie Inst. of Wash., pp. 1-98.

Intestinal protozoa of frogs and toads. Dobell, C., 1909. *Quar. Journ. Mic. Sci.*, 53: 201-266.

Intestinal protozoa of man. Dobell, C., and O'Connor, F. W., 1921. Pp. 1-211.

Intestinal protozoa of man. Hegner, R. W., and Payne, G. C., 1921. *Scientific Monthly*, pp. 47-52.

Intestinal protozoa of man. Hegner, R. W., and Cort, W. W., 1921. Pp. 1-72.

Giardia agilis. Hegner, R. W. *Amer. Journ. Hygiene*, 2: 435-441.

Giardia lamblia. Simon, C. E. *Amer. Journ. Hygiene*, 2: 406-434.

Trichomonas augusta. Kofoid, C. A., and Swezy, O., 1915. *Proc. Amer. Acad. Arts and Sci.*, 51: 289-378.

Nyctotherus cordiformis. Bezenberger, O., 1904. *Arch. f. Protist.*, 3: 138-174.

Opalina ranarum. Metcalf, M. M., 1909. *Arch. f. Protist.*, 13: 195-375.

Opalina ranarum. Metcalf, M. M., 1914. *Zool. Aus.*, 44: 533-541.

Balantidium entozoon. Bezenberger, O., 1904. *Arch. f. Protist.*, 3: 138-174.

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SCIENTIFIC EVENTS

ALEXANDER SMITH

THE New York Section of the American Chemical Society having appointed a committee, consisting of Professors Thomas B. Freas, Ralph H. McKee and James Kendall, chairman, to draw up resolutions in memory

of the late Professor Smith, the following resolutions were prepared and approved by the section on October 6:

Whereas, By the death of Alexander Smith at Edinburgh on September 8, 1922, the American Chemical Society has been deprived of a past president and the New York Section has lost one of its most highly esteemed members:

And whereas, Although the work of Alexander Smith as a teacher, as an administrator, and as an investigator in chemistry survives as an enduring monument to his name, yet it is none the less our privilege to put on record in the minutes of the section our sincere appreciation of his outstanding scientific genius and of his rare personal integrity and charm;

Be it therefore resolved, That the New York Section of the American Chemical Society express its profound regret at the passing of this distinguished leader in chemistry, who by his labors has added luster to science both in the land of his birth and in the land of his adoption;

And be it further resolved, That copies of this memorandum be forwarded to his widow and to his sister, with the respectful sympathy of the section.

THE TOTAL SOLAR ECLIPSE OF SEPTEMBER 21

DR. A. C. D. CROMMELIN, writing in *Nature*, says that the failure of the Christmas Island eclipse expedition is a great astronomical disappointment. Messrs. Jones and Melotte have devoted ten months or more to it, and hoped to secure useful photometric results for connecting the northern and southern stellar magnitude scales in addition to the eclipse work. The climate, however, proved unexpectedly unfavorable, and practically nothing could be done.

On the other hand, the conditions appear to have been ideal right across Australia, and enthusiastic reports have come from Wollal (West Coast), Cordillo Downs (center) and Goondiwindi and Stanthorpe (Queensland). The Einstein problem was studied at Wollal by the Lick Observatory party under Professor Campbell, and that from Toronto under Professor Chant. Mr. Evershed also finally selected this station in preference to the Maldives, and is believed to have undertaken the same investigation, in addition, doubtless, to spectroscopic work. Professor Dodwell, the government as-

tronomer at Adelaide, had the use at Cordillo Downs of a tower telescope lent by the Lick Observatory for the Einstein problem; the New South Wales astronomers were in Queensland and did some spectroscopic work; they intended also to make Einstein investigations, but the telegrams do not allude to these.

It is well to point out that the test of the Einstein theory does not depend wholly on the results of this eclipse. The plates secured in the 1919 eclipse at Principe and Sobral settled definitely that at least the half-shift was present, while the two cameras with the best definition gave values very close to the Einstein value. Further, the star-field in that eclipse was the best along the whole extent of the ecliptic, the stars in the present eclipse being much fainter. There are, however, two circumstances that should add weight to this eclipse: (1) that some of the observers were pointing directly on the stars, avoiding the use of a cœlostast or other mirror; (2) that the plan was being tried of photographing another star-field *during totality*, thus obtaining an independent scale-value for the plates, which gives a much larger coefficient to the Einstein displacement in the equations of condition.

Probably weeks or months must elapse before the Einstein results are to hand. The corona is said to have had four long streamers, one extending to three solar diameters, which is more than the average, though by no means a record. Professor Chant reports that the shadow bands were photographed. Professor Kerr Grant, of Adelaide University, made measures at Cordillo by the photo-electric cell of the relative brightness of the sun and the corona. The results, with this very sensitive instrument, should be more trustworthy than previous determinations.

The next two total eclipses (1923, September, and 1925, January) are visible in the United States; 1926, January, in Sumatra, etc., and 1921 in England and Norway.

THE FIJI-NEW ZEALAND EXPEDITION OF THE STATE UNIVERSITY OF IOWA

THE Fiji-New Zealand party from the University of Iowa arrived in San Francisco on September 4 by the Pacific steamer *Tahiti*. This expedition was organized by Professor C. C.

Nutting, head of the department of zoology of the University of Iowa, and included the following additional members from the faculty of that institution: Professor Robert B. Wylie, botanist; Professor A. O. Thomas, geologist; Dr. Dayton Stoner, entomologist, and Mr. Waldo Glock, assistant in geology. Mrs. Dayton Stoner, wife of Professor Stoner, accompanied her husband and assisted in the work with insects. The party left Vancouver on the *Niagara* on May 19, and after spending five weeks in Fiji went on to New Zealand for a like period, working mainly in North Island.

The expedition was greatly aided by the officials of these islands, with whom Professor Nutting as director had made preliminary arrangements by correspondence. Considerable collections were secured by each member of the party in his own field, including both illustrative and research material. Several hundred negatives were secured which will be used as a basis of illustration in lectures and publications. The Dominion Museums, both at Auckland and Wellington, New Zealand, were especially helpful; they extended to the party use of their buildings as temporary laboratories, offered helpful cooperation at all times, and contributed many valuable specimens to the University of Iowa Museum. Their gifts included four living and two preserved Sphenodons.

THE NEW ENGLAND INTERCOLLEGIATE GEOLOGICAL EXCURSION

THE eighteenth annual New England Intercollegiate Geological Excursion was held in the vicinity of Springfield and Northampton, Massachusetts, on the sixth and seventh of October. Professor J. W. Goldthwait, of Dartmouth College, and Dr. Ernst Antevs, of the University of Stockholm, were the leaders. Dr. Antevs, who has continued the work of Baron de Geer since the latter's return to Sweden, demonstrated the field methods which have led him to important conclusions concerning the glacial history of New England. His chief conclusions are (1) that the Wisconsin ice-sheet retreated from Hartford, Connecticut, to the northern border of Vermont in a period of approximately 4,000 years; (2) that this time