

nov., sp. nov. is proposed for this new organism. A more complete description of the organism and the histology of the disease will be published shortly. JOHN A. ELLIOTT

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#### THE SYNCHRONAL FLASHING OF FIREFLIES

IN SCIENCE for February 4, 1916, E. S. Morse, under the title, "Fireflies Flashing in Unison," mentions having seen fifty years before a striking instance of the synchronal flashing of fireflies. Morse again discusses briefly the same subject in SCIENCE for September 15, 1916. He states that he has never since observed this phenomenon in the flashing of these insects. McDermott, in SCIENCE for October 27, 1916, also discusses the question of fireflies flashing in unison.

The synchronal flashing of fireflies appears to be a very rare phenomenon in North America. So rarely does it seem to occur that one may consider himself fortunate if he has observed the phenomenon even once in a lifetime. The writer about twelve years ago observed a most remarkable instance of the simultaneous flashing of fireflies in Oxford, Mass. On the night this phenomenon occurred a heavy thunderstorm had recently passed over, followed by a profound calm. From time to time dazzling flashes of lightning illuminated the landscape. The air was very warm and humid, and fireflies became unusually abundant and active, especially in a low field adjoining some woods. Here thousands of these insects were sailing low over the ground, flashing incessantly as far as the eye could see. After a while a most remarkable synchronism in the flashing appeared to take place. From time to time, as if moved by a common impulse, great numbers would flash so closely in unison over the entire field that an extensive sheet of tiny light-points would gleam upon the vision for a moment—and then vanish. This remarkable synchronism in the flashing sometimes continued several times in succession, giving one the impression of alternate waves of illumination and darkness in the distance. At times the rhythmic impulse ceased

for a considerable period over the entire field. At other times it appeared to take place only in large groups occupying particular areas of the field. Although the writer has given a great deal of attention to the flashing of fireflies during the last twelve years, synchronism in the flashing of these insects has never since been observed. Depending more or less upon atmospheric conditions, fireflies show considerable variation in the character of their flight and the flashing impulse. At times the insects seem loath to leave the low herbage. On certain evenings they appear to confine their flight over the fields largely to the lowermost stratum of the atmosphere; at other times they rise upward in myriads from the grass early in the evening and drift away in all directions toward the crowns of the trees. At such times the upward flight is frequently accompanied by a weak, prolonged emission of light so that the insects appear to be tiny, glowing sparks propelled upward by gentle air currents.

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#### QUOTATIONS

##### THE NEWCASTLE MEETING OF THE BRITISH ASSOCIATION

FOR the third time the British Association has held its annual meeting during the great war. There are some obvious reasons for suspending such meetings, to which brief reference has already been made on the previous occasions, and to which has been since added the further restriction of available members by the adoption of universal service. But there are also good reasons for "carrying on," the best of them being provided by experience. The meetings have been eminently successful, if success is properly gauged with due account taken of the difficulties. In using the word it is not implied that the numbers present were large compared with the average numbers in peace time: at Newcastle the tickets sold were indisputably below that average—even much below it: we must think rather of what might have been, under the deplorable circumstances. The sections might have been empty, whereas they were well attended, in

some cases specially well attended even by any standard. It is a fair inference that many of the absentees were such as do not usually attend the section, preferring the lighter entertainments of the meeting. At Newcastle there were no general excursions, though the anthropologists made a sectional excursion to the Roman Wall; and there were no entertainments beyond a thoroughly enjoyable reception by the Lord Mayor on one evening, and a very pleasant garden party given by Miss Noble and Mrs. Cochrane. There is no need to determine now whether the severe economy in general gatherings need be permanent: in our present mood we naturally regard their more frivolous characteristics with disfavor. But such general gatherings, where those usually separated in calling and locality may meet for interchange of ideas, have an undoubted value which may be trusted to reassert itself when the time comes. At present we have neither much inclination nor much time for them, seeing that the whole meetings have been reduced in length.

Further, in estimating the success of the meeting, we must remember the actual difficulties to be overcome, especially by the city of Newcastle, and all who worked so devotedly in its interests. The invitation was given before the war, and it would have been quite reasonable to withdraw it under the entirely unforeseen conditions, even in the interests of the guests themselves, who might not have cared to visit an east coast "fortified town" just now. But in March last, after the necessary limitations and modifications had been frankly stated, and a courteous enquiry had been made and answered, the invitation was cordially confirmed; and from that moment no more was said of the heavy load of anxiety which those responsible for the success of the meeting must have carried with them continuously until the concluding words were spoken.—From an Oxford Note-book in *The Observatory*.

#### THE STATE COLLEGE OF AGRICULTURE AT CORNELL UNIVERSITY

THAT the State College of Agriculture at Cornell University is successfully solving the

great problem of agricultural education is visibly evident from the fact that in a dozen years the enrollment of students in the college has increased ten-fold. Already the college of agriculture is the largest college in Cornell University, and the authorities and friends of the university share the hopes of the faculty of agriculture for a continued increase in the attendance and steady improvement and growing success in its work.

The motive force behind this great movement for a more satisfying country life and a better agriculture is the conviction that properly trained men and women must be placed on the farms and in the rural communities. Education and science are the hope of the farmers as they have already proved the boon of manufacturers and transporters. Men and women of vision and well-disciplined minds are the prime agents in accomplishing progress in every field of human activity whether intellectual, economic or material.

Under the terms of the Smith-Lever Bill New York state will in 1923, and annually thereafter, when the appropriations provided for will have reached their maximum, receive from the federal government \$170,000 on condition that the state of New York provide an equal amount for cooperative extension work among the farmers of the state. Cornell University being the federal land grant college of New York is the agent by which this extension work is to be carried on.

While the federal government has thus generously encouraged education and investigation in agriculture and the extension of the results of scientific investigation to farmers on their own farms, many of the state governments have shown no less zeal for the betterment of the farmers and the improvement of conditions of farming within their own borders. Among these states New York stands conspicuous. The State College of Agriculture and Veterinary Medicine at Cornell University as well as the state experiment station at Geneva are visible evidences of the wisdom with which, in this respect, the state has been governed.

Briefly and broadly expressed, the State