

king aqueous extracts of our brown soils. The phenolsulfonic acid test for nitric acid is not applicable to such soils due to the interference of these pigment reactions. We were not satisfied with the results obtained in the experiments already given so we repeated them on a still larger scale, but with the same results which we consider as positively establishing the fact that the azotobacter do not nitrify but that the pigments which they form may give with phenolsulfonic acid, especially in very dilute solutions, a color reaction deceptively similar to that given by nitric acid and this reagent.

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NORTHERN LIGHTS IN SUMMER

I live at Nett Lake, Minnesota, 140 miles northwest of Duluth and 38 miles south of Fort Frances, Ontario, Canada. On the night of July 4 there was a fine display of northern lights (aurora borealis). It was as fine a display as is seen in this section even in the coldest months. There were spires and rolls of light and a bow of light which covered the whole northern sky and towards midnight reached nearly to the zenith.

ALBERT B. REAGAN

NETT LAKE, MINN.,
July 6, 1914

SCIENTIFIC BOOKS

The Cambridge Manuals of Science and Literature. Edited by P. GILES and A. C. SEWARD. New York, G. P. Putnam's Sons.

A review of the Cambridge Manuals appeared in *SCIENCE* of April 18, 1913; but since that date numerous additional volumes have come to hand, dealing with the most diverse topics. I give a list, with a few comments.

The Flea. By HAROLD RUSSELL.

When, some years ago, a member of the wealthy house of Rothschild took to collecting and describing fleas, there was a tendency to regard the circumstance in a humorous light, and perhaps even to enquire whether a man, to whom so many doors of opportunity were open, could not find something better to do.

To-day, the connection between fleas and the plague having been established, Rothschild finds himself the greatest living authority on a subject of the highest importance to medical men, and no well-informed person has anything but praise for his work. The oriental rat-flea, the one mainly concerned in the spread of bubonic plague, was first made known to science by Rothschild, and the development of psyllology is illustrated by the collection of about a hundred thousand specimens at Tring.

Mr. Russell has had the advice of Mr. Charles Rothschild, and we may assume that his readable little book is up-to-date. It should be in the hands of medical men and the public generally, especially in regions where fleas are abundant. We would venture to suggest that if another edition appears the exceedingly crude text-figures should be replaced by better ones; that on page 81, in particular, is really scandalous.

Bees and Wasps. By O. H. LATTER.

This also is illustrated by very rough figures, without much pretence to accuracy in detail. The point of view is strictly British, but as many genera are common to Europe and America, the descriptions are more or less applicable to our species. The excellent accounts of the habits of English bees and wasps could scarcely at present be duplicated in this country, owing to the lack of observations. The work of the Peckhams on the solitary wasps, and that of various American observers on particular species of bees and wasps, is quite as good as anything done in Europe; but we still remain largely or wholly ignorant concerning the habits of many of our genera.

The Life Story of Insects. By G. H. CARPENTER.

This book is well illustrated, and the author has not hesitated to borrow many of his figures from American sources. The treatment of the subject is broad, and although the work has only 134 pages, Professor Carpenter manages to convey a great deal of information in an interesting way. This is, I think, the best brief introduction to entomology yet published.