be required to prove them so. Laboratory experiments are far more reliable.

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## NOTE ON A DAYLIGHT METEORITE

THINKING that it might be of interest to readers of these columns, the writer calls attention to the following phenomenon observed by him while traveling by canoe on Lake Kipawa, Quebec, on August 31 last.

The day was particularly bright and cloudless, with a southerly wind blowing at about eight miles an hour. The time of the observation was 9:50 a. m., and the course of the canoe was almost directly south. The meteorite was suddenly seen to shoot across the course of the canoe from east to west, about 50° above the horizon, and, as far as could be judged, between 200 and 300 feet above the surface of the lake. Its passage lasted approximately three seconds from the time that it was first noted a little to the left of the bow of the canoe. The general impression received was that of a brilliant Roman candle shooting across the sky, of a vivid copper-green color. The size of the incandescent head of the body appeared to be a trifle larger than a golf ball with a bright incandescent streamer of nearly three feet in length behind it and of a like color. In the wake of the body trailed a curling wreath of white vapor of considerable length which became quickly dissipated.

The passage of the meteorite was accompanied by no detectable noise whatever, so that the other occupant of the canoe, whose gaze was directed elsewhere at the time, failed to see the occurrence. The body suddenly vanished about a hundred yards to the west about the original altitude, leaving a small cloud of white vapor behind that dissolved rapidly away. Although watch was kept on the surface of the lake beyond, no trace of a body falling into the water was noted. It is possible that either it was completely combusted at that moment, or it passed out of sight rapidly along its westerly course.

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## HOWARD ON CHEMICAL SPELLING

O Leland tell me, tell me true,
The explanation's up to you,
Why did you break the portals down
And jump into the Chemist's town?
But wait a minute: Now I see,
To solve the riddle's up to me;
You still are in your own domain
Where you without a rival reign,
For as the fact appears to me
You're trying to catch that spelling bee.

H. W. WILEY

# QUOTATIONS

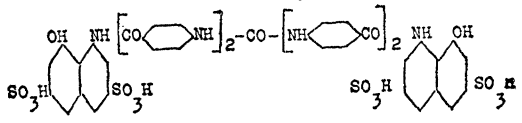
## "BAYER 205"

A CURIOUS illustration of the German desire, not unnatural in itself, to regain the tropical colonies lost by the folly of the rulers of the German Empire, is afforded by a discussion which took place at a meeting of the German Association of Tropical Medicine at Hamburg. We have not seen a full report of the meeting, but the *Times* correspondent in Hamburg reports that one of the speakers said that "Bayer 205 is the key to tropical Africa, and consequently the key to all the colonies. The German government must, therefore, be required to safeguard this discovery for Germany. Its value is such that any privilege of a share in it granted to other nations must be made conditional upon the restoration to Germany of her colonial empire." Some account of the drug manufactured by the Bayerische Farbwerke and provisionally named "205" was given in our issue of May 20 (p. 807), when we quoted Dr. H. H. Dale's opinion that it was a remarkable curative agent in trypanosome infections. A general account of the probable chemical relationship of "205" is given by Dr. King in the sixth Annual Report of the Society of Chemical Industry (1921).

In 1904 Ehrlich and Shiga discovered the trypanocidal action of trypan red, a compound formed by combining one molecule of tetrazotized benzidine-mono-sulfonic acid with two molecules of sodium naphthylamine disulfonate. In 1906 Mesnil and Nicolle[1] investigated a series of dyes containing amino-naph-

[1] *Ann. Institt. Pasteur*, 417 and 518, xx, 1906.

thalene-sulfonic acid and found that the most active trypanocidal agent was a dye prepared by the Bayer firm. Little notice was taken of this work, and the discovery of salvarsan diverted attention from the trypanocidal dyes to the organic arsenic compounds. The Bayer firm, however, continued to investigate the trypanocidal dyes and discovered that compounds of this type which were not dyes might still be active trypanocidal agents. They took out a large number of patents, and the type of compound to which the firm has paid special attention is represented by the following formula:



A number of substances of this type have been found to be very active trypanocides, and probably Bayer 205 is a derivative of this type. Bayer 205 is a white powder, freely soluble in water, forming a colorless solution, which can be sterilized. Animal experiments[2] have shown that it is an extraordinarily powerful trypanocidal agent, and that a single dose of it will produce immunity to trypanosomes for several weeks or even months. Mayer and Zeiss, for instance, found it cured infection with five different kinds of trypanosomes, that the ratio between the minimal lethal and minimal curative doses was as high as 167 to 1, and that a single dose of 3 mg. rendered a mouse immune to trypanosomes for three months. Recurrences were found to be extremely rare when infected mice were given a single curative dose of the drug.

The various workers have reported curative effects on trypanosomal infections in mice, rats, guinea-pigs, rabbits, dogs and horses. In England Wenyon[3] found that the drug was an extraordinarily effective trypanocidal agent. A brilliant success has been reported in a case of sleeping sickness.[4,5] The case was of a year's standing, and had been treated unsuccessfully with arsenic, antimony and emetine. Four doses of "205," making a total of 3.5 grams, were given. A few hours after the first dose the fever disappeared, and a complete cure appears to have been produced, for four months later there were no signs of recurrence of the disease.

The drug therefore appears to be a trypanocidal remedy of the first importance, and the fact that a single dose confers prolonged immunity to trypanosomes suggests that it will be of the greatest value as a prophylactic. A commission of German doctors is now in Rhodesia testing the drug, and our knowledge as to its action in man will soon be much more extensive. The discovery of "205" promises to mark a great advance in tropical medicine, but it is a remarkable fact that England should be dependent on Germany for this advance in tropical medicine, for at present Germany has not a single colony, while England has the largest tropical empire in the world. It is not a position of which we have any reason to be proud, but its cause is simple. Germany appreciates the value of pharmacological research and we do not.—*The British Medical Journal.*

[2] Haendel and Joetten, *Bull. Institt. Pasteur*, 131, 19, 1921; Mayer and Zeiss, *ibid.*, 133, 19, 1921; Walther and Pfeiler, *ibid.*, 380, 19, 1921; Miessner and Berge, *ibid.*, 380, 19, 1921; Mayer, *ibid.*, 248, 20, 1922; Schuckmann, *ibid.*, 247, 20, 1922.

[3] Wenyon, *British Medical Journal*, 1921, ii, 746.

[4] Muhlens and Menk, *Muench. med. Woch.*, 1488, 46, 1921.

[5] Yorke, *Ann. Trop. Med. and Paras.*, 479, 15, 1921.

## SCIENTIFIC BOOKS

*Smell, Taste and Allied Senses in the Vertebrates.* G. H. PARKER. Philadelphia and London, J. B. Lippincott Co., 1922, 192 pages, $2.50.

This little volume includes chapters on the Nature of Sense Organs, Anatomy of the Olfactory Organ, Physiology of Olfaction, Vomeronasal Organ or Organ of Jacobson, The Common Chemical Sense, Anatomy of the Gustatory Organ, Physiology of Gustation, and Interrelation of the Chemical Senses. In view of the author's long sustained interest in problems of integration of structure and function and his numerous successful experimental