death from the organism which causes the epidemic flacherie? There are undoubtedly many organisms which might cause the death of a caterpillar and a subsequent limp condition.

I do not wish to dictate or discuss what makes a piece of work scientific or unscientific, for that is out of my sphere; but I have previously stated my own incompetency to work on bacteriology in relation to the problem of the epidemic flacherie.[3]

The authors state that they have no experimental evidence that the disease may be air-borne but do not wish to exclude such a possibility. Bolle,[4] Prowazek[5] and Wahl[6] have used methods involving dry infection, working on the flacherie of either the silk worm, or nun moth or both. All of these investigators have also used dry cultures at least a year old with positive results. This would give some reason to believe that dry infection may be possible in the flacherie of the gypsy moth. Wahl used methods in combating the nun moth, showing that the disease was air-borne. Glaser's and Chapman's experiments as given in their table deal only with wet infection and no inferences involving the various phases of dry infection can be legitimately drawn. From my own paper of 1911 and later work, as yet unpublished, it is apparently evident that the epidemic flacherie (very possibly different from the disease which Glaser and Chapman induced) is also air-borne. In this disease it is entirely unnecessary to feed the caterpillars with my culture or inoculate individuals with large numbers of *Gyrococcus flaccidifex* or some organism that is unknown in order to produce an epidemic of flacherie and death. Whatever the organism may be which causes epidemic flacherie, it is certainly spread with ease and kills young larvæ after the first instar, no matter what the weather or food conditions may be. Glaser and Chapman have not considered secondary hosts, other stages of their bacteria or virulent strains.

Unfortunately the term "flacherie" is very indefinite, but it has long been suspected that a number of different diseases are included in this term. That disease which expresses itself as an epidemic of flacherie may be due to one or a number of organisms or stages of organisms. More work by the bacteriologists will be heartily welcomed.

William Reiff

Forest Hills, Mass.

[3] Reiff, William, "Some Experiments on Flacherie in the Gypsy Moth," *Psyche*, Vol. XVI., No. 5, Boston, 1909.

[4] Bolle, J., "Vorläufige Mitteilungen über die Gelbsucht der Seidenraupe," *Atti e Memoire dell' i. r. Società agraria*, Görz, 1894.

[5] Prowazek, Dr. S., "Chlamydozoa," *Archiv für Protistenkunde*, 10. Band, Jena, 1907.

[6] Wahl, Dr. Bruno, "Uber die Polyederkrankheit der Nonne (*Lymantria monacha* L.)," *Centralblatt für das gesamte Forstwesen*, Heft 6, Wien, 1911.

A NEW FLY TRAP

To the Editor of Science: In these days of general campaigning against the house fly, it may be of passing interest to the readers of Science to know that we have constructed at this station a fly trap which catches flies in such wholesale numbers that its merits are apparent to any one. So successful have we been that we have ventured to call it "The Minnesota Fly Trap."

The trap is twenty-four inches long, twelve inches high and eighteen inches across, the material consisting of a very little lumber and wire mosquito screen, costing 41 cents. A good carpenter can make one in one to three hours.

The director of this station felt the need of locating on the campus some fly traps which would capture flies in large numbers and as a result of his expressing the desire, this trap was constructed.

We find bread and milk (if more attractive food is not exposed) frequently renewed, to form the best bait. The following record shows how useful this contrivance is. In one day in the dairy barn, it caught 1,700 flies; rear of dining hall, two days, 3,000 flies; same place, five days, 13,000 flies; same place, one day, 4,200 flies; on the back porch of a dwelling house not far from a stable containing a

few horses, one day, 12,000; same place, one and a half days, 18,800 flies.

The writer would be very glad to mail illustrated leaflet describing this trap to any one desiring the same.

F. L. WASHBURN
MINNESOTA EXPERIMENT STATION,
ST. ANTHONY PARK, MINN.,
August 19, 1912

SCIENTIFIC BOOKS

Technical Methods of Chemical Analysis. Edited by GEORGE LUNGE, Ph.D., Dr. Ing., Emeritus Professor of Technical Chemistry, Federal Polytechnic School, Zürich. English Translation from the latest German Edition, adapted to English conditions of manufacture. Edited by CHARLES ALEXANDER KEANE, D.Sc., Ph.D., Principal and Head of the Chemistry Department, The Sir John Cass Technical Institute, London. Volume II., 2 parts, pp. xxvii + 1,252. New York, D. Van Nostrand Company. 1911. Price $18.00 net.

The Manufacture of Sulphuric Acid and Alkali with the Collateral Branches. A Theoretical and Practical Treatise. By GEORGE LUNGE, Ph.D. Third Edition. Volume III., Ammonia-Soda, Various Processes of Alkali Making and the Chlorin Industry, pp. xix + 764. New York, D. Van Nostrand Company. 1911. Price $10.00 net.

It is gratifying to know that such substantial progress has been made on the English translation of these two standard and almost indispensable works, and that only one volume of each remains to be published. It is indeed unfortunate that English translations should be needed, but the fact can not be ignored that a large proportion of our technical men do not read German, and that no work is really accessible to them unless it is printed in English. Even the younger generation, who have been compelled in their technical school training to use both German and French, seem in a great hurry to drop their knowledge of these languages as soon as they get out at work.

One general criticism may be passed on both of these books. They have been prepared and edited largely from an English standpoint, and American practise has been to far too great an extent ignored. There has been great development in recent years, both along the line of rapid methods of technical analysis and also in standardizing analytical methods, and along both these lines American chemists have been by no means backward, yet under Iron and Steel there are but 19 footnote references to American literature against more than 100 to English and more than 130 to German sources, and under Illuminating Gas and Ammonia but five out of 140 references are to American publications or apparatus. We also note that under Copper no reference is made to the use of a platinum gauze kathode in electrolytic deposition, nor under Lead to Low's modification of Alexander's method in the presence of calcium. It would have given a broader value to the first book had it not been quite so exclusively "adapted to English methods of manufacture."

Aside from this criticism the reviewer has nothing but favorable comment for both these books. In this second volume of Technical Methods, the following subjects are treated: Iron, by Dr. P. Aulich; Metals other than Iron, and Metallic Salts, by Professor O. Pufahl; Artificial Manures, by Professor O. Böttcher; Feeding Stuffs, by Dr. F. Barnstein; Explosives, by Oscar Guttmann; Matches and Fireworks, by Dr. A. Bujard; Calcium Carbide and Acetylene, by Professor Lunge himself and Dr. E. Berl; Illuminating Gas and Ammonia, by Dr. O. Pfeiffer; Coal Tar, by Dr. H. Köhler, and Organic Dyes, by Professor R. Gnehm. These comprise the subjects included in the second and third volumes of the new German edition, together with the section on Organic Dyes from the fourth and last volume. Under each head are given quite fully the standard methods of analysis of all the products connected with the industry, and at least an outline of other methods which promise to be improvements. In each case references are given to the orig-