

The Thomas Jefferson ap- proach 1790-1830	= method of greatest divisors
The Daniel Webster ap- proach 1840	= method of major fractions
The Samuel Vinton ap- proach 1850-1900	= Vinton method
The sliding divisor ap- proach 1910-1930	= modernized Webster method
The mathematical ap- proach 1940	= method of equal proportions
The double method ap- proach ?	= modernized Jefferson method

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## TICK PARASITES ON CAPE COD

DURING the summer of 1926 the chalcid fly *Hunterellus hookeri* How., with which *Ixodiphagus caucurtei* du Buyson has been shown to be identical,<sup>1</sup> was released on the island of Naushon in southern Massachusetts by Larousse, King and Wolbach,<sup>2</sup> in an attempt to control the American dog tick, *Dermacentor variabilis* Say. Specimens of this fly were taken on the island the following summer. Furthermore, a parasitized tick was found there in 1929 by Hertig<sup>3</sup> in a lot of some 400 nymphs of *D. variabilis*. The parasites were not identified.

In July and early August of 1940, 1,470 engorged immature ticks were collected on Naushon Island. Of these 90 per cent. were *D. variabilis*, 513 larvae and 841 nymphs, and the remainder were of the genus *Ixodes*, 113 larvae and 23 nymphs. The *Ixodes* that reached the adult stage proved to be *I. ricinus scapularis*, and it is believed that the others were the same. One larva of *D. variabilis* yielded two specimens of *Ixodiphagus texanus* How. This is believed to be the first report of this species as a parasite of the American dog tick. But it is not the first record in this part of the country, for the U. S. Department of Agriculture, Bureau of Entomology and Plant Quarantine, has a number of records from Oak Bluffs, Massachusetts, in *Haemaphysalis leporis-palustris* and *Ixodes dentatus*.

*Hunterellus hookeri* was not found parasitizing any of the above-mentioned ticks. However five adults were collected in the hair of a Setter dog, two about July 28 and three about August 20. Since the average life of an adult is about forty-eight hours, there probably is a fairly large population of the fly on the island, which is principally parasitizing some species other than *D. variabilis*. The only previous report of adults seen in nature is by Cooley.<sup>4</sup> It is

felt that the introduction of *H. hookeri* is not a useful measure for the control of the American dog tick.

I am indebted to Dr. A. B. Gahan and Dr. C. N. Smith, of the Bureau of Entomology and Plant Quarantine, for assistance with the identifications; and to Dr. H. S. Forbes for hospitality and assistance.

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## THE EFFECTIVE PRESENTATION OF SCIENTIFIC REPORTS

CONGRATULATIONS to Professor E. F. DuBois, of Cornell University Medical School, for the intriguing and worthwhile discussion which he has precipitated by his note of March 13 in *SCIENCE* on the effective oral presentation of scientific material.

The additional comments of John B. Lucke, Gilbert Dalldorf and Jean Broadhurst in *SCIENCE* for April 10, reveal further thinking on this truly commendable topic of discussion.

Perhaps no group of men in the country are more aware of the deficiencies of scientific papers, as read at many science meetings, than are the members of the National Association of Science Writers; those professional journalists who devote their full time to the reporting of the news of science and who attend, constantly, the major science meetings of the nation.

As a member of the National Association of Science Writers, and with the past benefit of many discussions with its members on this very subject, the following suggestions are offered for the research scientists.

The greatest fault of scientists would appear to be that they try to present material orally which is intended primarily for publication in a technical magazine.

No matter how skilled an orator a man may be, the unwise choice of words for spoken delivery can not overcome this basic handicap. The technical terminology of almost any phase of science is certainly near the peak of boredom for the human ear.

Lack of skill in oral presentation is a handicap, but one can not chide the research scientist too much on this score, for he has other things to do beside taking elocution lessons.

Nor can one expect a scientist to rehearse his address with the intensity of the director of a radio program who has nothing else in the world to do.

What scientists can do, however, is to rise above the laziness whereby they try to kill two birds with one stone. More effort needs to be made to tell their research story simply and with a minimum of technical terms which seem to be the trademark of any technical report at a scientific meeting.

If reports to scientific meetings are intended for later publication, as many of them are, let there be two drafts made of them; one to be mailed to the editor of

<sup>1</sup> A. B. Gahan, *Proc. Ent. Soc. of Wash.*, 36: 89, 1934.

<sup>2</sup> *SCIENCE*, 67: 351, 1928.

<sup>3</sup> A. Hertig, personal communication.

<sup>4</sup> *Onderstepoort Jour. Vet. Sci.*, 3: 23, 1934.