

of Arctic and, almost entirely, British expeditions, none of which had anything whatever to do with attempts upon the Pole. The number of books of this character is legion, most of them written, like this one, by persons without experience in the polar regions. Some of them are certainly superior to that by Hayes, though some may possibly be worse. The strong British and anti-American bias of the author, combined with his apparent lack of intellectual honesty or of a sense of values, makes him peculiarly unfitted for a task which calls loudly for sanity of judgment and for some measure of an international view-point.

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#### A STUDY OF THE RELATION OF THE RELATIVE SIZE OF THE TWO HANDS TO SPEECH

FROM a preliminary study of college students conducted last year at the State University of Iowa evidence was obtained which points to the conclusion that there occurs a difference in the volumetric size of the two hands. The hands of thirty-four normal speakers, twenty-four of whom were right-handed, were measured and it was found that 87.5 per cent. had larger right hands, while only 8 per cent. had larger left hands. Eight left-handed subjects were studied, five of whom were found to have larger left hands, with only one having a larger right.

Since there is assumed to be a lack of dominant lead in the stuttering person, if we further assume that the difference in the size of the two hands is due to development through use it might be expected that findings on normal speakers and stutterers would not agree. A similar study was therefore made of thirty-three stutterers who had shifted handedness not to exceed a year previous to measurement, but findings were similar to those for normal speakers. This group included twenty-seven cases who had used the right hand up to time of shift; 85.2 per cent. of these subjects had larger right hands, while only 7.4 per cent. had larger left hands.

By slightly altering the present technique and measuring a large number of cases it will be possible to determine with greater precision the quantity of difference for each person and then compare averages for each group. Further, it is the author's purpose to determine the cause of this condition and whether it is pre- or post-natal. If it is found to be the latter, attempt will be made—by studying children of various ages—to determine at what age these size differences occur.

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#### EDEMA AND GENERAL ATROPHY IN STENOSTOMUM OESOPHAGIUM

DISTENDED, abnormally large individuals have been found in certain cultures of *Stenostomum oesophagium*. An examination of these abnormal animals has led to an investigation of this condition, which has been termed edema. A study of the causes of edema in *Stenostomum oesophagium* is now being made.

The first step in this edema is the destruction of the main stem of the protonephridium. Morphological changes which follow the destruction of the main stem are the accumulation of fluid in the pseudocoel, the distention of the epidermis, the branching of the enteron, the migration of cells from both the epidermis and the enteron, the destruction of many of the elements of the parenchyma, the foreshortening of the capillary portion of the protonephridium and the addition to the number of the flame cells.

Certain factors, such as parasitism, light, temperature and hydrogen-ion concentration, appear to have little or no effect in producing the atrophy of the main stem of the protonephridium, the quantity of the food ingested seems to be the most important of the factors studied to date. Of 325 individuals of a clone, the members of which were fed abundantly, 284 died of edema; of 675 individuals of a clone, the members of which were fed only once a day, 46 died of edema. A study is being made of other factors that may determine the atrophy of the main stem of the protonephridium and the consequent edematous condition.

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#### BANG'S ABORTION DISEASE OF CATTLE

THE author, working at the Kansas Agricultural Experiment Station, has developed a strain of *Brucella abortus* var. *bovis* which does not produce agglutinins following massive doses, although a thermal response is noted in each instance. Bang negative cattle remain non-reactors indefinitely to the standard agglutination tests (rapid and tube), following injection of this vaccine.

A live germ vaccine of this strain is readily absorbed without abscessation in all the experimental animals. No enlargement of the spleen is noted in guinea-pigs and rabbits.

Experiments are being planned to determine the protective and immunizing value of this product in cattle under simulated field conditions.

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