

PHYSIOLOGY

Great Men's Brains Not Larger But Have Better Blood Supply

THE DIFFERENCE between a scholar's brain and that of the ordinary man is not size or weight but blood supply and composition.

This is the conclusion drawn from studies reported to the American Psychiatric Association, by Dr. Henry H. Donaldson of the Wistar Institute of Anatomy and Biology, at Philadelphia.

Dr. Donaldson studied the brains of scholars, including those of G. Stanley Hall, Sir William Osler and Edward S. Morse, and compared his findings with similar studies of brains of ordinary hospital patients.

In his address he asked the psychiatrists to imagine before them the brain of a scholar, and one by one Dr. Donaldson took up the anatomical features of this imaginary brain, just as he had studied them in real brains in his laboratory. The weight of this superior brain and of its different parts was no different from that of persons of low grade mentality, Dr. Donaldson pointed out. Careful measurements of the area of the brain surface also showed no difference between brains of superior and inferior mentality.

But when Dr. Donaldson examined the part of the brain containing the chief vessels that supplied it with blood, he found a great difference. In the brains

of scholars this part was always well developed, showing that the brain was unusually well nourished. The brain with a better food supply works better, as does a muscle with better blood supply and better nourishment, he reasoned. Even the best of brains makes a poor showing in a fainting individual in whom most of the blood has been withdrawn from the brain, he pointed out. Since nourishment of the brain appears to be the factor influencing its better functioning or causing greater mental ability, the composition of the blood as well as the amount of it supplied to the brain must be important. Further studies along this line are needed, he said, but much progress has already been made.

Science News Letter, June 11, 1932

ENTOMOLOGY

'Hoppers Will Cause Much Damage in Western States

WIDESPREAD damage from grasshoppers all over the West is expected by the Bureau of Entomology, U. S. Department of Agriculture. The insects are hatching rapidly in great numbers throughout the Plains area, and outbreaks have already been reported as far east as Iowa and Missouri. As yet the pests are in their earlier stages of growth; it is after full size and appetite have been attained that their most serious inroads on crops occur.

This year the Bureau of Entomology lacks sinews of war. An appropriation was asked from Congress, but was not granted. Hence the burden of the fight has been transferred to the localities affected. In most states at least some money has been raised by the various counties for the purchase of materials for poison bait, and the states supply technical advisers for organization and methods of combat. The Bureau itself has collected much data on grasshopper outbreaks and how to handle them, and this has been made available to the forces in the field.

Since the fight has been left to state and local agencies, it is expected that efforts will be uneven; necessarily determined by the amount of money avail-

able. South Dakota, hard hit by agricultural troubles during the past decade or more, will probably be able to do less than some of her more fortunate neighbors; but in all the states there are certain counties where the money needed for the grasshopper war cannot be found in sufficient amounts. These unfortunate communities will not only suffer most from their burden of 'hoppers this summer, but will carry over an increased stock of eggs into 1933, and thus serve as centers for trouble next year, unless severe winter weather or other natural factors fight on the side of the farmer instead of against him.

Science News Letter, June 11, 1932

PHYSIOLOGY

Python, Cold-Blooded, Becomes Warm at Times

SNAKES, though cold-blooded and actually below the temperature of the surrounding air most of the time, can warm up appreciably under suitable circumstances. This was strikingly demonstrated by measurements made on the body temperature of a female African python while she was incubating a "sitting" of eggs.

The study was made as part of a larger research on the physiology of large reptiles, under the direction of Dr. Francis G. Benedict, director of the nutrition laboratory of the Carnegie Institution of Washington at Boston. The results of this research will be issued in the near future in monograph form.

The temperature of the maternal python while she was trying to hatch her eggs was 93 degrees Fahrenheit, not very much below that of warm-blooded animals, while the surrounding air had a temperature of only 86 degrees. Normally, however, the temperature of a snake is not even as high as that of the surrounding air. It has been assumed for years that cold-blooded animals were always just as warm or just as cold as the atmosphere.

Science News Letter, June 11, 1932

▼ The Science Service radio address next week will be on the subject,

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FIGHTING INSECTS WITH POWDER AND LEAD

Prof. A. L. Melander

Head of the department of biology of the College of the City of New York

FRIDAY, JUNE 17

at 2:45 P. M., Eastern Standard Time

Over Stations of

The Columbia Broadcasting System

The Immense Distances of the Fixed Stars were not proved until

NEWTON

Studied them in connection with his work on gravitation in the solar system. His deductions will form the

NEXT CLASSIC OF SCIENCE