strated increased responses after prostigmin. Similarly Brown, Dale and Feldberg[3] also find a marked increase in the contractions to indirect stimulation after injections of eserine.

These apparent discrepancies are not due to the anesthetic employed, as Brown, Dale and Feldberg suggest; nor are they due to the site of injection of the drugs, as Wilson and Wright state. Whether increase or decrease of the responses occurs depends on the frequency at which the muscles are activated and on the dose of the substance injected.

In the same animal under dial anesthesia the contractions of the two gastrocnemius-soleus muscles may be recorded, while the popliteal nerves are stimulated, one at a frequency of 1 per 5 sec. and the other at a frequency of 3 or 4 per sec. If eserine (0.5 mgm per kgm) or prostigmin (0.1 mgm per kgm) is injected intravenously, the responses of the muscle stimulated at the lower frequency will increase, while those of the muscle activated at the higher frequency will, as a rule, decrease.

In general it may be stated that the conditions favorable for the appearance of increased responses are slow frequencies and small doses of the drugs; on the contrary, high frequencies and large doses lead to depressed contractions. The results are readily explained by the well-known ability of acetylcholine to stimulate skeletal muscle when in small doses, and to paralyze it when the concentrations are high. The acetylcholine in question is that liberated by the motor nerve impulses and protected from immediate destruction by the eserine or prostigmin which has been injected (*cf.* Cowan[4]).

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ON THE WORD SHADE-TREE

A SMALL pamphlet distributed by a prominent publishing company for the aid of authors in preparing manuscripts directs the writer, when speaking of trees, to "Make two words in all cases except where used as an adjective, when it is compounded, as: *apple tree, forest tree, fruit tree, etc.* Adjective form: *apple-tree borer, fruit-tree beetle,* etc." If entomologists followed this rule they would speak of *Empoasca fabae* as a leaf hopper or a leaf-hopper insect. As a matter of fact, the modern entomologist is so contrary that he does neither, a practice to which we shall refer later.

The Standard Dictionary discusses its method of compounding words at some length and states some general principles. In illustrating one of the principles, it says, "The second principle makes two nouns used together as one name become one word, if the first is not really attributive. Thus, while brick is attributive in *brick house* (a house made of bricks) it is *not* attributive in *brick-yard* (a yard in which bricks are made)." On page 1642 the Standard follows this principle and hyphenates *shade-tree.* The writer approves of this compounding because it gives a greater unification of sense in speaking of this particular kind of tree. Indeed, if any one is bold enough to write it as *shadetree,* similar to "shadbush," "sunflower" and "grasshopper," the writer will gladly follow suit.

It is of interest in this connection to recall for a moment the evolution of a word as an illustration of the growth of usage in writing the English language, at least in entomology.

The older usage is seen in a treatise on entomology in which *Eutettix tenella* is spoken of as the "Beet Leaf Hopper." Later entomologists call it the "beet leaf-hopper," while present-day authors speak of it as the "beet leafhopper."

I have often suspected that my ability to form mental pictures is not highly developed. At any rate, the broken words, "grass hopper," "grass-hopper," "leaf hopper," "leaf-hopper," "bed bug," "bed-bug," do not bring to my mind any such clear-cut, definitely circumscribed mental images as do the words "grasshopper," "leafhopper" and "bedbug." Perhaps that was the reason I was glad to find that the Standard Dictionary had tied shade and tree together with at least a hyphen. To me, the hyphenated word makes a much greater unification in sense and gives this useful and beautiful object a greater attribute of dignity and entity.

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EARLY REFERENCE TO THE BLACK WIDOW SPIDER

WHAT appears to be a very early reference to the black widow spider (*Latrodectus mactans*) was printed in 1812 in "The Indian Doctor's Dispensatory, being Father Smith's Advice respecting Diseases and their Cure," by Peter Smith, of Miami County (printed by Browne and Looker, Cincinnati, Ohio, 1812; reprint, 1901, by J. U. and C. G. Lloyd, Cincinnati). On page 74, of the reprint, under No. 57, it states:

The cure of venemous Bites and Stings ought to be known, if possible, by every body; for a little delay will often render the bite or sting dreadful, and sometimes incurable. How important must it be to be able to cure

[3] G. L. Brown, H. H. Dale and W. Feldberg, *Jour. Physiol.,* 87: 394, 1936.
[4] S. L. Cowan, *Jour. Physiol.,* 86: 61P, 1936.

the bite or sting of serpents or spiders, especially the black spider with a red spot on his back, called the tarantula, so common and dreadful in southern climates, wasps, bees, etc.

To cure any of these, you may only wet a thimbleful of indigo with good vinegar, to make it into a mud, and apply it to the bite or sting. If done soon, the danger will be immediately over; and it is stated to me, that the place will not swell at all.

The above is a discovery lately made in Sussex county, New-Jersey, where the snake called the pilot, or copperhead, was so common and bit so many, that the mowers would scarcely venture into the meadows, until this discovery was made. They then kept some of the indigo mud by them, and found that they could cure themselves at once by this simple application.

Readers are warned not to depend upon this folk remedy, but to seek competent medical advice. However, it would be interesting to investigate, by precise laboratory methods, whether indigo acidulated with acetic acid has sufficiently marked adsorptive action on venoms to be aidful, or if other adsorbents can not be advantageously used, at least in conjunction with accepted remedial agents.

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QUOTATIONS

ABANDONMENT OF THE MOSCOW MEETING OF THE INTERNATIONAL CONGRESS OF GENETICS

THE seventh International Congress on Genetics, which was to have been held next August with a thousand of the world's leading scientists in this field participating, has been canceled by order of the Soviet Government, it is learned unofficially. Several British scientists who had expected to attend have been informed by Moscow that the congress will not be held.

About 100 Americans had been expected to attend, about forty of whom, including such authorities as Drs. C. P. Bridges, T. S. Painter, Sewall Wright and G. H. Shull, were preparing papers. A score of British geneticists had been expected, including Julian Huxley and Viscount Haldane.

An interesting story of a schism among Soviet scientists, some of the most prominent among whom are accused by Communist party authorities of holding German Fascist views on genetics and even being shielders of "Trotskyists," lies behind the cancellation. The fact that so many of the Soviet Union's most distinguished geneticists are under fire is believed to be the motive for the government's action.

In the past three months T. D. Lysenko, botanist, who has won great acclaim and high favor with the government for his experiments in the "vernalization" of wheat and other agricultural products to shorten the growing season, has been attacking the "classical geneticists" in the monthly scientific magazine, *Socialist Reconstruction of Agriculture.*

He challenged the validity of classical genetics, including the Mendelian laws and the chromosome theories and stigmatized them as "formalistic" and of no practical value, whereas his work, he said, is producing useful results. Mr. Lysenko said, "Genetics is merely an amusement, like chess or football," and he attacked the All-Union Institute of Plant Industry at Leningrad, headed by Academician N. I. Vaviloff, as useless.

Americans had a special interest in the congress because Professor Herman J. Muller, of the University of Texas, who during a four-year leave here has attracted world-wide attention with his experiments on mutations of the fruit fly, was chairman of the program committee. He is now head of the Department of Mutations and Genes of the Institute of Genetics, Academy of Sciences of the U.S.S.R. Dr. Muller is assisted here by Dr. Daniel Raffel, Johns Hopkins graduate and a nephew of Gertrude Stein.

Among Soviet geneticists now under fire are Professor S. G. Levit, head of the Medico-Genetical Institute, who was general secretary of the organization committee, for the congress, and Professor Agol, a member of the Ukrainian Academy of Sciences. Both have worked in Dr. Muller's laboratory in the University of Texas and both now have a high standing in the genetics world.

Professors Agol and Vaviloff, who have traveled extensively in America, have been arrested at Kiev on charges understood to involve Trotskyism. Professor Agol has been a Bolshevik since before the revolution. Professor Levit was originally a Menshevik, who joined the Bolshevist party in 1918.

Recently Professor Levit has come under heavy attack in the Communist party press, proving he has come under the displeasure of party authorities, who rule every phase of Soviet life, including the sciences, literature and the arts, as well as economics and politics. This has culminated in Professor Levit's being accused by the science subcommittee of the Moscow City Communist party committee of permitting the development of scientific views hostile to Soviet theory and friendly to Nazis in his institute—which was surprising in view of his published theories.

At a meeting of physicians and biologists a party representative said some Soviet scientists were not only ready to admire false and anti-scientific theories of