



When Is An Insect?

SPIDERS are commonly called "insects" in ordinary conversation and the popular prints, despite the inevitable pained protests of entomologists and of scientists generally. Spiders are not insects. They belong to a group of their own, called the arachnids. Insects, arachnids, and a number of other "creeping things" with jointed legs, in turn make up a larger zoological category known as the arthropods; just as mammals, birds, fish, etc., are grouped into the category of vertebrates. To call a spider an insect is no more correct than it would be to call a flying-fish a bird.

Probably the spider-insect confusion arises simply because insects have a lot of legs; therefore anything with a lot of legs is put down as an insect. But insects always have six legs, whereas spiders always have eight. Most of us, however, have difficulty telling the difference between six and eight, when the objects to be counted are small, and in rapid motion—sometimes toward your uneasy self.

Another difference, even more obvious, is in the matter of wings. A "typical" insect has four wings; a spider no wings at all. This difference, while well-marked in the great majority of insects, is impossible to see in many others. Some insects have lost a pair of wings in the course of evolution, some have lost both pairs, and many that retain wings keep them out of use so persistently that one is apt to forget their existence.

Again, insects have antennae or "feelers," which spiders never have. Insect eyes are often large and conspicuous, while spider eyes are small, and usually eight in number—not a characteristic eye count for insects.

There are other points of difference,

such as the division of the insect body into three sections—head, thorax and abdomen—while the spider has only two. But the few points of distinction given will suffice, if you will only look closely enough.

One thing that deters many people from studying these interesting lesser neighbors more intimately is the fear we all have of the unknown. Anything that crawls is supposed to bite, and any bite is supposed to be deadly. As a matter

of fact, very few spiders can bite through the human hide, and of these only one, the Black Widow, is really "bad poison." And the worst you are likely to get out of an unfriendly insect is a hornet-sting, which, though painful, is certainly not likely to be lethal. We really should "take a chance" more often, and get acquainted with our neighbors of the little world.

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SURGERY

Test Can Foretell Success Of Blood Pressure Operation

A TEST which enables the surgeon to predict the outcome of operations for relief of high blood pressure before he starts the operation was reported by Dr. Edgar V. Allen of the Mayo Clinic, Rochester, Minn., at the meeting of the American Heart Association in Kansas City. Dr. Allen developed the test in collaboration with Drs. J. S. Lundy and A. W. Adson.

The test is used to determine which patients will be helped by this modern method of relieving very high blood pressure. Patients who will not be helped as shown by the test are thus spared what would be, in their cases, a useless operation.

The test consists in injecting into a vein an anesthetic, sodium pentothal, which puts the patient to sleep. This anesthetic, which is related to amytal, causes the patient's blood vessels to dilate temporarily, thus lowering the blood pressure. The operation produces the same effect but it is a permanent one. If the anesthetic does not cause the drop in blood pressure, the surgeon knows the operation would not be successful either.

The patient is under the anesthetic for about 15 minutes in the simple test and is able to be up and around within an hour. The operation itself consists in cutting a set of involuntary nerves which control dilation and contraction of blood vessels within the abdomen. A similar operation has been devised for Raynaud's disease, the condition in which impaired circulation in the extremities causes the fingers and toes to turn white, blue, or red on exposure to cold or when the patient gets excited.

An improved technic for performing this operation was reported by Dr. James C. White of Boston, and consists of cutting those involuntary nerves

which control the size of the blood vessels of the extremities. As first devised, the operation cured the condition as far as the toes were concerned, but Dr. White noticed that a few months after operation the hands continued to turn color when the patient became excited. In his opinion, this is because the nerves were not cut in the right place, so he devised a new operation for relieving the condition in the hands which apparently gives the same results as the original operation does for the feet.

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ENGINEERING

Mine Owner Embarrassed: Elephant Dropped In

MINING in the jungle has its peculiar, often rather heavy, embarrassments. There is, for example, the case of a British mining engineer friend of Dr. Frank D. Adams, emeritus professor of geology at McGill University.

This engineer runs a tin mine in Malaya, just below the Siamese boundary. His miners, Chinese workmen, have been considerably bothered, because an uncommonly huge crocodile swam up the creek to their settlement, and at the same time a leopard has been snarling and stealing livestock from the land side.

Then one night an elephant wandered into camp and fell down the mine shaft. The fall killed him, of course. Only, the engineer wrote to Dr. Adams, he didn't quite know what to do about it. He had no machinery strong enough to hoist the dead elephant out again. And one doesn't want an elephant clattering up the bottom of one's mine shaft, you know. It just won't do.

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