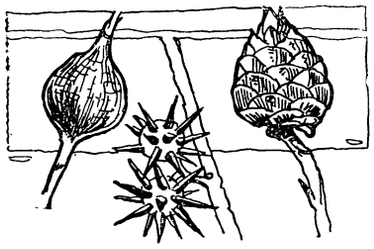
ENTOMOLOGY-BOTANY

Nature Ramblings

By FRANK THONE



Galls

IF IT BE TRUE that the pen is mightier than the sword, we shall have to credit the sting of a tiny insect with changing the course of history, not once but many times. For until the invention of modern synthetic inks, all the writing ink in the world came from the swellings in oak leaves we know as galls, and leaf-galls are caused by the sting of a tiny wasp-like insect, which thus irritates the tissues of the oak leaf to make a home for the little larva that will hatch from an egg she deposits at the same time. Oak galls were a common article of commerce during antiquity and the middle ages, and no monastery *scriptorium* was complete without a jar of oak galls steeping on a shelf or windowsill. Even yet, our common inks are chemically the offspring of this old monastic ink; they are gallates of iron.

But oak leaves are not the only plant tissues irritated into hypertrophic growth by the stings of insects. The number of gall insects is legion, and the plants in which they make these bulbous homes for their offspring run pretty well through the whole catalog of Linnaeus. There is no place in the world, jungle or desert, cultivated field or tundra, where you cannot find some kind of galled stem or leaf.

Some of the galls are very plain and unpretentious—simply utilitarian bulges in stem or leaf. Others are very characteristically shaped, with prickles, or horns, or scales, or leaf-like outgrowths. A sufficiently skilled entomologist who has made more or less of a specialty of this department of his science can look at a gall and tell immediately what kind of an insect made it. Or if he has the insect in hand, he can predict what kind of a plant it would seek as a nursery for its young, and what kind of galls it would cause on it.

Science News Letter, August 22, 1931

BIOLOGY

Chinese Breed Hens to Lay Eggs Weighing Quarter-Pound

CHINESE experimenters are trying to recover an old strain of hen that used to lay eggs as big as two.

Such a fowl existed in southern Manchuria, but Chinese farmers carelessly crossed it with other breeds that laid more but smaller eggs. Eggs were always sold by number and not by size. Now the big-egg-laying strain is all but lost, and has been preserved only by some fanciers in parts of China. The fowl is native to parts of the Japanese-leased zone of Hishikwa, and of Fu-hsien and Chauanhou-hsien, all in China.

The existence of hens' eggs so big that one alone would make a breakfast for a hungry man has been reported to the American Genetic Association by Taiji Kohmura of the Agricultural Experiment Station at Kungchuling, southern Manchuria. Mr. Kohmura was able to collect 25 of these hens and eight roosters with which to begin his breeding work. They were big-bodied, big-legged fowl, buff or brown in color and with varied markings.

The first hens did not give such remarkable results. Only three of them laid eggs that weighed as much as three ounces. Two ounces is an average weight for an American egg. But when Mr. Kohmura hatched new chickens from the best of the first eggs, he produced one pullet that laid eggs which averaged three and one-half ounces each. The biggest single-yolk eggs she laid weighed four ounces, or a quarter of a pound, and a two-yolk egg, five ounces.

But the objection of the Chinese farmers was borne out. The biggest-egg-laying hens laid very few. The pullet whose average egg weighed three and one-half ounces laid only 77 in a year. Another pullet whose average egg was a fraction under three ounces laid 136 eggs in a year. But Mr. Kohmura thinks he can bring up the number as well as the size, for the experiment is still new.

The average weight of a grown hen of the flock is about six and one-half pounds and of a grown rooster, nine pounds. The average age of the pullets when they began to lay was about 219 days. They are fairly good winter-layers, but stop early. The hatchability of the eggs is very low, too. Only 72 per cent of the eggs are fertile, and of those somewhat less than half hatch out, whether because of size or other reasons is not yet known. But all these things Mr. Kohmura hopes to improve.

Science News Letter, August 22, 1931