"Modern" Insects Like Heat

Entomology

The "flaming youth" of the insect world, evolutionally speaking, are just as fond of the bright lights, a hot time, and fast living generally as are their human prototypes. That is to say, the more "modern" insects, the species most recently evolved, have a higher metabolic rate, faster phsysiological processes, move more rapidly, and prefer bright sunlight and the warmer parts of the earth.

This is the thesis advanced by Dr. Clarence H. Kennedy of Ohio State University, writing in *Ecology*. He has made a special study of the dragonflies, but has examined also the family trees and present modes of living of a large number of other groups of insects, and in general he finds that they all fall into line with his theory.

"Modern" or recently evolved insects in general have three preferences. They like the tropics as a place to live, they prefer open, sunny places rather than dim woods or shelters under bark or stones, and, when they needs must live in a cooler zone they thrive best in the hot summer rather than in the cool spring. Insects of this group include such active and relatively intelligent orders as the ants and bees, the higher dragonflies and the day-flying butterflies.

The tastes of the old-fashioned insects, which have sometimes been called "surviving fossils", are just the opposite. They develop their maximum numbers in the cooler parts of the earth, fly in the cooler parts of the day or lurk in the shady woods or even in dark crevices, and are most active in the cooler seasons. These hexapod fogies include stoneflies and mayflies, thrips, booklice, and the lower families of the grasshopper, moth and fly orders.

Another point developed by Dr. Kennedy has to do with the length of life of the groups compared. The "slow" insects live long—breed only once a year as a rule, or sometimes require several years to come to maturity. He cites one primitive genus, an intermediate form between crickets and cockroaches, which takes three years to come to maturity, and which has to be raised on ice in a refrigerator. The "fast" moderns, on the other hand, mature and reproduce much more rapidly, a couple of weeks sufficing for the whole life cycle of some of the higher flies. Theirs seems to be a short life and a merry one.

Dr. Kennedy's study upsets the old fable of the ant and the grasshopper. For, while a few of the grasshopper order are modern and "fast", the bulk of the family is conservative; whereas none of the ants are "slow" and most of them belong very decidedly to the insect fast set.

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Chickens Dislike Oats

Zoology

Dr. Samuel Johnson, the famous dictionary writer, is said to have had a low opinion of both oats and Scots. At any rate, he defined oats as "a grain that is fed to horses; but in Scotland is used for men."

It now appears that English chickens agree with the learned doctor, for they don't like oats. But, unlike Dr. Johnson, they do something toward backing up their opinions. Scientific tests conducted at the School of Agriculture at Cambridge have shown that fowls digest oats much less completely than they do wheat. The chief difficulty seems to be with the hulls, which horses apparently delight to chew, but which are apparently just so much unnecessary impediment to digestion in the gizzard of a chicken.

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Electric Meter for Gas

Physics

No longer will aviators have to guess at their fuel supply when the gasoline gauge freezes or breaks. A simple and strongly constructed electric meter, connected by wires to the bottom of the gas tank, may tell the gas supply in future planes. The new gauge is the invention of J. H. Payne, of the General Electric Company. By means of a diaphragm at the bottom of the tank with a pile of small pieces of carbon back of it, the exact weight of the gasoline is measured. It will measure the amount of fuel in the tank to within an eighth of an inch, or about one per cent. of the amount.

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A specialist states that the majority of men and women over 35 years of age have defective hearing in at least one ear.

Nature Ramblings

By Frank Thone

Natural History

Ishmael

An outcast even among the creatures of the wilderness, furtive, cowardly except when desperately hungry, friend to none and befriended by none, the little wolf we call the coyote is an object at once of contempt and pity. He lacks the strength and the organization that make the big "lobos" terrible against stock and big game, and so for the most part is spared the relentless pursuit that has all but wiped his larger cousins off the range. But he is able, in small packs, to pull down calves and young elk, and causes some losses that way. But woe to him if a cow elk, or even a blacktail doe, catches him in an assault on her offspring. Against such as he horns are not needed, and the unantlered females of our deer tribe turn on him with their sharp front hooves, and often as not gash his ribs cruelly or perhaps even kill him outright.

Because of this the coyote does not atttack the young of game animals unless he catches them alone, or perhaps orphaned by the rigors of a hard winter. Aged and decrepit elk and deer, also, are sometimes spared the last agonies of starvation by the onslaught of a half-dozen coyotes. But for the most part, the coyote is a snapper-up of unconsidered trifles —rats and mice and such small deer— and a feeder on carrion, competing with buzzards and crows. As a traveling trap for ground squirrels, gophers, prairie dogs and other rodents, the coyote is a real servant of the community, and for this reason is tolerated in many sections where the appearance of even a single timber wolf would be the signal for a community hunt. Even Ishmael hath his uses.

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