

BIOLOGY
NATURE RAMBLINGS



Veterans of Winter

► **WOOLLY - BEAR CATERPILLARS** sometimes surprise us, during spells of mild weather, by suddenly appearing out of nowhere, to go humpity-hump across our paths.

Most of us, remembering the first (and perhaps only) nature lessons we received, think that proper caterpillars should spin themselves into cocoons in the fall, to emerge as butterflies or moths in the spring. To see a caterpillar active so long after autumn seems a contradiction of our kindergarten lesson.

It is a contradiction. We did not learn everything in the kindergarten—least of all about nature. The teacher gave us as much as she thought we could absorb at the time; it is not her fault if we stopped learning when she stopped teaching us.

The story she gave us is true enough—for that kind of caterpillar.

Woolly-bears, and a great many other kinds, have a different kind of life history. They hatch and grow up in late summer, hide out in sheltered cracks and crannies during the winter, and go on being caterpillars for a while when warm weather comes again. Then they spin sketchy nests—hardly to be dignified as cocoons—sleep briefly as pupae, and emerge as adults.

Still other members of the butterfly-moth order live through the winter as adults, clinging motionless to bark or twigs in the woods. A familiar example is the beautiful dark-winged mourning-cloak butterfly.

What is true for members of this one order is true throughout the whole world of many-legged lesser animal life. Whole hosts of insects, spiders, etc., quietly die in autumn, leaving only their eggs to survive the cold winter winds and renew the life of their species in spring. Others endure the hard season as larvae or pupae, hidden away in the safest lurking-places they can find, and ready to complete metamorphosis into adults when the sun shines longer and more warmly each day.

Still others manage to live through as adults, and are thus able to get an early start when warmth permits them to move and feed and mate again.

Science News Letter, February 23, 1952

BIOLOGY

Anesthetic Stops Brown Peach Rot

► A WAY to keep peaches from turning brown between the time they are harvested and the time the housewife buys them at market has been discovered by Drs. J. S. Vandemark and E. G. Sharvelle of Purdue University, Lafayette, Ind.

The method would be to treat the peaches with volatile chemicals such as the anesthetic, trichloroethylene.

Brown rot losses of peaches in transit due to the microorganism, *Monilinia fructicola*, often run to more than 10% of the crop value and greatly limit distribution, the scientists point out.

Trichloroethylene treatment in the laboratory prevented all breakdown of fruit inoculated with the brown rot germs. It was effective in concentrations as low as one part in 10,000. Peaches and plums exposed to this and stronger concentrations of the chemical for 24 hours were not injured.

The studies are being extended to test volatile chemicals as preventives of market, storage and in-transit losses of other fruits and vegetables when such losses are caused by microorganisms.

Details of the studies are reported in the journal of SCIENCE (Feb. 8).

Science News Letter, February 23, 1952

CHEMISTRY

Gas War Scares in Korea

► **GAS WARFARE** "scares" have occurred several times since the fighting in Korea began, Maj. Gen. E. F. Bullene, the Army's chief chemical officer, admitted to members of the American Chemical Society meeting in New York.

The "scares," however, all proved to be of nonmilitary origin.

"In one instance," Gen. Bullene reported, "a Korean child playfully banged away the corroded plug off a cylinder of chlorine and caused a number of casualties in re-captured Seoul. It was found that the gas was part of the equipment of wrecked city waterworks and Chemical Corps teams had to gather up the unused chlorine and dump it in the Han River."

Far worse gas "scares" may be in store for us and we may have a "gas-type Pearl Harbor," Gen. Bullene warned, if the present public apathy toward gas warfare is allowed to continue.

After the lessons of World War II, he pointed out, any nation planning aggression upon a well-industrialized nation would be likely to choose the weapon or combination of weapons giving promise of victory with a minimum of destruction.

"Chemical agents," he said, "are primarily anti-personnel weapons, but by incapacitating the individual workers, the

machinery and facilities needed for defense of the attacked nation would come to a standstill.

"Thus we must assume that our great industrial nation could be the object of such an attack."

Science News Letter, February 23, 1952

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