ENTOMOLOGY

New Spray Poison Kills Codling Moth Worms

DEADLY to apple worms, harmless to bees, is a new virtue found in the new poison-spray material, phenothiazine, now being tested by the U. S. Department of Agriculture. The discovery is subject of a joint report by L. M. Bertholf of the Bureau of Entomology and Plant Quarantine and J. E. Pilson of Western Maryland College.

One of the great problems involved in control of the worst of apple enemies, codling moth (whose larvae are the "worms" found in apples), is the deadliness to bees of the arsenical sprays commonly used. Beekeepers and orchardists are constantly at feud over this question.

In the tests reported recently, bees were given heavy doses of phenothiazine without any apparent ill effects. In contrast, minute doses of calcium arsenate proved deadly, and lead arsenate was also an active bee poison in the doses bees are likely to get in gathering pollen from sprayed orchards.

Phenothiazine is not yet recommended for general use in orchard spraying, because thus far it has not produced uniform results on the codling moth larvae. It is hoped that further experiments will make it more completely dependable.

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PSYCHOLOGY

Most Child Geniuses Come From Masses

WEALTHY CLASSES do not produce the majority of geniuses. Much larger numbers of gifted children could be found in the slums and teeming tenements if society would only look for them there, Prof. Paul A. Witty, of Northwestern University, believes.

Search of census figures has already revealed to investigators, he says, that if all gifted children were found, the majority would come from the ranks of skilled, semi-skilled and unskilled laborers—the masses. They would not be the sons and daughters of professional men and the rich.

This is not, he explained, because the masses are superior to the high economic classes in intelligence, but simply because there are so many more of them.

Recent tests of the children of different races confirm the findings of anthropologists that claims are groundless that "one race, one nation or one class has any God-given right to rule."

Prof. Witty with Dr. Martin D. Jenkins has studied 103 very bright Negro children with IQ above 120, who were selected from about 8,000 Negro children in Chicago. They found 29 in the "genius" class with IQ's above 140 (100 is normal). One girl has the extremely remarkable IQ of 200.

High intelligence as shown by the IQ tests is not, however, sufficient as an indication of genius in your child, he warned "Giftedness," he said, "can be estimated only by observation of behavior.

"The child whose performance is consistently remarkable in any potentially valuable area might well be considered gifted; he should be given the opportunity which his attainment demands for nurture and continuous growth, but his development should not be predicted nor his future attainment prescribed except as increased growth necessitates adaptations and changes."

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ICHTHYOLOGY

Fish Can Bark, Grunt And Can Even Sing

"DUMB as a fish" is a simile as inaccurate as it is common, according to scientists of the U. S. Fish and Wildlife Service. Fish have no vocal cords, but many species of fish are still able to make sounds, ranging from grunts and barks to actual musical notes.

Most musical of American fishes is one known as the singingfish, that produces a humming sound by vibrating its air bladder. This species, known also as the midshipman, lives in the Gulf of Mexico and in the Pacific ocean. Warm-water fishes in Old-World seas are also said to produce musical tones—perhaps the foundation for the classic myth of the sirens' song.

The majority of our sound-producing fishes, however, are not musical. Grunting and drumming sounds are most common; "grunt" and "drum" are actual names of fish. The porkfish or pigfish is another that got its name from its grunt. The croaker is still another fish named for its voice, which is said to be the loudest of all our native fishes. The sound of the Conger eel is a bark.

Most of the audible fishes produce their sounds by vibrating their air-bladders, either by the rapid tugs of attached muscles, or by sliding muscles over the tightened membrane. Some, however, become vocal by grating their teeth or rasping with their gill-covers.

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IN SCIEN

GENERAL SCIENCE

Plan To Expand Illinois Institute of Technology

PLANS for a $3,000,000 expansion of its physical plant, intended to create a new technological center in Chicago, have been announced by the Illinois Institute of Technology. A new mechanical laboratories building, an engineering and science building, a library and humanities building, a student union, a field house and a power plant are projected.

The Institute was formed last July by consolidation of Armour College of Engineering and Lewis Institute of Arts and Sciences. Though both the Lewis and Armour campuses are now in use, the former will eventually be abandoned, as the extensions will be made to the Armour campus.

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PHYSIOLOGY

Bones May Be Broken By Violent Exertion

BROKEN bones due to violent muscular exertion are rare, but six such cases were reported by Dr. Frank P. Strickler, of Louisville, Ky., at a recent meeting of the American College of Surgeons.

In three of these cases the muscular violence of pitching a ball broke the bone of the pitcher's arm. A young woman broke the bone in her left arm by forcibly throwing her arm out in an effort to catch herself while falling, although her arm did not hit anything.

A structural steel worker broke his knee cap by muscular violence when he was sitting with his back braced helping to push a steel beam into position with his left leg flexed at the knee.

A young farmer broke several vertebrae in the left side of his back when pushing a truck that had become stuck in a mudhole. He felt something give way in his back and had acute pain. At first he thought he had lumbago, but eventually an X-ray picture of his spine was taken and it revealed the broken bones.

All the patients made good recoveries.

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CE FIELDS

GEOGRAPHY

East African War News, Ethiopian Names Are Back

BRITISH advances into Italian East Africa bring to the news names that Americans learned to pronounce glibly back in 1935, when Ethiopia was waging a losing fight for independence.

Here are some pronunciations you may remember from that war, plus others new in this one:

Haile Selassie, Emperor of Ethiopia, now hopeful of driving the Italian conquerors from his kingdom: Hay-leh Seh-lahs-yeh'.

Eritrea, Italian colony north of Ethiopia, where British are pushing east: A'ree-treh'ah.

Kassala, frontier and railhead town in Sudan, retaken by British in starting drive east across Eritrea: Kas'suh-lah.

Massawa, Italian naval base and important port on Red Sea in Eritrea, toward which the British are moving: Mus-sah'wah.

Asmara, capital of Eritrea, on the British route toward Massawa: Ahs-mah'rah.

Addis Ababa, capital city in heart of Ethiopia: Ad'dis Ah-ba-bah'.

Tsana, important lake in northern Ethiopia, source of the Blue Nile: Tsah-nah'.

Neghelli, Italian airdrome 120 miles south of Addis Ababa, bombed by British: Neh-geh'lee.

Gallabat, important Sudan post seized by Italians last August, now in area of Sudan-Ethiopian border war: Gal'la-bat.

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PSYCHOLOGY

Fear, Rage Affect Vision, New Experiments Reveal

SCIENCE confirms your idea that rage or fear can "blind" you. Experiments by Dr. E. I. Strongin, Mrs. N. Bull, and Dr. B. Korchin of the College of Physicians and Surgeons, Columbia University, show that vision is not the same when you are under emotional strain as it is when you are relaxed.

Motion pictures taken of the eyes of persons reading showed that while 36 per cent of them could see better, when emotionally roused, another 22 per cent became worse under the strain.

More critical was the test of how the two eyes work together. This is important for the motorist who is trying to gauge the speed of an approaching car, or for the airplane pilot who is bringing his ship in for a landing. It is essential for the perception of distances and depth.

From 14 per cent to 22 per cent of those tested became worse in this binocular functioning under stress of emotion. Only 4 per cent improved under the excitement.

Men whose duties will require them to use their eyes under powerful emotional strain as in fighting or any hazardous situation, should have their vision tested under emotion, not while they are sitting calmly in the quiet of a doctor's office, these scientists recommended.

Psychologists are reminded that many of the crashes which involve army pilots occur when the flyer is returning from an exciting and fatiguing flight and tries to land his speeding plane in a small field. In this sort of situation, ability of the eyes to work together is put to severe test.

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OPTICS

Multifocal Lenses Have No Abrupt Change

OLDER persons, who now wear bifocal lenses, will be interested in new "multifocal" lenses. With the old kind, there is a sharp line of demarcation between the sections for near and far vision, but with the new type, one eases gradually into the other. (*Beach Lens Co., 469 Virginia St., Buffalo.*)

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INVENTION

Violin Practice Painless With New Invention

VIOLIN PRACTICE is made painless — for the neighbors — with a newly patented invention. It consists of a mute, which attaches to the bridge as usual. However, it contains a tiny microphone, which picks up the sound vibrations. They are amplified electrically, and can be heard through head phones worn by the violinist. Thus, though others hear the tones muted, he hears them in full volume. (*Max Rice, Buffalo, U. S. Patent No. 2,229,189.*)

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CHEMISTRY

False Twist Gives Yarn Effect Like That of Wool

SYNTHETIC yarns can be given a false twist, thereby imparting a crimp so that fabrics made with them have an effect like wool. It is made with a device having a twist tube with an internal helical passage through which the yarn passes, the tube being spun at high speed. (*Celanese Corp., New York City.*)

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INVENTION

Bottle Smashing Made Easy By New Machine

BOTTLE-SMASHING made necessary by the notice "Federal law forbids the re-use of this bottle" on liquor containers, may be accomplished quickly with a new hand operated machine. The small bits of glass are collected in a removable can, which holds the remains of some 80 bottles. (*Iron Porter, Inc., 509 Fifth Ave., N. Y. C.*)

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GENERAL SCIENCE

New Freedom for Humanity Seen in Future Science

FUTURE developments of science may equip a person with very small instruments and concentrated supplies carried in his pockets which will provide all human needs in communication, food and transport, J. G. Crowther, British science writer, predicts in his new book, *The Social Relations of Science* (reviewed, SNL, this issue).

"At present science is developing in the direction of big instruments and organizations," said Mr. Crowther. "It seems probable that it will evolve through this phase, and arrive at a new and higher one in which its instruments will again be small and compact. Science may show how a man can provide all his needs, in communication, food, transport, etc., from very small instruments and concentrated supplies carried in his pockets. Theory may show how the important features of the universe may be summarized in a few formulae, so that everyone may carry in his head the theoretical equipment for solving from first principles any ordinary problem arising in daily life. If science developed to this stage, it would provide new concrete bases for freedom."

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