

insects and rats come close to a billion dollars annually.

One attack on the problem of controlling insects is being made with the aid of the great cyclotron at the University of California. Experimental laboratory feedings are made with foods containing elements given radioactive "tags" with this giant instrument. This, explained Dr. Roderick Craig, College of Agriculture entomologist, enables scientists to trace more accurately the course of poisons used in controlling the pests.

It is even possible that the cyclotron may eventually be used in direct control of certain kinds of insects, for its stream of high-velocity particles constitutes a veritable death ray to them. Other forms of radiation have also been demonstrated as lethal to insects, including high-frequency radio waves, infra-red and ultraviolet radiations, and X-rays. Some of these kill insects by heating their tissues, others sterilize them out of existence.

*Science News Letter, March 15, 1941*

#### ENGINEERING

### Magnesium Sulfate Plaster Like Cement in Strength

**T**HOUGH chemically the same as plaster of Paris, a new gypsum plaster, described at the meeting of the American Institute of Chemical Engineers, is about twice as strong as the old-fashioned article. In fact, it approaches Portland cement in strength.

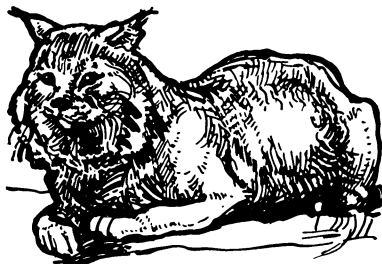
The new product was announced by E. P. Schoch and William A. Cunningham of the University of Texas. It is prepared, they explained, by heating gypsum in a magnesium sulfate solution, whereas plaster of Paris and ordinary wall plaster are made by the dry calcination or burning of gypsum.

Experiments in a small pilot plant indicate, they stated, that it can be made at a cost of \$8.82 per ton.

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## ● RADIO

Dr. Karl M. Dallenbach, Cornell University professor of psychology and editor of the *American Journal of Psychology*, will tell of the work of Emergency Committee on Psychology, organized by the National Research Council and national psychological societies, as guest scientist with Watson Davis, director of Science Service, on "Adventures in Science," over the coast to coast network of the Columbia Broadcasting System, Thursday, March 20, 3:45 p.m. EST, 2:45 CST, 1:45 MST, 12:45 PST. Listen in on your local station. Listen in each Thursday.



### Predator Problems

**P**REDATORY animals, like coyotes and bobcats, that prey on game birds, deer and other creatures that sportsmen like to hunt, present some of the most difficult problems with which wildlife managers have to wrestle. They took up a good part of the attention of the recent Sixth North American Wildlife Conference at Memphis. Should they be shot on sight, and trapped, and poisoned, or should they be let alone, so that nature may work out its own balance?

Keep them under control, insisted E. A. Schilling of the U. S. Forest Service. Neglect of predator control, he declared, has often meant severe game depletion, whereas rational control measures have been followed by restoration of good hunting. In support of his contention he cited the comeback of wild turkey in Southeastern woods after some of the bobcats and foxes had been trapped out. Since man has so completely and permanently upset the ancient balance of nature, there is no chance of its restoring itself so long as man remains on the scene, he declared. However, Mr. Schilling emphasized, control of predators does not mean wiping them out completely. No sensible wildlife manager would advocate that, he said, and anyway it couldn't be done even if it were attempted.

Testimony of coyotes' destructiveness to deer, in a quite different type of country, was offered by E. E. Horn of the U. S. Fish and Wildlife Service, who works out of Berkeley, Calif. In the Mono Basin of Santa Barbara County, Mr. Horn stated, a study of stomach contents of 371 trapped coyotes disclosed remains of deer in more than half of

them. This was supported by other field evidence.

However, the question arose as to the desirability of permitting deer to increase greatly in this particular region. The Mono Basin is a watershed, said Mr. Horn; its chief raw crop is water. In such an area, too many deer would be undesirable. If coyotes are to be killed off, deer will increase and more hunting will have to be permitted. But if more hunters go into the area there will be more forest and brush fires—which again is not so good, from the watershed management viewpoint. And so the problem goes round and round. A wildlife administrator's life is not a simple one.

If control of predators is determined upon, it is generally inadvisable to attempt it by means of offering bounties, stated Richard Gerstell of the Pennsylvania Game Commission. Bounty systems shift administration problems into the legislature, where they do not belong, he pointed out. Furthermore, there is a tendency for people to claim bounties on animals they would have killed for sport or for other reasons, which of course is a waste of public money. Worse still is the likelihood of outright fraud, as when bounties are claimed on animals killed outside the areas where the bounty applies. Better results, in Mr. Gerstell's opinion, can be obtained by direct employment of properly trained hunters and trappers, and by the education of the general public through press, radio, motion picture film and other effective means.

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Dogs do not see the world in colors, but fish do.

### INTERESTED? in Science



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