

the standard oil-base paint was more resistant to water than the others.

## Hormone Injections

► **ROOSTERS STOP** crowing, their tail feathers droop and their combs wither away when they are injected with female hormones. Their meat seems to be more tender when they are killed and eaten.

Sixteen-year-old Charlotte A. Eddings, found this out in experiments with four young roosters. Two of the roosters were injected under the skin of the neck with pellets containing 12 milligrams each of the female hormone. The other two were used as controls.

Hardly two weeks after the injection the "caponettes" had lost the liveliness common to the roosters used as controls. Eight weeks after injections, the effect was beginning to wear off and soon one made his first feeble attempt to crow.

There was little difference in weight from week to week between the caponettes and the controls. However, the young North Phoenix (Phoenix, Ariz.) High School senior said, this might not prove out with a large group of roosters.

The final act of the experiment was to kill one of the caponettes and eat it. Miss Eddings reports that its meat seemed to be more tender than ordinary rooster meat.

## Hamsters' Memories

► **MALE HAMSTERS** can learn about as fast as female hamsters, but females forget more. These are the tentative conclusions of 15-year-old John R. Seaman, an Ocean-side (N. Y.) High School senior who took four Syrian golden hamsters, two male and two female, and put them through a four-by-six foot maze. Food was in the middle and the hamsters had to learn the maze to reach the food.

On each successive "lesson" the hamsters, both male and female, cut their time down at about the same rate, with the males, perhaps, being a little quicker than the females.

The animals completed 15 trials between May 2 and June 13 last year, cutting their time down from an original average of 551 seconds to 70 seconds.

After that they were given a rest during summer vacation and in September the young scientist tried them out again to see how their memories were. In the first four trials in the fall, the males averaged 99 seconds, the females 129 seconds.

## Glowing Tiles

► **TILES WHICH** glow, under the proper activation, made from natural materials, were the subject of 17-year-old H. Rodney Hartmann's scientific project.

The New Brunswick (N. J.) High School senior attempted to make a luminescent

glaze out of natural phosphors he found in the surrounding countryside. He baked his experimental glazes in a ceramic oven at Rutgers University.

His conclusions were that such glazes are still in the experimental stages and need much work. He found that the luminescence seemed to vary inversely with the quality of the glaze—a glaze with superior covering quality seemed to glow with a lower intensity of the phosphor.

The young scientist pointed to a wide range of uses for his luminescent glazes, if perfected. These include, he said, a variety of decorative purposes, particularly in the form of mosaics. Also, they might be used in producing warning and directional signs, provided a cheap source of activation could be developed.

## Plankton Movements

► **ZOOPLANKTON**—tiny organisms on which fish feed—do not all move up and down in lakes in the same way or at the same time. Russell Noyes, Jr., 17, discovered this in a survey of the vertical migrations of zooplankton.

As a rule, he pointed out, plankton migrate toward the surface at dusk and back toward the depths at dawn. In surveying the various kinds in five Indiana lakes, the young scientist found considerable variations in this general rule.

The University (Bloomington, Ind.) High School student found many factors affecting the way in which the various kinds of plankton migrate. Among these are the temperature of the water, dissolved gases, food, gravity, wind and the age of individual plankton.

One kind actually rises toward the light at dawn. Others do not seem to migrate at all, he found.

## Caponized Fowl

► **ROOSTERS TREATED** with female hormones to make their meat tender and to increase their weight may have some effects on human beings if they eat enough of the meat.

This is the conclusion of 17-year-old Karl H. Muench, Evanston Township High School senior, Evanston, Ill., who fed stewed chicken caponized with chemicals to 24 golden hamsters.

It is a wide-spread practice, he pointed out, to put a pellet of female hormone under the skin of a rooster, near the head. Eating this pellet would be dangerous. However, the question still remains whether the rooster absorbs enough of the female hormone through the edible portions of the body to make the meat harmful to human beings.

"The evidence seems to favor the fact," said Mr. Muench, "that chemically sterilized roosters contain appreciable amounts of stilbestrol in their edible portions."

Science News Letter, March 1, 1952

## ● RADIO

Saturday, March 8, 1952, 3:15-3:30 p.m. EST  
"Adventures in Science," with Watson Davis, director of Science Service, over Columbia Broadcasting System.

Dr. Alan Waterman, director of the National Science Foundation, discusses the "National Science Foundation."

## ZOOLOGY

### Antipodes Chelonians Arrive in California

See Front Cover

► **TWO INOFFENSIVE** plodders have arrived at the California Academy of Sciences.

The half-way-around-the-world travellers are registered officially as *Chelodina longicollis*. They poked five inches of necks out from under their six-inch carapaces for their first look at the U. S. They are rare, long-necked turtles found in rivers and streams of southern Australia.

The bright, yellow-eyed pair, now weighing about five pounds each, may eventually weigh nine pounds. They can grow to 14 inches with ten-inch necks.

Dr. Joseph Slevin, curator of herpetology, noted that long-necked turtles lay eggs in the dirt, scooping out nests by rapidly turning round and round, throwing out the sand or earth with their feet. Egg-laying time, 20 eggs to a setting, Dr. Slevin says, is in November. The young appear in February or March. Omnivorous in habits, they eat meat, fish, and vegetables.

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## TECHNOLOGY

### "Picture Drawings" Speed Production for Boeing

► **ISOMETRIC DRAWINGS**—which look like pictures but which have much of the accuracy of blueprints—are being employed by the Boeing Airplane Company along its B-47 medium-bomber assembly line in Seattle.

Company officials said the isometric drawings also were to be used when the company begins producing B-52 Stratofortresses, a heavy bomber.

The isometric drawings eliminate the necessity of a workman consulting several blueprints before he drills a hole. Shown in picture form, the design is so clear that even a "green hand" can see at a glance exactly where the hole is to be drilled.

For wiring and tubing illustrations, technical illustrators go inside an airplane which has been built and sketch the wiring and tubing runs against the background of the plane's interior. These drawings have cut installation time in half, the officials said.

The isometric technique was tried first during World War II in Boeing's Wichita plant.

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