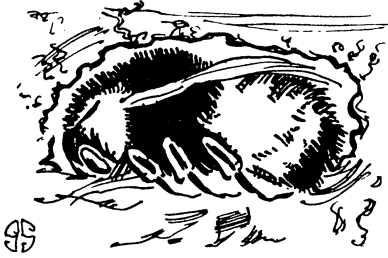


NATURE RAMBLINGS

BY FRANK THONE

Natural History



The Bumblebee's Sleep

A short time since, we concerned ourselves somewhat unnecessarily over the mythical awakening of the groundhog, and the chances of that interesting mammal's having seen his highly important shadow.

But if we depended on other hibernating creatures as weather prophets we should have less anxiety about shadows. The bumblebee, for one, will never see her shadow on Candlemas Day. She will be getting up early if she sees it by Easter. For creatures with a reputation for industry bees, and especially bumblebees, spend a most unconscionable amount of time in sleep. Late in summer or early in autumn, large female bumblebees go forth from every bumblebee nest, and proceed to dig themselves in. They sleep in their little burrows more than half-way round the calendar. While the weather is still warm, they do not sink into the deep and death-like slumber of true hibernation, and if disturbed can dig themselves another burrow and fall asleep again. But after frost comes they become profoundly unconscious, and remain so until spring warmth arouses them. This deep sleep of hibernation is quite probably a matter of physiological economy, for the bee must depend on the food stored in her own body tissues, plus a gorged crop from a last drink at the honey pots of the home nest.

In the spring, the sleeping bee will fare forth, find some nectar on which to feed, and then hunt a nesting place—preferably an abandoned fieldmouse burrow. Here she cleans house, deposits her first eggs, and nurses her first brood. After the new young bees—always smaller than their mother—mature, she does no more foraging, but remains in the hive as queen, devoting herself wholly to the duties of maternity.

Science News-Letter, February 25, 1928

Multiple Walls Subdue Deep Sounds

Physics

Multiple layered walls are the most efficient absorbers for deep musical sounds, Dr. E. C. Wentz and E. H. Bedell have discovered as a result of experiments at the Bell Telephone Laboratories.

Radio studios, auditoriums and other places, where echoes are troublesome and must be carefully controlled, can be made to have better acoustic properties through the use of a thin, perforated partition, set a short distance out from the main wall.

Formerly such sound studies had to be made in a large room, with good sized pieces of the material to be tested. Dr. Wentz and his associate have invented a way of testing in a small tube, and they claim that it gives results as satisfactory as with the older method. At one end is a telephone receiver to furnish the sound of any desired pitch. Sliding in the other end is

a piston, with which the material undergoing test is covered. The echoes formed are studied with a still smaller tube that goes into the main tube at the end near the telephone receiver. On the outside, at the end of this small tube, is a telephone transmitter with which the sounds can be picked up and analyzed.

Sounds of high pitch are largely absorbed by layers of felt, porous "acoustic tile" or wood fiber mixed with felt. Even with the best of such sound absorbers, deep, or low frequency, sounds pass through rather easily. But if the wall is covered with felt, and then, an inch away, a piece of perforated building board is placed, the low frequency sounds are much more completely absorbed. Still better is the effect of two layers of building board, with two air spaces.

Science News-Letter, February 25, 1928

Indian Children Heavier in Weight

Anthropology

When social workers at the Kansas Bureau of Child Research set out to make some individual growth studies of Indian children, they found the little brown-skinned Americans so much heavier than the white children of the same age that the ordinary height-weight-age tables did not "fit" them at all.

Through the courtesy of H. B. Peairs, formerly superintendent of Haskell Institute, a federal Indian school at Lawrence, Kansas, data and measurements were obtained on 21,637 Indian girls and boys from government Indian schools throughout the country from which a new set of tables were constructed. Contrary to what one would expect, the Indian

children were found to be shorter as well as heavier than their white brothers and sisters. The Indian boys ran from one to four inches shorter and from one to six and a half pounds heavier than white boys, while Indian girls were from one to two inches shorter and from one and a half to four and a half pounds heavier than their white contemporaries.

"Considering the fact that the tables represent many degrees of admixture from around eighty tribes," said Miss Emily H. Ferris of the Child Research Bureau, "it is probable that they show in a highly modified degree the structural differences between full-blooded Indian children and American white children."

Science News-Letter, February 25, 1928

Vast Rose Garden

Botany

One thousand varieties of roses are included in the vast rose garden of the University of Texas at Austin. Every known variety of rose grown in Texas and many varieties from other states are among the specimens in this remarkable garden, one of the largest in the world. The garden is under the supervision of Dr. B. C. Thorp, Professor of Botany at the University of Texas. The rose garden is a part of the Texas Botanical Garden which was established two years ago.

Science News-Letter, February 25, 1928

Defending Herons

Ornithology

German lovers of birds are up in arms over an attack being made by fisheries interests on the heron, a beautiful bird given careful legal protection in America and other countries. The herons of the Moehne valley in Westphalia have been accused of destroying undue numbers of fish, and a bounty of nine marks per head has been placed on them. The defenders of the herons declare that it has been possible to protect the Rhine fisheries without exterminating the herons there, and claim that there is no need to kill off the birds.

Science News-Letter, February 25, 1928