

10,000 Bee's Tongues Measured

Entomology

One of the first large scale measurements of insects, comparable to the elaborate measurements made by anthropologists of members of the human race, has been undertaken by Dr. W. W. Alpatov of the Zoological Museum of Moscow, now working at the Institute of Biological Research under Prof. Raymond Pearl of the Johns Hopkins University. Thousands of bees from Russia and the United States were examined during the investigation, which has shed interesting light on problems of beekeeping, according to a report in the *Quarterly Review of Biology*.

The anatomical feature to which Dr. Alpatov devoted the most attention in this huge survey with the microscope was the tongue, tool of supreme importance in the business of honey collecting. In Russia it was found that bees' tongues increase in length as one travels south, until in the Caucasus, the southeasternmost

corner of European Russia, are found the longest-tongued bees now known to entomology. In the United States no such geographical distribution held good, a condition accounted for by the fact that all honey bees in this country are species introduced from Europe within the last two or three centuries. Furthermore, progressive beekeeping has fostered interbreeding with bees from all parts of the country. Racial characteristics cannot be as fixed as with indigenous bees bred in the same locality for hundreds of years.

Before the war the Caucasian bees were the subject of special investigation on the estates of one of the members of the royal family of Russia. The records left by the agronomist in charge show, said Dr. Alpatov, that crops of red clover, a plant that carries its nectar too deep down in the blossoms for most bees, were much heavier in fields where

there were hives of Caucasian bees than where they were absent.

Another point emphasized by Dr. Alpatov was the difference in tongue length of worker bees of different types but of the same race. Those collecting pollen, for instance, had shorter tongues than those collecting nectar. Slight as the present information on the subject is, he added, it shows "a promising possibility for systematic investigation of the selection and adaptation of the worker bees of different races to different plants. The preference of certain bee races for certain plants is the cause of differences in the quality of honey collected. It happens often that the color and flavor of the honey collected in the same locality by colonies belonging to different races differ greatly. This has naturally a certain importance from the point of view of marketing honey."

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The Temple Guard

Archæology

The great stone Temple of the Warriors in the ruined city of Chichen Itza, in Yucatan, has been reclaimed from the jungle so far as science can accurately set the stones in place again, and it stands in cleancut beauty against the sky. The expedition from the Carnegie Institution of Washington, which spent much time and labor reconstructing the temple, is again at Chichen Itza and has sent the unusual photograph of one facade of the building, shown on our cover this week. Six grotesque masks with curling noses adorn the wall, and in the center is a carving of the Plumed Serpent, favorite deity of the city. The serpent clutches a human head in its jaws, and surrounding are the plumes in a graceful design. The carvings of the temple were originally painted in brilliant color. The native boy who stands guard before the temple of his ancestors is posed with spear and club. No doubt, temple guards were so armed in the thirteenth century, when the Warriors' Temple was one of the outstanding buildings of the city. The building was named because of the figures of eighty warriors that adorn the columns of the interior. Presumably, the figures are portraits of real statesmen and heroes of prehistoric America.

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