sents itself but I do agree with the advertising slogan of our railroads that we should "See America First."

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MUSEUM PESTS FEEDING ON GLYCERINE JELLY SLIDES

RECENTLY I accidently found, in an ordinary box of 100 microscopic slides, two Dermestid beetle larvæ, exhibiting what is an apparently new feeding habit for these museum pests, as far as I can ascertain from entomologists here.

The two larvæ I saw at different times actually feeding on the black rim of asphaltum encircling the cover glass of a few slides, two in one part and five in another part of the box. From these was removed from one fourth inch to fully one half of the periphery, exposing the mounting medium at the edge. Excess asphaltum on the upper surface was not touched, which shows, as well as do other points given below, that the asphaltum was not the chief attractive food substance in the case.

Glycerine jelly was the mounting medium in all these slides. All slides touched were fairly thick mounts, all practically thick enough for at least a small larva to get in beneath the cover glass. Two slides show rather large, broad, irregular tunnels in the jelly. I did not actually see larvæ at work in the jelly, but sufficient evidence was there. Besides these spaces in the jelly, which could not have been due to any flow of material, or made by any other agent, a great many larval hairs were stuck around the cover glass, and in decreasing numbers, on other parts of the slide, and a cast skin was stuck to one.

One of these larvæ was inadvertently crushed, and the other one later died. A couple of big Dermestid larvæ were secured and offered fresh glycerine jelly. They ate of it readily, but I also noticed that they became badly stuck up in a rather short time, and soon died. Such result would be rather fortunate for the slide owner, thanks to the consistency of the glycerine jelly. If there are few larvæ there probably will not be much damage then. Still some good specimens may be exposed to injury, and this happen long before the injury is noted. It is a feeding habit which the writer believes should be taken into account.

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NECTARINA IN TEXAS

MY attention was first called to the presence of *Nectarina lecheguana* within the limits of the United States by a letter from a beekeeper living in the lower Rio Grande Valley, stating that there were insects there which made nests like the hornets and yellow jackets but stored honey like bees. He also stated that they swarmed like bees. An investigation of available literature failed to mention anything fitting the description given. A few months later, on visiting the region, several beekeepers confirmed the account and I was shown a number of abandoned nests but could find none which were occupied. My interest continued and I endeavored to secure specimens from friends living there. A few live insects were sent me in an ordinary queen cage. These were forwarded to the National Museum for identification and were identified by S. A. Rohwer as *N. lecheguana*. This species is recorded commonly from Mexico to Brazil, but so far as can be ascertained there is no previous record of its appearance north of the Rio Grande River. I have been unable to find any indication of its occurrence farther north than about twenty miles of Brownsville, Texas.

In the early summer of 1920 I secured a large colony which was shipped in its original nest to Hamilton, Illinois, in a cage by express. A few days after the nest was placed in the open, the insects absconded and were not located again for some time. They built a new nest as large as the old and at least one division established itself, but the third nest was much smaller. Since the insects can stand but little frost they could not survive an Illinois winter in the open.

These insects are remarkable in possessing so many characteristics of both bees and wasps. As already stated they make large paper nests like the wasps but they store up honey like the bees. When they sting, they lose their stings as do the honeybees. They show little resentment when one approaches the nest and I found no difficulty in observing their actions at close range. When a forager returned from

the field it would pass from one to another of those remaining on the outside of the nest and offer the new nectar which was eagerly accepted. From five to a dozen individuals would thus be fed before passing inside the nest where it was lost to sight.

This and other species of *Nectarina* are discussed at length by R. du Buysson in Annales de la société entomologique de France, Vol. 74 pp. 537-566.

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SCIENTIFIC BOOKS

Geodetic Operations in the United States, January 1, 1912, to December 31, 1921. By WILLIAM BOWIE. Pp. 26, illustrated. (Washington, Government Printing Office, 1922, 20 cents).

This is a report which was presented in Rome in May, 1922, at the meeting of the section of Geodesy of the International Geodetic and Geophysical Union. It is reviewed from the point of view of a scientist. Otherwise the reviewer might call attention more directly to certain points in the report which are of interest to any one who would like to see all of the United States mapped well and soon.

The perusal of this publication, showing the contributions to geodesy by the Coast and Geodetic Survey in the past ten years, arouses admiration for the rapid progress which has been made in spite of the delays and disturbances due to war. The rate of accumulation of new observations for use in geodesy has been greater in the United States in this decade than in any previous decade. Along with this progress in observing there have also been notable improvements in instruments and methods.

One hundred and twenty-four determinations of the intensity of gravity, corrected for topography and isostatic compensation, were available in the United States before 1912. In the past ten years 162 such determinations have been added, making the total now available 286. This is a very substantial addition to the data of geodesy.

There are two lines of attack on the problem of determining the figure and size of the earth and on all associated matters such as isostasy. These two lines together are substantially the whole of geodesy. The primary data for one line of attack are observed values of the intensity of gravity as given by pendulum observations. The primary data for the other line of attack are observations of the relative directions of gravity at various places as given by astronomic determinations of the latitude, longitude and azimuth of points connected with continuous triangulation. The preceding paragraph shows that the available data for the first mentioned line of attack has been more than doubled in the United States in the past ten years. The paragraphs which follow give some of the points from the report which show that the strength available for the second line of attack mentioned has also been greatly increased on this continent in the past decade.

During 1912-1921 102 determinations of astronomic azimuth scattered widely over the United States have been made. The total number of such azimuth determinations before 1912 was 285. Similarly in this decade more than one fourth has been added to the number of determinations of astronomic longitude in the United States and 124 determinations of astronomic latitude have been made. To the network of primary triangulation in the United States which existed before 1912 there has been added in the last decade arcs of an aggregate length of 4,659 miles, or more than 66 degrees of a great circle on the earth's surface. Clarke's classical computation of the figure of the earth in 1880 depended on arcs measured by various nations of an aggregate length of only 89 degrees. In connection with the new triangulation of the past decade 20 new base lines have been measured with probable errors of one part in a million as a rule.

The accuracy with which the figure and size of the earth may be derived from a given continuous network of triangulation and the connected astronomic determinations increases very rapidly as the extreme dimensions of the network are increased. Within the decade under consideration, by cooperation on the part of Canada and Mexico, the continuous triangulation has been extended from the United States far into each of these countries and the computations are made on one standard datum.