Report upon a collection of Coccidae from Lower California

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REPORT UPON A

COLLECTION OF COCCIDAE

FROM LOWER CALIFORNIA

BY

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INTRODUCTION

LOWER CALIFORNIA

The peninsula of Lower California, or, to use its Spanish name, Baja California, is a long, slender land finger extending southward for nearly eight hundred miles from its junction with the continent of North America. Its southern extremity, terminating in Cape San Lucas, lies just within the tropics two hundred miles across the Gulf of California from the mainland of Mexico, of which the peninsula is politically a part. It is, in the main, an isolated land whose scanty population clusters about the crumbling missions that stand as symbols of a romantic past through which there moves a procession of priests, pirates, and filibusters succeeded by long years in which the land was virtually forgotten.

It is withal a land to fire the interest of the scientific explorer, especially of the botanist, for its isolation and its climate have combined to develop what has been characterized as the strangest desert flora in the world. Yet until comparatively recent years but little has been known concerning the biota of the peninsula. The existing knowledge is based largely upon the explorations made by Dr. Gustav Eisen under the auspices of the California Academy of Sciences, and by Mr. T. S. Brandegee during the closing years of the past century, the results of the extended travels of Nelson and Goldman, supported by the Bureau of Biological Survey of the United States Department of Agriculture, having for the most part not yet been made public.

In certain fields enough work has been done to give a reasonably clear conception of the nature of the life of the peninsula, but there remain some groups that have been practically untouched. Among these groups are the insects. Rather extensive entomological collections were made by Dr. Eisen in the southern portion of the peninsula, the region to which scientific writers have applied the name “Cape Region,” but even here practically no more than a beginning has been made. Throughout the remainder of the area almost no work at all has been done and concerning certain groups there is no information whatsoever. From all this great area, as far as I am able to determine, not a single species of the Coccidae or scale insects has heretofore been recorded, although the richness of the flora is in itself evidence that this group should be well represented. A few species have been taken from Carmen Island in the Gulf of California, but none from the peninsula itself.
The present writer has long been keenly aware of the possibilities of extending our knowledge of these insects by explorations within this region. With the financial support of the California Academy of Sciences, the Department of Entomology of Stanford University and the United States Bureau of Entomology, it became possible to spend some time during the summer of 1919 in the southern portion of the peninsula for the purpose, in part, especially of collecting these insects. It is upon the results of this work that the present paper is based.

Itinerary

Except for a few hours spent ashore at Ensenada, a port about fifty miles south of the United States boundary, the collecting was confined to the extreme southern portion of the peninsula of which I have already spoken as the Cape Region. Accompanied by Mr. J. R. Slevin, assistant curator of Herpetology of the California Academy of Sciences, I landed at La Paz, a port about one hundred miles north of Cape San Lucas on the gulf side of the peninsula. Here a few days were spent while arranging the necessary formalities connected with passing our equipment through the customs, and then, with riding animals and a pack train, we started upon a circuit of the region.

Stops of a few days each were made at San Pedro, Triunfo, San Antonio, San Bartolomé (or, as it is commonly called by the natives and will be called throughout this paper, San Bartolo), the Eureka ranch at La Rivera, Agua Caliente, Miraflorres, San Jose del Cabo and Cabo San Lucas. From the latter place the route lay by the roughest of trails over the mountains to Todos Santos on the western coast. From Todos Santos a trip of a few days was made to La Laguna, a meadow near the summit of the Laguna Mountains at an altitude of perhaps 5,000 feet, where one finds himself in surroundings reminiscent rather of regions some hundreds of miles to the northward than of the lowlands immediately about the base of the mountains. From Todos Santos we then returned directly across the peninsula to La Paz.

Characteristics of the Scale Insect Fauna

There are listed in the following pages 85 species of Coccidae. Of these, two, Pseudodiaspis larreae and P. dentilobis were not obtained in the peninsula, although the former doubtless occurs there, but are included because of their intimate connection with certain other included species. Two others, Ehrhornia cupressi and Aspidiotus densiflorae are represented by specimens taken from herbarium material from Guadeloupe Island, an island in the Pacific about two hundred miles off the coast of Lower California. Three species, Erium lichtensioides (Ckll.), Pseudo-
coccus eriogoni (Ehrh.), and Pseudococcus sequoiae (Coleman), were taken only at Ensenada. The remaining 79 species are from the Cape Region.

Of these 79 species, ten are cosmopolitan or at least tropicopolitan forms, the occurrence of which in this area is of no particular significance. These are the following:

- Orthezia insignis (Douglas).
- Pseudococcus filamentosus (Ckll.).
- Pseudococcus virgatus (Ckll.).
- Saissetia oleae (Bern.).
- Saissetia nigr a (Nietn.).
- Chrysonymphalus aurantii (Maskell).
- Chrysonymphalus aonidum (L.).
- Lepidosaphes gloveri (Pack.).
- Aspidiotus lataniae Sign.
- Aspidiotus rapax (Comst.).

One species, Aspidiotus spinosus Comst., has previously been recorded from greenhouses in eastern United States and in England, but is of unknown origin. It is almost certainly introduced in Lower California also. Three species are neotropical in origin, but are probably introduced in this particular area. These are the following:

- Asterolecanium pustulans (Ckll.).
- Ceroplastes cirripediformis Comst.
- Pseudoparlatoria parlatorioides (Comst.).

Six species, of which three are from oaks, are widely distributed throughout the United States and doubtless northern Mexico as well, these being the following:

- Eriococcus quercus (Comst.).
- Pseudococcus maritimus (Ehrh.).
- Chionaspis pinifoliae (Fitch).
- Chionaspis quercus Comst.
- Aspidiotus diffinis Newst.
- Aspidiotus osborni Ckll. and Newell.

Twenty-four species I am identifying as forms that have previously been recorded from southwestern United States or northern Mexico and that are more or less characteristic of that region. These are the following:

- Icerya rileyi Ckll.
- Steatococcus morrilli (Ckll.).
Dactylopis confusus (Ckll.).
Dactylopis tomentosus (Lam.).
Eriococcus cryptus Ckll.
Eriococcus bahiae Ehrh.
Eriococcus stanfordianus Ferris.
Pseudococcus salinus (Ckll.).
Trionymus smithii (Essig).
Puto yuccae (Coq.).
Phenacoccus helianthi (Ckll.).
Toumeyella mirabilis Ckll.
Ceroplastes irregularis Ckll.
Lichtensia lycii Ckll.
Ancepaspis tridentata (Ferris).
Pseudodiaspis yuccae (Ckll.).
Pseudodiaspis multipora Ferris.
Diaspis arizonica Ckll.
Diaspis echinocacti (Bouché).
Xerophilaspis prosopidis (Ckll.).
Lepidosaphes concolor (Ckll.).
Lepidosaphes mimosarum (Ckll.).
Aspidiotus candidulus Ckll.
Targionia yuccarum (Ckll.).

One species I am referring doubtfully to Eriococcus palmeri Ckll., a species heretofore recorded only from Carmen Island in the Gulf of California.

Twenty-nine species are here described as new. It is not impossible that some of these will eventually prove to be identical with species already described from Mexico. Some are very closely related to northern forms, being perhaps in the nature of subspecies as that term is understood by mammalogists and ornithologists, and others will almost certainly be found to occur in the United States and northern Mexico. A few may prove to be truly autochthonous in the peninsula. The list of new species is as follows:

Steatococcus tabernicolus.
Orthezia caudata.
Astrolecanium cristatum.
Fonscolombia peninsularis.
Eriococcus tillandsiae.
Eriococcus paucispinus.
Xerococcus fouquieriae.