

that the members of the Society pass on to us their suggestions. What kinds of articles would you like to see in this section? What problems do you want discussed? If you have any questions, problems, or suggestions, please send them to the undersigned at: School of Law, University of Louisville, Louisville 8, Ky., U. S. A.

JAMES R. MERRITT

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MINUTES OF THE SECOND PACIFIC SLOPE MEETINGS OF THE  
LEPIDOPTERISTS SOCIETY, SEPTEMBER 3 - 5, 1955

The meetings were held in the lecture room of the San Diego Society of Natural History Museum, San Diego, California. Through the cooperation of Colonel ARTHUR FISCHER and his staff, pleasant and adequate facilities were made available for all activities.

Starting September 3, the time from 9:30 to 11:00 was spent in registration and renewing of acquaintanceships of the members and guests, many of whom had not had this opportunity since the meeting in San Francisco the previous year.

At 11:00 the formal program was launched under the chairmanship of Dr. JOHN A. COMSTOCK. An address of welcome was delivered by Colonel FISCHER, greeting the Society and pointing out the importance of scientific investigation toward knowledge and enjoyment of the natural sciences.

The next order of business was the choosing of the area for the field collecting trip for the following day. It was unanimously decided to cover the desert area east of Julian, in the general region of San Felipe Creek. The decision was based upon the fact that heavy rains had brought out the vegetation on the desert.

The kind invitation of Mr. FRED THORNE to meet for an evening discussion at his home in El Cajon was enthusiastically accepted by the members. In the time remaining before lunch a group picture was taken.

Upon returning from a pleasant lunch, the article "Collecting Notes on *Megathymus*," by HUGH A. FREEMAN was read by J. W. TILDEN. This paper gave practical information on collecting and rearing these specialized insects. A lively discussion developed, as several of the members present had worked with this genus. The general opinion by the members was that a great deal of work remained to be done on these insects.

The next subject was "Interesting Collecting Spots in Lower California," by CHAS. F. HARBISON. Slides were shown of outstanding collecting areas, and Mr. HARBISON commented on the possibilities. There is a series of sub-tropical and tropical oases stretching nearly a thousand miles down the Peninsula. Each has its peculiar ecological conditions. The area has not been thoroughly covered by collectors, and no doubt new forms and even species remain to be discovered. For instance, there are 21 varieties of *Agave* represented, and almost surely new forms of *Megathymus* will be found by careful investigation.

ROBERT L. LANGSTON reported on "Western Tent Caterpillars and Their Parasites." The species and the variation of the moth and the caterpillar were discussed and a display cabinet of hosts and parasites were shown. Mr. LANGSTON indicated that though caterpillar parasites were important, the egg parasites were more effective from a control standpoint.

The last paper of the day was presented by Mr. FRED THORNE, on the Season Summary. Some challenging points were raised on the makeup of the present summary and upon a motion by Dr. COMSTOCK, seconded by Mr. SALA, a resolution was passed unanimously to send Mr. THORNE's paper to Dr. REMINGTON. The motion was amended to ask for inclusion of sub-specific names for the Western reports only.

A film was shown on The Grape Leaf Skeletonizer, prepared by The California Bureau of Entomology. This moth threatens the grape industry of the state.

The group adjourned for a delightful dinner at Cafe del Rey Moro, in Balboa Park. After dinner the members drove to the home of Mr. THORNE for informal discussions and refreshments. A feature of the evening was the examination of some remarkable specimens in our host's collection.

The following day, Sunday, was dedicated to the field collecting trip. Cars met at 8:00 A. M. at El Cajon, and by 10:00 were in the vicinity of Scissors Crossing, on San Felipe Creek, approximately 70 miles east of San Diego. This spot was selected as representing the typical desert condition in this area. The heaviest rains of many years had preceded our visit by about 3 weeks. Vegetation was in full growth, plants and shrubs in full leaf, flowers in bloom, and running water in the stream bed. Insects of many types were abundant, and Lepidoptera conspicuously present. To many of us, uninitiated in the peculiarities of the Southwest, the sight of the desert in bloom will always remain as a surprise and a revelation.

Collecting was excellent, both in numbers and variety. Some of the species taken were: *Papilio rudkini*, *Melitaea chara*, *Hemiargus gyas*, *Apodemia mormo deserti*, *Cænonympha californica*, *Brephidium exilis*, *Pieris protodice*, *P. beckeri*, *Danaus gilippus strigosus*, *D. plexippus*, *Eurema nicippe*, *Polites sabuleti*, *Colias eurytheme*, *Apodemia palmerii marginalis*. Three unexpected catches were *Euptoieta claudia*, *Libytheana bachmanii* and *Pseudocopeodes eunus*.

Meetings convened again in the Museum on Monday morning at 9:30. Dr. HOVANITZ was prevented at the last minute from attending the meeting. F. MARTIN BROWN kindly acted as moderator in the discussion "Geographical Variation." He laid the background of the subject by pointing out that there are many mysteries connected with the occurrence of variation. To fully explain the phenomena we may have to draw on sciences outside of biology. Among others, the effect of past geologic and climatic conditions may well be essential. The migration of forests and other vegetation, based on past temperature and rainfall may have much to do with the present distribution and isolation of species and sub-species.

At this point, Mr. JOHN DOWNEY took up the discussion by presenting data on *Lycaeides argyrognomon*. After defining terms he discussed the existence of basic variability tendencies in the gene pool of the species. In *melissa*, for instance, a clinal relationship exists from Canada to Southern California in genitalic characters. However, wing pattern does not follow the same trend. What factor is causing this variation? A table was shown on the occurrence of a specific spot on the fore wing. This showed an occurrence of 78% in the White Mountain variety to 0% for the Argus variety. Mr. DOWNEY asked for more data from collectors to help in working out these relationships.

Dr. J. W. TILDEN then presented data on the genus *Ochlodes*. Many of the life histories are missing in this genus, and some sub-species are not named. Even the status of some, such as *O. nemorum*, are in question. Some members of the genus, although widely distributed, show little variation. Examples are *O. yuma* and *O. morrisoni*. Others are highly variable. The *agricola* and *sylvanoides* complexes are examples of this. *O. sylvanoides*, particularly in California, shows great variation, even in genitalia.

Mr. THORNE at this point read a paper by DAVID L. BAUER on "Geographic variation in *Melitaea hoffmanni*." Slides were also shown, illustrating the variation in size and color of this species in various localities.

A summation was given by Mr. BROWN pointing out the small sample of the total population on which much of our work is necessarily based. More reports from collectors will help this. The wandering of species in following their food plant may bring them into new climatic conditions leading to variation and the development of a new subspecies. An example was given from Colorado, where a colony of *Papilio indra* became established. This isolated colony showed a few long-tailed examples in 1923, but by 1940 99% had long tails.

The next subject presented was "Highlights of the 1955 Season" by Mr. LLOYD MARTIN. The 1955 season was marked by very wet conditions on the desert. Apparently Mexican weather patterns moved north into the Southwest. This gave very good collecting conditions and led to a number of new records. The season was three weeks late in the Sierra due to a cold spring. Conditions in northern California were below average due to an unusually dry season.

A very interesting discussion developed around the questions of how far specimens could be blown by storms, and still be in good condition. It was agreed that 500 miles was not excessive, and was the explanation of some of the unusual catches recorded in 1955.

The last paper by Dr. HARRY LANGE on "Aquatic Pyralids," was read by Mr. MARTIN. This reviewed further work on this interesting group and showed that they are far more prevalent than generally thought.

With the reading of the last paper the closing items of business were taken up. Upon a motion by Mr. BROWN, seconded by Mr. THORNE, a resolution was passed thanking the San Diego Museum for their cooperation.

After some discussion, it was agreed unanimously to hold the 1956 meeting in Santa Barbara the first week in August.

Upon a motion by Mr. DOWNEY, seconded by Mr. MARTIN, a motion of appreciation was passed for the work of Mr. THORNE for his work as program chairman. An amendment to the motion appointed Mr. THORNE chairman of the 1956 meeting.

Upon motion by Mr. DOWNEY, seconded by Mr. FORD, a resolution was adopted thanking Mr. TARÔ IWASE and his associates in Japan for their interest and cooperation in the 1954 and 1955 Pacific Slope meetings.

Recommendation was made that DONALD PATTERSON as secretary send letters to authors of papers submitted in absentia, thanking them for their contributions.

The meeting was adjourned at 3:00 P. M.

The following members and guests registered for the meeting:

J. W. TILDEN  
FRED THORNE  
J. A. COMSTOCK  
ROBERT L. LANGSTON  
DONALD PATTERSON  
R. W. BREEDLOVE  
PADDY MCHENRY  
WILLIAM A. REES  
JOHN C. DOWNEY  
LLOYD M. MARTIN  
JERRY POWELL  
J. MCKENNEY

J. C. SPENCER  
W. L. PHILLIPS  
PAUL A. GERHARDT  
CHARLES F. HARBISON  
MR. and MRS. FRANK SALA  
ROBERT J. FORD  
F. MARTIN BROWN  
BILL PATTERSON  
Colonel ARTHUR FISCHER  
F. X. WILLIAMS  
PAUL H. ARNAUD

DONALD PATTERSON  
Secretary *Pro Tem*.