

of deltas, possessing similar and rather highly specialized features, cannot be referred to merely accidental conditions governing the forward growth of the deltas.

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THE NEW MEXICO BIOLOGICAL STATION.

THE Biological Station was founded as an independent institution at Mesilla in 1896. In 1899 it was moved to Las Vegas, and held a successful summer session in the New Mexico Normal University. A brief session was also held in 1900. The students in attendance have been mostly public school teachers. The results of the research work have been published in the *Annals and Magazine of Natural History*.

The Station will now be conducted as a part of the work of the biological department of the Normal University. The session of 1901 commenced on the 1st of June. A course in nature study is offered to public school teachers, and opportunities are afforded for research work along a number of different lines.

Las Vegas offers excellent opportunities for biological work. The summer climate is very good, and at no time is the heat excessive, as it is at lower altitudes in New Mexico and other parts of the Southwest. The altitude is about 6,400 feet, with mountains close by, rising above 11,000 feet.

Four distinct life-zones, the Upper Austral, the Transition, the Canadian and Hudsonian can be studied within 35 miles of Las Vegas. It results from this that the local fauna and flora are extremely rich in species; in the Hudsonian zone are forms of circumpolar distribution and others ranging to Alaska, though not to Asia or Europe; in the Canadian zone we find types identical with those of the mountains of the Northern States and of Colorado; in the Transition a varied assemblage typical, in part, of the foothill region of the Rocky Mountain range; in the upper Austral many species characteristic of the arid southwest, some ranging far southward and westward. With all this comes a certain percentage of local or endemic types, just how numerous further research must determine. Such are the snail *Ashmunella thomsoniana porteri* and the magnificent butter-

fly *Argynnis nitocris nigrocærulea*, both found in Sapello Cañon.

The Gallinas River, flowing through Las Vegas, contains a crayfish (*Cambarus gallinus*), described as new last year, some interesting fishes (*Leuciscus* and *Rhinichthys*), and a variety of aquatic insects, algæ, etc. The Hot Springs, six miles away, contain some peculiar organisms, which have not yet been sufficiently examined.

In the Arroyo Pecos, and elsewhere in the immediate vicinity of the town, is an immense alluvial deposit of Pleistocene age, containing innumerable remains of mollusca and occasional mammalian fragments. Special facilities are offered to students of wild bees (*Apoidea*), the available collections and literature being very extensive. Facilities are also offered for the study of *Coccidæ* and other groups of insects. Students should, if possible, bring their own microscopes, slides, forceps and other accessories.

T. D. A. COCKERELL.

ANNOUNCEMENT CONCERNING THE THIRTEENTH SUMMER MEETING OF THE GEOLOGICAL SOCIETY OF AMERICA.

Sessions.—The thirteenth summer meeting of the Society will be held in Denver on Tuesday, August 27th, in the East Denver High School building. The Council will meet on Monday evening at the hotel headquarters. The Society will be called to order by the President, Mr. Charles D. Walcott, on Tuesday morning, immediately following the general session of the American Association for the Advancement of Science.

Program.—The preliminary list of papers will be mailed about August 1st, and no supplementary list will be sent. The Fellows are requested to send their abstracts on the printed form as promptly as possible, and not later than July 15th. By the rule of the Council abstracts are required. Papers offered for printing should be fully described on the blank forms, extra copies of which will be promptly sent on request.

Hotel Headquarters.—The Brown Palace Hotel has been selected by the local committee, A. A. A. S., as headquarters. The regular