

petroleum in the oil well district for *Psilopa petrolei*; although I could not find the larva in the petroleum, I succeeded in getting the adults on grass around the pools. In the same locality was *Pelastoneurus dissimilipes*.

On the beach at Santa Monica were many specimens of a new species of *Stichopogon*, and on the surface of a brackish pool close to the beach was a swarm of *Ephydra millbrae*.

On the beach at Long Beach *Lipochaeta slossonae* was abundant.

At Lake Elsinore, an alkaline lake south of Riverside, I captured the same beautiful new species of *Tachytrechus* that I got at the south end of Great Salt Lake; also a single specimen of a new species of *Lispa*, of which I later secured a pair at fresh water at Lewiston, Idaho. *Caenia bisetosa* was the most abundant insect at the shore.

On the salt marsh adjacent to Palo Alto I collected several specimens of a species of *Canace*, a very peculiar sort of Ephydrid; also *Hercostomus metatarsalis*, *Pelastoneurus cyaneus* and *Hydrophorus aestuum*.

A two days' trip of a strenuous sort was made to Clear Lake, Lake County, Cal., from San Francisco, to ascertain what sort of *Ephydra* it was of which the larva had been named *E. californica* by Packard many years ago. As the lake is fresh water, and not salt as Packard had been informed, it was evident that the larvae came from some other water. I found that two borax ponds near the lake were well known, and made a visit to one of these, where I speedily found *E. hians*, which seemed to settle the identity of Packard's species. I also found the same large, undescribed *Lispa* which accompanied *hians* on the shores of Great Salt Lake.

The papers which I have published on the results of the trip are the following:

1. Larvae of a Saturniid Moth Used as Food by California Indians. Jour. N. Y. Ent. Soc., xx, 1-4, 1 pl.; Mar., 1912.
2. Flies of the Leptid Genus *Atherix* Used as Food by California Indians. Ent. News, xxiii, 159-163; Apr., 1912.
3. The Biology of Some Western Species of the Dipterous Genus *Ephydra*. Jour. N. Y. Ent. Soc., xx, 77-99, 3 pl.; June, 1912.
4. Two Western Species of *Ephydra*. Ibid., 100-103; June, 1912.
5. The North American Species of the Dipterous Genus *Lispa*. Jour. N. Y. Ent. Soc., in press.

Collecting Notes from the Great Basin and Adjoining Territory (Dipt., Col.).*

By J. M. ALDRICH, Moscow, Idaho.

In the summer of 1911 I traveled about 5000 miles in a 62-day expedition having for its main object the study of the insects found in and about the western salt and alkaline lakes. Although I have published four articles on my results and have another in press, there are so many facts of entomological interest remaining that a more general discussion of the theme seems to be required. Much of my material outside the Diptera still remains unidentified, hence it is even yet impossible to give a list of the species collected. Nor do I think such a list wholly desirable, as it would contain only here and there a species of real interest, nine-tenths being comparatively common and widespread insects. The better way would be to enumerate only species not heretofore known in the territory under consideration, or those whose distribution is little understood. This plan will be pursued with the Diptera, while other orders must wait indefinitely.

The first three weeks of the trip were spent with a farmers' institute party from the University of Idaho, to whom had been assigned a schedule of institutes mostly in rather out-of-the-way places. Our itinerary took us to Payette Lake and down Long Valley to the southward, a fine collecting ground for all kinds of insects, and now becoming accessible through the construction of a branch railroad from Nampa. We were there too early, about June 20; nearly a month later would have been better. The valley is bordered on both sides by heavily timbered and snow-capped mountains, the summits being only a few miles from civilization, ideal for entomological work. Along the main line of the Oregon Short Line as we progressed eastward there is nothing of especial interest in the way of a collecting ground until Pocatello is passed. East of this point the railroad enters a mountain valley, and the entomological field is highly interesting until the Wyoming line is reached. We left the railroad at Montpelier and made

*Part of the results of an investigation made by aid of an appropriation from the Elizabeth Thompson Science Fund.

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when I got off the train, and I had already lost an hour, so I made what haste I could in the hot sun to the place indicated, where I found in a small space more new and interesting Diptera than I ever collected in the same time before. Within two hours the following and many more common species were obtained: *Anacampta latiuscula* and two new species; *Dolichopus ciliatus*, *amnicola*, *obcordatus* and five undescribed species; *Sphegina n. sp.*, *Euparyphus n. sp.*, *Asyndetus n. sp.*, *Calobata pallipes*, *Palloptera jucunda*, *Diaphorus palpiger* and *opacus*, *Hydrophorus sodalis* and *magdalenae*, *Lispa tentaculata* and *uliginosa*, and some not yet fully determined. In accordance with my plans, I continued my journey at ten that evening, but there are some very attractive-looking high mountains a few miles south of Wells that had timber and snow upon them, which would in my opinion be one of the best collecting fields in the West.

Hazen, Nevada, was reached the next morning. A good hotel is the principal feature of the place, which consists principally of a few railroad employees. The Soda Lakes are about ten miles south, being some two miles from Mirage siding, on the Fallons branch. They are small bodies of very alkaline water, where quite a business was done in the manufacture of soda until the seepage from the new irrigating canals of the Truckee-Carson government irrigation project raised the level above the evaporating beds and put a stop to the enterprise. I stayed over night with the caretaker at the works and collected at the shore of the lakes *Ephydra hians* and *Caenia bisetosa*, as at Great Salt Lake. A single male of *Hydrophorus plumbeus* Ald. was found also, known previously only from a single female from Soap Lake, Washington. Around fresh or brackish seepage I found another new species of *Dolichopus*, *Hydrophorus aestuum* and *gratiosus*, *Pelastoneurus cyaneus*, *Thrypticus fraterculus*, and *Melieria occidentalis*. *Chrysops discalis* was occasionally present.

On July 14 I made a visit to Reno and called upon Professor S. B. Doten, whom I found much engrossed with his interesting investigation of the habits of Hymenopterous parasites, for which he has invented several ingenious pieces of apparatus; his devices for instantaneous photography under

the microscope are especially worthy of commendation. A short stroll around the outskirts of the town yielded *Thrypticus fraterculus*, *Chrysomya demandata*, *Asemosyrphus mexicanus*, *Madiza (Desmometopa) halteralis* and some commoner things.

The next day I returned eastward to Wadsworth and took the stage 20 miles north to the Nevada Indian School, where the superintendent, Mr. J. D. Oliver, provided me with accommodations and I remained four days. The trip in was highly interesting to me, as I discovered a really garrulous Indian in the driver "Fat Joe," and we struck up a warm friendship. The school is four miles from Pyramid Lake and eight from Winnemucca Lake, both of which I visited. They are moderately alkaline, but contain large quantities of fish. There is a more alkaline pond a mile south of Pyramid Lake, but it was difficult to reach, as it was on the other side of the Truckee River and the water was high; so I did not visit it. The bottoms of the Truckee River are verdant in this desert region and offer some good insects. The shore of Pyramid yielded a few Lisps of an undescribed species, as well as *Ephydra hians*; at Winnemucca I found still another undescribed *Lispa* with several common species of the genus. Among the Diptera collected on my trips to and from the lakes and about the Indian school were *Chrysops discalis* and *coloradensis*, *Tabanus opacus*, *Exoprosopa eremita*, *Anthrax agrippina*, *nugator*, *lepidota*, *Ceria tridens*, *Tachytrechus angustipennis*, *Thrypticus fraterculus*, *Hydrophorus gratiosus* and *philombrius*, *Geomyza frontalis*, *Rhinoessa albula*, *Urellia abstersa* and *Caenia bisetosa*.

On July 19 I returned to Wadsworth and took the train to Hazen, where I took the Goldfield train next morning to the little freighting station of Thorne, close to the south end of Walker Lake. An automobile conveys the passengers seven miles across a very sandy desert to the county seat town of Hawthorne, occupying a little oasis less than half a mile square. After dinner another auto stage runs before supper-time to Bodie, California, climbing over the Walker Lake mountain range, crossing a valley and ascending almost exactly to the summit of the next range, Bodie having an ele-