

The control of phorid flies was easily accomplished by using double nylon cloth to cover the jars, which kept ovipositing females out, and by consistent destruction of any phorid larva or puparium found when jars were checked. The mites, on the other hand, were very difficult to control. Whenever an infestation was found, it was necessary to transfer sciomyzid flies into a new breeding jar immediately, and to treat the whole old jar, including peat moss, with alcohol. Large glass containers with tight glass lids were used for this purpose. Whenever it was necessary to keep infested jars untouched for some time, they were placed on a separate table far from current rearings.

The help of Dr. D. E. Johnston (Columbus, Ohio), Mr. C. A. Lanciani (Ithaca, N. Y.), and Mr. W. H. Robinson (Ames, Iowa) in the identification of infesting species, and valuable suggestions of Dr. C. O. Berg (Ithaca, N. Y.) are appreciated.—JAN ZUSKA,² *Cornell University, Ithaca, New York.*

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The Rediscovery of *Manica parasitica* (Hymenoptera : Formicidae).—

In 1932 Dr. W. S. Creighton collected a new species of *Manica* on the summit of Polly Dome in Yosemite National Park, California at an elevation of about 8,600 feet. He found 13 workers in a nest of *Manica bradleyi* W. M. Wheeler consequently he named them *Manica parasitica* Creighton (1934, *Psyche*, 41: 185). In the intervening 35 years other American myrmecologists have made pilgrimages to Yosemite, especially to Polly Dome, in vain efforts to collect more of this species. For several years, in the course of our study of the genus *Manica*, we have examined many nests of *M. bradleyi* in many localities always hoping that we would find *M. parasitica*. Finally on 7 September 1967 our efforts were meagerly rewarded (one worker), but not on Polly Dome, nor even in Yosemite.

Our specimen was taken from a typical nest of *M. bradleyi* in an opening in a coniferous forest in sandy loam on a rather steep slope. A cluster of ants under a small stone was bagged with soil without close examination. We had despaired so long of finding *M. parasitica* that the sample was aspirated, preserved in alcohol and pinned several days later before we realized that we had something unusual.

We returned to the site with Mr. Oscar Stark, Laboratory of Desert Biology, on 17 September. Further extensive excavation uncovered one more all-black worker. The total *M. bradleyi* population collected was 379 workers, 1 winged female, 53 males, 1 larva and 40 worker pupae.

We sent the first specimen to Dr. Creighton, who reported on it by letter: "I think that there is no doubt that you have rediscovered *Manica parasitica* and I congratulate you on the discovery. The specimen that you sent me is somewhat more heavily sculptured than any member of the type series but, as there was notable variation in the sculpture of the thirteen types, all that this means is that the type series did not show the full range of sculpture which marks the worker of *parasitica*."

The second worker of *M. parasitica*, which was very similar to the first, was kept in an observation nest with 91 workers and 22 males of *M. bradleyi*. It was quite able to feed itself. It was very easy to distinguish from the *M. bradleyi* workers by its quicker response to disturbances, by its faster gait and by the bouncing of the anterior end as it walked. We thought at first that this might

be due to injury, but the individual outlived all of the host sample and died from unknown causes on 6 December.

Another comment in Dr. Creighton's letter: "I have always felt that the type nest of *parasitica* was abnormally situated." After several years of studying the genus *Manica*, we heartily concur: a shallow pocket of coarse gravel and sand on a treeless dome of solid rock is far from a typical nest site for *M. bradleyi*. To be sure, we have never been able to determine the full extent of a typical nest in a typical site, but it would certainly ramify through several cubic meters.

Field Data: Three miles northeast of Clark Fork Campground, Stanislaus National Forest, Alpine County, California. 7 and 17 September 1967. Elevation 6,100 feet. Opening in a coniferous forest: lodgepole pine (*Pinus contorta latifolia* Engelm.), Jeffrey pine (*Pinus jeffreyi* Grev. & Balf.), white fir (*Abies concolor* Lindl.), incense cedar (*Libocedrus decurrens* Torr.).—GEORGE C. WHEELER AND JEANETTE WHEELER, *University of Nevada, Reno.*

BOOK REVIEW

THE CRANE FLIES OF CALIFORNIA. By Charles P. Alexander. Bulletin of the California Insect Survey, Volume 8, 269 pages, 524 figures, frontispiece. 1967. \$6.00.

The Tipulidae, commonly known as Crane Flies, comprise the largest family group within the order Diptera, numbering approximately 13,000 described species. The recent (1965) Catalog of the Diptera of America North of Mexico reports 1458 species for the Nearctic Region. In January 1966 when the final revision of manuscript was submitted by the author, 432 species, approximately 29 per cent of the Nearctic fauna, were known to occur in California. Three additional published records may be called to the attention of the reader. These additions are: *Tipula* (*Lunatipula*) *macrotrichia* Alexander and *Dicranota* (*Dicranota*) *bernardiensis* Alexander, both described in *Great Basin Naturalist*, vol. 26, pp. 2-4; 1966. The former was from Kings Canyon, Fresno Co., the latter from Thurman Flats, Mill River, San Bernardino Co. The third addition to the state list is *Dactylolabis* (*Eudactylolabis*) *vestigipennis* Alexander, as recorded by Rentz and Gagne in *Entomological News*, vol. 78, pp. 261-262; 1967. The latter, a subapterous Crane Fly was taken at two localities, the first in Los Angeles County (22 miles west of the junction of highways 138 and 14), the second in San Bernardino County (3 miles north of Cajon Pass on Interstate highway 15).

I would like to add my voice to the chorus of praise that most certainly will rise in response to Dr. Alexander's significant contribution to our knowledge of the Crane Fly fauna of California. Dr. Alexander has not limited himself to the family Tipulidae alone but treats as well the families: Tanyderidae, Ptychopteridae, Trichoceridae, Anisopodidae, and Pachyneuridae. All species known to occur in California are considered and there are numerous instances where extralimital species e.g. *Dactylolabis vestigipennis* Alexander, which was originally known only from Arizona, find a place in the keys. This feature certainly augments the usefulness of the keys. I have already drawn attention to the fact that this species is presently known from California.