

Fig. 1.—Portable aspirator, assembled; arrow indicates air outlet.

small areas. The larger volume of mosquitoes that it is possible to collect with this unit also gives a more comprehensive picture of the concentrations of various species.

2. Adult mosquito biting collections. During the mosquito scason biting counts are taken to aid in the establishment of an adult mosquito density index and to supplement the data derived from adult mosquito light traps and resting/hibernating stations. This small self-contained device is also useful for this type survey. In making these particular counts and collections an insect repellent cannot be used for obvious reasons. Therefore a suitable net or veil must be worn to protect the head and neck region. The mouth aspirator is an unhandy and inconvenient device to operate while wearing a net. The

battery powered apparatus is excellent for these collections due to its mobility and case of operation.

3. Mass mosquito collections for arbovirus studies. Each year the Insect Vector Division collects hundreds of mosquitoes for arbovirus studies. In this program it is necessary to collect large volumes of mosquitoes in as short a time as possible. The aspirator has proved invaluable for this particular program. For these arbovirus determinations it is necessary that the specimens not be damaged, and they must also remain alive until they are frozen with carbon dioxide ice. This apparatus has proved to be extremely satisfactory in these aspects because our experience has shewn a 100 percent survival of specimens collected.

THE OCCURRENCE OF Phlebotomus californicus
FAIRCHILD AND HERTIG AND Phlebotomus
oppidanus DAMPF IN TEXAS

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Stone et al., (1965) have reported the occurrence of Phlebotomus californicus in Washington and California and Phlebotomus oppidanus in Mexico and Washington. One specimen of P. californicus collected July 31, 1966 and one male of P. oppidanus collected August 1, 1966 in a Malaise trap are new records for the State of Texas according to Hanson (personal communication, 1966). Both species were collected in a

thicket of willow trees below the San Estaban Dam, 11 mi. S. of Marfa, Texas. The Malaise trap used in this study was a model adapted from Townes (1962).

Along a running portion of Cibolo Creek at Shafter, Texas, two *P. oppidanus* females were collected in a Malaise trap on August 20, 1966.

References Cited

STONE, A., SABROSKY, C. W., WIRTH, W. W., FOOTE, R. H., and COULSON, J. R. 1965. A Catalog of the Diptera of America North of Mexico. U. S. Dept. of Agric. Hdbk. No. 276, Washington. D.C.

Townes, H. 1962. Design for a Malaise trap. Proc. Entomol. Soc. Washington 64:253–262.

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