

During the season, pyrethrum larvicide was used almost exclusively in the residential sections of the city with very satisfactory results. In addition, pyrethrum spray was used to protect people from mosquitoes at numerous outdoor gatherings. This service was started at the request of the City Parks Department to protect the people attending concerts, operas, etc., held each Friday evening in the outdoor theatre at Fairmont Park. The results were so effective, psychologically or actually, that the service was insisted upon and continued throughout the season.

An illustrated 34-page "Informative Bulletin on Mosquito Abatement in Salt Lake City" was published and distributed in 1941 to all schools, libraries, reception and reading rooms throughout Salt Lake City and vicinity. This bulletin has exceeded all expectations in creating interest and gaining public support for mosquito abatement work in Utah.

A technical bulletin, "The Mosquitoes of Utah", is now in press and will soon be available in the Biological Series of the University of Utah. This bulletin provides suitable keys for classification, also the known distribution, life history, habits and economic importance of the thirty-one species listed in the state.

Total expenditures, for the period starting December 1, 1941 and ending November 1, 1942, amounted to \$20,718.13.

California Mosquito Control Helps War
Industries and Military Establishments

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During 1942 California, because of its strategic position and its great number of war industries and military

Establishments, has concentrated largely on mosquito control measures of direct assistance to military establishments. The tremendous influx of war plant workers and military personnel has brought some large and difficult problems.

One new district has been organized in Fresno County in 1942, and is beginning work. Additional territory was also annexed to the Dr. Morris District in Kern County.

Up to April 1, 1942, the U. S. Public Health Service sponsored projects in San Diego County, Los Angeles and Orange Counties, San Luis Obispo and Monterey County (fresh water). The work consisted of drainage and clearing, with some incidental oiling, in areas not without organized mosquito abatement districts.

Beginning September 1, 1942, entomological and inspection work was undertaken by the U. S. Public Health Service, with one man each assigned to Tulare County, Merced and Stanislaus Counties, and Yuba County. Actual work, mainly oiling, with some minor drainage and clearing, has been done in Tulare County and Merced County, using three crews of four men each. This work has been strictly anti-anopheline work, and confined to a radius of about one mile surrounding military establishments.

The Bureau of Sanitary Engineering of the California State Department of Public Health has been handicapped in its supervisory work, since its mosquito control officer, Richard Peters, was commissioned a lieutenant in the Sanitary Corps Reserve, U. S. Army. Professor Stanley B. Freeborn has been commissioned in the U. S. Public Health Service Reserve as Malariologist with the rank of Senior Surgeon, and after spending some two months on work in California, is now in Georgia.

The districts around San Francisco Bay have been cooperating closely with the many army and navy establishments in this area. At some posts the districts, on request, are doing the actual control work; in others they

are furnishing technical advice or special services only. Many of the districts are having extreme difficulty in maintaining adequate crews, partly due to the draft, but mainly to the competition of high paid jobs in shipyards and other war industries.

The Alameda County Mosquito Abatement District, in cooperation with the University of California, has been assisting in the training of Navy Medical Corps personnel who are en route to stations in the combat areas in the Pacific. Both laboratory demonstrations on mosquito identification and other techniques, and practical field experience in mosquito control methods, as they must be modified for tropical areas, are being given these men.

Some reports have been received that oils of low toxicity have been in some cases substituted for the highly toxic Diesel oil heretofore furnished. This problem may become increasingly important later. Two districts have experimented with aliphatic thiocyanates as substitutes for pyrethrum as the toxic element in larvicides, but with unsatisfactory results. Difficulties in obtaining pyrethrum concentrates, and their high price, may result in the abandonment of pyrethrum larvicides in favor of the use of oil, in the few districts now using larvicides.

The year 1942 was expected to be a year of high incidence of encephalitis in the central valley of California, but instead, relatively few (43) and scattered cases appeared, in spite of a large influx of presumably susceptible persons into the endemic areas. Intensive work against Culex tarsalis and Culex pipiens (var. molestus), which are now practically proven to be vectors, may have contributed to this result. An increase in malaria incidence was also expected, due to large migrations from endemic areas of the southern states, but instead there was a decrease in reported cases, with no indications of increase in unreported cases. Neither dengue nor filariasis have yet been reported, though epidemics in the south-

part of the state may be expected to occur later when military personnel infected in the Pacific theater of war returned to this region.

On account of transportation difficulties and pressure of war work, it appears probable that the 1942 meeting of the California Mosquito Control Association will not be held.

ACTIVITIES IN MEMBER STATES

Malaria Control Anticipated for Maryland

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The U. S. Public Health Service has recognized that conditions in Maryland might result in an outbreak of malaria, and in consequence have extended their project under the "Control of Malaria in War Areas" to include Maryland. The administration of this project is under the State Department of Health, and the State Entomologist is responsible for the reconnaissance surveys and the supervision of the entomological work in checking up on the effectiveness of the work being done. All this work is done in the immediate environs of military and naval installations, defense plants, and defense housing projects. There are a large number of installations in Maryland and a number of the projects were begun during the late summer of 1942, and it is anticipated that all of the projects will be activated next spring.

Suffolk County Mosquito Extermination Commission Correlates the Weather and Mosquito Trap Catches.

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(Due to our system of publishing, the accompanying