

## NEWS AND NOTES

MOST OF OUR CORRESPONDENTS HAVE BEEN BUSIER THAN THE TRADITIONAL MOSQUITO AT THE NUDIST PICNIC the last three months and so, as often happens, the News and Notes have all poured in all at once, the last thing and too late to classify. It reminds us of a story which has nothing to do with mosquitoes, though it appeared in the pep sheet of a mosquito abatement office of the U. S. Navy. It seems this somewhat meddlesome old lady phoned in a choice bit of gossip to the editor of the town weekly and added officiously that it simply *must* go into the next edition.

"I'll try to get it in," the editor is reported to have said, "but it's late and we're running a little bit tight."

"Well, I *do* think," snapped the lady, "That you could stay sober long enough to get the paper out!" (The editor of M. N. wonders if the editor of N & N is suggesting that is why *Mosquito News* comes out late.—Ed.)

But, as the mosquitoes said to the trout fisherman, "I guess we're boring you."

THE VIRGINIA MOSQUITO CONTROL ASSOCIATION REPORTS IN ITS ORGAN *The Skeeter*, that Hampton district has been using its salt marsh plow to good advantage despite their inability to find time to work it more than one day or so a week. In an average four working days, the equipment installed over 80,000 linear feet of salt marsh ditches 10 inches wide and 10 inches deep. That's no joke.

*Skeeter* ALSO REPORTS TWO ITEMS WHICH PERHAPS SHOULD BE LISTED IN OPERATIONAL NOTES rather than here. Norfolk, they record, needed a power sprayer for light usage which would be compact, light weight and inexpensive. A used surplus aircraft fuel pump of small size and with a 200 GPH rating, a feedback and a pressure regulator exactly filled the bill. It was driven with an automobile starter motor, which pulls very little current under light load.

WE DIDN'T CLEAR *Skeeter's* OTHER SUGGESTION WITH TODD but it sounds like a good idea. Western Branch District, in Virginia, has a TIFA mounted on a jeep and needed to make it convenient for 1-man operation. They mounted a slit-light on the Tifa panel and focused a small mirror on the jeep so that the driver can watch the Tifa instrument panel without throwing his neck out of joint and driving with only one eye, or less, on the road. Then, in order to save the jeep battery, taxed by slow driving and the resultant failure to recharge, they put an extra generator and voltage regulator on a mount that could be swung out of the way when it was not in use. Another pulley on the shaft of the hand starter on the Tifa (which spins anyway, during

use) gives the jeep battery an extra input of juice during fogging operations so that the battery gets charged same as usual.

SIX MOSQUITO CONTROL DISTRICTS IN VIRGINIA are again cooperating in a light trap operation, too. Under their plan, a collector is hired who visits every trap every day. The results of the collection, if unusual, are telephoned to the appropriate Supervisor that afternoon, permitting immediate action. The cost is only \$80.00 per trap per year, a very small charge for this Gallup Poll on program effectiveness.

EDWARD I. COHER, W.H.O. ENTOMOLOGIST IN NEPAL writes from Amlekhganj, % The Indian Embassy P. O., Kathmandu, Nepal, that the malaria control team of which he is a member has been meeting with some little success in its efforts. They have incriminated the vector species, added a couple of anophelines not previously listed for Nepal and conducted a blood survey and spray survey for the Rapti Valley, which is just north of the Siwalik Range and lies at an altitude of about 520 meters. They have been using wettable DDT with apparent good effect, despite the fact that it was thought by some that this material would not work in that region. They credit George Burton, who has also written from Nepal, with getting the Nepalese Government supplies which WHO has been using. Ed's mail address is 557 California St., Newtonville, Mass.

GEORGE BURTON HIMSELF WRITES, ALSO FROM NEPAL, that despite his pleasant remarks on travelling about on anything from his feet to an elephant, the entomological travel picture isn't all rosy there. For one thing there are airplanes. These seem like a modern method of transportation, but the catch is that the airports, if we "give them the benefit of the doubt and call them that," are irregular grassy fields. During the monsoon these are presumably suitable for some mosquitoes but not for airplanes. Nevertheless the airplanes, and George, use them with insouciance and determination respectively. George reports that he is still knocking 'em down with his dieldrin spray program, though people who had become used to the whitewashing effect of wettable DDT were inclined to be skeptical of anything they couldn't see on the wall. These skeptics came around when they found that they could sleep without mosquito annoyance. The spraying has continued, though slowly, throughout the monsoon.

ENTOMOLOGISTS AND ENGINEERS ARE URGENTLY NEEDED IN ASIA AND AFRICA, WRITES DON JOHNSON, to underline statements previously made here.

The U. S. Public Health Service is recruiting to fill several vacancies in malaria and filariasis control programs supported by U. S. International Cooperation Administration. Liberal salaries plus free housing, allowances and transportation for employees and family are provided. Most assignments are for two years with option of renewal after home leave in U. S. Several one-year assignments also are available. If you are a U. S. citizen experienced in mosquito or malaria control, have a patriotic desire to assist our government in its foreign program, and have a yearning to travel to "far away places," send a brief summary of your education and experience to the Division of International Health, Public Health Service, Department of Health, Education, and Welfare, Washington 25, D. C.

THE CALIFORNIA MOSQUITO CONTROL ASSOCIATION has issued its 1956 Yearbook, a very fine job of printing and of compilation which lists all the people in that state who are concerned in the mosquito abatement program. Insecticides used in each section of the state are tabulated quantitatively and a summary of the 1955 program of mosquito source reduction is given. There is also a nice write-up of the AMCA and source material on our activities and structure.

CHET ROBINSON OF THE ALAMEDA COUNTY (CALIFORNIA) MOSQUITO ABATEMENT DISTRICT writes that no measurable rain fell during June but this did not help him a great deal in his mosquito abatement workload. Above average hot weather, interspersed with normal, cool days for emphasis, caused an increase in the number of people who sought relief on the hot days by running around their barbecue pits in shorts and otherwise exposing themselves to the mosquitoes, many of them the tree-hole breeder, *Aedes varipalpus*, which was still around. Trouble calls were also increased by the psychosomatic injuries received by householders from chironomid midges which they mistook for mosquitoes. Well, anyway, Chet, the worst is over for this year.

A RESIDENT OF MAPLEWOOD, N. J., AND WE GUESS A CUSTOMER OF ONE OF OUR MEMBER ASSOCIATIONS, A MR. JACOB ROSIN, HAS BECOME TIRED OF ALL THIS TALK ABOUT HOW DANGEROUS INSECTICIDES and such useful chemicals are. He has suggested that the compendium of dangerous, hazardous and toxic materials be enlarged to include:

#### Oxygen

A very toxic gas and an extreme fire hazard. It is fatal in concentrations of only 0.000001 p.p.m. Humans exposed to these oxygen concentrations die within a few minutes. Symptoms resemble very much those of cyanide poisoning (blue face, etc.) In higher concentration, e.g. about 20%, the toxic effect is somewhat delayed . . . the main disadvantage of the 20% oxygen concentration is that it is habit forming. The

first inhalation is sufficient to make oxygen addiction permanent. . . . High oxygen concentration provokes in prematurely born babies . . . a condition known as retrolental fibroplasia, resulting in blindness. Lung irritation has been reported on experimental animals. . . .

Oxygen is an extreme fire hazard. All the fires reported in the continental U. S. for the period of the past 25 years were found to be due to the presence of this gas in the atmosphere surrounding the buildings in question.

Oxygen is especially dangerous because it is odorless, colorless, and tasteless, so that its presence cannot be readily detected until it is too late.

CAPTAIN CARLYLE NIBLEY of the 4th Army Area Medical Laboratory is winding up some extremely interesting experiments with colored lights and lights of varied intensities in mosquito light traps. Done in collaboration with Westinghouse, the results may lead to a considerable improvement in our knowledge of the mechanism and usefulness of light traps. They will be written up for later full-scale publication. Meanwhile, Nibs is preparing to take time off for a return to school for further degrees, at the University of Maryland.

MR. E. ELWOOD LYNCH, Mosquito Control Engineer, formerly with the State Highway Department of Delaware, has accepted the position of Chief Engineer on the Maryland State-wide Mosquito Control Project that was initiated on 1 July, 1956.

A.M.C.A. HAS AMONG ITS LISTS NOT ONLY MANY PROMINENT INDIVIDUALS BUT SOME OF THE MOST MODEST FOLKS WE EVER RAN ACROSS. AFTER TIRELESS EFFORTS TO EXTRACT BIOGRAPHIES OUT OF THEM AND OUT OF *American Men of Science* AND OTHER SOURCES, HOWEVER, WE'VE MANAGED TO DRAG THE TRUTH OUT OF A FEW MORE FOR YOU. . . .

BILL BICKLEY PROBABLY HEADS THE LIST FOR MODESTY because in response to our inquiry for more info he characteristically sent us a lot of good words about some other people he knows. Bill feels his greatest success in AMCA has been choosing capable successors to his manifold jobs, whereas his successors know that, however pleased they may be at the compliment, being Bill's successor means the job has already been thoroughly organized and success is almost automatic. Well . . . Dr. Bickley was born in Knoxville, Tennessee, on 20 January, 1914, and received his B.S. from the University of that State in 1934. His Ph.D. was awarded by Maryland in 1940 and he has taught there for the past seven years or so. He previously taught at the University of Richmond between 1946 and 1949, during which time he was a consultant to the State Health Department. He was commissioned in the U.S.P.H.S. during the war, being assigned to Malaria Control in War Areas in Virginia. The P.H.S. is also responsible for a grant in aid which Bill ad-

ministers and an Army contract in research, but Bill's discussion of this branches off onto other people so much that we'll put it in a separate place. A description of a new species of mite, which will appear in the August number of the *Proceedings* of the Entomological Society of Washington, will give the name *Garmania bickleyi* to the literature, in honor of Bill.

ARCHIE D. HESS WAS BORN IN OKLAHOMA CITY, Oklahoma on 11 January, 1911, but grew up on a ranch in Colorado and received both his B.A. (1932) and his M.A. (1933) from Colorado College. His Doctorate was awarded by Cornell in 1939 during a four year period with the New York State Agricultural Experiment Station and as an Instructor at Cornell U., ending in 1940. Although Archie is chiefly associated in most of our minds with T.V.A. and the U. S. Public Health Service, he has actually distinguished himself at several other tasks as well, including a period as a travelling fellow in Central and South America for the Rockefeller Foundation and two years as Chief Malariaologist for FOA in the Philippines where he organized the program so capably continued by another AMCA member, T. V. McNeel. This program, which gave scientific proof to a contention on which the Army had based its post-war control program, demonstrated the feasibility of malaria control by house spraying and measures other than species eradication, and reduced malaria some 80 percent. Well over a million homes were sprayed annually and protection was afforded to above five million people. Especially important was accomplishing the malaria control before resistance arose. Archie is a member of Phi Beta Kappa, Sigma Xi, Delta Epsilon and a large number of learned societies concerned with entomology, public health and tropical medicine. He is also a member of the National Research Council and of the Expert Committee on Insecticides for WHO.

FRED L. SOPER was born in Hutchinson, Kansas, in 1893 and received his A.B. in 1914 and his M.S. in 1916 from the University of Kansas. He received an M.D. from Rush Medical College of the University of Chicago in 1918 and a doctorate in Public Health in 1925 from Johns Hopkins. From 1920 to 1942, he was with the Rockefeller Foundation, most of that period being Regional Director of the International Health Division, headquartered in Rio de Janeiro. During this time an eradication method against *Aedes aegypti* was developed and this was later used effectively against *A. gambiae*, which got a brief toehold in Brazil in 1939 and 1940. Fred was consultant to the Secretary of War from 1942 to 1946, a period which included a term as head of the Rockefeller Foundation Health Commission Typhus Team in North Africa and Italy. In addition to the eradication of typhus in Naples and malaria control demonstrations for the Allied Military Government in Italy, he was also instru-

mental in the eradication of *Anopheles gambiae* in Egypt, which was done at the request of that Government. Dr. Soper was Regional Director of the International Health Division, headquartered in Cairo, in 1946 and in 1947 became director of the Pan-American Sanitary Bureau, to which position he has been reelected at each succeeding Pan American Sanitary Conference. Since 1 May, 1949, this Bureau has also served as Regional Office for the Americas of the W.H.O. Fred has received awards from a good many foreign Governments, including Cuba, Brazil and Egypt, and has also not been unnoticed by our own Government and our learned Societies and Academies. In 1955, his most recent honor, the degree of Doctor of Science, was awarded by the Jefferson Medical College in Philadelphia.

ROY F. FRITZ, who is currently the Chief, Vector Borne Disease Unit, Epidemiology Branch, Communicable Disease Center, USPHS, Atlanta, Georgia, was born in 1915 in Oakland, California and received his BS and MS there in 1937 and 1939, respectively. In 1948 he returned and earned another MS in Public Health (MPH, that is), but meanwhile he had been assistant entomologist at the Kansas Agricultural Experiment Station, entomologist at MCWA of the USPHS in Atlanta, Ga., during the war years, and worked on typhus control. Following his studies at the University of California in 1947 and 1948, he was with the California State Department of Public Health and then returned to the USPHS in 1950 in San Francisco, before being made Chief of the Mosquito Control and Investigations Section of the CDC. His findings on the transmission of a freak outbreak of malaria in California were justifiably widely publicized, and provided us with useful knowledge that the theoretical can actually happen, sometimes. In 1954, Roy was an observer and consultant in Trinidad, during the outbreak of jungle yellow fever and in 1955, he went to Liberia to observe the program there, returning through Lisbon, Paris and London. In the latter place he conferred with the research men of the famed London School of Tropical Medicine. Since September 1955, he has been connected with the campaign to eradicate malaria in Mexico, under the chiefship of Dr. Luis Vargas' Office of Evaluation (cf. *Mosquito News*, News and Notes, Vol. 15, No. 1, p. 54). Some people sure get nice assignments.

FRANKLIN C. WRAY is the Technical Director of the Desplaines Valley Mosquito Abatement District, which has been giving us such interesting notes over the past few years. Frank was born in 1908 at Chicago and received his A.B. from Marietta College, Ohio, in 1931 and his M.S. from the University of Chicago in 1933, in the Department of Geology and Paleontology. He has been acting Secretary-Treasurer and President of the reorganized Illinois Mosquito Control Association, and Regional Director of the A.M.C.A. for the North Central Region.

DONALD GRANT, Manager-Entomologist of the San Mateo County Mosquito Abatement District, under whose presidency the California Mosquito Control Association gave us such a memorable joint meeting a couple of years ago, says he was determined to be a biologist and entomologist by the time he was old enough to read, and used to practice up for his future profession by collecting trips in which he packed back into the High Sierras, a now almost-obsolete sport. He started his ten years at Stanford in 1938 (was it really ten years, Don, or did it just *seem* like ten?) and received his B.A. in 1942. In the Army for 3 years, Don did lab work in England and France and returned to Stanford for his M.A. in 1947 and thereafter completed all but his thesis on a Doctorate. He is still working on this thesis, which is on parasitic mites, not mosquitoes, but meanwhile he is also becoming a leading authority on the non-culicine Diptera which complicate mosquito control so thoroughly in California. In addition to his membership in the AMCA and CMCA, Don is a member of Sigma Xi, the Society of Systematic Zoologists, the Pacific Entomological Society, and the Entomological Society of Washington. His efforts at developing reliable local mosquito abatement programs in his District have been so successful that residents talk about "the mosquitoes we had ten years ago," as if they had been all swept away by a cataclysmic Act of God. Man, *that's* *controll*

THE ARMY CONTRACT BILL RICKLEY IS ADMINISTERING enables his students to continue an investigation which they have been pressing on the role of mosquitoes as vectors of filariasis in six wild mammals in the Maryland area. They will be using skunks, raccoons, opossums, woodchucks, rabbits and squirrels in the study, and suspect *Aedes triseriatus* as one of the vectors, possibly a major one. Altogether there are 8 graduate students working on medical entomological problems at Maryland, Bill writes, and last semester saw 11 students enrolled in the course on mosquitoes. Bill not only scours the woods for members . . . he grows 'em.

DON JOHNSON AND HIS MEMBERSHIP COMMITTEE are scouring the woods for mosquito-hating members, too, according to a notice we have received. Regional Directors and other influential members are being canvassed in this drive and all members are urged to join right in and help. Our Association is big and strong and widely representative, but it will never be big enough or strong enough or wide enough until every worker in the field of mosquito control is enrolled. Actually, no worker in the field worth his salt can afford to remain on the outside looking in and it shouldn't be so hard to convince him of this fact. Mainly, it's knowing who's in and who ain't. Members are urged to scan their recently-received lists of members, give their cohorts and mosquito-

abatement acquaintances the double-o and whip out the little old yellow slips for membership. If you receive a communication from the membership committee, pray you gentlemen do not ignore it, and if you don't receive one feel not slighted but arm yourself with application blanks and *dig in!*

THE CALIFORNIA BUREAU OF VECTOR CONTROL held its Annual Staff Meeting on 21, 22 and 23 August, and listed some mighty vital discussion subjects, to say nothing of a very enjoyable picnic, held in Dick Peters' backyard. Informal and practical discussion was stressed rather than prepared papers. Dick's country estate is named "Back Acres," incidentally, but we don't think he means it unkindly.

ARCHIE HESS IS LIKEWISE THE SPONSOR of a very stimulating discussion group, one which met in Salt Lake City on 30 and 31 August and 1 September. The general topic of the meeting, which was an international one, was diseases occurring in nature and communicable to man, with particular reference to the Northwest. Sections covered such wide topics as arthropod-borne virus encephalitides, plague in Western North America, ecology of arthropod borne diseases, polio, rabies and other viruses and other major problems in which much more remains to be learned than has yet been discovered.

RECENT PROGRESS OF MOSQUITO WORK IN JAPAN. (From a letter from Dr. Teruhiko Hosoi to Archie Hess). "Despite the intensive control projects carried out after the war, urged by and under the supervision of U. S. Army officials, Japan has not had much success in eradication of pest mosquitoes. It is true that flies and mosquitoes have diminished in some cities, but in the suburbs and country areas they are still abundant everywhere. Last year, Chief of the Government Public Health Bureau drew up a three-year program of fly and mosquito extermination. However, the budget approved by the National Diet was miserably small. Health officials of cities and towns also had to face the similar economic disadvantage. The worst of all is that in our country cooperation is lacking among the different systems of organizations. Exploitation jobs or industrial constructions are undertaken before any consideration is paid to public sanitation. Main duties of the health officials are only to spray insecticides over the breeding places which are constructed anew every day.

"In one field, however, we have made fairly good progress during the last decade. That is civil instruction about insect borne diseases. Nowadays a majority of our nation knows how mosquitoes carry encephalitis and malaria and where these insects are breeding. Pupils of the primary schools are the most earnest operators in control works. They could have killed all the mosquitoes around their houses if there were no pools, marshes, paddy fields and irrigation ditches in those areas.

"Now I will turn to research works in our country. At present, most of our investigators on mosquito problems are joined to the Japan Society of Sanitary Zoology, which was separated from the Japan Society of Parasitology several years ago and held its first annual meeting in 1949. The society includes those who study arthropods and rodents of medical importance. Abstracts of articles read at the annual meetings and also some original papers have been published in the *Japanese Journal of Sanitary Zoology*, a representative periodical dealing with mosquito works in Japan, the first volume of which was issued in 1950. On the whole, mosquito studies are subsiding recently, being replaced by studies on other subjects, i.e., those on simuliids, Trombicula mites and wild rodents.

"Immediately after the war, people were warned of malaria epidemics, so that an *Anopheles* survey was taken, of urgent necessity. Otsuru worked on several subgroups of *Anopheles hyrcanus sinensis* and its allies and discussed their bearing on transmission of tropical malaria. Meanwhile the danger of malaria epidemics passed, but the problem of *sinensis* control remained unsolved, because this species breeds in paddy fields where control of water resources is extremely difficult. It seems curious that in the recent years Japanese workers are not much interested in B encephalitis transmitters. The problem has been mostly studied at U. S. Army medical laboratories. *Culex tritaeniorhynchus*, suspected to be the most important vector, breeds also in paddy fields; accordingly the control is by no means easy. Its hibernation habit is not yet known. Moreover, no one has succeeded in raising this mosquito through several generations in the laboratory.

"During these years, Sasa, Asanuma, Yamaguti and others engaged in taxonomic description of culicine and aedine mosquitoes. The revisions made rapid progress; consequently it facilitated mosquito surveys a great deal in various local

districts. Indeed, mosquito surveys have occupied a considerable percentage of sanitary entomologists throughout the last several years. The results will undoubtedly benefit future control projects. However, actual eradication works have not been so much investigated as would be required. Bringing up good engineers requires good politics. A light trap of the New Jersey type has frequently been employed in our country also. With the aid of this trap Nakata confirmed at Kyoto that many mosquitoes could migrate as high as 50 metres over the city ground. While engaged in revision of Japanese mosquitoes, Sasa also undertook filaria survey and, in cooperation with Hayashi, discovered *malayi* filariasis in a small island near Hachijo. This is the first record of *Microfilaria malayi* from Japan.

"The *Culex pipiens* complex was studied particularly by Omori and Abe. In Kyushu mixed populations of *C. pipiens pallens* and *C. fatigans* (= *C. quinquefasciatus*) have been established. Abe says that apparently typical *pipiens pallens* or *fatigans* produced some intermediate forms after succession of generations in the laboratory. An autogenous form of *molestus* type is also reported from Honshu and Kyushu. On the other hand, systematic investigations on closely allied species are being carried out from a synecological point of view. Among these works Kato's are outstanding.

"I have been interested in the physiology of hibernating adult mosquitoes. In relation to this study it became prerequisite to know the nutritional requirements of females. The work met with difficulty of feeding the insect on artificial meals which contain neither sugar nor blood corpuscles. Recently I was able to extract from ox erythrocytes a certain substance, which contained no hemoglobin but still retained a stimulating effect of inducing the mosquito to suck a dilute saline solution of it into the stomach as if a suspension of intact erythrocytes."

## OUT-OF-PRINT PUBLICATIONS AGAIN AVAILABLE

The New York State Museum announces that many out-of-print items from its stock of publications from the State Entomologist's office have recently been made available. A list of these publications, together with more recent titles, may be obtained from the office of the State Museum, State Education Bldg., Albany, N. Y. There are some 64 titles, beginning with Lintner's report on the May beetle, dated 1888, and including the several memoirs and circulars on aquatic insects by Needham, Johannsen, Felt, Metcalf and Sanderson, Betten, and others.