NEWS AND NOTES

DR. JACK COLVARD JONES OF THE LABORATORY OF TROPICAL DISEASES, N.I.H., Bethesda, Maryland, hastens to ask that we correct what he can only assume was an inadvertent error on our part in our little quotation about the toxicity of oxygen, which appeared in the September issue of News and Notes. He points out that mosquito larvae are able to withstand an hour in 100% oxygen, which is more than we can do. This certainly puts Man on the defensive in the question of which is the more enduring species, doesn't it? But probably few men fail to agree that we endure a heck of a lot more from mosquitoes than they ever have to from us, so far as that goes.

MOUNTING RAPIDLY FROM THE RIDICULOUS TO THE SUBLIME, WE WANT TO MENTION THAT DR. STAN FREEBORN, whom most of us think of as primarily a mosquito man, but who is really the Provost of the University of California at Davis, was recently the subject of a full column by Will Connolly in, of all places, the San Francisco Chronicle SPORTING GREEN. Connolly characterized Stan as "once dean of Imhoff septic tank research at Berkeley but since elevated to having a mosquito named after him," which settles once and for all, we guess, the old gag about the relative importance of sanitary engineers and entomologists. Connolly then went on to eulogize what Stan has done in making Davis not only a well-rounded University in its own right but also one where values have been kept normal. His special point was that Stan had managed to keep football an amateur sport at Davis, but he might have added that Stan's homely touch is equally manifested in his ability to mix high erudition with the necessary mud-slogging field work in teaching his hundreds of students who have gone forth to do mosquito control.

BILL FROHNE CONFESSES HE IS GOING TO PLAY HOOKY FROM ALASKAN MOSQUITO research for the next two years and work at the WHO Schistosomiasis Control Pilot Project in Leyte, Philippines, instead. The work there will deal with the limnology of the snail vector of the Oriental liver fluke. However, we hear that Bill will be encouraged to delve a little into local malaria problems as well; these may be changing as new areas are opened up to rice culture under the present malaria eradication project, which has heretofore dealt with stream breeders. Privately, Bill hopes especially to observe tropical swarms of male mosquitoes for comparison with Alaskan swarms, since, maybe, by so doing, he can sort out those swarming habits which pertain to extremes of arctic light and weather from those which belong to the natural history of mating mosquitoes generally. Anyhow, the Frohnes are mortgaging the future (they say) and taking along a jeep to permit them greater latitude in collecting plants and mosquitoes. A ten-cent air letter sheet addressed to Bill at the above-named Pilot Project, Palo, Leyte, Philippines, will reach him promptly, though he doesn't *say* how promptly he'll answer. We wish him well, and envy him the pleasure of being in the green and gracious Philippines for a spell.

AS A SORT OF "PRE-" OPERATIONAL AND SCIENTIFIC NOTE, BILL SENDS US A REMARK ON BITING SNIPE FLIES which is very interesting and somewhat startling. "My correspondence leaves me in no doubt," he writes, "That folks of our sort are interested in these blood-sucking Symphoromyias, even in the States, and in bad spots here (in Alaska) every warm-blooded mammal seems to have to be. Anyhow, this year and last we broke through most of the bottleneck, found the larval habitats and got males of *S. atripes*, which nobody could catch since Osten-Sacken got *one* in 1876. I can't do justice to the subject now, but should make a comment to encourage others. *S. atripes* is abundant in spots high up in California. Provost Stan Freeborn and I have been corresponding about the problem at his mountain summer cottage." (This note will be followed by an article on the subject in an early issue.—Ed.)

THE SEPTEMBER-OCTOBER ISSUE OF "SKEETER," ORGAN OF THE VIRGINIA MOSQUITO CONTROL ASSOCIATION, contains a very useful discussion of the use of PDB in light-trap killing jars. This subject has been of increasing concern to many who feared the effect on children or inquisitive adults of the cyanide jars. "Skeeter" reports that the PDB killed the mosquitoes well and remained effective as long as enough material remained to cover the bottom of the jar. The furnishing of ventilation holes in the Dixie cup the whole distance up the sides as well as along the bottom proved to be essential to a good kill. "Skeeter" reported having the usual difficulty in killing large beetles, a difficulty which was solved in Georgia by the use of "beetle traps," an arrangement of insect pins to simulate a "tank trap," as reported in *Mosquito News* for December 1955, but felt that the results were encouraging.

IN CALIFORNIA, MOSQUITO ABATEMENT DISTRICTS AND OTHER MOSQUITO-CONTROL AGENCIES have been increasingly drawn into the control, or attempted control, of other biting and non-biting Diptera. CHET ROBINSON reported from Alameda County that cooperative studies entered into with Parks Air Force Base for the control of Chironomids with chlordane wettable powder gave apparently satisfactory results. Similar cooperative

projects between mosquito abatement districts and Army and Navy installations against *Leptoconops* are getting under way and have inspired Mo HIRST to write a jingle entitled, "NIPS":

A GNAT is just a little jigger.
In fact, he isn't any bigger
Than the point of a very small pin.
But the lump that he raises
Just itches like blazes
AND THAT'S WHERE THE RUB COMES IN!

L. R. BRUMBAUGH OF THE SAN JOAQUIN MOSQUITO ABATEMENT DISTRICT found weather conditions toward the end of summer ideal for mosquito breeding, and so he put his organization into high gear. In addition to treating 4,670 acres of infested water and some 3,150 catch basins and gutters, his men also called on 224 premises and found that 64 of them had back-yard type mosquito sources. Nineteen of the property owners immediately undertook to correct or eliminate these sources. A comparison of August's light trap catches with those of a year ago showed a reduction of approximately 30%. In about two more years, San Joaquin is going to have it licked, seems as if!

SINCE WE QUOTED THAT PECULIAR REMARK ABOUT STAN FREEBORN EARLIER IN THIS COLUMN maybe we'd better start off Who's Who by giving you the real lowdown on him. Stan was born in Hudson, Massachusetts and received his B.S. degree from the University of that State (it was then Massachusetts Agricultural College, of Fernald renown) in 1914. In 1924 he earned his degree of Doctor of Philosophy and in 1949 a Doctorate of Science from the same institution. His thorough grounding in mosquitoes, which started with Prof. W. B. Herms in 1914, is reflected in the methodical rise he made through all the stages of the faculty at the University of California. Beginning as an Instructor in 1914, he became Assistant Professor in 1918, Associate Professor in 1925, full Professor in 1932. He was named Assistant Dean at Berkeley and Assistant Director at Davis in 1937 and continued in this position with time out for Directorship of Operations as a Colonel in U.S.P.H.S. Malaria Control in War Areas during the years 1942 through 1945. In 1952 he was named Provost of the University of California at Davis which became transformed into a full-fledged University. His publications include "Mosquitoes of California," in 1926, and a re-issue with DR. R. M. BOHART in 1951; as well as others too numerous to list. The mosquito is, of course, *Anopheles freeborni*, the Western malaria vector.

ON THE EAST COAST WE HAVE A MYSTERY MAN WHO IS SELDOM THOUGHT OF AS BEING FROM HIS REAL STATE OF ORIGIN. Like Dr. Freeborn, this good Doctor rose steadily through the ranks to fame in a state considerably removed from that in which he was born. This birth was in Easley, South Carolina, in 1906, and our subject attended famed Clemson College, receiving his B.S. in 1929. He was a laboratory assistant at Ohio State from 1929 to 1931 while preparing for his Master's, which he received the latter year, after which he went to the New Jersey Experiment Station and received his Doctor's degree in 1934 from Rutgers. He was Assistant Entomologist of the Experiment Station from 1935 to 1942, Associate from 1942 to 1944 and Acting Chairman of the department from 1944 to 1945. (Beginning to catch on?) Meanwhile, back at the University, he had been Assistant Professor from 1940 to 1943 and Associate from 1943 to 1945. In 1945 he became the Chairman of the Department of Entomology of the Experiment Station and full Professor at the University. He is a long-time member of the Middlesex County Mosquito Extermination Commission, and of the New Jersey Mosquito Extermination Association, of which he has also been an officer. Married in 1937, Bailey has two sons who are now just the right age to keep him busy during the summer at the two hobbies he admits to: hunting and fishing. DR. BAILEY PEPPER, we mean.

ANOTHER WELL-KNOWN MEMBER WHO STUDIED AT RUTGERS IS RUSSELL W. GIES, who is now the Scientific Director and Executive Secretary of the Delaware County Mosquito Extermination Commission as well as Principal Sanitary Engineer for the Department of Health in the Commonwealth of Pennsylvania. Russell says he worked with many of the old timers, Dr. Julian B. Smith, Dr. Headlee, J. A. lePrince, Harvey R. Carter and many others, and claims to have been in mosquito control for 41 years and still enjoys "fighting the mosquitoes with the younger men." He must have started in mighty young to do all that, because there are many who can testify that he is still one of the "younger men"! Some folks just *keep their energy*.

E. CHESTER ROBINSON, the Manager of the Alameda County Mosquito Abatement District, was born in nearby Oakland, in 1901, and attended the University of California. He came into mosquito abatement in 1940, being for 15 years the manager of the East Side Mosquito Abatement District, which refers to the East Side of the San Joaquin Valley, before coming to his present position in 1955. He is a long-time member of the California Mosquito Control Association and our American Mosquito Control Association in both of which he has been an official. He says, wistfully, that his hobby is fishing, but keeping the District going at the pace Harold Gray set for it (which he has done, nobly) has given him little time to prove what his recreation would be if he had one. Better luck next year, Chet.

DONALD ROSS JOHNSON, WHOM WE MENTIONED IN SEPTEMBER AS RECRUITING ENTOMOLOGISTS FOR

OVERSEAS MOSQUITO CONTROL WITH F.O.A., was born in Chicago, Illinois on 9 February 1920 and received his B.S. degree from the University of Illinois in 1943. From that year through 1946, Don was O.I.C. of a Navy Malariology Unit (No. 72) in New Guinea and the Philippines. In 1946 he returned to this country and attended the University of Minnesota, where he received an M.S. in 1948, and then became Assistant State Entomologist until 1951. In that year the lure of the South Pacific, an old war-time infection, broke out in him and he suffered a slight relapse, going out to Indonesia for the U. S. Public Health Service, where he stayed until August of 1953. Since them, he has been in Washington, D. C., handling the far-flung affairs of those who have followed his example overseas in Southeast Asia and elsewhere. We guess Minnesota's lost him.

ART LINDQUIST AND BILL MCDUFFIE, WHO ARE HEAD AND ASSISTANT HEAD RESPECTIVELY OF THE DIVISION OF INSECTS AFFECTING MAN AND ANIMALS, ENTOMOLOGY RESEARCH BRANCH, USDA, and well-known to all of us, will conclude our Who's Who for this time.

ARTHUR W. LINDQUIST was born in Lindsborg, Kansas, in 1903 and graduated from Bethany College in that state, going from there to Kansas State College for a Master's degree. He became an entomologist with the then Bureau of Entomology and Plant Quarantine in Texas from 1931 to 1938 and in California from 1938 to 1941, being called then to join the famous and productive research team at Orlando, Florida, which did the basic research on DDT and has provided the military with a wide arsenal of methods. From 1946 to 1953 he was in charge of the field station at Corvallis, Oregon, and was then drafted to fill his present position. In that same year, his original Alma Mater awarded him a richly-deserved honorary degree of Doctor of Science. Beside his Department of Agriculture duties, Dr. Lindquist is a consultant on Scientific Research and Development for the Armed Services.

WILLIAM C. MCDUFFIE was born in Nettleton, Mississippi, on 25 January 1910 and graduated from Mississippi State College in 1931, later taking advanced work at the University of Florida. He started off badly, doing research on Pink Boll Worm in Texas and later research with the Division of Cereal and Forage Insects at Salt Lake City and Yuma, but he finally saw the light and began his work on insects affecting man and animals, and especially on mosquitoes, with George Bradley at New Smyrna Beach, Florida. He was a Major in the former Sanitary Corps of the Army and afterward came also to the Orlando Laboratory. Leaving to go to the laboratory at Kerrville, Texas, for two years, he soon returned to Orlando, where he was head of the laboratory until 1954, when he was sort of shanghai-ed to Washington.

AS A KIND OF FOOTNOTE TO WHO'S WHO WE WANT TO TELL YOU ABOUT ARCHIE HESS'S LOGAN FIELD STATION OF THE U.S.P.H.S. This Section of the Communicable Disease Center operates out of Logan, Utah, a pretty little city set in a very lovely valley, and their headquarters in an old-fashioned mansion-converted-to-laboratory is enough to make any investigator drool. Their investigations cover both plague and encephalitis, principally, and it is the encephalitis angle which we mosquito-fanciers are particularly interested in, of course. With the occasional occurrence of encephalitis in pretty nearly every corner of the country, none of us can be indifferent to this important research. But let's let Archie tell it: "The virus encephalitides are the most important mosquito-borne diseases in temperate North America. Epidemics, the larger of which occurred in the northern tier of the Central States in 1941 and those which occurred in California and Texas in 1952, continue to occur and are unpredictable. (The northeastern U. S. has recently learned that it is not excluded from this situation—Ed.) With the further expansion of irrigation farming in the West and a concomitant increase in mosquito vectors, there is every reason to expect that the encephalitides problem will become increasingly serious over more extensive areas."

In addition to studies on hosts of the virus and on vector bionomics, the Logan Station is conducting extensive research on vector prevention and control, in close coordination with other Federal, State and local governmental agencies and citizen groups and councils. Archie says of this, "The primary objective of this work is to develop techniques for 'building mosquitoes out' of projects during the period of planning and construction." This includes not only artificial water impoundments such as irrigation, ponds and sanitation projects, but also rivers and natural water resources, on some 100 of which the Logan Station reviewed and submitted vector control recommendations during the past year. Archie is assisted, we hardly need add, by a goodly number of eminent men and eminent A.M.C.A. members.

OUR FINAL WORD FOR THIS QUARTER MIGHT BE CALLED "WHERE'S WHERE" . . . where's *where who is,* that is. Ted Raley sends us a list, part of which we are giving below, of the members who have changed addresses in the last year. Ted thinks there must be something about mosquito workers which makes them nomads at heart, for we surely seem to move around more than is strictly explainable on general statistics. Some of the moving has been from one house to another, like BEN KEH'S which we mentioned a few issues ago. Some of the rest have been changes of job, geography and even genre, like that of DR. FRED BISHOPP, also noted heretofore. THE FOLLOWING

LIST IS BY NO MEANS COMPLETE so don't write in to ye Ed., please. He is not to blame. We'll amplify as much as we know how from time to time in future issues.

We mentioned last issue that CAPT. CARLYLE NIBLEY had left Atlanta (but not the Army) to do graduate work at the University of Maryland. His address is care of Dr. Bill Bickley, Acting Head, Department of Zoology. Other military changes during the year have been several. Among them: CARL W. BARTHOLOMAI is now Entomologist for the 3rd Army Area, Engineer Section, living at 3148 Lenox Rd., N.E., Atlanta, Ga., while DR. F. S. BLANTON, is also a refugee from Washington and is now at the Department of Entomology of the University of Florida, at Gainesville. CAPT. FRANK FAVORITE has also gone way down South to Dixie, and is also at Ft. McPherson (Atlanta) Georgia, at the 3rd Army Medical Laboratory, where he has been before. To balance the flow *from* Washington, we find CDR JOHN DECOURSEY, MSC, USN, who has come in to the Hub and is now at the Naval Medical School of the National Naval Medical Center, at Bethesda, Maryland. So, too, is LCDR ALAN C. PIPKIN, MSC, USN, who has left the West Coast for the same Naval Medical Research Institute, and DR. HARVEY I. SCUDDER, is not far away, having left Savannah, Georgia, for the National Institutes of Health, also in Bethesda, across the road.

The exodus from warm climes is further augmented by CAPT. GORDON FIELD, who has shed his uniform to return to the Department of Entomology of the University of Massachusetts, at Amherst, Mass. And some of our members have just completely up and left us, like DR. J. M. GINSBURG, who has left New Jersey for an assignment at Tel Aviv, Israel, where he may be addressed care of the American Embassy. (But see another note on Dr. Ginsburg). Then too, ELBERT B. DIXON, who didn't find it warm enough in Louisville, is now addressable at P. O. Box 372, Tampa, Florida. But JOHN B. DIMOND reverses all this trend by going from Ohio to the State of Maine Forest Service, in Augusta, Maine. And DR. STEPHEN M. K. HU, has now been for some months at the 406th Medical General Laboratory in Tokyo, the address being APO 343, San Francisco, California.

T. E. MCNEEL, whom we noted in June as going to Mexico City, has sent us his address, which is, Oficina Sanitaria Panamericana, Calle de Roma, Número 36B, Mexico D.F., Mexico. And DR. HAROLD TRAPIDO, whom we saw at the Northwestern International Conference on 1 September, in Salt Lake City, is now at the Virus Research Center, P.O. Box No. 11, Poona 1, India. He has promised us some notes from this very interesting-sounding assignment, and we hope he doesn't forget.

SOME WHO HAVE CHANGED LESS SPECTACULAR DISTANCES are TED AARONS, who is now at 1320 Third St., Berkeley 10, Calif.; HARVEY J. CRAWFORD, who has left Melbourne for P.O. Box 503, Eau Gallie, still in Florida; DR. D. G. DENNING now at 1684 Oak Park Blvd., Walnut Creek, California; HAROLD F. GRAY, whose address at Oroville is now Rt. 4, Box 4268, and ROBERT D. GRAY, who is now at 16781 Green St., Huntington Beach, Calif.

THE FOLLOWING ARTICLE FROM THE ENGINEERING NEWS RECORD of June 21, 1956 is of interest in that it represents another extension of mosquito control into an area which has long had a severe mosquito problem with very little attention being paid to it.

"Sanitary Engineers Will Be Hired to Combat Mosquitoes"

"North Carolina has just announced allocation of $57,400 from its contingency and emergency fund and plans for the appointment of three sanitary engineers. The engineers will be employed for a five-month period to combat an invasion of salt marsh mosquitoes on the coastal region.

"The situation in North Carolina is due in large part to a series of hurricanes which hit the state in 1954 and 1955, washing salt water over wide areas, and clogging drainage ditches and streams.

"Gov. Hodges said that $25,000 of the total will be used to match local funds on a 50–50 basis for insecticides and other supplies necessary for spraying the mosquitoes. Another $12,000 will be used to pay the salaries of three sanitary engineers for five months while they work at the job. And the remaining $25,000 will permit a Salt Marsh Mosquito Study Commission set up by the 1955 state legislature to continue its operations and make recommendations to the legislature when it convenes again in regular session next January."—T. D. Mulhern.

NO PLACE TO GROW. Lady's Choice Pickle Company of Hayward, California, has come up with a method of treating wooden tanks that saves the company money and reduces the headaches of mosquito control. Mr. C. H. McCoy of Lady's Choice, and Herb Brown, Division Foreman of the Alameda County Mosquito Abatement District, have been cooperating on mosquito control and have been striving to improve the tedious, repetitive spraying or fish planting. They have experimented with a number of methods, but feel they now have the best system yet tried.

The tanks are used in the production of pickles for about three to five months. During that time there is no problem of mosquito control because the brine is of sufficient concentration to discourage mosquitoes. It is the "off" period of seven to nine months that has caused the difficulties, for during that time the tanks were formerly filled with water to prevent shrinkage of the wooden staves, and they were an open invitation to mosquitoes and other annoyances. The method devised by McCoy and Brown eliminates

the standing water in the tanks during the "off" season. The vats are emptied, and shrinkage is prevented by routine sprayings with water, each two weeks. Sprinkling is accomplished by means of a sprinkler head commonly used in lawn underground sprinkler system, attached to a rubber hose. The springler is left in a tank just long enough to moisten the sides of the tank—about sixty minutes. It can be moved easily from tank to tank. The tanks are kept covered with loose 1" × 12" boards to keep them cooler and to reduce loss of water by evaporation.

Savings realized by the company are: reduced water bill; reduced cleaning time; less cleaning materials used; and less cost for sewer, which is metered. Each tank has a 6,000 gallon capacity, and there are 284 tanks. Mr. McCoy estimates the saving in water per tank under the new system is 12,000 gallons per year. 284 tanks times 12,000 gallons per tank means a total saving of water each year of approximately 3,408,000 gallons. At a cost of approximately fifty cents per 1,000 gallons of water for the supply, and six and six-tenths cents per 1,000 gallons of water for sewer, that means a saving of about $1,928.93 per year, in water alone.

When untreated water was placed in the tanks and allowed to stand, it quickly produced algae. These minute plants were an adulterant, and had to be removed by scrubbing the walls and floor of the tanks, an obviously time-consuming and expensive procedure. In the new system in which water is not allowed to stand in the tanks during the "off" season, algae are not produced.

Here is one of those fortunate circumstances in which all concerned are benefited by the product of a cooperative effort at solving mutual problems.—M. C. Kramer.

On October 5 we received the following contribution to "News and Notes":

"JOSEPH M. GINSBURG FROM RUTGERS UNIVERSITY is spending a year in Israel. He was appointed by the Research Foundation of the State University of New York to serve on Point IV program, sponsored by I.C.A. While on leave of absence from the University, he will be connected with the Israel Ministry of Agriculture and can be reached at: c/o U. S. Embassy, Agricultural Division, Tel Aviv, Israel."

As this issue of the "News" goes to press we have been informed that Dr. Ginsburg is now in Italy, and it is assumed that his plans will depend somewhat on the rapidly changing developments in the international situation in the Near East.

HARRY STAGE IS NOW BACK IN THIS COUNTRY, permanently, we hope, and his many friends in the East have enjoyed visiting with him during his comings and goings in the late summer and fall. On visits to relatives in Albany, New York, he called at the *Mosquito News* office, and we are happy to report that he is continuing his lively interest in *Mosquito News* and AMCA affairs, even though he has retired from official duties and is planning to make his home in Oregon. Mosquito control activities in the Northwest, which have increased of late, will undoubtedly profit by his presence there. Harry plans to attend the AMCA meetings in Miami Beach, and we will expect detailed reports on all his doings—D. L. C.

DR. AND MRS. ROBERT GLASGOW left for the Philippine Islands in November to be gone for three or four months. Dr. Glasgow's many friends in AMCA who were aware of his interest in all things mechanical and his extensive practical knowledge in many different fields outside of entomology, should not be surprised to learn that he has been rendering distinguished service to the Philippines in their effort to rehabilitate their industry after its almost total destruction in World War II, and that one of the leading industrial concerns in the Islands is utilizing his services as a consultant.—D. L. C.