

NEWS AND NOTES

AUSTIN W. MORRILL, JR.

SAFETY IN HANDLING PESTICIDES HAS BEEN THE BIG THING WITH ALL OF US IN THESE POST-CARSONIAN DAYS AND WE MUST ADMIT THAT EVEN THOUGH WE THOUGHT WE WERE THINKING ABOUT IT A LOT BEFORE WE'VE THOUGHT *a lot more* about it since La Rachel hurled her little blockbuster at us. So in keeping with the times, the CMCA held a Management Seminar in Oakland, (California), lately and devoted one whole day to the subject of hazards to personnel and passersby and how to avoid them. Dr. Irma West, nationally known expert on such matters and authority on agricultural and industrial poisoning "accidents," started things off with a short summary of the types of hazards facing mosquito control workers: vehicles, burns, electric shocks, foreign bodies in the eye, chemical burns (also especially in the eye), heart attacks, fires in storage areas, bee stings, particularly to persons previously sensitized, falls and slips, puncture wounds, and, finally, spills of insecticide in use, in mixing or in vehicular accident, and exposure to fumes in storage and handling. Well, listed out thataway, it was just about enough to make us change our whole profession. Or retire.

Other speakers pointed to the need to know the characteristics of the material being used, its "flammability," solvency, persistency (in soil and water), ability to penetrate skin; the need to know, too, the degree of hazard actually present for the applier, was stressed, and the fact that information is available ON THE LABEL and in the form of leaflets obtainable from the manufacturer and the formulator. This should be in the hands of both the operator *and the physician* who may be called.

California, of course, has been using highly toxic materials for some time now, and so the need to keep the hazard low is always on their minds, but lots of us who haven't been using these things are getting there. One speaker urged MAD's to have "life-boat drills" on safety and check their education of their operators, their maintenance of their equipment (especially hoses!), their posting of handling areas and labeling of containers and their emergency plan, viz: to alert all persons in an area where an emergency has occurred, to alert the authorities, to isolate the area until it can be decontaminated, provision for emergency treatment of people who have been contaminated, provision for back-up personnel to cut off the flow of contaminating material from the tank and to protect against spread of material into wider areas. It sent us rushing to review our procedures, it did, and rummage around to find our list of Poison Control Centers and all.

ALONG THIS SAME LINE, WE KNOW YOU ALL

SUBSCRIBE TO AND FAITHFULLY READ OUR esteemed contemporary, *Pest Control*, but not many of you may see or know about its small brother, *Weeds, Trees and Turf*. Well, we want to tell you about an editorial JIM NELSON had in WT&T's August issue, because, although it was about the application of a systemic insecticide against elm leaf and bark beetles and sich, his words apply equally well to all of us insecticide appliers. He concludes, "The lesson is clear. . . . Be knowledgeable of your chemicals—tell the public that you are knowledgeable. Conduct your operations with obvious safety emphasis—inform the public that you do this. Be considerate of other forms of nature which may be affected by your treatments—tell the public that you are considerate. Know the limitations of treatments you offer—tell the public so. Above all, let your actions bear out what you tell the public." Good words, Jim.

VMCA's *SKEETER*, GIVES INSTANCES OF THE NEED TO DWELL ON SAFETY in every issue and recently, in addition, pointed out how a test to determine the presence of a new organic phosphate larvicide might implicate a suspected bank robber who had crawled through some on his way under the bank to rob it. Police were going to test his clothing for the chemical. *Skeeter* didn't say if they were going to give him a cholinesterase test, too. Perhaps a sign warning of the presence of the larvicide under the building would have prevented the robbery in the first place! Or just a warning of mosquitoes. *Skeeter* also quotes an AP dispatch we remember seeing and you may have, which told of mosquitoes putting down a minor insurrection of prisoners in the Louisiana penitentiary, when the onset of darkness made the prisoners decide they wouldn't defiantly stay out in the yard after all. How come, GEORGE CARMICHAEL? How come, DR. HATHAWAY?

WELL, MAYBE THEY DISCUSSED THAT AT THE LMCA MEETING in New Orleans, in August. Other things discussed were high powered panel presentations on both temporary and permanent mosquito control programming. In addition to George, local talent included CHARLES ANDERSON, BOB BARTNETT, FRED HARDEN and GLENN STOKES and invitees from abroad included F. L. BUTCHER, CHRIS ELMORE, OSCAR FULTZ and WAYNE MILLER.

YOU MAY HAVE NOTED A FEW PARAGRAPHS BACK HOW CAREFULLY WE USED "applier" instead of "applicator" (which is the implement, not the man, despite modern usage) but we must admit that our recurrent campaign against neologisms and assorted misusages has gotten us exactly no-

where. We have been forced to concede that words *do* take an 180° turn in meaning sometimes, as witness "flammable" (or ability to withstand flame) which now means "inflammable," and we have had to admit that words sometimes take on the meaning of what they sound *as if* they *ought* to mean, like "collate," which has come to mean collect and arrange. It's been sad. Perhaps that's why an anonymous donor has sent us a little jingle which we reproduce herewith:

TRY THIS ON YOUR MEDIA

A larvae
Or
An algae
Fills me
With
Despondenciae.
Similarlae
This data
About a criteria
Makes me wearia
And
Wearia.

So does a
Media.

Indecdia!

WHAT DO CAPT DICK HOLWAY AND CHET ROBINSON HAVE IN COMMON? Besides membership in AMCA and an interest in mosquitoes? Sugar refineries, that's what. But Dick brought them to heel in Hawaii and Chet won the sugar beet folks around a few months ago and eliminated several miles of sloughs and ditches by making nice neat impoundments that can be controlled if they begin to show signs of *Culex* breeding. Aren't you glad your only trouble with sugar is whether to take two lumps or one?

GLENN COLLETT WAS ALSO HAVING HIS PROBLEMS WITH RUN-OFF WATER but fortunately had some help from the Salt Lake County (Utah) Flood Control District, which removed the Bonneville Dam on the Jordan River and thus eliminated much of the mosquito producing area, with promise of more reduction to come with the widening and straightening of the channel planned for early accomplishment. Glenn also gave a good report, in his annual summary, of his District's use of their Sprite and his report contains a picture of the Sprite on its trailer (along with a good picture of DON REES and T. A. SCHOENFELD).

SPEAKING OF GOOD PICTURES, WE HAVE ONE MADE BY TOMMY MULHERN WHICH SHOWS DICK PETERS AND HIS LOVELY WIFE with happy it-seems-like-only-yesterday looks as they gaze on the certificate for Twenty Five Years of Service which the Bureau of Vector Control gave Dick, along with a testimonial dinner just before he took off

for Russia in late August. It was actually his twenty-eighth but those extra years hardly show.

DICK'S TOUR OF THE USSR WAS A GREAT SUCCESS AND SOUNDS VERY VERY EXCITING. He went over with a JACQUES HAMON of Equatorial Africa's Volta River region and 21 others from various countries. These included two representatives from India, two from Japan, three from South America (Venezuela, Bolivia and Brazil), and one each from Pakistan, Turkey, Afghanistan, Greece, Israel and Cuba. Dick found the scientific community hearteningly objective and cooperative. He commented on the fact that with the post-war manpower shortage and so many male scientists being drawn into the physical sciences, many of the outstanding authorities on mosquitoes, simuliids, *Leptoconops*, ticks, mites and other vectors, are women . . . and very capable ladies in all respects. He found that, if the technologies of control were somewhat less developed than they are in some other areas, this was made up for by their vigor and determination of their attacks. . . . that resistance, for instance, which they claim to have had little of, was quite possibly staved off by the mere fact that they overwhelmed the poor insects so that there weren't any left, resistant or not, to pass on future generations. He was most favorably impressed, too, with their health education programs, from which he felt we could learn a lot, particularly in regard to their educational media: charts, diagrams, school aids, etc. The Russians have what are called DDD teams: Disinfestation, Disinsectization, and De-ratization (deratification?) Stations, which storm into trouble areas and sweep them clean, but CLEAN. Saturation bombing. It's a lovely dream we've all had, I'm sure. There, they do it. Dick came back bright eyed and bushy tailed but he's always full of stimulating ideas, anyway. We'll bet he stimulated our Russian colleagues some!

WE FORGOT TO SAY THAT THIS WAS ALL ARRANGED BY NORM GRATZ WHO HAS FINGERS ALSO IN MANY ANOTHER PIE. For instance, he now has HARRY MATHIS out yonder in Rangoon (Burma) at the Filariasis Research Unit, where he will be a staff entomologist, and also LARRY LEWALLEN, who is there for two or three months sort of helping out while Norm establishes a permanent director and also puts together a hemorrhagic fever study group at Bangkok. This sort of dengue-related virus fever is thought to be quite probably carried by *Aedes aegypti* and this ought to be a real valuable study.

MEANWHILE TOMMY MULHERN IS HAVING A PERSON-TO-PERSON BALL in Saudi Arabia and Iran and stirring up all sorts of warmly admiring response as well as, we're sure, taking a raft of mighty fine pictures. With Mr. H. Rafatjah, malaria eradication engineer of WHO, Tommy is evaluating the suitability and applicability of larviciding techniques in these areas.

WELL, NOW, WE HADN'T EVEN GONE TO PRESS WITH OUR LITTLE DIATRIBE ON APPLICATOR (SEE ABOVE) when lo! here comes a plaintive letter from JIM NELSON (we *couldn't* have said all this before, could we? How did he know?) Jim says, while agreeing with us about applicators being not a "him" but an "it", that this would make Contract Applicators into Contract Appliers. "A pliers," he goes on, "Is something an electrician uses to remove insulation. The (mosquito controller) just doesn't have enough insulating education and experience for anyone to expose it through eruditional juxtaposition." Well, OK, Jim, we don't want to get into these Union jurisdictional disputes, we guess.

PEOPLE ARE ALWAYS MOVING ABOUT SO (we say with smug disapproval; having been transferred every five years all our life we have now been here in this same place for TEN years). Lt. Col. WESLEY NOWELL is now back in the US and at the USAF Epidemiological Lab. at Lackland AFB, Texas, 78236. LCDR Ed FUSSELL meanwhile, has skipped from sunny Florida to pleasant but definitely not warm Connecticut, where he is now at 29 Marion Ave., Hamden, 06518 (Ed is at Yale taking his MPH and with a major in entomology!). ED WASHBURN changed his address to his old home Rt 1 Box 48, Patterson, California, 95363, but his forthcoming address, we understand, is really with AID in Ethiopia. BOB TAYLOR came back from Port au Prince to his old home address of 1350 E. 17th Place, Tulsa, Oklahoma, but we think he's really with *Aedes aegypti* eradication (Isn't everyone?). Well, we don't really know that everyone is, for GEORGE BURTON has moved his address back from Ghana to 20-70 26th St., Apt. 3A, Long Island City, N.Y., 11105, and JACK KELLER has moved his from Vienna to 4805 S. Mill Avenue, Tempe, Ariz., 85281, and we don't know what either one of them is doing. (How's for a letter, guys?) We guess you figured from our note above on LMCA's meeting that BOB BARNETT has only just now moved. He's now the Harris County (Texas) Mosquito Control District, Room 105, Civil Courts Bldg., Houston 77002. Good luck, Bob. Dr. M. E. C. GIROLI of the London School is with the Mosquito Research and Control Unit on Grand Cayman, of the Cayman Islands, West Indies. ROLLIE DORER moved from Sellger Dr. into a P.O. Box, No. 12418, Norfolk 23502, and BUDDY SIMS didn't move but he moved his city! . . . from Norfolk into Virginia Beach. Same MAD, Buddy?

WAY BACK IN JUNE WE MEANT TO WELCOME DR. PENSRI GUPTAVANIJ of Ohio State University, DR. ABDUL KHAN of the University of California Medical Center in San Francisco, and WILLIAM GLADNEY of Virginia Polytechnic Institute in Blacksburg. But we missed. (S'cuse.) We'd also like to welcome FRANK EVANS of Ft. Pierce, Florida, and ROY MYKLEBUST of Centralia, Washing-

ton. And (we're running out of capital letters): John Burger of the University of California in Berkeley, Husam Darwazeh, of the University in Riverside, Edward Edwards of Grand Island, Nebraska, Paulino Geraldo Cabral de Mello, of Rio de Janeiro, Naghib Hazrati, of Teheran, Iran, Reyaz Sabahi, of Ahwaz, Iran, Freddy E. Gonzalez-Valdivieso, of Aragua, Venezuela, Donald Karn of Hamden, Connecticut and Harold Karn of same, Richard Moore of the University of Maryland School of Medicine in Baltimore, Peter Peluso of Hoboken, Harold Pope of Killingworth, Connecticut, and Russell Wright of Iowa State University in Ames.

AND WE SHOULD ALSO SAY THAT ART KIDWELL has gone from Baltimore to Ft. Pierce and PATRICK THOMPSON has gone from Maryland to Rutgers.

WHEN DON JOHNSON GAVE US THE NOTE ABOUT HIS RESEARCH INTO THE DERIVATION OF THE WORD *mosquito*, and how the Sanskrit *Atharva Veda* used the word *makka* in 1500 BC, (see September MN) it rang a bell for us, because although Japanese has no known linguistic relatives, it does have a few words which seem to be perhaps Sanskrit derived and one of them is the word for mosquito, "*ka*"! Naturally, one of the first words we learned in Japanese, and glad we were that it sounded vaguely like our word mosquito but we had never suspected that it and we were actually related. Small world.

OSCAR LOPP HAS ASKED A QUESTION THAT SHOULD HAVE BEEN ASKED BEFORE, WHICH IS, "*Are we all talking about the same thing?*" All over the world people have reported that *Gambusia* gave excellent mosquito control in the proper situations, yet in the same areas and notably in California, there have been those who have vehemently stated that the top minnows were no use whatsoever. Oscar has researched the matter and finds that there are more than 30 species which might be mis-identified as *Gambusia* and that the chorus of praise and the antiphon of dispraise has swelled loudly throughout the state ever since the *Gambusia* were introduced in 1922. So he and the CMCA and the California Department of Public Health and the California Department of Fish and Game are going to get together and find out something about it . . . a notable example of co-operation between these diverse agencies. Small kits are being sent out to mosquito abatement workers with the request that they collect some *Gambusia* from their rearing tanks and also some wild minnows which they feel may be of value in mosquito control (or vice versa). Fish and Game will identify them and *send the identified specimens back* to the sender so he can know what in the world it was he sent. Could be a mighty useful study, and high time, too.

GLENN M. STOKES WAS RECENTLY APPOINTED DIRECTOR OF THE NEWLY ORGANIZED JEFFERSON

PARISH MOSQUITO CONTROL DISTRICT in Louisiana. He graduated from the University of Southwestern Louisiana in 1961 with a B.S. in biology and chemistry. He received his M.S. in entomology and zoology at the University of Nebraska; and A. M. in biology at Harvard. He has worked toward his doctorate in medical entomology at

the University of Florida and Louisiana State University. Jefferson Parish's budget for 8 months in 1965 was \$230,511. Next year's budget should approach \$300,000. Jefferson is a coastal parish of 584 square miles lying adjacent to New Orleans and has a population of roughly 290,000. Best wishes, Glenn!

CONTENTS continued from Front Cover

	PAGE
On the Hibernation of <i>Culex tarsalis</i> Coquillett, <i>Culiseta inornata</i> Williston, and <i>Anopheles carlei</i> Vargas, (Diptera:Culicidae) in Alberta.....J. A. Shemanchuk	456
Oviposition of the Mosquito <i>Culex tarsalis</i> in Response to Light Cues D. Logen and R. F. Harwood	462
The Effect of Phosphorus ³² on the Fecundity of <i>Aedes aegypti</i> (L.) and Its Use in Determining Blood Meal Volumes.....G. F. Bennett	465
Effects of Chemosterilants on the Development of Malarial Parasites in Mosquitoes R. A. Ward, L. C. Rutledge and L. H. Bell	470
Oviposition Studies with <i>Aedes vexans</i> in the Laboratory....P. H. Thompson and R. J. Dicke	476

SCIENTIFIC NOTES

A New Method for Preserving Adult Mosquitoes.....W. K. Hartberg	483
A Gynandromorph of <i>Aedes (F) togoi</i> (Theobald).....W. T. Chellappah	483
Gynandromorphism in <i>Culicoides hollensis</i>K. T. Khalaf	484
Additional New Records of Treehole <i>Culicoides</i> (Diptera:Ceratopogonidae) in Northern Florida.....W. W. Smith	485
A Simple Apparatus for Obtaining Emergence of Large Numbers of <i>Simulium</i> Adults from Non-Immersed Pupae.....G. J. Burton	485
A Self-Straining Larval Concentrator.....M. E. Warren and C. D. Eddleman	486
Predation of <i>Bradysia coprophila</i> (Lint.) (Diptera:Sciaridae) on Mosquito Larvae U. M. Adhami and G. B. Craig, Jr.	487
Gynandromorph of <i>Culex tarsalis</i> Coquillett from Colorado.....R. C. Harmston	488
<i>Culex territans</i> Walker Biting Man in Nature.....R. G. Means	489
The <i>Culex pipiens</i> Complex in Southern Indiana.....V. F. Newhouse and R. E. Siverly	489
Blood Volumes Ingested by Various Pest Mosquitoes....D. B. Woodard and H. C. Chapman	490

ASSOCIATION NEWS	492
NEWS AND NOTES.....	495
BIBLIOGRAPHY	499
ADVERTISING RATES	XIX
LIST OF ADVERTISERS.....	XXII