NEWS AND NOTES

AUSTIN W. MORRILL, JR.

THOSE OF US WHO GREW UP IN TEXAS BEFORE WORLD WAR II HAVE NO TROUBLE REMEMBERING THE STRANGE CUPOLA TOWERS THAT WERE OFTEN SEEN IN RURAL AREAS ... AND SOME URBAN ONES TOO ... like the ubiquitous clusters of gourds hung on poles in the yards of unpainted Southern cabins along the road, they were meant to house mosquito-eaters, in this case bats. They worked, too, but they're long gone now. We were reminded of them when Ye Ed sent us a delightful publication edited by Mari Murphy and containing an article by Merlin D. Tuttle about Dr. Charles Campbell who originated the use of them in an antimalarial campaign in San Antonio. The idea quickly spread to Europe but here the use lapsed until the early 1980s when the boxes were revived by Tuttle, who established and is executive director of Bat Conservation International (You can buy a house from them, if you're interested; they're in Austin, Texas.) Did you see CNN's big story on this?

Exaggerated reports of rabies in bats in Southwestern caves have led people to conduct extermination wars against them (we remember one at Ft. Sam, using ANTU in the tile roofs), and the population in the Southwest has dropped from 30,000,000 to 30,000! However, there're some 20,000,000 in Bracken Cave north of San Antone, and about 750,000 fly in from Mexico each year to join the colony in Austin, under the Congress Avenue Bridge. Dr. Tuttle claims that each bat eats some 3,000 mosquitoes a night, according to an article in the *Washington Post* some months ago, and in an article in *Bats* Editor Murphy writes that Dr. Campbell claimed to have eliminated malaria in the area around his Mitchell's Lake tower (of which the article gave a picture) and also produced over 4,500 pounds of nitrogen-rich bat guano.

If you want to try your hand at mosquito control via bats, there's one more thing you ought to know. Dr. Campbell had a wee bit of trouble getting the bats *into* his bat towers at first because they preferred some abandoned houses nearby. You may remember seeing bats fly out at dusk from church belfreys and attics ... we remember a cloud emerging from a church in Saigon that lasted FORTY minutes and was still going when it got too dark to see them, and Dr. Campbell's bat tower at Mitchell's Lake grew from a five minute emergence to one lasting nearly two hours. He built bleachers and put up picnic tables and people used to come out to watch. Anyway, as we said, he had trouble at first competing with old houses, so he hired the Mexico City police band to play "Cascade of Roses" waltz with trombones, piccolos, drums and clarinets going full blast and moved them in *two nights.* Think how fast he could have moved them with a bit of rock!

AS YOU MAY REMEMBER, WE'VE MENTIONED THE PROJECT TO GET SOMETHING STARTED ON A NEW MEDICAL ENTOMOLOGY TEXTBOOK, SPARKED BY DR. GEORGE CRAIG AND OTHERS. The SOVE *Newsletter* last May had some interesting statistics on the replies, in case you haven't seen it, that showed that at least 525 students *per year* were in need of such a text in the U.S. and at least 560 a year elsewhere.

AND IT'S NOT EXACTLY THE SAME, BUT THE NEED FOR TEXTS REMINDS US OF THE FACT THAT WE ALL SEEM TO AGREE THAT WE NEED A DEFINITIVE LIST OF COMMON NAMES, BUT NO ONE QUITE AGREES ON WHAT THEY SHOULD BE. DR. E. M. BELTON sent us a letter last July about this that we want to share. "As you indubitably know," she writes, "the ESA's revised List of Common Names will be available in time for its 100th anniversary, and I'm looking forward to seeing what Dr. Stoetzel and her committee have done with the mosquito names. I hope they have got rid of 'forest day mosquito.' 'Asian tiger' is much more arresting!

"Have you come across 'shaggylegged gallinipper' for *Psorophora ciliata* ? That's one of the more colorful names I've seen but not yet on anyone's list so far as I know. Do they bite in ship's galleys as Webster suggests—or did they? We meant to ask the 'Pilgrim' [part of the entertainment at the Boston meetings—Ed] the origin of 'gurnipper,' which she mentioned during the opening ceremonies in Boston this spring. Any ideas?" Well ... we sort of thought Adam *named* mosquitoes gallinippers; we learned that long before we could say mosquito.

Dr. Belton also sent a copy of a letter she and her husband PETER sent to Dr. Berry about this, and we quote: "A common name should be distinctive, and this disqualifies most of those on your list, nearly all of which could apply to 2 or more species.

"Management procedures tend to be similar for broad groups of mosquitoes and common names are presently applied to the categories of treehole, floodwater, container-breeding, rockpool, snowmelt pool or marsh mosquitoes. Of these, only the last is descriptive enough for one species, although *Mansonia (Coquillettidia) perturbans* is not the only species that develops in such marshes....

"Another set of categories could be used for species that are known to transmit diseases in North America, but again, apart from the yellowfever mosquito, *Aedes aegypti,* no single common name seems appropriate. *Anopheles quadrimaculatus* is not the only common species that transmits malaria. It does not occur in western Canada.... Two other names on the Canadian (and also the ESA) list could be dropped or changed: flood water mosquito for *Aedes sticticus* and spotted wing mosquito for *Anopheles punctipennis,* because there are several species to which these names could apply....

"We see no practical value in spending time, effort and postage trying to devise descriptive names for most of the 170 or so North American mosquitoes. Most people can't even identify an insect as a mosquito unless it bites them and we have found that naturalists or environmentalists who are interested usually know the scientific names of their local pest species."

Dr. (E.M.) Belton is the Chair of the Insect Common Names Committee of the Entomological Society of Canada.

CONSTANT ADVERTISER AND MEETINGS EXHIBITOR ZOECON GOT IN A BIT OF FREE ADVERTISING when the financial section of the San Francisco *Chronicle* suddenly discovered IGRs. A bit surprised, no doubt, but happy to go along, Zoecon supplied some text and a life cycle chart for . . . not mosquitoes . . . fleas! (People here think fleas arise spontaneously from sand.) The life cycle showed methoprene interdicting the eggs from hatching and went on to explain that inasmuch as methoprene affected "only the eggs" pyrethrum had to be added for adult control. A veterinarian at a nearby college supplied the "information" that methoprene seemed to have the effect of making the fleas momentarily more active in biting. Those of us who remember supplying our friends with home-made "Flit" in the days when kerosene was 10¢ a gallon and drug stores sold pyrethrum powder and methyl salycilate, will also remember that it's the pyrethrum that has that happy faculty, causing some little feedback from the friends. At U. C. Riverside, they suggested a frequent and thorough vacuum cleaning. Then, of course, as a last resort, treat the dog. Oh, yes . . . mosquitoes *were* mentioned in passing.

THOSE OF YOU WHO TAKE *SMITHSONIAN* . . . and doesn't everyone? . . . will have read the good article written by David M. Schwartz about the work on repellents being done by CARL SCHRECK of the Gainesville Lab, LYMAN ROBERTS, of Walter Reed, (then of Ft. Detrick), and LOU RUTLEDGE and RAJ GUPTA of Letterman. He also quotes ROGER GROTHAUS and CARROLL SMITH to good effect.

T. WAYNE MILLER GOT IN A GOODLY BIT OF PRIME PUBLICITY FOR MOSQUITO CONTROL, too, in July, when the *News-Press* of Ft. Myers (Fla., as if you didn't know) gave him a big full color spread on page 1 with the continuation on the prime Back Page, which, as you know, is where the IMPORTANT stories are carried over to.

THE S. F. CHRONICLE, EVER ON THE ALERT AND TOTALLY UNAWARE OF THE LOCAL ANGLE, published a good article on *Gambusia* during the summer, reporting on their use in Chicago by CLARK WOOD. The article quoted Ye Ed (not US, f'evvins sake . . . Dr. RONALD A. WARD) and Phil Nixon, who said that they eat 100 mosquito larvae an hour but that they were little needed in Illinois lakes as *any* fish would eat mosquitoes. The Chron failed to credit the story, written by Bill Peterson of the *Washington Post* and published in that paper. Actually, here in California, environmentalists have loudly objected to the use of fish as being unnatural and perhaps (who knows?) upsetting Nature and, like spreading those awful bacteria . . . you know, *B. thuringiensis* . . . may have effects we don't know anything about yet.

AMONG THE FLOOD OF LIGHT SUMMER READING (you knew we wrote this in mid-summer for December, of course?) was some not-so-light but fascinating educational material by AMCA'ers like LERRY LACEY who sent us the report of the Vector Biology and Control Project, headquartered in Alexandria, Virginia. This comprised a review of the projects encompassed, the procedures of training courses and information distribution and a list of the publications to date. VBC has, for instance, conducted training programs in Bolivia, Kenya, Burma, Sri Lanka, Pakistan, Thailand, Papua New Guinea and Nepal, as well as conducting or assisting in field research projects in many other countries.

BRUCE ELDRIDGE'S MOSQUITO CONTROL RESEARCH PROJECT'S ANNUAL REPORT is a textbook for California mosquito controllers and has meaty articles of interest far beyond that State's borders. Dr. Eldridge leads off with a Director's Report which got us thinking. Everyone knows that the rush of enthusiasm for biological control has become a more studious evaluation, but Bruce brings out the point that although scholarly papers such as MIKE SERVICE'S lecture at the AMCA meetings in 1983 have stressed the importance of studying the predator-prey relationships in BC, this has been often quite overlooked. Pointing to the several papers in the Report on this subject, Bruce wrote, "Biological control continues to be an important concept, but more researchers need to study more control agents in more mosquito breeding situations. . . . We know that there are no quick, easy solutions to mosquito control problems, but we must continue the slow but steady path to the development of practices that will protect the public from mosquitoes and mosquito-borne diseases in a way that is safe to people and the environment."

"AND MIKE SERVICE HAD A GOOD LONG ARTICLE IN THE SOVE *BULLETIN* in June on the subject of the importance of ecological studies on malaria vectors. This was a paper he presented to the SOVE European Branch meetings at Cambridge in 1988. In a wide-ranging survey the world's prime malaria species, Mike went thoroughly into some Asian and SE Asian mosquitoes we were once pretty interested in, so we found it extra interesting. In species after species Mike showed how the activities of man in deforestation, in agricultural practices, and in spraying indoors and outdoors had changed the behavior and even changed the predominance of species of vectors.

LTC TONY BOSWORTH down in San Antonio had the idea of testing the dog and cat flea collars that are so widely sold, to see if they repelled mites and ticks. Seems some of the sojers had been trying them as anklets. Tony advises against it. Maybe they should test a concoction being sold by a young couple in Gainesville who have formed Counter Cultures, Inc., to make an herbal mix they claim will work better than DEET. It's sold in "natural" food stores, co-ops and bait shops. Maybe they've found another Avon.

YOU MAY REMEMBER THAT WE MENTIONED THAT WHEN WE LIVED IN JAPAN THE DEPARTMENT STORES ALL HAD DEPARTMENTS THAT SOLD INSECT-COLLECTING GEAR and bewailed that nowadays they were reported to prefer to collect computers. Well, seems it ain't so. The *Washington Post* reports that the stores now sell wooden models of mosquitoes, gigantic beetles (live) and mechanical dragonflies. . . . And butterfly farms are popular there, as in England. (We saw one of these in Stratford upon Avon. And why *Stratford?* Why not? as the White Queen said to Alice.)

GIL CHALLET SCARED THE BEJAYSSUS OUT OF ORANGE COUNTY (CALIF.) VECTOR CONTROL DISTRICT (AND US) BY HAVING A "MILD" HEART ATTACK while at a meeting in San Antonio, last July. When we'd waited a while for further info and weren' t too sure no news was good news, we phoned and were answered by Gil's cheery tones . . . he'd returned to the job in a month. He sounded too much his normal self for us to be assured he would now slow down a bit, so we cautioned him to anyway. His crews were going out that day to spray around for *scorpions.* They're what were called *Centrurus* when we were in school but of course that's all changed now. They're smallish and look far less dangerous than the bigger desert kind but the Mexican peons are deathly afraid of them . . . and with good reason. They not only hurt, they CAN lay you out. Gil lets PCOs do the insides and treats rocky hiding places outside. We forgot to ask him if he recommends damp sacks sprayed with dieldrin . . . oh, oh, forget that . . . Baygon, an old remedy based on their liking to creep into them to hide at dawn. Under the house, of course, and California's new houses mostly don't *have* underneaths.

Incidentally, our ubiquitous Mr. Boyd says "Q: Do scorpions eat mice? A: Big scorpions, little mice, yes." Is that true, Gil?

DON PLETSCH SENT US THE PROGRAM FOR THE FLORIDA ANTI-MOSQUITO ASSOCIATION'S 60TH ANNUAL MEETING last May.They talked about *Toxorhynchites splendens* released for control, about wastewater and salt floodwater problems, the Navy program at Jax, a ground aspirator for monitoring mosquito populations, and a "massive, multiuse, mitigation plan." You may have noticed a small squib in *Pest Control* about a new development that was also reported: "Research and development of improved formulations of monomolecular surface films, conventional pesticides, biological control agents and insect growth regulators has led to Culigel SP, a superabsorbent polymer developed by the Commission." P.C. says. This commission is the gung-ho bunch of AMCA'ers at Lee County (Fla.) headed by DICK LEVY for T. Wayne and with M. A. NICHOLS and J. A. HORNEY in tandem.

ALSO WHILE WE'RE IN P. C. MAGAZINE, OUR DICK BRENNER HAD SOME WORDS ABOUT A GROWING MENACE IN THE SOUTH (LIKE FLORIDA) . . . THE ASIAN COCKROACH. Returning tourists had brought some back as far as Michigan last year!

WHILE WE WERE WALKING (SLOWLY) THROUGH THE LOUVRE LAST SUMMER, LEW NIELSEN WAS GOING HELL-BENT-FOR-ELECTION ALONG THE AUTOBAHN. Except Lew's never hell-bent. Lew met CHRISTINE DAHL in Frankfort and they drove down to Austria where thay made mosquito collections high in the Alps at a location (a ski resort area) called Obergurgl a town located below Hochgurgl and above Untergurgl. He said they're all well known to skiers. The University of Innsbruck has a research station at Ober. and provided them with valuable help. "Interestingly," he wrote, "the dominant species here were common N.A. species, *Aedes cataphylla, pullatus* and *punctor.* We dropped Christine off in Munich and drove back to Uppsala, Sweden, with side stops at Salzburg and Copenhagen. Spent 2½ week in Uppsala with side trips to Norway, where we continued our work with the mermethid nematode parasites of mosquitoes, It was a wonderful, productive trip, but probably the most exciting part was driving on the Autobahn thru Germany. No speed limit here. I was driving in the slow lane at 75-80 miles per hour while BMW & Mercedes roared by at over 100 miles per hour. Lew retired in July. Hello, emeritus!

JOHN DAVIES OUT THERE IN THE BEAUTIFUL GRAND CAYMAN, WONDERS IF ANYONE KNOWS ANYTHING ABOUT ROBERT P. HOLDSWORTH, JR. who did some work there in the 1940s. He was part of a Naval Group and John would very much like to find out what he did. There was a History of the World Wars project going around once some years ago. Wonder what happened to it and if it might have some word? Anybody? Dr. Knight? Dr. Holway? Dr. Stone?

DR. LIEN JIH-CHING OF AMCA AND TAIWAN IS WELL KNOWN TO MANY OTHER AMCA'ers and those who have encountered him in WHO projects or on Taiwan. *The Free China Journal* ran a very fine spread on Dr. Lien in August and with an excellent photo of him characteristically surrounded by books and papers at his desk. Make that UN-characteristically, for he's usually busy in the lab or field. The paper gave a comprehensive biographical sketch: his birth as elderson in a 15-child family, his lowly job at the Japanese-established University of Taiwan Institute of Tropical Medicine when he could not afford to continue his schooling, his learning to type and typing papers for the researchers and absorbing so much of their content that his astonished supervisors set him to examining mosquitoes, his working as a translator of Japanese papers into English, his B.A. in English at National Normal University, his Army years and spending his free time then in wandering the central mountains of Taiwan to do field work and his eventual post-Army doctorate at Nagasaki University. During this time he earned a host of friends and admirers as well as naming some 27 species of mosquitoes.

And we found out, by the way, how Dr. Pletsch manages to be in Florida and reading the China paper . . . it's the U.S. EDITION . . . which, now that we think of it, is also published right here along the Cable Car route in San Francisco. But THAT doesn't explain the clipping we received from *Echos* de la Republique de Chine, published in Taiwan, which announced that in 1988 there were 260 cases of Japanese encephalitis in Taiwan which it surmises were transmitted by mosquitoes from pigs to man.

DR. LEONARD BRUCE-CHWATT DIED, SADLY, LAST SPRING IN LONDON. He had been, you will remember, our third Memorial Lecturer and gave his usual excellent presentation on Dr. L. O. Howard and malaria control. Those of us who saw him only as a scholar had little inkling of his valorous past. Working at the Pasteur Institute in Paris when World War II broke out and Poland was invaded, he immediately volunteered for service with the Polish Army in France. He was captured and interned by the Vichy forces, escaped to Scotland by way of Gibraltar and the Royal Navy. After a period of study at the School of Tropical Medicine and Hygiene (and winning its Duncan Medal), he enlisted in the RAMC and was assigned to the No. 7 Malaria Field Laboratory which started his long association with West Africa. He was always a strong advocate of environmental management for the prevention of malaria.

WHILE THE SEARCH FOR A VACCINE AGAINST MALARIA GOES ON WITH MORE OPTIMISM THAN HOPE ACCORDING TO MANY, there IS a new drug approved for use against it. According to *U.S Medicine, mefloquine* has joined chloroquine and fansidar, though the people at WRAIR who have worked on it say it should be reserved for a second line of defense use. Innate resistance has been found in parts of Africa and in SE Asia. There seem to be few people having side-effects but it's more expensive than chloroquine, which may be a good thing, for the doctors don't think it should be used prophylactically except in special cases.

DR. ED CUPP, FORMERLY AT CORNELL, HAS BEEN FINDING A LOT TO DO IN ARIZONA, BESIDES TRAVELLING IN MALI, TANZANIA, AND GUATEMALA DURING THE ACADEMIC "OFF-SEASON." "We succeeded," he writes, "in 'transplanting' the *Simulium vittatum* colony to the desert where it is currently in the 65th generation. Using material from the colony, I've begun working collaboratively with several researchers at Merck Sharp and Dohme to characterize potentially useful anticoagulants found in black fly saliva. So far, one novel coagulation factor inhibitor has been 'discovered.' " Dr. Richard Collins (formerly of CDC and now an adjunct professor in the Department of Entomology) and I are also involved in field-testing the usefulness of ivermectin (Mectizan) in 'blocking' transmission of *Onchocerca volvulus* in Guatemala. The results to date are extremely encouraging. As few as two six-monthly treatments given at a community level bring about a marked reduction in numbers of developing larvae and L_3s in the vector population. Finally, I'm looking forward to learning more about the mosquitoes of Arizona, particularly the tree-hole species belonging to the *Aedes atropalpus* group."

QUEEN VICTORIA AND PRINCE ALBERT COULD HAVE USED SOME OF THAT RESEARCH IN SCOTLAND where the "midges" were such bad biters that the Queen moved her palace, planned for the west of Scotland, east to Braemar. Israel Shenker, in a story in the N.Y.Times claimed the reason the Loch Ness monster is so reclusive is not shyness but midges and Kenneth McKeller sings that "with teeth like piranhas they drive you bananhas."

ALONG WITH THE EXCITEMENT ABOUT NEPTUNE AND THE NASA OPERATIONS AT PASADENA, SOMEBODY AT THE OAK RIDGE NATIONAL LABORATORY (nuclear and in California) must have figured that THEY needed some of all that attention. Anyway, they announced that their noise analysis techniques, developed for quite another purpose, when tried on bees to analyze reproductive behavior, gave an unexpected benefit in showing how to distinguish domestic "Italian" honeybees from the dread and approaching Africanized "Killer" bees. They beat on a different frequency. But do the BEES know that?