

## NEWS AND NOTES

Excerpts from release from Federal Security Agency, Public Health Service, Communicable Disease Center, Atlanta, Georgia, November 15, 1951:

JOSEPH AUGUSTIN LEPRINCE, eminent sanitary engineer, was honored Thursday by the National Malaria Society, which presented to him its first Joseph Augustin LePrince Award, established in his honor to recognize "Outstanding Accomplishment in Malaria Control."

Mr. LePrince, who is 76 and lives in Memphis, Tenn., is best known for his work with Dr. William Crawford Gorgas in virtually freeing the Canal Zone of mosquitoes and thus making possible the building of the Panama Canal.

His latest honor, the Joseph Augustin LePrince Award, was presented at 12 noon Thursday at the 34th annual meeting of the National Malaria Society, at the Congress Hotel in Chicago. It consists of a check for \$500 and a citation signed by Dr. Justin M. Andrews, President of the Society. Dr. Andrews, of Atlanta, is Deputy Officer in Charge, Communicable Disease Center, Public Health Service, Federal Security Agency.

Nelson H. Rector, of Atlanta, a long-time friend of Mr. LePrince and Senior Sanitary Engineer of the Communicable Disease Center, made the presentation. He called Mr. LePrince "an outstanding engineer, who has played a major role in wiping out the terrific toll taken by malaria, not only in Cuba, Panama, and the United States, but all over the world."

Mr. Rector stated that Mr. LePrince was the first person to control malaria by the control of adult mosquitoes. He related how, along one strategic section of the Canal Zone, Mr. LePrince hired small boys to capture mosquitoes each morning immediately after dawn. He reasoned that the chain of infection could be broken if mosquitoes which had feasted on infected blood the night before could be prevented from biting other human beings. Records show that the malaria rate in those barracks where mosquito catching or swatting was practiced was cut to one-fortieth of the rate in nearby uncontrolled barracks.

"General Gorgas and Mr. LePrince did not have an easy road in Panama," Mr. Rector said. "They were true pioneers, tireless, resourceful, inspired. The record shows, I am sorry to state, that some United States officials did not cooperate with them to the fullest extent. In evaluating their phenomenal results, we must give credit to our great President Theodore Roosevelt, who overruled subordinates and gave General Gorgas and Mr. LePrince sufficient authority to prosecute successfully their necessary, life-saving work."

Dr. Felix J. Underwood, Executive Officer, Mississippi State Board of Health, relates that

Mr. LePrince, accompanied by General Gorgas and another officer in a canoe, made the first trip through the Panama Canal. The trip almost ended tragically, for a strong current swept them near a dynamite charge, the fuse of which already had been lit. When the explosion occurred, they were showered by rocks and gravel, but they escaped unhurt.

In 1914, after 10 years in the Canal Zone, where his final title had been Chief Sanitary Inspector, Mr. LePrince returned to the United States. In 1915 he became a commissioned officer in the U. S. Public Health Service. His book, "Mosquito Control in Panama," was published in 1916. During World War I he had charge of the malaria control program in and around 28 Army and Navy installations in the United States.

"He reduced malaria to one-half of one per cent what it had been in Southern camps in the Spanish-American War," according to Mr. Rector. "This remarkable job was performed with a bare minimum of trained personnel and with inadequate supplies and poorly designed equipment."

In 1923 he was director of yellow fever control in the Mexican oil field area. In 1927 he was director of American Red Cross malaria control activities in the Mississippi River flood area. Since 1935 he has been consultant in malaria control to the Tennessee Valley Authority.

Until his retirement from the U. S. Public Health Service in 1939, Mr. LePrince played an important role in the early malaria control programs which have succeeded in all but eradicating the disease from the continental United States. He rose to the rank of Sanitary Engineer Director (colonel) in the commissioned corps of the Public Health Service.

In 1950 he was awarded the Ross Medallion, named for Sir Ronald Ross, discoverer of the mode of transmission of malaria, by the London School of Tropical Medicine, for distinguished work in preventing malaria. Only two other persons have received this award.

In May 1951 he was made an honorary member of the American Mosquito Control Association.

The Joseph Augustin LePrince Award will be given, on occasion in the future, by the National Malaria Society or its successor. The cash award was made possible this year by the Michigan Chemical Company, of St. Louis, Michigan.

WHO ARRANGES DDT PURCHASE. To combat the increasing shortage of vital insecticides needed in health campaigns, the World Health Organization has made arrangements to purchase DDT in the United States on behalf of other member countries of WHO.

A notice has been circulated to all interested governments by Dr. Brock Chisholm, WHO's Di-

rector General, that the Organization has obtained general export licenses from the United States, covering a large group of health supplies. Under these general export licenses, priority for DDT exports may be obtained immediately upon application by WHO and the Pan American Sanitary Bureau, the Regional Office of WHO in the Americas.

A priority reservation of some 15 million pounds of DDT has been set aside by the U. S. government for health and agricultural purposes abroad. However, priority will be granted only to orders placed for delivery during the third and fourth quarters of the year, at a time when U. S. requirements are at their lowest. Member governments are urged to obtain their requirements in the U. S. market for shipment before the end of the year in order to obtain the best prices and avoid conflict with U. S. domestic needs.

It will be recalled that the Fourth World Health Assembly last May drew the attention of DDT-producing countries to the critical shortage of insecticides needed for public-health programmes and asked for action to alleviate this situation. It was pointed out that *anti-malaria projects* in hand in a number of countries aimed at the protection of populations of no less than 450 million people, and that any interruption in the supply of DDT would present a serious threat to their health.

The U. S. government's decision was taken following representations by the Pan American Sanitary Bureau and the World Health Organization, and with the vigorous support of the U. S. Public Health Service.—WHO Newsletter.

"THE LAMP IS LIT" (referring to the lamp of health) is the title of a booklet by Ritchie Calder, published by the World Health Organization. Some dramatic results of malaria control are described.

In a remote corner of Bengal, for instance, a WHO team, working with the Pakistan authorities, demonstrated malaria control in a heavily infected area in which were living 250,000 people. At the end of the year "no cases of malaria were found among children under one year of age," said the report. But it also added: "The district Agricultural Officer reported an increase of 543 pounds of rice per acre for the year." When the sickness vanished the people became stronger. Because they were stronger, they worked harder in their fields. And because they worked harder they got their fields to produce more food. Actually, in handling the summer and autumn rice-crops, Mr. Calder tells us, nine men were able to do ten men's work, put in shorter working hours and still get that food increase.

In Greece, following malaria control, these things happened in the once-malarious districts: The average gross income of the local families practically doubled; the area cultivated increased

by well over half. And, because the campaign rid the country of other insect pests beside mosquitoes: Milk yield of the cows went up by as much as a fifth; the hens gave more eggs; typhoid and dysentery, being fly-borne diseases, were cut down.

A similar campaign in Ceylon had, by the end of one year, reduced the country's death rate from all causes (not only malaria) from 22 per thousand to 14.3.

THE CONCESSION SUPPLY COMPANY, 3916 Secor Road, Toledo 13, Ohio, should have been included in the list of manufacturers of mosquito traps in the September "News and Notes." Their advertisements appear in the September and December numbers of MOSQUITO NEWS.

THE WORLD HEALTH ORGANIZATION has recently published a monograph by Dr. E. J. Pampana which reports results of his extended studies on the use of residual insecticides in anti-malaria work. This is the first document based on statistical data to give a picture of the success of malaria control using residual insecticides on a world scale. The gradual regression of a very deadly endemic disease in some thirty countries is described.

FRED STUTZ, DIRECTOR, Dade County (Florida) Anti-Mosquito District, has noted that some AMCA members do not realize that when travelling to meetings at public expense, they can deduct the 15 per cent federal tax from transportation costs. This applies to both Pullman and coach travel. Forms may be obtained from the Collector of Internal Revenue. Ask for Tax Exemption Certificates. Such savings can be an important consideration to the man who watches the budget.—H. L. T.

LIEUTENANT COMMANDER KENNETH L. KNIGHT has finished his tour of duty in Cairo, Egypt, where he is being replaced as Head of the Entomology Department, U. S. Naval Medical Research Unit #3, University of Cairo, by Commander H. S. Hurlbut. Ken, with his family, visited in Bethesda, en route to his new assignment in Malaria and Mosquito Control Unit #1, Jacksonville, Fla.—H. L. T.

JACK JONES, an AMCA member at the National Institutes of Health in Bethesda, has reviewed in this issue a paper by Barney Travis. Jack is working on the effect of insecticides on *Anopheles quadrimaculatus*, with particular emphasis on the effect of DDT on the heart and defecation rates of the larvae. In addition, he is preparing a detailed histological atlas of the normal and treated specimens.—H. L. T.

F. W. EDWARDS' classic monograph on the classification of mosquitoes, "Diptera, Family Culicidae," Fasc. 194 of the Genera Insectorum (1932) can be obtained from Genera Insectorum,

Les Sapsins, Quatre-Bras, Crainhem, Belgique. The price is about \$8.00.

DR. C. Y. CHOW, formerly of Formosa, has just informed us that he has been appointed by the World Health Organization as entomologist, assigned to the South East Asia Region. His present address is: Prof. C. Y. Chow, Insect-borne Diseases Control Training Center, Kuru-negala, Ceylon.—H. L. T.

MR. GEORGE B. VOGT, who was placed on active duty in the Public Health Service Reserve last summer, is now doing malaria control work in Burma. His address is STEM to Burma, % American Embassy, Rangoon, Burma.

NEW ORLEANS WAS SUBJECT to one of the worst mosquito infestations in its history last summer. The salt marshes were unusually dry during the early part of the summer so that large numbers of *Aedes sollicitans* eggs accumulated. Heavy rains and high temperatures later in the season led to rapid development, and southerly winds did the rest according to a story in *The New Orleans Item*, quoting Dr. Albert Miller of the Tulane Medical School. The city's two anti-insect trucks were unable to keep up with the storm.

BY PROCLAMATION of the Governor of Virginia, Walter Reed Day was celebrated in Gloucester County. Dr. Reed's birthplace, Belroi, near Gloucester Court House is one of several memorials to him. Mr. Norman S. Beaton, Superintendent of Mosquito Control Commissions on the Lower Peninsula of Virginia, was present at the exercises.

PYROLAN. *Mosquito Buzz* (California) reports briefly on the new insecticide, Pyrolan, which was discovered by the Swiss. It is not extremely toxic to warmblooded animals, and it appears to have little or no effect on insects with chewing mouthparts such as caterpillars, roaches and beetles. In some respects it is comparable to rotenone. Pyrolan has been effective when used against DDT-resistant flies, and the house fly does not seem to develop a resistance to it.

PRIMAQUINE. The Office of the Surgeon General, Department of the Army, has announced that all servicemen returning from Korea will receive the new antimalarial drug, primaquine. Doses of 15-milligrams for 14 consecutive days will follow a one gram dose of the malaria suppressant, chloroquine. Primaquine is said to be an effective therapeutic agent against malaria when the parasites have lodged in the liver or other body organs. It is therefore expected that the serviceman who has been exposed to malaria will be cured before an attack of malaria or before relapses of the disease can occur. Primaquine is not a preventive for malaria.

MR. W. H. W. KOMP of the National Institutes of Health is now in Costa Rica where he is serving as a consultant in yellow fever investigations for the Pan American Sanitary Bureau. Last summer cases of jungle yellow fever occurred in Costa Rica for the first time in many years. The outbreak is being watched very carefully as it could develop into a serious situation, according to the NIH Record.

Jungle yellow fever exists as an animal and human disease in the jungles. Persons going into the jungle can be protected by immunization. But an unprotected person coming out of the jungle with yellow fever virus in his blood can be the starting point of a dangerous outbreak any place where *Aedes aegypti* is found.

NEW JERSEY has had an unusual mosquito year. The lower half of South Jersey had below normal rainfall, and for the most part mosquito incidence was quite low. North Jersey on the other hand had above normal rainfall with the result that there were more mosquitoes than have been present for the past few seasons. The precipitation at Fortescue on the Delaware Bay was .83 inches in July, while at Belvidere in North Jersey it was 10.59 inches. These were extremes, but the general averages showed about 2 inches for the south while the north got 5 inches. August was hot and humid, and mosquitoes prospered. Middlesex County was confronted with a serious problem resulting from a large hydraulic fill. There were deep cracks at angles so that water could not be seen. The mosquitoes were so bad that you "couldn't get your breath."

The labor situation was extremely annoying. Few college students were available. They wanted more money, and then when they had earned \$499.00 they quit so that "Daddy would still have an exemption." Contractors will pay up to \$2.25 per hour for a good shovel or sprayer man. (Most of the above was contributed by George E. Powers of Union County.)

CULICIDODOLOGY. There are at least two formal courses devoted exclusively to the study of mosquitoes in American universities. Both of these are for graduate students. Dr. Osmond P. Breland had six students in his course at the University of Texas in the fall of 1950, and we had eight in our course at the University of Maryland in the spring of 1951.

Dr. Breland's course is called "Biology and Taxonomy of the Culicidae." Laboratory periods were frequently devoted to field trips emphasizing larval collecting, the collection of adults "attracted to our bodies" and the collection and subsequent flooding of dry matter in the laboratory. Other laboratory time was spent in identification of specimens, mounting larvae and adults and a study of identification by male genitalia. Lecture periods included discussions and reports on such subjects as new insecticides and repellents, speciation in mosquitoes, the use of female

genitalia for classification, and general mosquito biology. No specific textbook was followed.

At Maryland the course is called "Bionomics of Mosquitoes." The laboratory work was heavily systematic. We observed various types of breeding areas on field trips, and had an interesting visit to the Patuxent River Naval Air Station where Mr. Thomas M. Gunn demonstrated control methods. Bates' "Natural History of Mosquitoes" was studied rather intensively. Matheson's "Mosquitoes of North America" was also used.—W. E. B.

FLORIDA NOTE FROM H. L. T. I was in Miami during the latter part of August and had the pleasure of looking over Dade County's mosquito-fighting equipment and meeting its personnel, under the direction of Fred Stutz.

Later, we drove for several hours over the area under control, and I realized the vastness and complexity of such a project. There are included in the County about 10,000 square miles of uninhabited marshlands, plus the Everglades, Miami, Miami Beach, Coral Gables, and numerous other communities. Fred believes that the unprecedented numbers of *Aedes taeniorhynchus*, the species then on the warpath, were due to the unusually dry weather which stranded and killed thousands of fish which ordinarily would have eaten the mosquito larvae. This species reputedly has an especially irritating and lasting bite. During my visit, I learned, too, that the lighthouses off the Keys have screens to protect the occupants against heavy flights of mosquitoes.

Another day, Fred Stutz, John Porter of the U. S. Public Health Service Quarantine Station at Miami, and I visited the Sandfly Laboratory at Ft. Lauderdale. This work is being conducted under the auspices of the Florida State

Board of Health, Dade, Broward, Indian River and Palm Beach Counties, and the scientific direction of the U. S. Dept. of Agriculture at Orlando. Robert Goulding is in charge of the project, which includes studies on the effectiveness of the new organics, such as chlordane and dieldrin. *Culicoides furens* is the species of immediate primary interest. We met James H. Bertholf, Director of the Broward County Anti-Mosquito District, and Mr. Goulding's associates, Jerry LeBreque and Robert Currans.

While in Miami, I stopped for a short time at the South Campus of the University of Miami, where I enjoyed a visit with Dr. and Mrs. Donald C. A. Butts. Dr. Butts, another AMCA member, is teaching at the University and also directing some research investigations on malaria, mosquitoes, and insecticides.—H. L. T.

IN JUNE 1950, at an informal meeting of malariologists and medical entomologists, held at Delhi, India, a national society of workers on malaria and other mosquito-borne diseases was formed. A proposal was made to publish a bulletin as an official organ of the society. This bulletin will be published on the model of MOSQUITO NEWS and we shall look forward to sending it to the Board of Editors of the latter publication early in January, 1952.—Rajindar Pal.

DR. RAJINDAR PAL, Assistant Director of the Malaria Institute of India, came over to the United States recently to participate in the Expert Committee on Insecticides of the World Health Organization. The Committee has drawn up specifications of spraying equipment used in malaria control work and it is hoped the report will receive wide circulation to the purchasers and manufacturers in order to stimulate production of first rate equipment.

**An indispensable item for all mosquito control workers and commissioners, libraries, schools, park and playground officers, and public officials. See Page V.**