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# CONVERSION OF THE NEW JERSEY LIGHT TRAP FOR COLLECTING LIVE MOSQUITOES IN DA NANG, VIETNAM

by

HM2 T G Floore, USN, and LCDR R. H Grothaus, MSC USN

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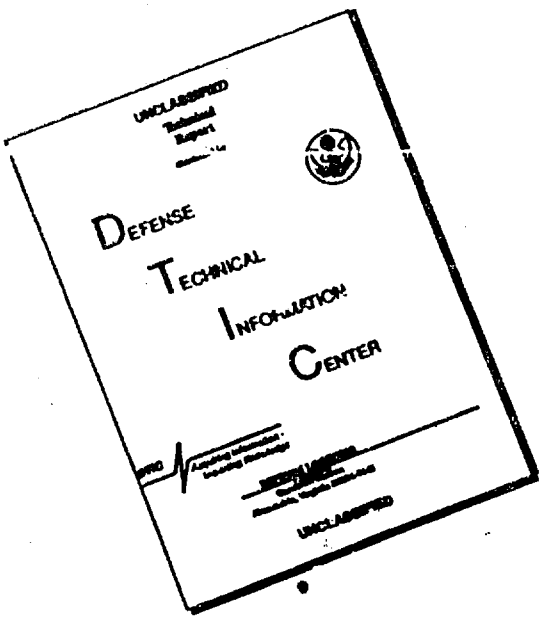


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Thomas G. Floore, HM2, USN, and Roger H. Grothaus, LCDR, MSC, USN

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13. ABSTRACT

During the years 1969-1970, the Preventive Medicine Unit, Naval Hospital, Da Nang, Vietnam, embarked on a project to identify malaria vectors. Because of a lack of equipment, New Jersey Light Traps were modified to collect live specimens. The modification consisted of removing the wire mesh screen from the opening of the trap and replacing the kill jars at the collecting point. The kill jars were replaced with a collection cage made from a standard bed net. The modified trap collected large numbers of viable mosquitoes and proved to be adequate. (U)

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# Conversion of the New Jersey Light Trap for Collecting Live Mosquitoes in Da Nang, Vietnam [1]

T. G. Floore and R. H. Grothaus

Naval Medical Field Research Laboratory
Camp Lejeune, North Carolina 28542

Prior to 1969, the Entomology Department, Preventive Medicine Unit, Naval Hospital, Da Nang, Vietnam, conducted routine entomological surveillance and provided logistic support to the Navy and Marine Corps units of the area.

Surveillance of the mosquito population was conducted by operating standard New Jersey Light Traps. In June 1969, the junior author organized an *Anopheles* dissection laboratory in the Entomology Department. It then became necessary to develop a method of collecting live *Anopheles* mosquitoes for dissection studies. It was not possible due to combat conditions, lack of personnel and high incidence of malaria, to conduct night bite counts on a routine basis. Other established methods of live collecting proved impossible because of the lack of equipment. Since the New Jersey Light Traps were the collecting equipment available, it was necessary to adapt them to meet the authors' needs.

After some experimentation, the 5/16-inch wire mesh screen was removed from the opening of the cylinder of the trap. This was done because debris created by the great number of large insects striking the screen damaged or killed the smaller insects being drawn into the trap. The rotation of

[1] The opinions or assertions contained herein are the private ones of the writers and are not to be construed as official or reflecting the views of the Navy Department or the naval service at large.

the fan blades resulted in little damage to the mosquitoes.

The kill jars were replaced with cylinders of netting similar to those found on the CDC light traps. Rubber bands held the nets in place on the traps. The collection cage was approximately 12 inches in diameter and 6 inches in height. It provided ample room for the movement of live insects. The downward pressure of the fan prevented loss of insects through the net opening. Moderate rainfall resulted in little loss of material, due to the construction of the light trap. If the nets became wet, they were dried by hanging in the sun.

More live adult mosquitoes could be returned to the laboratory if the cages were collected just after sunrise. Desiccation of the material resulted when the cages were left in the sun. Upon returning to the laboratory, the nets were placed in the freezer compartment of a refrigerator for 15 minutes. Then the contents were sorted and the mosquitoes identified. Viable *Anopheles* specimens were then dissected. In 9 months approximately 2,000 *Anopheles* were dissected.

This method of live collecting produced large numbers of viable wild adult *Anopheles* for dissection. It was also inexpensive since standard light traps were used. Nets could be produced for less than $3.00. Standard military bed and head nets provided the ideal type of material for construction of the cages (See figure). Had the authors been working in less remote and primitive circumstances, other techniques would have been employed. However, the authors believe that this technique may be of future value to workers who suddenly need live specimens for some purpose when they do not have the benefit of proper collecting equipment.