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NOVEL COLLECTION RECORD FOR *Culex tarsalis* COQUILLETT [1]

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An additional breeding source for *Culex tarsalis* Coquillett was discovered when 68 larvae of this mosquito were recovered from a container in an optometric examining room in an Air Force dispensary in Texas.

It is common practice in optometric fitting rooms to maintain a water bath to rinse lenses and cool frames after eyeglasses have been heated for adjustment in a frame warmer. The rinse container employed in this dispensary was a stainless steel pan (29 cm x 10 cm x 16.5 cm) which was generally filled to the 10 cm level (2330 ml volume) and, as indicated by the heavy mineral deposit around the inside, had been used for this purpose for many months.

The optometric technician reported to the fitting room, a small (2.4 m x 3.4 m) inner cubicle, on a Monday morning. He noted that the water level in the rinse pan was low (2.5 cm) and filled it to the 10 cm mark. Later, while cooling the first frame, he noticed some "small wriggling dots", took the pan to a preventive medicine technician, and reported that he had "gotten the bugs out of the water system." The dots were identified as first instar mosquito larvae and an effort was made to discover their source.

The traps under all wash basins were checked for larvae: there were none. A careful search was made in the fitting room for an adult mosquito: none was found; but the room had not been closed over the weekend and an adult could have flown in or out, or a female could have died following oviposition in the rinse pan and fallen to the floor. There was no record of any plumbing work having been done either inside or outside the building, nor had any mains been tapped or left open which could have drawn standing water through when they were reconnected. The lines were under constant pressure, and since all systems are superchlorinated to 50 ppm by Air Force Regulation whenever work is accomplished on the lines, the possibility that the larvae might have been introduced through the water system was discarded. The only water catchments available for mosquito breeding noted in the Eye Clinic and adjacent offices were the sink traps and the rinse pan in which the larvae were found.

The larvae advanced to the third and fourth instars and were sent to the Epidemiology Division of the USAF School of Aerospace Medicine where they were identified as *Culex tarsalis*. Larvae of this species develop in a rather wide variety of aquatic situations. They are frequently found in bodies of water associated with irrigation. They may breed in waters containing large quantities of organic material from human wastes, and they have been recovered from artificial containers of various types such as tin cans, jars, rain barrels, drinking troughs, ornamental ponds, and catch basins. Females deposit between 150 and 300 eggs in rafts with hatching normally occurring 48 to 72 hours after oviposition (Brennan and Harwood, 1953). The larval and pupal stages develop rapidly and generations are continuous throughout the year in Texas (Horsfall, 1955).

The dispensary has self-closing doors at each entrance. However, the janitors were reported to prop the outside doors open each evening until 10:00 p.m. and this would provide access for adult mosquitoes. The eye lanes in the clinic are painted black and they could attract a mosquito.

It could be supposed that a gravid female entered the open building during Friday evening, was attracted to the fitting room and deposited her eggs in the rinse pan. The eggs would have hatched on Sunday or Monday. Upon close examination, remnants of third and fourth instar mosquito larvae were noted imbedded in the mineral crust on the bottom of the rinse pan. This would indicate that breeding had

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[1] Further reproduction is authorized to satisfy the needs of the U.S. Government.

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occurred in this container previously, and that the *tarsalis* population might be a self-perpetuating one located within the building.

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INSECT ASPIRATORS MADE FROM PLASTIC OR GLASS SEROLOGICAL PIPETTES

GEORGE J. BURTON [1]

When glass tubing of suitable diameter is unavailable for making an insect-collecting aspirator, 5 cc. or 10 cc. plastic or glass serological pipettes can be used, instead, because they are of approximately the right length and diameter.

The plastic pipettes used were those manufactured by Falcon Plastics of Los Angeles, California. The internal diameter of the 5 cc. pipette is 7/32-inch; that of the 10 cc. pipette is 9/32-inch. The straight portion is 12 inches long. The cone or taper at the tip is cut off with a small saw, but may also be broken after being scored with a triangular file or knife. A circular score can also be made with a knife or tubing cutter, pressure applied, and the break filed smooth or touched to a hot iron or other heated metal surface. The cut collecting end may also be flared after softening it in a flame. Where it is desirable to have a small collecting aperture, the original opening at the tapered tip of the pipette can be used, or else a cut can be made along the tapered tip wherever desired. The plastic did not cloud up or become discolored after extensive use.

The hole between the mouthpiece and the pipette proper is reamed out slightly with a reamer or a heated rod. The mouthpiece can be sawed off and inserted into the distal end of the rubber tubing, or else can be left attached in the original condition. A small piece of mosquito netting, or wide-meshed silk or bolting cloth, is fitted over the end of the pipette, and is held in place with a ¼-inch strip of tape. The rubber tubing may be 18, 20, or 24 inches in length, and should be about ¼-inch in internal diameter. One end is slipped over the mesh-covered pipette tip. The other end of the tubing may be left as is, or else the detached plastic mouthpiece may be inserted into it.

The usable portion of a 5 cc. or 10 cc. glass serological pipette may vary from 11¼ to 12 inches. The internal diameter of the 5 cc. pipette is 7/32-inch, and that of the 10 cc. pipette is 5/16-inch. The tapered tip is broken off after being scored with a triangular file or tubing cutter. The narrowed aperture at the mouthpiece end retards the suction somewhat, therefore the glass is scored at about ¼-inch anterior to the neck and the mouthpiece is broken off. This leaves the original glass pipette as a tube of even diameter. A piece of mosquito netting or bolting cloth is applied over the distal end, and a length of rubber tubing attached, as described above. The removed glass mouthpiece can be inserted into the free end of the rubber tubing. The latter with an internal diameter or hole of ¼-inch accommodates the 5 cc. pipette, but tubing with a slightly wider hole would be necessary to accommodate the 10 cc. pipette.

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A SIMPLE INEXPENSIVE STYROFOAM CHAMBER FOR LONG-TERM HOLDING OF ADULT MOSQUITOES

GEORGE J. BURTON [1]

If a temperature- and humidity-regulated insectary is not available, humidity chambers for keeping infected or uninfected mosquitoes alive for up to 1 to 2 months, depending on species, can be easily constructed from styrofoam insulated boxes. These come in many sizes and shapes. They are often used for keeping liquids or foods hot or cold, or as shipping boxes or packing boxes. An advantage is that they usually cost no more than $1 to $2. Round or rectangular boxes may be used, but the latter will accommodate small holding cages better.

The box is lined with thin layers of wet absorbent cotton held to the inside surfaces with rustless thumb tacks or pins. If available, the best pins to use are "push pins" having an elongated plastic or aluminum head measuring about 1/2-inch long by 3/16-inch in diameter.

After being wetted, the cotton is pinched only

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