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BITING FLIES COLLECTED FROM RECURRENT BLUETONGUE-INFECTED SHEEP IN IDAHO

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A severe outbreak of bluetongue (BT) disease occurred in a flock of sheep near Bruneau, Owyhee Co., Idaho, August, 1973: 25% of 650 ewes and 12% of their lambs died. The probable vector was the biting midge or gnat, *Culicoides variipennis* (Coquillett), as reviewed by Jones and Foster (1978).

The presence of recumbent BT-infected sheep allowed the recovery of biting flies attacking sheep by mouth aspirator. The number of flies collected in 3 morning collections at about sunrise on August 24 and 27 and on September 12, 1973 are as follows:

CERATOPOGONIDAE

Culicoides

- variipennis* (Coquillett) 27
owyheensis Jones and Wirth 7

Leptoconops

- americanus* Carter 4

SIMULIIDAE

Simulium

- vittatum* Zetterstedt 89

CULICIDAE

Anopheles

- freeborni* Aitken 13

Aedes

- dorsalis* (Meigen) 6
nigromaculis (Ludlow) 4

Two additional species of *Leptoconops* were recovered on August 26, 1973, in an evening collection just before dusk: 1 *L. knowltoni* Clastrier and Wirth, and 15 *L. reesi* Clastrier and Wirth.

Bluetongue virus was recovered from parous females of *C. variipennis* collected during the outbreak (Barber and Jochim 1975), but not from any other species of biting fly.

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A SECURITY MODIFICATION FOR THE "AMERICAN MODEL" MOSQUITO LIGHT TRAP

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The San Mateo County Mosquito Abatement District employs 15 modified "American Model" light traps (Mulhern 1953) in its adult mosquito surveillance program (Fig. 1). The District, composed largely of suburban type communities with middle income families, has experienced increased problems of light trap security in the past few years. On occasion, traps placed in some areas have been the target of vandals. More importantly, to this District, was the potential hazard to unauthorized personnel who may tamper with the exposed cyanide kill jars used in the traps. These con-

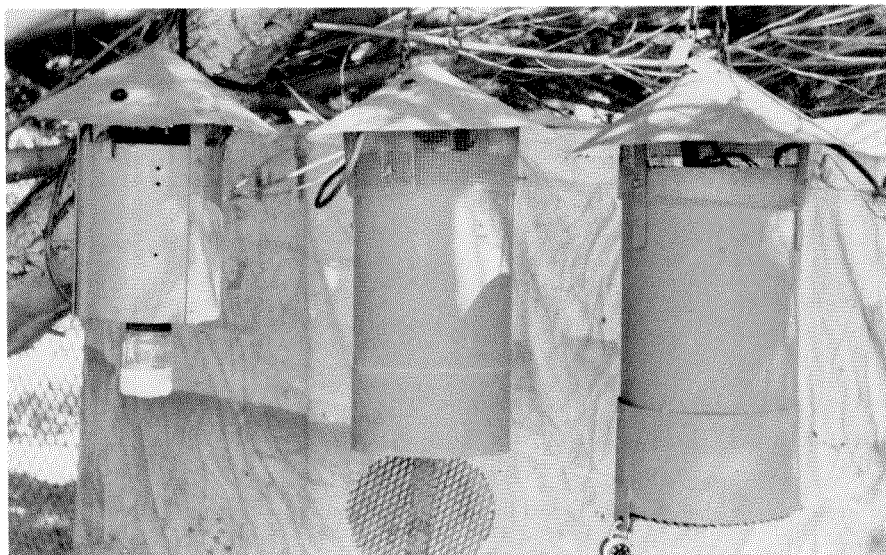


Fig. 1. Standard American Model trap (left)
 Modified American Model trap with expanded metal door in
 open position (center)
 Modified American Model trap in locked position (right)

cerns prompted the District to modify the traps for greater security.

Materials used for trap modifications may be purchased at local hardware stores and sheet metal supply companies. A local sheet metal company rolled the metal extensions to facilitate shaping to correspond to existing cylinder diameters. All other work was performed by District personnel. Total material cost for rolled metal, expanded metal, hinges, and locks was \$8.80 per trap. This cost excludes construction time of approximately 2 man hours per trap.

Modifications to the traps were made by extending the cylinder length 6 inches. Rolled sheet metal, #20 gauge, 7" x 34" was spot welded to the bottom of the existing trap to provide an overall cylinder length of 22". The 7" x 34" dimensions of the rolled sheet metal were made to allow for an overlap of 1" in both length and circumference. Completed dimensions of the trap are 22" cylinder length by 33" circumference. Expanded metal, #10 gauge, was cut to correspond to the diameter of the base of the trap (10") and was secured to the cylinder extension by spot welding a 4" strap

hinge to both the expanded metal and cylinder. Expanded metal was used so as not to impede air flow through the traps. Opposite from the strap hinge, a locking device was installed. This consisted of a piece of strap steel 1/8" x 1" x 1 1/2" bent to a right angle and welded to the expanded metal to allow 1" of the trap to extend below the trap. Opposite this strap, a piece of 1/8" x 1" x 3" strap steel was welded to the base of the extended cylinder with 1" extending below the trap. Corresponding holes were drilled through each piece of strap steel to accommodate a lock.

Since the trap modifications were completed, we have experienced one case of vandalism. This resulted in destruction of the face of the combination lock but did not allow access to the internal workings of the trap.

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