reported on the feeding habits of *Deinocerites* that several mosquito species in Panama feed preferentially on cold-blooded animals. Three species of *Melanoconion* mosquitoes, *C. eggyon*, *C. tecmarsi* and *C. elevates*, fed almost exclusively on reptiles, while 1 other, *C. dunnii*, apparently feeds on reptiles the majority of the time; the latter species also fed readily on birds and mammals.

These data further indicate that at least some groups of Neotropical mosquitoes have more extensive host ranges than those found among Nearctic groups.

**LITERATURE CITED**


Filarial worms of the genus *Foleyella* are restricted to cold-blooded vertebrate hosts, and numerous species are parasitic in lizards and frogs. Several species in the genus have been shown to develop to the infective stage in mosquitoes, but not all mosquito species are able to sustain complete development. Mosquitoes which regularly feed on cold-blooded hosts are the most likely vectors of *Foleyella* but amphibian or reptilian feeding habits are not common among the Culicidae. *Culex territans* Walker, 1856 has been shown to obtain the majority of its blood meals from amphibians (Crans 1970) and has been shown to transmit *F. jlexicauda* to frogs in the laboratory (Benach & Crans 1973). In all probability *C. territans* is a natural vector of *F. jlexicauda*.

Several workers have reported high mortality in mosquitoes which have fed on frogs harboring various species of *Foleyella*. However, most of these studies have utilized mosquitoes other than potential natural vectors. During the course of this investigation, many different mosquito species were exposed to frogs but could not be induced to feed. *Aedes triseriatus* (Say, 1823) was the only species tested other than *C. territans* which would accept blood from frogs without artificial stimulation. Although *A. triseriatus* never displayed much avidity for cold-blooded hosts, it provided an opportunity to compare the susceptibility and effect of *Foleyella* development in two different mosquito species, the presumed natural vector of *F. jlexicauda* and an alternative species which might occasionally encounter the parasite in nature.

**MATERIALS AND METHODS**

*Culex territans* individuals were colonized and maintained as described by Benach (1970). The techniques for rearing *Aedes triseriatus* have been described by Gerberg (1970). Unless specified otherwise, mosquitoes acquired microfilariae by feeding on infected bullfrogs with a microfilaremia of 700–900 per 5 µl liter of blood. All control mosquitoes took blood meals from uninfected bullfrogs. Maintenance of infected mosquitoes has been described by Benach & Crans (1973). Bullfrogs were kept as indicated by Nace (1968). Microfilaremia was established by the method of Crans (1969).

Susceptibility to the filarial larvae was interpreted according to the following criteria: (1) The number of developing larvae found at interval dissections, and the mortality of infected and control mosquitoes. Equal numbers of mosquitoes were fed simultaneously on infected and uninfected bullfrogs and maintained similarly for 18 days. Twenty-five mosquitoes were dissected at the following time intervals after feeding: immediately, 20 min., 1, 2, 3, 6, 12 and 24 hr, and daily thereafter for 18 days. Mosquitoes were immobilized by chilling and dissected in 0.85% saline; head, thorax and abdomen were examined separately and the number of larvae per individual was counted. The number of microfilariae ingested was determined by excising the entire and intact alimentary canal and diluting its contents in saline. (2) Pathological reactions of the mosquito to the filarial larvae. Infected and control specimens were immobilized by chilling and immediately fixed in Bouin’s fluid. Sections from mosquitoes selected at the same post-feeding intervals as those used for dissections were cut at 8 µ and stained with hematoxylin and cosin.

**TABLE 1. Rate of Development, Location and Mean Number of Larvae of Foleyella flexicauda in Culex territans.*

<table>
<thead>
<tr>
<th>No. MOSQ</th>
<th>DISSECTION TIME</th>
<th>MEAN NO. PARASITES**</th>
<th>STAGE OF DEVELOPMENT</th>
<th>LOCATION WITHIN MOSQUITO</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Immediately</td>
<td>7.8</td>
<td>Exsheathed</td>
<td>Hemocoel</td>
</tr>
<tr>
<td>25</td>
<td>20 min.</td>
<td>9.8</td>
<td>Microfilariae</td>
<td>Fat body</td>
</tr>
<tr>
<td>150</td>
<td>1–24 hr</td>
<td>9.5</td>
<td>&quot;</td>
<td>&quot;</td>
</tr>
<tr>
<td>125</td>
<td>2–6 days</td>
<td>9.6</td>
<td>1st-stage larvae</td>
<td>&quot;</td>
</tr>
<tr>
<td>175</td>
<td>7–13 days</td>
<td>9.5</td>
<td>2nd-stage larvae</td>
<td>&quot;</td>
</tr>
<tr>
<td>125</td>
<td>14–18 days</td>
<td>9.2</td>
<td>3rd-stage larvae</td>
<td>Head; few in abdomen &amp; thorax</td>
</tr>
</tbody>
</table>

*Microfilariae found dead in the gut are not included.

** Differences not statistically significant (p < 0.05).