Forensic markers in human blood drawn from Culex pipiens mosquito (Diptera: Culicidae)

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Abstract:

Mosquitoes feed on blood that is a marker in forensic research. Culex pipiens mosquitoes imbibed human blood and cultured, after ethanol-killing or keeping them alive, for 0, 3, 6, 12, 24, 48 and 72 h and followed by blood count. Red Blood Cells (RBCs) count in living mosquitoes showed reduction at 24 h after blood feeding while in ethanol-killed females the reduction was in a time dependent manner. White Blood Cells (WBCs) count showed a similar pattern in living mosquitoes however, in killed mosquitoes the reduction was rapid between 24 - 48 h with significant reduction at 48 h. Using different blood groups did not affect RBCs and WBCs degradation in living or dead mosquitoes. This indicated that the approximate time after mosquito bite can be determined (without impact from the type of blood group) by the RBCs and WBCs count in living and dead mosquitoes, respectively.

Keywords:

Mosquito; Forensic Entomology; Blood Count;

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