Aedes *vexans*

Introduction: This inland floodwater mosquito can be characterized by its distinctive physical features that give it a "warrior like" appearance. The adults are black and brown with white and grey markings, and they possess a distinct tip at the base of their abdomen. These tiny warriors will attack and bite ferociously, especially at dusk. In the North Fork Valley these mosquitoes dwell in heavily irrigated pastures, as well as along the floodplains of the river bottom.

Life Cycle: In the late fall the adult female will lay her eggs in areas that have a history of holding flood water, which are referred to as floodplains. The eggs are laid singularly either on the ground or on dried up vegetation, and are protected with a strong exterior that keeps them safe throughout the winter. In spring, as irrigation and rising river water are introduced to the dry floodplains, the eggs are soaked and within 3-5 days a larvae will hatch. The Aedes *vexans* mosquito begins hatching early in the spring, however many generations may occur throughout the summer, with a new brood hatching about every 18-24 days dependant on flood patterns.

Habitat: A. *vexan* larvae occur in a wide variety of habitats, however in the North Fork Valley it is common for this species to occur as a result of pasture irrigation. This habitat provides a large, known flood plain and exposure to direct sunlight which accelerates that mosquito lifecycle. Brackish waters in the river bottom often contain large numbers of A. *vexans* that are introduced to runoff waters via the river in the early spring. Finally, at the base of the Bookcliffs, there are pools of water that form during runoff or heavy rains that can produce large numbers of very aggressive mosquitoes.

Disease: Mosquitoes have the ability to transmit pathogens that cause some of the worst diseases in the world. This particular species of mosquito is no exception, as it has been shown that they transmit Western Equine Encephalitis, California Encephalitis and dog heart worm.

Control Methods: Due to the nature of the breeding locations, the insect growth regulator Altosid would be applied followed by the bacterial larvicide Bacillus *thuringiensis* (BTI).