

Changes in productivity of the saltmarsh mosquito, *Aedes vigilax* (Diptera: Culicidae), and vegetation cover following culvert removal

Turner, P.A. & Streever, W.J.

Abstract

Changes following culvert removal in the production of the saltmarsh mosquito, *Aedes vigilax* (Skuse), and the cover and occurrence of halophytes were investigated on Kooragang Island, New South Wales, Australia. Mosquito eggshells were collected from saltmarsh soil and used as an index of mosquito production. Saltmarsh bordering each of four tidal creeks was sampled prior to the removal of culverts from two of these creeks in 1995. All creeks were resampled two years later. In most instances, eggshell densities decreased significantly at saltmarshes affected by culvert removal, with relatively small change at reference saltmarshes. However, oviposition by *Ae. vigilax* was initiated in upland areas following culvert removal at one site. *Sarcocornia quinqueflora* cover decreased significantly at sites affected by culvert removal relative to reference sites. The cover of *Sporobolus virginicus* and frequency of occurrence of *Triglochin striata* increased significantly at one modified site, while the frequency of occurrence of *Avicennia marina* seedlings increased significantly at the other modified site. We suggest that culvert removal and other alterations intended to increase tidal flushing will lead to vegetation patterns and mosquito eggshell densities that typically occur in the more frequently inundated saltmarsh–mangrove complex.

Turner, P.A. & Streever, W.J. 1999, Changes in productivity of the saltmarsh mosquito *Aedes vigilax* (Diptera: Culicidae) and vegetation coverage following culvert removal, *Australian Journal of Ecology*, **Vol. 24**, pp. 240-8.
