Section 2: Executive Summary of the Project

The fresh stem bark and leaves of *G.glauca* is widely used by farmers in some areas in Sri Lanka as a traditional pest control agent in paddy cultivation. Since farmers channel the water entering a paddy field over fresh *G.glauca* leaves and twigs, the project was initiated to test the hypothesis that the activity was due to more polar insecticidal materials extracted by the water. Hexane, dichloromethane and methanol extracts of leaf, bark and stem were subjected to mosquito larvicidal bioassay against *A.egypti* 2nd instar larvae. Plant materials when shade dried were found to be inactive, although plant material when extracted while fresh showed activity. However active extracts and active fractions were found to lose activity gradually with all activity lost in three to five months. Active material was isolated using repeated bioassay guided fractionation. However activity was lost in the process suggesting either easy decomposition of active compounds or a synergetic effect. The study led to the isolation of several compounds, but none with good activity. Two of these compounds were characterized and shown to be a bicoumarin with weak larvicidal activity and an inactive diterpene, although both were isolated through repeated bioassay guided fractionation. ..