

**User Friendly Acoustic System For Detection Of coconut Palms  
Infested By Rynchophorus Ferrugineus**



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## Declaration

We declare that this thesis is our own work and has not been submitted in any form for another degree or diploma at any university or other institution of tertiary education. Information derived from the published or unpublished work of others has been acknowledged in the text and a list of references is given.

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## Abstract

Android Mobile Application have been developed and used to detect insects in concealed habitats. The larvae of red palm weevil, *Rynchophorus ferrugineus* (Olivier), a serious pest of the coconut palm, *Cocos nucifera* L. feed on the soft tissues inside the stem and bud region. Detection of infested coconut palms in the early stages by the conventional method of checking for external symptoms is time consuming, labour intensive and costly. This paper describes the development of Android Mobile Application and its potential in detection of infested palms in the field. The device comprises a sensor to mount on the Stem of the palm tree and to acquire the sounds of red palm weevil larvae, Android Application that processes the acquired sounds and automatically detect detected RPW and send a notification for its users. Many difficulties encountered with conventional methods could be overcome by the use of this Android Application.



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