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**CHEMISTRY AND ACTIVITY OF
ACRONYCHIA PEDUNCULATA FRUITS**

A THESIS PRESENTED
BY

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To the Board of Study in Chemical Sciences of the

POSTGRADUATE INSTITUTE OF SCIENCE

In partial fulfillment of the requirement
For the award of the degree of

MASTER OF PHILOSOPHY

Of the

UNIVERSITY OF PERADENIYA

SRI LANKA

2006



607461

ABSTRACT

CHEMISTRY AND ACTIVITY OF *ACRONYCHIA PEDUNCULATA* FRUITS

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Chemical investigation on the hexane and dichloromethane extracts of the fruits of *Acronychia pedunculata* (L.Miq.) has resulted in the isolation of six compounds including two novel compounds, 7-acetyl-4,6-dihydroxy-5-(methyl-2-butenyl)-2-(1-methyl-ethyl)benzofuran and a new benzopyran derivative. They were isolated along with three known acetophenone derivatives, acrovestone, demethylacrovestone and demethylacronylin and the sesquiterpene, clovan-2,9-diol. While demethylacrovestone has been previously isolated from *Acronychia pedunculata* fruits, acrovestone is isolated from *Acronychia pedunculata* fruits for the first time although it has been isolated from its bark and demethylacronylin has been reported to be present in *Acronychia laurifolia*. Clovan-2,9-diol is being reported from *Acronychia* species for the first time. Biological activities of these compounds were evaluated against the second instar larvae of *Aedes aegypti*. Acrovestone and the new benzofuran derivative showed moderate activity with LC_{50} of 3.6 ppm and 2.5 ppm while the new benzopyran and demethylacrovestone showed weak activity with LC_{50} of 10 ppm and 12.5 ppm respectively.