

TWO NEW COMPOUNDS FROM *ACRONYCHIA PEDUNCULATA*

Y. AHILAN AND V. KUMAR

Department of Chemistry, Faculty of Science, University of Peradeniya

The mosquito larvicidal fraction of the dichloromethane extract of *Acronychia pedunculata* fruits was found to contain a new acetylbenzofuran and a new benzopyran derivative which were active against *Aedes aegyptii* 2nd instar larvae with LC₅₀=2.5 ppm and 10 ppm respectively.

The structure of the acetylbenzofuran was established on the basis of its spectroscopic and chemical properties. ¹H, ¹³C and 2D-NMR of the compound showed it to be a benzofuran with the benzene ring substituted with acetyl, isopentenyl and 2 hydroxyl groups and a furan ring with an isopropyl substituent, suggesting that the ring was formed by the cyclization of an isopentenyl substituent with an OH group. On biogenetic considerations, the acetylbenzofuran could have either a 7-acetyl-4,6-dihydroxy-5-(3-methyl-2-butenyl)-2-(1-methyl-ethyl)benzo-furan structure (1) or a 5-acetyl-4,6-dihydroxy-7-(3-methyl-2-butenyl)-2-(1-methylethyl)-benzofuran structure (2). Partial acetylation of the compound, methylation and hydrolysis of the acetate led to a product shown by ¹H NMR to have a single unchelated hydroxyl group confirming that its structure was (1). The product from (2) should show chelation.

The NMR data of the new benzopyran (3) was similar to that of demethylacrovestone (4) except for the additional peaks corresponding to the *gem*-dimethyl pyran ring. The NMR data of the pyran ring was similar to that of the pyran ring of acronyculatin E (5) whose structure corresponded to the benzopyran half of the structure reported from the same plant.

