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## TWO NEW MOSQUITOLARVICIDAL COMPOUNDS FROM THREE *HORTONIA* SPECIES

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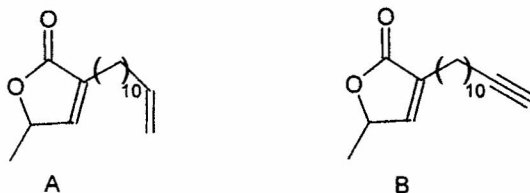
*Hortonia* is a genus endemic to Sri Lanka belonging to the family Monimiaceae which is considered to have originated in Gondwanaland about 100-120 million years ago. Latest revision of the family Monimiaceae by Dassanayake (1996) considers three species (*H. floribunda* and *H. angustifolia* and *H. ovalifolia*).

Although three species of *Hortonia* is found from sea level (*H. angustifolia*) to montane (*H. floribunda* and *H. ovalifolia*) regions there no reports of either medicinal properties or biological activity of the plant species. The present study was carried out to isolate the mosquitolarvicidal compounds of the plants.

Air-dried and ground leaves and stem bark of all three species were successively and exhaustively extracted into dichloromethane. Extracts were fractionated by MPLC (eluent: step gradient from hexane to dichloromethane). With the aid of mosquitolarvicidal assay-guided fractionation against second instar larvae of *Aedes aegypti*, two (A & B) mosquitolarvicidal compounds were isolated.

The two compounds were characterised by spectroscopic evidence (IR,  $^1\text{H}$  NMR,  $^{13}\text{C}$  NMR and HRMS). The structures were further confirmed by using correlation studies (COSY, HMQC & HMBC).

The structures of both the two compounds were elucidated to be  $\gamma$ -lactones. In both, C-4 was substituted by a methyl group. In compound A, C-2 had a  $\text{C}_{12}$  linear chain ending in an acetylenic moiety while in compound B, the same chain (at C-2) terminated in a double bond. A literature search revealed that both compounds were new. Compound A showed significant mosquitolarvicidal activity of 100% mortality at 1 ppm while B showed 70% mortality at 10 ppm.



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