

## DISTRIBUTION OF BENZOQUINONE PIGMENTS IN KENYAN MYRSINACEAE

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**ABSTRACT.** The distribution of benzoquinones in Kenyan Myrsinaceae is such that the three in *Maesa* are different from those in the three other genera (*Myrsine*, *Rapanea*, *Embelia*) which contain the same two benzoquinones. The two chemical groups are in accord with the morphological classification of these plants.

## INTRODUCTION

The family Myrsinaceae is represented in Kenya by four species in four different genera - *Maesa lanceolata* Forsk, *Myrsine africana* L., *Rapanea melanphloea* (L.) Mez. and *Embelia schimperi* Vatke (1). The species all find ethnopharmacological application as anthelmintics (2). Watt and Breyer-Brandwijk (3) claimed that embelin occurred in *Maesa lanceolata* and was the only benzoquinone in the other three species. However eleven Myrsinaceae from Japan have since been studied and these show the presence of embelin and/or rapanone, maesaquinone, acetylmaesaquinone and other related quinones (4). In 1983 *M. lanceolata* from Kenya was reported to contain a host defence stimulant, maesanin (5). We embarked on a comprehensive chemical study of the local Myrsinaceae and have observed chemical relationship of plants within the group which correlates with the morphological classification (1).

## RESULTS AND DISCUSSION

The results are listed on Table 1. There is a clear discontinuity in the distribution of quinones such that the benzoquinones with C<sub>15</sub> to C<sub>19</sub> side chains are restricted to *Maesa* while benzoquinones with shorter side chains (C<sub>11</sub>-C<sub>13</sub>) are found in *Myrsine*, *Rapanea* and *Embelia*. These compounds are therefore of taxonomic significance.

## EXPERIMENTAL

**Instruments.** Melting points were determined using Gallenkamp melting point apparatus. The UV/VIS spectra were obtained using DU-50 spectrophotometer. The IR spectra were recorded as KBr pellets on a Perkin-Elmer Infrared 720 instrument. The <sup>1</sup>H NMR spectra were taken on a Varian 200 MHz spectrometer.