

## SHORT COMMUNICATION

### AN EXAMINATION OF THE RUBIACEAE OF HONG KONG—III.\*

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*Plant. Hedyotis acutangula* Champ.

*Uses.* Medicinal, infusion by local herbalist for sprains and bruises.

*Previous work.* Leaves,\* roots,<sup>1</sup> roots and stems<sup>2</sup> on sister species.

*Leaves.* (Extr. EtOH after light petroleum,\* acid mixture isolated through sodium salt. Methylated and product chromatographed alumina, light petroleum: benzene): Ursolic acid  $C_{30}H_{48}O_3$  (m.p. mxd m.p.  $[\alpha]_D$  i.r. of methyl ester, methyl ester acetate).

*New Cpd. Triterpene acid*  $C_{30}H_{48}O_5$  (0.0015% of leaves) isolated as methyl ester m.p. 260–262°,  $[\alpha]_D +45.0^\circ$ ,  $\nu_{max}$  3650, 3400, 1740, 1250, 1140  $cm^{-1}$  (Found: C, 73.98; H, 10.23  $C_{31}H_{50}O_5$  requires C, 74.06; H, 10.03%): from further elution of above chromatogram (chloroform) and crystallization (EtOAc).

*Plant. Morinda umbellata* L.

*Uses.* Dyeing material,<sup>3</sup> medicinal, infusion by local herbalists for sprains and bruises.

*Previous work.* Root bark<sup>3</sup>; also leaves,<sup>4</sup> roots<sup>5,6</sup> heartwood,<sup>7</sup> and root bark<sup>8</sup> on sister species.<sup>9,10</sup>

*Stems.* (Extr. light petroleum, and chromatographed alumina):

*A higher aliphatic carbonyl compound*<sup>11</sup>

(m.p. mxd m.p. i.r.) from first fractions (light petroleum).

*2-methylanthraquinone (tectoquinone)*  $C_{15}H_{10}O_2$ .

(m.p. mxd m.p. i.r.) from following fractions (light petroleum).

*Sterol mixture* from later fractions (benzene), separated into *Stigmasterol*  $C_{29}H_{48}O$ . (m.p. mxd m.p. of acetate tetrabromide, m.p. mxd m.p.  $[\alpha]_D$ , i.r. of acetate and alcohol) and  $\beta$ -*Sitosterol*  $C_{29}H_{50}O$  (m.p. mxd m.p.  $[\alpha]_D$ , i.r. of acetate and alcohol).

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(Extr. EtOH, isolated through sodium salt): *Ursolic acid*  $C_{30}H_{48}O_3$  (m.p. mxd m.p.  $[\alpha]_D$ , i.r. of acid, methyl ester, methyl ester acetate).

*Leaves.* (Extr. light petroleum): Sterol mixture on chromatography (alumina; benzene) separated into *Stigmasterol* and  $\beta$ -*Sitosterol* as for stems. (Extr. EtOH): *Ursolic acid* as for stems.

*Plant.* *Psychotria serpens* L.

*Uses.* Medicinal, by local herbalists for sprains and bruises.

*Previous work.* Leaf-nodule endophyte on sister species.<sup>12</sup>

*Whole plant.* (Extr. light petroleum, and chromatographed alumina):

A higher aliphatic carbonyl compound<sup>11</sup> as for *M. umbellata* stems (light petroleum fractions). *Stigmasterol* and  $\beta$ -*Sitosterol* as for *M. umbellata* (benzene fractions).

A higher aliphatic alcohol<sup>11, 13, 14</sup> (m.p. mxd m.p. i.r. (later benzene fractions) (Extr. EtOH): no triterpene acids.

*Plant.* *Psychotria rubra* (Lour.) Poir.

*Uses.* Medicinal by local herbalists for sprains and bruises.

*Leaves* (Extr. light petroleum):

$\beta$ -*Sitosterol* on chromatography (alumina: benzene).

(Extr. EtOH): no triterpene acids.

*Stems.* As for leaves.

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