

# SHORT COMMUNICATION

## XANTHONES OF *KIELMEYERA FERRUGINEA*<sup>1</sup>

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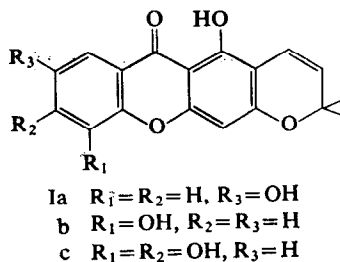
**Abstract**—The compounds osajaxanthone, 6-dehydroxyjacareubin, jacareubin, 2,8-dihydroxy-1-methoxyxanthone, 4-hydroxy-2,3-dimethoxyxanthone and 5-hydroxy-1,3-dimethoxyxanthone have been isolated from *Kielmeyera ferruginea*.

*Plant.* *Kielmeyera ferruginea* A. P. Duarte<sup>2</sup>—Guttiferae.

*Source.* Sêrro, bank of the Itaúna river, Minas Gerais State, Brasil.

*Identification.* RB 118.700 Herbarium of the Rio de Janeiro Botanical Garden.

*Bark.* The powdered bark (1.5 kg) was extracted with benzene. Upon concentration of the solution crystalline material (10.6 g) precipitated. Chromatography on a silica column yielded in order of elution aliphatic material (4.1 g); osajaxanthone (Ia, 450 mg) previously isolated from *Maclura pomifera* Raf. (Moraceae),<sup>3</sup> *Calophyllum scriblitifolium* Hend. & Wyatt Smith,<sup>4</sup> *C. canum* Hook f.<sup>5</sup> (Guttiferae), *K. corymbosa* (Spr.) Mart.;<sup>6</sup> 6-dehydroxyjacareubin (Ib, 50 mg) previously isolated from *C. brasiliense* Camb.,<sup>6</sup> *C. scriblitifolium*,<sup>4</sup> *K. speciosa* St. Hill.;<sup>6</sup> and jacareubin (Ic, 50 mg) previously isolated from *C. brasiliense*,<sup>7</sup> *C. scriblitifolium*,<sup>4</sup> *C. sclerophyllum* Vesq.,<sup>8</sup> *C. canum*,<sup>5</sup> *C. inophyllum* Linn.,<sup>5</sup> *C. fragrans* Ridley.<sup>5</sup>



<sup>1</sup> Part XVII in the series "The Chemistry of Brazilian Guttiferae"; for Part XVI, see A. PEREIRA DUARTE, D. DE BARROS CORRÊA, L. G. FONSECA E SILVA, S. JANOT and O. R. GOTTLIEB, *An. Acad. Brasil. Ciênc.* **40**, in press (1968).

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**Wood.** The benzene extract (60 g, 1%) was washed with light petroleum (p.e. 35–60°). The insoluble portion (5.1 g) was chromatographed on silica. In order of elution appeared aliphatic material (200 mg);  $\beta$ -sitosterol (20 mg); 2,8-dihydroxy-1-methoxyxanthone (30 mg) previously isolated from *K. petiolaris* (Spr.) Mart.,<sup>9</sup> *K. excelsa* Camb.;<sup>10</sup> 4-hydroxy-2,3-dimethoxyxanthone (300 mg) previously isolated from *K. coriacea* Mart.,<sup>11</sup> *K. corymbosa* (Spr.) Mart.;<sup>11</sup> *K. speciosa*,<sup>12</sup> *K. rupestris* A. P. Duarte;<sup>1</sup> kielcorin (18 mg), a 2,3,4-trioxygenated xanthone to be described in a forthcoming paper, previously isolated from *K. coriacea*, *K. corymbosa* and *K. speciosa*;<sup>13</sup> 5-hydroxy-1,3-dimethoxyxanthone (12 mg) previously isolated from *K. coriacea*,<sup>11</sup> *K. corymbosa*,<sup>11</sup> *K. speciosa*,<sup>12</sup> *K. rupestris*.<sup>1</sup>

**Notes.** The mutually exclusive occurrence of isoprenylated and simple oxygenated xanthones respectively in the bark and in the wood of *K. ferruginea* is of interest. Jacareubin has hitherto only been found in *Calophyllum* species,<sup>5</sup> where it also occurs in association with osajaxanthone and 6-dehydroxyjacareubin.

### EXPERIMENTAL

The identification of all substances was confirmed by direct comparison (co-chromatography, mixed m.p., u.v. and i.r. spectra) with authentic samples.

*Osajaxanthone* (Ia). Found: m.p. 265–267°, M 310. Required: m.p. 264–265°,<sup>3</sup> M 310. *6-Dehydroxyjacareubin* (Ib). Found: m.p. 211–213°, M 310. Required: m.p. 211–213°,<sup>6</sup> M 310. *Jacareubin* (Ic). Found: m.p. 252–254°, M 326. Required: m.p. 254–256°,<sup>7</sup> M 326. *2,8-Dihydroxy-1-methoxyxanthone*. Found: m.p. 196–197°, M 258. Required: 197–198°,<sup>9</sup> M 258. *4-Hydroxy-2,3-dimethoxyxanthone*. Found: m.p. 218–219°, M 272. Required: m.p. 218–219°,<sup>11</sup> M 272. *Kielcorin*. Found: 244–246°. Required: m.p. 244–246°.<sup>13</sup> *5-Hydroxy-1,3-dimethoxyxanthone*. Found: m.p. 263–265°, M 272. Required: m.p. 263–265°,<sup>11</sup> M 272.

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