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PTEROCARPANOIDS FROM DALBERGIA DECIPULARIS*

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Plant. Dalbergia decipularis Rizz. and Matt.,² trivial name 'sebastião de arruda', tree. Source. Andaraí, central Bahia, Brazil. Uses. The compact, fragrant heartwood has beautiful pink streaks and is used for fine furniture and flooring.³

Heartwood. Extraction with benzene produced a solution which was filtered and concentrated under vacuum. Upon standing a precipitate appeared. This was separated by filtration and crystallized from acetone giving (±)-3-hydroxy-9-methoxypterocarpan, m.p. and m.m.p. with an authentic sample,⁴ 195–197°. The filtrate was evaporated and extracted with boiling light petroleum. The soluble portion was an oil whose purification by distillation under vacuum (98–99°, 0.4 mm) gave practically pure nerolidol. The insoluble portion was chromatographed on silica, giving upon elution with benzene 3,9-dimethoxy-pterocarp-6a-en, m.p. 115–116° (lit. m.p. 110°, 116°6); and with AcOEt (+)-3-hydroxy-9-methoxypterocarpan, m.p. and m.m.p. with an authentic sample, 127–128°; 3,9-dimethoxy-6-oxopterocarp-6a-en, m.p. 200–201° (subl.) (lit. m.p. 196–198°); and an aliphatic ester, m.p. 245–247°, M-498. The identification involved NMR, IR, UV and mass spectral measurements. The base peak of the mass spectrum of 3,9-dimethoxy-6-oxopterocarp-6a-en is associated with the loss of a methyl group.

Phytochemical comments. Nerolidol⁷ and the pterocarpans⁴ were isolated previously from other Dalbergia species. The pterocarpens have only recently been reported⁵ as constituents of Swartzia madagascariensis. Dalbergia decipularis seems thus chemically closer to a species of the Leguminosae-Caesalpinioideae than indeed to its proper papilionaceous entourage.

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