3012, 2941, 1640, 1075 and 830 cm^{-1}. *Acetate.* $C_{32}H_{52}O_2$ needles from acetone, m.p. 218, $[\alpha]_D$ +47·3° (*c* 2·0, $CHCl_3$). *Benzoate.* $C_{37}H_{54}O_2$, prisms from acetone, m.p. 273°, *c* $[\alpha]_D$ +60·5° (*c* 4·0, $CHCl_3$). The identity of the compound as lupeol was confirmed by m.m.p., IR and MS of the acetate. The $CHCl_3$ solution, after the removal of lupeol, was concentrated to a small volume and chromatographed on alumina to give a compound which crystallized from EtOH to give needles, $C_{30}H_{50}O_2$, m.p. 248–250° (Found: C, 81·37; H, 11·39. Cal. for $C_{30}H_{50}O_2$; C, 81·39; H, 11·38%). IR (Nujol) ν 3450, 1665, 1625 and 1057 cm^{-1}. Acetate (di): $C_{34}H_{54}O_4$, prisms from EtOH, m.p. 223°, which had superimposable IR, NMR and MS with that of an authentic sample of betulin diacetate.

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ARYLPROPANOIDS FROM *LICARIA PUCHURY-MAJOR**

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Key Word Index—*Licaria puchury-major*; Lauraceae; 3,4-methylenedioxycinnamaldehyde; 3,4-methylenedioxycinnamyl alcohol; safrol; eugenol; syringic aldehyde.

Plant. Licaria puchury-major (Mart.) Kosterm. (Lauraceae), trivial name 'puxurí', occurrence Amazonia. The seeds are used as carminative and stomachic.[2] *Previous work.* Composition of the essential oils extracted from the seeds[3] (safrol 36·0%, eugenol 11·4%, eucalyptol 5·4%, terpene alcohols 10%, lauric acid 8·9%),[4] the leaves (safrol 21·7%, eugenol 1·7%, eucalyptol 47·6%, α-terpineol 11·7%)[5] and the branch wood (safrol 20·1%, eugenol 61·0%, eucalyptol 10·8%, α-terpineol 6·8%).[5]

* Part XXIII in the series "The Chemistry of Brazilian Lauraceae". For Part XXII see Ref. 1.

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Trunk-wood (1·4 kg) collected at km-14 of the Manaus Itacoatiara road was extracted with benzene at room temp. The extract (40 g) was chromatographed on silica. Elution with light petrol. gave safrol (12 ml). Elution with light petrol.–benzene, 1:1 gave first sitosterol (350 mg) and next eugenol (8 ml). Elution with benzene gave 3,4-methylenedioxycinnamaldehyde (200 mg, m.p. 84–85°, lit.[6] m.p. 84–85°). Elution with benzene–AcOEt 4:1 gave first 3,4-methylenedioxycinnamyl alcohol (80 mg, m.p. 75–77°, lit.[7] m.p., which we were not able to confirm, 123°) and next syringic aldehyde (120 mg, m.p. 108–110°, lit.[8] m.p. 109–110°). The identifications were obtained by spectral means and confirmed by direct comparison with authentic samples.

Comments. Surprisingly 3,4-methylenedioxycinnamyl alcohol and 3,4-methylenedioxycinnamaldehyde seem to be rare natural products. While the proven occurrence of the aldehyde was so far restricted to two Lauraceae (camphor tree,[9] sassafras[6]), the alcohol does not seem to have been isolated previously.

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CONSTITUENTS OF *LINDERA ERYTHROCARPA*

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Key Word Index—*Lindera erythrocarpa*, Lauraceae; bark and leaves; linderone; methyllinderone; lucidone; methyllucidone.

Plant. Lindera erythrocarpa Makino. *Source.* Gifu Prefecture, Japan. *Uses.* Leaves as a folk medicine of Gifu Prefecture for stomach ache and thirst. *Previous work.* Tannin of bark[1] and essential oil of leaves.[2]

Bark. The Et_2O extract of dry bark was chromatographed on silica and eluted with light petrol. (b.p. 45–60°), followed by benzene and EtOAc. Benzene eluted linderone (I), orange yellow needles, $C_{16}H_{14}O_5$, m.p. 92–93·5°. (TLC, IR, UV, NMR and m.m.p.). Ethyl acetate afforded methyllinderone(II), yellow needles, $C_{17}H_{16}O_5$, m.p. 84–85°. (TLC, IR, UV, NMR and m.m.p.). The presence of lucidone (III) and methyllucidone (IV) were only detected by TLC.

Leaves. The presence of I, II, III and IV were detected by TLC from Et_2O extract of dry leaves. TLC on Kiesel-gel H; solvent systems: benzene–EtOAc (9:1), EtOAc, and $CHCl_3$–MeOH (9:1), color reagent: I_2 and Ehrlich reagent.

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