sie identifiziert werden als (*A*): Δ-Ergosten-3-on (28.8%) (**1**), $\Delta^4$-Stigmasten-3-on (53.7%) (**2**) und $\Delta^{4,22}$-Stigmastadien-3-on (17.5%) (**3**); $R_f$ (min) (**1**) (11.5, (**2**) 13.6 und (**3**) 12.1. (*B*): $\Delta^4$-Ergost en-3, 6-dion (21.2%) (**4**), $\Delta^4$-Stigmasten-3, 6-dion (70,5%) (**5**) und $\Delta^{4,22}$-Stigmastadien-3, 6-dion (8.3%) $R_f$ (min) (**4**) 18.1 (**5**) 21.7, (**6**) 19.1.

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# PHLOROGLUCINOL DERIVATIVES OF *CALLISTEMON LANCEOLATUS* LEAVES

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**Key Word Index**—*Callistemon lanceolatus*; Myrtaceae; phloroglucinol derivatives; myrtucommulone A.

The shrubs and trees belonging to the family Myrtaceae flourish in the tropics and subtropics of both the old and new worlds. A particularly large number of species are found in Australia and the surrounding archipelago, where some 600 *Eucalyptus* species alone are known. Only one species, *Myrtus communis* L., is known in the Mediterranean area [1]. The leaves of Myrtaceous plants are pitted with schizogenously developed cavities containing essential oils, composed mainly of monoterpenes, sesquiterpenes and cyclic β-triketones [1]. The β-triketones of several species are derivatives of tetramethylated phloroglucinol ring (e.g., flavesone and leptospermone) [2].

From *M. communis* two polycyclic phloroglucinol derivatives, myrtucommulone A and B, which are structurally related to the phloroglucinol derivatives of *Dryopteris* ferns [3–5], kousso flowers [6–9] and kamala [10], have recently been reported [11]. In connection with our investigation of naturally occuring phloroglucinol derivatives [3–10] we have examined several Myrtaceous plants from India. In the present communication we report results for *Callistemon lanceolatus Eucalyptus citriodora*, *Psidium guajava* and *Syzygium cumini*.

Preliminary analysis of these plants (leaves and bark were treated seperately) indicated phloroglucinol derivatives only in the leaves of *C. lanceolatus*, which were then further investigated. Isolation of the crude phloroglucinol derivatives by the MgO-method [3–5], followed by column chromatographic purification and recrystallization yielded a small amount of yellow crystals, which melted at 183–185°. These were identical (Mmp, TLC, IR, PMR, MS) with the recently isolated myrtucommulone A* (*vide supra*) for which the structure **1** has been proposed [11].

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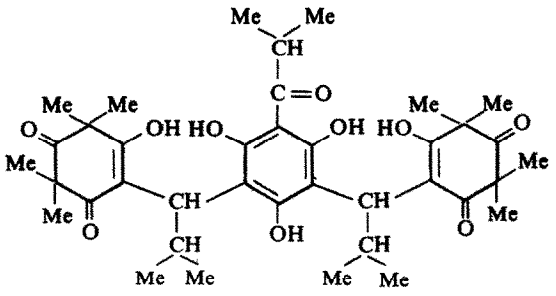
## EXPERIMENTAL

*Plant material.* Plants were collected from Chandigarh (India) in August 1975. *C. lanceolatus* DC. and *E. citriodora* Hook. W.J. are indigenous to Australia and have been recently introduced



1

in Chandigarh (India) as ornamental plants. *P. guajava* L. is a native of tropical America that has been growing in India for the last three centuries. *S. cumini* (L.) Skeels is a native of India Herbarium vouchers are deposited at the Botany Department Herbarium, Panjab University.

*Preliminary tests.* $Et_2O$ extracts of the freshly collected plant materials (leaves and bark were treated seperately) were examined on buffered Si gel TLC plates (pH 6; *n*-hexane–$CHCl_3$–EtOH (71.5:71.5:7) detection Fast Blue salt B).

*Isolation of myrtucommulone A.* Air-dried leaves of *C. lanceolatus* (800 g) were treated by the MgO-method [3–5], followed by column chromatographic purification (Si gel; $C_6H_6$). This yielded 25 mg of myrtucommulone A as yellow crystals, which, after recrystallization from $Me_2CO$, melted at 183–185° (lit. [11] 185–186°).

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# SUR L'ANHYDRODEHYDROFOMENTARIOL, NOUVEAU PIGMENT DE *FOMES FOMENTARIUS**

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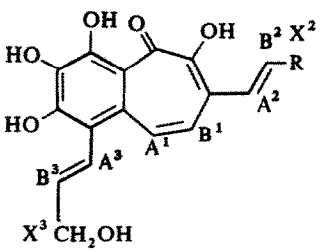
**Key Word Index**—*Fomes fomentarius*; Polyporaceae; new benzotropolone; anhydrodéhydrofomentariol.

La croûte externe de *Fomes fomentarius*, polypore parasite des feuillus et notamment du hêtre *Fagus silvatica*, renferme diverses benzotropolones: en plus du fomentariol (**1**) [1], pigment majeur, ont été caractérisés le déhydrofomentariol (**2**) [2] et l'anhydrofomentariol (**3**) [3].



1: R = $CH_2OH$: Fomentariol
2 R = CHO: Déhydrofomentariol

L'identification d'un nouveat constituant mineur, l'anhydrodehydrofomentariol (ADF) (**4**) fait l'objet de la présente note. Comme c'est le cas pour le déhydrofomentariol (**2**), l'effet bathochrome observé en spectrométrie UV-visible par rapport au fomentariol (**1**) indique la présence dans **4** d'une fonction aldéhydique conjuguée au chromophore.

De plus faible polarité que le déhydrofomentariol (élué de la colonne de polyamide acétylé avec 6% de MeOH dans $C_6H_6$, contre 10% pour **2** **4** donne un ion de plus haute masse à *m/e* 312 (100%) correspondant ici à l'ion moléculaire, alors que cette même masse de 312 correspondait à M-18 pour **2**. On observe par ailleurs pour **4** la formation d'un dérivé tri TMSi à *m/e* 528 (312 + 3 × 72).

Ces données conduisent à l'idée que **4** dérive de **1** par modifications au niveau des deux groupements propénols: formation d'un groupement propénal d'une part, d'un cycle pyrane d'autre part. L'étude du spectre PMR (Tableau) montre clairement que ces modifications représentent la somme de celles observées dans **2** (groupement propénal sur le cycle tropolonique) et dans **3** (cycle pyrane) ce qui justifie la structure **4** proposée pour

*Recherches chimiotaxinomiques sur les Champignons 38. Pour 37 voir: Arpin, N. et Kühner, R. (1971) *Bull. Mens. Soc. Linn. Lyon* **4**, 83.