cristallisée dans l'acétone. F = 228–232°. Le spectre IR et le spectre de masse sont comparables à ceux décrits pour la clavolonine.[4] Le spectre IR (KBr) de l'iodométhylate préparé à partir de notre échantillon est superposable à celui d'un échantillon authentique d'iodométhylate de clavolonine. Le point de fusion mixte des iodométhylates ne présente pas d'abaissement de température.

*Des-*N*-methyl-α-obscurine.* De la fraction de K = 0 on sépare l'*N*-acétyl-des-*N*-méthyl-α-obscurine (34 mg). F. 248–256°. IR: Bandes à 3200, 2910, 1680, 1645 et 1400 cm^{-1}. SM: Ion moléculaire à m/e = 302; Ions fragments caractéristiques à m/e = 259, 245, 230, 217, 203, 190 et 175.

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SPENOPSIDA

EQUISETACEAE

THE ISOLATION OF INDOLE-3-CARBOXALDEHYDE FROM *EQUISETUM TELMATEIA*

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Plant. Sterile aerial stems of *Equisetum telmateia* Ehrh. (*E. maximum* Lam.) collected near Brussels in June 1969.

Previous work. Chemical.[1–4]

Isolation and identification. The dried plants (5 kg) were exhaustively extracted by boiling light petroleum, then moistened with NH_3 and thoroughly extracted by MeOH. The concentrated residue was mixed with 10% HOAc, filtered and extracted with $CHCl_3$. The $CHCl_3$ solution was then extracted with 0·1 N HCl and evaporated. By chromatography on alumina of the residue (4·5 g) of non basic compounds, five constituents were isolated.

Indole-3-carboxaldehyde (25 mg)† was identified on the basis of its physical properties (m.p. 192–193°, IR, UV, NMR, MS); this structural attribution was confirmed by comparison (mixed m.p., IR, TLC) with a sample synthetized from indole.[5]

Methyl palmitate (600 mg; identified by IR, NMR, MS), palmitamide (9 mg; m.p.

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† The specified weights are the weights actually obtained; they do not necessarily represent the total weight of each compound in the fraction under study.

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105–106°, IR, MS), methyl ferulate (40 mg; IR, UV, MS; further characterized by alkaline hydrolysis to ferulic acid, m.p. 169–170°, IR, MS) and a sterol mixture (17 mg; m.p. 139–140°, $[\alpha]_D^{22}$ −37° [$CHCl_3$; c = 0·3] after crystallization from EtOH–H_2O) consisting mainly of β-sitosterol (molecular ion at 414 m.u.)* were also present among the non basic compounds separated from the methanolic extract.

The isolation of indole-3-carboxaldehyde and of palmitamide deserves some comment. The artifactual production of a range of simple indole compounds upon exposure of plant extracts to ammoniacal conditions has been demonstrated and in particular it is known that indole-3-carboxaldehyde is produced upon exposure of indole-3-pyruvic acid to ammonia.[6] Since the extraction was performed in the presence of ammonia, there is a possibility that the isolated indole-3-carboxaldehyde is but an artifact. A similar remark also applies to the isolation of palmitamide which could conceivably arise from ammonolysis of methyl palmitate.

Neither nicotine nor palustrine[7] could be detected in the fractions containing the basic constituents of *E. telmateia.*

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* The presence of a lower homologue is obvious by the occurrence in the MS of a further molecular ion at 400 m.u. (relative intensity 414/400:100/70).

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FILICINAE

POLYPODIACEAE

DIE INHALTSSTOFFE VON *DAVALLIA CANARIENSIS* UND *GYMNOCARPIUM DRYOPTERIS**

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Farn. Davallia canariensis (L.) Sm.

Herkunft. Kanarische Inseln, Felswände am Nordwestufer von Gran Canaria, 500 m ü.M., im September 1968 gesammelt.

Aufarbeitung. 100 g getrocknete und gemahlene Rhizome werden mit Äther extrahiert, der Extrakt eingedampft und der Rückstand in Hexan über 50 g Al_2O_3 (Akt. II, neutral) chromatographiert.

* 20. Mitteilung über Triterpene; 19.: S. HUNECK und R. TÜMMLER, *J. Prakt. Chem.* **38,** 233 (1968).