

IR (KBr): 3280–3320  $\text{cm}^{-1}$  (NH); 1570–1610  $\text{cm}^{-1}$  (C=O), 1350–1370 and 1450–1475  $\text{cm}^{-1}$  (CH deformation vibrations of C-CH<sub>3</sub>).

<sup>1</sup>H NMR (DMSO-*d*<sub>6</sub>): The spectra of all the synthesized compounds exhibit a signal in the region  $\delta$  8.3–10.7 due to the N-H proton, a singlet in the region  $\delta$  1.9–2.8 due to methyl protons and a multiplet in the region  $\delta$  6.2–8.17 due to aromatic protons.

Mass spectra: Mass spectra were recorded on a JEOL, JMSD-300 mass spectrometer at 70 eV and 100  $\mu\text{A}$  ionizing current. All the compounds, besides the respective molecular ion peaks exhibited a peak at  $m/z=184$  due to the  $(\text{COC}_6\text{H}_4\text{Br-}p)^+$ . This supports the formation of benzothiazines with benzoyl group rather than acetyl group.

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## ISOLATION OF A NEW TRITERPENE FROM CALOTROPIS PROCERA LATEX

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A variety of terpenoid alcohols, esters of steam volatile and long chain fatty acids and several cardioactive poisons have earlier been isolated from *Calotropis procera* latex and characterized. In the present communication, we describe the isolation and identification of a new ester of a terpenol.

The pooled frozen latex was thawed a fortnight after collection when the serum separated and the solid part of the latex could easily be removed and dried between filter paper sheets.

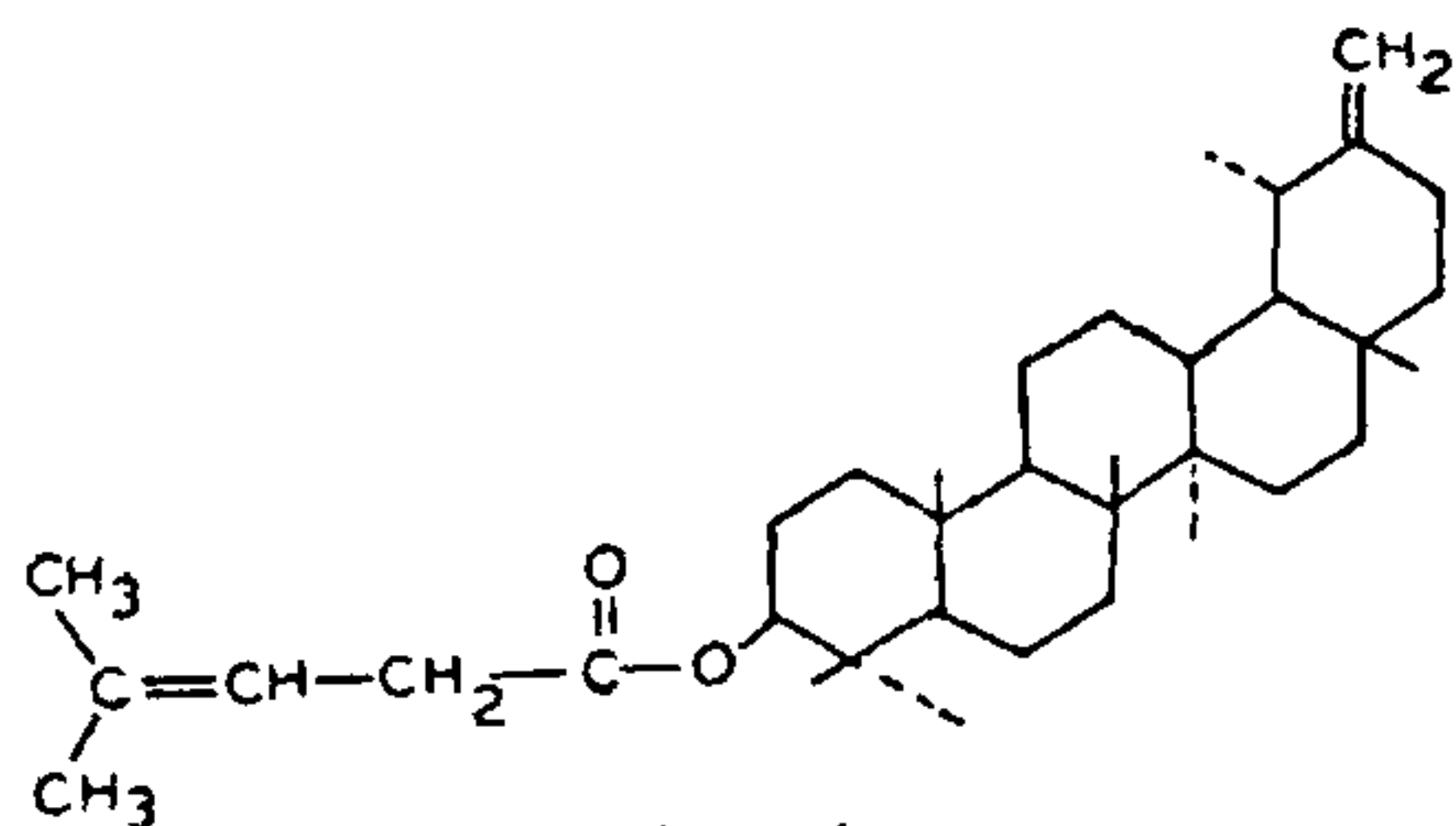
The solid was extracted exhaustively with ethanol (95%, v/v) and the alcoholic extract filtered hot and cooled when it deposited a white bulky mass. This was filtered, dried and subjected to column chromatography on a silica gel column dissolved in *n*-hexane and eluted with the same solvent.

The fractions eluted yielded two compounds. While one of them was identified as taraxasteryl acetate by various physical and chemical tests (m.p., m.m.p., IR, NMR, MS and co-TLC) the other appeared to be a new triterpene.

The white crystalline compound melting sharp at 154°C and with 522 as its molecular weight determined by the Rast's method, answered to the molecular formula C<sub>36</sub>H<sub>58</sub>O<sub>2</sub>. (Found: C, 82.7%; H, 11.16%; C<sub>36</sub>H<sub>58</sub>O<sub>2</sub> requires C, 82.76%; H, 11.11%). The compound responded to all the colour tests for triterpenes.

The IR spectrum exposed strong bands at 1740  $\text{cm}^{-1}$  (>C=O group), 1460  $\text{cm}^{-1}$ , 1396  $\text{cm}^{-1}$ , 1260  $\text{cm}^{-1}$  (-O-COR group) and at 880  $\text{cm}^{-1}$  (=CH<sub>2</sub> group out of plane bending).

The <sup>1</sup>H NMR spectrum of the compound revealed the presence of an exocyclic methylene group ( $\delta$  4.50, 2H, C=CH<sub>2</sub>). The signals at 0.79, 0.85, 0.92, 0.95



Scheme 1.

and 0.99 (21) established the presence of seven methyl groups on a saturated carbon atom. The compound also exhibited the characteristic signals for an ester side chain comprising of 2.06 (2H,  $-\text{CH}_2-$ ), 5.2 (t, 1H,  $-\text{CH}=\text{C}$ ) and 1.32 (s, 6H,  $=\text{C}(\text{CH}_3)_2$ ).

Hydrolysis of the compound in alkaline medium yielded a compound whose elemental composition, molecular formula, physical properties (m.p., IR, NMR and MS) and the presence of a single  $-\text{OH}$  group at  $\text{C}_3$  position pointed it to be taraxasterol. The mixed melting point of the compound with an authentic specimen of taraxasterol did not register any depression in its melting point.

Based on the above observations, the new compound obtained has been assigned the structure (scheme 1) and named as Taraxast-20(30)en-3-(4-methyl-3-pent-enoate).

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### **BHIDEA BORII, A NEW SPECIES OF POACEAE FROM INDIA**

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WHILE studying the grasses at the herbarium of the Royal Botanic Gardens, Kew, one of us (VP)

found an interesting specimen collected by C. McCann during October 1919 from Siddapur (Karnataka State). Detailed studies of the specimen revealed that it is a new species of the genus *Bhidea* Bor. The same is described here.

*Bhidea borii* U. R. Deshpande, Ved Prakash and N. P. Singh, *sp. nov.*

Ex affinitate *B. burnsiiana* Bor et *B. fischeri* Sreekumar and Shetty, ab utroque spiculis sessilibus magnioribus (ca 2 cm longis) et spiculis utroque glumis aristatis distinctus.

Holotypus: India: Jog-Siddapur (ditione Karnataka) McCann A. 51a (K).

*Bhidea borii* U. R. Deshpande, Ved Prakash and N. P. Singh, *sp. nov.*

Resembles *B. burnsiiana* Bor and *B. fischeri* Sreekumar and Shetty (in *Kew Bull.* 42(3): 683. f. 1. 1987) but differs from both in having larger sessile spikelets ca 2 cm long and glumes of all spikelets with awns.

Annual, ca 16 cm high. Culms slender, upper nodes hairy, hairs up to 2 mm long. Leaf blade linear, acuminate, glabrous, 2.5–6.0 × 0.2 cm; sheath glabrous. Inflorescence terminal, solitary, up to 5 cm long. Spikelets in pairs, one sessile and the other pedicelled, except the lower 3 pairs at the base of the raceme, which are homomorphous. Rachilla joint, ca 2 mm long, hairy. Sessile spikelet ca 2 cm long; callus 2.5 mm long; lower glume 1.4 cm long, awned; upper glume 2 cm long, 3-lobed, midlobe long-awned; lower lemma 1 cm long; upper lemma 3.7 cm long including the awn, awn ca 3 cm long, geniculate. Pedicelled spikelet 1.7 cm long including pedicel; pedicel 3 mm long, hairy on one side; lower glume 1.2 cm long, lanceolate, shortly awned, margins hyaline; upper glume 1.4 cm long, lanceolate, long-awned.

India, Karnataka, North Kanara District, Jog-Siddapur C. McCann A51a, October, 1919 (holotype K!).

Habitat: In open grasslands on rocky soils growing along with *Danthonidium gammie* (Bhide) C. E. Hubbard.

Etymology: This species is dedicated to the memory of Dr N. L. Bor, a pioneer in the study of grasses.

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