

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 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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A NEW SEVERE MOSAIC DISEASE OF OPIUM POPPY

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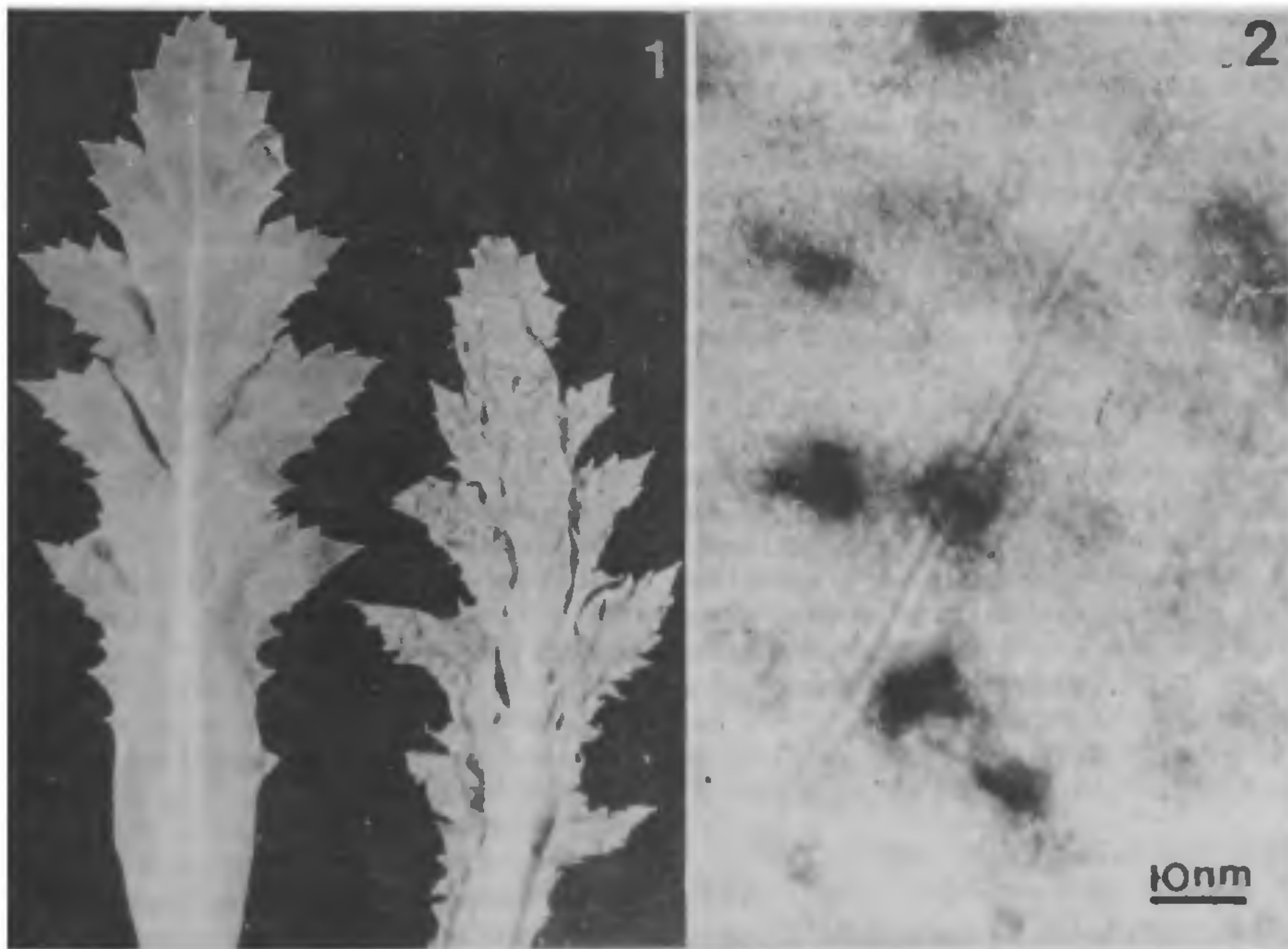
OPIUM poppy (*Papaver somniferum* L.) is an important medicinal plant cultivated on a large scale in India. It contains several alkaloids; among them morphine, codeine, thebaine, narcotine and papaverine have important therapeutic value.

A severe mosaic disease was observed on opium

poppy plants, in the experimental fields of the Central Institute of Medicinal and Aromatic Plants, Lucknow. The affected plants exhibited mosaic, puckering symptoms on the leaves. Plants were stunted, and produced small flower buds with mottling symptoms on pedicel and sepals. The capsules were distorted. Severe infection of young plants often resulted in premature death of the plants.

For mechanical transmission experiments, the sap was extracted from the infected leaves in 0.1 M phosphate buffer, pH 7.0, containing 0.1% 2-mercaptoethanol and gently rubbed on healthy young leaves of test plants previously dusted with Carborundum (600 mesh).

Aphids (*Myzus persicae* Sulz.) were used in insect transmission tests. Virus-free insects were fed on infected *P. somniferum* plants for 24 h. After fasting them for 4 h the aphids were transferred to two sets of healthy one-and-a-half-month-old poppy plants. Twenty-four hours later, 0.03% rogor was sprayed



Figures 1 and 2. 1, Healthy and mosaic virus-infected poppy leaves. 2, Flexuous filamentous virus particles in leaf-dip preparation.