

25  $\pm$  1°C. The cultures of the fungi have been deposited in the Department of Botany, Banaras Hindu University and the diseased specimens in the Herbarium Cryptogamae Indicae Orientalis of the Division of Mycology and Plant Pathology, Indian Agricultural Research Institute, New Delhi. The symptoms of the diseases and the characters of the pathogens are described below:

*A. citri* Ellis and Pierce<sup>1,2</sup> produced brown, circular spots with sharp margins, 0.5–2.25 mm in diameter on the leaves of *C. siphonanthus*. The colonies on Czapek's agar effuse, zonate, grey. Conidiophores simple to branched, slender, 3–5  $\mu$ m-wide, olive-brown, septate. Conidia produced in chains, light to olive-brown, darkening with age, smooth to occasionally finely rough walled, of variable shape, mostly obclavate or oval, with or without terminal or lateral beak, slightly constricted at septa, muriform, with 0–7 transverse and 0–6 longitudinal septa, of variable size, 18–40  $\times$  8–14  $\mu$ m, blunt or rounded, hyaline or light brown, conidial chains simple to branched.

The leaves of *A. lamarckii* THW., infected with *A. humicola* Oudem, Achiv. Neerland<sup>3,4</sup> showed irregular to circular pustules with greyish-brown to blackish-brown margins. On Czapek's agar medium colonies at maturity blackish-green; conidiophores distinct, hyaline, septate, 3–5  $\mu$ m in diameter, racemosely branched, lageniform, at first hyaline later honey coloured dark, finally blackish-green, variable in size, 12–52  $\times$  8–16  $\mu$ m with 3–7 transverse septa muriform, ultimately becoming dense and very finely roughened, slight or no constriction at septa.

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## CYTOLOGICAL STUDIES IN *ANTHERICUM SUFFRUTICOSUM* (BAKER) MILNE REDHEAD

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GENUS *Anthericum* L. (Liliaceae) is closely related to *Chlorophytum* Ker.-Gawl. and is represented by a large number of species in Africa. Cytological data in

respect of this genus are rather meagre and a few species that have been investigated revealed that *Anthericum* tends to have eight as its basic chromosome number and most of the species are diploid. The present paper deals with the chromosome number, karyomorphology and meiotic behaviour in *A. suffruticosum* (Baker) Milne Redhead from tropical Africa.

*A. suffruticosum* is a perennial with erect or creeping thick rhizome which continues as an aerial stem for some distance and bears distichously arranged grass-like leaves. It sends out naked slender scapes from leaf axils which end in short raceme of 5–15 greenish-white flowers. In the glass house, it flowered many times since its introduction in 1977 but all the flowers withered and no fruit formation has been observed so far (figure 1).



Figure 1. *Anthericum suffruticosum* (Baker) Milne Redhead, habit ( $\times$  12).

Root-tip squashes revealed  $2n=32$  chromosomes (figure 2) which can be arranged in four sets of eight each. On the basis of their relative lengths and centromeric positions they can be classified as 4 long with submedian centromeres, 12 medium sized with median centromeres, 12 medium sized with subterminal centromeres and 4 short with median centromeres as well as having secondary constriction in their short arm.

The length difference between the longest (6.2  $\mu$ ) and the shortest chromosome (3.4  $\mu$ ) is not significant. Thus, the karyotype can be termed as rather

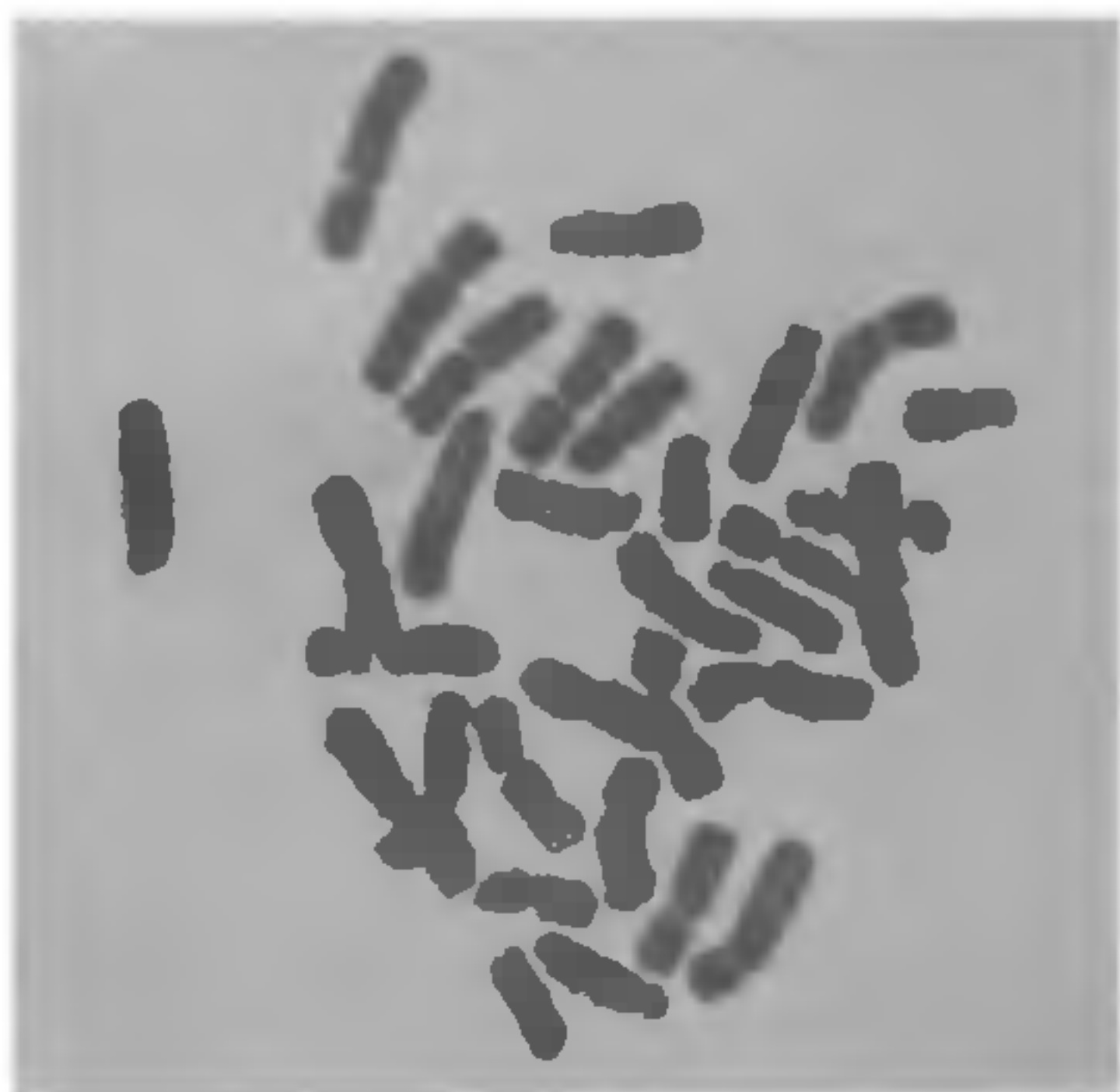


Figure 2. Somatic chromosomes at MI ( $\times 2250$ ).

symmetrical<sup>1</sup>. Absolute length of the chromosomes is  $158 \mu$ .

Observations on anther squashes revealed formation of 16 clear bivalents in about 40% PMC's which segregate normally at AI. The rest of the meiocytes presented abnormalities such as the formation of quadrivalents and/or multivalents at MI, occasional unorientated bivalent at MI (figure 3) and laggards at AI (figure 4). The most frequent configuration observed was formation of 7 to 8 quadrivalents at MI.

The cytological data available to date indicate that the majority of the species of this genus have  $2n=16$  chromosomes<sup>2,3</sup>, while only one, viz. *A. liliago* L. has  $2n=32$  chromosomes<sup>4</sup>. The present report of  $2n=32$  chromosomes, although second for the genus, is revealed here for the first time for *A. suffruticosum*.

Both *A. liliago* and *A. suffruticosum* evidently stand at a tetraploid level. Details of karyomorphology clearly indicate four similar sets of

eight chromosomes each in the latter species thus suggesting its auto-tetraploid nature. Meiotic behaviour of chromosomes, with frequent formation of quadrivalents, further supports the above assumption of autotetraploidy.

27 April 1981

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### **SAURAUIA BRACTEOSA DC. (SAURAUACEAE) — A NEW RECORD FOR THE INDIAN SUBCONTINENT AND A NEW GENERIC RECORD FOR ANDAMAN & NICOBAR ISLANDS**

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DURING the botanical exploration in the Nicobar islands, the authors collected an interesting plant which was subsequently identified as *Saurauia bracteosa* DC. Since this species is hitherto unreported from India<sup>1,2</sup> being reported only from Java<sup>3</sup>, a short description and illustration of the same are provided below.

*Saurauia bracteosa* DC., in Mem. Soc. Phys. Genev. 1: 422. 1822; Back. & Bakh.f., Fl. Java 1: 326. 1963.

Evergreen trees, up to 8 m tall, most parts scaly; branchlets stout, purplish-brown. Leaves up to  $35 \times 15$  cm, alternate, elliptic-oblong, coriaceous, scaly on the upper surface in juvenile leaves, glabrous in mature leaves, densely tomentose and scaly beneath, dentate-serrate, shortly acuminate at apex, rounded at base; petioles  $\pm 5$  cm long, stout. Cymes in corymbs,  $3-4 \times 4-5$  cm, densely pubescent and scaly; peduncle 5-10 cm long; bracts  $\pm 2 \times 0.8$  cm, foliaceous, oblong, caudate at apex, abundantly scaly. Calyx  $\pm 7$  mm long, quincuncially imbricate, much shorter than petals, united at base; sepals 5; outer 2 densely scaly, unequal, ovate-lanceolate,  $4-5 \times 2-3$  mm; inner 3 larger than the outer,  $\pm 7 \times 5$  mm, ovate, hyaline towards margin,

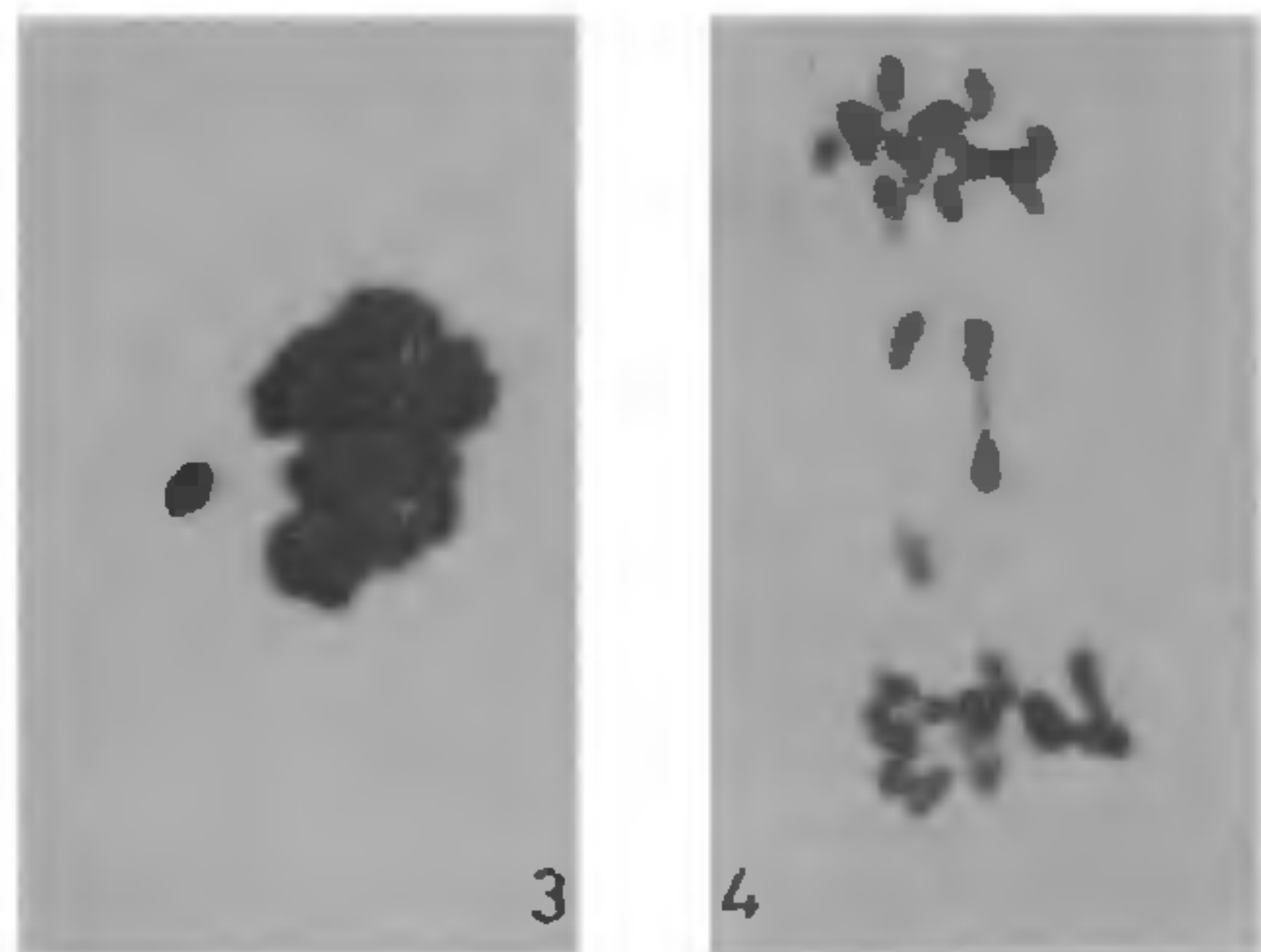


Figure 3, 4 Unorientated bivalent at MI ( $\times 1800$ ). 4. Laggards at AI ( $\times 1800$ ).