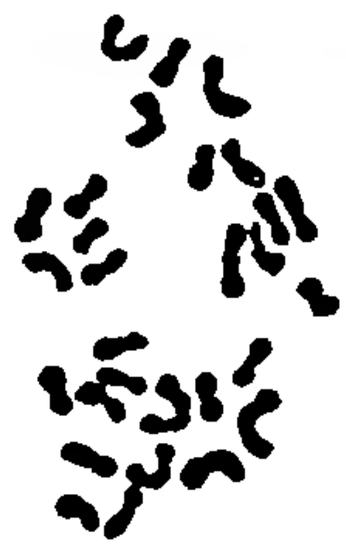
covered the lower half of the cuttings. After two hours, the twigs were taken out, washed well in running water and planted in the field to sprout. Out of 25 cuttings, only 9 plants survived to maturity.

Normal peg and pod formation were noticed in one plant (Fig. 1), which showed 38·7% pollen fertility as against 17·5% in the untreated triploid. It had a pollen diameter of 52·01 μ, while the triploid pollen grains measured only 40·40 μ. There was no gigasness in the morphology of the plant, but it was spreading and flowering profusely.



2 3

FIGS. 1–3. Fig. 1. Twigs from sterile triploid (right) and colchicine induced fertile amphidiploid plants (left) to show normal pod setting. Fig. 2. Mitotic metaphase in triploid ($2n = 30$) (× 1,000) with camera lucida drawing. Fig. 3. Mitotic metaphase in amphidiploid ($2n = 60$) (× 1000) with camera lucida drawing.

The amphidiploid nature of this plant was confirmed by counting the somatic chromosomes ($2n = 60$), from fresh squashes prepared from side roots of the live plant (Fig. 3). The triploid showed $2n = 30$ chromosomes (Fig. 2). However, meiosis of this amphidiploid plant could not be studied due to unforeseen reasons. A total of 30 seeds have been collected from this plant. The amphidiploid plant has been successfully propagated by stem cuttings both for meiotic analysis and for utilization as bridging species in further back-crosses to cultivated groundnut.

A fertile allohexaploid with $2n = 60$ chromosomes was obtained by Kumar *et al.*[2], by treatment with colchicine (0·2%) of young vegetative buds of the hybrid between *A. hypogaea* × *A. villosa*. Further, D'Cruz and Upadhyaya[1] gave cytological evidence to show that *A. hypogaea* is a typical allotetraploid, based on the behaviour of the interspecific hybrid between *A. hypogaea* × *A. villosa*, and their C_1 and C_2 progenies. Information on the utilization of the synthetic amphidiploids as bridging species, between cultivated and wild species, for transfer of tikka resistant genes is lacking. In the present study the wild species used (*A. duranensis*), the interspecific hybrid and the allohexaploid plant were found to be tolerant to *Cercospora* leaf spot (tikka) disease. Further work on the cytology of the vegetatively propagated amphidiploids and their back cross derivatives with the cultivated species is in progress.

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A NEW SPECIES OF *SPIROTRICHONYMPHA* GRASSI AND FOA (PROTOZOA: MASTIGOPHORA) FROM A XYLOPHAGOUS TERMITE FROM INDIA

WHILE examining the termite flagellates from Hooghly district, West Bengal, the author discovered a new flagellate from *Coptotermes heimi* (Wasm.) which is described here as *Spirotrichonympha bhadreshwarensis* sp. nov.

The specimens obtained from the gut contents of the host were examined in fresh condition, fixed in Schaudinn's fluid and stained with Heidenhain's iron haematoxylin. All the measurements were taken with the aid of a calibrated ocular micrometer and drawings were made with the help of camera lucida.

Description.—The body is more or less pear-shaped (Fig. 1) with pointed anterior end and slightly compressed posterior end, 22·5 to 67·5 μ in length (average

50·4 μ) and 18 to 34·5 μ in breadth (average 27·3 μ). A very short tubule originates at the anterior end and does not reach to the nucleus. The sprial bands are dexiotropic. The number of spiral bands of flagella vary from 19 to 22 in adult and 10 to 15 in oval bodied young forms. A little of the posterior end of the body is devoid of spiral bands in both adult and young forms. The anterior flagella around the tube measure 7·5 to 19·5 μ in length and the posterior ones 10·5 to 30 μ in length. The spherical nucleus which measures 4·5 to 7·5 μ in diameter has scattered chromatin granules and is located in the anterior third of the body. Six chromosomes in paired condition have been observed at the periphery attached to nuclear membrane. Various stages of nuclear division have, however, not been encountered. The axostyle was not found in the new species dealt with and in this aspect agrees with the observations of Koidzumi, (1921)[1] and Chakravarty and Banerjee (1956)[5]. Mackinnon, (1927)[2]; de Mello, (1921)[3] and Karandikar and Vittal (1954)[4], however, described axostyle in other species. Endoplasm contains fragments of wood particles of various sizes.

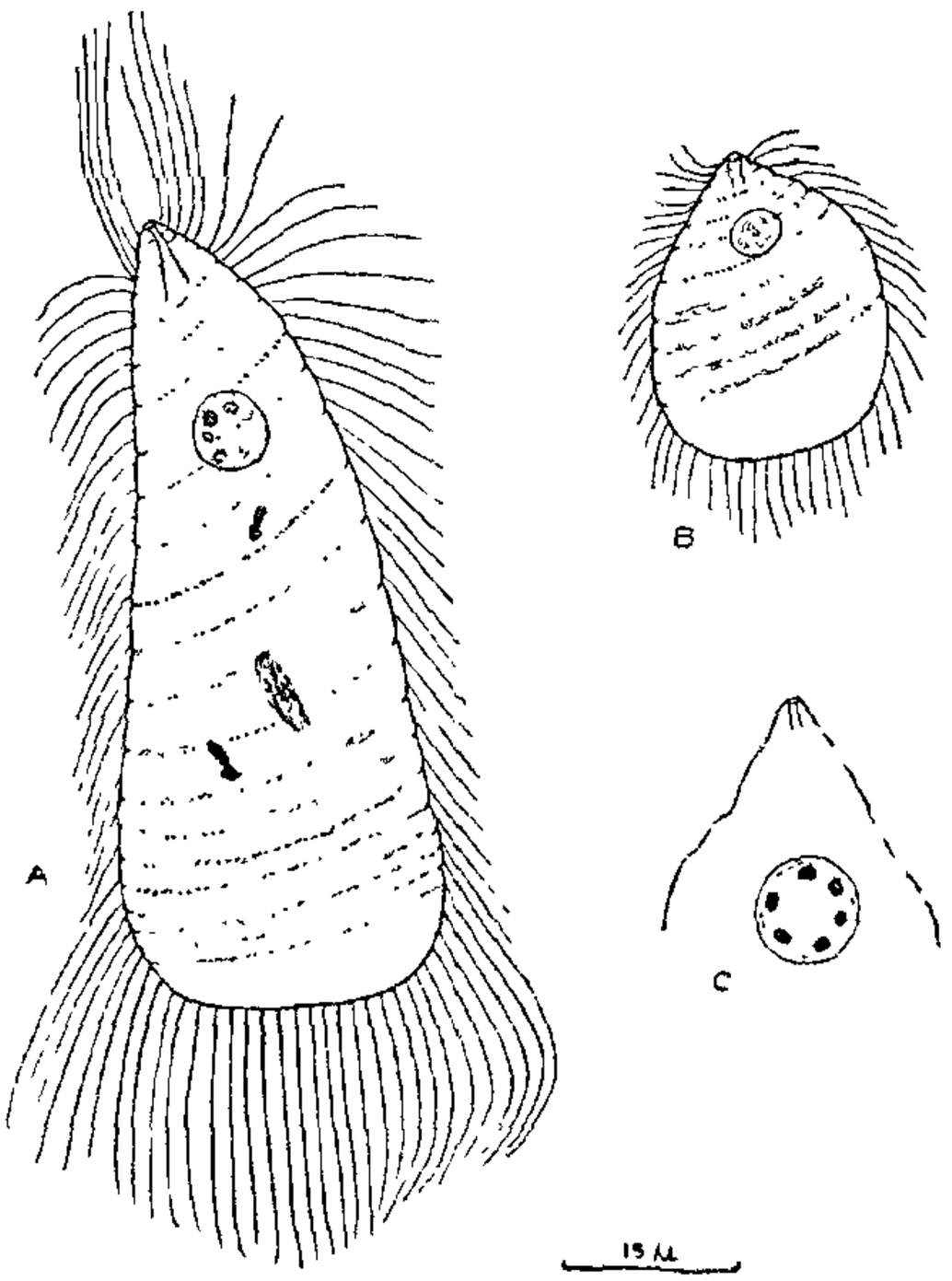

FIG. 1. *Spirotrichonympha bhadreshwarensis* sp. nov. A, adult flagellate; B, young form; C, anterior part of the flagellate showing six chromosomes in paired condition.

Remarks.—So far eleven species of *Spirotrichonympha* have been described. The present species resembles to *S. pyriformes* Chakravarty and Banerjee in the shape of body, absence of axostyle and in the shape of nucleus but differs in the body length 22·5 to 67·5 μ *versus* 10·70 to 55·64 μ and breadth 18 to 34·5 μ *versus* 8·56 to 21·40 μ. The anterior and the posterior flagella are larger than *S. pyriformes*. Six chromosomes have been observed in the present species as against five in *S. pyriformes*. The present species also resembles *S. leidyi* Koidzumi in having similar shape but the latter can conveniently be separated due to the length ranging from 22·5 to 67·5 μ *versus* 15 to 50 μ and breadth ranging from 18 to 34·5 μ *versus* 8 to 30 μ. Further, the nucleus in *S. leidyi* is oval and located in the middle region of the body whereas in the present species it is spherical and situated in anterior third. The present species also shows affinities to *S. elegans* Mackinnon in body shape and structure of the tubule but can be distinguished from *S. elegans* in the number of spiral bands 22 *versus* 16. The number of chromosomes are six instead of four as in *S. elegans*. From the above conjecture, the present form is described as *Spirotrichonympha bhadreshwarensis* sp. nov. The species name is given here after the type locality.

Type host : *Coptotermes heimi* (Wasm.)

Type locality: Bhandreshwar, Hooghly district, West Bengal

Holotype : On the slide wil be deposited in Zoological Survey of India.

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XENIA IN INTERSPECTIFIC CROSSES OF SORGHUM

XENIA may result in crosses between lines that differ for a single dominant oligo-gene affecting endosperm characters like aleurone colour in maize[3]. Paternal effects are often met with, in diverse crosses where the effects of the paternal genes are dominant over the maternal effects as can be seen in crossed seed (increase in size of the fruit and