

The cause of aggregation of insect population was worked by Arbous and Kerrich's<sup>9</sup> criteria and is given as follows:

$$h = \frac{\bar{x}}{2k} v$$

where  $\bar{x}$  = the mean,  $v$  is function of chi-square with  $2k$  degree of freedom and  $h$  is the number of individuals in aggregation for the probability level attached to  $v$ .

**Results and Discussions**

The value of Morisita's index of dispersion 1.2558 which is greater than one, as well as a higher value of variance 1.6701 which is greater than the mean 0.8925 showed aggregation nature of thrips population. The value of dispersion parameter  $k$  was found to be 1.0243. The calculation of chi-square between the observed and expected frequencies is shown in the last column of Table I.

TABLE I

Fitting the negative binomial distribution to counts of onion thrips (*Thrips tabaci* Lind.)

No. of thrips per plant (x)	Observed frequencies (fi)	Expected frequencies $\phi_i$	$(f - \phi)^2 / \phi$
0	210	210.52	0.0012
1	103	99.21	0.1448
2	47	46.56	0.0042
3	18	21.82	0.6683
4	11	10.21	0.0611
5	6	4.77	0.0396
6	3	2.23	
7	2	1.04	
8+	0	3.64	
Total	400	400	$\chi^2 = 0.9197$

The resulting chi-square and P between 0.9 and 0.8 indicated good agreement with the negative binomial distribution.

Arbous and Kerrich's<sup>9</sup> criteria with value of  $h = 0.6246$  less than two, concluded that the aggregation nature of the onion thrips is entirely due to environmental factors like temperature, light, humidity and is not due to active process of thrips population.

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Indian Institute of Horticultural Research,  
255, Upper Palace Orchards,  
Bangalore 560 006,  
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C. L. SUMAN,  
S. D. WAHI,  
N. JAGAN MOHAN.

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**GONYTRICHUM STATE OF MELANOPSAMMELLA INAEQUALIS: A NEW RECORD TO INDIAN MYCOFLORA**

The genus *Gonytrichum* is characterised by slimy phaco-amerospores produced endogenously in subulate phialides. So far, two species have been reported from India<sup>1-2</sup>. During the studies on hyphomycetes of Warangal (A.P.) the authors collected another *Gonytrichum*, viz., *G. caesium* Nees ex Pers [= *Melanopsammella inaequalis* (Grove) Hohnel], the type species of the genus (Fig. 1). Perusal of the literature revealed that this species has not been reported earlier from India.

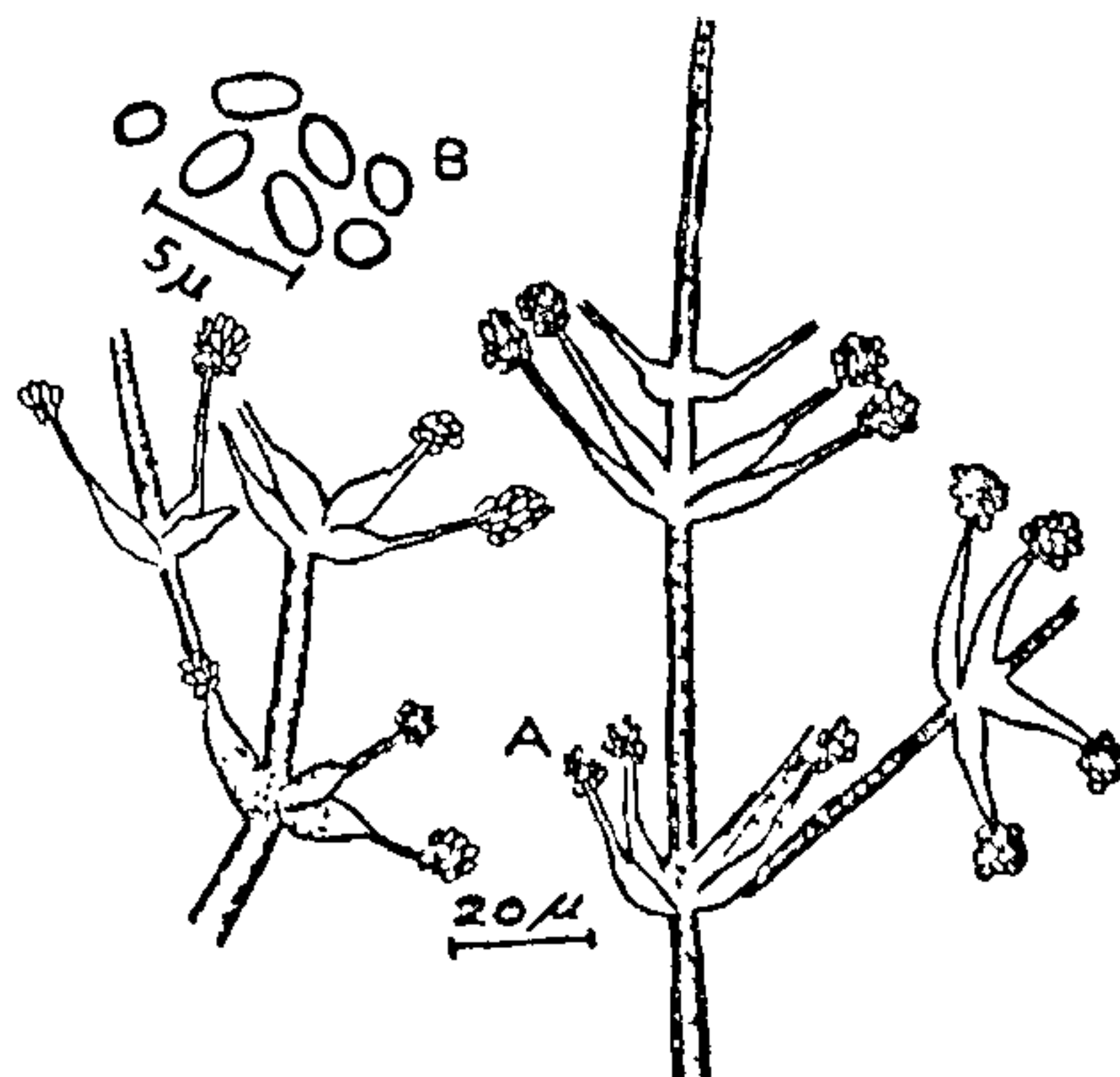


FIG. 1. (A) Conidiophortics with phialides, (B) Subglobose conidia.

Colonies on PDA effuso, pulvinate, white turning to greyish-green, pluffy. Mycelium superficial and immersed, threads branched, septate, 1.8-3.3  $\mu$ m thick. Conidiophores macronematous, mononematous, simple or branched, erect, straight or flexuous,

dark-brown, smooth, paler towards the apex, upto 465  $\mu\text{m}$  long, 1.6-1.7  $\mu\text{m}$  thick, branching system complex, often closely anastomosing and difficult to tease apart. Conidiogenous cells phialides, monophialidic, produced in whorls around the conidiophore at regular intervals on the branched or unbranched collar hyphae, discrete, lateral, lageniform or subulate, subhyaline to pale-brown, measure 7.1-14.3  $\times$  2.1-3.6  $\mu\text{m}$ . Conidia aggregated in slimy masses, acrogenous, endogenous, colourless to subhyaline, subglobose to oval, smooth, 0-septate, 2.1-3.2  $\times$  1.5-1.8  $\mu\text{m}$ .

On account of its short phialides and subglobose to oval conidia, the species has been further identified as *G. caesium* Nees ex Pers var. *subglobosum* W. Gams and Holubova-Jechova<sup>3</sup>.

The fungus was collected on dead leaves of *Mangifera indica* L. from Pakhal forest, on 19-9-1978. Culture on PDA deposited at CMI as IMI 225780.

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Department of Botany,  
Kakatiya University,  
Warangal 506 009,  
July 23, 1979.

S. R. REDDY.  
S. S. REDDY.

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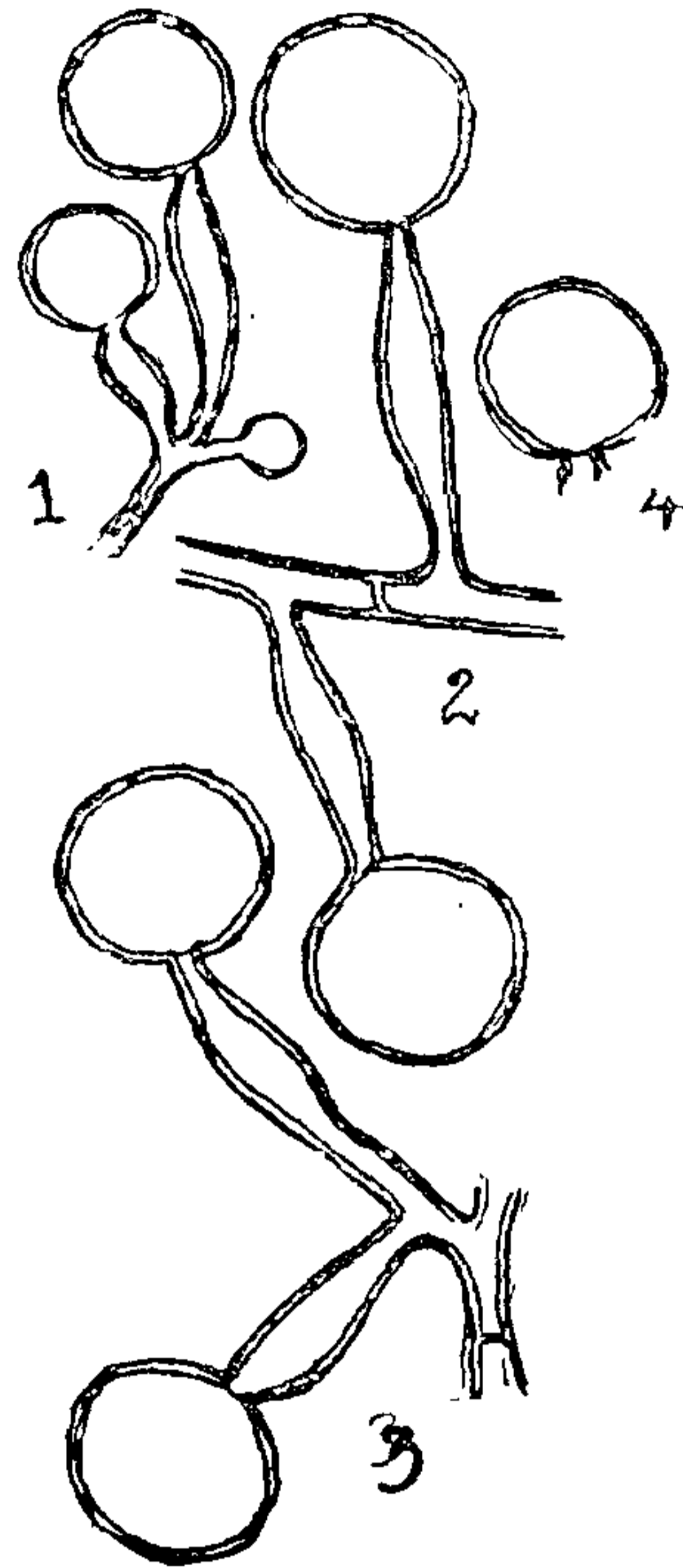
#### A NEW THERMOPHILIC VARIETY OF *HUMICOLA GRISEA* VAR. *INDICA*

DURING studies on Hyphomycetes olive green colonies with slow growth were observed at 24°C. These colonies after being transferred to 45°C showed good growth. Critical taxonomic studies of this fungus revealed that it belonged to *H. grisea* Traar<sup>3</sup>. However, it differed from the type variety and also *H. grisea* var. *thermoidea* Cooney and Emerson<sup>1</sup> in certain characters as shown in Table I and hence a new variety is proposed to accommodate it.

*Humicola grisea* Traan, var. *indica* A. Subrahm, var. nov. (Figs. 1-4)

Colonies in agar on YpSs at 45°C prostratae 90 mm diametro in decem diebus. Sine pigmento diffusibili; reverse coloniae nigrovirens ad nigrum. Mycelium glabrum, septatum 1.5-2.0  $\mu\text{m}$  latae; aleuriophorae 0-septate, simplices 11.0-16.5  $\times$  1.1-2.0  $\mu\text{m}$ ; aleurio-

spores sub-brunneae sphaericae, glabrum 7.7-11.0  $\times$  7.7-11.0  $\mu\text{m}$ .



FIGS. 1-4. *Humicola grisea* var. *indica*. Fig. 1. Part of hypha showing mature and immature aleuriospores (600 $\times$ ). Fig. 2. Part of hypha with mature aleuriospores (1000 $\times$ ). Fig. 3. Part of hypha showing branched aleuriophore bearing aleuriospores (1000 $\times$ ). Fig. 4. Mature aleuriospore (600 $\times$ ).

*Humicola grisea* Traan, var. *indica* A. Subrahm, var. nov. (Figs. 1-4)

Colonies at 45°C on YpSs agar moderately growing, prostrate, zonate, 90 mm in ten days, olive green to blue green, turns bluish gray with the maturation of spores. Margin thin and hyaline; diffusible pigment none; reverse colony zonate greenish black to black; sporulation abundant. At 60°C growth moderate, olive green to buff, reach 55 mm in ten days; margin white; diffusible pigment none; reverse colony zonate, black in the middle with creamy margin; sporulation abundant.

Mycelium smooth, septate, branched 1.5-2.0  $\mu\text{m}$  in diam., hyaline to pale brown; aleuriophores short, lateral or terminal, opposite or alternate, slightly