A NEW SPECIES OF PSEUDOCERCOSPORA SPEG.

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DURING collection of plant parasitic fungi from "Tarai", Belt of North Eastern U. P., an interesting species of *Pseudocercospora* was found on *Azadirachta indica* A. Juss. which is described here.

Pseudocercospora meliae A. N. Rai *et* Kamal sp. nov.

Maculae amphigenae, parvae, plus minusve circulares, in aetate necroticae et desiccentes; coloniae primi hypophyllae demum amphigenae, ad maculas limitatae, plus minusve punctiformes (punctis tenuissimis), fusco-brunneae vel nigricantes; hyphae immersae, septatae, glabrae, ramosae; stromata bene evoluta, irregularia, pseudoparenchymatica, medio-olivacea 18·4-41·4 μ diam.; conidiophora macronemata, mononemata, dense caespitosa, 1-3-septata, eramosa, suberecta, subhyalina vel pallide olivacea, 13·8-46× 3·4-5·7μ; cellulae conidiiferae integratae, terminales, polyblasticae sympodiales denticulis brevibus latis donatae, cicatricibus carentibus; conidia simplicia, solitaria, acropleurogena, subhyalina vel pallide olivacea, usque 9 transverse septata, obclavata vel clavata vel clavato-cylindrica, recta rare curvata, ad apices subacuta vel obtusa, ad bases obconicotruncata, hilo non incrassato praedita, 13·8-98·9 × 3·45-4·6 μ.

Hab. in foliis vivis *Azadirachtae indicae* A. Juss. (Meliaceae) Nov., 1979; Gorakhpur (Gorakhpur South Forest Division); leg. A. N. Rai. KR 413, (typus), IMI 247381.

Of all the Pseudocercosporae described so far,[1-7] only one species namely *P. subsessilis* (H, & P. Syd.) Deighton has been reported on Meliaceae[1]. To justify the distinct identity of the said collection, the same is compared with *P. subsessilis* as in table 1.

A critical study of table 1 reveals that the present collection has its distinct identity in the morphological characters and cannot be accommodated within *P. subsessilis*. Besides, the collection also differs symptamologically in producing amphigenous, necrotic areas leading to shot hole formation with age and hypophyllous colonies when young becoming amphiphyllous in due course as opposed to amphigenous spots and hypophyllous colonies in *P. subsessilis*.

It is also noted that no species of *Pseudocercospora* has ever been reported on *Azadirachta indica*.

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TABLE 1
Comparative account of *P. meliea* & *P. subsessilis*

Species	Stroma	Conidiophores		Conidia			
		Structure	Colour and size (in μm)	Structure	Colour and septation	Size (in μm).
P. meliae (proposed sp.)	18.4–41.4μm mid olivaceous	1-3 septate, denticulate	Subhyaline to light olivaceous 13·8–46 × 3·4–5·7	Obclavate to clava- to cylind- ric	Sub hyaline to light olivaceous, upto 9 septate	13·8–98·9 × 3·45–4·6
P. subsessillis	50–80 μm. dark olivaceous	Continu- ous, den- ticles not seen in the illustra- tions	light olivaceous, upto 8 in length	linear to obcl- avate or sub- filliform	Sub hyaline, 3-5 septate	30–56 × 3-4

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POLYPLOIDY INDUCED IN GINGER BY COLCHICINE TREATMENT

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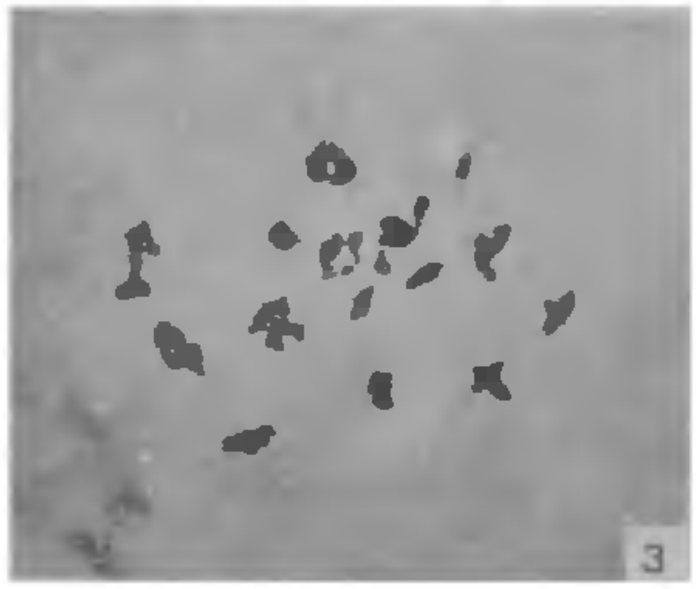
THIS study relates to tetraploidy induced in a local clone of ginger (*Zingiber officinale* Rosc.) by colchicine treatment. All eyes, except one were removed from pieces of rhizomes about 7 cm in length. The eyes which had begun to sprout were treated with 0·25% solution of colchicine in distilled water. The treatments were carried out in April and May 1979. Ninety pieces of rhizomes were treated in this way. Eleven of the plants which showed visible changes were planted in separate pots. Chromosome number in root tips and stomatal size were checked at intervals. Four of these turned out to be solid, nonchimeral tetraploids. One variegated chlorophyll mutant was also induced by the treatment.

The tetraploids showed vigorous growth, but failed to flower in the first year. The rhizomes of these plants were stored in a cool, dry place during the dormancy period. In April 1980 pieces of rhizomes were planted in pots and in the field. The tetraploids flowered in August, at nearly the same time as the diploids.

The tetraploids have thicker, stouter pseudostems and are more vigorous than the diploids (figure 1). They have larger, thicker rhizomes and larger, thicker and darker green leaves. Flowers and floral parts are bigger. Cell size is increased, as shown by stomata and



Figures 1-3. 1. Diploid (left) and tetraploid (right) plants of *Zingiber officinale*. **2.** Root tip cell of the tetraploid showing 44 chromosomes (× 1125). **3.** Metaphase I in PMC of tetraploid showing eight quadrivalents and six bivalents (× 1125).