

dark brown hyphae. The wall of the ascocarp is stromatic and composed of several layers of pseudoparenchymatic cells which are more thickened and deeply pigmented on the outside; asci subclavate to cylindrical pedicelate, bitunicate, thickened, 8-spored $62.5-87.5 \times 10-12.5 \mu\text{m}$; ascospores hyaline one-celled, ellipsoidal, wider in the mid region, guttulate, distichous or rarely monostichous, $12.5-17.5 \times 5-6.25 \mu\text{m}$, ends rounded with gelatinous plugs. Pseudoparaphyses not observed. Pycnidia variable in shape, brown to black, solitary or in groups with short or longer beaks, beset with dark brown hyphae. The pycnidial wall composed of several layers of pseudoparenchymatous, brown compressed, thick walled pigmented cells, holoblastic, simple cylindrical or conical. Conidia (blastospores) hyaline, one-celled, guttulate $10-12.5 \times 5-7.5 \mu\text{m}$, surrounded by a thick gelatinous envelope with an apical appendage $5-8 \mu\text{m}$ long.

On guava fruits (*Psidium*), Hesaraghatta, Bangalore, 15 Sept. 1980. Holotype ITCC 3028. Latin diagnosis: *Guignardia psidii* sp. nov.

Status pycnidialis Phyllosticta, colonise in agar 'potato Dextrose' veridigriseae derique lazulino nigrae, mycelio aereo abundant, reversum nigrogriseum vel nigrum. Mycelio subimmerso viridi vel brunneo nigro. Ascocarpi numerosi, interspersa inter pycnidia, atrobrunnei, solitarii vel aggrigaticum stromate, stroma solitarium, globosum vel late cylindricum, brevibus vel longis cum collis hyphis atobrunneis inductis. Parieti ascocarpi stromatico composito e stratis compluribus cellularum pseudoparenchymaticarum quae in exteriori densiores, obscuriores sunt. Asci subelevati vel cylindrici, stipitati, bitunicati, octospori, denso parieti, $62.5-87.5 \times 10-12.5 \mu\text{m}$. Ascosporae hyalinae, unicellulares, ellipsoideae, latiosae in media, guttulae, distichae vel monostichae $12.5-17.5 \times 5-6.25 \mu\text{m}$ funibus rotundatis, obturamentis gelatinosis, pseudoparaphyses non visae. Pycnidia interspersa interascocarpos, fusca vel nigra solitaria vel caespitosa, ostiolata, paries pycnidialis composita cellulis pseudoparenchymaticis, compressis cellulae conidiogenae holoblasticis, simplicibus, cylindricis vel conicis, conidia hyalina, unicellularia, guttulata $10-12.5 \times 5-7.5 \mu\text{m}$, tunica gelatinosa appendice apicali $5-8 \mu\text{m}$ long hyalinae.

(ex Fructibus psidii, Hesaraghatta, Bangalore 15 Sept. 1980 Holotypus ITCC 3028.)

Sivanesan¹ described a species of *Guignardia* on *Pinus* with *Phyllosticta* as its conidial state similar to the one described here. However it differs in having

entirely different host. Kapoor and Tandon² described a fruit rot caused by *Macrophoma allahabadensis* whose conidia are ellipsoidal to fusiform measuring $10.5-24.5 \times 3.5-5.3 \mu\text{m}$. While the conidia of the present fungus measure $10-12.5 \times 5-7.5 \mu\text{m}$ and oval to globular in shape.

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1. Sivanesan, A., *Tran. Br. Mycol. Soc.*, 1979, 73, 169.
2. Kapoor, I. J. and Tandon, R. N., *Indian Phytopathol.*, 1970, 13, 122.

CB II—A POTENTIAL DONOR AGAINST BACTERIAL BLIGHT OF RICE AND ITS GENETIC ANALYSIS FOR RESISTANCE

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BACTERIAL blight of rice caused by *Xanthomonas campestris* pv. *oryzae* is one of the most serious diseases of rice in India as well as in other Asian countries^{3, 4} for which economic and efficient chemical control measures are lacking, and developing varieties resistant to this disease appears to be the most appropriate control measures. Efforts are continuously being made to screen germ plasm and identify new sources of resistance. Chinsurah Boro II (CB II) was identified as one of the potential donor for resistance to bacterial blight of rice employing various artificial and natural inoculation techniques in different seasons from 1978 to 1982, utilizing a virulent local isolate CXO₃ of *X. campestris* pv. *oryzae*. Plants were repeatedly clip² and spray-inoculated separately at the maximum tillering and reproductive growth stages with bacterial suspension containing 10^9 cells/ml. The natural incidence of the disease was also studied on this cultivar up to the application of 90 kg nitrogen/hectare along with susceptible check 'Krishna'. The disease score¹ in CB II in artificial as well as in natural conditions varied from 1-3 at both maximum tillering and reproductive stages while in susceptible check, the score varied from 7 to 9.

Table 1 Bacterial leaf blight reaction of F_1 , F_2 and F_3 generations

Cross	F_1 reaction	F_2 reaction (No. of plants)		X^2 for 15:1	P value	F_3 reaction (No. of families)			X^2 for 7:4:4:1	P value	
		Resistant	Susceptible			Resistant	Segregated into 15:1	Susceptible 3:1			
CB II \times Krishna	Resistant	601	37	0.206	0.90-0.80	51	35	38	4	3.85	0.50-0.20

The root tips of the 10-day old seedlings of this cultivar were clipped and suspended in 1 O.D. suspension of *X. campestris* pv. *oryzae* and thereafter transplanted in zinc trays. The incidence of 'kresak', wilt phase of bacterial blight, was observed up to maximum tillering stage. None of the plants died of 'kresak'. The results were further confirmed by repeating in different seasons.

The results of bacterial blight reaction on CB II indicated that this cultivar possessed resistance both for leaf blight as well as 'kresak' phase of bacterial blight and there is scope for utilizing this cultivar as donor in breeding programme for bacterial blight of rice. CB II is tall traditional indica type with medium bold golden coloured grain maturing in about 125 days. Detailed knowledge of inheritance of a character facilitates its incorporation into a desired background, hence attempts were made to study the genetics of bacterial leaf blight (BLB) in CB II.

CB II was crossed with Krishna (BLB susceptible, dwarf improved cultivar of rice having Dee-Gee-Woo-Gen, gene). The F_1 , F_2 and random F_3 lines along with the parents were clip inoculated² with CXO₃ strain of *X. campestris* pv. *oryzae* at maximum tillering stage. Observations on disease reaction¹ were made on 15th day after inoculation. For calculating segregation ratios, plants having disease score from 1 to 3 were pooled in resistant category while those having 4 to 9 were grouped in susceptible category. Individual plants of F_3 lines were also scored and each line classified as resistant, segregating or susceptible. The results are presented in table 1.

The F_1 plants of the cross were resistant showing that the resistant character was dominant over susceptibility. The F_2 population segregated in ratio of 15 resistant to 1 susceptible which indicated that there are two dominant genes involved for resistance with duplicate factor interaction. Susceptible plants bred true. The randomly selected (resistant) single plant F_3 families segregated in different ways i.e. all resistant, 15 resistant to 1 susceptible and 3 resistant to 1 sus-

ceptible in proportion of 7:4:4 respectively which further confirmed the F_2 findings of involvement of two duplicate dominant genes. It may be concluded that CB II possesses two dominant gene governing BLB resistance.

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1. International Rice Research Institute, Standard evaluation system for rice, 1980, IRRI Publication, Los Banos, Philippines.
2. Kauffman, H. E., Reddy, A. P. K., Hsieh, S. P. Y. and Merca, S. D., *Plant Dis. Repr.*, 1973, 57, 537.
3. Ou, S. H., *Rice Diseases*, Commonwealth Mycol. Institute, Kew, Surrey, England, 1972, p. 368.
4. Srivastava, D. N., *Indian Phytopathol.*, 1972, 25, 1.

PSEUDOLACHNEA HISPIDULA (SCHRAD. EX FR.) SUTTON—A NEW REPORT FROM INDIA

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DURING the survey of Hyphomycetous flora of Katrain and Manali, H. P., the authors collected a Coelomycetous fungus growing on the bark of Palm tree (*Phoenix dactylifera* Roxb.). The fungus has been identified as a species of *Pseudolachnea*. The morphological characters of the present collection were compared with the type and other species and it was found to resemble *P. hispidula*¹. In the present note it