species to the other. The advantages of somatic hybridization with sorghum, in particular, are the transfer of apomixis, drought resistance and C₄ synthetic pathway. To achieve the desired objective, successful plant regeneration has to be obtained from the heterokaryons. It should also be noted that the problems of evaluation of the regenerated plants, the introgression of useful genes and the elimination of the undesirable genes are as great as those experienced in conventional breeding.

URM is grateful to ICAR, New Delhi and to the British Council for administering a TCTP award.

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A NEW SPECIES OF PHAEORAMULARIA MUNTANOLA

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During periodical surveys of the forest flora for the plant parasitic fungi, an interesting fungal specimen was collected which on detailed taxonomic observation was found to be a new taxon of species rank. It is described below:

Phaeoramularia asiatica A. N. Rai et Kamal sp. nov.

Coloniae hypophysolae, effusae, fusce olivaceae; mycelium hypharum immersum, tenue, angustum, laeve, septatum et ramosum; stromata bene formatae, partim immersae et partim superficialea, erumpentiae, bulbosa, pseudoparenchymatosae, moderate vel fusce olivacea, 23–69 μm diametro; conidiophori caespitosi, in fasciculis magnis, macronematosi, mononematosi, exiliter septati, septa transverse et interdum plura, non ramosi (simplices). Sympodiales, erecti vel suberecti, recti vel flexuosi, interdum geniculati, laeves, subhyalini vel pallide oli-

Figure 1. Phaeoramularia asiatica A. N. Rai et Kamal sp. nov. a—stroma, b—conidiophores, c—conidia.
Table 1.

<table>
<thead>
<tr>
<th>Species</th>
<th>Stromata</th>
<th>Conidiophores</th>
<th>Conidia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Size (μm)</td>
<td>Colour</td>
</tr>
<tr>
<td>P. lepiadeniae</td>
<td>Pseudoparen., golden br.</td>
<td>Unbranched</td>
<td>Golden br. up to 75 × 4-6</td>
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<tr>
<td>P. cucurbiticola</td>
<td>Swollen hyphae, prosen. up to 30 μm wide 30 μm high, rather pale oliv.</td>
<td>Numerous in dense divergent, fascicles, sometimes simple but more often branched substraight, sometimes slightly geniculate towards the apex, smooth septate</td>
<td>Rather pale oliv. up to 100 × 3.5-5.5</td>
</tr>
<tr>
<td>P. asiatica (proposed sp.)</td>
<td>Pseudoparen., partly superficial, erumpent, bulbous, mid to dark oliv., 23-69 μm in diam.</td>
<td>In large fascicles, simple, erect to suberect straight to flexuous, sometimes geniculate, smooth, sparsely septate</td>
<td>Subhyaline to light oliv. 9.2-80.5 × 2.9-4.6</td>
</tr>
</tbody>
</table>

Vacei, 9.2-80.5 × 2.9-4.6 μm; cellulae conidiogeno-sae integratae, terminales, polyblastae, sym po- diales, indistincte cicatricatae; conidia simplicia, catenata in catenis non ramosis, arida,acro-pleurogenosa, subhyalina vel pallide olivacea, clavata vel cylindrata vel obclavato cylindrata, apices obtusi, bases obconico-truncateae, 1-12 transverse septata, 6.9-69 × 2.9-5.8 μm.

Infection spots amphigenous, irregular, coalescing to cover major portion to leaf surface, necrotic on the upper surface, dull white to dull grey on the upper surface while dark olivaceous brown on the lower surface; colonies hypophyllous, effuse, dark olivaceous; mycelium of hyphae, immersed, thin, narrow, smooth, septate and branched; stromata well-developed, partly immersed and partly superficial, erumpent, bulbous, pseudoparenchymatous, mid to dark olivaceous, 23-69 μm in diam.; conidiophores caespitose, fascicles large, macronematous, mononematous, sparsely septate, septa transverse up to 3 or sometimes more, unbranched (simple), sympodial, erect to suberect, straight to flexuous, sometimes geniculate, smooth, subhyaline to light olivaceous, 9.2-80.5 × 2.9-4.6 μm; conidiogenous cells integrated, terminal, polyblastic, sympodial, indistinctly cicatrized; conidia simple, catenate in unbranched chains, dry, apoc- pleurogenous, subhyaline to light olivaceous, clavate to cylindric to obclavato cylindric, apices obtuse, bases obconico-truncate, 1-12 transversely septate, hila unthickened to slightly thickened, 6.9-69 × 2.9-5.8 μm (figure 1).
On living leaves of *Nectunhes arbor-tristis* Linn. (Oleaceae), January, 1981; Suhelwa (East Bahr- arach Forest Division); leg. A. N. Rai, K.R. 531, type, IMI 258300

A survey of literature shows* that no species of *Phaeoramularia* has hitherto been described on the host family. However, among the species of this genus described so far only *P. leptadeniae* (Chidgwar) Deighton (Ellis*) and *P. cucurbiticola* (P. Henn.) Deighton (Ellis*; Deighton*) are found slightly comparable to the present collection (table 1).

In size of the conidiophores, the proposed species resembles both *P. leptadeniae* and *P. cucurbiticola*. However, it differs from the latter in having simple to branched conidiophores. With catenate conidia (unbranched chains with slightly thickened hila), the proposed species resembles *P. leptadeniae* in conidal colour and septation while differs from *P. cucurbiticola* in having conidia in branched chains with almost half the number of septa (up to 5 as against 12). Moreover, the size of conidia also differs markedly in the two.

Therefore, the present collection cannot be accommodated justifiably with any of the known species of *Phaeoramularia* and deserves its disposal as a new species.

The authors are grateful to the Director, C.M.I., Kew, England, for identifying the fungus.

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**ASPERGILLUS KAMBARENSIS, A NEW REPORT FROM INDIA**

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The taxonomy of Aspergillus belonging to the *Aspergillus flavus* group and their toxin-producing capacity* which reveals a new species of *Aspergillus flavus* group is described here from India


Colonies on Czapek's agar medium 3–6 cm in dia at 25°C in 10 days and 5–7 cm in 5 days at 37°C; conidial heads yellow green, near rainette green (R., XXXI) but shifting in age to darker yellow hue, near yellowish olive (R., XXX); reverse colourless. Conidial heads radiate to loosely columnar, mostly 150–450 μm in dia; conidiophores long and roughened throughout its length; vesicles subglobose to globose. 15–83 μm dia; conidium bearing elements biserate in about 45% of the heads; matulae mostly 10–18 × 5–8 μm and phialides 10–12 μm long; conidia roughened oval to ellipsoidal highly variable in size, 4.5–9 × 4–7 μm usually 6.5–7 × 4.8–6 μm; sclerotia not observed.

Colonies on malt extract agar medium growing rapidly, heavy sporulation, more abundant conidiophores and loose, radiate heads. Other characteristics are similar to those described in Czapek's solution agar.

*A. kambarensis,* thought* to be a probable synonym of *Aspergillus oryzae* var. *oryzae* was found nearer to *A. flavus* species* than to *A. oryzae* as all the characteristics support Sugiyama's views for the placement of *A. kambarensis* as a separate species in *Aspergillus flavus* group.

Description is based on culture No. BT-9 isolated from stored wheat and maize. Culture has been deposited in B.S.M. Culture Collection, Botany Department, University of Allahabad, Allahabad and is also being deposited in A. K. Sarbhoy Culture Collection, IARI, New Delhi.