

TWO NEW LEAF-SPOT FUNGI

DURING the months of October and November 1963 the authors came across many spotted leaves of *Chlorophytum* sp. and *Lilium* sp. growing in pots at the Alfred Park, University Botanical Garden, and other gardens of the town. On examination it was observed that *Chlorophytum* sp. was infected with a species of *Colletotrichum*, and *Lilium* sp. with a species of *Phoma*. So far no species of *Colletotrichum* has ever been reported on any species of *Chlorophytum*. A comparison of the morphological characters of the present isolate with those of other species of *Colletotrichum* indicated that in some respects it is similar to *C. graminicolum* (Ces.) Wilson, while in others it has similarity with *C. dematium* (Pers. ex Fr.) Grove. It, however, could not be accommodated in any of the known species and thus is presented here as a new species.

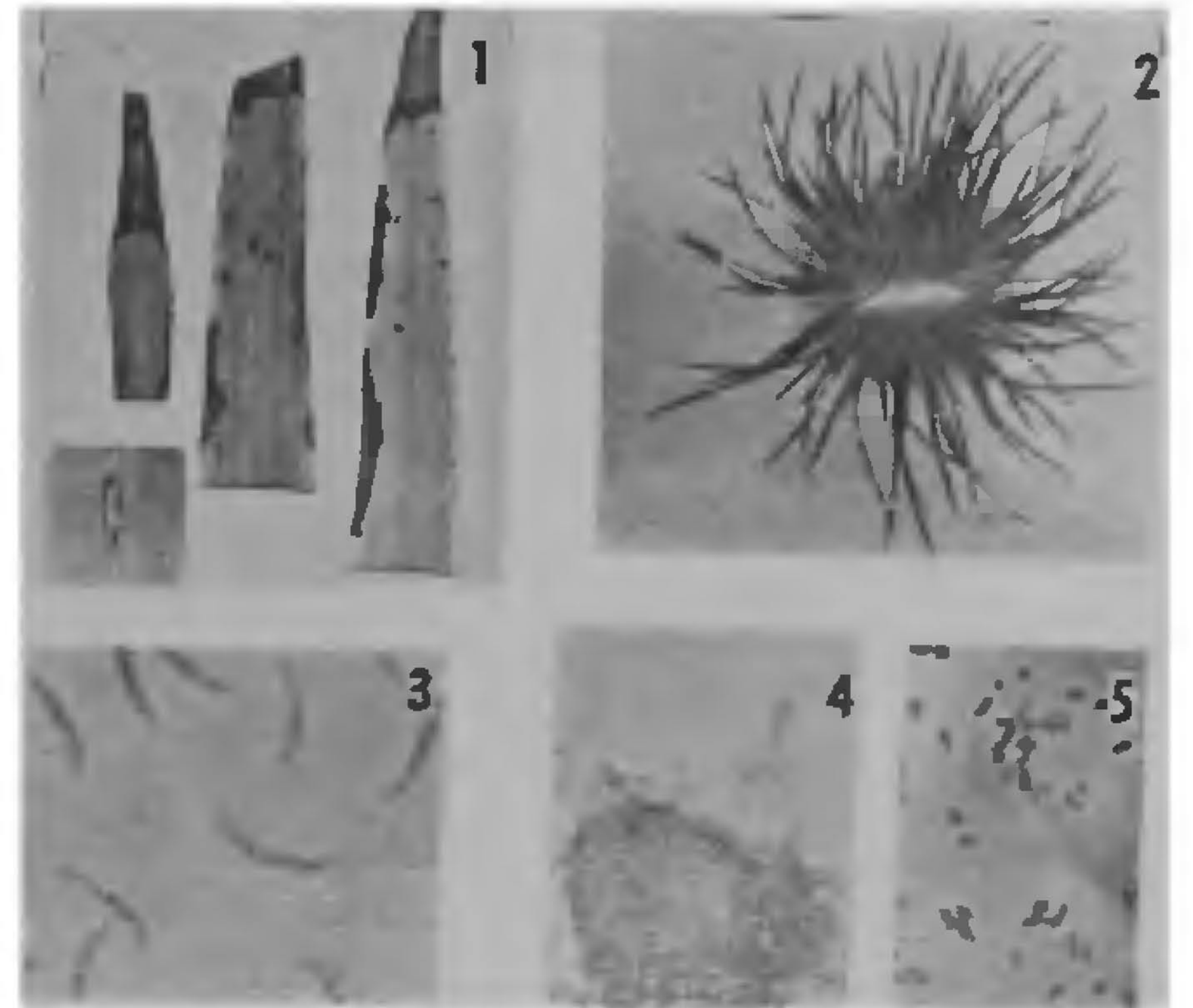
Three species of *Phoma* [viz., *P. Picea* (P.) Sacc., *P. liliacerum* West. and *P. herbarum* West.] have been reported on different species of *Lilium*, but the present isolate was not similar to any of them. A new species is, therefore, created to accommodate the present isolate.

1. *Colletotrichum chlorophytumi* sp. n.

On living leaves of *Chlorophytum* sp., Alfred Park, Allahabad, October 1963, leg. S.C.

Symptoms of the Disease.—The disease starts in the form of small brownish spots on any part of the lamina, more commonly on its margin or tip (Fig. 1). The spots gradually elongate and cover an appreciable area of the leaf. On the basis of colour three zones may be distinguished in mature spots. Inner zone of deep slaty-brown colour, the middle limiting band of dark vinaceous-gray colour and peripheral zone of honey-yellow or light dull-green yellow. The inner zone in later stages bears few minute black fruiting bodies—acervuli, which are restricted to the upper surface only.

Morphological Characters.—Hyphæ slender, branched, colourless, septate, both inter and



FIGS. 1-5. Fig. 1. Diseased leaves of *Chlorophytum* sp. Fig. 2. Acervulus of *Colletotrichum chlorophytumi*, $\times 40$. Fig. 3. Curved conidia of *C. chlorophytumi*, $\times 400$. Fig. 4. Pycnidium of *Phoma liliana*, $\times 40$. Fig. 5. Spores of *P. liliana*, $\times 250$

intracellular, acervuli superficial, light brown, oval or circular, $80.8-168.4 \mu$ (average 134.2μ), with few setæ scattered over the surface; setæ dark brown, thick-walled, unbranched, 2-3 septate, septa indistinct, with blunt apex, $70.4-142.8 \mu$ (average 102.2μ) in length and $5.2-6.4 \mu$ (average 5.8μ) in width; conidiophores simple, hyaline; conidia hyaline, curved, tapered at both ends, slightly truncate at base, wider nearer the base and tapering more gently towards the apex, $16.4-26.2 \times 3.5 \mu$ (average $20.4 \times 3.1 \mu$). In culture acervuli round, $105.2-320 \mu$ (average 210μ) in diameter, with many setæ (Fig. 2); conidia curved, truncate at base but tapered sharply at the apex and not so much at the base, of even width along the greater part of the length (Fig. 3), $20.8-30.2 \times 3.2-5.6 \mu$ (average $24.2 \times 4.1 \mu$) in size.

Latin Diagnosis.—Hyphæ, tenues, ramosæ, incoloræ, septatæ, intercellulares et intracellulares; acervuli superficiales, pallide brunnei, ovales vel circulares, $80.8-168.4 \mu$ (mediet 134.2μ), setis non nullis dispersis per superficiem; setæ fusce brunneæ, parietibus crassis, non-ramosæ 2-3 septatæ, septis indistinctis, apice hebetæ, $70.4-142.8 \mu$ (mediet 102.2μ) longæ, et $5.2-6.4 \mu$ (mediet 5.8μ) latæ; conidiophora simplicia, hyalina; conidia hyalina, curva, ad utrumque apicem fastigata, paulum truncata ad basin et latiora, fastigata plus molliter ad apicem $16.4-26.2 \times 3.5 \mu$ (mediet $20.4 \times 3.1 \mu$).

In foliis viventibus *Chlorophyti* sp. in Alfred Park, ad Allahabad, mense octobri 1963, leg

S.C. Typus positus in CMI ad Hortum Kewensem sub numero IMI 103806.

2. PR. *Phoma liliana* SP. N.

On living leaves of *Lilium* sp. University Botanical Garden, Allahabad University, November 1963, leg S.C.

Symptoms of Disease.—At first pale purplish vinaceous areas appear at the tip or margin of the leaves. With age the colour changes to pale-brownish-vinaceous and finally to pale grayish vinaceous. In severely infected leaves the healthy portion of the leaf is distinguishable from the diseased one due to the presence of a well-defined light russet vinaceous-coloured narrow band. The spread of the spot is more rapid in longitudinal direction although the midrib is freely traversed. The infected portion finally dries up and then very minute black fruiting bodies are seen on the surface of the lamina.

Morphological Characters.—Pycnidia mostly separate, globose, with a broad papilla and wide ostiole (Fig. 4), 205–425 μ (average 310 μ) in size, light brown to dark brown in colour, pycnidial wall consisting of two layers, outer plectenchymatous and inner parenchymatous: spores cylindrical or spherical (Fig. 5), 2–5 \times 1.5–2.4 μ (average 3 \times 1.5 μ). Hyphæ light brown, branched, septate, slightly constricted at septa, 2.5–6.4 μ in thickness; chlamydospores spherical, 3.5–6.8 μ in diameter.

Latin Diagnosis.—Pycnidia vulgo separata, globosa, ornata pallide una et ostiolo lato 205–425 μ (mediet 310 μ), pallide brunnea vel fusce brunnea, parietibus constantibus serie duplici, exteriori quidem plectenchymatica, interiori vero parenchymatica; sporæ cylindricæ vel sphericæ, 2–5 \times 1.5–2.4 μ (mediet 3 \times 1.5 μ). Hyphæ pallide brunneæ, ramosæ, septatæ paulum constrictæ ad septa, 2.5–6.4 μ crassæ; chlamydosporæ sphericæ, 3.5–6.8 μ diam.

In foliis viventibus *Lilii* sp. in horto botanico universitatis ad Allahabad, mense novembri 1963, leg S.C. Typus positus in CMI sub numero IMI 105607.

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