

SOUTH AFRICAN ASCOMYCETES

IN THE NATIONAL HERBARIUM.

By ETHEL M. DOIDGE.

PART II.

51. **Aphysa Rhynchosiae** (Kalch & Cke.) Theiss et Syd.

Ann. Myc. XV (1917), p. 134.

Syn. *Stigmatea Rhynchosiae* Kalch. & Cke.; Syll. Fung. I, p. 543 (on *Rhynchosia gibba*, Inanda, Natal., leg. Wood).

Parodiella Schimperii P. Henn. Bull. Herb. Boiss., I, 1893, p. 118; Syll. Fung. XI, p. 260 (on *Rhynchosia elegans* and *Vigna* sp. Eritrea).

On *Rhynchosia gibba*, Umkomaas, Natal, 25.4.19, Bottomley [11884].

On *Rhynchosia* spp., Durban, 25.5.97. Medley Wood [356]; Durban, 15.6.15, Lansdell [9015]; Kentani, 29.9.15, Pegler (Pegler No. 2357) [9116]; Inanda, Medley Wood [9478]; Kowie, 15.7.19, Doidge [12362]; Howiesons Poort, 12.7.19, Doidge [12381].

On *Dolichos gibbosus*, Van Stadens Pass, 13.11.17, Doidge [10864].

Epiphyllous, forming spots 1-2 mm. diameter, which are made up of numerous minute black points. Each point represents a hemispherical, subcuticular perithecium, 170 μ in diameter and about 60 μ high. Free mycelium wanting. Basal line brown, thin, 0.5 μ thick, lying flat on the outer wall of the epidermis; the outer membrane convex, remaining covered by the cuticle, 6-7 μ thick, parenchymatous, without any decided radial orientation except at the periphery. Asci basal, somewhat converging towards the ostiole, sessile, paraphysate, somewhat thickened round the apex, 42-48 $\times$ 12-15 μ , eight-spored. Spores distichous, ellipsoid, two-celled, not constricted, rounded at both ends, light, grey-brown, 7-10 $\times$ 4 μ .

✓ 52. **Catacauma Schotiae** n. sp.

On leaves of *Schotia speciosa*: Humewood, Port Elizabeth, 23.3.12, Doidge [2294].

Stromata epiphyllous, scattered, minute, black, convex, 0.3-0.4 mm. diameter, round or oval, unilocular. Loculus developing between the epidermis and the palisade tissue, and with its base resting on the latter which becomes concave, ellipsoid, 300-350 μ diameter, 100-120 μ high in the centre; epidermal clypeus black, opaque, 30-40 μ thick, and covered by thick cuticle which is 15-16 μ thick: the clypeus does not always extend over the whole length of the loculus, being 200-250 μ long, lateral and basal walls of loculus consisting of delicate hyphae which are laterally compressed. Asci paraphysate, oblong or ellipsoid, tapering somewhat to the rounded apex, eight-spored, sessile, 80-87 $\times$ 17-20 μ . Spores distichous, hyaline, continuous, ellipsoid, rounded at both ends, 20-24 $\times$ 6-7 μ .

Cutacaulma Schotiae Doidge, nov. sp.

Stromata epiphylla, sparsa, minuta, atra, convexa, subepidermales, 0.3–0.4 mm. diametro unilocularia. Loculi ellipsoidei, 300–350 μ diametro, 100–120 μ alti; clypeo atro, opaco, 30–40 μ crasso. Asci paraphysati, cylindranei v. ellipsoidei, octospori, sessiles, 80–87 $\times$ 17–20 μ . Sporae distichae, hyalinae, continuae, ellipticae, utrinque rotundatae, 20–24 $\times$ 6–7 μ .

Hab. in foliis *Schotiae speciosae*, Port Elizabeth, 23.3.12, leg. Doidge [2294]

53. *Dictyochorella Andropogonis* n. sp.

On leaves of *Andropogon vardus*, Tug-la Valley, near Goodoo, Natal, 16.5.20, Doidge [14104].

Stromata thickly strewn on the leaf surface, small, oval to elliptic, $\frac{1}{2}$ –1 mm. long, visible on both surfaces, slightly convex, loculi mostly opening towards the upper leaf surface; often a number of stromata arising close together become confluent and form streaks up to 5 mm. long in which the separate stromata can still be distinguished. Stromata with one or few loculi. Loculi occupying the whole of thickness of leaf, 190–240 μ diameter $\times$ 160–190 μ high. Clypeus over apex of loculi black, opaque, about 30 μ thick, extending considerably beyond loculus on each side: basal clypeus 20–25 μ thick; when the loculus does not reach basal clypeus, then the intervening space is filled with brown hyphae; lateral walls (and basal where there is no clypeus) up to 20 μ thick and composed of brown compact angular cells. Stylospores brown, oval, elliptic or pyriform; with a central (?) vacuole, 8–10 $\times$ 3–4 μ . Asci paraphysate, cylindrical, rounded at apex, eight-spored, 80–90 $\times$ 12–13 μ . Spores distichous or obliquely monostichous, with three or occasionally four transverse septa, constricted at septa, tapering towards rounded at ends, two central cells broader than terminal ones and one or both with a somewhat oblique longitudinal septum, 15–17 $\times$ 6–7 μ , fuscous-olivaceous, sometimes only one central cell has a septum and it is then broader than the other.

Dictyochorella Andropogonis Doidge, n. sp.

Stromata dense disposita, minuta, elliptica v. suborbicularia $\frac{1}{2}$ –1 mm. longa, in utraque foliorum pagina visibilia. Loculi uni v. pauci in quoque stromate, 190–240 diametro, 160–190 μ alti, clypeo amphigeno atro, opaco, circ. 30 μ crasso. Asci paraphysati, cylindranei, apice rotundati, octospori, 80–90 $\times$ 12–13 μ . Sporae distichae v. oblique monstichae, transverse 3-rare, 4-septatae, ad septa constrictae, loculis 1–2 plerumque mediis septo singulo longitudinale divisi, fuscae v. olivaceae, 15–17 $\times$ 6–7 μ .

Hab. in foliis *Andropogonis nardi*, Tugela Valley, Natal, 16.5.20, leg. Doidge [14104].

54. *Phaeodothis stenostoma* (Ell. et Tr.) Theiss et Syd.

Ann. Myc. XV (1917), p. 596.

Syn. *Phyllachora stenostoma* Ell. et Tracy, Journ. of Myc., 1890, p. 76; Syll. Fung. IX, p. 1029.

On *Panicum maximum*, Bluff, Durban, 7.7.11, Doidge [1611].

Stromata oval, about 600 μ long, 300–400 μ broad, or subcircular $\frac{1}{2}$ –1 mm. diameter, very irregular in outline, usually visible on both sides of the leaf, often only on one side and surrounded by a small, pale ring, later forming elliptic groups $\frac{1}{2}$ –1 cm. long and $\frac{1}{2}$ cm. broad. A dark epidermal clypeus is developed in both leaf surfaces. Loculi, flattened-spherical, often irregular in shape, mostly 170 μ diameter, 120–130 μ high, locular wall composed of delicate, light brown hyphae, fusing at the apex with the clypeus, 12–14 μ thick. Asci cylindrical, parietal, paraphysate, briefly pedicellate, 52–60 $\times$ 7–8 μ . Spores obliquely monostichous or subdistichous, oblong, club-shaped, fuscous, rounded at both ends, straight, 12–14 $\times$ 4–4 $\frac{1}{2}$ μ , somewhat constricted at the septum.

✓ 55. *Phaeodothis Tristachyae* Syd.

Ann. Myc. X (1912), p. 41.

On leaves of *Tristachya leucothrix*, Mooi River, Natal, 15.4.11, Burt-Davy [1470]. Stromata amphigenous, scattered or in short series, oblong or linear, $\frac{1}{2}$ –1 mm. long, flat, black, opaque; loculi numerous, minute, 100–150 μ diameter. Asci cylindrical, somewhat obtuse at the apex, 45–70 $\times$ 6–12 μ , eight-spored. Paraphyses numerous, filiform. Spores monostichous or distichous, fusiform, 1-septate, loculi equal, not or very slightly constricted, olivaceous-brown, 12–13 $\frac{1}{2}$ $\times$ 3–4 μ , each cell 1–2 guttulate.

✓ 56. *Phyllachora Crotonis* (Cke.) Sacc.

Syll. Fung. II, p. 599; Ann. Myc. XV (1917), p. 523.

Syn. *Dothidea Crotonis* Cke., *Grevillea* X, p. 129.

Phyllachora crotonicola Rehm., *Hedwigia* XXIX, 1890, p. 110; Syll. Fung. IX, p. 601.

Phyllachora Julocrotonis Bres., *Hedwigia*, XXXV, 1896, p. 300; Syll. Fung. XIV, p. 668.

On leaves of *Croton sylvaticum*, Inanda, Natal, January, 1881, Medley Wood (Wood No. 406) [9489].

Stromata visible on both sides of the leaf, $\frac{1}{2}$ –1 mm. diameter, round, convex on both surfaces, on the upper surface smooth, shiny, often becoming more or less coalescent, and then up to 1 mm. in diameter and more or less irregular in outline. Single stromata unilocular, scattered irregularly over leaf surface. Loculi with an upper and lower epidermal clypeus which is no broader than the loculus. The lateral walls are not so well developed and are light brown. Loculi 200–300 μ diameter, spherical. Asci cylindrical to somewhat club-shaped, paraphysate, briefly pedicellate, 60–70 $\times$ 10–14 μ . Spores distichous, one-celled colourless, ellipsoid, rounded at both ends, 14–16 $\times$ 7–9 μ .

✓ 57. *Phyllachora Cynodontis* (Sacc.) Niessl.

Not. Pyren., p. 54; Syll. Fung. II, p. 602; Ann. Myc. XV (1917), p. 447.

Syn. *Physalospora Cynodontis* Del., Bull. Soc. Myc. Fr., 1890, p. 183; Syll. Fung. IX, p. 599.

Phyllachora graminis var. *Cynodontis*, Sacc. Rabh. F. Eur., 2441.

On *Cynodon dactylon*, Pretoria, 12.7.03, Burt-Davy [145 and 170]; Groenkloof, Pretoria, 3.5.10, Burt-Davy [917]; Cedara, Natal, 18.1.11, Fisher [1172]; Vereeniging, 8.6.10, Burt-Davy [935]; Bloemfontein, 6.4.17, Potts [11311].

On *Cynodon incompletus*, Pretoria, 19.5.06, Pole Evans [17]; 19.6.11 [1587].

Stromata round-angular, scattered, 0.3–0.5 mm. diameter, sometimes coalescing, slightly convex, black. Clypeus epidermal, opaque, only on upper side of the stroma, and usually epiphyllous; on both sides of the leaf, but then the basal clypeus is shorter and not so well developed. Loculi small, spherical, 160–180 μ diameter, usually not penetrating right through the leaf, with a thin delicate wall, scattered or in small groups. Asci paraphysate, cylindrical, club-shaped, pedicellate, 50–60 $\times$ 12–15 μ . Spores hyaline, monostichous or distichous, oval-ellipsoid, 10–12 $\times$ 5 $\frac{1}{2}$ –6 μ .

✓ 58. *Phyllachora Evansii* Syd.

Ann. Myc. X (1912), p. 40; XIII (1915), p. 459.

On *Setaria sulcata*, Barberton, March, 1911, Pole Evans [1280]; Durban, 21.3.19, Bottomley [12231]; Isipingo, Natal, 27.3.18, Bottomley [11659].

On *Setaria nigrirostris*, Vereeniging, Transvaal, 26.2.17, Burt-Davy [10021].

On *Setaria aurea*, Barberton, 20.1.12, Doidge [2012]; Garstfontein, Pretoria District, 26.3.11, Pienaar [1265].

Stromata visible on both sides of the leaf, scattered or in rows, on yellowish leaf spots, ellipsoid, $\frac{1}{2}$ –1 $\times$ $\frac{1}{3}$ – $\frac{1}{2}$ mm., dull black; clypeus in both upper and lower epidermis, 20 μ thick, opaque. Loculi few, ellipsoid, 100–150 μ high, 260–230 μ diameter, with thinner, delicate, brown lateral walls. Asci cylindrical, club-shaped, 70–120 $\times$ 8–12 μ ; paraphysis numerous. Spores mono- or distichous, ellipsoid to oblong, rounded at both ends, straight, colourless, 14–18 $\times$ 6–8 μ . Conidia filiform or sickle-shaped, 15.25 $\times$ 1 μ .

59. *Phyllachora lucens* (Cke.) Sacc.

Syll. Fung. II, p. 600; Ann. Myc. XV (1917), p. 562.

Syn. *Dothidea lucens* Cke., Grevillea X, p. 128.

On leaves, Inanda, Natal, 1881, Medley Wood (Wood No. 581) [9487 and 10443].

Stromata unilocular, punctiform, only visible on the upper leaf surface, convex, black, shining, thickly crowded on yellow leaf spots, 6–10 mm. in diameter. Loculi flattened spherical, 220–260 μ diameter, 130–160 μ high; the base does not reach as far as the lower epidermis: the locular wall is 8–10 μ thick, consisting of brown cells, but weakly developed, and here and there not very distinct: at the apex it unites with the short black epidermal clypeus. Asci cylindrical, paraphysate, eight-spored, briefly pedicellate, 60–70 $\times$ 8–12 μ . Spores distichous or obliquely monostichous, oblong, colourless, one-celled, straight, with blunt ends, 13–15 $\times$ 4 $\frac{1}{2}$ –5 $\frac{1}{2}$ μ .

60. *Phyllachora Penniseti* Syd.

Ann. Myc. XIII (1915), p. 39 (on leaves *Pennisetum Benthami*, Congo).

On leaves of *Pennisetum sphacelatum*, Tugela Valley, near Goodoo, Natal, 16.5.20, Doidge [14102].

Stromata conspicuous on both leaf surfaces, scattered or crowded and arranged in rows, round or oblong, $\frac{1}{2}$ –1 mm. long, or forming larger stromata by confluence, black, opaque, plurilocular. Loculi irregular, large, 280–400 μ long, 200–300 μ high. Clypeus in both upper and lower epidermis, 15–25 μ thick, lateral wall of loculus 8–10 μ broad, brown: stylospores straight or flexuous, continuous, filiform, hyaline, 18–35 $\times$ 1 μ . Asci clavate, rounded at the apex, 70–95 $\times$ 20–26 μ , eight-spored, paraphysate; spores distichous or obliquely monostichous, broadly rounded at both ends, continuous, hyaline, 17–24 $\times$ 11–18 μ .

61. *Phyllachora heterospora* P. Henn.

Syll. Fung. XXII, p. 425; Ann. Myc. XV (1917), p. 453.

On leaves of *Panicum maximum*, Bluff, Durban, 7.7.11, Doidge [1611]; Kentani, 1.5.14, Pegler [7773]; Kentani, May, 1915, Pegler (Pegler No. 1953) [9095].

On *Panicum* sp., Barberton, 22.8.12, V. d. Bijl [5137].

Both leaf surfaces are comparatively thickly beset with stromata, which are round or elliptic, $\frac{1}{3}$ –1 mm. diameter, convex, somewhat shiny, not usually coalescing, and not situated on discoloured leaf areas, the whole leaf becomes yellow. Clypeus epidermal, 20 μ thick, on one or both leaf surfaces. Loculi about 4–10 in each stroma; when the stroma is only on one side of the leaf, occupying about two-thirds of its thickness, closely crowded, 180–230 μ diameter, 160 μ high. When two stromata occur at the same point on opposite sides of the leaf the loculi only reach the centre. Wall brown, about 10 μ thick. Asci cylindrical, paraphysate, 60–80 $\times$ 10–16 μ , eight-spored; spores mostly distichous, ellipsoid, tapering somewhat to both ends but rounded, one-celled, hyaline, 13–17 $\times$ 7–8 μ .

62. *Phyllachora Tecleae* n. sp.

On leaves of *Teclea natalensis*, 5.6.15, Kentani, Pegler (Pegler No. 2324) [9079].

Stromata in small groups on yellow leaf spots, developing on both sides of the leaf, with a preference for the upper surface, visible on both leaf surfaces, oval, ellipsoid or almost round, 0.5 to 2.5 mm. long, black, somewhat shiny, raised on both surfaces, but not

convex, groups of stromata are often oval or elliptic in outline between the lateral veins. The normal thickness of the leaf is about $240\ \mu$, the thickness of the stroma is $300\text{--}400\ \mu$. Loculi occupying the whole thickness of the leaf, flattened spherical, $300\text{--}400\ \mu$ diameter; epidermal clypeus on both leaf surfaces very thick, black, opaque, on the upper surface $40\text{--}50\ \mu$ thick; basal clypeus thinner, $23\text{--}25\ \mu$; lateral wall consisting of thin, delicate, laterally compressed hyphae; leaf tissue between the loculi permeated in every direction by brown hyphal threads. Asci richly paraphysate, cylindrical, eight-spored, with a short foot, $80\text{--}90 \times 10\text{--}13\ \mu$. Spores obliquely monostichous, one-celled, hyaline, ellipsoid or subfusoid, tapering to each end, but rounded not pointed at ends, $13\text{--}17 \times 5\text{--}6\ \mu$.

Phyllachora Tecleae Doidge, nov. sp.

Stromata amphigena plerumque epiphylla, maculis flavidulis insidentia, elliptica v. suborbicularia, $0\cdot5\text{--}2\cdot5$ mm. diametro atra, parum nitidula. Loculi suborbiculares, $300\text{--}400\ \mu$ diametro, clypeo epidermale amphigeno, atro, opaco, $40\text{--}50\ \mu$ crasso. Asci copiose paraphysati, cylindracei, octospori, $80\text{--}90 \times 10\text{--}13\ \mu$. Sporae oblique monostichae, continuae, hyalinae, ellipsoidae v. sub-fusoidae, utrinque attenuatae sed rotundatae, $13\text{--}17 \times 5\text{--}6\cdot5\ \mu$.

Hab. in foliis *Tecleae natalensis*, Kentani, 5.6.15, leg. Pegler [9079].

63. *Phyllachora Tricholaenae* P. Henn.

Engl. Bot. Jahrb. XXIII, p. 541; Syll. Fung. XIV, p. 672; Ann. Myc. XV (1917), p. 461.

On leaves of *Tricholaena rosea*, Winklespruit, Natal, 14.2.13, Pole Evans [5641].

Stromata oval, black, shining, slightly convex, scattered or crowded, $\frac{1}{2}\text{--}1$ mm. long, clypeus formed in epidermis of both leaf surfaces, but is more extensive on the side of the apex of the loculus than on the basal side. Loculi delimited at base and apex by the opaque clypeus, lateral walls thinner and more delicate. Loculi spherical, about $240\ \mu$ diameter; asci club-shaped, pedicellate, $55\text{--}60 \times 15\text{--}18\ \mu$, paraphysate. Spores distichous, elliptic, abruptly rounded at ends, $12\text{--}13 \times 7\text{--}8\ \mu$.

64. *Telimena Arundinariae* n. sp.

On leaves of *Arundinaria tessellata*, Goodoo Bush, Natal, 20.5.20, Doidge [14103.]

Stromata on yellow leaf spots, scattered or more rarely in groups, minute, oval to ellipsoid, $0\cdot5\text{--}0\cdot7$ mm. long, dull black, convex on upper leaf surface, penetrating through leaf and becoming visible as minute, dull-black specks on the lower surface. Loculi usually one, sometimes two in each stroma, $120\text{--}180\ \mu$ diameter, $100\text{--}120\ \mu$ high, occupying from three-quarters to whole of thickness of leaf, with a dark epidermal clypeus on the upper side, $15\text{--}20\ \mu$ thick; when the loculus occupies whole thickness of leaf there is also a clypeus developed in the lower epidermis; remainder of locular wall composed of delicate, laterally compressed hyphae. Asci cylindrical, paraphysate, rounded at apex, eight-spored, briefly stipitate, $100\text{--}120 \times 15\text{--}18\cdot5\ \mu$.

Spores obliquely monostichous or distichous, cylindrical, fusiform, tapering somewhat to both ends, four-celled, cells subequal in length, or middle cells somewhat larger than the terminal ones, hyaline or subhyaline, $27\text{--}33 \times 8\text{--}9\cdot5\ \mu$.

Telimena Arundinariae Doidge, nov. sp.

Stromata epiphylla, maculis flavidulis insidentia, sparsa v. gregaria, minuta, elliptica, atra, $0\cdot5\text{--}0\cdot7$ mm. longa, loculos 1-2 includentia, in hypophylla etiam conspicua. Loculi $120\text{--}180\ \mu$ diametro, $100\text{--}120\ \mu$ alti, clypeo epiphylo v. amphigeno, atro, $15\text{--}20\ \mu$ crasso. Asci cylindracei, paraphysati, apice rotundati, octospori, breviter pedicellati, $100\text{--}120 \times 15\text{--}18\cdot5\ \mu$. Sporae oblique monostichae v. distichae, cylindraceae v. fusiformae, parum utrinque attenuatae, 3-septatae, hyalinae v. sub-hyalinae, $27\text{--}33 \times 8\text{--}8\cdot5\ \mu$.

Hab. in foliis *Arundinariae tessellatae*, Natal, 20.5.20, leg. Doidge [14103].

65. *Telimena corticicola* n. sp.

On woody stems of *Helichrysum* sp., Alice, C.P., 18.11.17, Doidge [10975].

Stromata scattered irregularly on the greyish bark, minute, dull black, oval to narrow ellipsoid, 0.5 to 0.8 mm. long, somewhat convex, unilocular, or with few loculi sunken in the cortex, not erumpent. Loculi oval to flattened spherical, opening by an apical pore, 300–340 μ diameter, 200–240 μ high, fusing at the apex with the black, opaque, clypeus which is 18–20 μ thick and extends beyond the apex of the loculus a distance of 300–400 μ . The space between the clypeus and the upper part of the loculus is filled with a black opaque hyphal web similar to that forming the clypeus, and from this a few dark hyphae run out into the substratum. The lower part of the locular wall consists of delicate, almost colourless hyphae, which are strongly compressed laterally. Asci paraphysate, cylindrical, rounded at the apex, very briefly pedicellate, 80–110 $\times$ 20–23 μ , rather thick walled. Spores distichous, colourless, cylindrical, rounded at both ends, four-celled, primary cross-wall in the centre, each of two primary cells being later divided in the centre by a secondary wall. Thick walled, wall about 2 μ thick, outer edge smooth, inner curving inward to meet transverse walls and giving the spore the appearance of being constricted, 24–27 $\times$ 10–13 μ .
Telimena corticicola Doidge, nov. sp.

Stromata sparsa, corticicola, atra, elliptica, 0.5–0.8 mm. longa, leniter convexa, loculos paucos includentia. Loculi ovati v. suborbiculares, 300–400 μ diametro, 200–240 μ alti, clypeo opaco, 18–20 μ crasso. Asci paraphysati, cylindranei, apice rotundatae, brevissime pedicellati, 80–110 $\times$ 20–23 μ . Sporae distichae, hyalinae, cylindraceae, utrinque rotundatae, 3-septatae, 24–27 $\times$ 10–13 μ .

Hab. in corticis *Helichrysi* sp., Alice, C.P., 18.11.17, leg. Doidge [10975].

66 *Systemma Pterocarpi* n. sp.

On leaves and twigs of *Pterocarpus ceriseus*, Khami Ruins, Rhodesia, 14.7.20, Bottomley [14101].

Leaf stromata epiphyllous, rarely hypophyllous, scattered, situated on yellowish leaf spots, dull black, round or ellipsoid, 1–1.5 mm. diameter, 450–600 μ high, usually with a concentric zone of secondary stromata with a radius of about 1 mm. from centre of primary stroma. Stromata on twigs and midribs of leaves similar, but usually oval to ellipsoid, somewhat larger and without secondary stromata.

The stromata arise between the epidermis and the palisade cells, the cuticle becomes arched, and a dark-brown epidermal clypeus is formed. The base is also composed of small dark cells, and rests on the palisade cells, but the central part of the stroma is formed of paler, more delicate tissue in which are produced one large and a number of smaller conidial loculi more or less spherical but irregular in size. The conidia are round, oval, pyriform, somewhat angular, brown, and 5–7 μ diameter. The conidial stroma attains a height of 150–250 μ , and does not rupture the cuticle. The ascostroma arises from beneath the conidial stroma, and is similar to it in structure, the latter is pushed up and the cuticle ruptured, its dark base forming the covering layer of the ascostroma. Loculi few, spherical to ellipsoid, or pyriform, 120–200 μ diameter. Asci numerous aparaphysate, eight-spored, thin-walled, evanescent, oblong-cylindrical, about 70 $\times$ 10 μ . Spores mono-half distichous, two-celled, brown, cylindrical, with blunt ends, slightly constricted, 10–13.3 $\times$ 5–6.3 μ , upper loculus 6–8.6 μ , lower 3.3–5 μ long.

Systemma Pterocarpi Doidge, nov. sp.

Stromata epiphylla, rarius hypophylla, maculis flavidulis insidentia, atra, orbicularia v. elliptica, 1–1.5 mm. diametro, 450–600 μ alta, subepidermalia. Loculi pauci, orbiculares, elliptici v. pyriformi, 120–200 μ diametro. Asci numerosi, aparaphysati, octospori, oblongi v. cylindranei, 70 $\times$ 10 μ . Sporae monostichae v. subdistichae, 1-septatae, brunneae, cylindranei, utrinque subtruncatae, leniter constrictae, 10–13.3 $\times$ 5–6.3 μ ; loculo supero majore 6–8.6 μ longo, infero 3.3–5 μ longo.

Hab. in foliis caulisque *Pterocarpi cerisei*, Khami Ruins, Rhodesia, 14.7.20, leg. Bottomley [14101].

67. *Teratosphaeria fibrillosa* Syd.

Ann. Myc. X (1912), p. 39; XV (1917), p. 631.

On leaves of *Protea grandiflora*, Bains Kloof, near Wellington, 26.2.11, Doidge [1217]; 21.2.12, Doidge [2059]; 5.4.12, Stoneman [2232].

Loculi ellipsoid or pyriform, perithecium-like, 150–220 μ diameter, sunken under the epidermis, arranged in centrifugal, irregularly branched, radiating lines, to a diameter of 1 cm. Locular wall consisting of concentric layers of delicate stromatic hyphae. Apex of loculus penetrating the epidermis but not protruding. No true ostiole. Vegetative stroma meagre, penetrating into the intercellular spaces of the mesophyll below the epidermis in the form of perpendicular hyphal strands. At the apex the hyphae also penetrate the adjacent epidermal cells, but without forming a clypeus. Asci basal, quite sessile, club-shaped, thickened round apex, 70–110 $\times$ 25–35 μ , paraphysate, eight-spored. Spores distichous or tristichous cylindrical, straight, medially slightly constricted at the septum, light-brown, rounded at both ends, 42–52 $\times$ 8–9 μ .



Fig. 1

68. *Meliola capensis* (K. & Cke.) Th.

Ann. Myc. X (1912), p. 19; Trans. Roy. Soc. S. Afr., V, p. 731.

Syn. *Asterina capensis* K. & Cke., Grevillea 9, p. 32.

This fungus occurs commonly on *Hippobromus alatus*. Its mycelial setae were described as being straight, simple, opaque, 200–400 $\times$ 5–10 μ , pellucid near the acute apex. Examination of a large number of collections shows that in the majority at least 50 per cent. of the setae are forked at the apex. The apex of the setae should therefore be described as simple, acuminate, or with two to three acute teeth. [Fig. 2.]

69. *Meliola Carissae* n. sp.

Amphigenous, forming irregular spots 5-6 mm. diameter or larger areas by confluence. Mycelium forming an irregular network, branches opposite, anastomosing. Hyphae slightly undulate, 6-7 μ thick, not infrequently constricted at septa, cells 20-30 μ long; capitate hyphopodia alternate, 20-30 $\times$ 10-13 μ , terminal cell variable in form, sometimes club-shaped or sublobed, but most frequently truncate. Mucronate hyphopodia not very numerous, unilateral or alternate, with a short thick neck, 18-20 $\times$ 6-7 μ . Mycelial setae fairly numerous, simple, straight, 550-700 μ long, 9-10 μ thick at base, and tapering very gradually to the blunt apex, black and opaque at base, but becoming brown and slightly translucent near apex. Perithecia not very numerous, 180-200 μ diameter, spherical, black, surface cells slightly convex. Asci two-spored, evanescent, spores four-septate, oblong, slightly constricted, rounded at both ends, brown, 43-47 $\times$ 16.5-20 μ . [Fig. 1.]

On leaves of *Carissa arduina*, Pirie Forest, Kingwilliamstown, 8.7.19, Doidge [12296]; Van Stadens, C.P., 13.11.17, Doidge [10870]; Bathurst, C.P., 14.7.19, Doidge [12341]; Kowie, C.P., 15.7.19, Doidge [12361].

Meliola Carissae Doidge, nov. sp.

Amphigena, maculas irregulares, 5-6 mm. diametro formans; hyphis subundulatis, 6-7 μ crassis, nonnunquam ad septa constrictis, cellulis, 20-30 μ long, ramis oppositis, anastomosantibus; hyphopodiis capitatis alternis, 20-30 $\times$ 10-13 μ , cellula superiore

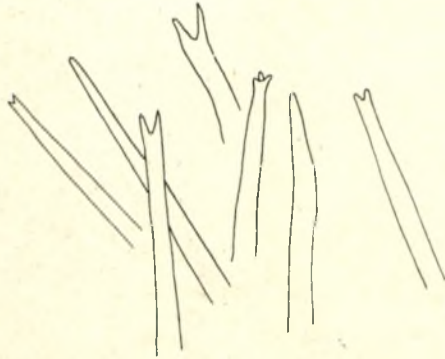


Fig 2.

variabile, aut clavata v. sublobata aut truncata; hyphopodiis mucronatis paucis, unilateralibus v. alternis, 18-20 $\times$ 6-7 μ ; setis mycelicis satis numerosis, rectis, simplicibus, 550-700 μ longi, basi opaco, 9-10 μ crassis, apice obtuse sensim attenuatis; peritheciis 180-200 μ diametro, ascis bisporis; sporis 4-septatis, oblongis, leniter constrictis, utrinque rotundatis, brunneis, 43-47 $\times$ 16.5-20 μ .

Hab. in foliis *Carissae arduinae*, Pirie Forest, 8.7.19, leg. Doidge [12296].

70. *Meliola dracoenicola* Pat. et Har.

Bull. Soc. Myc. Fr. XXIV (1908), p. 14, Sacc.; Syll. Fung. XXII, p. 56.

On leaves of *Behnia reticulata*, Louis Trichardt, 8.5.19, Putterill [11848].

This fungus was originally described from the Congo on *Dracoena* sp.; it has not been previously recorded from South Africa.

Amphigenous, black, forming spots 2-5 mm. diameter, easily detachable from the leaf surface. Hyphae brown, straight, 7-9 μ thick; cells 17-20 μ long; branches opposite, numerous, anastomosing; capitate hyphopodia alternate or unilateral, stipitate, 17-20 $\times$ 10-13 μ , stipe cell short, cylindrical, 5-7 μ long, head cell globular; mucronate hyphopodia numerous, alternate or opposite, interspersed with the capitate hyphopodia, pyriform or

ampulliform with a straight or curved neck, $15-20 \times 6-7 \mu$. Mycelial setae very numerous, erect, abruptly geniculate at the base or taking a broad curve upwards, opaque, $250-350 \mu$ long, $10-11.5 \mu$ thick, dividing near the apex into two or three short spreading branches, $10-17 \mu$ long, each of these being divided at the apex into two or three small tapering branches, $6-10 \mu$ long, occasionally the latter are themselves bidentate. Perithecia not numerous, black, carbonaceous, globose, $250-300 \mu$ diameter. Spores straight, brown, cylindrical, four-septate, constricted obtuse, $43-46 \times 16 \mu$. [Fig. 3.]

71. *Meliola oleicola* n. sp.

Sub. *M. amphitricha*, Proc. Roy. Soc., South Africa, V, p. 733.

Amphigenous, forming round, dull-black spots, 2-4 mm. diameter, or greater areas by confluence. Mycelium olivaceous, very freely branched and interwoven; branches

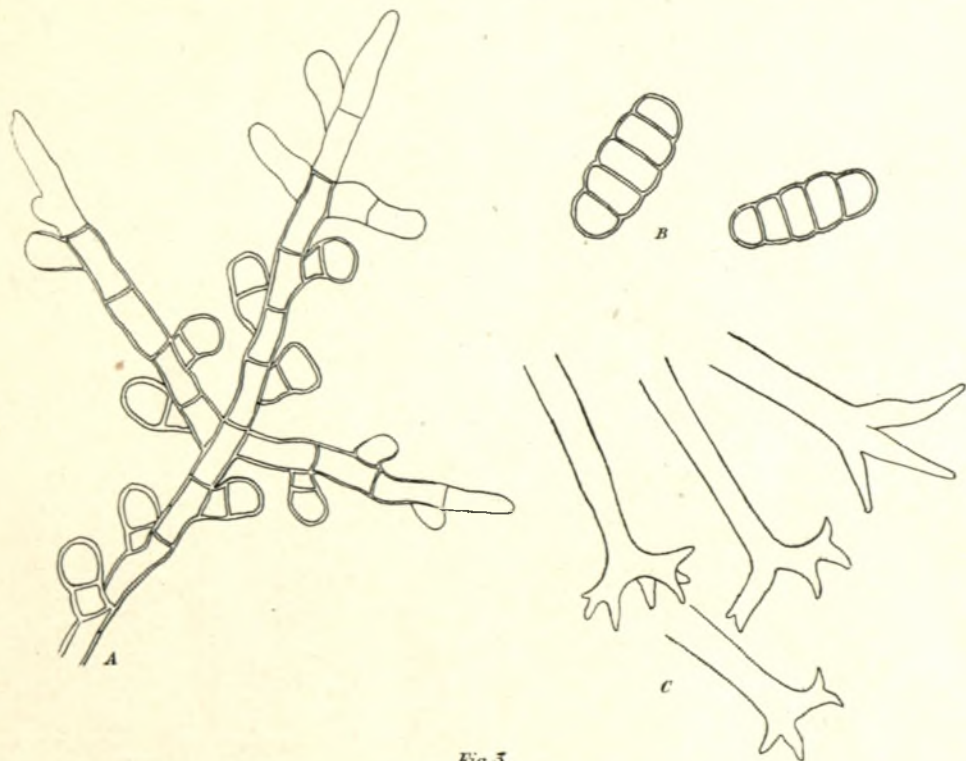


Fig. 3.

opposite, anastomosing; capitate hyphopodia alternate, stipitate, $26-30 \mu$ long, terminal cell ovate or club-shaped, straight or somewhat curved, $18-20 \times 10 \mu$, stipe cell short, closely appressed to or forming an acute angle with the branch. Mucronate hyphopodia on separate branches, opposite, alternate or unilateral, slender ampulliform, base not much wider than curved neck, $20-23 \times 6-7 \mu$. Mycelial setae rather numerous, scattered, simple, straight or slightly flexuous, $240-300 \mu$ long, $9-10 \mu$ thick at base, opaque up to acute apex. Perithecia not very numerous, globose, $220-250 \mu$ diameter, verrucose: surface cells convex. Asci two to four spored, early evanescent. Spores oblong, four-septate, very slightly constricted, broadly rounded at both ends, chestnut-brown when mature, $45-50 \times 20-23 \mu$. [Fig. 4.]

On leaves of *Olea laurifolia*, Buccleuch, Natal, 17.7.18, Doidge [11557]; Iemana, Zoutpansberg District, 7.8.11, Doidge [1835]; Tabankulu, Pondoland, 4.4.15 [9103]; Woodville Forest, George, 11.11.17, Doidge [10937].

On *Olea Pegleri*, Kentani, 29.8.14. Pegler (Pegler 1948) [8382-8785].

On *Oleaceae* (?), Woodbush, Zoutpansberg District, 4.8.11, Doidge [1767].

Meliola oleicola Doidge, nov. sp.

Amphigena, maculas atras orbiculares 2-4 mm. diametro formans. Mycelium ramosum, intertextum, ramis oppositis anastomosantibus, hyphopodiis capitatis alternis, stipitatis, 26-30 μ long, cellula superiore ovata v. clavata, recta v. leniter curvata, 18-20 $\times$ 10 μ ; cellula inferiore brevis, hyphopodiis mucronatis oppositis, alternis v. unilateralibus, ampullaceis, 20-23 $\times$ 6-7 μ ; setis mycelicis satis numerosis, sparsis, opacis, rectis v. leniter flexuosis, simplicibus, 240-200 μ long, basi 9-10 μ crassis, apice acutis. Perithecia globosa, 222-250 μ diametro, verrucosa. Asci 2-4 spori, mox evanescentes. Sporae oblongae 4-septatae, leniter constrictae, utrinque rotundatae, 45-50 $\times$ 20-23 μ .

Hab. in foliis *Oleae laurifoliae*, Buceleuch, Natal, 17.7.18, leg. Doidge [11557].

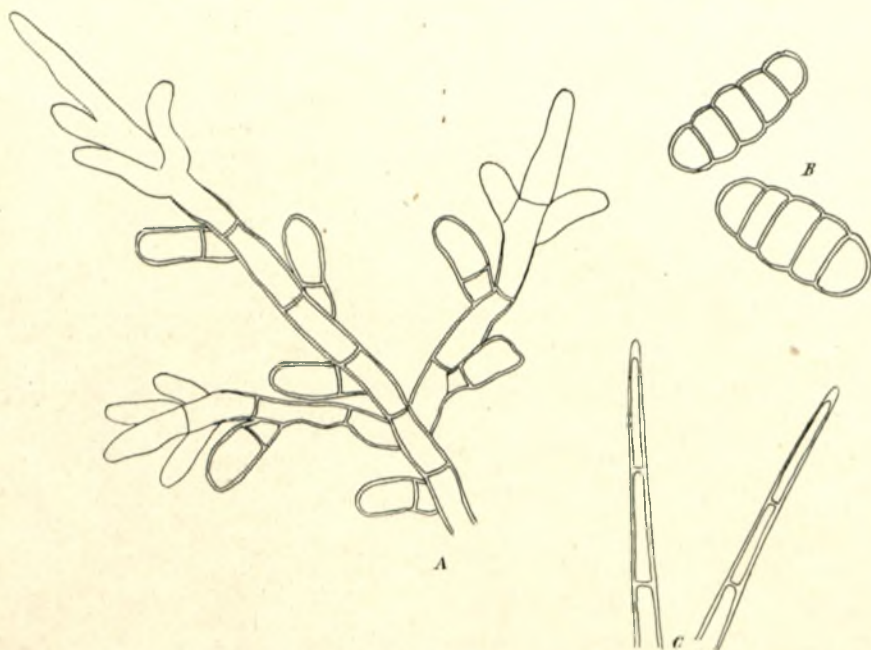


Fig. 2

72. *Meliola Panici* Earle.

Muhlenbergia, 1901, p. 12, Sacc.; Syll. Fung. XVII, p. 550.

On leaves of *Stipa dregeana* var. *elongata*, Langholm Estates, Bathurst District, 14.7.19, Doidge [12358].

The type specimen was collected in Porto Rico, and this species has not previously been recorded from South Africa. The original description is as follows:—

Forming minute spots 1-3 mm. diameter, which often become confluent. Hyphae 6-8 μ thick, sparingly branched. Capitulate hyphopodia usually alternate and forming a broad angle with the hyphae, 16-20 $\times$ 6-8 μ , terminal cell broader than long, irregular, usually three to four lobed. Mucronate hyphopodia numerous, opposite, inserted at right angles, broadly ampulliform, paler, 12 μ long. Mycelial setae numerous, straight, simple, obtuse, obscurely septate, opaque, 400-600 $\times$ 8-10 μ , tapering gradually towards the apex. Perithecia scattered, black, three to four spored, evanescent. Spores cylindrical, compressed, four-septate, slightly constricted, rounded at both ends, 40 $\times$ 12 $\times$ 8 μ .

The South African specimen differs slightly from the above description in that the mycelium is rather dense and copiously branched and anastomosing; the cells of the hyphae are rather short, 13–16 μ long. [Fig. 5.]

73. *Irene Zeyheri* n. sp.

Amphigenous, forming thin black spots 2–4 mm. diameter, or larger areas by confluence; mycelium not dense, forming an irregular network; branches opposite or irregular, anastomosing. Hyphae straight or somewhat sinuous, 6–6.5 μ thick; cells 20–30 μ long; capitate hyphopodia alternate, 18–23 μ long, terminal cell very variable in form, lobed in various ways, 6–14 μ broad at apex; mucronate hyphopodia opposite or unilateral, interspersed with the capitate hyphopodia; ampulliform 16–20 $\times$ 6–7 μ . Mycelial setae none. Perithecia scattered, spherical, black, carbonaceous, 190–220 μ diameter, surface cells convex. Asci two-spored, evanescent, spores oblong, brown, four-septate, slightly constricted, rounded at both ends, 39–44 $\times$ 16–18 μ .

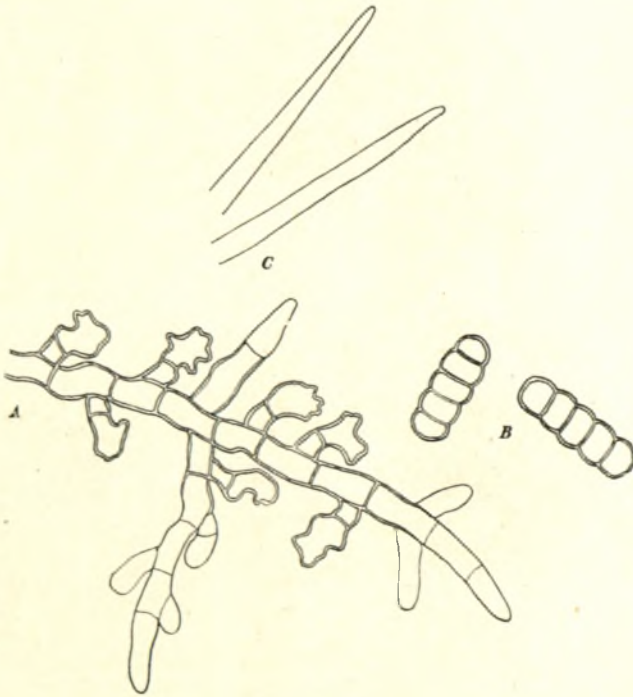


Fig. 5

On leaves of *Eugenia Zeyheri*, Howiesons Poort, 12.7.17, Doidge [12388]; Pirie Forest, 8.7.19, Doidge [12272]; Van Stadens Pass, 13.11.17, Doidge [10878].

Irene Zeyheri Doidge, n. sp.

Amphigena, maculas, tenues, atrae formans. Mycelium effusum, hyphis rectis v. leniter sinuosis, 6–6.5 μ crassis, ramis oppositis v. irregularibus, anastomosantibus; hyphopodiis capitatis alternis, 18–23 μ longis, cellula superiore varia, lobata, apice 6–14 μ lata; hyphopodiis mucronatis oppositis v. unilaterialibus, ampullaceis 16–20 $\times$ 6–7 μ ; setis mycelicis nullis. Perithecia sparsa, globosa, atra, 190–220 μ diametro. Asci bispori. Sporae oblongae, brunneae, 4-septatae, leniter constrictae, utrinque rotundatae, 39–44 $\times$ 16–18 μ .

74. *Calothyrium Psychotriae* n. sp.

Hypophyllous, forming thin, rusty-brown patches 10–12 mm. diameter. Mycelium fuscous, branching and anastomosing irregularly, hyphae about $5\ \mu$ thick, without hyphopodia. Thyriotheceia in groups, very pale, flattened hemispherical, or irregular in shape on account of lateral pressure of adjacent thyriotheceia, 400–430 μ diameter; composed of radiating hyphae 4–5 μ thick, margin entire, but more or less undulate. Asci fairly numerous, paraphysate, eight-spored, spherical or somewhat pyriform, 50–53 μ diameter, or $60\text{--}64 \times 30\ \mu$. Spores conglobate, hyaline thick-walled, two-celled, slightly constricted, oblong, rounded at both ends, cells subequal, $26\text{--}29 \times 11\cdot5\text{--}13\ \mu$.

On leaves of *Psychotria capensis* (same leaves as *Meliola amphitricha*). 10.7.11, Amanzimtoti, Natal, Doidge [1575].

Calothyrium Psychotriae Doidge, nov. sp.

Hypophyllis, maculas tenues, 10–12 mm. diametro formans. Mycelium fuscum, ramosum, hyphis circ. $5\ \mu$ crassis, hyphopodiis nullis. Thyriotheceia gregaria rotundata v.

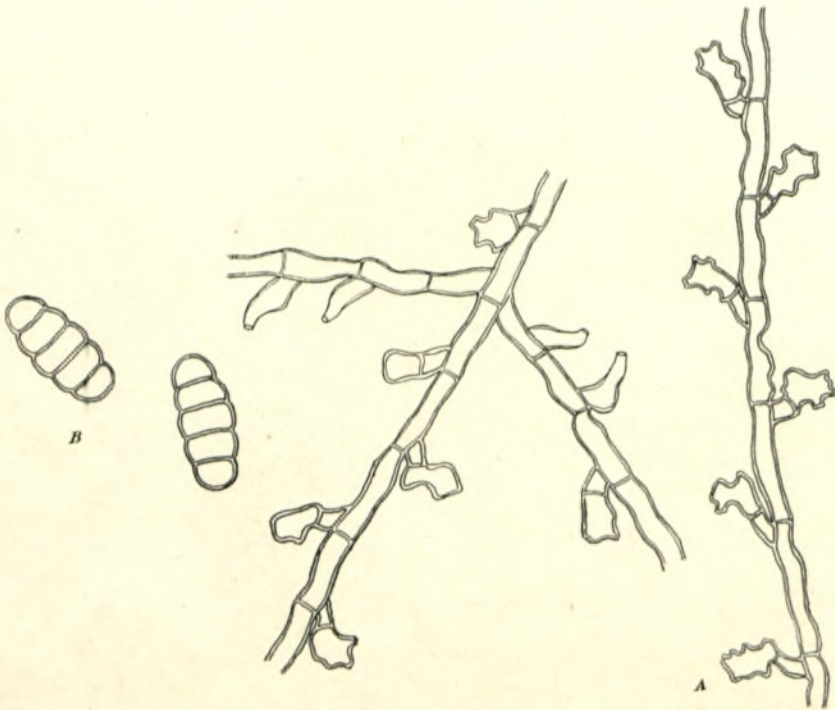


Fig. 6.

mutua pressione angulata v. compressa, 400–430 μ diametro, radiatim ex hyphis 4–5 μ crassis contexta, ad ambitum haud limbiata. Asci paraphysati, octospori, globosi v. subpyriformi, 50–53 μ diametro vel $60\text{--}64 \times 30\ \mu$. Sporae conglobatae, hyalinae, 1-septatae, leniter constrictae, oblongae, utrinque rotundatae, $26\text{--}29 \times 11\cdot5\text{--}13\ \mu$.

Hab. in foliis *Psychotriae capensis*, Amanzimtoti, Natal, 10.7.11, leg. Doidge [1575].

75. *Asterina rotonicola* n. sp.

On leaves of *Croton rivularis*, East London, 19.7.19, Doidge [12427]; Langholm Estates, Bathurst, 14.7.19, Doidge [12355].

Epiphyllous, forming thin black, carbonaceous spots, 2–3 mm. diameter. Mycelium pale fuscous, not dense, branching and anastomosing irregularly. Hyphae undulating, 3–3.5 μ thick. Cells 18–25 μ long. Hyphopodia unilateral or alternate, minute, continuous,

pyriform, $6-7\ \mu$ high $\times 3.5\ \mu$. Thyriothecia rather numerous, scattered, flattened hemispherical, $120-140\ \mu$ diameter, formed of radiating hyphae about $3\ \mu$ diameter, margin not fimbriate, dehiscing by a stellate fissure, no basal membrane. Asci aparaphysate, eight-spored, subspherical or ovate, sessile, $36-40 \times 23-33\ \mu$. Spores conglobate, two-celled, brown, slightly constricted, cells subequal, epispore rough at maturity, $17-20 \times 10\ \mu$. Pycnidia similar in form to thyriothecia, but somewhat smaller, about $100\ \mu$ diameter; conidia ovate, brown, continuous, without a hyaline band, $17-20 \times 12-13\ \mu$.

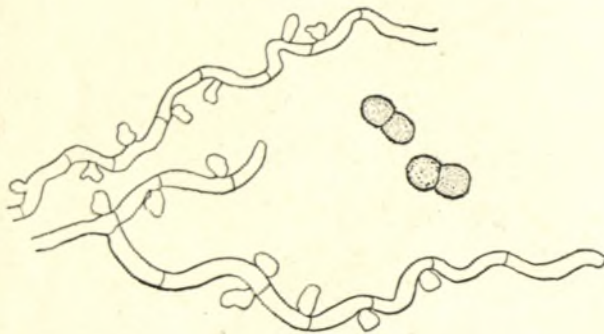


Fig. 7

Asterina crotonicola Doidge, nov. sp.

Epiphylla, maculas tenues atrae, 2-3 mm. diametro formans. Mycelium fuscum ramosum, hyphis undulatis $3-3.5\ \mu$ crassis, cellulis $18-25\ \mu$ longis; hyphopodiis unilateralibus v. alternis, minutis, continuis, pyriformis, $6-7\ \mu$ altis, $2.5\ \mu$ latis. Thyriothecia satis numerosa, sparsa, orbicularia, $120-140\ \mu$ diametro, radiatim ex hyphis circ. $3\ \mu$ crassis contexta, stellatim dehiscencia ad ambitum haud fimbriata. Asci aparaphysati, octospori, subglobosi v. ovati, sessiles, $36-40 \times 23-33\ \mu$. Sporae conglobatae, 1-septatae, brunneae, in maturitate verrucosae, $17-20 \times 10\ \mu$. [Fig. 7.]

Hab. in foliis *Crotonis rivularis*, East London, 19.7.19, leg. Doidge [12427].

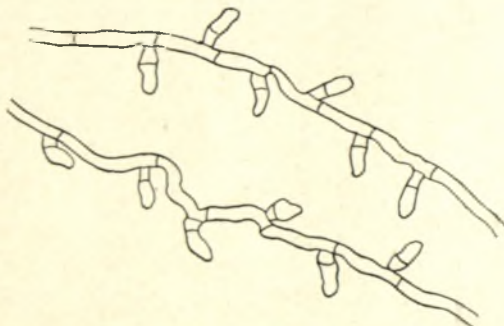


Fig. 8

✓ 76. *Asterina Scolopiae* n. sp.

On leaves of *Scolopia Zeyheri*, East London, 19.7.19, Doidge [12414].

On *Scolopia* sp., Mossel Bay, 22.7.15, Pole Evans [9067].

Hypophyllous, forming very thin spots about 5 mm. diameter. Mycelium delicate, diffuse. Hyphae straight or somewhat undulate, branching and anastomosing irregularly, $3-3.3\ \mu$ thick; hyphopodia unilateral or alternate, briefly stipitate, often at right angles to hypha, cylindrical, straight or slightly curved, $10-13.3 \times 3-3.5\ \mu$. Thyriothecia scattered,

flattened-hemispherical, 150–170 μ diameter, composed of radiating hyphae about 3 μ thick; at margin a number of these continue to extend towards and anastomose with vegetative hyphae, dehiscing by a stellate fissure. No basal membrane. Asci subspherical apapophysate, eight-spored, sessile, 33–40 μ diameter. Spores conglobate, two-celled, slightly constricted, ellipsoid, cells subequal, 20–23.5 $\times$ 9–11 μ . Pycnidia similar in form to thyriothecia, but smaller, 80–90 μ diameter. Conidia brown, continuous without a hyaline band, angular kite shaped, 18–25 $\times$ 10–13.5 μ . [Fig. 8.]

Asterina Scolopiae Doidge, nov. sp.

Hypophylla, maculas tenues, circ. 5 mm. latas, formans. Mycelium laxum, hyphis rectis v. subundulatis, 3–3.3 μ crassis; hyphopodiis unilateralibus v. alternis, breviter stipitatis, cylindraceis, rectis v. leniter curvatis, 10–13.3 $\times$ 3–3.5 μ . Thyriothecia sparsa, orbicularia, 150–170 μ diametro, radiatim ex hyphis circ. 3 μ crassis contexta, ambitu plus minus fimbriata, stellatim dehiscencia. Asci subglobosi, apapophysati, octospori, sessiles, 33–40 μ diametro. Sporae conglobatae, 1-septatae, leniter constrictae, ellipsoidae, cellulis subaequalibus, 20–23.5 $\times$ 9–11 μ .

Hab. in foliis *Scolopiae Zeyheri*, East London, 19.7.19, leg. Doidge [12414].

77. *Lembosia piriensis* n. sp.

On leaves of *Trichocladus ellipticus*, Pirie Forest, Kingwilliamstown, 8.7.19, Doidge [12301].

Epiphyllous, on leaf spots up to 1 cm. diameter, sometimes numerous and confluent, covering greater part of leaf surface. Hyphae slender, fuscous, 3–3.5 μ thick, branching and anastomosing irregularly. Hyphopodia sessile, about 4–5 μ diameter, hemispherical or sublobed, developing at irregular intervals. Thyriothecia scattered, ellipsoid, straight, simple or occasionally forked, 300–400 $\times$ 190–240 μ , composed of radiating hyphae about 3 μ thick, margin fimbriate. Asci paraphysate, eight-spored, ovate, somewhat thickened round the apex, sessile, 37–40 $\times$ 20–24 μ . Paraphyses hyaline, filiform, about 2 μ thick, equalling or slightly exceeding the asci. Spores two-celled, slightly constricted, ellipsoid, upper loculus broader, 17–20 $\times$ 6–7 μ , brown when mature. Pycidia flattened-hemispherical, 100–120 μ diameter. Conidia minute, hyaline, bacilloid.

Lembosia piriensis Doidge, nov. sp.

Epiphylla, maculas usque 1 cm. latas insidentia; hyphis tenuibus, fuscis, 3–3.5 μ crassis, ramosis; hyphopodiis sessilibus, circ. 4–5 μ diametro hemisphaericis, v. sublobatis, dispersis. Thyriothecia sparsa, elliptica, recta, simplices v. nonnunquam bifurcata, 300–400 $\times$ 190–240 μ , radiatim ex hyphis 3 μ crassis contexta, ambitu fimbriata. Asci paraphysati, octospori, ovati, sessiles, 37–40 $\times$ 20–24 μ . Paraphyses hyalinae circ. 2 μ crassae. Sporae 1-septatae, leniter constrictae, ellipsoidae, 17–20 $\times$ 6–7 μ , in maturitate brunneae, loculo superiore latiore.

Hab. in foliis *Trichoclaði elliptici*, Pirie Forest, 8.7.19, leg. Doidge [12301].

78. *Trichopeltula Carissae* n. sp.

On leaves of *Carissa arduina*, East London, 24.11.17, Doidge [10914]; 19.7.19 [12424].

Epiphyllous, when thinly sown each thallus is plainly visible, consisting of a number of narrow, dull-black, irregularly branched radiating fibrillae; frequently the thalli are so numerous that they coalesce, and the whole leaf surface becomes encrusted with the dull-black growth; thallus irregular in breadth, 95–275 μ broad, formed of narrow, rectangular, radiating-prosenchymatous cells. Conidial pycnothecia, 90–115 μ diameter, containing bacilliform, hyaline, non-septate conidia, 6–8 μ $\times$ 1–1.5 μ . Pycnothecia containing asci somewhat larger, 120–140 μ diameter; asci apapophysate, eight-spored, obovate or obclavate, broadly rounded at the apex, constricted at the base, with a very short foot, 24–30 $\times$ 13–16 μ . Spores tristichous, hyaline, oblong, slightly curved, four to five celled, usually four-septate when mature, 10–14 $\times$ 3–4 μ .

Trichopeltula Carissae Doidge n. sp.

Epiphylla, thallus vittaeformis, repens, ramosus; vittae brunneo-atrae, irregulares, 95–275 μ latae, radiato-prosenchymaticae, cellulis anguste rectangularibus. Pycnothecia in thallo formata, alia conidiofera, 90–115 μ , alia ascofera 120–140 μ diametro, applanato hemisphaerica, demum apice perforata. Conidia bacillaria, hyalina, continua, 6–8 $\times$ 1–1½ μ . Asci aparaphysati, octospori, obovati v. obclavati, supra late rotundati infra in nodum brevissimum coarctati, 24–30 $\times$ 13–16 μ . Sporae tristichae, hyalinae, oblongae, subcurvatae, quadrisepatae, 10–14 $\times$ 3–4 μ .

Hab. in foliis *Carissae arduinae*, East London, 24.11.17, leg. Doidge [10914].

79. *Trichopeltula kentaniensis* n. sp.

On *Xymalos monospora*, Kentani, 3.3.15, Pegler (Pegler No. 1999) [8866]; Zwartkop, near Maritzburg, Natal, 19.7.18, Doidge [11598].

On *Schmidelia monophylla*, Kentani, 3.3.15, Pegler (Pegler No. 2300) [8865].

This fungus is very similar in appearance to the species on *Carissa*, from which it differs chiefly in the size and form on the asci and spores; the latter are three to four septate, but usually four-septate when mature.

Trichopeltula kentaniensis n. sp.

Epiphylla, thallus vittaeformis, repens, ramosus: vittae brunneo-atrae, irregulares, 64–200 μ latae, radiato-prosenchymaticae, cellulis anguste rectangularibus. Pycnothecia in thallo formata, alia conidiofera 90–110 μ , alia ascofera 160–180 μ diametro, applanato-hemisphaerica, demum apice perforata. Conidia bacillaria, hyalina, continua, 4–6 $\times$ 1–1½ μ . Asci aparaphysati, octospori, ellipsoidei v. subclavati, apedicellati, 30–36 $\times$ 13–16 μ . Sporae tristichae, hyalinae, subclavatae, rectae, quadrisepatae, 15–17 $\times$ 3.5–5 μ .

Hab. in foliis *Xymalos monosporae*, Kentani, 3.3.15, leg. Pegler [8866].

Fungi belonging to this group appear to be very common in many localities, particularly in the neighbourhood of East London; but, although material has been collected at different seasons of the year, only the two species described above have been found with mature asci. Immature fungi belonging to the *Trichopeltaceae* have been collected near East London and elsewhere on the following hosts: *Acokanthera spectabilis*, *Behnia reticulata*, *Buxus MacOwani*, *Chaetacme aristata*, *Elaeodendron capense*, *Elaeodendron croceum*, *Eugenia* sp., *Putterlickia pyracantha*, *Rhoicissus rhomboidea*, *Toddalia natalensis*, *Trichocladus ellipticus*, *Umtisa Listeriana*.

80. *Scolecopeltis Cassipoureae* n. sp.

Ascomata hypophyllous, not situated on leaf spots, scattered, superficial, easily becoming detached, opaque, dark-green in the centre, translucent, paler at edges, 550–650 μ diameter, composed of a dense web of fine hyphae 1–2 μ thick.

Ostiole distinct, round 23–36 μ diameter. Asci aparaphysate, ellipsoid, sessile, 120–170 $\times$ 20–26 μ , four to eight spored. Spores parallel or twisted, filiform, 100–120 μ long, six to seven broad at centre, tapering somewhat towards rounded ends, ten to fifteen septate, constricted, easily separating even in ascus into very uneven portions 6–15 μ long.

On leaves of *Cassipourea verticillata*, Buceleuch, Natal, 17.7.18, Doidge [11586].

Scolecopeltis Cassipoureae Doidge, nov. sp.

Peritheciis hypophyllis, sine maculis, sparsis, superficialibus, facile secedentibus, opace atro-coeruleis, lenticulari-scutatis margine alatis, 550–650 μ diametro marginem versus coerulee pellucidi, ibique ex hyphis 1–2 μ latis tenuibus, maeandrice denseque conjunctis contextis, praeterea margine ca. 30–60 μ latoferre hyalino ex hyphis 1–2 μ latis anastomosantibus composito cinctis, ostiolo distincto, rotundato, 33–36 μ lato: ascis aparaphysatis, ellipsoideis, sessilibus, 120–170 $\times$ 20–26 μ , 2–8 sporis, sporidiis parallelis v. tortis, filiformis 100–120 μ $\times$ 6–7 μ , utrinque leniter attenuatis, 10–15 septatis, constrictis, facile secedentibus.

Hab. in foliis *Cassipoureae verticillatae*, Buceleuch, Natal, 17.7.18, leg. Doidge [11586].

81. *Asterinella Mimusopsidis* n. sp.

On leaves of *Mimusops obovata*, Pirie Forest, Kingwilliamstown, 8.7.19, Doidge [12267]; East London, 19.7.19, Doidge [12409].

Hypophyllous, forming thin black spots up to 5 mm. diameter; mycelium reticulate, alternate or opposite, branching, composed of fuscous-brown hyphae, more or less torulose, and undulate, varying in thickness from 3–6 μ , articulation more or less irregular; hyphopodia none; thyriothezia crowded in centre, or scattered, flattened-hemispherical, 240–320 μ diameter, dehiscing by collapse of central cells or by radial fissure, composed of straight radiating hyphae 3–3.5 μ thick, margin entire or with numerous rather delicate hyphae about 3 μ thick running out into the mycelium. Asci paraphysate, ovate or narrow ovate, sessile, eight-spored, thickened round apex, 60–70 $\times$ 25–35 μ . Spores conglobate, two-celled, brown, constricted at septum, 28–33 $\times$ 13–16.5 μ , slightly rough at maturity, upper loculus broader, broadly rounded at both ends.

Asterinella Mimusopsidis Doidge, nov. sp.

Hypophylla, maculas tenues usque 5 mm. latas formans, mycelium ex hyphis fusciculis, subtorulosis, undulatis 3–6 μ crassis formatum. Hyphopodia desunt. Thyriothezia conferta v. sparsa, orbicularia, 240–320 μ diametro, radiatim ex hyphis rectis 3–3.5 μ crassis contexta, peripherice hyphis longiusculis, flexuosis, 3 μ crassis fimbriata. Asci paraphysati, ovati, sessiles, octospori, ad apicem incrassati, 60–70 $\times$ 25–35 μ . Sporae conglobatae, 1-septatae, brunneae, constrictae, 28–33 $\times$ 13–16.5 μ , in maturitate minute verrucosae, loculo superiore latiore.

Hab. in foliis *Mimusopsidis obovatae*, Pirie Forest, 8.9.19, leg. Doidge [12267].

82. *Meliola gemellipoda* n. sp.

On leaves of *Jasminum angulare*, Langholm Estates, Bathurst District, 14.7.19, Doidge [12352].

Epiphyllous, forming round black velvety spots 1–5 mm. diameter. Mycelium compact, fairly dense, formed of straight or slightly wavy hyphae 10 μ thick; cells 20–30 μ long; branching opposite or irregular; capitate hyphopodia opposite, usually one pair to each cell of hypha, 16–23 $\times$ 9–10 μ , stipe cell short, 3–5 μ , terminal cell ovate to cylindrical, rounded at the apex. Murconate hyphopodia rare, interspersed with capitate hyphopodia, ampulliform 20–30 μ long $\times$ 10 μ thick at base. Mycelial setae fairly numerous, simple, straight, black, opaque except near the somewhat blunt apex, 9–10 μ thick at base, tapering gradually towards apex, 360–600 μ long. Perithecia 200–250 μ diameter, black, globose, smooth. Asci two to three spored, evanescent. Spores four-septate, cylindrical or tapering slightly towards both ends, rounded at both ends, scarcely constricted, 53–60 $\times$ 16.5–20 μ . Closely related to *M. Toddaliae*.

Meliola gemellipoda Doidge, nov. sp.

Epiphylla, maculas atras, orbiculares, 1–5 mm. diametro efformans; mycelio ex hyphis ramosis, septatis, 10 μ crassis composito; hyphopodiis capitatis oppositis 16–23 $\times$ 9–10 μ , cellula superiore ovata v. cylindrica; hyphopodiis mucronatis raris, ampulliformibus usque ad 30 μ longis; setis mycelicis numerosis, simplicibus, rectis, opacis, 360–600 μ longis, obtusis; peritheciis 200–250 μ diametro, atris, laevis, globosis; ascis, 2–3 sporis, evanescentibus; sporidiis 4-septatis, ad septa vix constrictis, 53–60 $\times$ 16.5–20 μ .

Hab. in foliis *Jasminii angularis*, Bathurst District, Cape Province, 14.7.19, leg. Doidge [12352].

83. *Irene Rinoreae* n. sp.

On leaves of *Rinorea ardesiaeflora*, Karkloof, Natal, 14.7.21, Doidge [14961].

Amphigenous, forming small, round, dull-black spots 1–2 mm. diameter: these are occasionally rather numerous and become confluent, but usually they are scattered and only one to two spots occur on a leaf.

Mycelium reticulate: hyphae dark-brown, semi-opaque, 6–7 μ thick, cells mostly 18–20 μ long, branches opposite, anastomosing, capitate hyphopodia alternate, usually one to each cell, stipitate, 17–26 μ high, terminal cell variously lobed with rounded or truncate lobes 17–20 μ broad. Mucronate hyphopodia rather numerous, interspersed with the capitate hyphopodia, opposite, alternate or unilateral: they are rather peculiar in form, reminding one of penguins at rest, 17–20 μ long and 5–6 μ thick at the base; mycelial setae none.

Perithecia spherical, black, carbonaceous, 140–200 μ diameter, surface cells conical or rounded, projecting to a height of 16–18 μ . (These could hardly be termed appendages; and the species is accordingly assigned to the genus *Irene*.) Asci fugaceous, not seen. Spores four-septate, cylindrical, rounded at both ends, constricted, $40\text{--}46 \times 16\cdot5\text{--}21\cdot5 \mu$.

Irene Rinoreae Doidge, nov. sp.

Amphigena, plagulas minutas, atras, 1–2 mm. diametro efformans. Mycelio reticulato. Hyphis brunneis, subopacis, 6–7 μ crassis, cellulis plerumque 18–20 μ longis, hyphopodiis capitatis alternis, stipitatis 17–26 μ altis, cellula superiore varie lobata, lobis rotundatis v. truncatis. Hyphopodiis mucronatis numerosis, oppositis, alternis v. unilateralibus, 17–20 μ longis, basi 5–6 μ crassis.

Setis myceliis nullis. Peritheciis globosis atris, tuberculatis, 140–200 μ diametro. Ascis non visis. Sporidiis 4-septatis, cylindricis, utrinque rotundatis, ad septa constrictis, $40\text{--}46 \times 16\cdot5\text{--}21\cdot5 \mu$.

Hab. in foliis *Rinoreae ardesiaeflorae*, Karkloof, Natal, 14.7.21, leg. Doidge [14961].

84. *Phyllachora myrsinicola* n. sp.

On leaves of *Myrsine melanophleos*, Duncairn, near Maritzburg, 13.7.21, Doidge [15015].

Stromata epiphyllous, not visible on lower surface of leaf, and not surrounded by discoloured leaf tissue, scattered, $\frac{1}{2}$ –1 mm. diameter, black, somewhat shiny, flat, very slightly raised above the epidermis.

Several loculi in each stroma, occupying about half the thickness of the leaf, which is here swollen to about twice its normal thickness. Loculi covered by a common epidermal clypeus which is black, opaque, and variable in thickness. Loculi not closely crowded, subspherical, 180–240 μ diameter, lateral and basal walls well developed, consisting of laterally compressed hyphae, usually hyaline, but sometimes brown at the base and where the lateral walls join the clypeus. Asci clavate $80\text{--}100 \times 20\text{--}27 \mu$, thick-walled, rounded at the apex, eight-spored, paraphysate, briefly pedicellate. Spores distichous, one-celled, hyaline, ellipsoid or rhomboid-ellipsoid, $16\cdot5\text{--}23\cdot5 \times 9\text{--}10 \mu$.

Phyllachora myrsinicola Doidge, nov. sp.

Stromata epiphylla, atra, in inferiore foliorum pagina non visibilia, sparsa, $\frac{1}{2}$ –1 mm. diametro parum nitidula, loculi pauci in quoque stromate, suborbiculares, 180–240 μ diametro, clypeo epidermale atro, opaco. Asci paraphysati, clavati, octospori, breviter pedicellati, $80\text{--}100 \times 20\text{--}27 \mu$. Sporae distichae, continuae, hyalinae, ellipsoidae v. subrhomboidae, $17\cdot5\text{--}23\cdot5 \times 9\text{--}10 \mu$.

Hab. in foliis *Myrsine melanophleos*, Duncairn, near Maritzburg, Natal, 13.7.21, leg. Doidge [15015].

85. *Clypeosphaeria natalensis* n. sp.

On leaves of *Viscum nervosum* growing on *Rapanea melanophleos*, Glen Burnie, Highflats, Ixopo District. Natal, 20.8.21, J. W. Bews [14867].

Perithecia and pycnidia epiphyllous, in scattered groups, similar in form and size, immersed, lenticular, spherical, convex at the apex with a black, opaque epidermal clypeus; 160–200 μ in diameter, very slightly papillate in the centre, where it becomes perforated by a pore; wall black, carbonaceous, 16–20 μ thick.

Asci paraphysate, subpyriform, broadly rounded at the base, narrower at the apex, thick-walled around the apex, which is traversed by a pore, eight-spored, evanescent, $90-120 \times 20-27 \mu$. Spores fuscous, four to five septate, cylindrical or subclavate, parallel or obliquely distichous, $42-54 \times 7.5-10 \mu$.

Conidia hyaline, cylindrical or clavate, rounded at both ends, transversely six to eight septate, $50-62 \times 10-11 \mu$.

Clypeosphaeria natalensis Doidge, nov. sp.

Peritheciis et pycnidiis epiphyllis, gregariis, immersis, lenticulariter sphaeroideis, vertice applanato, convexulo, centro leniter papillulatis demum poro perforatis, atris, $160-200 \mu$ diametro; ascis octosporis, paraphysatis, subpyriformibus, basi late rotundatis, sessilibus, apice incrassatis poro pertusis, evanescentibus, $90-120 \times 20-27 \mu$. Sporidiis fuscis oblique; distichis v. parallelibus, 4-5 septatis, cylindricis, v. subclavatis, $42-54 \times 7.5-10 \mu$.

Conidiis hyalinis, cylindricis v. clavatis, utrinque rotundatis, 6-8 septatis, $50-62 \times 10-11 \mu$.

Hab. in foliis *Visci nervosi*, Ixopo District, Natal, 20.8.21, leg. Bews [14867].

EXPLANATION OF ILLUSTRATIONS.

- Fig. 1. *Meliola Carissae*. (a) Mycelium with capitato hyphopodia. (b) Spores. (c) Mycelial setae.
 Fig. 2. *Meliola capensis*. Tips of mycelial setae.
 Fig. 3. *Meliola dracoenicola*. (a) Mycelium. (b) Spores. (c) Tips of mycelial setae.
 Fig. 4. *Meliola Oleicola*. (a) Mycelium. (b) Spores. (c) Tips of setae.
 Fig. 5. *Meliola Panici*. (a) Mycelium. (b) Spores. (c) Tips of setae.
 Fig. 6. *Irene Zeyheri*. (a) Mycelium. (b) Spores.
 Fig. 7. Mycelium and spores of *Asterina crotonicola*.
 Fig. 8. Mycelium of *Asterina Scolopiae*.