SOUTH AFRICAN ASCOMYCETES IN THE NATIONAL HERBARIUM.

By ETHEL M. DOIDGE.

PART IV.

136. **Vestergrenia chaenostoma** (Sacc.), Th.

Ann. Myc. XVI (1918), pp. 178–179.

Syn. *Physalospora chaenostoma*, Sacc. Hedw., 1899, p. 132; Syll. Fung. XVI, p. 460. *Haplodothis chaenostoma* (Sacc.) Th. Verhandl. K. K. zool. bot. Gesellsch. Wien., 1916, pp. 296–400.

On the leaves of *Maesa* sp., Durban, Natal; on *Maesa rufescens*, Zoutpansberg, leg. Pole Evans.

On leaves of *Maesa rufescens*, Durban, Natal, Medley Wood (Wood No. A. 86) [835] and [11136]; Winterskloof, Natal, 27.6.11, Doidge [1621]; Windy Hill, Natal, 9.9.13, Van der Bijl [6955]; Eston, Natal, 14.12.13, Van der Bijl [8372]; Maritzburg, Natal, 10.6.14, Doidge [8397]; Buccleuch, Natal, 20.4.16, J. M. Sim [10147]; Louis Trichardt, 8.4.19, Putterill [11839]; Claridge, Natal, 15.7.21, Doidge [14946]; Town Bush Valley, Maritzburg, 9.2.22, Doidge [15415].

Epiphyllous; the perithecia are closely crowded in groups 5–8 mm. in diameter, these groups often coalescing to form larger groups. Perithecia sunken under the epidermis, but protruding somewhat, the covering layer early becoming ruptured and wide open. The wall at the base and sides of the perithecium is comparatively thin, 8–10 μ thick, consisting of a few layers of fuliginous brown, elliptical cells. The outer wall is thicker, forming a flat, broad covering layer 30–40 μ thick and 150–180 μ in diameter, parenchymatous in structure. There is no typical ostiole. The whole pseudo-perithecium is 200–220 μ high, 240–260 μ diam., flattened-spherical in form. It does not reach the lower epidermis, the upper epidermis becomes ruptured by the pressure of the perithecium. There is no true stroma.

The asci are very varied in form; some broaden out from a short foot and are clavate, up to 130 μ long × 24 μ broad in the upper part; others broaden suddenly from a long thin stalk 50-60 μ long; these are cylindrical, 65 μ × 34 μ. The asci are eight-spored, and there are no paraphyses.

Spores hyaline, one-celled, oblong, straight or somewhat narrower in the lower half, both ends broadly rounded, 25–29 μ × 9–11 μ.

137. **Pleomassaria gigantea,** Syd.

Ann. Myc. XII (1914), p. 265.

On rind of *Euphorbia* sp., Amanzimtoti, Natal, 10.7.11, Doidge [1660]; 20.5.13, Doidge [6625].

Perithecia scattered, globose or hemispherical, coriaceous-carbonaceous, about 1 mm. diam., black, covered, immersed in the cortex, with a round ostiole. Asci oblong, 200–300 μ × 35–40 μ, 1–2-spored; paraphyses very long and extremely numerous, 1–1½ μ thick. Spores oblong or oblong-fusoid, blunt at both ends, transversely 18–30-septate, not constricted or slightly constricted at all the septa, sometimes with a more decided constriction at the medial septum, longitudinally 3–5-septate, and thus

becoming muriform ; at first hyaline, then olivaceous- or reddish-brown, 80–170 μ × 25–28 μ. The spores seem to have a delicate mucilaginous envelope ; in the original description Sydow states that he has not observed this.

138. **Titanella grandis,** Syd.

Ann. Myc. XVII, p. 36 (1919).

Syn. *Pleomassaria grandis,* Syd. Ann. Myc. XII (1914), p. 264.

On bark of *Sideroxylon inerme* L., Amanzimtoti, Natal, 20.5.13, Doidge [6622].

Perithecia scattered, flattened-globose, 1½–2½ mm. diam., black, immersed in the outer bark with the upper part protruding, ostiole round, comparatively small, walls very thick ; asci variable, 2–8-spored, indistinctly paraphysate ; spores monostichous to distichous, ellipsoid-oblong, obtuse at both ends, transversely 10–15-septate, longitudinally 2–4-septate, not constricted or rarely very slightly constricted at the medial septum ; at first hyaline, then fuscous, 70–95 μ × 28–36 μ, epispore 2–3½ μ thick, spores immersed in a mucilaginous envelope.

139. **Pleomassaria Peddieae** n. sp.

On living bark of *Peddiea africana,* Woodbush, Zoutpansberg Dist., 16.9.23, Doidge [17741].

Perithecia scattered or more or less crowded, immersed in the outer bark with the ostiole protruding, globose or flattened, coriaceous-carbonaceous, 700–900 μ diam., black ; ostiole round, about 150–160 μ diam. Asci 4–8-spored, oblong, 180–200 μ × 17–27 μ. Paraphyses long, filiform, and extremely numerous, not more than 1 μ thick. Spores obliquely monostichous, later subdistichous, oblong-ellipsoid, muriform, transversely 8–10-septate, not constricted or very slightly constricted at all the septa, sometimes with a more decided constriction at the medial septum ; longitudinally 1-septate ; at first hyaline, then fuscous, later becoming olivaceous-brown, with a delicate mucilaginous envelope, 45–70 μ × 17–19 μ, often slightly curved or asymmetrical.

Pleomassaria Peddieae, Doidge, n. sp.

Perithecia sparsa, depresso-globosa, coriaceo-carbonacea, 700–900 μ diam., atra, in cortice exteriore immersa, vertice tantum prominula, ostiolo rotundo donata ; asci oblongi, 4–8-spori, 180–200 μ × 17–27 μ ; paraphysibus longis, filiformis copiosissimis ; sporae ellipsoideo-oblongae, utrinque obtusis, transverse 8–10-septatae, ad omnia septa non vel leniter constrictae, longitudinaliter 1-septatae, hinc muriformae, ex hyalino olivaceo-fuscae, 45–70 μ × 17–19 μ.

Hab. in cortice *Peddieae africanae,* Woodbush, Zoutpansberg Dist., 16.9.23, leg. Doidge [17741].

140. **Nematostigma obducens,** Syd.

Ann. Myc. XI (1913), pp. 262–263.

On leaves of *Scutia indica,* Port Elizabeth, C.P., 23.3.11, Doidge [1242].

Hypophyllous, parasitic on the mycelium of an undetermined ascomycete with thick ahyphopodiate hyphae, forming round, raised spots which are radiating, olivaceous, and 1–3 mm. in diameter. Hyphae subhyaline to pallid olivaceous-violaceous, septate, branched, 1½–2½ μ thick. Perithecia numerous, globose, 140–200 μ diam., violet-black or brown-black, with a minute, not very prominent ostiole, and set about with a few or rather numerous hyphae which are straight or slightly flexuous, obtuse at the apex, up to 110 μ long, 5–9 μ thick, frequently septate. Perithecial wall rather thin, olivaceous-brown, parenchymatous, composed of cells about 10–16 μ long. Asci mostly saccate, subsessile, 70–90 μ × 24–30 μ, eight-spored, with filiform paraphyses. Spores parallel, long fusiform, straight or slightly asymmetrical, tapering slightly towards each end, but obtuse, 6–9-septate, not or scarcely constricted, at first hyaline, pale yellow-brown or olivaceous, brown when mature, 42–55 μ × 7½–9 μ.

141. **Leptosphaeria Protearum,** Syd.

Ann. Myc. X (1912), pp. 441–442.

On leaves of *Protea melaleuca*, Wellington, C.P., 22.2.12, Doidge [2061].

On leaves of *Protea cynaroides*, mountain behind St. James, C.P., 22.12.12, Pole Evans [5573].

Produces round-irregular whitish-brown spots with a raised margin, which vary in size on different hosts—on *Protea melaleuca* they are 4–10 mm. long, on *P. cynaroides* they attain a diameter of 15–25 mm.; these are frequently confluent and so form irregular blotches of larger dimensions. Perithecia amphigenous, scattered, covered by the epidermis, later slightly protruding at the apex, lenticular, 175–275 μ diam., black, with a minute, inconspicuous papilla, parenchymatous in structure, opaque, formed of cells 7–10 μ diam., asci fasciculate, aparaphysate, eight-spored, often curved, rounded at the apex, mostly clavate, 80–100 μ × 13–17 μ, with distichous spores, rarely long cylindrical, up to 200 μ long, 10–12 μ wide, with monostichous spores. Spores oblong, obtuse, at first 1-septate and hyaline, later 3-septate and pale brown, slightly constricted at the medial septum, 18–26 μ × 5–9 μ.

142. **Phyllachora minuta,** P. Henn.

Hedwigia XLI, 1902, p. 143; Syll. Fung. XVII, p. 832.

Ann. Myc. XIII (1915), p. 531.

On leaves of *Hibiscus tiliaceus*, Port Shepstone, Natal, 15.10.12, Pole Evans [5604].

Stromata hypophyllous, sometimes also epiphyllous in groups of 4–12 on reddish-yellow leaf spots 1–1½ mm. diam.; single stromata about 300 μ diam., sometimes confluent; the leaf, which is normally 140 μ thick, is at these spots hypertrophied, becoming over 400 μ thick, and the leaf tissue is reddish in colour. The loculi are embedded in the mesophyll, 250 μ broad and high, or somewhat higher than broad, hyaline, with a very delicate wall; only at the apex there is a very short black clypeus developed by which the apex of the loculus is fused with the epidermis; there is sometimes also a dark group of hyphae at the base of the loculus. Often the short epidermal clypeus extends and fuses with that of neighbouring loculi; so also sometimes two adjacent delicate loculi also become fused into a single colourless cavity. Asci cylindrical, paraphysate, tapering to the base, 120–140 μ × 10–12 μ. Spores monostichous, elliptic, colourless, one-celled 14 μ × 9 μ.

Previously recorded from Java, the Philippines, and Australia.

143. **Catacauma goyazense** (P. Henn.), Th. et Syd.

Ann. Myc. XIII, pp. 96–397 (1915).

Syn. *Phyllachora goyazensis*, P. Henn., Hedwigia XXIV, 1895, p. 110; Syll. Fung. XI, p. 369.

On leaves of *Eugenia* sp., Kentani, C.P., 17.9.15, A. Pegler (Pegler No. 2110) [9113].

Stromata epiphyllous, scattered in irregular groups up to 5 mm. diam., black, shining, convex, single stromata up to 1 mm. diam., unilocular or with a small number of loculi; epidermal clypeus black, opaque, 60–70 μ thick; inner part of stroma lilac-brown, indistinctly prosenchymatous in structure. Loculi spherical or somewhat flattened, with their bases closely appressed to the palisade cells, 400–500 μ × 300–350 μ. Asci paraphysate, cylindrical, eight-spored, 75–85 μ × 12–15 μ. Spores monostichous, colourless, one-celled, elliptic, rounded at both ends, 13–16 μ × 6–8 μ.

I have not seen the type specimen which was collected in Brazil, but the South African specimen agrees very closely with the description in the "Annales Mycologici."

144. **Hysterostoma microspora** n. sp.

On leaves of *Weihea africana*, West Wood, Haenertsburg, 14.9.23, Doidge [17726].

Stromata hypophyllous, scattered, circular in outline, dull black, up to 5 mm. diam., carbonaceous with a rough surface, each stroma surrounded by a sparse radiating fringe

of undulating hyphae, which tend to run in strands, are pale fuscous and 2–2·5 μ thick. Loculi numerous, round to irregular closely crowded, up to 240 μ diam., 60–80 μ high, each with a central pore; outer wall radiating in structure. Hypothecium thin, colourless, attached at many points to the hypostroma, which is dark coloured, subcuticular or subepidermal, but always intercellular. Asci paraphysate, clavate, eight-spored, rounded at the apex, apedicellate, 30–37 μ × 10–11·5 μ, paraphyses numerous, filiform. Spores distichous, fuscous-olivaceous, two-celled, not constricted, kite-shaped, upper cell shorter and broader, both ends acutely rounded, 13–15 μ × 5–6 μ. The asci do not stain blue with iodine.

Hysterostoma microspora, Doidge, n. sp.

Stromata hypophylla, sparsa, atra, usque 5 mm. diam., radiato contexta, periphice in hyphas radiantes 2 μ crasses dissoluta hypostromate subcuticulari et subepidermali; loculi numerosi rotundati v. irregulares, conferti, usque 240 μ diam., 60–80 μ alti; hypothecio tenue; asci paraphysati clavati octospori, apice rotundati 30–37 μ × 10–11·5μ, paraphysibus numerosis filiformis; sporae distichae 1-septatae haud constrictae, rhomboideae, 13–15 μ × 5–6 μ, cellula superiore latiore at breviore.

Hab. in foliis *Weiheae africanae*, West Wood, Haenertsburg, 14.9.23, leg. Doidge [17726].

145. **Hysterostomina Oxyanthae,** Doidge.

Syn. *Morenoella Oxyanthae*, Doidge, Trans. Roy. Soc. S. Africa, VIII, pp. 270, 281, 1920.

On leaves of *Oxyanthus Gerrardi*, Woodbush, Zoutpansberg Dist., 7.8.11, Doidge [1758]; Kentani, C.P., 10.5.15, Pegler (Pegler No. 2321) [9073]; Town Bush Valley, Maritzburg, Natal, 21.3.16, Doidge [9719]; Louis Trichardt, 8.4.19, Putterill [11850]; Woodbush, Zoutpansberg Dist., 18.9.23, Doidge [17725]; Table Mountain, near Maritzburg, 12.7.21, Doidge [14970].

This fungus forms thin black pellicles which very readily become detached from the leaf surface, and was therefore regarded as superficial, but on examination of the leaf tissue it appears that it has a well-developed hypostroma, and must therefore be placed in the Polystomellaceae. The mycelium, which is often closely associated with the stromata, does not appear to belong to this fungus.

Amphigenous, sometimes on yellowish leaf spots, stromata flat, membranous, dull black, round, up to 5 mm. diameter, about 50 μ high. Loculi 400–600 μ × 250–300 μ closely crowded, irregularly arranged, dehiscing by longitudinal slits; covering membrane radial, dark brown to black, opaque except at the margins, composed of hyphae 3–3·5 μ thick. Hypothecium dark brown, opaque, connected at many points with the epidermal hypostroma. Asci aparaphysate, eight-spored, elliptic-ovate, sessile or very briefly pedicellate, very much thickened round the apex, 23–30 μ × 13–16 μ. Spores distichous or conglobate, ellipsoid or subclavate, unequally 1-septate, the upper cell being shorter and broader, slightly constricted, fuscous when mature, 12–16 μ × 3·5–5 μ. Hypostroma well developed in the epidermal cells, consisting of a tangled mass of hyaline hyphae which also penetrate to some extent between the cells of the mesophyll.

146. **Stigmatopeltis,** nov. gen.

Omnia ut in *Stigmatea*, sed sporis continuis, fuscis.

Stigmatopeltis Royenae, Doidge, n. sp.

On leaves of *Royena lucida*, West Wood, Haenertsburg, 14.9.23, Doidge [17727].

Ascomata epiphyllous, in small groups up to 5 mm. diam., subcuticular, remaining covered by the cuticle, smooth, lenticular, 190–240 μ diam., 60–70 μ high; covering membrane dark brown, opaque, radial in structure as seen at margin, with a round ostiole 14–17 μ in diameter. Hypothecium thin, hyaline. Asci eight-spored, oblong or clavate, sessile, 60–70 μ × 16·5–20 μ, paraphyses not seen. Spores distichous, brown, continuous,

elliptic, subclavate or rarely subpyriform, 15–16·5 μ × 5–6·5 μ, sometimes with a narrow hyaline band.

This fungus differs from the typical *Stigmatea* in having non-septate spores; in this respect it resembles *Entopeltis*, from which it differs considerably in the absence of mycelium and the structure of the ascomata. The material is rather old, and it is possible that paraphyses may be present in younger ascomata.

Stigmatopeltis Royenae, Doidge, n. sp.

Ascomata epiphylla, gregaria, 190–240 μ diam., 60–70 μ alti, brunnea, obscure radiatim contexta, hypothecio tenue hyalino; asci octospori, oblongi v. clavati, sessiles, 60–70 μ × 16·5–20 μ; sporae distichae, brunneae continuae, ellipticae, subclavatae v. rarius subpyriformae, 15–16·5 μ × 5–6·5 μ.

Hab. in foliis *Royenae lucidae*, West Wood, Haenertsburg, 14.9.23, leg. Doidge [17727].

147. **Entopeltis interrupta** (Wint.), V. Hohn.

Fragm. 3, Myk. X, No. 489, 1910.

Syn. *Asterina interrupta*, Wint., Flora, 1884, Bd. 64, p. 264, Taf. V, fig. 6.

On leaves of *Leucadendron* sp., Muizenberg, C.P., May, 1883, MacOwan (Rabh. Fung. Eur. 3952) [4292].

On leaves of *Leucospermum conocarpum*, Hottentots Holland, C.P., May, 1883, MacOwan (Rabh. Fung. Eur. 3951) [4291]; Hout Bay, 21.1.15, Bottomley [8918].

On leaves of *Protea lepidocarpon*, Lions Head, Capetown, 16.11.10 [1028].

On *Protea cynaroides*, Bainskloof, Wellington, 16.9.16, Doidge [9782].

A very exact and detailed description is given by V. Höhnel, with which I am entirely in agreement, except that the fungus appears to me to be embedded in the surface of the thick cuticle rather than under the cuticle. The brown mycelium consists of flat ribbon-like hyphae, 4–8 μ thick, with quite homogeneous contents. The single hyphae usually follow the outlines of the epidermal cells, they often are more or less zigzag or undulating, and form a network with meshes 40–200 μ wide. While the longitudinal walls of these hyphae are extremely delicate, the cross walls are thick, dark-coloured, and usually in pairs, so that the hyphae often consist of regularly alternating cells, 4–6 μ × 10–20 μ long. A few of these typical hyphae go out from each fruiting body and also invade the stomata, filling the substomatal cavity with brown hyphae and invading the neighbouring palisade cells. The infected parts of the leaf show as brownish spots, 1–6 mm. in diameter which are often confluent, and on which the black fruiting bodies appear in groups. These are also grown into the cuticle and the upper wall only is developed; they are therefore dimidiate, round, irregular, very flat-conical with a flat base, 160–225 μ diam. and about 35 μ high, unilocular. The hyaline base gives rise to a few asci, of which the outer are slanting or almost horizontal and the inner more upright. The outer wall of the fruiting body is only a single layer of cells and has in the centre a flat, round, somewhat ragged false ostiole 16–22 μ in diameter, which is formed by the breaking away of the parenchyma cells which form the wall. The cells are in radiating lines, thin-walled, 4–6-angled, and 6–9 μ diam. Asci thick-walled, stipitate, clavate, eight-spored, 60–67 μ × 20–23 μ; paraphyses thread-like, indistinct, evanescent. Spores distichous, broadly elliptic, violet-brown, 16–17 μ × 9–9·5 μ, always unicellular, but having a light-coloured band, 2–3 μ broad across the middle. [Figs. 1–2.]

148. **Asterina secamonicola** n. sp.

On leaves of *Secamone alpini*, Woodbush, Zoutpansberg Dist., 16.9.23, Doidge [17716].

Epiphyllous, forming irregular sooty blotches and often by confluence covering the greater part of the leaf surface. Mycelium fuscous, reticulate, forming a dense network similar in character to that of *Parasterina reticulata*. Hyphae 3·5–4 μ thick, branching irregularly and anastomosing; hyphopodia not numerous and only readily distinguishable on the younger parts of the mycelium, alternate, continuous, oval, hemispherical or flattened, 6·5–10 μ high, 6·5–10 μ broad. Thyriothecia numerous, dark brown, scattered, flattened-

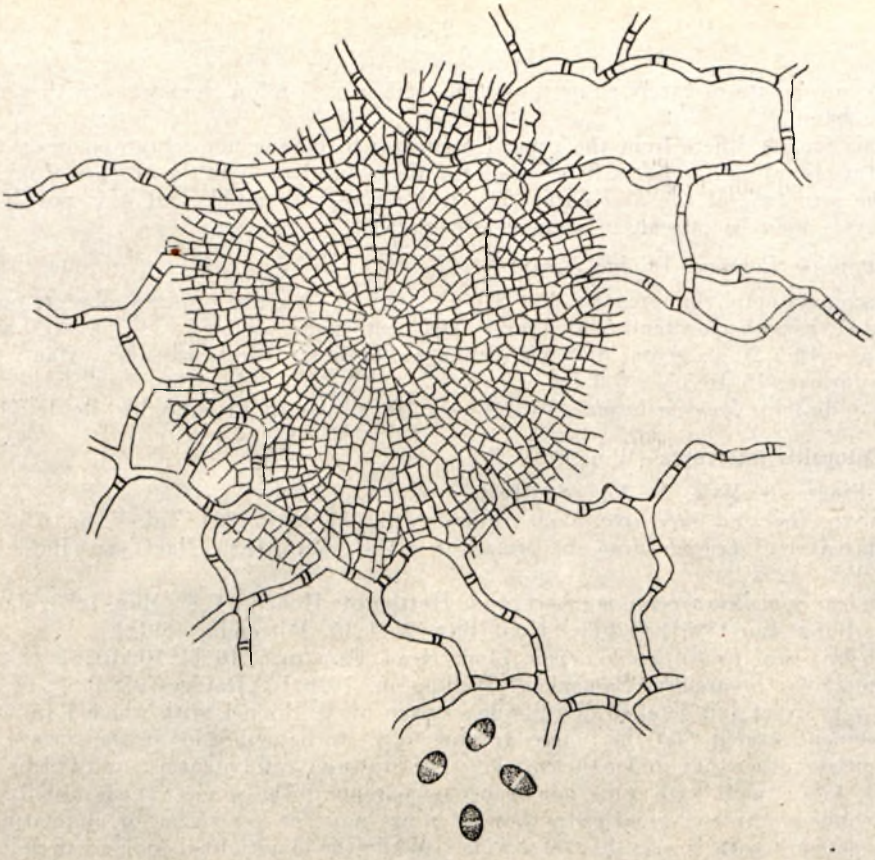

Fig. 1.

Entopeltis interrupta. Thriothecium, mycelium, and spores; surface view.

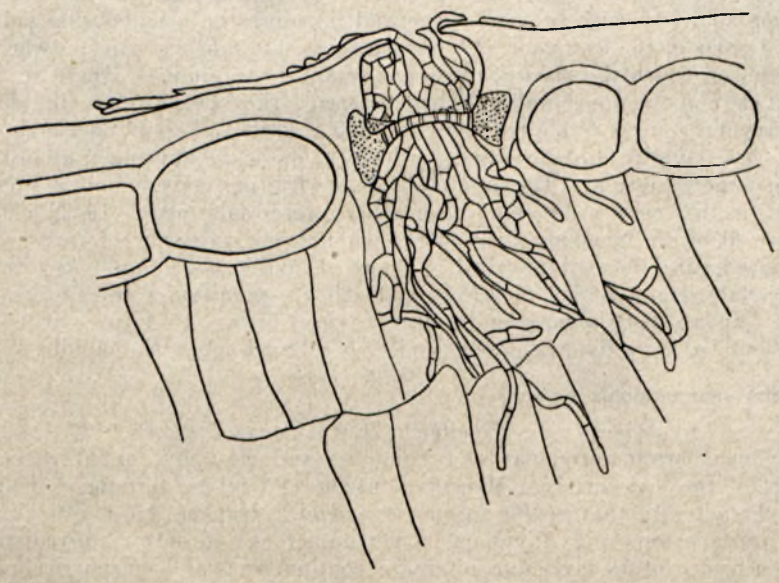

Fig. 2.

Entopeltis interrupta. Mycelium growing through stoma.

hemispherical, 200–240 μ diam., covering membrane formed of radiating hyphae 3–3·5 μ thick, margin at first crenate, more or less fimbriate at maturity. Asci aparaphysate, ovate or subspherical, eight-spored, sessile, thickened round apex, 40–50 μ × 24·27 μ or 30 μ × 27–30 μ. Spores conglobate, two-celled, brown, slightly constricted, upper cell broader and more broadly rounded than lower, 20–23·5 μ × 9–10 μ; lower cell, 6·5–7 μ.

Asterina secamonicola, Doidge, n. sp.

Epiphylla, plagulas irregulares, atras confluentes formans; mycelium fuscum, reticulatum ex hyphis brunneis ramosis 3·5–4 μ crassis compositum. Hyphopodia haud numerosa, alterna, ovata, hemisphaerica v. depressa, continua, 6·5–10 μ longa, 6·5–10 μ lata. Thyriothecia numerosa, atro-brunnea, sparsa dimidiata, orbicularia 200–240 μ diam. ex hyphis radiatis 3–3·5 μ crassis contexta; asci aparaphysati, ovati v. subglobosi octospori apice incrassati, 40–50 μ × 24–27 μ or 30 μ × 27–30 μ; sporae conglobatae, 1-septatae, brunneae, leniter constrictae, 20–23·5 μ × 9–10 μ, cellula superiore latiore.

Hab. in foliis *Secamones alpini*, Woodbush, Zoutpansberg Dist., 16.9.23, leg. Doidge [17716].

149. **Microthyrium ranulisporum** n. sp.

On *Scolopia Mundtii*, Komgha, C.P., July, 1919, E. P. Phillips [14152].

Thyriothecia hypophyllous, scattered or in small groups, minute, black, superficial dimidiate, round, 240–360 μ diam., about 30 μ high in the centre and with a round ostiole about 20–30 μ diam., covering membrane radiating in structure, composed of undulating hyphae about 2 μ thick in the centre and 3–3·5 μ thick near the margin. Margin irregular, but not fimbriate. Asci numerous, paraphysate, eight-spored, sessile, oblong, thickened round the apex, 90–100 μ × 10–14 μ, not staining blue with iodine. Spores distichous, hyaline or flavescent, two-celled like tadpoles in shape, 25–30 μ × 3·5–5 μ, upper cell oval, 6·5–8·5 μ × 3·5–5 μ, lower cell narrow, cuneate, tapering, 16·5–23·5 μ × 3 μ.

Microthyrium ranulisporum, Doidge, n. sp.

Thyriothecia hypophylla sparsa v. laxe gregaria minuta, atra, superficialia, dimidiata, orbicularia 240–360 μ diam. ex hyphis undulatis, brunneis 2–3·5 μ contexta, ostiole rotundo 20–30 μ diam.; asci numerosi, paraphysati, octospori, sessiles, oblongi, apice incrassati, 90–100 μ × 10–14 μ; sporae distichae, hyalinae v. flavescentes, 1-septatae ranuliformae, 25–30 μ × 3·5–5 μ, cellula superiore elliptica, 6·5–8·5 μ × 3·5–5 μ, cellula inferiore anguste cuneata, attenuata, 16·5–23·5 μ × 3 μ.

Hab. in foliis *Scolopiae Mundtii*, Komgha, C.P., 1919, leg. E. P. Phillips [14152].

150. **Irene Peddieae** n. sp.

On leaves of *Peddiea africana*, Woodbush, Zoutpansberg Dist., 16.9.23, Doidge [17777].

Hypophyllous, forming dark irregular blotches up to 10 mm. diam. Mycelium brown, forming rather a dense network; hyphae 6–7 μ thick, sinuous, with opposite branches; cells about 30–35 μ long; capitate hyphopodia alternate, not crowded, usually one to each cell, 24–30 μ high, stalk cell cylindrical or becoming slightly thicker from the base upwards, head cell irregularly 2–4-lobed, lobes rounded, flattened or bi-lobulate, 15–20 μ broad; mucronate hyphopodia not very numerous, opposite, alternate or unilateral, lageniform, straight, curved or gibbose, 17–20 μ high, 6–7 μ broad. Perithecia scattered, spherical, 200–240 μ diam., without setae or appendages, collapsing at maturity, formed of cells about 10 μ diam. Spores brown, 3-septate, straight or slightly curved, oblong, rounded at both ends, somewhat constricted at the septa, 40–44 μ × 15–16·5 μ. [Fig. 3.]

Irene Peddieae, Doidge, n. sp.

Mycelium hypophyllum, plagulas irregulares usque 10 mm. diam. efformans; hyphis sinuosis 6–7 μ crassis, ramis opposites hyphopodiis capitatis alternis 24–30 μ altis, 15–20 μ latis; cellula superiore 2–4-lobata, lobis rotundatis, truncatis v. bilobulatis; hyphopodiis

mucronatis lageniformis, 17–20 μ × 6–7 μ. Perithecia sparsa, globosa, 200–240 μ diam. in sicco collapsa ; asci non visi. Sporae 3-septatae, leniter constrictae, brunneae, oblongae utrinque rotundatae, 40–44 μ × 15–16·5 μ.

Hab. in foliis *Peddieae africanae*, Woodbush, Zoutpansberg Dist., 16.9.23, Doidge [17777].

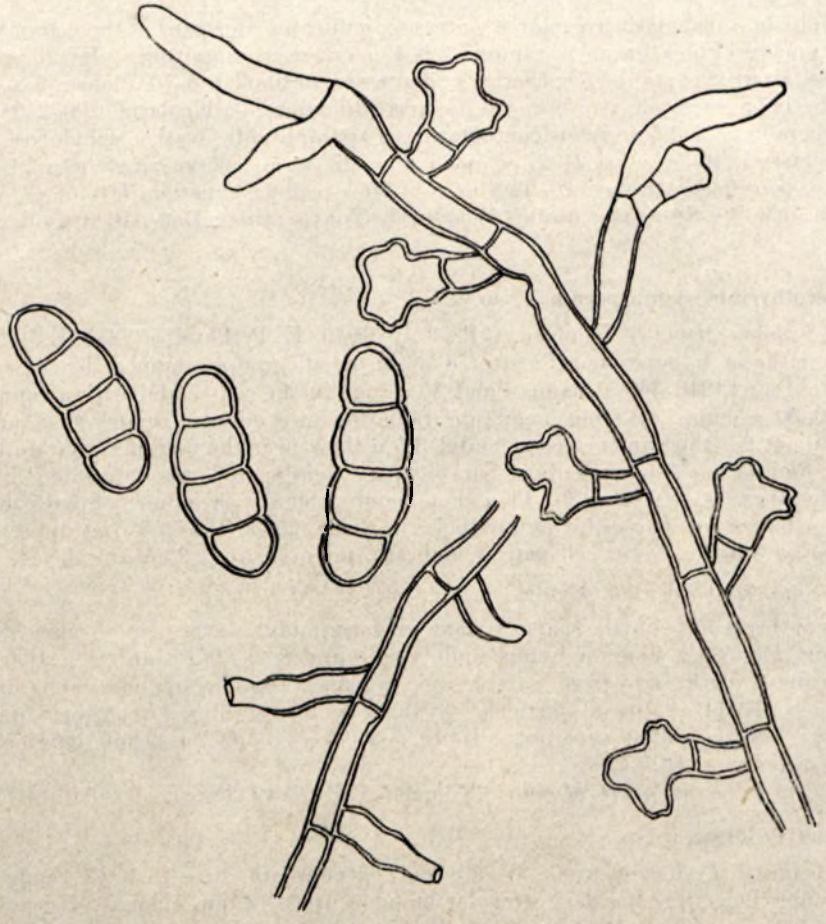

Fig. 3.
Irene Peddieae. Mycelium and spores.

151. **Meliola Choristylidis** n. sp.

On leaves of *Choristylidis rhamnoides*, Woodbush, Zoutpansberg Dist., 16.9.23, Doidge [17733].

Epiphyllous, colonies round or irregular in outline, black, 4–10 mm. in diameter. Mycelium forming an open network composed of hyphae 6·5–7·5 μ thick, with opposite branches. Capitate hyphopodia opposite or alternate, not crowded, 14–17 μ long, 8·5–10 μ broad, stalk cell short, cylindrical, head cell smooth, ovate. Mucronate hyphopodia abundant in the older parts of the colony, opposite, bottle-shaped or flask-shaped, 14–17 μ × 6·5 μ. Mycelial setae abundant around perithecia, 200–250 μ high, dark brown, and 6·5–10 μ thick at the base, tapering towards the tips and becoming lighter in colour ; once to four times dichotomous, primary branches 120–150 μ from the base, at right angles

to one another or more widely divergent, secondary and tertiary branches when present usually almost at right angles; primary and secondary branches 40–50 μ long, further branches usually shorter, and ultimate branches often not more than 5–6 μ long. Perithecia scattered, black, spherical 150–175 μ diam., verrucose, wall formed of rounded, conical cells 10–14 μ diam. Asci two-spored, evanescent. Spores brown, oblong, 4-septate, broadly rounded at both ends, slightly constricted, 36–40 μ × 13–15 μ. [Fig. 4.]

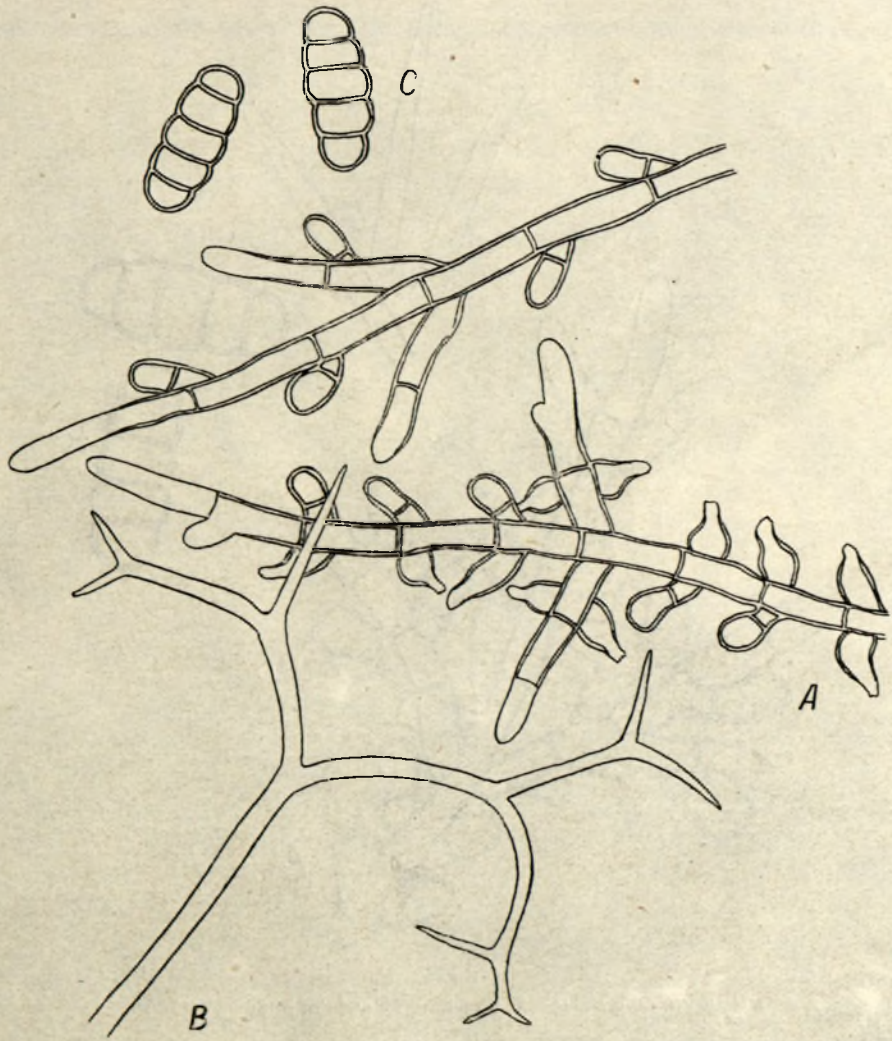

Fig. 4.

Meliola Choristylidis. A. mycelium; B, seta; C, spores.

Meliola choristylidis, Doidge, n. sp.

Plagulae epiphyllae, atrae, orbiculares v. irregulares, 4–10 μ diam.; mycelium reticulatum ex hyphis 6·5–7·5 μ crassis, opposite ramosis compositum; hyphopodia capitata opposita v. alternantia, 14–17 μ longa, cellula basali brevi, cellula superiore integra ovata, 8·5–10 μ lata; hyphopodia mucronata numerosa, opposita, ampullacea, 14–17 μ × 6·5 μ; setae mycelicae modice copiosae, tantum ad basim peritheciorum evolutae, 200–250 μ longae,

ad basim opacae 6·5–10 μ crassae superne in ramos duos, 40–50 μ longos patentes divisae, ramis iterum in ramulos duos variae longitudinis ad apicem bifurcatos divisis ; perithecia sparsa atra, globosa, 150–170 μ diam., verrucosa ; asci bi-spori mox diffluentes ; sporae brunneae, oblongae, 4-septatae, utrinque rotundatae, leniter constrictae, 36–40 μ × 13–15 μ.

Hab. in foliis *Choristylidis rhamnoidis*, Woodbush, Zoutpansberg Dist., 16.9.23, leg. Doidge [17733].

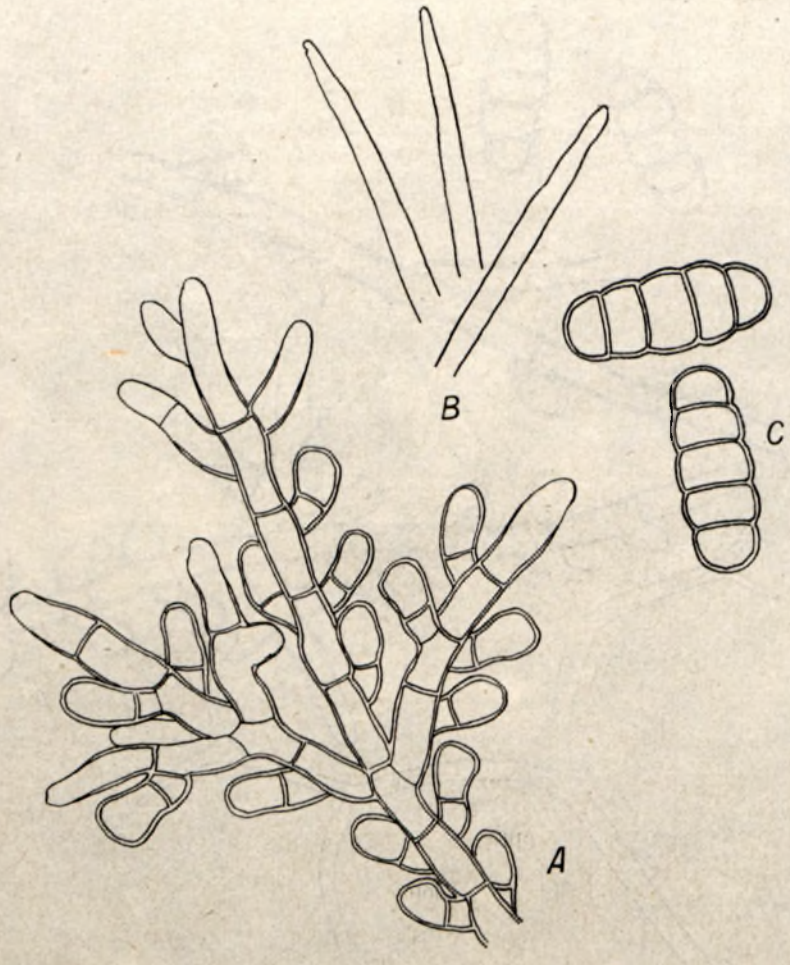

Fig. 5.

Meliola transvaalensis. A, mycelium ; B. tips of setae ; C, spores.

152. **Meliola transvaalensis** n. sp.

On leaves of *Myrsine africana*, Woodbush, Zoutpansberg Dist., 16.9.23, Doidge [17746].

Amphigenous, forming black spots 2–5 mm. in diameter. Mycelium dark brown, dense, hyphae 7–10 μ thick, branches usually opposite. Capitate hyphopodia crowded, opposite, at right angles to or appressed towards the hyphae, 15–20 μ high, stalk cell cylindrical, head cell ovate or flattened by compression, about 10 μ broad. Mucronate hyphopodia rare, ampulliform with a curved neck, 16–23 μ × 6–7 μ. Mycelial setae black, opaque, simple, most numerous in the neighbourhood of the perithecia 450–650 μ long,

10 μ thick at the base, not tapering, or tapering very gradually to the blunt apex. Perithecia crowded in the centre of the colony, black, carbonaceous, spherical, 250–290 μ diam., wall formed of rounded, conical cells. Spores oblong, 4-septate, broadly rounded at both ends, very slightly constricted, 44–50 μ × 16–18·5 μ. [Fig. 4.]

Meliola transvaalensis, Doidge, n. sp.

Amphigena, plagulas atras 2–5 mm. latas formans ; mycelium ex hyphis 7–10 μ crassis septatis, ramosis compositum ; hyphopodia capitata numerosa, opposita, 15–20 μ longa, cellula superiore ovata, circ. 10 μ lata ; hyphopodia mucronata rara lageniformia, 16–23 μ × 6–7 μ ; setae mycelicae tantum ad basim peritheciorum evolutae, rectae vel sub-rectae simplices 450–600 μ longae, ad basim 10 μ crassae, haud attenuatae, vel apicem obtusum sensim attenuatae ; perithecia gregaria, globosa, atra, 250–290 μ diam. ; asci mox diffluentes ; sporae oblongae, 4-septatae, leniter constrictae, brunneae, utrinque late rotundatae, 44–50 μ × 16–18·5 μ.

Hab. in foliis *Myrsines africanae*, Woodbush, Zoutpansberg Dist., 16.9.23, leg. Doidge [17746].

153. **Treubiomyces Celastri** n. sp.

On leaves of *Celastrus* sp., Woodbush, Zoutpansberg Dist., 18.9.23, Doidge [17769].

Epiphyllous, forming round to irregular fuscous spots 3–5 mm. diam., mycelium superficial, composed of a network of pale greyish, torulose hyphae 3–5 μ thick ; setae scattered, arising from a small group of pseudoparenchyma, black, erect, straight or somewhat curved, 170–240 μ long, 5–8 μ thick at the base, tapering gradually to the apex. Perithecia smooth, without setae, scattered, flattened-spherical, 160–240 μ diam., wall composed of several layers of cells 8–10 μ diam., some of these having a tendency to separate into hyphae when crushed ; ostiole indistinct, not typical, about 18 μ diam. Asci fasciculate, aparaphysate, eight-spored, broadly clavate, rounded and thickened at the apex, obtusely cuneate at the base, 50–70 μ × 20–27 μ. Spores pluriseriate, hyaline, muriform, oblong or subclavate, with 5–7 transverse septa, some of the cells with one longitudinal septum, slightly constricted at some of the septa, 27–30 μ × 7–8·5 μ.

Treubiomyces Celastri, Doidge, n. sp.

Epiphylla, plagulas orbiculares v. irregulares fuscas, 3–5 mm. diam. formans ; mycelium ex hyphis torulosis griseis, 3–5 μ crassis compositum, setae mycelicae sparsae atrae rectae v. subcurvatae, 170–240 μ longae, ad basim 5–8 μ crassae apicem versus paullatim attenuatae ; perithecia sparsa, leves, setis nullis, globoso-depressa, 160–240 μ diam., e cellulis 8–10 μ diam. obscure olivaceis contextis ; asci fasciculati, aparaphysati, octospori, late clavati, apice incrassati, 50–70 μ × 20–27 μ ; sporae hyalinae, muriformae, oblongae v. subclavatae, transverse 5–7-septatae, longitudinaliter 1-septatae, ad septa leniter constrictae, 27–30 μ × 7–8·5 μ.

Hab. in foliis *Celastri* sp., Woodbush, Zoutpansberg Dist., 18.9.23, leg. Doidge [17769].

154. **Aithaloderma capense** n. sp.

On leaves of *Schotia latifolia*, East London, C.P., 19.7.19, Doidge [12422].

Epiphyllous, diffuse, superficial, forming a very thin pellicle, easily detached from the leaf, black or olivaceous, opaque ; mycelium fuscous-olivaceous, reticulate, formed of a few thicker hyphae 6·5–12 μ thick, with cells about 30 μ long and not longitudinally connate as in *A. clavatisporum*, and a closer network of fine hyphae not paler than the thicker ones and 3–3·5 μ thick ; hyphae of both kinds occasionally becoming subtorulose. Conidia and pycnidia not seen. Perithecia fairly evenly scattered, 100–120 μ diam., black, coriaceous, briefly conoid, distinctly ostiolate, the ostiole being set about with a varying number of black, opaque setae. Setae 24–30 μ long, 6–6·5 μ thick at the base, and tapering to the blunt apex, slightly curved, continuous. Perithecia parenchymatous in structure, composed of cells 4–5 μ diam. Asci sub-clavate or ovate, eight-spored, aparaphysate, thin-walled, and disappearing rather early, 30–37 μ × 10–12 μ. Spores 3–4-stichous or parallel, hyaline, subclavate, 3-septate, often slightly constricted at the septa, 20–24 μ × 3·5–5 μ.

Aithaloderma capense is closely related to *A. clavatisporum*, Syd. (Ann. Myc. XI, p. 257, 1913), but differs in the character of the mycelium and in the size of the spores and perithecia.

Aithaloderma capense, Doidge, n. sp.

Epiphyllum, effusum, superficiale, tenue, pelliculosum facile decedens, atrum vel atro-olivaceum, opacum; mycelium rete dense efformans ex hyphis crassioribus 6·5–12 μ crassis (articulis circ. 30 μ longis) et tenuioribus 3–3·5 μ crassis compositum; perithecia aequaliter sparsa breviter conoidea, 100–120 μ diam., atra, coriacea, distincte ostiolata, circa ostiolum setis paucis vel pluribus atris opacis 24–30 μ longis, 6–6·5 μ latis continuis obsita, parenchymatice ex cellulis 6–8 μ diam. contexta; asci subclavati v. ovati, octospori, aparaphysati, 30–37 μ × 10–12 μ; sporae 3–4 stichae vel parallelae, hyalinae, subclavatae, 3-septatae, plerumque ad septa leniter constrictae, 20–24 μ × 3·5–5 μ.

Hab. in foliis *Schotiae latifoliae*, East London, 19.7.19, leg. Doidge [12422].

155. **Limacinia transvaalensis,** Doidge.

Syn. *Zukalia transvaalensis*, Doidge, Trans. Roy. Soc. S. Africa, 5, p. 721, Pl. 58, Fig. 9, 1916.

Parasitic on the mycelium of *Parasterina brachystoma*.

On leaves of *Eugenia Gerrardi*, Woodbush, Zoutpansberg Dist., 3.8.11, Doidge [1759]; 16.9.23 [17757].

Mycelium pale fuscous, reticulate, septate, hyphae 3–3·5 μ thick, closely investing the hyphopodiate mycelium of *Parasterina brachystoma*. In the original description the hyphopodiate mycelium of the host was erroneously described as belonging to *Zukalia transvaalensis*. Perithecia black, globose, scattered, sub-pellucid, brown, smooth, with a false ostiole, 130–170 μ diam. Asci numerous, fasciculate, eight-spored, thin-walled, elliptic or narrow-ovate, frequently slightly curved. Paraphyses none. Spores distichous or tristichous, clavate, hyaline, 5-septatae, 45–55 μ × 5–7 μ, obtuse at both ends.

156. **Limacinia Nuxiae** n. sp.

On leaves of *Nuxia tomentosa*, Woodbush, Zoutpansberg Dist., 18.9.23, Doidge [17744].

Mycelium hypophyllous, diffuse; hyphae fuscous-olivaceous, branched, septate, 3–3·5 μ thick, forming a tangled network, which is densest in the neighbourhood of the perithecia. Perithecia in small groups, spherical, minute, fuscous-olivaceous, astomous, 50–60 μ diam. Asci few in each perithecium, eight-spored, aparaphysate, ovate, briefly pedicellate, thickened round the apex, 30–37 μ × 16–17 μ. Spores oblong or subclavate, hyaline, transversely 3-septate, sometimes constricted at the medial septum, rounded at both ends, 17–20 μ × 3·5–5 μ.

Limacinia Nuxiae, Doidge, n. sp.

Hypophylla, mycelium ex hyphis fuscis-olivaceis, ramosis, septatis, 3–3·5 μ crassis compositum; perithecia sparsa v. gregaria, globulosa, astoma, 50–60 μ diam.; asci pauci in quoque perithecio, octospori, aparaphysati, ovati, breviter pedicellati, apice incrassati, 30–37 μ × 16–17 μ; sporae oblongae v. subclavatae, hyalinae, transverse 3-septatae, haud constrictae vel septo medio leniter constrictae utrinque rotundatae, 17–20 μ × 3·5–5 μ.

Hab. in foliis *Nuxiae tomentosae*, Woodbush, Zoutpansberg Dist., 18.9.23, leg. Doidge [17744].

157. **Microthyriella transvaalensis** n. sp.

On *Celastrus* sp., Woodbush, Zoutpansberg District, 18.9.23, Doidge [17770].

Thyriothecia epiphyllous, minute, punctiform, dimidiate, orbicular, dark brown, 240–270 μ diam., pseudo-parenchymatous in structure, composed of irregular, angular cells 5–6 μ diam., without a definite ostiole; the central part of the thyriothecial wall appears to break away at maturity. Asci aparaphysate, ovate or elliptic, eight-spored,

27–33 μ × 16–17 μ. Spores distichous, oblong or subclavate, hyaline, 1-septate, not or barely constricted at the septum, broadly rounded at both ends, 12–16 μ × 4·5–5 μ.

Microthyriella transvaalensis Doidge, n. sp.

Thyriothecia epiphylla, minuta, dimidiata, orbicularia, brunnea, 240–270 μ diam., pseudoparenchymatice ex cellulis irregularibus 5–6 μ diam. contexta, ostiolo nullo; asci aparaphysati, ovati v. elliptici, octospori, 27–33 μ × 16–17 μ; sporae distichae, oblongae v. subclavatae, hyalinae, 1-septatae, haud v. vix constrictae, utrinque late rotundatae. 12–16 μ × 4·5–5 μ.

Hab. in foliis *Celastri* sp., Woodbush, Zoutpansberg Dist., 18.9.23, leg. Doidge [17770].

158. **Stomiopeltella africana** n. sp

On leaves of *Peddiea africana*, Woodbush, Zoutpansberg Dist., 16.9.23, Doidge [17778].

Epiphyllous, diffuse; mycelium reticulate, without hyphopodia, primary hyphae straight, radiating, pale fuscous, about 2·5 μ thick, branching irregularly and anastomosing to form an open network; branches paler and slightly thinner than the primary hyphae, often sinuous. Thyriothecia scattered, olivaceous-fuscous, dimidiate, round, 90–120 μ diam., pseudo-parenchymatous in structure, at the margin composed of a dense network of hyphae, which are in intimate connexion with the mycelial network; at maturity there is a central pore. Asci aparaphysate, sessile, oblong, eight-spored, 20–24 μ × 6·5–10 μ. Spores hyaline, two-celled, subclavate, upper cell somewhat shorter and broader, rounded at both ends, 13–14 μ × 3·5–4 μ.

Stomiopeltella africana, Doidge, n. sp.

Epiphylla, mycelium pallide fuscum, reticulatum, ex hyphis 2–2·5 μ crassis, ramosis compositum; thyriothecia sparsa, fusca, dimidiata orbicularia, 90–120 μ diam., pseudo-parenchymatice contexta, poro rotundo pertusa; asci aparaphysate, sessiles, octospori oblongi, 20–24 μ × 6·5–10 μ; sporae hyalinae, 1-septatae, subclavatae, leniter constrictae, 13–14 μ × 3·5–4 μ, cellula superiore paullo latiore et breviore.

Hab. in foliis *Peddieae africanae*, Woodbush, Zoutpansberg Dist., 16.9.23, leg. Doidge [17778].

159. **Stomiopeltella petiolaris** n. sp.

On petioles of *Cussonia spicata*, Woodbush, Zoutpansberg Dist, 16.9.23, Doidge [17718].

Forming thin, effuse, black pellicles on the petioles, which are sometimes almost entirely covered with the spreading film of the fungus. Hyphae pale fuscous, 3–3·5 μ thick, frequently septate and often constricted at the septa, branching repeatedly and anastomosing freely, and finally forming a pseudo-parenchymatous pellicle in which the network of more robust, darker, primary hyphae is still plainly discernible. Thyriothecia scattered, flattened-hemispherical, 150–170 μ diam., darker than the mycelium, irregularly pseudo-parenchymatous in structure and with a small central ostiole. Asci aparaphysate, eight-spored, elliptic, sessile not thickened round apex, 27–36 μ × 10–12 μ. Spores distichous, hyaline, oblong to subclavate, two-celled, very slightly constricted, rounded at both ends, 13·3–15 μ × 3·5–5 μ.

Stomiopeltella petiolaris, Doidge, n. sp.

Thyriothecia petiolicola, sparsa, 150–170 μ diam., dimidiata, orbicularia pseudo-parenchymatice contexta, fuscidula poro rotundo aperta; asci aparaphysati, octospori, elliptici, sessiles, 27–36 μ × 10–12 μ; sporae distichae, hyalinae, oblongae v. subclavatae, 1-septatae, vix constrictae, utrinque rotundatae, 13·3–15 μ × 3·5–5 μ; mycelium dilute fuscum, primitus reticulatum deinde fere pseudoparenchymaticum, ex hyphis 3–3·5 μ crassis, septatis, ramosis ad septa constrictus compositum.

Hab. in petiolis *Cussoniae spicatae*, Woodbush, Zoutpansberg Dist., 16.9.23, leg. Doidge [17718].