"Sori large, swelling out in elliptical masses; spores globose, surrounded by from four to six hyaline cells." M. J. Berkeley, Grevillea, 3:58. December, 1874.

80. Venturia orbicula (Schw.) C. & P.

On Quercus prinus. L.

Sugar Grove, Fairfield Co., Ohio. May 17, 1901.

Coll. W. A. Kellerman and Clara G. Mark.

"Sphaeria orbicula, L. v. S.....

"S. in maculis exacte orbiculatis, margine quasi linea nigra limitatis, ob aggregationem peritheciorum in margine perithecia numerosa aggregata sunt. Maculis ¼ uncialibus diametro, cinerascentibus. Peritheciis minutissimus, innatis, nigris, prominentibus pilis longis sparsis obsitis, demum deciduis, concoloribus." L. D. de Schweinitz, Transactions of the American Philosophical Society, Philadelphia, 4:224. 1834.

NEW ALABAMA FUNGI

BY J. B. ELLIS AND B. M. EVERHART.

The following fungi were collected in the vicinity of Tuskegee, Alabama, by George W. Carver, Director of the Department of Agriculture and Agricultural Experiment Station at Tuskegee, Ala.

PHYLLOSTICTA RICHARDSONIAE E. & E.—On leaves of Richardsonia scabra, Tuskegee, Ala. Aug. 1901.

Perithecia amphigenous, on irregularly shaped, dirty white spots and bleached areas of the leaves, mostly occupying and killing the tips of the leaves, perithecia scattered, globose, 80-110 μ diam., pierced above. Sporules oblong-elliptical, abundant, 4x1½ μ.

PHOMA APOCRYPTA E. & E.—On dead stems of Phytolacca decandra, Tuskegee, Ala. Oct. 1900 (Carver 704).

Perithecia subcuticular, raising the epidermis into little pustules pierced by the subconical ostiolum, globose, 150-200 diam., scattered or often three or more approximated, or sometimes seriately arranged and splitting the epidermis in clefts or cracks 2-3 mm. in length. Sporules elliptical or ovoid, 1-2 nucleate, with a slight smoky tinge, 3-4x1½-2 μ.

Its much smaller sporules as well as its pseudo-stromatic habit will separate it from P. herbarum West. and from P. phytolaccae B. & C. May be the spermogonial stage of Diaporthe aculeata Schw.

PHOMA ZEICOLA E .& E.—Bull. Torr. Bot. Club, 27:573. 1900. Specimens recently sent show that the perithecia appear at first on definite, pallid spots, which finally become confluent.

MACROPHOMA SUBCONICA E. & E.—Jour. Mycol. 5:147, 1889. Mr. Carver has sent what we now refer to this species on the following hosts—On Luffa acutangula (dried pericarp), spor. 15-22x10-12 μ; on Dolichos sinensis, spor. 15-20x10-11 μ; on Melia azederach; Pelargonium zonale, and Cassia tora, spor. 15-22x5-7 μ; on Mucuna utilis, spor. 15-18x12-14 μ.

The perithecia vary from 120-400 μ in diameter, with a distinct conic-papilliform ostiolum, and become depressed and flattened or collapse to concave. The ostiolum is soon deciduous leaving the perithecium perforated.

APOSPHAERIA TURMALIS E. & E.—On weatherbeaten wood of Diospyros virginiana.

Perithecia superficial, densely crowded and angular from mutual pressure, forming a continuous crust several centimeters in extent, ovate, globose, 300-400 μ diam. with an obscure papilliform ostiolum. Sporules ovate or piriform, hyaline, filled with small nuclei, 15-20x10-12 μ.

DOTHIORELLA MAJOR E. & E.—On dead stems of Gossypium herbaceum.

Perithecia in clusters of 3-8, stromatically connected and surrounded by the ruptured epidermis, with a few scattered singly, globose, $\frac{1}{4}$-$\frac{1}{3}$ mm. diam. Sporules oblong-elliptical or ovate, 20-22x12 μ, on basidia of about the same length, others (sterile basidia) are longer than the sporules and resemble paraphyses.

D. botryosphaerioides Sacc. on the same host has sporules only 8x3 μ.

SPHAEROPSIS GRANDIFLORA E. & E.—On dead leaves of Magnolia grandiflora.

Perithecia scattered quite evenly over the upper side of the leaf, raising the cuticle into little pustules, 99-110 μ diam., perforated at the apex. Sporules oblong-elliptical, 15-20x8-10 μ.

SPHAEROPSIS SABALICOLA Ell. & Carver.—On Sabal andansonii, Beloit, Ala.

Perithecia gregarious, 150-200 μ diam., often subseriate, 2-4 in a short line, splitting the epidermis over them but hardly confluent, suberumpent, finally deciduous. Sporules oblong-elliptical, 15-22x9-11 μ, on rather slender basidia about as long as the spores.

SPHAEROPSIS BEGONIICOLA E. & E.—On Begonia, cultivated.

Perithecia hypophyllous, on dead, indefinitely limited areas of the leaves, hemispheric-prominent, finally collapsing, large (400-500n), carbonaceo-membranaceous, with a distinct tuberculo-papilliform ostiolum. Sporules elliptical, 15-22x12 μ nearly hyaline at first, filled with granular matter becoming brown.

HAPLOSPORELLA GRANDINEA E. & E.—On dead limbs of Magnolia glauca.

Stromata small, thickly scattered, ½-1 mm. diam., sunk in the bark, raising the epidermis into pustules and rupturing it but not erumpent. Perithecia 2-6 in a stroma, 150-200 μ diam., with a papilliform ostiolum, sometimes scattered singly in the bark. Sporules oblong-elliptical, 15-20x8-11 μ.

H mexicana E. & E.—(Bull. Torr. Bot. Club, 22:440. 1895) differs from this in its larger, seriate, carnose, erumpent stromata.

HAPLOSPORELLA JASMINI E. & E.—On dead limbs of Jasminum fruticans.

Perithecia ovate, bursting out through the bark in clusters of 6-20 and loosely surrounded by the lobes of the ruptured epidermis. Sporules oblong-elliptical or ovate, 18-20x8-11 μ.

DIPLODIA ATROCOERULEA E. & E.—On dead steams of Datura stramonium.

Perithecia innate, the apex erumpent, discharging the ovate-elliptical, dark brown, 12-22x12 μ spores abundantly, and blackening the surface of the stem.

Accompanied by a Helminthosporium (H. socium E. & E. in herb.) with elongate-elliptical, 3-septate, pale yellow conidia, 30-50x12-15 μ. The sporules are more or less distinctly longitudinally striate.

BOTRYODIPLODIA MELIAE E. & E.—Diplodia meliae E. & E. Bull. Torr. Bot Club, 25:288. 1897. Diplodia langloisii Sacc. & Syd., Sacc. Syll. 14:929. 1897. On dead limbs of Melia azedarach, Louisiana (Langlois), Alabama (Carver).

Perithecia globose or ovate, 150-200 μ diam., 3-15 in a flattish-verruciform stroma, ½-1 mm. diam., closely covered by the irregularly ruptured but closely adherent epidermis, black inside and of a waxy or subcarnose consistency; ostiola papilliform. Sporules oblong-elliptical, more or less distinctly constricted, 15-20x8-10 μ.

The Louisiana specimens which were published in the Torr. Bull. as Diplodia were not as well developed as those from Alabama but a re-examination of the species in Herb. Everhart shows that the stromatic arrangement of the perithecia is the normal condition, although in specimens from both of the localities named, perithecia scattered singly occur.

BOTRYODIPLODIA PALLIDA E. & E.—On dead stems of Glycine hispida.

Perithecia collected in little groups 3-8 in a more or less evident stroma, ovate globose, 250-300 μ diam., the papilliform ostiolum and generally the apex of the perithecium projecting slightly above the stroma. Sporules oblong-elliptical, obtuse, hyaline and continuous at first, tardily becoming brown and uniseptate, 20-26x12 μ in the hyaline state, a little smaller when mature and brown; basidia about as long as the sporules.

LASIODIPLODIA TUBERICOLA E. & E.—Bot. Gaz. 21:92. 1896. On cotton-balls. This has been sent by Mr. Carter on the following hosts: On beets, tomatoes, egg-plant, old corn husks, and on a rind of Crookneck-squash, indicating that it is indigenous to this country and not imported.

SEPTORIA CYPERI E. & E.—On Cyperus sp. Tuskegee, Ala. Aug. 1900.

Perithecia at first on small rust-colored spots on the living leaves, but when these become dead, scattered irrgeularly, suberumpent, 150-200 μ diam. Sporules filiform, continuous, curved, 80-120x2 μ.

HENDERSONIA OPUNTIAE E. & E.—On Opuntia ficus indica.

Perithecia gregarious, pustuliform, 150-200 u diam. Sporules cylindrical, slightly curved, 3-septate, brown, 20-25x4-5 μ, ends obtuse.

COLLETOTRICHUM CARVERI E. & E.—On leaves of tea plant, cult.

Acervuli epiphyllous, on dead, brown areas of the leaf, erumpent, amber-colored, $\frac{1}{4}$-$\frac{1}{2}$mm. diam., sparingly girt around the base with weak, brown, continuous, bristle-like hairs, slightly swollen at the base and 40-80x3 μ. Conidia oblong-cylindrical, 12-15x3$\frac{1}{2}$-5 μ, obtusely rounded at the ends.

COLLETOTRICHUM PHYLLOCACTI E & E.—On Phyllicactus latifrons.

Spots brown, whitening out, large, 3-4 cm. across with a narrow raised concolorous margin. Acervuli in groups both on the spots and on adjacent areas of the leaf, erumpent, black, surrounded with a fringe of dark-colored continuous bristles, 30-40x3-3$\frac{1}{2}$ μ, tapering above. Conidia oblong-elliptical, or oblong-cylindrical, granular, continuous, hyaline, 10-12x3$\frac{1}{2}$-4 μ, on basidia longer than the conidia.

Differs from C. carveri E. & E. in its smaller conidia and shorter, subundulate bristles.

GLOEOSPORIUM AMARANTHI E. & E.—On dead stems of Amaranthus spinosus.

Acervuli subcuticular, raising the epidermis into pustules, then suberumpent, discharging the conidia in a flesh-colored globule, seated on elongated, blackened strips on the stem. Conidia oblong-elliptical, 2-nucleate, 12-15x5-6 μ.

PESTALOZZIA BATATAE E. & E.—On tubers of Batatas edulis.

Acervuli raising the cuticle into hemispherical pustules which roughen the surface of the tuber. Conidia clavate-oblong, 20x5-6 μ, terminal cells hyaline, acutely conical, intermediate cells brown, apical cell surmounted by a crust of three spreading, hyaline bristles about 12 u long, pedicels becoming oblique.

The conidia are hardly distinguishable from those of P. guepini Desm. which is found around Tuskegee on leaves of Rosa, Vitis, Ulmus, Liriodendron, Sassafras and Diospyros.

VENTURIA NEBULOSA E. & E.—On dead leaves of Eragrostis sp.

Amphigenous. Perithecia ovate-globose, 75-100 μ diam., pierced above, membranaceous, clothed with black, continuous, spreading hairs 30-40x3 μ, seated on cloudy or smoky, elliptical spots 2-5 mm. diam. or by confluence more. Asci oblong, abruptly contracted at base into a short stipe, aparaphysate, 35-45x 12-15 μ. Sporidia biseriate, oblong-ovate, hyaline, uniseptate, slightly constricted, 12-15x5 μ.

Differs from V. erysipheoides E. & E. in its more abundant, shorter and narrower bristles and different sporidia and from V. graminicola Winter in its broader, shorter sporidia.

NECTRIA SECALINA E. & E.—On dead culms of Secale cereale.

Perithecia gregarious, ovate-globose, 100-120 μ diam., orange yellow, sometimes slightly collapsed but not very distinctly so, ostiolum papilliform, minute, inconspicuous; Asci clavate-cylindrical sessile, aparaphysate, 40-55x7-8 μ, Sporidia subbiseriate, oblong or oblong-elliptical, uniseptate, scarcely constricted, hyaline, 7-10x3-4 μ.

Differs from N. gibberelloides E. & E. and from N. brassicae & S. E. in its orange color and rather smaller, straight sporidia.

NECTRIELLA CACTI E. & E.—On Opuntia ficus indica.

Perithecia gregarious, bright blood-red, soft, ovate 200 μ high, 110 μ broad. Asci sublanceolate, 45-55x4 μ; paraphyses obscure. Sporidia biseriate, oblong, hyaline, continuous, 5-6x 1½ μ.

Outwardly resembles Nectria sanguniea (Sibth.) but the sporidia are very different; nor can it be mistaken for N. opuntiae Roll. in Sacc. Syll 14:632.

ZIGNOELLA SABALINA E. & E.—On petioles of Sabal adansonii.

Perithecia superficial, gregarious or subcespitose, ovate, rough, collapsing, 300-350 μ diam., with a papilliform ostiolum. Asci clavate-cylindrical, 45-60x10-12 μ, subsessile, aparaphysate. Sporidia fusoid, subinequilateral or slightly curved, hyaline, 3-septate, scarcely constricted, 15-20x4½-5 μ. The sporidia scarcely differ from those of Metasphaeria palmetto Cke.

LAESTADIA PRENANTHIS E. & E.—On living leaves of Prenanthus crepidinea. Aug. 1901.

Spots elliptical or irregular, 3-5 mm. diam., partly limited by the veinlets, light brown, with a narrow, slightly raised border. Perithecia hypophyllous, scattered on the spots, semierum-

pent, minute, (50-60μ), pierced above. Asci oblong, subsessile, rather abruptly narrowed at the ends, 30-35x6-7 μ. Sporidia biseriate, fusoid-oblong, 3-guttulate, hyaline, 10-12x3-3½ μ.

LAESTADIA ARI E. & E.—On living leaves of Arum arifolium. Spots subcircular, dark gray above, deep brown below, 1 cm. diam., with a narrow darker border; perithecia epiphyllous, abundant, evenly and thickly scattered over the central portion of the spots, 100-110 μ diam., pierced above, semi-erumpent. Asci oblong-cylindrical, short-stipitate, 40-50x7-8 μ, paraphyses rudimentary or wanting. Sporidia biseriate, subnavicular, 2-3-nucleate, hyaline, obtuse, 8-10x3½-4½ μ.

Vermicularia trichella Fr. is found in a narrow belt just within the margin of the spots.

SPHAERELLA YUCCAE E. & E.—On leaves of Yucca filamentosa.

Perithecia evenly scattered on the dead leaves, subcuticular, slightly raising the epidermis, at length more or less collapsing, small (110-120 μ). Asci clavate-cylindrical, short-stipitate, 45-55x10-12 μ. Sporidia biseriate, short, oblong-fusoid, 12-15x 4-5 μ, uniseptate but not perceptibly constricted.

DIDYMELLA RICINI E. & E.—Proc. Phil. Acad. 421. 1895. Prof. Carver sends this on dead shoots of Ailanthus glandulosa; the asci 45-50x10-12 μ, spor. oblong-elliptical, obtuse, yellowish-hyaline, scarcely curved, 12-15x5-6 μ; on stems of Mucuna utilis, asci 40-45x8-10 μ, spor. oblong-fusoid, distinctly curved, 12-15x 4-5½ μ, yellowish-hyaline, becoming uniseptate; on Hibiscus esculentus, asci 50x10 u, spor. curved, yellowish, 12-15x4-4½ u, 2-3 guttulate (becoming unseptate).

The perithecia in all these collapse. This is closely allied to D. sphaerellula (Pk.) and D. fuschiae (Ck. & Hark.).

PHYSALOSPORA VAGANS E. & E.—On dead, bleached canes of Rubus strigosus.

Perithecia scattered, singly or 3-5 subconfluent, membranaceous, of rather coarse cellular structure, black, pierced above, 100-200 μ diam., raising the cuticle into little pustules which, especially over the clustered perithecia, are ruptured by a narrow cleft. Asci clavate-cylindrical, 110-200x12-20 μ, short,stipitate and obscurely paraphysate. Sporidia uniseriate in the narrower asci, biseriate in the broader, elliptical, 12-20x8-12 μ hyaline, The asci soon collapse so that the sporidia bulge out all round like a bag stuffed full of apples. Many of the perithecia, especially the scattered, single ones, contain only stylospores narrow-elliptical, hyaline, 15-20x7-8 μ, on basidia 12-20x1½ μ.

PHYSALOSPORA OBTUSA (Schw.) Cke.—On Rubus villosus, has longer, narrower sporidia 35-40x9 μ. This occurs also on the following hosts: on dead stems of spiraea—asci 150x20-25 μ, spor.

18-25x10-12 μ; on Hemerocallis—asci 90-150x12-15 μ spor. 20-24x8-10 μ; on Polygonum pennsylvanicum—asci 100x15 μ, spor. average 15x10 μ.

PHOMATOSPORA WISTARIAE E. & E.—On partly dead leaves of Wistaria frutescens.

Perithecia mostly epiphyllous, on small, mostly round, gray spots, 2-4 mm. diam., bounded by a narrow dark line; but often confluent over a great part of the leaf, subdepressed, membranaceous, 110-120 μ. Asci oblong, sessile, 35-45x10-12 μ, without paraphyses. Sporidia biseriate oblong-elliptical, hyaline, rounded at the ends, about 12x6 μ.

METASPHAERIA IPOMOEAE E. & E.—On dead stems of Ipomoea.

Perithecia scattered or 2-3 together, subcuticular, then emergent and mostly collapsing, ½-⅓ mm. diam. with a disinct papilliform ostiolum. Asci clavate, short-stipitate, 75-90x10-14 μ, with filiform paraphyses. Sporidia overlapping and crowded, often biseriate above, elongate-ovate or broad fusiod-clavate, 3-4 septate and constricted especially at the next to the upper septum, 15-25 (mostly about 20) x8-12 μ.

Comes very near M. kali (Fabr.) according to his description and figure, differing principally in its subaggregated perithecia.

METASPHAERIA CARVERI E. & E.—On dead stems of Sesamum orientale, Glycine hispida, Cassia tora and Mucuna utilis.

Perithecia thickly scattered or gregarious, occasionally cespitose-conglomerate, semierumpent but mostly remaining covered by thin cuticule, depressed-hemispherical when fresh, wrinkled and collapsed when dry, 120-200 μ diam. of thin membranaceous texture, pierced above. Asci oblong, short-stipitate, 50-55x8-12 μ, paraphyses evanescent. Sporidia biseriate, oblong-cylindrical, moderately curved, hyaline, 15-20x4-5 μ, ends obtuse, contents granular, with 3-4 nuclei (becoming 2-3 septate?).

Has the general appearance of Vermicularia.

METAPSHAERIA SANGUINEA E. & E.—On dead stems of Helenium tenuifolium.

Perithecia subcuticular, scattered or 2-3 together, membranaceous, and finally collapsing, about 200 μ diam., raising the red-stained cuticle into pustules which are soon ruptured at the apex; ostiolum papilliform, inconspicuous. Asci clavate-cylindrical, 50-70x7-8 μ, paraphysate. Sporidia biseriate (mostly), narrow-elliptical, or subfusoid, hyaline, 4-nucleate, becoming 3-septate, 15-18x4 μ.

The perithecia are sparingly clothed with loose, spreading blood-colored hyphae 40-80x3 μ.

BOTRYOSPHAERIA MURICULATA E. & E.—On dead steams of a white berried Smilax.

Perithecia ¼-⅓ mm. diam., 2-6 together in a cortical stroma, white inside, contracted above into slender necks, the papilliform ostiola raising the blackened epidermis into little tubercles mostly ruptured across the top by a single hysteriform slit. Asci clavate-cylindrical, short-stipitate, paraphysate, p. sp. 75-80x18-20 μ. Sporidia biseriate, oblong- elliptical, subinequilateral, rounded at the ends or obtusely pointed, 20-25x10-12 μ.

The surface of the bark occupied by the fungus is overspread by a thin black, finely muriculate crust presenting under the lens quite an ornamental appearance.

HYSTERIUM COMPRESSUM E. & E.—On decaying wood of Pinus palustris.

Perithecia scattered, mostly lying parallel, 1-3 mm. long, ½ mm. broad, straight or in the elongate forms undulate or curved, faintly longitudinally striate above, narrow at the ends but subobtuse, lips closed or slightly opened. Asci oblong-cylindrical, short-stipitate, 75-80x15-20 μ, broadly rounded above, paraphyses filiform, abundant. Sporidia crowded bi-tri-seriate, fusoid, 3-septate, scarcely constricted, hyaline at first, soon brown (reddish-brown), subinequilateral, slightly curved, compressed, 25-30x7-10 μ, cell next to the upper one very slightly swollen.

The perithecia scarcely differ from those of H. insidens Schw. but the sporidia are constantly only 3-septate and are compressed so as to be only 4-5 μ thick.

MOLLISIA ALABAMAENSIS E. & E.—On decaying canes of Rubus villosus.

Scattered, erumpent-superficial, gelatin-carnose, immarginate, ½ mm. diam., convex when fresh and pale-rose-color, subconcave when dry and about the color of lean beef steak, finally becoming almost black. Asci ventricose-oblong, subsessile, 60-65x15 μ, paraphyses enlarged and colored above, united in a brown epithecium and bearing subglobose conidia 5 μ diam. Sporidia subseriate, hyaline, 12-13x6-7 μ.

Allied to Mollisia fuscorubra Rehm. which it much resembles.

BELONIUM BICOLOR E. & E.—On dead stems of Eupatorium.

Ascomata scattered or gregarious, sessile of soft carnose substance, convex and amber color when young and fresh, concave and nearly black when dry, ½-¾ mm. diam., margin narrow, subdentate, the substance of the ascomata yellow when crushed under the microscope. Asci clavate-cylindrical, short-stipitate, 80-90x12 μ, with stout simple paraphyses slightly thickened above. Sporidia mostly uniseriate, oblong-elliptical, 15-20x6-8 μ, 3-4-nucleate becoming 3-septate, hyaline at first becoming dull yellow and more or less constricted when mature.

The sporidia are more like those of Dermatella but the other characters are those of Belonium.

BELONIUM CONSANGUINEUM E. & E.—On decorticated, decaying wood of Ilex.

Ascomata gregarious, sessile, slightly narrowed at the base, black, mostly a little less than ½ mm. diam., soft-carnose, disk circular roughish, margin narrow, slightly toothed, convex and dull amber color when young and fresh, concave and nearly black when dry, substance dull yellow under the microscope. Asci clavate-cylindrical, short-stipitate, 45-55x6-8 μ, paraphyses simple, stout, longer than the asci. Sporidia biseriate, fusoid, hyaline, slightly curved, 4-nucleate, becoming 3-septate, scarcely constricted, 15-20x3½-4 μ.

Differs from B. bicolor in its smaller size, cellular-fibrose texture and narrower, sessile base. The asci also are shorter and narrower, and the sporidia only about half as broad.

GODRONIA RUGOSA E. & E.—On dead limbs of Oxydendrum arboreum.

Ascomata scattered, erumpent, 1-1½ mm. diam., sessile, closely embraced by the ruptured epidermis, hymenium when moist subgelatinous, turgid and rugose, obscurely glandular-roughened, sooty-black, lighter within. Asci clavate-cylindrical, 70-75x8-10 μ, paraphyses abundant, united above in a sooty-olivaceous epithecium. Sporidia elongated, fusoid, nucleate, arcuate when free, hyaline with a faint tinge of yellow, 45-55x3-3½ μ.

The scanty glandular pubescence of the hymenium would indicate Belonium, but the members of that genus are mostly on Gramineae or on herbaceous plants.

PLASMOPORA VINCETOXICI E. & E.—On leaves of Vincetoxicum.

Hypophyllous, forming loose white woolly patches 3-4 mm. across, at length subconfluent, the upper side of the leaf opposite becoming brown. Conidiophorous hyphae continuous, 8-10 μ thick, branched above, the branches issuing at a right angle and sending out short secondary branches with brownish, conical sterigmata 8-10 μ long, both lateral and terminal. Conidia globose or short-elliptical, averaging about 15x13 μ. Oospores globose, brown, about 20 μ diam.

CERCOSPORA CAPREOLATA E. & E.—On leaves of Bignonia capreolata.

Spots reddish-brown with a reddish-purple shaded margin, ½-1 cm. diam., hyphae hypophyllous in the central portion of the spots, arising in small spreading tufts from a small tuber-base, 15-20x3 μ, continuous, pale brown. Conidia slender, obclavate, continuous, brownish, slightly curved, 60-80x3 μ.

Very different from C. bignoniicola Speg.

CERCOSPORA HIERACII E. & E.—On leaves of Hieracium venosum.

Epiphyllous, on pale yellowish, indefinite spots at first, but soon spreading over the entire surface of the leaf, forming a thin, mouse-colored stratum, the spots now being scarcely recognizable. Hyphae in dense tufts, 15-20x3 μ, subnodulose, continuous, or faintly septate, obtuse at the apex, subolivaceous, Conidia slender, obclavate, with a slight oblivaceous tinge, slightly curved, 50-80x2½-3 μ, faintly 3-5-septate.

CERCOSPORA SESSILIS E. & E.—On (dead)? leaves of Populus monolifera. Beloit, Ala. Sept. 1901.

Epiphyllous; conidia fasciculate, sessile (or nearly so) on a minute, sphaeriform base, curved or undulate, 20-60x3 μ, olivaceous, guttulate, becoming 3-or more-septate.

On the same leaves are many small grayish-white spots but the Cerocospora is on the dark colored part of the leaf and not on the spots though it may partly overrun some of them.

C. populina E. & E. (Jour. Mycol. 3:20) is on definite spots and is different from this.

CERCOSPORA GRATIOLAE E. & E.—On Gratiola pilosa.

Hyphae cespitose, short (25-35x3 μ), continuous, brown, somewhat crisped and toothed above, tufts effused, forming an olivaceous layer over the lower side of the leaves, but not on any spots. Conidia cylindrical, olivaceous, nucleate, becoming about 5-septate, 60-75x3½-4 μ.

CERCOSPORA HYDRANGEAE E. & E.—On leaves of Hydrangea cult.

Spots amphigenous, subangular, more or less confluent so as to cover a greater part of the leaf, rusty-brown becoming dark brown. The brown spots become pale silver gray in the center on both sides of the leaf and on these gray spots the tufts of hyphae are sparingly scattered. Hyphae nodulose and geniculate, brown, simple, continuous or 1-2-septate below, subdentate at the tips, 40-60x3½-4 μ. Conidia slender obclavate, hyaline, faintly septate towards the thick end, 60-80x3½-4 μ.

CERCOSPORA OXYDENDRI E. & E.—On leaves of Oxydendrum arboreum.

Leaves at first mottled with dull red, more distinctly so above, the red areas bounded at first by the veinlets, soon confluent over a great part of the leaf, here and there forming distinct, indefinitely limited spots of a deep-brown color, one or more centimetres in extent. Hyphae tufted, short, the tufts becoming almost black, especially above, of a lighter color but not so abundant below. Conidia slender, obclavate-cylindrical, 3-5-septate, subolivaceous, 50-75x3-4 μ, mostly a little curved.

CERCOSPORA BRACHYPUS E. & E.—On leaves of Vitis rotundifolia.

Hypophyllous on brown, dead areas of the leaves. Hyphae mere conical points on a brown, sphaeriform base, bearing abundant, slender, curved, faintly nucleate, nearly hyaline conidia, acute at each end and 50-70x2½-3 μ.

Very distinct from all the other species described on Vitis. The effused tufts look like a thin, mouse-colored down.

CERCOSPORA TAGETICOLA E. & E.—On leaves of Tagetus patula which it soon blackens and kills.

Hyphae in loose, spreading tufts, 200-300x4 μ, geniculate and septate. Conidia filiform about as long as the hyphae, thickened, 6-8-septate near the base and when well developed, constricted at the septa and 5-6 μ thick.

Differs from the original C. canescens E. & M. principally in its longer hyphae and conidia.

CERCOSPORA CYDONIAE E. & E.—On leaves of Cydonia japonica.

Spots amphigenous, irregular in outline, 1-3 mm. diam., definite but without any raised border, subconfluent, dark brown, almost black above; hyphae epiphyllous, tufted, short, 15-20x2½-3 μ, continuous, subgeniculate, pale-yellowish under the microscope. Conidia mostly curved, subcylindrical, hyaline or with a very faint shade of yellow, 30-45x2½ μ, nucleolate, becoming 1-3 septate.

Under the pocket lens the tufts of hyphae with the conidia appear like minute cinerous specks.

CERCOSPORA RICHARDSONIAE E. & E.—On leaves of Richardsonia scabra.

Hyphae amphigenous, tufts effused more or less over the entire leaf, forming an olivaceous coat, few in a tuft, subundulate above and sparingly toothed, continuous or sparingly septate, 20-40x3-3½ μ. Conidia long and slender, gradually attenuated above, faintly 3-5-septate, with a slight yellowish tint, 75-90x3 μ.

CERCOSPORA MACLURAE E. & E.—On living leaves of Maclura aurantiaca.

Hypophyllous, forming irregularly shaped, olive-green patches 2-4 mm., diam., partly limited by the veinlets of the leaf but not on any definite spots; hyphae cespitose, short (8-10x5 μ. continuous, nearly hyaline. Conidia obclavate, the lower broader part olive brown, 5-7-septate and slightly constricted at the septa, abruptly contracted above into a cylindrical, subhyaline beak which forms about half the length of the spore.

CERCOSPORA SEDI E. & E.—On living leaves of Sedum sp.

Amphigenous, effused, giving the leaves a smoky look. Hyphae fasciculate, continuous or faintly septate more or less sinuous or crooked, short, 15-25x4 μ. Conidia straight, guttulate, 30-110x2½-3 μ with a slight brownish tint.

CERCOSPORA VINCETOXICI E. & E.—On leaves of Vincetoxicum hirsutum.

Spots subcircular, reddish-brown, 4-10 mm. diam., with a narrow slightly raised, concolorous margin. Fertile hyphae amphigenous, simple, erect, continuous, 15-20x3 μ, brownish, slightly toothed or entire above, densely cespitose, the tufts effused and forming a slate-colored layer covering the central area of the spots. Conidia oblong 20-30 or elongated 30-60x3 μ, slightly colored, continuous.

CERCOSPORA CANESCENS E. & M.—Am. Nat. 1003. 1882. Mr. Carver sends this on dead stems of Lycopersicum esculentum, Petunia parviflora and on leaves of Ricinus communis and Amaranthus. The hyphae which are crowded in dense tufts are at first cylindrical, straight and truncate at the apex but in the more elongated ones they sometimes become geniculate and some of them branched. The conidia often reach 300 μ long and become 10-12 (or more) septate. They are quite perfectly hyaline and are so abundant as to give the tufts a light-gray appearance.

STEMPHYLIUM COPALLINUM E. & E.—On leaves of Rhus copallina.

Hyphae creeping, loosely and irregularly branched, not interwoven, brown, sparingly septate, 4-5 μ thick. Conidia subglobose, 20-25 μ diam., mostly 4-celled with two septa at right angles to each other, some of them 5-6-celled, pale brown at first, then opaque, nearly sessile and lateral.

S. epochniodeum (Berk.) has the conidia much smaller and the hyphae hyaline.

VERMICULARIA OBLONGISPORA E. & E.—On dead stems of Portulaca oleracea, Tuskegee, Ala. June 1901.

Perithecia 80-110 μ diam., thin membranaceous, sparingly clothed with short (20-50x3 μ) brown, continuous hairs mostly curved or irregularly bent. Sporules oblong, obtuse, 11-14x3-4 μ on basidia longer than the sporules.

VERMICULARIA RUGULOSA E. & E.—On dead stems of Rumex crispus, Tuskegee, Ala. Aug. 1900.

Perithecia scattered, superficial, about ½ mm. diam. membranaceous, rugulose, rather sparingly clothed especially around the base and sides with straight, rather short (90-120) black bristle-like hairs. Sporules oblong-fusoid, hyaline, straight, subobtuse, continuous, 13-15x2 μ.

Different from V. orthospora Sacc. or V. rectispora Cke.