being due to the dark spores filling the loculus), 10–12μ thick, of 1–2 outer layers of flattened polygonal cells 8–10μ diam., enclosing an inner hyaline layer of conidiiferous cells; apical pore round, 10–18μ diam., piercing the epidermis. Spores formed directly on the lining cells of the pycnidium, ellipsoid, at first pale olivaceous, becoming dark brown, smooth, transversely 5–7-septate when mature and usually with 2 longitudinal septa in the larger cells, often slightly constricted at the middle septum and then looking exactly like ascospores of *Pleospora*, 20–25 × 12–14μ.

(166) Camarosporium sp. indet.

On old stems of *Suaeda australis*, Meningie, South Australia, L. D. Williams, WARI 3490, p.p.

Pycnidia scattered or loosely gregarious, immersed, globose to depressed, about 150μ diam., black, punctiform, with papillate, erumpent ostiole pierced by a round pore. Wall thinly membranous, of dark brown angular cells, paler towards the base, in 1–2 layers. Conidiophores not evident. Spores mostly ovate to subpiriform, honey-brown, smooth, transversely 3-septate, with 1 longitudinal septum in the two central cells, 12–15 × 6–8μ.

(167) Septoria carpholobi Hansf., n. sp.

Maculae cinereae vel griseae, indeterminatae, orbiculares. Pycnidia epiphylla, punctiformia, dense irregulariterque dispersa, immersa, nigra, circa 80μ diam.; membranacea, glabra; paries parenchymaticus, 1–2-stratosus, cellulis 6–10 × 4–7μ, sursum atrobrunneus, deorsum pallidior vel subhyalinus. Sporophora non visa. Sporae hyalinae, filiformes vel cylindraceae, rectae vel curvulae, utrinque obtuse rotundatae vel basi subtruncatae, leves, plerumque 2-septatae, 30–50 × 3μ.

Hab. in foliis subvivis *Carpholobi aequilateri*, Meningie, South Australia, L. D. Williams, WARI 3527, p.p.

Leafspots ashen to grey, indefinite, rounded, with numerous pycnidia on upper surface, which soon extend into the dying tissues around. Pycnidia punctiform, closely and irregularly scattered, immersed, appearing black, about 80μ diam.; under microscope greenish-brown, membranous, darker around the apical pore, smooth; wall of parenchymatous cells irregularly arranged and angulose, 6–10 × 4–7μ, in 1–2 layers, paler to subhyaline towards the base of the pycnidium. Sporophores not seen. Spores hyaline, filiform to cylindric, straight or slightly bent, the ends obtusely rounded or the base subtruncate, smooth, mostly 2-septate, 30–50 × 3μ, very slightly attenuate towards the ends.

(168) Septoria geranii Rob. & Desm., *Ann. Sci. Nat.*, 20:93, 1853.

On leaves of *Geranium pilosum*, Kosciusko, New South Wales, A. Costin 174.

Leafspots indefinite, with reddish surrounding area, drying out to pale brownish in the centre, irregular and often confluent. Pycnidia amphigenous, mostly hypophyllous, black, at first completely immersed, then by enlargement elevating the epidermis and becoming almost superficial, though still covered by the epidermis, which is joined to the pycnidial wall around the upper part. Pycnidia black, soft membranous-fleshy, up to 200μ diam. and high, with terminal pore about 30–40μ diam.; wall parenchymatous, about 10μ thick in lower part, thicker around apex and passing at the sides into subhyaline to pale olivaceous mycelial hyphae 3μ thick, branched and interwoven, septate, intercellular in mesophyll; wall of 2–4 layers of olivaceous parenchyma, soft, lined with a close palisade of simple fusiform conidiophores 10–18 × 3μ, slightly attenuate towards both ends, continuous, straight or bent, hyaline, forming single conidia at the apex. Conidia hyaline, filiform with rounded ends, 30–50 × 1–1·5μ, smooth, bent to much curved, indistinctly 3-septate.

(169) Septoria gerberae Syd., *Ann. Mycol., Berlin*, 10:43, 1912.

On *Gerbera jamesonii*, Meningie, S. Australia, June 1953, L. D. Williams 48.

(170) Septoria pelargonii Syd., *l.c.* 10:443, 1912.

On *Pelargonium australe*, Meningie, S. Australia, June 1953, L. D. Williams 16.

(171) SEPTORIA SILYBI Pass., *Atti Soc. Critt. Ital.*, 2:34.

On *Silybum marianum*, Meningie, S. Australia, June 1953, L. D. Williams 26.

Leafspots more or less circular, often demarcated by a dark line and with traces of zonation, brownish-grey, becoming pallid, smooth, shining, often raised above the general level of the leaf, up to 7 mm. diam., though usually smaller, numerous, rarely confluent. Pycnidia in mesophyll with the ostioles opening on upper surface, loosely scattered, black, globose, smooth, 50–100μ diam.; wall of meandering brown hyphae 4–5μ wide, much branched and agglutinate into a single layer, thin and leathery-membranous, not parenchymatous; ostiole very slightly papillate with a narrow round pore. Sporophores lining the loculus, very short, hyaline, simple, each producing a single apical spore. Spores extruded in a long white tendril, hyaline, filiform, up to 65 × 1·5μ, with numerous minute vacuoles but no septa, straight or slightly bent, smooth, thin-walled, the ends attenuate to a narrow apex and slightly wider base.

(172) SEPTORIA SP. INDET.

On *Wahlenbergia gracilenta*, Keith, South Australia, L. D. Williams, WARI 3695.

Leafspots often terminal, indefinite, whitish when dry, up to 5 mm. long, becoming greyish with formation of numerous pycnidia. Pycnidia closely scattered, immersed, globose, black, about 100μ diam., smooth, with apical round ostiole about 10μ diam.; wall of one or two layers of dark angular parenchyma with some traces on the exterior of formation from interwoven hyphae, the whole 5–8μ thick, bearing on the inner surface a rather close palisade of simple, continuous sporophores about 10μ long, each forming a single spore at its apex. Spores filiform, hyaline, greenish in mass, straight or slightly bent, the ends obtusely rounded, continuous or indistinctly 3-septate, smooth, 30–52 × 1·5–2μ.

This does not agree well with descriptions of species previously recorded on Campanulaceae, but no material of these was available for comparison.

(173) DINEMASPORIUM GRAMINUM Lev., var. STRIGULOSUM Karst., *Hedwigia* 1884, p. 21.

On dead leaves *Phragmites* sp., Meningie, S. Australia, L. D. Williams, WARI 3494, det. E. W. Mason.

(174) PESTALOTIA QUERCINA Guba, *Mycologia*, 24:380, 1932.

On old leaves of *Quercus* sp., Adelaide, March 1952, isolated in culture by A. Kerr.

Petri-dish cultures produce a white mycelial growth with scattered acervuli, which are frequently coalescent into black spore masses up to 4 mm. diam.; from single acervuli the spores sometimes issue in long twisted black tendrils. Spores 5-celled, fusoid-clavulate, tapering to the base, very slightly constricted at the septa, mostly 24–28μ long; the three median cells olivaceous, equally coloured, 15–18μ long; terminal cells hyaline, the apical cell conoid with a crest of 3 divergent setae 10–15 × 1μ; the basal cell conoid and with a terminal seta 5–7μ long.

(175) PESTALOTIA BANKSIAE Hansf., n. sp.

Gallae in fructibus productae, usque ad 7 cm. diam., durae, brunneae, tuberculatae, intus lignosae et hyphis hyalinis saepe aggregatis permeatae. Fungus culto mycelium album et acervuli numerosi ferens. Acervuli usque ad 1 mm. diam., nigri. Conidia fusoidea, 4-septata, cellulis mediis atro-olivaceis, leniter constrictis, levibus vel subtiliter granulosis, 14–20 × 6–7μ, cellulis terminalibus hyalinis, obtuse conoideis, 4–5μ longis; setae apicales 3, divergentes, hyalinae, solidae, usque ad 20 × 1μ; seta basale usque ad 10 × 1μ; corpora tota conidiorum 22–29μ longa.

Hab. in fructibus *Banksiae marginatae*, Keith, South Australia, Dec. 1953, J. B. Harris, WARI 3684.

Infected fruit-spikes show nearly every individual fruit greatly enlarged, and reach 7 cm. diam., to form a rough-tuberculate, woody, brown gall; internally the tissues are brown and woody, permeated by loose hyphae and masses or small sheets of white

mycelium. In agar culture the fungus forms a white woolly aerial mycelium, with numerous black acervuli, mostly around the colony margin, which reach 1 mm. diam. Conidia fusoid, usually straight, with a basal setiform pedicel up to 10μ long, and three divergent apical setae up to 20 × 1μ; the body of the conidium is 22–29μ long by 6–7μ wide in the widest part, consisting of terminal small conoid hyaline cells each 4–6μ long, with three, uniformly dark olivaceous, central cells, measuring together 14–20 × 6–7μ, slightly constricted at the septa, the exterior smooth or indistinctly granulose. This was the only fungus isolated from the galled fruits, but has not yet been proved to be the cause of the disease.

(176) Monochaetia muehlenbeckiae McAlpine in Herb., n. sp.

Maculae amphigenae, in epiphyllo rotundatae, concentrice zonatae, usque ad 10 mm. diam. vel confluentes, linea atrobrunnea circumdatae, intus alternatim atro- et fulvo-brunneo zonatae, haud secedentes, in hypophyllo minus distinctae. Acervuli amphigeni, plerumque epiphylli, dispersi, atro-brunnei vel subnigri, usque ad 100μ diam., primo velati, demum epidermidem irregulare disrumpenti. Sporae fusoideae, 21–26 × 2·5–5·5μ, transverse 4-septatae, utrinque hyalinae, cellulis mediis dilute olivaceis; cellula apicali conoidea, in setam terminaliam rectam vel curvulam, usque ad 10 × 1μ producta; cellula basali obtuse conoidea, seta recta 4–7μ longa excentrica praedita.

Hab. in foliis *Muehlenbeckiae adpressae*, Victoria (typus in Herb. Waite Institute, 2088).

The leafspots show on both sides of the leaf, on the upper surface rounded, concentrically zoned alternately with dark- and buff-brown, surrounded by a dark brown marginal line, up to 10 mm. diam., drying out but not secedent; on the lower surface the spots are less distinct. Acervuli amphigenous, mostly epiphyllous, evenly scattered over the centre of the leafspot, dark brown to almost black, up to 100μ diam., covered, then bursting the epidermis irregularly. Spores slightly bent, fusoid, 21–26 × 4·5–5·5μ, 4-septate, the end cells hyaline and conoid, the three middle cells pale olivaceous, smooth, and not constricted at the septa; apical cell produced into a terminal straight or slightly bent hyaline seta up to 10 × 1μ; basal cell with an excentric straight seta 4–7μ long.

(177) Monochaetia lomatie McAlpine in Herb., n. sp.

Maculae 2–30 mm. diam., rotundatae vel confluentes, linea atrobrunnea circumdatae, luteae vel griseo-brunneae, haud secedentes, haud zonatae, arescentes. Acervuli amphigeni, nigri, plus minusve rotundati, usque ad 300μ diam., epidermidem rumpenti. Sporae late fusoideae, saepe curvulae, 15–20 × 5·5–7·0μ, 4-septatae, cellulis mediis castaneis, tunicatis (1·5μ), extus verruculosis, cellulis terminalibus hyalinis, conoideis, minutis, 2–3μ long. et lat.; seta basali 5–15μ longa, recta vel curvula, centrali; seta apicali usque ad 33μ longa, recta vel curvula.

Hab. in foliis *Lomatiae ilicifoliae*, Victoria, WARI 3728, ex Herb. Dept. Agr. Victoria.

Leafspots 2–30 mm. diam., round or confluent, each surrounded by a dark red-brown line, the centre uniformly yellow to greyish-brown, drying out but not secedent. Acervuli amphigenous, black, more or less circular, up to 300μ diam., at first covered, then bursting the epidermis. Spores broadly fusoid, often slightly bent, 15–20 × 5·5–7μ, 4-septate, not constricted, the terminal cells hyaline, obtusely conoid, 2–3μ long and wide; the central cells uniformly dark chestnut-brown, thick-walled (1·5μ), the surface coarsely and bluntly verruculose. Basal seta 5–15μ long, apparently central; apical seta a prolongation of the apical cell, up to 33μ long, both straight or bent.

(178) Monochaetia unicornis (Cke. & Ell.) Sacc., *Syll Fung.*, 18:485, 1906.

On *Cupressus* sp., Adelaide, Jan. 1952, N. T. Flentje.

(179) Papularia arundinis (Corda) Fr., *Summa Veg. Scand.*, p. 509, 1849.

On old stems of Bamboo, Victoria, WARI 3727, ex Herb. Dept. Agr. Victoria; on old culms *Phragmites* sp., Meningie, S. Australia, WARI 3494, L. D. Williams.