Grove (1937) cites 'Cf. *Patellaria vermifera* Phill. Discom. 369' without further comment. Phillips (1887) described this species from *Ilex* wood in Dolgelly and gave the spores as 30–35 × 3 μm. It is unclear why Grove refers to this taxon as it was clearly described as forming the spores in asci. Unfortunately the original material of *P. vermifera* could not be located in K, precluding further investigation of this problem.

It is possible that there is a second microconidial (spermatial) anamorph of *D. atrocyanea*, with a pycnidial wall constructed like that of *Plasia ramicola* but with minute, rod-shaped conidia 1·5–3·5 × 0·5–1·5 μm produced on slender, monophialidic conidiogenous cells 5–15 × 1–1·5 μm (Fig. 3). Such pycnidia are frequently found associated with *D. atrocyanea* in nature, but were not obtained in the single-ascospore cultures prepared.

I would like to thank Mrs G. Butterfill and Mrs J. Woodhams for isolating the fungus in pure culture, the Directors of the Commonwealth Mycological Institute and the Royal Botanic Gardens, Kew, for permitting me to study their collections; Dr D. L. Hawksworth for Figs 2–3 and help in preparing the work for publication; and especially Dr B. C. Sutton for his helpful advice and encouragement. This investigation was completed during the tenure of a Science Research Council award to the University of Liverpool for the preparation of a checklist of British Ascomycetes.

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## *PSEUDOCERCOSPORA PERONOSPOROIDEA* (PAT. & HAR.) COMB. NOV., A LITTLE-KNOWN SPECIES FROM CHAD

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By courtesy of the curator of the Farlow Herbarium (FH), the type specimen of *Cercospora peronosporoidea* Pat. & Har. was obtained on loan to the Commonwealth Mycological Institute where I was able to examine it. This is the only collection seen of this species which was collected on an unidentified asclepiad, and an expanded description and drawing are here given. The fungus is better placed in the genus *Pseudocercospora* and seems quite distinct from other species so far described.

**Pseudocercospora peronosporoidea** (Pat. & Har.) comb. nov.

*Cercospora peronosporoidea* Pat. & Har., *Bull. trimest. Soc. mycol. Fr.* **24**: 16 (1909).

Leaf spot none or slight yellowish discolorations on the upper surface. *Caespituli* hypophyllous, dark olivaceous, effuse, up to 3 mm wide. *Mycelium* internal: hyphae copious, almost colourless, 2·5–5 μm wide. *Stroma* none. *Conidiophores* mostly 3–10 but occasionally up to 40 in a fascicle arising from a few brown substomatal cells, moderate to rather dark brown, often somewhat paler toward the apex, mostly simple, rarely once branched, smooth, septate, substraight or slightly sinuous, 65–78 (90) μm long, 4–5 μm wide but here and there swollen to as much as 6·5 μm wide, often slightly swollen towards the apex (occasionally to as much as 8·5 μm). Conidial scars unthickened, 1·5–2 μm diam, the old ones scarcely visible but just discernible at slight geniculations. *Conidia* pale olivaceous, obclavate, substraight or slightly curved, smooth, (1) 2–9 septate, the septa often difficult to see in unstained mounts, not constricted, (32) 40–122 × 4–6 μm, most commonly about 5 μm wide.





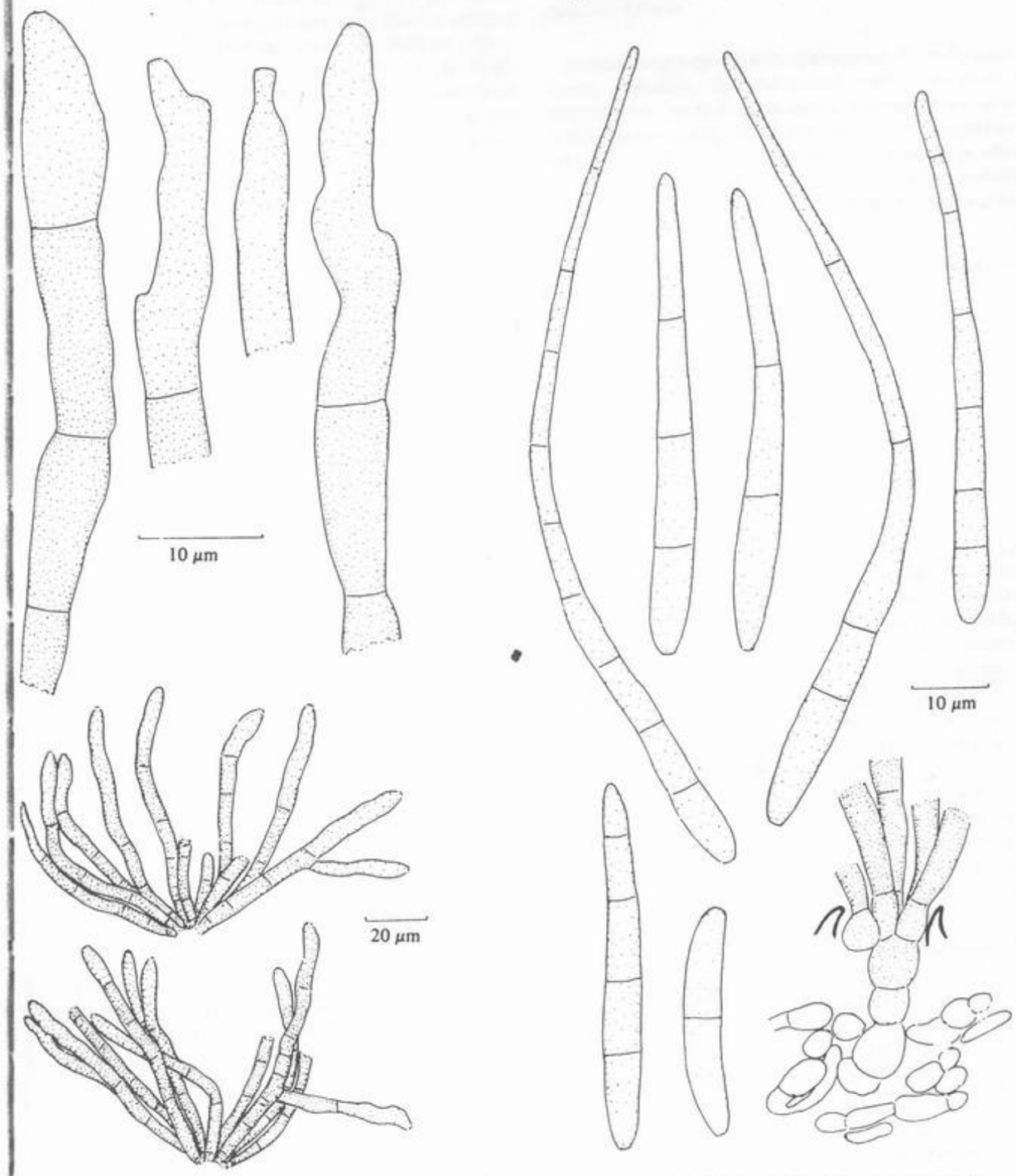


Fig. 1. *Pseudocercospora peronosporoidea*. Section showing emergence of conidiophores through a stoma, conidiophore fascicles, conidiophore tips and conidia.

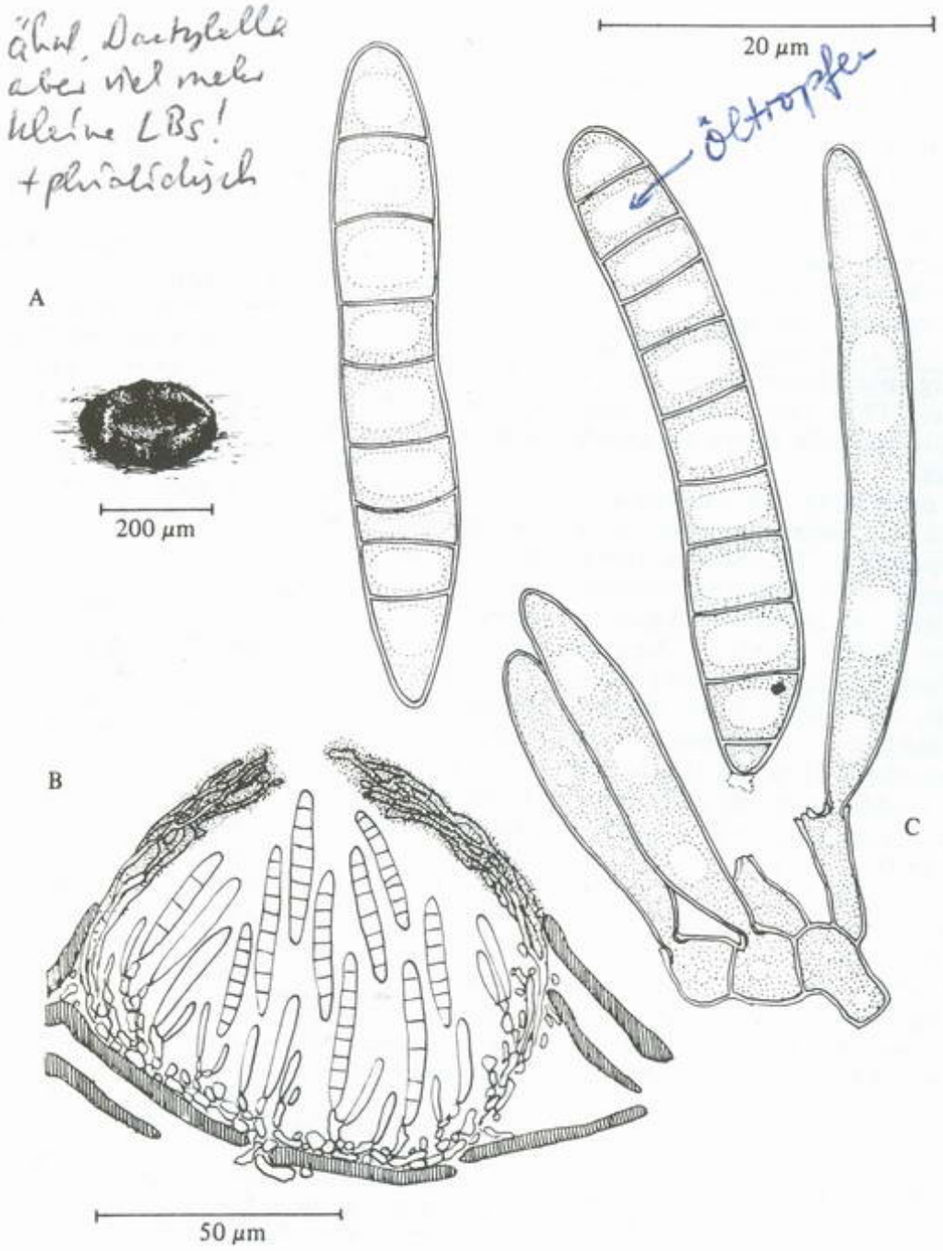


Fig. 1. *Plasia ramicola* (IMI 244649). A, Sketch of conidioma; B, vertical section of conidioma; C, conidiogenous cells and conidia.

North temperate zone there is no reason to suppose that the anamorph does not occur elsewhere under suitable conditions.

*Durella atrocyanea*, in common with a number of fungi, appears to be somewhat sensitive to air pollution. The distribution in the vicinity of large cities is roughly similar to that of *Parmelia sulcata* Taylor, one of the more pollution-tolerant foliose epiphytic lichens. The known collections of *Plasia ramicola* are all from relatively urban and polluted areas, and it is conceivable that the production of asexual propagules in *Durella atrocyanea* is favoured by air pollution. A parallel response is well documented in lichens which produce both sexual spores and asexual propagules such as soredia (Hawksworth, Rose & Coppins, 1973).

At the end of his account of *Excipulina ramicola*,





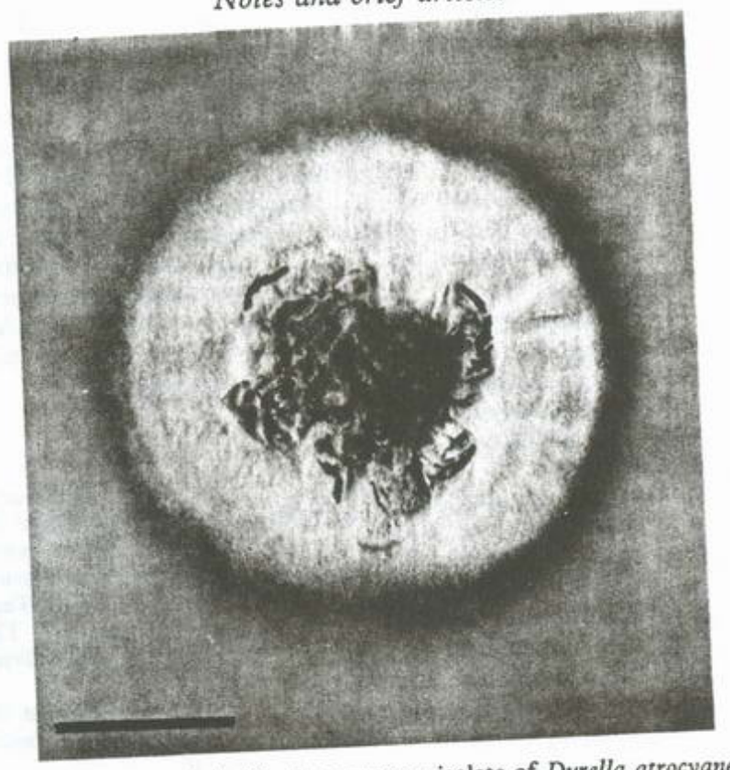

Fig. 2. *Plasia ramicola* (IMI 244649). Single-ascospore isolate of *Durella atrocyanea* after two months on malt agar at *c.* 15–20 °C. Scale = 5 mm. Photograph by Mr D. W. Fry.

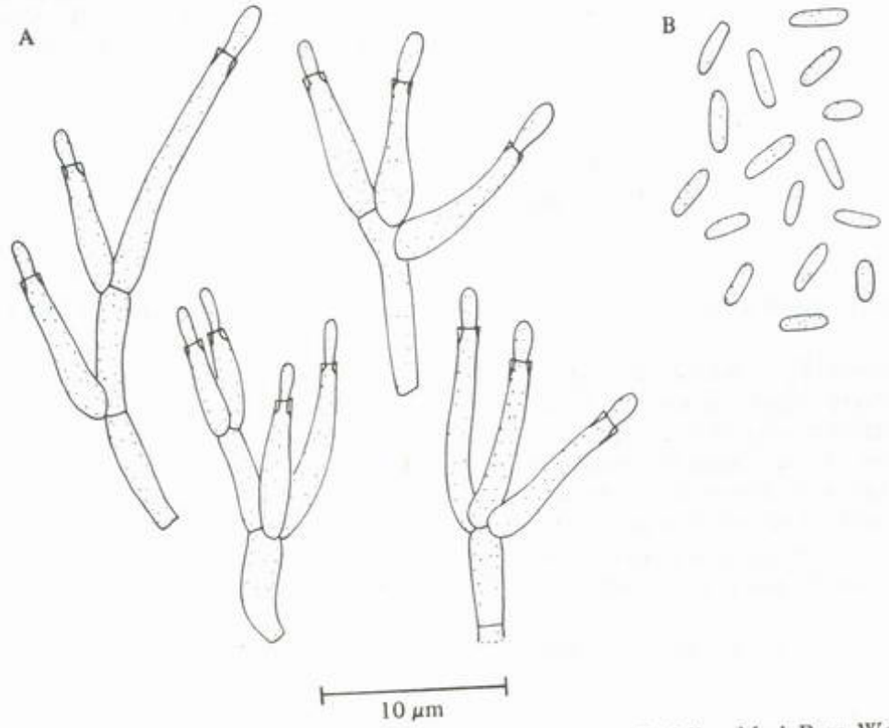


Fig. 3. Possible microconidial state of *Durella atrocyanea* (Middlesex, Ruislip, Mad Bess Wood, on *Carpinus* wood, 8 Feb. 1976, D. L. Hawksworth 4290, IMI 200983). A, Conidiophores and conidiogenous cells; B, conidia. Drawings by Dr D. L. Hawksworth.

diophore, from which it is early delimited by a basal septum. It has an apical growing point. Two further centres of growth develop below the apex and, by the activity of all three growing-points, the final tetraradiate conidium is achieved. It is then liberated by the breakdown of a separating-cell formed at the end of the conidiophore. By the Kananaskis rule this is certainly thallic and even passes Cole & Samson's extra test in having a considerable stretch of periclinal wall.

If tetraradiate conidia like those of *T. elegans*, previously termed aleuriospores, are to be regarded as blastic, then the elaborately branched conidia of *Dendrospora erecta* Ingold are also blastic. In view of this problem, Descals & Webster (1980), in monographing the genus *Dendrospora*, deliberately avoided thallic–blastic terminology in their descriptions of species. If the conidium of *Dendrospora* is blastic, it is a far cry from the concept of a blastospore as given in the *Dictionary of the Fungi* (Ainsworth, 1971): 'a spore which has been budded off as in yeast, a sprout cell'.

It seems to me that in one and the same complex conidium there may be both thallic and blastic episodes. Thus I would regard the whole conidium of *Triscelophorus monosporus* Ingold as thallic (Fig. 2B). A small primordium, delimited by a cross-wall, undergoes considerable development before the tetraradiate structure of the mature conidium is produced. The first-formed arm of the conidium develops by apical growth of the primordium, but the other arms arise in succession, almost by yeast-like (blastic) budding from near the base of the first-formed arm. Exactly the same case can be made for *Dendrospora erecta*, *Tricladium splendens* Ingold and *Gyoerffyella speciosa* (Miura) Ingold, in all of which the main axis, in my opinion, is thallic but the laterals have a blastic origin.

Most mycologists would, I believe, agree that certain types of conidia are readily recognizable: phialoconidia, arthroconidia, those formed on annellophores, blastoconidia budded yeast-wise from the cells of the conidiophore or directly from the prostrate mycelium, and single terminal conidia which have often been called aleuriospores. For the last type a generally acceptable term is needed, the Kananaskis workshop having rejected the term 'aleurioconidium'. What is to be doubted is the wisdom of trying to impose a blastic–thallic dichotomy on the whole system. In my view if a significant division is to be made it might be between phialoconidia and all other types, Further, it might be best to discard the term 'blastic' completely, except in relation to blastoconidia of the type found, for example, in *Aureobasidium pullulans* (de Bary) Arnaud, where there is clearly a valid comparison with yeast-like budding.

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# *PLASIA*, A NEW GENUS FOR THE MACROCONIDIAL ANAMORPH OF *DURELLA ATROCYANEA*


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*Durella atrocyanea* (Fr.) Höhn. is a common small black discomycete which occurs on hard wood, usually of angiosperms, throughout the north temperate zone. It is characteristically winter-fruiting and has a tendency to produce a green stain in the wood on which it is growing. As the long synonymy cited by Dennis (1956) indicates, *D. atrocyanea* has been treated in a great many different genera and described as new several times. The anamorph has sometimes been assumed to be *Cystotricha* Berk. & Br. (cf. Dennis, 1956), but experimental evidence demonstrating this connexion has been lacking.

The coelomycete *Excipulina ramicola* (Cooke & Massee) Grove is a distinctive, cupulate pycnidial fungus with large phragmosporous conidia known from a few collections made in the British Isles. A collection of this species made in Ruislip, Middlesex, late in the autumn of 1979 also contained *Durella atrocyanea*; the similar appearance of the fruit bodies suggested that the two might be different stages in the life cycle of the same fungus. Accordingly single ascospore isolates of the *Durella* were prepared and grown on malt agar. Colonies failed to develop in a 25 °C incubator, but on transfer to a laboratory bench (at about 15–20°), slow-growing salmon-pink mycelial colonies appeared. After two months the colonies had reached 1 cm diam and were starting to produce darker-coloured pycnidia near their margins in five separate single-ascospore isolates. The pycnidia, while not absolutely identical to those of *Excipulina ramicola* in nature, exhibited the greenish paraplectenchymatous wall, polyphialidic conidiogenous cells, and large phragmoconidia characteristic of that species. Thus there can be little doubt that *Excipulina ramicola* is the anamorph of *Durella atrocyanea*.

The systematic position of the anamorph is more problematical as *Excipulina* Sacc. is a synonym of *Heteropatella* Fuckel (Sutton, 1977), a very different genus with holoblastic conidiogenous cells each with 1–3 apical conidiogenous loci (Sutton, 1980). *Durella compressa* (Pers. ex Fr.) Tul. has long been recognized to be the teleomorph of *Cystotricha striola* Berk. & Br., but that anamorph has holoblastic conidiogenous cells integrated into irregularly branched chains and hyaline 1-septate conidia (see illustrations in Sutton, 1980) and is clearly generically distinct from the anamorph of *D. atrocyanea*. Indeed, these states are so distinct that the question as to whether *D. compressa* and *D. atrocyanea* are really congeneric should be re-investigated.

As no suitable generic name appears to be available, and as the anamorph can be found in nature without the teleomorph, the new generic name *Plasia* is introduced here for this state of *D. atrocyanea*.

**Plasia** gen.nov.

*Etym.* Named in honour of Daniel Plas, former curatorial assistant at the Farlow Herbarium, Harvard University.

Pycnidia discoidea, cupulata, margo gelatinoso, ex hyphis intertextis paraplectenchymatis composita. Cellula conidiogenae enteroblasticae, polyphialidicae, in conidiophoris incorporatae. Conidia hyalina, magna, cylindrica transversali septata.

Species holotypicus: *Plasia ramicola* (Cooke & Massee) Sherw.

*Conidiomata* pycnidial, discoid or short-hysteriiform, cupulate, the pycnidial wall composed of interwoven hyphal gelatinous paraplectenchyma. *Conidiogenous cells* lining the base of the pycnidium attached directly to the pycnidial wall or in short chains, enteroblastic, mono- to polyphialidic. *Conidia* large, cylindrical, colourless, transversely septate, not appendaged.

**Plasia ramicola** (Cooke & Massee) comb.nov. (Figs 1–2).

*Excipula ramicola* Cooke & Massee, *Grevillea* **16**: 9 (1887).

*Excipulina ramicola* (Cooke & Massee) Grove, *J. Bot., Lond.* **1916**: 219 (1916).

*Colonies* on malt agar mycelial, slow-growing, at first a dense convoluted mat of pale salmon-pink aerial mycelium, then, at the onset of pycnidium formation, growing predominantly within the agar to give a colony with a flat, watery appearance and deeper salmon-pink coloration. *Conidiomata* pycnidial in culture, tending to form concentric rings, the innermost of which marks the line of demarcation between aerial and immersed mycelium, 0·1 mm diam, olivaceous; in nature scattered, orbicular or somewhat hysteriiform, greenish-black when dry, the disk olivaceous when wet, with a darker margin, 0·1–0·3 mm diam, erumpent. Pycnidial wall paraplectenchymatous, the lower portion thin, colourless, the upper portion *c.* 10 μm thick, of slender interwoven hyphae imbedded in a greenish gel. *Conidiogenous cells* solitary or in short branched chains, integrated, not borne on definite conidiophores, colourless, 4–5 μm diam, enteroblastic, polyphialidic, without an obvious collarette. *Conidia* cylindrical, with obtuse ends, colourless, 7–10 septate, with a single large guttule in each cell, 35–50 × 4·5–6 μm.

*Specimens examined* (with *Plasia ramicola*): British Isles: England, Middlesex, Ruislip, Ruislip Local Nature Reserve, on *Salix* wood, 19 Nov. 1979, D. L. Hawksworth & M. A. Sherwood, IMI 244649, 244651; Surrey, Oxshott Common, on wood in pine grove, 30 Sept. 1956, R. W. G. Dennis, K; Surrey, Kew Gardens, on *Acer obtusatum*, G. Massee, K (holotype of *Excipula ramicola*); Warwickshire, Sheldon Hall, on *Ilex aquifolium*, 4 Apr. 1913, W. B. Grove, K.

On decorticated angiosperm wood, often associated with its teleomorph *Durella atrocyanea* in the autumn and spring. The known collections of the anamorph are all from the British Isles, but as the teleomorph is widely distributed in the


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