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NEW OR INTERESTING MICROFUNGI

VI. *SPORIDESMIELLA* GEN.NOV. (HYPHOMYCETES)

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A new genus of Hyphomycetes is established for two new species and four others which were previously referred to *Sporidesmium*. A key, and descriptions and illustrations for each species are provided.

The application of the generic name *Sporidesmium* Link ex Fr. was discussed by Ellis (1958) who examined a collection in Persoon's herbarium (herb. L, 910, 262–658). This specimen is labelled 'Ehrbg in hb. Pers. *Sporidesmium fusiforme* Nees ab Esenb. *Sporidesmium atrum* Link teste Link [scr. ? Ehrenberg] var. E Fam. Uredinea? [scr. Persoon]'. Ellis (1958) proposed that this specimen, in the absence of the holotype or an authentic collection of *S. atrum* Link ex Fr., the holotype species of *Sporidesmium*, served to indicate the characters upon which the genus should be based. Ellis described the collection from Persoon's herbarium as the type of his new species *S. ehrenbergii* M. B. Ellis because it was conspecific with *S. fusiforme* Nees ex Fr. Hughes (1979) concurred with these proposals and provided further evidence that this particular collection (910, 262–658) was of considerable importance in fixing the application of the name *S. atrum*. He considered that *S. ehrenbergii* was 'being used in effect as a lectotype species' and added that 'this seems to be a logical procedure if the generic name *Sporidesmium* is going to be used with any consistency'. This would indeed appear to be the most satisfactory approach to the problem of delimiting the concepts of the genus *Sporidesmium*.

Sutton & Hodges (1979) and Hughes (1979) were of the opinion that *Sporidesmium* is a large and heterogeneous genus. Although Sutton & Hodges suggested that no combination of criteria had emerged by which the genus could be satisfactorily split, Hughes saw groups of species emerging which could form the basis for its subdivision. He suggested that those species with few septa and cuneate to obovoid conidia may eventually form a convenient segregate.

Prompted by the collection of two apparently undescribed taxa referable to *Sporidesmium* sensu Hughes (1979) and clearly similar to other species of *Sporidesmium* which appear to form a distinct group, it now seems appropriate to segregate these taxa and establish a new genus for them.

Sporidesmiella P. M. Kirk, gen.nov.

Mycelium partim superficiale, partim in substrato immersum, ex hyphis ramosis, septatis, pallide brunneis ad brunneis compositum. Conidiophora macronematosa, mononematosa, solitaria, simplicia, recta vel leviter flexuosa, septata, brunnea ad atrobrunnea. Cellulae conidiogenae holoblasticae, monoblasticae, in conidiophoris incorporatae, terminales, proliferationis respectu percurrentes, vel raro sympodiales. Conidia acrogena, solitaria, sicca, schizolytice secedentia, cylindrica, anguste clavata, obovoidea ad late obovoidea vel cuneiformia, ad basim truncata, ad apicem rotundata vel raro coronata, 1 ad 5-distoseptata, cellularum luminibus deminutis, pallide olivacea ad olivaceobrunnea vel brunnea.

Species typica: *Sporidesmiella claviformis* P. M. Kirk

Mycelium partly superficial, partly immersed in the substratum, composed of branched, septate, pale brown to brown hyphae. *Conidiophores* macronematous, mononematous, solitary, simple, straight or slightly flexuous, septate, brown to dark brown. *Conidiogenous cells* holoblastic, monoblastic, integrated, terminal, proliferating percurrently, rarely sympodially. *Conidia* acrogenous, solitary, dry, seceding schizolytically, cylindrical, narrowly clavate, obovoid to broadly obovoid or cuneiform, truncate at the base, rounded or rarely coronate at the apex, 1- to 5-distoseptate, cell lumina reduced, pale olivaceous to olivaceous brown or brown.

Sporidesmiella claviformis P. M. Kirk, sp.nov. (Fig. 1)

Coloniae effusae, pilosae, sparsae, saepe inconspicuae, canobrunneae vel brunneae ad atrobrunneae. Mycelium plerumque superficiale sed in substrato partim immersum, ex hyphis ramosis, septatis, pallide brunneis ad brunneis, laevibus, 1·5–3 μm latis compositum. Conidiophora macronematosa, mononematosa, solitaria, simplicia, recta vel leviter flexuosa, laevia, septata, brunnea ad atrobrunnea, ad apicem pallidiora, primo 50–80 μm alta, deinde usque ad 150 μm alta, nonnumquam etiam maiora, 2·5–4 μm lata, ad basim saepe inflata ad 12 μm lata, per usque ad 15 nonnumquam etiam plures cylindricas proliferationes crescentia. Cellulae conidiogenae holoblasticae, monoblasticae, in conidiophoris incorporatae,

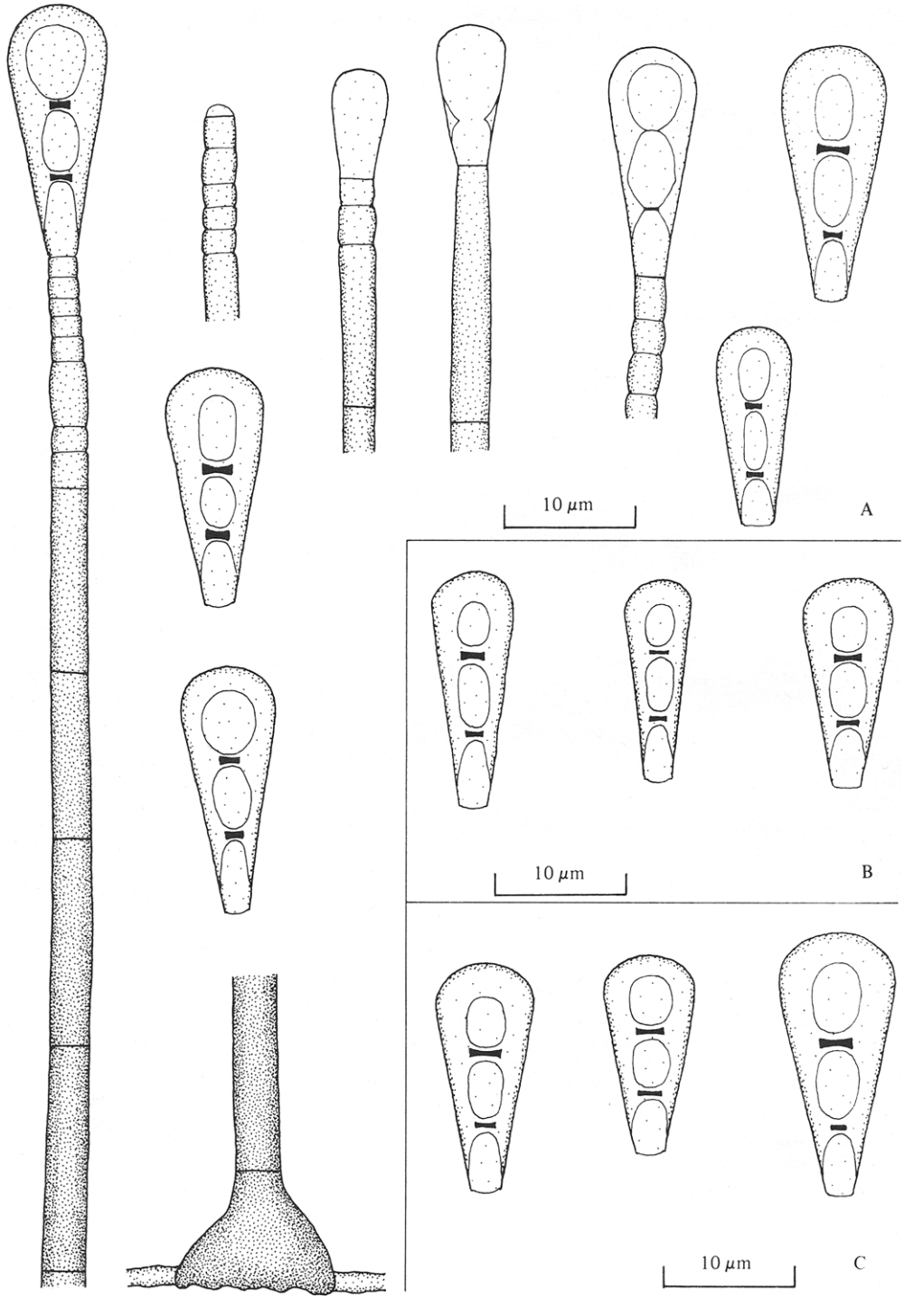

Fig. 1. (A–C) *Sporidesmiella claviformis*. (A) IMI 246982. (B) IMI 246967*a*. (C) IMI 232848.

terminales, cylindricae, proliferationis respectu percurrentes. Conidia acrogena, solitaria, sicca, schizolytice secedentia, clava, ad basim truncata, 2-distoseptata, cellularum luminibus magnopere deminutis, cellula ima excepta, laevia, pallide olivacea ad olivaceobrunnea vel brunnea, (14–) 16–20 μm longa, (4·5–) 6·5–8·5 (–9) μm lata, ad basim 2–2·5 μm lata.

In virgulis emortuis *Ulicis europaei* L., Esher Common, Surrey, U.K., 7 Apr. 1980, P. M. Kirk 542, IMI 246982, holotypus.

Colonies effuse, hairy, sparse, often inconspicuous, greyish brown or brown to dark brown. *Mycelium* mostly superficial but partly immersed in the substratum, composed of branched, septate, pale brown to brown, smooth, 1·5–3 μm wide hyphae. *Conidiophores* macronematous, mononematous, solitary, simple, straight or slightly flexuous, smooth, septate, brown to dark brown, paler towards the apex, initially 50–80 μm high, finally up to 150 μm or more high, 2·5–4 μm wide, often swollen at the base to 12 μm wide, with up to 15 or more cylindrical proliferations at the apex. *Conidiogenous cells* holoblastic, monoblastic, integrated, terminal, cylindrical, proliferating percurrently. *Conidia* acrogenous, solitary, dry, seceding schizolytically, clavate, truncate at the base, 2-distoseptate, cell lumina much reduced, less so in the basal cell, smooth, pale olivaceous to olivaceous brown or brown, (14–)16–20 μm long, (4·5–)6·5–8·5(–9) μm wide, 2–2·5 μm wide at the base.

Specimens examined: On dead cane of *Rubus fruticosus* L. agg., Killerton House, Exeter, Devon, U.K., 3 Sept. 1978, P. M. Kirk 313, IMI 232848; on decaying leaves of *Taxus baccata* L., Windsor Great Park, Berkshire, U.K., 5 Apr. 1980, P. M. Kirk 527a, IMI 246967*a*; on dead twigs of *Ulex europaeus*, Esher Common, Surrey, U.K., 7 Apr. 1980, P. M. Kirk 542, IMI 246982, holotype, 22 Mar. 1981, B. M. Spooner, IMI 256383 and 256384*d*, 12 Apr. 1981, B. M. Spooner, K.

Sporidesmiella coronata (B. Sutton) P. M. Kirk, comb.nov. (Fig. 2)

Endophragmia coronata B. Sutton, *Naturalist, Hull* **933**: 69 (1975).

Sporidesmium suttonii S. Hughes, *N.Z. Jl Bot.* **17**: 163 (1979, non *Sporidesmium coronatum* Fuckel, 1874).

Colonies effuse, hairy, sparse, inconspicuous. *Mycelium* partly superficial but mostly immersed in the substratum, composed of branched, septate, pale brown to brown, smooth, 2–3 μm wide hyphae. *Conidiophores* macronematous, mononematous, solitary or rarely fasciculate, simple, straight or slightly flexuous, smooth, septate, dark brown, paler towards the apex, 55–85 μm high, 2·5–4 μm wide, up to 8 μm wide at the base, with up to 11 or more cylindrical proliferations at the apex. *Conidiogenous cells* holoblastic, monoblastic, integrated, terminal, cylindrical, proliferating percurrently. *Conidia* acrogenous, solitary, dry, seceding schizolytically, clavate or cuneiform, apex with usually 4 short projections up to 4 μm long, truncate at the base, 2- or 3-distoseptate, cell lumina reduced, smooth, pale olivaceous brown to pale brown, 24–36 μm long (including projections), 6–7·5 μm wide at the apex, 2·5–3·5 μm wide at the base.

Specimens examined: On decaying leaves of *Taxus baccata*. Chatsworth Park, Derbyshire, U.K., 27 Sept. 1974, B. C. Sutton, IMI 188487*a*, holotype; Windsor Great Park, Berkshire, U.K., 5 Apr. 1980, P. M. Kirk 527b, IMI 246967*b*.

Sporidesmiella cuneiformis (B. Sutton) P. M. Kirk, comb.nov. (Fig. 3)

Endophragmia cuneiformis B. Sutton, *Boln Soc. argen. Bot.* **18**: 156 (1978).

Sporidesmium cuneiforme (B. Sutton) S. Hughes, *N.Z. Jl Bot.* **17**: 162 (1979).

Colonies effuse, hairy, sparse, pale brown, often inconspicuous. *Mycelium* partly superficial, partly immersed in the substratum, composed of branched, septate, brown, smooth, 1·5–3·5 μm wide hyphae. *Conidiophores* macronematous, mononematous, solitary, simple, straight, smooth, septate, brown to dark brown, paler towards the apex, 35–85 μm high, 3–4 μm wide, 5–6 μm wide at the base, with up to 6 cylindrical proliferations at the apex. *Conidiogenous cells* holoblastic, monoblastic, integrated, terminal, cylindrical, proliferating percurrently. *Conidia* acrogenous, solitary, dry, seceding schizolytically, clavate to cuneiform or obovoid, truncate at the base, (4–) 5-distoseptate, with the lower two septa thickened, cell lumina noticeably reduced, less so in the basal cell, smooth, pale brown, (17·5–) 18·5–21 (–23) μm long, (6–) 7–8·5 (–9·5) μm wide, 2·5–3 μm wide at the base.

Specimen examined: On decaying leaves of *Eucalyptus tereticornis* Sm., Monte Dourado, Para, Brazil, 20 June 1974, C. S. Hodges, IMI 186975*b*, holotype.

Sporidesmiella hyalosperma (Corda) P. M. Kirk, comb.nov. var. **hyalosperma** (Fig. 4)

Helminthosporium hyalospermum Corda, *Icon. Fung.* **1**: 13 (1837).

Brachysporium hyalospermum (Corda) Sacc., *Syll. fung.* **4**: 426 (1886).

Endophragmia hyalosperma (Corda) Morgan-Jones & A. Cole, *Trans. Br. Mycol. Soc.* **47**: 490 (1964).

Sporidesmium hyalospermum (Corda) S. Hughes, *N.Z. Jl Bot.* **16**: 349 (1978).

Colonies effuse, hairy, brown to dark brown.

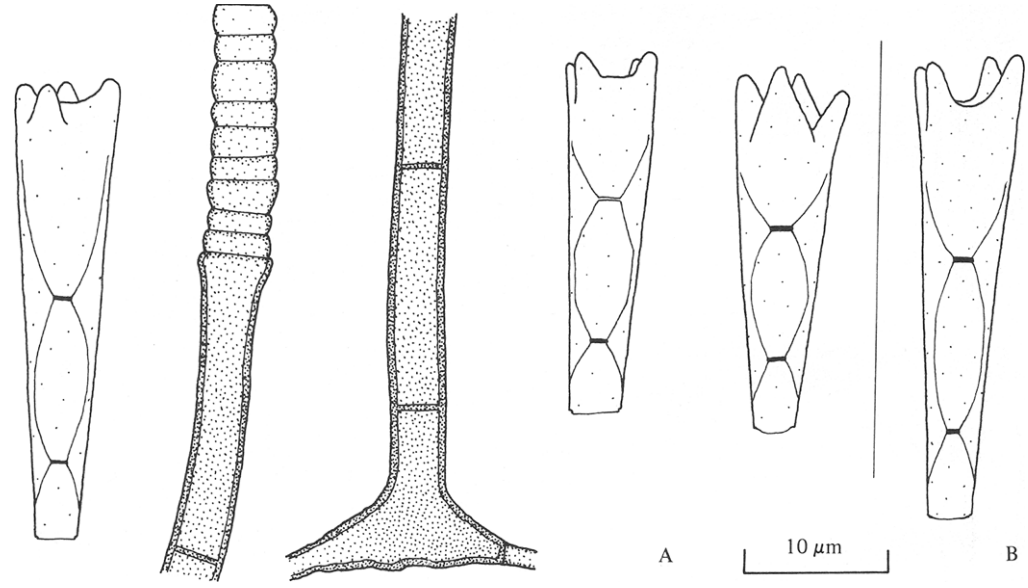

Fig. 2. (A–B) *Sporidesmiella coronata.* (A) IMI 188487*a*. (B) IMI 246967*b*.

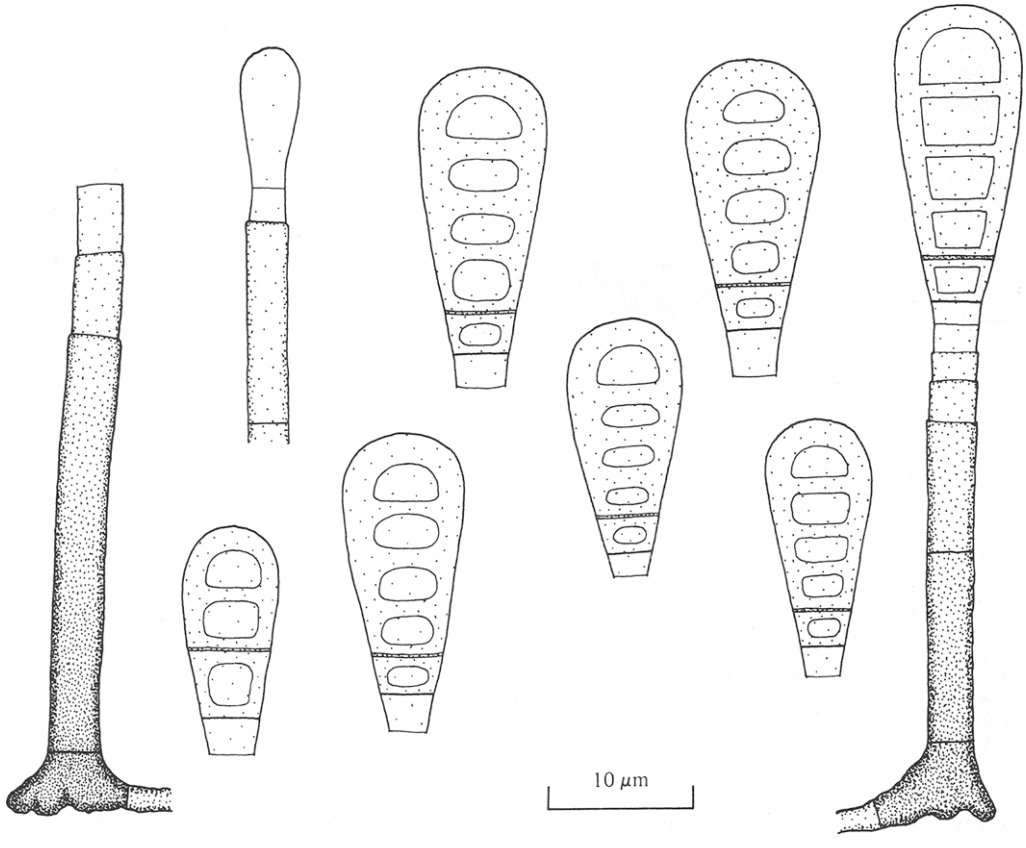

Fig. 3. *Sporidesmiella cuneiformis.* IMI 186975*b*.

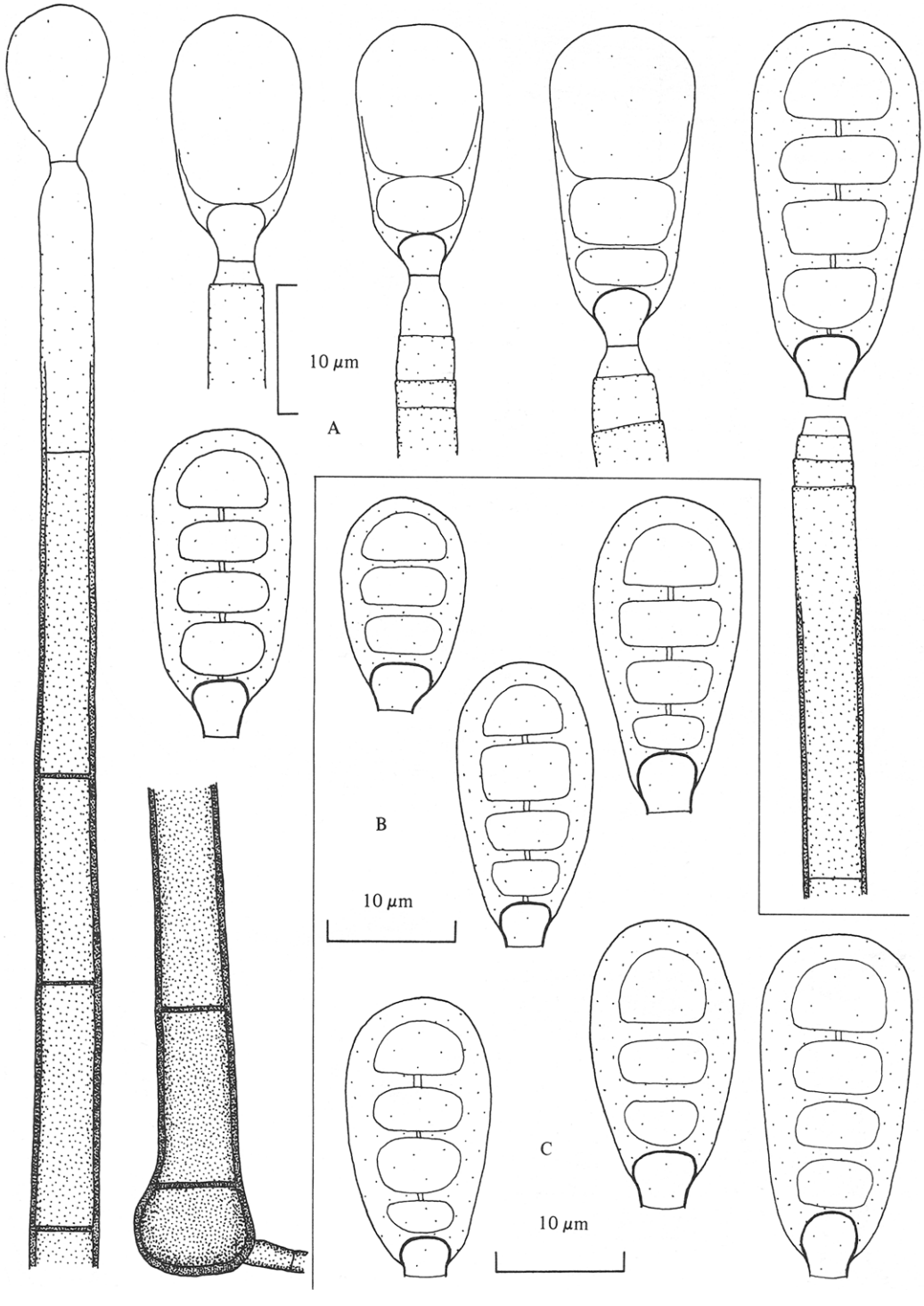

Fig. 4. (A–C) *Sporidesmiella hyalosperma* var. *hyalosperma*. (A) IMI 214250. (B) IMI 231490*a*. (C) IMI 105270.

Mycelium partly superficial but mostly immersed in the substratum, composed of branched, septate, pale brown to brown, smooth, 1·5–3 μm wide hyphae. *Conidiophores* macronematous, mononematous, solitary, simple, straight or slightly flexuous, smooth, septate, golden brown to brown, paler towards the apex, initially 60–125 μm high, finally up to 250 μm or more high, 3–5(–6) μm wide, often swollen at the base to 15 μm wide, with up to 20 or more cylindrical proliferations at the apex. *Conidiophores* holoblastic, monoblastic, integrated, terminal, cylindrical, proliferating percurrently. *Conidia* acrogenous, solitary, dry, seceding schizolytically, clavate to obovoid, truncate at the base, (3-) 4-distoseptate, cell lumina reduced, less so in the basal cell the apical septum of which is convex and deeply pigmented, pale olivaceous to olivaceous brown or golden brown, (17–) 22–25 (–29) μm long, 9–12 (–13) μm wide, 2·5–3 (–3·5) μm wide at the base.

Specimens examined: On dead culms of *Agropyron repens* Beauv. var. *aristata*, Buss Creek, Southwold, Suffolk, U.K., 11 Mar. 1977, M. B. & J. P. Ellis, IMI 214250; on *Arundinaria* sp. cane, Royal Botanic Gardens, Kew, Surrey, U.K., 16 Aug. 1977, P. M. Kirk, 133, IMI 231490; Esher Common, Surrey, U.K., 25 May 1980, P. M. Kirk 613a, IMI 248607*a*; on *Bambusa* sp. cane, Peregrine Hall, Lostwithiel, Cornwall, U.K., 14 Nov. 1946, F. Rilstone 4760, IMI 15475; Mulgrove Woods, Yorkshire, U.K., 18 Sept. 1946, M. B. Ellis, IMI 8243; Upper Hellesdon, Norwich, Norfolk, U.K., 14 Apr. 1954, M. B. Ellis, IMI 56368; Ilam Park, Dovedale, Worcestershire, U.K., 20 Nov. 1963, G. Morgan-Jones, IMI 104436, same locality, 25 Nov. 1963, A. L. J. Cole, IMI 104435; on *Betula* sp. bark, Forge Valley, Yorkshire, U.K., 11 Apr. 1947, S. J. Hughes, IMI 13832*b*; on *Brassica oleracea* L. stem, Llanelly, Gwent, U.K., 6 Aug. 1946, S. J. Hughes, IMI 6134*h*; on *Carex riparia* Curt. leaf, East Wretham, Norfolk, U.K., 29 Dec. 1958, E. A. Ellis, IMI 78382*a*; on *Cytisus scoparius* Link wood, Wenallt, Glamorganshire, U.K., 6 Apr. 1947, S. J. Hughes, IMI 13475*b*; on *Epilobium angustifolium* L. stem, Arlington Court, Devon, U.K., 20 May 1972, M. B. Ellis, IMI 175939; on *Eupatorium cannabinum* L., Farwath, Newton Dale, Pickering, Yorkshire, U.K., 6 Aug. 1960, W. G. Bramley, IMI 83016*b*; on *Fagus sylvatica* L. bark, Ranmore Common, Surrey, U.K., 30 June 1946, S. J. Hughes, IMI 5895*a*; cupule, Killerton House, Exeter, Devon, U.K., 3 Sept. 1978, P. M. Kirk 194d, IMI 231907*d*; wood, Esher Common, Surrey, U.K., 9 Oct. 1979, P. M. Kirk 478a, IMI 252151*a*; on *Filipendula ulmaria* Maxim. stem, Paris Marsh, Wheatfen Broad, Norfolk, U.K., 18 Apr. 1949, M. B. & J. P. Ellis, IMI 34998; on *Juncus* sp. stem, Temple Balsall, Warwickshire, U.K., 17 Oct. 1978, M. C. Clark MC2125, IMI 232844; on *Luzula sylvatica* Bichen., Glen of the Down, County Wicklow, Ireland, Nov. 1965, C. H. Dickinson, IMI 117405, Arncliffe Woods, Glaisdale, North Yorkshire, U. K., 5 June 1978, M. B. & J. P. Ellis, IMI 237287*b*; on *Picea* sp. bark, Cloughton Woods, Yorkshire, U.K., 17 Apr. 1955, J. Webster, IMI 59891*b*; Knapdale, Argyllshire, U.K., 15 Aug. 1972, B. C. Sutton, IMI 168977; on *Polygonum cuspidatum* Sieb. & Zucc., Hengwrt Estate, Gwynedd, U.K., 15 May 1975, M. B. Ellis, IMI 203655; Plas-Tan-y-Bwlch, Gwynedd, U.K., 17 May 1976, M. B. Ellis, IMI 203661*c*; on *Quercus* sp. wood, Ashtead Common, 23 June 1946, S. J. Hughes, IMI 5902*c*; leaf, Temple Balsall, Warwickshire, U.K., without date, M. C. Clark, IMI 222913; on *Quercus ilex* L. leaf, Bathill, Brixham, Devon, U.K., 17 Aug. 1978, P. M. Kirk 98b, IMI 231199*b*; on *Quercus robus* L. wood, Esher Common, Surrey, U.K., 16 Sept. 1979, P. M. Kirk 458d, IMI 241389*d*; on *Rubus fruticosus* agg. cane, University grounds, Exeter, Devon, U.K., 13 Sept. 1947, M. B. Ellis, IMI 17591; Valency Valley, Boscastle, Cornwall, U.K., 12 Apr. 1971, B. C. Sutton, IMI 156826; Three Marsh Lane, Reydon, Suffolk, U.K., 24 Feb. 1978, M. B. & J. P. Ellis, IMI 227501*b*; on *Sambucus nigra* L. twigs, Ham Common, Surrey, U.K., 4 July 1948, S. J. Hughes, IMI 29516; Grantly Woods, Yorkshire, U.K., 24 Apr. 1954, A. H. S. Brown, IMI 56691; on *Tilia platyphylla* C. A. Mey. wood, Islebiam, Saxony, Germany, Mar. 1875, J. Kunze's Fungi selecti exsiccati No. 199; on *Triglochin palustre* L., Lulymore, County Kildare, Ireland, 12 Jan. 1966, C. H. Dickinson, IMI 117404; on *Tripsacum laxum* Nash, Tea Research Institute, Talawakelle, Sri Lanka, 25 Jan. 1973, B. C. Sutton, IMI 173402*c*; on indet. umbelifer, Birmingham, U.K., Nov. 1946, C. J. Hickman, IMI 8937; on indet. wood, Reichenberg, Germany, without date, A. K. J. Corda, PR 155551, holotype of *Helminthosporium hyalospermum*; Rough Hill Wood, Studley, Warwickshire, U.K., 12 Dec. 1975, M. C. Clark MC 1872, IMI 199508*b*; Arlington Court, Devon, U.K., 2 Sept. 1978, P. M. Kirk 148b, IMI 231877*b*; Esher Common, Surrey, U.K., 13 Apr. 1980, P. M. Kirk 551a, IMI 247241*a*; Lathkill Dale, Derbyshire, U.K., 19 May 1980, P. M. Kirk 583, IMI 248577; on dung of *Glomeris marginata*, U.K., 3 Dec. 1964, J. C. Frankland J80, IMI 110313; isolated from Patuxent River using balsa wood block, Brighton, Maryland, U.S.A., 3 Nov. 1967, C. A. Shearer & J. L. Crane 34528, IMI 134590.

Sporidesmiella hyalosperma var. **novae-zelandiae** (S. Hughes) P. M. Kirk, comb.nov. (Fig. 5)

Sporidesmium hyalospermum var. *novae-zelandiae* S. Hughes, *N.Z. Jl Bot.* **16**: 349 (1978).

Colonies of similar appearance to *S. hyalospermum* var. *hyalospermum*. *Mycelium* and *conidiophores* of similar dimensions and morphology to the type variety. *Conidiogenous cells* holoblastic, monoblastic, integrated, terminal, proliferating sympodially. *Conidia* differing only in size from those of the type variety, 22–26 μm long, 12–14·5 μm wide, 4–5 μm wide at the base.

Specimens examined: On *Filipendula ulmaria* stem, Loch Chinie, Perthshire, U.K., Sept. 1953, M. B. Ellis, IMI 54366; on *Pinus sylvestris* L. twig, Loch Ahire, Morvern, U.K., Aug. 1976, S. M. Francis, IMI 229539.

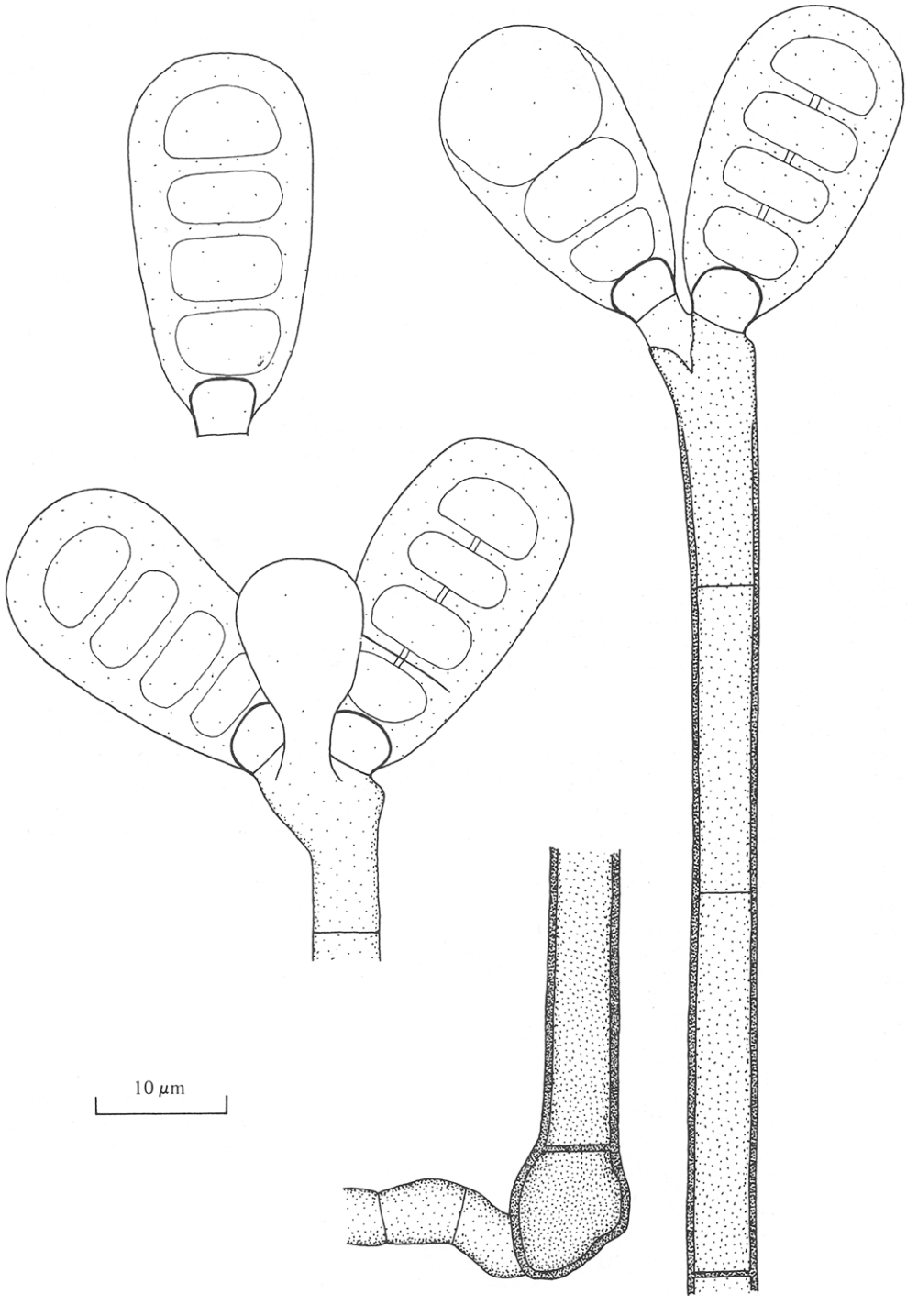

Fig. 5. *Sporidesmiella hyalosperma* var. *novae-zelandiae*. IMI 229539.

Sporidesmiella longissima P. M. Kirk, sp.nov. (Fig. 6)

Coloniae effusae, pilosae, sparsae, brunneae, inconspicuae. Mycelium plerumque superficiale sed in substrato partim immersum, ex hyphis ramosis, septatis, pallide brunneis ad brunneis, laevibus, 1·5–3 μm latis compositum. Conidiophora macronematosa, mononematosa, solitaria, simplicia, recta vel leviter flexuosa, ad apicem raro geniculata, laevia, septata, brunnea ad atrobrunnea, ad apicem pallidiora, primo 15–65 μm alta, deinde usque ad 140 μm, nonnumquam etiam maiora, 3–4 μm lata, ad basim saepe inflata ad 15 μm lata, per usque ad 8 nonnumquam etiam plures cylindricae proliferationes crescentia. Cellulae conidiogenae holoblasticae, monoblasticae, in conidiophoris incorporatae, terminales, cylindricae, proliferationis respectu percurrentes. Conidia acrogena, solitaria, sicca, schizolytice secedentia, cylindrica, ad apicem rotundata, nonnihil fastigiata vel raro coronata, ad basem truncata, 2–12-distoseptata, cellularum luminibus deminutis, cellula ima fundamenti respectu excepta, laevia, pallide olivacea ad olivacea vel olivaceobrunnea, (22–) 46–100 μm longa, (3·5–) 4–4·5 μm lata, ad basi 3·5–4·5 μm lata.

In folio emortuo *Taxi baccatae*, Longshaw Estate, Grindleford, Derbyshire, U.K., 17 May 1980, P. M. Kirk 572, IMI 248566, holotypus.

Colonies effuse, hairy, sparse, brown, inconspicuous. *Mycelium* mostly superficial but partly immersed in the substratum, composed of branched, septate, pale brown to brown, smooth, 1·5–3 μm wide hyphae. *Conidiophores* macronematous, mononematous, solitary, simple, straight or slightly flexuous, rarely geniculate at the apex, smooth, septate, brown to dark brown, paler towards the apex, initially 15–65 μm high, finally up to 150 μm or more high, 3–4 μm wide, often swollen at the base to 15 μm wide, with up to 8 or more cylindrical proliferations at the apex. *Conidiogenous cells* holoblastic, monoblastic, integrated, terminal, cylindrical, proliferating percurrently. *Conidia* acrogenous, solitary, dry, seceding schizolytically, cylindrical, rounded, somewhat tapered or rarely coronate at the apex, truncate at the base, 2–12-distoseptate, cell lumina reduced, less so at the base, smooth, pale olivaceous to olivaceous or olivaceous brown, (22–) 46–100 μm long, (3·5–)4–4·5 μm wide, 3·5–4·5 μm wide at the base.

Specimen examined: On decaying leaves of *Taxus baccata*, Longshaw Estate, Grindleford, Derbyshire, U.K., 17 May 1980, P. M. Kirk 572, IMI 248566, holotype.

Sporidesmiella parva (M. B. Ellis) P. M. Kirk, comb.nov. (Fig. 7)

Endophragmia parva M. B. Ellis, *More Dematiaceous Hyphomycetes*: 138 (1976).

Sporidesmium parvissimum (M. B. Ellis) S. Hughes, *N.Z. Jl Bot.* 17: 163 (1979, non *Sporidesmium parvum* (S. Hughes) M. B. Ellis, 1958).

Colonies effuse, hairy, greyish brown or brown to dark brown. *Mycelium* mostly superficial but partly immersed in the substratum, composed of branched, septate, pale brown, smooth, 1·5–2·5 μm wide hyphae. *Conidiophores* macronematous, mononematous, solitary, simple, straight, rarely geniculate at the apex, smooth, septate, brown paler towards the apex, initially 35–90 μm high, finally up to 150 μm or more high, 2–3·5 μm wide, often swollen at the base to 11 μm wide, with up to 20 or more cylindrical proliferations at the apex. *Conidiogenous cells* holoblastic, monoblastic, integrated, terminal, cylindrical, proliferating percurrently. *Conidia* acrogenous, solitary, dry, seceding schizolytically, cylindrical, truncate at the base, rounded at the apex, 1(–2)-distoseptate, cell lumina reduced, less so at the base, smooth, pale olivaceous to olivaceous brown, (12–) 13–18·5 (–20) μm long, 2·5–4 μm wide.

Specimens examined: On dead cane of *Rubus fruticosus* agg., Chipping Campden, Gloucestershire, U.K., 12 Dec. 1970, M. C. Clarke, IMI 153411*b*, holotype; on decaying leaves of *Buxus sempervirens* L., Sandridge Church, Kent, U.K., 25 Nov. 1972, J. P. Ellis, IMI 172588*b*; on decaying leaf petioles of *Laurus nobilis* L., Brodick Castle grounds, Isle of Arran, U.K., 8 Sept. 1980, P. M. Kirk 767, IMI 252143, Rayleigh, Essex, U.K., 25 Dec. 1980, B. M. Spooner, IMI 255780*a*.

Sporidesmiella is distinguished from *Sporidesmium* by its cylindrical to cuneiform or obovoid distoseptate conidia. Although Pirozynski (1972) has demonstrated that both euseptate and distoseptate conidia can occur together in the same species, often in a single collection, the usefulness of the two types of septation as taxonomically valid characters should not be ignored. Pirozynski was of the opinion that in *Exosporium monanthotaxis* Piroz. both euseptate and distoseptate conidia represented two stages in conidium development. However, an alternative explanation of the presence of both euseptate and distoseptate conidia in the same collection is that formation of distoseptate conidia is dependent on the correct timing of a sequence of interrelated processes which occur during conidium development and maturation. Often, distoseptate conidia have partial 'true' septa which do not appear to be contiguous with the 'primary' wall of the conidium (Ellis, 1971 : 426). Similarly, euseptate conidia may have reduced cell lumina and superficially appear distoseptate (Ellis, 1971 : 104). Several species of *Sporidesmium* are characterized, in part, by distoseptate conidia (Ellis, 1976 : 79) or euseptate conidia with reduced cell lumina (Ellis,

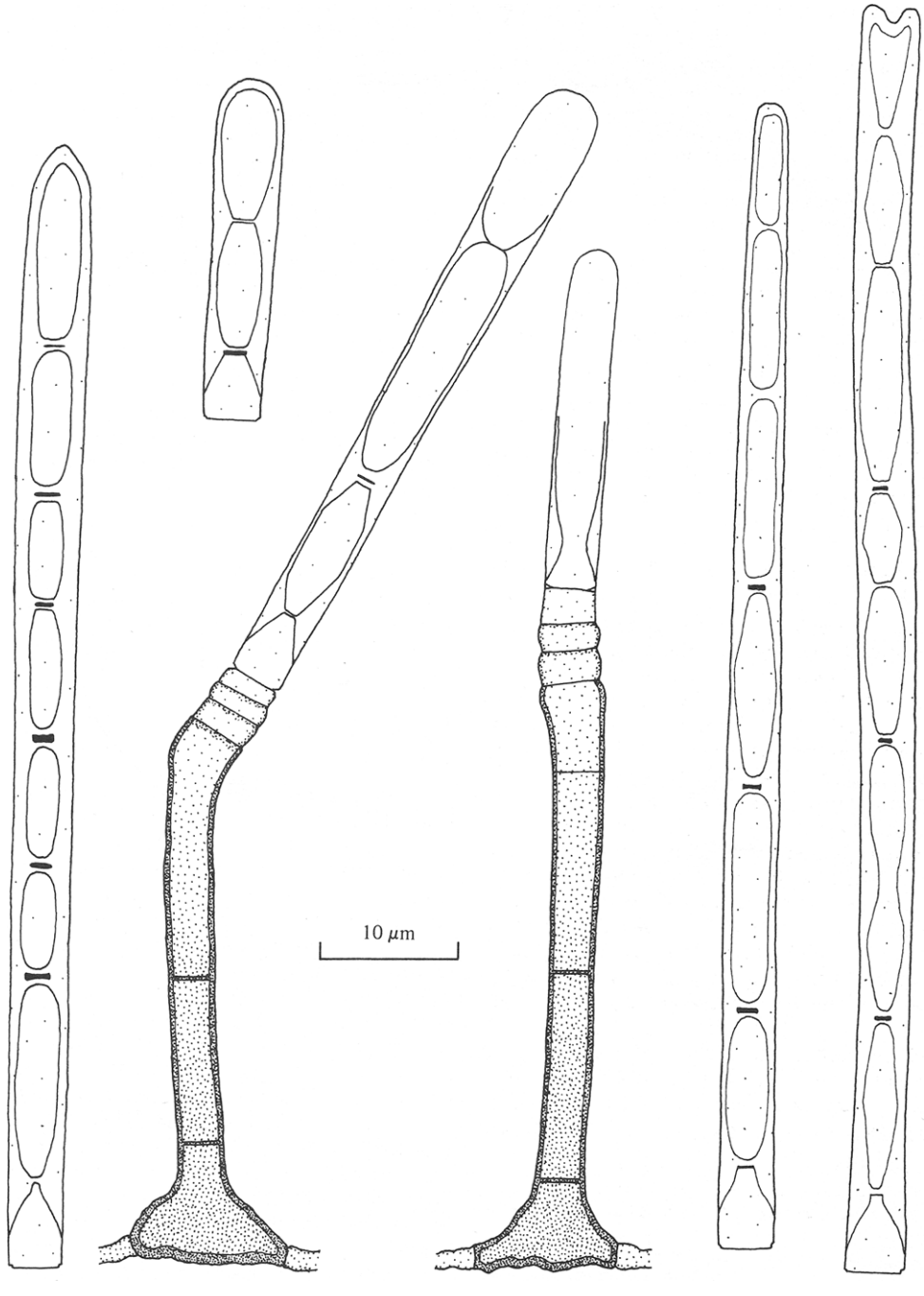

Fig. 6. *Sporidesmiella longissima*. IMI 248566.

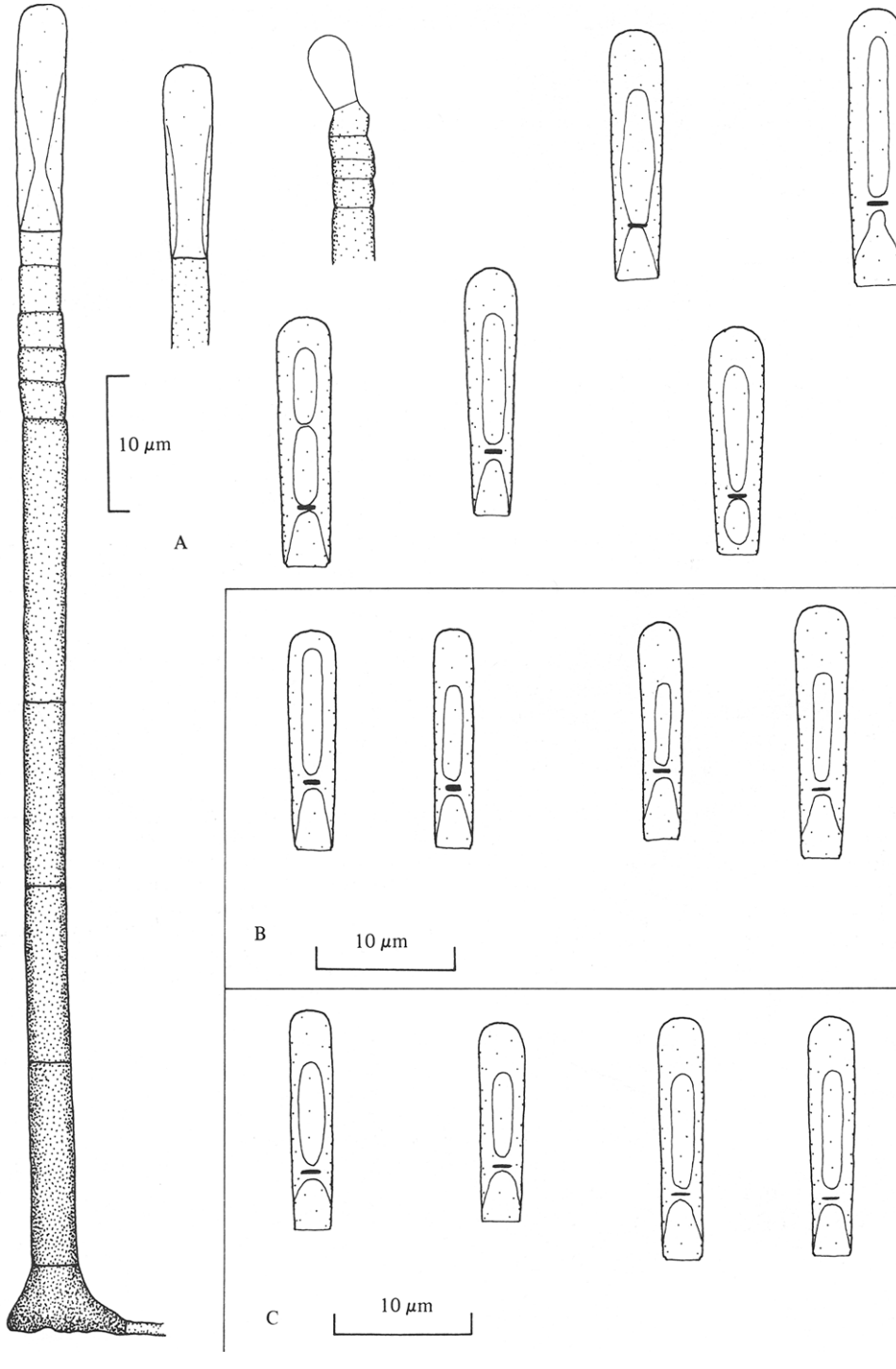

Fig. 7. (A–C) *Sporidesmiella parva*. (A) IMI 153411*b*. (B) IMI 172588*b*. (C) IMI 255780*a*.

KEY TO *SPORIDESMIELLA* SPECIES

1. Conidia cylindrical, more than 20 μm long . . . . . *S. longissima*
1. Conidia less than 20 μm long or not cylindrical 2
   2. Conidia cylindrical, 1 (–2)-septate . . . . . *S. parva*
   2. Conidia narrowly obovoid to obovoid with truncate base, 2–5-septate 3
3. Conidia 2-septate, narrowly obovoid or clavate . . . . . *S. claviformis*
3. Conidia (3–) 4-septate or with coronate apex 4
   4. Conidia coronate at the apex . . . . . *S. coronata*
   4. Conidia rounded at the apex 5
5. Conidia (3–) 4-septate 6
5. Conidia (4–) 5-septate . . . . . *S. cuneiformis*
   6. Conidiogenous cell proliferating percurrently . . . . . *S. hyalosperma* var. *hyalosperma*
   6. Conidiogenous cell proliferating sympodially . . . . . *S. hyalosperma* var. *novae-zelandiae*

1976: 97). The conidia in these species are, however, essentially fusiform to obclavate or obpyriform and are clearly unlike those in *Sporidesmiella* spp.

The holotype of *Sporidesmiella coronata* is extremely scant and is here regarded as comprising two distinct taxa, *S. cornata* sensu stricto and the species *S. longissima* (vide supra). These two species, together with *S. claviformis* and *S. parva*, forms a distinct group within the genus and would appear to be more closely related to one another than to the other two species.

The most frequently collected taxon of *Sporidesmiella* in the British Isles is, without doubt, *S. hyalosperma* var. *hyalosperma*. This also occurs on the largest number of substratum types and is apparently the most widespread geographically, occurring throughout Europe, and recorded from North America (Crane, 1972), Japan (Ichinoe, 1967; Matsushima, 1975) and Sri Lanka (herb. IMI, unpublished data). *Sporidesmiella cuneiformis* is presently known only from the holotype collection on leaves of *Eucalyptus tereticornis* collected in Brazil. The internal morphology of the conidia appears to closely resemble that of conidia in *Henicospora coronata* B. Sutton & P. M. Kirk (Kirk & Sutton, 1980).

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