

NEW SPECIES AND NEW RECORDS OF FOLIICOLOUS HYPHOMYCETES FROM NEW ZEALAND

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Abstract

The new foliicolous hyphomycete species *Gonatophragmium epilobii*, *Pseudocercospora ackamae*, *P. virgiliae*, *Ramularia hydrangeae-macrophyllae* and *Stenella sinuosogeniculata* are described, and the new combination *Pseudocercospora escalloniae* is proposed, based on material from New Zealand. *Cercospora deutziae* is recorded from New Zealand on *Deutzia gracilis*, and *C. resedae* on *Reseda luteola*. First records of *Ramularia gunnerae* and *R. rollandii* from New Zealand are listed. *Stenella pittospori*, recently described from China on *Pittosporum podocarpum*, has been collected in New Zealand on the new host *P. tenuifolium*.

U. Braun and C.F. Hill (2008). New species and new records of foliicolous hyphomycetes from New Zealand. *Australasian Mycologist* 27 (2): 45–56.

Introduction

Contributions to the knowledge of foliicolous hyphomycetes of New Zealand have been published in a series of papers (Braun and Dick 2002, Braun and Hill 2002, 2004, Braun *et al.* 2003, Braun *et al.* 2006). During 2006 and 2007, several new species and new hosts have been found, and some new to New Zealand leaf spotting hyphomycetes have been collected. The present host range and distribution of fungi in New Zealand has been determined by references to the papers cited above as well as Dingley (1969), Pennycook (1989) and the online NZ Fungi Database (<http://www.landcareresearch.co.nz/databases>).

Material and Methods

Specimens were examined by standard light microscopy (Olympus BX50). Measurements were carried out in distilled water and lactic acid using oil immersion. Colourless structures were stained by cotton blue. Herbarium samples are deposited at HAL (Martin-Luther-University, Institute of Biology, Geobotany and Botanical Garden, Herbarium, Halle (Saale), Germany) and also in PDD (Herbarium,

Landcare Research, Auckland, New Zealand). Cultures of some of these species have been deposited at ICMP (International Collection of Microorganisms from Plants, Landcare Research, Auckland, New Zealand) and duplicates to CBS (Centraalbureau voor Schimmelcultures, Utrecht, the Netherlands). The new species have been registered in MycoBank (MB).

Results

1. *Cercospora deutziae* Ellis & Everh. (= *C. apii* s. lat.), on living leaves of *Deutzia gracilis*, Auckland, St Johns, Morrin Road, University Campus, 24 Oct. 2007, C.F. Hill 2007/3412 (HAL 2181 F, ICMP 17167). New host for New Zealand.
2. *Cercospora resedae* Fuckel, on living leaves of *Reseda luteola*, Auckland, St Johns, Morrin Road, Quarry, 29 Dec. 2006, C.F. Hill 2006/7060 (HAL 2150 F, PDD 92020, ICMP 16901). Braun *et al.* (2006) recorded this species from New Zealand on *Reseda odorata*. *R. luteola* is a new host species for this country.

3. *Gonatophragmium epilobii* U. Braun & C.F. Hill, **sp. nov.** (Fig. 1)

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Gonatophragmium obscuro similis, sed conidiis brevioribus, 5–11 μm , pallide ad modice olivaceis vel olivaceo-brunneis.

Holotype: isolated from leaf spots on *Epilobium ciliatum* (*Onagraceae*), New Zealand, Auckland, Mount Albert, Carrington Road, UNITEC, 27 May 2007, C.F. Hill 2007/1679 (HAL 2105 F). Ex type cult.: CBS 122271, ICMP 17170.

In vitro (on prune extract agar): Colonies white to greyish white, in the centre

somewhat elevated, otherwise thin, floccose, gradually becoming thinner towards the periphery, margin very thin, gradually dissolving, with scattered, small, floccose, greyish dots caused by hyphae with pigmented conidiophores and conidia. Hyphae simple to branched, 1–3 μm wide, septate, hyaline to pale olivaceous-brown, thin-walled, smooth. Conidiophores arising from decumbent hyphae, lateral or terminal, up to 100 μm long or sometimes longer, simple to several times branched, forming a complex system of branched hyphae and conidiophores, irregularly to dichotomously branched, 2–3 μm wide, pluriseptate, thin-walled (ca. 0.5 μm), smooth, olivaceous to olivaceous-brown, tips often somewhat paler; conidiogenous

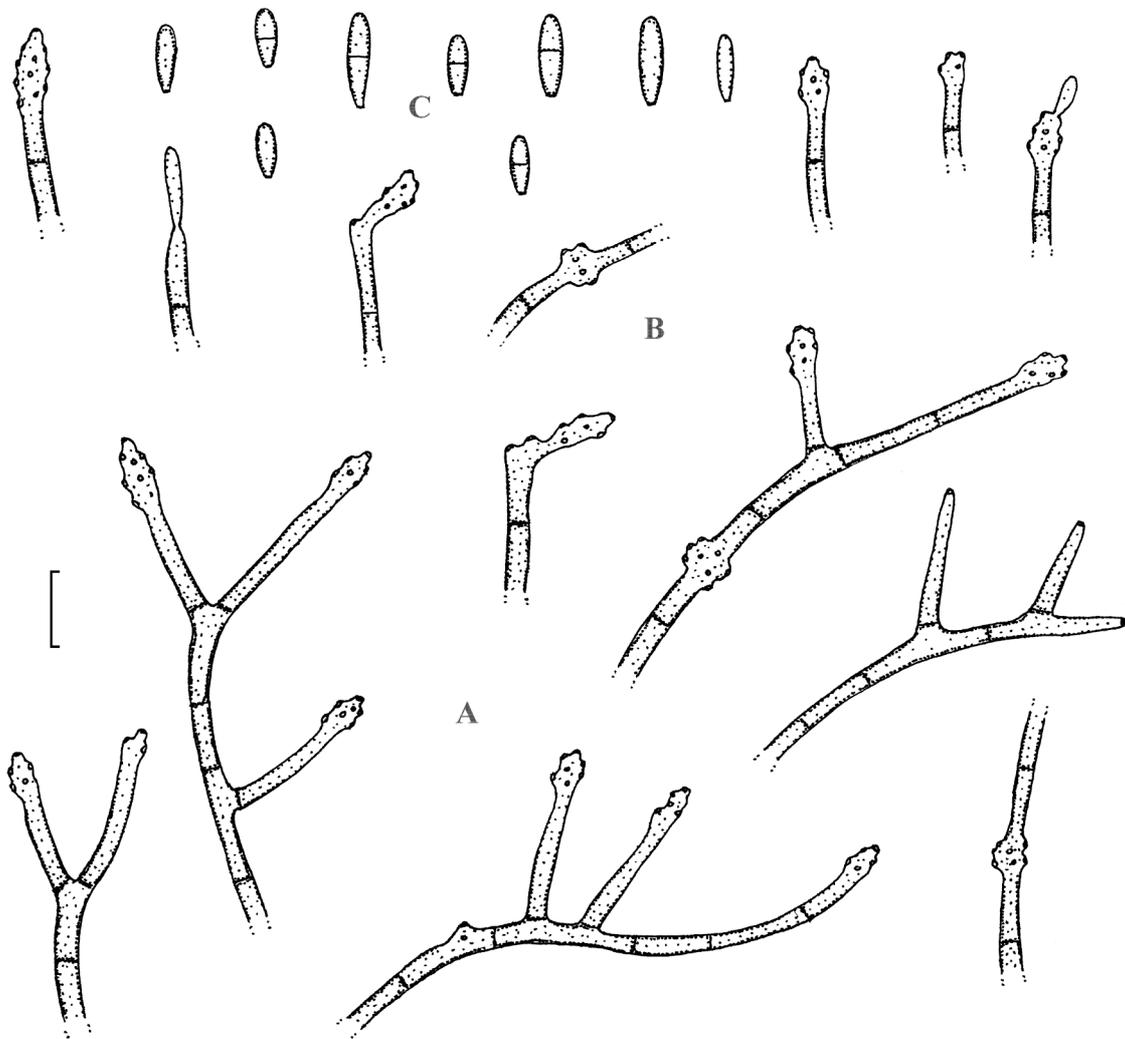


Figure 1. *Gonatophragmium epilobii*, A – conidiophores, B – tips of conidiophores, C – conidia. Bar – 10 μm .

cells integrated, terminal or intercalary, 8–15 µm long, usually with a portion up to 12 µm somewhat swollen, 3–6 µm; conidiogenous loci conspicuous, mostly numerous, aggregated on swollen segments of the conidiogenous cells, denticle-like, slightly bulging, convex, 0.75–1 µm diam., somewhat refractive, in front view visible as minute dark circles. Conidia solitary, narrowly obovoid, ellipsoid-ovoid, short cylindrical, 5–11 × 2–3.5 µm, length/width ratio 1.5–3, 0–1-septate, apex obtuse, rounded, base somewhat attenuated into a conspicuous hilum, 0.75–1 µm diam., unthickened, but slightly darkened-refractive.

Notes: *Gonatophragmium epilobii* is morphologically close to *G. obscurum* U. Braun & C.F. Hill (Braun and Hill 2002), described from New Zealand as a leaf-spotting hyphomycete on *Psidium guajava*, but it differs from the latter species in having pale to medium olivaceous to olivaceous-brown, 0–1-septate, shorter conidia, 5–11 × 2–3.5 µm (length/width ratio 1.5–3). The conidia of *G. obscurum* are subhyaline to pale olivaceous or pale yellowish brown, 0–1(–3)-septate and longer, 10–20 × 2–4 µm (length/width ratio 3–5). *G. mori* (Sawada) Deighton (Ellis 1971), widespread in tropical countries on numerous hosts belonging to different families, and *G. mangiferae* J.L. Mulder, described from Myanmar on *Mangifera indica* (Ellis 1976), are easily distinguishable from the new species by having larger conidia (longer, wider and 1–7-, mostly 3-septate in *G. mori* and 5–7 µm wide in *G. mangiferae*). *G. kuanense* A.N. Rai (Rai 1996), described as leaf-spotting hyphomycete on *Miliusa tomentosa* in India, is quite distinct from *G. epilobii* by its usually 2–3-septate, fusiform, often curved conidia and denticle-like, conoid conidiogenous loci.

4. ***Pseudocercospora ackamae*** U. Braun & C.F. Hill, **sp. nov.** (Fig. 2)

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Differt a *P. capensis* hyphis superficialibus cum conidiophoris solitariis, conidiophoris longioribus (ad 60 µm), septatis et conidiis anguste obclavatis-acicularibus.

Holotype: on living leaves of *Ackama*

rosifolia (*Cunoniaceae*), New Zealand, Auckland, Mount Albert, Carrington Road, Unitec, 18 Nov. 2007, C.F. Hill 2007/3842 (HAL 2187 F). Ex type cult.: ICMP 17182.

In vivo: Leaf spots amphigenous, angular-irregular, often vein-limited, 1–5 mm diam., but soon confluent, forming larger patches, up to 15 mm diam., pale to medium brown, greyish brown or olivaceous-brown, margin indefinite. Caespituli amphigenous, on the upper leaf surface punctiform, scattered, on the lower side minutely punctiform to subeffuse, brown. Mycelium internal and external; superficial hyphae emerging through stomata, branched, septate, 1–4 µm wide, subhyaline to pale olivaceous or olivaceous-brown, thin-walled, smooth. Stromata substomatal to intraepidermal, 10–50 µm diam., olivaceous-brown, composed of swollen hyphal cells, 2–5(–6) µm diam. Conidiophores solitary, arising from superficial hyphae, lateral, or in small to moderately large fascicles, loose to moderately dense, arising from stromata, erect, straight, subcylindrical to distinctly geniculate-sinuous, unbranched or rarely branched, 5–60 × 2–4(–5) µm, 0–3-septate, pale olivaceous to olivaceous-brown, thin-walled, smooth; conidiogenous cells integrated, terminal or conidiophores reduced to conidiogenous cells, 5–25 µm long, sympodial; conidiogenous loci inconspicuous or more or less truncate, subdentate, 1.5–2.5 µm wide, but unthickened, not darkened. Conidia solitary, narrowly obclavate to acicular, 60–130 × (2–)2.5–4.5 µm, indistinctly pluriseptate (up to 18 septa), subhyaline to pale olivaceous or olivaceous-brown, thin-walled, smooth, fresh conidia often guttulate, apex subacute, base truncate to obconically truncate, hila 1.5–3 µm wide, unthickened, not darkened.

Notes: *Pseudocercospora capensis* Crous & B. Sutton (Crous and Sutton 1997), described on *Cunonia capensis* from South Africa, is the only other species of *Pseudocercospora* known from plants belonging to the Cunoniaceae. This species is, however, easily distinguishable from *P. ackamae* by lacking superficial mycelium, consistently fasciculate conidiophores and cylindrical conidia. Furthermore, the conidiophores are always short and aseptate.

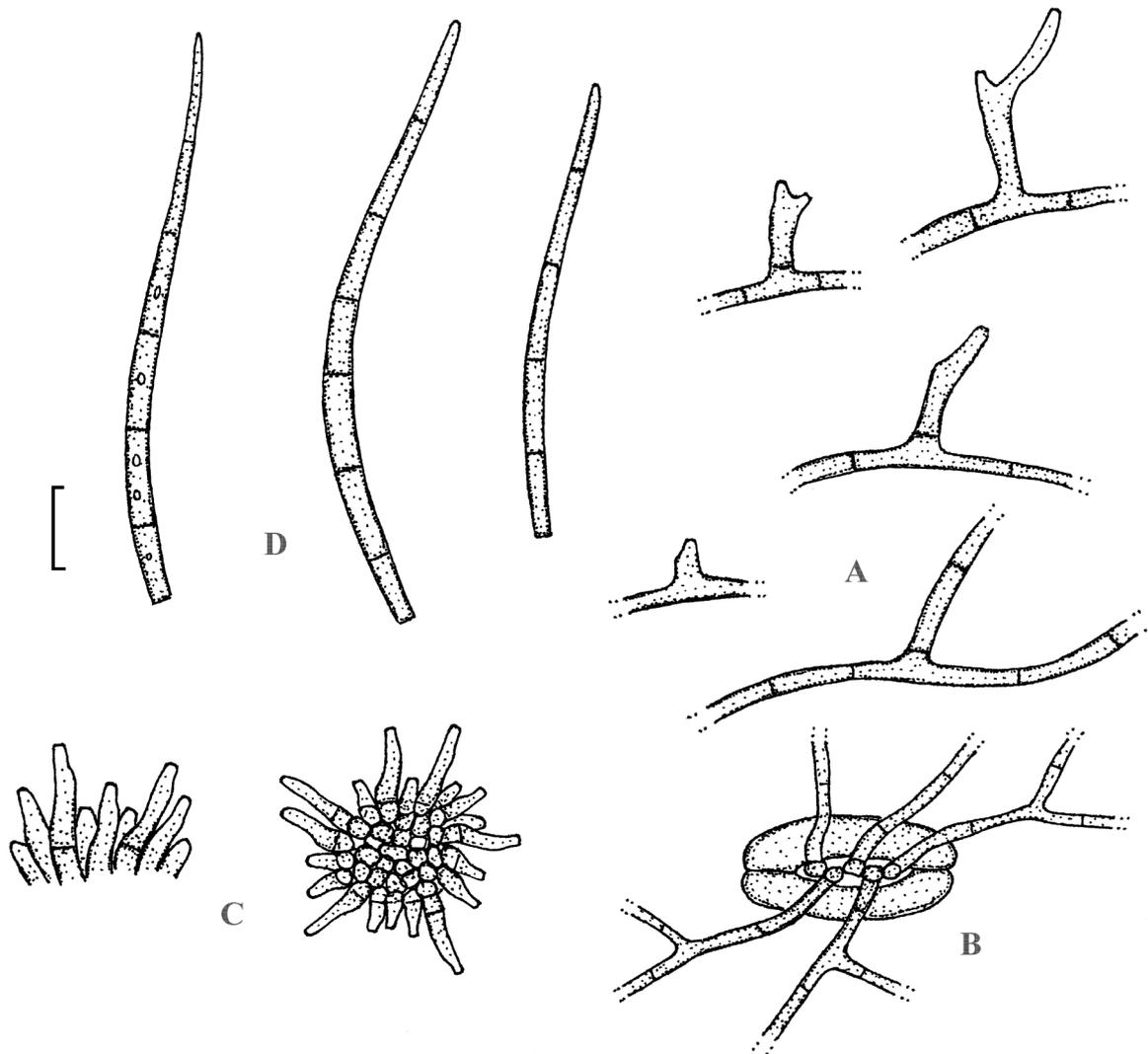


Figure 2. *Pseudocercospora ackamae*, A – conidiophores arising from superficial hyphae, B – superficial hyphae emerging through a stoma, C – fasciculate conidiophores, D – conidia. Bar – 10 μ m.

5. ***Pseudocercospora escalloniae***
(Marchion.) U. Braun & C.F. Hill, **comb. nov.** (Fig. 3)

Bas.: *Cercospora escalloniae* Marchion., Publ. Inst. Sanidad. Veg., B. Aires, Ser. A, 21: 4, 1946.

Material examined: on leaves of *Escallonia rubra* (*Grossulariaceae*), Auckland, Mount Albert, corner of La Veta Avenue and Richardson Road, 12 Nov. 2007, C.F. Hill 2007/3704 (HAL 2186 F, PDD 93288, ICMP 17181)

Leaf spots amphigenous, variable in shape and size, angular-irregular, 1–4 mm diam., or irregular and large, up to 30 mm diam.,

mostly along tips and edges of leaves, later often expanded, covering large areas, pale to medium dark brown or greyish brown, margin indefinite. Caespituli hypophyllous, minutely punctiform to effuse, loose to dense, brown. Mycelium internal and external; superficial hyphae emerging through stomata, branched, 1–5 μ m wide, subhyaline to pale olivaceous to olivaceous-brown, septate, thin-walled, smooth. Stomata lacking to well-developed, substomatal to immersed, 10–50 μ m diam., olivaceous-brown to brown, composed of swollen hyphal cells, up to 7 μ m diam. Conidiophores solitary, arising from superficial hyphae, or in small to moderately large fascicles, loose to dense, arising from stomata, emerging through

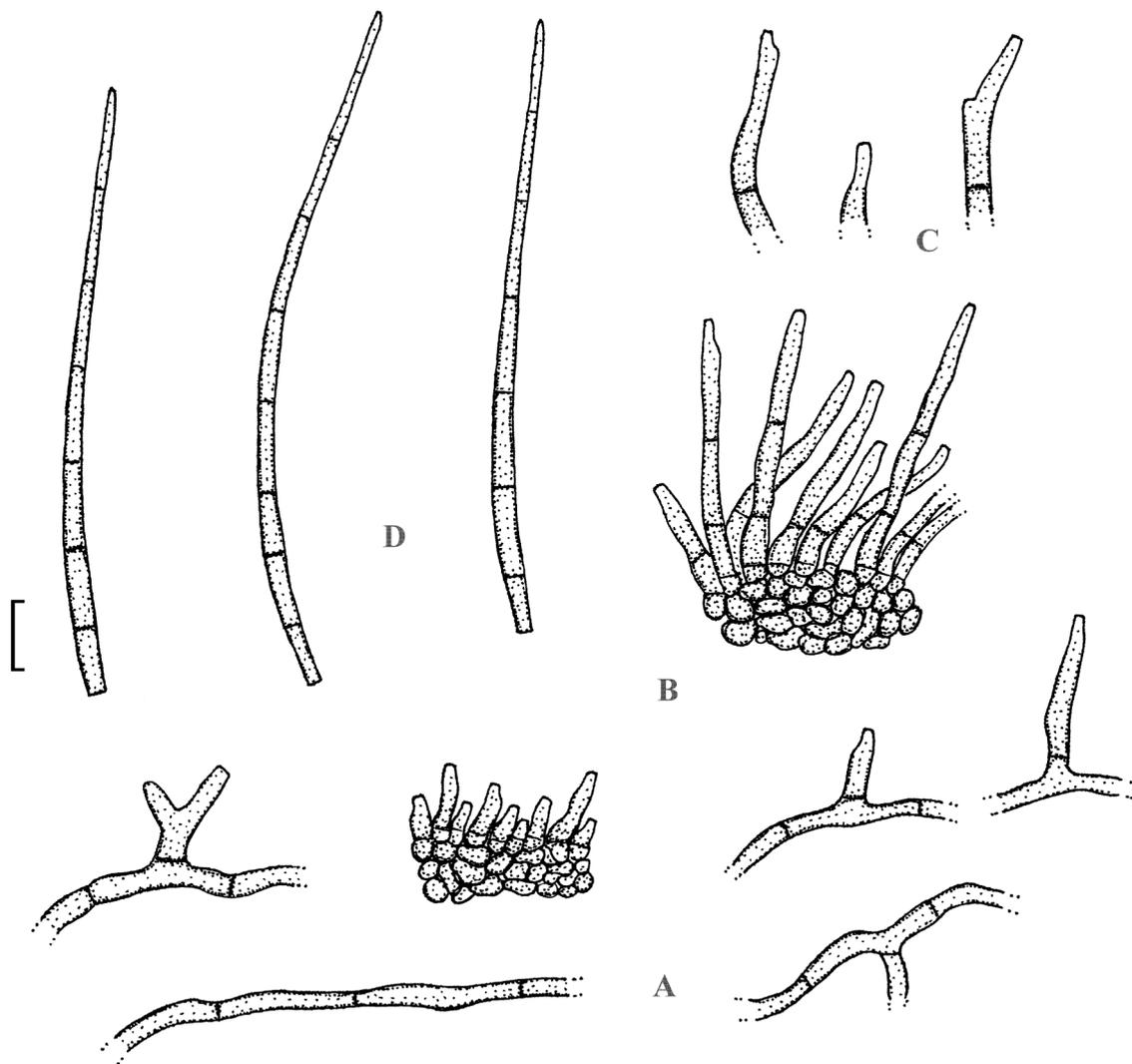


Figure 3. *Pseudocercospora escalloniae*, A – superficial hyphae with and without solitary conidiophores, B – fasciculate conidiophores, C – tips of conidiophores, D – conidia. Bar – 10 µm.

stomata or erumpent, erect, straight, subcylindrical to geniculate-sinuous, rarely branched, 5–50 × 1.5–3.5 µm, 0–2(–3)-septate, pale to medium olivaceous to olivaceous-brown, thin-walled, smooth; conidiogenous cells integrated, terminal or conidiophores reduced to conidiogenous cells, 5–25 µm long, often with a single terminal conidiogenous locus (determinate), but occasionally sympodial, with two or several loci, conidiogenous loci truncate, 1.5–2 µm wide, neither thickened nor darkened. Conidia solitary, usually acicular, i.e. with truncate base, gradually attenuated towards the apex, occasionally narrowly obclavate, slightly attenuated towards the base, 70–140 × 2–3 µm, indistinctly pluriseptate (mostly 6–12

septa), subhyaline to pale olivaceous or olivaceous-brown, thin-walled, smooth, apex subacute, base truncate to slightly obconically truncate, hila (1.5–)2–2.5(–3) µm wide, neither thickened nor darkened.

Notes: The present description is based on the material from New Zealand. Type material of this species could not be traced. Chupp (1954) also reported that he had not seen this species, described from Argentina on *Escallonia rubra* and hitherto only known from the type locality. The original description of this species is brief and, although not very detailed, is in basic agreement with the new material from New Zealand, i.e., the description of the conidiophores and conidia are within the

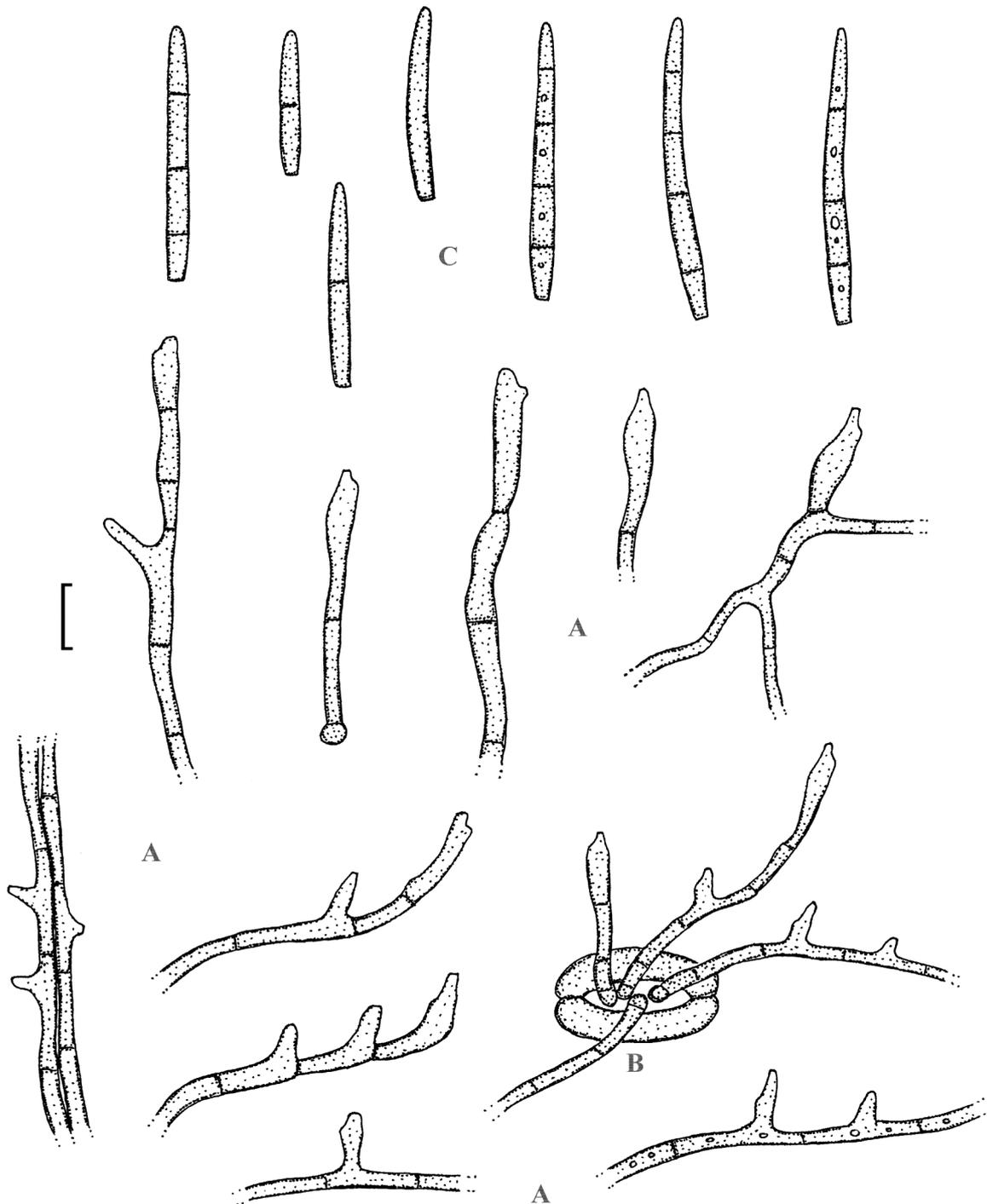


Figure 4. *Pseudocercospora virgiliae*, A – conidiophores arising from superficial hyphae, B – conidiophores and superficial hyphae emerging through a stoma, C – conidia. Bar – 10 μ m.

range of the material from New Zealand. In the original description, small greyish leaf spots and 1–3-septate conidia were described and superficial hyphae were not mentioned. The septation in this species is rather indistinct and it is also not unusual to find superficial hyphae in some collections

but not in others. It is also possible that superficial hyphae were present in the type collection but considered to be unconnected with the fasciculate fungus. Therefore, we prefer to use the name *Cercospora escalloniae* for the fungus from New Zealand and transfer it to

Pseudocercospora due to the presence of inconspicuous conidiogenous loci and unthickened, non-pigmented conidial hila.

6. *Pseudocercospora rubi* (Sacc.) Deighton, on living leaves of *Rubus × barkeri*, Auckland, St Johns, Morrin Road, University Campus, 6 Nov. 2007, C.F. Hill 2007/4006 (HAL 2183 F, ICMP 17180). Known from New Zealand (Crous and Braun 2003). *R. × barkeri* is a hybrid originating from native *Rubus* species.
7. ***Pseudocercospora virgiliae*** U. Braun & C.F. Hill, **sp. nov.** (Fig. 4)

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Pseudocercosporae mucunae-ferrugineae similis sed conidiophoris saepe subclavatis et conidiis brevioribus, 25–65 µm, (0–)1–4(–5)-septatis.

Holotype: on living leaves of *Virgilia divaricata* (*Fabaceae*), New Zealand, Auckland, Mount Albert, Carrington Road, Unitec, 4 June 2007, C.F. Hill 2007/1722 (HAL 2101 F). Ex type cult.: ICMP 17055.

In vivo: Lesions variable in shape and size, angular-irregular to effuse, 1–10 µm diam., sometimes confluent and larger, finally large leaf segments or almost entire leaves discoloured, at first greenish, later yellowish, ochraceous to brown, margin indefinite. Colonies inconspicuous, amphigenous, but mainly hypophyllous. Mycelium internal and external, superficial, external hyphae emerging through stomata, solitary, occasionally forming strands, sparingly branched, septate, smooth or almost so, thin-walled, pale greenish to olivaceous or olivaceous-brown, (1.5–)2–4(–5) µm wide, occasionally guttulate. Stromata lacking, at most with a few swollen hyphal cells aggregated in the substomatal cavities. Conidiophores usually solitary, arising from superficial hyphae, lateral, occasionally terminal, sometimes with a few conidiophores arising directly from substomatal hyphae to form small, loose fascicles, erect, straight to somewhat curved, subcylindrical-conical to mostly somewhat enlarged towards the apex (subclavate), 4–30 × 2–5 µm, 0–1(–2)-septate, pale olivaceous to olivaceous-brown, smooth, thin-walled (< 1 µm); conidiogenous cells integrated, terminal or

conidiophores reduced to conidiogenous cells, 4–20 µm long; conidiogenous loci inconspicuous to subdenticulate, 1–2 µm diam., but always unthickened and not darkened. Conidia solitary, cylindrical to obclavate-cylindrical, 25–65 × 2–4.5 µm, (0–)1–4(–5)-septate, pale olivaceous to olivaceous-brown, smooth, thin-walled (< 1 µm), apex obtuse, base truncate to short obconically truncate, hila unthickened, not darkened, 1.5–2 µm wide.

In vitro (on prune extract agar): Colonies subcircular, mycelium somewhat elevated in the centre, medium olivaceous-brown, becoming gradually thinner and paler towards the periphery, outer zone thin and greyish white, margin almost regular to sinuous-crenate, somewhat feathery, reverse olivaceous-black.

Notes: *Pseudocercospora virgiliae* is morphologically well-characterized by its usually subclavate conidiophores arising from superficial hyphae and relatively short conidia with few septa. The number of *Pseudocercospora* species on hosts belonging to the legumes is very large, but most are quite distinct by lacking superficial hyphae and solitary conidiophores or by having well-developed stromata or well-developed fascicles of conidiophores. Few of the species concerned are morphologically comparable with *P. virgiliae*. *P. mucunae-ferrugineae* (W. Yamam.) Deighton (Chupp 1954, Deighton 1976, Hsieh and Goh 1990, Guo and Hsieh 1995), known on *Mucuna* spp. in India and Taiwan (Crous and Braun 2003), resembles *P. virgiliae*, but differs in having geniculate, denticulate, non-subclavate conidiophores and much longer conidia, up to 130 µm, with up to 12 septa. *P. phaseolicola* Goh & W.H. Hsieh (Hsieh and Goh 1990, Guo and Hsieh 1995) on *Vigna radiata* in Taiwan is another similar species with consistently solitary conidiophores arising from superficial hyphae, but the conidiophores are non-subclavate and the conidia are longer and much narrower, 20–90 × 1.5–2 µm, with up to eight obscure septa.

8. *Ramularia gunnerae* (Speg.) U. Braun (= *Ovularia gunnerae* Speg.), on living leaves of *Gunnera tinctoria*, Auckland, Mount Albert, Carrington Road, Unitec, 12 May 2007, C.F. Hill 2007/2011 (HAL 2997 F, PDD 93080, ICMP 17316) (Fig. 5).

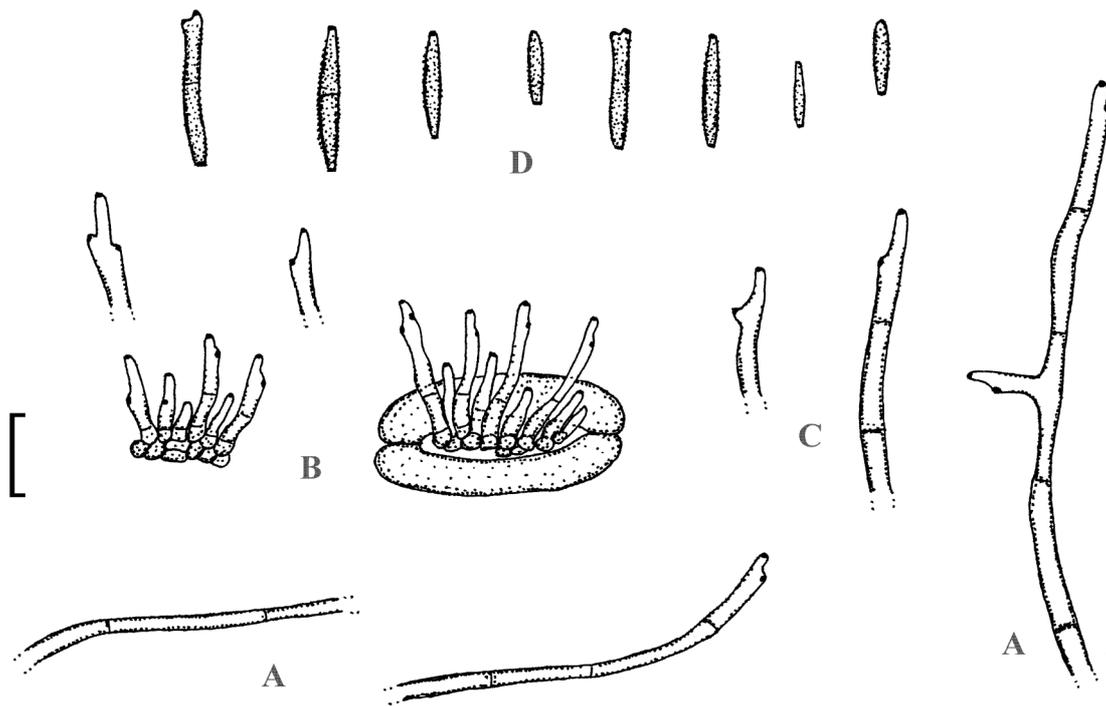


Figure 5. *Ramularia gunnerae*, A – superficial hyphae with and without solitary conidiophores, B – fasciculate conidiophores emerging through a stoma, C – tips of conidiophores, D – conidia. Bar – 10 μ m.

Description based on the collection from New Zealand: At first forming small angular-irregular, vein-limited, brown to dingy greyish white lesions, 1–5 mm diam., amphigenous, but soon confluent, expanded, forming large necrotic areas. Colonies hypophyllous, punctiform to effuse, loose to dense, greyish white. Mycelium internal, occasionally with some external hyphae, sparingly branched, 1–3 μ m wide, septate, hyaline, smooth. Stromata lacking or with small to moderately large substomatal stromatic hyphal aggregations, 10–40 μ m diam., at first hyaline or subhyaline, later turning yellowish to medium brown or olivaceous-brown. Conidiophores in small to moderately large fascicles, loose to moderately dense, arising from internal hyphae or stromatic hyphal aggregations, emerging through stomata, occasionally solitary, arising from superficial hyphae, lateral or terminal, erect, straight, conical, subcylindrical to flexuous, geniculate-sinuous, usually unbranched, 3–30(–40) \times 1–3.5 μ m, 0–1(–2)-septate, hyaline, thin-walled, smooth; conidiogenous cells integrated, terminal or conidiophores reduced to conidiogenous cells, 3–15 μ m

long; conidiogenous loci conspicuous, slightly thickened and darkened, 0.5–1 μ m diam. Conidia in simple or branched chains, narrowly ellipsoid-ovoid, fusiform, subcylindrical, 4–18(–20) \times 1–3 μ m, 0–1-septate, hyaline, thin-walled, finely verruculose, usually somewhat narrowed towards both ends, hila slightly thickened and darkened, 0.5–0.75 μ m diam.

In vitro (on prune extract agar): Colonies subcircular, somewhat zonate, centre somewhat elevated, with age wrinkled, becoming cracked, greyish white, surrounded by a thinner and darker zone, followed by a very thin, greyish white border, margin almost entire to somewhat crenate-sinuous, somewhat feathery, reverse also zonate, greyish white to olivaceous-black.

Notes: This is the first collection of *Ramularia gunnerae* from New Zealand on the new host species *Gunnera tinctoria*. This species was hitherto only known on *Gunnera chilensis* from the type locality in Chile (Braun 1998). The specimen from New Zealand agrees well with the holotype material, except for somewhat larger

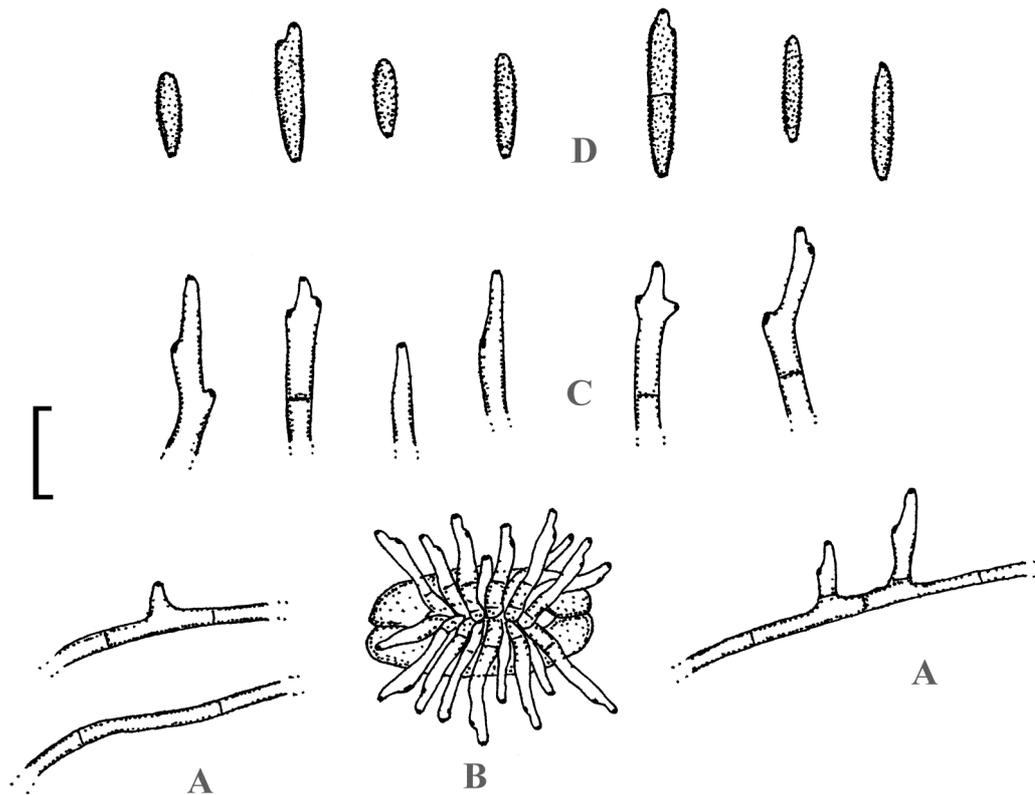


Figure 6. *Ramularia hydrangeae-macrophyllae*, A – superficial hyphae with and without solitary conidiophores, B – fasciculate conidiophores emerging through a stoma, C – tips of conidiophores, D – conidia. Bar – 10 µm.

stromata, somewhat shorter conidiophores (maximum length 40 µm) and conidia (maximum length 20 µm).

9. ***Ramularia hydrangeae-macrophyllae***

U. Braun & C.F. Hill, **sp. nov.** (Fig. 6)

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Differt a *R. hydrangeae* conidiophoris fasciculatis vel solitariis, ex hyphis superficialibus oriundis et conidiophoris in vivo brevioribus et angustioribus, 4–18 × 1.5–2.5 µm, 0(–1)-septatis.

Holotype: on living leaves of *Hydrangea macrophylla* (*Hydrangeaceae*), New Zealand, Auckland, Mount Albert, Ruarangi Road, 2 Jul. 2007, C.F. Hill 2007/2068 (HAL 2103 F). Ex type cult.: CBS 122273.

In vivo: Lesions variable, ranging from small, angular-irregular speckles to large, irregular, brown leaf blotches, sometimes only with diffuse discolorations, finally almost entire leaves turning brown, becoming necrotic, margin indefinite. Caespituli hypophyllous, but rather

inconspicuous. Mycelium internal and external, superficial hyphae emerging through stomata, sparingly branched, 1–2.5(–3) µm wide, hyaline, septate, thin-walled, smooth. Stromata lacking or only with small substomatal hyphal aggregations, 10–20 µm diam., hyaline to olivaceous. Conidiophores in small to moderately large, loose to moderately dense fascicles, arising from internal hyphal or substomatal hyphal aggregations, emerging through stomata, or conidiophores solitary, arising from superficial hyphae, lateral, rarely terminal, erect, straight, subcylindrical-conical to moderately geniculate-sinuous, unbranched, 4–35 × 1.5–3.5 µm, 0–1-septate, hyaline, thin-walled (< 1 µm), smooth; conidiogenous cells integrated, terminal or conidiophores reduced to conidiogenous cells, 4–20 µm long; conidiogenous loci conspicuous, slightly thickened and darkened, 0.75–1.25 µm diam. Conidia in simple or branched chains, narrowly ellipsoid-ovoid, fusiform-subcylindrical, 4–18 × 1.5–2.5 µm, 0(–1)-septate, hyaline, thin-walled (< 1 µm), almost smooth to usually verruculose, both ends rounded to

somewhat attenuated, hila slightly thickened and darkened, 0.75–1.25 µm diam.

In vitro (on prune extract agar): Colonies subcircular in outline, in the centre somewhat elevated, wrinkled, with a pink tinge, covered by whitish fertile hyphae with conidiophores and conidia, becoming very thin, whitish and floccose towards the periphery, diffuse, mycelium at the margin gradually dissolving, reverse with pink centre, surrounded by olivaceous-brown and greyish white zones.

Notes: *Ramularia hydrangeae* Y.L. Guo & U. Braun (Braun 1998), described from China on *Hydrangea bretschneideri*, differs from the new species in having consistently fasciculate conidiophores, i.e. superficial hyphae with solitary conidiophores are lacking *in vivo*, and larger, 0–3-septate conidia, 8–35 × 2–5 µm.

10. *Ramularia rollandii* Fautrey, on "*Iris* × *hollandica*" (*I. xiphium* × *tingitana*. "Dutch iris"), Auckland, Grafton, Park Road, The Auckland Domain, 28 Oct. 2007, C.F. Hill 2007/3485-B (HAL 2184 F, ICMP 17173). New to New Zealand, and on a new host species (Braun 1998).
11. *Stenella pittospori* U. Braun, on *Pittosporum tenuifolium*, Auckland, Mount Albert, Carrington Road, Unitec, 15 Jul. 2007 and 10 Nov. 2007, C.F. Hill 2007/2185 and 3729 (HAL 2152 F and 2182 F, PDD 93254). Cultures at CBS 122274 and ICMP 17098). This species has recently been described from Sichuan, China, on *Pittosporum podocarpum* (Braun and Crous 2007). The collection from New Zealand is the second record of this species, with *P. tenuifolium* as new host species.
12. *Stenella sinuosogeniculata* U. Braun & C.F. Hill, **sp. nov.** (Fig. 7)

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Stenellae myrsines similis, sed conidiophoris valde geniculatis-sinuosis, brevioribus, 20–100 µm, conidiis obclavatis-cylindratis vel subacicularibus.

Holotype: on *Myrsine australis* (*Myrsinaceae*), New Zealand, Auckland, Grey Lynn, Great North Road, Western

Springs, 6 Aug. 2007, C.F. Hill 2007/2414 (HAL 2104 F).

Leaf lesions lacking or only with diffuse, paler greenish to yellowish ochraceous discolorations, finally becoming necrotic, brownish. Colonies hypophyllous, thin, effuse, brownish, not very conspicuous. Stromata lacking. Mycelium internal and external; superficial hyphae emerging through stomata, sparingly branched, septate, 1.5–3 µm wide, pale olivaceous to olivaceous-brown, thin-walled, verruculose. Conidiophores solitary, arising from superficial hyphae, lateral, occasionally emerging through stomata, rarely in small, loose groups, arising from substomatal hyphal cells, erect, usually strongly geniculate-sinuuous, unbranched, 20–100 × 3–5.5 µm, 1–7-septate, pale to usually medium olivaceous-brown or brown, tips sometimes somewhat paler, wall thin to slightly thickened, up to 1 µm, smooth to rough-walled; conidiogenous cells integrated, terminal and intercalary (sometimes to the base of the conidiophore), 10–30 µm long, conidiogenous loci conspicuous, 1–2 µm diam., slightly thickened and darkened, in front view visible as minute circles. Conidia solitary, narrowly obclavate-cylindrical to subacicular, 15–100 × 2.5–5 µm, 1–8-septate, pale greenish, olivaceous to brownish, verruculose, thin-walled, apex obtuse to subacute, base truncate to slightly obconically truncate, hila slightly thickened and darkened, 1–2 µm wide.

Notes: The new species on *Myrsine australis* from New Zealand is a typical member of the genus *Stenella* Syd., characterized by having verruculose superficial mycelium with solitary conidiophores and conspicuous, thickened and darkened conidiogenous loci and conidial hila (Crous and Braun 2003). *Stenella* species are host-specific. Four species of this genus have been described from hosts belonging to the *Myrsinaceae*. *S. myrsines* R. Kirschner (Kirschner and Chen 2007), described from Taiwan on *Myrsine seguinii* is characterised by having straight, cylindrical-filiform, non-geniculate, much longer conidiophores, (72–)125–230(–280) × 4–6(–7) µm, and cylindrical conidia. *S. embeliae* R.C. Rajak (R.C. Rajak 1981), described from India on *Embelia robusta* is

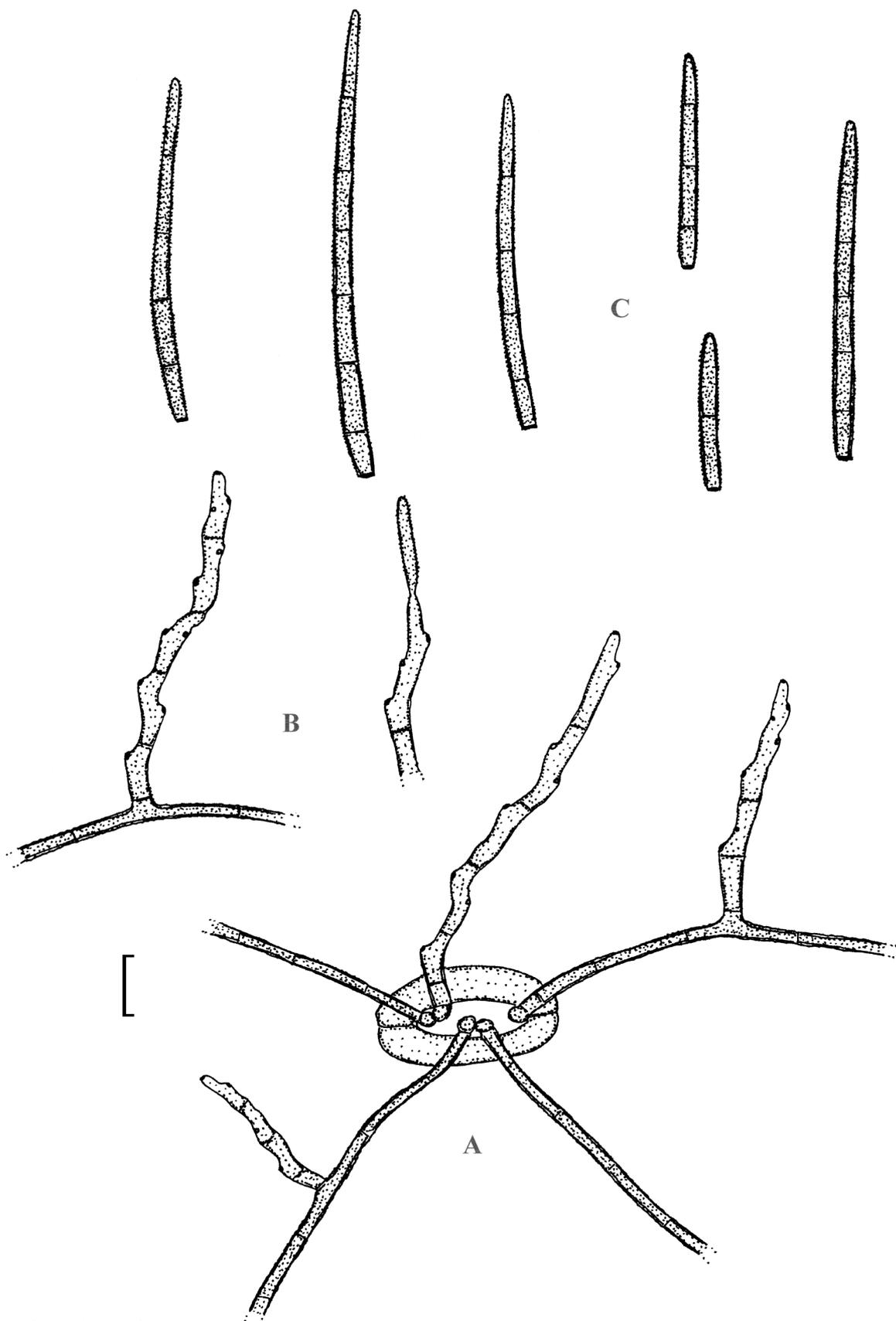


Figure 7. *Stenella sinuosogeniculata*, A – superficial hyphae with and without solitary conidiophores emerging through a stoma, B – solitary conidiophore arising from a superficial hypha and a tip of a conidiophore with a conidium initial, C – conidia. Bar – 10 μ m.

clearly distinguished from *S. sinuosogeniculata* by having straight conidiophores, only geniculate-sinuous at the apex, and much wider, 0–18-septate conidia, 16–72 × 6–10 µm [*S. embeliae* A.N. Rai & Kamal (Rai and Kamal 1989), nom. illeg. (homonym), on *E. tsjeriamcottam* (= *E. rubustum*) in India, is a probable synonym of *E. embeliae* R.C. Rajak]. *S. maesae* Crous & U. Braun (Crous and Braun 1994), the anamorph of *Mycosphaerella maesae* Crous & U. Braun, known from South Africa on *Maesa lanceolata*, is quite distinct by its much shorter conidiophores, 7–15 × 2–4 µm, and longer and narrower conidia, up to 220 × 2–2.5 µm.

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