DANSK BOTANISK ARKIV
(RES BOTANICAE DANICAE)
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Studies in Danish Pyrenomycetes.

By
POUL LARSEN †.

A Manuscript Compiled and Annotated by ANDERS MUNK.

Preface.

The Danish mycologist POUL LARSEN (1864–1938) was active within two widely different fields of fungus science; the *Agaricales* and the *Pyrenomycetes*. Concerning the larger fungi his interest was shared by a number of Danish colleagues, first of all JAKOB E. LANGE. But in his study of the *Pyrenomycetes* he was almost alone. To be sure J. LIND, a contemporary of LARSEN's, was a very active collector of *Micromycetes* in general and also of *Pyrenomycetes*, but it seems that the two mycologists have been too different to practice much cooperation. LIND's main interest was the collection and preservation of the fungi, whereas LARSEN's main work with the plants took its beginning at home; he thoroughly examined and described the fungi, and after that he – unfortunately – did not care much for his material. Therefore the results of LIND's work are preserved as a big herbarium containing much valuable material, but with many wrongly determined specimens. LARSEN's work, however, presents itself as a large collection of descriptions and drawings. His herbarium[1]) must be regarded – and was regarded by himself – as secondary to his descriptions. Unfortunately, his herbarium is neither large nor well-arranged, but nearly all fungi in it are correctly determined. A comparison of LARSEN's notes with his herbarium has shown that he has not by far preserved all the

[1]) Now preserved in the Botanical Museum of the University of Copenhagen.

species he has seen. The most deplorable fact is that the herbarium lacks material of a great many species proposed as new to science by LARSEN.

LARSEN's work as a collector has chiefly taken place in the eastern part of Jutland around Aarhus and Kolding, the two towns where he lived when he was most concerned with mycology. He collected *Pyrenomycetes* in all sorts of localities and on all kinds of substrata. Nevertheless, a number of host-plants occur remarkably often in his notes: *Hippophaës rhamnoides*, *Frangula Alnus*, and *Corylus avellana*; *Geum*, *Typha*, *Cladium mariscus*, and *Equisetum hiemale*. Especially the two last-mentioned rather rare plants have yielded valuable material.

LARSEN has published nothing concerning his studies of Danish *Pyrenomycetes*, except a floristical list from Hammer Bakker (LARSEN 1935). This fact is not so strange as it might seem to be, because he was a provincial without direct access to the mycological periodicals and therefore unable to follow closely the progress in taxonomy of *Pyrenomycetes*. Besides, his concern for the preparing of sections was limited.

During his long life LARSEN had only two pupils interested in *Pyrenomycetes*, namely professor ØJVIND WINGE and the editor. The editor's personal connection with LARSEN lasted 3½ years – the last years of LARSEN's life and the 13th–16th of the editor's. The editor wants to express his deep gratitude towards the aged mycologist being patient enough to share his enormous experience with a school-boy.

In order to make LARSEN's work accessible to the public professor WINGE applied, in 1944, to the Carlsberg Foundation for a grant, which was to be left at the editor's disposal for a revision of LARSEN's herbarium and notes. The amount was granted, and the editor tenders his sincere thanks to the Carlsberg Foundation for it.

The present paper is the first of three treatises giving account for the results of the editor's work with *Pyrenomycetes* since 1944. The second one (in press) deals with morphological and phylogenetical aspects within the group *Sphaeriales* sensu LINDAU. The third one (not finished yet) will be a flora of the Danish members of the group in question.

LARSEN's notes are written by hand in two large books with fixed pages. Thus, his descriptions are arranged chronologically. The editor has arranged the species according to the system of WINTER (1887).

In nomenclature LARSEN mainly followed SCHROETER (1908) and WINTER (1887). The editor has done the same[1]), trying to follow the international rules of nomenclature as far as possible.

The editor has examined the material of all species represented in LARSEN's herbarium, indicated by * in front of the name. The note "(other material examined)" indicates that LARSEN has left no material of the species in question and that the editor has examined other Danish material of the same species as is described by LARSEN. – In some cases the editor has added critical notes of his own; these are followed by "(Ed.)". – Occasionally the editor's description of a species is given instead of LARSEN's in order to give details only visible in sections; such descriptions are introduced with "(Editor's description)". – LARSEN's notes are written in Danish; they have been translated to English (diagnoses of new species also to Latin) by the editor.

The new species appear with different indications of author. The novae species which LARSEN has proposed without leaving material of them are mentioned with LARSEN alone as author, and LARSEN's descriptions have been cited in translation. The species which LARSEN has named and of which material is left are mentioned with LARSEN & MUNK as indication of author, and the editor's description has been given. – Finally the editor has found new species in LARSEN's herbarium which he has either determined wrongly, has not identified or described at all, or the structure of which he has not been able to make clear to himself. For the publication of these species the editor would have to take the full responsibility and accordingly it is found most correct to include such descriptions in a separate paper, published as an appendix to the present treatise.

The Botanical Museum of the University of Copenhagen has most benevolently lent me material from the herbarium. The former librarian of the Botanical Library, JOHS. GRØNTVED, M. Sc., has ever been obliging to my wishes concerning the use of the library. I tender my best thanks to Dr. HAGERUP, curator of the museum, and to Mr. GRØNTVED.

MR. K. RINGGAARD, M. A., has revised the English text of the manuscript. Mr. E. BROCKMEYER has revised the Latin diagnoses. Miss B. THORUP has re-drawn LARSEN's drawings and prepared them for publication. I thank all of these collaborators for their valuable assistance.

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[1]) As for the *Diaporthe*-group, WEHMEYER (1933) has been followed.

Finally I want to express my gratitude to professor Ö. WINGE, who has not only taken the initiative and the responsibility of the appliance to the Carlsberg Foundation, but has also hospitably placed his laboratory and all technical facilities at my disposal and followed my work with a never failing interest and readiness to help.

Silkeborg, August 1951.

ANDERS MUNK.

Abbreviations: J.: Jutland.
S.: Sealand.
F.: Funen.

In the editor's descriptions the terminology of STARBÄCK has been followed concerning the different types of fungal tissue:

Textura prismatica and textura globosa: Short-celled, "pseudoparenchymatous" tissue with respectively angular or subspheric cells.

Textura intricata and textura porrecta: Long-celled tissue with respectively interwoven or subparallel cells of a distinctly hyphal appearance.

Sordaria Ces. & de Not.

1.* S. fimicola (Rob.) Ces. & de Not.

On horse-dung, August 1904. (No locality).
Common on dung of herbivorous animals.

2. S. discospora (Awd.) Niessl

On dung of *Lepus*, Dec. 1924. J.: Søndervig.

As pointed out by the editor (Munk 1948), this fungus seems to be identical with *Rosellinia* (*Coniochaeta*) *ligniaria* (Grev.) Fck.

Podospora Ces.

1.* P. curvula de Bary

Stated to be very common on cow-dung. Also on horse-dung, March 1912: J.: Fregerslev.

Sporormia de Not.

1.* Sp. intermedia Awd.

Stated to be very common on dung of herbivorous animals.

2.* Sp. minima Awd.

On cow-dung, August 1904. (No locality).

3.* Sp. ambigua Niessl.

On horse-dung in raw culture, Jan. 1916.

Niesslia Awd.

1.* N. exilis (Alb. & Schw.) Winter

On bark and decorticated wood of *Corylus* and *Rubus*, Febr. 1921. J.: Bramdrup Skov near Kolding.

Perithecia up to 400 μ diam.; asci 25–35 $\mu \times 5\mu$.

2. N. exosporioides (Desm.) Winter

On dead stems of *Epilobium hirsutum*, March 1925. (Only useless material left).

Trichosphaeria Fck.

1.* Tr. minima (Fck.) Winter

On decaying wood of frondose trees, Febr.–April. – J.: Riis Skov; Skanderborg; Kolding.

Herpotrichia Fck.

1.* H. Rubi Fck.

On the basal parts of half-decayed stems of *Rubus Idaeus*, April.

Poul Larsen has seen the brownish colour of the fully ripe spores, which is mentioned by Fuckel, but not seen by later authors.

2.* H. callimorpha (Awd.) Winter

On the basal parts of dead branches of *Salix*, Febr. – J.: Seest near Kolding.

Lasiosphaeria Ces. & de Not.

1.* L. hispida (Tode) Fck.

On half-decayed branches of *Fraxinus excelsior*, Dec., and on a half-decayed trunk of *Sorbus aucuparia*, March. – J.: Lystrup; Fregerslev.

2. L. gracilis Niessl

Epiphyllous on leaves of *Carex paniculata*, especially on the formerly submerse parts of the leaves; July 1924. – J.: Stallerup Sø near Kolding.

Leptospora Fck.

1.* L. canescens (Pers.) Winter

On rotten, decorticated branches of *Salix Caprea*, Dec. 1915. – J.: Skanderborg Dyrehave.

2. L. sorbina (Nyl.) Munk n. comb.

Syn. i. a.: *Leptospora radiata* Fck. 1869.
Bizzozeria veneta Berl. & Sacc. 1885.
Bizzozeria sorbina (Nyl.) v. H. 1918.

On the inside of the loose bark of decaying, thick branches of *Fagus*, Febr. – J.: Marselisborg.

Poul Larsen has described this fungus sub nom. *Leptospora subincarnata* n. sp. However, his description perfectly fits the many descriptions under different names in the literature of this misunderstood fungus.

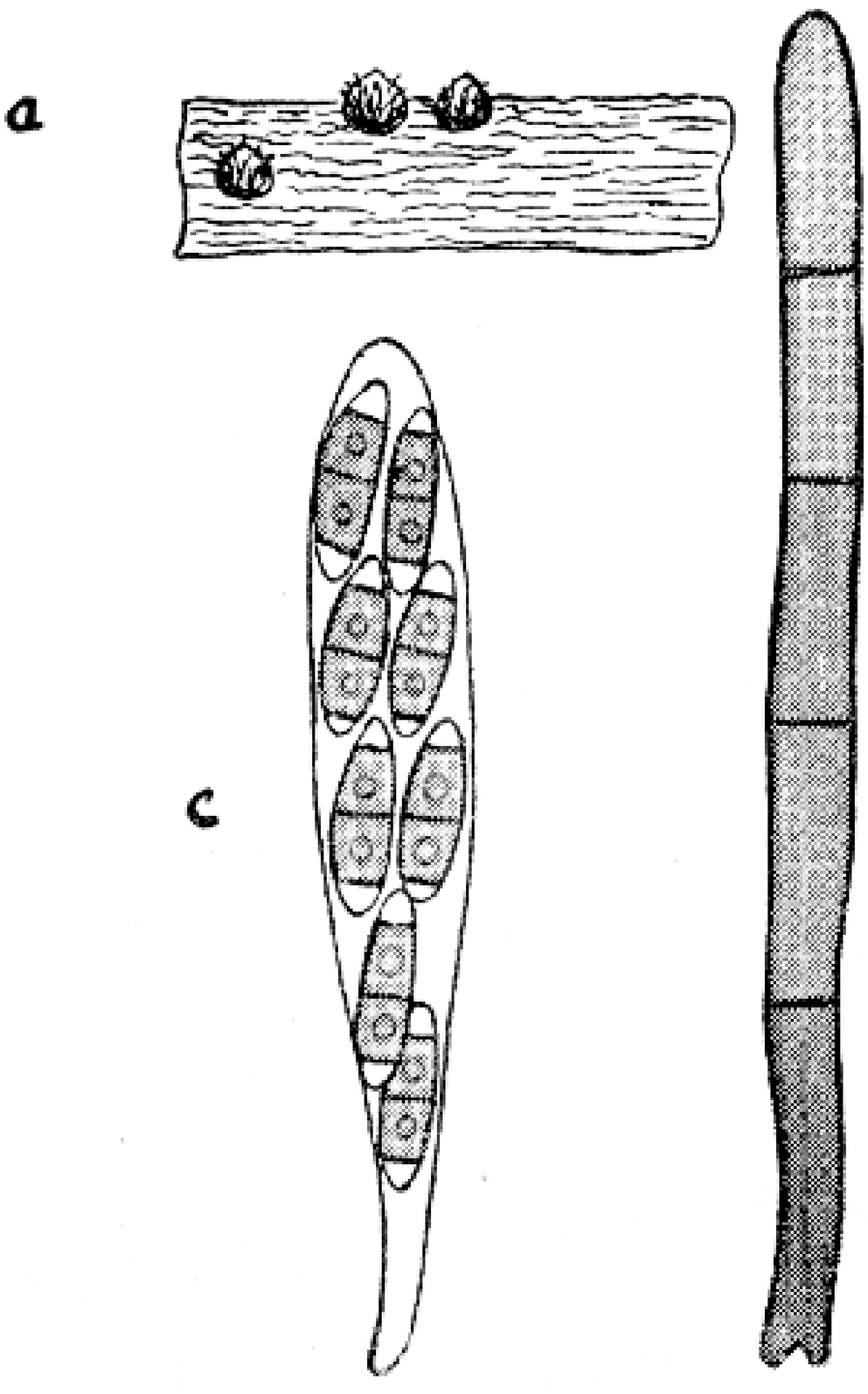

Fig. 1.

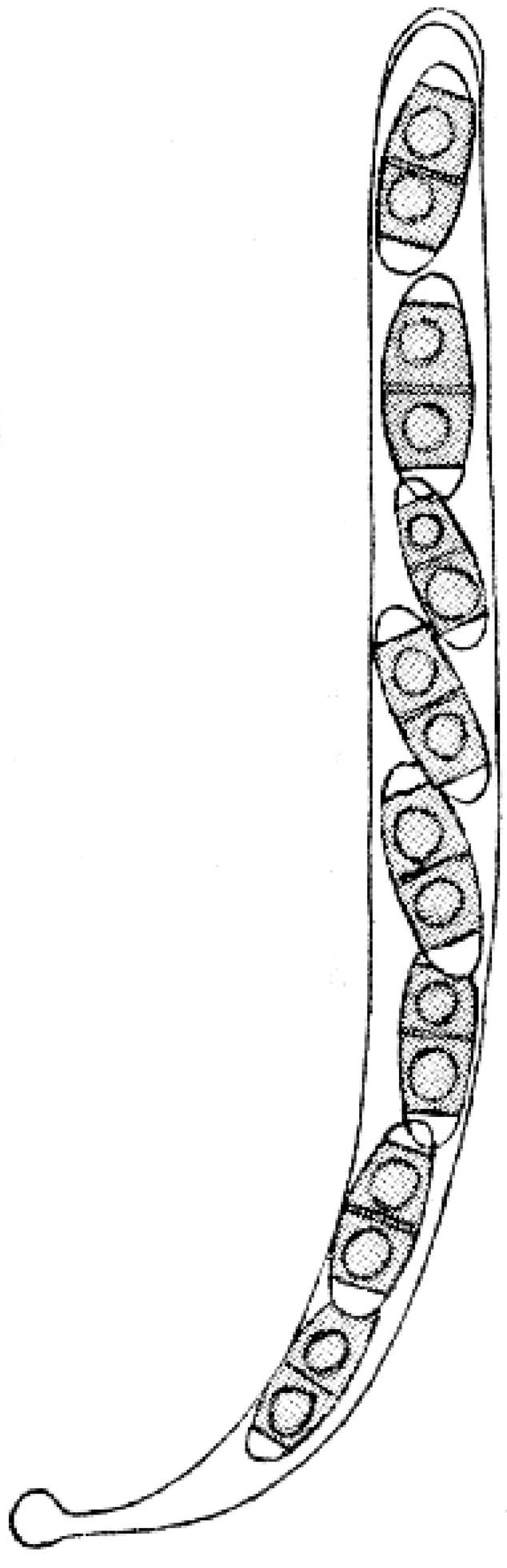

Fig. 2.

Fig. 1. Chaetosphaeria fusispora Larsen n. sp. – a) Perithecia, ×10. b) A hair from a perithecium, ×800. c) Ascus, ×800.
Fig. 2. Chaetosphaeria subcaespitosa Larsen n. sp. – An ascus.

Chaetosphaeria Tul.

1. Ch. phaeostroma (Dur. & Mont.) Fck.

On dead branches of *Quercus*, on which the bark is ruptured, April. – J.: Vranderup.

2. Ch. fusispora Poul Larsen n. sp. (Fig. 1).

Peritheciis c. 300 μ diametro, globosis, papillulatis, hyphis olivaceis, septatis, ad apicem late rotundatis, 5 μ crassis vestitis. – Ascis c. 56 μ p. sp. × 10 μ, breve stipitatis, fusiformibus vel clavatis, apparenter ascis *Ch. phaeostromatis* similibus. – Sporis uni- vel bi-seriatis, ca. 12–14 $\mu \times 4\,\mu$, utrinque fere acutis, 4-cellularibus, non constrictis, cellulis mediis brunneolis, uniguttulatis, cellulis extremis hyalinis.

In ramo *Fagi silvaticae*.

Perithecia ca. 300 μ diam., globose, with a small papilla, covered with hairs, which measure ca. 5 μ in thickness, septate, broadly rounded at the top. – Asci ca. 56 μ p. sp. × 10 μ, short-stipitate, fusiform or clavate, apparently much like those of *Ch. phaeostroma*. – Spores 1-2-seriate, ca. 12–14 $\mu \times 4\,\mu$, fusiform, very

narrowly rounded at the ends, 4-celled, the middle cells light brown, each with an oil-drop, the end-cells hyaline.

On a branch of *Fagus*; no locality or date.

Only a drawing left. – This fungus seems to be a distinct species, closely related to *Ch. phaeostroma* (Ed.).

3. Ch. subcaespitosa Poul Larsen n. sp. (Fig. 2).

Peritheciis superficialibus, solitariis vel saepius subgregariis, ca. 250 μ diametro, nigris, in massis griseis, lanaeformibus, hyphis hyalinis et substantia amorpha constructis semiimmersis (hyphae brunneae vel pili absunt). – Ascis cylindraceis, stipitatis, 115–140 μ p. sp. × 8–10 μ, ad apicem truncatis et pariete incrassato, 8-sporis, 1 vel 2 sporis saepe frustratis; paraphysibus indistinctis vel nullis. – Sporis uniseriatis, ellipsoideis, 17–22 μ × 6–7 μ, utrinque rotundatis, 4-cellularibus, cellulis mediis brunneis, uniguttulatis, cellulis extremis parvis, hyalinis.

In ramo mortuo, decorticato *Sambuci nigrae*.

Perithecia superficial, solitary or more often in small groups, ca. 250 μ diam., black, partly immersed in a greyish, felty mass, consisting of hyaline hyphae and a granular substance (no brown hyphae or hairs). – Asci cylindrical, stipitate, 115–140 μ p. sp. × 8–10 μ, truncate and with an incrassated wall at the top, 8-spored, often with only 6 or 7 developed spores; paraphyses indistinct or absent. – Spores 1-seriate, ellipsoid, 17–22 μ × 6–7 μ, rounded at the ends, 4-celled, the middle cells brown, each of them containing a large oil-drop, the end-cells small and hyaline.

On a decorticated branch of *Sambucus nigra*.

J.: Bramdrup Skov near Kolding, March 1921.

This fungus seems by no means to be a *Chaetosphaeria*; it seems rather related to *Lasiosphaeria* (the ascus, truncate and thick-walled at the top, the hyaline hyphae and the amorphous tomentum, cp. *Lasiosphaeria* (*Leptospora*) *ovina*). It is extremely deplorable, that we have no material left of such a fungus (Ed.).

Rosellinia Ces. & de Not.

1. R. Aquila (Fr.) Ces. & de Not.

On decaying wood of different trees, Dec.–March. – J.: Riis Skov (on *Fraxinus excelsior*); Kolding; Kirkeskoven (on *Cerasus Padus*).

A description of the collection on *Cerasus Padus* is named *R. thelena* Rbh.; but the appendages on the spores described and drawn are short and rounded, answering better to those noticed by the editor on the spores of *R. Aquila* (Ed.).

2.* R. pulveracea (Eihrh.) Fck.

On half-decayed, decorticated branches of *Quercus Robur*, Dec. – J.: "Friheden" in Aarhus.

3.* R. malacotricha Niessl

On dead branches of *Pinus montana*, March. – J.: A bog South of Terndrup.

4.* R. subcorticalis Fck.

On wood and on the inside of loosening bark of different frondose trees, Nov.–Febr. – J.: Marselisborg; Alpedalslyst near Kolding (on *Alnus glutinosa*); Seest near Kolding (on *Fagus silvatica*).

A sample on the inside of bark of *Alnus* (Bramdrup near Kolding) is described by Poul Larsen sub nom. *R. conglobata* (Fck.) Winter. It may be identical with *R. conglobata*, but it really represents a rather strongly gregarious form of *R. subcorticalis* (Ed.).

5. R. Kellermannii Ellis & Everhart

On decorticated wood of *Fagus silvatica*, Jan.–March. – J.: "Kirkeskoven"; Hadsund.

Characteristic by the very small asci and spores, the latter only $4\frac{1}{2}$–$5\ \mu \times 2\frac{1}{2}$–$3\ \mu$.

Bombardia Fr.

B. ambigua var. carbonaria Reihm

On decaying wood and on the ground, Dec. – J.: "Friheden" in Aarhus.

Bertia de Not.

* B. moriformis (Tode) de Not.

On decaying wood, Dec.–March. – J.: Sophiendal (on *Picea excelsa*); Hadsund (on *Fagus silvatica*).

Capronia Sacc.

C. pleiospora (Mout.) Sacc. sensu Munk 1948.

On fallen, decorticated, half decayed branches of *Fagus silvatica*, Dec. (Other material examined). – J.: Hadsund.

By Larsen described as *Capronia* (?) sp.

Melanomma Fck.

M. Pulvis pyrius (Pers.) Fck.

Very common on any kind of wood. Unusual growth-forms noticed by Poul Larsen: On *Cerasus avium*, the perithecia were growing in dense groups in transversal fissures in the bark. – On thin twigs of *Salix alba* f. *vitellina*, the perithecia were solitary and a little immersed in the peridermis (Marielund near Kolding).

Zignoëlla Sacc.

* Z. fallax Sacc. sensu Schroeter 1908.

Rather common on decaying bark and wood of frondose trees, Febr.–April. – J.: Marselisborg; Riis Skov; Aarslev Skov; Tingskoven; Lilballe Skov (on *Alnus glutinosa*); Ejstrup Skov (on *Quercus*).

Ceratostomella Sacc.

1.* C. cirrhosa (Pers.) Sacc.

On decaying wood of *Quercus*, especially in spots which have for a long time been undisturbed, Febr.–March. – J.: Frederikshøj; Ejstrup.

2.* C. rostrata (Fr.) Sacc.

Stated to be common on rotten wood of *Fagus*, *Quercus* and *Alnus* throughout the winter; no localities recorded.

Lentomita Niessl

L. caespitosa Niessl

On *Acer campestris*, Febr. – J.: Marielund near Kolding.

Ceratosphaeria Niessl

C. rhenana (Awd.) Winter

On the inside of the bark of sick or dead stems of *Fagus silvatica*, March. – J.: Amaliegaard Skov near Hornslet.

Amphisphaeria Ces. & de Not.

1.* A. applanata (Fr.) Ces. & de Not.

On branches of *Alnus glutinosa*, both on the bark and on the wood, March. – J.: "Friheden" near Aarhus.

2. A. pusiola KARSTEN

On decorticated branches of *Salix*, Jan. – J.: Konstantinsborg.

Trematosphaeria FCK.

* T. pertusa (PERS.) FCK.

On dead branches of *Salix*, April. – J.: Brændkærgaard near Kolding.

Melomastia NKE. & FCK.

* M. mastoidea (FR.) NKE. & FCK.

On wood of frondose trees, chiefly on *Cornaceae* and *Caprifoliaceae*, Dec.–May. – A series of finds from J.: On *Cornus sanguinea* (Riis Skov); on *Lonicera* (Sophiendal, Ask Skov, Kolding); on *Sambucus nigra* (Riis Skov); on *Viburnum opulus* ("Friheden" near Aarhus); on *Symphoricarpus racemosus* (Kolding); on *Syringa vulgaris* (Bramdrup near Kolding).

Strickeria KÖRBER

1.* S. obducens (FR.) WINTER

On dead branches of *Fraxinus excelsior*, Dec.–Febr. – J.: Riis Skov; Marselisborg.

2. S. mutabilis (QU.) WINTER

On decorticated branches of *Salix*, April. – J. Seest near Kolding.

LARSEN has noticed, that the asci in normally ripe perithecia are persistent and not especially fragile, as stated by LIND (in Ann. Myc. 5, p. 273).

3. S. seminuda (DE NOT.) WINTER

On decorticated spots on stems of Fagus, Dec. – J.: "Friheden" near Aarhus. – Also on *Lonicera periclymenum* and *Chamaenerium angustifolium*, both near Kolding.

Material examined by the editor collected by J. LIND on a dead stem of *Rubus idaeus* cult. (S.: Skelskør, June). It evidently seems to be the same species as is described by LARSEN.

Lophiotrema Sacc.

1. L. crenatum (Pers.) Sacc.

On dead branches of frondose trees, found on *Viburnum opulus* (J.: Strandskoven near Skamlingsbanke) and on *Frangula Alnus* (J.: Eltang near Kolding).

2. L. vagabundum Sacc.

On dead stems of *Epilobium hirsutum* and *Chamaenerium angustifolium*, found in July and December. – J.: Kolding Skov; a bog South of Terndrup.

Lophiostoma Ces. & de Not.

1. L. quadrinucleatum Karsten

On dead branches of *Salix cinerea*, growing in decorticated spots, March. – J.: In a bog South of Terndrup.

This fungus has slightly smaller asci and spores than Karsten's fungus, collected on *Rhamnus cathartica*.

2.* L. Desmazierii Sacc. & Speg.

On branches of *Salix*, Dec. – J.: Aarhus.

3.* L. Arundinis (Fr.) Ces. & de Not.

On dead stems of *Phragmites communis*, May. – J.: Mølleengen near Aarhus.

Lophiotrema semiliberum (Desm.) Sacc. seems to be based on unripe specimens of the present fungus.

4. L. macrostomoides (de Not.) Ces. & de Not.

On dead branches of *Salix* and *Populus*(?), March–July. (Other material examined). – J.: Skanderborg; Lilballe Skov near Kolding; Seest near Kolding.

Seems to be variable in size and spore-septation; some collections show mainly 6-celled, others mainly 8-celled spores. Poul Larsen writes, that Winter's (1887) ascus-length must be inclusive the stipe; further, that Winter gives uniseriate spores, and that this does not fit well to the ascus-thickness given by Winter.

5. L. appendiculatum Fck.

Not rare on wood of dry branches of *Salix*, March–April. – J.: Skanderborg; Vonsild near Kolding.

Platystomum Trev.

* P. compressum (Pers.) Schroeter

On dead branches of *Populus*, Jan.–Febr. – J.: Marselisborg; Kolding. (Common, also on other frondose trees (editor's experience)).

Nitschkia Otth

N. tristis (Pers.) Winter

On dead wood, Dec.–Febr. – J.: Kirkeskoven near Aarhus (on *Cerasus Padus*); Mariclund near Kolding (on *Ulmus glabra*).

Otthia Nke.

1. O. Rosae Fck.

On dead twigs of *Rosa* sp., March. – J.: Søndervang in Kolding.

2. O. Pruni Fck.

On living stems of *Prunus spinosa*, especially on etiolated individuals standing beneath shadowy trees, Febr.–April. – J.: Riis Skov; St. Jørgens Skov near Aabenraa.

Gibberidea Fck.

* G. macrospora (Desm.) Schroeter

Stated to be very common throughout the winter on branches of *Fagus*, especially young trees.

Cucurbitaria Gray

1. C. Berberidis (Pers.) Gray

On dead twigs of *Berberis vulgaris*, Dec. (Other material examined). No locality recorded.

2. C. Rosae Winter & Sacc.

On strongly decayed twigs of *Rosa* sp., March. – J.: Vonsild near Kolding.

3.* C. Spartii (Nees) Ces. & de Not.

On dead twigs of *Ulex europaeus*, May. – J.: Skamlingsbanken.

Berlesiella Sacc.

* B. nigerrima (Bloxam) Sacc.

On old stromata of other *Pyrenomycetes*, especially *Valsa* (*Eutypa*) *flavovirens*, Dec.–March. – J.: "Friheden" near Aarhus; Thygeslund near Hadsund; Ejstrup.

Mycosphaerella Joh.

1.* M. prominula (Speg.).

On dead leaves of *Pteridium aquilinum*, May–June. – J.: Hammer Bakker; Eltang near Kolding.

2. M. cfr. Iridis (Awd.) Sbroeter (Fig. 3).

Perithecia gregarious in small, greyish areas, covered by the loosening epidermis, spheric; papilla short, conical. – Peridium a textura prismatica, cells short, angular, olive-brownish; on the peridium are seen a few wavy, brown hyphae. – Asci cylindrical-clavate, obtusely rounded at the top, 43–50(–60) $\mu \times 11$–13 μ, sessile or short-stipitate, 8-spored; paraphysoid tissue indistinct. – Spores irregularly 2-seriate, 10–14 $\mu \times 5\frac{1}{2}$–$6\frac{1}{2}$ μ, very broadly rounded at the ends, equally 2-celled, constricted; a large oil-drop in each cell.

On dead leaves of *Iris Pseudacorus*, May–June. – J.: Komarksbuske near Kolding; Trelde Sande.

Sphaerella Iridis Awd. has unequally 2-celled, longer spores with granular contents.

3.* M. isariphora (Desm.) Joh.

Hypophyllous on dead leaves of *Stellaria holostea*, March–June. – J.: Lilballe, Søndervang and "Skovbakken" (all near Kolding).

4. M. cfr. isariphora (Desm.) Joh. (Fig. 4).

Perithecia scattered or sparsely gregarious, immersed in the mesophyll, 150–200 μ diam., somewhat depressed, brown, without a papilla, but with a distinct porus, 15–20 μ diam. – Asci cylindrical, sessile or almost so, 75–85 $\mu \times 10$–12 μ, 8-spored; no paraphysoid tissue seen. – Spores irregularly 2-seriate, 15–19 $\mu \times 5$–7 μ, ellipsoid, straight or somewhat curved, unequally 2-celled (the upper cell a little larger than the lower one), more or less constricted, guttulate, narrowly rounded to almost apiculate at the ends.

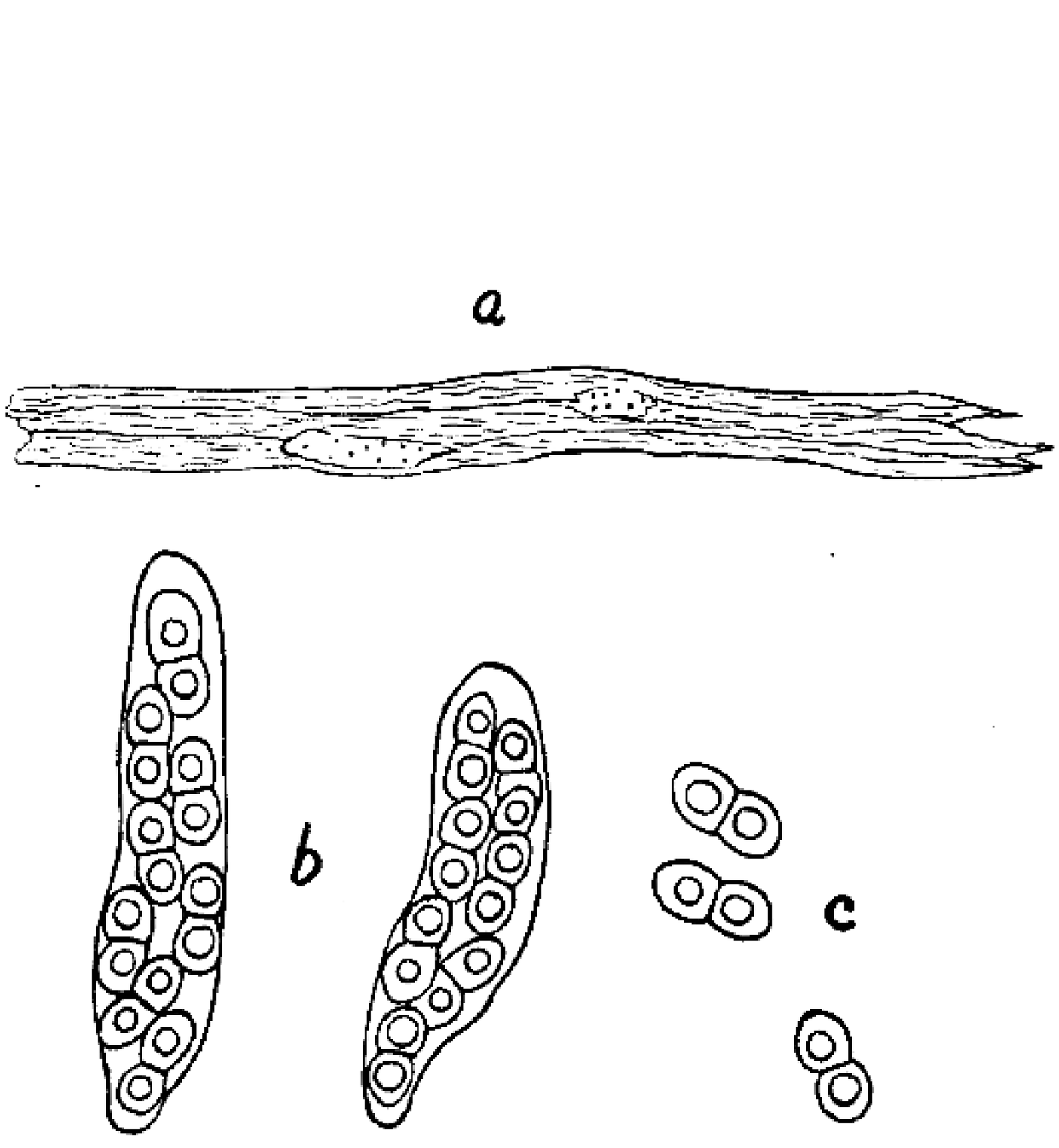

Fig. 3.

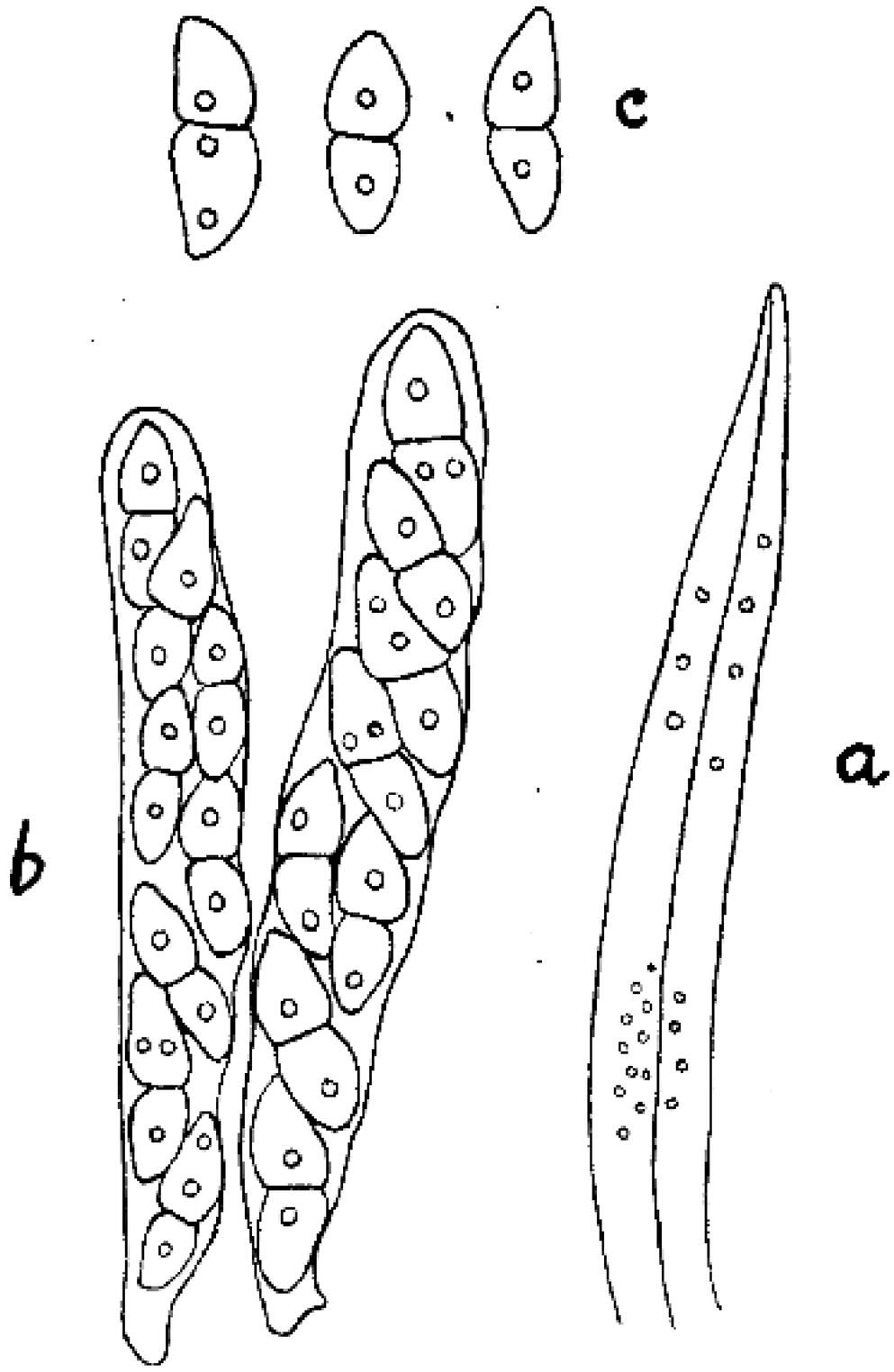

Fig. 4.

Fig. 3. Sphaerella cfr. Iridis Awd. – a) A leaf-fragment of Iris Pseudacorus with the fungus, ×1. b) Asci, ×750. c) Spores, ×750.
Fig. 4. Sphaerella cfr. isariphora (Desm.). – a) A leaf of Stellaria holostea with Sphaerella isariphora (near the base) and the present fungus (near the end of the leaf), ×2. b) Asci, ×750. c) Spores, ×750.

On dead leaves of *Stellaria holostea*, together with *Sph. isariphora*, which has more densely gregarious and more superficial perithecia, May. – J.: Stenderup and Seest, both near Kolding.

5.* M. Hyperici (Awd.) Schroeter

On dead stems of *Hypericum perforatum*, May. – J.: Klintenborg Plantage near Kolding.

6.* M. eupatoriicola Petr.

On dead stems of *Eupatorium cannabium*, together with *Leptosphaeria agnita*, May. – J.: Marielund near Kolding.

7. M. cfr. sentina (Fr.) Schroeter

Perithecia gregarious in more or less distinct longitudinal lines, ca. 200 μ diam., covered by a circular clypeus-like spot, depressed-spheric, with a short, erumpent papilla. – Asci cohaerent, but not

really fasciculate, 50–60 $\mu \times 9$–10 μ, fusiform, often curved, short-stipitate. – Spores in a cluster, fusiform, 2-celled, not constricted, hyaline, not guttulate, 22–30 $\mu \times 4$–4 ½ μ.

On dead twigs of *Rosa* sp., April. – J.: Dalby Aadal (near Kolding).

Larsen mentions, that this species is close to *Sph. sentina* (Fr.) Fck., which, however, is found on petioles of *Pyrus communis*; the editor believes, that the two species can hardly be identical.

Phaeosphaerella Sacc. sensu Petrak

1.* Ph. Typhae (Schroeter) Sacc.

On dead leaves of *Typha latifolia*, March. – J.: Tavlov Sø.

2.* Ph. pheidasca (Schroeter) Sacc.

April–May. – On *Cladium Mariscus* ("Sølyst" near Hadersley); on *Juncus effusus*, *Typha latifolia* and *Typha angustifolia*. (No locality recorded).

Pringsheimia v. H.

* P. sepincola (Fr.) v. H.

Syn. i. a.: *Sphaerulina intermixta* (Berk. & Br.) Sacc.

Common on dead twigs of *Rosa* spp. (e. g. *R. canina*), Dec.–April. – J.: Søndervang, Vonsild, Hoppeshuse (all near Kolding).

Physalospora Niessl

Ph. cfr. gregaria Sacc. (Fig. 5).

Perithecia gregarious, immersed, at last almost free, ca. 200 μ diam., spheric with a minute papilla. – Asci cylindrical, stipitate, ca. 100 μ p. sp. $\times 10$ μ, 8-spored; paraphyses indistinct. – Spores strictly or obliquely 1-seriate, ellipsoid, straight or a little inaequilateral, at first guttulate, when mature not so, 16-21 $\mu \times$ 6-7 μ, slightly brownish.

On the wood of dead branches of *Euonymus europaeus*, March. – J.: Amaliegaard Skov near Hornslet.

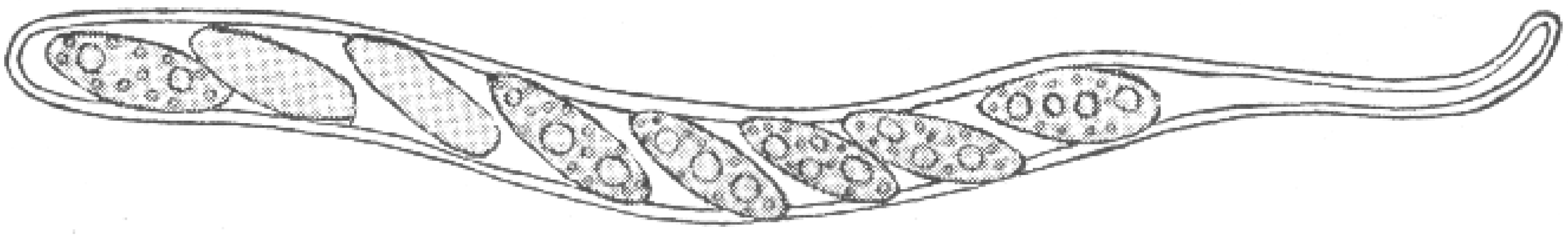

Fig. 5. Physalospora cfr. gregaria Sacc. – An ascus, $\times 750$.

Didymosphaeria Fck.

1. D. brunneola Niessl

On dead stems of *Rubus fruticosus* coll., Dec. – J.: "Friheden" near Aarhus.

2. D. albescens Niessl

On living stems of *Lonicera periclymenum*, March. – J.: Seest Vesterskov near Kolding.

A species closely related to *D. diplospora*, according to Larsen, only differing by more prominent perithecia, shorter asci and somewhat thicker and more dark-coloured spores.

3.* D. diplospora (Cke.) Rehm

Common on stems of *Rubus* all through the winter till June. – J.: Marielund near Kolding; Hadsund. Also on *Cornus sanguinea* (Riis Skov near Aarhus).

Larsen writes the following notes on this species: The spores are typically shorter in the upper end of the ascus than in the lower end. The asci are often 6-spored or even 4-spored; in such asci the spores may reach a size of 20 $\mu \times 9\ \mu$. The spores are finely punctate (emphasized in the manuscript), and the paraphyses are branched. The fungus is also found on *Rosa*; it may be identical with *D. brunneola*.

4.* D. minuta Niessl

On dead stems of *Typha*, *Juncus effusus* and *Cladium mariscus*, April–June. – J.: Kolding; Trelde Skov; "Sølyst" near Hadersley.

The samples on *Typha* were determined to *D. Typhae* Peck by Larsen; they cannot be distinguished from *D. minuta*.

5.* D. Equiseti-hiemalis Larsen & Munk n. sp. (Fig. 6).

Editor's diagnosis:

Pseudotheciis dispersis, totaliter immersis, 300–400 μ diametro, depresso-globosis. – Peridio 30–35 μ crasso, textura intricata; cellulis peridii indistinctis, minimis, olivaceo-griseis; in parietibus cellulorum particulis atro-brunneis irregulariter dispositis; peridio hyphis tenuibus, hyalinis vel brunneolis (1–2(–3) μ crassis), ad apicem pseudothecii saepe clypeum obsoletum formantibus vestito. – Ascis subparallelibus (ad basim divergentibus, ad apicem convergentibus), ex area parva in basi pseudothecii crescentibus, 70–100 $\mu \times$ 6–10 μ, cylindraceis, sessilibus; pariete asci ad apicem leniter incrassato; textura paraphysiforme densissima, filamentis tenuissimis (crassitudine minore quam 1 μ), ascis longioribus. – Sporis uniseriatis, 13–21 $\mu \times$ 6–8 μ, bicellularibus, constrictis, subcylindraceis ad latissime ellipsoideis (sporis latis in parte majore apicale asci), viridi-griseis, dein olivaceo-brunneis.

In caulibus mortuis *Equiseti hiemalis*.

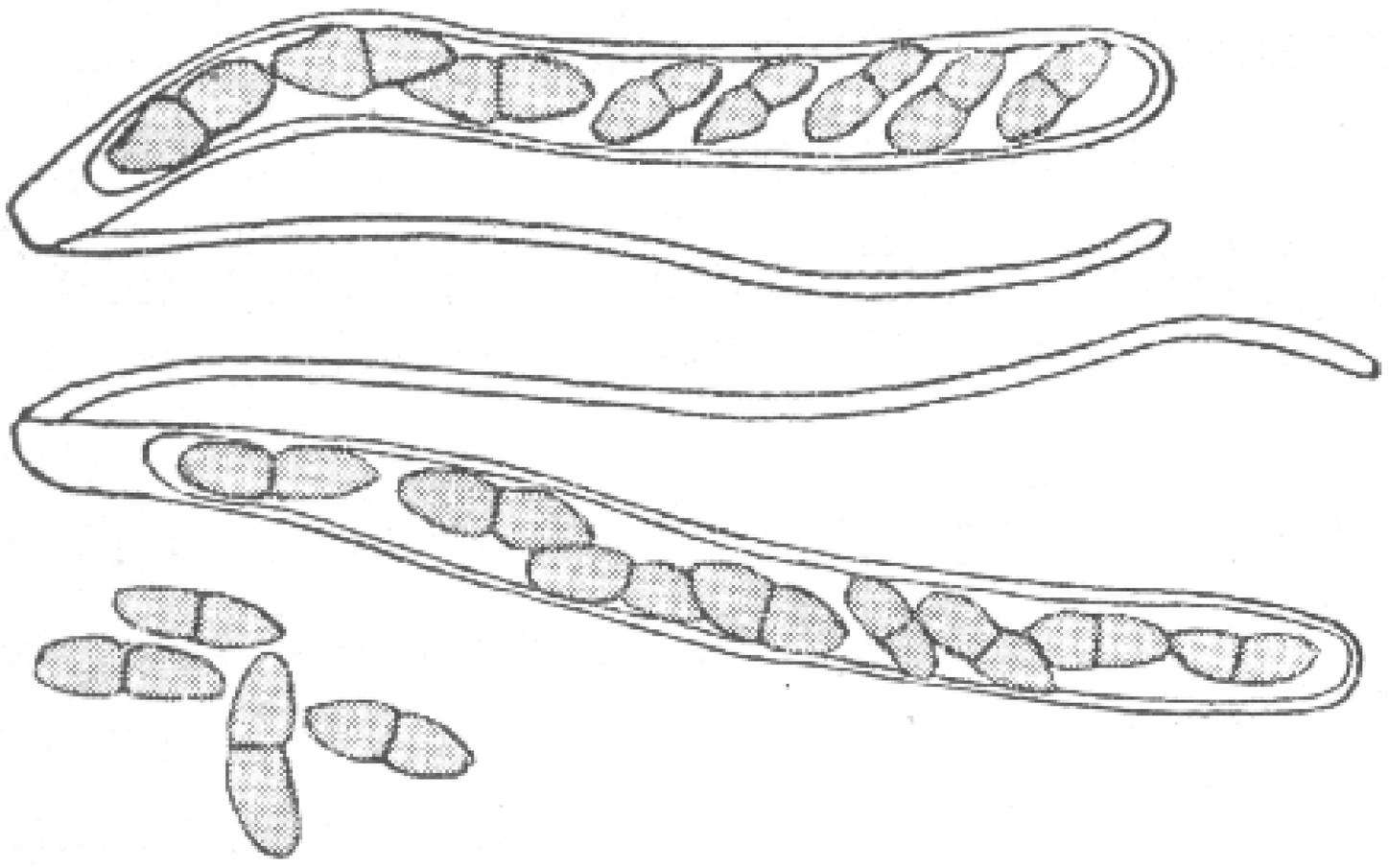

Fig. 6. Didymosphaeria Equiseti-hiemalis Larsen & Munk n. sp. – Asci and spores, ×750.

Perithecia scattered, totally immersed, 300–400 μ diam., depressed-spheric. – Peridium 30–35 μ thick, uniform, cells indistinct and very small, olive-grey, with irregular dark brown thickenings in the cell-walls; the peridium is densely covered with thin, hyaline to brown hyphae (1–2(–3) μ thick), which generally form a slightly developed clypeus at the top of the perithecium. – Asci subparallel (diverging below, converging above), springing from a rather small area in the bottom of the perithecium, 70–100 $\mu \times 6$–10 μ, cylindrical, sessile; paraphyses very numerous, thin (1 μ or less in thickness), branched and anastomosing, longer than the asci. – Spores 1-seriate, 13–21 $\mu \times 6$–8 μ, 2-celled, constricted at the septum, subcylindrical to very broadly ellipsoid (the former shape generally found in the lower part of the ascus, the latter shape characteristical to the upper 5–6-spores in the ascus); colour olive-brown when ripe, more greenish in the smaller unripe spores.

On dead stems of *Equisetum hiemale*.

June and October (also described by Larsen). – J.: Seest Mølleaa near Kolding; Trelde.

Poul Larsen writes the following notes on this fungus:

It is very difficult macroscopically to distinguish this fungus from *Leptosphaeria Berlesei*, with which it grows together on dead stems of *Equisetum hiemale*. The *Leptosphaeria* has perithecia of the same size and shape, but they are seated more deeply in the stem; only the presence of a slightly blackened circle around the papilla reveals the presence of a *Didymosphaeria*.

It grows sparsely, chiefly near the nodi of the stems, the rest of these being occupied by *Leptosphaeria Berlesei*, the perithecia of which grow much more densely, and which is always present on most of the surface of the dead stem.

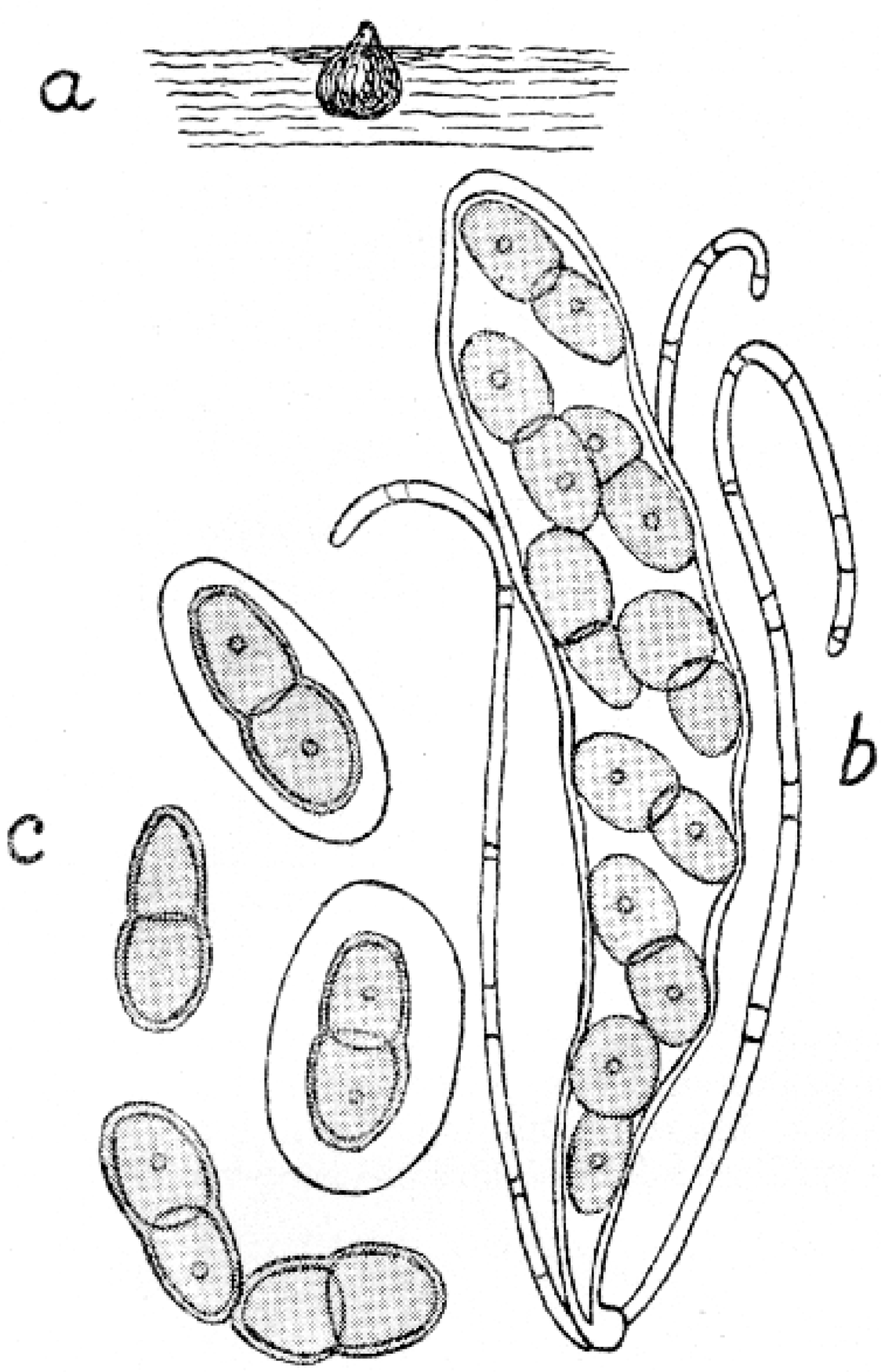

Fig. 7.

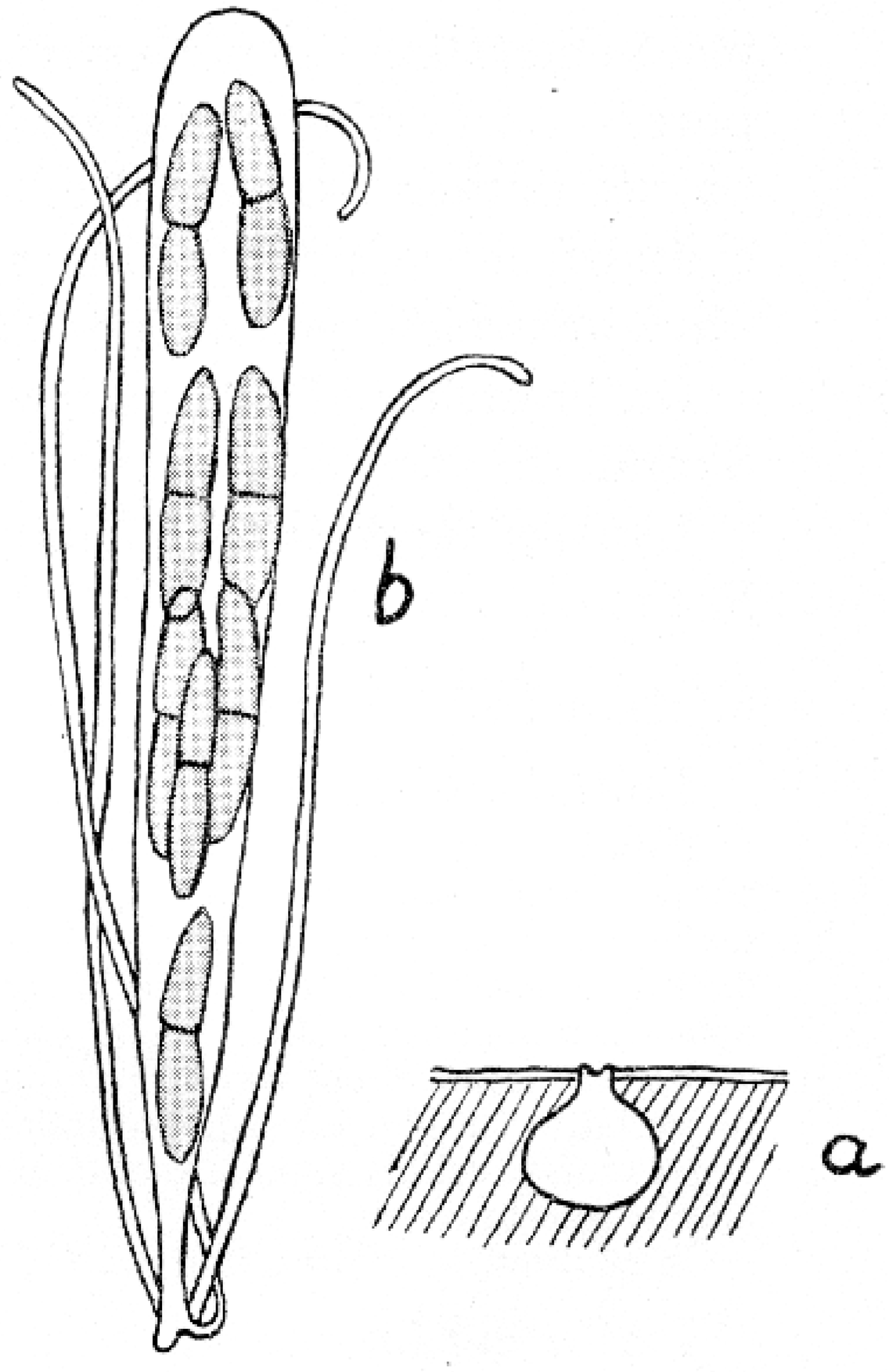

Fig. 8.

Fig. 7. Didymosphaeria cfr. palustris (Berk. & Br.) Sacc. Perithecium, ×30. b) Asci, ×750. c) Spores, ×750.
Fig. 8. Didymosphaeria cfr. subcorticalis Feltg. – a) Perithecium, ×20. b) Ascus, ×1000.

6. D. cfr. palustris (Berk. & Br.) Sacc. (Fig. 7).

With or without a distinct clypeus. – Perithecia spheric, 200–225 μ diam., immersed, erumpent with a relatively thick, short, smooth and black papilla, solitary or sparsely gregarious. – Asci clavate, sessile, 100 $\mu \times 20$–22 μ, sometimes somewhat elongate, then considerably narrower, 8-spored; paraphyses ca. 2 μ thick, curved or wavy. – Spores 2-seriate or transversally 1-seriate, in the elongate asci 1-seriate, ellipsoid, obtuse, 2-celled, the upper cell thicker and shorter than the lower one, 18–22 $\mu \times 9$–11 μ, greenish yellow, often surrounded by a delicate gelatinous covering.

On decaying leaves of *Elymus arenarius*, especially on the upper $^1/_3$ of the leaves, June. – J.: Egaa and "Ørnereden", both near Aarhus.

7. D. cfr. subcorticalis Feltg. (Fig. 8).

Perithecia scattered, occasionally 2–3 together, beneath the peridermis, depressed-spheric, 300–400 μ diam.; papilla short,

just penetrating the peridermis, with a distinct, somewhat angular pore. – Asci cylindrical-clavate, 75–90 $\mu \times$ ca. 9 μ, 8-spored; paraphyses numerous, curved or wavy. – Spores irregularly 2-seriate, cylindrical, rounded at the ends, slightly curved, 2-celled, light olive-brownish, when ripe without oil-drops, 16–18 $\mu \times 4$ μ.

On branches of *Salix Caprea*, April. – J.: At "Svanesøen" near Skanderborg.

LARSEN suggests the identity of this fungus with *D. subcorticalis* FELTGEN.

8.* D. Cladii LARSEN & MUNK n. sp. (Fig. 9).

Editor's diagnosis:

Pseudotheciis immersis, gregariis, 200–250 μ diametro, subglobosis; papilla curta, epidermidem leniter protrudente. – Peridio tenuissimo, 5–8 μ crasso, textura prismatica; cellulis peridii apparenter 7–10 μ longis, valde applanatis, fere collabentibus, obscure olivaceo-brunneis; peridio papillae 15–20 μ crasso, cellulis 5–7 $\mu \times$ 3–4 μ, opace atro-brunneis. – Ascis 65–90 $\mu \times 7\,\frac{1}{2}$–10 μ, subcylindraceis, pariete crassiusculo, ad apicem crassissimo; textura paraphysiforme parum distincta. – Sporis uni (rarius bi-)seriatis, 12–16 $\mu \times$ 5–6 μ, bicellularibus; cellula inferiore minima, 3–4 μ longa, 3–4 μ crassa; cellula superiore obscuriore, uni- vel biguttulata; colore olivaceo-viride ad olivaceo-brunneo.

In caulibus foliisque *Cladii Marisci*.

Perithecia immersed, gregarious, 200–250 μ diam., subspheric; papilla short, lifting the epidermis a little before breaking it. – Peridium extremely thin, 5–8 μ thick, textura prismatica with flattened cells; cells probably 7–10 μ long, very flat, almost collapsing, rather dark olive-brown; in the papilla the peridium is 15–20 μ thick, cells 5–7 $\mu \times$ 3–4 μ, very dark. – Asci 65–90 $\mu \times$ $7\,\frac{1}{2}$–10 μ, subcylindrical, rather thickwalled, especially at the top; interascicular tissue not quite distinct. Spores 1(–2)-seriate, 12–16 $\mu \times$ 5–6 μ, 2-celled; the lower cell is only 3–4 $\mu \times$ 3–4 μ; it is more thin-walled and more light-coloured than the upper one,

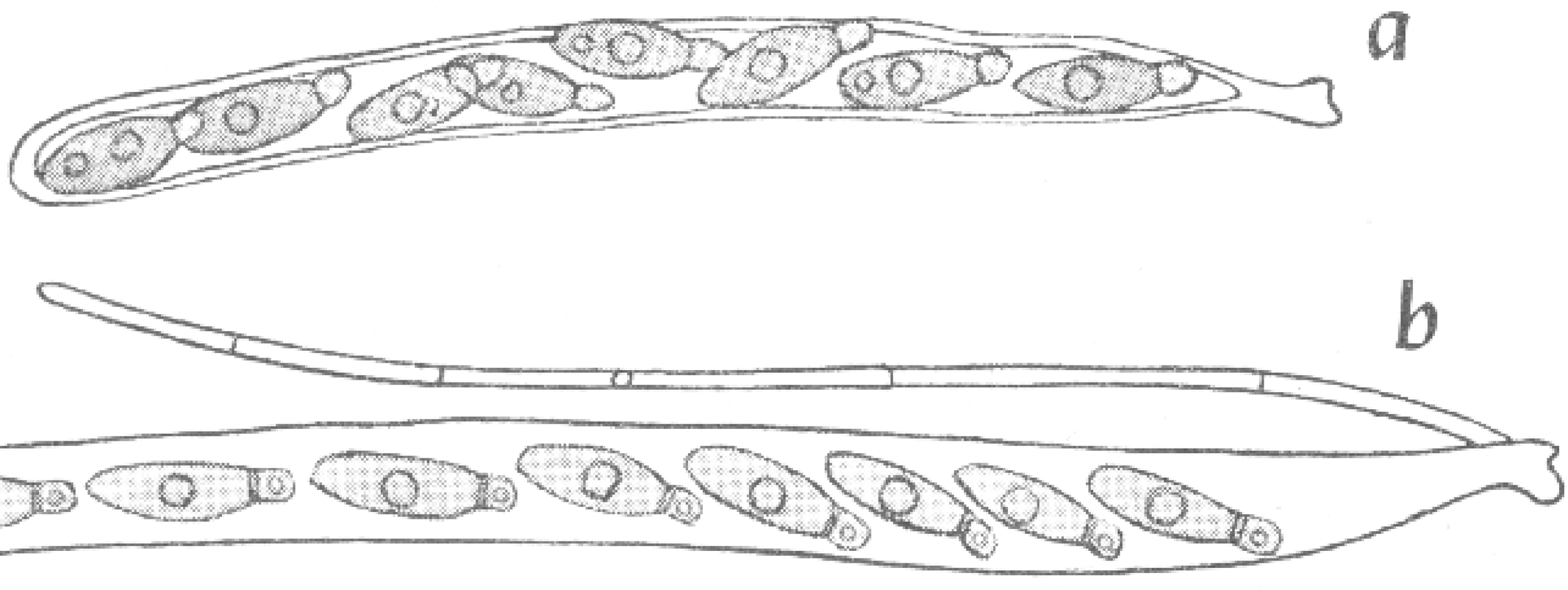

Fig. 9. Didymosphaeria Cladii LARSEN & MUNK n. sp. – a) Ascus, ×750. b) Ascus, ×1000.

which contains 1 or 2 large oil-drop(s); colour of the spore olive-greenish to olive-brown.

Dec.–April (also described by LARSEN). – Type locality: J.: "Sølyst" near Haderslev. Found in several localities; according to LARSEN, this fungus is probably present in any vegetation of the host-plant.

The spores often germinate immediately outside the porus, producing a tuft of hyphae, which gives a spotted appearance to the brownish substratum with greenish grey spots.

Didymella SACC.

1.* D. fenestrans (DUBY) SACC.

On dead stems of *Chamaenerium angustifolium*, Febr.–June. – J.: Skanderborg Dyrehave. No other localities mentioned, just a general remark, that the fungus is common everywhere.

2.* D. Fuckeliana (PASS.) SACC.

Common on dead stems of *Chamaenerium angustifolium*; also found on *Epilobium hirsutum*, March–June. – J.: Elbodalen near Taulov; Svanemosen near Kolding; Strandhuse and Komarksbuske, also near Kolding; Trelde Sande.

3.* D. applanata (NIESSL) SACC.

Common on dead twigs of *Rubus Idaeus*, Jan.–June. – J.: Vonsild near Kolding; Thygeslund Skov; Marielund near Kolding; Trelde Sande.

4.* D. proximella (KARSTEN) SACC.

On dead stems and leaves of monocotyledonous plants, May–June. All finds, except one, from J. – On *Carex hirta* (Kolding Aa); on *Carex paniculata* (Thurø); on *Carex silvatica* (Marielund near Kolding); on *Scirpus lacustris* (Dons near Kolding); on *Scirpus tabernaemontani* (Christiansminde near Kolding); on *Heleocharis palustris* (Vorbasse); on *Typha latifolia* (Stormosen near Kolding).

5. D. Ilicis LARSEN n. sp. (Fig. 10).

Perithecis in cortice gregariis, ad superficiem ligni sedentibus, late conicis, c. 500 μ diametro; papilla curta, distincter erumpente. – Ascis cylindraceo-clavatis, curte stipitatis, c. 100 $\mu \times 12\,\mu$, octosporis; paraphysibus c. 1 ½ μ crassis, ascos superantibus. – Sporis uniseriatis, ad apicem asci saepe transversaliter uniseriatis, 15–16 $\mu \times 5$ ½–7 μ, bicellularibus, constrictis, hyalinis, cellula superiore majore.

In ramulis mortuis *Ilicis aquifolii*.

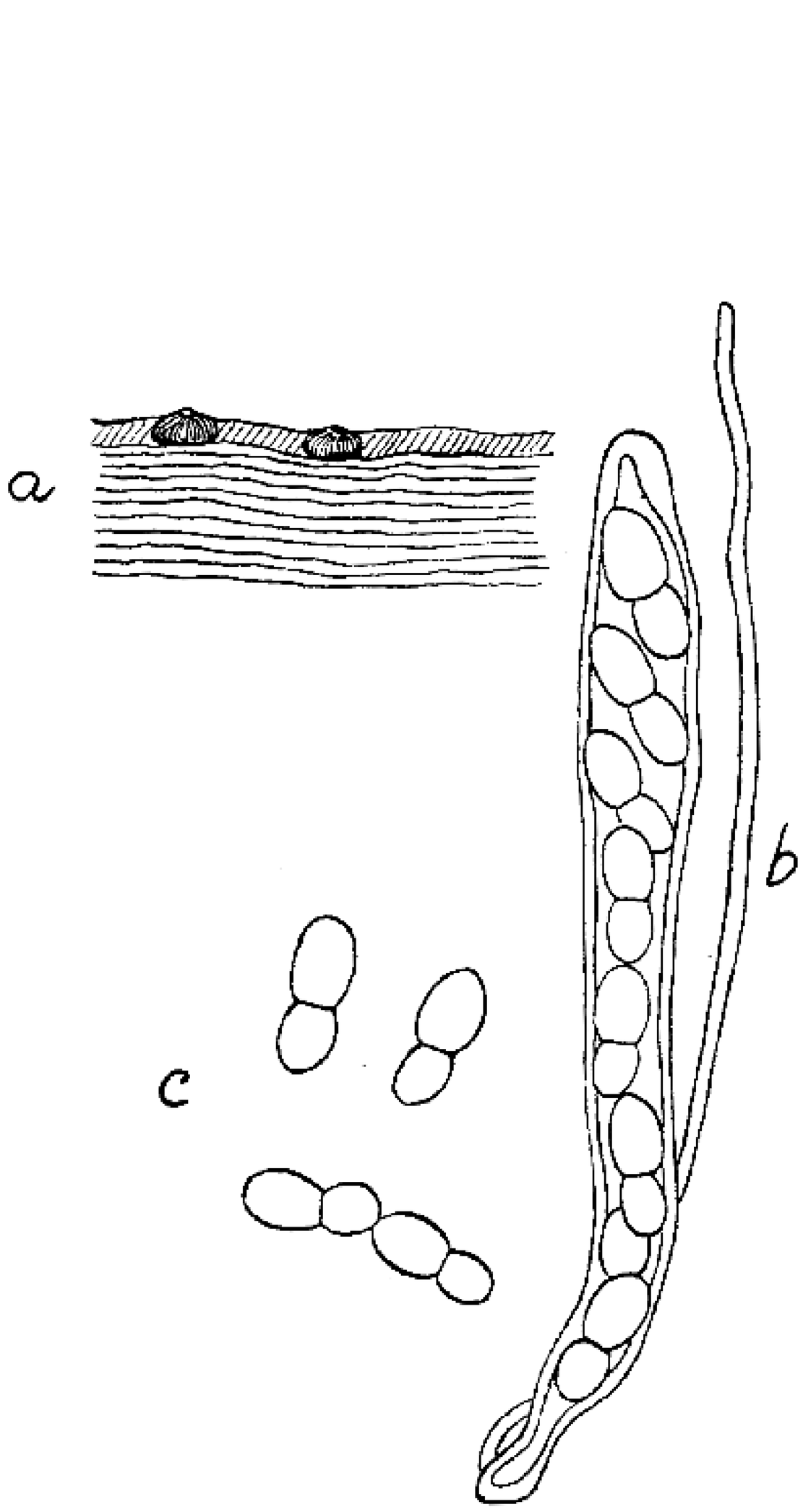

Fig. 10.

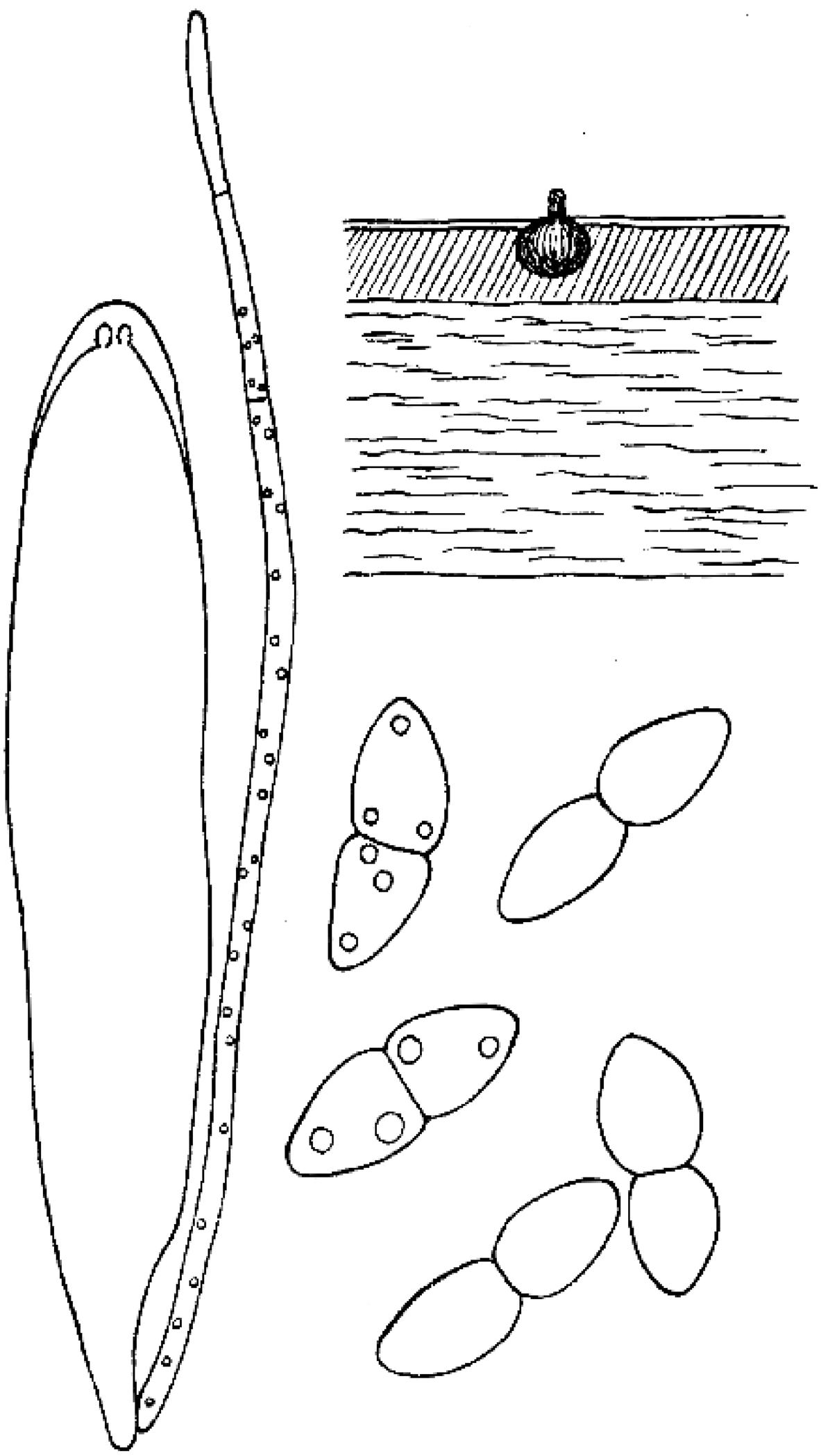

Fig. 11.

Fig. 10. Didymella Ilicis Larsen n. sp. – a) Perithecia, ×10. b) Ascus, ×750. c) Spores, ×750.
Fig. 11. Didymella cfr. Mesneriana (Rehm & Thüm.). – Perithecium, ascus and spores.

Perithecia gregarious in the bark or on the wood, broadly conical, with a short, distinctly perforated ostiolum; ca. 500 μ diam. – Asci cylindrical-clavate, short-stipitate, ca. 100 $\mu \times 12$ μ, 8-spored; paraphyses longer than the asci, 1 ½ μ thick. – Spores 1-seriate, in the clavate asci transversally 1-seriate above, hyaline, 15–16 $\mu \times 5$ ½–7 μ, 2-celled, constricted, the upper cell larger than the lower one.

On dead twig of *Ilex aquifolium*.

March. – J.: Løverodde at Kolding Fjord.

6. D. cfr. Mesneriana (Rehm & Thüm.) Sacc. (Fig. 11).

Perithecia gregarious beneath the peridermis, immersed in the outer part of the bark, subspheric or a little depressed, ca. 600 μ diam.; ostiolum conical, prominent, 200–800 μ long, when long somewhat tapering towards the top, when short rather truncate, distinctly perforated. – Peridium leathery, black, glabrous. – Asci 100–120 $\mu \times 17$–20 μ, 8-spored, clavate, short-stipitate, with a distinct apical ring visible as two refractive points; paraphyses long, very thick, thin-walled. – Spores 2-seriate, short-fusiform or ellipsoid, 2-celled, strongly constricted, more or less narrowly parabolically rounded to almost pointed at the ends, at first guttulate, at last without oil-drops.

On dead stems of *Rubus idaeus* cult., March. – J.: Kolding.

Larsen suggests the identity of this fungus with *D. Mesneriana* (Rehm & Thümen) Sacc. – It seems to be related to *D. fenestrans* (= *Sydowiella fenestrans* (Duby) Petr.). (Ed.).

Venturia Ces. & de Not. sensu auctt.

1. V. Rumicis (Desm.) Winter

On living leaves of *Rumex nemorosus*, May. (Other material examined). – J.: "Ørnereden" near Aarhus.

2. V. chlorospora (Ces.) Karsten

On dead leaves of *Fraxinus excelsior*. – No locality or date. (Only a drawing left).

Leptosphaeria Ces. & de Not. sensu lato.

1.* L. Berlesei Larsen & Munk n. sp. (Fig. 12).

Editor's diagnosis:

Pseudotheciis dispersis, 200–300 μ diametro, totaliter et permanenter immersis, fere exacte globosis; papilla stratum superficiale silicosum substrati penetrante, superficiem substrati non superante. – Peridio tenuissimo (12–15 μ crasso); cellulis peridii 2–3 strata formantibus, 8–13 $\mu \times 4$–6 μ, pariete tenui, atro-brunneo (in specimibus vivis olivaceo-viride). – Ascis subparallelibus, 120–155 $\mu \times 14$–20 μ, cylindraceo-clavatis, ad apicem late rotundatis, breve stipitatis, pariete crassiusculo; textura paraphysiforme distincta, guttulata. – Sporis 40–56 $\mu \times 6\ ½$–9 μ, cylindraceis, typice 12-cellularibus, ad septa leniter vel non constrictis, cellulis terminalibus plus minus late parabolice rotundatis; colore fulvo-luteo.

In caulibus mortuis *Equiseti hiemalis*.

Perithecia scattered, 200–300 μ diam., totally and permanently immersed, rather exactly spheric; papilla penetrating the silicious layer of the substratum, not projecting beyond the substratum

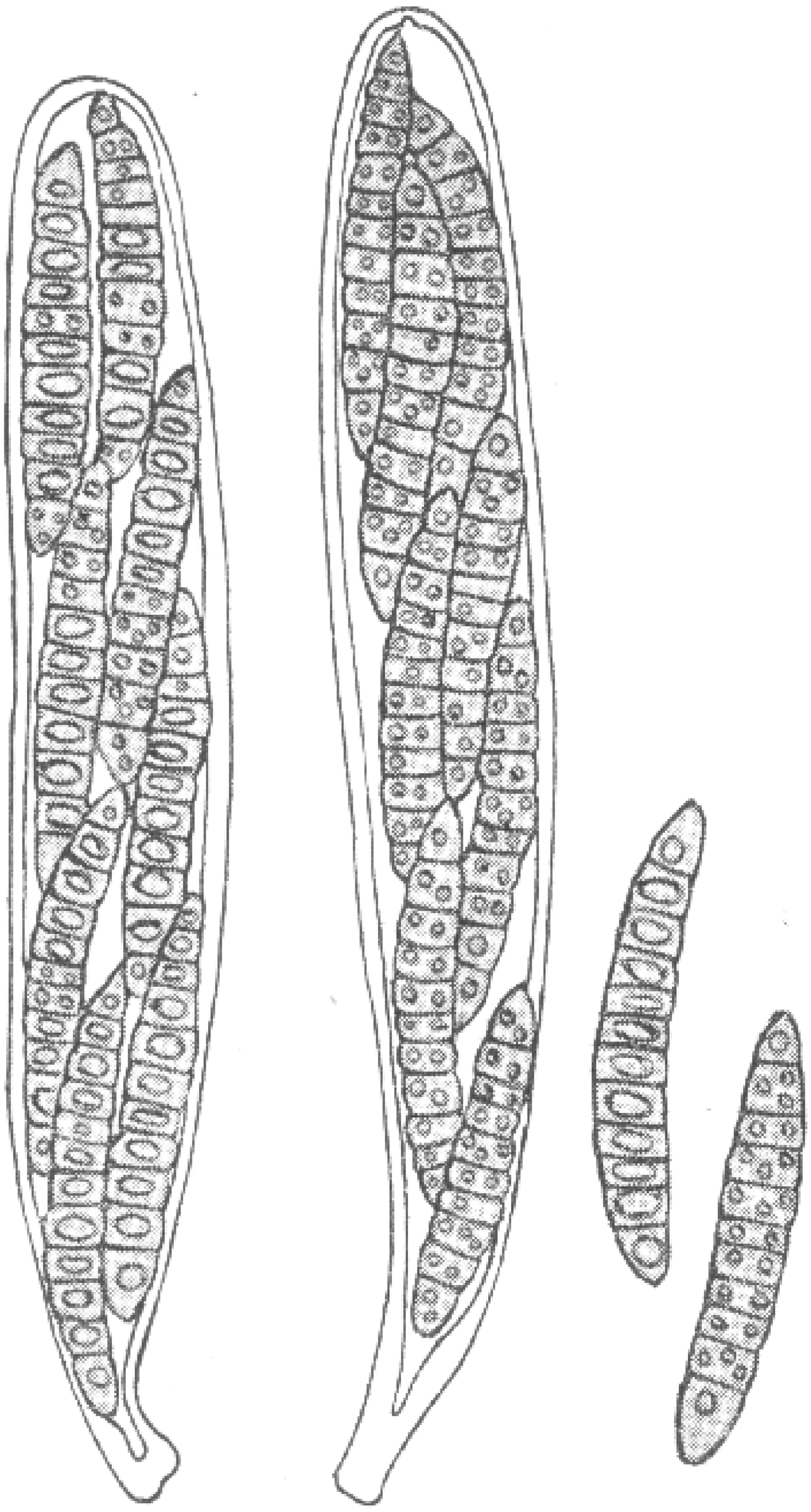

Fig. 12.

Fig. 13.

Fig. 12. Leptosphaeria Berlesei Larsen & Munk n. sp. – Asci and spores.
Fig. 13. Leptosphaeria Equiseti Karsten. – Ascus and spores.

(unfortunately it seems almost impossible to cut sections of the papilla, because it is firmly enclosed in the silicious layer). – Peridium very thin (12–15 μ thick), cells in 2–3 layers, 8–13 $\mu \times 4$–6 μ, rather thin-walled, but blackish brown (in fresh material olive-greenish (P. L.)). – Asci subparallel, 120–155 $\mu \times 14$–20 μ, cylindrical-clavate, broadly rounded above, short-stipitate, rather thick-walled; paraphyses numerous, containing oil-drops. – Spores 40–56 $\mu \times 6\,\frac{1}{2}$–9 μ, cylindrical, very slightly constricted or not at all, typically 12-celled, end-cells $\pm$ broadly parabolical; colour brownish yellow.

On dead stems of *Equisetum hiemale*.

Found with ripe spores almost all the year round, and probably in any vegetation of the host-plant. (Also described by Larsen). – J.: Ravnholt Skov; Mosgaard; Ejstrup; Trelde.

The species is already discussed by LARSEN in a previous paper (LARSEN 1932), so far as LARSEN writes, that the *Leptosphaeria* on *Equisetum hiemale* is different from that on *Equisetum variegatum*; the latter one is the true *Leptosphaeria Equiseti* KARSTEN, and it differs from *L. Berlesei* by smaller asci and spores, more irregularly septate spores of an olive-greenish colour, and finally by the brown or even yellowish brown colour of the peridial cells (Fig. 13).

The name *L. Berlesei* is chosen by LARSEN, because BERLESE (in Icones Fungorum. Pyrenomycetes I, p. 54) figures the present species sub nom. *L. Equiseti* KARSTEN.

2.* L. Michotii (WEST.) SACC.

Common on dead stems and leaves of monocotyledonous plants, March–Aug. – J.: On *Typha latifolia* (Storemose and Seest, near Kolding); on *Sparganium ramosum* (Ejstrup); on *Juncus effusus* (Paarup; Trelde Sande); on *Juncus obtusiflorus* (F.: Røgle; J.: "Sølyst" near Haderslev); on *Cladium Mariscus* ("Sølyst"); on *Scirpus maritimus* (Kolding Fjord); on *Carex sp.* (Stallerup Sø near Kolding); on *Dactylis glomerata* (Julemærkesanatoriet near Kolding); on *Phragmites communis* (Kobbelskov); on *Deschampsia caespitosa* (Stallerup Sø).

3.* L. microscopica KARSTEN

Very common on dead stems and leaves of monocotyledonous plants, March–June. – J.: On *Polygonatum multiflorum* (Eltang); on *Iris Pseudacorus* (Komarksbuske near Kolding; Trelde Sande); on *Typha latifolia* (Eltang); on *Sparganium ramosum* (no locality); on *Juncus glaucus* (a meadow in Kolding); on *Juncus effusus* (in the valley of Kolding Aa); on *Scirpus silvaticus* ("Slotssøen" in Kolding; Seest Mølleaa); on *Scirpus lacustris* (Dons near Kolding); on *Carex hirta* (hills near Kolding Aa); on *Carex glauca* (same locality); on *Carex silvatica* (Marielund near Kolding); on *Elymus arenarius* (Silistria near Aarhus; Trelde); on *Glyceria aquatica* (Stallerup Sø near Kolding and Kolding Aa); on *Dactylis glomerata* (Egtvedvejen near Kolding).

4. L. arundinacea (SOW.) SACC.

On dead stems of *Phragmites communis*, May. – J.: "Ørnereden" near Aarhus.

5. L. Apogon Sacc. & Speg.

On dead stems of *Scirpus lacustris*, May. – J.: Brabrand Sø; Dons.

Larsen emphasizes the differences between *L. Apogon* and *L. microscopica*: *L. Apogon* has narrower asci and spores; its spores are olive-greyish, whereas the spores of *L. microscopica* are yellow.

6.* L. petkovicensis Bub. & Ran.

On dead stems and leaves of *Juncus effusus*, April–May. – J.: Bjært Strand; Alpedalen and Komarksbuske, both near Kolding; Vonsild. – F.: Dallund.

Sec. Larsen, this fungus is most common on long, thin, somewhat etiolated stems of plants having grown in shady places.

7.* L. Typharum (Desm.) Karsten

Found in any vegetation of *Typha latifolia* or *T. angustifolia*, growing on the leaves of these plants, April–May. – J.: Stallerup Sø, Lilballe Mose, Harte, all near Kolding; Jels.

8.* L. Typhae (Awd.) Karsten

On dead *Typha latifolia*, May. – J.: Blaakær Skov; Trelde.

9.* L. culmicola (Fr.) Awd.

On dead stems, chiefly of monocotyledonous plants, Febr.–May. – A series of finds from J.: On *Dactylis glomorata* (Jels); on *Calamagrostis lanceolata* (Kolding); on *Eriophorum pelystachyum* (Sjølund); on *Luzula maxima* (Løverodde).

Specimens fairly well corresponding to *L. nigrans* (Desm.) Ces. & de Not., but hardly specifically distinct from *L. culmicola*, were found in the following localities: On *Elymus arenarius* (Riis Skov); on *Scirpus silvaticus* (Komarksbuske near Kolding); on *Ranunculus acer* (no locality).

10.* L. Fuckelii Niessl

On dead stems of monocotyledonous plants, April–July. – Several finds from J., one from F.: On *Iris pseudacorus* (Vonsild near Kolding. – F.: Elsehoved); on *Typha latifolia* (on the leaves) (Mosgaard Mose); on *Carex silvatica* (Marielund near Kolding); on *Calamagrostis sp.* (Ask Skov; Korsvang Skov); on *Baldingera arundinacea* (Elvighøj; Dalby Aadal, both near Kolding).

11.* L. epicalamia (Riess).Ces. & de Not.

On dead stems of *Luzula silvatica*, March. – J.: St. Jørgens Skov near Aabenraa; Løverodde.

This pyrenomycete is constantly accompanied by *Stagonospora Luzulae*.

12. L. cfr. Secalis Haberlandt

Perithecia gregarious, ca. 300 μ diam., when young immersed except the papilla, later on more prorumpent, covered by a dense, greyish brown tomentum (hyphae 3–4 μ thick, branched, brown). – Asci clavate, short-stipitate, 100–110 $\mu \times 10$ μ. – Spores somewhat twisted together, 32–36 $\mu \times 4$–$4\frac{1}{2}$ μ, typically 7-celled, the 2nd cell thicker than the others; the end-cells twice as long as the others, narrower and somewhat attenuating; colour honey-yellow.

On dead stems of *Secale cereale*, May. – J.: Mølleengen (probably near Aarhus).

13. L. Larseniana Munk n. nom. (Fig. 14).

Syn.: *Leptosphaéria Elymi* Poul Larsen 1932, non Atkinson 1897 (Bull. of the Cornell Univ. III, no. 1, p. 7).

Perithecia gregarious, seated in the leaf-sheaths; 300–400 μ diam.; papilla black, almost pointed, penetrating the epidermis. – Asci cylindrical, sessile or very short-stipitate, 75–85 $\mu \times 15$–16 μ, 8-spored; paraphyses septate, terminal cell filiform, subterminal cell somewhat swollen. – Spores 2-seriate, fusiform, 24–30 $\mu \times 6$–8 μ, more or less curved, 6-celled, the 3rd cell thicker than the others; colour yellow.

On stems and leaves of monocotyledonous plants, April–May. – J.: *On Phragmites communis* (Dons); on *Baldingera arundinacea* and *Iris pseudacorus* (a bog South of Vonsild).

14.* L. littoralis Sacc.

On dead leaves of *Psamma arenaria*, July. – J.: Als Odde.

15.* L. cfr. littoralis Sacc. var. (Fig. 15).

Under this name is twice described a fungus, differing from the typical *L. littoralis* mentioned above by smaller (especially narrower) asci and spores, and by another shape of the spore (asci: 80–110 $\mu \times 13$–18 μ; spores 26–42 $\mu \times 6$–10 μ; *L. littoralis* has asci 150–170 $\mu \times 30$–35 μ and spores 45–55 $\mu \times 15$–16 μ). It seems to the editor to be another species of *Leptosphaeria* s. lat. – J.: On *Cladium*

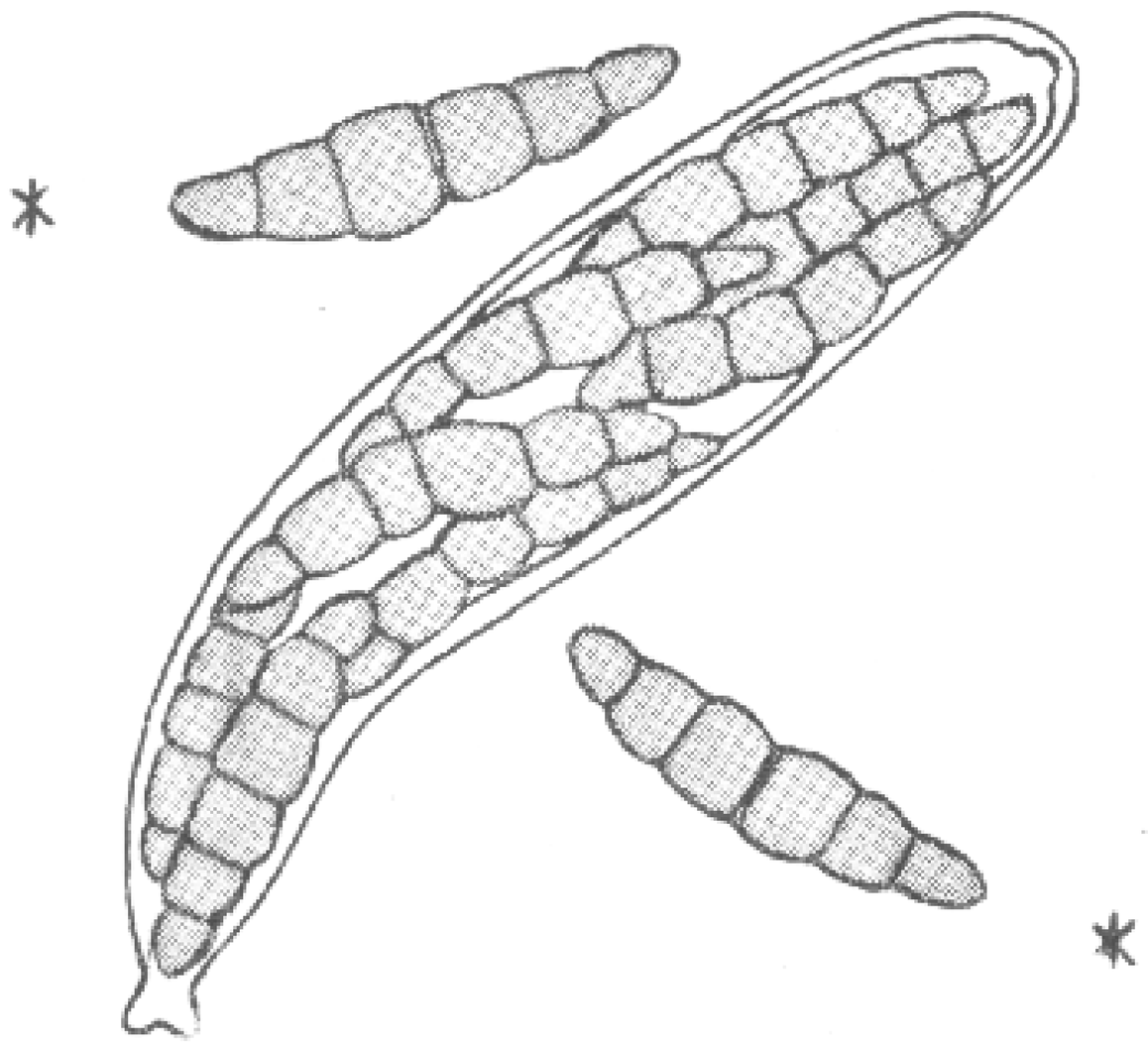

Fig. 14.

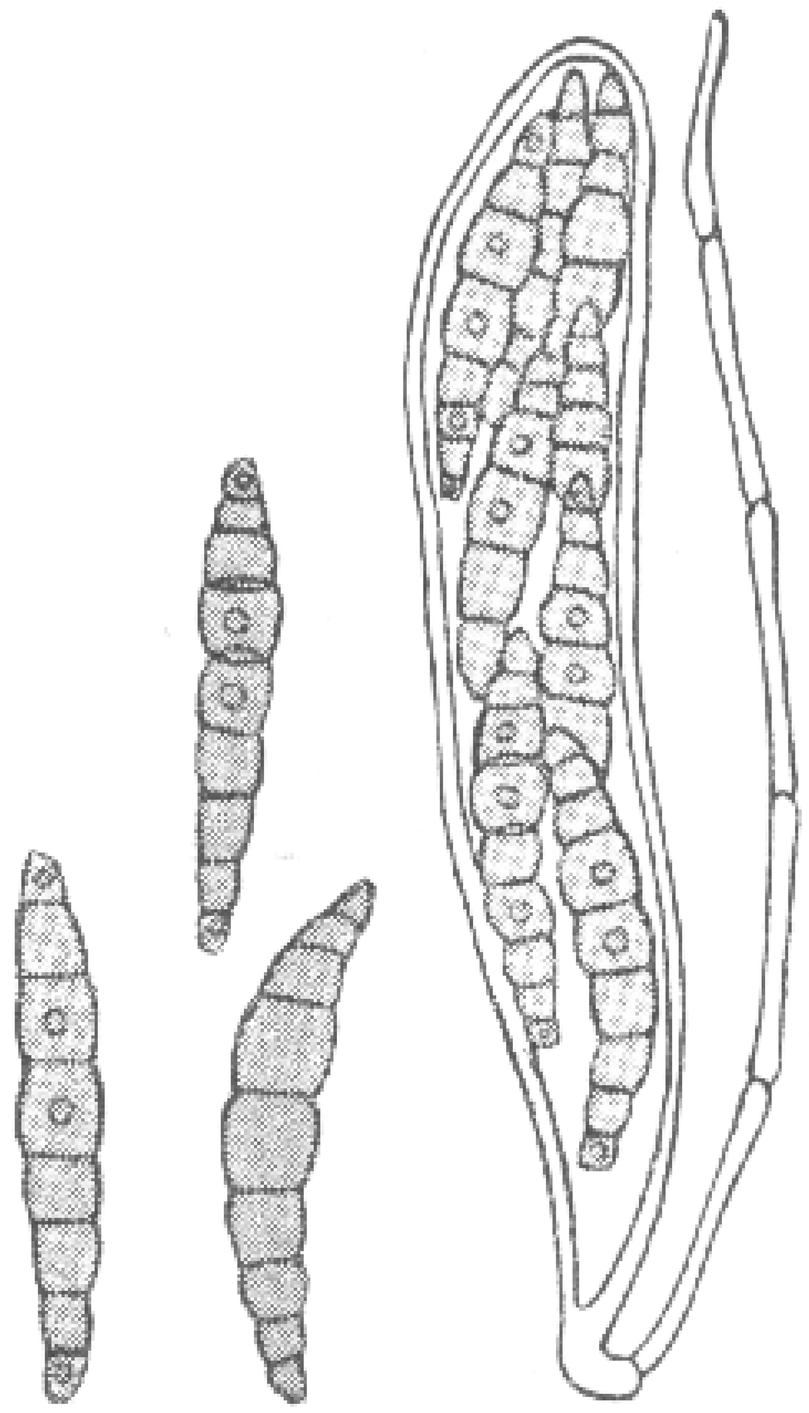

Fig. 15.

Fig. 14. Leptosphaeria Larseniana Munk n. nom. – Ascus and spores, ×750. – The asterisks indicate the upper ends of the spores.
Fig. 15. Leptosphaeria littoralis Sacc. var. – Ascus and spores, ×650.

mariscus (Skanderborg; Egaa; "Sølyst" near Haderslev); on *Typha latifolia* (Klintenborg plantation near Kolding); on *Juncus effusus* (Stallerup Sø and Aadalen, both near Kolding); on *Phragmites communis* (Stallerup Sø).

16.* L. herpotrichoides de Not.

On dead leaves and sheaths of *Carex muricata* and *Carex silvatica*, May. – J.: Kolding Skov.

17. L. cfr. pontiformis (Fck.) Sacc.

Perithecia densely gregarious, 2–5 together in small groups beneath the sheaths, immersed in the stem, surrounded and connected by a brownish tomentum of hyphae. – Asci 100–120 μ long, ca. 12 μ thick, clavate, stipitate, the stipe swollen at the base; paraphyses well developed. – Spores 2–3-seriate, slightly twisted in the ascus, a little curved, 40–50 $\mu \times 4$-5 μ, 14–17-celled, the 4th cell swollen, spheric; an oil-drop in each cell; colour light honey-yellow (in solution of iodine orange-yellow like the spore of *Pleospora herbarum*).

On dead stems of *Phragmites communis*, May. – J.: "Ørnereden" near Aarhus (together with *L. arundinacea*).

18.* L. Sowerbyi Sacc.

On dead stems of *Scirpus lacustris*, May. – J.: Brabrand; Jels.

On a separate piece of paper, Poul Larsen has written the following supplementary notes to *L. Sowerbyi*: Along Seest Mølleaa (near Kolding) was found a similar fungus on stems of *Scirpus silvaticus* and on *Juncus effusus*. It differs from *L. Sowerbyi* by constantly smaller asci and spores (asci 75–85 $\mu \times 12$–16 μ, spores 35–40 $\mu \times 5$ μ; *L. Sowerbyi* has asci 65–80 $\mu \times 22$–27 μ and spores 48–60 $\mu \times 5$–6 μ); further, the spores of this fungus are constantly 6-celled (7-celled in *L. Sowerbyi*), and their end-cells are more attenuating. On *Juncus effusus*, the *Leptosphaeria* is accompanied by *Rhabdospora Junci*.

19. L. culmifraga (Fr.) Ces. & de Not.

On stems and leaves of monocotyledonous plants, May–July. – F.: On leaves of *Typha latifolia* (Elsehoved). J.: On stems of *Calamagrostis* (no locality); on sheaths of *Bromus Benekeni* (Trelde); on stems of *Phragmites communis* (Dons; Stallerup Sø near Kolding).

20.* L. Doliolum (Pers.) Ces. & de Not.

On dead stems, especially on the basal internodia, of *Lampsana communis*, July. – J.: Kolding Skov.

21.* L. clivensis (Berk. & Br.) Sacc.

May. – J.: On *Viscaria vulgaris* (Brabrand); on *Chaerophyllum temulum* (Komarksbuske near Kolding).

In his description, Larsen has emphasized the clavate shape of the asci. This shape is really characteristic of this fungus and strange to the genus *Leptosphaeria*; as a matter of fact, the present species is not a *Leptosphaeria* at all, but belongs to the ascohymenial *Pyrenomycetes* (Ed.).

22.* L. Coniothyrium (Fck.) Sacc.

On dead stems of *Rubus Idaeus*, Dec.–Febr. – J.: Konstantinsborg; Thygeslund near Hadsund; Dyrehavegaard Skov near Kolding.

23.* L. fuscella (Berk. & Br.) Ces. & de Not.

March–May. (Material on *Rubus* examined). – J.: On *Geum rivale* (Kolding Skov). On *Rubus idaeus* (Thygeslund near Hadsund; Stenderup).

Larsen writes the following note unusual to him: This fungus must, according to the structure of the perithecium, belong to that group of the genus *Leptosphaeria*, which is to be placed in the *Pseudosphaeriaceae*.

24. L. cfr. Genistae Oud.

Perithecia beneath the peridermis of the dead apical internodia of living plants, 200–300 μ diam. – Asci almost sessile, cylindrical, rounded at the ends, 8-spored, ca. 65 $\mu \times 17$ μ; paraphyses distinct. – Spores ellipsoid, 4-celled, ca. 25 $\mu \times 8\frac{1}{2}$–9, pale yellow or yellow.

On *Genista anglica*, April. – J.: Komarksbuske near Kolding.

25.* L. planiuscula (Riess) Ces. & de Not.

On dead stems of *Solidago virgaurea*, April–June. – J.: Silistria near Aarhus; Hammer Bakker. F.: Røgle Klint.

The asci of this fungus are 4-spored, rarely 6-spored, at least in the Danish specimens.

26.* L. caespitosa Niessl

On dead stems of *Artemisis campestris*, July. – J.: Als Odde.

Larsen writes the following note:

"Winter (1887) writes, that Kunze's original diagnosis says: "Spores with 5–9 septa"; Winter has only seen spores with 5 septa. According to my investigations, this disagreement is due to the fact, that the two scientists have seen the spores in different stages of development; the spores, which have just ripened, show only 5 septa, but in the over-ripened spores a secondary septum through the middle cells may be laid down."

27.* L. cfr. ogilviensis (Berk. & Br.) Ces. & de Not. (Fig. 16).

Editor's description:

Pseudothecia scattered, 350–480 μ diam., from a flat or concave base flattened-conical; papilla small, conical or somewhat laterally flattened, but porus is always circular, ca. 20 diam. – Peridium thick and cartilagineous, 20–30 μ (in the base and top) to 70 μ (in the sides of the flattened base) thick; cells light brown, isodiametrical, 7–13 μ diam., partly with very little lumen on account of the cartilagineous cell-walls; outer cuticula blackish brown, 2–3 μ thick. – Asci strongly convergent, but springing from the bottom of the pseudothecium only, 70–90 $\mu \times 8$–12 μ, subcylindrical, short-stipitate with a nodule at the base, very thick-walled; paraphysoid structure very dense, filaments up to 5 μ thick. – Spores subfusiform to subcylindrical, 40–50 $\mu \times 5$–6 μ, generally slightly curved, 6-celled, constricted at the middle, the 3rd cell thicker than the others, the end-cells narrowly cylindrical, relatively broadly rounded at the ends; colour pale olive-greyish.

On dead stems of *Geum rivale*, March (also described by Larsen). – J.: Eltang.

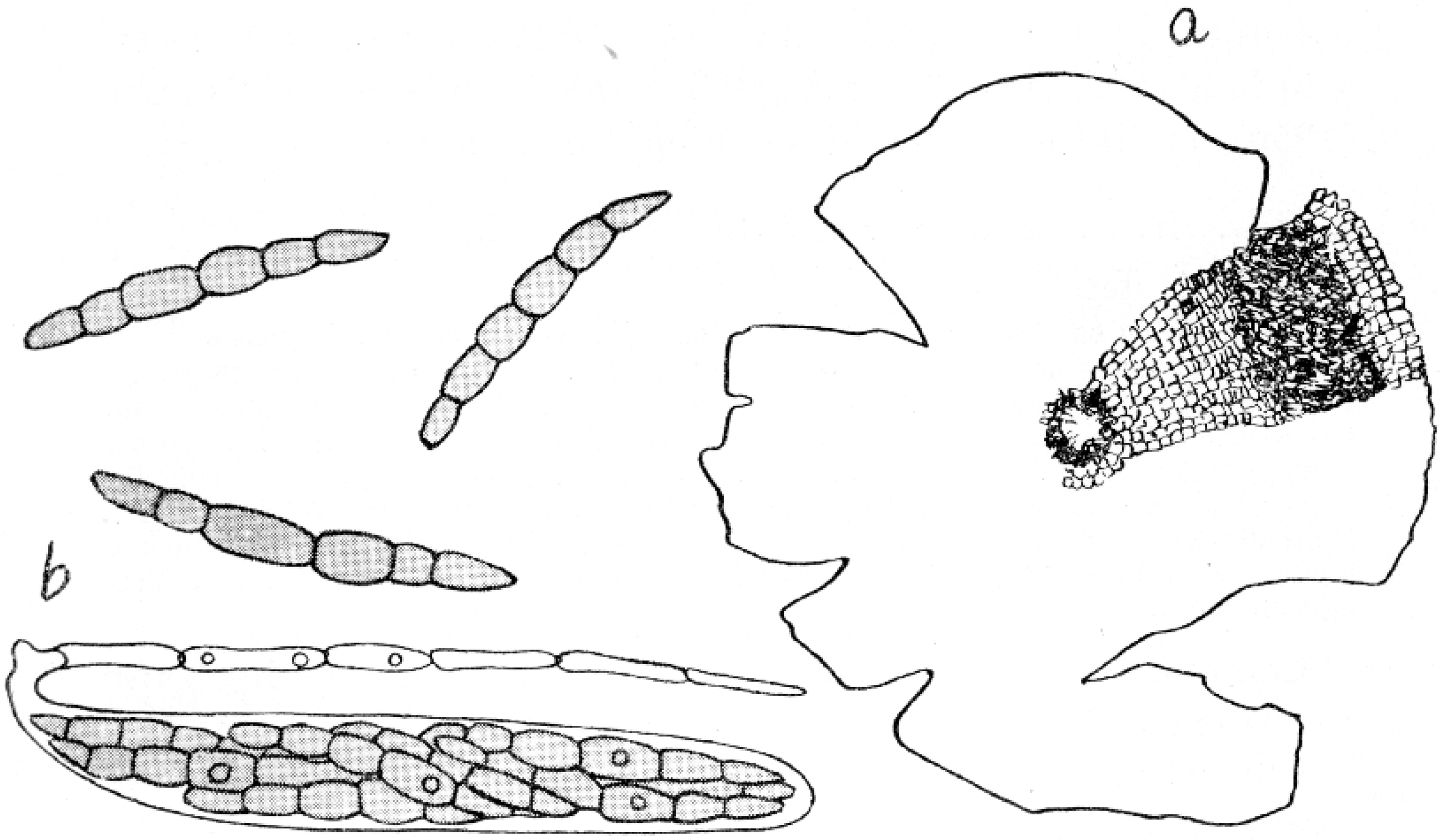

Fig. 16. Leptosphaeria cfr. ogilviensis (Berg & Br.). –
a) Squeezed pseudothecium, dorsal view, ×125. b) Ascus and spores, ×750.

With some doubt, Larsen refers this fungus to *L. ogilviensis* (Berk. & Br.) Ces. & de Not. This determination may be correct; but the present fungus seems to be somewhat different from that described by Müller (1950) under this name, so the editor has preferred to give his own description here. (Ed.).

28.* L. cfr. derasa (Berk. & Br.) Awd. coll.

Editor's description:

Pseudothecia 300–400 μ diam., depressed, flattened at base, with a distinct, subcylindrical papilla, which is 60–70 μ thick and of the same height. – Peridium 12 (at the base and sides) –25 μ (at the base of the papilla) thick; cells 8–15 μ × 3–8 μ, thin-walled, olive-brown and flattened in the bottom of the pseudothecium, more thick-walled, darker brown and more isodiametrical towards the top; the inside of the papilla is covered with a dense tuft of blackish brown hairs, ca. 40 μ long, 3–4 μ thick, pointed, directed almost vertically upwards, somewhat recurved. – Asci somewhat converging in the peripheric parts of the pseudothecium, 80–90 μ × 11–13 μ, clavate, short–stipitate; paraphysoid tissue rather dense, filaments longer than the asci. – Spores irregularly clustered, 34–40 μ × 5–6 μ, more or less curved, 6–7-celled, attenuating towards the ends, but relatively broadly rounded, the 3rd cell inflated, barrel-shaped or thickest below the middle of the cell; not distinctly constricted at the septa; colour light olive-yellow.

On dead stems of *Hieracium vulgatum* coll., May. – J.: "Ørnereden" near Aarhus; Lilballe Skov, Bramdrup Skov and Marielund, all near Kolding.

Like the preceding species, this fungus was referred to *L.*

ogilviensis by LARSEN; this, of course, cannot be correct. The present fungus is a member of strips *L. derasa* in the sense of MÜLLER (1950); but it seems, that MÜLLER has not seen it. (Ed.).

29.* L. cfr. derasa (BERK. & BR.) AWD. coll.

Editor's description:

Pseudothecia ca. 350 μ diam., 300 μ high, depressed-spheric, slightly flattened at the base, with a short, truncate-conical papilla, which is ca. 100 μ thick at the top. – Peridium 25–50 μ thick, cells 13–20 μ × 9–12 μ, rounded, dark brown, flattened near the centre of the pseudothecium; the porus is (inside) covered with hairs, which are wavy, pointed or in the upper part somewhat clavate, 20–30 μ long, 2–4 μ thick; the hairs do not project beyond the top of the papilla. – Asci 100–110 μ × 13–15 μ, clavate, short-stipitate. – Spores 45–60 μ × 4½–6 μ, the 3rd cell inflated, generally thickest below the middle of this cell; total number of cells 8–11, generally 9; colour light olive-yellowish.

Common on dead stems of *Centaurea*, in the spring (also described by LARSEN). – Only a single locality recorded. – J.: Jels.

This fungus, too, is a member of MÜLLER's stirps *L. derasa* and cannot be placed in any of the species described by MÜLLER. (Ed.).

30.* L. dolioloides AWD.

On dead stems of *Tanacetum vulgare*, Febr.–June. – J.: Kolding Skov; the new churchyard in Kolding; Trelde Sande.

This is till now the only species within MÜLLER's stirps *L. derasa* identified with certainty by the editor; there is no doubt, as also stated by MÜLLER, that this stirps will turn out to be a very difficult problem in taxonomy. (Ed.).

31. L. cfr. Phyteumatis (FCK.) WINTER

Perithecia somewhat flattened, 200–300 μ diam., covered with a dense tomentum of dark hyphae; papilla small. –Asci elongate-clavate, ca. 80 μ × 8–9 μ, 8-spored. – Spores irregularly 2-seriate, fusiform, slightly curved, 7–8-celled, yellowish brown, end-cells hyaline or almost so, 26–28 μ × 4–5 μ.

On dead stems of *Phyteuma spicatum*, April. – J.: Seest near Kolding.

LARSEN believes, that the material examined by WINTER (see WINTER 1887) has been partly spoiled by drying (WINTER describes the spores "mit 4 (5–6?) Querwänden.") If this is true, MÜLLER (1950) cannot be right in giving the name *L. Phyteumatis* as a synonym of *L. modesta*, even if the "pale end-cells" described by LARSEN are appendages and not real cells; *L. modesta* has minute spheric appendages on the spore. (Ed.).

32.* L. agnita (Desm.) Ces. & de Not.

Common on dead stems of *Eupatorium cannabinum*, May–July. – J.: Mosgaard; Ejstrup; Trelde Sande. F.: Elsehoved.

33. L. acuta (Moug. & Nestler) Karsten

On the dead stems of *Urtica dioeca*, probably in any vegetation of this plant; in the spring. – Only a single locality given: J.: Eltang.

34.* L. multiseptata Winter

On dead stems of *Lathyrus silvestris*, May. – J.: Riis Skov.

Metasphaeria Sacc.

1.* M. Bellyncki (West.) Sacc.

On dead stems of *Polygonatum multiflorum*, April. – J.: Kolmarksbuske near Kolding.

On *Iris Pseudacorus* and *Carex acutiformis*, Larsen has found species of *Metasphaeria* very similar to *M. Bellyncki*; his brief descriptions do not seem to reveal any great difference between the fungi mentioned. (No material left).

2.* M. ocellata (Niessl) Sacc. sensu Petrak

On dead stems of *Hypericum perforatum*, May. – J.: Marielund near Kolding.

3. M. bispora Poul Larsen n. sp. (Fig. 17).

Perithecіis gregariis, immersis, dein fere superficialibus, vix 100 μ diametro; papilla minima. – Peridio tenui. – Ascis cylindraceo-clavatis, breve stipitatis, 45–52 μ × 8–9 μ, *bisporis*; paraphysibus delicatulis. – Sporis fusiformibus, strictis vel leniter curvatis, 2-, dein 4-cellularibus, medio constrictis, hyalinis, 25–26 μ × 6–7 μ; in utraque cellula sporae guttula olcaria.

In foliis *Typhae latifoliae*.

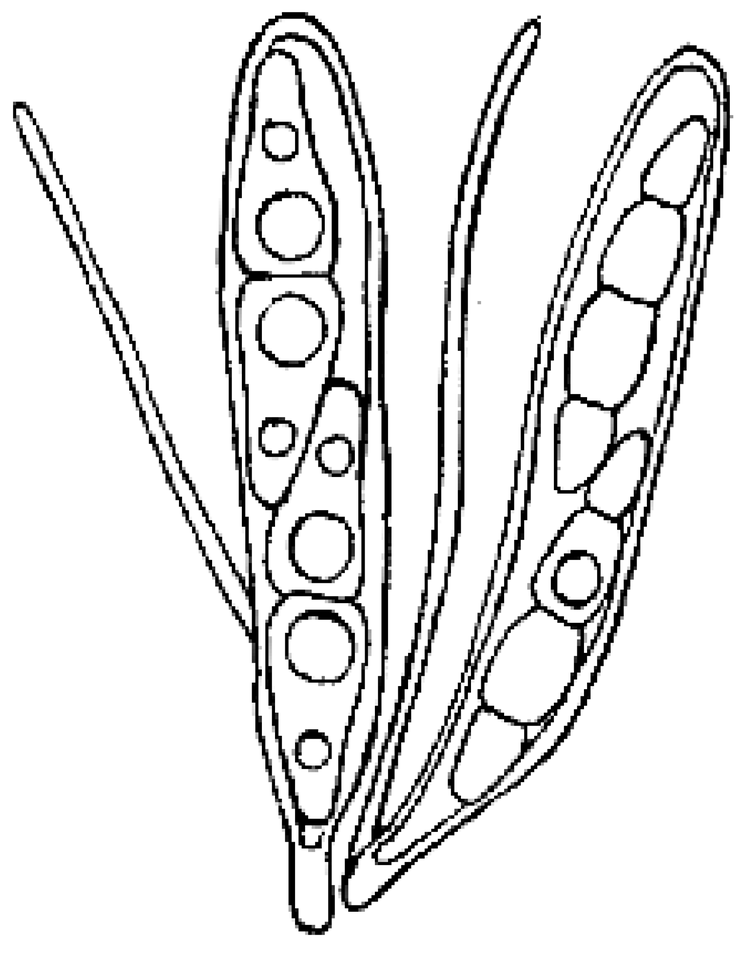

Fig. 17. Metasphaeria bispora Larsen n. sp. – Asci, × 750.

Perithecia gregarious, at first immersed, then more superficial, hardly 100 diam., with a small papilla. – Peridium thin. – Asci cylindrical-clavate, short-stipitate, 45–52 $\mu \times 8$–9 μ, 2-spored; paraphyses delicate, but distinct. – Spores fusiform, straight or slightly curved, 4-celled, but tardily septate, constricted, especially at the middle septum, with an oil-drop in each cell, hyaline, 25–26 $\mu \times$ 6–7 μ.

Amphigenous on dead leaves of *Typha latifolia*.

July. – J.: In a bog near the Northern end of Lilballe Skov near Kolding.

4.* M. cfr. arenariae Bomm., Rouss. & Sacc.

Editor's description:

Pseudothecia scattered, half immersed in the hard substance of the substratum, 400–450 μ diam., depressed-subspheric, black. – Peridium 13 (in the bottom) –40 μ (in the sides) thick, cells 2–8 $\mu \times 2$–5 μ, very thin-walled, hyaline or almost so in the main part; in the free part, the superficial layer is rather dark brown, with strongly thickened cell-walls; the papillar part of the peridium is covered with dark brown, not very pointed, somewhat sinuate hairs, 25–35 μ long, 3–4 μ thick, which are almost totally embedded in a loose layer of isodiametrical, subhyaline cells, ca. 5 μ diam. – Asci parallel, 90–105 $\mu \times 10$–13 μ, cylindrical-clavate, sessile; paraphysoid tissue rather abundant, filaments thin, longer than the asci. – Spores 1–2-seriate, 22–27 $\mu \times 5$–6 μ, 4-celled, constricted, especially at the middle, end-cells rather broadly parabolically rounded; spores generally curved, with an oil-drop in each cell and a rather persistent gelatinous covering, which is thickest at the middle, thin at the ends; spores hyaline.

On dead stems of *Elymus arenarius*, Dec. – J.: At Ringkøbing Fjord.

Larsen determined this fungus to *Leptosphaeria setulosa* Sacc. & Roum. (over-ripe spores are slightly brownish); other names in question are *Metasphaeria recutita* (Fck.) Sacc. and *Metasphaeria arenariae* Bomm., Rouss. & Sacc. (Ed.).

A similar fungus was found by Larsen on *Juncus effusus* (material examined); it has asci 70–80 $\mu \times 10$–13 μ and spores 27–30 μ $\times$ ca. 5 μ. – J.: Stormosen near Kolding; Hammer Bakker.

Pleospora Rbh.

1.* Pl. typhicola (Cke.) Sacc.

On dead leaves of *Typha latifolia*, March–July. – J.: Tavlov Sø; Stallerup Sø near Kolding; Lilballe; Sjølund; Harte near Kolding; Trelde Sande.

2.* Pl. vagans Niessl

On dead stems and leaves of monocotyledonous plants, rarely on dicotyledonous plants, or even cryptogams, Dec.–June. – A

series of finds from J.: On *Equisetum hiemale* (!) (Eltang); on *Alisma plantago-aquatica* (Kobbelskov); on *Typha latifolia* (Lilballe and Stallerup Sø, both near Kolding); on *Scirpus lacustris* (Dons); on *Carex muricata* (Marielund near Kolding); on *Carex arenaria* (Dons); on *Carex acutiformis* (Jels); on *Nardus stricta* (Stallerup Sø); on *Cynosurus cristatus* (Stallerup Sø); on *Deschampsia caespitosa* (Riis Skov near Aarhus); on *Bromus Benekeni* (Trelde); on *Achillea millefolium* (no locality).

2a.* Pl. vagans var. arenaria Niessl

On dead stems of *Elymus arenarius*, July. – Fænø.

3. Pl. infectoria Fck.

On dead stems or leaves of monocotyledonous plants, March–May. – On *Cynosurus cristatus*. (No locality). – J.: On *Typha latifolia* (Stallerup Sø near Kolding); on *Holcus mollis* (Lilballe).

4.* Pl. scirpicola (de Cand.) Karsten

On dead specimens of *Scirpus lacustris*, May. – J. Brabrand; Jels.

5.* Pl. vulgaris Niessl

On dead stems of dicotyledonous plants, Jan.–June. – A long series of finds from J., one from Thurø: On *Ranunculus acer* (near Kolding); on *Lychnis Flos cuculi* (Lilballe); on *Brassica* cult. (Søndervang in Kolding); on *Geum rivale* (Eltang); on *Fragaria* (Kolding, in Larsen's own garden); on *Angelica silvestris* (Eltang); on *Pirola minor* (Klintenborg plantation near Kolding); on *Primula veris* (Eltang); on *Armeria vulgaris* (at Stallerup Sø near Kolding); on *Symphytum sp.* (Hadsund); on *Solanum tuberosum* (Gelballe); on *Scrophularia nodosa* (Christiansminde at Kolding Fjord); on *Plantago major* (Marielund near Kolding); on *Plantago lanceolata* (Eltang); on fruits of *Fraxinus excelsior* (Kolding); on *Phyteuma spicatum* (Trelde); on *Achillea millefolium* (at Stallerup Sø); on *Tanacetum vulgare* (Eltang); on *Centaurea jacea* (Eltang); on *Cichorium intybus* (Thurø).

6.* Pl. herbarum (Pers.) Rbh.

Very common on dead stems, chiefly on dicotyledonous plants; also found on moist paper; in the spring. – A long series of finds from J.: On moist paper (Skamling); on *Equisetum hiemale* (Eltang); on *Polygonatum multiflorum* (Komarksbuske near Kolding);

on *Asparagus officinalis* (Brabrand); on *Iris Pseudacorus* (Eltang, Jels, Trelde); on *Luzula silvatica* (F.: Kongebroskoven near Middelfart); on *Triglochin palustre* (Stormosen near Kolding); on *Neottia nidus avis* (Vonsild Skov); on *Typha latifolia* (no locality); on *Scirpus silvaticus* (Eltang); on *Cladium mariscus* ("Sølyst" near Hadersley); on *Carex paniculata* (at Hadersley Fjord); on *Carex silvatica* (Marielund near Kolding). – On *Pulsatilla vulgaris* (Brabrand); on *Cerastium* sp. (no locality); on *Lychnis Flos-Cuculi* (Lilballe); on *Beta vulgaris* cult. (Strandbjerggaard); on *Salicornia herbacea* (Højer Sluse); on *Linum catharticum* (Lilballe); on *Brassica oleracea* cult. (Søndervang in Kolding); on *Sedum maximum* (Sølyst); on *Sedum* sp. (Hadsund, in a garden); on *Parnassia palustris* (Lilballe); on *Saxifraga corniculata* (no locality); on *Filipendula ulmaria* (Eltang); on *Geum rivale* (Kolding Skov); on *Geum urbanum* (Vonsild); on *Fragaria vesca* (no locality); on *Ulex europaeus*, growing in the sepala (Dons); on *Astragalus glycyphyllus* (Harte near Kolding); on *Medicago sativa* (Konstantinsborg); on *Lotus corniculatus* (Stormosen near Kolding); on *Lupinus angustifolius* (a garden in Kolding); on *Epilobium palustre* (at Slotssøen in Kolding). On *Pirola minor* (Klintenborg plantation near Kolding); on *Primula veris* (Eltang); on *Brunella vulgaris* (Hasselager; Taulov); on *Thymus serpyllum* (Hadsund); on *Scrophularia nodosa* (Løverodde; Trelde); on *Plantago lanceolata* (no locality); on *Succisa pratensis* (Stormosen); on *Sambucus Ebulus* (no locality); on *Phyteuma spicatum* (Langenæs); on *Campanula trachelium* (Harte); on *Centaurea jacea* (Kolding Skov); on *Cichorium Intybus* (Elev); on *Hypochoeris radicata* (Viuf); on *Hypochoeris maculata* (Gyttegaard); on *Hieracium silvaticum* coll. (Vonsild).

7.* Pl. rubicunda Niessl

On dead specimens of *Juncus effusus*, March–June. – J.: At Stallerup Sø near Kolding; Viuf; Hammer Bakker; Vorbasse.

This is probably a polyphagous species, but it is remarkably often found on *Juncus effusus*.

8. Pl. Hippophaës Poul Larsen n. sp. (Fig. 18).

Pseudotheciis ± dispersis, inter peridermidem et corticem sedentibus, lentiformibus, c. 400 μ diametro; papilla curta, crassiuscula, peridermidem leviter pulvinatam perforante, sed non protuberante. – Peridio tenui. – Ascis octosporis, cylindraceis, breviter stipitatis, 160 μ × 16–20 μ, pariete crasso; textura interasciculare paraphysiforme. – Sporis oblique vel stricte uniseriatis (rarius pro parte biseriatis),

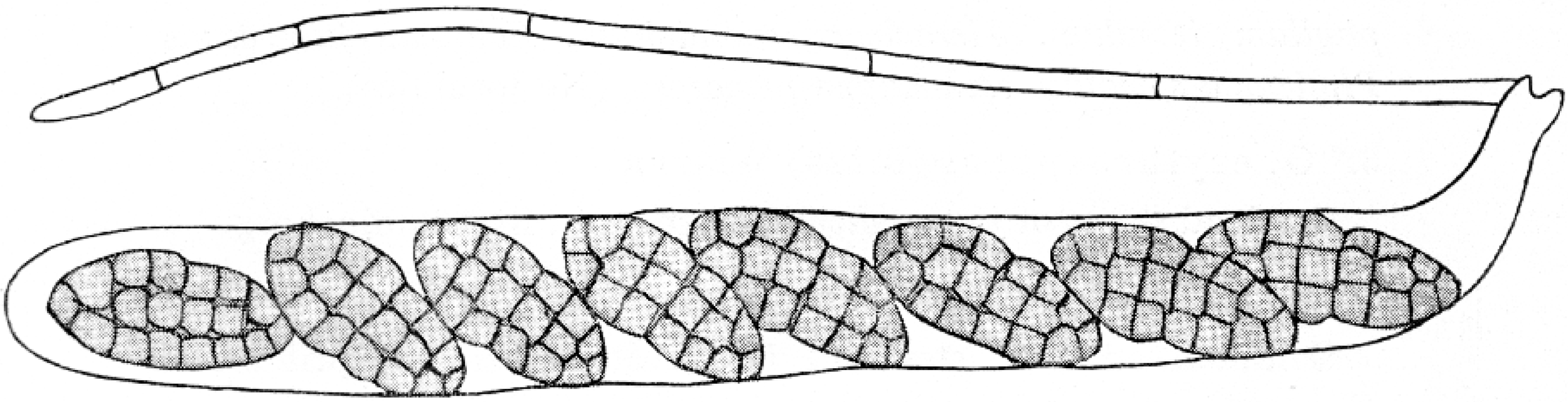

Fig. 18. Pleospora Hippophaës LARSEN n. sp. – Ascus, ×800.

24–30 μ × 10–13 μ, subellipsoideis, utrinque rotundatis, sub medio leviter constrictis, laete fulvis, transversaliter 7-septatis, longitudinaliter 2-septatis.

In ramulis siccis Hippophaës rhamnoides.

Perithecia ca. 400 μ diam., more or less scattered, occasionally two together between the peridermis and the bark, depressed; papilla short and thick, just penetrating the peridermis. Peridium very thin. Asci cylindrical, short-stipitate, 160 μ × 16–20 μ, thick-walled, 8-spored; paraphyses distinct. Spores 1(–2)-seriate, often obliquely 1-seriate, 24–30 μ × 10–13 μ, with a constriction a little below the middle, for the rest regularly ellipsoid, rounded at the ends, with 7 transversal septa and 2 longitudinal ones, yellowish brown.

On dead twigs of *Hippophaës rhamnoides*, Jan.–Febr. – J.: Riis Skov.

9.* Pl. trichostoma (FR.) WINTER

On stems and (especially) leaves of grasses, March–April. – J.: Friheden near Aarhus; on *Secale cereale* (near Stallerup Sø); on *Dactylis glomerata* (Eltang).

Ophiobolus RIESS.

1. O. herpotrichus (FR.) SACC.

On dead stems of grasses, April–June. – J.: Charlottehøj near Aarhus; on *Dactylis glomerata* (Hylke near Kolding); on *Bromus Benekeni* (Trelde).

2.* O. rubellus (PERS. ex FR.) SACC.

Syn. i. a.: *O. porphyrogonus* (TODE) SACC.

Dec.–June. – J.: On *Iris pseudacorus* (Vonsild Skov); on *Geum rivale* (Vonsild Skov; "Ellekrattet", probably near Kolding); on *Geum urbanum* (Kolding); on *Rubus Idaeus* (Hadsund); on *Chaero-*

phyllum temulum, *Heracleum spondylium*, *Solanum tuberosum*, *Phyteuma spicatum* and *Lappa nemorosa*. (No localities).

3.* O. erythrosporus (Riess) Winter

On dead stems of *Urtica dioeca*, April. – J.: Konstantinsborg.

4.* O. acuminatus (Sowerby) Duby

Common on dead stems of *Lappa* and *Cirsium*, April. – J.: Horsens.

5.* O. cfr. Hesperidis Sacc. var. Geranii Karsten

Editor's description:

Pseudothecia –450 μ diam., scattered, body flattened, papilla large, conical and strongly prominent, ca. 200 μ high, attenuating from ca. 200 μ in thickness at the base to 100 μ at the top. – Peridium 12 (in the bottom) to 45 μ (at the base of the papilla) thick; cells ca. 10–12 μ × 5 7 μ, indistinct, with an indistinct granular structure of the walls, of a remarkable light olive-brownish colour, especially at the outside (!); here, they are almost hyaline. In fresh sections in lactic acid is seen a strong red colouring of the fluid surrounding the upper part of the pseudothecium; this colour is caused by a soluble, very diffusible red substance, which is seen to be situated in the outer cells of the peridium; this substance is apparently not soluble in glycerine. – Asci converging, 120–140 μ × 5–7 μ, cylindrical, short-stipitate; paraphysoid tissue not very dense, filaments ca. 2 μ thick (i. e. a little thicker than the spores). – Spores indistinctly septate, light yellow; no peculiar thickenings observed.

On dead stems of *Geranium silvaticum*, May (described by Larsen sub. nom. *O. pellitus* (Fck.) Sacc.). – J.: Lystrup Skov.

6.* O. cfr. pellitus (Fck.) Sacc.

Editor's description:

Pseudothecia scattered, 300–350 μ diam., covered by the epidermis, depressed with a distinct subcylindrical papilla, which is ca. 100 μ thick, 50 μ high; porus wide, 50–60 μ diam. – Peridium ca. 8 μ thick in the bottom of the pseudothecium, 13–16 μ at the sides and ca. 30 μ at the top; cells 6–10 μ × 2–5 μ, thin-walled and almost hyaline in the bottom, more thick-walled (especially in the outer half) and blackish brown in the sides, very thick-walled, almost opaque black in the upper part; at the outside, the peridium is sparsely covered with light brown hyphae, 3–4 μ thick. – Asci strongly convergent, springing from the lower half of the pseudothecium, 100–140 μ × 5–8 μ, with a short, nodulous stipe, cylindrical; paraphysoid tissue well developed. – Spores as long as the asci, ca. 1 ½ μ thick, indistinctly multiseptate, yellowish.

On dead stems of *Geum urbanum*, June. – J.: Kolding Skov.

This fungus, too, was referred to *O. pellitus* by Larsen.

7.* O. Niesslii Bäumler

A sample in Larsen's herbarium; no records about substratum, locality or date.

8. O. tenellus (Awd.) Sacc.

On dead stems of *Geum urbanum*, May. – J.: Kolding Skov; Bramdrup Skov.

8.* O. fruticum (Rob.) Sacc.

On dead stems of *Ononis spinosa*, May. -- J.: Jels.

Enchnoa Fr.

1. E. infernalis (Kze.) Sacc.

On dead branches of *Quercus Robur*, Febr.–April. – J.: Aarhus: "Friheden" and two localities near Frederikshøj.

2. E. Friesii Fck.

On dead branches of *Caprifoliaceae*, Jan.–March. – J.: On *Sambucus nigra* (Sommersted); on *Viburnum Opulus* (Søndervang in Kolding).

Massariella Speg.

1.* M. bufonia (Berk. & Br.) Speg.

On dead branches of *Quercus robur*, Dec.–April. – J.: "Strandbjerggaard"; Riis Skov; "Friheden" in Aarhus; Eltang.

2.* M. vibratilis (Fck.) Sacc.

On dead branches of *Prunus Avium*, Jan.–April. – Probably present in any larger vegetation of the host-plant. (No localities).

3.* M. Currеyi (Tul.) Sacc.

Syn. i. a.: *Phorcys Tiliae* (Currey) Schroeter

On dead branches of *Tilia*, Dec.–Febr. – J.: Marselisborg near Aarhus; "Slotssøen" and Marielund near Kolding.

Massarina Sacc.

1.* M. eburnea (Tul.) Sacc.

On dead branches of *Fagus silvatica*, March–April. – J.: Riis Skov; Løverodde at Kolding Fjord.

2. M. polymorpha (Reihm) Sacc.

On dead twigs of *Rosa* sp., March. – J.: Vonsild Mark near Kolding.

3.* M. micacea (Kze.) Sacc.

On dead twigs of *Tilia*, Febr. – J.: Kolding (in Larsen's own garden).

4.* M. salicinicola Rehm

On dead twigs of *Populus candicans*, March. – J.: Marielund near Kolding.

Massaria de Not.

1.* M. foedans (Fr.) Fck.

Common on dead branches of *Ulmus*, in the winter. – J.: On *Ulmus campestris* ("Vennelyst" in Aarhus).

2.* M. Pupula (Fr.) Tul.

On dead branches of *Acer*, Dec.–March. – J.: "Vennelyst" in Aarhus; Marielund in Kolding.

3. M. Argus (Berk. & Br.) Fres. (Fig. 19).

On dead branches of *Tilia cordata*. (No locality or date).

The fungus described by Larsen under this name only differs from the typical *M. Argus* (on *Betula*) by somewhat narrower spores: 49–57 $\mu \times 14$–17 μ.

4.* M. conspurcata (Wallr.) Sacc. (Fig. 20).

On dead branches of *Cerasus Padus*, in the winter. – J.: In all the woods around Aarhus. F.: Sandholt near Faaborg.

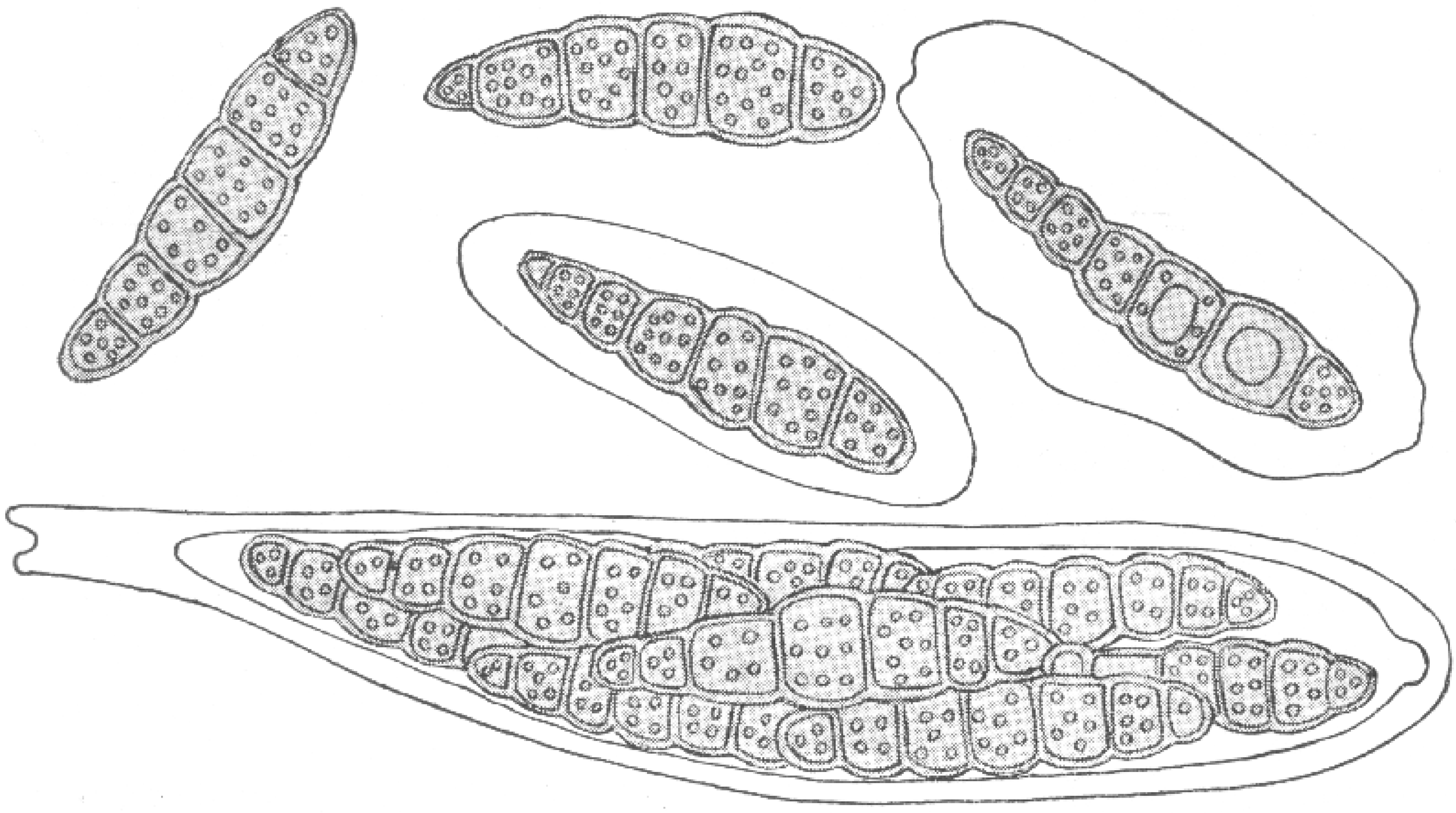

Fig. 19. Massaria cfr. Argus (Berk. & Br.). – Ascus and spores, $\times 750$.

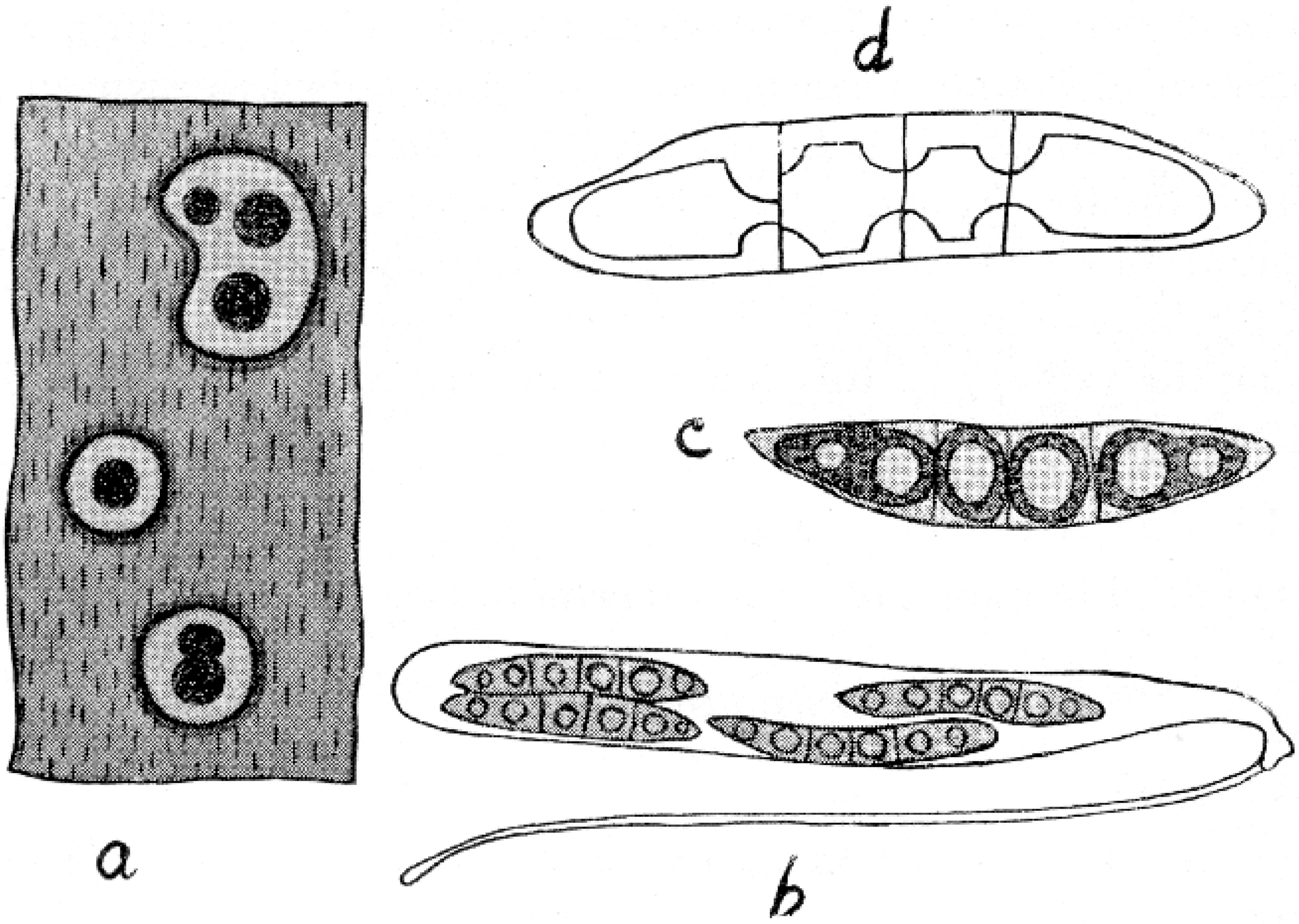

Fig. 20. Massaria conspurcata (Wallr.). a) Stromata, tangential section, ×5. b) Ascus, ×250. c) Spore, ×500. d) Spore, ×750.

5.* M. hirta (Fr.) Fck.

On dead branches of *Caprifoliaceae*, Febr.–March. – J.: On *Lonicera* sp. (in the church-yard of Kolding); on *Sambucus nigra* (Søndervang in Kolding).

6. M. stipitata Fck.

On dead branches of *Fagus silvatica*, Febr. – J.: Marselisborg.

7. M. loricata Tul.

On dead branches of *Fagus silvatica*, Febr. – J.: "Fribeden" in Aarhus.

Pleomassaria Speg.

1.* Pl. rhodostoma (Alb. & Schw.) Winter

On twigs of *Franqula Alnus*, Jan.–April. – J.: Skanderborg; Jels.

2.* Pl. siparia (Berk. & Br.) Sacc.

On dead twigs of *Betula*, Febr.–April. – S.: Havselskabets Have in Copenhagen. J.: Skamlingsbanken.

On *Alnus glutinosa* was found a fungus, which Larsen interpretes as a form of *Pl. siparia*. It has smaller perithecia, smaller asci (ca. 150 $\mu \times 40\ \mu$) and spores (40–50 $\mu \times 11$–15 μ) (*Pl. siparia*

has asci 180–250 $\mu \times 25$–40; spores 50–70 $\mu \times 15$–18 μ); further, the spores of the *Alnus*-form are almost opaque dark brown and so strongly constricted at the middle, that they often fall into two pieces; finally, the end-cells of the spores often show a longitudinal septum (this is never seen in the typical *Pl. siparia*). – J.: Riis Skov (at the base of the slope between the two foot-paths from the road along the railway to Riis Skov); Hammer Bakker. (No material left).

3. Pl. Carpini (Fck.) Sacc.

On dead branches of *Carpinus betulus*, Dec. – J.: Slavtrup Skov.

Anthostomella Sacc.

* A. tomicoides Sacc.

On dead stems of *Eupatorium cannabinum*, May. – J.: "Sølyst" near Hadersley.

Clypeosphaeria Fck.

* Cl. Notarisii Fck.

Dec.–April. – J.: On *Chamaenerium angustifolium* (Ringkøbing); on *Acer platanoides* (Friheden near Aarhus); on *Cornus sanguinea* (Aarhus; Kolding, in Larsen's own garden).

As stated by Larsen in a note, *Cl. mamillana* (Fr.) is certainly identical with the present species.

Hypospila Fr.

H. Pustula (Pers.) Karsten

On dead leaves of *Quercus Robur*, April. (Other material examined). – No locality.

Linospora Fck.

* L. Caprearum (DC.) Fck.

On dead, fallen leaves of *Salix* spp., especially on *S. Caprea*, May. – J.: "Ørnereden" near Aarhus.

Phomatospora Sacc.

* Ph. ovalis (Pass.) Sacc.

On dead stems of *Juncus effusus*, April–May. – J.: Stallerup Sø, Klintenborg Plantation, Vonsild Aa and Sjølund, all near Kolding.

Ditopella DE NOT.

* D. ditopa (FR.) SCHROETER

On dead branches of *Alnus glutinosa*, Jan.–April. – Very common, often in company with *Gnomonia conformis*, the perithecia of which are seated near the nodi, whereas the perithecia of the *Ditopella* are scattered over the whole internodium. – J.: Struer; Seest Mølleaa and Dalby Mølleaa, both near Kolding.

Ceriospora NIESSL

* C. Ribis P. HENNINGS

On branches of *Ribes nigrum*, Jan.–April. – J.: "Friheden" near Aarhus; Skanderborg; Dalby Mølleaa near Kolding).

Gnomonia CES. & DE NOT.

1.* Gn. amoena (NEES) WINTER.

On dead leaves of *Corylus avellana*, April. – J.: Seest near Kolding.

2.* Gn. inclinata (DESM.) AWD.

On petioles of *Acer Pseudoplatanus*, March–April. – J.: Egtvedvej near Kolding; Skamlingsbanken.

3.* Gn. Gnomon (TODE) SCHROETER

On dead leaves of *Corylus avellana*, April–May. – Common. (No localities).

4.* Gn. devexa (DESM.) AWD.

On dead stems of *Rumex* sp., May. – J.: Jels.

5. Gn. errabunda (ROB.) AWD.

On dead leaves of *Fagus silvatica*, April–May. – J.: "Friheden" near Aarhus; Lystrup.

6.* Gn. salicella (FR.) SCHROETER

On dead branches of *Salix* spp., Febr.–April. – J.: Riis Skov; Seest Mølleaa and Dalby Aadal near Kolding.

7.* Gn. conformis (BERK. & BR.) FERD. & WINGE

On dead branches of *Alnus glutinosa*, Febr.–April. – J.: Marselisborg near Aarhus; Seest Mølleaa and Komarksbuske near Kolding.

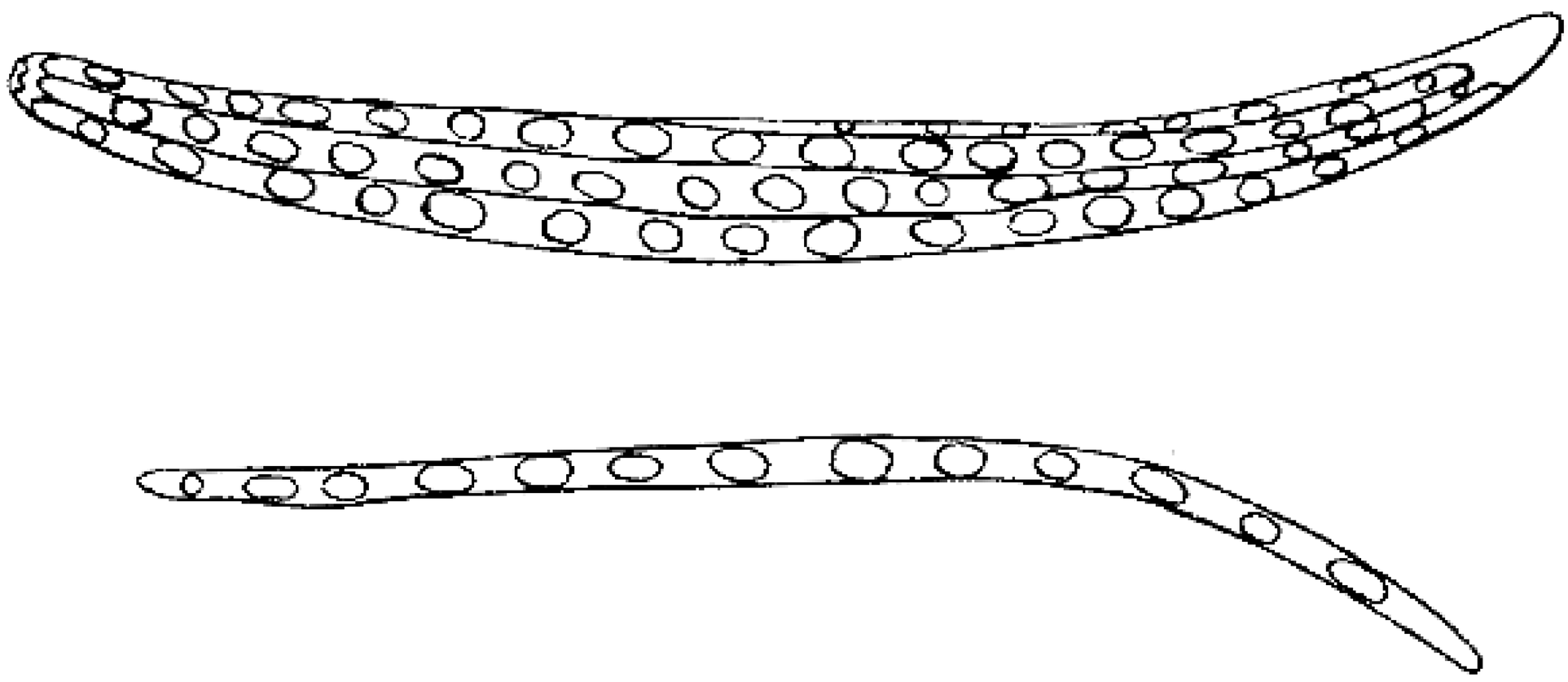

Fig. 21. Gaeumannomyces sp. – Ascus and spore.

Gnomoniella Sacc.

* Gn. tubaeformis (Tode) Sacc.

On half-decayed leaves of *Alnus glutinosa*, Febr. – J.: Skanderborg Dyrehave.

Gaeumannomyces v. Arx & Olivier

* G. sp. (Fig. 21).

Editor's description:

Perithecia ca. 350 μ diam., immersed, almost not prominent, scattered in the lower part of the stem of the host-plant; astiolum cylindrical-clavate, ca. 80 μ high and 80 μ thick at the top, penetrating the epidermis. – Peridium thin and soft, 20–25 μ thick, textura prismatica; cells ca. 8 μ × 5–6 μ, olive-greyish; in the ostiolum a similar structure; no distinct periphyses seen. – Asci 120–170 μ × 9–11 μ, slenderly fusiform, almost sessile, ca. 3 μ thick at the top, rounded-truncate, with a most delicate apical structure, visible as two elongate, parallel, refractive bodies closely together; among the asci are seen numerous oil-drops of various size, the largest ones being 20 μ diam. – Spores 120–150 μ × 3 ½–4 ½ μ, attenuating towards the narrowly parabolical ends, with many comparatively large oil-drops and apparently septate into 18–20 μ long cells by delicate transversal septa.

On stems of larger *Carex* spp. (*C. acutiformis* and *C. paniculata*), July (also described by Larsen). – J.: Trelde Sande; Hammer Bakker; Alminde.

Larsen has determined this fungus to *Ophiobolus herpotrichus* and given it the provisional name *O. herpotrichus* f. *caricinum*.

The genus *Gaeumannomyces* seems to be little investigated. I have been obliged to list the present species as *Gaeumannomyces* sp. (Ed.).

Diaporthe Nke.

The species within this large genus are mainly arranged according to Wehmeyer (1933).

1.* D. Arctii (Lasch) Nke.

D. Tulasnei Nke.

On dead stems of herbaceous plants, March. – J.: Komarksbuske near Kolding.

2.* D. linearis (Nees) Nke.

Common on dead stems of *Solidago virgaurea*. – Als: Als Odde, July.

3.* D. pardalota (Mont.) Fck.

D. insignis Fck.

On decaying stems of *Rubus* sp. and *Rubus Idaeus*, Dec.–Jan. – J.: Fovslet Skov; a garden in Kolding.

4.* D. Eres Nke.

D. Eres typ.

On dead branches of *Ulmus*, Dec.–Jan. – J.: Frederikshøj in Aarhus; Marielund and Bramdrup Skov near Kolding.

D. fallaciosa Nke.

On dead branches of *Acer Pseudoplatanus*, Jan.–April. – J.: Bygholm near Horsens; Marielund near Kolding.

D. incrustans Nke.

On dead stems of *Brassica oleracea* cult., Dec. – J.: Strandbjerggaard.

D. pithya Sacc.

On dead branches of *Picea Abies*, Dec. – J.: Bramdrup Skov near Kolding.

It was noticed by Larsen, that this fungus is very close to *D. resecans* Nke.; the latter species is also a form of *D. Eres* sensu Wehmeyer.

* *D. revellens* Nke.

On dead branches of *Corylus avellana*, Febr. – J.: "Fiskehuset" near Aarhus.

* *D. scobina* Nke.

On dead branches of *Fraxinus excelsior*. – No locality or date.

D. controversa (Desm.) Fck.

On dead twigs of *Fraxinus excelsior*, Dec. – J.: Thygeslund near Hadsund.

D. Ligustri Allescher

On dead branches of *Ligustrum vulgare*, Febr. – J.: Stejlbjerg in Kolding.

* *D. cryptica* Nke.

On dead stems of *Lonicera periclymenum*, Jan. – J.: Fredericia; Kolding Skov.

D. forabilis Nke.

On dead branches of *Populus* and *Salix*, Dec. – J.: Thygeslund near Hadsund.

D. Cerasi Fck.

On dead branches of *Cerasus avium*, Febr.–May. – J.: Dyrehavegaard Skov, Bramdrup Skov, and Harte near Kolding.

* *D. insularis* Nke.

On dead twigs of *Quercus Robur*, Jan.-April. – J.: "Friheden" near Aarhus; Konstantinsborg.

D. incarcerata (Berk. & Br.) Nke.

On decaying twigs of *Rosa* sp., Febr. – J.: Søndervang in Kolding.

D. Ryckholtii (West.) Nke.

On dead branches of *Symphoricarpus racemosa*, Jan. – J.: Kolding.

* *D. resecans* Nke.

On dead branches of *Syringa vulgaris*, Dec. – J.: Stensballe.

* *D. velata* (Pers.) Nke.

On dead branches of *Tilia*, Jan. – J.: Konstantinsborg.

5. D. spiculosa (Alb. & Schw.) Nke.

On dead branches of *Caprifoliaceae*, Jan.–March. (Other material examined). – J.: On *Sambucus* sp. (Vennelyst in Aarhus; Stejlbjerg in Kolding); on *Viburnum Opulus* (Søndervang in Kolding).

6.* D. pulla Nke.

On dead branches of *Hedera helix*, Jan. – J.: Fredericia.

7. D. decedens (Fr.) Fck.

Syn. i. a.: *D. tessera* (Fr.) Fck.

On dead branches of *Corylus avellana*, Dec.–April. (Other material examined). – J.: Seest; Vonsild; Kolding.

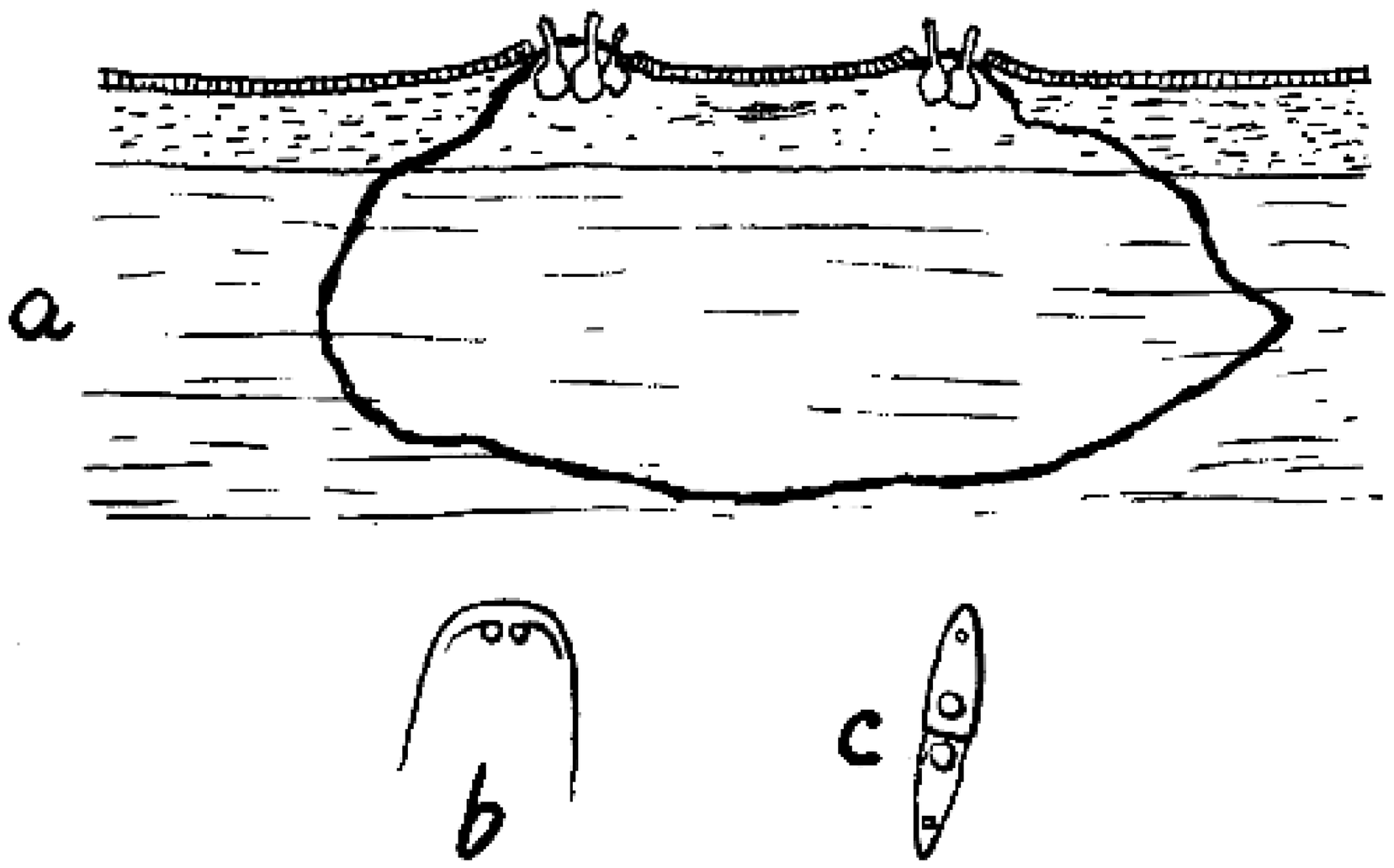

Fig. 22. Diaporthe accrina Peck. –
a) Stroma, ×5.
b) Ascus-top, ×1000.
c) Spore, ×1000.

8.* D. Padi Otth

Growing very densely on dead branches of *Cerasus Padus*, Febr. – J.: Skamlingsbanken. – According to Larsen probably present in any vegetation of the host.

9.* D. acerina (Peck) Sacc. (Fig. 22).

According to Wehmeyer, this species has till now only been found in N. America on *Acer spicatum*. In order to confirm this evidence of a find in Europe, the editor gives his description here:

Stroma pustulate-effuse, occasionally rather widely extended; ventral zone distinct, dipping deeply into the wood, continuous with the dorsal zone, which runs in the bark and again continues into the black disc; dorsal zone in the Danish specimens *not* present between the pustules of the same stroma; tissue of the zones 20–40 μ thick, textura prismatica-globosa, cells small, 2–3 μ diam., with thickened, dark olive-brownish walls. – Perithecia 225–400 μ diam., rather deeply immersed, subspheric, uniseriate, in more or less dense clusters; ostiola more or less typically collectively erumpent, free part cylindrical-subclavate, 150–180 μ thick. – Peridium 20–25 μ thick, textura porrecta-prismatica, cells 4–7 $\mu \times$ 2(–3) μ, thin-walled, light olive-coloured. – Asci ca. 70 $\mu \times 8$–10 μ, slenderly clavate, parabolically rounded at the top, with two small refractive points in the very apex. – Spores 13–15 $\mu \times 3\frac{1}{2}$–$4\frac{1}{2}$ μ, subfusiform, hardly or not constricted, with two large (central) oil-drops and two smaller (terminal) ones.

On dead, thin twigs of *Acer Pseudoplatanus*, Jan. (not described by Larsen). – J.: Marielund near Kolding. (Det. by the editor).

10. D. oncostoma (Duby) Fck.

On dead branches of *Robinia Pseudacacia*, Dec.–Febr. – J.: Marielund near Kolding.

11.* D. Crataegi Nke.

On dead branches of *Crataegus oxyacantha*, Nov.–March. – J.: Riis Skov; Alpedalen and Seest Mølleaa near Kolding; Søndervang in Kolding.

12.* D. pustulata (Desm.) Sacc.

On dead branches of *Acer Pseudoplatanus*, Dec.–Febr. – J.: Ringkøbing; Marielund and Dalby Aadal near Kolding.

13.* D. inaequalis (Curr.) Nke.

On dead stems and branches of *Sarothamnus scoparius*, common; also found on *Genista anglica* (hosp. nov. sec. Weimeyer 1933); Dec.–July. – J.: Skanderborg Dyrehave; Seest Mølleaa near Kolding; Hadsund. Als: Als Odde (on *Genista*).

14. D. Laschii Nke.

On dead branches of *Euonymus europaeus*. (No locality or date).

15. D. Carpini (Fr.) Fck.

Syn. i. a.: *D. Betuli* (Pers.) Winter

On dead branches of *Carpinus betulus*, Dec.–Febr. – J.: Stavtrup Skov; Søndervang in Kolding; Vonsild.

16.* D. syngenesia (Fr.) Fck.

On dead branches of *Frangula Alnus*, Dec.–April. – J.: Rosenholm; Hadsund.

17.* D. strumella (Fr.) Fck.

On dead stems and branches of *Ribes* spp., Febr.–March. – J.: Søndervang in Kolding (on *Ribes grossularia*); Vonsildgaard Skov near Kolding (on *Ribes rubrum*).

18.* D. fibrosa (Pers.) Fck.

On dead branches of *Rhamnus cathartica*, ?*Cerasus* and ?*Prunus spinosa*, April. – J.: Marselisborg; Eltang.

Larsen mentions, that he has found this species also (but rarely) on *Prunus* and *Cerasus*; but a specimen in his herbarium labelled: "Host: *Prunus spinosa*" also shows twigs of *Rhamnus cathartica*

with the fungus; so it is still doubtful, as also emphasized by WEHMEYER (1933), if *D. fibrosa* occurs on other hosts than *Rhamnus*. (Ed.).

19.* D. detrusa (FR.) FCK.

On dead twigs of *Berberis vulgaris*, Jan.–April. – J.: Bygholm near Horsens; Konstantinsborg.

20.* D. leiphaemia (FR.) SACC.

Very common on dead branches of *Quercus*, in the winter. – Only one statement of locality: – J.: Ryhave.

21.* D. tessella (PERS.) REHM

On dead branches of *Salix fragilis*, Jan. – J.: Seest Østerskov near Kolding.

22.* D. taleola (FR.) SACC.

On dead branches of *Quercus*, common, Jan.–March. – J.: Riis Skov; Aarslev Skov; Marielund near Kolding.

23.* D. rostellata (FR.) NKE.

On dead stems of *Rosa* and *Rubus*, Dec.–April. – J.: On *Rubus Idaeus* (Kolding, in LARSEN's garden); on *Rubus* sp. (Ejstrup; Hadsund); on *Rosa* sp. (Seest).

Cryptodiaporthe PETR. sensu WEHMEYER

1.* C. salicella (FR.) WEHMEYER

Syn. i. a.: *Diaporthe spina* FCK.

On dead branches of *Salix* sp., Febr. – J.: Marielund near Kolding.

2.* C. Aubertii (WEST.) WEHMEYER

Syn. i. a.: *Diaporthe prominula* BOMM., ROUSS. & SACC.

On dead branches of *Myrica gale*, Dec.–March. – J.: Egaa near Aarhus; Skanderborg.

3.* C. Aesculi (FCK.) PETR.

On dead branches of *Aesculus Hippocastanum*, Jan.–March. – J.: Jels; Dalby Mølle and Marielund near Kolding.

4.* C. galericulata (Tul.) Wehmeyer

Syn. i. a.: *Melanconiella leucostroma* (Niessl) Sacc.

On dead branches of *Fagus silvatica*, March. – J.: "Ørnereden" and "Friheden" near Aarhus.

Apioporthe v. H. sensu Wehmeyer

* A. vepris (de Lacr.) Wehmeyer.

Syn. i. a.: *Diaporthe nidulans* Niessl.

On dead stems of *Rubus Idaeus*. – No locality or date.

Diaporthopsis Fabre

* D. trinucleata (Niessl) v. H.

On dead stems of *Eupatorium cannabinum*, July. – F.: Elsehoved.

Valsa Fr. sensu Nke.

1. V. Eutypa (Ach.) Nke.

On dead branches of *Acer* sp., March. (Other material examined). – J.: "Vennelyst" in Aarhus.

2.* V. flavovirens (Fr.) Nke.

Very common on dead branches of frondose trees, in the winter and early spring. – Only one locality recorded: J.: On *Fraxinus excelsior* (Marselisborg).

3.* V. cunomia (Fr.) Nke.

Common on fallen branches of *Fraxinus excelsior*, Sept.–May. – No localities.

4.* V. Nitschkei (Awd.) Nke.

On dead branches of *Salix Caprea*, Dec. – J.: Seest Østerskov near Kolding.

5.* V. grandis Nke.

On dead, fallen branches of *Quercus*, Jan.–Febr. – J.: Konstantinsborg; Marielund near Kolding.

6.* V. stellulata Fr.

On dead, fallen branches of *Ulmus*, in the winter. – No localities.

7. V. extensa Fr.

On dead branches of *Rhamnus cathartica*, Dec. – J.: Hadsund.

8.* V. Sorbi (Alb. & Schw.) Fr.

On dead branches of *Sorbus aucuparia*, March–April. – J.: Aarhus; Skanderborg Dyrehave; Rosenholm.

9.* V. Prunastri (Pers.) Fr.

On dead branches of *Prunus spinosa*, Dec.–June. – J.: Konstantinsborg; Pamhule Skov; Søndervang in Kolding; Dalby Aadal near Kolding; Kolding Skov; Hadsund.

10.* V. cerátophora Tul.

On dead stems of *Rosa* spp. and of *Rubus Idaeus*, Nov.–March. – J.: On *Rosa* spp. (Fovslet Skov; Jels; Søndervang in Kolding); on *Rubus Idaeus* (Seest Østerskov near Kolding).

Larsen has measured somewhat larger spores than mentioned in literature: 6–10 $\mu \times 1\,\frac{1}{2}$–2 μ.

11. V. Hoffmanni Nke.

On dead branches of *Crataegus oxyacantha*, Dec. – J.: Seest Østerskov near Kolding.

12.* V. Friesii (Duby) Fck.

On dead branches of *Abies alba*, Dec. – J.: Seest Østerskov and Bramdrup Skov near Kolding.

13.* V. pustulata Awd.

On dead branches of *Fagus silvatica*. – J.: Marselisborg.

14.* V. salicina (Pers.) Fr.

On dead branches of *Salix*, Febr.–April. – J.: Stavtrup Skov; at Kolding Fjord; Komarksbuske near Kolding.

15.* V. ambiens (Pers.) Fr.

On dead branches of frondose trees, Oct.–May. – J.: On *Prunus spinosa* (no locality); on *Prunus serotina* (Bramdrup Skov near Kolding); on *Robinia pseudacacia* (Marielund near Kolding); on *Carpinus Betulus* (Vonsild near Kolding).

16.* V. nivea (Pers.) Fr.

On dead branches of *Populus* spp. (*P. tremula* and *P. nigra*), March. – No locality.

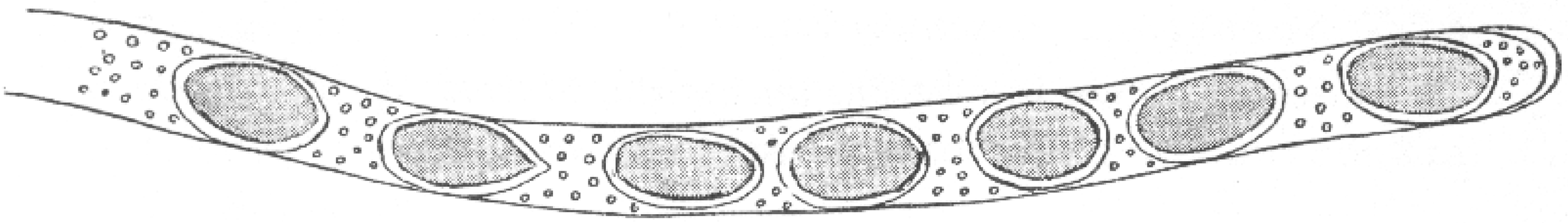

Fig. 23. Anthostoma cfr. dubium FELTG. – Fragment of an ascus, ×750.

17.* V. Auerswaldii NKE.

On dead branches of *Frangula Alnus*, Dec.–March. – J.: Jels; Hammer Bakker.

18. V. Salicis (FCK.) NKE.

On dead branches of *Salix aurita*, Dec. (Other material examined). – J.: Egaa near Aarhus.

Anthostoma NKE. sensu lato.

1.* A. Xylostei (PERS.) SACC.

On *Lonicera periclymenum* (and *L. Xylosteum*), Dec.–March. – J.: Sophiendal; Strandbjerggaard; Thygeslund near Hadsund.

2.* A. turgidum (PERS.) NKE.

On dead, fallen branches of *Fagus silvatica*, very common, in the winter. – Only one locality: J.: Marielund near Kolding.

3. A. cfr. dubium FELTGEN (Fig. 23).

Stroma valsoid, covered by the peridermis of the host, rather flat, containing 10–20 perithecia; the ostiola break the peridermis into a small, transversal fissure. – Asci cylindrical, 125–150 μ × 10–12 μ; paraphyses numerous, filiform, long. – Spores 1-seriate, broadly ellipsoid with obtuse ends, 14–18 μ × 9–10 μ, brown, often with a large oil-drop; a light-coloured germinative furrow present; spore covered by a hyaline, thin, persistent gelatinous body.

On dead branches of *Corylus avellana*, Febr. – J.: Lilballe near Kolding.

Rhynchostoma KARSTEN

Rh. anserina (PERS.) WINTER

On decorticated branches of *Fraxinus excelsior*, Jan. – J.: Frederikshøj in Aarhus.

The determination of this species was confirmed by E. ROSTRUP.

Kalmusia Niessl.

1. K. Ebuli Niessl.

On dead branches of *Sambucus* sp., March. – J.: Sommersted.

Cryptosporella Sacc.

1.* Cr. hypodermia (Fr.) Sacc.

Common on dead branches of *Ulmus*, in the winter. – Only two statements of localities: J.: Aarhus; Marielund near Kolding.

2.* Cr. populina Fck.

On dead branches of *Populus* sp., Dec. – J.: Riis Skov.

3.* Cr. chondrospora (Ces.) Sacc.

On dead twigs of *Tilia* sp., Dec. -- J.: Several finds in gardens in Kolding.

Larsen has noticed, that this fungus is completely non-stromatic, and suggests placing it in *Apiospora*; this is mainly in accordance with modern authors; it is, in fact, placed in *Apiospora* by Sacc. & Dearn. (see Syll. Fung. XVII). (The editor has found it to be most closely related to *Apiosporella sepincolaeformis* (Sacc.) Theissen and believes, that its proper name will be *Apiosporella chondrospora* (Ces.) Munk n. comb.).

Cryptospora Tul.

1.* Cr. suffusa (Fr.) Tul.

On living and dead branches of *Alnus glutinosa*, all the year round. – J.: "Friheden" near Aarhus; Dalby Aadal near Kolding.

2. Cr. Betulae Tul.

No material left; a very brief description is given without any note of locality or date.

3.* Cr. corylina (Tul.) Fck.

On dead branches of *Corylus avellana*, Febr. – Found several times by Larsen; only two localities recorded: J.: Marielund and Vonsild near Kolding.

Melanconis Tul.

1.* M. stilbostoma (Fr.) Tul.

On dead, fallen branches of *Betula*, common, in the winter. – Only the following recorded localities: J.: Riis Skov; Marselisborg; Fredericia.

2.* M. Alni Tul.

On dead branches of *Alnus glutinosa*, Oct.–Febr. – J.: Pamhule Skov; Marselisborg.

3.* M. thelebola (Fr.) Sacc.

On dead branches of *Alnus glutinosa*, Nov.–Dec. – J.: "Friheden" and Silistria near Aarhus.

4.* M. xanthostroma (Mont.) Schroeter

Syn. i. a.: *Diaporthe bitorulosa* (Berk. & Br.) Sacc.

On dead branches of *Carpinus Betulus*, Dec. – J.: Seest Østerskov.

5.* M. sulphurea (Fck.) Petr.

Syn. i. a.: *Diaporthe sulphurea* Fck.

On dead branches of *Corylus avellana*, Dec.–April. – J.: Frederikshøj near Aarhus; Amaliegaard Skov near Hornslet; Marielund near Kolding; "Sølyst" near Haderslev.

Seems to be present in vegetations of *Corylus* in which *Cryptospora corylina* is absent, and vice versa.

6. M. Fagi Oud.

Found on dead branches of small specimens of *Fagus silvatica*, Febr. – J.: Aarslev Skov.

Determined by E. Rostrup.

Melanconiella Sacc.

1.* M. spodiacea (Tul.) Sacc.

On dead branches of *Carpinus betulus*, Dec.–May. – J.: Stavtrup Skov; Seest Kirkeskov near Kolding; Marielund near Kolding.

2. M. appendiculata Otth

On dead branches of *Acer platanoides*, Dec. – J.: Frederikshøj and "Friheden" near Aarhus.

Pseudovalsa Ces. & de Not.

1. Ps. lanciformis (Fr.) Ces. & de Not.

On dead branches of *Betula verrucosa*, Jan. (Other material examined). – J.: Frederikshøj in Aarhus.

2. Ps. profusa (Fr.) Winter

Common on dead branches of *Robinia Pseudacacia*, Nov.–Febr. – J.: Mosgaard Skov; Marielund near Kolding.

3.* Ps. longipes (Tul.) Sacc.

On dead branches of *Quercus*, Jan.–Febr. – J.: Skanderborg; Seest Østerskov near Kolding.

4.* Ps. aucta (Berk. & Br.) Sacc.

Common on dead branches of *Alnus glutinosa*, Febr.–April. – J.: Dyrehavegaard Skov, Marielund and Seest Mølleaa near Kolding.

5.* Ps. platanoides (Pers.) Winter

Common on dead branches of *Acer*, Dec.–March. – Only two statements of localities: "Vennelyst" in Aarhus; Marielund near Kolding.

6. Ps. Berkeleyi (Tul.) Sacc.

On dead branches of *Ulmus*, Jan.–March. – J.: Dalby Mølle and Marielund near Kolding.

7. Ps. cfr. umbonata (Tul.) Sacc. (Fig. 24).

Stromata gregarious in small groups, sometimes confluent, 1–3 mm broad, pulvinate; disc brownish black, breaking the peridermis of the host; the lobes of the peridermis often cover the major part of the disc. – Asci subcylindrical, tapering below into a ca. 20 μ long stipe, 152–160 $\mu \times 30$–32 μ, 8-spored; paraphyses numerous, thick. – Spores (1–)2–(3–)-seriate, ellipsoid, broadly rounded at the ends, 6-celled, with a large, ellipsoid oil-drop in each cell; the end-cells are surrounded by a hyaline covering, ca.

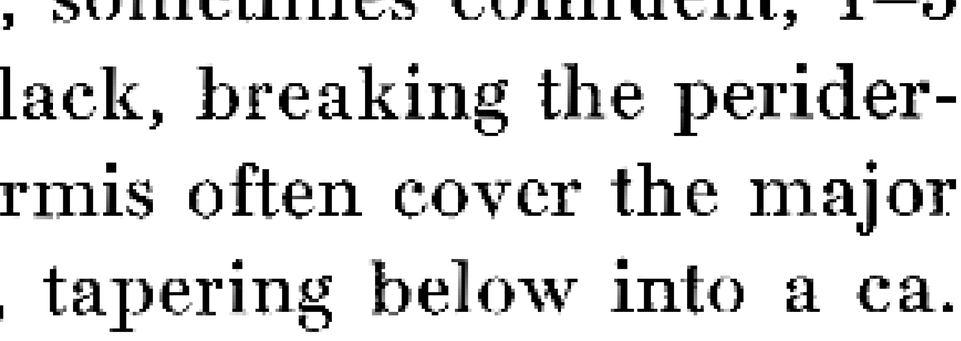

Fig. 24. Pseudovalsa cfr. umbonata (Tul.) Sacc. – Spore, ×800.

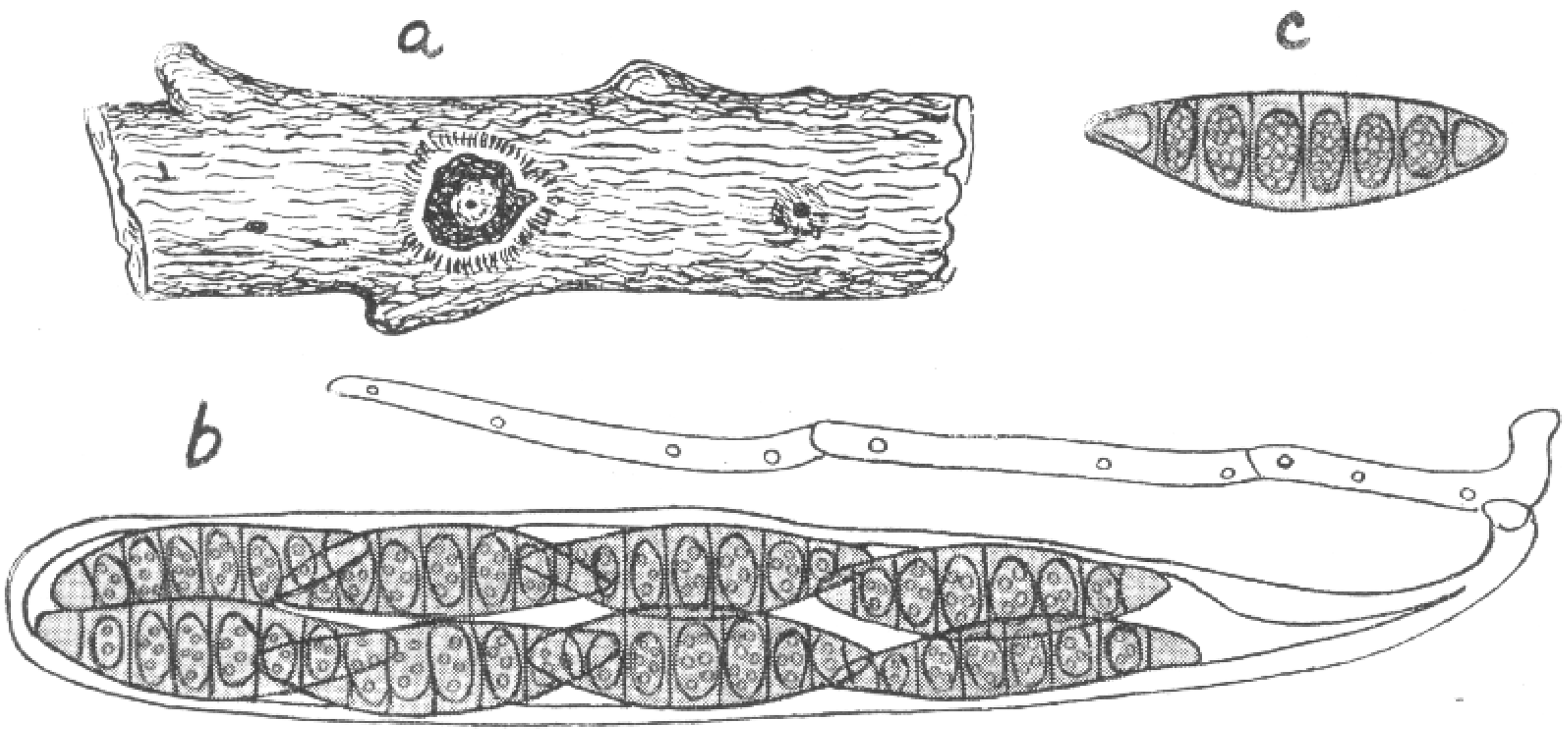

Fig. 25. Pseudovalsa sp. (see below). – a) Surface-view, ×1½.
b) Ascus, ×625. c) Spore, ×625.

12 μ broad, ca. 8 μ long; the dark brown part of the spore 36–46 μ ×15–17 μ.

On dead branches of *Acer Pseudoplatanus*, Nov. – J.: Marselisborg.

This fungus differs from *Ps. umbonata*, which is described growing on *Quercus*, by the smaller and more numerous perithecia and by the typically 6-celled spores. Sec. Poul Larsen, it should probably be conceived as a substrate-form of *Ps. umbonata*.

8. Ps. sp. (Fig. 25).

Stroma isolate, ca. 2 mm diam., covered by the peridermis and breaking it with a small disc, the rest of the stroma in the bark, surrounded by a dark zone. – Perithecia 4–8 in stroma, subspheric; ostiola collectively erumpent in the black disc. – Asci 150–200 μ p. sp. ×16 μ, cylindrical-clavate, stipitate, 4–6–8-spored. – Spores 1–2-seriate, 35–60 μ ×12–14 μ, fusiform, somewhat elongate at the ends, more or less inaquilateral, 8-celled, brown, with more light-coloured end-cells.

On fallen branches of *Fagus silvatica*, Nov.–Jan. – J.: "Frihcden" near Aarhus.

Seems to be a distinct species related to *Ps. lanciformis*. The editor's opinion is that it ought to be mentioned here even if it is impossible to refer it to a species previously described.

Fenestella Tul.

1.* F. princeps Tul.

On dead branches of frondose trees, Dec.–April. – J.: On *Betula verrucosa* (Amaliegaard Skov near Hornslet); on *Quercus Robur* (no locality); on *Corylus avellana* (Hinnerup Skov near Aarhus); on *Rubus Idaeus* (Frederikshøj in Aarhus); on *Rosa* sp. (Vonsild near Kolding); on *Crataegus oxyacantha* (Konstantinsborg).

It seems to the editor, that *F. macrospora* Fck. is a synonym of *F. princeps*.

2.* F. vestita (Fr.) Sacc.

Febr. – On *Acer* sp. (Riis Skov); on *Ribes rubrum* (at Stallerup Sø near Kolding); on *Lycium barbarum* (F.: Near Odense).

Valsaria Ces. & de Not.

* V. foedans (Karsten) Sacc.

On dead branches of *Alnus*, Jan.–April. – J.: Strandbjerggaard; Konstantinsborg; Seest Mølleaa near Kolding.

Melogramma Fr.

1. M. spiniferum (Wallr.) de Not.

On bark of *Fagus silvatica*, especially on the basal part of roots, common. – Only one locality: J.: Marselisborg.

2.* M. Bulliardi Tul.

On dead branches of *Carpinus Betulus*, Dec. – J.: Seest Østerskov near Kolding.

Calosphaeria Tul. (excl. Coronophora Fck.).

1. C. dryina (Curr.) Nke.

On dead branches of *Quercus*, Dec.–April. – J.: Seest Østerskov and Bramdrup Skov near Kolding.

2. C. minima Tul.

On branches of *Fagus silvatica*, apparently attacking old stromata of *Quaternaria quaternata*, March. – J.: Jels.

3. C. vibratilis (Fr.) Nke.

On dead branches of *Prunus* and *Cerasus*, Dec.–Febr. – J.: On *Prunus spinosa* (“Fiskehuset” near Aarhus); on *Prunus serotina*

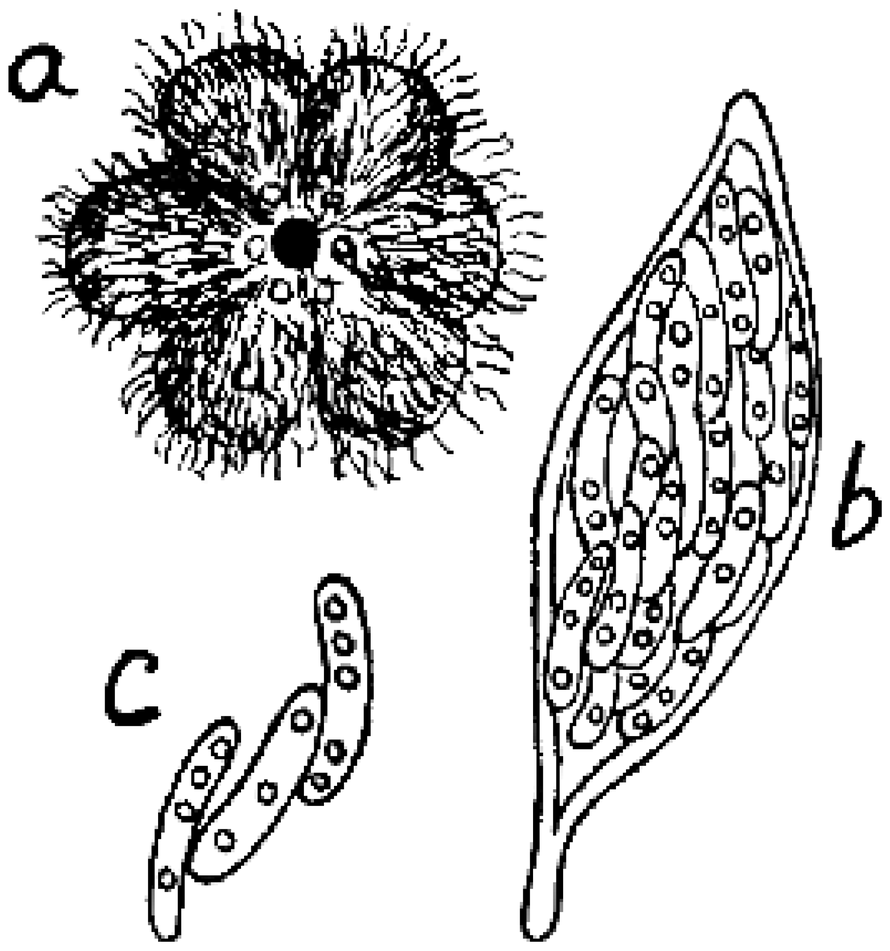

Fig. 26. Coronophora cfr. annexa (Nke.)
The aberrant form on Hippophaës, (see p. aa). –
a) A cluster of perithecia, ×10.
b) Ascus, ×750. c) Spores, ×750.

(Bramdrup Skov near Kolding); on *Cerasus Padus* (F.: Sandholt near Faaborg).

On *Cerasus Padus* apparently attacking stromata of *Valsa leucostoma*.

Coronophora Fck.

1.* C. gregaria (Lib.) Fck.

On dead branches of frondose trees, Nov.–March. – J.: On *Salix* sp. (Eltang); on *Betula* (''Fiskehuset'' near Aarhus); on *Alnus glutinosa* (no locality); on *Prunus serotina* (Bramdrup Skov near Kolding); on *Cerasus Padus* (no locality); on *Sorbus aucuparia* (with very large perithecia, —1,8 mm; Skanderborg); on *Aesculus Hippocastanum* (no locality).

2. C. annexa (Nke.) Fck.

On dead branches of *Hippophaës rhamnoides*, Jan. (Other material examined). – J.: Riis Skov.

Besides the typical form, Larsen found a form with smaller and more separate perithecia and less numerous spores in the ascus; further, the spores in the fungus mentioned were 50 % larger than in the typical *C. annexa*. – It may be a distinct species; Larsen has indicated this in his note where he refers to it under the specific epithet ''*Hippophaës*''. (Fig. 26).

Quaternaria Tul.

1.* Qu. quaternata (Pers.) Schroeter

Very common on dead branches of *Fagus silvatica*, in the winter. – No localities recorded.

2. Qu. dissepta (Fr.) Tul.

On dead branches of *Ulmus*, Dec.–April. (Other material examined. – J.: Lunden near Horsens; Stejlbjerg and Marielund in Kolding.

Diatrypella Ces. & de Not.

1. D. quercina (Pers.) Nke.

On dead branches of *Quercus Robur*. – No localities or dates.

2. D. pulvinata Nke.

On dead branches of *Quercus Robur*, Febr. – J.: Riis Skov.

3. D. aspera (Fr.) Nke.

On dead branches of *Fagus silvatica*, Dec. – J.: Rydhave.

4.* D. verrucaeformis (Ehrh.) Nke.

On dead branches of *Corylus avellana*, *Alnus*, *Carpinus Betulus* etc. – No statements of localities or dates.

5. D. favacea (Fr.) Nke.

On dead branches of *Betula*, April. (Other material examined).– J.: Bygholm near Horsens.

6. D. melaleuca (Kze.) Nke.

On dead branches of *Fagus silvatica*, Dec. – J.: Riis Skov.

7. D. nigro-annulata (Grev.) Nke.

On fallen branches of *Fagus silvatica*, Jan. – J.: "Vennelyst" in Aarhus.

8. D. Tocciaeana de Not.

On dead branches of *Alnus glutinosa*. (Other material examined). – No locality or date.

Diatrype Fr.

1.* D. Stigma (Hoffm.) de Not.

Very common on dead branches of frondose trees, in the winter. – Only one locality: J.: Near Aarhus.

2.* D. disciformis (Hoffm.) Fr.

Common on fallen branches of *Fagus silvatica*, in the winter. – No localities for the typical form.

On *Ulmus montana* was found a form with an ash-grey disc; on *Salix* sp. was found a form with a yellow colouring of the interior of the stroma (J.: Marselisborg); LARSEN has also seen such forms on *Fagus* (Seest Østerskov and Mariclund near Kolding); finally, the typical form is also found on *Betula* (Bramdrup Skov near Kolding).

3.* D. bullata (HOFFM.) FR.

On branches of *Salix* spp. and *Populus* spp., Febr.–March. – J.: Hanstedgaard near Horsens; Marielund near Kolding (on *Salix Caprea*).

Nummularia TUL.

N. succenturiata (TODE.) NKE.

On half-decayed branches of *Quercus*, Dec. – J.: Strandbjerggaard.

Hypoxylon BULL.

1. H. semiimmersum NKE.

On half-decayed wood of *Quercus*, Dec. (Other material examined). – J.: Strandbjerggaard.

2. H. serpens (PERS.) FR.

A doubtful record on half-decayed wood of *Fraxinus excelsior*, Dec. – J.: Kvistrup Skov.

LARSEN states, that this may be *H. rubiginosum* instead of *H. serpens.*

3. H. multiforme FR.

On stems of *Betula*, Nov. (Other material examined). – J.: Riis Skov.

4. H. rutilum TUL.

On half-decayed branches of *Fagus silvatica*, Nov. – J.: Trelde Sande.

5. H. fuscum (PERS.) FR.

Found on *Alnus glutinosa*, *Corylus avellana*, *Salix* and *Prunus*, all the year round.

6.* H. coccineum BULL.

On fallen branches of *Fagus silvatica*, common, Oct.–July. – J.: Ryhave; Stenderup Skov near Kolding Fjord.

Bolinia Nke.

B. tubulina (Alb. & Schw.) Sacc.

On dead stems of *Alnus glutinosa*, Jan. (Material left, but spoiled by insects). – J.: "Friheden" near Aarhus; Amaliegaard Skov near Hornslet.

Xylaria Hill

No notes left about this genus; Larsen evidently was not very interested in the *Xylariaceae*.

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