***Plectania rhytidia* (Berk.) Nannf. & Korf. PDD 126777 (= AEB 1427) – a good match**

Collection date: 31 October 2026

Collection site: five-mile loop track, Rimutaka Forest Park

Substrate: soil litter

Collector: Ann Bell; **Identifier:** Dan Mahoney

Voucher materials: dried herbarium specimen accompanied by 5 semi-permanent microscope slides (3 in aniline blue lactic acid, 1 in lacto-Fuchsin and 1 in Shear's mounting fluid (SMF); Samsung Galaxy A70 smartphone photos of a dry apothecium taken 1 Nov. 2026 and microscopic photos of asci, ascospores and apothecium fragments from the prepared semipermanent slides using an Olympus BX51 (DP28 camera); pertinent references and Dan's brief description, photos and comments.

Pertinent references: .

1. **Plectania rhytidia (Berk.) Nannf. & Korf - CEMAS**

centrodeestudiosmicologicosasturianos.org
https://www.centrodeestudiosmicologicosasturianos.org › ...

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2. *Plectania rhytidia* iNaturalist – **Many** online in-situ and microscopic photos

3. Wikipedia – *Plectania rhytidia* is a species of fungus in the family Sarcosomataceae. Originally described under the name *Peziza rhytidia* by Miles Joseph Berkeley in 1855, the species was transferred to *Plectania* by mycologists John Axel Nannfeldt and Richard P. Korf in 1957. **Further references on the next 3 pages.**

4. Systematics Collections Data PDD – There are 43 records (accessed 1-11-26) at PDD for *Plectania rhytidia* – 10 of which have an assortment of photos, sequences, ICMP cultures and historical comments.

5. Mycoportal online – 149 records of *Plectania rhytidia* (accessed Nov. 2026) including many from New Zealand & Australia

6. Liu JR, Li D, Chen SA, Zhang YC, Mou GF, Liu Y, Zhou GR, Tan ZR, Zhang JH (2025) Species diversity and systematic taxonomy of Sarcosomataceae (Ascomycota, Pezizales), with an emphasis on subtropical regions of China. MycoKeys 121: 21–65. https://doi.org/10.3897/mycokeys.121.155432 Page 24 "In the current sense, *Plectania* is characterized by the following features: the ascocarp is discoid to deeply cupulate, sessile to stipitate, with a dark brown to nearly black external surface covered with dark hairs; the ectal excipulum is composed of angular cells, and the medullary excipulum consists of a textura intricata and is often gelatinous; the mature ascospores are elliptical, smooth or ornamented (transversally striated or verrucose), with or without a gelatinous sheath (Carbone et al. 2013a, 2015a; Ekanayaka et al. 2018)."
Pages 39 & 40:

Taxonomic Keys for Species Classification of *Plectania* in China

1	Ascospores ellipsoid 2
–	Ascospores inequilateral ellipsoid with a flattened side 3
2	Ascospores surface smooth 4
–	Ascospores surface covered with verrucose ornamentation 5
3	Ascospores one side bearing 13 to 17 transverse grooves, 19.6–27.4 (29.4) × (6.9) 7.8–12.3 µm ..... ***P. rhytidia***
–	Ascospores one side bearing 8 to 12 rib-like horizontal furrows, 18–22 × 10–12 µm ..... ***P. platensis***
4	Apothecium sessile, ascospores relatively large, 35–42 × 13–18 µm ..... ***P. yunnanensis***
–	Apothecium substipitate, ascospores smaller 6
5	Apothecium11.0–18.0 mm, with short stipe, external surface sparsely covered with tomentum ..... ***P. lutea***
–	Apothecium19–27 mm, with longer and thicker stipe, external surface densely covered with grey tomentum ..... ***P. damingshanensis***
6	Apothecia external surface and margin covered by orange granules 7
–	Apothecia external surface covered or not by orange or brownish granules often restricted at the margin ..... ***P. sichuanensis***
7	Asci and ascospores relatively large, asci measuring 400–450 × 12–15 µm, ascospores measuring 21.8–25 × 10–12.4 µm ..... ***P. melastoma***
–	Asci and ascospores relatively small, asci measuring 363–388 (425.8) × 9.2–14.1 µm, ascospores measuring 17.3–21.4 (23.1) × 8.1–10.9 (11.7) µm ..... ***P. huapingensis***

7. Richard P. Korf (1957) Two Bulgarioid Genera: Galiella and *Plectania*, Mycologia, 49:1, 107-111, DOI: 10.1080/00275514.1957.12024617
To link to this article: https://doi.org/10.1080/00275514.1957.12024617

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I. Ascospores smooth, without transverse furrows.
A. Ascospores ellipsoid.....*Sect.* **Plectania**
B. Ascospores suballantoid.....*Sect.* **Curvatisporae**
II. Ascospores with transverse (or longitudinal ?) furrows, ellipsoid.....
.....*Sect.* **Plicosporae**

PLECTANIA Fuckel, Jahrb. Nass. Ver. Naturk. **23–24**: 323. [1870.] *emend.* Saccardo, Syll. Fung. **8**: 163. 1889 (*non emend.* Seaver, N. Am. Cup-fungi (Op.) 190. 1928, = *Sarcoscypha* (Fr.) Boud.).
= *Peziza* ser. *Lachnea* subgen. *Rhizopodella* Cooke, Mycogr. **1**: 260. 1879.
= *Peziza* subgen. *Plectania* (Fckl.) Sacc., Bot. Centralbl. **18**: 215. 1884.
= *Rhizopodella* (Cooke) Boud., Bull. Soc. Myc. Fr. **1**: 103. 1885.
= *Gloeocalyx* Mass., Kew Bull. Misc. Inf. **1901**: 155. 1901.

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Section **Plicosporae** Korf, sect. nov.

Sicut generis sectio typica, sed sporarum tunica sulcis transverse (vel in longitudinem ?) incisis ornata.

SPECIES HOLOTYPICA: **Plectania cyttarioides** (Rehm *in* Durand) Korf, comb. nov., basionym: *Sarcosoma cyttarioides* Rehm *in* Durand, Jour. Myc. **9**: 104. 1903.

SPECIES ALIAE: **Plectania rhytidia** (Berk. *in* Hook.) Nannf. & Korf, comb. nov., basionym: *Peziza rhytidia* Berk. *in* Hook., Bot. Antarctic Voy., Part II, Fl. Novae-Zeland. **2**: 200. 1855; also several other species with transversely furrowed spores that are being worked out by Prof. Nannfeldt, including *Urnula platensis* Speg. which surely belongs here. Transfer of these species awaits his further studies. *Sarcosoma turbinatum* Wakef. with longitudinally furrowed spores may possibly belong in this section.

8. AI online:

Sarcosomataceae is a family of dark-coloured, cup-shaped fungi within the order Pezizales. Commonly known as black cup fungi or urn mushrooms, these organisms are primarily found in temperate and subtropical regions, where they act as saprobes breaking down rotten or buried wood. [1, 2]

Key Characteristics

Appearance: They produce large, tough-textured fruiting bodies (apothecia) that range from shallowly cupulate to deep, funnel-shaped, or disk-like. [1, 2]

Colouration: Typically characterised by dark brown, dark grey, or charcoal-black exterior tissues. [1, 2]

Interior Tissue: They often feature highly gelatinised or leathery internal medullary tissue. [1]

Spore Dispersal: They possess pressure-sensitive spore sacs (asci). Changes in air pressure or wind provoke these sacs to explosively rupture, clouding the air with millions of microscopic spores. [1]

Taxonomy and Genera

Historically encompassing a broader group, modern molecular phylogenetics split several genera out into a sister family, Chorioactidaceae. The core, strongly supported sexual genera remaining in Sarcosomataceae on GBIF include: [1, 2]

Sarcosoma: The type genus, which includes *Sarcosoma globosum* (commonly called the "witches' cauldron").

Urnula: Deeply cup-shaped when young, flattening out and becoming heavily wrinkled as they age.

Plectania: Jet-black, fleshier cup fungi found rooted in soil or coarse woody debris. Notable for species like *Plectania nigrella*, which produces the therapeutic antibiotic protein plectasin.

Plectania rhytidia is an uncommon, dark cup fungus (discomycete) characterized by its tough, black, deeply wrinkled fruiting bodies and highly distinct, transversally ribbed asymmetrical spores. Originally described in 1855, this saprotrophic species grows on forest soil and leaf litter rather than directly on decaying wood. [1, 2, 3]

Macro-morphology (Macroscopic Features)

Ascomata (Fruiting Body): Deeply cup-shaped (cupulate) to hemispherical, measuring up to 1.5 to 2 cm in diameter. Small, immature specimens are nearly spherical with a tiny apical opening. [1, 2, 3]

External Surface: Solid charcoal-black to dark brown, lacking prominent hairs but exhibiting a characteristic vertically wrinkled, wavy, or undulating texture (*undato-rugosa*). [1, 2, 3]

Hymenium (Inner Surface): Polished, smooth, and entirely black. [1, 2]

Stipe (Stem): Typically sessile to subsessile, but can feature a short, tough black stem anchored into the substrate via a prominent, dark, hair-like root mass of mycelium (subiculum). [1, 2, 3]

Flesh (Context): Tough, rubbery to gelatinous, transitioning to an olivaceous or dark internal tone, devoid of any distinct odor. [1, 2, 3]

Micro-morphology (Microscopic Features)

Ascospores: Elongated, oblong-elliptical, but noticeably asymmetrical or inequilateral (one side is distinctly more convex than the other). They measure **19.6–27.4 (–29.4) × 7.8–12.3 µm**. [1, 2, 3]

Spore Ornamentation: The single most diagnostic feature is the presence of several distinctive transverse ribs, striations, or furrows running across the convex side. The spores are hyaline (translucent) when viewed individually under a light microscope. [1, 2, 3]

Asci: Long, cylindrical, 8-spored (octosporic), uniseriate (spores stacked lineally), operculate, and non-reactive to iodine (inamyloid). [1]

Paraphyses: Slender, septate, and frequently branched near the tips. [1, 2]



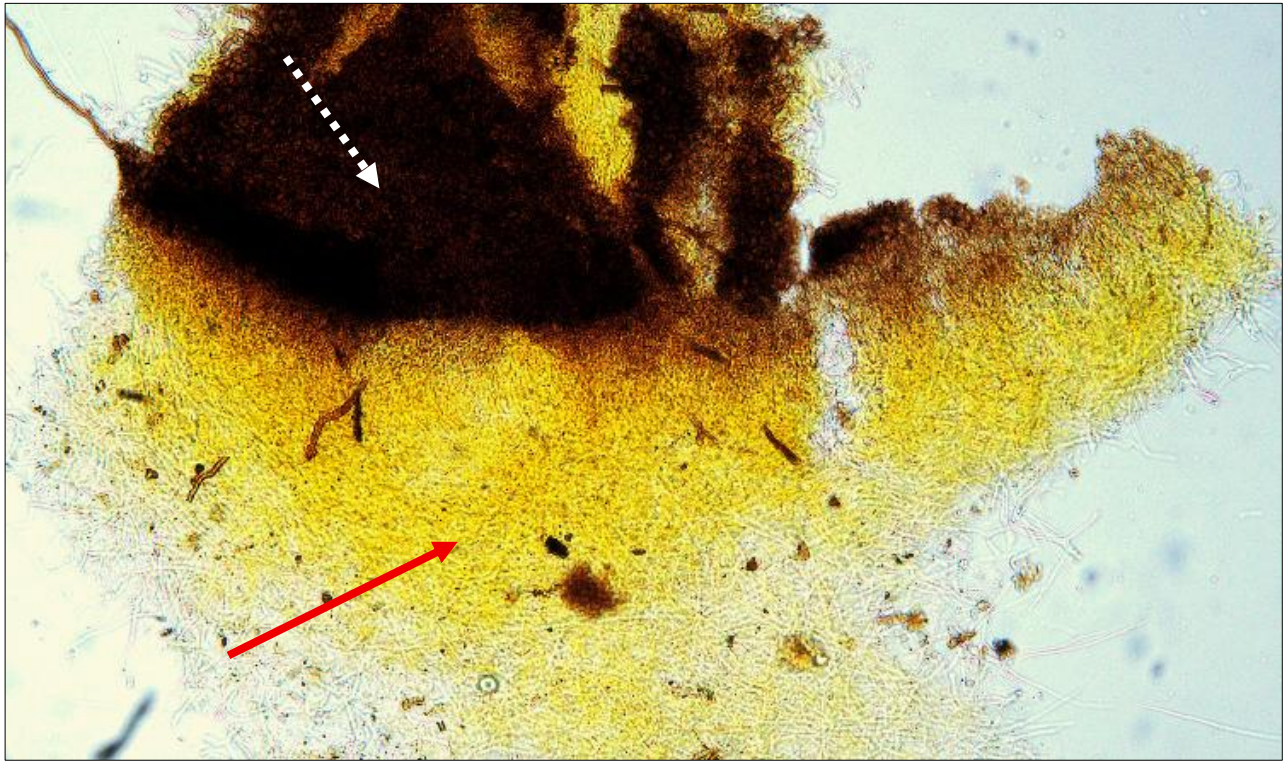


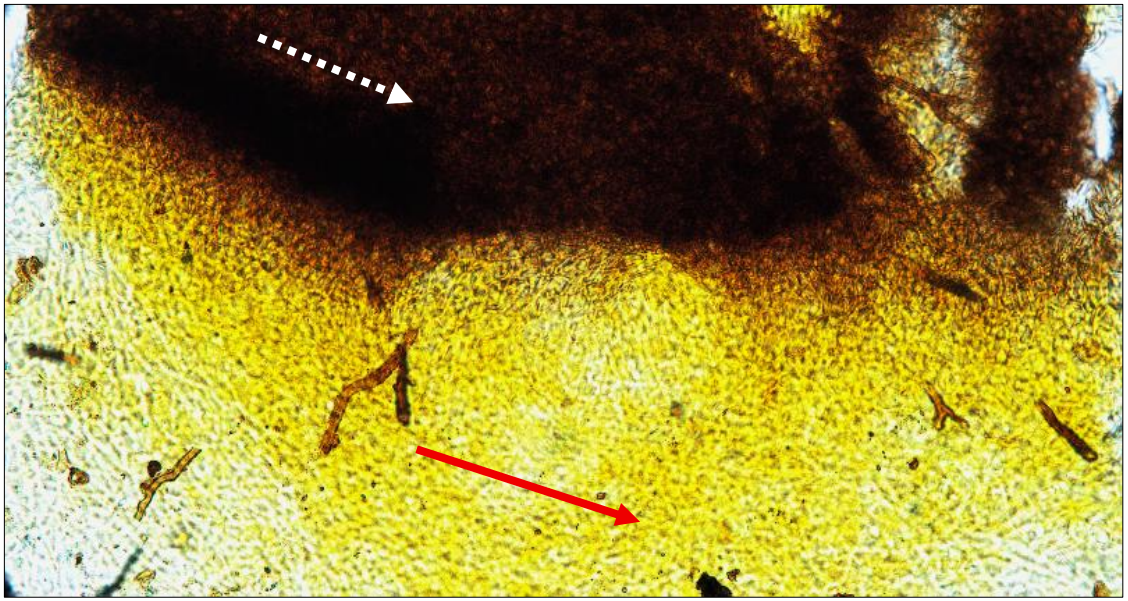


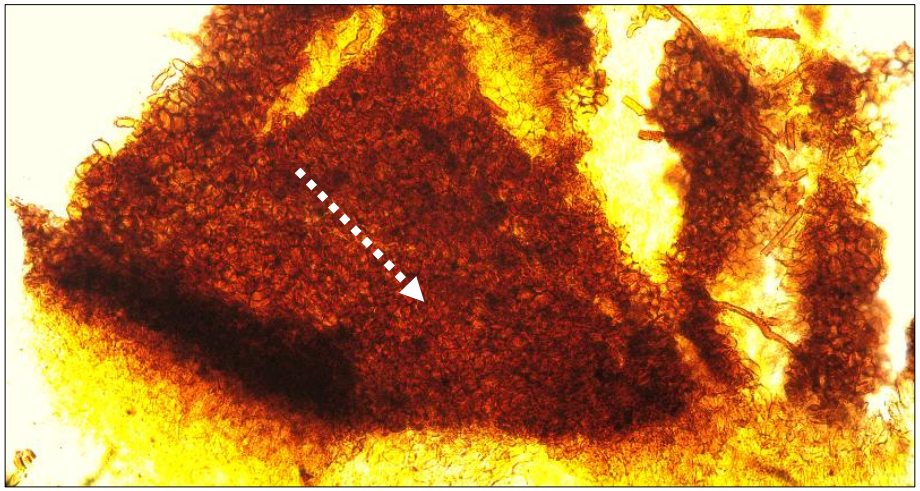


Dan's brief description and comments: Ann collected the single dark dry-looking apothecium during her volunteer work with predator-trapping in Rimutaka Forest Park. No other apothecia were seen on the ground/litter nearby. Photos at the left show the apothecium in various views shortly after its collection. These present little that resembles the fresh apothecial views of this species online. Only its blackish, tough-textured, shallow-cupulate fruiting body suggests its inclusion in the Sarcosomataceae. However, once a thin razor section of the cup rim downwards (including the excipulum and hymenium) was cut – with difficulty – and placed in water, the gel-like yellowish hymenial layer and its mature asci became swollen and were easily placed in water and variously stained for microscopic observation. Only then did the horizontally striate ascospore wall allow placement in *Plectania rhytidia*.

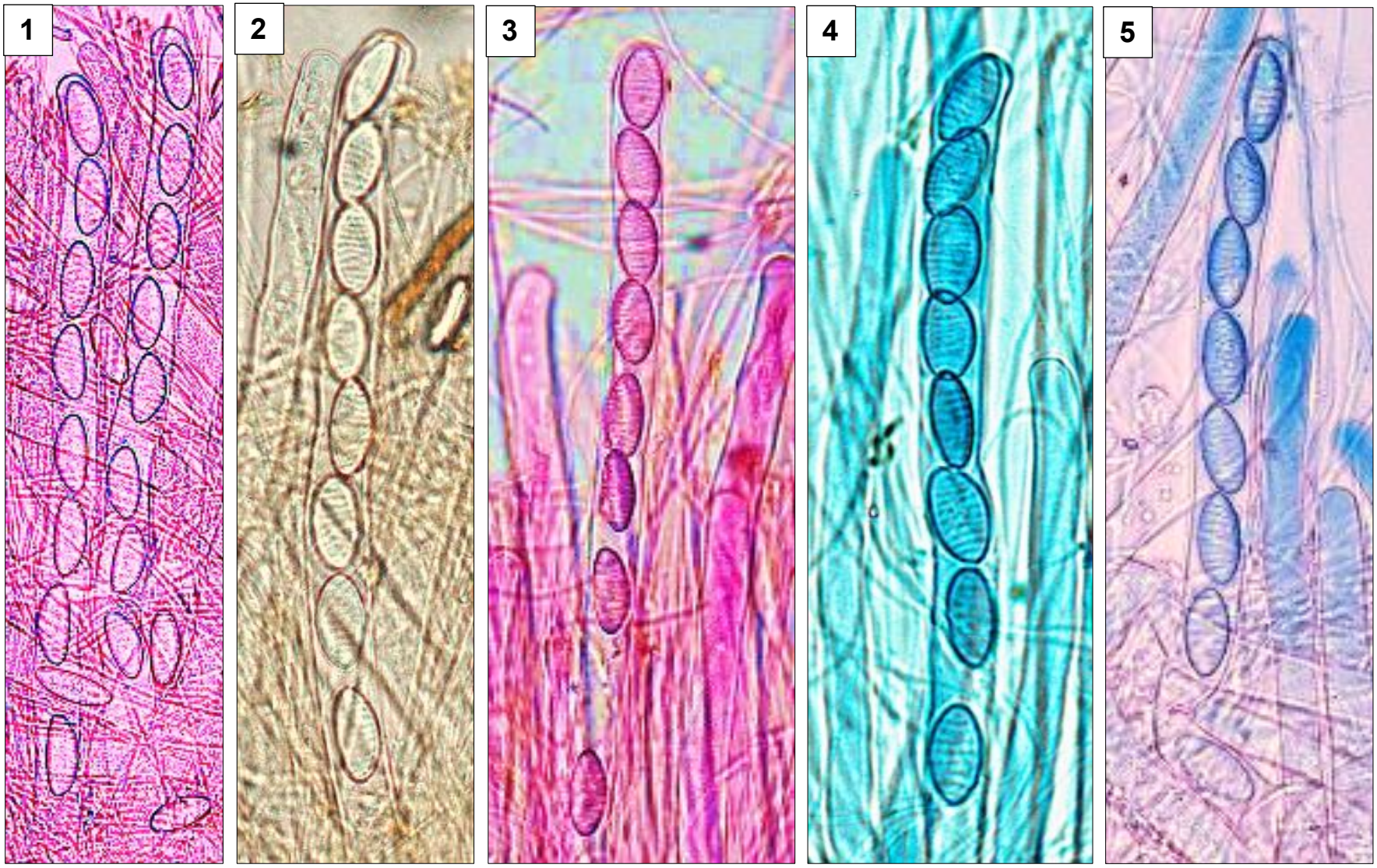
Apothecium Photos: Upper left – upside down view, **Upper right –** bird's eye view, **Lower left –** closeup of rim (dark brown) & hymenium surface (black), **Lower right –** focus on rim.







AEB 1427. Photos of apothecium medullary excipulum intricata tissue and ectal excipulum pseudoparenchymatous tissue from the SMF voucher slide. Upper photo is at a lower magnification; lower two photos are enlargements of the upper photo. Red arrows point to the medullary excipulum & white-dotted arrows to the ectal excipulum.



AEB 1427. Asci and ascospores. Photo 1 from a water slide mount; 2–5 from collection voucher slides – SMF (2), lacto-Fuchsin (3) and aniline blue lactic acid (4&5). Note the variable ascospore shapes in photo 1 and the numerous horizontal striations that ornament the ascospore walls in photos 2–5. Ascospore measurements: (21–)23–27(–30) × 10–12.5 µm.