

MYCOLOGICAL RECORDS 4: *VIZELLA TUNICATA* SP. NOV.

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ABSTRACT

A new species of *Vizella*, *V. tunicata*, distinguished from other *Vizella* species by the gelatinous coat surrounding each ascospore, is described. The fungus is parasitic on leaves of *Pittosporum tenuifolium* Solander ex Gaertner and *Myrsine australis* (A. Richard) Allan.

Keywords: Ascomycetes; *Vizella tunicata*; *Pittosporum tenuifolium*; *Myrsine australis*.

INTRODUCTION

Vizella Saccardo is a mainly tropical genus of leaf-parasitic ascomycetes. Species have been reported from tropical Africa, India, Melanesia, and Central and South America (Hughes 1953; von Arx & Müller 1954; Barr 1987; McKenzie 1989), and Swart (1971) has described two Australian species. There are no published records of *Vizella* spp. from New Zealand.

The New Zealand material was collected by Forest Health Officers in the course of routine inspections of parks and reserves in the vicinity of ports. The first collection was made by Mike Stoodley in 1984 and was filed as an unidentified *Vizella* sp. With the arrival of a second specimen of the same *Vizella* collected by Brent Rogan, it was necessary to make a serious attempt to identify the species.

The main characteristic that distinguishes the New Zealand species from other *Vizella* spp. is the gelatinous coat surrounding each ascospore. Müller & von Arx (1955), after examining *Vizella gomphispora* (Berkeley & Broome) Hughes, *V. royenae* von Arx & Müller, and *V. bingervilliana* C. Moreau & M. Moreau, concluded that these three species were conspecific with the older *V. appendiculosa* (Montagne & Berkeley) Theissen. In addition to the possession of a gelatinous coat, the New Zealand species differs from *V. appendiculosa sensu lato* in that (a) its ascospores have the hyaline band in the middle rather than close to the apex (Hughes 1953; von Arx & Müller 1975) and (b) rather than having thick hyphae composed of "almost cuboid" cells up to 12 µm wide (Hughes 1953), the width of its hyphal cells does not exceed 7 µm and the length varies from 5 µm to 35 µm. In common with the Australian *V. oleariae* Swart, both the conidial and ascal states of the

New Zealand species are found in the same colony. However, the conidia of the New Zealand species, unlike those of *V. oleariae*, remain hyaline at maturity and the mycelium does not have the regular alternation of paired hyaline cells as with dark cells as described for *V. oleariae* (Swart 1971).

DESCRIPTION

Vizella tunicata sp. nov. (Fig. 1)

Maculae epiphyllae, subrotundatae 2–12 mm diametris, interdum confluentes, atrae. *Mycelium* subcuticulare, ex hyphis hyalinis vel pallide brunneis, 5–7 µm crassis (cellulis 5–35 µm longis), septis incrassatis et atrobunneis compositum. *Ascomata* gregaria, discreta, nigra, nitida, dimidata vel planoconvexa, 120–160 µm diametris, ad maturiorem ostiolo 10–20 µm diametro praedita. Paries superior bistratosus, ex cellulis atrobunneis 3–5 µm cr. compositus. Paries inferior subhyalinus, unistratosus, ex cellulis 3–5 µm cr. compositus. *Asci* circum columnam centralem (textus paraphysoidei) radiate dispositi, bitunicati, ellipsoidei vel subclavati, apice rotundati et incrassati, 45–65 µm longi et 15–20 µm lati, octospori. *Ascospores* oblique 1–2 seriatae, unicellulares, obovatae, brunneae cum zona transversali pallida (1–2 µm lata) supra medium praeditae, 10–14 × 5–7 µm, appendicula basali hyalina, inconspicua, circa 2 µm longa, conica. Tunica gelatinosa, crassitie uniformis, totam sporam cingens. *Conidia* ellipsoidea, hyalina 5–8 × 4–6 µm. *Conidiophora* a me non visum.

Habitat in foliis vivis *Pittosporii tenuifolii*, Horto Botanico, Napier, Novazelandia (B.J. Rogan, 27.ix.1994) **NZFRI(M)** 6 holotypus, **PDD** 63586 isotypus. In foliis vivis *Myrsiniis australis*, Pukekura Park, New Plymouth, Novazelandia (M.A. Stoodley 27.xi.1984) **NZFRI(M)** 2990, **PDD** 63585 paratypi.

Leaf spots on the upper surface of the leaf, roughly circular, 2–12 mm diameter, dull black, necrotic, mostly discrete but sometimes confluent. **Mycelium** subcuticular, with light-brown and hyaline cells in no particular order, hyphae 5–7 µm wide with individual cells varying from 5 to 35 µm in length, septa thickened and dark-brown. **Ascocarp** a thyrothecium, fruitbodies arranged in groups on the black spots, discrete, shining black, dimidate or flattened convex, 120–160 µm in diameter. The ascocarp has an ostiole, 10–20 µm diameter, at maturity. Upper wall of the ascocarp composed of two layers of dark-brown, non-radiating cells, 3–5 µm wide. Lower wall composed of a single layer of subhyaline cells, 3–5 µm wide. **Asci** arranged radially round a central column of paraphysoid tissue, bitunicate, ellipsoidal to subclavate, 45–65 µm long × 15–20 µm wide, with 8 spores, apex rounded and thickened. **Ascospores** arranged in 1–2 rows, unicellular, obovate, brown with a transverse hyaline zone (1–2 µm wide) just above the middle, 10–14 µm long × 5–7 µm wide, with a small (about 2 µm long), conical, hyaline basal appendage. A thin gelatinous coat of uniform thickness surrounds the ascospore. **Conidia** borne in structures similar to ascocarps, ellipsoidal, hyaline, 5–8 × 4–6 µm. **Conidiophores** not seen.

On living leaves of *Pittosporum tenuifolium* and of *Myrsine australis*.

Additional material examined: Leaves of *Pittosporum tenuifolium*, Haitaitai, Wellington, New Zealand (B.J. Rogan, 28.x.1994) **NZFRI(M)** 3522.

The specific epithet refers to the gelatinous coat surrounding the ascospore.

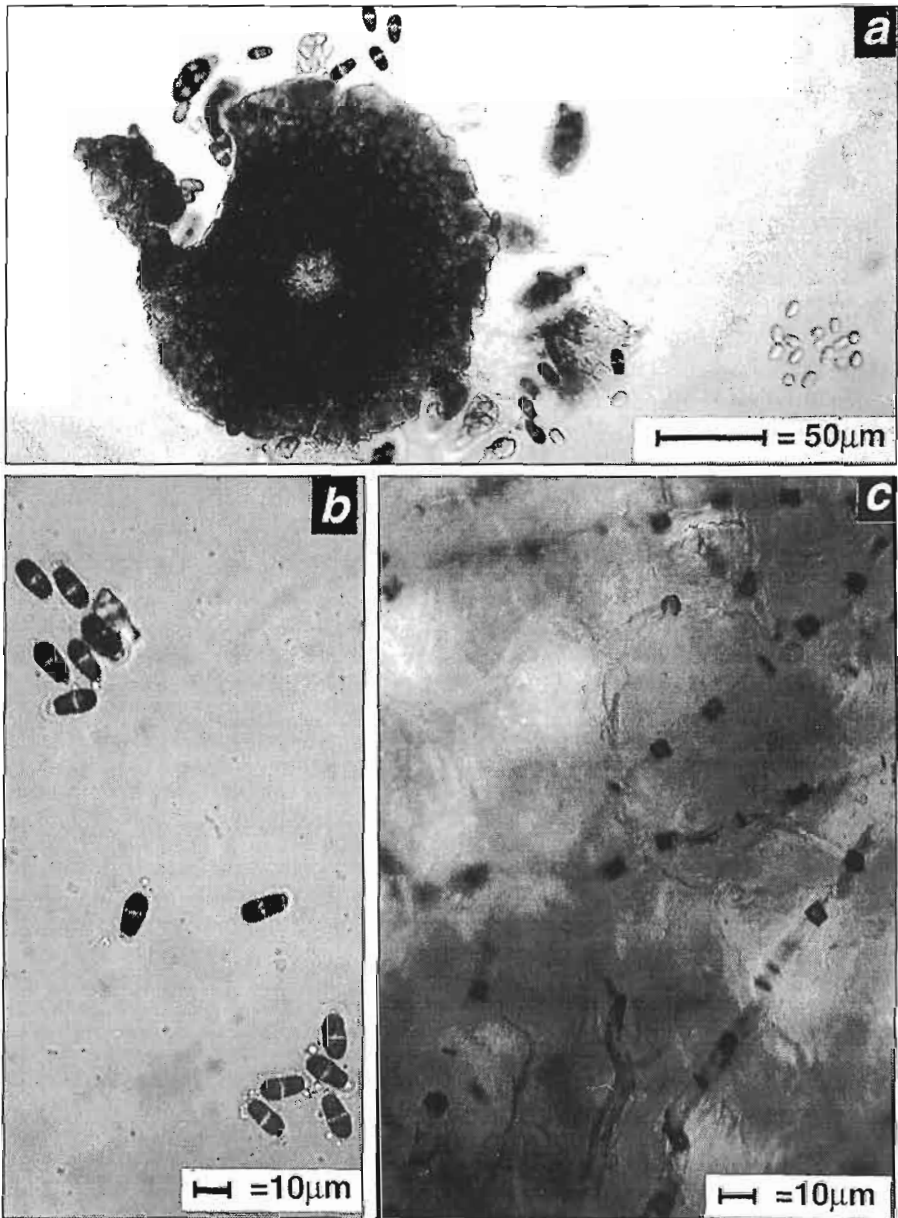


FIG. 1—*Vizella tunicata* sp. nov.

- (a) Squash mount of ascocarp. Conidia in lower right-hand corner (from the holotype, mounted in water).
- (b) Ascospores. Note the gelatinous coat and the small basal appendage (from the holotype, mounted in water).
- (c) Typical subcuticular *Vizella* mycelium with hyaline and brown cells and thickened septa (from the paratype).

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