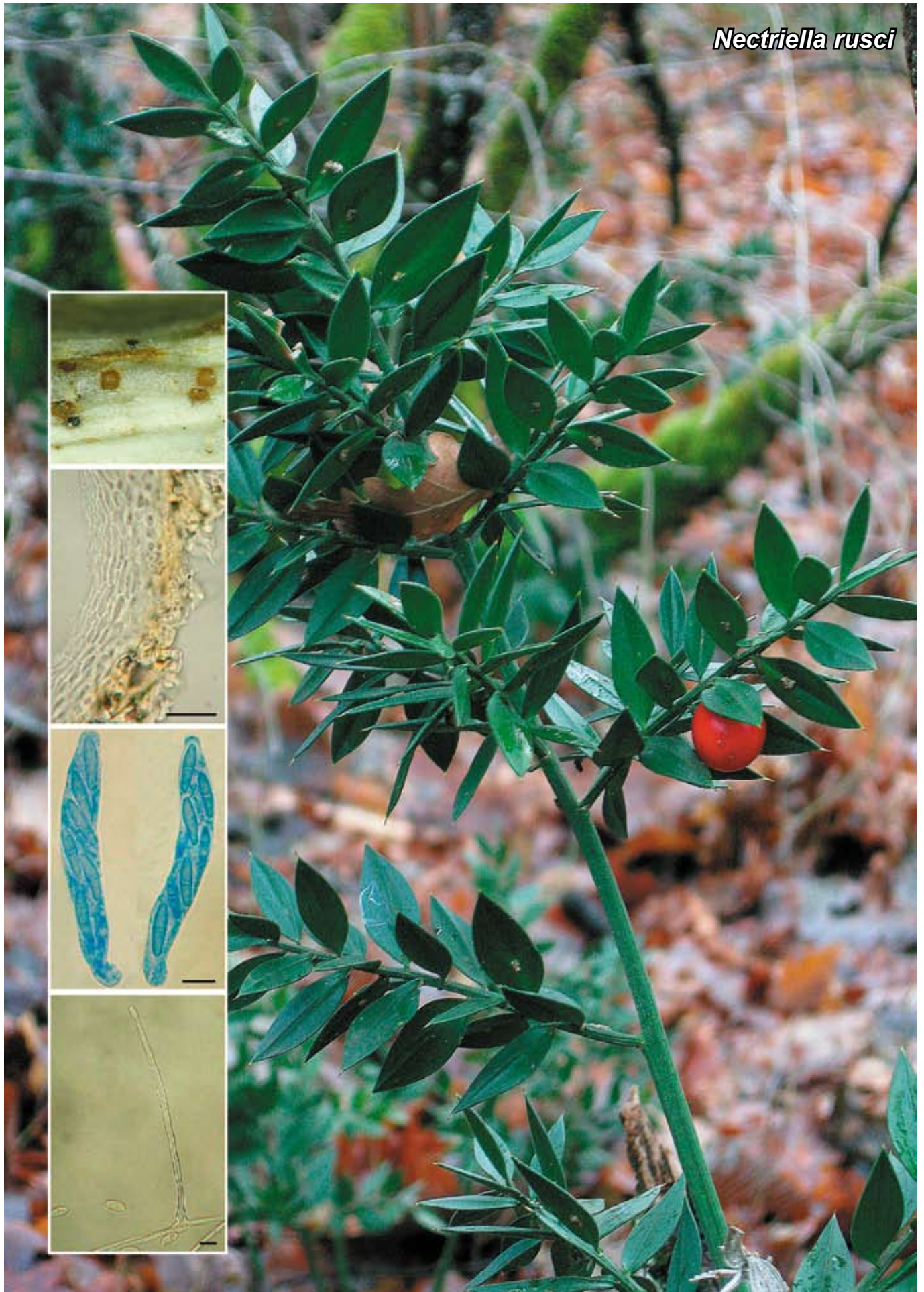


Nectriella rusci



Fungal Planet 50 – 23 December 2010

Nectriella rusci Lechat, Lowen & Gardiennet, *sp. nov.*

Anamorph. *Acremonium*-like.

Ascomata subglobosa, immersa, haud stromatica 180–220 µm diam, aurantia vel pallide luteis, immutabilia in 3 % KOH vel acido lactico. Paries peritheciiorum 20–25 µm lata. Asci clavatos (53–)60–70(–75) × 8.5–10(–12) µm ($m = 63.4 \times 9.2 \mu\text{m}$, $n = 20$), octospori, unitunicati, ascosporis biserialibus. Ascosporae ab ellipsoideis ad fusiformes (12.5–)13–14.5(–17) × 2.8–3.2 µm ($m = 14.2 \times 3 \mu\text{m}$, $n = 20$), uniseptatae, hyalinae, spinosae. Status asexualis *Acremonii* similis.

Etymology. The epithet *rusci* refers to the substratum *Ruscus aculeatus*.

Ascomata scattered singly or in groups of 2–5, subglobose, 180–220 µm diam, non-stromatic, totally immersed in host tissues, with only the rounded apex of papilla protruding at surface of periderm, at first orange-yellow, then pale yellow, not changing colour in 3 % KOH or lactic acid, completely covered by thick-walled, intertwined hyphae, except ostiolar region, 1.5–2.5 µm diam with wall 0.5–1 µm thick, hyaline. *Apex* of papilla composed of thin-walled, cylindrical to clavate cells, 8–12 × 2–2.8 µm. *Ascomatal wall* comprised of intertwined hyphae, 20–25 µm thick, of a single region composed of globose to ellipsoidal cells, 2.5–8 × 1.5–2.5 µm, hyaline to pale yellowish, thick-walled, wall 0.7–1.5(–2) µm thick, becoming narrower and thin-walled toward centre. *Asci* clavate, (53–)60–70(–75) × 8.5–10(–12) µm ($av. = 63.4 \times 9.2 \mu\text{m}$, $n = 20$), short-stipitate, apex rounded with an inconspicuous refractive apical ring, usually containing biseriate ascospores, completely filling each ascus, numerous asci in which 2–4 of 8 ascospores are aborted. *Ascospores* ellipsoidal to fusiform with rounded ends, (12.5–)13–14.5(–17) × 2.8–3.2 µm ($av. = 14.2 \times 3 \mu\text{m}$, $n = 20$), 1-septate, not constricted at septum, hyaline, spinulose.

Colour illustrations. Ascomata on host substratum; vertical section through ascomatal wall; asci and ascospores; conidiophore and conidia (C. Lechat). Scale bars = 10 µm.

Culture characteristics — Colony grown at 25 °C, on 2 % Difco potato-dextrose agar with 5 mg/L streptomycin, pale pinkish white, reaching 4–5 cm diam after 2 wk. Hyphae smooth, 2–3 µm diam. Conidiophores long, subcylindrical, monophialidic 70–100 µm long, 2–3 µm diam, 1–2-septate, simple or stalked with two secondary branches, sporulating in middle of colony, some orthophialides observed. Conidia ellipsoidal to subcylindrical, hyaline, smooth, non-septate, hyaline, smooth, (4.5–)5–12(–18) × 2.5–4.8(–5.2) µm ($av. = 8.4 \times 4.5 \mu\text{m}$, $n = 30$). Abscission scar basal, minute.

Typus. FRANCE, Côte d'Or, Messigny et Vantoux, on cladodes of *Ruscus aculeatus*, 12 Dec. 2009, A. Gardiennet, deposited at Faculté de Pharmacie de Lille, France (LIP) AG09358 holotype, culture ex-type CBS 126457, MycoBank MB516770.

Notes — Through our ongoing research of hypocrealean fungi we discovered an undescribed species of *Nectriella* on the cladodes of *Ruscus aculeatus*. Although we have found many other hypocrealean fungi on this host, this is the first time a species of *Nectriella* is reported on *Ruscus*. *Nectriella rusci* is difficult to see because it is totally immersed in the tissues of the host and possesses very small pale yellow ascomata. This fungus is not described in Lowen (1991)¹ and Rossman et al. (1999)²; we did not find any species corresponding to our specimen. *Nectriella rusci* resembles *N. alpina* because of the intertwined hyphal wall but differs from *N. alpina* by its smaller ascospores, (12.5–)13–14.5(–17) × 2.8–3.2 µm vs (12.5–)13–17.5(–19) × 3.5–5(–7) µm, and hosts, *Arabidopsis* or *Saxifraga* vs *Ruscus aculeatus*.

References. ¹Lowen R. 1991. A monograph of the genera *Nectriella* Nitschke and *Pronectria* Clements with reference to *Charonectria*, *Cryptonectriella*, *Hydronectria* and *Pseudonectria*. PhD dissertation, City University of New York. ²Rossman AY, Samuels GJ, Rogerson CT, Lowen R. 1999. Genera of Bionectriaceae, Hypocreaceae and Nectriaceae (Hypocreales, Ascomycetes). *Studies in Mycology* 42: 1–248.