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# Fungal Planet description sheets: 1383–1435

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**Key words**

ITS nrDNA barcodes
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**Abstract** Novel species of fungi described in this study include those from various countries as follows: **Australia**, *Agaricus albofoetidus*, *Agaricus aureoelephanti* and *Agaricus parviumbrus* on soil, *Fusarium ramsdenii* from stem cankers of *Araucaria cunninghamii*, *Keissleriella sporoboli* from stem of *Sporobolus natalensis*, *Leptosphaerulina queenslandica* and *Pestalotiopsis chiaroscuro* from leaves of *Sporobolus natalensis*, *Serendipita petricolae* as endophyte from roots of *Eriochilus petricola*, *Stagonospora tauntonensis* from stem of *Sporobolus natalensis*, *Teratosphaeria carnegiei* from leaves of *Eucalyptus grandis* × *E. camaldulensis* and *Wongia ficherai* from roots of *Eragrostis curvula.* **Canada**, *Lulworthia fundyensis* from intertidal wood and *Newbrunswickomyces abietophilus* (incl. *Newbrunswickomyces* gen. nov.) on buds of *Abies balsamea.* **Czech Republic**, *Geosmithia funiculosa* from a bark beetle gallery on *Ulmus minor* and *Neoherpotrichiella juglandicola* (incl. *Neoherpotrichiella* gen. nov.) from wood of *Juglans regia.* **France**, *Aspergillus rouenensis* and *Neoacrodontium gallica* (incl. *Neoacrodontium* gen. nov.) from bore dust of *Xestobium rufovillosum* feeding on *Quercus* wood, *Endoradiciella communis* (incl. *Endoradiciella* gen. nov.) endophytic in roots of *Microthlaspi perfoliatum* and *Entoloma simulans* on soil. **India**, *Amanita konajensis* on soil and *Keithomyces indicus* from soil. **Israel**, *Microascus rothbergiorum* from *Stylophora pistillata.* **Italy**, *Calonarius ligusticus* on soil. **Netherlands**, *Appendopyricularia juncicola* (incl. *Appendopyricularia* gen. nov.), *Eriospora juncicola* and *Tetraploa juncicola* on dead culms of *Juncus effusus*, *Gonatophragmium physciae* on *Physcia caesia* and *Paracosmospora physciae* (incl. *Paracosmospora* gen. nov.) on *Physcia tenella*, *Myrmecridium phragmitigenum* on dead culm of *Phragmites australis*, *Neochalara lolae* on stems of *Pteridium aquilinum*, *Niesslia nieuwwulvenica* on dead culm of undetermined *Poaceae*, *Nothodevriesia narthecii* (incl. *Nothodevriesia* gen. nov.) on dead leaves of *Narthecium ossifragum* and *Parastenospora pini* (incl. *Parastenospora* gen. nov.) on dead twigs of *Pinus sylvestris.* **Norway**, *Verticillium bjoernoeyanum* from sand grains attached to a piece of driftwood on a sandy beach. **Portugal**, *Collybiopsis cimrmanii* on the base of living *Quercus ilex* and amongst dead leaves of *Laurus* and herbs. **South Africa**, *Paraproliferophorum hyphaenes* (incl. *Paraproliferophorum* gen. nov.) on living leaves of *Hyphaene* sp. and *Saccothecium widdringtoniae* on twigs of *Widdringtonia wallichii.* **Spain**, *Cortinarius dryosalor* on soil, *Cyphellophora endoradicis* endophytic in roots of *Microthlaspi perfoliatum*, *Geoglossum laurisilvae* on soil, *Leptographium gemmatum* from fluvial sediments, *Physalacria auricularioides* from a dead twig of *Castanea sativa*, *Terfezia bertae* and *Tuber davidlopezii* in soil. **Sweden**, *Alpova larskersii*, *Inocybe alpestris* and *Inocybe boreogodeyi* on soil. **Thailand**, *Russula banwatchanensis*, *Russula purpureoviridis* and *Russula lilacina* on soil. **Ukraine**, *Nectriella adonidis* on overwintered stems of *Adonis vernalis.* **USA**, *Microcyclus jacquiniae* from living leaves of *Jacquinia keyensis* and *Penicillium neoherquei* from a minute mushroom sporocarp. Morphological and culture characteristics are supported by DNA barcodes.

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Calonarius ligusticus

Fungal Planet 1405 – 12 July 2022

# ***Calonarius ligusticus*** Calledda, Boccardo & Dovana, *sp. nov.*

*Etymology*. The epithet '*ligusticus*' reflects the name Liguria, a region in Italy where the holotype was collected.

Classification — *Cortinariaceae*, *Agaricales*, *Agaricomycetes.*

*Basidiomata* small-sized, phlegmacioid. *Pileus* 25–45 mm diam, hemispherical, then convex to plano-convex, when old depressed, slightly viscid to dry, radially fibrillose, centre with a few whitish to pale brown veil remnants, margin involute for a long time then inflexed; cream, ochraceous to ochraceous brown with some faint brown hues and with pinkish to violaceous tinges. *Lamellae* moderately distant, emarginate to adnate with decurrent tooth, edge even to slightly crenulated, violet at the beginning, darkening to rusty brown with age. *Stipe* 20–40 × 6–12 mm, cylindrical, with a relatively broad marginate bulb up to 20 mm diam long, violet, later becoming brownish, solid, covered with fibrils of the partial veil; bulbipellis whitish with a lilac tinge, that becomes brownish when old; whitish to lilac universal veil on the bulb margin; mycelial strands white. *Cortina* fairly sparse, whitish, with age heavily covered with rust-brown spore powder. *Context* whitish to ochraceous in the pileus, with blue tinge in the stipe, brown in the bulb of older specimens. *Odour* and *taste* not distinctive. Macrochemical reaction 30 % KOH on pileus orange-brown, in context pale orange-brown, brown on bulb edge surface. *Basidiospores* (10.5–)10.7–*11.7*–12.6(–14.5) × (5.0–)5.9–*6.4*–6.9(–7.5) µm Q = (1.49–)1.61–*1.83*–2.05(–2.36) citriform, amygdaliform to subamygdaliform, strongly and coarsely, net-like verrucose, suprahilar plage indistinct, apiculus smooth. *Basidia* 27–32 × 8–10 µm, clavate, four-spored, thin-walled and hyaline in KOH, sterigmata up to 3.5 µm long. *Lamella edge* fertile, presence of cystidioid cylindrical elements. *Cheilocystidia* and *pleurocystidia* not observed. *Pileipellis* as an ixocutis, hyphae hyaline, yellow to brown, cylindrical to slightly moniliform with subcapitate terminal elements 4–6 µm wide. *Pigments* cytoplasmic and parietal. *Clamp connections* frequent at all septa.

Habitat & Distribution — In deciduous forest with *Quercus ilex* on calcareous soil. Found, so far as we know, only in North Italy in Liguria Region.

*Typus*. Italy, Zoagli, Località Le Grazie, in a dense forest of *Quercus ilex*, near the path, on calcareous soil, 30 Nov. 2019, *F. Calledda*, *M. Carbone* & *E. Pini* (holotype GDOR5237, ITS and LSU sequences GenBank OM980183 and OM980184, MycoBank MB 843353).

Notes — Spore dimensions are expressed as (a)b–*c*–d(e), where (a) = minimum value, b = (average – standard deviation), *c* = average, d = (average + standard deviation) and (e) = maximum value. *Calonarius ligusticus* is characterised by a small basidioma, cream to ochraceous brown fibrillose pileus with pinkish to light violaceous tinges and with some brown hues, lamellae moderately distant and distinctly violaceous, violaceous stipe with broad marginate bulb covered by whitish to lilac universal veil, mycelial strands white and orange alkaline reaction on the pileus surface and in the context. Microscopically, *Calonarius ligusticus* shows high variability in spore shape (citriform, amygdaliform to subamygdaliform, Q = 1.49–2.36) and size (10.5–14.5 × 5.0–7.5 µm) and a pileipellis as an ixocutis, with brown subcapitate terminal elements. In the nrITS phylogenetic analysis, *Calonarius ligusticus* is in a well-supported /Calochroi clade (maximim-likelihood bootstrap, MLB = 98 %), and it is a sister species of *Calonarius laberiae* (MLB = 100 %), with which it shares 97 % bp. Based on a megablast search of NCBIs GenBank nucleotide database, the best hit using the LSU sequence is *Calonarius sodagnitus* (voucher AFTOL-ID 811, GenBank; Identities = 909/915 (99 %), no gaps). Morphologically, *C. laberiae* differs mainly from *C. ligusticus* by yellow to yellow-ochraceous pileus, greyish white lamellae, white to ochraceous stipe, smaller basidiospores (9.3–12.2 × 5.9–7.3 µm) and different habitat under *Abies* and *Picea* (Münzmay et al. 2009). *Calonarius sodagnitus* is easily distinguished from *C. ligusticus* by its violaceous pileus with dark spots, intense alkaline reactions on bulbipellis and pileus and smaller basidiospores (8.5–10 × 5–6 um) (Brandrud et al. 1992).

*Colour illustrations*. Zoagli, Italy, *Quercus ilex* forest. *Calonarius ligusticus* basidiomata in habitat; basidiospores and pileipellis. Scale bars = 10 µm.

**Supplementary material**

**FP1405** Phylogenetic tree.

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