

## A survey of the corticioid fungi from the Biosphere Reserve of Las Batuecas-Sierra de Francia (Spain)

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**Abstract** — 140 species belonging to 55 genera of corticioid fungi are reported from the Biosphere Reserve of Las Batuecas-Sierra de Francia in central-western Spain. *Amyloathelia amylacea*, *Phlebia* cf. *lacteola*, *Sistotrema alboluteum*, *S. porulosum*, *S. subtrigonospermum* and *Vuilleminia alni* are new records for the Iberian Peninsula. The presence of *Hjortstamia crassa* recently re-collected in Europe after one century is remarkable.

**Key words** — *Aphylliphorales*, chorology, Mediterranean

### Introduction

The Natural Park of “Las Batuecas-Sierra de Francia”, declared a Biosphere Reserve in 2006, is situated in the south of Salamanca province in the central-western part of the Iberian Peninsula (40°26'–40°35' N, 5°57'–6°15' W) and covers an area of 320 km<sup>2</sup>. The reserve has a typically humid, Mediterranean climate and the main forest formations are: deciduous forests of *Quercus ilex* subsp. *ballota* (Desf.) Samp., *Q. suber* L., *Q. faginea* Lam., *Q. pyrenaica* Willd., *Q. robur* L., *Castanea sativa* Mill., *Arbutus unedo* L., and *Eucalyptus camaldulensis* Dehnh.; coniferous forests of *Pinus pinaster* Aiton, *P. sylvestris* L., and *Juniperus oxycedrus* L.; and riparian formations of *Alnus glutinosa* (L.) Gaertn., *Salix* spp. and *Populus* spp. Despite being declared a Biosphere Reserve (mainly based on the interesting Mediterranean vegetation, animal communities and socio-cultural patrimony) only a few fungal studies have been undertaken in the area (Daniëls & Gorjón 2009, Gorjón & Bernicchia 2009, Gorjón et al. 2007). Present survey constitutes the first long-term, systematized study of corticioid species.

## Materials and methods

During 2002–07 fungi were collected on different kinds of substrate in the area studied. Samples were examined following classical methods. Sections were mounted in KOH (5%), cotton blue and/or Melzer's reagent and studied using a Leica DMRD microscope; line-drawings were made from images acquired with a Leica DC100 camera and Leica QWin image system. Specimens are kept in SALA, some duplicates also in HUBO and GU. Nomenclature mainly follows CBS (2009).

## Results

In this survey 140 species belonging to 55 genera of corticioid wood-inhabiting fungi were identified. Species of *Hyphodontia*, *Tomentella*, *Botryobasidium*, *Phanerochaete*, and *Hyphoderma* were dominant.

The Iberian Peninsula has been very well investigated, however six species (marked with an asterisk) are considered to be new records: *Amyloathelia amylacea* (Bourdot & Galzin) Hjortstam & Ryvarden, a rare species in southern Europe but cosmopolitan and widely distributed in the northern hemisphere; *Phlebia* cf. *lacteola* (Bourdot) M.P. Christ., a species belonging to the *P. lilascens* (Bourdot) J. Erikss. & Hjortstam complex; *Sistotrema alboluteum* (Bourdot & Galzin) Bondartsev & Singer; *S. porulosum* Hallenb.; *S. subtrigonospermum* D.P. Rogers (see also Gorjón & Hallenberg 2008); and *Vuilleminia alni* Boidin, Lanq. & Gilles. *Hjortstamia crassa* (Lév.) Boidin & Gilles was recently collected in the north of the Iberian Peninsula by Salcedo & Olariaga (2008) and has now also been found in the study area; it is a very interesting record because in Europe it was previously only known from one collection in Poland (Bresadola 1903) and it has probably become extinct in this collecting site (Snowarski 2004).

Rare or infrequent species in the Iberian Peninsula are *Aleurodiscus aurantius* (Pers.) J. Schröt., *Botryobasidium asperulum* (D.P. Rogers) Boidin, *Bulbillomyces farinosus* (Bres.) Jülich, *Ceraceomyces sulphurinus* (P. Karst.) J. Erikss. & Ryvarden, *Dacryobolus sudans* (Alb. & Schwein.) Fr., *Hyphodontia cineracea* (Bourdot & Galzin) J. Erikss. & Hjortstam, *H. rimosissima* (Peck) Gilb., *Phanerochaete avellanea* (Bres.) J. Erikss. & Hjortstam, *Phlebia ochraceofulva* (Bourdot & Galzin) Donk, *P. subochracea* (Alb. & Schwein.) J. Erikss. & Ryvarden, *Stereum illudens* Berk., *S. reflexulum* D.A. Reid, *Tomentella botryoides* (Schwein.) Bourdot & Galzin, *Tubulicrinis borealis* J. Erikss. and *Vuilleminia cystidiata* Parmasto. Some species seem to have a mainly Mediterranean distribution, such as *Meruliopsis hirtella* (Burt) Ginns, *Peniophora meridionalis* Boidin, *Phanerochaete martelliana* (Bres.) J. Erikss. & Ryvarden, *Scytinostroma aluta* Lanq. and *Stereum reflexulum*. Substrates which are particularly

species-rich are *Quercus pyrenaica* (54 species), *Pinus pinaster* (40), *Arbutus unedo* (37), *Pinus sylvestris* (34), and *Quercus ilex* (33).



Fig. 1. Macroscopic aspect of Iberian novelties a) *Amyloathelia amylacea* (SALA-Fungi 2577), b) *Hjortstamia crassa* (SALA-Fungi 3608), c) *Phlebia lacteola* (SALA-Fungi 3548), d) *Vuilleminia alni* (SALA-Fungi 4031), e) *Sistotrema alboluteum* (SALA-Fungi 3722), f) *S. porulosum* (SALA-Fungi 3735), g) *S. subtrigonospermum* (SALA-Fungi 3736).

### Checklist

Species are listed in alphabetic order; for the sake of brevity only substrates and herbarium numbers are indicated, with comments on distribution or frequency (for the Iberian Peninsula, see Hernández Crespo 2006, Tellería 1990, Tellería & Melo 1995). For the Iberian novelties, original descriptions, line-drawings and photographs are provided. For the remaining species, complete descriptions, line-drawings, photographs and exact location data can be requested from the first author.

***Aleurodiscus aurantius*** (Pers.) J. Schröt.

SPECIMENS EXAMINED – *Rubus* sp., MA-Fungi 22390. A rare species in Europe, widespread in North America and Japan (Ginns & Lefebvre 1993, Núñez & Ryvarde 1997); NOTES – Widely distributed in the Iberian Peninsula.

***Aleurodiscus disciformis*** (DC.) Pat.

=*Aleurocystidiellum disciforme* (DC.) Tellería

SPECIMENS EXAMINED – *Quercus ilex*, SALA-Fungi 2550, 2552, 2556, MA-Fungi 22374; *Q. pyrenaica*, SALA-Fungi 2551; *Q. suber*, SALA-Fungi 2553. NOTES – Common and widely distributed in the Iberian Peninsula in the *Quercus* zone.

***Amphinema byssoides*** (Pers.) J. Erikss.

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 2562, 2563, 2565, 2570, 2557, 2568, 2566, 2558, 2575, 2576, 2569, 2571, 2573; *P. sylvestris*, SALA-Fungi , 2564, 2567, 2572, 2574. NOTES – Common and widespread in the Iberian Peninsula.

\****Amyloathelia amylacea*** (Bourdot & Galzin) Hjortstam & Ryvarde

Fig. 1a, 2.

SPECIMENS EXAMINED – *Juniperus oxycedrus*, SALA-Fungi 2577, 2578, 2579. DESCRIPTION – Basidiome resupinate, effused, membranaceous; hymenophore smooth, cracked, whitish to pale cream; margin cottony whitish, abrupt. Hyphal system monomitic; hyphae clamped, basal ones straight, subhymenial more or less sinuous, thin-walled, hyaline. Cystidia absent. Basidia clavate to urniform, 30–40 × 6–7 µm, 4-sterigmate, guttulate, with a basal clamp. Basidiospores ellipsoid, 9–11 × 4–6 µm, smooth, thick-walled, amyloid, frequently collapsed. NOTES – On coniferous wood, *Picea*, *Thuja* in North America (Ginns & Lefebvre 1993); *Juniperus* in Europe (Hjortstam & Ryvarde 1979, Bernicchia 2000). Cosmopolitan and widespread in the northern hemisphere but not frequent; rare in Europe (Ginns & Lefebvre 1993, Bernicchia 2000); new record for the Iberian Peninsula; in the area it is quite frequent on still-attached, dead branches of juniper.

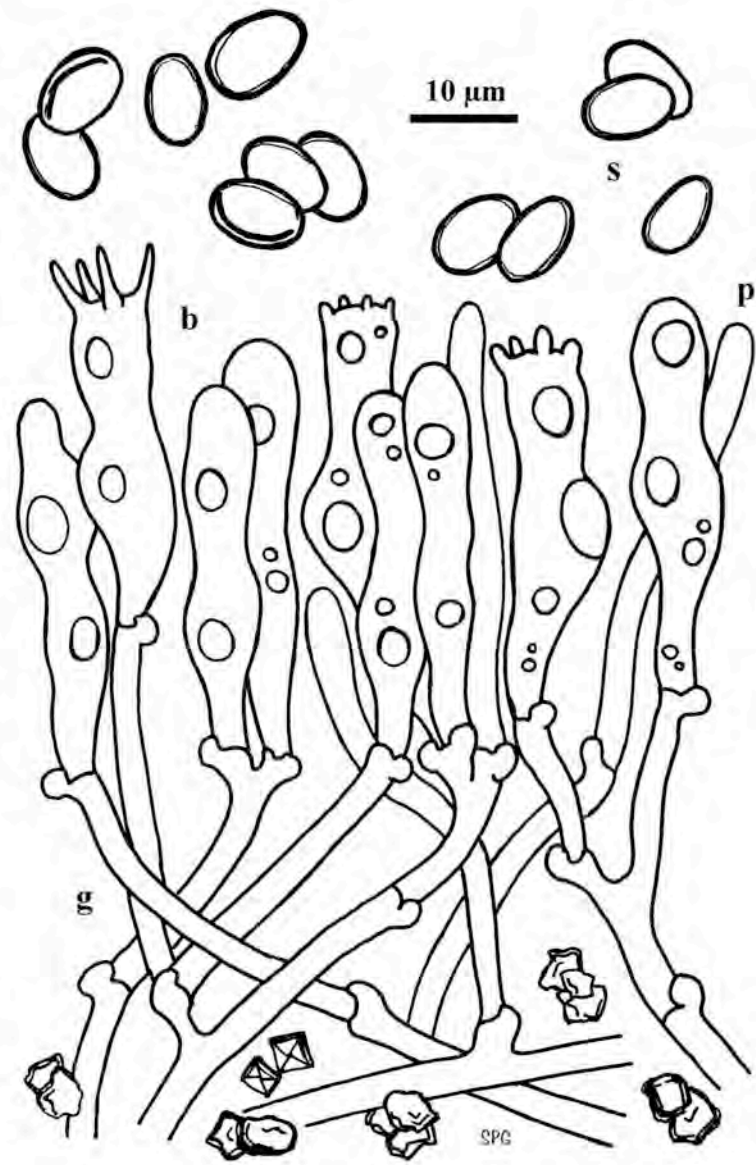


Fig. 2. *Amyloathelia amylacea* (SALA-Fungi 2577); microscopic elements:  
s) spores, b) basidia, g) generative hyphae, p) paraphysoid hyphae.

***Amylocorticium cebennense*** (Bourdot) Pouzar

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 2582, 2585, 2587, 2602, 2580, 2588, 2589, 2591, 2600, 2601, 2592, 2594, 2593, 2595, 2596, 2598, 2597; *P. sylvestris*, SALA-Fungi 2583, 2599, 2603, 2604, 2605, 2606, 2581, 2584, 2590, 2586. NOTES – Common and widely distributed in the Iberian Peninsula.

***Amylostereum laevigatum*** (Fr.) Boidin

SPECIMENS EXAMINED – *Taxus baccata*, SALA-Fungi 2613, 2610, 2608, 2609, 2611, 2612, MA-Fungi 22385. NOTES – Widely distributed in the northern half of the Iberian Peninsula; in the studied area it is very frequent on bark of *Taxus*.

***Athelia acrospora*** Jülich

SPECIMENS EXAMINED – *Betula alba*, SALA-Fungi 2633; *Castanea sativa* (leaves), SALA-Fungi 2630; *Pinus sylvestris*, SALA-Fungi 1838, 1840, 2627, 2629, 2631, 2632, 2628, 2626; *P. pinaster*, SALA-Fungi 2624; *Quercus pyrenaica*, SALA-Fungi 2625. NOTES – Widely distributed in the Iberian Peninsula.

***Athelia decipiens*** (Höhn. & Litsch.) J. Erikss.

SPECIMENS EXAMINED – *Castanea sativa*, SALA-Fungi 2634; *Pinus sylvestris*, SALA-Fungi 2635; *Quercus pyrenaica*, SALA-Fungi 2636, 2637. NOTES – Widely distributed in the Iberian Peninsula.

***Athelia epiphylla*** Pers.

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 2647, 2645; *Castanea sativa*, SALA-Fungi 2639; *Quercus ilex*, SALA-Fungi 2644, 2648, 2650; *Q. pyrenaica*, SALA-Fungi 2640, 2641; *Q. robur*, SALA-Fungi 1847; *Q. suber*, SALA-Fungi 2642; *Pinus sylvestris*, SALA-Fungi 2638, 2643, 2646, 2649, 2651. NOTES – A common species, widespread in the Iberian Peninsula, considered as a species complex.

***Athelopsis glaucina*** (Bourdot & Galzin) Oberw. ex Parmasto

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 2652; *Salix sp.*, SALA-Fungi 2653. NOTES – Widespread in the Iberian Peninsula

***Botryobasidium asperulum*** (D.P. Rogers) Boidin

SPECIMENS EXAMINED – *Acer monspessulanum*, SALA-Fungi 2657. *Botryobasidium cf. asperulum*: *Eucalyptus camaldulensis*, SALA-Fungi 2678; *Pinus sylvestris*, SALA-Fungi 2677; *Quercus faginea*, SALA-Fungi 2676. NOTES – A rare species, known from America and Africa (Boidin 1970, Boidin & Gilles 1982, Hjortstam 1983) and it seems to have a scattered distribution in the Iberian Peninsula (Tellería & Melo 1995); recently also recorded from Italy (Bernicchia et al. 2008). Closely related to *Botryobasidium laeve* (J. Erikss.) Parmasto, but differs in the spore ornamentation which is often very difficult to discern with the light microscope.



***Botryobasidium candicans*** J. Erikss.

SPECIMENS EXAMINED – *Eucalyptus camaldulensis*, SALA-Fungi 2667, 2668; *Pinus sylvestris*, SALA-Fungi 2658, 2659, 2660, 2663, 2670, 2666; *P. pinaster*, SALA-Fungi 2671, 2669, 2665, 2664, 2672, 2674, 2675, 2673. *Botryobasidium* cf. *candicans*. *E. camaldulensis*, SALA-Fungi 2679; *P. pinaster*, SALA-Fungi 2682. NOTES – Widely distributed in the Iberian Peninsula but not frequent.

***Botryobasidium laeve*** (J. Erikss.) Parmasto

SPECIMENS EXAMINED – *Pinus sylvestris*, SALA-Fungi 2683. NOTES – The distribution in the Iberian Peninsula is not well known due to confusion with closely related species.

***Botryobasidium subcoronatum*** (Höhn. & Litsch.) Donk

SPECIMENS EXAMINED – *Acer monspessulanum*, SALA-Fungi 2714, 2715, 2716; *Arbutus unedo*, SALA-Fungi 2770; *Betula alba*, SALA-Fungi 2724, 2726; *Castanea sativa*, SALA-Fungi 2712; *Pinus pinaster*, SALA-Fungi 2749, 2751, 2759, 2732, 2747, 2752, 2753, 2754, 2755, 2756, 2725, 2702, 2705, 2708, 2711, 2713, 2719, 2721, 2723, 2706, 2776, 2701, 2704, 2707, 2728, 2730, 2765, 2718, 2700, 2709, 1804; *P. sylvestris*, SALA-Fungi 1830, 1845, 2748, 2738, 2698, 2773, 2699, 2703, 2731, 2733, 2734, 2735, 2736, 2737, 2739, 2740, 2741, 2742, 2743, 2744, 2745, 2746, 2750, 2757, 2760, 2761, 2762, 2763, 2764, 2766, 2767, 2768, 2769, 2771, 2772, 2774, 2775, 2777, 2778, 2758, 2722, 2710, 2717, 2720, 2779; *Quercus pyrenaica*, SALA-Fungi 2729. NOTES – Very common and widely distributed in the Iberian Peninsula.

***Botryobasidium vagum*** (Berk. & M.A. Curtis) D.P. Rogers

SPECIMENS EXAMINED – *Eucalyptus camaldulensis*, SALA-Fungi 1859, 1789, 2800, 2801, 2802, 2803, 2804, 2805; *Pinus pinaster*, SALA-Fungi 2780, 2797, 2786, 2788, 2792, 2785, 2790, 2791, 2796, 2806, 2793, 2799, 2783, 2784, 2787, 1877; *P. sylvestris*, SALA-Fungi 1865, 2795, 2798, 2781, 2789, 2794. NOTES – Widely distributed and frequently collected in the Iberian Peninsula.

***Botryohypochnus isabellinus*** (Fr.) J. Erikss.

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 2810, 2815, 2809; *Eucalyptus camaldulensis*, SALA-Fungi 2818, 2812; *Pinus pinaster*, SALA-Fungi 2813, 2816, 2821, 2807, 2811; *P. sylvestris*, SALA-Fungi 2808, 2814; *Quercus pyrenaica*, SALA-Fungi 2817, 2819, 2820. NOTES – A common and widely distributed species in the Iberian Peninsula.

***Bulbillomyces farinosus*** (Bres.) Jülich

SPECIMENS EXAMINED – *Betula alba*, SALA-Fungi 2823; *Populus alba*, SALA-Fungi 2824. NOTES – Not frequent and with a scattered distribution in the Iberian Peninsula.

***Byssomerulius corium*** (Pers.) Parmasto

= *Meruliopsis corium* (Pers.) Ginns

SPECIMENS EXAMINED – *Acer monspessulanum*, SALA-Fungi 3285; *Castanea sativa*, SALA-Fungi 3279; *Fraxinus angustifolia*, SALA-Fungi 3281; *Quercus ilex*, SALA-Fungi 3280, 3284, 3286; *Q. robur*, SALA-Fungi 3282. NOTES – Widely distributed in the Iberian Peninsula.

***Byssomerulius hirtellus*** (Burt) Parmasto

= *Meruliopsis hirtella* (Burt) Ginns

SPECIMENS EXAMINED – *Quercus ilex*, SALA-Fungi 3287. NOTES – Widespread in the Iberian Peninsula

***Ceraceomyces sublaevis*** (Bres.) Jülich

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 2839; *Eucalyptus camaldulensis*, SALA-Fungi 2837, 2838, 2836. NOTES – Rather common and widely distributed in the Iberian Peninsula, mainly in the northern part.

***Ceraceomyces sulphurinus*** (P. Karst.) J. Erikss. & Ryvarden

*Pinus sylvestris*, SALA-Fungi 2840. NOTES – Widely distributed in North America, while it seems to be a rare species in Europe; previously cited in the Iberian Peninsula in Navarra and Valencia but these specimens are not available (Tellería & Melo 1995); with this collection we can confirm its presence in the Iberian Peninsula.

***Ceraceomyces tessulatus*** (Cooke) Jülich

SPECIMENS EXAMINED – *Pinus sylvestris*, SALA-Fungi 2841, 2842, 2843, 2844, 2845, 2846. NOTES – Rather common, distributed mainly in the northern half of the Iberian Peninsula.

***Chondrostereum purpureum*** (Pers.) Pouzar

SPECIMENS EXAMINED – *Populus alba*, SALA-Fungi 2861; *Quercus pyrenaica*, SALA-Fungi 1763. NOTES – Widespread in the Iberian Peninsula.

***Coniophora arida*** (Fr.) P. Karst.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 2903; *Arbutus unedo*, SALA-Fungi 2901; *Betula alba*, SALA-Fungi 2898; *Pinus pinaster*, SALA-Fungi 2899, 2906, 2892, 2894; *P. sylvestris*, SALA-Fungi 2902, 2904, 2905, 2895, 2900, 2893, 2896, 2897. NOTES – A common and widely distributed species in Europe as well as in the Iberian Peninsula.

***Coniophora fusispora*** (Cooke & Ellis) Sacc.

SPECIMENS EXAMINED – *Pinus sylvestris*, SALA-Fungi 2907. NOTES – Widely distributed in the Iberian Peninsula but not frequent. Easily recognized by the shape and size of the basidiospores.

***Coniophora olivacea*** (Fr.) P. Karst.

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 2908, 2909, 2910. NOTES – Common and widely distributed in the Iberian Peninsula.

***Coniophora puteana*** (Schumach.) P. Karst.

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 1880; *Cistus ladanifer*, SALA-Fungi 1878; *Pinus pinaster*, SALA-Fungi 2911; *Quercus ilex*,



SALA-Fungi 1879. NOTES – A very frequent species and widely distributed in the Iberian Peninsula.

***Cristinia helvetica*** (Pers.) Parmasto

SPECIMENS EXAMINED – *Acer monspessulanum*, SALA-Fungi 2934; *Castanea sativa*, 14-10-2007, SALA-Fungi 2936; *Quercus pyrenaica*, SALA-Fungi 2937, 2935; *Q. robur*, SALA-Fungi 1850. NOTES – Widely distributed in the Iberian Peninsula.

***Cylindrobasidium evolvens*** (Fr.) Jülich

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 2951; *Betula alba*, SALA-Fungi 2950. NOTES – Widespread in the Iberian Peninsula.

***Dacryobolus karstenii*** (Bres.) Oberw. ex Parmasto

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 2969, 1892, 2959, 2962, 2961, 2953, 2955, 2967, 2965, 2970, 2971, 1862, 2957, 2964, 2960, 1876; *P. sylvestris*, SALA-Fungi 2952, 2968, 2954, 2958, 2972, 2956, 2963, 2966. NOTES – Widely distributed in the northern hemisphere and in the Iberian Peninsula; a very important brown-rotting species frequent in the coniferous forest of the studied area.

***Dacryobolus sudans*** (Alb. & Schwein.) Fr.

SPECIMENS EXAMINED – *Castanea sativa*, SALA-Fungi 2973. NOTES – Not very frequent but a widely distributed species in the Iberian Peninsula; mainly collected on coniferous wood.

***Gloeocystidiellum luridum*** (Bres.) Boidin

SPECIMENS EXAMINED – *Erica arborea*, SALA-Fungi 3005. NOTES – Widely distributed in the temperate north hemisphere also in the Iberian Peninsula.

***Gloeocystidiellum porosum*** (Berk. & M.A. Curtis) Donk

SPECIMENS EXAMINED – *Betula alba*, SALA-Fungi 3006, 3010, 3012; *Castanea sativa*, SALA-Fungi 3008; *Quercus pyrenaica*, SALA-Fungi 3011, 3007; *Q. robur*, SALA-Fungi 3009. NOTES – Widespread in the Iberian Peninsula.

***Hjortstamia crassa*** (Lév.) Boidin & Gilles

=*Porostereum crassum* (Lév.) Hjortstam & Ryvarden

Fig. 1b, 3.

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 3608, 3609.  
DESCRIPTION – Basidiome resupinate, effused; hymenophore smooth to tuberculate, brownish with purplish tints; context thin, brown. Hyphal system (pseudo)dimitic; generative hyphae simple-septate, thin to slightly thick-walled, 3–6 µm; skeletal hyphae thick-walled, yellowish to pale brown, 4–10 µm. Cystidia (skeletalocystidia), cylindrical with subulate apex, almost smooth in young cystidia to strongly encrusted, thick-walled, 50–100 × 8–12 µm, hyaline to pale brown, projecting. Basidia clavate to cylindrical, 15–25 × 4–6 µm, 4-sterigmate, simple-septate. Basidiospores narrowly ellipsoid, 6–7 × 3–4 µm, smooth, thin-walled,

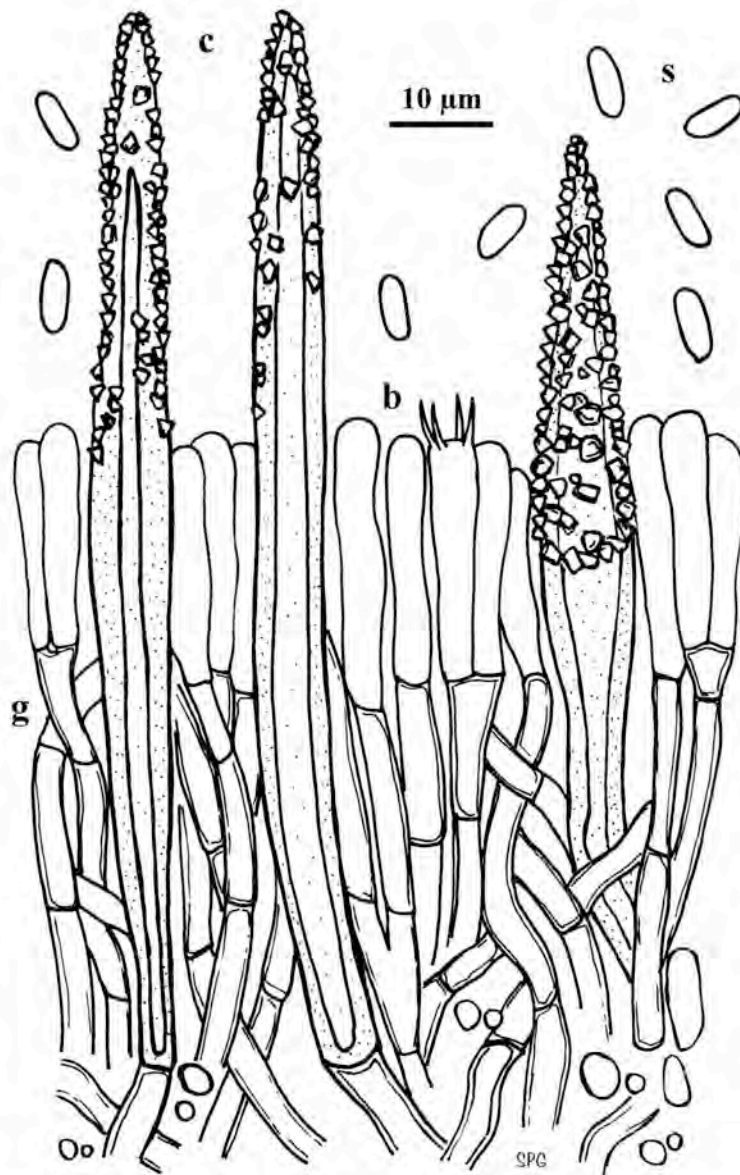


Fig. 3. *Hjortstamia crassa* (SALA-Fungi 3608); microscopic elements: s) spores, b) basidia, c) cystidia, g) generative hyphae.

IKI-. NOTES – On deciduous wood. It seem to be a common pantropical species or species complex (Burdshall 1985, Hjortstam & Ryvarden 1990, Boidin & Gilles 2002); in Europe there was previously only one known record from Poland determined by Bresadola (Jahn 1971), and in the red list of plants and fungi of Poland it appears as “extinct” and “not possible to find again on the collection site” (Snowarski 2006). This is a very interesting record of a species cited in Europe several years ago; it has also been recently collected in the north of the Iberian Peninsula by Salcedo & Olariaga (2008).

***Hymenochaete cinnamomea* (Pers.) Bres.**

SPECIMENS EXAMINED – *Erica arborea*, SALA-Fungi 3035, 3032, 3033; on unidentified wood, MA-Fungi 3280. NOTES – Widely distributed in the Iberian Peninsula.

***Hymenochaete rubiginosa* (Dicks.) Lév.**

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 1896; *Castanea sativa*, SALA-Fungi 3041, 3040, 3038, 3047, 3046, 3039; *Eucalyptus camaldulensis*, SALA-Fungi 3043; *Quercus pyrenaica*, SALA-Fungi 3042, 3037, 3036, 3044, 3048, 1780, 3045, LAZA 2057; on unidentified wood, MA-Fungi 22386. NOTES – Common and widespread species.

***Hyphoderma argillaceum* (Bres.) Donk**

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3050, 3051, 3052, 3053, 3054, 3057, 1846; *P. sylvestris*, SALA-Fungi 3055, 3056. NOTES – Widespread throughout the temperate northern hemisphere, also in the Iberian Peninsula.

***Hyphoderma litschaueri* (Burt) J. Erikss. & Å. Strid**

SPECIMENS EXAMINED – *Quercus faginea*, SALA-Fungi 3059. NOTES – Widely distributed in the north of the Iberian Peninsula.

***Hyphoderma medioburiense* (Burt) Donk**

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3061; *Eucalyptus camaldulensis*, SALA-Fungi 3069; *Quercus pyrenaica*, SALA-Fungi 3060, 3062, 3063, 3064, 3065, 3066, 3067, 3068. NOTES – Widespread in the northern hemisphere even if not very frequent; widely distributed in the Iberian Peninsula.

***Hyphoderma occidentale* (D.P. Rogers) Boidin & Gilles**

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 3049, 3070.

***Hyphoderma roseocreum* (Bres.) Donk**

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3102. *Hyphoderma* cf. *roseocreum*: *Quercus pyrenaica*, SALA-Fungi 3058. NOTES – Widely distributed in the Iberian Peninsula.

***Hyphoderma setigerum* (Fr.) Donk**

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3108, 3104; *Pinus pinaster*, SALA-Fungi 3103; *Quercus pyrenaica*, SALA-Fungi 3110,

3107, 3109, 3111, 3106, 3105; *Q. robur*, SALA-Fungi 3112. NOTES – Widespread in the northern hemisphere

***Hyphodermella corrugata*** (Fr.) J. Erikss. & Ryvardeen

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3121; *Quercus robur*, SALA-Fungi 3120. NOTES – It seems to be a rare species in north Europe, but common in the south; widespread in North America and rather common in the Iberian Peninsula.

***Hyphodontia alutaria*** (Burt) J. Erikss.

SPECIMENS EXAMINED – *Acer monspessulanum*, SALA-Fungi 3125; *Castanea sativa*, SALA-Fungi 3126, 3124, 3123. NOTES – Widespread in Europe and in the Iberian Peninsula.

***Hyphodontia aspera*** (Fr.) J. Erikss.

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3128, 1886, 1887, 1890, 3133, 3131, 3132, 3135, 3137, 3145, 3139, 3141, 3142, 3143, 3134, 3136, 3138, 3140, 3144; *Betula alba*, SALA-Fungi 3130; *Quercus ilex*, SALA-Fungi 3127, 3129. NOTES – Widespread throughout Europe and in the Iberian Peninsula.

***Hyphodontia breviseta*** (P. Karst.) J. Erikss.

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3147. NOTES – Widespread in the northern hemisphere, rare in the Iberian Peninsula.

***Hyphodontia cineracea*** (Bourdot & Galzin) J. Erikss. & Hjortstam

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3153. NOTES – Due to the possible confusion with *Hyphodontia subalutacea* its distribution is uncertain. The species differs from *H. subalutacea* mainly by the wider and shorter spores. *H. cineracea* is also present in the northern part of the Iberian Peninsula (Salcedo et al. 2006b).

***Hyphodontia crustosa*** (Pers.) J. Erikss.

SPECIMENS EXAMINED – On unidentified wood, MA-Fungi 22395, MA-Fungi 22396. NOTES – Widespread in the northern hemisphere and in the Iberian Peninsula.

***Hyphodontia floccosa*** (Bourdot & Galzin) J. Erikss.

SPECIMENS EXAMINED – *Quercus robur*, SALA-Fungi 1891. NOTES – It seems to be an infrequent species in Europe; also found in North America.

***Hyphodontia gossypina*** (Parmasto) Hjortstam

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3154; *Quercus robur*, SALA-Fungi 3155. NOTES – Widespread in the north temperate hemisphere, infrequent in the Iberian Peninsula.

***Hyphodontia juniperi*** (Bourdot & Galzin) J. Erikss. & Hjortstam

SPECIMENS EXAMINED – *Juniperus oxycedrus*, SALA-Fungi 3156. NOTES – Main distribution in the southern part of Europe, Japan and reported from Texas in North America.

***Hyphodontia nespori*** (Bres.) J. Erikss. & Hjortstam

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3157; *Alnus glutinosa*, SALA-Fungi 3158. NOTES – It seems to be widespread in the temperate northern hemisphere even if not very frequent.

***Hyphodontia pruni*** (Lasch) Svrček

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3161, 3159, 3160.  
NOTES – With a scattered distribution in the Iberian Peninsula.

***Hyphodontia quercina*** (Pers.) J. Erikss.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3163; *Castanea sativa*, SALA-Fungi 3167, 3183, 3185, 3162; *Eucalyptus camaldulensis*, SALA-Fungi 1881, 1888, 3173, 3175, 3164, 3181; *Prunus avium*, SALA-Fungi 1884. *Quercus faginea*, SALA-Fungi 3187; *Q. ilex*, SALA-Fungi 3168, 3169, 3172, 3174, 3182, 3170, 3188, 3165; *Q. pyrenaica*, SALA-Fungi 3179, 3180, 3176, 3186, 3177, 3166, 1882, 1883, 3171; *Q. robur*, SALA-Fungi 3184; *Salix sp.*, SALA-Fungi 3178. NOTES – Widespread in North America, Europe, and also in the Iberian Peninsula.

***Hyphodontia rimosissima*** (Peck) Gilb.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3146, 3150; *Arbutus unedo*, SALA-Fungi 1889, 3147, 3149, 3148; *Corylus avellana*, SALA-Fungi 3151. NOTES – A rare species in the Iberian Peninsula with few known locations.

***Hyphodontia sambuci*** (Pers.) J. Erikss.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3189, 3190. NOTES – Widely distributed in Europe, North America and in the Iberian Peninsula.

***Hyphodontia subalutacea*** (P. Karst.) J. Erikss.

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3204, 3200; *Acer monspessulanum*, SALA-Fungi 3152, 3193; *Pinus pinaster*, SALA-Fungi 3194, 3195, 3199, 3203, 3198, 3201; *P. sylvestris*, SALA-Fungi 3196, 3197; *Quercus pyrenaica*, SALA-Fungi 3202. NOTES – Very frequent species in the Iberian Peninsula.

***Hypochnicium molle*** (Fr.) Hjortstam

SPECIMENS EXAMINED – *Pinus sylvestris*, SALA-Fungi 3247. NOTES – Infrequent species in the Iberian Peninsula.

***Hypochnicium albostramineum*** (Bres.) Hallenb.

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3205; *Quercus pyrenaica*, SALA-Fungi 3206. NOTES – It seem to be a frequent species in Europe, with a scattered distribution in the Iberian Peninsula; we ascribe the collected specimens to *H. albostramineum* because of the bigger spores in relation to other species of the *Hypochnicium punctulatum* (Cooke) J. Erikss. complex (Nilsson & Hallenberg 2003).

***Intextomyces contiguus*** (P. Karst.) Erikss. & Ryvarden

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3211; *Quercus ilex*, SALA-Fungi 3210, 3212, 3213, 3214; on unidentified wood, MA-Fungi 22375. NOTES – Scattered distributed in the Iberian Peninsula.

***Laeticorticium polygonioides*** (P. Karst.) Donk

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 1904, 3228, 3230, 1837, 3225, 3223, 3226, 3235, 3236, 3232, 3224, 3233, 3237; *Erica arborea*, SALA-Fungi 1905; *Juniperus oxycedrus*, SALA-Fungi 3222; *Olea europaea*, SALA-Fungi 3229; *Quercus ilex*, SALA-Fungi 3227.3231; *Q. suber*, SALA-Fungi 3221; *Salix* sp., SALA-Fungi 3234.

NOTES – Widely distributed in the north of the Iberian Peninsula; in the studied area this is a common species growing mainly on *Arbutus*. Other species of *Laeticorticium* recorded in the area are *L. lombardiae* M.J. Larsen & Gilb. (MA-Fungi 24354) probably *L. polygonioides* (Salcedo pers. com), *L. roseum* (Fr.) Donk, (MA-Fungi 3529) with a note in Tellería & Melo in Tellería (ed.) (1992:78) (“it is *Laeticorticium* cf. *polygonioides*”), and *L. meridioroseum* (Boidin & Lanq.) M. Dueñas & Tellería (MA-Fungi 24355).

***Laxitextum bicolor*** (Pers.) Lentz

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 4173. NOTES – Widespread in the north temperate hemisphere.

***Leucogyrophana mollusca*** (Fr.) Pouzar

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 1893, 3250; *P. sylvestris*, SALA-Fungi 3248, 3249. NOTES – Widespread in the Iberian Peninsula.

***Luellia recondita*** (H.S. Jacks.) K.H. Larss. & Hjortstam

=*Athelopsis recondita* (H.S. Jacks.) Parmasto

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3251. NOTES – It seems to be a rare species with scattered distribution.

***Mycoacia fuscoatra*** (Fr.) Donk

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 3295. NOTES – With a scattered distribution in the Iberian Peninsula.

***Mycoacia uda*** (Fr.) Donk

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 1842; *Betula alba*, SALA-Fungi 3298; *Pinus pinaster*, SALA-Fungi 3300; *Quercus ilex*, SALA-Fungi 3297, 3296; *Q. robur*, SALA-Fungi 3299. NOTES – Widely distributed in the Iberian Peninsula.

***Peniophora cinerea*** (Pers.) Cooke

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3331. NOTES – Common and widely distributed in the northern hemisphere, also in the Iberian Peninsula.

***Peniophora incarnata*** (Pers.) P. Karst.

SPECIMENS EXAMINED – *Quercus ilex*, SALA-Fungi 3332, 3333, 3334, 3335. NOTES – Widely distributed in the Iberian Peninsula. Often easily



recognized with the naked eye thanks to the orange-reddish colour of the basidiomata. Molecular data by Hallenberg et al. (1996) show that *P. incarnata* forms a species group difficult to separate morphologically.

***Peniophora lycii*** (Pers.) Höhn. & Litsch.

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3336. NOTES – Widely distributed in the Iberian Peninsula.

***Peniophora meridionalis*** Boidin

SPECIMENS EXAMINED – *Erica arborea*, SALA-Fungi 3337; *Eucalyptus camaldulensis*, SALA-Fungi 3345; *Quercus ilex*, SALA-Fungi 3341, 3338, 3339, 3342, 3343, 3346, 3344, 3347, 3340. NOTES – Widely distributed in the Iberian Peninsula growing on several Mediterranean trees and shrubs.

***Peniophora nuda*** (Fr.) Bres.

SPECIMENS EXAMINED – *Quercus ilex*, SALA-Fungi 3330. NOTES – Widespread in the Iberian Peninsula

***Peniophora quercina*** (Pers.) Cooke

SPECIMENS EXAMINED – *Castanea sativa*, SALA-Fungi 3359; *Quercus faginea*, SALA-Fungi 3356; *Q. ilex*, SALA-Fungi 3354, 3364, MA-Fungi 22373; *Q. pyrenaica*, SALA-Fungi 1894, 3358, 3355, 3366, 3351, 3362, 3348, 3357, 3361, 3363, 1787, 1858, 3350, 3349, 3368, 3367, 3352, 3353; *Q. robur*, SALA-Fungi 3365, 1895, 3360, 4070; *Q. suber*, SALA-Fungi 1820. NOTES – A very common and widely distributed species in all the European *Quercus* forests and also in the Iberian Peninsula.

***Peniophora violaceolivida*** (Sommerf.) Masee

SPECIMENS EXAMINED – *Genista florida*, SALA-Fungi 3369; *Quercus pyrenaica*, SALA-Fungi 3370. NOTES – Widely distributed in the Iberian Peninsula.

***Peniophorella pallida*** (Bres.) K.H. Larss.

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3075, 3076, 3072, 3074; *Pinus sylvestris*, SALA-Fungi 3071, 3073. NOTES – Widely distributed in the Iberian Peninsula.

***Peniophorella praetermissa*** (P. Karst.) K.H. Larss.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3089; *Arbutus unedo*, SALA-Fungi 3084; *Betula alba*, SALA-Fungi 3081; *Calluna vulgaris*, SALA-Fungi 3093; *Pinus pinaster*, SALA-Fungi 3078, 3085, 3088, 3099, 3092; *P. sylvestris*, SALA-Fungi 3079, 3086, 3087, 3090, 3094; *Quercus ilex*, SALA-Fungi 3077, 3096; *Q. pyrenaica*, SALA-Fungi 3082, 3097, 3098, 3080, 3095, 3100, 3083; *Salix* sp., SALA-Fungi 3091. NOTES – Frequent and widely distributed in the Iberian Peninsula. The molecular study by Hallenberg et al. (2007), where different specimens from America, Europe, Asia and Africa were analysed, confirmed that *P.*

*praetermissa* is a species-complex difficult to separate with morphological or ecological characters but showing interesting biogeographical patterns.

***Peniophorella pubera*** (Fr.) P. Karst.

SPECIMENS EXAMINED – *Populus alba*, SALA-Fungi 3101. NOTES – Widely distributed in the Iberian Peninsula.

***Phanerochaete avellanea*** (Bres.) J. Erikss. & Hjortstam

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 3382. NOTES – A rare species in the Iberian Peninsula. Closely related to *Phanerochaete tuberculata* (P. Karst.) Parmasto, differing mainly by a much thinner subiculum consisting of wide hyphae and in the size of the basidiospores

***Phanerochaete martelliana*** (Bres.) J. Erikss. & Ryvarde

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3390, 3392; *Castanea sativa*, SALA-Fungi 3393; *Erica arborea*, SALA-Fungi 3395; *Eucalyptus camaldulensis*, SALA-Fungi 3388, 1792; *Genista florida*, SALA-Fungi 3389; *Quercus ilex*, SALA-Fungi 3391, 3394. NOTES – Typical Mediterranean species, widely distributed in the Iberian Peninsula.

***Phanerochaete sanguinea*** (Fr.) Pouzar

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 1786; *Pinus pinaster*, SALA-Fungi 3397; *P. sylvestris*, SALA-Fungi 3396, 3398, 3399. NOTES – A rather common species in the Iberian Peninsula.

***Phanerochaete sordida*** (P. Karst.) J. Erikss. & Ryvarde

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3440, 3435, 3450, 3431; *Castanea sativa*, SALA-Fungi 3456, 3442, 3434; *Erica arborea*, SALA-Fungi 3428; *Pinus pinaster*, SALA-Fungi 3418, 3405, 3417, 3414, 3416, 3412, 3408; *P. sylvestris*, SALA-Fungi 3420, 1796, 3436, 3423, 3427, 1861, 3400, 3415, 3410, 3411, 3426, 3419, 3429, 3425, 3444, 3404, 3401, 3445, 3443; *Quercus ilex*, SALA-Fungi 3409; *Q. pyrenaica*, SALA-Fungi 3451, 3453, 3430, 3454, 3422, 3441, 3449, 3452, 3447, 3407, 3433, 3424, 3432, 3403, 3446, 3421, 3413, 3402, 3406, 1872, 3455, 3448; *Q. robur*, SALA-Fungi 3437, 3438, 3439. NOTES – A very common species, or species complex, widely distributed, especially in the northern hemisphere, frequent in the Iberian Peninsula

***Phanerochaete tuberculata*** (P. Karst.) Parmasto

SPECIMENS EXAMINED – *Acer monspessulanum*, SALA-Fungi 3463, 3464; *Erica arborea*, SALA-Fungi 1855; *Quercus ilex*, SALA-Fungi 3472; *Quercus pyrenaica*, SALA-Fungi 3471, 3458, 3469, 3457, 3460, 3476, 3462, 3466, 3479, 3475, 3465, 3467, 3473, 3461, 3478, 3474, 3459, 3470, 3468; *Quercus robur*, SALA-Fungi 3477. NOTES – A rather common species very frequent in the Iberian Peninsula.

***Phanerochaete velutina*** (DC.) Parmasto

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3505, 3522, 3489, 3483; *Castanea sativa*, SALA-Fungi 3499; *Erica arborea*, SALA-Fungi 3515, 3513; *Eucalyptus camaldulensis*, SALA-Fungi 3487, 3523, 3500, 3516; *Pinus pinaster*, SALA-Fungi 3502, 3493, 3504, 3518, 3497, 3512, 3508, 3488, 3485, 3492, 3490, 3491, 3494; *P. sylvestris*, SALA-Fungi 3519, 3521, 3507, 3520, 3517; *Quercus pyrenaica*, SALA-Fungi 3503, 3486, 3482, 3480, 3510, 3495, 3514, 3496, 3506, 3501, 3481, 3509, 3484, 3511; *Q. robur*, SALA-Fungi 3524, 3498. NOTES – A common species and widespread in the Iberian Peninsula. Generally easily recognized but it presents a great variability in macroscopic characters; suggested by several authors as a species complex.

\**Phlebia cf. lacteola* (Bourdot) M.P. Christ.

Fig. 1c, 4.

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3548.

DESCRIPTION – Basidiome annual, resupinate, adnate, effused, whitish to cream, hymenophore smooth with determinate margin. Hyphal system monomitic; hyphae clamped, thinwalled, 2.5–3 µm, agglutinated and undifferentiated. Cystidia absent. Basidia cylindrical to subclavate, 20–25 × 4–5 µm, 4-sterigmate, with a basal clamp. Basidiospores narrowly ellipsoid, 3–3.5 × 2–2.5 µm, smooth, thin-walled, IKI–. NOTES – On coniferous wood in Europe, new to the Iberian Peninsula. We believe that this specimen belongs to the *Phlebia lilascens* (Bourdot) Erikss. & Hjortst. complex (Eriksson et al. 1981:1125). *Phlebia lilascens* differs mainly by colour but the colour is often dependent on the kind of substrate it is growing on. Moreover, within *P. lilascens* there are cryptic species with a very big overlap in morphology. Because of its whitish fruitbody and different spore size we prefer to continue to keep this specimen as *Phlebia cf. lacteola*, and wait for further accumulation of specimens.

*Phlebia lilascens* (Bourdot) J. Erikss. & Hjortstam

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 3551. NOTES – Widely distributed in Europe, with a scattered distribution in the Iberian Peninsula.

*Phlebia livida* (Pers.) Bres.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3557; *Arbutus unedo*, SALA-Fungi 3550; *Eucalyptus camaldulensis*, SALA-Fungi 1849, 3555, 1901, 1757, 3552; *Pinus pinaster*, SALA-Fungi 3558; *Quercus ilex*, SALA-Fungi 3556, 3554; *Q. pyrenaica*, SALA-Fungi 3559, 3553; *Q. robur*, SALA-Fungi 1827. NOTES – Widely distributed in the temperate northern hemisphere and in the Iberian Peninsula.

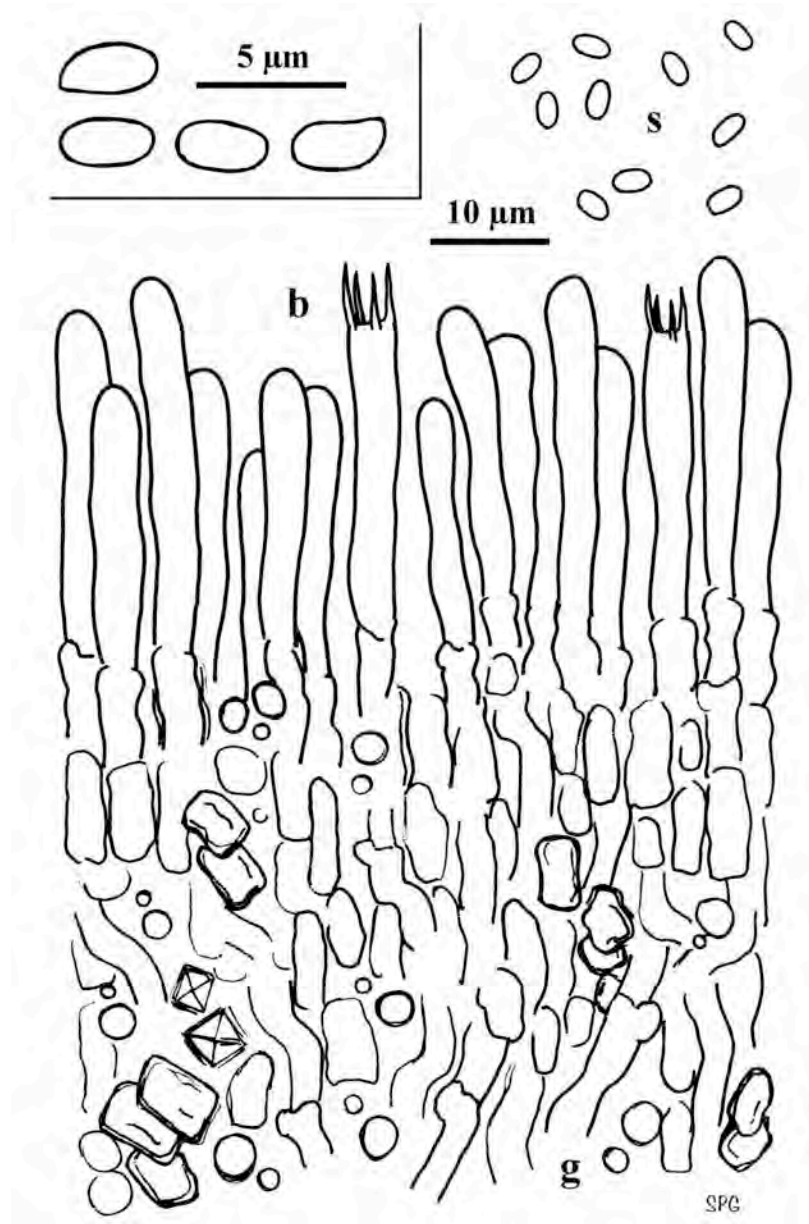


Fig. 4. *Phlebia lacteola* (SALA-Fungi 3548); microscopic elements: s) spores, b) basidia, g) generative hyphae.

***Phlebia ochraceofulva*** (Bourdot & Galzin) Donk

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 2545. NOTES – Rare in the Iberian Peninsula. Very close related to *Phlebia subochracea* (Alb. & Schwein.) J. Erikss. & Ryvarde and difficult to separate (Eriksson et al. 1981); the spores in our collections are broader (3-3.5 µm) than those of *P. subochracea* (2.3-2.8 µm) and the hyphal structure is denser with undifferentiated hyphae.

***Phlebia rufa*** (Pers.) M.P. Christ.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3572, 3566; *Erica arborea*, SALA-Fungi 3568; *Quercus ilex*, SALA-Fungi 3567; *Q. pyrenaica*, SALA-Fungi 3564, 3560, 3565, 3563, 3561, 3570, 3571, 3562; *Q. robur*, SALA-Fungi 3573, 3569, 1844. NOTES – Widely distributed in Europe, Asia and North America.

***Phlebia subochracea*** (Alb. & Schwein.) J. Erikss. & Ryvarde

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3574. NOTES – A rare species in the Iberian Peninsula. *P. subochracea* is very closely related to *P. ochraceofulva*; the specimen shows more differentiated hyphae and narrower basidiospores than those of *P. ochraceofulva*. Hymenophore is smooth to tuberculate as is indicated by Eriksson et al. (1981), not grandinoid as is indicated by Jülich & Stalpers (1980); the spore size of SALA-Fungi 3574 (5–6 × 2.3–2.8 µm) agrees with Jülich & Stalpers (1980) (4.5–5.5 × 2.5–3 µm) but the spores are shorter and narrower than those of Eriksson et al. (1981) (6–8 × 2.5–3.5 µm).

***Phlebia subserialis*** (Bourdot & Galzin) Donk

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3575. NOTES – Mainly distributed in Europe and North America, rare in the Iberian Peninsula.

***Phlebia tremellosa*** (Schrad.) Nakasone & Burds.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3288, 3293; *Pinus pinaster*, SALA-Fungi 3289, 3290, 3291; *Quercus pyrenaica*, SALA-Fungi 3292. NOTES – Common and widely distributed in the Iberian Peninsula.

***Phlebiella tulasnelloidea*** (Höhn. & Litsch.) Oberw.

=*Xenasma tulasnelloideum* (Höhn. & Litsch.) Donk

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3577, 3578; *Quercus pyrenaica*, SALA-Fungi 3576. NOTES – Widespread in the northern hemisphere and in the Iberian Peninsula.

***Phlebiella vaga*** (Fr.) P. Karst.

SPECIMENS EXAMINED – *Acer monspessulanum*, SALA-Fungi 3589; *Arbutus unedo*, SALA-Fungi 3586, 3592; *Castanea sativa*, SALA-Fungi 3585; *Eucalyptus camaldulensis*, SALA-Fungi 3581; *Pinus pinaster*, SALA-Fungi 3583, 3588, 3591, 3587; *P. sylvestris*, SALA-Fungi 3579, 3580, 3582, 3590; *Quercus robur*, SALA-Fungi 1851, 3584. NOTES –

Widespread throughout the northern hemisphere and very frequent in the Iberian Peninsula.

***Phlebiopsis ravenelii*** (Cooke) Hjortstam

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3595; *Quercus ilex*, SALA-Fungi 3594; *Q. robur*, SALA-Fungi 3597, 3598, 3596, 3593.

NOTES – Widely distributed in southern Europe and southern North America; frequent in the Iberian Peninsula.

***Porostereum spadiceum*** (Pers.) Hjortstam & Ryvarde

SPECIMENS EXAMINED – *Quercus suber*, SALA-Fungi 3610. NOTES – Widespread in Europe and commonly collected in the Iberian Peninsula.

***Pseudotomentella flavovirens*** (Höhn. & Litsch.) Svrček

SPECIMENS EXAMINED – *Pinus sylvestris*, SALA-Fungi 3613; *P. pinaster*, SALA-Fungi 3611, 3612. NOTES – A rare species in the Iberian Peninsula, recently recorded in Portugal by Melo et al. (2006).

***Pseudotomentella tristis*** (P. Karst.) M.J. Larsen

SPECIMENS EXAMINED – *Pinus sylvestris*, SALA-Fungi 3614, 3615. NOTES – Common and widely distributed in the Iberian Peninsula.

***Radulomyces confluens*** (Fr.) M.P. Christ.

SPECIMENS EXAMINED – *Acer monspessulanum*, SALA-Fungi 3624, 3621; *Arbutus unedo*, SALA-Fungi 3623; *Cytisus striatus*, SALA-Fungi 3617, 3618; *Quercus ilex*, SALA-Fungi 3620; *Q. pyrenaica*, SALA-Fungi 3622; *Viburnum tinus*, SALA-Fungi 3619. NOTES – Frequent and widely distributed in the Iberian Peninsula.

***Radulomyces molaris*** (Chaillet ex Fr.) M.P. Christ.

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 1785, 3628, 3625; *Q. robur*, SALA-Fungi 3627; *Q. suber*, SALA-Fungi 3626. NOTES – Fairly common and widely distributed in the Iberian Peninsula.

***Scopuloides hydroides*** (Cooke & Masee) Hjortstam & Ryvarde

SPECIMENS EXAMINED – *Acer monspessulanum*, SALA-Fungi 3719. NOTES – Widely distributed, in the Iberian Peninsula mainly in the north.

***Scytinostroma aluta*** Lanq.

SPECIMENS EXAMINED – *Quercus ilex*, SALA-Fungi 3720. NOTES – With a scattered distribution in the Iberian Peninsula; it differs from *Scytinostroma portentosum* (Berk. & M.A. Curtis) Donk in the skeletal hyphae without dendroid ramifications and not vertically oriented.

***Scytinostroma portentosum*** (Berk. & M.A. Curtis) Donk

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3721. NOTES – With a scattered distribution in the Iberian Peninsula.

**\**Sistotrema alboluteum*** (Bourdot & Galzin) Bondartsev & Singer

Fig. 1e, 5(1).

SPECIMENS EXAMINED – *Pinus sylvestris*, SALA-Fungi 3722, 4097.

DESCRIPTION – Basidiome annual, resupinate, effused, fragile; hymenophore



poroid with angular pores, 1-4 per mm, whitish to yellowish cream; subiculum thin, arachnoid. Hyphal system monomitic; hyphae clamped, thin-walled, 2–8  $\mu\text{m}$  wide, more or less branched and filled with conspicuous and abundant oil drops. Cystidia absent. Basidia urniform, 20–30(35)  $\times$  6–10  $\mu\text{m}$ , (2–)4–sterigmate, with a basal clamp. Basidiospores globose, 4.5–6  $\mu\text{m}$ , slightly thick-walled, hyaline, neither amyloid nor dextrinoid. NOTES – A rare species with a scattered distribution in Europe (Ryvarden & Gilbertson 1994); new to the Iberian Peninsula.

***Sistotrema brinkmannii*** (Bres.) J. Erikss.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3724, 3723; *Betula alba*, SALA-Fungi 3726; *Pinus pinaster*, SALA-Fungi 3725; *Quercus ilex*, SALA-Fungi 3728; *Quercus pyrenaica*, SALA-Fungi 3727. NOTES – Widely distributed in the Iberian Peninsula

***Sistotrema oblongisporum*** M.P. Christ. & Hauerlev

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 1829. NOTES – Collected mainly in the north of the Iberian Peninsula.

***Sistotrema octosporum*** (J. Schröt. ex Höhn. & Litsch.) Hallenb.

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3733; *Quercus pyrenaica*, SALA-Fungi 3734. NOTES – Widely distributed in the Iberian Peninsula.

**\**Sistotrema porulosum*** Hallenb.

Fig.1f, 5(2).

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3735. DESCRIPTION – Basidiome resupinate, effused, adnate; hymenophore smooth to porulose, greyish white, margin indeterminate, subiculum thin. Hyphal system monomitic; hyphae clamped, thin-walled, 2–4  $\mu\text{m}$  wide, with oily contents. Cystidia absent. Basidia urniform, 10–20  $\times$  3–4  $\mu\text{m}$ , with 6(–8) sterigmata and a basal clamp. Basidiospores narrowly ellipsoid, slightly curved, 3.5–4.5  $\times$  2–2.5  $\mu\text{m}$ , smooth, neither amyloid nor dextrinoid. NOTES – Little-known species separated from the *Sistotrema brinkmannii* complex mainly by hymenophore morphology and the shape and size of the spores. New to the Iberian Peninsula.

**\**Sistotrema subtrigonospermum*** D.P. Rogers

Fig.1g, 5(3).

SPECIMENS EXAMINED – *Quercus suber*, SALA-Fungi 3736. DESCRIPTION – Basidiome resupinate, adnate, inconspicuous; hymenophore smooth, whitish-greyish, margin not differentiated. Hyphal system monomitic; hyphae clamped, 2.5–4.5  $\mu\text{m}$  wide, thin-walled, with abundant oily contents. Cystidia absent. Basidia urniform, basally widened, 15–20  $\times$  4–6  $\mu\text{m}$ , 6–8 sterigmate, with a basal clamp. Basidiospores tetrahedral, lobed, 4–5  $\times$  3–4.5  $\mu\text{m}$ , smooth, thin-walled, non amyloid, non

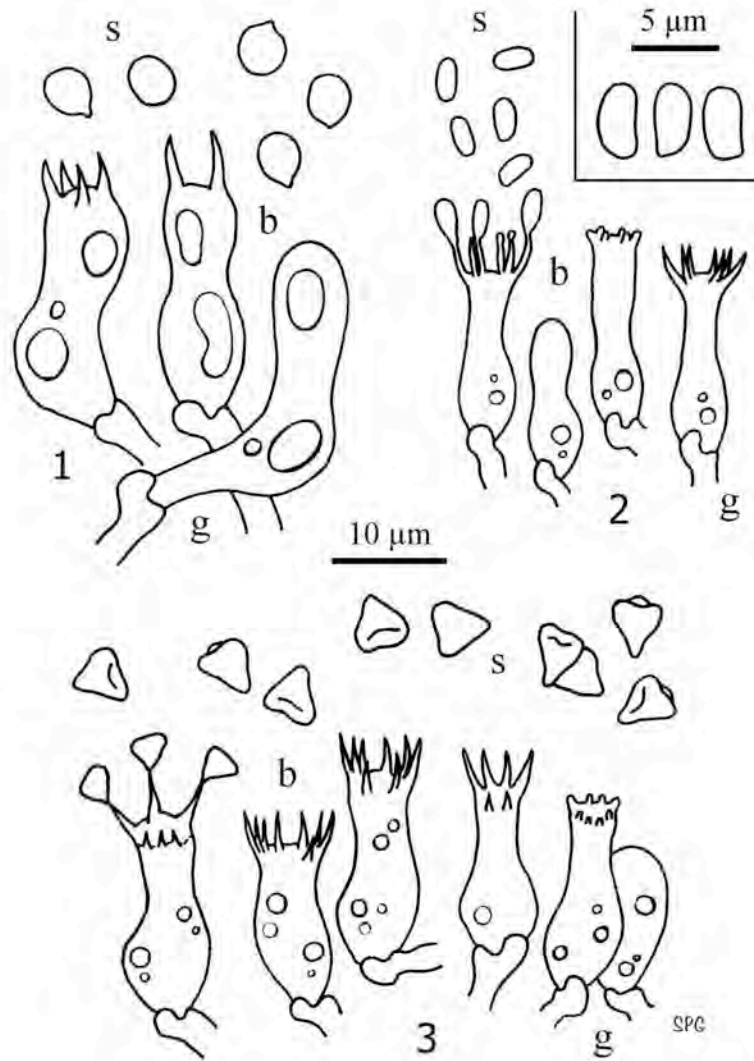


Fig. 5. (1) *Sistotrema alboluteum* (SALA-Fungi 3722), (2) *S. porulosum* (SALA-Fungi 3735), (3) *S. subtrigonospermum* (SALA-Fungi 3736); microscopic elements: s) spores, b) basidia, g) generative hyphae.

dextrinoid. NOTES – A rare species but presumably overlooked; this is a very interesting record for southern continental Europe and new to the Iberian Peninsula.

***Sistotremastrum niveocreameum*** (Höhn. & Litsch.) J. Erikss.

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 3737, 3738. NOTES – Widely distributed in the Iberian Peninsula.

***Steccherinum fimbriatum*** (Pers.) J. Erikss.

SPECIMENS EXAMINED – *Populus alba*, SALA-Fungi 3787; *Quercus pyrenaica*, SALA-Fungi 3786, 3789, 3788, 1897; *Q. robur*, SALA-Fungi 1863, 1835. NOTES – Rather common species and widely distributed in the Iberian Peninsula.

***Steccherinum ochraceum*** (Pers. ex J.F. Gmel.) Gray

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3798, 3791; *Arbutus unedo*, SALA-Fungi 1832, 3790, 3794; *Quercus pyrenaica*, SALA-Fungi 1834, 3792, 3796, 3795, 3793, 3803, 3799; *Q. robur*, SALA-Fungi 3797, 1874, 1833; *Q. ilex*, SALA-Fungi 3802, 3804, 3800; *Viburnum tinus*, SALA-Fungi 3801. NOTES – Common species and widely distributed in the Iberian Peninsula.

***Stereum gausapatum*** (Fr.) Fr.

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3809, 3807; *Quercus pyrenaica*, SALA-Fungi 3808, 3806. NOTES – Widely distributed in Europe, particularly in the Mediterranean area; frequent in the Iberian Peninsula.

***Stereum hirsutum*** (Willd.) Pers.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3814; *Arbutus unedo*, SALA-Fungi 3812, 821; *Betula alba*, SALA-Fungi 3830, 3829; *Castanea sativa*, SALA-Fungi 3838, 3842, 3825, 3828; *Eucalyptus camaldulensis*, SALA-Fungi 3819, 3817, 3811, 3831, 3818; *Pinus pinaster*, SALA-Fungi 3820, 3815, 3827, 3832, 3833; *P. sylvestris*, SALA-Fungi 1902; *Quercus ilex*, SALA-Fungi 1806, 3834; *Q. pyrenaica*, SALA-Fungi 3822, 3837, 3843, 3841, 3826, 3836, 1864; *Q. robur*, SALA-Fungi 3835, 3840, 3823; *Q. suber*, SALA-Fungi 3839, 3816, 3824, 3813. NOTES – Widely distributed in the north temperate hemisphere; a very common species in the Iberian Peninsula.

***Stereum illudens*** Berk.

SPECIMENS EXAMINED – *Eucalyptus camaldulensis*, SALA-Fungi 3844, 3846, 3845. NOTES – Known exclusively from *Eucalyptus* wood; a rare species in Europe, recently recorded from the northern Iberian Peninsula (Salcedo et al. 2006a) and from the Canary Islands (Ribes 2007).

***Stereum ochraceoflavum*** (Schwein.) Sacc.

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 3847, 3848, 3850; *Q. robur*, SALA-Fungi 3849. NOTES – Widely distributed in the north temperate hemisphere, also in the Iberian Peninsula.

***Stereum reflexulum*** D.A. Reid

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3852, 3851. NOTES – On deciduous wood mainly of Mediterranean shrubs; a rare species in Europe, with a scattered distribution in the Iberian Peninsula.

***Stereum sanguinolentum*** (Alb. & Schwein.) Fr.

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3857, 3854, 3853, 3856, 3855, 1801. NOTES – Widespread in the Iberian Peninsula.

***Subulicystidium longisporum*** (Pat.) Parmasto

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 3859; *Eucalyptus camaldulensis*, SALA-Fungi 3858; *Quercus pyrenaica*, SALA-Fungi 3860, 3860. NOTES – Widely distributed in the Iberian Peninsula.

***Terana caerulea*** (Schrad. ex Lam.) Kuntze

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 3866, 3861; *Arbutus unedo*, SALA-Fungi 3868, 3865, 3863, 3864; *Castanea sativa*, SALA-Fungi 3862; *Quercus ilex*, SALA-Fungi 1794, 3867. NOTES – Frequent species in southern Europe, rarer in the north; common and widely distributed in the Iberian Peninsula.

***Tomentella botryoides*** (Schwein.) Bourdot & Galzin

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 3871. NOTES – It seems to be a rare species rarely collected in the Iberian Peninsula.

***Tomentella bryophila*** (Pers.) M.J. Larsen

SPECIMENS EXAMINED – *Quercus ilex*, SALA-Fungi 3876, 3875, 3872; *Q. pyrenaica*, SALA-Fungi 3874, 1873; *Q. robur*, SALA-Fungi 3873. NOTES – Widely distributed and frequently recorded from the Iberian Peninsula.

***Tomentella cinerascens*** (P.Karst.) Höhn. & Litsch.

PREVIOUS REPORTS – *Quercus suber*, coll. 5582 I. Melo. NOTES – Scattered distribution in the Iberian Peninsula.

***Tomentella fibrosa*** (Berk. & M.A. Curtis) Kõljalg

SPECIMENS EXAMINED – *Cytisus striatus*, SALA-Fungi 3879; *Pinus pinaster*, SALA-Fungi 3880; *Quercus suber*, SALA-Fungi 3881. NOTES – Widely distributed in the Iberian Peninsula.

***Tomentella galzinii*** Bourdot

SPECIMENS EXAMINED – *Quercus ilex*, SALA-Fungi 3882. NOTES – Little-known and collected in few localities in the Iberian Peninsula.

***Tomentella lapida*** (Pers.) Stalpers

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 3887, 3886, 3885, 3883, 3884. NOTES – Widely distributed in the northern half of the Iberian Peninsula.

***Tomentella lateritia*** Pat.

SPECIMENS EXAMINED – *Eucalyptus camaldulensis*, SALA-Fungi 3888; *Pinus pinaster*, SALA-Fungi 3889; *Quercus pyrenaica*, SALA-Fungi 3890.  
NOTES – Widely distributed in the Iberian Peninsula.

***Tomentella lilacinogrisea*** Wakef.

SPECIMENS EXAMINED – *Quercus ilex*, SALA-Fungi 3895; *Quercus pyrenaica*, SALA-Fungi 3893, 3891, 3892, 3894. NOTES – Widely distributed in the Iberian Peninsula.

***Tomentella radiosa*** (P. Karst.) Rick

SPECIMENS EXAMINED – *Quercus ilex*, SALA-Fungi 3896. NOTES – A common species with a worldwide distribution; in the Iberian Peninsula it is a rare species recently cited from Portugal (Melo et al. 2003).

***Tomentella stuposa*** (Link) Stalpers

SPECIMENS EXAMINED – *Quercus ilex*, SALA-Fungi 3897; *Q. pyrenaica*, SALA-Fungi 3898; *Q. robur*, SALA-Fungi 1852. NOTES – A common species with a worldwide distribution.

***Tomentellopsis echinospora*** (Ellis) Hjortstam

SPECIMENS EXAMINED – *Pinus sylvestris*, SALA-Fungi 3899, 3907, 3903, 3908, 3901, 3902; *Quercus pyrenaica*, SALA-Fungi 3909, 3906, 3904, 3905, 3900. NOTES – Widely distributed in the Iberian Peninsula.

***Trechispora cohaerens*** (Schwein.) Jülich & Stalpers

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 3947. NOTES – With a scattered distribution in the Iberian Peninsula.

***Trechispora farinacea*** (Pers.) Liberta

SPECIMENS EXAMINED – *Eucalyptus camaldulensis*, SALA-Fungi 3953, 3948; *Pinus pinaster*, SALA-Fungi 3949, 3950, 3954, 3951; on unidentified wood, SALA-Fungi 3952. NOTES – Frequent and widely distributed in the Iberian Peninsula.

***Tubulicrinis angustus*** (D.P. Rogers & Weresub) Donk

SPECIMENS EXAMINED – *Pinus sylvestris*, SALA-Fungi 3967. NOTES – Widespread in the northern hemisphere; with a scattered distribution in the Iberian Peninsula.

***Tubulicrinis borealis*** J. Erikss.

SPECIMENS EXAMINED – *Quercus faginea*, SALA-Fungi 3968; *Quercus ilex*, SALA-Fungi 3969. NOTES – A rare species in the Iberian Peninsula.

***Tubulicrinis calothrix*** (Pat.) Donk

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 3989, 1869, 1866, 3988, 3990, 3986, 3979, 3985, 3993, 3981, 3976, 3991, 3975, 3984, 3973, 3980, 3977, 3978, 3994, 3970, 3983, 3971, 3992, 3987, 3974, 3972, 3982. NOTES – With a scattered distribution in the Iberian Peninsula; common in the studied area on coniferous substrates.

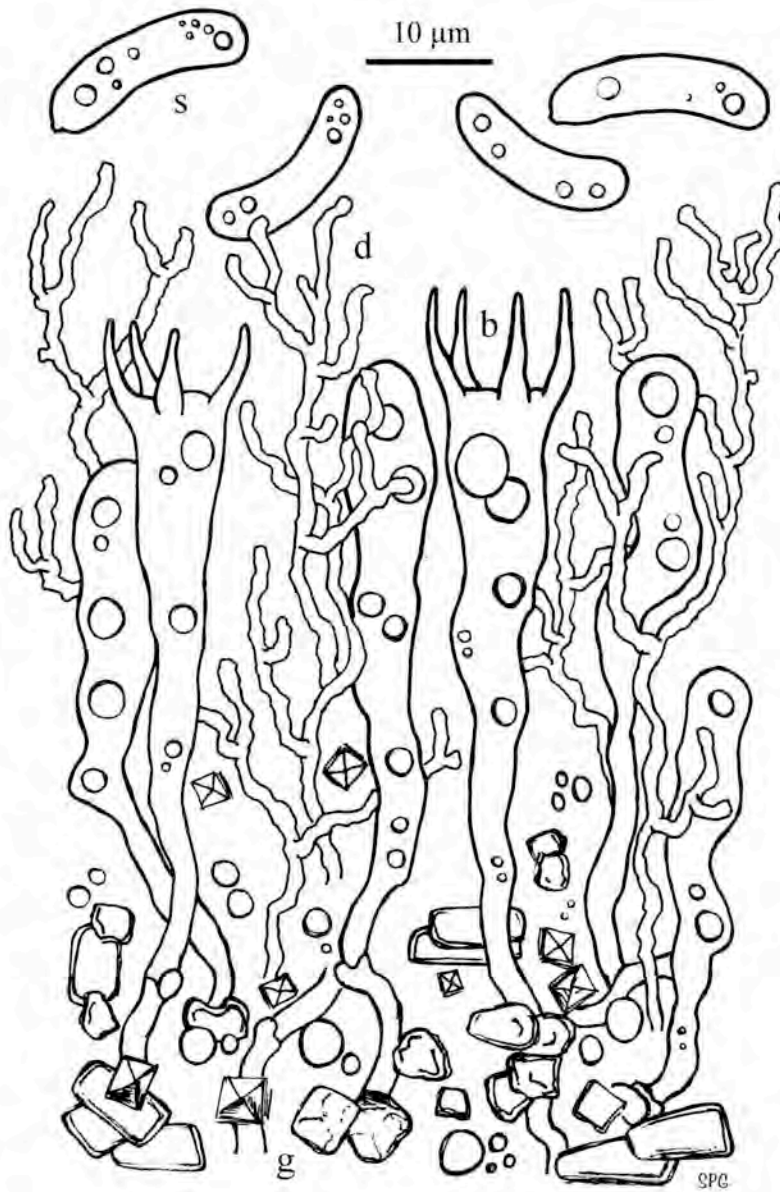


Fig. 6. *Vuilleminia alni* (SALA-Fungi 4031); microscopic elements: s) spores, b) basidia, d) dendrohyphae, g) generative hyphae.



***Tubulicrinis sororius*** (Bourdot & Galzin) Oberw.

SPECIMENS EXAMINED – *Castanea sativa*, SALA-Fungi 3996; *Pinus sylvestris*, SALA-Fungi 3995. NOTES – Widespread in the Iberian Peninsula

***Tubulicrinis subulatus*** (Bourdot & Galzin) Donk

SPECIMENS EXAMINED – *Pinus pinaster*, SALA-Fungi 4021, 3999, 3997, 4000, 4017, 4001, 4006, 4007, 4008, 4013, 4012, 4003, 4018, 4005, 4009, 4010; *Pinus sylvestris*, SALA-Fungi 4015, 4016, 4011, 4002, 4020, 4004, 4014, 3998, 4019, 4022. NOTES – Widespread in the Iberian Peninsula.

\****Vuilleminia alni*** Boidin, Lanq. & Gilles

Fig. 1d, 6.

SPECIMENS EXAMINED – *Alnus glutinosa*, SALA-Fungi 4031, 4032, 4033, 4034. DESCRIPTION – Basidiome resupinate, effused, decorticating, ceraceous to gelatinous when fresh, hymenophore smooth, reddish. Hyphal system monomitic, hyphae clamped, generally thin-walled, 2–3  $\mu\text{m}$ , sinuous, with numerous dendrohyphidia. Cystidia absent. Basidia clavate, sinuous, 80–150  $\mu\text{m}$  long, in the upper part (8–10  $\mu\text{m}$ ), basally narrow (2–3  $\mu\text{m}$ ), with 4 long sterigmata and basal clamp. Basidiospores allantoid, 15–20  $\times$  4–5  $\mu\text{m}$ , smooth, thin-walled, IKI-, acyanophilous, with oildrops. NOTES – A rare species, new to the Iberian Peninsula. Cultural studies by Boidin et al. (1994) show incompatibility between *V. alni* and *V. comedens*. This species differs slightly from *V. comedens* in colour and spore size but initial molecular studies (Ghobad-Nejhad & Hallenberg, unpublished) do not provide clear evidence for keeping the two species separate.

***Vuilleminia comedens*** (Nees) Maire

SPECIMENS EXAMINED – *Quercus pyrenaica*, SALA-Fungi 4036, 4037, 4044, 1898, 4039, 4038, 4040, 4041, 4043, 4042; *Quercus robur*, SALA-Fungi 1899. NOTES – A very common species widely distributed in the Iberian Peninsula.

***Vuilleminia cystidiata*** Parmasto

SPECIMENS EXAMINED – *Arbutus unedo*, SALA-Fungi 4058, 4056, 4055, 4054, 4053, 4052, 4051, 4047, 4048, 4050, 4049; *Acer monspessulanum*, SALA-Fungi 4057. NOTES – Infrequent species, rare in the Iberian Peninsula and collected mainly on shrubs.

***Xenasma pruinosum*** (Pat.) Donk

SPECIMENS EXAMINED – *Eucalyptus camaldulensis*, SALA-Fungi 4061. NOTES – With a scattered distribution in the Iberian Peninsula.

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