

Contribution to the knowledge of tomentelloid fungi in the Iberian Peninsula. II.

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Descriptions and original iconography are given for the following tomentelloid basidiomycetes from the Iberian Peninsula: *Tomentella badia*, *T. cinereoumbrina*, *T. fuscocinerea*, *T. bresadolae*, *T. bryophila*, *T. brevispina*, *T. neobourdotii*, *T. ramosissima* and *T. stuposa*. Their distribution in the area is reviewed. *T. brevispina* is a new record to the Iberian Peninsula. *T. badia*, *T. fuscocinerea*, *T. bryophila* and *T. neobourdotii* are new to Portugal.

Key words: chorology, Iberian Peninsula, *Tomentella*

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Introduction

This is a continuation of a study of tomentelloid fungi from the Iberian Peninsula started recently (Melo et al. 1998). The first contribution dealt mainly with cystidioid and/ or dimitic species. The present issue comprises aribulate species as well as species with globose to subglobose spores.

For the simple-septate species we have followed the opinion of Kõljalg (1996) and for the aribulate ones Larsen (1974), because the Iberian material of this group fits better with the species concept of the latter author.

The problem of the species delimitation in the genus *Tomentella* could be resolved with the help of complementary modern molecular techniques we know are being developed (Kõljalg 1999). Nevertheless, we think that studies involving morphological and chorological data are still necessary to improve the general knowledge of this controversial genus.

Material and methods

The descriptions of species were based on the specimens deposited in BIO, LISU and MA. Citation of the authors of the scientific names follows Brummitt & Powell (1992). Measurements and drawings were made from microscopical sections mounted in 3% KOH. A Leitz Dialux 20 EB microscope provided with a drawing tube was used to make the drawings. The colour terms are from the Munsell Soil Color Charts (1990). In the specimen data the following abbreviations are used: IM= Ireneia Melo, IS= Isabel Salcedo, MD= Margarita Dueñas, MT= Maria Teresa Tellería.

Descriptions of species

Tomentella badia (Link) Stalpers, Rev. Mycol. 29: 98. 1975. – Fig. 1
≡ *Sporotrichum badium* Link, Mag. Ges. Naturf. Freunde 3: 12. 1809.

Basidioma resupinate, adherent to the substrate, continuous, more or less mucedinoid to arachnoid. Hymenophore smooth, dark grayish brown

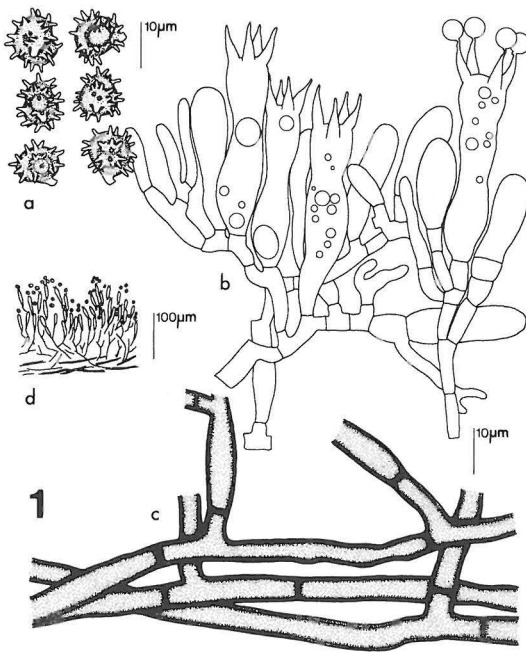


Fig. 1. *Tomentella badia* (I. Melo 6742, LISU): a. basidiospores, b. basidia and subhymenial hyphae, c. subicular hyphae, d. section through basidioma.

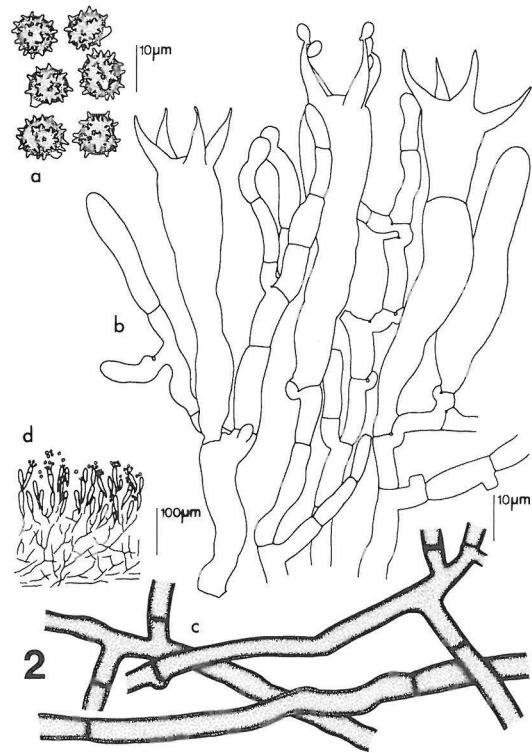


Fig. 2. *Tomentella cinereoumbrina* (I. Melo 5213, LISU): a. basidiospores, b. basidia and subhymenial hyphae, c. subicular hyphae, d. section through basidioma.

(10YR 4/2) to dark brown (7.5YR 4/3). Subiculum arachnoid, darker than the hymenophore; cordons absent. Margin indeterminate. *Hyphal system* monomitic; subicular hyphae without clamps, 4–8 µm diam., thick-walled, brown; subhymenial hyphae without clamps, 3–4 µm diam., thin to slightly thick-walled, hyaline to sometimes pale brown. Subhymenial and hymenial hyphae often with bluish green diffusates in 3% KOH. *Basidia* clavate, sinuous, (35–)40–75 × (7–)8–10 µm, with 4 up to 8 µm long sterigmata. *Basidiospores* subglobose to irregularly globose, 8–11 × 7–8(–10) µm, aculeate, spines up to 2 µm long, pale brown.

Remarks: – This species can be distinguished by simple septate hyphae and irregularly globose spores with long spines. Previously reported only from Spain, Huelva (Tellería 1980, as *T. atroviolacea* Litsch.), Menorca (Tellería et al. 1997) and Valencia (Malençon & Bertault 1971, as *Tomentella spongiosa* (Schwein. : Fr.) Höhn. & Litsch.). New to Portugal.

Material studied: **Portugal.** Ribatejo, Ferreira do Zêzere, Pereiro, 29SND5499, on *Crataegus monogyna* Jacq., 11.IX.1997 IM 7196 (LISU). **Spain.** Alava, San Millán, Aspuru, 30TWN4552, 600 m, on *Quercus pyrenaica* Willd., 29.VII.1987 IS 3974 (BIO-Fungi 891). Cantabria, Los Tojos, de Bárcena Mayor al cruce de los Tojos, junto al río Argoza Labor, 30TVN0179, 570 m, 9.X.1986 MT 7782 (MA-Fungi 18986). Gerona, Pals, Pinedes dels Masos de Pals, 31TEG1548, 40 m, on *Pinus* sp., 9.XI.1995 IM 6742 (LISU). Jaén, Cazorla, Vara del Espino, 30SWG0895, 1450 m, on *Pinus nigra* J.F. Arnold, 11.V.1990 IM 4838 (LISU).

***Tomentella cinereoumbrina* (Bres.) Stalpers**, Stud. Mycol. 35: 26. 1993. – Fig. 2

≡ *Hypochnus cinereoumbrinus* Bres., Stud. Trent. ser. II, 7: 62. 1926.

Basidioma resupinate, adherent to the substrate, continuous, crustose. Hymenophore smooth, brown (7.5YR 5/3) to dark brown (10YR 4/3). Subiculum dense, concolorous to slightly darker than the hymenophore; without cordons. Margin indeterminate.

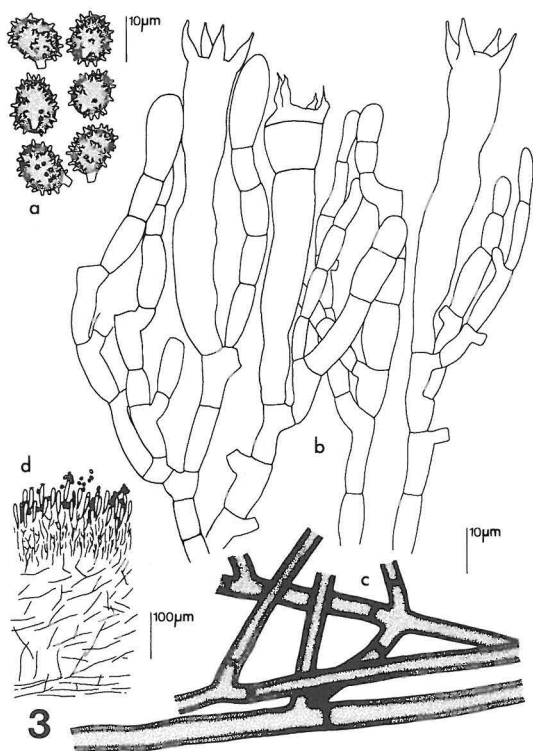


Fig. 3. *Tomentella fuscocinerea* (I. Melo 7195, LISU): a. basidiospores, b. basidia and subhymenial hyphae, c. subicular hyphae, d. section through basidioma.

Hyphal system monomitic; subicular hyphae without clamps, sometimes showing scattered clamps, 3–6 µm diam., slightly thick-walled, yellowish brown; subhymenial hyphae without clamps, sometimes with few clamps, 3–5 µm diam., thin-walled, hyaline. Subhymenial and hymenial hyphae often with bluish green diffusates in 3% KOH. *Basidia* clavate to utriform, often with transverse septa, 50–75 × 9–12 µm, with 4 up to 12 µm long sterigmata. *Basidiospores* subglobose, (8–)9–12 × 7–9 µm, echinulate, pale brown to brown.

Remarks: The presence of scattered clamps on the subicular and subhymenial hyphae and the subglobose and short-spined (up to 1 µm) spores enable the identification of this species. So far only reported from two areas in the Iberian Peninsula: Portugal, Estremadura (Torrend 1913, as *Hypochnus crustaceus* (Schumacher: Fr.) P.Karst. sensu Bres.) and Spain (Larsen 1981, without indication of locality).

Material studied: **Spain.** Avila, Piedralaves, 30TUK5665, 630 m, on burnt wood of *Pinus pinea* L., 12.XII.1983 MT 4789bis (MA-Fungi 7351). Menorca, Ciutadella, La Vall, 31TEE8833, 20 m, on *Pinus halepensis* Mill., 17.XI.1990 IM 5213, 5214 (LISU).

Tomentella fuscocinerea (Pers.) Donk, Med. Bot. Mus. Herb. Rijks-Univ. Utrecht 9: 30. 1933. – Fig. 3

≡ *Thelephora fuscocinerea* Pers., Mycol. Europ. 1: 114. 1822.

Basidioma resupinate, adherent, continuous, crustose, cracked when dried. Hymenophore smooth, dark brown (7.5YR 4/2). Subiculum dense, fibrous, concolorous; without cordons. Margin byssoid, white (10YR 8/2) to very pale brown (10YR 7/3).

Hyphal system monomitic; subicular hyphae without clamps, 4–6 µm diam., thick-walled, brown; subhymenial hyphae without clamps, 3–5 µm diam., often densely ramified with short and inflated cells, thin to slightly thick-walled, hyaline to pale brown. Sometimes subhymenial and hymenial hyphae with bluish green diffusates in 3% KOH. *Basidia* clavate to utriform, sinuous, 45–75 × 8–12 µm, with 4 up to 8 µm long sterigmata. *Basidiospores* subglobose to ellipsoid, 9–12 × 7–9 µm, echinulate, brown.

Remarks: This species is easily recognized by dense and crustose basidioma with pale margin, hyphae without clamps and subhymenial hyphae with short and inflated cells. New to Portugal. Known so far from Northeast and South Spain: Granada (Tellería 1985, as *Tomentellastrum alutaceo-umbrinum* (Bres.) Larsen), Lérida and Tarragona (Llimona et al. 1998).

Material studied: **Portugal.** Ribatejo, Ferreira do Zêzere, Pereiro, 29SND5499, on *Crataegus monogyna* Jacq., 11.IX.1997 IM 7195 (LISU). **Spain.** Alava, Cigoitia, Apodaca, 30TWN2152, 550 m, on *Juniperus* sp., 31.X.1987 IS 4114 (BIO-Fungi 3387); idem, IS 4148 bis (BIO-Fungi 926); Maeztu, El Ayedo, 30TWN4629, 850 m, on *Thymus* sp., 6.XII.1987 IS 4232 bis (BIO-Fungi 843); ibidem, on *Quercus rotundifolia* Lam., 6.XII.1987 IS 4263 (BIO-Fungi 2101); Laguardia, entre Laguardia y Oyón, 30TWN3709, 500 m, on *Rosmarinus officinalis* L., 7.XII.1987 IS 4380 (BIO-Fungi 2125). Cuenca, Sierra Altomira, Illana, 30TWK1148, on *Rosmarinus officinalis* L., 28.IV.1988 MD 4375 (MA-Fungi 21326). Granada, Alhama de Granada, 30SVF0991, on *Quercus rotundifolia* Lam., 19.I.1982 (MA-Fungi 3805). Guadalajara, Monte de la Alcarria, de Horche a Yebeles, 30TVK9188, on *Thymus* sp., 1.XI.1987 MD 3827 (MA-Fungi 21287-2); Sigüenza,

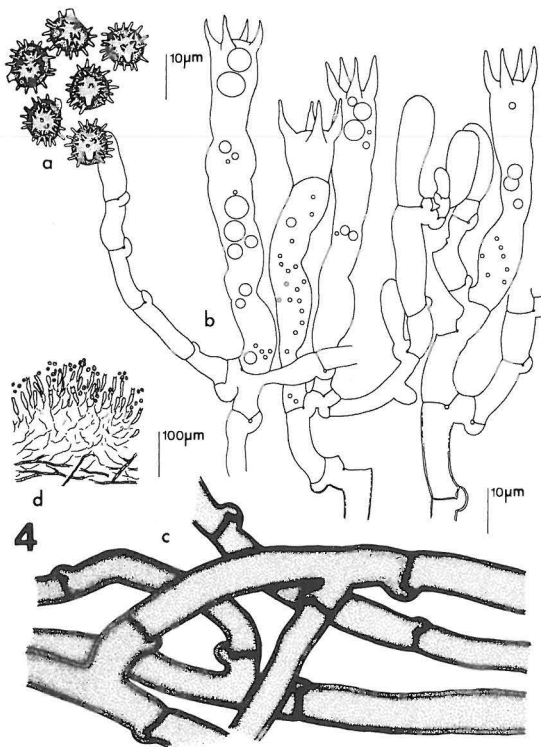


Fig. 4. *Tomentella bresadolae* (I. Melo 6655, LISU): a. basidiospores, b. basidia and subhymenial hyphae, c. subicular hyphae, d. section through basidioma.

30TWL3047, on *Thymus* sp., 5.X.1987 (MA-Fungi 24519). Menorca, Mahón, S' Albufera, 31SFE0823, on *Quercus ilex* L., 15.XI.1990 IM 5108 (LISU); Mercadal, Binifamis, 31SFE0128, 60 m, 15.XI.1990 IM 5075 (LISU). Vizcaya, Txatxarramendi, 30TWP2505, on mosses, 9.III.1986 IS 1913 (BIO-Fungi 7947).

Tomentella bresadolae (Brinkmann) Bourdot & Galzin, Bull. Soc. Mycol. France 40: 155. 1924. – Fig. 4

≡ *Hypochnus bresadolae* Brinkmann in Bres., Ann. Mycol. 1: 108. 1903.

Basidioma resupinate, adherent, continuous to discontinuous, more or less mucedinoid to arachnoid. Hymenophore smooth to minutely granulose, brown (7.5YR 5/2) to dark brown (7.5YR 4/2). Subiculum arachnoid, darker than hymenophore; without cordons. Margin indeterminate. *Hyphal system* monomitic; subicular hyphae with clamps, 8–9 µm diam., thick-walled,

dark brown; subhymenial hyphae with clamps, 4–6 µm diam., thin to slightly thick-walled, hyaline to pale brown. Subhymenial and hymenial hyphae often with bluish green diffusates in 3% KOH. *Basidia* clavate, sinuous, sometimes with transverse septa, 60–70(–75) × 10–11 µm, with 4 up to 8 µm long sterigmata. *Basidiospores* globose, 8–9 µm diam., aculeate, brown.

Remarks: Microscopically this species is very similar to *T. brevispina*, *T. bryophila* and *T. stuposa*. *T. brevispina* has subhymenial hyphae with short and inflated cells and narrower subicular hyphae. The yellowish brown globose spores make *T. bryophila* easily recognized. The characteristic more evident in *T. stuposa* is the strong swelling of the cell walls in KOH. In the Iberian literature this species has been confounded with *T. brevispina* and *T. bryophila*. So, in spite of being previously widely reported from this area, we were only able to confirm the collections studied.

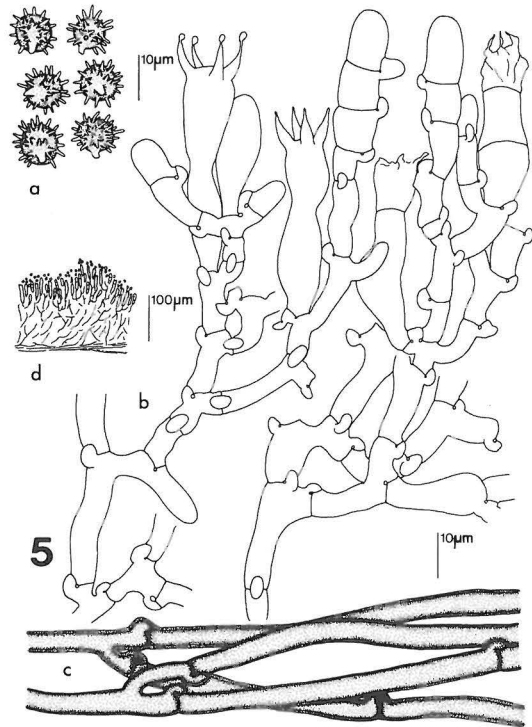


Fig. 5. *Tomentella brevispina* (I. Melo 7018, LISU): a. basidiospores, b. basidia and subhymenial hyphae, c. subicular hyphae, d. section through basidioma.

Material studied: **Portugal.** Algarve, Monchique, entre Caldas de Monchique e Nave, 29SNB3827, 290 m, on *Quercus suber* L., 24.I.1990 IM 4632 (LISU). **Spain.** Gerona, Parque Natural de l'Albera, junto al castillo de Requesens, 31TDG9599, 460 m, on *Quercus ilex* L., 7.XI.1995 IM 6655 (LISU).

Tomentella brevispina (Bourdot & Galzin) M.J. Larsen, *Mycologia* 62: 136. 1970. – Fig. 5
 ≡ *Tomentella spongiosa* var. *brevispina* Bourdot & Galzin, *Bull. Soc. Mycol. France* 40: 154. 1924.

Basidioma resupinate, adnate to the substrate, continuous, mucedinoid. Hymenophore smooth or slightly granulose, reddish brown (5YR 4/3, 4/4) to dark reddish brown (5YR 3/3, 3/4). Subiculum arachnoid to fibrous, concolorous; sometimes with narrow cordons. Margin indeterminate. *Hyphal system* monomitic; subicular hyphae sometimes forming narrow cordons, with clamps, 3–6 µm diam., thick-walled, brown; subhymenial hyphae with clamps, 3–5 µm diam., thin-walled, densely ramified with short and inflated cells, up to 8 µm diam., pale brown. Subhymenial and hymenial hyphae sometimes with green reaction in 3% KOH. *Basidia* cylindrical to subclavate, sinuous, 35–50 × 10–11 µm, with 4 up to 7 µm long sterigmata. *Basidiospores* globose, 7–8 (–9) µm, echinulate to aculeate, pale brown.

Remarks: Similar to *T. bresadolae*, however the narrower subicular hyphae and the densely ramified subhymenial ones, with short and inflated cells, distinguish *T. brevispina*. New record to the Iberian Peninsula.

Material studied: **Portugal.** Algarve, Monchique, entre Caldas de Monchique e Nave, 29SNB3827, 290 m, on *Quercus suber* L., 24.I.1990 IM 4631 (LISU). Beira Alta, Oliveira de Frades, Arca, Gandra, 29TNE6795, on *Quercus robur* L., 5.XI.1996 IM 7017–7019, 7027 (LISU). **Spain.** Asturias, Reserva Biológica de Muniellos, Tablizas, 29TPH8868, on *Quercus petraea* (Matt.) Liebl., 18.X.1983 MD 1184 (MA-Fungi 14629); idem, MD 1236 (MA-Fungi 14631). Cádiz, pinsapar de Benamahona, 30STF8173, on unidentified wood, (MA-Fungi 825). Huesca, Parque Nacional de Ordesa, Cotatuero, junto a la Virgen de Ordesa, 30TYN4125, 1350 m, on coniferous wood, 16.X.1989 IS 7396 (BIO-Fungi 5633); ibidem, on *Abies alba* Mill., 16.X.1989 MD 5221 (MA-Fungi 26357). Vizcaya, bajada de Urkiola a Ochandiano, 30TWN2870, on *Larix* sp., 9.X.1983 IS 414 (MA-Fungi 7155); Koltixa, 30VN7983, 630 m, on *Quercus robur* L., 10.X.1983 IS 494 (BIO-Fungi 3152).

Tomentella bryophila (Pers.) M.J. Larsen, *Mycol. Mem.* 4: 51. 1974. – Fig. 6
 ≡ *Sporotrichum bryophilum* Pers., *Mycol. Europ.* 1: 78. 1822.

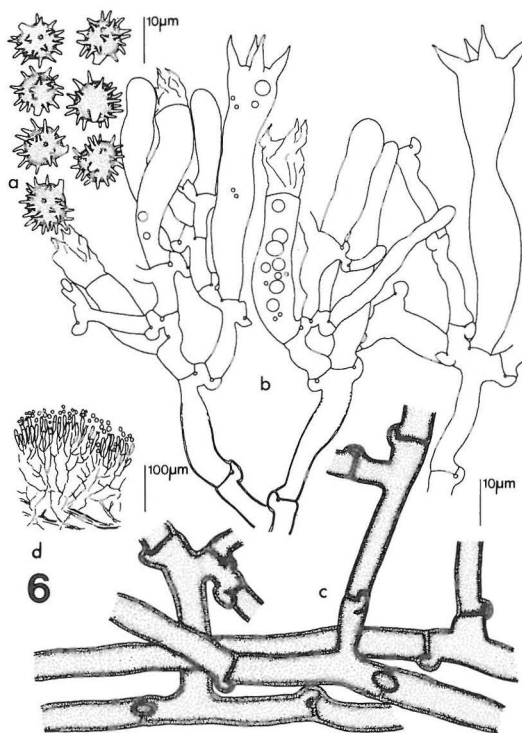


Fig. 6. *Tomentella bryophila* (I. Melo 6253, LISU): a. basidiospores, b. basidia and subhymenial hyphae, c. subicular hyphae, d. section through basidioma.

Basidioma resupinate, adherent, continuous, more or less mucedinoid. Hymenophore smooth, strong brown (7.5YR 4/6, 5/6) to yellowish brown (10YR5/8). Subiculum arachnoid to fibrous, darker than the hymenophore; without cordons. Margin indeterminate. *Hyphal system* monomitic; subicular hyphae with clamps, 4–7 µm diam., thick-walled, dark brown; subhymenial hyphae with clamps, 4–6 µm diam., thin to slightly thick-walled, pale yellowish brown. *Basidia* cylindrical to clavate, sinuous, 55–65 × 9–12 µm, 4 up to 10 µm long sterigmata. *Basidiospores* globose, 8–10 µm diam., aculeate, spines up to 2.5 µm long., bright yellowish brown.

Remarks: The ferruginous basidioma and the yellowish brown aculeate globose spores, are characteristics that make this species easily recognized. Widespread in Spain: Asturias (Dueñas & Tellería 1988), Barcelona (Bertault 1982, Tellería

1984, Llimona et al. 1998), Ciudad Real (Dueñas 1991), Cáceres (Blanco Bueno 1991), Huesca (Hjortstam et al. 1981; Melo et al. 1993), León (Dueñas & Tellería 1988), Mallorca (Tellería 1985), Navarra (Hjortstam et al. 1981), Soria (Tellería 1980; Hjortstam et al. 1981), Tarragona (Llimona et al. 1998) and Toledo (Dueñas 1991). New to Portugal.

Material studied: **Portugal.** Algarve, S. Bras de Alportel, E.N. 2, km 713, 29SNB9418, on *Quercus suber* L., 23.I.1990 *IM* 4564, 4566 (LISU). Baixo Alentejo, Barrancos, Santo Aleixo da Restauração, 29SPC6115, 235 m, on unidentified wood, 12.XII.1994 *IM* 6457 (LISU). **Spain.** Alava, Cigoitia, Apodaca, 30TWN2152, 550 m, on *Juniperus communis* L., 31.X.1987 *IS* 4113 (BIO-Fungi 934); idem, *IS* 4148 (BIO-Fungi 909); ibidem, on *Quercus rotundifolia* Lam., 31.X.1987 *IS* 4134 (BIO-Fungi 918); Laguardia, entre Laguardia y Oyón, 30TWN3709, 500 m, on *Vitis vinifera* L., 7.XII.1987 *IS* 4401 (BIO-Fungi 856). Asturias, Peñamellera Alta, Llonín, 30TUN6699, 8.X.1986 *MT* 7441 (MA-Fungi 19014); Reserva Biológica de Muniellos, Tablizas, 29TPH8868, on *Quercus petraea* (Matt.) Liebl., 18.X.1983 *MD* 1171 (MA-Fungi 14638); idem, *MT* 3641 (MA-Fungi 14640). Barcelona, Cabrils, 31TDF4797, on *Quercus suber* L., 31.X.1979 *MT* 162/79 (MA-Fungi 5687). Cantabria, Hermandad de Campoo de Suso, La Lomba, 30TUN9364, on *Fagus sylvatica* L., 17.XI.1982 *MD* 443 (MA-Fungi 14635); Los Tojos, de Bécena Mayor al cruce de los Tojos, junto al río Argoza Labor, 30TVN0179, 570 m, *MT* 7768 (MA-Fungi 18970); Los Tojos, Saja, hacia el Puerto de Palombera, 30TUN9547, 9.X.1986 *MT* 7821 (MA-Fungi 18930). Ciudad Real, Sierra del Chorito, de Retuerta de Bullaque a Horcajo de los Montes, 30SUJ7666, on *Quercus suber* L., 12.V.1988 *MD* 4671 (MA-Fungi 22463); idem, *MD* 4677 (MA-Fungi 22469). Granada, Alhama de Granada, 30SVF0991, on *Quercus rotundifolia* Lam., 12.XII.1980 (MA-Fungi 3791). Huesca, Selva de Oza, 30TXN8941, 1160 m, on *Abies alba* Mill., 10.XI.1977 *MT* 757/77 (MA-Fungi 3681); Parque Nacional de Ordesa y Monte Perdido, Bielsa, ermita de Nuestra Señora de Pineta, 31TBH6130, 1300m, on *Fagus sylvatica* L., 17.X.1989 *MD* 5277 (MA-Fungi 26404). León, Carretera Nacional VI, entre Villafranca del Bierzo y Pereje, km 415, 29TQH7822, 630m, on *Castanea sativa* Mill., 12.XII.1984 *MD* 3280 (MA-Fungi 14634); idem, *MD* 3283 (MA-Fungi 14639); *MT* 6701 (MA-Fungi 14637); idem, *MT* 6702 (MA-Fungi 14641); Fabero, San Pedro de Paradela, 29TPH9544, on *Erica arborea* L., 12.XII.1984 *MD* 3369 (MA-Fungi 14687); Posada de Valdeón, del Collado de Pandruedas a Posada de Valdeón, 30TUN4076, 1220 m, 20.X.1992 *IM* 5774 (LISU). Lugo, Becerreá, Vilachá, carretera de Becerreá a Navia de Suarna, km 12, 29TPH5750, 400 m, on *Quercus pyrenaica* Willd., 4.X.1994 *IM* 6246 (LISU); ibidem, on *Pinus sylvestris* L., 4.X.1994 *IM* 6253 (LISU). Madrid, Miraflores de la Sierra, 30TVL3518, on *Quercus pyrenaica* Willd., 23.XI.1979 (MA-Fungi 1144). Mallorca, carretera comarcal 710, km 39, 31SDE7905, on *Quercus ilex* L., 28.III.1984 *MT* 5265 (MA-Fungi 8504). Navarra, Imoz, Zarranz, 30TWN9755, 700 m,

on *Quercus* sp., 12.X.1990 *IS* 7603 (BIO-Fungi 216); Lecumberri, a 3 km en dirección a Ururzun, 30TWN9062, 590 m, on *Quercus* sp., 11.XI.1977 *MT* 838/77 (MA-Fungi 3373); prox. de Zabaleta, 30TXN2133, 460 m, on unidentified wood, 8.XI.1977 *MT* 449/77 (MA-Fungi 3713). Palencia, Cervera de Pisuerga, 30TUN7747, on *Quercus pyrenaica* Willd., 30.XI.1984 *MT* 6450 (MA-Fungi 14688); idem, *MT* 6452 (MA-Fungi 14633); idem, *MT* 6462 (MA-Fungi 14636). Toledo, Carretera comarcal 508, entre Fresnedilla y el Real de San Vicente, 30TUK5746, on *Castanea sativa* Mill., 29.V.1988 *MD* 4733 (MA-Fungi 22510); de Navahermosa a Navas de Estena, Risco de las Paradas, 30SUJ7184, on *Quercus pyrenaica* Willd., 12.V.1988 *MD* 4643 (MA-Fungi 23528); prox. de la Iglesiasuela, 30TUK5256, on *Juniperus* sp., 21.II.1988 *MD* 4119 (MA-Fungi 23007). Vizcaya, Somorrostro, Monte Montano, 30TVN9298, 200 m, on *Quercus robur* L., 3.IX.1983 *IS* 279 (BIO-Fungi 8412).

Tomentella neobourdotii M.J. Larsen, Mycologia 60: 1179. 1969. – Fig. 7

Basidioma resupinate, adnate to separable from the substrate, continuous, more or less mucedonoid. Hymenophore granulose, dark brown

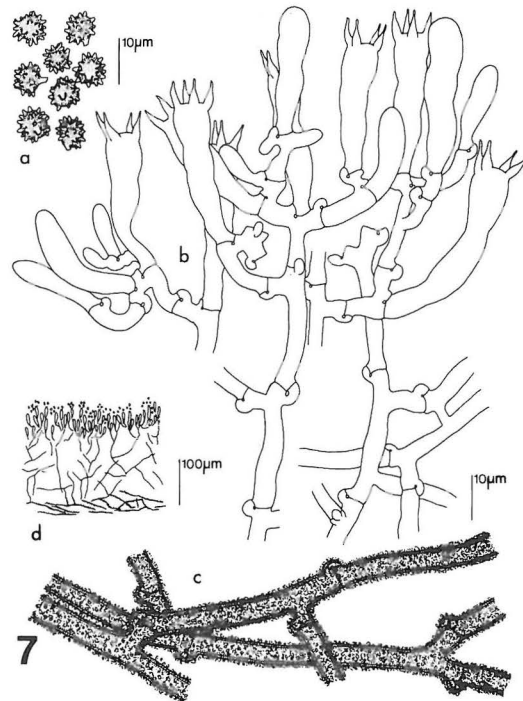


Fig. 7. *Tomentella neobourdotii* (I. Melo 7165, LISU): a. basidiospores, b. basidia and subhymenial hyphae, c. subicular hyphae, d. section through basidioma.

(7.5YR 3/2) to dark reddish brown (5YR 3/2). Subiculum arachnoid, concolorous; without cordons. Margin indeterminate. *Hyphal system* monomitic; subicular hyphae with clamps, 5–7 μm diam., thick-walled, strongly encrusted, brown; subhymenial hyphae with clamps, 3–4 μm diam., thin-walled, sometimes minutely encrusted, pale brown. *Basidia* clavate, sinuous, 27–45 \times 5–8 μm , 4 up to 7 μm long sterigmata. *Basidiospores* irregularly globose, 6–7 μm , echinulate, pale brown.

Remarks: This species can be distinguished by its strongly incrustated subicular hyphae and the size and shape of its spores. So far known only from Spain, Alicante (Malençon & Llimona 1983), Asturias (Dueñas & Tellería 1988), Barcelona and Orense (Tellería 1984), Menorca (Tellería et al. 1997) and Tarragona (Llimona et al. 1998), its distribution is now extended to Portugal.

Material studied: **Portugal.** Beira Alta, Viseu, Parque Florestal de Fontelo, 29TNF9301, on *Quercus robur* L., 7.XI.1996 IM 7165 (LISU). **Spain.** Alava, Maestu, entre Maestu y Corres, El Ayedo, 30TWN4629, 850 m, on *Quercus rotundifolia* Lam., 6.XII.1987 IS 4242 (BIO-Fungi 2102); Zuya, Marquina, 30TWN1558, 680 m, on *Ulex* sp., 5.XII.1987 IS 4207 (BIO-Fungi 876); Zuya, Zarate, 30TWN1657, 700 m, on *Quercus pyrenaica* Willd., 19.IX.1992 IS 5711 (BIO-Fungi 7356). Asturias, Reserva Biológica de Muniellos, Tablizas, 29TPH8868, on *Quercus petraea* (Matt.) Liebl., 18.X.1983 MD 1242 (MA-Fungi 15467). León, Carretera Nacional VI, entre Villafranca del Bierzo y Pereje, km 415, 29TQH7822, 630 m, on *Castanea sativa* Mill., 12.XII.1984 MD 3281 (MA-Fungi 15465); Posada de Valdeón, del Collado de Panderruedas a Posada de Valdeón, 30TUN4076, 1220 m, on *Fagus sylvatica* L., 20.X.1992 IM 5769 (LISU). Jaén, Parque Natural de Cazorla, Segura y las Villas, La Iruela, camino de Fresnedilla a la piscifactoría, 30SWH1303, 960 m, on *Arbutus unedo* L., 13.V.1990 MD 5622 (MA-Fungi 27488); ibidem, on *Pinus pinaster* Aiton, MD 5627 (MA-Fungi 27492); ibidem, on *Quercus rotundifolia* Lam., MT 10533 (MA-Fungi 37421). Lugo, Cervantes, Castillo de Frades, río de Cereixedo, 29TPH6740, 740 m, on *Quercus pyrenaica* Willd., 5.X.1994 IM 6322 (LISU). Madrid, Miraflores de la Sierra, 30TVL3518, on *Quercus pyrenaica* Willd., 23.XI.1979 (MA-Fungi 1147). Orense, Untes, 29TNG8688, on *Quercus suber* L., 26.XI.1982 MT 2135 (MA-Fungi 6716). Vizcaya, bajada de Urkiola a Ochandiano, 30TWN2870, on *Pseudotsuga* sp., 9.X.1983 IS 430 (BIO-Fungi 8048).

Tomentella ramosissima (Berk. & M.A. Curtis) Wakef., Mycologia 52: 927. 1962. – Fig. 8
 ≡ *Zygodesmus ramosissimus* Berk. & M.A. Curtis in Berk., Grevillea 3: 145. 1875

Basidioma resupinate, adnate to separable from the substrate, continuous, mucedinoid. Hymen-

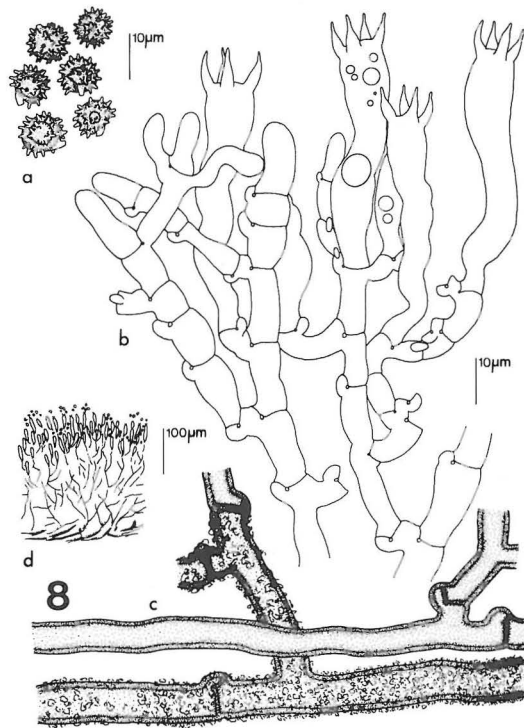


Fig. 8. *Tomentella ramosissima* (I. Melo 5040, LISU): a. basidiospores, b. basidia and subhymenial hyphae, c. subicular hyphae, d. section through basidioma.

ophore granulose, reddish brown (5YR 4/3) to dark reddish gray (5YR 4/2). Subiculum arachnoid, concolorous to darker than the hymenophore; without cordons. Margin indeterminate. *Hyphal system* monomitic; subicular hyphae with clamps, 6–10 μm diam., very thick-walled, sometimes minutely encrusted, dark brown to golden brown; subhymenial hyphae with clamps, 4–6 μm diam., thin to slightly thick-walled, often minutely encrusted, pale golden brown. Subhymenial and hymenial hyphae often with bluish green diffusates in 3% KOH. *Basidia* clavate, 35–60 \times 9–12 μm , 4 up to 7 μm long sterigmata. *Basidiospores* globose to subglobose, 7–9 μm diam., echinulate to aculeate, golden brown.

Remarks: This species can be characterized by its wide, dark to golden brown subicular hyphae and the presence of a strong bluish green diffusate in KOH in the hymenial and subhymenial hyphae. Species relatively common, widely distributed in Spain: Asturias (Dueñas & Tellería

1988), Barcelona (Tellería 1984), Huesca (Melo et al. 1993), Menorca (Tellería et al. 1997), Segovia (Calonge 1968) and Tarragona (Llimona et al. 1998). There is only one reference from Portugal (Larsen 1974).

Material studied: **Spain.** Alava, Beotegui, 30TVN9371, 380 m, on *Clematis* sp., 5.XI.1988 *IS* 4586 (BIO-Fungi 2469); Oyón, Labraza, bosque de Dueñas, 30TWN4913, 670 m, on *Pinus halepensis* Mill., 7.XII.1987 *IS* 4446 (BIO-Fungi 2112); Valdegoxia, Guinea, 30TVN9844, 800 m, on *Pinus sylvestris* L., 17.V.1987 *IS* 3593 (BIO-Fungi 598); ibidem, on *Pinus sylvestris* L., 13.XI.1986 *IS* 2514 (BIO-Fungi 597). Asturias, Reserva Biológica de Muniellos, Tablizas, 29TPH8868, 700 m, on *Quercus petraea* (Matt.) Liebl., 18.X.1983 *MD* 1169 (MA-Fungi 14661); ibidem, on unidentified wood, 19.X.1983 *MD* 1408 (MA-Fungi 14660). Avila, El Tiemblo, pinal de El Tiemblo, 30TUK7375, on *Pinus* sp., 27.X.1982 *MT* 1374 (MA-Fungi 7420); idem, *MT* 1389 (MA-Fungi 7419). Barcelona, Cabrils, 30TCH32, 31.X.1979 *MT* 148/79 (MA-Fungi 5688); ibidem, on *Quercus suber* L., 31.X.1979, *MT* (MA-Fungi 5675); idem, *MT* 159/79 (MA-Fungi 5679); idem, *MT* 161/79 (MA-Fungi 5681). Burgos, Vil-

lanueva de los Montes, 30TVN7033, 600 m, on *Pinus pinaster* Aiton, 28.XI.1992 *IS* 6512 (BIO-Fungi 5202). Cantabria, Los Tojos, de Barcena Mayor al cruce de Los Tojos, junto al río Argoza Labor, 30TVN0179, 570 m, 9.X.1986 *MT* 7761 (MA-Fungi 19025). Gerona, Pals, Pinedes dels Masos de Pals, 31TEG1548, 40 m, on *Rosmarinus officinalis* L., 9.XI.1995 *IM* 6753 (LISU). Huesca, Selva de Oza, 30TXN8941, 1160 m, on *Abies alba* Mill., 10.XI.1977 *MT* 758/77 (MA-Fungi 3703); Valle de Vio, Nerín, barranco de Flageta, 31TBH5617, on *Pinus sylvestris* L., 18.X.1989 *MD* 5345 (MA-Fungi 26462). Lérida, Puerto del Pontón, 30TUN3184, on *Fagus sylvatica* L., 8.XII.1984 *MD* 3177 (MA-Fungi 14630). Menorca, Mahón, S' Albufera, 31SFE0823, on *Rosmarinus officinalis* L., 15.XI.1990 *IM* 5115 (LISU); Mercadal, Binifamis, 31SFE0128, 60 m, on *Pinus halepensis* Mill., 15.XI.1990 *IM* 5040 (LISU); ibidem, on grasses, 15.XI.1990 *IM* 5074 (LISU). Palencia, de Cervera de Pisuerga a Santibañez de Resoba, alrededores de Cervera, 30TUN7747, on *Quercus pyrenaica* Willd., 20.XI.1984 *MD* 2272 (MA-Fungi 15466).

Tomentella stuposa (Link) Stalpers, Stud. Mycol. 24: 86. 1984. – Fig. 9

≡ *Sporotrichum stuposum* Link, Mag. Ges. Naturf. Freunde, Berlin 3: 12. 1809).

= *Tomentella ruttneri* Litsch., Bull. Soc. Mycol. France 49: 67. 1933.

Basidioma resupinate, adherent, continuous, mucedinoid. Hymenophore smooth, reddish brown (5YR 5/3, 4/3). Subiculum dense, concolorous; without cordons. Margin indeterminate. *Hyphal system* monomitic; subicular hyphae with clamps, 6–8 µm diam., thick-walled, swelling quickly in 3% KOH, golden brown; subhymenial hyphae with clamps, 4–6 µm diam., densely ramified, with short articles, thin-walled, pale brown, swelling quickly too. *Basidia* cylindrical to clavate, sinuous, with transverse septa, 50–60 × 10–12 µm, 4 up to 10 µm long sterigmata. *Basidiospores* globose to subglobose, 8–11 × 7–10 µm, aculeate, pale brown.

Remarks: Similar to *T. brevispina* and *T. bresadola*. From the latter, *T. stuposa* can be recognized by the golden brown subicular hyphae together with the strong swelling of the cells walls in KOH. This last characteristic and the larger spores distinguish *T. stuposa* from *T. brevispina*. So far only known from one locality in peninsular Spain, Lerida (Tellería & Dueñas 1986, as *T. ruttneri* Litsch.).

Material studied: **Spain.** Alava, Cigoitia, Apodaca, 30TWN2152, 550 m, on *Phellinus* sp., 2.X.1993 *IS* 6880 (BIO-Fungi 5866). Lérida, carretera de Sorbe al Puerto de la Bonaigua, 31TCH3326, 1550 m, on *Abies alba* Mill., 4.VI.1984 *MT* 6104 (MA-Fungi 14485).

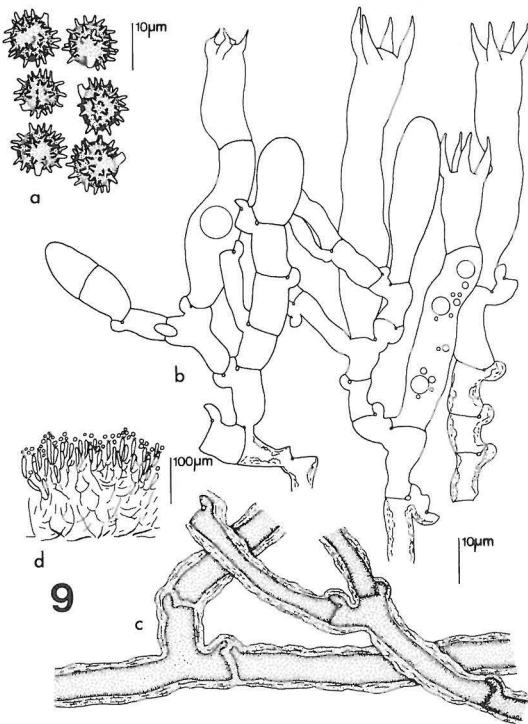


Fig. 9. *Tomentella stuposa* (I Salcedo 6880, BIO-Fungi 5866): a. basidiospores, b. basidia and subhymenial hyphae, c. subicular hyphae, d. section through basidioma. Note the strong swelling of the cell walls of the subhymenial and subicular hyphae in 3% KOH.

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