

**MARASMIUS CELTIBERICUS (TRICHOLOMATACEAE, AGARICALES)
A NEW SPECIES FROM SPAIN**

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Marasmius celtibericus G. Moreno & Raitviir, a new species from Spain, is described and illustrated. It is characterized by very small basidiocarps with a smooth hymenophore, somewhat resembling *Marasmius cornelii* Laessøe & Noordel. Microscopically, however, *Marasmius celtibericus* must be ranged in sect. *Hygrometrici* on account of the pileipellis.

In the autumn of 1996, which has been exceptionally rainy in the Iberian Peninsula, we carried out several forays to the autochthonous vegetation of *Kochia prostrata* (L.) Schrader in the stands of the association *Artemisio herba-albae-Salsoletum vermiculatae* (Br.-Bl. & O. Bolòs 1957) O. Bolòs 1967, a type of halonitrophilous brushwoods, which have a Saharian-Indian and Irano-Turanian optimum, but occur also all over Spain on clayey-marly miocenic sediments, particularly when these are rich in chlorides. In general, this association is a final state of the degradation of climax evergreen oak forests belonging to the association *Quercetum rotundifoliae* Br.-Bl. & O. Bolòs 1957. On dead branches of *Jasminus fruticans* L., a characteristic shrub in these associations, we collected an abundantly fruiting small *Marasmius* species, which we describe as new here.

***Marasmius celtibericus* G. Moreno & Raitviir spec. nov. — Figs. 1–19**

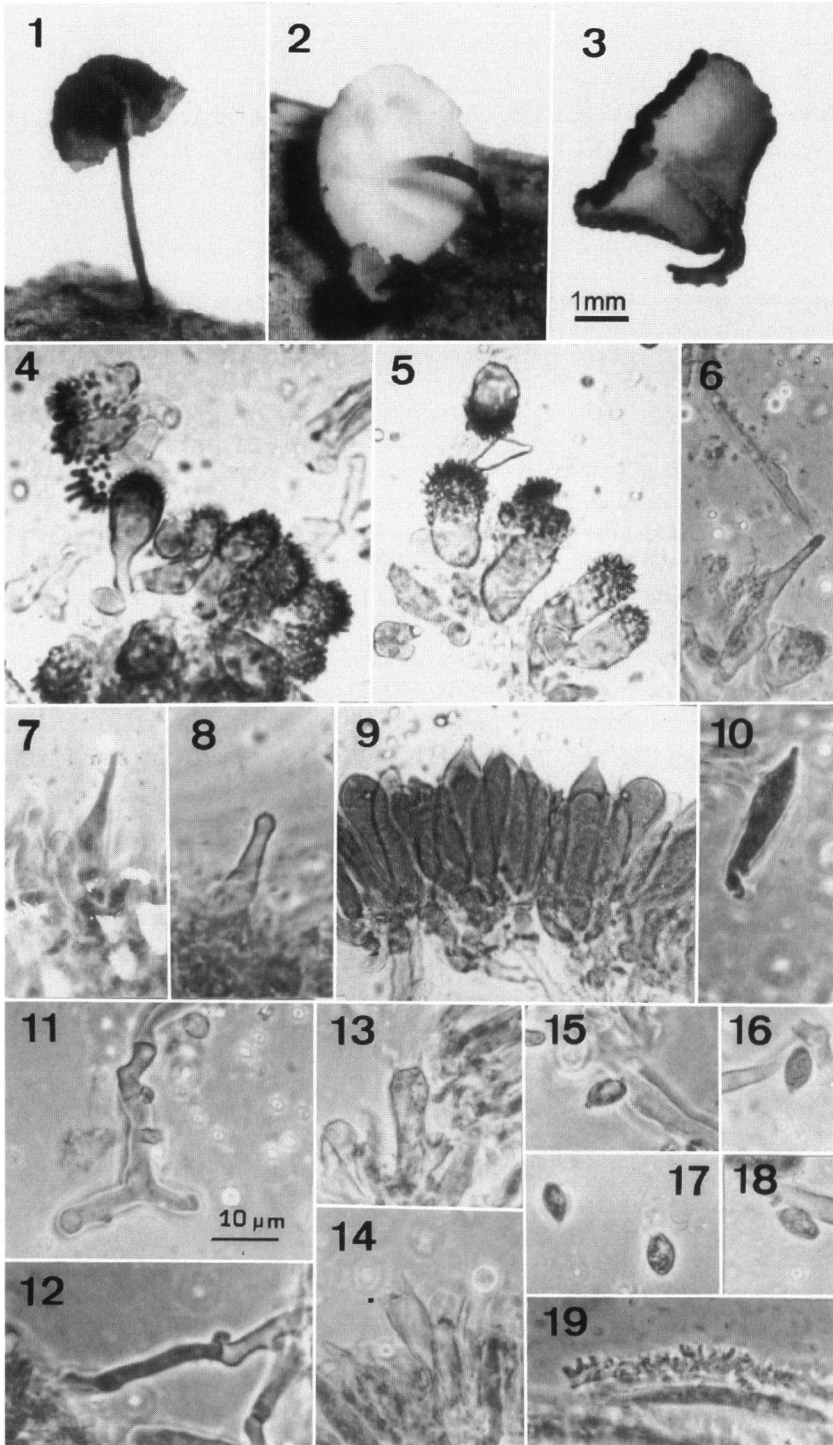
Pileus 0.3–1.2(–1.5) mm latus, convexus vel plano-convexus, rufo-brunneus, sicca rufus, minute granulatus, in vivo plicato-rugosus. Margine recto, concoloro. Hymenophorum laeve vel plicatum, raro 3–7 lamellas adnatas habentes, albidum vel albido-cremeum. Stipes 0.5–4 × 0.1 mm, teres, curvatus, centralis, obscure rufo-brunneus, velutino-furfuraceus, apice pallide stramineo. Pileipellis hymeniformis, cellulis fibulatis, globosis vel clavatis, apicibus crassiter brunneotunicatis, verrucosis. Pileocystidia fusiformia, 20–28 × 5–6 µm, hyalina. Basidia 24–33 × 7–9 µm, clavata, tetraspora, fibulata, hyalina. Sterigmata arcuata, ad usque 2 µm in longitudine. Sporae 8–10(–11) × 5–7 µm, amygdaliformes vel late ellipsoideae, non amyloideae, non dextrinoideae. Hymenocystidia numerosa, 27–40 × 6–9 µm, clavato-fusoidae, hyalina, apicibus papillatis. Stipes hyphis parallelis diverticulatis compositur. In ramis siccis *Jasmini fruticans* crescit.

Holotypus: In ramis siccis *Jasmini fruticans*, Reservatum ecologicum Las Cuestas, Alcalá de Henares, Madrid, Hispania, 26.XI.1996, leg. A. Raitviir, M. Lizárraga & G. Moreno (holotypus: AH 18389); isotypus: TAA-137666.

Basidiocarps very small. Pileus 0.3–1.2(–1.5) mm broad, convex or plano-convex, reddish brown, reddish when dry, granular under lens, more or less folded or wrinkled when moist with straight, concolorous margin. Hymenophore smooth or slightly fold-like, rarely 3–7 adnate poorly developed lamellae present, whitish to whitish cream, con-

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trasting with the colour of pileus; well-developed lamellae not observed. Stipe 0.5–4 × 0.1 mm, insititious, cylindrical, more or less central, curved, pale straw-yellow in the upper third, dark reddish brown in lower two thirds, darker towards base, velvety-scurfy.

Spores 8–10(–11) × 5–7 µm, almond-shaped to broadly ellipsoid, not amyloid, not dextrinoid. Basidia 24–33 × 7–9 µm, with curved, up to 2 µm long sterigmata, 4-spored, clavate, hyaline, clamped. Hymenial cystidia very abundant, 27–40 × 6–9 µm, clavate-fusiform with an apical papilla; more rarely hyaline cystidia similar to the pileocystidia are present.

Pileipellis hymeniform, made up of globose to clavate broom cells, 13–30 × 10–20 µm, having more or less thickened brown wall in upper half, remaining hyaline in lower half, covered with abundant cylindrical, nonramified, short projections (Rotalis-type); clamped. Pileocystidia 20–28 × 5–6 × 1–2 µm, fusiform to lentiform, rarely slenderly tibiiform, with a long, subcapitate neck, projecting for example 17 × 5 × 2 µm from pileipellis (similar to those observed in *Marasmius buxi*). Stipitipellis a cutis of thick-walled, brown, diverticulate hyphae. Stipititrama formed of cylindrical, parallel, hyaline hyphae.

Collections studied. SPAIN: Madrid, Alcalá de Henares, Reserva ecológica Las Cuestas, creciendo sobre ramas secas de *Jasminum fruticans* L., 24-XI-1996, leg. A. Raitviir, AH 18388; idem, 26-XI-1996, leg. A. Raitviir, M. Lizárraga & G. Moreno, AH 18389. Holotypus, ibidem AH 18390; idem, 18-XII-1996, leg. A. Raitviir, AH 18393.

Marasmius celtibericus is characterized by its small size, reddish colour which contrasts to the whitish-cream hymenium, the very dark central stipe, the hymeniform pileipellis composed of broom cells, the hymenial cystidia, and almond-shaped spores. In this combination of characters it differs clearly from the other species of *Marasmius* known in Europe. *Marasmius cornelii* Laessøe & Noordel. has similar small size, but its pileipellis is not made up of broom cells, its caulocystidia and cheilocystidia are different, its spores are narrowly ellipsoid, 12–18 × 3.5–6.5 µm, and it fruits on the leaves of *Cladium mariscum* (Antonín & Noordeloos, 1993). Singer (1976) has reported *Marasmius sphaerodermus* Spegazzini from Hawaii and Argentina with smooth or fold-like hymenium, but it differs by its smaller pileus (0.3–0.7 mm), longer stipe (3–15 × 0.08–0.12 mm) and absence of diverticulate hyphae in the stipe. Corner (1996) has described two species without lamellae from Malesia: *Marasmius patellula* Corner and *M. cyphella* Dennis & Reid. The first differs from the proposed new species in 1–3 mm broad, pale yellowish cream pileus, the short stipe of only 0.2 mm in length, absence of cystidia and nondiverticulate hyphae in stipe. *Marasmius cyphella* differs in the olivaceous brown pileus, lateral rudimentary stipe, tissue above the hymenium containing crystalline masses and absence of cystidia (cf. Dennis & Reid, 1957, fig. 2).

Marasmius celtibericus belongs to the section *Hygrometrici* Kühner according to the classification adopted by Antonín & Noordeloos (1993) on account of its pileipellis structure. It is related to *Marasmius buxi*, which clearly differs, however, by its well-developed lamellae, and habitat.

Figs. 1–19. *Marasmius celtibericum*. 1–3. Basidiocarps, showing hymenophore; 4, 5. elements of pileipellis; 6. fusiform-lageniform pileocystidium; 7, 8. hymenial cystidia similar to the pileocystidia; 9, 10. hymenial cystidia, clavate-fusiform with an apical mucro; 11, 12. clamp-connections; 13, 14. basidia; 15–18. spores; 19. diverticulate hyphae of stipitipellis (all from holotype).

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