# RIVISTA MICOLOGICA ROMANA

Bollettino dell'Associazione Micologica Ecologica Romana

# Numero speciale (fuori serie) 2021



A.M.E.R. Associazione Micologica Ecologica Romana - Onlus, Via Tuscolana, 548 - 00181 Roma

Numero speciale (fuori serie) 2021 so	OMMARIO / CONTENTS
CLAUDIO ANGELINI, CRISTIANO LO	DSI
Fungus flora of the Dominican Republic. V	II.
Some unreported polyporoid, stereoid an	nd
corticioid fungi / Flora dei funghi de	Ila
Repubblica Dominicana. VII. Alcuni fung	shi
poliporoidi, stereoidi e corticioi	di
non segnal	ati 3
Antonio Albanese, Eliseo Battisti	IN,
Claudio Berna, Marcello Boragin	NE,
Enrico Ercole, Alfredo Vizzi	INI
<b>Nomenclatural noveltie</b>	IS /
<b>Novità nomenclatura</b>	ali 34
Alfredo Vizzini, Pablo Alvarado, Bálint Din	MA
Nomenclatural noveltie	is /
Novità nomenclatura	ali 36

#### RIVISTA MICOLOGICA ROMANA BOLLETTINO dell'ASSOCIAZIONE MICOLOGICA ECOLOGICA ROMANA - APS

Anno XXXVII, numero speciale (fuori serie) 2021

Data di effettiva pubblicazione: giugno 2021

Direttore

Luigi PERRONE

Comitato di lettura

Enrico BIZIO - Eliseo BATTISTIN - Marco CLERICUZIO - Giovanni CONSIGLIO - Matteo GELARDI - Edmondo GRILLI -Tomaso LEZZI - Enzo MUSUMECI - Giovanni SEGNERI - Alfredo VIZZINI

Redazione

Mario AMADEI - Tomaso LEZZI - Luigi PERRONE - Giovanni SEGNERI

#### Direzione, Redazione ed Amministrazione, Via Tuscolana 548, 00181 Roma - Tel. e Fax 06-7802490

P. IVA 02120821000 - C.F. 80074620586 • e-mail: amerass1@virgilio.it • http://www.ameronlus.it Autorizzazioni del Tribunale di Roma N. 96 per la versione cartacea e N. 97 per la versione on line del 22.05.2018 Periodico quadrimestrale

Stampa: TMB Stampa, Commercity - Isola M/24, Viale Alexandre Gustave Eiffel, 100 - 00148 Roma - www.tmbstampa.eu

La Rivista è proprietà dell'A.M.E.R. La riproduzione parziale o totale degli articoli pubblicati sarà consentita solo previa autorizzazione. La pubblicazione è inviata gratuitamente ai Soci in regola con la quota associativa.

Quota associativa annuale: Euro 35,00

Quota associativa familiare: Euro 20,00

Adesione alla sola Rivista: Euro 30,00 per l'Italia e Euro 35 per l'estero.

Numeri arretrati: Euro 10,00 per l'Italia e per l'estero (escluse spese postali).

I versamenti per la quota associativa devono pervenire all'Associazione entro il mese di febbraio di ogni anno e potranno essere effettuati tramite conto corrente postale n. 11984002, intestato all'Associazione Micologica ed Ecologica Romana, Onlus, Via Tuscolana 548, 00181 Roma, specificando la causale del versamento.

Alternativamente i pagamenti possono essere effettuati tramite i seguenti bonifici postali, intestati a A.M.E.R. Onlus, Via Tuscolana 548, 00181 Roma, presso:

Banco Posta - Codice IBAN (dall'Italia): IT 45 Z 07601 03200 000 011 984 002 - Codice IBAN (dall'estero): BIC/SWIFT BPPIIRRXXX.

Credito Valtellinese - Agenzia 22, Via XX settembre 50/52 Roma - Codice IBAN (per l'Italia): IBAN IT 95 I 05216 03222 000 000 000 340 - Codice IBAN (dall'estero): BIC/SWIFT BPCVIT2S.

I versamenti per l'adesione alla sola Rivista e per il pagamento dei numeri arretrati si effettuano anch'essi tramite il c/c postale o i bonifici postali sopra citati.

#### ASSOCIAZIONE MICOLOGICA ECOLOGICA ROMANA - A.M.E.R. ONLUS

Presidente Aldo GURRIERI

Segretario Generale Gaetano FANELLI

Tesoriere Dante PASCUCCI

Consiglio Direttivo

Fabio DE STEFANI - Gaetano FANELLI - Giancarlo GHEZZI - Leonardo GIULIANI Aldo GURRIERI - Attilio LUCIDI - Maria Grazia MAIOTTI - Dante PASCUCCI Luigi PERRONE - Giovanni SEGNERI - Roberto TREGGIARI

> Garante Angelo SFERRAZZA

RMR Boll. AMER, numero speciale (fuori serie), Anno XXXVII, 2021: 3-33

#### CLAUDIO ANGELINI, CRISTIANO LOSI

#### FUNGUS FLORA OF THE DOMINICAN REPUBLIC. VII. SOME UNREPORTED POLYPOROID, STEREOID AND CORTICIOID FUNGI

#### Abstract

Twenty polyporoid (Bresadolia craterella, Ceriporia alachuana, C. microspora, Fomitiporia maxonii, Lindtneria trachyspora, Nigroporus vinosus, Oxyporus lacerus, Perenniporia subannosa, Perenniporiella neofulva, Phaeolus schweinitzii, Polyporus leprieurii, Postia tephroleuca, Pseudofavolus miquelii, Pseudowrightoporia dominicana, Ranadivia modesta, Schizopora flavipora, Steccherinum undigerum, Trametes pavonia, T. villosa, Truncospora tephropora), ten stereoid and corticioid (Cymatoderma caperatum, Podoscypha nitidula, P. thozetii, Steccherinum ciliolatum, Stereum hirsutum, S. striatum, Thelephora dentosa, T. dominicana, T. palmata, T. terrestris) neotropical fungi all collected in the Dominican Republic are here represented and annotated.

#### Riassunto

Vengono qui rappresentate con brevi note a commento 20 specie poliporoidi (Bresadolia craterella, Ceriporia alachuana, C. microspora, Fomitiporia maxonii, Lindtneria trachyspora, Nigroporus vinosus, Oxyporus lacerus, Perenniporia subannosa, Perenniporiella neofulva, Phaeolus schweinitzii, Polyporus leprieurii, Postia tephroleuca, Pseudofavolus miquelii, Pseudowrightoporia dominicana, Ranadivia modesta, Schizopora flavipora, Steccherinum undigerum, Trametes pavonia, T. villosa, Truncospora tephropora), 10 specie stereoidi e corticioidi (Cymatoderma caperatum, Podoscypha nitidula, P. thozetii, Steccherinum ciliolatum, Stereum hirsutum, S. striatum, Thelephora dentosa, T. dominicana, T. palmata, T. terrestris) di funghi neotropicali raccolti in Repubblica Dominicana.

Key words: Basidiomycota, Aphyllophorales, sub-tropical zone, Caribbean.

#### Introduction

Following our previous contributions to the knowledge of fungi of Dominican Republic (ANGELINI & LOSI, 2013a, 2013b, 2014, 2015, 2016 and 2018), here are represented other 30 records not previously annotated. The collecting and research areas in the Dominican Republic have been described in detail in ours previous works (ANGELINI & LOSI, 2013a, 2013b, 2014) and on the website "*Neotropical fungi - Hongos de la República Dominicana*" (*www.neotropicalfungi.com*).

## TAXONOMY

# POLYPOROID FUNGI

**Hymenium** poroid, rarely lamellar (and hard); **basidiomata** often tough and coriaceous, resupinate to pileate, sessile or stipitate (JÜLICH, 1989).

# Family Hymenochaetaceae Imazeki & Toki 1948

(as defined in ANGELINI & LOSI, 2013a)

# Genus Fomitiporia Murrill

*Fomitiporia* is above all characterized by globose to subglobose, thick-walled, cyanophilous and dextrinoid **basidiospores**. **Hyphal system** dimitic (pseudodimitic); **setae** and **cystidioles** variably present. **Basidiomata** resupinate or pileate (CAMPOS-SANTANA *et al.*, 2014).

#### Fomitiporia maxonii Murrill [as 'maxoni']

**Basidiome** resupinate, pulvinate, inseparable, hard woody. Margin adnate, irregular, white, sulphurous yellow, bright yellowish, yellowish brown to yellowish orange; pore surface greyish brown, chocolate brown when dried, the pores circular, 7-9 per mm, the dissepiments entire, thin; tubes concolorous, up to 2 mm deep; context thin, yellowish brown. **Hyphal system** dimitic. **Hymenial setae** absent. **Basidiospores** subglobose, broadly ovoid to globose, hyaline, thick-walled, dextrinoid, 5.6-6.6 (-7.2) µm in diam.

Distribution: probably widespread in the neotropics (DECOCK et al., 2007).

Material studied: on fallen trunk in a wood long the mountain river with deciduous trees, 21 Dec. 2018 - Jassica (P.to Plata) DR. Exiccatum: JBSD131257 (Fig. 1)

#### Remarks

*F. maxonii* shares with *F. langloisii* Murrill and *F. neotropica* Campos-Santana, Amalfi, R.M. Silveira, Robledo et Decock the basidiospores size; *F. langloisii* differs by a more cushionshaped basidiome, a lighter pore-surface color and slightly larger pores (DECOCK *et al.*, 2007); the distinction among asetose specimens of *F. neotropica* and *F. maxonii* is not unequivocal by using classical morphological characters (CAMPOS-SANTANA, 2014). Moreover in *F. punctata* complex, *F. punctata* (P. Karst.) Murrill and *F. dryophila* Murrill have distinctly larger basidiospores (DECOCK *et al.*, 2007). On the other hand according to VLASÁK *et al.* (2011), *F. maxonii* can be positively determined only after DNA sequencing.

# Family *Fomitopsidaceae* Jülich 1982

(as defined in ANGELINI & LOSI, 2015)

## Genus Phaeolus (Pat.) Pat.

*Phaeolus* is characterized by the stipitate and fleshy **basidiomes**, the simple septate **hyphae** and the brown **rot**.

#### Phaeolus schweinitzii (Fr.) Pat.

**Basidiomata** pileate, stipitate, with central or lateral, short and stout stipe to sessile, single or imbricate, soft and sappy when fresh, light-weight and brittle when dry. Upper surface orange at first, becoming yellowish brown to reddish brown, faintly zonate or with lilac, violet, chestnut zones, hirsute to tomentose; margin regular to lobed. Pore surface yellowish green to yellowish brown, pores angular, 1-3 per mm, becoming elongated to labyrinthine, decurrent on the stipe. **Hyphal system** monomitic; hyphae with simple septa, hyaline, yellowish to brown, thin- to slightly thick-walled; hyphal ends in the dissepiments often more or less encrusted; **gloeoplerous** hyphae with grainy contents present. **Gloeocystidia** scattered to frequent, projecting, cylindrical, hyaline, thin-walled, up to 110  $\mu$ m long and 13  $\mu$ m wide, as a rule naked but sometimes apically surrounded by conspicuous masses of reddish brown resinous matter. **Basidiospores** ellipsoid, hyaline, mostly uniguttulate or anyway with oily contentents, thin-walled, smooth, 6.4-9 × 4-5.5  $\mu$ m, IKI-.

Distribution: widespread, but rare in the tropical zones (RYVARDEN, 2016).

**Material studied**: on stumps and roots in a mountain forest with pine trees (*Pinus occidentalis* Sw.), 19 Nov. 2020 - Jarabacoa (La Vega) DR. Exiccatum: ANGE1446; on stump in a mountain forest with pine trees (*Pinus caribaea* Morelet), 22 Feb. 2020 - Pico Isabel de Torres (P.to Plata) DR. Exiccatum: ANGE1184 (**Fig. 2**).



Fig. 1. Fomitiporia maxonii

Photo by Claudio Angelini



Fig. 2. Phaeolus schweinitzii

Photo by Claudio Angelini

# Genus Postia Fr.

**Basidiomata** annual, effuse-reflexed to pileate. **Pileal surface** white or greyish to pale greyish brown; **pore surface** white. **Hyphal system** monomitic, **hyphae** with clamp connections, IKI-, CB-. **Basidiospores** allantoid to cylindrical, hyaline, thin-walled, smooth, IKI-, CB- (SHEN *et al.*, 2019).

#### Postia tephroleuca (Fr.) Jülich

= Polyporus lacteus Fr.

**Basidiomata** pileate, single, sessile, fleshy and watery when fresh, rather brittle on drying. Upper surface white to pale cream or very pale greyish, finely velutinous; margin regular to lobed. **Pore surface** white, pores round, 4-8 per mm. **Hyphal system** monomitic, **hyphae** with clamps, hyaline, thin- to mostly thick-walled, tightly packed and somewhat gelatinized in the trama. **Basidiospores** slightly allantoid,  $3.5-4.5 \times 0.7-1 \mu m$ .

**Distribution**: in the neotropics reported from Brazil (Brazilian Flora 2020 project) and Central America (CARRANZA & RYVARDEN, 1998).

Material studied: on fallen trunk in a mountain forest with deciduous trees, 24 Jan. 2020 - Pico Isabel de Torres (P.to Plata) DR. Exiccatum: ANGE1196 (Fig. 3).

## Genus Ranadivia Zmitr.

**Basidiomata** of corioloid to fibroporioid habitus; **hymenophore** as a single tube layer with pores small-sized, often sinuose; pinkish tint in all the tissues. **Hyphal system** dimitic with sympodially branched skeletal hyphae; **generative hyphae** clamped. **Basidiospores** cylindrical, slightly curved, thin-walled, IKI-, CB- (ZMITROVICH, 2018).

#### Ranadivia modesta (Kunze ex Fr.) Zmitr.

**Basidiomata** pileate, thin, leathery, more or less flexible, single, imbricate or fused laterally, semicircular to flabelliform with contracted and somewhat umbonate base. Upper surface pink to isabelline with lilac shades, brown to pinkish brown towards the base, finely zonate, appressed fibrillose, radially wrinkled with irregular outgrowths at the base; margin white, slightly incised, lobed to entire. **Pore surface** whitish with lilac shades, **pores** round to angular, 6-8 per mm. **Hyphal system** trimitic-like, generative hyphae with clamps. **Basidiospores** cylindrical-ellipsoid, 4-6 × 2.4-2.8 µm.

Distribution: common in tropical America (OVERHOLTS, 1953).

Material studied: on fallen trunk in a man-made wood with deciduous trees, 13 Mar. 2020 - Sosua (P.to Plata) DR. Exiccatum: ANGE1312 (Fig. 4).

#### Remarks

Basidiospores range seems highly variable: cylindrical, 4.5-6 × 1.5-2 (-2.5) μm in Gilbertson & Ryvarden (1987); broad-ellipsoid, 6-7.5 × 3.5-4 μm in Fidalgo & Fidalgo (1968); 7-9 × 4 μm in Carranza & Ryvarden (1998).

# Family Hericiaceae Donk 1964

**Hymenophore** smooth, odontoid or poroid; **hyphal system** monomitic or dimitic, clamps present; **Basidiospores** predominantly ornamented, amyloid; white **rot**, where noted (BEGEROW *et al.* 2018).



Fig. 3. Postia tephroleuca

Photo by Claudio Angelini



Fig. 4. Ranadivia modesta

Photo by Claudio Angelini

# Genus Pseudowrightoporia Y.C. Dai, Jia J. Chen & B.K. Cui

*Pseudowrightoporia* is characterized by soft corky to corky **basidiocarps** when fresh, shining pores, dimitic **hyphal structure**, ellipsoid to subglobose, finely asperulate and amyloid **basidiospores**, and a subtropical to tropical **distribution** (CHEN *et al.*, 2016).

# Pseudowrightoporia dominicana Angelini, Losi & Vizzini

*Pseudowrightoporia dominicana* is mainly characterized by pileate **basidiome** with a bright pinkish context, very small **basidiospores** and a dimitic-trimitic **hyphal system** (VIZZINI *et al.,* 2018).

Distribution: known only from the type locality in Dominican Republic.

**Material studied**: on live trunk of a deciduous tree, in a mixed mountain forest with several broadleaved species and pines (*Pinus occidentalis*), 17 Dec. 2016 - Jarabacoa (La Vega) DR. Exiccatum: JBSD127410 (**Fig. 5**).

# Family Irpicaceae Spirin & Zmitr. 2003

**Corticioid** species or **polypores**; **hyphal system** monomitic more rarely dimitic; **hyphae** mostly simple-septate; **cystidia** often absent; **basidiospores** thin-walled, smooth, hyaline; producing a white-**rot**, except for *Leptoporus* (Justo *et al.*, 2017).



Fig. 5. Pseudowrightoporia dominicana

Photo by Claudio Angelini

## Genus *Ceriporia* Donk (as defined in Angelini & Losi, 2015)

# Ceriporia alachuana (Murrill) Hallenb.

Basidiomata resupinate, thin, rather soft, brittle when dry. Pore surface white to yellowish, drying buff, margin cottony, white; pores angular, (2-) 4-8 per mm, sometimes elongated, at first cupulate; tube layer concolorous, context very thin, white. Hyphal system monomitic,

**hyphae** simple-septate, thin- to slightly thick-walled, hyaline. Rare, fusoid-subulate **cystidioles** present. **Basidiospores** cylindrical ellipsoid, hyaline, thin-walled, 3.2-4.4 × 1.8-2.2 (-2.4) μm.

**Distribution**: in the Neotropics reported from Panama, Costa Rica, Puerto Rico, Dominican Republic, Perù, Brazil.

Material studied: on fallen trunk in a man-made wood with deciduous trees, 25 Feb. 2020 - Sosua (P.to Plata) DR. Exiccatum: ANGE1257 (Fig. 6).



Fig. 6. Ceriporia alachuana

Photo by Claudio Angelini

## Ceriporia microspora Lindblad & Ryvarden

**Basidiomata** resupinate, thin, rather soft, brittle when dry. **Pore surface** white, **pores** thinwalled, circular, at first cupulate, 4-8 per mm with entire dissepiments that often become lacerate, **tube** layer and subiculum concolorous; margin white, cottony. **Hyphal system** monomitic, **hyphae** simple-septate, thin- to slightly thick-walled, hyaline, 2.4-8  $\mu$ m in diam, sometimes inflated. **Basidiospores** cylindrical ellipsoid, 3.2-3.6 × 1.8-2  $\mu$ m.

Distribution: frequently reported from Costa Rica and Venezuela.

Material studied: on fallen trunk in a man-made wood with deciduous trees, 25 Feb. 2020 - Sosua (P.to Plata) DR. Exiccatum: ANGE1258 (Fig. 7).

# Family Oxyporaceae Zmitr. & Malysheva 2014

**Basidiomes** with tubular hymenophore; **hyphal system** pseudodimitic, **hyphae** simpleseptate; **leptocystidia** apically encrusted; **basidiospores** ovoid to subglobose, inamyloid. Causes a white **rot**.

# Genus Oxyporus (Bourdot & Galzin) Donk

Description as for the family Oxyporaceae (see above).



Fig. 7. Ceriporia microspora

Photo by Claudio Angelini

## Oxyporus lacerus Ryvarden

**Basidiomata** resupinate, rather soft; **pore surface** white; **pores** 1-4 per mm, circular or angular, usually split, lacerate-denticulate, strongly irregular or labyrinthine; **context** thin and white. **Hyphal system** monomitic; **hyphae** simple-septate, thin- to thick-walled, hyaline. **Cystidia** frequent, cylindrical clavate, thin- to slightly thick-walled, with an apical crown of coarse crystals, up to 20 µm long and 4-5 µm wide. **Basidiospores** ellipsoid, thin-walled, hyaline, 4-4.4 × 2.4-2.6 µm.

**Distribution**: outside Dominican Republic it seems only reported from the type locality in Belize (RYVARDEN, 2016).

Material studied: on fallen trunk in a man-made wood with deciduous trees, 2 Dec. 2018 - Sosua (P.to Plata) DR. Exiccatum: ANGE1135 (Fig. 8).

#### Remarks

Superficially it looks like *O. pellicula* (Jungh.) Ryvarden (Ryvarden, 2007) however the latter species has larger basidiospores and slender and heavily encrusted cystidia (Ryvarden & JOHANSEN, 1980). *Oxyporus hexaporoides* Ryvarden & Iturr. has similar basidiospores but angular to hexagonal pores (Ryvarden & IturrIAGA, 2011).

# Family *Polyporaceae* Fr. ex Corda 1839 (as defined in Angelini & Losi, 2014)

# Genus Bresadolia Speg.

*Bresadolia* is characterized by centrally to eccentrically **stipitate**, fleshy and sometimes watery when fresh, papery and brittle upon drying. **Hyphal system** dimitic with **generative** and **skeleto**-



Fig. 8. Oxyporus lacerus

Photo by Claudio Angelini

**binding hyphae**; generative hyphae clamped, inflated, sometimes difficult to differentiated from inflated skeleto-binding hyphae; the former are dominant in the trama which is almost monomitic. **Cystidia** absent. **Basidia** clavate, four sterigmate. **Basidiospores** cylindrical to sub-ellipsoid, hyaline to slightly yellowish, thin-walled, smooth, IKI-, CB+ (MOTATO-VÁSQUEZ *et al.*, 2018).

## Bresadolia craterella (Berk. & M.A. Curtis) Audet

**Basidiomata** single, centrally stipitate, fleshy, up to 2.5 cm high and 2 cm wide. **Pileus** flat or slightly depressed in the centre, radially slightly wrinkled, glabrous or with some tufts of hairs adpressed or glued to the surface, whitish, tan to rust; margin thin, slightly lobate. **Pore surface** whitish, **pores** angular, decurrent on stipe to the base, 3-6 per mm. **Hyphal system** dimitic; **generative hyphae** with clamps, dominant and rather regular in the trama, with swollen parts in the context. **Skeleto-binding hyphae** irregular and difficult to separate from the generative hyphae proper. **Basidiospores** cylindrical ellipsoid, smooth, hyaline, thin-walled, 8-10 × 3.2-4 µm.

Distribution: sub-tropical to tropical America.

Material studied: on fallen branch in a man-made wood with deciduous trees, 22 Nov. 2018 - Sosua (P.to Plata) DR. Exiccatum: ANGE1132 (Fig. 9).

#### Remarks

*B. craterella* differs from other species in the genus by the smaller and paler basidiomata without watery consistency when fresh and smaller pores (MOTATO-VÁSQUEZ *et al.*, 2018).



Fig. 9. Bresadolia craterella

Photo by Claudio Angelini

# Genus Perenniporia Murrill

(as defined in Angelini & Losi, 2015)

# Perenniporia subannosa (Bres.) Decock, S. Herrera & Ryvarden

**Basidiomata** pileate, solitary, tough, sessile. Upper surface brown, grey, lilac, violet, yellowish green, zonate-sulcate, velvety to glabrous with a blackish brown cuticle 0.2-0.3 mm thick; margin rather thin and rounded, white, regular or slightly wavy. **Pore surface** whitish to cream, **pores** angular, rather irregular, 3-4 per mm, with entire dissepiments; **tubes** up to 1 cm deep, context thin, with a cottony texture. **Tubes** and **context** concolorous with pore surface. **Hyphal system** dimitic, **generative hyphae** with clamps; **skeletal hyphae** unbranched and strongly dextrinoid, in the context (3.2-) 4-6 (-7.2) μm diam. **Basidiospores** ellipsoid to subglobose, smooth, thick-walled, hyaline, not dextrinoid, 3.8-5 × 3-4.2 μm.

**Distribution**: the species seems to be restricted to Central and South America and the Caribbean area (DECOCK *et al.*, 2001).

**Material studied**: on stumps in a mountain mixed forest with pine trees (*Pinus occidentalis*), 28 Feb. 2020 - Jarabacoa (La Vega) DR. Exiccatum: ANGE1323 (Fig. 10).

# Remarks

Its closest relative is *P. contraria,* which has the margin of the pileus thin and acute, smaller pores (5-) 6-8 per mm and narrower skeletal hyphae in the context 2.5-3.8 (-4.5)  $\mu$ m diam (DECOCK *et al.,* 2001).

# Genus Perenniporiella Decock & Ryvarden

*Perenniporiella* is characterized by having trametoid **habitus**, a dimitic **hyphal system**, clamped *generative hyphae*, dendroid **skeletal hyphae**, and subglobose, not truncate, smooth, thick-walled, dextrinoid **basidiospores**.



Fig. 10. Perenniporia subannosa

Photo by Claudio Angelini

# Perenniporiella neofulva (Lloyd) Decock & Ryvarden

**Basidiomata** pileate, solitary, sessile to flabelliform, coriaceous, whitish to pale cream in all parts. Upper surface smooth to low tuberculate, glabrous, azonate; **pores** round, (7) 8 (9) per mm. **Hyphal system** dimitic, **generative hyphae** hyaline, with clamps; **skeletal hyphae** variably branched, arboriform, hyaline to pale yellowish, not dextrinoid. **Basidiospores** broadly-ellipsoid to subglobose, hyaline, thick-walled, 3.6-4.4 (-4.8) × 3-4 µm, weakly dextrinoid or apparently not dextrinoid.

Distribution: south America and the Caribbean area (DECOCK & RYVARDEN, 2003).

**Material studied**: on fallen branch in a mountain forest with deciduous trees, 4 Nov. 2019 - Pico Isabel de Torres (P.to Plata) DR. Exiccatum: ANGE1200 (**Fig. 11**).

#### Remarks

The closest relative *P. micropora* has a thinner basidiome, smaller pores and larger basidiospores (RYVARDEN, 1990).

# Genus Polyporus P. Micheli ex Adans

(as defined in ANGELINI & LOSI, 2014)

## Polyporus leprieurii Mont.

**Basidiomata** laterally stipitate with a small, irregular, dark reddish disc at the point of attachment, single, coriaceous. **Pileus** flabelliform, up to 4 cm wide and 1-2 mm thick, margin acute, even to undulate; upper surface pale tan to isabelline, glabrous, azonate to faintly zonate, slightly radially striate. **Pore surface** whitish to concolorous with upper surface, **pores** round



Fig. 11. Perenniporiella neofulva

Photo by Claudio Angelini



Fig. 12. Polyporus leprieurii

Photo by Claudio Angelini

to mostly angular, 6-10 per mm, with entire and rather thick dissepiments. **Stipe** up to 1 cm long and 3 mm wide, cylindrical or with one of the sides slightly flattened, black to dark brown, glabrous. **Hyphal system** dimitic, arboriform binding hyphae present; **generative hyphae** with clamps. **Cystidia** lacking. **Basidiospores** narrowly elipsoid, smooth, hyaline, thin-walled, 5.2- $7.2 \times 2.2-3 \mu m$ .

Distribution: tropical to subtropical species (Núñez & Ryvarden, 1995).

Material studied: on fallen branch in a mountain mixed forest with pine trees (*Pinus occidentalis*), 28 Nov. 2017 - Jarabacoa (La Vega) DR. Exiccatum: JBSD130259 (Fig. 12).

#### Remarks

A close species is *Polyporus guianensis* Mont. and in herbaria these two polypores are often confused however *P. guianensis* has larger pores and basidiospores (FIDALGO & FIDALGO, 1967).

# Genus Pseudofavolus Pat.

**Basidiomata** flabelliform to spathulate, narrowing behind to a **stipe** like base, **pileus** glabrous, smooth or tessellate, **context** thin; **pores** large to rather small; **tubes** short. **Hyphal system** dimitic, **generative hyphae** with clamps; **skeleto-binding hyphae** arboriform. **Basidiospores** smooth and large. Causes a white **rot** (GILBERTSON & RYVARDEN, 1987).

# Pseudofavolus miquelii (Mont.) Pat.

**Basidiomata** single, pileate, laterally substipitate or attached with a contracted tapering base with a small, whitish, dark violaceous margined disc at the point of attachment, somewhat flexible but fragile when dry. **Pileus** conchate, up to 5 cm wide and 2 mm thick, upper surface



Fig. 13. Pseudofavolus miquelii

Photo by Claudio Angelini

whitish to pale reddish-brown, glabrous, azonate, minutely tessellate reflecting the bottoms of the pores due to the very thin straw-coloured context; margin acute, even to lobed. **Pore surface** reddish-brown, **pores** angular, 1-2 per mm, dissepiments thin, entire, seldom slightly lacerate or fimbriate. **Hyphal system** dimitic, arboriform **binding hyphae** present; **generative hyphae** with clamps. **Cystidia** none. **Basidiospores** narrowly ellipsoid, smooth, often with oily contents, 14-20 × 4.8-5.6 (-8) µm.

Distribution: pantropical but exact distribution unknown (RYVARDEN, 2016).

Material studied: on fallen branch in a man-made wood with deciduous trees, 17 Dec. 2017 - Sosua (P.to Plata) DR. Exiccatum: JBSD130266 (Fig. 13).

# Genus Trametes Fr.

(as defined in Angelini & Losi, 2014)

#### Trametes pavonia (Hook.) Ryvarden

**Basidiomata** pileate, sessile, single or imbricate, coriaceous and somewhat flexible. **Pileus** dimidiate to flabelliform, up to 4 cm wide and 3 mm thick; upper surface whitish to brown, narrowly zonate and concentrically sulcate, villose-tomentose, margin acute, slightly wavy to lobed, white. **Pore surface** whitish, **pores** round to angular or slightly elongated radially, 5-8 per mm; **context** white, fibrous. **Hyphal system** trimitic, **generative hyphae** with clamps. **Cystidia** none. **Basidiospores** ellipsoid, smooth, thin- to slightly thick-walled, hyaline, 4.4-5.8 × 3-3.8 µm.

**Distribution**: widespread and common in tropical America to northern Argentina (Gilbertson & Ryvarden, 1987).

Material studied: on fallen trunk in a man-made wood with deciduous trees, 21 Nov. 2017 -Sosua (P.to Plata) DR. Exiccatum: JBSD130265 (Fig. 14)

#### Trametes villosa (Sw.) Kreisel

**Basidiomata** pileate, single or fused laterally, thin, flexible, dimidiate or effused-reflexed. Upper surface whitish, grey, brown, greenish, zonate, strigose to hirsute; margin regular to lobed. **Pore surface** concolorous with the pileus surface, **pores** angular, 2-3 per mm. **Context** white, 0.2-0.3 mm. **Hyphal system** trimitic, **generative hyphae** with clamps. **Basidiospores** cylindrical to suballantoid or narrowly ellipsoid, hyaline, smooth, thin-walled, 6.4-8 × 2.8-3.2 µm.

**Distribution**: widely reported from Neotropics and Southeastern United States (GILBERTSON & RYVARDEN, 1987).

Material studied: on fallen trunk in a mountain forest with pine trees (*Pinus occidentalis*), 19 Apr. 2013 - Jarabacoa (La Vega) DR. Exiccatum: JBSD124858 (Fig. 15).

## Genus Truncospora Pilát

**Basidiomata** sessile to resupinate, **context** tough-spongy, white to tan. **Hyphal system** dimitic. **Generative hyphae** clamped; **skeletal hyphae** rarely branched, of dendroid appearance, dextrinoid. **Basidiospores** ovate or ellipsoid, thick-walled, yellowish to brownish, dextrinoid (ZMITROVICH, 2018).

#### Truncospora tephropora (Mont.) Zmitr.

**Basidiomata** resupinate, 3 cm wide, with a black, tomentose to glabrous, somewhat sulcate, pseudo-pileus at the upper margin. **Pore surface** clay buff, **pores** angular, sometimes slightly elongated radially, 3-6 per mm; **tubes** brown. **Hyphal system** dimitic, **generative hyphae** difficult to find, hyaline, with clamps; **skeletal hyphae** dominating, thick-walled with a distinct



Fig. 14. Trametes pavonia

Photo by Claudio Angelini



Fig. 15. Trametes villosa

Photo by Claudio Angelini

lumen, clearly dextrinoid. **Basidiospores** broadly ellipsoid, sometimes with adaxial side slightly flattened, to truncate, thick-walled, dextrinoid, 4.8-6.4 × 4-4.8  $\mu$ m.

Distribution: pantropical species (RYVARDEN, 2016).

**Material studied**: on construction wood in front of the beach, 21 Nov. 2016 - Sosua (P.to Plata) DR. Exiccatum: ANGE806 (**Fig. 16**).



Fig. 16. Truncospora tephropora

Photo by Claudio Angelini

# Family *Schizoporaceae* Jülich 1982 (as defined in Angelini & Losi 2015)

Genus *Schizopora* Velen. emend. Donk (as defined in Angelini & Losi 2018)

# Schizopora flavipora (Berk. & M.A. Curtis ex Cooke) Ryvarden

**Basidiomata** resupinate to slightly effused-reflexed or somewhat nodulose, tough-fibrous, later woody. **Pore surface** whitish, cream to pale yellow; **pores** angular, elongated or sinuous, at first cupulate, 2-6 per mm; **tubes** cream to buff, **context** concolorous. **Hyphal system** monomitic, **hyphae** with clamps, hyaline, thin- to thick-walled; hyphal ends on the edges of the dissepiments mostly encrusted with granular crystals. **Cystidia** bulbous, smooth, present in the trama. **Basidiospores** broadly ellipsoid to subglobose, hyaline, uniguttulate, thin- to slightly thick-walled, 3.8-4.4 × 3-3.8 µm.

Distribution: very common in tropical zones (Ryvarden, 2016).

**Material studied**: on fallen trunk in a mountain mixed forest with pine trees (*Pinus occidentalis*), 7 Mar. 2020 - Jarabacoa (La Vega) DR. Exiccatum: ANGE1326 (**Fig. 17**).



Fig. 17. Schizopora flavipora

Photo by Claudio Angelini

# Family Steccherinaceae Parmasto 1968

Species with **poroid** or **hydnoid hymenophores**; **hyphal system** dimitic with clamps more rarely monomitic and/or simple septa; **spores** mostly thin-walled, rather small, smooth and hyaline; **cystidia** often present. Producing a white-**rot** (JUSTO *et al.*, 2017).

# Genus Nigroporus Murrill

**Basidiomata** pileate to resupinate, **pileus** when present greyish-blue, vinaceous-brown, pink or violet; **hymenial surface** concolorous. **Hyphal system** dimitic, **generative hyphae** with clamps; **cystidia** none; **basidiospores** mostly small, hyaline, thin-walled, smooth, non amyloid. Causes a white **rot**.

# Nigroporus vinosus (Berk.) Murrill

**Badidiomata** pileate, thin, coriaceous, single, broadly sessile to flabelliform; upper surface glabrous, black-violaceous to vinaceous-brown, faintly zonate sulcate; margin regular to slightly undulate, white or not particularly differentiated. **Pore surface** violaceous brown, **pores** circular to angular, 8-10 per mm. **Hyphal system** dimitic, **generative hyphae** clamped. **Basidiospores** cylindrical suballantoid, 3.8-4.8 × 1.4-1.6 µm.

Distribution: widespread in the tropics (Ryvarden, 2015).

Material studied: on fallen decay trunk in a mountain mixed forest with pine trees (*Pinus occidentalis*), 23 Dec. 2019 - Jarabacoa (La Vega) DR. Exiccatum: ANGE1351 (Fig. 18).

#### Remarks

Younger specimens are described thicker and velvety-tomentose (OVERHOLTS, 1953).



Fig. 18. Nigroporus vinosus

Photo by Claudio Angelini

# Genus Steccherinum Gray

The genus *Steccherinum* seems to be limited to dimitic species with clamps, small spores, encrusted **skeletocystidia** with **poroid** to **hydnoid hymenophore** (MIETTINEN *et al.*, 2012).

# Steccherinum undigerum (Berk. & M.A. Curtis) Westphalen & Tomsovsky

**Basidiomata** pileate, thin, tough when fresh, more fragile when dry, single or usually imbricate, sometimes fused laterally, effused reflexed to dimidiate; upper surface whitish, pinkish to pale brown, faintly zonate sulcate, radially wrinkled, finely tomentose; margin white, more or less regular, wavy to lobed. **Pore surface** concolorous whit the upper surface, **pores** angular, 5-8 per mm. **Hyphal system** dimitic, **generative hyphae** with clamps. **Skeletocystidia** frequently slightly projecting into the hymenium or imbedded, sometimes numerous in the dissepiments edges, cylindrical to clavate or attenuate towards the apex, encrusted apically, rarely smooth, 5.6-11 µm diam. **Basidia** clavate, 4-sterigmate, 14-16 × 5-8 µm. **Basidiospores** broadly ellipsoid, hyaline, smooth, thin- to slightly thick-walled, 4-5.2 (-5.5) × (3-) 3.2-4.2 µm.

**Distribution**: widespread in the Neotropics, *S. undigerum* is a very common species in southern Brazil (WESTPHALEN *et al.*, 2018).

**Material studied**: on fallen trunk in a mountain mixed forest with pine trees (*Pinus occidentalis*), 10 Jan. 2020 - Jarabacoa (La Vega) DR. Exiccatum: ANGE1360 (**Fig. 19**).



Fig. 19. Steccherinum undigerum

Photo by Claudio Angelini

# Family Stephanosporaceae Oberw. & E. Horak, 1979

**Basidiomata** gasteroid (*Stephanospora*) or resupinate (*Lindtneria*), characterized by strongly sculptured and more or less coloured **basidiospores**. *Lindtneria* appears quite unlike *Stephanospora*, but molecular, chemical and anatomical data confirm their relationship (CANNON & KIRK, 2007).

# Genus Lindtneria Pilát

The genus *Lindtneria* is characterized above all by the **basidia** with cyanophilous granulation and the cyanophilous ornamented **basidiospores** (GORJÓN, 2020).

# Lindtneria trachyspora (Bourdot & Galzin) Pilát

**Basidiomata** resupinate, effused to somewhat nodulose, soft, cottony esp. when young, brittle when dry. **Hymenophore** at first white to pale yellow, smooth, papillate to reticulate then bright yellow to orange, poroid with irregular and large **pores**, 0.5-3 per mm; margin white, cottony fibrillose or not differentiated. **Hyphal system** monomitic; **hyphae** hyaline, thin-walled, simple septate with scattered clamps more common in the subhymenium and mostly present at the basidial bases; **hyphal strands** numerous. **Cystidia** none, but hyphal ends in the hymenium with a bulb of excreted substance may be present. **Basidia** clavate to suburniform, up to 35 µm long and 16 µm wide, hyaline, 4-sterigmate, with cyanophilous globules in the cytoplasma. **Basidiospores** globose, thin- to slightly thick-walled, hyaline to pale brown, usually uniguttulate, aculeate or even with short crests, 6-8 (-9) µm in diam excluding the ornamentation; echinuli up to 1.6 µm long.

Distribution: a rare species in the Neotropics (Ryvarden, 2015).

**Material studied**: long a river, on fallen decay trunk in a man-made wood with deciduous trees, 4 Dec. 2019 - Sosua (P.to Plata) DR. Exiccatum: ANGE1241 (**Fig. 20**).



Fig. 20. Lindtneria trachyspora

Photo by Claudio Angelini

# STEREOID AND CORTICIOID FUNGI

**Stereoid fungi**: group of many types of **basidiomycetes** characterized by a pileate to effusedreflexed **basidiocarp** and a more or less smooth **hymenial surface** (RYVARDEN, 2010).

**Corticioid fungi**: **hymenium** smooth to hydnoid; **basidiomata** resupinate rarely pileate, sessile or stipitate (JÜLICH, 1989).

# Family Panaceae Miettinen, Justo & Hibbett 2017

**Basidiomes** pileate-stipitate, **hymenophore** lamellate or smooth. **Hyphal system** dimitic, **generative hyphae** clamped; **spores** hyaline, smooth, non-amyloid, non dextrinoid, thin-walled; **cystidia** present. Producing a white-**rot**.

# Genus Cymatoderma Jungh.

**Basidiomata** lignicolous, coriaceous, dimidiate, flabellate, infundibuliform. Upper surface of the **pileus** with ridges and tomentose. **Hymenial surface** smooth, warty, spiny or with folds, ridges or undulations. **Stipe** lateral or central, well developewd or rudimentary. **Hyphal system** dimitic or trimitic, **generative hyphae** with clamps. **Gloeocystidia** always present, **metuloids** in some species. **Basidiospores** thin-walled, hyaline, non amyloid (REID, 1965).

# Cymatoderma caperatum (Berk. & Mont.) D.A. Reid

**Basidiomata** single, infundibuliform with central **stipe**, coriaceous-membranous, up to 10 cm high and 5 cm wide. **Pileus** whitish to pale ochre, irregularly wrinkled and with radiate sharp ridges, hispid-strigose toward the center; margin dentate-lobate, incised-erose, laciniate-fimbriate. **Hymenial surface** whitish, smooth with obtuse longitudinal folds. **Stipe** well developed, cylindrical, pale brown, slightly tomentose, attached to the woody substrate by a small basal disc. **Hyphal system** dimitic; **generative hyphae** with clamps. **Gloeocystidia** frequent, sinuous, several constricted, widest at the base, tapering to the obtuse apex, thin-walled. **Basidiospores** subcylindrical to ellipsoid, hyaline, thin-walled, mostly guttulate, 9-12 × 4.2-5.2 μm.

**Distribution**: throughout the Neotropics (Welden, 2010).

**Material studied**: on fallen decay trunk in a man-made wood with deciduous trees, 16 Nov. 2018 - Sosua (P.to Plata) DR. Exiccatum: JBSD131267 (**Fig. 21**).

#### Remarks

Absence of metuloids and the large ellipsoid basidiospores characterized the species (REID, 1965).



Fig. 21. Cymatoderma caperatum

Photo by Claudio Angelini

# Genus *Podoschypha* Pat. (as defined in Angelini & Losi, 2016)

# Podoscypha nitidula (Berk.) Pat.

**Basidiomata** single or in small groups, stipitate, infundibuliform, papery-coriaceous, up to 4 cm high and wide. **Pileus** yellowish, pinkish, golden brown or reddish brown in age, lineate-striate, concentrically more or less zonate, glabrous, sometimes with semi-translucent appearance;



Fig. 22. Podoscypha nitidula

Photo by Claudio Angelini

margin even, slightly wavy to lobed, white or not differentiated. **Hymenial surface** smooth, whitish to pale grey or concolorous with the pileus, faintly zonate. **Stipe** glabrous, short and rudimentary, brown, arising from a basal mycelial pad on exposed wood. **Hyphal system** dimitic; **generative hyphae** clamped. **Gloeocystidia** present, numerous, enclosed or slightly projecting, long, tubular, sinuous and somewhat constricted, mostly tapering to an obtuse apex, thin-walled, with homogeneous contents. **Basidia** mature not seen. **Basidiospores** broadly ellipsoid, hyaline, thin-walled, mostly uniguttulate, 4-4.8 × 2.8-3.5 μm.

Distribution: neotropical species (Welden, 2010).

Material studied: on fallen branches in a mountain mixed forest with pine trees (*Pinus occidentalis*), 18 Nov. 2018 - Jarabacoa (La Vega) DR. Exiccatum: JBSD131258 (Fig. 22).

## Podoscypha thozetii (Berk.) Boidin

**Basidiomata** gregarious, stipitate, infundibuliform, rather soft when fresh, up to 3 cm high and 3.5 cm wide. **Pileus** glabrous, at first pink to light buff and faintly zonate then with clear brown zones; margin white, slightly wavy to lobed or deeply divided. **Hymenial surface** smooth, pink to pale ochre, even or with shallow undulate folds. **Stipe** unevenly brownish, glabrous, often with a ball of earth adhering to the base. **Hyphal system** dimitic; **generative hyphae** thin walled, hyaline, with clamps; **skeletal hyphae**, thick-walled, hyaline, 2.4-5 µm wide. **Gloeocystidia** present, numerous, not or slightly projecting, undulant, thin-walled, tapering to an obtuse apex, subhyaline, with homogeneous protoplasm, 60-80 µm long and 6.4-10 µm wide. **Basidiospores** broadly ellipsoid, hyaline, uniguttulate, thin-walled, 6.4-8.8 × 5.2-6.4 µm.

**Distribution**: widespread in the tropical zones (Ryvarden, 2020). In the Neotropics reported from Mexico, Panama (Ryvarden, 2010), Brazil (Welden, 2010) and Venezuela (Reid, 1965).

Material studied: on the ground amongst grasses, 2 Jan. 2020 - Near Airport of P.to Plata - DR. Exiccatum: ANGE1317(Fig. 23).



Fig. 23. Podoscypha thozetii

Photo by Claudio Angelini

# Family *Steccherinaceae* Parmasto 1968 Genus *Steccherinum* as reported above.

# Steccherinum ciliolatum (Berk. & M.A. Curtis) Gilb. & Budington

**Basidiomata** resupinate, adnate, subceraceous, membranaceous to somewhat fibrous, white to pale ochraceous; margin fimbriate or slightly rhizomorphic. **Hymenial surface** odontoid to hydnoid with irregularly conical aculei, more or less fringed and fimbriate in the apex, up to 1 mm long. **Hyphal system** dimitic with clamped **generative hyphae**. **Cystidia** (pseudocystidia) numerous in aculei, strongly encrusted at distal end. **Basidiospores** ellipsoid, smooth, thinwalled, 3.8-4.2 × 2.2-2.6 µm.

**Distribution**: it seems rare in the Neotropics: recorded in Mexico (URBIZU *et al.*, 2014) and seems in Colombia (HJORTSTAM & RYVARDEN, 2007).

Material studied: on fallen branches in a man-made wood with deciduous trees, 25 Dec. 2018 - Sosua (P.to Plata) DR. Exiccatum: JBSD131264 (Fig. 24).

#### Remarks

The closest relative *Steccherinum litschaueri* (Bourdot & Galzin) J. Erikss. has regularly cylindrical, not fimbriate aculei and the basidiospores are less rounded with almost parallel sides (ERIKSSON *et al.*, 1984).



Fig. 24. Steccherinum ciliolatum

Photo by Claudio Angelini

# Family *Stereaceae* Pilát 1930 Genus *Stereum* Hill. ex Pers. (as defined in Angelini & Losi, 2013a)

## Stereum hirsutum (Willd.) Pers.

**Distribution**: widespread in Mexico and Central America, Caribbean islands, and South America (Welden, 2010).

Material studied: on fallen branches in a mountain mixed forest with pine trees (*Pinus occidentalis*), 7 Mar. 2020 - Jarabacoa (La Vega) DR. Exiccatum: ANGE1327 (Fig. 25).

## Stereum striatum (Fr.) Fr.

**Basidiomata** pileate, very thin and papery, effused-reflexed, dimidiate, flabelliform or orbicular and attached by a more or less central point, to 4.0 cm wide and long, sometimes imbricate or with laterally fused pileus; upper surface glabrous, shiny, sericeous, radially lineate-striate, zonate, pale grey, whitish, silvery, with brownish or pinkish zones; margin rounded, sometimes lobed or wavy, entire or rarely lacerate. **Hymenial surface** smooth, whitish to pale grey. **Hyphal system** dimitic; **generative hyphae** thin- to slightly thick-walled, simple septate; **skeletal hyphae** thick-walled, seldom branched. **Skeletocystidia** up to 10  $\mu$ m wide, cylindrical to subcylindrical, often constricted, thick-walled, with yellowisih contents, apically obtuse or subulate, thin- or slightly thick-walled, sometimes with a schizopapilla. **Acutocystidia** numerous, thin-walled, up to 6  $\mu$ m wide. **Basidia** narrowly clavate, 4-sterigmate. **Basidiospores** narrowly ellipsoid to cylindrical, thin-walled, smooth, hyaline, amyloid, 5-6 × 2.2-3  $\mu$ m.

**Distribution**: widespread in the eastern and southern United States and in Central and South America (RYVARDEN, 2010).

Material studied: on fallen branches in a mountain mixed forest with pine trees (*Pinus occidentalis*), 9 May 2018 - Jarabacoa (La Vega) DR. Exiccatum: JBSD130744 and JBSD130745 (Fig. 26).



Fig. 25. Stereum hirsutum

Photo by Claudio Angelini



Fig. 26. Stereum striatum

Photo by Claudio Angelini

# Family *Thelephoraceae* Chevall. 1826 Genus *Thelephora* Ehrh. ex Willd. (as defined in Angelini & Losi, 2018).

# *Thelephora dentosa* Berk. & M.A. Curtis

**Basidiomata** soft-coriaceous, up to 4 cm high, encrusting leaves and small twigs at the base and ascending as free, sessile, clavarioid, spathulate, flabelliform, digitate processes and lobes, purplish brown, blackish brown; margin white; hymenium smooth to velutinous. **Hyphae** clamped, subhyaline to light brown, thin- to slightly thick-walled, sometimes inflated as reported by WELDEN (1968). **Hymenium** cyanescent or not in KOH. **Basidiospores** 6.4-8.4 (-9.6) × 5.6-7.6 µm except the ornamentation, broadly ellipsoid to subglobose, sometimes slightly angular, not lobed, yellowish brown, mostly uniguttulate, echinulate, spines up to 1 (1.2) µm.

Distribution: Cuba, Haiti, Jamaica and Mexico (CHACÓN et al., 2018).

Material studied: on litter, in a man-made wood with deciduous trees, 10 Dec. 2018 - Sosua (P.to Plata) DR. Exiccatum: JBSD131262 (Fig. 27).

#### Remarks

In the American tropics *Th. paraguayensis* Corner, *Th. cervicornis* Corner, *Th. versatilis* Ramírez-López & M. Villegas and *Th. pseudoversatilis* Ramírez-López & M. Villegas are part of *Th. dentosa* complex characterized by not lobed, not or slightly angular, subglobose, broadly ellipsoid or ovateellipsoid basidiospores. *Th. paraguajensis* and *Th. cervicornis* have clavarioid or palmate basidiome without resupinate, encrusting parts (STALPERS, 1993); *Th. versatilis* and *Th. pseudoversatilis* have more than 5 cm long basidiome and smaller basidiospores (RAMíREZ-LÓPEZ *et al.*, 2015).



Fig. 27. Thelephora dentosa

Photo by Claudio Angelini

# Thelephora dominicana Angelini, Losi & Vizzini

*Thelephora dominicana* is characterized by small, infundibuliform to spathulate **basidiomes** and brown, globose to subglobose, strongly aculeate **basidiospores** distinctive in the genus *Thelephora* (VIZZINI *et al.*, 2016).

Distribution: Dominican Republic, the type locality, and Mexico (OswALDO et al., 2020).

**Material studied**: on litter, in a man-made wood with deciduous trees, 3 Dec. 2016 - Sosua (P.to Plata) DR. Exiccatum: JBSD129824 (**Fig. 28**).



Fig. 28. Thelephora dominicana

Photo by Claudio Angelini

# Thelephora palmata (Scop.) Fr.

**Basidiomata** caespitose, fibrous-coriaceous, stipitate and clavarioid with flattened and obtuse branches, up to 5 cm high, resupinate part absent. **Hymenium** amphigenous, smooth, purplish brown, margin white. **Smell** of rotten cabbage when fresh, foetid on drying. **Hyphae** clamped with scattered simple septa, hyaline to subhyaline in 3% KOH, thin- to slightly thick-walled; subhymenial hyphae usually short and inflated, 4.8-9  $\mu$ m diam, tramal hyphae regular 3.2-6  $\mu$ m diam. **Trama** cyanescent in KOH. **Basidiospores** 8-11 × 6.4-8  $\mu$ m except the ornamentation, brown, mostly with oil drops, irregular in outline to lobed, usually elongated along one axis, aculeolate to echinulate, echinuli sometimes bifurcate.

**Distribution**: in the Neotropics reported from Brazil (Meijer, 2006; Bononi, 1984), Guatemala (Flores Arzù, 2012), Mexico (Jesus Garcia Jimenez, 2013), Venezuela (Dennis, 1970), Cuba (Camino Vitaro *et al.*, 2006).

**Material studied**: on litter, in a mountain mixed forest with pine trees (*Pinus occidentalis*), 28 Feb. 2020 - Jarabacoa (La Vega) DR. Exiccatum: ANGE1336 (Fig. 29).

#### Remarks

*Th. palmata* can be distinguished from ramified states of *Th. anthocephala*, *T. caryophillea*, or *T. regularis* by the foetid smell and the cyanescent trama (CORNER, 1968).



Fig. 29. Thelephora palmata

Photo by Claudio Angelini

# Thelephora terrestris Ehrh.

**Basidiomata** subsessile, fibrous-coriaceous, mostly concrescent, flabellate, up to 1.5 cm wide. **Hymenium** unilateral, inferior, papillate, radially sulcate rugulose, brown chocolate. Abhymenial surface fibrillose rugulose, dark brown to blackish. Margin white, fimbriate and incised. **Hyphae** clamped, subhyaline to pale brown in 3% KOH, slightly thick-walled, 4-6 µm diam; **hyphal cords** present, dark brown in 3% KOH. No parts cyanescent in KOH. **Basidiospores** 8-11.2 × 6-8.8 µm except the ornamentation, brown, mostly with oil drops, irregular in outline to lobed, usually elongated along one axis, aculeolate, echinuli sometimes bifurcate.

Distribution: Cuba (Camino Vitaro *et al.*, 2006), Guatemala (Welden, 1968), Mexico (Sanchez-Jacome & Guzmán -Davalos, 1997), Jamaica, Brazil, Uruguay (Sulzbacher *et al.*, 2013), Panama (Guzmán & Piepenbring, 2011).

Material studied: on litter, in a mountain forest with pine trees (*Pinus occidentalis*), 21 Dec. 2019 - Jarabacoa (La Vega) DR. Exiccatum: ANGEANGE1348 (Fig. 30).

#### Remarks

Macroscopically the species is very varible (CORNER, 1968) up to wholly and widely resupinate basidiome as *Th. terrestris* f. *radiosa* (P. Karst.) Zmitr.



Fig. 30. Thelephora terrestris

Photo by Claudio Angelini

#### Authors' addresses

CLAUDIO ANGELINI Jardin Botanico Nacional Dr. Rafael Ma. Moscoso. Santo Domingo (Dominican Republic). Via Cappuccini, 78/8, 33170 Pordenone (Italy). E-mail: claudio\_angelini@libero.it

CRISTIANO LOSI Canaregio, 3608, 30121 Venezia (Italy). E-mail: cristianolosi@libero.it

#### Literature Cited

- ANGELINI C. & LOSI C. 2013a: Polyporoid fungi in the Dominican Republic. I. Ganodermataceae & Hymenochaetaceae. Boll. Amer 89: 27-39.
- ANGELINI C. & LOSI C. 2013b: Annotated list of stereoid fungi in Dominican Republic. II. Boll. Amer 90: 31-38.
- ANGELINI C. & LOSI C. 2014: Annotated list of Polyporaceae in the Dominican Republic. III. R.M.R. Boll. Amer 91: 31-45.
- ANGELINI C. & LOSI C. 2015: Annotated list of polyporoid fungi in the Dominican Republic. IV. R.M.R. Boll. Amer 96: 3-19.
- ANGELINI C. & LOSI C. 2018: Annotated list of fungus flora of the Dominican Republic.VI. R.M.R. Boll. Amer 103: 3-22.
- BEGEROW D., MCTAGGART A. & AGERER R. 2018: Syllabus of Plant Families. Basidiomycota and Entorrhizomycota. Borntraeger Science Publishers, Stuttgart.

- BONONI V.L. 1984: Macromicetos do Parque Estadual da Ilha do Cardoso. IV. Adicoesas familias Hymenochaetaceae, Stereaceae e Thelephoraceae. Rickia 11: 43-52.
- CAMINO VITARO M., MENA PORTALES J. & MINTER J. 2006: Fungi of Cuba. www.cybertruffle.org.uk/cubafung.
- CAMPOS-SANTANA M., AMALFI M., ROBLEDO G., BORGES DA SILVEIRA R.M. & DECOCK C. 2014: Fomitiporia neotropica, a new species from South America evidenced by multilocus phylogenetic analyses. Mycol. Progress 13: 601-615.
- CANNON P.F. & KIRK P.M. 2007: Fungal Families of the World. CAB International.
- CARRANZA J. & RYVARDEN L. 1998: Additional list of pore fungi of Costa Rica. Mycotaxon 69: 377-390.
- CHACÓN S., TAPIA F. & JAVIO D. 2018: Four interesting aphylloforoid species in the tropical northern region of Veracruz, Mexico. Mycotaxon 133: 153-163.
- CHEN J.J., CUI B.K. & DAI Y.C. 2016: Global diversity and molecular systematics of Wrightoporia s.l. Russulales, Basidiomycota. Persoonia 37: 21-36.
- CORNER E.J.H. 1968: A monograph of Thelephora (Basidiomycetes). Beih.Nova Hedw. 27: 1-110.
- DECOCK C., HERRERA FIGUEROA S. & RYVARDEN L. 2001: Studies in Perenniporia. Perenniporia contraria and its presumed taxonomic synonym Fomes subannosus. Mycologia 93: 196-204.
- DECOCK C. & RYVARDEN L. 2003: Perenniporiella gen. nov. segregated from Perenniporia, including a key to neotropical Perenniporia species with pileate basidiomes. Mycol. Res. 107: 93-103.
- DECOCK C., HERRERA FIGUEROA S., ROBLEDO G. & CASTILLO G. 2007: Fomitiporia punctata (Basidiomycota, Hymenochaetales) and its presumed taxonomic synonyms in America: taxonomy and phylogeny of some species from tropical/ subtropical areas. Mycologia 99: 733-752.
- DENNIS R.W.G. 1970: Fungus flora of Venezuela and adjacent countries. Kew Bulletin additional series III, 531 pp.
- FIDALGO O. & FIDALGO M.E.P.K. 1967: Polyporaceae from Trinidad and Tobago. II. Mycologia 59: 833-869.
- FIDALGO O. & FIDALGO M.E.P.K. 1968: Polyporaceae from Venezuela. I. Mem. New York Bot. Garden 17: 1-34.
- FLORES ARZÙ R., COMANDINI O. & RINALDI A.C. 2012: A preliminary checklist of macrofungi of Guatemala, with notes on edibility and traditional knowledge. Mycosphere 3: 282-287.
- GILBERTSON R.L. & RYVARDEN L. 1987: North American Polypores. Vol.2. Megasporoporia Wrightoporia. Fungiflora, Oslo. 437-885.
- Gorjón S.P. 2020: Genera of corticioid fungi: keys, nomenclature and taxonomy. Studies in Fungi 5: 125-309.
- GUZMÁN G. & PIEPENBRING M. 2011: Los hongos de Panama. Introducion a la identificacion de los macroscopicos. Mexico, D.F. 372 pp.
- HJORTSTAM K. & RYVARDEN L. 2007: Checklist of corticioid fungi (Basidiomycotina) from the tropics, subtropics, and the southern hemisphere. Synopsis fungorum 22: 27-146.
- JESÚS GARCÍA JIMÉNEZ M.C. 2013: Diversidad de macromicetos en el Estado de Tamaulipas, Mexico. Tesis. Universidad Autonoma de Nuevo Leon, Facultad de Ciencias Forestales, Subdireccion de Posgrado.
- JUSTO A., MIETTINEN O., FLOUDAS D., ORTIZ-SANTANA B., SJOKVIST E., LINDER D., NAKASONE K., NIEMELÄ T., LARSSON K.-H., RYVARDEN L. & HIBBETT D.S. – 2017: A revised family-level classification of the Polyporales (Basidiomycota). Fungal Biology 121: 798-824.
- MEIJER A.A.R. 2006: Preliminary list of the macromycetes from the Brazilian state of Paranà. Bol. Mus. Bot. Munic. 68: 1-55.
- MIETTINEN O., LARSSON E., SJOKVIST E. & LARSSON K.-H. 2012: Comprehensive taxon sampling reveals unaccounted diversity and morphological plasticity in a group of dimitic polypores (Polyporales, Basidiomycota). Cladistics 28: 251-270.
- MOTATO-VÁSQUEZ V., GRASSI E., GUGLIOTTA A.M. & ROBLEDO G.L. 2018: Evolutionary relationships of Bresadolia (Basidiomycota, Polyporales) based on molecular and morphological evidence. Mycol. Progress 17: 1031-1048.
- NUÑEZ M. & RYVARDEN L. 1995: Polyporus (Basidiomycotina) and related genera. Synopsis Fungorum 10. Fungiflora Oslo Norway.
- Oswaldo M., Pinzón J.P. & Guzmán-Dávalos L. 2020: Thelephora dominicana (Agaricomycetes, Fungi), un nuevo registro para México. Acta Botanica Mexicana 127. Nota científica, 1-6.

- OVERHOLTS L.O. 1953: The Polyporaceae of the United States, Alaska, and Canada. Univ. Michigan Press, Ann Arbor.: 466 pp.
- RAJCHENBERG M. 1982: El genero Coriolus (Polyporaceae) en la Republica Argentina. Bol. Soc. Argentina de Botanica 21: 17-57.
- RAMÍREZ-LÓPEZ I., VILLEGAS-RÍOS M., SALAS-LIZANA R., GARIBAY-ORIJEL R. & ALVAREZ-MANJARREZ J. 2015: Thelephora versatilis and Thelephora pseudoversatilis: two new cryptic species with polymorphic basidiomes inhabiting tropical deciduous and sub-perennial forests of the Mexican Pacific coast. Mycologia 107: 346-358.
- REID D.A. 1965: A Monograph of the Stipitate Stereoid Fungi. Beih. Nova Hedwigia 18: 1-382.
- RYVARDEN L. 1990: Type studies in the Polyporaceae 22. Species described by C.G. Lloyd in Polyporus. Mycotaxon 38: 83-102.
- RYVARDEN L. 2007: Studies in neotropical polypores 23. New and interesting wood-inhabiting fungi from Belize. Synopsis Fungorum 23:32-55.
- RYVARDEN L. 2010: Stereoid fungi of America. Synopsis Fungorum 28. Fungiflora, Oslo, Norway.
- RYVARDEN L. 2015: Neotropical polypores. Part 2. Polyporaceae, Abortiporus Nigroporus. Synopsis Fungorum 34. Fungiflora, Oslo, Norway.
- RYVARDEN L. 2016: Neotropical polypor–es. Part 3. Polyporaceae, Obba Wrightoporia. Synopsis Fungorum 36. Fungiflora, Oslo, Norway.
- RYVARDEN L. 2020: The genus Podoscypha Pat.- a synopsis. Synopsis Fungorum 42: 59-81.
- RYVARDEN L. & JOHANSEN I. 1980: A preliminary polypore flora of East Africa. Fungiflora: 636 pp.
- RYVARDEN L. & ITURRIAGA T. 2011: Studies in Neotropical polypores 30. New and interesting species from Gran Sabana in Venezuela. Synopsis Fungorum 29: 74-81.
- SANCHEZ-JACOME M.D.R. & GUZMÁN-DÁVALOS L. 1997: Nuevos registros de Thelephora (Aphyllophorales, Basidiomycotina) para México. Rev. Mexicana de Micologia 13: 70-77.
- SHEN L.L., WANG M., ZHOU J.L., XING J.H., CUI B.K. & DAI Y.C. 2019: Taxonomy and phylogeny of Postia. Multigene phylogeny and taxonomy of the brown-rot fungi: Postia (Polyporales, Basidiomycota) and related genera. Persoonia 42: 101-126.
- STALPERS J.A. 1993: The Aphyllophoraceous Fungi I. Keys to the species of the Thelephorales. Studies in Mycology 35: 1-168.
- SULZBACHER M.A., GREBENC T., JACQUES R.J.S. & ANTONIOLLI Z.I. 2013: Ectomycorrhizal fungi from southern Brazil – a literature-based review, their origin and potential hosts. Mycosphere 4(1), 61–95.
- URBIZU M., SIQUEIROS M.E., ABREGO N. & SALCEDO I. 2014: New records of aphyllophoroid fungi from Aguascalientes, Mexico and an approach to thei ecological preferences. Rev. Mex. Biodiversidad 85: 1007-1018.
- VIZZINI A., ANGELINI C., LOSI C. & ERCOLE E. 2016: Thelephora dominicana (Basidiomycota, Thelephorales), a new species from the Dominican Republic, and preliminary notes on thelephoroid genera. Phytotaxa 265: 27-38.
- VIZZINI A., ANGELINI C., LOSI C. & ERCOLE E. 2018: Diversity of polypores in the Dominican Republic: Pseudowrightoporia dominicana sp. nov. (Hericiaceae, Russulales). MycoKeys 34: 35-45.
- VLASÁK J., KOUT J., VLASÁK JR. J. & RYVARDEN L. 2011: New records of polypores from southern Florida. Mycotaxon 118: 159-176.
- WELDEN A.L. 1968: West Indian Species of Dark-spored Thelephoraceae. Sydowia 22: 269-273.
- WELDEN A.L. 2010: Stereum s.l.. Flora Neotropica Monograph 106, The New York Botanical Garden.
- WESTPHALEN M.C., RAJCHENBERG M., TOMSOVKY M. & GUGLIOTTA A.M. 2018: A re-evalutation of Neotropical Junghuhnia s.lat. (Polyporales, Basidiomycota) based on morphological and multigene analyses. Persoonia 41: 130-141.
- ZMITROVICH I.V. 2018: Conspectus Systematis Polyporacearum v 1.0. Folia Cryptogamica Petropolitana nº 6.

#### RMR Boll. AMER, numero speciale (fuori serie), Anno XXXVII, 2021:34-35

#### ANTONIO ALBANESE, ELISEO BATTISTIN, CLAUDIO BERNA, MARCELLO BORAGINE, ENRICO ERCOLE, ALFREDO VIZZINI

#### NOMENCLATURAL NOVELTIES

**Arrhenia monsducalis** Albanese, Battistin, Berna, Boragine, Ercole & Vizzini, sp. nov. MycoBank: MB840168

**Etymology**: the specific epithet refers to Monte Ducale street, the collection site of the holotype.

Holotype: TOHG3573. Italy, Lazio, Minturno (LT), Monte Ducale street, 41°15.846' N, 013°44.548' E, 100 m a.s.l., among mosses, in Mediterranean vegetation with the presence of *Quercus suber L., Q. virgiliana* (Ten.) Ten., *Erica arborea L.,* and *Myrtus communis L.,* 08 Nov. 2020, *leg.* A. Albanese; GeneBank MW981352 (ITS), MW981348 (28S).

Pileus 10–19 mm diam., convex, with deeply depressed centre, omphaloid-funnel-shaped; margin sometimes sinuous and wavy, slightly involuted, translucently striate; surface smooth, hygrophanous, dark grey to brown, paler towards the margin. Lamellae decurrent, spaced (distant), intercalated with numerous second and third order lamellae (lamellulae), light grey with bluish hues, sometimes changing to purple, with straight smooth concolorous edge. Stipe 10-16 mm  $\times$  2-3.5 mm, central, terete, conical at insertion with the pileus, grooved, smooth, light grey at apex, grey brown towards the base; presence of a white basal mycelium. Context scarce, elastic, dirty-white; odour strongly Pelargonium-like, taste not tested. Spore-print white. Spores (5.7-) 5.9-7.2 (-7.8) × (3.0) 3.2-3.9 (-4.2)  $\mu$ m, on average  $6.5 \times 3.5 \ \mu m$ ,  $Q = (1.5-) \ 1.6-2 \ (-2.4)$ ,  $Q_m = 1.9$ , ellipsoid to ovoid, smooth, hyaline, thin-walled, with small intracellular granulation, without a germ pore and with a prominent hilar appendix, inamyloid, nondextrinoid. Basidia (21.1-) 28.6-36.0 (-42.6) × (4.6-) 5.1-6.8 (-8.6) µm, cylindrical-claviform, tetrasporic or bisporic, with 4.0-6.0 µm long sterigmata. Hymenophoral trama subregular to irregular, consisting of intertwined, 1.5-3.5 µm wide hyphae. Hymenial cystidia absent. Pileipellis an ixocutis of parallel, thinwalled and cylindrical 2-6  $\mu m$  wide hyphae, immersed in a gelified matrix, with brownish extracellular and encrusting parietal granulations. Stipitipellis composed of hyaline, thin-walled, parallel, cylindrical, 2.5-3.5 µm wide hyphae, some of these thicker, caulocystidioid, ascending and with rounded apex. Clampconnections absent in all parts of the basidiome.

Habitat and distribution: gregarious, terricolous, among mosses, in Mediterranean areas. So far known only from the type locality.

#### Authors' addresses

ANTONIO ALBANESE Via Monte Ducale 47, 04026 Minturno (LT-Italy. E-mail: antonio.albanese32@gmail.com

ELISEO BATTISTIN Via Chiesa di Piana 26, 36078 (Valdagno (VI-Italy). E-mail: eliseo\_battistin@yahoo.it

CLAUDIO BERNA Via Londro 11, 03030 Vicalvi (FR-Italy). E-mail: claudioberna19@gmail.com MARCELLO BORAGINE Via L. Abenavolo Cond. Libertas snc., 81057 Teano (CE-Italy). E-mail: spankio@alice.it

ENRICO ERCOLE VIA MURAZZANO 11, 00141 Torino (Italy). E-mail: enrico.ercole@gmail.com

Alfredo Vizzini Via S. Pietro d'Ollesia 13b, 10053 Bussoleno (TO-Italy). E-mail: alfredovizzini@libero.it

#### RMR Boll. AMER, numero speciale (fuori serie), Anno XXXVII, 2021: 36

#### ALFREDO VIZZINI, PABLO ALVARADO, BÁLINT DIMA

#### NOMENCLATURAL NOVELTIES

Spodocybe collina (Velen.) Vizzini, P. Alvarado & Dima, comb. nov.

MycoBank: MB840169

Basionym: Cantharellus collinus Velen., České Houby 1: 83 (1920)

Spodocybe herbarum (Romagn.) Vizzini, P. Alvarado & Dima, comb. nov.

MycoBank: MB840170

Basionym: Clitocybe herbarum Romagn., Bull. trimest. Soc. mycol. Fr. 94(1): 80 (1978)

Spodocybe font-queri (R. Heim) Vizzini, P. Alvarado & Dima, comb. nov.

MycoBank: MB840171

Basionym: Clitocybe font-queri R. Heim, Trab. Mus. Nac. Cienc. Nat., Ser. Bot. 15(3): 97 (1934)

## Spodocybe trulliformis (Fr.) Vizzini, P. Alvarado & Dima, comb. nov.

MycoBank: MB840172

Basionym: Agaricus trulliformis Fr., Syst. mycol. (Lundae) 1: 174 (1821)

#### Notes

The placement of the species of the *Clitocybe trulliformis* (Fr.) P. Karst. complex outside the *Tricholomatineae* (*Agaricales*) was first suggested by Vizzini and Alvarado (in ALVARADO P., MOREAU P.-A., SESLI E., YOUCEF KHODJA L., CONTU M., VIZZINI A., Cryptog. Mycol. 39(2): 164, 2018). He & Yang (HE Z.M. & YANG Z.L..., MycoKeys 79: 139, 2021) established the new genus *Spodocybe* Z.M. He & Zhu L. Yang (*Cuphophylloideae, Hygrophoraceae*) for *S. rugosiceps* Z.M. He & Zhu L. Yang (as type species) and *S. bispora* Z.M. He & Zhu L. Yang without comparing them with all the European and North American taxa of the *C. trulliformis* complex. Preliminary analyses show that species of the *C. trulliformis* complex are phylogenetically related to *Spodocybe*.

#### Authors' addresses

ALFREDO VIZZINI Via S. Pietro d'Ollesia 13b, 10053 Bussoleno (TO-Italy). E-mail: alfredovizzini@libero.it

PABLO ALVARADO Alvalab, Calle Dr. Fernando Bongera, Severo Ochoa S1.04, 33006 Oviedo (Spain). E-mail: pablo.alvarado@gmail.com

Bálint Dima Department of Plant Anatomy, Institute of Biology, Eötvös Loránd University, Pázmány Péter sétány 1/С, 1117 Budapest (Hungary). E-mail: cortinarius1@gmail.com