

Some stereoid fungi from Cuba

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Kotlaba F. and Pouzar Z. (2008): Some stereoid fungi from Cuba. – Czech Mycol. 60(2): 213–220.

Eight species of stereoid fungi were identified in collections from Cuba. Uncommon or rare species include *Dendrophora albobadia*, *Laxitextum bicolor*, *Lopharia cinerascens*, *Porostereum lilacinum*, *Stereum fasciatum* and *S. lobatum*. The species *Hjortstamia crassa* and *H. papyrina* are rather common.

Key words: *Stereum* s. l., hosts, distribution, taxonomy, subtropics.

Kotlaba F. a Pouzar Z. (2008): Některé stereoidní houby z Kuby. – Czech Mycol. 60(2): 213–220.

Z kubánských sběrů pevníkovitých hub bylo určeno osm druhů. K nehojným nebo spíše vzácným patří na Kubě *Dendrophora albobadia*, *Laxitextum bicolor*, *Lopharia cinerascens*, *Porostereum lilacinum*, *Stereum fasciatum* a *S. lobatum*, zatímco *Hjortstamia crassa* a *H. papyrina* jsou tam dosti hojné.

INTRODUCTION

In the herbarium of the Mycological Department of the National Museum in Prague (PRM) besides many other fungal specimens several stereoid fungi are kept collected by the first author during his stay in Cuba 41–42 years ago (November 19, 1966 – April 19, 1967). The collected stereoid fungi belong to the genera *Dendrophora*, *Hjortstamia*, *Laxitextum*, *Lopharia*, *Porostereum* and *Stereum*.

Cuban stereoid fungi were studied especially by Bondarceva and Davydkina (1976). Their paper comprises 9 species, 4 of them identical to those we list below, whereas *Stereum australe*, *S. complicatum*, *S. ferreum*, *S. ochraceo-flavum*, and *Boreostereum vibrans* were not collected by F. Kotlaba. Altogether, the list of Cuban stereoid fungi includes 13 species. Of course, the list is not complete as neither M. A. Bondarceva nor F. Kotlaba were able to find all species growing there, since their main interest was focussed on polyporaceous, not stereoid fungi.

We would like to note that from the phytogeographical point of view Cuba belongs to the subtropics (not to the tropics as we can often read in some mycological papers).

The aim of this paper is to publish finds of stereoid fungi from the interesting island of Cuba. It represents a continuation of a series of our papers devoted to Cuban fungi, especially polypores (Kotlaba 1983, Kotlaba and Pouzar 2003, Kotlaba et al. 1984, Pouzar 2003, Vampola et al. 1994).

MATERIAL AND METHODS

The fungi were collected accidentally at various locations on the island of Cuba (most of them in the western part) on dead trunks or branches of various trees and shrubs. The field search was carried out in the period November 19, 1966 – April 19, 1967. The first author always tried to identify also their hosts (substrata). Cuban botanist Julián Acuña and Czech phytocenologist Věroslav Samek (both deceased), were most helpful in identifying the substrates (not all hosts were identified to species). All collections are deposited in the herbarium PRM (National Museum Prague, Mycological Department).

The collected stereoid fungi have been identified gradually during many years; for this reason we quote in some cases also the date of identification. Identification of some species was carried out by K. Hjortstam (Sweden) and E. Parmasto (Estonia).

The localities of the collected species are arranged from west to east and the names of the Cuban districts, called provinces (abbreviated to Prov.), are listed in the sense as they were used when the fungi were collected (the provinces are currently smaller, more numerous and have partly other names).

The names of the authors of this paper are abbreviated F.K. and Z.P.; the abbreviation L. et F.K. represents Libuše Kotlabová and her husband F. Kotlaba.

RESULTS AND DISCUSSION

List of Cuban stereoid fungi deposited in the herbarium PRM

***Dendrophora albobadia* (Schwein.: Fr.) Chamuris**

Syn. : *Stereum albobadium* (Schwein.: Fr.) Fr., *Peniophora albobadia* (Schwein.: Fr.) Boidin

Central Cuba, Prov. Las Villas, below Pico Potrerillo in the Sierra del Escambray Mountains close to the small town of Trinidad, on dead twigs of *Coffea arabica*, 5.I.1967 leg. F.K., det. Z.P. (PRM 858238).

Dendrophora albobadia is characteristic by its thick-walled large encrusted cystidia (over 100 µm long) as well as by numerous, mostly brown coloured dendrohyphidia. As regards distribution, this nice stereoid fungus grows only in the New World, where it is known from North, Central and South America (Boidin and Lanquetin 1991, Chamuris 1988).

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

Syn.: *Stereum crassum* Lév., *Lopharia crassa* (Lév.) Boidin, *Porostereum crassum* (Lév.) Hjortstam et Ryvarde, *Stereum umbrinum* Berk. et M. A. Curt.

SW Cuba, island of Isla de Pinos (now Isla de la Juventud), sabana under Loma La Cañada near Sta. Fé, on dead twigs of *Pinus tropicalis* (or *P. caribaea*), 20.II.1967 leg. et det. F.K. (PRM 874188); same locality and host, leg. F.K., det. K. Hjortstam 17.7.1991 (PRM 874187). – Ibid., sabana near El Colony close to Siguanea (Sta. Fé), on bank of a stream, on dead trunk of a frondose tree, 19.II.1967 leg. F. et L.K., det. F.K. et Z.P. (PRM 871901). – W Cuba, Prov. Pinar del Rio, between La Fé and Cayuco near the small town of Pinar del Rio, on dead branch of *Quercusagraeana*, 30.XI.1966 leg. F.K. et J. Ramón Cuevas, det. E. Parmasto 2005 (PRM 903272). – W Cuba, Prov. Pinar del Rio, Hato de Malas Aguas near Santa Lucia close to the small town of Pinar del Rio, on dead branches of *Quercusagraeana*, 1.XII.1966 leg. F.K., det. E. Parmasto 2005 (PRM 903271). – W Cuba, Prov. Pinar del Rio, near La Mulata, Sierra de Cajalbana Mountains, on dead branch of *Brya ebenus* (PRM 903266) and on fallen branch of *Myrica cerifera* (PRM 903264), both 25.XI.1966 leg. F.K., det. E. Parmasto 2005. – W Cuba, Prov. La Habana, near El Salado close to Habana, on dead small trunk of *Eugenia buxifolia*, 5.II.1967 leg. F.K., det. E. Parmasto 2005 (PRM 903268). – W Cuba, Prov. La Habana, city of Habana-Marianao, site called Laguito, in garden of the Biological Institute of the Cuban Academy of Sciences, on wood of *Mangifera indica*, 20.I.1967 leg. F.K., det. E. Parmasto 2005 (PRM 903269). – Central Cuba, Prov. Las Villas, Mataguá in Sierra del Escambray Mountains close to the small town of Trinidad, on dead trunk of a frondose tree, 6.I.1967 leg. F.K., det. F.K. et Z.P. 27.6.1991 (PRM 871902).

This species differs from the similar *Hjortstamia papyrina* (see below) chiefly by shorter cystidia (at most $\pm 70 \mu\text{m}$ long) as well as by their different in-crustation which is more robust and coarse in *H. crassa*.

Hjortstamia crassa grows on wood of various frondose trees and shrubs and seems to be rather common in Cuba. Bondarceva and Davydkina (1976) reported this species only once from Prov. Las Villas.

H. crassa is distributed in North, Central and South America (in many states of the USA, Mexico, Cuba, Guatemala, Costa Rica, Venezuela, Ecuador), Asia (India, Vietnam, China, Japan, Timor), and Africa [Ivory Coast, Gabon, Central African Republic, Democratic Republic of Congo (Belgian Congo), Republic of South Africa, Madagascar], and in Australia (Boidin and Gilles 2002, Burdsall 1985, Hjortstam and Ryvarde 2008, Lentz 1955, Welden 1975, Wu 2008).

***Hjortstamia papyrina* (Mont.) Boidin et Gilles**

Syn.: *Stereum papyrinum* Mont., *Lopharia papyrina* (Mont.) Boidin, *Porostereum papyrinum* (Mont.) Hjortstam et Ryvarde

SW Cuba, island of Isla de Pinos (now Isla de la Juventud), Mt. Loma La Cañada near Sta. Fé, on dead branch of a frondose tree, 20.II.1967 leg. et det. F.K. (PRM 871903). – Ibid., sabana near El Colony close to Siguanea (Sta. Fé), on dead twigs of *Pinus tropicalis*, 19.II.1967 leg. L. et F.K., det. K. Hjortstam 17.7.1991 (PRM 874207); same locality and date, on trunk of a frondose tree 19.II.1967 leg. F. et L.K., det. F.K. (PRM 871904). – W Cuba, Prov. Pinar del Rio, between La Fé and Cayuco near the small town of Pinar del Rio, on dead fallen branch of *Quercusagraeana*, 30.XI.1966 leg. et det. F.K. (PRM 871898). – W Cuba, Prov. La Habana, site called Punto Escondido near Jibacoa close to the town of Matanzas, on small lying trunk of a shrub (*Guetarda* sp.), 20.XI.1966 leg. et det. F.K. (PRM 871899). – Central Cuba, Prov. Las Villas, sabana near Manacas close to Sta. Clara, on dead twig of *Cameraria retusa* (?), 9.II.1967 leg. et det. F.K. (PRM 871896, 871900). – E Cuba, Prov. Camaguey, Cabaniguan near Guáimaro,

on dead fallen trunk of *Bucida buceras*, 11.IV.1967 leg. F.K., det. Z.P. (PRM 871161). – E Cuba, Prov. Oriente, in the valley of the Gaumá stream above El Sonador near Chirivico close to Santiago de Cuba, Sierra Maestra Mountains, on fallen branch of *Guazuma tomentosa*, 23.III.1967 leg. et det. F.K. (PRM 871897). – E Cuba, Prov. Oriente-Granma, Copeinicu Botanic Garden, Los Mameyes near Guisa close to Bayamo, on dead trunk, 17.V.1985 leg. V. Holubová-Jechová, det. F.K. et Z.P. 27.6.1991 (PRM 871907).

In the herbarium of the National Museum in Prague (PRM) two other specimens of *Hjortstamia papyrina* (as *Stereum papyrinum*) from Cuba are deposited: 1. Insula Cuba (without more exact data), ex Herbario Montagne, don. Bresadola (PRM 187693). It represents a fragment of Montagne's holotype. 2. Ceballos, Cuba, on prostrate hardwood limb, 13.XII.1914 leg. C. J. Humphrey 2726, det. E. A. Burt (PRM 187694, see also Burt 1920).

Hjortstamia papyrina is a common species in the tropics and subtropics of the world including Cuba – see also Bondarceva and Davydkina (1976) who mentioned it from three localities (Isla de Pinos, Prov. Habana and Las Villas), one collection from a palm (*Yuraguana* sp.). This species grows mostly on frondose trees or shrubs, rarely also on conifers (*Pinus tropicalis*).

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

Syn.: *Stereum bicolor* (Pers.: Fr.) Fr., *Stereum fuscum* (Schrad.) P. Karst.

W Cuba, Prov. Pinar del Rio, Hato de Malas Aguas near Sta. Lucia close to the small town of Pinar del Rio, on lying trunk of *Quercus sagraeana*, 1.XII.1966 leg. et det. F.K. (PRM 871930). – W Cuba, Prov. Pinar del Rio, Soroa near San Cristóbal close to Habana, on dead trunk of *Bursera simaruba* (?), 13.I.1967 leg. et det. F.K. (PRM 871924).

Laxitextum bicolor is a rather uncommon to rare species in Cuba growing there solely on dead wood of frondose trees and shrubs; Bondarceva and Davydkina (1976) report it from only one locality in Prov. Oriente.

This species has a very wide distribution; it is known from all continents except Antarctica (Chamuris 1988).

***Lopharia cinerascens* (Schwein.) G. H. Cunn.**

Syn.: *Stereum cinerascens* (Schwein.) Massee

W Cuba, Prov. Pinar del Rio, Soroa near San Cristóbal, on thin trunk of a frondose tree, 3.II.1967 leg. F.K., det. F.K. et Z.P. (PRM 910580). – W Cuba, Prov. La Habana, city of Habana-Marianao, site called Laguito, in garden of the Biological Institute of the Cuban Academy of Sciences, on dead branch of *Mangifera indica*, 20.I.1967 leg. F.K., det. F.K. et Z.P. 4.9.2008 (PRM 858237).

In Cuba evidently a rare to very rare species; Bondarceva and Davydkina (1976) report it only from one locality (Prov. Oriente).

Lopharia cinerascens is known from North America, South America, Asia (Thailand), Africa, and in Europe only from Portugal (Boidin and Gilles 2002, Hjortstam and Ryvarden 1982, Hjortstam and Ryvarden 1990).



Fig. 1. Part of Mt. Loma la Cañada, Isla de Pinos, SW Cuba, 20.2.1967. Photo: F. Kotlaba.

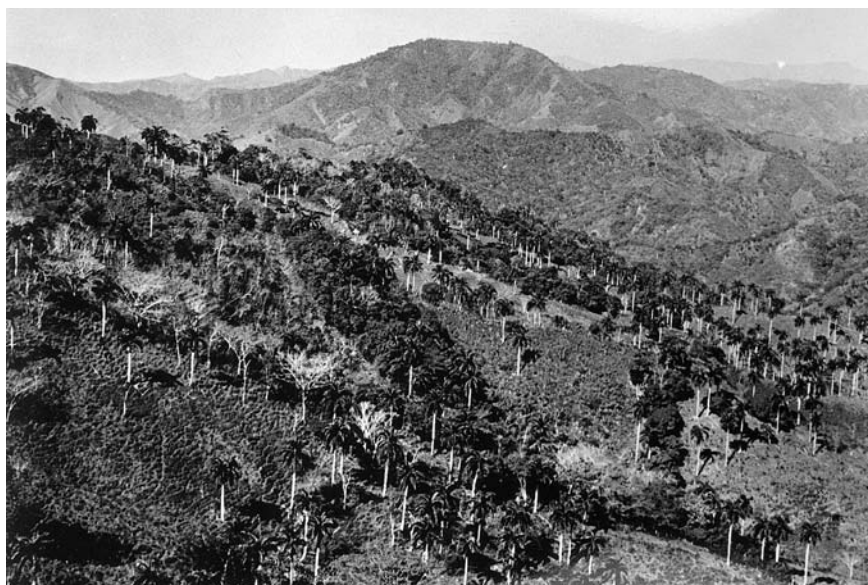


Fig. 2. Landscape in the vicinity of Los Tibes near Maisí (easternmost Cuba), Prov. Oriente, 18.3.1967. Photo: F. Kotlaba.

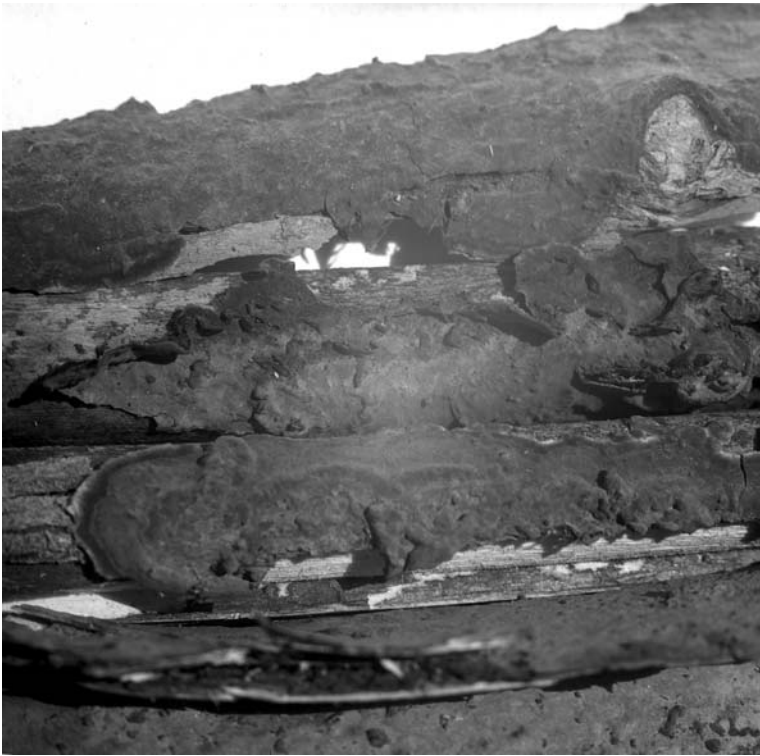


Fig. 3. *Dendrophora albobadia* on dead twigs of *Coffea arabica*, below Pico Potrerillo close to the small town of Trinidad, Central Cuba, 5.1.1967. Photo: F. Kotlaba.



Fig. 4. *Laxitextum bicolor* on dead trunk of *Bursera simaruba* (?), Soroa near San Cristóbal, Cuba, 13.1.1967. Photo: F. Kotlaba.

Porostereum lilacinum (Berk. et Broome) Hjortstam

Syn. : *Peniophora lilacina* (Berk. et Broome) Cooke

Central Cuba, Prov. Las Villas, sabana near Manacas, on dead branch of *Bucida buceras*, 9.II.1967 leg. F.K., det. E. Parmasto 2005 (PRM 903278).

Only one (but a rich) collection that is unfortunately sterile due to the very dry weather when gathered. It seems that this is the first collection of this species from Cuba where it is evidently very rare (not mentioned by Bondarceva and Davydkina 1976).

Porostereum lilacinum is known from the type locality in Sri Lanka (Asia), from the Central African Republic and Gabon in Africa, and from Brazil (São Paulo) in South America (Hjortstam and Ryvardeen 1990).

Stereum lobatum (Kunze: Fr.) Fr.

Syn. : *Stereum ostrea* auct., *Stereum lobatum* f. *intertropicale* Boidin

W Cuba, Prov. Pinar del Rio, Soroa near San Cristóbal close to Habana, on dead trunk of a frondose tree, 13.I.1967 leg. F.K., det. Z.P. (PRM 871958); same locality and date, on rotten stump of *Jambosa vulgaris*, leg. F.K., det. F.K. et Z.P. (PRM 871136).

With only two collections from the same locality; *Stereum lobatum* is probably rare species in Cuba.

The species *Stereum australe* is reported by Bondarceva and Davydkina (1976) from two localities in Cuba (Prov. Las Villas and Oriente); these collections might be identical with *S. lobatum*.

Boidin (1960) described from Congo *Stereum lobatum* f. *intertropicale* which he later (Boidin and Gilles 1989) treated as a synonym of *S. lobatum*.

Stereum fasciatum (Schwein.) Fr.

Syn. : *Stereum ostrea* auct.

W Cuba, Prov. Pinar del Rio, Hato de Malas Aguas near Sta. Lucia near the small town of Pinar del Rio, on dead trunk of *Quercusagraeana*, 1.XII.1966 leg. et det. F.K. (PRM 871959).

It seems to be a very rare species in Cuba, since it is known there from only one collection.

The taxon occurring in North America named *Stereum ostrea* (Blume et Nees: Fr.) Fr. (Chamuris 1988, Jülich and Stalpers 1980, Lentz 1955) includes two different species (Demoulin 1985): *S. fasciatum* and *S. lobatum*. We follow Demoulin's concept when identifying Cuban material. Nevertheless this group of stereoid species requires a further taxonomic as well as nomenclatural analysis.

ACKNOWLEDGEMENTS

We are thankful to Dr. Kurt Hjortstam (Alingsås, Sweden) and Prof. Dr. Erast Parmasto (Tartu, Estonia) for the identification of some stereoid species. We also thank Dr. Karen Nakasone (Madison, USA) for valuable corrections of our manuscript.

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