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5th Floor, Hunt Library  
Carnegie Mellon University  
4909 Frew Street  
Pittsburgh, PA 15213-3890  
Telephone: 412-268-2434  
Email: [huntinst@andrew.cmu.edu](mailto:huntinst@andrew.cmu.edu)  
Web site: [www.huntbotanical.org](http://www.huntbotanical.org)

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The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

manuscript - 12-III-1990

12-III-1990

Mon cher Régis,

I am returning the manuscript to you at the earliest possible moment, having worked on it over the weekend. I imagine that you may not agree with all my comments, but I hope there is nothing so fundamentally different in our views as to present an impediment to publication. Tremellaceous fungi have often been neglected in mycoflora surveys, and this paper, though brief, puts them into proper perspective. So I am flattered that you should consider this to be a joint publication, which I attribute not so much to my small contribution as to your generosity.

The problem with your Director is lamentable, and the additional burden it places upon you is grossly unfair. Luckily, I believe that you are flexible enough to be able to cope with it, but it can not be easy! Are you still considering the possibility of finding a more favorable environment for your work? Have you heard from the New York Botanical Garden? Please let me know of the latest developments.

w. M. all best wishes

Barnard

FACULTE DE PHARMACIE

3, rue du Professeur Laguesse - 59045 LILLE CEDEX - Tél. 20.95.30.07

DEPARTEMENT DE BOTANIQUE  
RESEAU DE SYNECOLOGIE

Biologie végétale : Brigitte CARON

Botanique,  
Ethnobotanique : Annick DELELIS-DUSOLLIER  
Bruno DE FOUCAULT

Lille, le

28.02.1990

Cryptogamie : Chantal VAN HALUWYN  
Régis COURTECUISSÉ

My dear Bernard,

Please, find enclosed the first draft of the paper I wish to produce with you as a co-author.

I should be honoured and very glad to receive your comments, corrections, suggestions and any thing you may think useful to make it better. Probably they will be quite numerous...

Please remember that is it just a rough copy, and (if you accept to co-sign, what I hope) you do have to feel free to change everything.

Some elements need your special contribution: for example on p.1, why did you omit T.aurantia in Flora Neotropica? Do you think Montagne misinterpreted this species?

The exsiccatum I sent you yesterday will be to add and the numbers of species and illustrations will be changed.

Could you write the key to described specimens, after the presented characters?

Concerning D.fissa, I did not well understood your aim on my field notes. Do you think we can keep it as a good species. On the sheet inside the envelop with the specimen, you wrote = D.spathularia var. polycephala Lowy. I do not have this taxon in my card index. Is it published and do you think we would preferably adopt that rank for my collection? Please let me know your true opinion about that. Therefore, the discussion of this species will be changed. Do what you feel better about this paragraph.

In order that you may judge again from my sketches, I send you one more all those sheets. Please send them back with comments.

After receiving you corrections, suggestions and other, I'll prepare a new copy of the text and drawings from the original sketches.

Which periodical could in your opinion publish this paper? I should like Mycologia if possible. Or any other journal after your suggestions. I think I'll make insert this paper in the serial "Studies in the Flora of the Guyanas", numbered after advice by Mrs.A.R.A. Gorts van Rijn (Utrecht, Editor of the Flora of the Guyanas). I'll send her a copy of the final version of our paper to



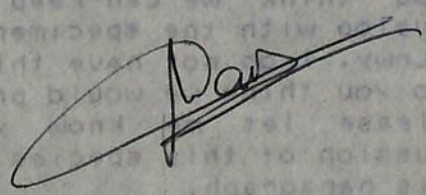
get a serial number to be joint as undertitle.

It is important now to publish this as quickly as possible (but of course, we do have to take time to get the paper as perfect as possible) because prof. Lacoste (director of the Cryptogamy Lab. at the Museum of Paris; I told you about all the disagreements I got with him 2 years ago) requested from me to deposit the material quickly in the herbarium. I suspect he is trying to avoid the examination and publication of material by myself for an obscure reason. In fact, all what this man does is obscure and negative. That is really incredible, I know, but that's true. So I sent him only a few exsiccata to temporize, the Hygrophoraceae I already published, some very common fungi (Schizophyllum commune and other things like that) and some determined collections, among them the heterobasidiomycetous material. It is important to publish our results before he could do anything with those fungi. I suspect him of the worse, from experience. Now we have a draft for the paper, and nobody can publish these results before us. But we may not lose time.

You will probably think that I feel prosecuted and that I am rather paranoiac. Not at all, this man is really dreadful. Of course my wish to co-sign with you has nothing to do with that problem. That is only a matter of friendship between us and of scientific collaboration. And it will be an honour for me.

Well my dear Bernard, I have a lot of things to prepare before to-night (a course in botany for to-morrow) and several other things. I am waiting for your very best regards.  
Your

Régis COURTECUISSÉ



sr

## FACULTE DE PHARMACIE

3, rue du Professeur Laguesse - 59045 LILLE CEDEX - Tél. 20.95.30.07

DEPARTEMENT DE BOTANIQUE  
RESEAU DE SYNECOLOGIE1<sup>st</sup> Draft

Biologie végétale : Brigitte CARON

Botanique,  
Ethnobotanique : Annick DELELIS-DUSOLLIER  
Bruno DE FOUCAULT

Lille, le

28.02.1990

Cryptogamie : Chantal VAN HALUWYN  
Régis COURTECUISSÉ

For my comments, please refer to my numbered notes.

My dear Bernard,

Please, find enclosed the first draft of the paper I wish to produce with you as a co-author.

I should be honoured and very glad to receive your comments, corrections, suggestions and any thing you may think useful to make it better. Probably they will be quite numerous...

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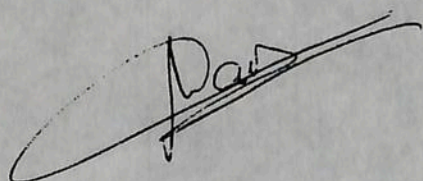
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Well my dear Bernard, I have a lot of things to prepare before to-night, (a course in botany for to-morrow) and several other things. I am waiting for your answer.  
With my very best regards.  
Your

Régis COURTECUISSÉ



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DEPARTEMENT DE BOTANIQUE  
RESEAU DE SYNECOLOGIE

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Bruno DE FOUCAULT

Cryptogamie : Chantal VAN HALUWYN  
Régis COURTECUISSÉ

Lille, le 27.02.1990

My dear Bernard,

I am now preparing several papers dealing with the fungi collected in French Guyana in 1988. A first one concerning the Pluteaceae is almost finished. I just have to examine some types of species described by Singer to check the identity of my species. I also have one new Chamaeota and two new Volvariella species. Another one concerns the Russulaceae and is written with Bart Buyck, belgian specialist of tropical russulas. We have a new species and a new variety in Russula, as well as a new species and a new subsection in Lactarius. My exciting work on the exsiccata goes further and a lot of things still remain to be done.

I am also writing a paper concerning the Heterobasidiomycetes I sent you some times ago... and I actually should want to co-sign it with you. I'll send you a proposal as soon as possible in order to get your advice and corrections. I should be really glad if you would accept to produce a joint paper.

I found in my remaining exsiccata another heterobasidiomycetous fungus which I send you today. It is rather puzzling to me and I can't find a satisfactory solution about its generic identity. I think it is a Dacryopinax but I am not sure that the hyphae are all of the same type. Maybe in the stipe the external ones are more thick-walled and the internal are more gelatinized and thin-walled. If that is true (but I think it is actually monomitic), it would fit into the genus Ditiola. But in any case, I can't found a specific name for it. If in Dacryopinax, the single yellow species is D.yungensis but the descriptions have nothing to do with my fungus. In Ditiola, nothing can fit as well. I send you my sketches along with the sample. Please let me know your opinion about it. I hope it will be interesting to you, and that will be a further stimulation for you to accept a joint production with me... <

I am more and more involved in the "Flora of the Guyanas" project and I have more and more opportunities to examine tropical collections, from South Americas as well as from Africa and Asia. That is really exciting and interesting ! Whenever I receive some heterobasidiomycetous fungi, I'll probably need your help as well...

I hope that you are fine on all points of view. Waiting for your answer, I and Maryvonne send you our very best regards and



LSU

LOUISIANA  
BATO

157 - Dacryopinax spathularia {fide Kobayasi !}  
040 - " " "

527 - A. ~~patens~~ Fr. Guiana  
353 - A. " "  
457 - A. delicata Courtecuisse  
562 - A. solitaria  
353 - A. delicata  
203 - Tremella lutescens Fr.  
576 - T. fibrata  
273 - Pseudohydnum gelatinosum  
503 - Calocera coralloides  
151 - Tremella fibulifera  
093 - Dacryopinax inderohaseae  
419 - Ditiola radicata

Dear Régis !

Your Guyane  
being returned to  
your attention to  
Three of the numbe  
notes and sketches  
(not listed) was increas  
ions as indicated in you

- ✓ n° RC/GF88.040 (that means Dacryopinax spathularia (Schw.) Martin 1948 ear.n°)  
✓ n° RC/GF88.093 Dacryopinax sp.  
✓ n° RC/GF88.151 Tremella fibulifera Moeller 1895  
✓ n° RC/GF88.157 x  
✓ n° RC/GF88.273 Pseudohydnum gelatinosum (Scop.:Fr.) Karsten 1868 (but  
a bisporous form)  
not received X n° RC/GF88.284 Tremella sp.  
X n° RC/GF88.327 Tremella sp. (immature)  
✓ n° RC/GF88.353 Auricularia polytricha (Mont.) Sacc. 1885  
✓ n° RC/GF88.354 Auricularia delicata (Fr.) Henn. 1893  
✓ n° RC/GF88.419 Dacryopinax spathularia (cf !)

✓ 203 - Tremella lutescens . received but not listed.

x = collection not received.

- not received X n° RC/GF88.452 Tremella fibulifera  
✓ n° RC/GF88.457 Auricularia delicata  
✓ n° RC/GF88.503 Calocera cf. coralloides Kobayasi 1939 (?)  
✓ n° RC/GF88.527 Auricularia polytricha  
✓ n° RC/GF88.562 Auricularia polytricha  
✓ n° RC/GF88.576 Tremella sp.

I have examined what you have sent me, and thought it best to include my comments, where pertinent, directly on the numbered pages on which you have made your sketches. Also attached to them are a few xeroxes of parts of papers which may be of some use to you. Your sketches and notes are being returned to you in a large envelope separate from your collections.

I am in complete accord with your feelings of frustration with the Paris Museum. It is hard to understand their attitude. The enthusiasm once shown



10-II-1989

Dear Régis !

Your Guyane Française collections (all those which I received), are being returned to you in the same small package you sent to me. I must call your attention to what appears to be a small lapsus memoriae on your part. Three of the numbers on your list (No. 284, 327, 452) were missing. Your notes and sketches for No. 452 are here, but no collection. Also, No. 203 (not listed) was included. So, in all, I received the following 14 collections as indicated in your list:

- ✓ n° RC/GF88.040 (that means Régis Courtecuisse/Guyane Française-year.n°)  
Dacryopinax spathularia (Schw.)Martin 1948
- ✓ n° RC/GF88.093 Dacryopinax sp.
- ✓ n° RC/GF88.151 Tremella fibulifera Moeller 1895
- ✓ n° RC/GF88.157 x
- ✓ n° RC/GF88.273 Pseudohydnum gelatinosum (Scop.:Fr.)Karsten 1868 (but a bisporous form)
- <sup>not received</sup> X n° RC/GF88.284 Tremella sp.
- <sup>not received</sup> X n° RC/GF88.327 Tremella sp. (immature)
- ✓ n° RC/GF88.353 Auricularia polytricha (Mont.)Sacc.1885
- ✓ n° RC/GF88.354 Auricularia delicata (Fr.)Henn.1893
- ✓ n° RC/GF88.419 Dacryopinax spathularia (cf !)

✓ 203 - Tremella luteovirens . received but not listed.

x = collection not received.

- <sup>not received</sup> X n° RC/GF88.452 Tremella fibulifera
- ✓ n° RC/GF88.457 Auricularia delicata
- ✓ n° RC/GF88.503 Calocera cf. coralloides Kobayasi 1939 (?)
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<sup>here</sup>  
 I am in complete accord with your feelings of frustration with the Paris Museum. It is hard to understand their attitude. The enthusiasm once shown

there, when Heim was in charge, apparently has suffered. I regret that I can be of so little use to you! About two weeks ago I called the NY Bot. Garden in order to speak with Gary Samuels, but he was out of the country. Although I was also invited to be part of the Fr. Guiana Project, and more or less expected to go there some time this year, the funding (I am told) did not go through as expected, so my direct participation will be postponed, although I believe Halling will go.

Over a month ago I wrote again to Wasser, asking him to inform me whether or not he will be coming to LSU as planned. He has been very ambivalent about it in his letters to me. I have reserved a room for him at the Faculty Club (which houses special guests of the university), but have not heard from him yet. I wonder whether he is having some problem concerning permission to leave the country.

You are very generous to consider me as a co-author ("co-sign"), but I really believe that I have not contributed enough to merit that. After all, you are doing all the important work, from collecting to writing! As to reprints, I am quite content to send you whatever you can use, if I have it, or can copy it. The Pluteus paper has been collecting dust here since Singer sent it to me. Incidentally, I was with Singer last October in Mexico where we both were invited to give talks at the III Congreso Nacional de Micología. He appears to be in very good health (he'll be 83 in June) and as enthusiastic as always about his beloved mushrooms.

With all best regards,

*Bernard*  
B. Lowy

PS - My plans for the summer are uncertain, more  
over Régis, but a visit to my colleagues in  
Mexico is a possibility. They have been consulting  
me for some information on the Tremellales,  
perhaps to include in a mycology textbook  
they are writing - and possibly already published.

*B*

D<sup>r</sup> Régis COURTECUISSÉ

2/35, rue L. de Bettignies

F. - 59139 WATTIGNIES

Tél. : 20 95 45 70

Wattignies, le 24.01.1989

I send you all the original descriptions, drawings and notes on that material. Please, be kind enough to send it back to me after examination as well as for the full, and read of which I send you the whole. I need to get it back in order to deposit it in the after publication.

I feel ashamed, once more, for the long delay since my last letter. I have to thank you very much for the letters you sent me recently, and especially for the separata of the paper by Singer on Pluteus. That is really a nice gift you made for me. Now I began the writing of my paper on the Pluteaceae from French Guyana. It will follow the first one, dealing with Hygrophoraceae, ready to go in press and in which I describe 4 new species.

I have to say, that I'll hesitate in the future to ask you for more papers from american literature lacking to me, because I don't want you to devaluate your library in sending me originals. Xerox copies would be enough of course.

I send you (late again), the heterobasidiomycetous material from French Guyana I collected last year. Unfortunately, I realized when I was back to France, that some useful characters were not observed in the field, especially for the genus Tremella, and that my descriptions are too short, lacking many details. I hope, anyway that the material will be suitable for scientific purpose and determination.

I tried to name my specimens myself, and I have to say that I think I did success for some of them. But others set serious problems that I feel unable to solve, whether for the lack of enough documentation, or for the reason that I am not a specialist of this group.

I send you by separate mail the 16 exsiccata. Maybe some other species belonging here will be found in the collections placed in the "corticaceae" s.l. on a macroscopic point of view. I'll advise you if yes. Among those specimens, only 2 seem to me to be really interesting, even if more remain questionable for me. The list of herbarium specimens is as follow:

- ✓ n° RC/GF88.040 (that means Régis Courtecuisse/Guyane Française-year.n°)  
Dacryopinax spathularia (Schw.)Martin 1948
- ✓ n° RC/GF88.093 Dacryopinax sp.
- ✓ n° RC/GF88.151 Tremella fibulifera Moeller 1895
- ✓ n° RC/GF88.157 x
- ✓ n° RC/GF88.273 Pseudohydnum gelatinosum (Scop.:Fr.)Karsten 1868 (but a bisporous form)
- not received x n° RC/GF88.284 Tremella sp.
- x n° RC/GF88.327 Tremella sp. (immature)
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- ✓ n° RC/GF88.419 Dacryopinax spathularia (cf !)

✓ 203 - Tremella luteocens, received but not listed.

not received

- n°RC/GF88.452 Tremella fibulifera
- n°RC/GF88.457 Auricularia delicata
- n°RC/GF88.503 Calocera cf. coralloides Kobayasi 1939 (?)
- n°RC/GF88.527 Auricularia polytricha
- n°RC/GF88.562 Auricularia polytricha
- n°RC/GF88.576 Tremella sp.

The two more interesting for me are n°093 and 576

I send you all the original descriptions, drawings and notes I made on that material. Please, be kind enough to send it back to me after examination, as well as for the fungal material, of which I send you the whole. I need to get it back, in order to deposit it in PC after publication.

Some notes on the descriptions, notes and discussions.

1) n°040 ( Dacryopinax spathularia )  
no problem I guess. The locality is "Camp des Nouragues"; the ecology: "lying trunk of a Sterculiaceae tree"; the date: "15.02.1988". I have a (rather bad) slide of this collection.

2) n°093 ( Dacryopinax sp. )  
Environs du camp des Nouragues; Bois pourri (tronc couché); 17.02.1988.  
here is an interesting fungus in my opinion. I copy the description here, that will more easy to understand for you, instead of my ugly hand-writing.

"Masse gélatineuse jusque 20 mm de diamètre, irrégulièrement orbiculaire ou spatulée. Couleur orange foncé sale, puis translucide orangé laiteux, brillant. Basidiocarpe stipité à stipe court et massif, plus ou moins tronconique, non différencié. Surface inférieure un peu moins brillante, veloutée."

I think that the microscopical notes on my original will be more useful for you because you will examine the material yourself.

Of course, I have no experience enough in heterobasidiomycetous fungi, especially from the tropics, and I can't give any conclusion for that. Anyway, I feel that the more closely related species could be D. elegans (BC) Martin 1948, but the spores are larger and with thickened walls, or D. indicochae Lowy 1961 ('1959') but the margin is not lobed and the sporal septa are thin. I have not seen the original diagnosis of the latter, published in Mycologia 51:848. Generally speaking, I ask also the papers where were described D. fellowi (Lloyd) Reid 1962 Persoonia 2:130, and D. imazekiana (Kobayasi) Lowy 1959 Mycologia 51:848, so I couldn't compare the descriptions with this material.

As far as I can give an advice on it, it seems to me an undescribed species, but, as I said above, I have not all the adequate literature.

What is your opinion ?

3) n°151 ( Tremella fibulifera )  
Environs du camp des Nouragues; Tronc couché; 19.02.1988.

I think that no problem exist here. I have a good slide of that collection, made in the field.

4) n°157 (x)  
Environs du camp des Nouragues; Tronc pourri; 19.02.1988

This specimen seem to be overmatured and most of the microscopical elements are collapsed. Maybe you will success in giving if a name, thanks to your experience in this group.

5) n°273 ( Pseudohydnum gelatinosum )  
Environs du Saut Pararé, sur la rivière Arataye; Bois pourri;  
25.01.1988.

I feel that the bisporous form is rather unusual. Indeed, I found no clear mention of it in the literature (at least as a pure bisporous form). Do you think it could justify the creation of a new form?

not received  
6) n°284 ( Tremella sp. )  
Meme localité; Branche tombée; 25.01.1988.

This is the specimen for which I regret the more not to have note some macroscopical characteristics (consistence of flesh, thickness and stratification of it, s.o.). Lacking these elements, I did not success to give it a name despite the coloured sketch on my description.

I refer to you for that case... but Tremella cinnabarina (Mont.) Patouillard 1900 seems to me a possible identity.

7) n°353 ( Auricularia polytricha )  
Meme localité; Ecorce de bois mort; le 27.02.1988.

No problem here. The specimen was impossible to place under the microscope correctly because of the gelatinization of the flesh: It escaped each time from the cover glass and I broke a lot of them. So I saw only the hairs but this determination seems quite correct.

8) n°354 ( Auricularia delicata )  
Meme localité; Poutre du carbet au camp de l'Arataye;  
27.02.1988

No problem again.

9) n°419 ( Dacryopinax cf spathularia )  
Meme localité; Bois mort; le 1.03.1988

I found no important difference under the microscope between this one and the n°040, but macroscopically they differed rather seriously. I think it could fit in the variability of this species.

not received  
10) n°452 ( Tremella fibulifera )  
Meme localité; Ecorce de tronc couché; le 2.03.1988

No problem?

11) n°457 ( Auricularia delicata )  
Meme localité; Tronc couché; 2.03.1988

12) n°503 ( Calocera coralloides ) cf !!!  
Meme localité; Ecorce de branche morte à terre; 5.03.1988.

I am not quite sure of this identification because the spores seem to be somewhat too little. But I have nothing else to propose...

13) n°576 ( Tremella sp. )  
Meme localité; Bois mort; 8.03.1988

For this one also, I regret the lack of notes on fresh material ! It seems to me a very interesting fungus as you can judge from my notes on the microscopical characters. I have no idea at all about it and I believe that it could be an undescribed species, unless you get a better idea, thanks again to your great experience in this group. Please let me know.

Well, that's all.

I feel somewhat unsatisfied by my work, because I couldn't give a name to everything and because some important things have been omitted in the field. I had so many agarics to describe when fresh

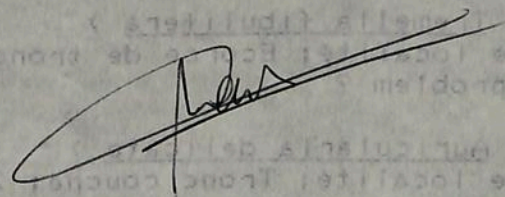
that heterobasidiomycetous material was somewhat neglected... I hope that you will manage to success in naming all those.

Whenever you feel that suitable for a publication, I should be very happy if you would accept to co-sign. I think important for me to publish all my collections made in French Guyana. At the time being, nobody in the Museum of Paris is still interested in the material I gathered there, and I even ask myself why they sent me there. I feel really frustrated to be here, when some american colleagues, Roy Halling, others, and you perhaps, have got the way to go there once more and collect fungi. I wish sincerely to take part in the Flora of the Guyanas Project but I feel alone and without possibility to be really useful, being so far from you. I took contact with R.Halling and asked him if no way exist to get some kind of a grant and to work on that topic. I hope that you understand all these feelings.

Well, dear Bernard, I hope that your plans are going well. What about your planed trip to South America, about the visit by Solomon Wasser (if you meet him, please give him my sincere regards, as I know him rather well by letter). Personally, I am still looking for a professional solution, and even if some positions now exist here in France, it is very difficult to fight against university tricks and fiddles. The criterions for the choice of a candidate are not based on his scientific value but on non scientific matter. I sent also my candidature for a grant in Spain and for another in Germany. I have still contacts with D.Malloch, in Canada, also. I hope hat one of these things will find success.

Thank you very much in advance for your answer and advices.  
Waiting for the pleasure to read you, I send you my best and sincere regards.  
Truly yours.

Régis Courtecuisse



Regions sketches and notes.

Tremellales of Fr. Brevier

---

Tremella

→ 25 mm  $\varnothing$

applique au mur

jetons cerise en l'air

orange et rouge vert de la / and

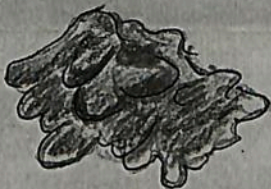
flamme de raye verte vermillon de la crete

RC/GF 88. 204

Arday. San Paro

Brande l'air

25/2/88



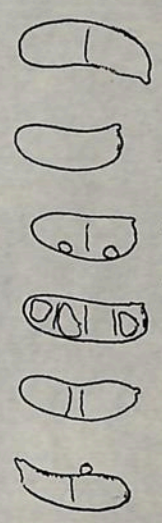
micro element not xeroxed

Downy mildew

17-2-88

(one side only -  
only. long. shown  
habit also)

spores 4 x 1 1/2

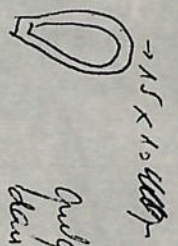
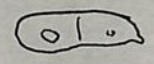


10 x 5  
9 x 5  
8 x 2 1/2

thin walled, striated or hyaline, papilae elongate

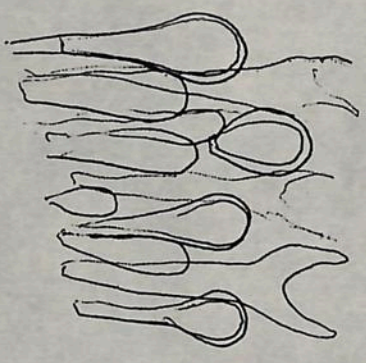
perithecia, distinct  
7-10 x 2.8-3.2 μ

ascospores arranged perithecia  
Cordoba ascus x 1.5 μ (Bas.)  
spores etc. perithecia?



2.15 x 1.0 μ

ascospores elongate, striate  
ascus 1.5 μ (Bas.)



Leaves on D. elegans, was sp. > of young plants

a D. indica was very rare later  
D. indica sporadic

D. O. original 17. 7. 88

Handwritten description of the specimen

1957  
No. 10  
No. 1962  
1957 original 57: 838

MADAME CH. COURTECUISSE-DRUART

33, rue de Piètré  
59249 AUBERS

RC/GF 88-419

Arrière Saint Pierre

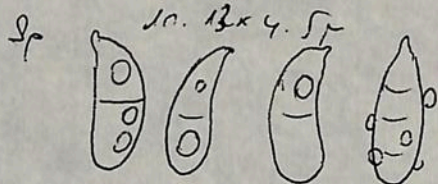
Bois mort

1/3/88

DACRYDIPNAX cf SPATHULARIA

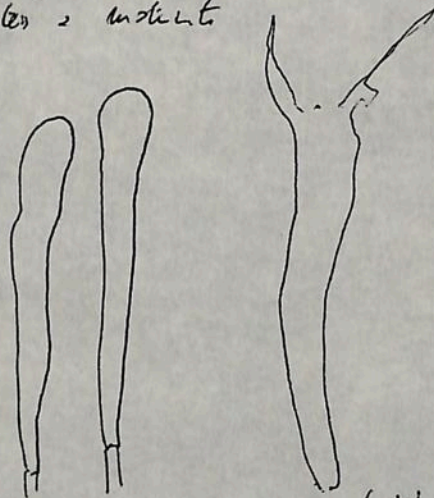
?

(mais semble ≠ de 040)



(état moyen)  
micro!

Cylédrocellitiques à étiés emboquées  
 fuyés (seulement collés)  
 1 septes = indistinct



Monomérique

Aspores x 1-3 μ dans le téti  
 sans verrucosité  
 Bords 0

Aspores collés

Aspores → 4.0 x 4 μ

Aspores = cylédrocellitiques x 1.5-2.5 (3) μ les fuyés

Aspores

2 par 1 μ espacement

RC/GF 88-353 *AURICULARIA POUTRICA*

Arvaly Saint Pasare

Bos mort (Wood)

27/2/88

ampoules = (to be seen)

to handle !!

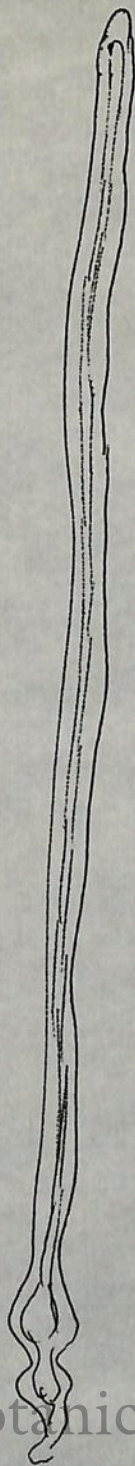
immature

length to fruit  
felpu

poils number

-) 300 x 5

(200 x 2,5)



RC/4F88 473

PSEUDONYDJUT GEATINOSUM

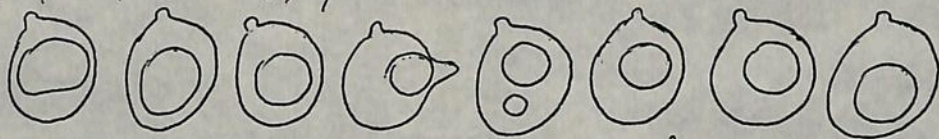
Arrière Saint Lazare

Bois pourri

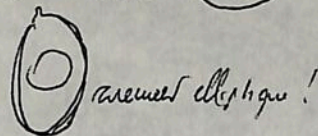
15/2/88

sp hignon

Sp 5,5-8,5 x 5,5-7,5  $\mu$ .



Contenu elliptique = asphobolus, guttules  
fermant par crue dorsale (apertion).



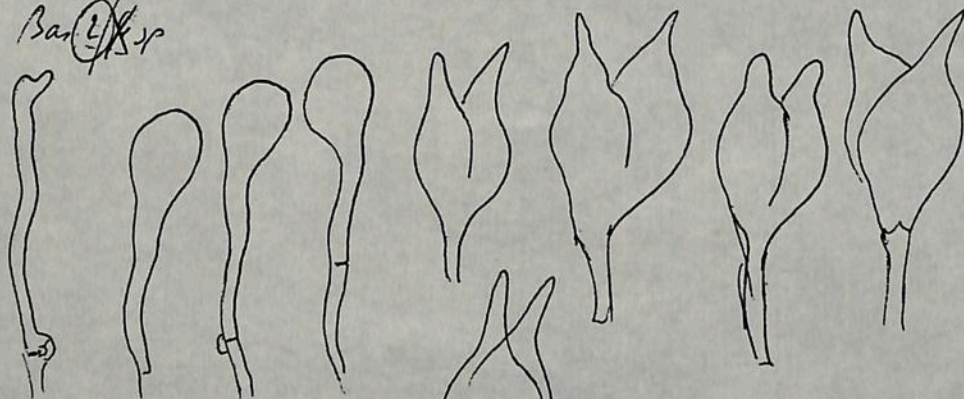
rarement elliptique!

Banals + hyphes x 1-3  $\mu$

Char gelifiée

Cyrt o

Ban ~~2~~ x 3  $\mu$



prolonge élève asphobolus

-> 10 x 8  $\mu$

surabande -> 11 x 10  $\mu$

Surface de charbon = hyphes x 2-10  $\mu$  (12)

éléments terminaux en poil, deux

ostes (peltodique trichodermique)

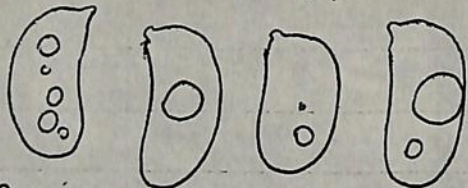
hyphes  
sub-cultivées

++ dans le substrat  
Sécher fraîche

*Auricularia deliziana*

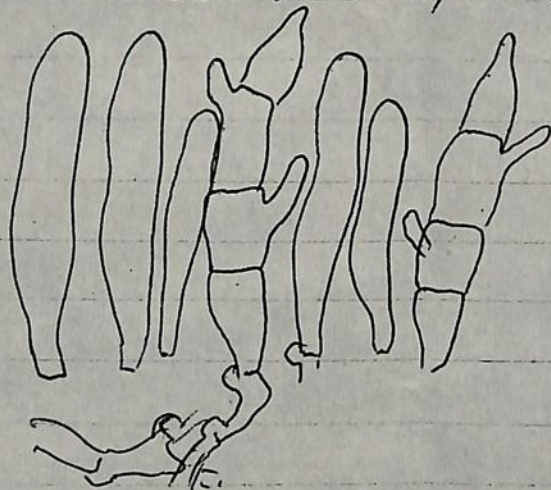
CC/4F 88.457  
Asbury - Saint Lazare  
Tronc ouche.  
2/3/88

sp 10-11 x 4.5-5.5  $\mu$  alveoloids



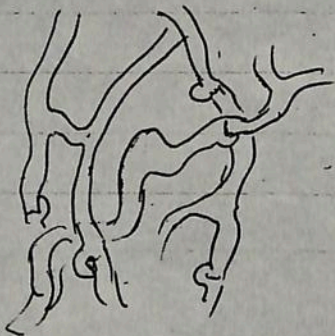
Probands 25-32 x 4-6  $\mu$

Metabands 4-cell. 28-39 x 4-6  $\mu$ . Stigmata  $\rightarrow$  8  $\mu$ .



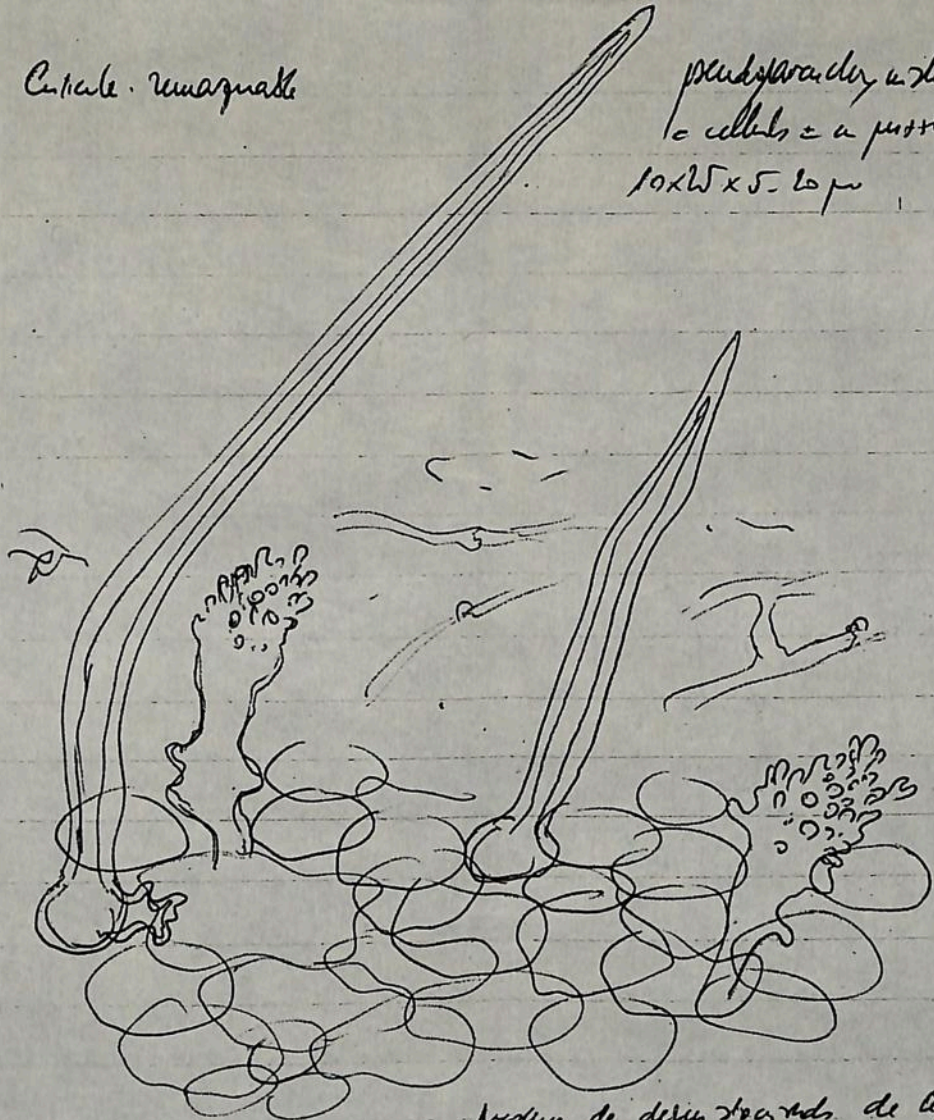
derms sticks or  
ellipsoid paleans

Char gel/ice = highly annulate canities and stigmata  
 $\times$  1.5-3.5  $\mu$

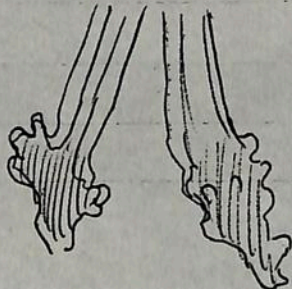


Cuticle remarquable

psudoparaclyptis  
= cellules = a pectin  
10x25x5. 60 µ



perme de deux couches de l'ep  
marronade dans 2 directions  
sans 15-30x10-15µ souvent  
a part auous = le sac de  
pith



pith → 430x7µ

pari → 2,5µ.

668-354

AURICULARIA DELICATA

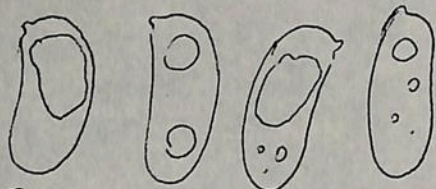
Wage. Saint-Pierre

(-p longipora?)

etc. du corail

1/2/88

13-15 x 5-6  $\mu$



pa. un. de  
fermentation

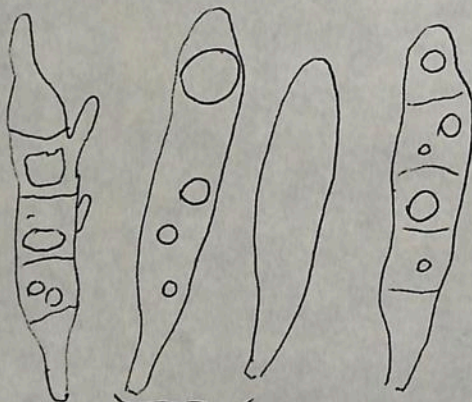
4.5 x 6

15-5

17 x 5

(hydrophobes. (un peu frustes!))

Andis (sp. de vannes, travers, stercor)



1  $\mu$  m x 1  $\mu$  m

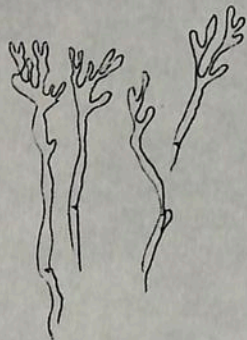
32-40 x 4-7  $\mu$

up. des p. un. mures.

Mur. dendroide ou sarrus

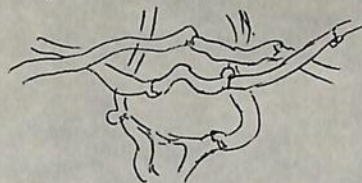
x 1.3  $\mu$

les lin. verte



Nephes curvata, Sarcos

$\pm$  felles



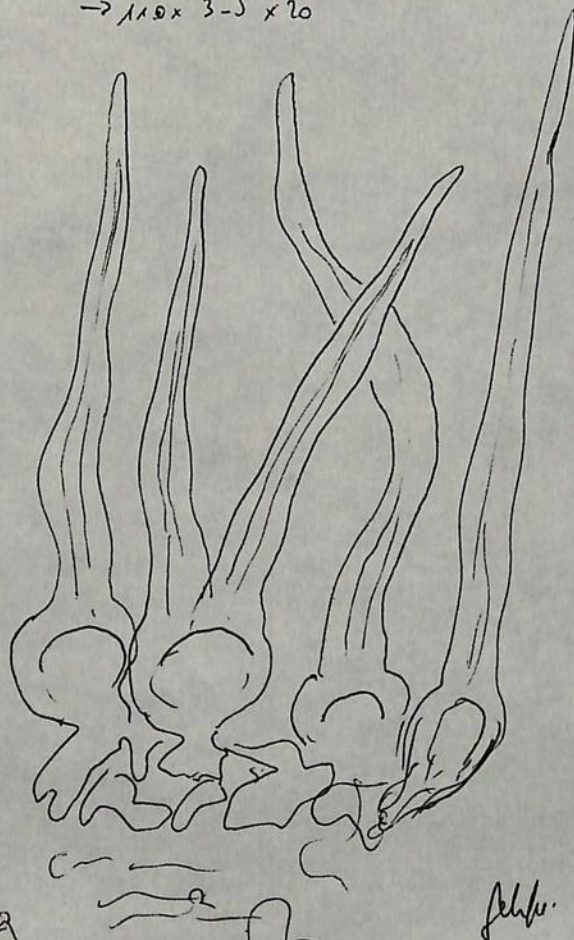
Cyrtos o

Bords 6-12  $\mu$  m

Spiculis 2 poils a sterc

$\rightarrow$  110 x 3-5 x 20

delant: felif = Gonophore



felif.

ENCUA

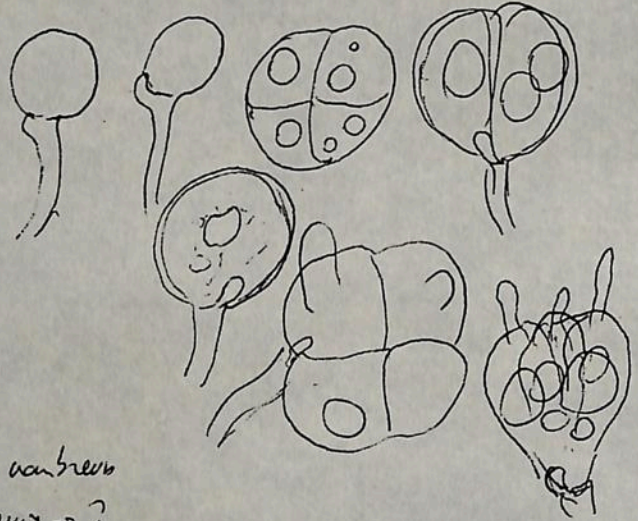
Sp

4F08.576  
page sans barres  
88 Bas, unct

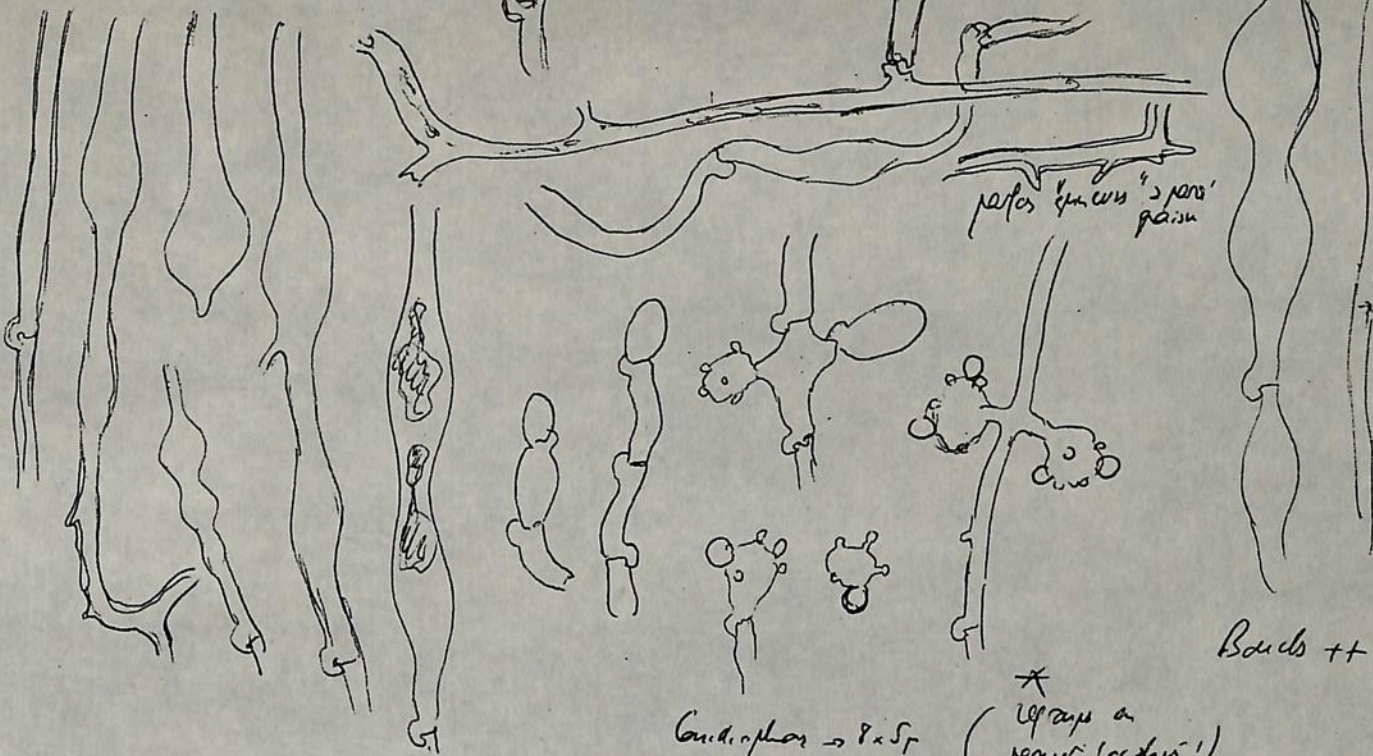
heights x 1.5-2.5µ  
avec quelques renflements → x10µ

bands x 10-15 sphériques  
bands → x10µ 4 sp

\* (grappes a petites boites)



ous ??  
fre les nombreux  
chds murs → ?



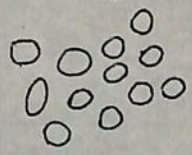
partes 'grues' '3 parts' 'paiss'

Bands ++

\* (grappes a petites boites)  
Candidophor → 8x5µ  
d'ornes

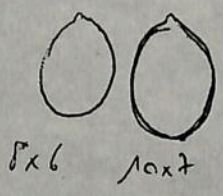
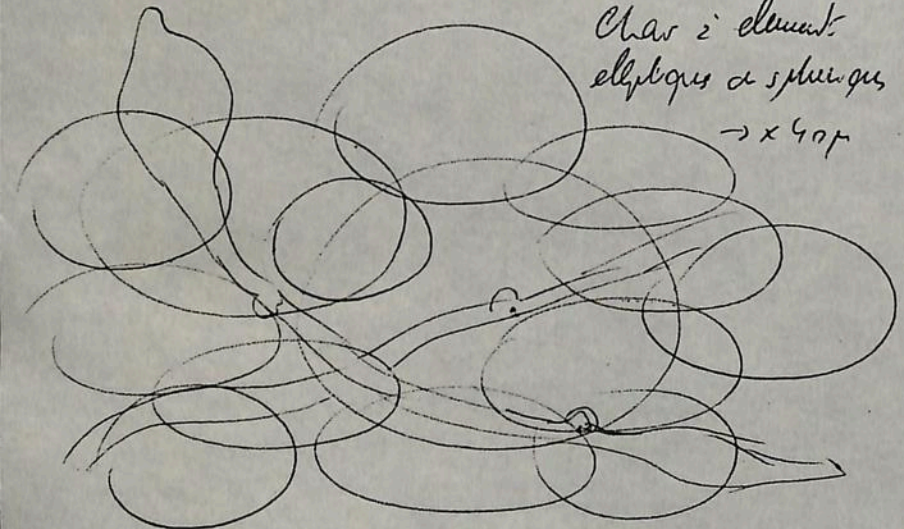
Chas 2 elements  
elliptiques a sphériques  
→ x40µ

Gandici x 2.5-4µ  
sphériques parties elliptiques



terminaux a 12-15µ  
partes de Gandici  
(jeunes parties) ou Gandiphon petit-  
des Gandici II  
numeroses 1-1.5-2.5µ!

Chas jetées



8x6 10x7

ou hétérotypes 2!  
plus nombreux  
mais sans doute  
éléments terminaux  
de

en relation avec heights fms

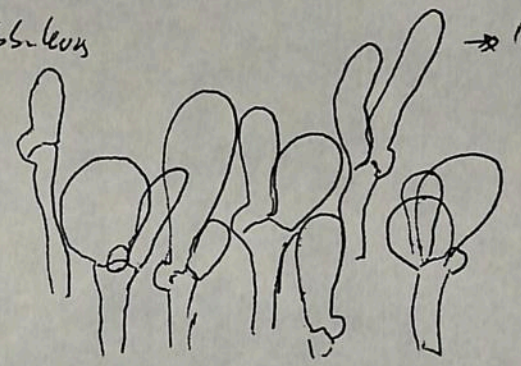
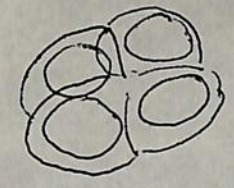
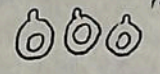
Gr. 157  
152ms  
no buds  
1488

TRIFIDELLA FIBULIFERA

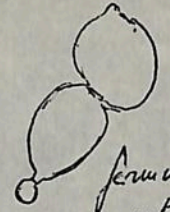
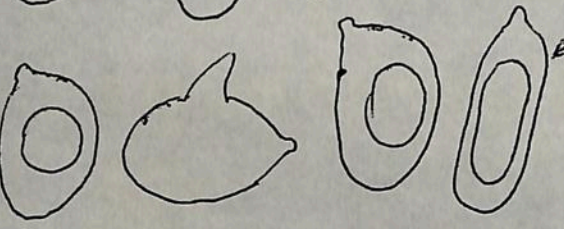
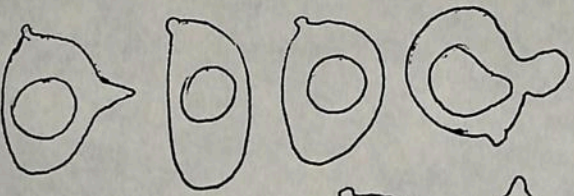
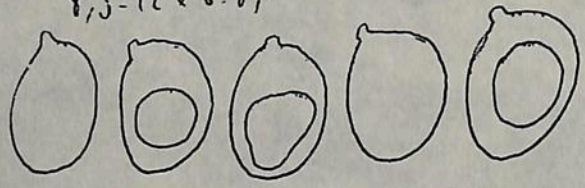
Conidia 2,5 x 1,5 - 2,5  
innumerable

Bands x 13-18µm distiglobuleux

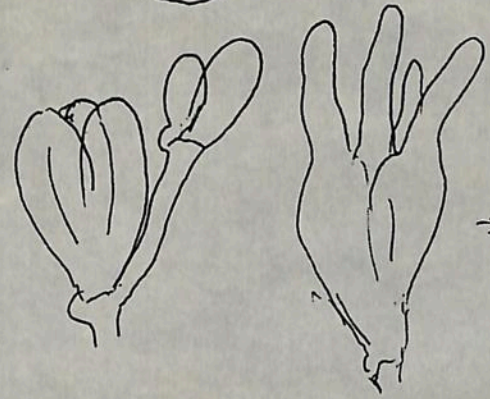
→ 10-20



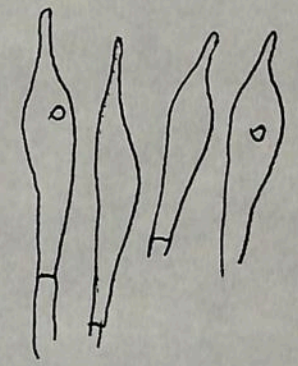
8,5-12 x 6-8µ



fermentation par  
repetition



arrondies  
→ lopi de lay

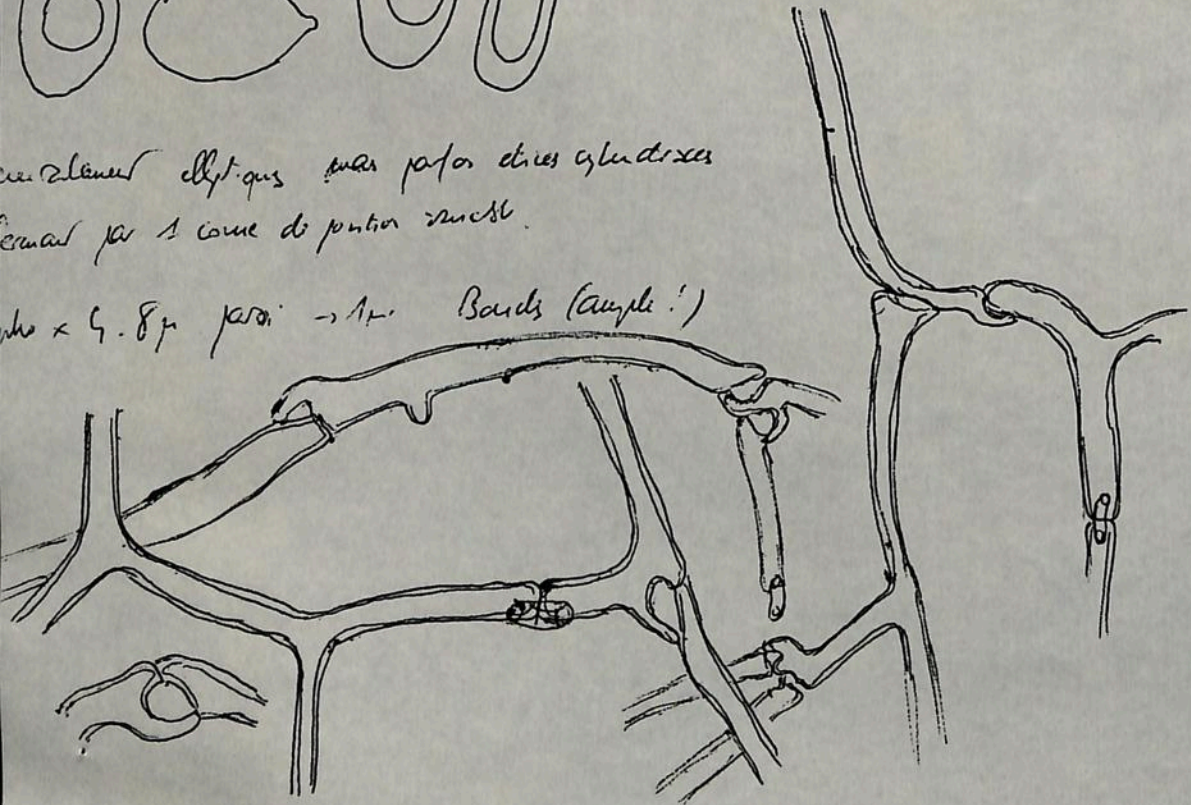


cf Boudier: *Ascomyces*,  
1483 *Ann. Bot. Fr.* 75 (1): 159

Gr. d'oplon  
→ 30 x 2-4µ

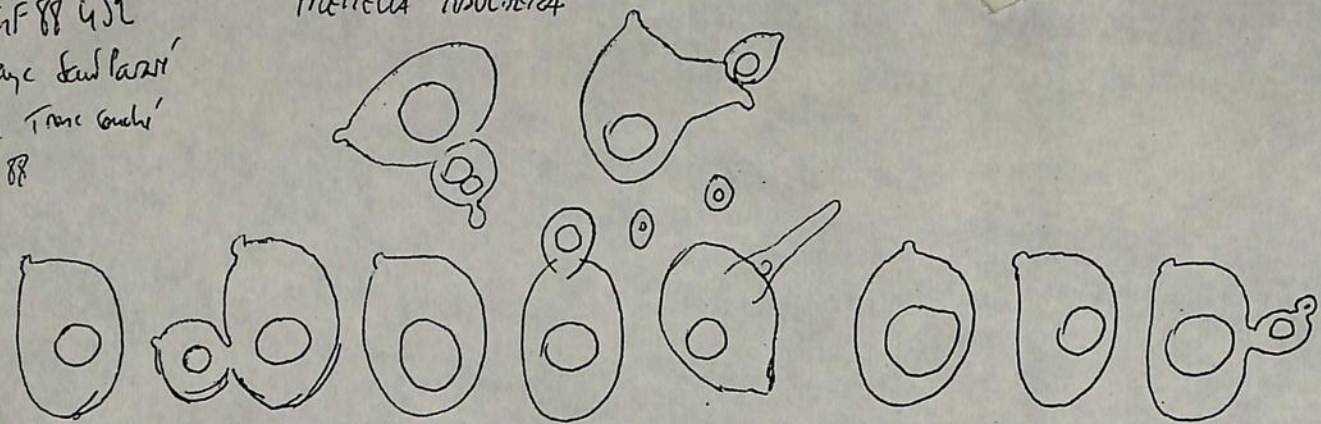
cellules elliptiques sur les parois et les cylindriques  
formés par le cône de pointure simple.

→ 4-8µ paroi → 1µ Bands (ample!)



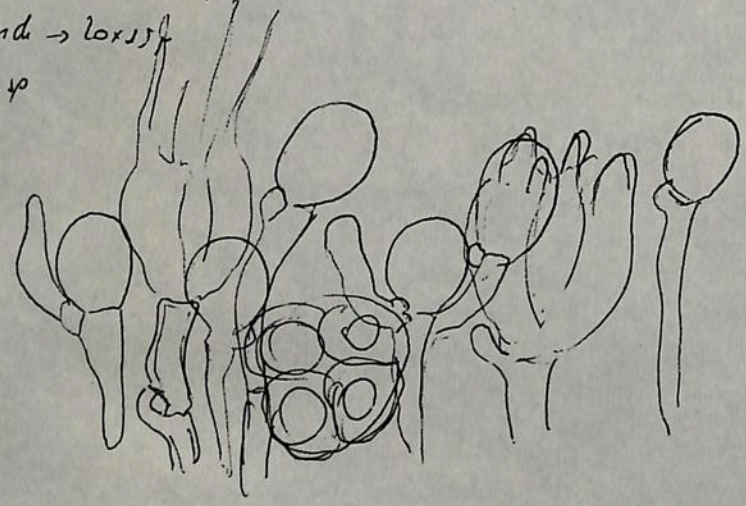
1/4 F 88 452  
 Stage sub-larv.  
 ou Tronc couché  
 1/1 88

METELLA FIBULIFERA

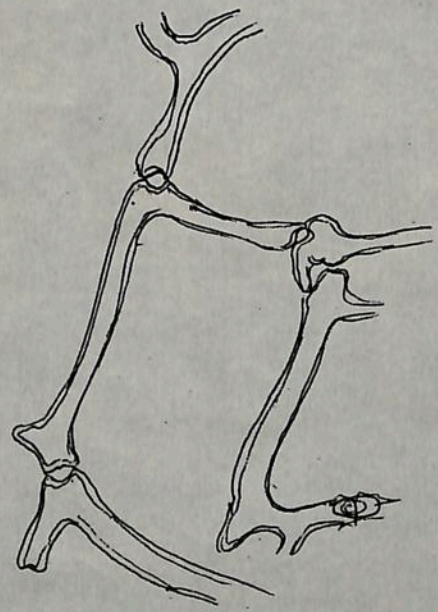


les germes du faitement se couvrent par suite, successivement répétitif  
 de II sub-larv. et de III spales !! (mais c'est le développement secondaire)  
 morph. (mélange de spores I, II). 8-11 x 5-8 μ  
 de III elliptique (spores III ?) 2-4 x 1-3 μ

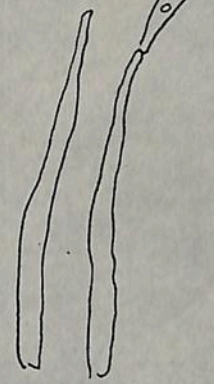
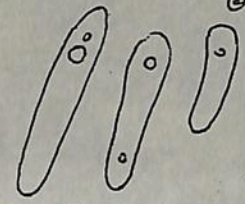
grande 10-18 x 5-16 μ  
 grande → 10 x 15 μ  
 4 μ



les plus liés foliaires  
 sur epaule =  
 d'après couples de Souds

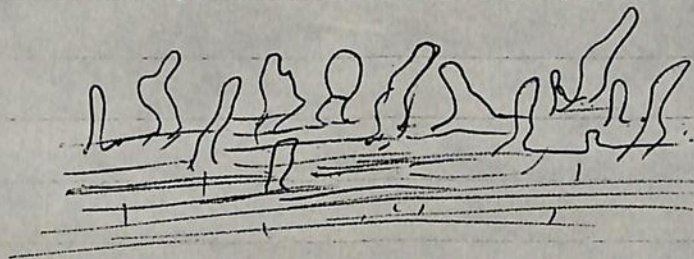


Gonides ?? allongés glanduleux  
 à clavés.  
 masses de gonidiospores  
 débuts au glanduleux - 30  
 8-18 x 2-3 μ



paroi d'épaisseur variable mais en  
semble par deux stries

Précise apparemment d'1 stp. au d'1 km stp  
Cuneate de petit côté jusqu'à 15 x 4 µ

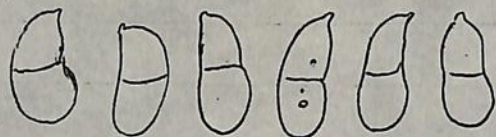


Cela est coralloïde mais pour un peu petits ...

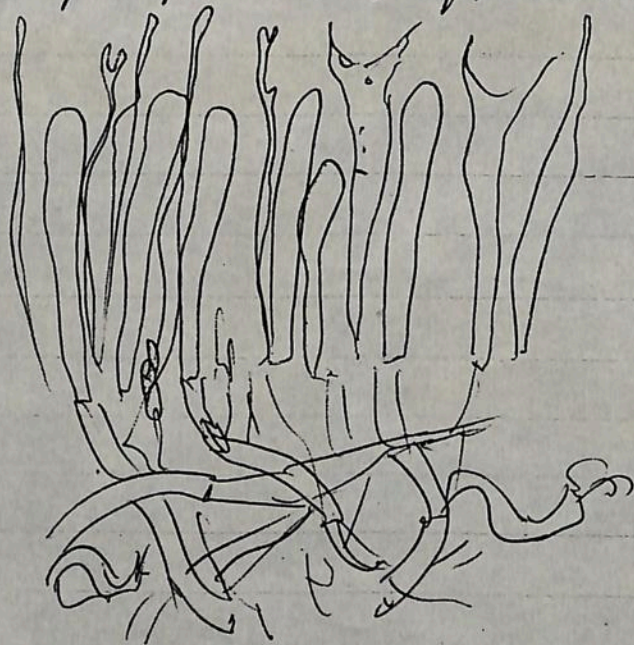
cf *Cladonia coralloides*.

PC/4F88 503

Sp 7-10 x 4.5  $\mu$  1 septa. ligamentum exiguum sive 12' cellula  
terminale ligamentum plus grossa. Pari. pau. ferelement coll. rā



Prothecia 30-35 x 2-4  $\mu$  cylindrica = pennis clavatae sive le haut  
in orbato furca ut colligra.  $\rightarrow$  90 x 2-6  $\mu$ . 2 septa,  $\rightarrow$  10  $\mu$   
Nouveau types simple acanthus = types tramanis emefanti.



Kohlmann dar  
a 24

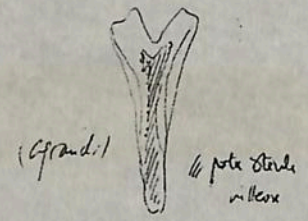
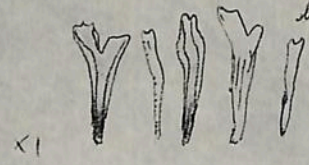
Types de type d'amygdaloid et par. felpa sotte et alie!  
Chair et types felpa d'écumez asphère parallèle

*Daucyopsis spatulata* (Schw.) Wasth

RC/CF 88.040  
Camp de Neuzes  
Tronc canaliculé  
(kobi) ~~de l'axe~~  
15/01/88

En groupe

forme orange (couleur lobes cornea)  
spatule parfois bifide avec les bords canaliculés vers l'antérieur  
forme nettement indurifiée dans les vallées  
partie distale remontant vers le sommet  
bords plus sombre soustra



(Mots)

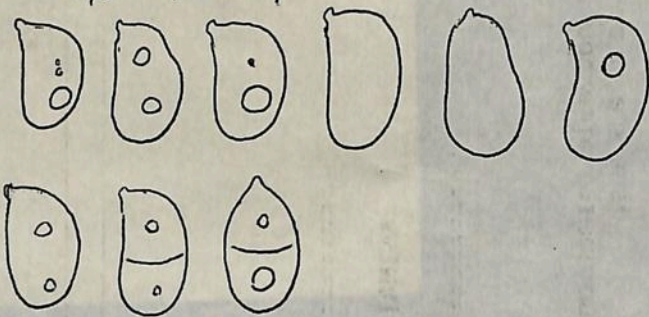
RC/GF 88 040 - DAGMOPINAX SPATHULARIA

Camp de Bucuresti

Tronc obtinut de sterilizarea

15/2/88

Sp 8-10,5 x 4-5,5  $\mu$



fermentation non  
obscure

elliptiques subpresentes (legèrement rugues) = ceterum. 6  
apicula renflée, subpyriforme de face, 1. septum 2  
instituti, se colligant faciem ad septation

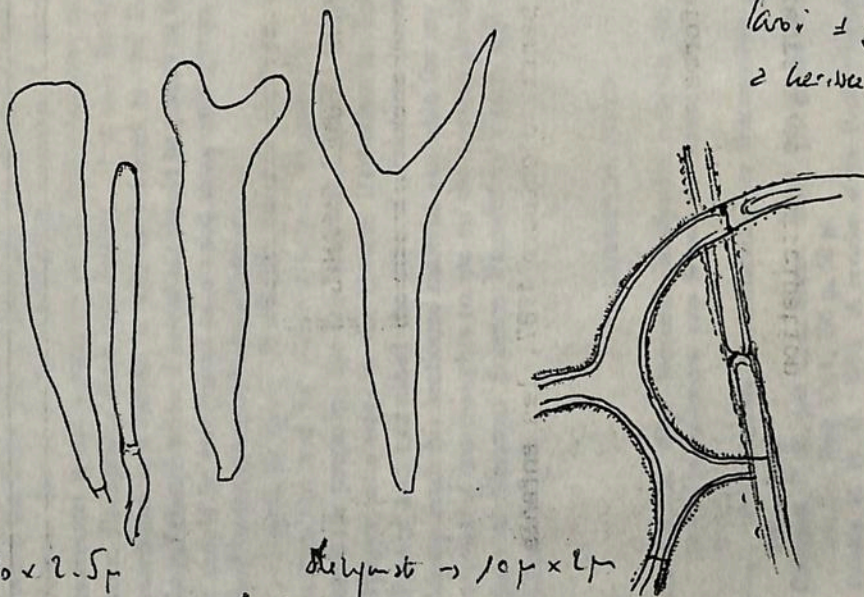
Char gelifera

elliptica x 2-5  $\mu$

Baudes 0.

Tarsi 1 gelifera

2 her. nec



ho 30 x 2.5  $\mu$

probanda

delipnate  $\rightarrow$  10  $\mu$  x 2  $\mu$

lyphndis dicitis x 2  $\mu$ .

$\rightarrow$  2  $\mu$

Kenya Regio  
Kerol

Dr Régis COURTECUISSE  
2/35, rue L. de Bettignies  
F. - 59139 WATTIGNIES  
Tél. : 20 95 45 70

CLAIM CHECK  
NO. 168427



PPR VET  
0770NDP  
DATE 07/07/89  
1ST NOTICE  
2ND NOTICE  
RETURN  
Detached from  
PS Form 3849-A  
Oct 1980



IMPRIMERIE  
A tout occasion de cette condition, l'acheteur  
s'engage à retourner le colis dans le délai de 15 jours  
à l'adresse indiquée ci-dessous.  
L'acheteur est tenu de payer les frais de retour par ses soins  
ou encaisser à l'émission.  
pour être remboursé  
dans les 15 jours  
Valeur : 4125  
Poids net :  
(Produit le nominale)

B. Lowy  
Botany Department

Louisiana State University

BATON ROUGE

Louisiana 70803

U.S.A.

R2552



Received: 7-11-1990.

ELEMENTS FOR A MYCOLOGICAL IN  
THE SURROUNDINGS OF "SAUT PARAR  
AND "NOURAGUES INSELBERG" (F  
V. HETEROBASIDIOMYCETI

my notes attached

Rég  
and Ben  
and Ber  
ST-T  
CIB  
(1) Laboratoire de Botanique et Crypto  
3, rue du Professeur Laguesse, F.59045  
Botany Department; Louisiana State University; BATON ROUGE, LA  
(USA).

SUMMARY: The authors give a description and illustrations of macro- and micromorphological features for the heterobasidiomycetous material collected in French Guyana by RC in 1988. Pseudohydnum gelatinosum var. bisporum Lowy et Courtec. is proposed as new.

RESUME: Les auteurs donnent une description et des illustrations des caractères macro- et micromorphologiques pour le matériel appartenant aux Hétérobasidiomycètes, récolté en 1988 par RC en Guyane Française. Pseudohydnum gelatinosum var. bisporum est proposée comme nouvelle.

KEY-WORDS: Mycoflora, French Guyana, Heterobasidiomycetidae, Auricularia, Calocera, Dacryopinax, Ditiola, Pseudohydnum, Tremella.

#### INTRODUCTION:

After dealing with Hygrophoraceae, Pluteaceae (COURTECUISSÉ, 1989, 1990), and Russulaceae (COURTECUISSÉ and BUYCK, 1990), we present in this paper a survey of the heterobasidiomycetous material collected in French Guyana during a mission organized by the Muséum of Paris. Rather rich collections were made, with sixteen samples. Field notes were gathered on fresh material, and some coloured plates and slides made. Determinations by RC of the dried material took place after coming back to the laboratory. BL confirmed some identifications and determined some unnamed specimens.

Some species were previously known from French Guyana: Auricularia fuscosuccinea (Mont.)Farlow and A. polytricha were noted by LOWY (1971), as well as Dacryopinax spathularia (Schw.)Martin, the two later being already mentioned by Montagne (1854), respectively under the names Hirneola polytricha + H. nigra and Guepinia cohaerens. Septobasidium leprieurii (Mont.)Pat. and S. rhubarbarinum (Mont.)Bres. were cited respectively by DENNIS (1970) and MONTAGNE (l.c., s.n. Daedalea) followed by RYVARDEN (1982) who re-studied the type. A single species of Tremella, viz. T. aurantia Schw.:Fr. was also listed by MONTAGNE (l.c.) but this taxon was omitted by LOWY (1971), monograph. and included in our collections range from Auricularia (5 specimens), to

Calocera (1), Dacryopinax (2), Ditiola (1), ~~Auepinia~~ (1), Pseudohydnum (1) and Tremella (5). All species were previously known, but a variety is proposed as new, viz. Pseudohydnum gelatinosum ~~fo. bisporum~~.

KEY TO THE DESCRIBED TAXA:

DESCRIPTION OF THE TAXA: I. Auriculariaceae

1. Auricularia delicata (Fr.) Hennings in Bresadola, Hennings et Magnus 1893 Bot. Jahrb. 17:492

- = Laschia delicata Fr. 1830 Linnaea 5:553
- = ? Merulius affinis Junghuhn 1839 Batav. Gen. Verh. 17:76
- = Laschia tremellosa Fr. 1849 Summ. Veg. Scand.:325
- = Auricularia tremellosa (Fr.) Patouillard 1887 J. Bot. 1:226
- = Auricula delicata (Fr.) O. Kuntze 1898 Rev. Gen. Pl. 3:446
- = Auricula tremellosa (Fr.) O. Kuntze 1898 l.c.
- = Hirneola delicata (Fr.) Bres.
- = Auricularia moelleri Lloyd 1918 Mycol. Writ. 5:784
- = Auricularia hunteri Lloyd 1918 l.c.:808
- = Auricularia crassa Lloyd 1924 Mycol. Writ. 7:1275

Macroscopic description (Fig.1):

*Abhymenia* Basidiocarp pileate, more or less orbicular, firm to gelatinous, sessile. ~~External~~ surface shortly pilose. Hymenophoral surface pale yellowish, then light reddish brown, becoming poroid-reticulate. Medulla lacking.

Microscopic description:

Spores (Fig.2) 10-17 x 4,5-6 um, cylindrical to somewhat allantoid, hyaline with irregular internal droplets and guttules.

Probasidia cylindrical clavate; metabasidia (Fig.3) becoming transversely 3-septate, 28-40 x 4-7 um, the last article easily collapsed, with basal clamp.

Hyphae (Fig.4) x 1-3,5 um, interwoven in a gelatinous matter, more or less branched and anastomosing, with clamp connections. Some hyphidia with dendroid apex present, x 1-3 um.

Pileipellis (Fig.5) with a pseudoparenchymatous layer with more or less isodiametrical cells 10-25 x 5-20 um, and dermatocystidia of two types. First type marasmioid, i.e. clavate diverticulate, brown, 15-30 x 10-25 um. Second type setiform up to 130 x 7 um with a thickened wall up to 2,5 um, sometimes associated with a inflated and diverticulate base ~~resembling~~ the first type, but more often with a bulbous, smooth base, seldom forked.

Collections:

- "Saut Pararé" (Arataye river), on a wooden beam of the building at the camp. 27.02.1988. Coll. and Det.:RC; n°RC/GF88.354 (PC)
- ~~Surroundings~~ <sup>vicinity</sup> of the "Saut Pararé" (Arataye river), on a laying trunk. 2.03.1988. Coll. and Det.:RC, n°RC/GF88.457 (PC)

Discussion:

These collections are ~~rather~~ typical of A. delicata, as described by LOWY (1971). This species is rather common throughout all the Neotropics but was so far not ~~mentioned~~ <sup>reported</sup> from French Guyana.

Summarized Countries where this fungus occurs areas follow (from LOWY, 1971, or if from other references, those noted in brackets): Argentina, Bolivia, Brazil, British Honduras, China (DU FU et al, 1983; TAN et WU, 1986), Colombia, Congo (BRESADOLA, 1911), Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Ethiopia (BRESADOLA, 1894), Guatemala, Haiti, Honduras, India (NATARAJAN et KOLANDAVELU, 1980) Jamaica, Java (BRESADOLA, 1907), Mexico, Panama, Peru, Puerto Rico, St. Croix, Trinidad, Venezuela.

2. Auricularia polytricha (Mont.) Saccardo 1885 Att.R.Inst.Ven. VI, 3:722

- = Exidia polytricha Montagne in Belanger 1834 Voy. Indes: 154
- = Exidia purpurascens Jungh. 1838 Prasm.: 35
- = Exidia hispidula Berk. 1838 Ann. Mag. Nat. Hist. II, 3: 396
- = Exidia porphyrea Lévl. 1844 Champ. Exot. II, 2: 218
- = Hirneola nigra Fries 1848 Fung. Nat.: 27
- = Hirneola porphyrea (Lévl.) Fr. 1848 l.c.
- = Hirneola polytricha (Mont.) Fr. 1849 K. Vet. Ak. Handl.: 46
- = Hirneola hispidula (Berk.) Berk. 1874 J. Linn. Soc. Bot. 14: 352
- = Auricula nigra (Fr.) O. Kuntze 1891 Rev. Gen. Pl. 2: 844
- = Auricula polytricha (Mont.) O. Kuntze 1891 l.c.
- = Auricula nigrescens (Sw.) Earle 1899 Bull. Torr. Bot. Cl. 26: 633
- = Auricularia hispidula (Berk.) Farlow 1905 Bibl. Index 1: 307
- = Auricularia nigrescens (Sw.) Farlow 1905 l.c.: 308
- = Auricularia porphyrea (Lévl.) Teixeira 1945 Bragantia 5: 163 (synonymy from LOWY, 1971).

Macroscopic description (Fig. 6)

<sup>Abhymenis</sup> Basidiocarp pileate, cupulate, up to 10 cm broad, tough to gelatinous. ~~External~~ surface densely pilose. Hymenium dark, brown to purplish brown, smooth to somewhat rugulose. Medulla present, thin.

Microscopic description:

Spores (Fig. 7) 11-16 x 5-6 um, cylindrical to subballantoid, hyaline.  
 Probasidia cylindrical, metabasidia (Fig. 8) becoming transversely 3-septate, 40-60 x 4-6 um.  
 Hyphae x 1-4 um, interwoven in a gelatinous layer, with clamp connections.  
 Pileipellis, consisting of a layer of more or less isodiametrical cells and dense setiform dermatocystidia (Fig. 9) up to 300 x 5 um with a thickened wall, up to 2-(2,5) um.

Collections:

- <sup>Vicinity</sup> Surroundings of the "Saut Pararé" (Aratayé River), on dead wood of a laying trunk. 27.02.1988. Coll. and Det.: RC, n°RC/GF88.353 (PC).
- Same locality at some distance, on dead wood. 7.03.1988. Coll. and Det.: RC, n°RC/GF88.527 (PC).
- Same locality at some distance, on a dead trunk. 8.03.1988. Coll. and Det.: RC, n°RC/GF88.562 (PC).

Discussion:

Like the preceding, those specimens fit well within the concept of A. polytricha, as described by LOWY (1971). The species was already mentioned from French Guyana and is also noted from (references as for the preceding) Argentina, Australia (BRESADOLA et

SACCARDO, 1890), Bahama Islands, Bermuda, Bolivia, Brazil, British Guyana, British Honduras, Canal Zone, Cameroon (BERTHET et BOIDIN, 1966), China (DU FU et al, 1983; TAN et WU, 1986), Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Ecuador, Ethiopia (BRESADOLA, 1894), Guatemala, Haiti, India (BERKELEY, 1854), Indonesia in Sumatra Island (BOEDIJN, 1929), Jamaica, Japan (IMAZEKI et HONGO, 1965 and other authors), Mexico, New Zealand (MacNABB, 1964), Nicaragua, Pacific Islands (LOWY, 1952), Pakistan (Ahmad, 1945), Panama, Peru, Philippines Islands (BRESADOLA, 1915), Puerto Rico, Sao Tome et Principe (BRESADOLA et ROUMEGUERE, 1890), Surinam, Trinidad, Venezuela.

## II. Dacrymycetaceae

3. Calocera coralloides Kobayasi 1939 Sci.Rept.Tokyo Bunr.Daig. B4(74):225

### Macroscopic description (Fig.10):

Basidiocarp erect, digitate, cylindrical to subulate, up to 5 x 1 mm, orange to reddish brown downwards, gelatinous and then tough. Hymenium amphigenous, smooth.

### Microscopic description:

Spores (Fig.11) 7-10 x 4-5 um, slightly curved, 1-septate, the distal cell a little bit larger. Wall thin, easily collapsed.

Probasidia (Fig.12) 30-35 x 2-4 um, cylindrical, slightly clavate upwards. Metabasidia (Fig.12) up to 40 x 2-6 um, bifurcate, easily collapsed. Sterigmata up to 10 um.

Hyphae with gelatinous, punctate to asperulate ciliate wall, curved in the subhymenial layer. Flesh with densely agglutinated parallel hyphae.

Sterile zone of the basidiocarp ("stipe") covered with short hairs (Fig.13), up to 15 x 4 um.

### Collection:

- <sup>vicinity</sup> surroundings of the "Saut Pararé" (Arataye River), on the bark of a fallen branch. 5.03.1988. Coll.and Det.: RC, n°RC/GF88.503 (PC)

### Discussion:

This rare species, previously known from Japan and Bolivia (LOWY, 1971) is new to the mycoflora of French Guyana. This is the second record from South America, as far as we know.

4. Dacryopinax indacocheae Lowy 1959 Mycologia 51:848

### Macroscopic description (Fig.14)

Basidiocarp gelatinous, up to 20 mm broad, irregularly orbicular or spathulate, dirty dark orange then milky orange, translucent, shining. Stipe (sterile zone) short and thick-set, weakly differentiated. Lower surface less shining, somewhat velvety.

### Microscopic description:

Spores (Fig.15) 8-10 x 2,8-3,2 um, narrowly allantoid or subcylindrical, sometimes constricted, 1-3 septate. Wall and septae thin. Some spores were seen germinating little spherical conidia x 1,5 um with a broad "apiculus".

Probasidia (Fig.15) up to 20 x 3 um cylindrical to clavate

5  
subcapitate with a slightly thickened wall. Metabasidia (Fig.15) up to 30 x 4-5 um, bifurcate, with sterigmata up to 10 x 2 um, organized in a very dense hymenium, with some sclerified clavate cells, up to 15 x 10 um.

Flesh gelified made of thin-walled (up to 1 um) hyphae x 2-4 um. Clamps none.

Upper surface (sterile) with thick-walled, clavate to elliptical or pyriform cells (Fig.16), up to 30 x 20 um. Wall up to 4 um.

#### Collection:

- Around the "Nouragues mountain" camp, on a laying rotten trunk. 17.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.093 (PC)

#### Discussion:

Too many it seems to me. I have compared it with the type, and have fewer doubts!

[It is with some doubts that we present this determination.]  
D.indacocheae is usually somewhat larger with a lobed basidiocarp, presents cylindrical dicharyoparaphyses which were not observed here, and its conidia (secondary spores) are larger, up to 2-2,5 um in diameter. Maybe the youth of the involved collection could explain all of these discrepancies, the basidiocarp and conidia being immature, smaller ~~more little~~ than at maturity, and the hymenium being still too dense to let the dicharyoparaphyses appear. Nevertheless, the fructification showed by LOWY (1959:842, fig.1, right) looks like our collection. Anyway, this taxon is the closest to our collection, and we propose D.indacocheae as new to French Guyana. It was previously known from Bolivia and Brazil (LOWY, 1971).

New or Noteworthy Fungi from Bolivia

5 Dacryopinax spathularia (Schw.:Fr.)Martin 1948 Lloydia 11:116  
= Merulius spathularia Schw. 1822 Schr.Nat.Ges.Leipzig 1:97  
= Guepinia spathularia (Schw.:Fr.)Fr. 1828 Elench.Fung.2:32  
= Cantharellus spathularius (Schw.:Fr.)Schw. 1832

Trans.Amer.Phil.Soc.II, 4:153  
= Guepiniopsis spathularia (Schw.)Patouillard 1900

Ess.Tax.Hym.:30 ↑ Don't be offended if I prefer my long-winded synonymy. Flora Neotropica 6:129, of which this seems to be a part.

#### Macroscopic description (Fig.17):

Basidiocarp up to 10 x 4-5 mm, erect, spatulate to somewhat furcate at apex, the sides slightly curved inside, yellow orange, the base darker, with a well marked stipe, villose like the sterile surface.

#### Microscopic description:

one of these is enough, non!  
Spores (Fig.18) 8-10,5 x 4-5,5 um, elliptical [subphaseoliform] (slightly curved), the apex often inflated, subpyriform on face view, 1-septate when mature, easily collapsed after septation.

Probasidia (Fig.19) cylindrical to clavate, 20-30 x 2-5 um; metabasidia (Fig.20) bifurcate, with sterigmata up to 10 x 2 um. Hyphidia seldom, cylindrical, not branched.

Flesh gelified, made of hyphae x 2-5 um with "villose" walls. Clamps none.

#### Collection:

- Around the "Nouragues Mountain" camp. <sup>Fallen</sup> Lying trunk of a Sterculiaceae tree. 15.02.1988. Coll. and Det.:RC, n°RC/GF88.040 (PC)

- The species has been seen many other times, under its typical form, in the area of Nouragues mountains and Saut Pararé.

smaller

one of these is enough, non!

not in bibliography Mycologia 51:840-850 1959

6  
Discussion:

The above-cited collections fit very well in the concept of Dacryopinax spathularia, as described by LOWY (1971). It is a very common species all over the tropical and subtropical belt, which can penetrate some temperate areas and it would become wearisome to enumerate all the countries where it occurs. *Sacré bleu! Name your own!*

*Superfluous, in my opinion.*

- 6. → Dacryopinax fissa (Berk.) Martin 1948 Lloydia 11:116
- = Guepinia fissa Berk. 1843 Ann. Mag. Nat. Hist. 1, 10:383
- = Guepiniopsis fissa (Berk.) Patouillard 1889 Tab. Anal. Fung. 2(7):70
- = ? Guepinia spathularia fo. lata Lloyd 1916 Mycol. Lett. 63:11
- = ~~Dacryopinax spathularia var. polycephala Lowy (ined. ? on my herbarium sheet !)~~ *no status!*

Macroscopic description (Fig. 21)

Like the preceding one, but apex of basidiocarp furcate to polycephalic. The hymenium may seem amphigenous on some specimens.

Microscopic description:

Like D. spathularia.

Collection:

-Around the "Nouragues Mountain" camp. On a rotten trunk. 19.02.1988. Coll.: RC; Det.: BL; n° RC/GF88.157 (PC)

Discussion:

The hierarchic level [~~deserved by~~ <sup>of</sup>] this taxon is rather questionable. Some authors consider it as synonymous with Dacryopinax spathularia (MARTIN, 1948; LOWY, 1971), but others prefer to consider it a good species (LANG MU, 1985). Indeed, microscopic features are almost identical, and the only discrepancy lies in the macroscopic appearance of the basidiocarps, much more furcate and polycephalic at apex. This special pattern is disturbing enough to make the determination problematic in the field, and it is possible that the varietal rank would be preferable. On the other hand, LOWY (1971) offers the possibility of a chorological argument. The neotropical (and Japanese ?) specimens may better belong here, collections from other areas fitting better into the typical forms of D. spathularia (in average of course). Because of the partly admitted synonymy between the two taxa, it is difficult, at present to draw the geographical repartition of what we call D. fissa.

*I edited his paper. He is a very good worker, and should be encouraged, but he is only beginning to understand some of the Dacrymycetaceae.*

*or anywhere else!*

*yes!*

*I don't think so*

*the*

*?*

*yes!*

*distribution?*

- 7. Ditiola radicata (Alb. et Schw.: Fr.) Fr. 1822 Syst. Mycol. 2:170
- = Helotium radicatum Alb. et Schw. 1805 Consp. Fung.: 348
- = Ditiola luteoalba var. radicata (AS:Fr.) Quélet 1886 Enchir. Fung.: 227
- = Guepinia radicata (AS:Fr.) Costantin et Dufour 1891 Nouv. Fl.: 205
- = Dacrymyces deliquescens fo. radicata (AS:Fr.) Bourdot et Galzin 1928 Hym. Fr.: 68
- = Dacrymyces radicatus (AS:Fr.) Donk 1933 Meded. Ned. Mycol. Ver. 18-20:120

*see note p. 9*

Macroscopic description (Fig. 22)

7

Basidiocarp orange, erect, tough gelatinous, with a sterile stipe and a lobate spatulate apex, up to 6 mm high. Hymenium amphigenous.

**Microscopic description:**

Spores (Fig.23) 10-13 x 4-5 um, cylindrical to elongate elliptical, slightly curved, fragile and easily collapsed, becoming 1-septate when mature.

Probasidia (Fig.24) cylindrical to clavate, up to 40 x 4 um. Metabasidia collapsed in our collection, but distinctly 2-furcate.

Structure monomitic, but with thick-walled hyphae in the cortical layer of the stipe x 1,5-2,5-(3) um, strongly gelified. Hyphae of the capitate apex x 1-3 um, thin-walled. Clamps none.

**Collection:**

Vicinity  
~~Surroundings~~ of the "Saut Pararé" on the Arataye river. On dead wood. 1.03.1988. Coll.:RC; Det.:BL; n°RC/GF88.419 (PC)

**Discussion:**

This collection fits into the concept of Ditiola, as redescribed by KENNEDY (1958). The heterogenous structure is rather typical. It is difficult to give chorological data about this species, because the synonymy seems rather confused. However, ~~it is noticeable that~~ it occurs in tropical areas as well as in temperate ones.

?  
See  
P.9

III. Tremellaceae

8. Pseudohydnum gelatinosum var. bisporum Lowy et Courtecuisse var. nov.

A typo differt metabasidiae bisporibus. Typus in Guyana Gallica lectus, n°RC/GF88.273 in PC conservatur.

**Macroscopic description:**

Basidiocarp quite typical of the type variety (see LOWY, 1971).

**Microscopic description:**

Spores (Fig.25) 5,5-8,5 x 5,5-7,5 um, shortly elliptical to subglobose, guttulate, germinating with a dorsal appendix. Very few quite elliptical (secondary?) spores have been seen.

Probasidia (Fig.26) clavate or subglobose, up to 10 x 8 um, becoming 2-septate, very seldom cruciate-septate, but metabasidia (Fig.27) constantly 2-septate (for some reason, 2 of the probasidial cells from cruciate basidia do not form sterigmata), up to 12 x 10 um.

Hyphae x 1-3 um, with clamps. ~~No cystidia in hymenium.~~

Surface of the pileus covered with hyphae x 2-10-(15) um, erect in a subtrichodermial structure, with intracellular beige-greyish pigmentation, very obvious in mediopellis.

**Collection:**

Vicinity  
~~Surroundings~~ of the Saut Pararé on the Arataye river. On rotten wood. 25.02.1988. Coll.:RC; n°RC/GF88.273 (PC)

**Discussion:**

no in P. gelatinosum!

included enclosed

so far the var. paucidentatum Lowy 1959, known from Bolivia. The typical 4-spored P. gelatinosum is known from Guyana (LOWY, 1971) and from several other neotropical areas, and we found in the world literature no mention of 2-spored collections. This seems remarkable enough to establish a new variety.

9. Tremella fibulifera A. Moeller 1895 Protobas.:119

Macroscopic description:

Basidiocarp soft gelatinous; pulvinate then folded and finally irregularly foliose; pure white then subhyaline white, up to 2-2,5 cm in diameter and height; drying to a horny pale yellowish irregular and flat cushion.

Microscopic description:

a secondary sterigma

Spores (Fig.27) 6-11 x 4-8 um, elliptical, heteromorphous because of the mixture of primary and secondary spores. Primary spores easily germinating by repetition through an horn or directly by repetitive budding. Among the I and II spores exist some elliptical elements (spores III ?) 2-4 x 1-3 um.

Probasidia 10-18 x 5-12 um, subspherical to elliptical. Metabasidia (Fig.28) up to 20 x 15 um, cruciate-septate, 4-spored.

Hyphae (Fig.29) strongly gelatinized, x 4-8 um, rather thick-walled (up to 1 um thick) bearing numerous, complex and sometimes loop-like clamps.

Conidiophores (Fig.30) also present, cylindrical to fusiform, producing elongate elements, 8-18 x 2-3 um.

Collections:

- Around the "Nouragues Mountain" camp. On a lying trunk. 19.02.1988. Coll.:RC; Det.:RC, n°RC/GF88.151 (PC)
- Surroundings of the "Saut Pararé" on the Arataye river. On the bark of a lying trunk. 2.03.1988. Coll.:RC, Det.:RC, n°RC/GF88.452 (PC)

Discussion:

The collections are quite similar to those described by LOWY (1971) and BANDONI et OBERWINKLER (1983). The production of spores (primary basidiospores, secondary and perhaps tertiary derived ones as well as conidiospores probably of different types) seems to be very complex in this species as shown by our own sketches and description and by the later above-cited paper. In this one, the authors suggest that some of the observed elements may come from a tremellaceous parasite. This might deserve a more careful study in the field and on fresh material, because, it is probable that, if any, the parasite may exist in the specimens as a rule. Indeed, our material shows the same pattern that the "single authentic specimen" described by BANDONI et OBERWINKLER. The association between the two hypothetical species might be specific and constant. ~~It would be interesting to study [that for people having the opportunity to deal microscopically with] fresh material of T. fibulifera (Repetitive. Already mentioned above.)~~

The species, previously known from Brazil, Columbia, Costa Rica, Panama (LOWY, 1971) is new to French Guyana.

10. Tremella fimbriata Fr.:Fr. 1822 Syst.Mycol.2:212

= T. foliacea Pers., Mycol. Eur. 1:101. 1822.

Macroscopic description:

9

Basidiocarp up to 6 cm, brownish orange, foliose or  
aricularioid, firm gelatinous.

**Microscopic description:**

Spores not clearly seen, but several elliptical apiculate elements (Fig.31), 8-10 x 6-7 um present.

Probasidia spherical, x 10-15 um. Metabasidia (Fig.32) up to x 20 um, cruciate-septate, 4-spored, mainly arranged in groups.

Flesh gelatinized, made of elliptical to spherical elements mixed with hyphae (Fig.33) x 1,5-2,5 um, showing numerous swellings up to x 10 um and intracellular pigment. Clamps numerous.

Beside the presumed basidiospores were seen a lot of apical or pleural labile conidiophores (Fig.34) up to 8 x 5 um (probably acting themselves as conidia), bearing tiny (secondary ?) conidiospores, growing up to x 2,5-4 um after maturation.

**Collection:**

- <sup>vicinity</sup> ~~surroundings~~ of the Saut Pararé on the Arataye river. On dead wood. 8.03.1988. Coll.:RC; Det.:BL; n°RC/GF88.576 (PC)

**Discussion:**

The sporal diversity of this specimens seems also to be rather complex, and might be better studied in fresh material. Such a pattern seems never to have been noticed in the temperate areas where the species also occurs. It could specifically occur in the Tropics. The taxonomy of this group being rather <sup>im</sup>perfectly known, ~~as far as we know~~, it seems difficult to propose a correct chorological outline for this taxon.

*I think "chorographical" would be correct here. is from chorography, not chorology. Also on p 6, 7.*

11. Tremella cf lutescens Fr.:Fr. 1822 Syst.Mycol.2:213  
= Tremella mesenterica Fr.:Fr. 1822 l.c.:593

**Macroscopic description:**

Basidiocarp up to 25 mm in diameter, cerebriform to lobate contortate, adherent to partially free, gelatinous, orange coloured, with some shade of greenish <sup>by place</sup>, with some parts much more red-orange or vermillion, especially on the folds.

**Microscopic description:**

Spores (Fig.35) 6-7 x 4-5 um, shortly elliptical subglobose to more or less elliptical, guttulate, germinating by secondary sterigmata.

Probasidia (Fig.36) x 12-15 um, associated <sup>with</sup> to a conidiophore and ~~to~~ a complex clamp system. Metabasidia cruciate-septate, 4-spored, up to 20 x 13 um.

**Collection:**

- <sup>vicinity</sup> ~~surroundings~~ of the Saut Pararé on the Arataye river; on fallen branches. 25.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.284 (PC)

**Discussion:**

The ~~too~~ <sup>smaller?</sup> small spores probably originate in the fact that we dealt with secondary ones. It is often difficult to distinguish between primary, secondary and eventually tertiary spores in a single mature basidiocarp, and heterogeneity in size and shape can easily

confuse the interpretation of the true basidiospores as quoted by LOWY (1971). Our specimens probably fit into the concept of T. lutescens sensu lato, inclusive of T. mesenterica. In that wide sense, the species is almost cosmopolitan but is presumably new to French Guyana.

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13. Basidia generally not exceeding  $20\ \mu$  in greatest dimension; sterigmata not deciduous. 11. *T. lutescens*.  
 10. Brownish tints predominating when fresh; drying nearly black. 3. *T. clavisterigma*.  
 14. Sterigmata notably clavate with a much constricted base. 14. Sterigmata elongate-inflated to cylindrical. 15. *T. volcanagua*.  
 15. Metabasidia mostly ovoid, up to  $35 \times 5\ \mu$ . 16. *T. wrightii*.  
 15. Metabasidia mostly subglobose, up to  $10.5 \times 8\ \mu$ .

→ 1. ***Tremella aurantia*** Schweinitz ex Fries, Syst. Mycol. 2: 213. 1822.

*Tremella aurantia* Schw., Naturf. Ges. Leipzig Schrift. 1: 114. 1822.

*Naematelia quercina* Coker, Jour. Elisha Mitchell Soc. 35: 135. 1920.

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Fructification externally tough-gelatinous, internally whitish, fleshy-fibrous; up to 8 cm broad and 2.5 cm in height; bright orange-reddish when fresh, drying orange-brown; grossly cerebriform-lobate, deeply furrowed; hyphae with clamp connections; probasidia subglobose; metabasidia becoming ovoid to subclavate, cruciate-septate,  $12.5-17.5 \times 8.5-12\ \mu$ ; sterigmata cylindrical, up to  $115 \times 5.5\ \mu$ ; basidiospores subglobose,  $8-9.5 \times 6.5-7.5\ \mu$ , germinating by repetition.

TYPE LOCALITY. N. Carolina, U.S.A.

ILLUSTRATIONS. Lloyd, Mycol. Writ. 3 (Old Sp. 1): 11, f. 225; Jour. Elisha Mitchell Soc., 35: col. pl. 23, f. 1; pl. 58, f. 1, 2; Univ. Iowa Stud. Nat. Hist. 15(3): 25, f. 17-29; 29, f. 31.

DISTRIBUTION. Argentina, Brazil. BRAZIL. Bosque de Jequitibas, Campinas, São Paulo, Berenstein 7494, 17 Mar 1948 (SP). ARGENTINA. Las Lenguas, Tucumán, Singer T 3012, 27 Feb 1957 (LIL); San Javier, Tucumán, Lowy, 19 Jan 1959 (LSUM).

2. ***Tremella brasiliensis*** (A. Möller) Lloyd, Mycol. Writ. 7: 1152. 1924.  
Fig 24.

*Tremella lutescens* f. *brasiliensis* A. Möller, Bot. Mitth. Trop. 8: 100. 1895.

Fructification tough to cartilaginous-gelatinous when fresh, up to 3 cm or more broad  $\times$  1 cm in height, grossly lobate, lobes hollow, red, drying pale yellow-brown; hymenium amphigenous; hyphae  $2-3.5\ \mu$  in diam with large clamp connections; probasidia subglobose, up to  $25\ \mu$ ; metabasidia becoming cruciate-septate, ovoid, very large,  $25-44(-50) \times 20-28(-34)\ \mu$ ; conidia subspherical to ovoid,  $3-5.5 \times 2-4\ \mu$ ; sterigmata long-cylindrical, up to  $150 \times 6\ \mu$ , commonly becoming detached from the basidium; basidiospores nearly spherical,  $15-21(-24) \times 14-19(-21)\ \mu$ , with large, blunt apiculus, germinating by repetition.

TYPE LOCALITY. Blumenau, Brazil.

ILLUSTRATIONS. A. Möller, Protobasidiomyceten, pl. IV, Fig. 15; Lloydia 21: 139, f. 2 a-f.

DISTRIBUTION. Brazil, Panama. PANAMA. Valley Río Chiriquí Viejo, Prov. Chiriquí, Martin 2049, 27 Jun 1935 (IA); same loc. Martin 2246, 1 Jul 1935 (IA); same loc. Martin 2688, 10 Jul 1935 (IA). BRAZIL. Novo Petropolis, Rio Grande do Sul, Rick 444, 1925, Neotype (BPI); Rio Grande do Sul, Rick 38792 (no date) (BPI); Rio Grande do Sul, Rick 4014 (conidial stage; no date) (BPI).

Bandoni (1958) suggested that Rick's No. 38792 be designated as the neotype for the species (Möller's collection is unknown), but another of Rick's collections (Rick 444) not recorded by Bandoni, is more robust, in excellent condition and would serve better as the neotype. Overlooked was the tendency of sterigmata to become detached (Fig. 24d) from basidia, a condition I found to be common in Rick 444 as well as in Rick 38792. Conidia were lacking in Rick 444 but present in

②  
Cher Re'giz,

Your fine dacrymycetaceous collection and first draft of your ms. arrived within a day of each other. I think it would be useful to get some EM/SEM pictures of it, so I've given it to our EM technician, and when I get the chance to study the preparations, a few photos suitable for publication should be forthcoming. The problem is that this will take some time. Our technician has a list of desiderata from other members in the department, and although I may have convinced her (?) to give priority to this beautiful little fungus, I may just be dreaming. After all, everyone thinks that their material is most urgent. N'est-ce pas? As soon as I can get it ready, I'll send it to you toute de suite!

I believe that your fungus is an undescribed sp. of Dacryopinax, not a Ditiola. Because of the almost certain delay in getting EM photos, let me suggest the following. I am sending back your ms. (enclosed) with my suggestions and corrections, so that you can go over it and make whatever changes you think appropriate. In view of your desire for quick action on the ms, sending it to Mycotaxon would probably be best. Meanwhile, the new Dacryopinax would have to be published separately. The alternative is to wait with the ms. until I can return the sp. nov. after EM study, and incorporate it in the present ms. Let me know what you prefer to do.

The chief disadvantage with Mycologia is the longer time required for publication.



④

Dacryopinax fissa (Berk.) Martin is in my opinion not sufficiently different from D. spathularia to warrant species designation. My reason for being quite sure about it is that I have seen the type (Univ. Iowa herbarium), and am convinced that it is merely a variant, only the "polycephalic" character (based upon a single collection) separates it from D. spathularia, all other features being indistinguishable. I did not intend to give this varietal status.

⑤

Mycotaxon

Perhaps you may think that I am becoming "sot" in my old age, but I have a question about geographical nomenclature as it applies to your paper. After consulting the most recent atlas available here (National Geographic Atlas of The World, 1981) I can not find a country called "French Guyana" as indicated in your title, and throughout the paper. Instead, it is clearly identified as "French Guiana!" Former "British Guiana" has become "Guyana;" old "Dutch Guiana" ....) "Suriname." but "French Guiana" has remained unchanged. Vive La France!

original  
2nd draft

ELEMENTS FOR A MYCOLOGICAL INVENTORY OF  
THE VICINITY OF "SAUT PARARE" (ARATAYE RIVER)  
AND "NOURAGUES INSELBERG" (FRENCH GUIANA)  
V. HETEROBASIDIOMYCETIDEAE

Régis COURTECUISSÉ (1)  
and Bernard LOWY (2)

(1) Laboratoire de Botanique et Cryptogamie; Faculté de Pharmacie,  
3, rue du Professeur Laguesse, F.59045 -LILLE Cédex (FRANCE); (2)  
Botany Department; Louisiana State University; BATON ROUGE; La 70803  
(USA).

SUMMARY: The authors give a description and illustrations of macro-  
and micromorphological features for the heterobasidiomycetous material  
collected in French Guiana by RC in 1988. Pseudohydnum gelatinosum  
var. bisporum Lowy et Courtec. and Dacryopinax sp. Lowy et Courtec.  
are proposed as new.

RESUME: Les auteurs donnent une description et des illustrations des  
caractères macro- et micromorphologiques pour le matériel appartenant  
aux Hétérobasidiomycètes, récolté en 1988 par RC en Guyane Française.  
Pseudohydnum gelatinosum var. bisporum et Dacryopinax sp. sont  
proposés comme nouveaux.

KEY-WORDS: Mycoflora, French Guiana, Heterobasidiomycetidae,  
Auricularia, Calocera, Dacryopinax, Ditiola, Pseudohydnum,  
Tremella.

INTRODUCTION:

After dealing with Hygrophoraceae, Pluteaceae  
(COURTECUISSÉ, 1989, 1990), and Russulaceae (COURTECUISSÉ and BUYCK,  
1990), we present in this paper a survey of the heterobasidiomycetous  
material collected in French Guiana during a mission organized by the  
Muséum of Paris. Rather rich collections were made, with sixteen  
samples. Field notes were gathered on fresh material, and some  
coloured plates and slides made. Determinations by RC of the dried  
material took place after coming back to the laboratory. BL confirmed  
some identifications and determined some unnamed specimens.

Some species were previously known from French Guiana:  
Auricularia fuscosuccinea (Mont.)Farlow and A. polytricha were noted  
by LOWY (1971), as well as Dacryopinax spathularia (Schw.)Martin,  
the two latter being already mentioned by Montagne (1854),  
respectively under the names Hirneola polytricha + H. nigra and  
Guepinia cohaerens. Septobasidium leprieurii (Mont.)Pat. and  
S. rhabarbarinum (Mont.)Bres. were cited respectively by DENNIS (1970)  
and MONTAGNE (l.c., s.n. Daedalea) followed by RYVARDEN (1982) who  
re-studied the type. A single species of Tremella, viz. T. aurantia  
Schw.:Fr. was also listed by MONTAGNE (l.c.).

Sorry for my mistake concerning your citation of this species in  
Digitized by the Herbarium Insularis for Botanical Documentation, it seems  
better this way.

Our collections range from Auricularia (5 specimens), to Calocera (1), Dacryopinax (4), Ditiola (1), Pseudohydnum (1) and Tremella (4). Most of the taxa are well known from neotropical areas but a variety is proposed as new, viz. Pseudohydnum gelatinosum fo. bisporum as well as a species, viz. Dacryopinax sp.

KEY TO THE DESCRIBED TAXA:

I. AURICULARIACEAE: Basidiocarp gelatinous, more or less auriform; metabasidia cylindrical, becoming transversely 3-septate.

- 1. Hymenium poroid-reticulate: Auricularia delicata
- 1. Hymenium non poroid-reticulate: A. polytricha.

II. DACRYMYCETACEAE: Basidiocarp gelatinous, pulvinate, lobate to substipitate.

- 1. Erect, digitately branched: Calocera coralloides
- 1. Not digitately branched: cf. 2
- 2. Stipitate, pileate; hyphae heterogeneous: Ditiola radicata

2. Pileus spathulate to expanded-orbiculate; hyphae homogeneous: cf. 3

3. Pileus spathulate, simple to branched, orange-yellow: Dacryopinax spathularia (= D. fissa)

3. Pileus foliose, deeply lobed, with brownish tints:

D. indacocheae

3. the new species

III. TREMELLACEAE: Basidiocarp gelatinous, variously cerebriform to lobate; metabasidia subspherical, becoming cruciate-septate.

1. Hymenium spiny: Pseudohydnum gelatinosum

1. Hymenium without spines: cf. 2

2. Hyaline to whitish, sparsely lobate, drying nearly effused: Tremella fibulifera

2. Yellow, orange or brownish pigments predominating: cf. 3

3. Foliose, brownish when fresh, drying darker:

T. fimbriata

3. Cerebriform to lobate, with yellow-orange pigments:

T. lutescens.

DESCRIPTION OF THE TAXA:

I. AURICULARIACEAE:

- 1. Auricularia delicata (Fr.) Hennings in Bresadola, Hennings et Magnus 1893 Bot. Jahrb. 17:492
- = ? Merulius affinis Junghuhn 1839 Batav. Gen. Verh. 17:76
- (see LOWY, 1971 for further synonymy).

Macroscopic description (Fig. 1):

Basidiocarp pileate, more or less orbicular, firm to gelatinous, sessile. Abhymenial surface shortly pilose. Hymenophoral surface pale yellowish, then light reddish brown, becoming poroid-reticulate. Medulla lacking.

Microscopic description:

Spores (Fig. 2) 10-17 x 4.5-6 um, cylindrical to somewhat allantoid, hyaline with irregular internal droplets and guttules. Probasidia cylindrical clavate; metabasidia (Fig. 3) becoming transversely 3-septate, 28-40 x 4-7 um, the last article easily

*It is pleasant that the alphabetic order I adopted fits with the systematic one! Auriculariaceae then Daucrymycetaceae then Tremellaceae ...!*

*→ I think preferable not to repeat your complete synonymy but only to refer to it.*

collapsed, with basal clamp.

Hyphae (Fig.4) x 1-3,5 um, interwoven in a gelatinous matter, more or less branched and anastomosing, with clamp connections. Some hyphidia with dendroid apex present, x 1-3 um.

Pileipellis (Fig.5) with a pseudoparenchymatous layer with more or less isodiametrical cells 10-25 x 5-20 um, and dermatocystidia of two types. First type marasmioid, i.e. clavate diverticulate, brown, 15-30 x 10-25 um. Second type setiform up to 130 x 7 um with a thickened wall up to 2,5 um, sometimes associated with a inflated and diverticulate base resembling the first type, but more often with a bulbous, smooth base, seldom forked.

**Collections:**

- "Saut Pararé" (Arataye river), on a wooden beam of the building at the camp. 27.02.1988. Coll. and Det.:RC; n°RC/GF88.354 (PC)

- Vicinity of the "Saut Pararé" (Arataye river), on a fallen trunk. 2.03.1988. Coll. and Det.:RC, n°RC/GF88.457 (PC)

**Discussion:**

These collections are typical of A.delicata, as described by LOWY (1971). This species is rather common throughout all the Neotropics but was so far not reported from French Guiana. Countries where this fungus occurs are summarized as follow (from LOWY, 1971, or if from other references, those noted into brackets): Argentina, Bolivia, Brazil, British Honduras, China (DU FU et al, 1983; TAN et WU, 1986), Colombia, Congo (BRESADOLA, 1911), Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Ethiopia (BRESADOLA, 1894), Guatemala, Haiti, Honduras, India (NATARAJAN et KOLANDAVELU, 1980) Jamaica, Java (BRESADOLA, 1907), Mexico, Panama, Peru, Puerto Rico, St.Croix, Trinidad, Venezuela.

2. Auricularia polytricha (Mont.)Saccardo 1885 Att.R.Inst.Ven. VI,3:722

(for the synonymy, see LOWY, 1971).

**Macroscopic description (Fig.6)**

Basidiocarp pileate, cupulate, up to 10 cm broad, tough to gelatinous. Abhymenial surface densely pilose. Hymenium dark, brown to purplish brown, smooth to somewhat rugulose. Medulla present, thin.

**Microscopic description:**

Spores (Fig.7) 11-16 x 5-6 um, cylindrical to subballantoid, hyaline.

Probasidia cylindrical, metabasidia (Fig.8) becoming transversely 3-septate, 40-60 x 4-6 um.

Hyphae x 1-4 um, interwoven in a gelatinous layer, with clamp connections.

Pileipellis, consisting of a layer of more or less isodiametrical cells and dense setiform dermatocystidia (Fig.9) up to 300 x 5 um with a thickened wall, up to 2-(2,5) um.

**Collections:**

- Vicinity of the "Saut Pararé" (Arataye River), on dead wood of a fallen trunk. 27.02.1988. Coll. and Det.:RC, n°RC/GF88.353 (PC).

- Same locality at some distance, on dead wood. 7.03.1988. Coll. and Det.:RC, n°RC/GF88.527 (PC).

- Same locality at some distance, on a dead trunk. 8.03.1988. Coll. and Det.: RC, n°RC/GF88.562 (PC).

**Discussion:**

Like the preceeding, those specimens fit well within the concept of A. polytricha, as described by LOWY (1971). The species was already mentioned from French Guiana and is also noted from (references as for the preceeding) Argentina, Australia (BRESADOLA et SACCARDO, 1890), Bahama Islands, Bermuda, Bolivia, Brazil, British Honduras, Canal Zone, Cameroon (BERTHET et BOIDIN, 1966), China (DU FU et al, 1983; TAN et WU, 1986), Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Ecuador, Ethiopia (BRESADOLA, 1894), Guatemala, Guyana, Haiti, India (BERKELEY, 1854), Indonesia in Sumatra Island (BOEDIJN, 1929), Jamaica, Japan (IMAZEKI et HONGO, 1965 and other authors), Mexico, New Zealand (MacNABB, 1964), Nicaragua, Pacific Islands (LOWY, 1952), Pakistan (AHMAD, 1945), Panama, Peru, Philippine Islands (BRESADOLA, 1915), Puerto Rico, Sao Tome et Principe (BRESADOLA et ROUMEGUERE, 1890), Surinam, Trinidad, Venezuela.

**II. DACRYMYCETACEAE:**

3. Calocera coralloides Kobayasi 1939 Sci.Rept.Tokyo Bunr.Daig. B4(74):225

**Macroscopic description (Fig.10):**

Basidiocarp erect, digitate, cylindrical to subulate, up to 5 x 1 mm, orange to reddish brown downwards, gelatinous and then tough. Hymenium amphigenous, smooth.

**Microscopic description:**

Spores (Fig.11) 7-10 x 4-5 um, slightly curved, 1-septate, the distal cell a little bit larger. Wall thin, easily collapsed.

Probasidia (Fig.12) 30-35 x 2-4 um, cylindrical, slightly clavate upwards. Metabasidia (Fig.12) up to 40 x 2-6 um, bifurcate, easily collapsed. Sterigmata up to 10 um.

Hyphae with gelatinous, punctate to asperulate ciliate wall, curved in the subhymenial layer. Flesh with densely agglutinate parallel hyphae.

Sterile zone of the basidiocarp ("stipe") covered with short hairs (Fig.13), up to 15 x 4 um.

**Collection:**

- Vicinity of the "Saut Pararé" (Arataye River), on the bark of a fallen branch. 5.03.1988. Coll. and Det.: RC, n°RC/GF88.503 (PC)

**Discussion:**

This rare species, previously known from Japan and Bolivia (LOWY, 1971) is new to the mycoflora of French Guiana. That is the second record from South America, as far as we know.

4. Dacryopinax indacocheae Lowy 1959 Mycologia 51:848

**Macroscopic description (Fig.14)**

Basidiocarp gelatinous, up to 20 mm broad, irregularly orbicular or spatulate, dirty dark orange then milky orange, translucent, shining. Stipe (sterile zone) short and thick-set, weakly

differentiated. Lower surface less shining, somewhat velvety.

**Microscopic description:**

Spores (Fig.15) 8-10 x 2,8-3,2 um, narrowly allantoid or subcylindrical, sometimes constricted, 1-3 septate. Wall and septae thin. Some spores were seen germinating little spherical conidia x 1,5 um with a broad "apiculus".

Probasidia (Fig.15) up to 20 x 3 um cylindrical to clavate subcapitate with a slightly thickened wall. Metabasidia (Fig.15) up to 30 x 4-5 um, bifurcate, with sterigmata up to 10 x 2 um, organized in a very dense hymenium, with some sclerified clavate cells, up to 15 x 10 um.

Flesh gelified made of thin-walled (up to 1 um) hyphae x 2-4 um. Clamps none.

Upper surface (sterile) with thick-walled, clavate to elliptical or pyriform cells (Fig.16), up to 30 x 20 um. Wall up to 4 um.

**Collection:**

- Around the "Nouragues mountain" camp, on a laying rotten trunk. 17.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.093 (PC)

**Discussion:**

*new*

It is with few hesitation that we present this determination because D.indacocheae is usually somewhat larger with a lobed basidiocarp, presents cylindrical dicharyoparaphyses which were not observed here; furthermore its conidia (secondary spores) are larger, up to 2-2,5 um in diameter. Maybe the youth of the involved collection could explain discrepancies, the basidiocarp and conidia being immature, smaller than at maturity, and the hymenium being still too dense to let the dicharyoparaphyses appear. Nevertheless, the fructification showed by LOWY (1959:842, fig.1, right) looks like our collection. This taxon is the closest to our collection, and we propose D.indacocheae as new to French Guiana. It was previously known from Bolivia and Brazil (LOWY, 1971).

5 Dacryopinax spathularia (Schw.:Fr.)Martin 1948 Lloydia 11:116  
= Dacryopinax fissa (Berk.)Martin 1948 Lloydia 11:116  
(for complete synonymy, see LOWY, 1971)

**Macroscopic description (Fig.17):**

Basidiocarp up to 10 x 4-5 mm, erect, spathulate to somewhat furcate or even polycephalic at apex, the sides slightly curved inside, yellow orange, the base darker, with a well marked stipe, villose like the sterile surface.

**Microscopic description:**

Spores (Fig.18) 8-10,5 x 4-5,5 um, elliptical subphaseoliform, the apex often inflated, subpyriform on face view, 1-septate when mature, easily collapsed after septation.

Probasidia (Fig.19) cylindrical to clavate, 20-30 x 2-5 um; metabasidia (Fig.20) bifurcate, with sterigmata up to 10 x 2 um. Hyphidia seldom, cylindrical, not branched.

Flesh gelified, made of hyphae x 2-5 um with "villose" walls. Clamps none.

**Collection:**

- Around the "Nouragues Mountain" camp. Fallen trunk of a Sterculiaceae tree. 15.02.1988. Coll. and Det.:RC, n°RC/GF88.040 (PC)
- Around the "Nouragues Mountain" camp. On a rotten trunk. 19.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.157 (PC)
- The species has been seen many other times, in its typical form, in the area of Nouragues mountains and Saut Pararé.

Discussion: new

The above-cited collections fit very well in the concept of Dacryopinax spathularia, as described by LOWY (1971). It is a very common species all over the tropical and subtropical belt, which can penetrate some temperate areas and it would become wearisome to enumerate all the countries where it occurs.

The hierarchic level of D.fissa is rather questionable. Some authors consider it as synonymous with Dacryopinax spathularia (MARTIN, 1948; LOWY, 1971), but others prefer to consider it a good species (ZANG MU, 1985). Indeed, microscopic features are almost identical, and the only discrepancy lies in the macroscopic appearance of the basidiocarps, much more furcate and polycephalic at apex. This special pattern is disturbing enough to make the determination problematic in the field. But, examination of the type (Univ. of Iowa) by one of us (BL) proves that it is merely an extreme morphological variation and we consider both taxa as conspecific.

- 6. Ditiola radicata (Alb.et Schw.:Fr.)Fr. 1822 Syst.Mycol.2:170
- = Helotium radicatum Alb.et Schw. 1805 Consp.Fung.:348
- = Ditiola luteoalba var.radicata (AS:Fr.)Quélet 1886
- Enchir.Fung.:227
- = Guepinia radicata (AS:Fr.)Costantin et Dufour 1891
- Nouv.Fl.:205
- = Dacrymyces deliquescens fo.radicata (AS:Fr.)Bourdot et Galzin 1928 Hym.Fr.:68
- = Dacrymyces radicatus (AS:Fr.)Donk 1933
- Meded.Ned.Mycol.Ver. 18-20:120
- (for more synonyms, see LOWY, 1971)

Macroscopic description (Fig.22)

Basidiocarp orange, erect, tough gelatinous, with a sterile stipe and a lobate spathulate apex, up to 6 mm high. Hymenium amphigenous.

Microscopic description:

Spores (Fig.23) 10-13 x 4-5 um, cylindrical to elongate elliptical, slightly curved, fragile and easily collapsed, becoming 1-septate when mature.

Probasidia (Fig.24) cylindrical to clavate, up to 40 x 4 um. Metabasidia collapsed in our collection, but distinctly 2-furcate.

Structure monomitic, but with thick-walled hyphae in the cortical layer of the stipe x 1,5-2,5-(3) um, strongly gelified. Hyphae of the capitate apex x 1-3 um, thin-walled. Clamps none.

Collection:

- Vicinity of the "Saut Pararé" on the Anataye river. On dead wood. 1.03.1988. Coll.:RC; Det.:BL; n°RC/GF88.419 (PC)

Discussion:

This collection fits into the concept of Ditiola, as redescrbed by KENNEDY (1958). The heterogeneous structure is rather typical. It is difficult to give chorographical data about this species, because the synonymy seems rather confuse. However, ~~it is noticeable that~~ it occurs in tropical areas as well as in temperate ones.

→ I forgot to erase this ... next time of corrections!

III. TREMELLACEAE:

7. Pseudohydnum gelatinosum var. bisporum Lowy et Courtecuisse var. nov.

A typo differt metabasidia bisporibus. Typus in Guyana Gallica lectus, n°RC/GF88.273 in PC conservatur.

*The latin will be checked by a professional latinist.*

Macroscopic description:

Basidiocarp quite typical of the type variety (see LOWY, 1971).

Microscopic description:

Spores (Fig.25) 5,5-8,5 x 5,5-7,5 um, shortly elliptical to subglobose, guttulate, germinating with a dorsal appendix. Very few quite elliptical (secondary?) spores have been seen.

Probasidia (Fig.26) clavate or subglobose, up to 10 x 8 um, becoming 2-septate, very seldom cruciate-septate, but metabasidia (Fig.27) constantly 2-septate (for some reason, 2 of the probasidial cells from cruciate basidia do not form sterigmata), up to 12 x 10 um.

Hyphae x 1-3 um, with clamps.

Surface of the pileus covered with hyphae x 2-10-(15) um, erect in a subtrichodermial structure, with intracellular beige-greyish pigmentation, very obvious in mediopellis.

Collection:

-Vicinity of the Saut Pararé on the Anataye river. On rotten wood. 25.02.1988. Coll.:RC; n°RC/GF88.273 (PC)

Discussion:

The variability of this subcosmopolitan species included so far the var. paucidentatum Lowy 1959, known from Bolivia. The typical 4-spored P. gelatinosum is known from Guyana (LOWY, 1971) and from several other neotropical areas, and we found in the world literature no mention of 2-spored collections. This seems remarkable enough to establish a new variety.

8. Tremella fibulifera A.Moeller 1895 Protobas.:119

Macroscopic description:

Basidiocarp soft gelatinous, pulvinate then folded and finally irregularly foliose, pure white then subhyaline white, up to 2-2,5 cm in diameter and height; drying to a horny pale yellowish irregular and flat cushion.

Microscopic description:

Spores (Fig.27) 6-11 x 4-8 um, elliptical, heteromorphous because of the mixture of primary and secondary spores. Primary spores easily germinating by repetition through a secondary sterigma or

8,  
directly by repetitive budding. Among the I and II spores are some elliptical elements (spores III?) 2-4 x 1-3 um.

Probasidia 10-18 x 5-12 um, subspherical to elliptical. Metabasidia (Fig.28) up to 20 x 15 um, cruciate-septate, 4-spored. Hyphae (Fig.29) strongly gelatinized, x 4-8 um, rather thick-walled (up to 1 um thick) bearing numerous, complex and sometimes loop-like clamps.

Conidiophores (Fig.30) also present, cylindrical to fusiform, producing elongate elements, 8-18 x 2-3 um.

#### Collections:

- Around the "Nouragues Mountain" camp. On a lying trunk. 19.02.1988. Coll.:RC; Det.:RC, n°RC/GF88.151 (PC)
- Surroundings of the "Saut Pararé" on the Arataye river. On the bark of a lying trunk. 2.03.1988. Coll.:RC, Det.:RC, n°RC/GF88.452 (PC)

#### Discussion:

The collections are quite similar to those described by LOWY (1971) and BANDONI et OBERWINKLER (1983). The production of spores (primary basidiospores, secondary and perhaps tertiary derived ones as well as conidiospores, probably of different types) seems to be very complex in this species as shown by our own sketches and description and by the latter above-cited paper. In this one, the authors suggest that some of the observed elements may come from a tremellaceous parasite. This might deserve a more careful study in the field and on fresh material, because, it is probable that, if any, the parasite may exist in the specimens as a rule. Indeed, our material shows the same pattern that the "single authentic specimen" described by BANDONI et OBERWINKLER. The association between the two hypothetical species might be specific and constant.

The species, previously known from Brazil, Columbia, Costa Rica, Panama (LOWY, 1971) is new to French Guiana.

9. Tremella fimbriata Fr.:Fr. 1822 Syst.Mycol.2:212  
= T.foliacea Pers. 1822 Mycol.europ.1:101

#### Macroscopic description:

Basidiocarp up to 6 cm, brownish orange, foliose or auricularioid, firm gelatinous.

#### Microscopic description:

Spores not clearly seen, but several elliptical apiculate elements (Fig.31), 8-10 x 6-7 um present.

Probasidia spherical, x 10-15 um. Metabasidia (Fig.32) up to x 20 um, cruciate-septate, 4-spored, mainly arranged in groups.

Flesh gelatinized, made of elliptical to spherical elements mixed with hyphae (Fig.33) x 1,5-2,5 um, showing numerous swellings up to x 10 um and intracellular pigment. Clamps numerous.

Beside the presumed basidiospores were seen a lot of apical or pleural labile conidiophores (Fig.34) up to 8 x 5 um (probably acting themselves as conidia), bearing tiny (secondary?) conidiospores, growing up to x 2,5-4 um after maturation.

#### Collection:

- Vicinity of the Saut Pararé on the Arataye river. On dead wood. 8.03.1988. Coll.:RC; Det.:BL; n°RC/GF88.576 (PC)

**Discussion:**

The sporal diversity of this specimens seems also to be rather complex, and might be better studied in fresh material. Such a pattern seems never to have been noticed in the temperate areas where the species also occurs. It could specifically occur in the Tropics. The taxonomy of this group being rather imperfectly known, it seems difficult to propose a correct chorographical outline for this taxon.

- 10. Tremella cf lutescens Fr.:Fr. 1822 Syst.Mycol.2:213  
 = Tremella mesenterica Fr.:Fr. 1822 l.c.:593

**Macroscopic description:**

Basidiocarp up to 25 mm in diameter, cerebriform to lobate contortate, adherent to partially free, gelatinous, orange coloured, with some shade of greenish by place, with some parts much more red orange or vermillion, especially on the folds.

**Microscopic description:**

Spores (Fig.35) 6-7 x 4-5 um, shortly elliptical subglobose to more or less elliptical, guttulate, germinating by secondary sterigmata.

Probasidia (Fig.36) x 12-15 um, associated with a conidiophore and a complex clamp system. Metabasidia cruciate-septate, 4-spored, up to 20 x 13 um.

**Collection:**

- Vicinity of the Saut Pararé on the Arataye river; on fallen branches. 25.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.284 (PC)

**Discussion:**

The smaller spores probably originate in the fact that we dealt with secondary ones. It is often difficult to distinguish between primary, secondary and eventually tertiary spores in a single mature basidiocarp, and heterogeneity in size and shape can easily confuse the interpretation of the true basidiospores as indicated by LOWY (1971). Our specimens probably fits into the concept of T.lutescens sensu lato, inclusive of T.mesenterica. In that wide sense, the species is almost cosmopolitan but is presumably new to French Guiana.

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ELEMENTS FOR A MYCOLOGICAL INVENTORY OF  
 THE SURROUNDINGS OF "SAUT PARARE" (ARATAYE RIVER)  
 AND "NOURAGUES INSELBERG" (FRENCH GUYANA)  
 V. HETEROBASIDIOMYCETIDAE

2<sup>nd</sup> Draft  
 not corrected

Régis COURTECUISSÉ (1)  
 and Bernard LOWY (2)

(1) Laboratoire de Botanique et Cryptogamie; Faculté de Pharmacie,  
 3, rue du Professeur Laguesse, F.59045 -LILLE Cédex (FRANCE); (2)  
 Botany Department; Louisiana State University; BATON ROUGE; La 70803  
 (USA).

SUMMARY: The authors give a description and illustrations of macro-  
 and micromorphological features for the heterobasidiomycetous material  
 collected in French Guyana by RC in 1988. Pseudohydnum gelatinosum  
var. bisporum Lowy et Courtec. is proposed as new.

RESUME: Les auteurs donnent une description et des illustrations des  
 caractères macro- et micromorphologiques pour le matériel appartenant  
 aux Hétérobasidiomycètes, récolté en 1988 par RC en Guyane Française.  
Pseudohydnum gelatinosum var. bisporum est proposée comme nouvelle.

KEY-WORDS: Mycoflora, French Guyana, Heterobasidiomycetidae,  
Auricularia, Calocera, Dacryopinax, Ditiola, Pseudohydnum,  
Tremella.

#### INTRODUCTION:

After dealing with Hygrophoraceae, Pluteaceae  
 (COURTECUISSÉ, 1989, 1990), and Russulaceae (COURTECUISSÉ and BUYCK,  
 1990), we present in this paper a survey of the heterobasidiomycetous  
 material collected in French Guyana during a mission organized by the  
 Muséum of Paris. Rather rich collections were made, with sixteen  
 samples. Field notes were gathered on fresh material, and some  
 coloured plates and slides made. Determinations by RC of the dried  
 material took place after coming back to the laboratory. BL confirmed  
 some identifications and determined some unnamed specimens.

Some species were previously known from French Guyana:  
Auricularia fuscosuccinea (Mont.)Farlow and A. polytricha were noted  
 by LOWY (1971), as well as Dacryopinax spathularia (Schw.)Martin,  
 the two later being already mentioned by Montagne (1854), respectively  
 under the names Hirneola polytricha + H. nigra and Guepinia  
cohaerens. Septobasidium leprieurii (Mont.)Pat. and  
S. rhubarbarinum (Mont.)Bres. were cited respectively by DENNIS (1970)  
 and MONTAGNE (l.c., s.n. Daedalea) followed by RYVARDEN (1982) who  
 re-studied the type. A single species of Tremella, viz. T. aurantia  
 Schw.:Fr. was also listed by MONTAGNE (l.c.) but this taxon was  
 omitted by LOWY (1971).

Our collections range from Bolbitis (5 specimens), to

Calocera (1), Dacryopinax (2), Ditiola (1), Guepinia (1), Pseudohydnum (1) and Tremella (5). All species were previously known, but a variety is proposed as new, viz. Pseudohydnum gelatinosum fo. bisporum.

#### KEY TO THE DESCRIBED TAXA:

#### DESCRIPTION OF THE TAXA:

1. Auricularia delicata (Fr.) Hennings in Bresadola, Hennings et Magnus 1893 Bot. Jahrb. 17:492
  - = Laschia delicata Fr. 1830 Linnaea 5:553
  - = ? Merulius affinis Junghuhn 1839 Batav. Gen. Verh. 17:76
  - = Laschia tremellosa Fr. 1849 Summ. Veg. Scand.:325
  - = Auricularia tremellosa (Fr.) Patouillard 1887 J. Bot. 1:226
  - = Auricula delicata (Fr.) O. Kuntze 1898 Rev. Gen. Pl. 3:446
  - = Auricula tremellosa (Fr.) O. Kuntze 1898 l.c.
  - = Hirneola delicata (Fr.) Bres.
  - = Auricularia moelleri Lloyd 1918 Mycol. Writ. 5:784
  - = Auricularia hunteri Lloyd 1918 l.c.:808
  - = Auricularia crassa Lloyd 1924 Mycol. Writ. 7:1275

#### Macroscopic description (Fig.1):

Basidiocarp pileate, more or less orbicular, firm to gelatinous, sessile. External surface shortly pilose. Hymenophoral surface pale yellowish, then light reddish brown, becoming poroid-reticulate. Medulla lacking.

#### Microscopic description:

Spores (Fig.2) 10-17 x 4,5-6  $\mu$ m, cylindrical to somewhat allantoid, hyaline with irregular internal droplets and guttules.

Probasidia cylindrical clavate; metabasidia (Fig.3) becoming transversely 3-septate, 28-40 x 4-7  $\mu$ m, the last article easily collapsed, with basal clamp.

Hyphae (Fig.4) x 1-3,5  $\mu$ m, interwoven in a gelatinous matter, more or less branched and anastomosing, with clamp connections. Some hyphidia with dendroid apex present, x 1-3  $\mu$ m.

Pileipellis (Fig.5) with a pseudoparenchymatous layer with more or less isodiametrical cells 10-25 x 5-20  $\mu$ m, and dermatocystidia of two types. First type marasmioid, i.e. clavate diverticulate, brown, 15-30 x 10-25  $\mu$ m. Second type setiform up to 130 x 7  $\mu$ m with a thickened wall up to 2,5  $\mu$ m, sometimes associated with a inflated and diverticulate base reminding the first type, but more often with a bulbous, smooth base, seldom forked.

#### Collections:

- "Saut Pararé" (Arataye river), on a wooden beam of the building at the camp. 27.02.1988. Coll. and Det.:RC; n°RC/GF88.354 (PC)
- Surroundings of the "Saut Pararé" (Arataye river), on a laying trunk. 2.03.1988. Coll. and Det.:RC, n°RC/GF88.457 (PC)

#### Discussion:

These collections are rather typical of A. delicata, as described by LOWY (1971). This species is rather common throughout all the Neotropics but was so far not mentioned from French Guyana.

Summarized countries where this fungus occurs are as follow (from LOWY, 1971, or if from other references, those noted into brackets): Argentina, Bolivia, Brazil, British Honduras, China (DU FU et al, 1983; TAN et WU, 1986), Colombia, Congo (BRESADOLA, 1911), Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Ethiopia (BRESADOLA, 1894), Guatemala, Haiti, Honduras, India (NATARAJAN et KOLANDAVELU, 1980) Jamaica, Java (BRESADOLA, 1907), Mexico, Panama, Peru, Puerto Rico, St.Croix, Trinidad, Venezuela.

2. Auricularia polytricha (Mont.) Saccardo 1885 Att.R.Inst.Ven. VI,3:722

- = Exidia polytricha Montagne in Belanger 1834 Voy.Indes:154
- = Exidia purpurascens Jungh. 1838 Prasm.:35
- = Exidia hispidula Berk. 1838 Ann.Mag.Nat.Hist. II,3:396
- = Exidia porphyrea Lév. 1844 Champ.Exot. II,2:218
- = Hirneola nigra Fries 1848 Fung.Nat.:27
- = Hirneola porphyrea (Lév.)Fr. 1848 l.c.
- = Hirneola polytricha (Mont.)Fr. 1849 K.Vet.AK.Handl.:46
- = Hirneola hispidula (Berk.)Berk. 1874 J.Linn.Soc.Bot.14:352
- = Auricula nigra (Fr.)O.Kuntze 1891 Rev.Gen.Pl.2:844
- = Auricula polytricha (Mont.)O.Kuntze 1891 l.c.
- = Auricula nigrescens (Sw.)Earle 1899 Bull.Torr.Bot.Cl.

26:633

- = Auricularia hispidula (Berk.)Farlow 1905 Bibl.Index 1:307
- = Auricularia nigrescens (Sw.)Farlow 1905 l.c.:308
- = Auricularia porphyrea (Lév.)Teixeira 1945 Bragantia 5:163 (synonymy from LOWY, 1971).

**Macroscopic description (Fig.6)**

Basidiocarp pileate, cupulate, up to 10 cm broad, tough to gelatinous. External surface densely pilose. Hymenium dark, brown to purplish brown, smooth to somewhat rugulose. Medulla present, thin.

**Microscopic description:**

Spores (Fig.7) 11-16 x 5-6 um, cylindrical to subballantoid, hyaline.

Probasidia cylindrical, metabasidia (Fig.8) becoming transversely 3-septate, 40-60 x 4-6 um.

Hyphae x 1-4 um, interwoven in a gelatinous layer, with clamp connections.

Pileipellis, consisting of a layer of more or less isodiametrical cells and dense setiform dermatocystidia (Fig.9) up to 300 x 5 um with a thickened wall, up to 2-(2,5) um.

**Collections:**

- Surroundings of the "Saut Pañaré" (Arataye River), on dead wood of a laying trunk. 27.02.1988. Coll. and Det.:RC, n°RC/GF88.353 (PC).

- Same locality at some distance, on dead wood. 7.03.1988. Coll. and Det.:RC, n°RC/GF88.527 (PC).

- Same locality at some distance, on a dead trunk. 8.03.1988. Coll. and Det.:RC, n°RC/GF88.562 (PC).

**Discussion:**

Like the preceding, those specimens fit well within the concept of A.polytricha, as described by LOWY (1971). The species was already mentioned from French Guyana and is also noted from (references as for the preceding) Argentina, Australia (BRESADOLA et

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SACCARDO, 1890), Bahama Islands, Bermuda, Bolivia, Brazil, British Guyana, British Honduras, Canal Zone, Cameroon (BERTHET et BOIDIN, 1966), China (DU FU et al, 1983; TAN et WU, 1986), Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Ecuador, Ethiopia (BRESADOLA, 1894), Guatemala, Haiti, India (BERKELEY, 1854), Indonesia in Sumatra Island (BOEDIJN, 1929), Jamaica, Japan (IMAZEKI et HONGO, 1965 and other authors), Mexico, New Zealand (MacNABB, 1964), Nicaragua, Pacific Islands (LOWY, 1952), Pakistan (Ahmad, 1945), Panama, Peru, Philippines Islands (BRESADOLA, 1915), Puerto Rico, Sao Tome et Principe (BRESADOLA et ROUMEGUERE, 1890), Surinam, Trinidad, Venezuela.

3. Calocera coralloides Kobayasi 1939 Sci.Rept.Tokyo Bunn.Daig. B4(74):225

**Macroscopic description (Fig.10):**

Basidiocarp erect, digitate, cylindrical to subulate, up to 5 x 1 mm, orange to reddish brown downwards, gelatinous and then tough. Hymenium amphigenous, smooth.

**Microscopic description:**

Spores (Fig.11) 7-10 x 4-5 um, slightly curved, 1-septate, the distal cell a little bit larger. Wall thin, easily collapsed.

Probasidia (Fig.12) 30-35 x 2-4 um, cylindrical, slightly clavate upwards. Metabasidia (Fig.12) up to 40 x 2-6 um, bifurcate, easily collapsed. Sterigmata up to 10 um.

Hyphae with gelatinous, punctate to asperulate ciliate wall, curved in the subhymenial layer. Flesh with densely agglutinate parallel hyphae.

Sterile zone of the basidiocarp ("stipe") covered with short hairs (Fig.13), up to 15 x 4 um.

**Collection:**

- Surroundings of the "Saut Pararé" (Arataye River), on the bark of a fallen branch. 5.03.1988. Coll.and Det.: RC, n°RC/GF88.503 (PC)

**Discussion:**

This rare species, previously known from Japan and Bolivia (LOWY, 1971) is new to the mycoflora of French Guyana. That is the second record from South America, as far as we know.

4. Dacryopinax indacocheae Lowy 1959 Mycologia 51:848

**Macroscopic description (Fig.14)**

Basidiocarp gelatinous, up to 20 mm broad, irregularly orbicular or spatulate, dirty dark orange then milky orange, translucent, shining. Stipe (sterile zone) short and thick-set, weakly differentiated. Lower surface less shining, somewhat velvety.

**Microscopic description:**

Spores (Fig.15) 8-10 x 2,8-3,2 um, narrowly allantoid or subcylindrical, sometimes constricted, 1-3 septate. Wall and septae thin. Some spores were seen germinating little spherical conidia x 1,5 um with a broad "apiculus".

Probasidia (Fig.15) up to 20 x 3 um cylindrical to clavate

5,  
subcapitate with a slightly thickened wall. Metabasidia (Fig.15) up to 30 x 4-5 um, bifurcate, with sterigmata up to 10 x 2 um, organized in a very dense hymenium, with some sclerified clavate cells, up to 15 x 10 um.

Flesh gelified made of thin-walled (up to 1 um) hyphae x 2-4 um. Clamps none.

Upper surface (sterile) with thick-walled, clavate to elliptical or pyriform cells (Fig.16), up to 30 x 20 um. Wall up to 4 um.

#### Collection:

- Around the "Nouragues mountain" camp, on a laying rotten trunk. 17.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.093 (PC)

#### Discussion:

It is with some doubts that we present that determination. D.indacocheae is usually somewhat larger with a lobed basidiocarp, presents cylindrical dicharyoparaphyses which were not observed here, and its conidia (secondary spores) are larger, up to 2-2,5 um in diameter. Maybe the youth of the involved collection could explain all of these discrepancies, the basidiocarp and conidia being immature, more little than at maturity, and the hymenium being still too dense to let the dicharyoparaphyses appear. Nevertheless, the fructification showed by LOWY (1959:842, fig.1, right) looks like our collection. Anyway, this taxon is the closest to our collection, and we propose D.indacocheae as new to French Guyana. It was previously known from Bolivia and Brazil (LOWY, 1971).

- 5 Dacryopinax spathularia (Schw.:Fr.)Martin 1948 Lloydia 11:116  
= Merulius spathularia Schw. 1822 Schr.Nat.Ges.Leipzig 1:97  
= Guepinia spathularia (Schw.:Fr.)Fr. 1828 Elench.Fung.2:32  
= Cantharellus spathularius (Schw.:Fr.)Schw. 1832  
Trans.Amer.Phil.Soc.II, 4:153  
= Guepiniopsis spathularia (Schw.)Patouillard 1900  
Ess.Tax.Hym.:30

#### Macroscopic description (Fig.17):

Basidiocarp up to 10 x 4-5 mm, erect, spatulate to somewhat furcate at apex, the sides slightly curved inside, yellow orange, the base darker, with a well marked stipe, villose like the sterile surface.

#### Microscopic description:

Spores (Fig.18) 8-10,5 x 4-5,5 um, elliptical subphaseoliform (slightly curved), the apex often inflated, subpyriform on face view, 1-septate when mature, easily collapsed after septation.

Probasidia (Fig.19) cylindrical to clavate, 20-30 x 2-5 um; metabasidia (Fig.20) bifurcate, with sterigmata up to 10 x 2 um. Hyphidia seldom, cylindrical, not branched.

Flesh gelified, made of hyphae x 2-5 um with "villose" walls. Clamps none.

#### Collection:

- Around the "Nouragues Mountain" camp. Lying trunk of a Sterculiaceae tree. 15.02.1988. Coll. and Det.:RC, n°RC/GF88.040 (PC)  
- The species has been seen many other times, under its typical form, in the area of Nouragues mountains and Saut Pararé.

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### Discussion:

The above-cited collections fits very well in the concept of Dacryopinax spathularia, as described by LOWY (1971). It is a very common species all over the tropical and subtropical belt, which can penetrate some temperate areas and it would become wearisome to enumerate all the countries where it occurs.

6. Dacryopinax fissa (Berk.) Martin 1948 Lloydia 11:116  
= Guepinia fissa Berk. 1843 Ann.Mag.Nat.Hist. I,10:383  
= Guepiniopsis fissa (Berk.) Patouillard 1889 Tab.Anal.Fung.  
2(7):70  
= ? Guepinia spathularia fo. lata Lloyd 1916 Mycol.Lett.  
63:11  
= Dacryopinax spathularia var. polycephala Lowy (ined.? on  
my herbarium sheet !)

### Macroscopic description (Fig.21)

Like the preceding one, but apex of basidiocarp furcate to polycephalic. The hymenium may seem amphigenous on some specimens.

### Microscopic description:

Like D.spathularia.

### Collection:

-Around the "Nouragues Mountain" camp. On a rotten trunk.  
19.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.157 (PC)

### Discussion:

The hierarchic level deserved by this taxon is rather questionable. Some authors consider it as synonymous with Dacryopinax spathularia (MARTIN, 1948; LOWY, 1971), but others prefer to consider it a good species (ZANG MU, 1985). Indeed, microscopic features are almost identical, and the only discrepancy lies in the macroscopic appearance of the basidiocarps, much more furcate and polycephalic at apex. This special pattern is disturbing enough to make the determination problematic in the field, and it is possible that the varietal rank would be preferable. On the other hand, LOWY (1971) offers the possibility of a chorological argument. The neotropical (and Japanese ?) specimens may better belong here, collections from other areas fitting better into the typical forms of D.spathularia (in average of course). Because of the partly admitted synonymy between the two taxa, it is difficult, at present to draw the geographical repartition of what we call D.fissa.

7. Ditiola radicata (Alb.et Schw.:Fr.) Fr. 1822 Syst.Mycol.2:170  
= Helotium radicatum Alb.et Schw. 1805 Consp.Fung.:348  
= Ditiola luteoalba var. radicata (AS:Fr.) Quélet 1886  
Enchir.Fung.:227  
= Guepinia radicata (AS:Fr.) Costantin et Dufour 1891  
Nouv.Fl.:205  
= Dacrymyces deliquescens fo. radicata (AS:Fr.) Bourdot et  
Galzin 1928 Hym.Fr.:68  
= Dacrymyces radicatus (AS:Fr.) Donk 1933  
Meded.Ned.Mycol.Ver. 18-20:120

### Macroscopic description (Fig.22)

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Basidiocarp orange, erect, tough gelatinous, with a sterile stipe and a lobate spatulate apex, up to 6 mm high. Hymenium amphigenous.

**Microscopic description:**

Spores (Fig.23) 10-13 x 4-5 um, cylindrical to elongate elliptical, slightly curved, fragile and easily collapsed, becoming 1-septate when mature.

Probasidia (Fig.24) cylindrical to clavate, up to 40 x 4 um. Metabasidia collapsed in our collection, but distinctly 2-furcate.

Structure monomitic, but with thick-walled hyphae in the cortical layer of the stipe x 1,5-2,5-(3) um, strongly gelified. Hyphae of the capitate apex x 1-3 um, thin-walled. Clamps none.

**Collection:**

-Surroundings of the "Saut Pararé" on the Arataye river. On dead wood. 1.03.1988. Coll.:RC; Det.:BL; n°RC/GF88.419 (PC)

**Discussion:**

This collection fits into the concept of Ditiola, as redescribed by KENNEDY (1958). The heterogenous structure is rather typical. It is difficult to give chorological data about this species, because the synonymy seems rather confuse. However, it is noticeable that it occurs in tropical areas as well as in temperate ones.

8. Pseudohydnum gelatinosum var.bisporum Lowy et Courtecuisse var.nov.

A typo differt metabasidiae bisporibus. Typus in Guyana Gallica lectus, n°RC/GF88.273 in PC conservatur.

**Macroscopic description:**

Basidiocarp quite typical of the type variety (see LOWY, 1971).

**Microscopic description:**

Spores (Fig.25) 5,5-8,5 x 5,5-7,5 um, shortly elliptical to subglobose, guttulate, germinating with a dorsal appendix. Very few quite elliptical (secondary?) spores have been seen.

Probasidia (Fig.26) clavate or subglobose, up to 10 x 8 um, becoming 2-septate, very seldom cruciate-septate, but metabasidia (Fig.27) constantly 2-septate (for some reason, 2 of the probasidial cells from cruciate basidia do not form sterigmata), up to 12 x 10 um.

Hyphae x 1-3 um, with clamps. No cystidia in hymenium.

Surface of the pileus covered with hyphae x 2-10-(15) um, erect in a subtrichodermial structure, with intracellular beige-greyish pigmentation, very obvious in mediopellis.

**Collection:**

-Surroundings of the Saut Pararé on the Arataye river. On rotten wood. 25.02.1988. Coll.:RC; n°RC/GF88.273 (PC)

**Discussion:**

The variability of this common subcosmopolitan species

enclosed so far the var. paucidentatum Lowy 1959, known from Bolivia. The typical 4-spored P. gelatinosum is known from Guyana (LOWY, 1971) and from several other neotropical areas, and we found in the world literature no mention of 2-spored collections. This seems remarkable enough to establish a new variety.

9. Tremella fibulifera A.Moeller 1895 Protobas.:119

**Macroscopic description:**

Basidiocarp soft gelatinous; pulvinate then folded and finally irregularly foliose; pure white then subhyaline white, up to 2-2,5 cm in diameter and height; drying to a horny pale yellowish irregular and flat cushion.

**Microscopic description:**

Spores (Fig.27) 6-11 x 4-8 um, elliptical, heteromorphous because of the mixture of primary and secondary spores. Primary spores easily germinating by repetition through an horn or directly by repetitive budding. Among the I and II spores exist some elliptical elements (spores III ?) 2-4 x 1-3 um.

Probasidia 10-18 x 5-12 um, subspherical to elliptical. Metabasidia (Fig.28) up to 20 x 15 um, cruciate-septate, 4-spored.

Hyphae (Fig.29) strongly gelatinized, x 4-8 um, rather thick-walled (up to 1 um thick) bearing numerous, complex and sometimes loop-like clamps.

Conidiophores (Fig.30) also present, cylindrical to fusiform, producing elongate elements, 8-18 x 2-3 um.

**Collections:**

- Around the "Nouragues Mountain" camp. On a lying trunk. 19.02.1988. Coll.:RC; Det.:RC, n°RC/GF88.151 (PC)

- Surroundings of the "Saut Pararé" on the Arataye river. On the bark of a lying trunk. 2.03.1988. Coll.:RC, Det.:RC, n°RC/GF88.452 (PC)

**Discussion:**

The collections are quite similar to those described by LOWY (1971) and BANDONI et OBERWINKLER (1983). The production of spores (primary basidiospores, secondary and perhaps tertiary derived ones as well as conidiospores probably of different types) seems to be very complex in this species as shown by our own sketches and description and by the later above-cited paper. In this one, the authors suggest that some of the observed elements may come from a tremellaceous parasite. This might deserve a more careful study in the field and on fresh material, because, it is probable that, if any, the parasite may exist in the specimens as a rule. Indeed, our material shows the same pattern that the "single authentic specimen" described by BANDONI et OBERWINKLER. The association between the two hypothetical species might be specific and constant. It would be interesting to study that for people having the opportunity to deal microscopically with fresh material of T. fibulifera.

The species, previously known from Brazil, Columbia, Costa Rica, Panama (LOWY, 1971) is new to French Guyana.

10. Tremella fimbriata Fr.:Fr. 1822 Syst.Mycol.2:212

**Macroscopic description:**

9

Basidiocarp up to 6 cm, brownish orange, foliose or  
reticularioid, firm gelatinous.

**Microscopic description:**

Spores not clearly seen, but several elliptical apiculate elements (Fig.31), 8-10 x 6-7 um present.

Probasidia spherical, x 10-15 um. Metabasidia (Fig.32) up to x 20 um, cruciate-septate, 4-spored, mainly arranged in groups.

Flesh gelatinized, made of elliptical to spherical elements mixed with hyphae (Fig.33) x 1,5-2,5 um, showing numerous swellings up to x 10 um and intracellular pigment. Clamps numerous.

Beside the presumed basidiospores were seen a lot of apical or pleural labile conidiophores (Fig.34) up to 8 x 5 um (probably acting themselves as conidia), bearing tiny (secondary ?) conidiospores, growing up to x 2,5-4 um after maturation.

**Collection:**

- Surroundings of the Saut Pararé on the Arataye river. On dead wood. 8.03.1988. Coll.:RC; Det.:BL; n°RC/GF88.576 (PC)

**Discussion:**

The sporal diversity of this specimens seems also to be rather complex, and might be better studied on fresh material. Such a pattern seems never to have been noticed in the temperate areas where the species also occurs. - It could specifically occur in the Tropics. The taxonomy of this group being rather unperfectly known, as far as we know, it seems difficult to propose a correct chorological outline for this taxon.

11. Tremella cf lutescens Fr.:Fr. 1822 Syst.Mycol.2:213  
= Tremella mesenterica Fr.:Fr. 1822 l.c.:593

**Macroscopic description:**

Basidiocarp up to 25 mm in diameter, cerebriiform to lobate contortate, adherent to partially free, gelatinous, orange coloured, with some shade of greenish by place, with some parts much more red orange or vermillion, especially on the folds.

**Microscopic description:**

Spores (Fig.35) 6-7 x 4-5 um, shortly elliptical subglobose to more or less elliptical, guttulate, germinating by secondary sterigmata.

Probasidia (Fig.36) x 12-15 um, associate to a conidiophore and to a complex clamp system. Metabasidia cruciate-septate, 4-spored, up to 20 x 13 um.

**Collection:**

- Surroundings of the Saut Pararé on the Arataye river; on fallen branches. 25.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.284 (PC)

**Discussion:**

The too small spores probably originate in the fact that we dealt with secondary ones. It is often difficult to distinguish between primary, secondary and eventually tertiary spores in a single mature basidiocarp, and heterogeneity in size and shape can easily

confuse the interpretation of the true basidiospores as quoted by LOWY (1971). Our specimens probably fits into the concept of T.lutescens sensu lato, inclusive of T.mesenterica. In that wide sense, the species is almost cosmopolitan but is presumably new to French Guyana.

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A

ELEMENTS FOR A MYCOLOGICAL INVENTORY OF  
THE SURROUNDINGS OF "SAUT PARARE" (ARATAYE RIVER)  
AND "NOURAGUES INSELBERG" (FRENCH GUYANA)  
V. HETEROBASIDIOMYCETIDAE

Régis COURTECUISSÉ (1)  
and Bernard LOWY (2)

(1) Laboratoire de Botanique et Cryptogamie; Faculté de Pharmacie, 3, rue du Professeur Laguesse, F.59045 -LILLE Cédex (FRANCE); (2) Botany Department; Louisiana State University; BATON ROUGE; La 70803 (USA).

**SUMMARY:** The authors give a description and illustrations of macro- and micromorphological features for the heterobasidiomycetous material collected in French Guyana by RC in 1988. Pseudohydnum gelatinosum var. bisporum Lowy et Courtec. is proposed as new.

**RESUME:** Les auteurs donnent une description et des illustrations des caractères macro- et micromorphologiques pour le matériel appartenant aux Hétérobasidiomycètes, récolté en 1988 par RC en Guyane Française. Pseudohydnum gelatinosum var. bisporum est proposée comme nouvelle.

**KEY-WORDS:** Mycoflora, French Guyana, Heterobasidiomycetidae, Auricularia, Calocera, Dacryopinax, Ditiola, Pseudohydnum, Tremella.

**INTRODUCTION:**

After dealing with Hygrophoraceae, Pluteaceae (COURTECUISSÉ, 1989, 1990), and Russulaceae (COURTECUISSÉ and BUYCK, 1990), we present in this paper a survey of the heterobasidiomycetous material collected in French Guyana during a mission organized by the Muséum of Paris. Rather rich collections were made, with sixteen samples. Field notes were gathered on fresh material, and some coloured plates and slides made. Determinations by RC of the dried material took place after coming back to the laboratory. BL confirmed some identifications and determined some unnamed specimens.

Some species were previously known from French Guyana: Auricularia fuscosuccinea (Mont.)Farlow and A. polytricha were noted by LOWY (1971), as well as Dacryopinax spathularia (Schw.)Martin, the two later being already mentioned by Montagne (1854), respectively under the names Hirneola polytricha + H. nigra and Guepinia cohaerens. Septobasidium leprieurii (Mont.)Pat. and S. rhubarbarinum (Mont.)Bres. were cited respectively by DENNIS (1970) and MONTAGNE (l.c., s.n. Daedalea) followed by RYVARDEN (1982) who re-studied the type. A single species of Tremella, viz. T. aurantia Schw.:Fr. was also listed by MONTAGNE (l.c.) but this taxon was omitted by LOWY (1971).

Our collections range from Auricularia (5 specimens), to

Calocera (1), Dacryopinax (2), Ditiola (1), Guepinia (1), Pseudohydnum (1) and Tremella (5). All species were previously known, but a variety is proposed as new, viz. Pseudohydnum gelatinosum fo. bisporum.

#### KEY TO THE DESCRIBED TAXA:

#### DESCRIPTION OF THE TAXA:

1. Auricularia delicata (Fr.) Hennings in Bresadola, Hennings et Magnus 1893 Bot. Jahrb. 17:492

- = Laschia delicata Fr. 1830 Linnaea 5:553
- = ? Merulius affinis Junghuhn 1839 Batav. Gen. Verh. 17:76
- = Laschia tremellosa Fr. 1849 Summ. Veg. Scand.:325
- = Auricularia tremellosa (Fr.) Patouillard 1887 J. Bot. 1:226
- = Auricula delicata (Fr.) O. Kuntze 1898 Rev. Gen. Pl. 3:446
- = Auricula tremellosa (Fr.) O. Kuntze 1898 l.c.
- = Hirneola delicata (Fr.) Bres.
- = Auricularia moelleri Lloyd 1918 Mycol. Writ. 5:784
- = Auricularia hunteri Lloyd 1918 l.c.:808
- = Auricularia crassa Lloyd 1924 Mycol. Writ. 7:1275

#### Macroscopic description (Fig.1):

Basidiocarp pileate, more or less orbicular, firm to gelatinous, sessile. External surface shortly pilose. Hymenophoral surface pale yellowish, then light reddish brown, becoming poroid-reticulate. Medulla lacking.

#### Microscopic description:

Spores (Fig.2) 10-17 x 4,5-6  $\mu$ m, cylindrical to somewhat allantoid, hyaline with irregular internal droplets and guttules.

Probasidia cylindrical clavate; metabasidia (Fig.3) becoming transversely 3-septate, 28-40 x 4-7  $\mu$ m, the last article easily collapsed, with basal clamp.

Hyphae (Fig.4) x 1-3,5  $\mu$ m, interwoven in a gelatinous matter, more or less branched and anastomosing, with clamp connections. Some hyphidia with dendroid apex present, x 1-3  $\mu$ m.

Pileipellis (Fig.5) with a pseudoparenchymatous layer with more or less isodiametrical cells 10-25 x 5-20  $\mu$ m, and dermatocystidia of two types. First type marasmoid, i.e. clavate diverticulate, brown, 15-30 x 10-25  $\mu$ m. Second type setiform up to 130 x 7  $\mu$ m with a thickened wall up to 2,5  $\mu$ m, sometimes associated with a inflated and diverticulate base reminding the first type, but more often with a bulbous, smooth base, seldom forked.

#### Collections:

- "Saut Pararé" (Arataye river), on a wooden beam of the building at the camp. 27.02.1988. Coll. and Det.:RC; n°RC/GF88.354 (PC)
- Surroundings of the "Saut Pararé" (Arataye river), on a laying trunk. 2.03.1988. Coll. and Det.:RC; n°RC/GF88.457 (PC)

#### Discussion:

These collections are rather typical of A. delicata, as described by LOWY (1971). This species is rather common throughout all the Neotropics but was so far not mentioned from French Guyana.

Summarized countries where this fungus occurs are as follow (from LOWY, 1971, or if from other references, those noted into brackets): Argentina, Bolivia, Brazil, British Honduras, China (DU FU et al, 1983; TAN et WU, 1986), Colombia, Congo (BRESADOLA, 1911), Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Ethiopia (BRESADOLA, 1894), Guatemala, Haiti, Honduras, India (NATARAJAN et KOLANDAVELU, 1980) Jamaica, Java (BRESADOLA, 1907), Mexico, Panama, Peru, Puerto Rico, St.Croix, Trinidad, Venezuela.

2. Auricularia polytricha (Mont.)Saccardo 1885 Att.R.Inst.Ven. VI,3:722

- = Exidia polytricha Montagne in Belanger 1834 Voy.Indes:154
- = Exidia purpurascens Jungh. 1838 Prasm.:35
- = Exidia hispidula Berk. 1838 Ann.Mag.Nat.Hist. II,3:396
- = Exidia porphyrea Lév. 1844 Champ.Exot. II,2:218
- = Hirneola nigra Fries 1848 Fung.Nat.:27
- = Hirneola porphyrea (Lév.)Fr. 1848 l.c.
- = Hirneola polytricha (Mont.)Fr. 1849 K.Vet.Ak.Handl.:46
- = Hirneola hispidula (Berk.)Berk. 1874 J.Linn.Soc.Bot.14:352
- = Auricula nigra (Fr.)O.Kuntze 1891 Rev.Gen.Pl.2:844
- = Auricula polytricha (Mont.)O.Kuntze 1891 l.c.
- = Auricula nigrescens (Sw.)Earle 1899 Bull.Torr.Bot.Cl.

26:633

- = Auricularia hispidula (Berk.)Farlow 1905 Bibl.Index 1:307
- = Auricularia nigrescens (Sw.)Farlow 1905 l.c.:308
- = Auricularia porphyrea (Lév.)Texeira 1945 Bragantia 5:163 (synonymy from LOWY, 1971).

#### Macroscopic description (Fig.6)

Basidiocarp pileate, cupulate, up to 10 cm broad, tough to gelatinous. External surface densely pilose. Hymenium dark, brown to purplish brown, smooth to somewhat rugulose. Medulla present, thin.

#### Microscopic description:

Spores (Fig.7) 11-16 x 5-6 um, cylindrical to subballantoid, hyaline.

Probasidia cylindrical, metabasidia (Fig.8) becoming transversely 3-septate, 40-60 x 4-6 um.

Hyphae x 1-4 um, interwoven in a gelatinous layer, with clamp connections.

Pileipellis, consisting of a layer of more or less isodiametrical cells and dense setiform dermatocystidia (Fig.9) up to 300 x 5 um with a thickened wall, up to 2-(2,5) um.

#### Collections:

- Surroundings of the "Saut Pararé" (Arataye River), on dead wood of a laying trunk. 27.02.1988. Coll. and Det.:RC, n°RC/GF88.353 (PC).

- Same locality at some distance, on dead wood. 7.03.1988. Coll. and Det.:RC, n°RC/GF88.527 (PC).

- Same locality at some distance, on a dead trunk. 8.03.1988. Coll. and Det.:RC, n°RC/GF88.562 (PC).

#### Discussion:

Like the preceeding, those specimens fit well within the concept of A.polytricha, as described by LOWY (1971). The species was already mentioned from French Guyana and is also noted from (references as for the preceeding) Argentina, Australia (BRESADOLA et

SACCARDO, 1890), Bahama Islands, Bermuda, Bolivia, Brazil, British Guyana, British Honduras, Canal Zone, Cameroon (BERTHET et BOIDIN, 1966), China (DU FU et al, 1983; TAN et WU, 1986), Colombia, Costa Rica, Cuba, Dominican Republic, El Salvador, Ecuador, Ethiopia (BRESADOLA, 1894), Guatemala, Haiti, India (BERKELEY, 1854), Indonesia in Sumatra Island (BOEDIJN, 1929), Jamaica, Japan (IMAZEKI et HONGO, 1965 and other authors), Mexico, New Zealand (MacNABB, 1964), Nicaragua, Pacific Islands (LOWY, 1952), Pakistan (Ahmad, 1945), Panama, Peru, Philippines Islands (BRESADOLA, 1915), Puerto Rico, Sao Tome et Principe (BRESADOLA et ROUMEGUERE, 1890), Surinam, Trinidad, Venezuela.

3. Calocera coralloides Kobayasi 1939 Sci.Rept.Tokyo Bunn.Daig. B4(74):225

**Macroscopic description (Fig.10):**

Basidiocarp erect, digitate, cylindrical to subulate, up to 5 x 1 mm, orange to reddish brown downwards, gelatinous and then tough. Hymenium amphigenous, smooth.

**Microscopic description:**

Spores (Fig.11) 7-10 x 4-5 um, slightly curved, 1-septate, the distal cell a little bit larger. Wall thin, easily collapsed.

Probasidia (Fig.12) 30-35 x 2-4 um, cylindrical, slightly clavate upwards. Metabasidia (Fig.12) up to 40 x 2-6 um, bifurcate, easily collapsed. Sterigmata up to 10 um.

Hyphae with gelatinous, punctate to asperulate ciliate wall, curved in the subhymenial layer. Flesh with densely agglutinate parallel hyphae.

Sterile zone of the basidiocarp ("stipe") covered with short hairs (Fig.13), up to 15 x 4 um.

**Collection:**

- Surroundings of the "Saut Pararé" (Arataye River), on the bark of a fallen branch. 5.03.1988. Coll.and Det.: RC, n°RC/GF88.503 (PC)

**Discussion:**

This rare species, previously known from Japan and Bolivia (LOWY, 1971) is new to the mycoflora of French Guyana. That is the second record from South America, as far as we know.

4. Dacryopinax indacocheae Lowy 1959 Mycologia 51:848

**Macroscopic description (Fig.14)**

Basidiocarp gelatinous, up to 20 mm broad, irregularly orbicular or spatulate, dirty dark orange then milky orange, translucent, shining. Stipe (sterile zone) short and thick-set, weakly differentiated. Lower surface less shining, somewhat velvety.

**Microscopic description:**

Spores (Fig.15) 8-10 x 2,8-3,2 um, narrowly allantoid or subcylindrical, sometimes constricted, 1-3 septate. Wall and septae thin. Some spores were seen germinating little spherical conidia x 1,5 um with a broad "apiculus".

Probasidia (Fig.15) up to 20 x 3 um cylindrical to clavate

5

subcapitate with a slightly thickened wall. Metabasidia (Fig.15) up to 30 x 4-5 um, bifurcate, with sterigmata up to 10 x 2 um, organized in a very dense hymenium, with some sclerified clavate cells, up to 15 x 10 um.

Flesh gelified made of thin-walled (up to 1 um) hyphae x 2-4 um. Clamps none.

Upper surface (sterile) with thick-walled, clavate to elliptical or pyriform cells (Fig.16), up to 30 x 20 um. Wall up to 4 um.

#### Collection:

- Around the "Nouragues mountain" camp, on a laying rotten trunk. 17.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.093 (PC)

#### Discussion:

It is with some doubts that we present that determination. D.indacocheae is usually somewhat larger with a lobed basidiocarp, presents cylindrical dicharyoparaphyses which were not observed here, and its conidia (secondary spores) are larger, up to 2-2,5 um in diameter. Maybe the youth of the involved collection could explain all of these discrepancies, the basidiocarp and conidia being immature, more little than at maturity, and the hymenium being still too dense to let the dicharyoparaphyses appear. Nevertheless, the fructification showed by LOWY (1959:842, fig.1, right) looks like our collection. Anyway, this taxon is the closest to our collection, and we propose D.indacocheae as new to French Guyana. It was previously known from Bolivia and Brazil (LOWY, 1971).

5 Dacryopinax spathularia (Schw.:Fr.)Martin 1948 Lloydia 11:116  
= Merulius spathularia Schw. 1822 Schr.Nat.Ges.Leipzig 1:97  
= Guepinia spathularia (Schw.:Fr.)Fr. 1828 Elench.Fung.2:32  
= Cantharellus spathularius (Schw.:Fr.)Schw. 1832  
Trans.Amer.Phil.Soc.II, 4:153  
= Guepiniopsis spathularia (Schw.)Patouillard 1900  
Ess.Tax.Hym.:30

#### Macroscopic description (Fig.17):

Basidiocarp up to 10 x 4-5 mm, erect, spatulate to somewhat furcate at apex, the sides slightly curved inside, yellow orange, the base darker, with a well marked stipe, villose like the sterile surface.

#### Microscopic description:

Spores (Fig.18) 8-10,5 x 4-5,5 um, elliptical subphaseoliform (slightly curved), the apex often inflated, subpyriform on face view, 1-septate when mature, easily collapsed after septation.

Probasidia (Fig.19) cylindrical to clavate, 20-30 x 2-5 um; metabasidia (Fig.20) bifurcate, with sterigmata up to 10 x 2 um. Hyphidia seldom, cylindrical, not branched.

Flesh gelified, made of hyphae x 2-5 um with "villose" walls. Clamps none.

#### Collection:

- Around the "Nouragues Mountain" camp. Lying trunk of a Sterculiaceae tree. 15.02.1988. Coll. and Det.:RC, n°RC/GF88.040 (PC)  
- The species has been seen many other times, under its typical form, in the area of Nouragues mountains and Saut Pararé.

### Discussion:

The above-cited collections fits very well in the concept of Dacryopinax spathularia, as described by LOWY (1971). It is a very common species all over the tropical and subtropical belt, which can penetrate some temperate areas and it would become wearisome to enumerate all the countries where it occurs.

6. Dacryopinax fissa (Berk.)Martin 1948 Lloydia 11:116  
 = Guepinia fissa Berk. 1843 Ann.Mag.Nat.Hist. I,10:383  
 = Guepiniopsis fissa (Berk.)Patouillard 1889 Tab.Anal.Fung.  
 2(7):70  
 = ? Guepinia spathularia fo.lata Lloyd 1916 Mycol.Lett.  
 63:11  
 = Dacryopinax spathularia var. polycephala Lowy (ined.? on  
 my herbarium sheet !)

### Macroscopic description (Fig.21)

Like the preceding one, but apex of basidiocarp furcate to polycephalic. The hymenium may seem amphigenous on some specimens.

### Microscopic description:

Like D.spathularia.

### Collection:

-Around the "Nouragues Mountain" camp. On a rotten trunk.  
 19.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.157 (PC)

### Discussion:

The hierarchic level deserved by this taxon is rather questionable. Some authors consider it as synonymous with Dacryopinax spathularia (MARTIN, 1948; LOWY, 1971), but others prefer to consider it a good species (ZANG MU, 1985). Indeed, microscopic features are almost identical, and the only discrepancy lies in the macroscopic appearance of the basidiocarps, much more furcate and polycephalic at apex. This special pattern is disturbing enough to make the determination problematic in the field, and it is possible that the varietal rank would be preferable. On the other hand, LOWY (1971) offers the possibility of a chorological argument. The neotropical (and Japanese ?) specimens may better belong here, collections from other areas fitting better into the typical forms of D.spathularia (in average of course). Because of the partly admitted synonymy between the two taxa, it is difficult, at present to draw the geographical repartition of what we call D.fissa.

7. Ditiola radicata (Alb.et Schw.:Fr.)Fr. 1822 Syst.Mycol.2:170  
 = Helotium radicatum Alb.et Schw. 1805 Consp.Fung.:348  
 = Ditiola luteoalba var.radicata (AS:Fr.)Quélet 1886  
 Enchir.Fung.:227  
 = Guepinia radicata (AS:Fr.)Costantin et Dufour 1891  
 Nouv.Fl.:205  
 = Dacrymyces deliquescens fo.radicata (AS:Fr.)Bourdot et  
 Galzin 1928 Hym.Fr.:68  
 = Dacrymyces radicatus (AS:Fr.)Donk 1933  
 Meded.Ned.Mycol.Ver. 18-20:120

### Macroscopic description (Fig.22)

Basidiocarp orange, erect, tough gelatinous, with a sterile stipe and a lobate spatulate apex, up to 6 mm high. Hymenium amphigenous.

**Microscopic description:**

Spores (Fig.23) 10-13 x 4-5 um, cylindrical to elongate elliptical, slightly curved, fragile and easily collapsed, becoming 1-septate when mature.

Probasidia (Fig.24) cylindrical to clavate, up to 40 x 4 um. Metabasidia collapsed in our collection, but distinctly 2-furcate.

Structure monomitic, but with thick-walled hyphae in the cortical layer of the stipe x 1,5-2,5-(3) um, strongly gelified. Hyphae of the capitate apex x 1-3 um, thin-walled. Clamps none.

**Collection:**

-Surroundings of the "Saut Pararé" on the Arataye river. On dead wood. 1.03.1988. Coll.:RC; Det.:BL; n°RC/GF88.419 (PC)

**Discussion:**

This collection fits into the concept of Ditiola, as redescribed by KENNEDY (1958). The heterogenous structure is rather typical. It is difficult to give chorological data about this species, because the synonymy seems rather confuse. However, it is noticeable that it occurs in tropical areas as well as in temperate ones.

8. Pseudohydnum gelatinosum var.bisporum Lowy et Courtecuisse var.nov.

A typo differt metabasidia bisporibus. Typus in Guyana Gallica lectus, n°RC/GF88.273 in PC conservatur.

**Macroscopic description:**

Basidiocarp quite typical of the type variety (see LOWY, 1971).

**Microscopic description:**

Spores (Fig.25) 5,5-8,5 x 5,5-7,5 um, shortly elliptical to subglobose, guttulate, germinating with a dorsal appendix. Very few quite elliptical (secondary?) spores have been seen.

Probasidia (Fig.26) clavate or subglobose, up to 10 x 8 um, becoming 2-septate, very seldom cruciate-septate, but metabasidia (Fig.27) constantly 2-septate (for some reason, 2 of the probasidial cells from cruciate basidia do not form sterigmata), up to 12 x 10 um.

Hyphae x 1-3 um, with clamps. No cystidia in hymenium.

Surface of the pileus covered with hyphae x 2-10-(15) um, erect in a subtrichodermial structure, with intracellular beige-greyish pigmentation, very obvious in mediopellis.

**Collection:**

-Surroundings of the Saut Pararé on the Arataye river. On rotten wood. 25.02.1988. Coll.:RC; n°RC/GF88.273 (PC)

**Discussion:**

The variability of this common subcosmopolitan species

enclosed so far the var. paucidentatum Lowy 1959, known from Bolivia. The typical 4-spored P. gelatinosum is known from Guyana (LOWY, 1971) and from several other neotropical areas, and we found in the world literature no mention of 2-spored collections. This seems remarkable enough to establish a new variety.

9. Tremella fibulifera A. Moeller 1895 Protobas.:119

**Macroscopic description:**

Basidiocarp soft gelatinous, pulvinate then folded and finally irregularly foliose, pure white then subhyaline white, up to 2-2,5 cm in diameter and height; drying to a horny pale yellowish irregular and flat cushion.

**Microscopic description:**

Spores (Fig.27) 6-11 x 4-8 um, elliptical, heteromorphous because of the mixture of primary and secondary spores. Primary spores easily germinating by repetition through an horn or directly by repetitive budding. Among the I and II spores exist some elliptical elements (spores III ?) 2-4 x 1-3 um.

Probasidia 10-18 x 5-12 um, subspherical to elliptical. Metabasidia (Fig.28) up to 20 x 15 um, cruciate-septate, 4-spored.

Hyphae (Fig.29) strongly gelatinized, x 4-8 um, rather thick-walled (up to 1 um thick) bearing numerous, complex and sometimes loop-like clamps.

Conidiophores (Fig.30) also present, cylindrical to fusiform, producing elongate elements, 8-18 x 2-3 um.

**Collections:**

- Around the "Nouragues Mountain" camp. On a lying trunk. 19.02.1988. Coll.:RC; Det.:RC, n°RC/GF88.151 (PC)

- Surroundings of the "Saut Pararé" on the Arataye river. On the bark of a lying trunk. 2.03.1988. Coll.:RC; Det.:RC, n°RC/GF88.452 (PC)

**Discussion:**

The collections are quite similar to those described by LOWY (1971) and BANDONI et OBERWINKLER (1983). The production of spores (primary basidiospores, secondary and perhaps tertiary derived ones as well as conidiospores probably of different types) seems to be very complex in this species as shown by our own sketches and description and by the later above-cited paper. In this one, the authors suggest that some of the observed elements may come from a tremellaceous parasite. This might deserve a more careful study in the field and on fresh material, because, it is probable that, if any, the parasite may exist in the specimens as a rule. Indeed, our material shows the same pattern that the "single authentic specimen" described by BANDONI et OBERWINKLER. The association between the two hypothetical species might be specific and constant. It would be interesting to study that for people having the opportunity to deal microscopically with fresh material of T. fibulifera.

The species, previously known from Brazil, Columbia, Costa Rica, Panama (LOWY, 1971) is new to French Guyana.

10. Tremella fimbriata Fr.:Fr. 1822 Syst.Mycol.2:212

**Macroscopic description:**

Basidiocarp up to 6 cm, brownish orange, foliose or auricularioid, firm gelatinous.

**Microscopic description:**

Spores not clearly seen, but several elliptical apiculate elements (Fig.31), 8-10 x 6-7  $\mu$ m present.

Probasidia spherical, x 10-15  $\mu$ m. Metabasidia (Fig.32) up to x 20  $\mu$ m, cruciate-septate, 4-spored, mainly arranged in groups.

Flesh gelatinized, made of elliptical to spherical elements mixed with hyphae (Fig.33) x 1,5-2,5  $\mu$ m, showing numerous swellings up to x 10  $\mu$ m and intracellular pigment. Clamps numerous.

Beside the presumed basidiospores were seen a lot of apical or pleural labile conidiophores (Fig.34) up to 8 x 5  $\mu$ m (probably acting themselves as conidia), bearing tiny (secondary ?) conidiospores, growing up to x 2,5-4  $\mu$ m after maturation.

**Collection:**

- Surroundings of the Saut Pararé on the Arataye river. On dead wood. 8.03.1988. Coll.:RC; Det.:BL; n°RC/GF88.576 (PC)

**Discussion:**

The sporal diversity of this specimens seems also to be rather complex, and might be better studied on fresh material. Such a pattern seems never to have been noticed in the temperate areas where the species also occurs. It could specifically occur in the Tropics. The taxonomy of this group being rather unperfectly known, as far as we know, it seems difficult to propose a correct chorological outline for this taxon.

11. Tremella cf. lutescens Fr.:Fr. 1822 Syst.Mycol.2:213

= Tremella mesenterica Fr.:Fr. 1822 l.c.:593

**Macroscopic description:**

Basidiocarp up to 25 mm in diameter, cerebriform to lobate contortate, adherent to partially free, gelatinous, orange coloured, with some shade of greenish by place, with some parts much more red orange or vermillion, especially on the folds.

**Microscopic description:**

Spores (Fig.35) 6-7 x 4-5  $\mu$ m, shortly elliptical subglobose to more or less elliptical, guttulate, germinating by secondary sterigmata.

Probasidia (Fig.36) x 12-15  $\mu$ m, associate to a conidiophore and to a complex clamp system. Metabasidia cruciate-septate, 4-spored, up to 20 x 13  $\mu$ m.

**Collection:**

- Surroundings of the Saut Pararé on the Arataye river; on fallen branches. 25.02.1988. Coll.:RC; Det.:BL; n°RC/GF88.284 (PC)

**Discussion:**

The too small spores probably originate in the fact that we dealt with secondary ones. It is often difficult to distinguish between primary, secondary and eventually tertiary spores in a single mature basidiocarp, and heterogeneity in size and shape can easily

confuse the interpretation of the true basidiospores as quoted by LOWY (1971). Our specimens probably fits into the concept of T.lutescens sensu lato, inclusive of T.mesenterica. In that wide sense, the species is almost cosmopolitan but is presumably new to French Guyana.

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