

*Studies in the Aphyllophorales of the Canary Islands. 3. Some species from the western islands*

by Leif Ryvarden \*

(recibido en la redacción: 28.4.1976)

**S u m m a r y**

116 species, out of which 87 new to the Canary Islands, are reported from the western islands. *Caloporus spissus* (Schw.) Ryv. is recorded as new to Europe. *Amaurodon viridis* (Alb. & Schw. ex Fr.) Schroet. is reported from Gomera and the status of *Amaurodon* Schroet. is discussed. The Aphyllophoraceous flora is a typical temperate one and not a single tropical species has been found. There is a small group of species with affinities to North America represented by species like *Crustoderma dryinum* (Berk. & Curt.) Parm. and *Aleurodiscus botryosus* Burt.

**A c k n o w l e d g m e n t s .**

The Norwegian Research Council for Humanities and Natural Sciences is most sincerely thanked for their generous financial support making the expedition possible. My friend John Eriksson of the University of Göteborg, Sweden, has kindly confirmed some of the determinations and otherwise been most helpful in suggesting ideas in connection with other specimens. Dr. M. Larsen, Center for Forest Mycology Research, Madison, USA, has given valuable suggestions in connection with *Amaurodon* for which I am grateful. My companions, A.-E. Torkelsen and K. Høiland are thanked for making the expedition memorable, instructive and above all a pleasant one.

Since the last paper in this series was printed (Ryvarden 1974) there have been published two papers on the Aphyllophorales of the Canary Islands. Beltran-Tejera (1974) reports some species new to the flora and gives a list

\* Botanical Laboratory, University of Oslo, P.O. Box 1045, Blindern, Oslo, 3 Norway.

of the species of Polyporales known from the islands up to 1974. Beltran Tejera & Wildpret de la Torre (1975) report some taxa new to the islands, mostly agarics and some ascomycetes, only a few species of the Aphyllophorales.

In January 1974 there was a small mycological expedition from the University of Oslo to the western islands. The participants were curator A.—E. Torkelsen, research assistant K. Höiland and myself. The season was fairly good for fungi even if we did not experience a single drop of rain during our stay from 7-20 January.

This paper reports the species of Aphyllophorales found on the expedition except for a few new species which will be described in a later paper.

Besides my own collections there are also included some scattered specimens collected made by other botanists and mycologists who have visited the islands recently. Details on these collections are given in each case.

The nomenclature is according to Maas Geesteranus (1975) for the Thelephoraceae, Eriksson and Ryvarden (1974-75) for the Corticiaceae s. lato and Ryvarden (1976) for the Polyporaceae s. lato.

Details on the collections are given in an abbreviated form with a number referring to the localities given in the following list. When the host could be determined, the following abbreviations have been used: *Pinus* is *P. canariensis*, *Erica* is *E. arborea*, *Chamaecytisus* is *C. proliferus*, and *Castanea* is *C. sativa*.

If not stated otherwise, all collections have been made by myself and the specimens are deposited in the University herbarium in Oslo (0).

The following localities were visited:

1. Tenerife: El Bardo, 3 km east of La Guancha, in an open forest of *Pinus canariensis*, 7. Jan.
2. Tenerife: Cruce de las Rosas, 3 km S of la Esperanza, in *Pinus canariensis* forest, 8. Jan.
3. Tenerife: Monte Verde near Aguamansa in the Orot-

- va valley, in mixed forest, 8. and 17. Jan.
4. Tenerife: Monte de las Mercedes, in evergreen forest, 9. and 18. Jan.
  5. Tenerife: Cuadras de don Benito, 3 km N of Las Mercedes, in mixed forest, 18. Jan.
  6. Palma: Velhoco, 2 km W of Santa Cruz de La Palma, in mixed forest, 10. Jan.
  7. Palma: Pino de la Virgen, near Fuencaiente, in *Pinus canariensis* forest, 11. Jan.
  8. Palma: Roque Grande, 5 km NE of El Paseo, in *Pinus* forest, 11. Jan.
  9. Gomera: Monte de la Zarza, in evergreen forest, 13.—15. Jan.
  10. Gomera: Cabezo Alta, 5 km SW of Hermigua, in evergreen forest, 16. Jan.
  11. Gomera: Monte de Tobares, 3 km SW of La Palmita, in deciduous forest, 16. Jan.

#### CANTHARELLACEAE.

*Cantharellus cibarius* Fr. 1. 6.

#### CONIOPHORACEAE.

*Coniophora puteana* (Fr.) Karst. 6, 8, 9, *Pinus*.—New to the islands.

*Coniophorella olivacea* (Fr.) Karst. 2, 3, 6, 8, *Pinus*.—New to the islands.

#### CORTICIACEAE.

Very few corticioid fungi except for "Stereum"-species have been collected in the Canary Islands and the species reported below are all new to the islands except for: *Amphinema byssoides*, *Chondrostereum purpureum*, *Stereum hirsutum*, *reflexulum* and *sanguinolentum*.

*Aleurodiscus bortryosus* Burt, 4.

Previously in Europa known only from France and Portugal being originally described from N. America. It is a

highly characteristic species as the outer apices of the ac-  
thophyses react very strongly with a bluish to violet col-  
or in Melzer's reagent.

*Amphinema byssoides* (Fr.) Erikss. 2, 5, 7, *Pinus*, 6,  
on *Castanea*.

*Athelia acrospora* Jülich, 2, on dead leaves.

*A. decipiens* (v. Höhn. & Litsch.) Erikss., 8, *Pinus*,  
10.

*Botryobasidium aureum* Parm., 4.

Scattered on the perfect fruitbody, there were some  
yellow colonies of the imperfect state, *Oidium aureum* F.

*B. candicans* Erikss., 4, 9.

*B. danicum* Erikss. & Hjortst. 9, confirm. Eriksson.

*B. obtusisporum* Erikss. 5, *Pinus*, confirm. Eriksson.

*B. pruinatum* (Bres.) Erikss. 1, *Castanea*.

*B. subcoronatum* (v. Höhn. & Litsch) Donk. 1, 3,  
*Pinus*, 9.

*Byssomerulius corium* (Fr.) Parm. 6, *Castanea*.

*Chondrosterum purpureum* (Fr.) Pouz. 8, *Chamaecy-  
sus*.

Hierro: La Dehesa 21-11-1975, on *Chamaecytisus*, 1  
H. Gjaerum.

"*Corticium*" *exilis* Jacks. 2. det. J. Eriksson.

The species was originally described from Canada, but  
has since then been found several times in Northern Eu-  
rope. It is reported in Eriksson & Ryvarden (1975: 454)  
*Corticium* sp. Strid. n. 11431 in connection with *Hyphod-  
ma*. The species will later be treated by Kurt Hjortstam.

*Cotylidia undulata* (Fr.) Karst. 2, in old fireplace.

This is a rare minute species with fruitbodies rarely ex-  
ceeding 5-7 mm in height. It is probably overlooked due  
to its small size and brown colours. You must really go down  
on the knees and scrutinize the ground very carefully to  
find it.

*Crustoderma dryinum* (Berk. & Curt.) Parm. 8, *Pinus*.

Originally described from North America, this species  
was previously in Europe only known from the continent.

northern parts of Sweden and Finland (Eriksson & Ryvar-  
den 1975: 317).

*Cylindrobasidium evolvens* (Fr.) Jülich, 2, 3, 9.

*Dacryobolus karstenii* (Bres.) Oberw. ex Parm. 3, *Pinus*.

*Fibulomyces fusoides* Jülich 7, *Pinus*. 9.

*Gloeocystidiellum citrinum* (Pers.) Donk, 9.

*G. convolvens* (Karst.) Donk, 7, *Pinus*.

*Hyphoderma cremeoalbum* (v. Höhn. & Litsch.) Jülich  
9.

*H. obtusiforme* Erikss. & Strid, 7, on *Pinus*, confirm. J.  
Eriksson.

*H. praetermissum* (Karst.) Erikss. & Strid. 2, 3, 5, *Pi-  
nus*, 4, 9 on *Laurus*. A very common and variable species in  
the islands.

*H. puberum* (Fr.) Wallr. 4. *Laurus* sp. 6.

Hierro: Jimamas, 20-11-1975, *Myrica fayae*, Leg. R. El-  
ven.

*H. sambuci* (Fr.) Jülich, 6.

*Hyphodontia arguta* (Fr.) Erikss. 1, *Pinus*, 6, *Cast-  
nea*, 9.

The collection from *Pinus* is typical in external morpho-  
logy, but microscopical somewhat deviating as no lageno-  
cystidia could be demonstrated, otherwise the microscopi-  
cal details was as in typical *H. arguta*.

*H. aspera* (Fr.) Erikss. 2, 7, *Pinus*. 10.

*H. breviseta* (Karst.) Erikss. 5, 7, *Pinus*.

*H. bugellensis* (Ces.) Erikss. 11, *Laurus* sp., confirm.  
Erikss.

*H. floccosa* (Fr.) Erikss. 8.

*H. pallidula* (Bres.) Erikss. 1, *Pinus*.

*H. papillosa* (Fr.) Erikss., 9.

*Hyphochnium punctulatum* (Cooke) Erikss. 6, *Cast-  
nea*.

*H. sphaerosporum* (v. Höhn. & Litsch.) Erikss. 1, *Pinus*.

*Laeticorticium polygonioides* (Karst.) Donk. 3, *Erica*.

*L. roscum* (Fr.) Donk, 3, *Cytisus*.

*Leucogyrophana mollis* (Fr.) Pouz. 6.

*Melzericium udicolum* (Bourd. & Galz.) Haursl. 3, *Eric*

This a rare species throughout Europe, microscopical quite distinct because of its amyloid and "bent" spores.

"*Odontia*" *corrugata* (Fr.) Bourd. & Galz. 8, *Chamaecytisus*.

This is a rare species which will be placed in a genus of its own in Vol. 4 of Corticiaceae of N. Europe.

*Peniophora cinerea* (Fr.) Cooke 1, 2, on *Rosa* sp. 4, 10 on *Rubus* sp.

*P. incarnata* (Fr.) Karst. 3, 10.

*P. versiforme* (Berk. & Curt.) Bourd. & Galz. 6, 3.

*Phanerochaete affinis* (Burt) Parm. 6.

*P. cremea* (Fr.) Parm. 4, 6, 8, 9, 11.

*P. velutina* (Pers.) Karst. 5, 6. *Castanea*, 10.

*Phlebia gigantea* (Fr.) Donk 1, 2, 7, 8, *Pinus*.

*P. livida* (Fr.) Bres. 2, 4, 9.

*P. roumegueri* (Bres.) Donk, 4.

*P. rufa* (Fr.) Christ. 6.

*Pulcherricium coeruleum* (Fr.) Parm. 3, 6.

*Radulomyces confluens* (Fr.) Christ. 9, *Erica*.

*Scytinostroma ochroleuca* (Bres. & Torr.) Donk, 6. *Castanea*, 11.

The species seems to be rare, it was originally described from Portugal, but has since been reported from India (Rattan 1974).

*S. portentosum* (Berk. & Curt.) Donk 11.

As in Scandinavia, the specimens on Canary Islands had a very strong and intense scent of naphtha.

*Sistotrema confluens* Fr. 1, 2.

A common species on needles of *Pinus canariensis*.

*S. diademiferum* (Bourd. & Galz.) Donk 2, *Pinus*, 4, 6.

*Sistotremastrum niveocremeum* (v. Höhn. & Litsch.) Erikss. 2, *Pinus*.

*Steccherinum ochraceum* (Fr.) S. F. Gray. 4, 10.

*S. laeticolor* (Berk. & Curt.) Banker. 4.

Previously known from Northern Europe and United States (Maas Geesteranus 1974: 514).

*Stereum hirsutum* (Fr.) Fr. almost all localities, very common.

*S. reflexulum* Reid, all localities.

Seems to be the most common *Stereum* species in the islands and can be found everywhere if looked for.

*S. sanguinolentum* (Fr.) Fr. 1. *Pinus*.

A very common species in the *Pinus*-forests.

*Trechispora confinis* (Bourd. & Galz.) Lib. 2, on burnt wood.

*T. farinacea* (Fr.) Lib. 1, 2, 4, 5, 6, 8, 9.

Probably the most common corticioid species in the islands.

*T. mutabilis* (Pers.) Lib. 2, 10.

*Tubulicrinis calothrix* (Pat.) Donk, 8, *Pinus*.

*T. glebulosus* (Bres.) Donk 1, 2, 7, 8, *Pinus*.

*Xenasma praeterita* (Jacks.) Donk. 4. on *Myrica* sp.

This is a rare species, according to Oberwinkler (1965: 41) previously in Europe only recorded from Bayern in West Germany.

#### CYPHELLACEAE.

*Cyphella poriaeformis* (Link) Fuck, 4, new to the islands.

#### GANODERMATACEAE.

*Ganoderma applanatum* (Gray) Pat. 9 *Myrica* sp. 11.

*G. australe* (Fr.) Pat. 4.

Leg. L. Borgen & H. Østhagen, 25-3-1972.

#### HYDNACEAE.

*Hydnum repandum* Fr. 6.

*H. rufescens* Fr. 2, 6.

#### HYMENOCHAETACEAE.

*Coltricia perennis* (Fr.) Murr. 2.

*Hymenochaete cinnamomea* (Pers.) Bres. 1, *Castanea*, 9.

*H. corrugata* Fr. 4.— New to the islands.

*H. subfuliginosa* Bourd. & Galz. 9.— New to the islands.

*Inonotus hispidus* (Fr.) Karst. 1, 2, *Chamaecyrtisus Populus*.

*I. tamaricis* (Pat.) Maire.

About 4 km west of La Laguna, on *Tamarix* sp. at the roadside. 17. Jan.

*Phellinus ferreus* (Pers.) Bourd. & Galz. 9, 10.— New to the islands.

*P. ferruginosus* (Schrad.) Bourd. & Galz. 4.— New to the islands.

*P. pomaceus* (Pers.) Maire 6, on *Prunus avium*.— New to the islands.

*P. robustus* (Karst.) Bourd. & Galz. 6.— New to the islands.

*P. torulosus* (Pers.) Bourd. & Galz. 3, 4, 5, 6, 9, 11.

A very common species throughout the islands, especially on old stems of *Erica arborea*.

#### POLYPORACEAE.

*Antrodia albida* (Fr.) Donk, 2, 6.

*A. lenis* (Karst.) Ryv. 10.— New to the islands.

*A. xantha* (Fr.) Ryv. 8, *Pinus*.— New to the islands.

*Bjerkandera adusta* (Fr.) Karst. 5.

*Boletopsis subsquamosa* (Fr.) Kotl. & Pouz. 1, 2, 7.

This is a conspicuous species which seems to be quite common in the *Pinus* forests on the islands.

*Caloporus spissus* (Schw.) Ryv. (Syn. *Meruliopsis spissus*) 4, 11.

American species, new to Europe. It is beautiful and highly characteristic due to its bright orange pore surface when fresh, fading only slightly in the herbarium. A detailed description is given in Lowe (1966: 37).

*Ceriporia reticulata* (Fr.) Donk, 10.— New to the islands.

*C. purpurea* (Fr.) Donk 1, 7, *Pinus*.

New to the islands, a cosmopolitan species, but nowhere common.



- Corioloopsis gallica* (Fr.) Ryv. 4.  
*Incrustoporia nivea* (Jungh.) Ryv. 4, 6, *Castanea*, 11.  
*I. percandida* (Berth. & Malenc.) Ryv. 2, on cones of *Pinus*, 6 *Castanea*, 7 *Pinus*.  
*Junghuhnina nitida* (Pers.) Ryv. 11. *Laurus* sp.— New to the islands.  
*Laetiporus sulphureus* (Fr.) Murr. 3, on *Laurus* sp. 6, *Castanea*, 9.  
Hierro: El Golfo, 20-11-1975, leg. H. Gjaerum.  
*Perenniporia ochroleuca* (Berk.) Ryv. 4.  
*Phaeolus schweinitzii* (Fr.) Pat. 8, on the ground.  
*Rigidoporus sanguinolentum* (Fr.) Donk, 11, *Laurus*.— New to the islands.  
*Schizopora paradoxa* (Fr.) Donk 4, 9.  
New to the islands. A very common and widespread species.  
*Trametes hirsutas* (Fr.) Pil. 4, leg. L. Borgen and H. Oesthagen 25-3-1972.  
*Trametes versicolor* (Fr.) Lloyd 3, 4, 6, 11.  
*Trichaptum abietinum* (Fr.) Ryv. 1, 3. *Pinus*.  
A very common species in the *Pinus* forests.  
*Tyromyces leucomalleus* Murr. (Syn. *T. gloeocystidiatus* Kotl. & Pouz.) 4, 5, *Pinus*.—New to the islands.  
*T. resinascens* (Rom.) Erikss. 3, *Cytisus*.  
New to the islands. It is quite remarkable to find this species on the islands as it in N. Europe seems to have a boreal to continental distribution. It is close to *T. aneirinus* (Somf. ex Fr.) Sing., but is separated by longer and slender spores.  
*T. subcaesius* David. 4, on *Laurus*, 9.— New to the islands.  
*T. tephroleucus* (Fr.) Donk, 4.— New to the islands, taste not bitter.

#### THELEPHORACEAE.

- Amaurodon viridis* (Alb. & Schw. ex Fr.) Schroet. 9, 10.  
This is a rare and highly characteristic species becau-

se of its dark green hydroid fruitbody with echinulate amyloid spores. Its taxonomy, however, is somewhat confused. When Schroeter coined the genus *Amaurodon* in 1881 he stated that *Hydnum viride* Alb. & Schw. ex Fr. was the type species. However, he described the spores to be smooth. Thus, most mycologists seem today to accept the opinion of Rogers & Jackson (1943) that Schroeter actually had *Coniophora mustialaensis* (Karst.) Masee in his hand when he made the genus. We are again confronted with the problem of typification of a genus on basis of an misapplied name. A problem for which the Botanical Code has no automatic solution. I myself prefer the strict type method and use the type of the actual type species as diagnostic for the genus regardless of what we think or believe the author of the genus actually has at his disposal. This method seems to offer more advantages than drawbacks. The advantage is first that the question of typification is settled once for all and not left to changing interpretations of an often vague diagnosis or description if no specimens from the author of the genus are left, which is the case with *Amaurodon*. If this method of typification is rejected and the original species is considered worthwhile a generic segregation, there will be two genera typified by the same species, a fact which will add to confusion. The drawback by the strict type method is that the concept of the genus will be more or less changed compared with that of the original author. To achieve stability for forthcoming botanists, however, this is the price the author has to pay for not having made a proper identification of his specimen.

There are a number of other genera which are in the same situation as *Amaurodon* (where there is a type specimen of the type species) such as *Antrodia* and *Perenniporia*. *Caloporus* Karst. is somewhat different as there are no type or authentic specimen left of *Polyporus incarnatus* Fr., the type species. In such cases we must rely on the specimen(s) named by the generic author.

*Hydnellum conrescens* (Fr.) Karst. 1, 2, 6, 8.

New to the island, locally quite common.

*H. ferrugineum* (Fr.) Karst. 2, 3.

*Phellodon niger* (Fr.) Karst. 1, 2, 8. Locally quite abundant. Det. Maas Geesteranus.

*Thelephora terrestris* Fr. 3, 6.

#### Plantgeographical connections.

The Aphyllophorales of the Canary Islands is of course not known in detail for the time being, and especially among the resupinate species there are still a large number to be found. However, collecting has been quite intensive in the last years and some more common and conspicuous species have been reported by several mycologists, indicating that a certain level of knowledge has been reached. My own collecting included some 420 specimens representing 116 species besides a few apparently new species which will be described later. On basis of this collection and previous reports it is tempting to add a few plantgeographical comments.

From the list given here, it is clear that the fungus-flora of the islands is a temperate one, at least when it comes to the species of Aphyllophorales. Not a single tropical species has yet been reported from the islands. Except for cosmopolitan species, there seems to be three groups of species.

The first group includes species with a very wide distribution in the temperate zone, in some cases following the genus *Pinus* north to 70° in Northern Norway. Examples are *Amphinema byssoides*, *Hyphoderma praetermissum*, *Phlebia gigantea* and *Trechispora farinacea*. From this group there is of course an even transition represented by species like *Ganoderma applanatum* and *Inonotus hispidus* to a second group of Mediterranean species. This is a group of species which has their main distribution in the Mediterranean and Southern Europe. A very few species reach southern part of Scandinavia, but is very rare in this area. Examples in this group are *Incrustoporia percandida*, "*Odontia*" *corrugata*, *Peniophora versiforme*, *Phlebia roumegueri*, *Scytinostroma ochroleucum* and *Stereum reflexulum*.

**Cuadernos de Botánica Canaria**  
**COMUNICACIONES SOBRE FLORA Y VEGETACION DEL**  
**ARCHIPIELAGO CANARIO**

(Editor-fundador: G. KUNKEL)

**Indice N.º 26/27 (1976)**

G. FOLLMANN: Observaciones acerca de la flora y vegetación de Hquenes de las Islas de Cabo Verde. II. . . . .	1
A. HANSEN: An interesting form of <i>Rubus ulmifolius</i> from La Gomera (Canary Islands). . . . .	9
J. DUVIGNEAUD & J. LAMBINON: Quelques récoltes macaronésiennes du genre <i>Amaranthus</i> L. . . . .	13
P. L. PEREZ & G. KUNKEL: Novedades sobre el género <i>Micromeria</i> Benth. (Lamiaceae) en la Isla de Gran Canaria . . . . .	19
L. RYVARDEN: Studies in the Aphyllophorales of the Canary Islands. 3. Some species from the western islands . . . . .	29
G. KUNKEL: Enumeración de las plantas vasculares del Parque Nacional de Timanfaya (Lanzarote) . . . . .	41
A. HANSEN & G. KUNKEL: <i>Rutheopsis</i> (Apiaceae), ein notwendiger neuer Gattungsname . . . . .	59
G. KUNKEL: Fuerteventura: adiciones florísticas y nuevas localidades . . . . .	63
G. KUNKEL: Gran Canaria, Tenerife y La Gomera: notas florísticas y adiciones . . . . .	75
Bibliografía botánica 26/27 . . . . .	82
Reseñas: . . . . .	7-8, 11-12, 18, 74, 81, 88-91

Tirada: 250 ejemplares  
Depósito Legal: G.C.-620-1967  
Imprenta Pérez Galdós. — Buenos Aires, 38  
Las Palmas de Gran Canaria  
SP - ISSN 0011 - 2372/10  
Fecha publicación: 28-VII-76

The third and smallest group includes species originally described from North America and with a very limited occurrence in Europe. Examples from this group are *Aleu discus botryosus*, *Caloporus spissus*, *Crustoderma dryini*, *Steccherinum laeticolor* and *Xenasma praeterita*. It may be that these last species had a wider distribution in the Mediterranean, becoming more and more rare as the area was deforested through the ages and up to recent times.

#### References

- BELTRAN-TEJERA, E. 1974: Catálogo de los Polyporales en el archipiélago Canario. *Vieraea* 3:118-132.
- BELTRAN-TEJERA, E. & WILDPRET DE LA TORRE, W. 1975: Taxones nuevos en la flora fúngica canaria. *Vieraea* 5:127-166.
- BOURDOT, H. & GALZIN, A. 1928: *Hymenomyces de France*. Sceaux.
- ERIKSSON, J. & RYVARDEN, L. 1973-74: *The Corticiaceae of North Europe* Vol. 2 & 3. Oslo.
- LOWE, J. L. 1966: Polyporaceae of North America. The genus *Poria*. *State Univ. Coll. For. Syracuse Univ. Techn. Publ.* no. 90.
- MAAS GEESTERANUS, R.A. 1974: Studies in the genera *Irpex* and *Steccherinum*. *Persoonia* 7:443-581.
- MAAS GEESTERANUS, R. A. 1975: Die terrestrischen Stachelpilze Europas. *Wehand. Kon. Nederl. Akad. Wetensch. Afd. Naturk.* Ser. 2, part. 65.
- OBERWINKLER, F. 1965: Primitive basidiomyceten. *Sydowia* 19: 1-72.
- RATTAN, S.S. 1974: Scytinostroma in India with notes on extralimital species. *Trans. Br. mycol. Soc.* 63:1-12.
- ROGERS, P.D. & JACKSON, H.S. 1943: Notes on the synonymy of some North American Thelephoraceae and other resupinates. *Farlowia* 1:263-328.
- RYVARDEN, L. 1974: Studies in the Aphyllophorales of the Canary Islands 2. Some species new to the islands. *Cuad. Bot. Canar.* 20: 3-8.
- RYVARDEN, L. 1976. *The Polyporaceae of North Europe* Vol. 1. Oslo.