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## Sclerotiniaceae on sweet chestnut burrs in the northern 'old world'

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Numerous collections by the author and 91 samples of old, fallen burrs of *Castanea sativa* Mill. received from 51 correspondents in Algeria and 21 countries in Europe, including the Canary Islands, Corsica and Madeira, produced the following Sclerotiniaceae: i.e. *Botryotinia fuckeliana* (de Bary) Whetzel, *Ciboria americana* Durand, *Ciboria tenuistipes* Schroet., *Ciboria bresadolae* (Rick) J. T. Palmer, *Lanzia echinophila* (Bull. Fr.) Korf, *L. luteovirescens* (Rob. in Desmaz.) Dumont et Korf and *Rutstroemia sydowiana* (Rehm in Syd.) White as well as species of *Ciboria*, *Ciboria* and *Rutstroemia*, which require further investigation. Hitherto, *L. echinophila* was the only sclerotinaceous species reported from this substrate in Europe. The samples ranged from single burrs to large packages with up to four species found in each. In addition, 44 further samples, nineteen of freshly burrs, produced no apothecia. Both *C. americana* and *R. sydowiana* have, however, been found in collections in national herbaria determined with a synonym of *Lanzia echinophila*.

Key words: Sclerotiniaceae, *Castanea sativa*, Europe, Algeria

Palmer J. T. (1994): Sclerotiniaceae na číškách kaštanovníku jedlého v severním „Starém světě“. Czech Mycol. 47: 101-138

Jsou publikováni zástupci čeledi Sclerotiniaceae rostoucí na starých spadáných číškách kaštanovníku jedlého - *Castanea sativa* Mill. (91 vzorků) - *Botryotinia fuckeliana* (de Bary) Whetzel, *Ciboria americana* Durand, *C. tenuistipes* Schroet., *Ciboria bresadolae* (Rick) J. T. Palmer, *Lanzia echinophila* (Bull. Fr.) Korf, *L. luteovirescens* (Rob. in Desmaz.) Dumont et Korf a *Rutstroemia sydowiana* (Rehm in Syd.) White a také další druhy rodů *Ciboria*, *Ciboria* a *Rutstroemia*, které však vyžadují další studium. Sběry pocházejí od autora a 51 spolupracovníků z Alžírsko a 21 zemí Evropy, včetně Kanárských ostrovů, Korsiky a Madeiry. *Lanzia echinophila* byla dosud jediným druhem čeledi Sclerotiniaceae, známým v Evropě z tohoto substrátu. Vzorky zahrnovaly od jedné čísky až k velkým souborům s až čtyřmi zjištěnými druhy v jednom vzorku. Další 44 vzorků, z toho 19 s čerstvě spadánými číškami nevytvořilo žádná apotecia. *Ciboria americana* a *Rutstroemia sydowiana* byly zjištěny ve sběrech v řadě národních herbářů, v položkách označených různými synonymními jmény vztahujícími se k *Lanzia echinophila*.

## INTRODUCTION

The only species of the *Sclerotiniaceae* reported as occurring on burrs of *Castanea sativa* Miller (= *C. vesca* Gaertn.) in Europe prior to Palmer (1965) was *Lanzia echinophila* under its various combinations with *Ciboria*, *Hymenoscypha*, *Peziza*, *Phialea*, *Rutstroemia* and *Sclerotinia*. A single but quite different fungus, *Ciboria americana* Durand, which has also been treated in *Rutstroemia*, is known from North America but had not been collected for many years due to the virtual disappearance of the American Chestnut, *Castanea dentata* Borkh., caused by chestnut blight, *Endothia parasitica* (Murr.) And. et And. Whilst searching for *L. echinophila* on the 29th September, 1963, the writer collected overwintered *Castanea* burrs bearing brownish apothecia in Lyme Park, Disley, Cheshire, England. However, microscopic examination showed ellipsoid, instead of the typical allantoid spores of *L. echinophila* and the fungus was found to agree with a collection from Enfield Gorge, Ithaca, N. Y., U.S.A., where Durand had collected *C. americana*, which was confirmed by Professor R. P. Korf. Subsequent searches for *Lanzia echinophila* in Northwest England produced only *C. americana*. Therefore, as the writer had previously seen *L. echinophila* in Moccas Park near Hereford, from where collections by C. B. Plowright were distributed as *Ciboria echinophila* in Rehm's Ascomyceten # 606, he visited this locality on the 9th November, 1963, and collected both species on previous year's burrs.

During the "Dreiländertagung" of the Austrian, German and Swiss mycologists at Chur, Switzerland, in 1964, *C. americana* and *L. echinophila* were found on sweet chestnut burrs, together with *Rutstroemia sydowiana* (Rehm) White, a common species on stromatized petioles of *Castanea* and *Quercus* leaves, in Engelwald, Mädris near Mels on the 26th October (Palmer 1965). Subsequently, whilst on the way to the Deutsche Gesellschaft für Pilzkunde Tagung in Münster, Westphalia, further collections of these three species on chestnut burrs were made at Neustadt an der Weinstraße and Wiesbaden with *C. americana* being found in the Botanic Garden at Münster. Additional finds of *C. americana* and *R. sydowiana* were also made at Amersfoort and between Enschede and Hengelo in the Netherlands whilst returning to England, where *R. sydowiana* was collected on burrs in Regent's Park, London.

As it appeared that these three species could be widespread with *Ciboria americana* having a more northern distribution, correspondents were asked for samples of *Castanea* burrs, irrespective of whether or not apothecia were visible. This resulted in the receipt from 50 people of 130 samples from as far south as Algeria, Portugal in the west and Georgia in the east. 80 samples contained apothecia of one or more species of *Sclerotiniaceae*, including one with four. None were found in the remaining 40 collections, nineteen of which were clearly freshly fallen burrs with three (Austria, Belgium, England and Scotland) containing a few

sclerotia, none of which were retained. In addition to the preceding, the writer has made numerous collections in Europe, including the Canary Islands, Greece, Ireland and Madeira, with the most northern being *C. americana* at ca 57°45' N in Scotland.

Samples varied from single burrs to a large number with each being soaked in water on receipt for about half-an-hour. Each burr was then thoroughly dissected with all apothecia, varying from single to numerous, being removed and macroscopically separated into species when more than one were present. The various apothecia were packeted after microscopical study for preservation in the writer's herbarium, with duplicates distributed, where quantities permitted, to various institutes, chiefly CUP, K and NY, where Dr. K. P. Dumont was initially jointly concerned in the project. Fungi belonging to other groups were mainly passed to Dr. R. W. G. Dennis at K.

In addition to the actual burrs, apothecia of *C. americana* were often also found on the cuticles, frequently blackened or showing line stromatization, of immature, mostly empty chestnuts, which are abundant in the northern areas where the nuts rarely mature. Whilst mainly confined to burrs showing heavy stromatization, only a few collections of *L. echinophila* have been on chestnut cuticles with *R. sydowiana*, often on burrs with a heavy woolly growth or showing little apparent stromatization, with all three occurring on the stalks. All three species developed from the thick shell-like [matrical] layer of the burr, either within or externally, when the apothecia were often more robust and larger, and on the spines, when they were frequently minute but perfectly formed and mature. The occurrence of all three main species or very similar species fungi on acorns and cupules of *Quercus* spp. was reported by Galán (1985, 1991), Palmer (1968, 1993) and Palmer et Truszkowska (1969).

**Botryotinia fuckeliana:** During the course of this survey, luxurious developments of *Botrytis* conidiophores within freshly fallen burrs were often observed in the autumn with *Botryotinia* apothecia occasionally being collected in the first half of the year. A *Botrytis* anamorph was present with the teleomorphs collected from May to July, which were mostly passed to Professor G. L. Hennebert (Belgium), who was then monographing *Botryotinia* but from whom no decision has yet been received. The writer agrees with Korf et Hennebert (1993) that the recent proposal to introduce new terms for *anamorph* and *teleomorph*, which are now well-established and are used here, is superfluous.

**Ciborinia sp.:** Apothecia with either four- or eight-spored asci but no sign of a *Botrytis* anamorph were collected in England and Switzerland during the second half of the year whilst similar 4-spored apothecia were found on *Castanea* burrs in Potsdamer Forst, Potsdam, Germany, on 19, IX, 1971 by Dr. D. Benkert. They

could comprise two separate species are still being investigated and Mr. W. Matheis (Switzerland) has proposed a joint project. Clark (1980) referred a collection of apothecia, apparently within *C. sativa* burrs bearing *Botrytis* conidiophores, from Newland Wood, Warwickshire, leg. 21, X, 1979, to *Sclerotinia fuckeliana* (de Bary) Fuckel, which may belong here.

**Ciboria americana:** Apothecia were both macro- and microscopically variable and could comprise more than one species with further study required. Although clearly widely distributed in Europe, its presence appears only to have been reported by Baral et Krieglsteiner (1985), Calonge (1970), Clarke (1980), Dennis (1968), Galán (1985, 1991), Matheis (1985a,b), Palmer (1965, 1970, 1993a) and Torre (1974). The description of the apothecia as whitish (*blanquecino*) and asci with four spores (*asco tetraspóricos*) in Romero de la Osa Mateos (1993) suggests the preceding 4-spored *Ciborinia*. The writer's collections of this species on burrs beneath *Castanea crenata* Sieb. et Zucc. and *C. mollissima* BL. in the Berlin-Dahlem Botanical Garden extends the range of chestnut species. Outside Europe and North America, *C. americana* appears to have only been reported on '*Castanea vulgaris*' from Nepal by Thind (1969), corrected to *Castanea sativa* with the new combination *Poculum americanum* (Dur.) Sharma et Thind in Thind, Sharma et Singh (1983) and two collections on *C. sativa* burrs as *Ciboria americana* from West Bengal, India, by Thind, Sharma et Singh (1983) but whose description and figure suggest some other species.

**Ciboria tenuistipes:** Described from leaves of *Rubus fruticosus* agg. in Poland but also known from other plant remains, with the synonym *Ciboriopsis bramleyi* Dennis, was the species transferred to *Moellerodiscus* by Dumont (1976), who cited collections J. T. P. 2452 and 2454 on *Castanea* burrs. The writer, however, finds few grounds for keeping *Ciboriopsis* and *Moellerodiscus* distinct from *Ciboria* and regards them as synonyms.

**Lanzia echinophila:** Widely known under its synonyms in the European literature, it appears to be known outside the European continent apart from Algeria (Palmer, 1968), Canary Islands (Bañares Baudet et Beltrán Tejera, 1987) and Madeira (Palmer, 1993a). The record as *Peziza* from Pennsylvania, U.S.A. in Schweinitz (1832) was suggested by Durand (1902), possibly belonging to *C. americana*.

**Rutstroemia sydowiana:** very common on leaf petioles, the only published references to *Castanea* burrs seem to be Baral et Krieglsteiner (1985), Kohn (1982), Matheis (1976), Palmer (1965, 1968, 1970) and Palmer et Truszkowska (1969).

**Other taxa:** Duplicates of collections made during 1963/4 were deposited in the personal herbarium of Professor Korf (R.P.K.) in Herb. CUP. They were studied mainly by Dr. Dumont, with three advised as underscribed taxa and given the following tentative epithets in *Rutstroemia*, in which the three main species were then being treated.

**'algeriensis':** R.P.K.3505 = J.T.P.4207 (Algeria), which the writer had also recognized.

**'palmeri':** R.P.K.3460et3190 = J.T.P.2559 (Germany), which the writer had determined as *C. americana* and, doubtfully, R.P.K.3439 = J.P.T.2654 (Shropshire, England), which he had considered to be *R. sydowniana*. Dr. Dumont failed to supply his reasons and the writer has not re-examined the duplicates. However, it is evident that, as more than one species can occur on a single burr and most collections comprised several burrs from the same locality, it cannot exclude that the duplicates may have contained other species as it was not practical to examine each apothecium microscopically.

**'websteri':** R.P.K.3501 = J.T.P.2618 (Yorkshire, England) and R.P.K.3500 = J.T.P.2626 (Durham, England), with apothecia and considered to be an '*Helotium* parasitic on sclerotia', were sent to Professor Korf with no material retained in the writer's herbarium.

In addition, the following were also treated under 'Other taxa':

**Ciboria spp.:** J.T.P.4409 (Greece), 4511, 4524 and 4528 (Canary Islands), 4629 and 4648 (Madeira) and 4201 (Peninsular Portugal) with 4511, 4629 and 4649 closely resembling a similar, apparently underscribed species on *Eucalyptus* capsules and occasional twigs etc. in Southern Europe.

**Rutstroemia spp.:** J.T.P.3964 (France).

Finally and most unexpected were:

**Ciborinia bresadolae:** J.T.P.4769 (Somerset, England). Described from oak cynipid galls and buds of *Quercus robur* L., the holotype of *Sclerotinia hirtella* Boud., which is a synonym, was, however, found on *Castanea* leaves and branchlets with further collections reported on oak and other tree debris (Palmer, 1991).

**Lanzia luteovirescens:** J.T.P.4048 (Cheshire, England). A common species on stromatized petioles of *Acer* spp., the collection comprised several apothecia distinctly attached to burr spines.

Although not previously recorded for Europe prior to 1965, apothecia of *C. americana* were found in the Kew Herbarium to have been collected, together with *L. echinophila*, and later determined, by Dr. D. A. Reid during the British Mycological Society's Day foray on 9, X, 1955 at Aldbury near Tring, Hertfordshire, but Hora (1956) made no mention of it in his report. During the writer's revision of exsiccati in various national herbaria, further apothecia were found in the following, clearly mixed collections determined as *Peziza*, *Rutstroemia* or *Sclerotinia echinophila*.

B: Herb. W. Kirschstein, *Sclerotinia echinophila* (Bull.), Rehm, Neustadt a. d. Weinstraße [Germany]. Auf den faulenden Kapseln von *Castanea sativa* Miller, Sept, 1942, K. Bäßler.

Revid. *L. echinophila* with two apothecia of *C. americana* on a single, immature chestnut and apothecia of *R. sydowiana* mainly on spines.

BM (now in K): Nr. Hereford [England] / Ex Herb. M. C. Cooke / *Peziza echinophila* Bull.

Revid. *L. echinophila* with one apothecium of *R. sydowiana*.

K: Sydow, Mycotheca germanica 2166, *Sclerotinia echinophila* (Bull.), Rehm. Auf faulenden Fruchthüllen von *Castanea vesca*, Brandenburg; Baumschulen zu Tamsel [Germany], 26, 9, 1923, Leg. P. Vogel.

Revid. *L. echinophila* with two apothecia of *C. americana*.

L. № 954. 216-077, *Rutstroemia echinophila* (Bull. ex Fr.) v. Höhn. Leg. C. Bas, 7, 9, 1954, № 611, St. Odiliënberg, Aarwinkel [Netherlands], Op cupulae van *Castanea sativa*, det. M. G. (= R. A. Maas Geesteranus),

Revid. *L. echinophila* with two apothecia of *C. americana* and some sclerotia.

L. № 967. 125-021, *Rutstroemia echinophila*, Berkshire, Windsor Great Park, Cranbourne Park [England]. On *Castanea sativa*, Leg. D. A. Reid, 3, X, 1968.

Revid. *L. echinophila* with one apothecium of *C. americana* on a chestnut.

The main period for the collection of these fungi was from 1964 to 1966, after which burrs were only occasionally examined, especially in countries where these fungi have been little collected. However, as these further collections considerably extend the range of these species, it has been decided to include them in this publication.

Outside the preceding survey, Kohn (1982) described a very sparse collection on burrs from Tenerife, Canary Islands, as *Lanzia* sp. 137 whilst Professor Korf advised (pers. comm.) having collected on chestnut burrs a "*Rutstroemia*" in Japan which was distinct from the present species and a setose "*Rutstroemia*" from Georgia, U.S.A., which latter may be a *Torreodiella* sp. In addition, together with Professors



D. C. Pant and V. P. Tewari and Mr. V. P. Dubey of Benaras Hindu University, Varanasi, the writer recently collected a *Lambertella* sp. on *Castanea sativa* burrs in the Kumaon Hills of the northwestern Himalayas, India, which appears to be the first report of this genus on sweet chestnut burrs.

#### DISCUSSION

Although *Lanzia echinophila* was for many years considered to be the sole member of the *Sclerotiniaceae* growing in Europe on the old, fallen burrs of *Castanea sativa*, this substrate has been found to be a fertile matrix for other members of this family, wherever the tree grows or is planted. Additionally, chestnuts also accommodate several species whereas they were previously believed only to support *Ciboria batschiana* (Zopf) Buchwald, which is much more common on acorns and is confined to the cotyledons, which it mummifies and is a parasite. When this investigation commenced in 1963, only *Ciboria americana* could be found on chestnut burrs and nuts in Northwestern England. The writer therefore had to go south to find *L. echinophila*, which recent collections find to be equally common with *C. americana* in this district and may be due to climatic changes.

#### COLLECTIONS STUDIED

Collection numbers, which refer to the author's herbarium, Herb. J. T. P., are followed by B = burr, C = catkin, Ch = mature chestnut cuticle, M = mummified chestnut, N = immature empty chestnut, indicating position of apothecia or conidiophores on substrate or when loose, either amongst burr debris or adjacent. Collections or duplicates have been received for study or distributed to various individuals, R. Galán (R.G.), G. L. Hennebert (G.L.H.), R. P. Korf (R.P.K.), W. Matheis (W.M.) and J.-P. Priou (J.P.P.) or national herbaria including B, BM (now in K), CUP, DBN, GDAC, K, L, LG, MA, MADJ, MADM, PC, PRM and TFC Mic. Collections made during official forays are indicated by the abbreviations Barc. = V Reunion Conjunta de Micologia, Barcelona. Béarn = Societé Mycologique de Béarn, Béd. = Bédarieux meeting, B.M.S.C.F. = British Mycological Society Foray to Canary Islands, B.M.S.G.F. = B. M. S. Greek Foray, D.G.P.(M.) = Deutsche Gesellschaft für Pilzkunde (Mykologie) Tagung, D.L.T. = Drei Länder Tagung and S.M.F. = Societé Mycologique de France Session.

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
<b>ALGERIA</b>							
BLIDA, 70 km from Algiers, l'Atlas de Blida, leg. L. Faurel 8, IX, 64	—	—	2690B	—	2858BS + 10, X, 65	—	" <i>Rutstroemia</i> " 4205B — parasitized et 4206B
<b>AUSTRIA</b>							
KÄRNTEN, Klagenfurt, Kreuzburg Botanic Gardens, leg. J. T. Palmer 24, IX, 65	—	—	—	—	2894B	—	—
<b>BELGIUM</b>							
BRABANT, Heverlee, Bois d'Heverlee leg. J. T. P. et G. L. Hennebert, 29, IX, 65	—	—	2868BN et 2978N	—	2876B	2875B	—
LIÈGE, Embourg leg. M. Hofinger per V. Demoulin, 16, IX, 66	—	—	3345B	—	3346B	—	—
Modave leg. V. D. 24, IX, 66	—	—	3102B	—	3101B	—	—
NAMUR, Leuze leg. J. T. P. et G. L. H. 28, IX, 65	—	—	—	—	2888B	—	—
<b>CROATIA</b>							
ca 4 km from Petrinja, Cepeliš leg. M. Tortič, 19, X, 65	—	—	—	—	2946B	—	—
Mostac near Petrinja leg. J. T. P. et M. T., 19, VIII, 67	—	—	—	—	3862B et 3863N	—	—



	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
Zagreb, base of Medvednica, on Gračec leg. M. T., 19,X,65	—	—	—	—	2947B	—	—
leg. J. T. P. et M. T., 18,VIII,67	—	—	—	—	3295BS - 20,IX,67	—	—
leg. M. T., 8,IX,68	—	—	—	—	3566B	—	—
leg. J. T. P. et M. T., 13,IX,69	—	—	—	—	3546Ch et 3549B	—	—
Slopes of Medvednica leg. J. T. P. et M. T., 12,IX,69	—	—	3537B	—	3536B	3538B	—
Varoško Rebno leg. J. T. P. et M. T., 15,VIII,67	—	—	—	—	3271BS - +10-20,IX,67 et 3285Ch	3272B + 30,VIII,67	—
<b>CZECH REPUBLIC</b>							
Na Petřinách, Praha-Vešlavín, leg. F. Kotlaba, 17,X,64	—	—	—	—	—	2656S	—
Průhonice u Prahy, Botanical Garden, leg. F. K., 2,XI,65	—	—	—	—	—	2912B	—
Public gardens leg. F. K., 21,X,66	—	—	—	—	3108B	—	—
<b>FRANCE including CORSICA</b>							
ARIÈGE, Niaux leg. J. T. P., 4,X,90	—	—	—	—	4591B	—	—
CALVADOS, Lisieux between Rouen and Alençon, leg. J. T. P., 6,IX,70	—	—	3836B et 3837N	—	3716B et 3835BN	—	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
CORSE-DU-SUD, Forêt de Cotti, Chiavari, s. of Ajaccio leg. V. Demoulin, 18,X,72 V. D., 20,IX,83	—	—	—	—	3876B	—	—
	—	—	—	—	4367B	—	—
CÔTES-DU-NORD, Dinon, Fontaine- des-Eaux leg. N. F. Palmer 5,VIII,65 Gouarec, leg. J. T. P. 5,IX,70 E. of Loudéac, Forêt de Loudéac leg. J. T. P. 5,IX,70 Quénécan, 3 km e. of Gouarec, leg. J. T. P. 5,IX,70	—	—	—	—	2856B	2857B	—
	—	—	—	—	3887B	—	—
	—	—	—	—	3710B	—	—
	—	—	—	—	3709B	—	—
EURE, near Brionne leg. J. T. P. 6,IX,70	—	—	3838B 6,IX-14,XI,70	—	3717B	—	—
FINISTÈRE, near Concarneau, Kerleven leg. J. T. P. et H. G. Ward 4,IX,70 Coray, e. of Quimper leg. J. T. P. 5,IX,70 Pluguffan near Quimper airport leg. J. T. P. 5,IX,70 Gorges de Poulanere, St. Gilles-Vieux- Marché leg. N. F. P. 8,VIII,65	—	—	—	—	3689B et 3704BS	—	—
	—	—	—	—	3707B	—	—
	—	—	—	—	3705BS	—	—
	—	—	—	—	—	2872B 2,X,65	—

	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
S.e. of Spézet, Montagnes Nomes, Rest-Menez leg. J. T. P. 5,IX,70 Rouge, 6 km e. of Quimper, leg. J. T. P. 5,IX,70	—	—	—	—	3708BS	—	—
	—	—	—	—	3706BCh	—	—
HAUTE-CORSE, between Lumio and Lavatoggia leg. J. T. P. 9,XII,83 Sant Martino di Lota near Bastia, leg. V. D. 3,X,72	—	—	4067B	—	4066B	—	—
	—	—	—	—	3873B	—	—
HAUTES- GARONNE, Gorges d'Héric leg. J. T. P. 21,X,81	—	—	3960B, 3961B et 3966B	—	3963B	—	" <i>Rutstroemia</i> " sp. 3964B
HAUTE- PYRÉNÉES, Vallée de Aspe, 2 km s. of Urds leg. J. T. P. 7,X,86	—	—	4315BN	—	4314BS	—	—
HAUTE-SAVOIE, Armoy leg. J. T. P. (S. M. F.) 31,VIII,70 S.w. of Thonon- les-Bains, Forêt de Perrignier leg. J. T. P. (S. M. F.) 26,VIII,70 Forêt de Thonon leg. J. T. P. (S. M. F.) 1,IX,70	—	—	—	—	3670B	—	—
	—	—	—	—	3646/7B et 3652B	3649B	—
	—	—	—	—	3677B + 14,X,70	3685B	—

PALMER: SCLEROTINIACEAE ON SWEET CHESTNUT BURRS

	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
Between Noyer and Lyaud leg. J. T. P. (S. M. F.) 29, VIII, 70	—	—	—	—	3667B et 3669B	—	—
Thonon-les-Bains, Moruel leg. J. T. P. (S. M. F.) 27, VIII, 70	—	—	3655Ch	—	3654M et 3656B	—	—
HÉRAULT, Col de Fontfroide, leg. J. T. P. (Béd.) 16, X, 81	—	—	3941BNS 3943N, 3945B et 3946BN	—	3942B, 3947, 3948Ch	—	—
Ft. Ecrivains Combattants, Combes leg. J. T. P. 19, X, 81	—	—	3956B	3959B	3957B	3958B	—
Lodève, Les Plânes leg. J. T. P. (Béd.) 18, X, 81	—	—	3952B	—	3953B et 3954Ch	—	—
LOIRE- ATLANTIQUE, 2 km n. of Châteaubriant, La Grd. Rigne leg. J. T. P. et H. G. W. 3, IX, 70	—	—	—	—	3695B	—	—
LOIRE-ET-CHER, Selles-sur-Cher between Bourges and Tours leg. J. T. P. et H. G. W. 2, IX, 70	—	—	—	—	3832B	—	—
Vierzon between Bourges and Tours leg. J. T. P. et H. G. W. 2, IX, 70	—	—	—	—	3690B et 3691Ch	—	—

	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
MAINE-ET-LOIRE, 3km n. of La Roche and 11 km from Angers leg. J. T. P. et H. G. W. 3,IX,70	—	—	—	—	3692B	—	—
MANCHE, near Pontorson leg. J. T. P. 3,IX,70	—	—	—	—	3711BS et 3834Ch	—	—
MORBIHAN, Augan e. of Ploërmel, leg. J. T. P. et H. G. W. 3,IX,70	—	—	—	—	3702B	—	—
Belle Isle, Bangor, leg. J. P. Priou 12,X,90	—	—	—	—	J.P.P.9094B	—	—
Keruzeth Brigitte near Kerfontaine leg. J. T. P. 7,X,90	—	—	—	—	4607B	—	—
Tréfflean Kervenne leg. J. T. P. 7,X,90	—	—	—	—	4608B	—	—
6 km from Locminé, Châteaubriant leg. J. T. P. et H. G. W. 3,IX,70	—	—	—	—	3697B	—	—
La Gacilly, St. Jugon leg. J. T. P. et J. P. P. 6,X,90	—	—	—	—	4593Ch et 4596B	—	—
St. Just leg. J. T. P. et J. P. P. 7,X,90	—	—	—	—	4600B	—	—
Glénac, Sourdeac leg. J. T. P. et J. P. P. 7,X,90	—	—	—	—	4599B	—	—

PALMER: SCLEROTINIACEAE ON SWEET CHESTNUT BURS

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
OISE, s. of Lassigny, ca 10 km from Belval leg. J. T. P. et H. G. W. 23,VIII,70	—	—	—	—	3643B 14,X-5,XI,70	—	—
Ormoy-Villiers, Bois de Roye leg. J. T. P. et H. G. W. 23,VIII,70	—	—	—	—	3644B	—	—
ORNE, ca. 5 km from Écouche, e. of Argentan leg. J. T. P. 6,IX,70 2 km e. of Domfront leg. J. T. P. 6,IX,70 St. Launeuc leg. J. T. P. 6,IX,70	— — — —	— — — —	— — — —	— — — —	3714B +14-20,IX,70  3712B  3715B  2700B	— — — —	— — — —
PYRÉNÉES- ATLANTIQUE, Cambe leg. P. Jovet Autumn 64 Larceveau leg. P. J. Autumn 64 Ca. 40 km from Pau, Bois de Chéraute leg. J. T. P. 4,X,86 Bizanos, Aressy (Béarn) leg. A. Grepin 5,X,86 Payrouse leg. J. T. P. 6,X,86	— — — — — — — — — —	— — — — — — — — — —	— — — — — — — — — —	— — — — — — — — — —	2701B  4305/6B  4308BN et 4309B  4312B et 4313BN	— — — — — — — — — —	— — — — — — — — — —

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
SAUNE-ET-LOIRE, La Valouse s. of Cluny, leg. J. T. P. et H. G. W. 2,IX,70	—	—	—	—	3686B	3687B	—
SOMME, Omiécourt between Péronne and Roye, leg. J. T. P. et H. G. W. 23,VIII,70	—	—	—	—	3642B-14,X,70	—	—
YVELINES, Forêt de St. Germain leg. V. Demoulin 25,IX,84	—	—	—	—	4368B	—	—
<b>GEORGIA</b>							
ADŽARSKAJA, Kobuleti, 45 km n.e. of Batumi, leg. M. N. Gvritišvili per B. P. Vassilkov 10,IX,65	—	—	—	—	2899B	—	—
ABKHAZIA, Okresposti near Sukhumi leg. M. N. G. per B. P. V. 20,IX,65	—	—	2901B	—	2900B	—	—
<b>GERMANY</b>							
BADEN- WURTEMBERG Ettlingen leg. S. Philippi 9,XI,91	—	—	4720B	—	—	—	—
BAYERN, Katzenbach near Bad Kissingen, leg. I. Eisfelder X,64	—	—	—	—	—	2671B	—



	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
BERLIN, Berlin-Dahlem Botanical Garden leg. J. T. P. et A. Straus 29,VIII,66	—	—	3091BN <i>C. crenata</i>	—	—	—	—
	—	—	3092BN <i>C. mollisima</i>	—	—	—	—
	—	—	3093BNS <i>C. sativa</i>	—	—	—	—
	—	—	3094BN <i>C. dentata</i>	—	—	—	—
HESSE, Wiesbaden leg. J. T. P. 1,IX,64	—	—	2562B	—	2556B	2565B	—
RHEINLAND- PFALZ, Neustadt a. d. Weinstrasse, base of Wolfsburg Wolfsbrunnen leg. J. T. P. 1,IX,64 Base of Wolfsburg Herz-Jesu-Kloster leg. J. T. P. 1,IX,64	—	—	2555BN	—	—	2559B	—
	—	—	—	—	2554BN	2569B	—
SACHSEN-ANHALT, Bad Harzburg leg. S. P. 18,X,91 Near Dessau, Park Lusium leg. H. Jage 12,X,64 Horbke leg. J. T. P. (D. G. P.) 16,X,91	—	—	4719B	—	—	—	—
	—	—	—	—	—	2670B	—
	—	—	4690B	—	4688B	4689B	—
WESTFALEN, Münster, Botanic Garden leg. J. T. P. (D. G. P.) 2,IX,64	—	—	2561BN	—	—	—	—

	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
<b>GREECE</b>							
MACEDONIA, Chalkidiki, Ágios Óros Athos, between Mon. Pantokrator and Karyes leg. J. T. P. (B. M. S. G. F.) 27,III,88	—	—	4425B 20,VII- 23,IX,88	—	4426B 13,VIII,88 4421B 2,VII-3,IX,88	—	—
Mon. Philotheou leg. J. T. P. (B. M. S. G. F.) 26,III,88	—	—	—	—	—	—	—
THESSALIA, Káto Ólimbos, Skoteina leg. J. T. P. (B. M. S. G. F.) 23,III,88	—	—	4404B 26,VIII- 23,IX,88 15,IX,89	—	—	—	—
Óros Óssa, Ariopriono leg. J. T. P. (B. M. S. G. F.) 24,III,88	—	—	4411N 20,VIII,88	—	4408B 4,VI- 16,VIII,88	—	—
	—	—	—	—	4410Ch 16et30,VIII,88	—	<i>Ciboria</i> sp. 4409B 4,IX,88
<b>HUNGARY</b>							
SOPRON, near Sopron leg. Z. Igmány per H. Kreisel X/XI,64	—	—	2702B	—	—	—	—
Near Sopron leg. Z. I. per S. Toth 10,X,64	—	—	2785B	—	2787B	2786B	—
2,XI,64	—	—	2788B	—	2789B	2790B	—
<b>IRELAND</b>							
DUBLIN, Dublin, Phoenix Park leg. J. T. P. 17,VI,65	—	—	2781B 22,VIII- 24,X,65	2782C	—	—	—

	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
KERRY, Killarney, Franciscan Priory leg. J. T. P. 5,VI,69	—	—	—	—	3497BN 28,VII-13,X,69	—	—
LAOIS, Abbeyleix, Abbeyleix Gardens leg. J. T. P. 17,V,70	3602BT	—	—	3603B 24,VI- 26,VII,70	3809BNS 14,IX-14,X,70	—	—
	3604T	3607L 8-sp.	—	3609C	3864B 14,IX-14,X,70	—	—
Stradbally, Brockley Park leg. J. T. P. 17,V,70	—	—	—	3867C 6,VII,70	—	—	—
	3610LT	—	—	—	3611BN 14,VII-8,XI,70	—	—
S. of Stradbally leg. J. T. P. 17,V,70	3612LT	—	3810BN 14,X,70	—	—	—	—
<b>ITALY</b>							
ALTO ADIGE, n. of Bolzano, Barbian leg. M. Gams per W. Gams 1,XI,65	—	—	—	—	2906B	—	—
PIEMONTE, near Torino, Torre Pellice leg. Beniamino Peyronel X,64	—	—	—	—	—	—	<i>Ciboria</i> sp. 4200B
leg. B. P. 27,VIII,65	—	—	2854B	—	2851B	—	—
TOSCANA, Lucca leg. A. Biraghi XI,64	—	—	—	—	2681B	—	—
Campione da Camaione leg. A. B. VIII,65	—	—	—	—	2871BS	—	—
Pistoia leg. A. Biraghi XI,64	—	—	—	—	2691B	—	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
VENETO, near Padova, Tramonte leg. C. Cappelletti 26,IX,64	—	—	—	—	2621B + 8,IX,65	2620B	—
<b>MACEDONIA</b>							
Near Gostivar leg. Cv. Hinkova 18,X,65 Vodno near Skopje leg. M. T. 25,X,66	—	—	2918/9B	—	2916B	2917B	—
	—	—	—	—	3107B	—	—
<b>NETHERLANDS</b>							
GELDERLAND, Nijmegen, Duivelsberg leg. C. Bas per R. A. Geesteranus. 26,IX,56	—	—	—	—	1943B	—	—
Amersfoort, private garden leg. J. T. P. 5,IX,64	—	—	2564BNS	—	—	2563B	—
Wageningen Station "De Dorschkamp" leg. J. Gremmen 14,X,54	—	—	—	—	2745B	—	—
LIMBURG, Groesbeek, Philosophendal leg. R. A. M. G. 6,X,63	—	—	—	—	2219B	—	—
OVERIJSEL, between Enschede and Hengelo leg. J. T. P. 5,IX,64	—	—	—	—	—	2639B	—
ZUID-HOLLAND, Wassenaar, "Voor-Linden" leg. J. T. P. 1,X,65	—	—	2870BS	—	2869B	2880S	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
<b>POLAND</b>							
WROCLAW, Wroclaw, Botanic Gardens leg. J. T. P. 13,VIII,92	—	—	4721B 1,VIII-17,X,92	—	—	—	—
<b>PORTUGAL including MADEIRA</b>							
BEIRA ALTA, Santa Comba Dão leg. A. L. Branquinho d'Oliveira per M. T. Lucas 5,X,64	—	—	2637BS	—	—	—	<i>Ciboria</i> sp. 4201B
MADEIRA, Aguas Mansas, junction of Lev-a de Serra Faial and Lev-a do Pico leg. J. T. P. et R. Kautt 27,II,91	—	—	—	4648B 16,VI-21,IX,91	4647B 22,IX-5,XI,91 15,IX-17,X,92	—	—
Near Pico do Bodes leg. J. T. P. S. Fontinha, G. Freitas et R. K. 26,II,91	—	—	—	—	4642B 29,IX-21,X,91	—	—
W. of Landeiros, between Murinhal and Marco leg. J. T. P. et R. K. 24,II,91	—	—	—	4629B 23,VI-5,XI,91 6,IV-5,VIII,92	4627B 24,XI,91 4628B 25,VII-26,X,91 15,IX,92	—	—
Jardim da Serra leg. J. T. P., S. F., G. F. et R. K. 26,II,91	—	—	—	—	4640B 18,VIII,91 15-26,IX,92 4641B 25,VIII- 5,XI,91 15,IX-17,X,92	—	—

	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
<b>ROMANIA</b>							
MARAMURES, Baia-Mare leg. G. Silaghi 12,XI,64 et 2709/10B	—	—	2708B +8,IX,65, 2709/10B	—	—	—	—
<b>SLOVAKIA</b>							
Štátna Gaštenica, Gýmeš leg. L. Marvanová, 15,III,65 Bratislava, near Hlinák, close to Pezinok, leg. F. K., 28,VI,65 Žibrica near Kolíňany, leg. V. Řehořek per L. M., 1965	—	—	—	—	2874B	2853B	—
	—	—	2799B	—	2859B 8,IX,65	2842B 28,VIII,65	—
	—	—	—	—	2886BS	2887B	—
<b>SLOVENIA</b>							
Bled, n.e. side of Blejsko Jezero leg. J. T. P. et M. T. 7,IX,69	—	—	—	—	3527B	—	—
<b>SPAIN</b>							
BARCELONA, Parque Nacional de Montserrat leg. F. D. Calonge 24,X,71 Ermitage de Sta, Fé leg. J. T. P. 30,IX,90 Can Agustii, Olzinelles leg. X. LLimona per R. Galán 20,X,75	—	—	—	—	3800B	—	—
	—	—	4584B	—	4583B	—	—
	—	—	—	—	4169B	—	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
GRANADA, Sierra Nevada, road to Seminario, Fuente Agrillo leg. R. G. 21,X,80	—	—	—	—	4168B	—	—
leg. J. T. P. et A. Ortega 11,XII,84	—	—	—	—	4135B	—	—
LUGO, Sierra de Meira, 4 km s. of Udan leg. J. T. P. 28,X,87	—	—	—	—	4637B 6,VIII-26,XII,88	—	—
MADRID, El Escorial, Fuente de la Reina leg. F. D. C. 7,IX,69	—	—	3561B +20,XI,69	—	—	—	—
10,X,71	—	—	—	—	3801B	—	—
NAVARRA, Etulain near Ostiz leg. J. T. P. et L. García Bona 10,X,86	—	—	—	—	4325BN	—	—
E. of Ezcurra leg. J. T. P. 11,X,86	—	—	—	—	4324BN	—	—
E. of Mugaire leg. J. T. P. 11,X,86	—	—	—	—	4324BN	—	—
OVIEDO, La Peña leg. J. T. P. 24,X,87	—	—	—	—	4374B	—	—
STA, CRUZ DE TENERIFE, Isla de la Gomera, Parque Nacional de Garajonay, La Laguna Grande leg. J. T. P. (B. M. S. C. F.) 11,I,90	4512BA	—	—	4511B? 11,I-20,XI,90	4535B 15,IV-26,XI,90 20,VI-30,X,91 21,V-30,IX,92	—	<i>Ciboria</i> sp. 4528S 18,III-15,IV,90



	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
Isla de Tenerife, above Acofa, Montaña Colorado leg. J. T. P. (B. M. S. C. F.) 17,I,90 Between La Hacienda Perdido and El Berbedero near La Orotova leg. J. T. P. (B. M. S. C. F.) 19,I,90	—	—	4531B 8,IV-9,XI,90 (parasitized?)	—	4542B 30,VI-9,XI,90 +10,X,91	—	—
	—	—	—	—	4543B 3,VII-4,XI,90 15,IX-10,X,91	—	<i>Ciboria</i> sp. 4524B 6et28,III,90
SWITZERLAND							
GRAUBÜNDEN, Bergell, Soglio leg. E. Horak et M. Känel 18,IX,64	—	—	—	—	2589B	—	—
Malans, Schloss Bodmer leg. J. T. P. et K. Schwarz (D. L. T.) 30,VIII,64	—	—	—	—	2550B	—	—
ST. GALLEN, near Mels, Mädris, Engelwald leg. J. T. P. (D. L. T.) 26,VII,64	—	—	2542BN	—	2541BN	2546B	—
THURGAU, Bettwiesen leg. W. Mattheis 1,XI,69 11,IX,70	—	3563B 4-sp.(some 5-sp.)	—	—	—	—	—
No dates	—	4177B 8-sp.	4178N et 4183B	—	4180BN	3885B	—
	—	3883B 4-sp.	—	—	—	—	—
	—	4179B 8-sp.	—	—	—	—	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
TICINO, sw. of Bellinzona, Copera leg. E. H. et M. K. 15,X,64	—	—	—	—	2647B+8,IX,65	—	—
Ca 8km s. of Lugano near Carona leg. J. Karman per R. A. Maas Geesteranus 15,IX,66	—	—	—	—	3167B	—	—
Near Chiasso leg. R. Hotz 31,VIII,64	—	—	—	—	2567B	—	—
Near Lugano leg. F. Casagrandi per E. Müller 25,IX,64	—	—	—	—	2605B	—	—
<b>TURKEY</b>							
ISTANBUL, Istanbul leg. H. Kayacik Autumn 64 Autumn 65	—	—	2666BN 8,IX,65	—	2602B+8,IX,65	2603B	—
	—	—	—	—	2881BS 8,X,65	3110B 7,XI,65	—
<b>UNITED KINGDOM - ENGLAND</b>							
CHESHIRE, Alderley Edge leg. J. T. P. 12,X,63	2160BA	—	2159B	—	—	—	—
14,VI,64	2465BT	—	—	—	—	—	—
20,VI,64	2784BT	—	—	—	—	—	—
19,IX,64	2471BT	—	2570/1B	—	—	—	—
14,XI,64	—	—	2677BS	—	—	—	—
24,X,65	—	—	2890N	—	—	—	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
Between Alderley Edge and Chelford 3,XI,63 and Nether Alderley, leg. J. T. P. 12,X,63	2322BA	—	—	—	—	—	—
Brynlow leg. J. T. P. 12,X,63	—	—	2162BN	—	—	—	—
19,IX,64	2161BA	—	—	—	—	—	—
14,XI,64	—	—	2572BS	—	—	—	—
Dean Green leg. J. T. P. 14,XI,64	—	—	2678B	—	—	—	—
	—	—	2680B	—	—	—	—
Finlow Hill leg. J. T. P. 19,IX,64	—	—	2573BN et 2574B	—	—	2583B	—
Finlow House leg. J. T. P. 18,V,64	2438BNT	—	—	—	—	—	—
Nether Alderley leg. J. T. P. 3,XI,63	2323BA	—	—	—	—	—	—
Gatley Green leg. J. T. P. 12,X,63	—	—	2163B	—	—	—	—
14,XI,64	—	—	2679BS	—	—	—	—
Runcorn, Aston, Beckett's Wood leg. J. T. P. 26,XI,71	—	—	3766BS	—	—	—	—
30,IX,84	—	—	4097BN	—	4098B	4099B	—
8,V,90	—	4603B 8-sp. 12,X,90	—	—	—	4602B 12,X,90	—
Chapel Wood leg. J. T. P. 24,IX,83	—	—	4050B	—	—	—	<i>L. luteo- virescens</i> 4048B
Bollington, Whitley Green leg. J. T. P. 9,X,65	—	—	2879B	—	—	—	—
Bulkley, Peckforton Hills, Bulkley Hill leg. J. T. P. 21,X,84	—	—	—	—	4120B	—	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
Congleton, Eaton Hall leg. J. T. P. 3,X,64	—	—	2607BN	—	—	—	—
Crewe, Doddington Park leg. J. T. P. 17,X,64	—	—	2635BN	—	2636B	—	—
Haslingdon, Slaughter Hill leg. J. T. P. 17,X,64	—	—	2634BNS	—	—	—	—
Delamere Forest, leg. J. T. P. 26,IX,64	—	2595B 8-sp.	2594BN, 2596BN,	—	—	—	—
		2597B 8-sp.	2598N et 2600B/01BN, 2205B	—	—	—	—
Hunger Hill leg. J. T. P. 1,X,63	2206BA	—	—	—	—	—	—
30,V,64	2451BT	—	—	—	—	—	—
Disley, Lyme Park leg. J. T. P. 28,IX,63	—	—	2136B et 2143BN	—	—	—	—
24,V,64	2448BT et 2450BT	—	—	—	—	—	—
Ellesmere Port, Hooton Park leg. J. T. P. 12,X,71	—	—	3762B	—	—	—	—
Frodsham, Newton Hall leg. J. T. P. 2,XI,63	2204BA	—	2203B	—	—	—	—
Knutsford, Tatton Park leg. J. T. P. 26,IX,64	—	—	2590/1BN et 2593BN	—	—	—	—
Near Macclesfield, Monks Heath leg. J. T. P. 8,X,66	—	3264B 4-sp.	—	—	—	—	—
		3265B et 3266B 8-sp.	3097BNS				

	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
S. of Norley leg. J. T. P. 23,IX,64	—	—	4086B	—	—	—	—
Oakmere, Abbey Arms Wood leg. J. T. P. 8,X,84	—	—	4111B	—	—	4112B	—
24,V,90	4541BT	—	—	—	—	—	—
Sutton Weaver leg. J. T. P. 22,IX,84	—	—	4081B	—	—	—	—
2,V,90	—	—	4605B 15,X,90	—	—	—	—
15,IV,90	4803BT 10,VI- 7,VIII,93	—	—	—	—	—	—
Between Warrington and Newton-le-Willows leg. J. T. P. 8,X,90	—	—	4604B 15,X,90	—	—	—	—
DERBYSHIRE, Bakewell, Chatsworth Park, The Grotto leg. J. T. P. 26,X,63	2194BA	2411B 4-sp.	2190BN	2454C/5B	—	—	—
Chatsworth Park, Queen Mary's Bower leg. J. T. P. 26,X,63	2193BA	—	2188BN	—	—	—	—
Between Bakewell and Rowsley, n. of Haddon Hall, Manners Wood leg. J. T. P. 31,X,64	—	—	2663BN	—	—	—	—
Haddon Park leg. J. T. P. 4,IX,65	—	—	2850N	—	—	—	—
Old Glossop, Shire Hill leg. J. T. P. 24,X,65	—	—	2891N	—	—	—	—
DEVON, Branscombe leg. J. T. P. 17,XI,71	—	—	—	—	3767B	—	—

	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
Exeter, Stoke Wood leg. J. T. P. 17, XI, 71	—	—	3844BS	—	—	—	—
DORSET, Blandford, Bryaston School leg. C. G. Carré X, 64	—	—	—	—	2614B	—	—
DURHAM, Durham, Little High Wood leg. P. Watson 6, X, 64	—	—	2613N	—	—	—	" <i>Rutstroemia</i> " sp. 2626B
GLOUCESTER- SHIRE, Chipping Campden, Dover Hill leg. K. J. Koghill per B. C. Knight X, 64	—	—	2632B	—	—	—	—
GREATER LONDON, London, Regents Park leg. J. T. P. 6, IX, 64	—	—	—	—	—	2566B	—
GREATER MANCHESTER, Bowden, Dunham Park leg. J. T. P. 20, X, 63	2179BA	—	2178BN	—	—	—	—
Bramhall, Bramall Hall leg. J. T. P. 27, X, 63	2195BA	—	2192NS	—	—	—	—
23, V, 64	2441BT et 2443BNST	—	—	2442B, 2444C et 2447B	—	—	—
31, V, 64	2453BT	—	—	2452B CUP	—	—	—
21, VI, 64	2471BT	2468B 8-sp. 2469C 4-sp.	—	2470B	—	—	—
12, VII, 64	—	2486LC 4-sp.	2487B	2485B	—	—	—
26, VII, 64	2499LT	2468B 8-sp.	—	—	—	2500S	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
1,VIII,64	—	2501/2L 8-sp.	—	—	—	—	—
20,IX,64	—	—	2584B, 2585BS, 2586/7BN	—	—	—	—
21,XI,64	—	—	2689B	—	—	—	—
6,XII,64	—	—	2699B	—	—	—	—
1,VIII,65	—	—	2814B	—	—	—	—
13,XI,65	—	2903B 4-sp.	2904B/5B	3182C	—	—	—
23,IX,67	—	—	3290B	—	—	—	—
20,X,84	—	—	4114B	—	4116B	—	—
29,VI,93	4804BT	4807B 4-sp.	4805B	—	4808B	4806B	—
Marple Bridge, Brabyn's Park leg. J. T. P. 1,XI,64	18,VII,93	29,VIII,93	9,VIII,93 2664B	—	29,VIII,93	9-30,VIII,93	—
Romiley, Chadkirk Wood leg. J. T. P. 29,IX,63	—	—	2137BS	—	—	—	—
11,X,64	—	—	2630N	—	—	—	—
7,XI,65	—	—	—	—	2911B	—	—
Worsley leg. J. T. P. 1,V,65	2739BT	—	—	—	—	—	—
30,X,65	—	—	2902BS	—	—	—	—
HEREFORDSHIRE, Torrington, East Wood leg. B. C. K. 22,X,64	—	—	2660B	—	—	—	—
Hereford, Moccas Park, Deer Park leg. J. T. P. 9,XI,63	2224BA	—	2221N/2BN et 2223BS	—	2220B	—	—
Moccas Park, Court leg. J. T. P. 9,XI,63	—	—	2229N	—	—	—	—



	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
KENT, Beckenham, Ravensbourne, Beckenham Place Park, Summerhouse Hill leg. J. T. P. 19,XI,64	—	—	2687N	—	—	—	—
Frinted leg. E. G. Keena per A. E. Apinis X,64	—	—	—	—	2672B	—	—
Maidstone, East Malling Research Station leg. M. Bennet per P. W. Talboys 15,X,64	—	—	2641B	—	—	2640B	—
Sevenoaks, Bessels Green, Montreal Park leg. H. G. Ward 15,X,70	—	—	—	—	4194B	—	—
Sevenoaks Weald, Hildenborough leg. A. Grasmann 16,X,64	—	—	2652BN	—	—	2646BNS	—
3 miles from Sussex border, Tunbridge Wells leg. 26,IX,64	—	—	—	—	—	2606B	—
LANCASHIRE, Chorley, Astley Park leg. J. T. P. 9,XI,65	—	—	2908B	—	—	—	—
Bolton, Egerton leg. J. T. P. 4,XI,63	2218BA	—	—	—	—	—	—
Rufford, Rufford Old Hall leg. J. T. P. 29,IX,84	—	—	4089B	—	4094B	—	—
10,X,84	—	—	2625BN et 2627/8BN	—	—	—	—
24,XII,64	—	—	2703BN	—	—	—	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
LEICESTERSHIRE, near Loughborough, Quorndon leg. J. T. P. 9,X,69	—	—	3556BN	—	—	—	—
MERSEYSIDE, between Great Altcar and Downholland Cross leg. J. T. P. 3,XI,64	—	—	2667BS	—	—	—	—
Bidstone Hill leg. J. T. P. 29,X,63	2196BA	—	—	—	—	—	—
27,VI,64	2472BT ?	—	—	—	—	—	—
21,X,64	—	—	2642/3B	—	—	—	—
5,XI,64	—	—	2668B	—	—	—	—
Birkenhead, Arrowe Park leg. J. T. P. 12,IX,64	—	—	2568BN	—	—	—	—
Birkenhead Park leg. J. T. P. 1,XI,63	2202BA	—	—	—	—	—	—
Liverpool, Speke Hall, Stockton's Wood leg. J. T. P. 8,X,88	—	—	4457N	—	—	—	—
8,VI,90	4540LT	—	—	—	—	—	—
Liverpool, near Allerton Cemetery leg. J. T. P. 12,XI,64	—	—	2675B	—	—	—	—
Calderstones Park leg. J. T. P. 15,X,63	2168BA	—	—	—	—	—	—
17,X,63	2172BA	—	2171N	—	—	—	—
5,IX,63	—	—	2215NS	—	—	—	—
15,X,64	—	—	2631B	—	—	—	—
Sefton Park leg. J. T. P. 30,X,63	2201BA	—	2200B	—	—	—	—
6,XI,63	—	—	2216BN	—	—	—	—

	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
Prescot, Knowsley Park, Prescot Lodge leg. J. T. P. 7,XI,64	—	—	2674BN	—	—	—	—
W. of Bidston Hill leg. J. T. P. 27,VI,64	2472LT	—	—	—	—	—	—
NORFOLK, Snettisham, Ken Hill Wood leg. S. S. Bates IX,64	—	—	2588BN	—	—	—	—
Kings Lynn, Sandringham Woods leg. S. S. B. 6,X,64	—	—	2622BNS	—	—	—	—
Between Sandringham and Wolferton leg. S. S. B. 13,X,64	—	—	2645BN	—	—	2644B	—
NORTHUMBER- LAND, Blanchlands Abbey grounds leg. J. T. P. 27,X,73	—	—	4216B	—	—	—	—
Coupland, 5 km n.w. of Wooler leg. J. T. P. 7,VI,71	—	3734L 8-sp.	3765BN 17-21,XI,71	3733C	—	—	—
NOTTING- HAMSHIRE. Nottingham, University campus leg. J. T. P. et J. S. Srivastavi 27,VII,91	—	4679B 8-sp. 25,VIII,91	—	—	—	—	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
SHROPSHIRE, Church Stretton, Ragleth Wood leg. J. T. P. 27,X,64 Newport, Gt. Chatwell, Woodcote Hall leg. W. E. Perry per B. C. K. X,64 Shrewsbury, Attingham Hall leg. J. A. Thompson 1,X,64 Whitchurch, Old Woodhouse, Combermere leg. J. T. P. 21,IX,85	—	2653LB 4-sp.	2654BN	—	—	2655BS	—
	—	—	2615BNS	—	—	—	—
	—	—	2604B—	—	—	—	—
	—	—	—	—	4229B	4238B 9,X,90	—
SOMERSET, Abbot's Leigh, Abbot's Pool leg. T. E. T. Bond 2,X,64 Abbot's Leigh, Ashton Court leg. T. E. T. B. 2,X,64	—	—	—	—	2609B	—	—
	—	—	26010B	—	2611B	2612BS	—
Allerford Plantation, near Porlock leg. J. T. P. et H. G. Ward 20,III,93	—	—	4726B 15,IX,92	—	4732N 1,X,92	—	<i>Ciborinia</i> <i>bresadolae</i> 4796B 27,III,93
STAFFORDSHIRE, Patshull leg. S. R. Ardley per B. C. K. 4,XI,64 Wolverhampton, Tettenhall Wood leg. B. C. K. 13,X,64	—	—	2673BNS	—	—	—	—
	—	—	2633BN	—	—	—	—

	<i>Botryotinia</i> cf. <i>fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
SUFFOLK, Barnby, Barnby White House leg. J. T. P. 7,VIII,70	—	—	3639N 14,X,70	—	—	4199B 14,IX,70	—
Between Beccles and Lowestoft leg. J. T. P. 7,VIII,70	—	—	3641B 29,ix-14,X,70	—	—	—	—
Near Bury St. Edmunds, West Stow leg. W.	—	—	2877B/8N	—	—	2907B 9,XI,65	—
Byford 3,X,65 Flatford, Dodnash Wood leg. J. Cowan 27,IX,64	—	2704B 4-sp.	2706B	—	2705BS	2707B	—
SURREY, Richmond, Richmond Park, White Lodge leg. J. T. P. 17,XI,64	—	2685B 4-sp.	2683BN	—	—	2684B	—
Richmond Hill entrance leg. J. T. P. 17,XI,64	—	—	2686B	—	—	—	—
SUSSEX, Hastings leg. D. M. Dring 1,IX,66	—	—	—	—	3109B	—	—
Near Tunbridge Well leg. A. G. 16,X,64	—	—	—	—	—	2606B	—
WORCESTER- SHIRE, Halesowen, Leasowes Park leg. J. T. P. 12,X,66	—	—	3028BN	—	—	—	—
Between Lenchford and Shrawley leg. B. C. K. 22,X,64	—	—	2661BN	—	—	2662S	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
YORKSHIRE, n.w. of Ilkley, Bolton Abbey leg. J. T. P. 19,X,70	—	—	3718B	—	—	—	—
Near Knaresbrough, Scotton Wood leg. J. T. P. 19,IX,70	—	—	3719B 14,X,70	—	—	—	—
leeds, Middleton Park leg. J. T. P. 8,X,64	—	—	2608BN	—	—	—	—
Sheffield, Eccleshall Wood leg. J. Webster 4,X,64	—	2619B 4-sp.	2617B	—	—	2616B	" <i>Rutstroemia</i> " sp. 2618B
<b>UNITED KINGDOM - SCOTLAND</b>							
ANGUS, Glamis Castle leg. J. T. P. 22,VIII,68	—	—	3426B +10,X,70	—	—	—	—
ROSS et CROMARTY, Easter Ross, near Alness, Evanton leg. J. T. P. 9,VI,71	—	—	3763BN 17,XI,71	—	—	—	—
SELKIRKSHIRE, Galashiels, Boldside leg. J. T. P. 5,VIII,68	—	—	3431BN 10,X-28,XI,68 3432BN 21-30,X,68 3433BN 24,IX-7,XI,68	—	—	—	—

	<i>Botryotinia</i> <i>cf. fuckeliana</i>	<i>Ciborinia</i>	<i>Ciboria</i> <i>americana</i>	<i>Ciboria</i> <i>tenuistipes</i>	<i>Lanzia</i> <i>echinophila</i>	<i>Rutstroemia</i> <i>sydowiana</i>	Other taxa
UNITED KINGDOM - WALES							
CLWYD, Hawarden, Hawarden Castle leg. J. T. P. 24,X,64	—	—	2648B	—	—	—	—
Near railway station leg. J. T. P. 24,X,64	—	—	2649B	—	—	—	—
Near Ruthin leg. J. T. P. 17,IX,68	—	—	3441B	—	—	4193B 24,IX,68	—
Wrexham, Coed-y-Glyn, Erddig Park leg. J. T. P. 24,X,64	—	—	2650B/1BN	—	—	—	—
GWENT, Wyndcliffe Wood near St. Arvans leg. J. T. P. 27,V,92	—	—	—	—	4725B 15,IX-17,X,92	—	—
GWYNEDD, Anglesey, Llanfairpwllgwyn- gyllogerychwyrn- drobwillantysylio- gogoch leg. J. T. P. 13,X,73	—	—	4213B +14,X,73	—	—	—	—
Llandegai leg. J. T. P. 13,X,73	—	—	4214B	—	4214B	—	—
S. of Llanfairfechan leg. J. T. P. 7,X,73	—	—	3889B	—	—	—	—
POWYS, Llanthony, Banks of Afon Hondelu leg. R. K. Brummitt 12,X,64	—	—	2676BS	—	—	—	—

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