

## **Fungi collected in the Republic of Guinea.**

### **I. Collections from the rain forest.**

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In a series of annual lists, finds of fungi are to be recorded which have been collected in connection with my work as a Plant Pathologist in Guinea. Nearly all the specimens included have been identified or confirmed by the the staff of the Commonwealth Mycological Institute, Kew, UK. The access numbers of the IMI herbarium are being quoted here which might serve the specialist interested in one or a group of fungi. It is also hoped that this list will contribute to a more complete knowledge of the prevalence and distribution of fungi in Africa.

The present list comprises collections made mostly in 1961 in the Guinean rain forest on the Experimental Station of Sérédou near Macenta, or its immediate neighbourhood. This remote and isolated station is situated at 550 metres altitude (with outposts at 800 and 1100 metres) at the fringe of the Ziama Mountains with their preserve of primary rain forest. Secondary rain forest with intermittent patches of cultivation and planted with bananas, coffee, citrus fruit, manioc, maize, oilpalms, sweetpotatoes, sorghum etc. extends towards the south. At the station itself, there is coffee and at Poste 5 (1100 metres) *Cinchona* and tea but most other cultivated plants suitable for the humid tropics exist. Apart from indigenous crops, however, all these plants have been introduced from other parts of the world, certainly with some of their usual parasites or colonizers.

The rainy season begins gradually in March and ends in November, reaching a maximum in July, August and September. Some occasional showers are usually recorded during the dry season lasting from November to March. The total days with rain per annum thus amount to 170—200 mm. The daily maxima of temperatures vary little throughout the years with 27° C in August and 32° C in February (1949—1960). The day and night differences are, however, more pronounced. They are up to 16° C in the dry season and 7° C in the rainy season. Relative humidity is usually high, and dew heavy in the dry period.<sup>1)</sup>

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<sup>1)</sup> All meteorological data is taken from the records of the station at Macenta, 40 km north of Sérédou, at 542 metres altitude, 08° 32' N and 09° 28' W.

I am greatly indebted to the Director and staff of the Commonwealth Mycological Institute, Kew, United Kingdom, for identifying or confirming most of the listed fungi, and to Mr. Camara Forá, Sérédou, for this help in determining host plants and for collecting fungi.

1. *Aecidium bomolense* Syd., — On leaves of *Adenia lobata* Sérédou, July 1962; Coll. C. Forá (IMI 95656).

2. *Ae. formosanum* Syd. — On leaves of *Emilia* sp. In a banana plantation, Sérédou, 19. Oct. 1961; rare (IMI 93162).

3. *Ae. justiciae* P. Henn. — On leaves of *Justicia* sp. On roadsides in shady places, Gueasso, Region de Beyla, 24. Nov. 1961; common and severe (IMI 93188). Also at Sérédou in a similar environment, 8. Dec. 1961 (s. 73).

4. *Ae. phyllanthi* P. Henn. — On leaves of *Phyllanthus discoides*. Sérédou, 12. Oct. 1961; common; Coll. C. Forá (IMI 93147).

5. *Alternaria dauci* (Kühn) Groves & Skolko — Causing a leaf rot of *Daucus carota*. Sérédou, 11. Oct. 1961; severe (IMI 93145).

6. *A. porri* (Ell.) Cif. — On leaves of *Apium graveolens*. Sérédou, 8. Dec. 1961; common in the garden of the station and sometimes severe (IMI 93194).

7. *Arcyria insignis* Kalchlr. ex Cooke — On dead leaf-sheaths of *Bambusa vulgaris*. Sérédou, 12. Oct. 1961; very rare (IMI 93144 b).

8. *Aschersonia* sp. — On leaves of *Albizzia sassa*. Sérédou, 6. Nov. 1961; immature (IMI 93168 a).

9. *Ascochyta* sp. — On leaves of *Coffea canephora* var. *robusta*. Near Gueasso, Region de Beyla, 24. Nov. 1961; severe on some single leaves (IMI 93191). — In concentric leaf spots of *Solanum melongena*. Sérédou, October 1961; common but mild; (IMI 93204).

The size of pycnidia and spores would fit in the description of *A. hortorum* (Speg.) C. O. Sm. as quoted by L. Roger in „Phytopathologie des pays chauds“ p. 1732, who includes *Phomopsis vexans* (Sacc. & Syd.) Harter amongst the synonyms.

10. *Botryodiplodia theobromae* Pat. — On rotting fruits of *Theobroma cacao* previously damaged by rats. Sérédou, 23. Nov. 1961; common.

11. *Cephalosporium* sp. — On *Hemileia vastatrix* Berk. & Br. (s. 36). Sérédou, Oct. 1961; common (IMI 93205 b).

12. *Cercospora abelmoschii* Ell. & Ev. — On leaves of *Hibiscus esculentus*. Sérédou, 5. Dec. 1961; effuse spots on the lower surface of the leaves, gray and mildew-like at first, becoming rather black and sooty with age; a severe attack (IMI 93192).

13. *C. annulata* Cooke — Causing large zonate leaf spots on *Olyra latifolia*, greenish at first, becoming gradually gray towards

the centre with distinct brown rings, up to 10 cm in length. Sérédou, Nov. 1961; Coll. C. For a (IMI 93202).

14. *C. apii* Fresen. — In leaf spots on *Apium graveolens*. Sérédou 20. Nov. 1961; associated with *Phoma apicola* (No. 53), the disease is common in the vegetable garden of the station, though not severe; (IMI 93176 b).

15. *C. bidentis* Tharp. — On leaves of *Bidens* sp. Sérédou, 8. Dec. 1961; a severely attacked plant (IMI 93196).

16. *C. canescens* Ell. & Mart. — On leaves and dead tendrils of *Phaseolus vulgaris*. Sérédou, 20. Nov. and 8. Dec. 1961; severe on lower leaves and common on moribund and dead parts (IMI 93178 and 93201). — In leaf spots of *Vigna* sp. Sérédou, July 1962; Coll. C. For a (IMI 95664).

17. *C. caribaea* Gif. & Chupp. — In small gray leaf spots of *Manihot utilisima*. Sérédou, 20. Nov. 1961; associated with No. 21, but less frequent (IMI 93161 b).

18. *C. chevalieri* P. Sacc. — On leaves of *Anchomanes difformis*. Near N'Zo, Region de N'Zérékoré, 3. Nov. 1961; a single plant in a coffee plantation severely attacked (IMI 93163).

19. *C. coffeicola* Berk. & Cooke. — On leaves of *Coffea canephora* var. *robusta* and *C. arabica* the berries of the latter are also attacked. Common throughout the forest, particularly in nurseries; attacks can be severe.

20. *C. contraria* H. & P. Syd. — On leaves of *Dioscorea* sp. Sérédou, 20. Nov. 1961 (IMI 93183).

21. *C. henningsii* Allesch. — On leaves of *Manihot utilisima*. Sérédou, 20. Nov. 1961; this disease is very common and sometimes severe in all the forest region (s. No. 17) (IMI 93161 a).

22. *C. nicotianae* Ell. & Ev. — On leaves *Nicotiana tabacum*. Around Foubadougou, Region de Beyla, 24. Nov. 1961; a serious disease, very common (IMI 93189).

23. *C. tithoniae* Baker & Dale — On leaves of *Tithonia diversifolia*. Sérédou, 8. Dec. 1961; common on the station (IMI 93193).

24. *C. ? volkammeria* Speg. — In leaf spots of *Clerodendron scandens*. Sérédou, 14. Oct. 1961; common but not severe; there is sometimes a *Phomopsis* sp. associated with the same symptom (IMI 93149 a).

25. *Chloridium musae* Stahel — On leaves of *Musa* sp. Sérédou, 18. Oct. 1961; common, conspicuous in some plantations (IMI 93153).

26. *Colletotrichum* sp. — On leaves of *Rauwolfia vomitaria*; Sérédou, July 1962; spores unusually curved; Coll. C. For a (IMI 95666).

27. *Corticium salmonicolor* Berk. & Br. — On twigs of *Coffea canephora* var. *robusta*. Sérédou, 27. Sept. 1961; common at this

place and throughout the forest region, but never severe (IMI 93136).  
— On twigs of *Cinchona* sp. at Sérédou. Poste 5; common, can cause some damage in certain parts of the plantations.

28. *Corynespora cassiicola* (Berk. & Curt.) Wei. — On leaves of *Macarobium* sp. Sérédou; 20. Nov. 1961.

29. *Endodothella deightonii* Syd. — On the lower side of leaves of *Albizzia sassa*. Sérédou, 6. Nov. 1961; common, often severe on the leaves without, however, causing obvious harm at this time; associated with No. 67 and parasitized by No. 49 (IMI 93168 c).

30. *Gibberella xylarioides* Heim & Saccas apud Heim — On stems and branches of *Coffea canephora*, both vars. *typica* and *robusta*, causing the destructive tracheomycosis of the coffee tree in large parts of the rain forest (IMI 93215) <sup>1)</sup>.

31. *Gloeosporium musarum* Cke & Massee — On fruits of *Musa* spp. Common and often severe throughout the forest region. The disease occurs in two forms: the prevalent brown spots, called „bananes tigrées“, and a progressive black rot.

32. *Glomerella cingulata* (Stonem.) Spauld & Schrenk. — Conidial in gray leaf spots of *Piper nigrum*. Sérédou, 9. Oct. 1961; common but moderate (IMI 93141). — Conidial on ripe pods of *Cassia* ? *hirsuta*. Sérédou, 8. Dec. 1961; (IMI 93195 a).

33. *G. microspila* Syd. — On leaves of *Osbeckia tubulosa*. Sérédou, poste 4, 6. Nov. 1961; this leaf spot is common, but fructification appears to be sparse (IMI 93173).

34. *Helminthosporium heveae* Petch. — Causing leaf spots of *Hevea brasiliensis*. Aveilidou near Sérédou, 23. Oct. 1961; severe attack in a nursery (IMI 93155).

35. *Hemileia vastatrix* Berk. & Br. — On leaves of *Coffea* spp. Sérédou, October 1961. The fungus is widespread in the Guinean rain forest, particularly in the south around N'Zérékoré. *Coffea arabica* at Sérédou suffers losses of economic importance. „Kouillou“ and „Gamé“ (both *C. canephora* var. *typica*) appear to be more susceptible than „Lulla“ (var. *robusta*). The local variety „Kissi“ is only slightly affected, whereas no coffee rust was seen on *Robusta* INEAC and *C. excelsa* (IMI 93206).

36. *H. scholzii* (P. Henn.) Syd. — On leaves of *Clerodendron* sp. Sérédou, Nov. 1961; common (IMI 93207).

37. *Hexagona discopoda* Pat. — On dead stems of *Coffea canephora* var. *typica*. Sérédou, Nov. 1961; rare (IMI 93233).

38. *Hysterostomella elaeicola* Maubl. — On leaves of *Elaeis guineensis*. Very common in all the forest region and sometimes harmful to young palms (IMI 93208).

1) FAO Plant Prot. Bull. **10**, 5, pp 107—109, 1962.



39. *Leptosphaeria sacchari* Breda de Haan. — On leaves of *Saccharum officinarum*. Sérédou, 14. Oct. 1961; all plants severely attacked (IMI 93148).

40. *Leveillula taurica* (Lév.) Arn. — On leaves of *Capsicum annuum*, *Cyphomandra betacea*, *Solanum melongena* and *S. incana*. Sérédou; the fungus is common on these hosts, often causing defoliation.

41. *Marasmius scandens* Mass. — White threads on twigs and leaves of *Coffea canephora* var. *typica*; at some scattered places in the forest region, rare and usually insignificant.

42. *M. stenophyllus* Mont. — On rotting pseudostems of *Musa sinensis*. Sérédou, 20. Nov. 1961; only a few plants affected.

43. *Meliola panici* Earle — On leaves of *Setaria* sp. Sérédou, 6. Nov. 1961; Common on roadsides (IMI 93174).

44. *Micropeltella minima* Stev. & Mantl. — On leaves of *Trichilia lanata*, Sérédou, 6. Nov. 1961; Coll. C. For a (IMI 93171).

45. *Mycosphaerella arachidicola* W. A. Jenkins — Conidial in leaf spots of *Arachis hypogaea*. Sérédou, 19. October 1961; common and severe in some gardens; Coll. C. For a (IMI 93156).

46. *M. musicola* Leach — Conidial in leaf spots of *Musa* spp. Sérédou and all the forest region, common and often severe. This and *Gloeosporium musarum* are the most important disease of the banana in the rain forest of Guinea.

47. *Mycosphaerella* sp. — On leaves of ? *Craiba* sp. Sérédou, 8. Dec. 1961; Coll. C. For a (IMI 93198). — On leaves of *Terminalia ivorensii*. Sérédou, July 1962; Coll. C. For a (IMI 95663).

48. *Nectria haematococca* Berk. & Br., — On shrivelled and rotting immature pods of *Theobroma cacao*. Sérédou, 27. Sept. 1961, common (IMI 93135).

49. *N. xenoderma* Syd., — On *Endothenella deightonii* Syd. on the lower side of leaves of *Albizia sassa*. Sérédou, 6. Nov. 1961; this fungus is frequently seen on *E. deightonii* (No. 29) as a pinkish crust (IMI 93168 c).

50. *Nectria* sp. — On decaying tendrils of *Adenia lobata*, Sérédou, 6. Nov. 1962, abundant (IMI 93169).

51. *Periconia byssoides* Pers. ex Schw. — On leaves of ? *Azalia* sp. Sérédou, Febr. 1962; Coll. C. For a (IMI 93233 b).

52. *Pestalotiopsis* sp. — On leaves of *Tephrosia vogelii*. Sérédou, 16. Oct. 1961; a single tree with leaf spots on yellowing or still green leaves (IMI 93152).

53. *Phakopsora* sp. — On leaves of *Randia* sp. Sérédou, Febr. 1962; Coll. C. For a (IMI 93230).

54. *Phoma apiicola* Kleb. — On leaf spots of *Apium graveolens*. Sérédou, 20. Nov. 1961; common and associated with No. 14 (IMI 93176 a).

55. *Phomopsis cocophila* (Speg) Bond-Mont. — On leaf spots of *Combretum* sp. Sérédou, 20. Nov.; common (IMI 93179).

56. *Phragmocarpella* sp. — On leaves of *Marantochloa cuspidata*. Sérédou, Nov. 1961; a very common light brown marginal leaf-spot up to several cm in diameter; destructive (IMI 956670).

57. *Phyllachora contigua* Syd. — On leaves of *Millettia* sp., between N'Zo and Lola, Reg. N'Zérékôre; common (IMI 93170).

58. *P. leucospila* Syd. — On leaves of *Millettia porphyrocalis*. Sérédou, 20. Nov. 1961; common (IMI 93182). — On leaves of *Ostrya* sp. Sérédou, Oct. 1961; rare; Coll. C. For a (IMI 93203).

59. *P. penniseti* Syd. — On leaves of *Pennisetum purpureum*. Common in all the forest region and sometimes severe (IMI 93172).

60. *Phyllachora* sp. — On leaves of *Digitalia* sp. Sérédou, Poste 5, 25. Oct. 1961; common and severe in a tea plantation. Distinct from *P. digitariae* Syd. and *P. digitalicola* Doidge (Mr. Pirozynski; CMI, Lit. (IMI 93159 b).

61. *Phylleutypa dioscoreae* (Wakef.) Petr. — On tendrils of *Dioscorea praehensilis*. Sérédou, 12. Oct. 1961; a single plant severely attacked (IMI 93146).

62. *Phyllosticta batatas* (Thüm.) Cke. — In leaf spots of *Ipomoea batatas*. Sérédou, 28. Sept. 1961; very common in gardens, and on escapes (IMI 93134).

63. *P. dioscorea* Cke. — On leaves of *Dioscorea* sp. Near Guekedou, Nov. 1961; infrequent (IMI 93200).

64. *Phyllosticta* sp. — On leaves of *Citrus aurantium* var. *amara*. Sérédou, 30. Oct. 1961; a large leaf spot, severe on some trees; Coll. P. Collie (IMI 93166).

65. *Physarum cinereum* Pers. — On decaying bracts of *Musa sinensis*. Sérédou, 14. Oct. 1961; rare (IMI 93151).

66. *Plectopellis* sp. — On leaves of *Trichilia lanata*. Sérédou, 6. Nov. 1961; Coll. C. For a (IMI 93171).

67. *Pseudothia pterocarpi* Syd. — On leaves of *Albizia sassa*. Sérédou, 6. Nov. 1961; associated with No. 29 and 49 (IMI 93168 b).

68. *Puccinia abutili* Berk & Br. — On leaves of ? *Wissadula* sp. Gueasso, Region de Beyla, 24. Nov. 1961; a single plant severely affected (IMI 93190).

69. *P. heterospora* Berk. & Curt. — On leaves of *Sida veronicifolia*. Sérédou, Oct. 1961; common wherever the hosts occurs, sometimes severe; Coll. C. For a (IMI 93154).

70. *P. holosericea* Cooke — On leaves of ? *Lepistemon* sp. Near N'Zo, Region de N'Zerekore, 20. Nov. 1961; rare (IMI 93180).

71. *P. lateritia* Berk & Curt. — On leaves of *Borreria* sp. Sérédou, 25. Oct. 1961; the host was rare but severely attacked (IMI 93164).

72. *P. polysora* Underw. — On leaves of *Zea mays*. Sérédou, 9. Oct. 1961; very severe attack (IMI 93139).

73. *P. thunbergiae* Cooke — On leaves of *Justicia* sp. Sérédou, 8. Dec. 1961; rare (s. No. 3) (IMI 93197).

74. *Puccinia* sp. — On leaves of *Elephantopus scaber*. Sérédou, 19. Oct. 1961; some single plants on the roadside severely attacked. According to Mr. L a u n d o n, CMI (Litt.), no rust like this has been described on this host but a morphologically identical species (*P. thunbergiae* Cke) occurs on *Acanthaceae* (IMI 93158).

75. *Piricularia musae* Hughes — On dead leaves of *Musa* sp. Sérédou, Nov. 1961; common (IMI 93177).

76. *Septobasidium pseudopedicellatum* Burt. — On twigs of *Citrus nobilis*. Sérédou, Poste 4, 25. Oct. 1961; rare.

77. *Septoria lycopersici* Speg. — Causing typical leaf spots on *Lycopersicum esculentum*. Sérédou, Oct. 1961; severe on lower leaves (IMI 93143).

78. *S. zeicola* Stout. — In gray, sometimes irregular leaf spots of *Zea mays*. Sérédou, 9. Oct. 1961; common and severe, often associated with *Puccinia polysora* (IMI 93138).

79. *Uromyces appendiculatus* (Pers.) Ung. — On leaves of *Phaseolus vulgaris*. Sérédou, 11. Nov. 1961; and at other places common and severe (IMI 93142).

80. *U. commelinae* Cooke — On leaves of *Commelina nodiflora*. Bac de Diani, 4. Nov. 1961; rare; Coll. C. F o r a (IMI 93165).

81. *U. mucunae* Rabenh. — On leaves of *Mucuna pruriens*. Sérédou, Febr. 1962, Coll. C. F o r a (IMI 93231).

82. *Ustilaginoida virens* (Cke) Tak. — In spikelets of *Oryza sativa* in swamp and dry land cultivation. Sérédou, Oct. 1961; common, but only a few panicles are usually affected.

83. *Tryblidiella rufula* (Spreng.) Sacc. var. *microspora* Ell. & Ev. — On dead stems of *Coffea canephora* var. *typica*. Sérédou, Nov. 1961; rare (IMI 93234).

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