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## THE CERCOSPORAE OF PUERTO RICO

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The following list of Porto Rican Cercosporae represent a rather exhaustive examination of the literature in which references to Porto Rican fungi occur as well as a study of specimens deposited in the extensive collections of Porto Rican fungi in the Herbarium at Cornell University and the New York Botanical Gardens. The author believes this list to be fairly complete. The collections begin with Holler in 1902 and continue with those of Stevenson, Whetzel, Olive, Chardon, Stevens, Seaver, Barrus, and the writer up to the present time. The numbers one to fifteen following the name of the host refer to the citations given at the close of this article. The numbers in **bold face type** refer to the various collections. Where the names of the collections are not given they refer to the numbers in the herbarium at Cornell University. The names of the species which are listed as in the Herbarium of the University of Illinois were copied from the material found in the New York Botanical Garden collection. The reference cited in each case is to the original place of publication of the species. The species indicated by asterisk (\*) are new reports for the Island.

I wish to acknowledge the suggestions and assistance of Dr. Charles Chupp and Professor H. H. Whetzel, of Cornell University, in the preparation of this list, and to the former for the descriptions of the three new species, and the critical notes on various of the specimens which he examined.

### CERCOSPORE Fries

1. CERCOSENSE ACHYRANTHIS Sydow, Ann. Myc. 7:171. 1909.  
On *Centrostachys aspera* (L) Standley 8, 9, 13; **464**; Herb., Univ. of Ill. **333**, **459**, **459 a**.
2. CERCOSENSE ACROCOMIAE Stevenson, Ann. Rept. Ins. Exp. Sta. Porto Rico 1916:89. 1917.  
On *Acrocomia aculeata* (Jacq.) Lodd 8, 13; Stevenson **2090**.

3. CERCOSPORA ALTERNANTHERAE Ell. & Lang., Journ. Myc. 6:36. 1890.  
On *Achyranthes portoricensis* (Kuntze) Standley 8, 9, 13; Herb. Univ. of Ill. 820, 3273, 3976, 8479.
4. CERCOSPORA AMARYLLIDIS Ell. & Ev., Journ. Myc. 3:14. 1887.  
On *Hymenocallis* sp. 15; Herb. Univ. of Ill. 836  
*H. declinata* (Jacq.) M. Roem. 8, 13.
5. CERCOSPORA ATRICINECA Heald & Wolf, Mycol. 3:14. 1911.  
On *Crassina elegans* (Jacq.) Kuntze. 8, 13;  
*Zinnia* sp. 9.
6. CERCOSPORA BERNARDIAE Stevens, Trans. Illinois Acad. Sci. 10:213 1917.  
On *Bernardia Bernardia* (L) Millsp. 8, 9, 13; Herb. of Univ. of Ill. No. 355A.
7. CERCOSPORA BETICOLA Sacc., Nuov. Giorn. Bot. Italia 8:189. 1876.  
On *Beta vulgaris* L. 8, 9, 13, 14.
8. CERCOSPORA BIFORMIS Peck, Bull. Torrey Bot. Club 36:156. 1909.  
On *Passiflora sexflora* Juss. 8, 9, 13.
9. CERCOSPORA BIXAE Allesch & Noack, Bot. Inst. Agron. do Estado de Sao Paulo em Campinas 9:95. 1898.  
On *Bixa orellana* L. 8, 9, 13; 1180; Herb. Univ. of Ill. 56, 3795, 4845.
10. CERCOSPORA BLOXAMI Berk. & Br., Annals and Mag. Nat. Hist. Ser. 5. 9:183. 1882.  
On *Brassica* spp. 8, 11; Univ. of Ill. Herb. 449, 5121.  
*B. rapa* L. 11, 13, 15;  
*B. napus* (L) 15;  
*B. arvensis* L 13;  
*B. integrifolia* (West) Schulz 13;  
*B. Japonica* Siebold 13;  
*B. juncea* (L) 13;  
*B. pe-tsai* 13;  
*B. campestris* L. 11.
11. CERCOSPORA BORINQUENSIS Young, Mycol. 8:45. 1916.  
On *Calopogonium orthocarpum* Urb. 8, 13, 15; Herb. Univ. of Ill. 6752; Stevenson 3186.

- \*12. CERCOSPORA BRACHYPODA Speg. Anal. Soc. Cient. Argentina. 12: 1881.  
On *Abutilon hirtum* (Lam.) Sweet, collected by M. T. Cook,  
No data.
- Abelmoschus esculentus* (C) Moench. Herb. John A. Stevenson. No. 3565. Río Piedras.
13. CERCOSPORA BRADBURYAE Young, Mycol. 8:46. 1916.  
On *Bradburya pubences* (Benth.) Kuntze 8, 13 15; Herb. of F. L. Stevens 5785; N. Y. Bot. Gard. 446, 3930, 5412, 6296; Herb. Univ. of Ill. 225a, 263a, 446a, 479, 5609, 5796, 6296, 6482, 6558.
14. CERCOSPORA CAJANI P. Henn., Hedwigia 41:309. 1902.  
On *Cajan Cajan* (L) Millsp. 8, 11, 13, 15; 1179; Herb. Univ. of Ill. 226, 294a, 3556, 3798, 4832, 5100, 5608, 5733, 5874, 6029, 6058a, 6752.
- \*15. CEROOSPORA CALADI Cooke, Grevillea 8:95. 1879.  
On *Caladium bicolor*. Herb. Exp. Sta. Río Piedras, P. R. 1189.
- \*16. CERCOSPORA CALOTROPIDIS E. & E. Mo. Bot. Gard. Ann. Rept. 9:120. 1898.  
On *Calotropis procera* (Ait.) R. Br. 2739.
17. CERCOSPORA CANESCENS Ell. & Mart., Am. Nat. 16:1003. 1882.  
On *Dolichos Lablab* L. 8, 11, 13; Stevenson 5130.  
*Phaseolus vulgaris* L. 7, 8, 11, 13; Herb. Univ. of Ill. 5722.  
*Phaseolus lunatus* L. 8, 11, 13.  
*Phaseolus lathyroides* L. 1203, 2662.  
*Vigna unguiculata* (L) Walp. 8, 13.
18. CERCOSPORA CAPSICI Heald & Wolf, Mycol. 3:15. 1911.  
On *Capsicum annuum* L. 1, 8, 11, 13; 2982; Stevenson 5049.
19. CERCOSPORA CARBONACEA Miles, Trans. Illinois Acad. Sci. 10:255. 1917.  
On *Dioscorea alata* L. 7, 8, 13; Herb. of Univ. of Ill. 3563, 4178, 4187, 4234, 6469, 6687.
20. CERCOSPORA CASEARIAE Stevens, Trans. Illinois Acad. Sci. 10:212. 1917.  
On *Casearia* spp. 8; Herb. of Univ. of Ill. No. 99, 4190, 6115.

*Casearia guianensis* 9, 13; Herb. Univ. of Ill. 76, 99,  
 293a, 311, 370, 387, 406, 420, 1386 3801, 3900,  
 3940, 4190, 4675 4691 4858, 4865, 5086, 5171,  
 5556, 5839, 6698, 7925, 8051, 9268, 9306, 9339.  
*Casearia sylvestris* Sw. 9, 13; 2973; Herb. Univ. of Ill.  
 524, 3895, 5004, 5016, 5431, 5714, 7177, 7273, 7275,  
 7364, 7855, 7884, 8682.

21. CERCOSPORA CITRULLINA Cooke, Grevillea, 12:31. 1883.

. On *Citrullus vulgaris* Schrad. 8, 9, 10, 11, 13.

- \*22. CERCOSPORA CLITORIAE Atk. Jour. Elisha Mitchell Scien. Soc.  
 8: 1892.

On *Clitoria ternatea* L. 2985.

23. CERCOSPORA COFFEICOLA Berk. & Cooke. Grevillea 9:99. 1881.

*Cercospora coffeae*—Zimm. Ber. u. Land. und. Fortstwirth  
 Deutsch Ostafriek. 1904:35.

On *Coffea arabica* L. 2, 3, 7, 8, 13; 498, 499, 3033, 3082;  
 Herb. of Univ. of Ill. 4827.

24. CERCOSPORA CONSPICUA Earle, Bull. New York Bot. Gard. 3:312.

1905.

On *Cleome* sp. 15; Herb. Univ. of Ill. 19, 6728.

*Cleome spinosa* Jacq. 8, 13; 473; Herb. Univ. of Ill.  
 7186, 8360, 8365, 8984, 9151.

*Cleome gynandra* L. 1154, 1157, 1209; Porto Rican  
 Fungi (Heller) 6152.

25. CERCOSPORA CRUENTA Sacc., Michelia 2:149. 1880.

On *Phaseolus vulgaris* L. 11, 14

*Phaseolus lunatus* L. 8, 13; Herb. Univ. Ill. 222, 5989.  
*Vigna unguiculata* (L) Walp. 1, 8, 11, 13; Stevenson  
 6270.

26. CERCOSPORA CUCURBITAE Ell. & Ev., Journ. Mycol. 4:3. 1888.

On *Lagenaria leucantha* (L) Rusby, 8, 11, 13; Stevenson  
 5710.

27. CERCOSPORA CUCURBITICOLA P. Henn., Hedwigia 43:95. 1904.

On *Cayaponia* sp. 8, 9, 13.

*Cuburbit* Herb. Univ. of Ill. 3777, 4815.

28. CERCOSPORA DENSISSIMA Speg., Anal. Mus. Nac. Buenos Aires Ser.

2, 3:341. 1899.

On *Sida* sp. 8, 13, 15; Herb. Univ. of Ill. 6354, 6361.

- \*29. CERCOSPORA ELEPHANTOPIS E. & E. Journ. Mycol. 3:15. 1887.  
On *Elephantopus mollis* H. B. K. 1186.

30. CERCOSPORA FLAGELLARIA Ell. & Mart., Am. Nat. 16:1003. 1882.  
On *Phytolacca icosandra* L. 8, 9, 13; Herb. Univ. of Ill. 2323.

- \*31. CERCOSPORA FLAGELLIFERA Atk. Journ. Elisha Mitchell Scien. Soc. 8: 1892.  
On *Galactia striata* (Jacq.) Urban. 1163.

NOTE: This specimen does not fit very well any of the Cercosporae described on this host or closely related hosts.

32. CERCOSPORA GILBERTII Speg., Anal. Soc. Cient. Argentina 10:38. 1880.  
On *Iresine panniculata* Kuntze 8, 9, 13; Herb. Univ. of Ill. 8286.

33. CERCOSPORA GOSSYPINA Cooke, Grevillea 12:31. 1883.  
On *Gossypium barbadense* L. 1, 8, 13; 2975.

34. CERCOSPORA GUANICENSIS Young, Mycologia 8:45. 1916.  
On *Caesalpina crista* L. 8, 13, 15; Herb. Univ. of Ill. 6843; Col. of Agr. U. of P. R. 6840.

- \*35. CERCOSPORA HELICTERIS Syd., Philippine Jour. Sci. (Botany) 9:189. 1914.  
On *Solanum torvum* Herb. Univ. of Ill. 361, 361a, 486, 1144, 1266, 4691.

NOTE: The specimens in these packets all look like the type material of *C. trichophila* Stevens on the same host. A detailed study, however, was not made to determine accurately their identity.

36. CERCOSPORA HEMIDIODIAE Toro Journ. Dept. Agric. Labor. Porto Rico, 14. 1930.  
On living leaves of *Hemidiodia ocimifolia* (Willd.), 1174.

37. CERCOSPORA HENNINGSII Allesch., Engl. Ost. Pflanz. 3:35. 1895.  
*Cercospora Cassavae* Ell. & Ev., Bull. Torrey Bot. Club 22:438. 1895.  
On *Manihot utilissima* Pohl. 7, 8, 11, 13, 15, 462; Herb. Univ. of Ill. 223, 254.  
*Cassava* sp. 9, 15; Herb. Univ. of Ill. 6557.

A comparison of the descriptions indicate that *C. Henningsii* and

*C. Cassavae* are the same species. Stevenson (Journ. Dept. Agric. Porto Rico 2:211. 1918) points out the similarity between the two.

38. CERCOSPORA HIBISCI Tracy & Earle, Bull. Torrey Bot. Club 22:179. 1895.

On *Hibiscus tiliaceus* L. 8, 13, 15; Herb. Univ. of Ill. 8073, 8456, 8501, 8962, 9147, 9484.

*Abelmoschus esculentus* (L.) Moench. 7, 8, 11, 13, 14; Herb. Univ. of Ill. 310, 3630, 3793, 4797, 5030, 5229, 6465, 6618.

39. CERCOSPORA HURAE Stevens, Trans. Illinois Acad. Scie. 10:210. 1917.

On *Hura crepitans* L. 8, 9, 13; Herb. Univ. of Ill. 70, 478, 3594, 5830.

40. CERCOSPORA HYDROPIPERIS (Thuem) Speg. Anal. Soc. Cient. Argentina 9:191. 1880.

*Helminthosporium Hydropiperis* Thuem, Mycotheaca Universalis No. 1087.

*Cercospora Polygonorum* Cooke, Hedwigia 17:39. 1878.

On *Polygonum punctatum* Ellis. 8, 13; Herb. Univ. of Ill. 27, 69, 91, 419, 1154, 4578, 4586.

- \*41. CERCOSPORA IPOMOAE Wint, Hedwigia 26: 34, 35. 1887.

On *Ipomoea* sp. 513.

*Ipomoea pes-caprae* (L.) Roth. 514.

42. *Cercospora Lantanae* Chupp. sp. nov.

On *Lantana camara* L.

Spots amphigenous, indefinite or on the upper surface of the leaf with minute brown center surrounded by a yellowish halo that merges with the green of the leaf. On the lower surface the spots are mostly indefinite or with a slight yellowing. When fruiting tufts are plentiful the spot has an olivaceous tinge. Conidiophores hypophyllous not in dense tufts, smoky to light brown slightly branched, 1-5 septate, sometimes constricted at the septa, 4-5 × 30-70 u. Conidia cylindrical, longer ones slightly attenuated, 1-3 septate, septation very evident sometimes constricted at the septa, smoky to light brown, 4-5 × 25-60 u. This seems distinct from any one of the large number of species described as being on the Verbenaceae.

Collected by C. E. Chardon (Collection No. 1200) at Peñuelas, July 21, 1920. A similar collection was made in Bermuda by Whetzel, March 15, 1922.

43. CERCOSPORA LEPIDI<sup>II</sup> Peck. Ann. Rept. New York State Mus. 35:140. 1884.  
On *Lepidium* sp. 15;  
*Lepidium virginicum* L. 8, 13.
44. CERCOSPORA LONGIPES Butler, Mem. Dept. Agric. India 1 (3):44. 1906.  
On *Saccharum officinarum* L. 6, 8, 14; Stevenson 6315.
45. CERCOSPORA LONGISSIMA (Traverso) Sacc. Syll. Fung. 18:607. 1906.  
*Cercospora longispora* (Cug. in herb.) Traverso. Malpighia 17:217. 1903.  
*Cercospora Lactucae* Stevenson, Journ. Dept. Agric. Porto Rico. 1:105. 1917.  
*Cercospora Lactucae* Welles, Phytopath., 13:289. 1923.  
On *Lactuca sativa* L. 8, 11. Stevenson 5513.

In *Phytopathology* 15:247. 1925, Frank P. McWhorter calls attention to the fact that the name *Cercospora Lactucae* Stevenson invalidates *Cercospora Lactucae* Welles for reason of priority of name. He undoubtedly overlooked Saccardo's *Sylloge Fungorum* 18:607, where *Cercospora Lactucae* P. Henn. is recorded. P. Hennings described his species in *Botanische Jahrbücher* 31:742. 1902, and therefore his name has priority over *C. Lactucae* Stevenson and *C. Lactucae* Welles both of which are not tenable on this basis.

Traverso in *Malpighia* 17:217. 1903, describes another *Cercospora* on *Lactuca* and names it *C. longispora*. Saccardo, however, recorded this species as *C. longissima* since the name *longispora* was preoccupied by a species described by Peck. Traverso's description agrees in some points with those of Stevenson and Welles while it differs much from that of P. Hennings. As a result of his studies on the genus *Cercospora*, Welles states in *Am. Journ. Bot.* 13:201, that "The measurements of the fruiting structures indicate decidedly that spore size as a means of classification is utterly valueless and misleading when spores are obtained from uncontrolled field lesions" and (p. 216) "that physiological behavior in relation to host range would give a more accurate and, perhaps, not an altogether clumsy method of arranging these parasites". In the light of our present knowledge of the taxonomy of these fungi one can only speculate on the validity of the above named species. From an examination of the literature one would appear to be forced to conclude that there are two distinct species of *Cercospora* on *Lactuca*: *C. Lactucae* P. Henn. and *C.*

*longissima* (Traverso) Sacc., with *C. Lactucae* Stevenson and *C. Lactucae* Welles, as probably synonyms of the latter.

46. CERCOSPORA MALACHRAE Heald & Wolf, Mycologia 3:19. 1911.  
*Cercospora Malachrae* Young, Mycologia 8:45. 1916.

On *Malachra alceifolia* Jacq. 8, 13, 15; Herb. Univ. of Ill.  
 338a, 381, 431, 5003, 5199, 5840.

47. CERCOSPORA MARICAOENSIS Young, Mycologia 8:44. 1916.  
 On *Teramnus uncinatus* (L) Sw. 8, 13, 15; Herb. Univ. of  
 Ill. 2271, 5340, 5815, 6554.

48. CERCOSPORA MIKANIACOLA Stevens, Trans. Illinois Acad. Sci. 10:  
 213. 1917.

On *Mikania* sp. 8, 9, 13; Herb. of the Univ. of Ill. 4700,  
 5083, 7923 (*Type*).

49. CERCOSPORA NICOTIANAE Ell. & Ev., Proc. Acad. Sci. Philadelphia  
 45:170. 1893.

On *Nicotiana tabacum* L. 1, 7, 8, 9, 13; 2970; Herb. Univ.  
 of Ill. 23; Stevenson 5336, 7060.

50. CERCOSPORA ORYZAE Miyake. Journ. Coll. Agric. Tokyo 2:263.  
 1910.

On *Oryza sativa* L. 8, 13.

\*51. CERCOSPORA PAPILLOSA Atk Journ. Elisha Mitchell Scien. Soc.  
 8: 1892.

On *Valerianodes jamaicense* (L) Kuntze. 524.

52. CERCOSPORA PERSONATA (B. & C.) Ellis, Journ. Myc. 1:63. 1885.  
*Cladosporium personatum* B. & C., Grevillea, 3:106. 1874.

On *Arachis hypogaea* L. 3, 8, 9, 11, 13, 14.

\*53. CERCOSPORA PHASEOLORUM Cke. Grevillea 12:30. 1883.

On *Phaseolus adenanthus* G. F. W. 538.

NOTE: This specimen does not very well fit any of the descriptions of the nine species reported on *Phaseolus*.

54. *Cercospora phyllanthae* Chupp sp. nov.

On living foliage of *Phyllanthus Niruri* L.

Spots indefinite or none, marked only by the ashen gray coating of the fungous fruiting structures. Conidiophores mostly hypophylloous, sometimes amphigenous, dark brown, branched cylindrical, straight or slightly geniculate, in closely crowded fascicles of 3-12 conidiophores each, septate,  $4 \times 20-50$  u. Conidia cylindrical,

nearly straight to slightly tortuous, base blunt and rounded, tip rounded to acute, 1-6 (mostly 2-3) septate, frequently constricted at the septum, hyaline  $3-4 \times 18-45$  u.

Collected on Island of Vieques, July 18, 1924. *Type Whetzel Kern Toro 2663* in Collection of Exploration of Porto Rico. Cornell University.

This *Cercospora* appears to be distinct from any of the other species recorded on members of the Euphorbiaceae. It is characterized by its relatively broad, branching conidiophores and broad conidia. Many of the conidiophores have a single side branch with a septum just above the point where the branch emerges.

55. CERCOSPORA PHYLLITIDIS Hume, Bull. Torrey Bot. Club. 27:577.  
1900.

On *Polypodium* sp. 8, 13, 15; Herb. Univ. of Ill. 121.

56. CERCOSPORA PISA-SATIVAE Stevenson, Ann. Rept. Ins. Exp. Sta.  
Porto Rico 1917-18:138. 1919.

On *Pisum sativum* L. 8, 11, 13; Stevenson 6777.

57. CERCOSPORA PORTORICENSIS Earle, Muhlenbergia, 1:15. 1901.

On *Piper* sp. 58, 92, 742, 3797, 3839, 3955, 4050, 4311, 4885,  
4972, 4993, 5167, 5792, 6020.

*Piper aduncum* L. 8, 9, 13; 463, 1150, 1181, 1190, 2680,  
3124;

Herb. Univ. of Ill. 22, 45a, 315, 412, 463, 1166, 7015,  
7035, 7319, 7501, 7833, 8088, 8358, 8420, 8735, 9131,  
9132, 9143, 9308, 9399; Stevenson (5804);

Plants of Porto Rico No. 4359 (Earl), 4359, 6369  
(Heller).

On *Piper Peltatum* L. 8, 13; 526, 1204, 7133; (C. piperis  
Pat. Fungi Columbiana No. 4906.)

Porto Rican Fungi (Heller) 6159, 6242; Plants of Porto  
Rico (Underwood and Griggs, N. Y. Bot. Gard.) No  
numbers.

*Piper Scabrum* Sw. 8, 13, 15; 2240, 4792, 4802, 4804.

*Piper umbellatum* L. 9, 13; N. J. Plant, Path., Herb.  
(Type material);

Herb. Univ. of Ill. 115, 146, 414, 417, 721, 7771, 7903,  
8854.

58. CERCOSPORA RICINELLA Sacc. & Berl., Atti. R. Inst. Ven. di Sci.  
Let. Art. Ser. 6. 3:721. 1885.

- On *Ricinus* sp. 60, 84, 125, 3238, 6553.  
*Ricinus communis* L. 8, 9, 13; 1158, 1166, 1178, 1184.  
 Herb. Univ. of Ill. 5973; Stevenson 6354, 7050.
59. CERCOSPORA RICOSSPORA Atk., Journ. Elisha Mitchell Soc. 8:65.  
 1891.  
 On *Solanum nigrum* L. 8, 9, 13, 487, 1194, 2748, 3162.
60. CERCOSPORA ROSAECOLA Pass., on Packet of the Thümen. Myc. Univ. No. 1086, 1874.  
 On *Rosa* spp. 8, 13, 15; 1187; Herb. Univ. of Ill. 737, 3447,  
 4806; Stevenson 5841.
61. CERCOSPORA SAGITTARIAE Ell. & Kellerm. Journ. Myc. 2:1. 1886.  
 On *Sagittaria lancifolia* L. 8; 2670.
62. CERCOSPORA SECHII Stevenson, Ann. Rept. Insular Exp. Sta.  
 Dept. Agr. & Labor, Porto Rico, 1917-18:137. 1919.  
 On *Sechium edule* (Jacq.) Sw. 8, 13; Stevenson 6888.
63. CERCOSPORA SESAMI Zimm. Ber. u. Land—. Fortw. Deutsch-  
 Ostafrika. 1904:28.  
*Sesamum* sp. Stevenson 5836.  
*Sesamum orientale* L. 8, 11, 13.
64. CERCOSPORA SIMULATA Ell. & Ev., Journ. Myc. 1:64. 1885.  
*Cercospora chamaecristae* Ell. & Kellerm. Journ. Myc. 4:7.  
 1888.  
 On *Cassia alata* L. 8, 13, 15; 537, 2749; Porto Rican Fungi  
 6270.  
*Cassia occidentalis* L. 3, 8, 13, 15; 1165, 1197; Herb.  
 Univ. of Ill. 269a, 3586, 3896, 6054, 7146, 7240, 7318,  
 7355, 7889, 8924, 9132.
65. CERCOSPORA STEVENSII Young, Mycologia 8:45. 1916.  
 On *Andira* sp. 15; Herb. Univ. of Ill. 6008, 6549;  
*Andira inermis* H.B.K. 8, 13.
- \*66. CERCOSPORA STIZOLOBII Sydow, Ann. Myc. 11:270. 1913.  
*Cercospora Mucunae* Sydow, Hedwigia 42:106.  
 On *Mucuna* sp. Herb. Univ. of Ill. 3779, 6555.  
*Mucuna pruritum* (Wight) Piper 8, 13, 15; 479; Herb.  
 Univ. of Ill. 250, 3535, 3601, 3951, 4685, 4691, 4704,  
 4779, 4806, 4929, 6009, 7120, 8008.  
*Mucuna urens* (L) D. C. 8;  
*Stizolobium aterinum* 13.

67. CERCOSPORA THOUINIAE Stevens, Trans. Illinois Acad. Sci. 10: 213. 1917.  
On *Thouinia striata* Radlk. 8, 9, 13. Herb. Univ. of Ill. 751. Porto Rican Fungi, F. L. Stevens 751 (Type).
68. CERCOSPORA TIGLII P. Henn., Hedwigia 47:265. 1908.  
On *Croton lobatus* L. 8, 2657.  
NOTE: This fungus is new to Vieques Island.
69. CERCOSPORA TRICHOPHILA Stevens, Trans. Illinois Acad. Sci. 10: 212. 1917.  
On *Helicteres jamaicensis* Jacq. 8, 9, 13; *Solanum torvum* Sw. 8, 9, 13; 484, 1154; Herb. Univ. of Ill. 486, 3156, 7035, 7227, 7296, 7693, 7832, 7982, 8499, 9205, 9339. *Solanum verbascifolium* L. 8, 9, 13; 78260.
70. CERCOSPORA TRICHOSTIGMAE Stevens, Trans. Illinois Acad. Sci. 10:211. 1917.  
On *Trichostigma octandra* (L) H. Walst. 8, 9, 13; Herb. Univ. of Ill. 9254, 9470.
- \*71. CERCOSPORA TURNERAE E. & E. Mo. Bot. Gard. Ann. Rept. 9:119. 1898.  
On *Turnera ulmifolia* L. 481.
72. CERCOSPORA VAGINAE Krueger, Meded. Profest. West-Java 24:8. 1896.  
On *Saccharum officinarum* L. 1, 6, 8, 13, 15; Herb. Univ. of Ill. 7001.
73. CERCOSPORA VENTURIODES Peck, Rept. State Mus. 34:47. 1881.  
On *Asclepias curassavica* L. 8; 1151, 2669.
74. CERCOSPORA VIGNAE E. et E. Journ. Mycol. 3:19. 1887.  
*C. Vignae* Racib. Zeitschr. Pflanzenkr. 8:66. 1898.  
(Probably a synonym as both have occasional branched conidiophores. The type material of both was not examined.)  
On *Vigna repens* (L) Kuntze, 2744.  
*Vigna unguiculata* (L) Walp. 1, 8, 10, 11, 13.
75. CERCOSPORA VIOLAE Sacc., Nuov. Giorn. Bot. Italia 3:187. 1876.  
On *Viola* sp. 8, 9, 13. 1149, 1160.

76. *Cercospora Whetzelii* Chupp sp. nov.On *Argemone mexicana* L.

Spots definite or sometimes indefinite, grayish brown to yellowish brown with darker margin on upper surface of leaf, brown to oliveaceous with no margin brown, subcircular or when confluent irregular in shape, 2-6 mm. in diameter. Conidiophores amphigenous, in fascicles of 3-20, arising from stromae of varying sizes, fascicles gregarious, conidiophores light brown, irregularly cylindrical, straight to curved, sometimes geniculate, rarely if ever septate, 5-7  $\times$  15-70 u. Conidia straight, cylindrical with rounded ends, sometimes slightly attenuated at one end, shorter ones unicellular, mostly one septate, rarely constricted at the septa, the point of attachment mostly very evident, 5-8  $\times$  15-35 u. This seems different from any other Cercospora species described on the Papaveraceae.

Collected by C. E. Chardon at Ponce, Porto Rico, July 10, 1925.  
Chardon Collection No. 1161.

DEPARTMENT OF PLANT PATHOLOGY  
INSULAR EXPERIMENT STATION  
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## LITERATURE CITED

1. Cook, Mel. T. Report of the division of plant pathology and botany. Porto Rico Agr. Exp. Sta. Ann. Rept. 1924-25; **98**: 1926. Similar in 1923-24; **89**-100. 1924.
2. Fawcett, G. K. Report of the plant pathologist. Ann. Rept. Porto Rico Fed. Agr. Exp. Sta. 1913:26-29. 1914.
3. Gardner, F. D. Annual Report of the Porto Rico Agricultural Exp. Sta. for 1903. Fungous diseases. U. S. Dept. Agr. Office of Exp. Sta. Ann. Rept. 1903:449-450.
4. Hendrickson, H. C. Vegetable growing in Porto Rico, Porto Rico Fed. Agr. Exp. Sta. Bul. 7: 64. 1907.
5. Johnston, J. R. Sugar cane diseases. Board of Comm. Agr. Porto Rico Bul. 1: 45. 1911.
6. Johnston, J. R. and Stevenson, J. A. Sugar cane fungi and diseases in Porto Rico. Journ. Dept. Agr. Porto Rico 1:177-251. 1917.
7. Miles, L. E. Some diseases of economic plants in Porto Rico. Phytopathology 7:348-349. 1917.
8. Seaver, F. J. and C. E. Chardon. Botany of Porto Rico and the Virgin Islands. Mycology N. Y. Acad. of Sci. 3(1):92-96.
9. Stevens, F. L. Porto Rican fungi, old and new. Trans. Ill. Acad. Sci. 10:210-214. 1917.
10. Stevenson, J. A. Report of the pathologist. Board Comm. Agr. Porto Rico. Ann. Rept. 4:42. 1916.

11. **Stevenson, J. A.** Diseases of vegetable and garden crops. *Journ. Dept. Agr. Porto Rico* 1:93-117. 1917.
12. **Stevenson, J. A.** Report of the Pathologist. *Board Comm. of Agr. Porto Rico.* Rept. 5:72. 1917.
13. **Stevenson, J. A.** A check list of Porto Rican fungi and host index *Journ. Dept. Agr. Porto Rico.* 2:125-264. 1918.
14. **Thomas, H. E.** Report of the plant pathologist. *Porto Rico. Agr. Exp. Sta. Ann. Rept.* 1917:28-30. 1918.
15. **Young, E.** Studies in Porto Rico parasitic fungi. *Mycologia* 8:42-46. 1916.