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Uredinales of the Southern Ryukyu Islands¹⁾

By

Naohide HIRATSUKA* and Shun-ichi SHIMABUKURO**

The Southern Ryukyu Islands designated in the present paper include the two island-groups; Miyako and Yaeyama. Miyako island group consists of the following islands: Miyako, Ikema, Kurima, Irabu, Shimochi, Tarama, Minna and Ogami, of which the island of Miyako is the largest. Miyako lies to the southwest of Okinawa being separated about 250 km. from the latter by open sea which attains a depth of more than 1,000 meters. Yaeyama island group consists of the islands: Ishigaki, Taketomi, Kohama, Kuroshima, Aragusuku (Kamiji and Shimoji), Hateruma, Iriomote, Hatoma and Yonaguni. Besides these islands, there are a few uninhabited islets, namely Senkaku-Retto, Kayama-jima, Nakami-ugan, and others. The principal islands of Yaeyama island group are Ishigaki and Iriomote. The former is located on the eastern side of the Yaeyama group, at a distance of 436 km. from Naha port on Okinawa and 144 km. from the island of Miyako. Iriomote Island lies nearly the center of the Yaeyama group.

The first account of rust fungi from the Southern Ryukyu Islands was presented by the senior author (1) in 1936. He recorded *Phakopsora Ehretiae* Hiratsuka on *Ehretia Dicksonii* Hance. var. *japonica* Nakai, based upon a specimen collected by Tetsuo Miyagi on Ishigaki Island. In 1954, the present authors (2) reported 8 genera and 17 species of rust fungi from the Southern Ryukyu Islands in a paper, entitled, "Uredinales of the Ryukyu Islands."

Since August 1953, the junior author has made two trips to the islands of Miyako and Ishigaki and one to Iriomote for the purpose of collecting rust fungi. Furthermore, Masao Tamori spent about a month on Ishigaki in the summer of 1954 for the same purpose, under the direction of the junior author. The whole number of specimens collected by the junior author and Tamori is some 300.

¹⁾ Contributions from the Laboratories of Phytopathology and Mycology, Faculty of Agriculture, Tokyo University of Education. no. 24, also, Contributions from the Agriculture and Home Economics Division, University of the Ryukyus. no. 2.

* Faculty of Agriculture, Tokyo University of Education.

** Agriculture and Home Economics Division, University of the Ryukyus.

The following is a tabulation of the number of species, by genera, heretofore known from the Southern Ryukyu Islands, additions newly announced in the present paper and the total.

Number of species of rust fungi found in the
Southern Ryukyu Islands

Families	Genera	Number of species			
		Previously reported	Present additions	Total	
Melampsoraceae	Melampsora	—	1	1	13
	Phakopsora	2	4	6	
	Crossopora	1	1	2	
	Coleosporium	—	4	4	
Pucciniaceae	Kuehneola	1	—	1	44
	Poliotelium	1	—	1	
	Pileolaria	—	1	1	
	Ravenelia	1	—	1	
	Hapalophragmium	—	1	1	
	Uromyces	3	10	13	
	Puccinia	3	21	24	
	Endophyllum	—	2	2	
Uredinales Imperfecti	Aecidium	2	4	6	12
	Uredo	—	6	6	
Total		14	55	69	

As shown in the table, there are 14 genera and 69 species including 12 species of the two form-genera, *Aecidium* and *Uredo* which are now known from the Southern Ryukyus. Among them, the following six species are considered new additions to the rust-flora of the Japanese Archipelago. They are: 1) *Hapalophragmium Derridis* Sydow, 2) *Uromyces orientalis* Sydow, 3) *Puccinia Curculigonis* Raciborski, 4) *Endophyllum Griffithiae* (P. Henn.) Raciborski, 5) *Aecidium hornotinum* Cummins and 6) *Uredo sinensis* Trotter.

The specimens studied are all kept in the Hiratsuka Herbarium, Tokyo, Japan, with duplicates deposited in the Herbarium of University of the Ryukyus.

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Enumeration of species

MELAMPSORACEAE

1. **Melampsora Idesia** Miyabe ex Hiratsuka in Bot. Mag. Tokyo, XI, p. 45 & pl. IV, figs. 1~3, 1897.

Hab. II, (III). On *Cathayaia polycarpa* Ohwi (*Iigiri*). Iriomote Isl.: "Iriomote" (Oct. 1, 1940, T. Naito, no. 2059).

2. **Phakopsora Ampelopsidis** Dietel et Sydow apud Dietel in Hedwigia, XXXVII, p. 217, 1898. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 8, 1954).

Hab. II, III. On *Ampelopsis brevipedunculata* Trautv. var. *Maximowiczii* Rehd. (*No-budo*). Miyako Isl.: Shimajiri-aza, Taira-shi (Aug. 5, 1953, S. S., no. 1019); Miyaguni-aza, Ueno-mura (Aug. 5, 1953, S. S., no. 1018). Ishigaki Isl.: Mt. Banna (Ishigaki-shi) (June 17, 1954, S. S., no. 2070).

3. **Phakopsora Ehretiae** Hiratsuka in Bot. Mag. Tokyo, XIV, p. 91 & pl. III, figs. 10~13, 1900. (Hiratsuka, f. in Bot. Mag. Tokyo, L, p. 3, 1938; Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 8, 1954).

Hab. II, III. On *Ehretia Dicksonii* Hance. var. *japonica* Nakai (*Maruba-chishanoki*). Miyako Isl.: Shimoji-cho (Aug. 2, 1953, S. S., no. 1017). Ishigaki Isl.: Ohama-cho (Aug. 8, 1954, M. T., no. 2066); Mt. Banna (Feb. 19, 1955, S. S., no. 2069); "Ishigaki Isl." (March 6, 1925, T. Miyagi, no. 1050).

4. **Phakopsora Fici-erectae** Ito et Otani in Bot. & Zool. IX, p. 663 & text-fig. 2, 1941 (nom. seminud.); Ito & Murayama in Transact. Sapporo Nat. Hist. Soc. XVIII, p. 85, 1949.

Hab. II, (III). On *Ficus erecta* Thunb. (*Inu-biwa*). Miyako Isl.: Taira-shi (Dec. 22, 1954, S. S., no. 2352, M-19). Ishigaki Isl.: Ohama-cho (Aug. 6, 1954, M. T., no. 2067).

II, (III). On *Ficus Harlandi* Benth. var. *kotoensis* Sata (*Koto-inubiwa*). Iriomote Isl.: Sonai-aza (June 20, 1954, S. S., no. 2068).

II, (III). On *Ficus Konishii* Hayata (*Giran-inubiwa*). Ishigaki Isl.: Mt. Banna (Feb. 19, 1955, S. S., no. 2079).

¹⁾ The following abbreviations are used for the name of the collectors most frequently named in the list: S. S.=Shun-ichi Shimabukuro (島袋俊一); Y. N.=Yoshima Niro (新納義馬); M. T.=Masao Tamori (田盛正雄).

5. **Phakopsora incompleta** (Syd.) Cummins in *Mycologia*, XLII, p. 786, 1950.

Hab. II, (III). On *Ischaemum crassipes* Thell. var. *formosanum* Nakai (*Taiwan-kamonohashi*). Miyako Isl.: Shimochi-cho (Feb. 17, 1955, M. T., no. 2321, M-18).

II, (III). On *Microstegium ciliatum* A. Camus (*O-sasagaya*). Ishigaki Isl.: Mt. Banna (June 18, 1954, S. S., no. 2319, Y-142).

6. **Phakopsora Malloti** Cummins in *Mycologia*, XIII, p. 783 & fig. 3, 1950.

Hab. II, (III). On *Mallotus japonicus* Müll.-Arg. (*Akame-gashiwa*). Ishigaki Isl.: Ohama-cho (Aug. 8, 1954, M. T., no. 2322, Y-17).

7. **Phakopsora Pachyrhizi** Sydow in *Ann. Myc.* XII, p. 108, 1914.

Hab. II, III. On *Glycine Max* Merr. (*Daidzu*) (*cult.*). Iriomote Isl.: Shirahama-aza (June 23, 1954, S. S., no. 2324, Y-168).

8. **Crossopsora Antidesmae-dioicae** (Syd.) Arthur et Cummins in *Philippine Jour. Sci.* LXI, p. 474, 1936.

Hab. II, (III). On *Antidesma japonicum* Sieb. et Zucc. (*Yama-hihatsu*). Ishigaki Isl.: Mt. Omoto (Aug. 7, 1954, M. T., no. 2075, Y-2).

9. **Crossopsora Malloti** (Racib.) Cummins in *Mycologia*, XXXII, p. 372, 1940. (Hiratsuka, f. & Shimabukuro in *Sci. Bull. Facul. Agric. Univ. Ryukyus.* I, p. 10, 1954).

Hab. II, (III). On *Mallotus moluccanus* Müll.-Arg. (*Yanbaru-akame-gashiwa*). Miyako Isl.: Ueno-mura (Aug. 3, 1953, S. S., no. 1022); Shimochi-cho (Aug. 2, 1953, S. S., no. 1021, M-15). Ishigaki Isl.: Ohama-cho (Aug. 11, 1954, M. T., no. 2076, Y-34).

10. **Coleosporium Clematidis** Barclay in *Jour. Asiatic Soc. Bengal*, LIX, pt. 2, p. 89 & pl. VI, figs. 3 & 5, 1890.

Hab. II, (III). On *Clematis grata* Wall. (*Ke-botandzuru*). Ishigaki Isl.: Ohama-cho (Aug. 5, 1954, M. T., no. 2301, Y-14).

11. **Coleosporium Clerodendri** Dietel in *Bot. Jahrb.* XXVIII, p. 556, 1899.

Hab. II, III. On *Clerodendron trichotomum* Thunb. (*Kusagi*). Ishigaki Isl.: Mt. Banna (June 18, 1954, S. S., no. 2027).

12. **Coleosporium Evodiae** Dietel in *Ann. Myc.* VII, p. 355, 1909.

Hab. II, (III). On *Evodia glauca* Miq. (*Hama-sendan, Shima-*

kuroki). Ishigaki Isl.: Mt. Banna (Feb. 19, 1955, S. S., no. 2074, Y-102).

13. **Coleosporium Xanthoxyli** Dietel et Sydow apud Dietel in Hedwigia, XXXVII, p. 217, 1898.

Hab. II, III. On *Fagara ailanthoides* Engl. (*Karasu-zansho*). Ishigaki Isl.: Ohama-cho (Feb. 22, 1955, S. S., no. 2073, Y-109).

II, (III). On *Zanthoxylum Arnothianum* Maxim. (*Hire-zansho*). Ishigaki Isl.: Mt. Banna (Feb. 23, 1955, S. S., no. 2085, Y-114).

PUCCINIACEAE

14. **Kuehneola Callicarpae** Sydow in Sydow & Petrak in Ann. Myc. XXVI, p. 420, 1928. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 15, 1954).

Hab. 0, II, III. On *Callicarpa japonica* Thunb. var. *luxurians* Rehd. (*O-murasakishikibu*). Ishigaki Isl.: "Ishigaki-shima" (Aug. 6, 1953, Y. N., no. 1013).

15. **Polioteliium hyalospora** (Sawada) Mains in Bull. Torrey Bot. Club, LXVI, p. 175, 1939. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 16, 1954).

Hab. 0, II, III. On *Acacia confusa* Merr. (*Soshijyu*). Miyako Isl.: Shimochi-cho (Aug. 2, 1953, S. S., no. 1102). Ishigaki Isl.: Ishigaki-shi (Aug. 5, 1953, Y. N., no. 1101); Mt. Banna (Feb. 19, 1955, S. S., no. 2071, Y-105).

16. **Pileolaria Shiraiana** (Diet. et Syd.) Ito in Jour. Coll. Agric. Hokkaido Imp. Univ. XI, p. 273 & pl. IX, fig. 13, 1922.

Hab. II, III. On *Rhus succedanea* L. (*Haze-no-ki*). Ishigaki Isl.: Mt. Omoto (Aug. 7, 1954, M. T., no. 2054, Y-4). Iriomote Isl.: Inaba-aza (June 22, 1954, S. S., no. 2055, Y-161).

17. **Ravenelia Hobsoni** Cooke in Jour. Roy. Micr. Soc. III, p. 386 & pl. XI, fig. 4, 1880. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 18, 1954).

Hab. II, III. On *Pongamia pinnata* Merr. (*Kuro-yona*). Miyako Isl.: Ueno-mura (Aug. 3, 1953, S. S., no. 1012).

18. **Hapalophragmium Derridis** Sydow in Hedwigia, XL, p. (64), 1901.

Hab. II, (III). On *Derris uliginosa* Benth. (*Shiinoki-kadzura*). Miyako Isl.: Taira-shi (Dec. 23, 1954, S. S., no. 2054, M-70).

19. **Uromyces azukicola** S. Hirata in Ann. Phytopath. Soc. Japan, XVI, p. 18 & text-fig. 3, 1952. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 19, 1954).

Hab. (0, I), II, III. On *Phaseolus angularis* Wight. (*Azuki*) (*cult.*). Miyako Isl.: Taira-shi (Aug. 4, 1953, S. S., no. 1100). Iriomote Isl.: Komi-aza (Sept. 11, 1954, M. T., no. 2091, Y-183).

20. **Uromyces Commelinae** Cooke in Transact. Roy. Soc. Edinb. XXXI, p. 342, 1888.

Hab. II, (III). On *Commelina nudiflora* L. (*Shima-tsuyukusa*). Ishigaki Isl.: Ohama-cho (Feb. 27, 1955, S. S., no. 2105, Y-97); Mt. Banna (June 17, 1954, S. S., no. 2095, Y-130).

21. **Uromyces coronatus** Miyabe et Nishida ex Dietel in Bot. Centralbl. CV, p. 495, 1905. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 20, 1954).

Hab. II, III. On *Zizania latifolia* Turcz. (*Makomo*) (*cult.*). Ishigaki Isl.: Mt. Omoto (June 25, 1954, S. S., no. 2099, Y-40); "Ishigaki-shima" (Aug. 5, 1953, Y. N., no. 1103).

22. **Uromyces Eriochloae** Sydow et Butler in Ann. Myc. V, p. 492, 1907.

Hab. II, (III). On *Eriochloa procera* C. E. Hubbard (*Nokibi*, *Murasaki-nokibi*). Ishigaki Isl.: Ohama-cho (Aug. 8, 1954, M. T., no. 2100, Y-26).

II, (III). On *Eriochloa villosa* Kunth. var. *stenantha* Ohwi (*Hosomi-no-narukobie*). Iriomote Isl.: Otomi-aza (Sept. 11, 1954, M. T., no. 2094, Y-186).

23. **Uromyces Ervi** Westendorp in Bull. Acad. Roy. Sci. de Belg. XXI, pt. 2, p. 246 & fig. 3, 1854.

Hab. (0), I, II, III. On *Vicia sativa* L. (*Karasu-no-endo*). Ishigaki Isl.: Ohama-cho (March 8, 1955, M. T., no. 2096, Y-131).

24. **Uromyces Lespedezae-procumbentis** (Schw.) Curtis in Geol. Survey N. Car. III, p. 123, 1867.

Hab. (0, I), II, III. On *Lespedeza cuneata* G. Don. (*Medo-hagi*). Miyako Isl.: Taira-shi (Dec. 28, 1954, S. S., no. 2106, M-22).

25. **Uromyces linearis** Berkeley et Broome in Jour. Linn. Soc. XIV, p. 92, 1875. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 22, 1954).

Hab. II, III. On *Panicum repens* L. (*Hai-kibi*). Miyako Isl.: Shimochi-cho (Aug. 2, 1953, S. S., no. 1032).

26. **Uromyces Mucunae** Rabenhorst in Hedwigia, XVII, p. 62, 1878.

Hab. II, III. On *Mucuna pruriens* Prodr. (*Fuki-mame*). Miyako Isl.: Taira-shi (Dec. 22, 1954, S. S., no. 2103, M-36).

27. **Uromyces orientalis** Sydow in Ann. Myc. V, p. 490, 1907.

Hab. II, III. On *Indigofera trifoliata* var. *liukiensis* Matsum. (*Naha-eboshigusa*). Ishigaki Isl.: Ohama-cho (Feb. 21, 1955, S. S., no. 2092, Y-139).

28. **Uromyces proeminens** Léveillé in Ann. Sci. Nat. (III), VIII, p. 371 & 375, 1847.

Hab. 0, I, II, III. On *Chamaesyce Makinoi* Hara (*Koba-nishikiso*). Ishigaki Isl.: Ohama-cho (Feb. 27, 1955, S. S., no. 2101, Y-93).

29. **Uromyces Setariae-italicae** Yoshino in Bot. Mag. Tokyo, XX, p. 247, 1906.

Hab. II, (III). On *Setaria italica* Beauv. (*Awa*) (*cult.*). Miyako Isl.: Taira-shi (June 16, 1954, S. S., no. 2104, M-44).

II, (III). On *Setaria viridis* Beauv. var. *genuina* Honda (*Enokoro-gusa*). Ishigaki Isl.: Ohama-cho (Aug. 16, 1954, M. T., no. 2098, Y-31).

30. **Uromyces Wedeliae** Hennings in Hedwigia, XLIII, p. 150, 1904.

Hab. II, III. On *Wedelia biflora* DC. (*Kidachi-hamaguruma*). Ishigaki Isl.: Ohama-cho (Feb. 21, 1955, S. S., no. 2093, Y-231).

31. **Uromyces yakushimensis** Hiratsuka, f. et Katsuki in Hiratsuka, f. in Mem. Facul. Agric. Tokyo Univ. Education, I, p. 53, 1952.

Hab. II, III. On *Trichosanthes bracteata* Voigt. (*O-karasuuri*). Ishigaki Isl.: Ohama-cho (Feb. 28, 1955, S. S., no. 2102); Mt. Omoto (June 25, 1954, S. S., no. 2097).

32. **Puccinia Angelicae** (Schum.) Fuckel in Jahrb. Nass. Ver. Nat. XXIII/XXIV, p. 52, 1870. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 25, 1954).

Hab. II, III. On *Peucedanum japonicum* Thunb. (*Botan-ninjin*). Ishigaki Isl.: Ishigaki-shi (March 13, 1955, M. T., no. 2038, Y-224). Senkaku-retto (Aug. 2, 1953, Y. N., no. 1096).

33. **Puccinia citrina** Sydow, Monogr. Ured. I, p. 634 & pl. XXXVI, fig. 483, 1903.

Hab. II, III. On *Smilax plani-peduncula* Hayata (*Hirane-san-kirai*). Ishigaki Isl.: Ohama-cho (Aug. 22, 1954, M. T., no. 2302, Y-90).

34. ***Puccinia Crepidis-japonicae*** Dietel in Ann. Myc. VI, p. 226, 1908.

Hab. (0, I); II, III. On *Youngia japonica* DC. (*Oni-tabirako*). Ishigaki Isl.: Shiraho (Feb. 21, 1955, S. S., no. 2040, Y-137).

35. ***Puccinia Curculigonis*** Raciborski, Parasit. Algen u. Pilze Javas, I, p. 21, 1900 (sub "*Puccinia Curculigo*").

Hab. II, III. On *Curculigo orchioides* Gaertner (*Kinbai-zasa*). Ishigaki Isl.: Hirakubo-aza, Ohama-cho (Aug. 26, 1954, T. M., no. 2035, Y-75).

36. ***Puccinia Cynodontis*** Lacroix in Desm., Pl. Crypt. II, p. 655, 1859.

Hab. II, (III). On *Cynodon Dactylon* Pers. (*Gyogi-shiba*). Iriomote Isl.: Ohara (March 3, 1955, M. T., no. 2036, Y-206).

37. ***Puccinia Elytrariae*** Hennings in Hedwigia, XXXIV, p. 320, 1895.

Hab. III. On *Justicia procumbens* var. *riukiuiensis* Yamamoto (*Kitsuneno-himago*). Ishigaki Isl.: Tonogusuku-aza, Ishigaki-shi (March 6, 1955, M. T., no. 2037, Y-223).

38. ***Puccinia erebia*** Sydow in Philippine Jour. Sci. VIII, Bot. p. 475, 1859. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 29, 1954).

Hab. II, III. On *Clerodendron inerme* Gaertn. (*Ibota-kusagi*). Miyako Isl.: Miyaguni-aza, Ueno-mura (Aug. 3, 1953, S. S., no. 1023); Taira-shi (Aug. 1, 1953, S. S., no. 1024, M-1). Ishigaki Isl.: Hoshino, Ohama-cho (Aug. 18, 1954, M. T., no. 2045, Y-82).

39. ***Puccinia exhausta*** Dietel in Bot. Jahrb. XXVIII, p. 283, 1900. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 30, 1954).

Hab. III. On *Clematis grata* Wall. (*Ke-botandzuru*). Miyako Isl.: Taira-shi (Aug. 1, 1953, S. S., no. 1026). Ishigaki Isl.: "Ishigaki-shima" (Aug. 5, 1953, Y. N., no. 1028).

40. ***Puccinia ferruginosa*** Sydow, Monogr. Ured. I, p. 13 & pl. I, fig. 10, 1902.

Hab. III. On *Artemisia dubia* Wall. (*Yomogi*). Ishigaki Isl.:

Ohama-cho (Feb. 27, 1955, S. S., no. 2053, Y-95).

41. **Puccinia flavipes** Sydow in Sydow & Butler in Ann. Myc. V, p. 497, 1907.

Hab. II, (III). On *Fimbristylis annua* Roem. et Schult. (*Ten-tsuki*). Ishigaki Isl.: Ishigaki-shi (Aug. 24, 1954, M. T., no. 2316, Y-61).

42. **Puccinia graminis** Persoon, Syn. Fung. p. 228, 1801.

Hab. II, III, On *Triticum aestivum* L. (*Ko-mugi*) (*cult.*). Miyako Isl.: Taira-shi (March 2, 1955, S. S., no. 2048, M-52).

43. **Puccinia Hashiokai** Hiratsuka, f. in Jour. Jap. Bot. XVIII, p. 570, 1942.

Hab. II, (III). On *Epipremnum mirabile* Schott. (*Habu-kadzura*). Iriomote Isl.: Inaba (June 21, 1954, S. S., no. 2304, Y-165).

44. **Puccinia Juncelli** Dietel in Ann. Myc. VIII, p. 306, 1910.

Hab. II, III. On *Juncellus serotinus* Clarke (*Midzu-gayatsuri*). Ishigaki Isl.: Ohama-cho (Aug. 6, 1954, M. T., no. 2305, Y-10).

45. **Puccinia Lepturi** Hiratsuka, f. in Transact. Sapporo Nat. Hist. Soc. XVIII, p. 28, 1941.

Hab. II, III. *Lepturus repens* R. Br. (*Hai-shiba*). Ishigaki Isl.: Ohama-cho (Aug. 27, 1954, M. T., no. 2311, Y-64; Feb. 21, 1955, S. S., no. 2039, Y-136).

46. **Puccinia Lophatheri** (Syd.) Hiratsuka, f. in Jour. Jap. Bot. XIV, p. 36, 1938.

Hab. II, III. On *Lophatherum gracile* Brong. (*Sasakusa*). Ishigaki Isl.: Ohama-cho (Aug. 8 & 27, 1954, M. T., nos. 2041, Y-21 & 2315, Y-57).

47. **Puccinia minussensis** Thümen in Bull. Soc. Imp. Nat. Moscou, LIII, p. 214, 1878.

Hab. (0, I), II, III. On *Lactuca indica* L. (*Akinonogeshi*). Miyako Isl.: Taira-shi (Dec. 21, 1954, S. S., no. 2051).

48. **Puccinia Miscanthi** Miura, Flora of Manchuria & E. Mongolia, III, p. 302 & pl. IV, fig. B, 1928.

Hab. II, III. On *Miscanthus sinensis* Anders. (*Susuki*). Miyako Isl.: Shimochi-cho (Feb. 20, 1955, M. T., no. 2049, Y-67); Taira-shi (Dec. 25, 1954, S. S., no. 2050, M-12). Ishigaki Isl.: "Ishigaki-shima" (Aug. 5, 1953, Y. N., no. 2107).

49. **Puccinia oahuensis** Ellis et Everhart in Bull. Torrey Bot. Club, XXII, p. 425, 1895.

Hab. II, III. On *Digitaria Ischaemum* Mühl. var. *asiatica* Ohwi (*Akino-mehishiba*). Ishigaki Isl.: Ohama-cho (Aug. 6, 1954, M. T., no. 2306, Y-12).

50. **Puccinia philippinensis** Sydow in Philippine Jour. Sci. VIII, no. 4, Sect. C, Bot. p. 266, 1913.

Hab. II, III. On *Cyperus rotundus* L. (*Hama-suge*). Ishigaki Isl.: Ohama-cho (Aug. 10, 1954, M. T., no. 2310, Y-29); Ishigaki-shi (June 25, 1954, S. S., no. 2300, Y-46).

51. **Puccinia Phyllostachydis** Kusano in Bull. Coll. Agric. Tokyo Imp. Univ. VIII, p. 2 & pl. VI, 1, 2, 10 & 11, 1908.

Hab. II, (III). On *Phyllostachys aurea* Carr. (*Hotei-chiku*). Ishigaki Isl.: Mt. Banna (Jan. 18, 1954, S. S., no. 2052, Y-48).

52. **Puccinia purpurea** Cooke in Grevillea, V, p. 15, 1876.

Hab. II, (III). On *Sorghum bicolor* Moench. (*Morokoshi*) (*cult.*). Ishigaki Isl.: Ohama-cho (Feb. 28, 1955, S. S., no. 2047, Y-100).

53. **Puccinia rufipes** Dietel in Bot. Jahrb. XXXII, p. 48, 1902.

Hab. II, (III). On *Imperata cylindrica* Beauv. var. *Koenigii* Durand (*Chigaya*). Ishigaki Isl.: Ohama-cho (Feb. 27, 1955, S. S., no. 2046, Y-92).

54. **Puccinia Scleriae** (Paz.) Arthur in Mycologia, IX, p. 75, 1917.

Hab. II, III. On *Scleria Doederleiniana* Booklr. (*O-shinjuryu-gaya*). Ishigaki Isl.: Mt. Omoto (Aug. 7 & 17, 1954, M. T., nos. 2043 & 2044, Y-1 & 84); "Ishigaki-shima" (Aug. 6, 1953, Y. N., no. 2112).

55. **Puccinia Zoysiae** Dietel in Bot. Jahrb. XXXII, p. 48, 1902. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 40, 1954).

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56. **Endophyllum emasculatum** Arthur et Cummins in Philippine Jour. Sci. LXI, p. 475, 1936.

Hab. III. On *Breynia rhamnoides* Müll.-Arg. (*Oshima-koban-*

noki). Ishigaki Isl.: Mt. Banna (June 18, 1954, S. S., no. 2057, Y-52).

57. **Endophyllum Griffithiae** (P. Henn.) Raciborski, Parasit. Algen u. Pilze Javas, I, p. 20, 1900.

Hab. III. On *Randia sinensis* Roem. et Schult. (*Hijiharinoki*, *Shima-misaonoki*). Ishigaki Isl.: Miyara-aza, Ohama-cho (March 8, 1955, M. T., no. 2058, Y-239).

UREDINALES IMPERFECTI

58. **Aecidium formosanum** Sydow in Ann. Myc. XI, p. 56, 1913.

Hab. On *Emilia sonchifolia* DC. (*Usubeni-nigana*). Ishigaki Isl.: Ohama-cho (Aug. 17, 1954, M. T., no. 2082, Y-86).

59. **Aecidium hornotinum** Cummins in Ann. Myc. XXXV, p. 103, 1937.

Hab. On *Meliosma Oldhami* Miq. (*Yanbaru-awabuki*). Ishigaki Isl.: Ohama-cho (Feb. 24, 1955, S. S., no. 2088, Y-141).

60. **Aecidium Kaernbachii** Hennings in Bot. Jahrb. XV, p. 5, 1892. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 42 & pl. I, fig. 8, 1954).

Hab. On *Ipomoea pes-caprae* Sw. (*Gunbai-hirugao*). Ishigaki Isl.: Ishigaki-shi (Aug. 6, 1953, Y. N., no. 1011; June 24, 1954, S. S., no. 2086, Y-42). Iriomote Isl.: Sonai-aza (June 20, 1954, S. S., no. 2081, Y-156).

61. **Aecidium Machili** Hennings in Hedwigia, XLI, p. 21, 1902. (Hiratsuka, f. & Shimabukuro in Sci. Bull. Facul. Agric. Univ. Ryukyus. I, p. 43, 1954.)

Hab. On *Machilus Thunbergii* Sieb. et Zucc. (*Tabunoki*). Ishigaki Isl.: Ohama-cho (Feb. 22, 1955, S. S., no. 2083, Y-91). Iriomote Isl.: Inaba (June 21, 1954, S. S., no. 2080, Y-166). Senkaku-retto (Aug. 2, 1953, Y. N., no. 1086).

62. **Aecidium Mori** Barclay in Jour. Asiatic Soc. Bengal, IX, pt. 2, p. 226, 1891.

Hab. On *Morus australis* Poir. (*Shima-guwa*). Ishigaki Isl.: Mt. Banna (June 18, 1954, S. S., no. 2089, Y-54).

63. **Aecidium Rraphiolepidis** Sydow in Ann. Myc. XX, p. 61, 1922.

Hab. On *Rhaphiolepis umbellata* Mak. (*Sharinbai*). Ishigaki Isl.: "Ishigaki" (Aug. 6, 1953, Y. N., no. 2087).

64. **Uredo Alocasiae** Sydow, Monogr. Ured. IV, p. 521, 1924.

Hab. On *Alocasia macrorhiza* Schott. (*Kuwadzu-imo*). Ishigaki Isl.: Ohama-cho (Feb. 22, 1955, S. S., no. 2064, Y-111).

65. **Uredo Dianellae** Dietel in Hedwigia, XXXVII, p. 213, 1898.

Hab. On *Dianella ensifolia* Red. (*Kikyo-ran*). Ishigaki Isl.: Ohama-cho (Aug. 10, 1954, M. T., no. 2063, Y-37).

66. **Uredo Fagarae** Sydow in Ann. Myc. XII, p. 111, 1914.

Hab. On *Fagara nitida* Roxb. (*Teriha-zansho, Kume-zansho*). Ishigaki Isl.: Mt. Banna (Feb. 20, 1955, S. S., no. 2065, Y-121).

67. **Uredo Guettardae** Hiratsuka, f. et Hashioka in Bot. Mag. Tokyo, XLIX, p. 523, 1935.

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68. **Uredo psychotricola** Hennings in Hedwigia, XXIV, p. 321, 1895.

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