

琉球大学学術リポジトリ

琉球列島におけるサビ菌類の分布と種類に関する考察

メタデータ	言語: 出版者: 琉球大学農家政工学部 公開日: 2012-02-15 キーワード (Ja): キーワード (En): 作成者: Shimabukuro, Shun-ichi, 島袋, 俊一 メールアドレス: 所属:
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Hab. in the Ryukyus. II, III. on *Panicum repens* L. (*Hai-kibi*). Tanegashima Isl.: Nishinoomote-machi (Aug. 13, 1957, S. S. & N. T., no. Tane-113). Yakushima Isl.: Anbo (Sept. 14, 1954, S. S., no. 1405). Amami-oshima Isls: Koniya-machi (Jan. 7, 1955, Y. M., no. 1844); Nase-shi (Oct. 3, 1954, S. K., no. 1854) Okinawa Isl.: Onna-mura (Jan. 12, 1940, H. f., nos. 64 & 81); Haneji-mura (Jan. 15, 1940, H. f., nos. 208, 278, 281, 289 & 297); Mt. Katsuu-dake (Jan. 14, 1940, H. f., no. 261). Shuri (Naha-shi) (Jan. 10, 1940, H. f., no. 18, April 25 & May 2, 1953, H. f., nos. 810 & 826); Mawashi (Naha-shi) (May 22 & 23, 1953, H. f., nos. 831 & 809); Naha-shi (Jan. 11, 1940, H. f., no. 32; Jan. 19, 1940, H. f., nos. 137 & 142); Osato-mura (Jan. 20, 1940, H. f., nos. 170 & 171); Itoman-machi (Jan. 21, 1940, H. f., nos. 307 & 321); Haeburu-mura (May 16, 1953, H. f. & S. S., no. 811); Ginoza-mura (June 5, 1953, H. f. & S. S., no. 827); Haneji-mura (May 8 & June 12, 1953, H. f. & S. S., nos. 829 & 830); Kunigami-mura (May 29, 1953, H. f. & S. S., nos. 824 & 825); Takamine-mura (May 15, 1953, H. f. & S. S., no. 823); Miwa-mura (May 15, 1953, H. f., no. 821); Gushikawa-mura (May 1, 1953, H. f. & S. S., no. 808). Iejima Isl. (May 23, 1954, S. S., no. Oki-1063). Iheya Isl. (June 8, 1956, S. S. & M. Y., no. Oki-1124). Izena Isl. (Sept. 19, 1955, Y. N., no. Oki-1194). Kumejima Isl.: Gushikawa-mura (Feb. 15, 1957, S. S. & M. T., no. Oki-1331). Minami-daito Isl. (July 30, 1958, M. T., no. Oki-1370). Miyako Isl.: Shimochi-machi (Aug. 2, 1953, S. S., no. 1032). Yonaguni Isl. (Aug. 4, 1955, M. T., no. Yae-275).

Distrib. in the Ryukyus: Satsunan Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

20. *Uromyces kunigamiensis* Shimabukuro, sp. nov.* (Hiratsuka, f., Prov. list. Ured. Jap. Proper & Ryukyu Isls. p. 232, 1960).

Hab. in the Ryukyus. II, III. on *Fimbristylis dichotoma* Vahl. (*O-tentsuki*). Okinawa Isls.: Kunigami-mura (Yona) (Jan. 12, 1957, S. S. & M. T., no. 1360 type!).

Distrib. in the Ryukyus: Okinawa Isls.

21. *Uromyces mucunae* Rabenhorst in Hedwigia. XVII, p. 62, 1878. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 3, 1914; Hiratsuka, f., Jour. Jap. Bot. XIII, p. 734, 1937; Ured. Formosa. p. 37, 1943; Uredinolog. Stud. p. 296, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 19, 1935; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 22, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 10, 1955; Sawada, Descript. Cat. Formosan Fung. IV. p. 40, 1922; S. Ito, Myc. Fl. Jap. II, no. 3, p. 100, fig. 116, 1950).

Hab. in the Ryukyus. II, III. on *Mucuna hasjoo* Rock. (*Mucuna capitata* Wight. et Arn.) (*Hassho-mame*) (*Cult.*). Okinawa Isl.: Oroku (Jan. 21, 1940, H. Okamoto, no. 323). II, III. on *Mucuna pruriens* Prod. (*Fuki-mame*) (*Cult.*). Okinawa Isl.: Nago-machi (Nov. 27, 1953, S. S., no. Oki-36). Miyako Isl.: Taira-shi (Dec. 22, 1954, S. S., no. 2103, Miya-36).

Distrib. in the Ryukyus: Okinawa Isls., Sakishima Isls.

22. *Uromyces orientalis* P. et H. Sydow in Ann. Myc. V, p. 490, 1907. (Hiratsuka, f., Uredinolog. Stud. p. 296, 1955; Hiratsuka, f. & Shimabukuro, Sci. Bull.

* *Uromyces kunigamiensis* Shimabukuro, sp. nov.

Soris uredosporiferis plerumque hypophylis, sparsis vel laxe aggregatis, minutes, 0.2-0.7 mm diam., brunneis, subpulverulentis; uredosporis subglobosis, obovatis vel ellipsoideis, 21-33×16-25 μ , echinulatis, flavo-brunneis vel pallide castaneo-brunneis, poris germinationis 2, aequatorialis; episporio 1.5-2.4 μ crasso.

Soris teleutosporiferis hypophylis, sparsis, minutis, rotundatis vel oblongis, 0.2-0.7 mm diam., dein nudis, compactis, atrobunneis; teleutosporis obovatis, subglobosis, ellipsoideis vel oblongis, 23-38×15-22 μ , apice rotundatis vel truncatis, incrassatis (5-8 μ), basi attenuatis vel rotundatis, levibus, flavobrunneis, ad incrassationem obscurioribus; pedicello flavo-brunneis, usque 45 μ . (From Hiratsuka, f.: A-38).

Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 10, 1955; Hiratsuka, f., Uredinolog. Stud. p. 296, 1955).

Hab. in the Ryukyus. II, III. on *Indigofera trifoliata* var. *lukiuiensis* Matsum. (*Naha-eboshigusa*). Miyako Isl.: Karimata (Mar. 26, 1956, S. S. & M. T., nos. Miya-133 & 153). Ishigaki Isl.: Ohama-machi (Feb. 21, 1955, S. S., no. 2092).

Distrib. in the Ryukyus: Sakishima Isls.

23. *Uromyces saururi* Hennings in Hedwigia. XLI, p. (19), 1902. (Hiratsuka, f., Jour. Jap. Bot. XII, p. 266, 1936; Ured. Kiushu. p. 51, 1952; Uredinolog. Stud. p. 297, 1955; Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 120, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 29, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 287, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 83, fig. 93, 1950).

Hab. in the Ryukyus. I, III. on *Saururus loureiri* Decne. (*Hangesho*). Yaku-shima Isl.: "Yakushima" (S.K.). Kikaishima Isl.: Kikai-machi (Aug. 29, 1954, Y. N., no. 1839). Okinawa Isls.: Chinen-mura (March 7, 1957, S. S., no. Oki-1001; April 17, 1955, M. T., no. Oki-1019).

Distrib. in the Ryukyus: Satsunan Isls., Amami Isls., Okinawa Isls.

24. *Uromyces striatus* Schröter in Abhandl. Schles. Ges. vaterl. Kult. XLVIII, p. 11, 1872. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 3, 1914; Hiratsuka, f., Jour. Jap. Bot. XII, p. 164 & 266, 1936; XIII, p. 736, 1937; Bot. Mag. Tokyo. LIV, p. 162, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 24, 1941; Ured. Formosa. p. 38, 1943; Ured. Kiushu. p. 52, 1952; Uredinolog. Stud. p. 298, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. LI, p. 43, 1937; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 23, 1954; Sawada, Descript. Cat. Formosan Fung. IV, p. 43, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 99, fig. 115, 1950).

Hab. in the Ryukyus. II, III. on *Medicago lupulina* L. (*Kometsubun-umakoyashi*). Okinawa Isl.: Shuri (Naha-shi) (March 12, 1940, Y. T., no. 386; April 25 & May 25, 1953, H. f., nos. 965 & 966; April 18, 1956, S. S., no. Oki-1044); Naha-shi (Feb. 22, 1954, S. S., no. 1221). Iheya Isl. (June 8, 1958, S. S. & M. T., no. Oki-1132).

Distrib. in the Ryukyus: Okinawa Isls.

25. *Uromyces tairae* Hiratsuka, f. in Bot. Mag. Tokyo. LIV, p. 374 & text-fig. 1 (c, d), 1940. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. XVII, p. 24, 1941; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 23, 1954; S. Ito, Myc. Fl. Jap. II, no. 3, p. 117, 1950).

Hab. in the Ryukyus. II, III. on *Tournefortia argentea* L. (*Messerschmidia argentea* Johnston) (*Monpa-no-ki*). Okinawa Isl.: Mabuni-mura (Miwa-mura) (March 2, 1940, Y. T., no. 372, type!).

Distrib. in the Ryukyus: Okinawa Isls.

26. *Uromyces tenuicutis* Mc Alpine, Rusts of Australia. p. 87 & pl. XVI, fig. 133, 1906. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 3, 1914; Hiratsuka, f., Jour. Jap. Bot. X, p. 469, 1934; XIII, p. 742, 1937; Bot. Mag. Tokyo. LIV, p. 162, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 24, 1941; Ured. Formosa. p. 42, 1943; Ured. Kiushu. p. 52, 1952; Uredinolog. Stud. p. 298, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 19, 1935; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 23, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 29, 1955; no. 3, p. 11, 1956; no. 4, p. 162, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 51, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 36, 1958; Sawada, Descript. Cat. Formosan Fung. IV, p. 43, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 74, fig. 81, 1950).

Hab. in the Ryukyus. II, III. on *Sporobolus indicus* R. Br. (*Nezumino-o*). Tane-

gashima Isl.: Nishinoomote-machi (Aug. 13, 1957, S. S. & M. T., no. Tane-128). Yakushima Isl.: Anbo (Aug. 1, 1957, S. S. & M. T., no. Yaku-150). Kuroshima Isl. (July 27, 1956, S. S. & Y. N., nos. Mishima-3 & 28). Takeshima Isl. (Aug. 6, 1959, Y. N., no. Mishima-68). Takarashima Isl. (Aug. 11, 1955, S. S. & Y. N., no. Tokara-157; Dec. 22, 1955, Y. N., no. Tokara-218). Nakanoshima Isl. (Dec. 24, 1955, Y. N., no. Tokara-280). Amami-oshima Isl.: Nase-shi (Dec. 28, 1954, Y. M., no. 1836); Kasari-mura (Dec. 25, 1953, Y. N., no. 1182; Jan. 5, 1955, Y. M., no. 1835). Okinawa Isl.: Naha-shi (Jan. 18 & 19, 1940, H. f., nos. 115 & 138); Shuri (Naha-shi) (June 11, 1953, H. f., no. 1133). Iheya Isl. (Sept. 21, 1955, Y. N., no. Oki-1133; June 8, 1956, S. S. & M. T., no. Oki-1184). Izena Isl. (Sept. 19, 1955, Y. N., no. Oki-1196). Minami-daito Isl. (July 30, 1958, M. T., no. Oki-1375). Kita-daito Isl. (Aug. 6, 1958, M. T., no. Oki-1404). Kumejima Isl.: Gushikawa-mura (Feb. 15 & 16, 1957 S. S. & M. T., nos. Oki-1324 & 1319). Yonaguni Isl. (Aug. 4, 1955, M. T., no. Yae-277).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

27. *Uromyces thermopsidicola* Shimabukuro in Hiratsuka, f. & Shimabukuro in Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 119, 1957.

Syn. *Uredo thermopsidicola* Hiratsuka, f. in Sci. Bull. Facul. Agric. Univ. Ryukyus. no. 1, p. 44, 1954.

Hab. in the Ryukyus. II, III. on *Thermopsis chinensis* Benth. (*Kuso-endo*). Okinawa Isl.: Ginoza-mura (June 5, 1953, H. f. & S. S., nos. 909 & 910); Miwa-mura (June 12, 1955, M. T., no. Oki-1003); Iejima Isl. (May 23, 1954, S. S., no. Oki-1014). Ikeijima Isl. (June 1, 1953, Hideo Arakaki, no. Oki-1225).

Distrib. in the Ryukyus: Okinawa Isls.

28. *Uromyces vignae* Barclay in Hour. Asiatic Soc. Bengal. LX, p. 211, pl. V, fig. 19, 1891. (Hiratsuka, f. Jour. Jap. Bot. XII, p. 163, 1936; XIII, p. 734, 1937; Ured. Formosa. p. 36, 1943; Ured. Kiushu. p. 53, 1952; Uredinolog. Stud. p. 299, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 157, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 24, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 29, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 43 & pl. II, figs. 9-10, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 110, fig. 128, 1950).

Syn. *Uromyces appendiculatus* Link, p.p. (Fujikuro, Bot. Mag. Tokyo. XXVIII, p. (485), 1914; Transact. Nat. Hist. Soc. Formosa. no. 19, p. 2, 1914; S. Ito, Jour. Coll. Agric. Hokkaido Imp. Univ. XI, p. 230, 1922, p.p.

Hab. in the Ryukyus. II, III. on *Dolichos lablab* L. (*Fuji-mame*) (*Cult.*). Okinawa Isl.: Oroku (Jan. 19, 1940, H. f., nos. 120 & 121). II. on *Vigna sesquipedalis* Fruwirth (*Hata-sasage*) (*Cult.*). Okinawa Isl.: Itoman-machi (May 15, 1953, S. S., no. Oki-1352). II, III. on *Vigna sinensis* Savi (*Sasage*) (*Cult.*). Amami-oshima Isl.: Nase-shi (Oct., 1935, T. Tamotsu, no. 1104). Okinawa Isl.: Mawashi (Naha-shi) (July 5, 1951, M. Nagayama, no. 933).

Distrib. in the Ryukyus: Amami Isls., Okinawa Isls.

29. *Uromyces wedeliae* Hennings in Hedwigia. XLIII, p. 150, 1904. (Hiratsuka, f., Jour. Jap. Bot. XIII, p. 741, 1937; Bot. Mag. Tokyo. LV, p. 270, 1941; Ured. Formosa. p. 41, 1943; Ured. Kiushu. p. 53, 1952; Uredinolog. Stud. p. 299, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. V, p. 241, 1935; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 24, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 10, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 29, 1955; no. 3, p. 11, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 51, 1955; Sawada, Descript. Cat. Formosan Fung. VII, p. 47, 1942;

S. Ito, Myc. Fl. Jap. II, no. 3, p. 122, 1950).

Hab. in the Ryukyus. II, III. on *Wedelia biflora* DC. (*Kidachi-hamaguruma*, *Shima-hamaguruma*). Yakushima Isl.: Kurio (Aug. 3, 1954, S. Sa. & Y. H., no. 1486); Onoaida—Haro (Aug. 5, 1954, S. Sa. & Y. H., no. 1493); Nakama—Kurio (Aug. 3, 1954, S. Sa. & Y. H., nos. 1490-1492). Nakanoshima Isl. (Aug. 3, 1955, S. S. & Y. H., no. Takara-54). Takarashima Isl. (Aug. 8, 1955, S. S. & Y. N., no. Tokara-144). Kodakarashima Isl. (Dec. 23, 1955, Y. N., no. Tokara-270). Amami-oshima Isl.: Uken-mura (Dec. 20, 1936, T. Tamotsu, no. 1094). Okinawa Isl.: Minna Isl. (Sept. 22, 1955, Y. N., no. Oki-1221). Ishigaki Isl.: Ohama-machi (Feb. 21, 1955, S. S., no. 2093, Yae-231). II. on *Wedelia chinensis* Merr. (*Kuma-nogiku*). Tanegashima Isl.: Nishinootomote-machi (Aug. 15, 1957, S. S. & M. T., no. Tane-83). II, III. on *Wedelia prostrata* Hemsl. (*Hamaguruma*). Kumejima Isl.: Gushikawa-mura (March 7, 1954, S. S., no. 1212; Feb. 15, 1957, S. S. & M. T., no. Oki-1315). II, III. on *Wedelia robusta* (Mak.) Kitamura (*O-hamaguruma*). Tanegashima Isl.: Nishinootomote-machi (Aug. 15, 1957, S. S. & M. T., no. Tane-142). Yakushima Isl.: Kurio—Yudomari (Aug. 8, 1957, S. S. & M. T., no. Yaku-97). Amami-oshima Isl.: Kasari-mura (Sept. 4, 1954, Y. N., no. 1834). Okinawa Isl.: Iejima Isl. (May 21, 1954, S. S., no. Oki-1075). Iheya Isl. (June 7, 1956, S. S. & M. T., no. Oki-1135; March 27, 1957, M. T., no. Oki-1136). Kumejima Isl.: Gushikawa-mura (Feb. 15, 1957, S. S. & M. T., no. Oki-1269).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

30. *Uromyces yakushimensis* Hiratsuka, f. et Katsuki in Hiratsuka, f., Ured. Kiushu. p. 53, 1952. (Hiratsuka, f. Uredinolog. Stud., p. 299, 1955; Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 10, 1955; no. 3, p. 11, 1956; Hiratsuka, f. Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 51, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 288, 1955).

Hab. in the Ryukyus. II, III. on *Trichosanthes bracteata* Voigt. (*O-karasuuri*). Yakushima Isl. (Oct. 13, 1949, S. K., type!, no. 2350); Anbo (Sept. 11, 1954, S. S., no. 1404; Aug. 6, 1957, S. S. & M. T., no. Yaku-102). Tanegashima Isl.: Nishinootomote-machi (Sept. 22, 1954, S. S., no. 1403). Takarashima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-187). Ishigaki Isl.: Ohama-machi (Feb. 28, 1955, S. S., no. 2102); Mt. Omoto (June 25, 1954, S. S., no. 2097).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Sakishima Isls.

Puccinia Person, 1801

1. *Puccinia acetosae* Körnicke in Hedwigia. XV, p. 184, 1876. (Hiratsuka, f., Jour. Jap. Bot. XII, p. 267, 1936; Ured. Formosa. p. 44, 1943; Ured. Kiushu. p. 54, 1952; Uredinolog. Stud. p. 300, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. V, p. 240, 1935; Katsuki, Jour. Jap. Bot. XXX, p. 288, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 239, fig. 302, 1950; Sawada, Descript. Cat. Formosan Fung. VII, p. 47, 1942).

Hab. in the Ryukyus. II. on *Rumex acetosa* L. (*Suiba*). Yakushima Isl. (S. K.).

Distrib. in the Ryukyus: Satsunan Isls.

2. *Puccinia aestivalis* Dietel in Engl. Bot. Jahrb. XXXIV, p. 585, 1905. (Hiratsuka, f., Ured. Kiushu. p. 54, 1952; Uredinolog. Stud. p. 300, 1955; Hiratsuka, f., Shimabukuro & Niino, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 11, 1956; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 43, 1958; S. Ito, Myc. Fl. Jap. II, no. 3, p. 160, fig. 192, 1950).

Hab. in the Ryukyus. II, III. on *Microstegium somai* Ohwi (*Menten-sasagaya*). Okinawa Isl.: Kunigami-mura (Jan. 12, 1957, S. S. & M. T., no. Oki-1432). II, III. on *Microstegium nudum* S. Camus (*Sasagaya*). Nakanoshima Isl. (Aug. 1, 1955, S. S. & Y. N., no. Tokara-18; Dec. 24, 1955, Y. N., no. Tokara-313). Takarashima Isl. (Aug. 8, 1955, S. S. & Y. N., no. Tokara-169; Dec. 24, 1955, Y. N., no. Tokara-253). II, III. on *Microstegium vimineum* A. Camus (*Hime-ashiboso*). Okinawa Isl.: Nakagusuku-mura (Jan. 3, 1955, M. T., no. Oki-1263).

Distrib. in the Ryukyus: Tokara Isls., Okinawa Isls.

3. *Puccinia agropyri-ciliaris* Tai et Wei in Sinensia. IV, p. 110 & fig. 41, 1933. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 704, 1935; Ured. Kiushu. p. 55, 1952; Uredinolog. Stud. p. 300, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 25, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 162, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 51, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 66, 1958; S. Ito, Myc. Fl. Jap. II, no. 3, p. 137, fig. 158, 1950).

Hab. in the Ryukyus. II. on *Agropyron ciliare* Franch. (*Ao-kamojigusa*). Yakushima Isl.: Kurio (June 4, 1951, Y. M., no. 1547; Aug. 3, 1954, S. Sa. & Y. H., no. 1546). Okinawa Isl.: Shuri (Naha-shi) (May 26, 1953, H. f., no. 1143). II. on *Agropyron tsukushiense* (Honda) Ohwi var. *transiens* Ohwi (*Kamoji-gusa*). Kuroshima Isl. (July 27, 1956, S. S. & Y. N., no. Mishima-115).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls.

4. *Puccinia ainsliaeae* P. et H. Sydow, Monogr. Ured. I, p. 6, 1902. (Hiratsuka, f., Jour. Jap. Bot. XV, p. 436, 1939; Bot. Mag. Tokyo. LV, p. 271, 1941; Ured. Formosa. p. 52, 1943; Uredinolog. Stud. p. 301, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 51, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 311, fig. 404, 1950).

Syn. *Puccinia nitakensis* Hiratsuka, f. et Hashioka in Bot. Mag. Tokyo. XLVII, p. 233 & text-fig. 1, b, 1934.

Hab. in the Ryukyus. III. on *Ainsliaea apiculata* Sch.-Bip. (*Kikko-haguma*). Yakushima Isl.: Hananoego—Miyanooura-dake (Aug. 1, 1954, S. Sa. & Y. H., nos. 1548 & 1550; Aug. 4, 1957, S. S. & M. T., nos. Yaku-203 & 213); Ishizuka—Hananoego (July 31, 1954, S. Sa. & Y. H., nos. 1549 & 1558).

Distrib. in the Ryukyus: Satsunan Isls.

5. *Puccinia allii* (DC.) Rudolphi in Linnaea. IV, p. 392, 1892. (Hiratsuka, f., Uredinolog. Stud. p. 301, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 160, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 25, 1954; Sawada, Descript. Cat. Formosan Fung. IV, p. 46 & pl. II, figs. 11-16, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 214, fig. 270, 1950).

Hab. in the Ryukyus. II, III. on *Allium fistulosum* L. (*Negi*) (*Cult.*). Okinawa Isl.: Haebaru-mura (April 10, 1953, M. Nagayama, no. 902); Nago-machi (May 23, 1953, M. Nagayama, no. 898). II. on *Allium tuberosum* Rottle (*Nira*) (*Cult.*). Okinawa Isl.: Shuri (July 15, 1960, S. S.).

Distrib. in the Ryukyus: Okinawa Isls.

6. *Puccinia angelicae* (Schum.) Fuckel in Jahrb. Nass. Ver. Nar. XXIII-XXIV, p. 52, 1870. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. IX, p. 227, 1927; Ured. Kiushu. p. 56, 1952; Uredinolog. Stud. p. 302, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 25, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 10, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 51, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 29, 1955; S. Ito, Myc. Fl. Jap. II,

no. 3, p. 277, fig. 357, 1950).

Hab. in the Ryukyus. II, III. on *Peucedanum japonicum* Thunb. (*Botan-ninjin*, *Botan-bofu*). Yakushima Isl.: Anbo (June 4, 1951, Y. M., no. 1556); Nakama—Kurio (Aug. 3, 1954, S. Sa. & Y. H., nos. 1554 & 1555); Yoshida—Nagara (Aug. 10, 1957, S. S. & M. T., no. Yaku-76); Kurio—Yudomari (Aug. 7, 1957, S. S. & M. T., no. Yaku-105). Kikaishima Isl.: Somachi-mura (Aug. 29, 1954, Y. N., no. 1669). Okinawa Isl.: Mawashi (Naha-shi) (Jan. 22, 1940, Y. T., no. 324). Ishigaki Isl.: Ishigaki-shi (March 13, 1955, M. T., no. 2038). Senkaku-retto: Uotsurishima Isl. (Aug. 2, 1953, Y. N., no. 1096).

Distrib. in the Ryukyus: Satsunan Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

7. *Puccinia angustata* Peck in Bull. Buffalo Soc. Nat. Sci. I, p. 67, 1873. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. IX, p. 227, 1927; XVI, p. 144, 1940; Bot. Mag. Tokyo. XLVII, p. 712, 1933; LIV, p. 429, 1940; Ured. Kiushu. p. 56, 1952; Uredinolog. Stud. p. 302, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 208, fig. 263, 1950).

Hab. in the Ryukyus. II. on *Scirpus ternatanus* Reinw. (*O-aburagaya*). Tanegashima Isl.: Furuta (Aug. 14, 1957, S. S. & M. T., no. Tane-100).

Distrib. in the Ryukyus: Satsunan Isls.

8. *Puccinia arthraionis-ciliaris* Hennings in Hedwigia. XLVIII, p. 251, 1908. (Hiratsuka, f., Uredinolog. Stud. p. 303, 1950; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 25, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 121, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 29, 1955; no. 3, p. 12, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 52, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 44, 1958).

Syn. *Uredo arthraionis-ciliaris* Hennings in Hedwigia. XLVIII, p. 251, 1908. (Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo, XLIX, p. 24, 1935; Sawada, Descript. Cat. Formosan Fung. VII, p. 64, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 347, 1950).

Hab. in the Ryukyus. II, III. on *Arthraxon hispidus* Mak. (*Kobunagusa*). Tanegashima Isl.: Minamitane-mura (Sept. 23, 1954, S. S., no. 1543). Yakushima Isl.: Onoaida—Kojima (Aug. 3, 1954, S. Sa. & Y. H., no. 1544); Onoaida—Kurio (Aug. 7, 1957, S. S. & M. T., no. Yaku-119). Takarashima Isl. (Aug. 8, 1955, S. S. & Y. N., no. Tokara-173; Dec. 22, 1955, Y. N., no. Tokara-226). Nakanoshima Isl. (Dec. 25, 1955, Y. N., no. Tokara-307). Amami-oshima Isl.: Mt. Yuwan-dake (Jan. 1, 1955, Y. N., no. 1618); Tatsugo-mura (Dec. 29, 1954, Y. N., no. 1619); Sumiyomura (Sept. 23, 1954, Y. N., no. 1620). Kikaishima Isl.: Kikai-machi (Oct. 8, 1954, S. K., no. 1621); Mt. Hyakuno-dai (Aug. 29, 1954, Y. N., no. 1622). Tokunoshima Isl.: Isen-mura (Sept. 16, 1954, Y. N., no. 1623); Mt. Mikyo-dake (Sept. 17, 1954, Y. N., no. 1624). Okinawa Isl.: Kanegusuku-mura (Jan. 21, 1940, H. f., no. 309); Osato-mura (Jan. 20, 1940, H. f., no. 165); Takamine-mura (May 15, 1953, H. f. & S. S., no. 1155); Shuri (Naha-shi) (March 25, 1940, Y. T., no. 415; April 30 & May 26, 1953, H. f., nos. 1088 & 1089); Mt. Taniu-dake (June 12, 1953, H. f. & S. S., nos. 1087 & 1156). Iejima Isl. (May 23, 1954, S. S., no. Oki-1059). Iheya Isl. (Sept. 21, 1955, Y. N., no. Oki-1137; June 8, 1956, S. S. & M. T., no. Oki-1185). Izena Isl. (Sept. 20, 1955, Y. N., no. Oki-1199). Kumejima Isl.: Gushikawa-mura (Feb. 19, 1957, S. S. & M. T., no. Oki-1304). Miyako Isl.: Shimochi-machi (Dec. 27, 1954, S. S., no. Miya-66). Ishigaki Isl.: Kabira (Aug. 11, 1955, M. T., no. Yae-311). Yonaguni Isl. (Aug. 4, 1955, M. T., no. Yae-265).

Distrib. in the Ryukyus: Satsunan Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

9. *Puccinia arundinellae-anomalae* Dietel in Engl. Bot. Jahrb. XXXVII, p. 100, 1905. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 430; 1940; Ured. Kiushu. p. 56, 1952; Uredinolog. Stud. p. 303, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 52, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 77, 1958; S. Ito, Myc. Fl. Jap. II, no. 3, p. 142, fig. 164, 1950).

Hab. in the Ryukyus. II, III. on *Arundinella hirta* Tanaka var. *ciliata* Koidz. (*Toda-shiba*). Yakushima Isl.: Miyanoura (Sept. 16, 1954, S. S., no. 1542).

Distrib. in the Ryukyus: Satsunan Isls.

10. *Puccinia arundinis-donacis* T. Hiratsuka in Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 51, 1958.

Syn. *Uredo arundinis-donacis* Tai in Fralowia. III, p. 133, 1947.

Hab. in the Ryukyus. II, III. on *Arundo donax* L. (*Dan-chiku*). Miyako Isl.: Shimochi-machi (Feb. 17, 1955, M. T., no. Miya-71).

Distrib. in the Ryukyus: Sakishima Isls.

11. *Puccinia asparagi-lucidi* Dietel in Engl. Bot. Jahrb. XXXII, p. 625, 1903. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 4, 1914; Hiratsuka, f., Ured. Formosa. p. 63, 1943; Ured. Kiushu. p. 56, 1952; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 52, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 19, 1935; Sawada, Descript. Cat. Formosan Fung. I, p. 366, 1919; S. Ito, Myc. Fl. Jap. II, no. 3, p. 215, fig. 272, 1950).

Hab. in the Ryukyus. II. on *Asparagus cochinchinensis* Merr. (*Kusasugi-kazura*, *Tenmondo*). Tanegashima Isl.: Nishinooto-machi (Aug. 15, 1957, S. S. & M. T., no. Tane-52).

Distrib. in the Ryukyus: Satsunan Isls.

12. *Puccinia benokiyamensis* Hiratsuka, f. in Transact, Sapporo Nat. Hist. Soc. XVII, p. 25, 1941. (Hiratsuka, f., Ured. Formosa. p. 44, 1943; Ured. Kiushu. p. 57, 1952; Uredinolog. Stud. p. 304, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 25, 1954; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 52, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, 234, fig. 293 1950).

Hab. in the Ryukyus. II, III. on *Ampelgynonum umbellatum* Masamune (*Tsurusoba*). Yakushima Isl.: Kosugidani (June 1, 1951, Y. M., no. 1540); Kosugidani—Anbo (Aug. 2, 1954, S. Sa. & Y. H., no. 1541). Okinawa Isl.: Mt. Benokiyama (April 10 & 11, 1940, Y. T., nos. 432 & 436, type!).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls.

13. *Puccinia brevicornis* S. Ito in Jour. Coll. Agric. Tohoku Imp. Univ. III, p. 191. pl. X, fig. 7, 1909. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. IX, p. 222. 1927; Transact. Tottori Soc. Agric. Sci. II, p. 241, 1931; Uredinolog. Stud. p. 304, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 147, fig. 171, 1950).

Hab. in the Ryukyus. II. on *Phalaris arundinacea* L. var. *picta* L. (*Ribon-grass*) (*Cult.*). Tanegashima Isl.: Nishinooto-machi (Aug. 13, 1953, S. S. & M. T., no. Tane-71). Yakushima Isl.: Anbo—Haro (Aug. 6, 1957, S. S. & M. T., no. Yaku-75). Okinawa Isl.: Shuri (Naha-shi) (June 4, 1956, S. S., no. Oki-1029).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls.

14. *Puccinia breviculmis* Dietel in Ann. Myc. V, p. 72, 1907. (Hiratsuka, f., Ured. Formosa. p. 60, 1943; Ured. Kiushu. p. 57, 1952; Uredinolog. Stud. p. 304, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 25, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 118, 1957; Hiratsuka, f., Shimabukuro & Niino, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 12, 1956; no. 4, p. 162, 1957; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. V, p.

240, 1935; Sawada, Descript. Cat. Formosan Fung. VIII, p. 48, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 192, fig. 234, 1950).

Hab. in the Ryukyus. II, III. on *Carex leucochloa* Bunge (*Ao-suge*). Yakushima Isl.: Kurio—Anbo (Aug. 8, 1957, S. S. & M. T., no. Yaku-55). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., nos. Mishima-17 & 80). Takeshima Isl. (Aug. 6, 1956, Y. N., no. Mishima-81). Nakanoshima Isl. (Dec. 25, 1955, Y. N., no. Tokara-320). Okinawa Isl.: Mt. Yonaha-dake (May 30, 1953, H. f. & S. S., no. 1003). Iheya Isl. (March 27, 1957, M. T., no. Oki-1138). Kumejima Isl.: Gushikawa-mura (Feb. 20, 1957, S. S. & M. T., no. Oki-1330); Nakazato-mura (Feb. 17, 1957, S. S. & M. T., no. Oki-1301). II. on *Carex leucochloa* var. *fliculmis* Kitagawa (*Ito-aosuge*). Akusekushima Isl. (Aug. 6, 1955, S. S. & Y. N., no. Tokara-118). Takarashima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-160).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls.

15. *Puccinia buxi* De Candolle, Fl. Fr. VI, p. 60, 1815. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. XVI, p. 144, 1940; Ured. Kiushu. p. 57, 1952; Uredinolog. Stud. p. 305, 1955; Hiratsuka, f. & Nomiya, Bot. & Zool. VIII, p. 1063, 1940; Hiratsuka, f. & Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 52, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 262, fig. 338, 1950).

Hab. in the Ryukyus. III. on *Buxus microphylla* Sieb. et Zucc. var. *japonica* Rehd. et Wilson (*Asama-tsuge*). Yakushima Isl.: Ishizuka—Hananoego (July 31, 1954, S. Sa. & Y. H., nos. 1533-1537).

Distrib. in the Ryukyus: Satsunan Isls.

16. *Puccinia cacao* Mc Alpine, Rusts of Australia. p. 117 & pl. XXX, figs. 259 & 260, 1906. (Hiratsuka, f., Jour. Jap. Bot. XII, p. 267, 1936; Ured. Kiushu. p. 58, 1952; Uredinolog. Stud. p. 305, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 42, 1958; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 173, fig. 207, 1950).

Hab. in the Ryukyus. II. on *Hemarthria sibirica* (Gandog.) Ohwi (*Ushino-shippei*). Tanegashima Isl.: Nishinoomote-machi (Aug. 13, 1957, S. S. & Y. N., no. Tane-60). Yakushima Isl.: (S. K.); Mt. Miyanoura (Aug. 9, 1957, S. S. & M. T., no. Yaku-50).

Distrib. in the Ryukyus: Satsunan Isls.

17. *Puccinia canaliculata* (Schw.) Lagerheim in Tromsø Mus. Aarsh. XVII, p. 51, 1894. (Hiratsuka, f., Bot. Mag. Tokyo. LVI, p. 55, 1942; Ured. Formosa. p. 61, 1943; Ured. Kiushu. p. 58, 1952; Uredinolog. Stud. p. 305, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 52, 1955; Hiratsuka, f., Shimabukuro & Niino, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 162, 1957; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 202, 1950).

Syn. *Puccinia cyperi-iriae* Sawada, Jour. Taihoku Soc. Agric. & Forestr. VII, p. 34, 1943 (nom. nud.); Descript. Cat. Formosan Fung. IX, p. 45, pl. II, figs. 1 & 2, 1943 (nom. nud.).

Hab. in the Ryukyus. II. on *Cyperus polystachyos* Rottb. (*Igayatsuri*). Tanegashima Isl.: Minamitane-mura (Sept. 24, 1954, S. S., no. 1512). Yakushima Isl.: Kurio (Jan. 3, 1953, S. K., no. 1511); Onoaida—Haro (Aug. 5, 1954, S. Sa. & Y. H., nos. 1509 & 1510). II. on *Cyperus compressus* L. (*Kugugayatsuri*). Iwojima Isl. (Aug. 6, 1956, S. S. & Y. N., no. Mishima-46). II, III. on *Cyperus distans* L. f. (*Hoki-gayatsuri*). Iriomote Isl.: Ohara (Sept. 10, 1954, M. T., no. Yae-9). Yonaguni Isl. (Aug. 5, 1955, M. T., no. Yae-352).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Sakishima Isls.

18. *Puccinia caricis-boottianae* Hiratsuka, f. in Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 26 & pl. II, fig. 5, 1954. (Hiratsuka, f., Uredinolog. Stud. p. 306, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 30, 1955; no. 3, p. 12, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 22, p. 52, 1955).

Syn. *Aecidium nikkense* (non Hennings et Shirai) (Hiratsuka, f., Ured. Kiushu. p. 88, 1952).

Hab. in the Ryukyus. O, I. on *Farfugium japonicum* Kitamura (*Ligularia tussilaginea* Mak.) (*Tsuwa-buki*). Yakushima Isl. (Jan. 1, 1934, K. Ide, no. 1528). Takarashima Isl. (Dec. 22, 1955, Y. N., no. Tokara-221). Nakanoshima Isl. (Dec. 25, 1955, Y. N., no. Tokara-299). Amami-oshima Isl.: Nase-shi (March, 1936 & March 6, 1937, T. Tamotsu, nos. 1106 & 1234); Mikata-mura (Dec. 23, 1953, Y. N., no. 1232); Koniya-machi (Jan. 7, 1955, Y. N., no. 1616); Santaro-toge (Jan. 6, 1955, Y. M., no. 1617). Okinawa Isl.: Mabuni-mura (March 2, 1940, Y. T., no. 375); Motobu-machi (May 29, 1953, H. f. & S. S., no. 1233); Iheya Isl. (March 26, 1957, M. T., no. Oki-1139). Kumejima Isl.: Nakazato-mura (Feb. 19, 1957, S. S. & M. T., no. Oki-1271). II, III. on *Carex brunnea* Thunb. (*Kogome-suge*). Yakushima Isl.: Kosugidani (Aug. 2, 1957, S. S. & M. T., no. Yaku-194). Okinawa Isl.: Mt. Katsudake (Jan. 14, 1940, H. f., no. 230); Osato-mura (Jan. 20, 1940, H. f., no. 166). Iheya Isl. (March 26 & 27, 1957, M. T., nos. Oki-1170 & 1235). Kumejima Isl.: Gushikawa-mura (March 4, 1954, S. S., no. 1230; Feb. 20, 1957, S. S. & M. T., no. Oki-1345).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls.

19. *Puccinia caricis-brunneae* Dietel in Ann. Myc. IV, p. 309, 1906. (Hiratsuka, f., Uredinolog. Stud. p. 306, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 162, 1957; S. Ito, Myc. Fl. Jap. II, no. 3, p. 198, 1950).

Hab. in the Ryukyus. II. on *Carex brunnea* Thunb. (*Kogome-suge*). Tanegashima Isl.: Nishinoomote-machi (Aug. 13, 1957, S. S. & Y. N., nos. Tane-14, 57 & 66). Kuroshima Isl. (July 27, 1956, S. S. & Y. N., no. Mishima-118). Iriomote Isl.: Mt. Sonai (Sept. 4, 1954, M. T., no. Yae-189). II. on *Carex warburgiana* Kukenth. (*Baiki-suge*). Okinawa Isl.: Mt. Yonaha-dake (May 30, 1953, S. S., no. Oki-1227).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

20. *Puccinia caricis-filicinae* Barclay in Jour. Asiatic Soc. Bengal. LVIII, p. 250, pl. XIII, figs. 1 & 2, 1889. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 4, 1914; Hino & Katsumoto, Bull. Facul. Agric. Yamaguchi Univ. no. 7, p. 264, 1956; Hiratsuka, f., Ured. Formosa. p. 60, 1943; Uredinolog. Stud. p. 306, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 52, 1928; IX, p. 39, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 201, 1950).

Hab. in the Ryukyus. II. on *Carex cruciata* Wahlenb. (*Hanabi-suge*). Yakushima Isl.: Onoaida (Aug. 8, 1955, K. Katsumoto).

Distrib. in the Ryukyus: Satsunan Isls.

21. *Puccinia caricis-japonicae* Dietel in Ann. Myc. IV, p. 306, 1909. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. XVI, p. 144, 1940; Uredinolog. Stud. p. 306, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 12, 1956; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 185, fig. 219, 1950).

Hab. in the Ryukyus. II, III. on *Carex doniana* Spreng. (*Shira-suge*). Tanegashima Isl.: Furuta (Aug. 14, 1957, S. S. & M. T., no. Tane-68). Yakushima Isl. (S. K.). Nakanoshima Isl. (July 31, 1955, S. S. & Y. N., no. Tokara-48).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls.

22. *Puccinia caricis-macrocephalae* Dietel in Ann. Myc. VIII, p. 306, 1910. (Hiratsuka, f., Transact. Tottori Soc. Agric. Sci. V, p. 233, 1935; Bot. Mag. Tokyo. L, p. 215, 1936; Transact. Sapporo Nat. Hist. Soc. XVI, p. 144, 1940; Ured. Kiushu. p. 59, 1952; Uredinolog. Stud. p. 306, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 27, 1954; S. Ito, Myc. Fl. Jap. II, no. 3, p. 182, fig. 215, 1950).

Hab. in the Ryukyus. II, III. on *Carex pumila* Thunb. (*Kobo-shiba*). Okinawa Isl.: Takamine-mura (May 15, 1953, H. f. & S. S., no. 1002).

Distrib. in the Ryukyus: Okinawa Isls.

23. *Puccinia cenchri* Dietel et Holway in Bot. Gaz. XXIV, p. 28, 1897. (Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 120, fig. 2, 1957; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 58, 1958).

Hab. in the Ryukyus. II, III. on *Cenchrus calyculatus* Cavanilles (*Kuri-no-iga*). Iejima Isl. (May 23, 1954, S. S., no. Oki-1012). Okinawa Isl.: Miwa-mura (June 12, 1955, M. T., no. Oki-1013). Iheya Isl. (March 25, 1957, M. T., no. Oki-1239). Ishigaki Isl.: Ishigaki-shi (June 24, 1954, S. S., no. Yae-253); Ohama-machi (Aug. 12, 1956, M. T., no. Yae-339).

Distrib. in the Ryukyus: Okinawa Isls., Sakishima Isls.

24. *Puccinia chrysanthemi* Roze in Bull. Soc. Myc. Fr. XVII, p. 92, 1900. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 39, 1935; Transact. Sapporo Nat. Hist. Soc. XVI, p. 203, 1941; Bot. Mag. Tokyo. LVI, p. 56, 1942; Ured. Formosa. p. 54, 1943; Ured. Kiushu. p. 59, 1952; Uredinolog. Stud. p. 308, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 27, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 12, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 1955; Sawada, Descript. Cat. Formosan Fung. IX, p. 40, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 319, fig. 414, 1950).

Syn. *Puccinia chrysanthemi-chinensis* Hennings in Hedwigia. XL, p. (26), 1901.

Hab. in the Ryukyus. II, III. on *Chrysanthemum morifolium* Ramat. (*Kiku*) (*Cult.*). Amami-oshima Isl.: Nase-shi (Oct., 1935, T. Tamotsu, no. 1061). II. on *Chrysanthemum japonense* Nakai var. *crassum* Kitamura (*Oshima-nojigiku*). Nakanoshima Isl. (July 31, 1955, S. S. & Y. N., no. Tokara-72).

Distrib. in the Ryukyus: Tokara Isls., Amami Isls.

25. *Puccinia cirsii* Lasch in Rabenhorst, Fung. eur. no. 89, 1859. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 4, 1914; Hiratsuka, f., Mem. Tottori Agric. Coll. I, p. 67, 1930; Jour. Jap. Bot. XV, p. 624, 1939; Bot. Mag. Tokyo. LIV, p. 430, 1940; Ured. Formosa. p. 53, 1943; Ured. Kiushu. p. 60, 1952; Uredinolog. Stud. p. 308, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 158, 1933; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 53, 1955; Sawada, Descript. Cat. Formosan Fung. I, p. 365, 1919; S. Ito, Myc. Fl. Jap. II, no. 3, p. 322, fig. 418, 1950).

Hab. in the Ryukyus. II, III. on *Cirsium yakushimense* Masamune (*Yakushima-azami*). Yakushima Isl.: Hananoego—Mt. Miyanoura (Aug. 1, 1954, S. Sa. & Y. H., no. 1539); Ishizuka—Hananoego (July 31, 1954, S. Sa. & Y. H., no. 1538).

Distrib. in the Ryukyus: Satsunan Isls.

26. *Puccinia citrina* P. et H. Sydow, Monogr. Ured. I, p. 634 & pl. XXXVI, fig. 483, 1903. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 4, 1914; Hiratsuka, f., Ured. Formosa. p. 63, 1943; Transact. Sapporo Nat. Hist. Soc. XVII, p. 26, pl. I, fig. 5, 1941; Uredinolog. Stud. p. 309, 1955; Hiratsuka, f. & Hashioka, Bot. Mag.

Tokyo. XLIX, p. 19, 1935; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 27, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 12, 1956; no. 4, p. 162, 1957; Sawada, Descript. Cat. Formosan Fung. I, p. 336, 1919; IX, p. 41, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 222, 1950).

Hab. in the Ryukyus. II, III. on *Heterosmilax japonica* Kunth. (*Karasukiba-sankirai*). Takarashima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-176; Dec. 22, 1955, Y. N., no. Tokara-248). Amami-oshima Isl.: Mikata-mura (Jan. 6, 1955, Y. N., no. 1684); Tatsugo-mura (Dec. 27, 1953, Y. N., no. 1685); Santaro-toge (Jan. 6, 1955, Y. M., no. 1686); Kasari-mura (Jan. 4, 1955, Y. M., no. 1687); Yamato-mura (Dec. 31, 1954, Y. M., no. 1691). Okinawa Isl.: Kunigami-mura (Feb. 9, 1954, S. S., no. 1194). Iheya Isl. (Sept. 22, 1955, Y. N., no. Oki-1140; June 8, 1956, S. S. & M. T., no. Oki-1183). Kumejima Isl.: Gushikawa-mura (Feb. 19 & 25, 1957, S. S. & M. T., nos. Oki-1294 & 1335). Iriomote Isl. (Nov. 8, 1957, S. S., no. Yae-397; Aug. 15, 1955, M. T., no. Yae-390). Yonaguni Isl.: Kubura (Aug. 4, 1955, M. T., no. Yae-389). II, III. on *Smilax china* L. (*Sarutori-ibara*). Okinawa Isl.: Urasoe-mura (Feb. 23, 1940, Y. T., nos. 359 & 360); Naha-shi (Jan. 9, 1940, H. f., no. 130); Shuri (Naha-shi) (Feb. 1 & 19, 1940, Y. T., nos. 142 & 352). II, III. on *Smilax planipeduncula* Hayata (*Hirae-sankirai*). Ishigaki Isl.: Ohama-machi (Aug. 22, 1954, M. T., no. 2302). II. on *Smilax stenopetala* A. Gray (*Satsuma-sankirai*). Kuroshima Isl. (July 31, 1956, S. S. & Y. N., nos. Mishima-22 & 31). Iwojima Isl. (Aug. 6, 1956, S. S., nos. Mishima-45 & 47). Takeshima Isl. (Aug. 6, 1956, Y. N., no. Mishima-66). Ishigaki Isl.: Ohama-machi (Aug. 17, 1956, M. T., no. Yae-443). II, III. on *Smilax* sp. Okinawa Isl.: Mt. Tanui-dake (June 12, 1953, H. f. & S. S., no. 1150). Kumejima Isl.: Nakazato-mura (Feb. 17, 1957, S. S. & M. T., no. Oki-1320).

Distrib. in the Ryukyus: Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

27. *Puccinia congesta* Berkeley et Broome in Jour. Linn. Soc. XI, p. 91, 1871. (Hiratsuka, f., Jour. Jap. Bot. XIII, p. 587, 1937, Bot. Mag. Tokyo. LIV, p. 162, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 26, pl. I, fig. 3, 1941; Ured. Formosa p. 44, 1943; Ured. Kiushu. p. 60, 1952; Uredinolog. Stud. p. 309, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 28, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 121, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 30, 1955; no. 3, p. 12, 1956; no. 4, p. 163, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 53, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; Morimoto, Jour. Jap. Bot. XXVIII, p. 27, 1953, S. Ito, Myc. Fl. Jap. II, no. 3, p. 234, fig. 294, 1950).

Syn. *Puccinia solmsii* Hennings in Saccardo, Syll. Fung. XIV, p. 357, 1899. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 7, 1914; Hiratsuka, f., Jour. Jap. Bot. XII, p. 268, 1936; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 160, 1933; Sawada, Descript. Cat. Formosan Fung. IV, p. 67, 1928).

Hab. in the Ryukyus. III. on *Ampelgynonum umbellatum* Masamune (*Tsurusoba*). Tanegashima Isl.: Nishinootote-machi (Sept. 21, 1954, S. S., no. 1567; Aug. 13, 1957, S. S. & M. T., no. Tane-96). Yakushima Isl.: Isso (Aug. 5, 1951, K. Togashi & S. K., no. 1559); Onoaida (Aug. 3, 1954, S. Sa. & Y. H., no. 1560); Nakama—Kurio (Aug. 3, 1954, S. Sa. & Y. H., no. 1562); Kurio—Okawa (Aug. 4, 1954, S. Sa. & Y. H., no. 1563); Onoaida—Haro (Aug. 5, 1954, S. Sa. & Y. H., no. 1564); Miyanoura (Sept. 17, 1954, S. S., no. 1565), "Yakushima" (Dec. 31, 1933, K. Ide, no. 1566); Anbo (Aug. 1, 1957, S. S. & M. T., no. Yaku-164). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., no. Mishima-13; July 31, 1956, S. S. & Y. N., no. Mishima-20). Iwojima Isl. (Aug. 6, 1956, S. S., no. Mishima-50). Takeshima Isl. (Aug. 6, 1956, Y. N., no. Mishima-62). Nakanoshima Isl. (Aug. 1, 1955, S. S. & Y. N., no. Tokara-

13; Dec. 1955, Y. N., no. Tokara-281; Aug. 19, 1933, T. Naito). Suwanose Isl. (Aug. 4, 1955, S. S. & Y. N., no. Tokara-100). Akusekishima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-127). Amami-oshima Isl.: Nase-shi (July 2, 1953, T. Tamotsu, no. 807); Mikata-mura (July 1936, T. Tamotsu, no. 1127; Jan. 6, 1955, Y. N., no. 1615); Sumiyo-mura (Dec. 30, 1954, Y. N., no. 1614); Uken-mura (Dec. 30, 1954, Y. M., no. 1613). Okinawa Isl.: Shuri (Naha-shi) (April 22, 1899, Naoharu Hiratsuka, no. 1063; April 25 & 30, 1953, H. f., nos. 805 & 806); Mawashi (Naha-shi) (Jan. 22, 1940, H. f., no. 333); Takamine-mura (Jan. 21, 1940, H. f., nos. 180 & 186); Mt. Katsuu-dake (Jan. 14, 1940, H. f., nos. 215 & 249); Nago-machi (Jan. 16, 1940, H. f., no. 102; May 8, 1953, H. f. & S. S., no. 802); Haneji-mura (Jan. 15, 1940, H. f., no. 271); Motobu-machi (April 18, 1940, Y. T., no. 471; May 29, 1953, H. f. & S. S., no. 803). Ishigaki Isl.: Ishigaki-shi (Aug. 5, 1953, Y. N., no. Yae-154).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

28. *Puccinia convolvuli* Castagne, Observ. Fl. Ured. I, p. 16, 1842. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 163, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 26, 1941; Ured. Kiushu. p. 61, 1952; Uredinolog. Stud. p. 309, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 28, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 30, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 53, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 292, fig. 375, 1950).

Hab. in the Ryukyus. II, III. on *Calystegia soldanella* R. Br. (*Hama-hirugao*). Tanegashima Isl.: Nishinootomote-machi (Sept. 25, 1954, S. S., no. 1553; Aug. 15, 1957, S. S. & M. T., no. Tane-136). Yakushima Isl.: Anbo (June 7, 1951, Y. M., no. 1552); Yoshida—Nagata (Aug. 10, 1957, S. S. & M. T., no. Yaku-140). Amami-oshima Isl.: Kasari-mura (Aug. 25, 1954; Jan. 4, 1955, Y. M., nos. 1672 & 1673; Aug. 25, 1954, Y. N., no. 1674). Okinawa Isl.: Kunigami-mura (May 29, 1953, H. f. & S. S., no. 897); Ginoza-mura (June 5, 1953, H. f. & S. S., no. 896); Higashi-mura (June 13, 1953, H. f. & S. S., no. 895). Iheya Isl. (June 7, 1956, S. S. & M. T., no. Oki-1142; March 27, 1957, M. T., no. Oki-1187). Kumejima Isl.: Gushikawa-mura (March 7, 1954, S. S., no. 1215). Miyako Isl.: Taira-shi (June 16, 1954, S. S., no. Miya-43). II. on *Ipomoea denticulata* Chois. (*Sokobeni-hama-hirugao*). Okinawa Isl.: Onna-mura (Jan. 12, 1940, H. f., no. 61); Haneji-mura (Jan. 15, 1940, H. f., nos. 273 & 299). Kumejima Isl. (Dec. 27, 1907, T. Miyagi, no. 1064).

Distrib. in the Ryukyus: Satsunan Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

29. *Puccinia coronata* Corda, Icon. Fung. I, p. & pl. II, fig. 96, 1837. (Hiratsuka, f., Ured. Kiushu. p. 61, 1952; Uredinolog. Stud. p. 309, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 28, 1954; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 40, 1958; S. Ito, Myc. Fl. Jap. II, no. 3, p. 148, fig. 172, 1950).

Hab. in the Ryukyus. II. on *Lolium multiflorum* Lam. (*Nezumi-mugi*) (*Cult.*). Okinawa Isl.: Mawashi (Naha-shi) (May 23, 1953, H. f. & S. S., nos. 1043 & 1044).

Distrib. in the Ryukyus: Okinawa Isls.

30. *Puccinia crepidis-integrae* Hiratsuka, f., Ured. Kiushu. p. 61, 1952. (Hiratsuka, f., Jour. Jap. Bot. XXVII, p. 113, 1952; Uredinolog. Stud. p. 310, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 28, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 118, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 31, 1955; no. 3, p. 13, 1956).

Syn. *Uredo crepidis-integrae* Lindroth in Acta Soc. pro Fauna et Flora Fennica XXII, no. 3, p. 11, 1902. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 377, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 34, 1941; S. Ito, Myc. Fl. Jap. II, no. 3, p. 358, 1950).

Hab. in the Ryukyus. II, III. on *Crepidiastrum lanceolatum* Nakai (*Crepis integra* Miq.) (*Heranaren*). Yakushima Isl.: Yoshida—Nagata (Aug. 10, 1957, S. S. & M. T., no. Yaku-58). Amami-oshima Isl.: Mikata-mura (Oct. 19, 1936, T. Tamotsu, no. 1062); Yamato-mura (Jan. 1, 1955, Y. N., no. 1670). Okinawa Isl.: Chinen-mura (Jan. 20, 1940, H. f., nos. 145, 146 & 147); Takamine-mura (March 19, 1940, Y. T., no. 405); Yontan-mura (Yontanzen-mura) (March 8, 1940, Y. T., no. 380). II, III. on *Crepidiastrum lanceolatum* Nakai f. *pinnatilobum* Nakai (*Hamanaren*). Nakanoshima Isl. (Dec. 24, 1955, Y. N., no. Tokara-326).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls.

31. *Puccinia crepidis-japonicae* Dietel in Ann. Myc. VI, p. 226, 1908. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 5, 1914; Hiratsuka, f., Ured. Formosa. p. 53, 1943; Ured. Kiushu, p. 62, 1952; Uredinolog. Stud. p. 310, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 158, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 29, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 11, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 31, 1955; no. 3, p. 13, 1956; no. 4, p. 163, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 53, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 2, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 324, fig. 421, 1950).

Hab. in the Ryukyus. O, I, II, III. on *Youngia japonica* DC. (*Crepis japonica* Benth.) (*Oni-tabirako*). Tanegashima Isl.: Nishinoomote-machi (Sept. 22, 1954, S. S., no. 1532); Furuta (Aug. 14, 1957, S. S. & M. T., no. Tane-124). Yakushima Isl.: Onoaida (Sept. 14, 1954, S. S., no. 1529); Nakama—Kurio (Aug. 3, 1954, S. Sa. & Y. H., no. 1530); Onoaida—Haro (Aug. 5, 1954, S. Sa. & Y. H., no. 1531); Anbo—Haro (Aug. 6, 1957, S. S. & M. T., no. Yaku-160). Kuroshima Isl. (July 29, 1956, S. S. & Y. N., nos. Mishima-1 & 33). Iwojima Isl. (Aug. 9, 1956, S. S. & Y. N., no. Mishima-51). Takeshima Isl. (Aug. 7, 1956, Y. N., no. Mishima-52). Nakanoshima Isl. (Aug. 3, 1955, S. S. & Y. N., no. Tokara-70; Dec. 24, 1955, Y. N., no. Tokara-283). Akusekishima Isl. (Aug. 6, 1955, S. S. & Y. N., no. Tokara-129). Takarashima Isl. (Dec. 22, 1955, Y. N., no. Tokara-241). Amami-oshima Isl.: Kasari-mura (Dec. 26, 1953, Y. N., no. 1185); Mikata-mura (Jan. 6, 1955, Y. N., no. 1694); Tatsugo-mura (Aug. 26, 1954, Y. N., no. 1695); Sumiyo-mura (Sept. 22, 1954, Y. N., no. 1696); Mt. Yuwan-dake (Dec. 31, 1954, Y. M., no. 1697); Koniya-machi (Oct. 5, 1954, S. K., no. 1698); Chinzei-mura (Sept. 21, 1954, Y. N., no. 1699). Kikaishima Isl.: Kikai-machi (Aug. 28, 1954, Y. N., no. 1700). Tokunoshima Isl.: Isen-mura (Sept. 15, 1954, Y. N., no. 1701). Okinawa Isl.: Haneji-mura (Jan. 13, 1940, H. f., no. 96); Nago-machi (Jan. 16, 1940, H. f., no. 108; April 19, 1940, Y. T., no. 474; May 9, 1953, H. f. & S. S., no. 995); Onna-mura (Jan. 12, 1940, H. f., nos. 65 & 79); Shuri (Naha-shi) (Jan. 10, 1940, H. f., nos. 5 & 23; May 23, 1953, H. H., no. 991; Oct. 25, 1953, S. S., no. 1098); Nishihara-mura (Jan. 20, 1940, H. f., no. 175); Osato-mura (Jan. 20, 1940, H. f., no. 157); Oroku (Jan. 19, 1940, H. f., no. 124); Takamine-mura (Jan. 21, 1940, H. f., nos. 183 & 189); Naha-shi (Jan. 11, 1940, H. f., no. 28); Motobu-machi (April 18, 1940, Y. T., no. 469; May 29, 1953, H. f. & S. S., no. 994). Iejima Isl. (May 23, 1954, S. S., no. Oki-1071). Theya Isl. (June 9, 1956, S. S. & M. T., no. Oki-1143; March 26, 1957, M. T., no. Oki-1188). Minami-daito Isl. (July 31, 1958, M. T., no. Oki-1375). Kumejima Isl.: Gushikawa-mura (Feb. 15, 1957, S. S. & M. T., no. Oki-1326); Nakazato-mura (Feb. 17, 1957, S. S. & M. T.,

no. Oki-1306). Ishigaki Isl.: Shiraho (Feb. 21, 1955, S. S., no. 2040, no. Yae-137).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

32. *Puccinia curculigonis* Raciborski, Parasit. Algen u. Pilze Javas. I, p. 21, 1900. (Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 11, 1955).

Hab. in the Ryukyus. II, III. on *Curculigo orchioides* Gaertner (*Kinbai-zasa*). Ishigaki Isl.: Harakubo (Aug. 26, 1954, M. T., no. 2035). Iriomote Isl.: Ohara (March 3, 1955, M. T., no. Yae-232).

Distrib. in the Ryukyus: Sakishima Isls.

33. *Puccinia cynodontis* Lacroix in Desm., Pl. Crypt. Fr. II, no. 655, 1859. (Hiratsuka, f., Jour. Jap. Bot. XIV, p. 36, 1938; Bot. Mag. Tokyo. LIV, p. 163, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 27, 1941; Ured. Formosa. p. 57, 1943; Ured. Kiushu. p. 62, 1952; Uredinolog. Stud. p. 310, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 160, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 29, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 11, 1955; no. 4, p. 118, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 31, 1955; no. 3, p. 13, 1956; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 78, 1958; S. Ito, Myc. Fl. Jap. II, no. 3, p. 150, fig. 175, 1950).

Syn. *Puccinia varians* Dietel in Ann. Myc. VI, p. 224, 1908. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 7, 1914; Sawada, Descript. Cat. Formosan Fung. IV, p. 69, 1928). *Uredo eleusinis-indicae* Sawada in Jour. Taihoku Soc. Agric. & Forestr. VII, p. 41, 1943 (nom. nud.).

Hab. in the Ryukyus. II, III. on *Cynodon dactylon* Pers. (*Gyogi-shiba*). Tanegashima Isl.: Nishinoomote-machi (Aug. 15, 1957, S. S. & Y. N., no. Tane-64). Yakushima Isl.: Yoshida—Nagata (Aug. 10, 1957, S. S. & M. T., no. Yaku-56). Anbo (Aug. 1, 1957, S. S. & M. T., no. Yaku-61). Kodakarashima Isl. (Dec. 23, 1955, Y. N., no. Tokara-235). Amami-oshima Isl.: Kasari-mura (Jan. 4, 1955, Y. M., no. 1878). Okinawa Isl.: Shuri (Naha-shi) (April 25, 1953, H. f., no. 1121); Haeburu-mura (May 16, 1953, H. f. & S. S., no. 1122); Haneji-mura (Jan. 13, 1940, H. f., nos. 97 & 206; April 14, 1940, Y. T., no. 449); Yagajishima Isl. (Jan. 15, 1940, H. f., no. 290). Iheya Isl. (Sept. 22, 1955, Y. N., no. Oki-1144; June 7, 1956, S. S. & M. T., no. Oki-1186; March 25, 1957, M. T., no. Oki-1145). Minami-daito Isl. (July 31, 1958, M. T., no. Oki-1376). Kumejima Isl.: Gushikawa-mura (Feb. 15, 1957, S. S. & M. T., no. Oki-1332); Nakazato-mura (Feb. 17, 1957, S. S. & M. T., no. Oki-1310). Miyako Isl.: Taira-shi (March 23, 1956, S. S. & M. T., no. Miya-108). Iriomote Isl.: Ohara (March 3, 1955, M. T., no. 2036).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

34. *Puccinia dieteliana* P. Sydow in Hedwigia. XXXVII, p. 215, 1898. (Hiratsuka, f., Jour. Jap. Bot. X, p. 222, 1934; XI, p. 39, 1935; Ured. Formosa. p. 47, 1943; Ured. Kiushu. p. 62, 1952; Uredinolog. Stud. p. 311, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLVIII, p. 234, 1934; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; Sawada, Descript. Cat. Formosan Fung. VII, p. 48, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 289, fig. 371, 1950).

Hab. in the Ryukyus. I, III. on *Lysimachia clethroides* Duby (*Okatoranoo*). Yakushima Isl. (S. K.).

Distrib. in the Ryukyus: Satsunan Isls.

35. *Puccinia dioscoreae* Komarov in Jaczewski, Komarov et Tranzschel, Fung. Ross. exsicc. no. 269, 1899. (Hiratsuka, f., Ured. Kiushu. p. 63, 1952; Uredinolog.

Stud. p. 311, 1955; Hiratsuka, f., Shimabukuro & Niiro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 163, 1957).

Syn. *Rostrupia dioscoreae* P. Sydow in Saccardo, Syll. Fung. XVI, p. 315, 1902. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 40, 1935; S. Ito, Myc. Fl. Jap. II, no. 3, p. 346, fig. 454, 1950).

Hab. in the Ryukyus. II. on *Dioscorea matsudai* Hayata (*Somemono-imo*). Ishigaki Isl.: Ohama-machi (Aug. 9, 1955, M. T., no. Yae-351). II. on *Dioscorea septemloba* Thunb. (*Kikuba-dokoro*, *Momiji-dokoro*). Kuroshima Isl. (July 31, 1956, S. S. & Y. N., no. Mishima-39).

Distrib. in the Ryukyus: Tokara Isls., Sakishima Isls.

36. *Puccinia elytrariae* Hennings in Hedwigia. XXXIV, p. 320, 1895. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 1935; Ured. Formosa. p. 50, 1943; Ured. Kiushu. p. 63, 1952; Uredinolog. Stud. p. 321, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Sci. Agric. Sci. IV, p. 159, 1933; Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 11, 1955; Hiratsuka, f., Shimabukuro & Niiro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 31, 1955; no. 4, p. 163, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 53, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 302, fig. 390, 1950).

Syn. *Puccinia shiraiana* P. Sydow in Hedwigia. XXXVII, p. (141), 1899. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 6, 1914; Sawada, Descript. Cat. Formosa Fung. IV, p. 65, 1928).

Hab. in the Ryukyus. III. on *Justicia procumbens* L. var. *leucantha* Honda (*Kitsuneno-mago*). Tanegashima Isl.: Nishinoomote-machi (Sept. 15, 1954, S. S., no. 1508; Aug. 18, 1957, S. S. & M. T., no. Yaku-91). Yakushima Isl.: Onoaida (Aug. 3, 1954, S. S. & Y. H., nos. 1504 & 1505). Kuroshima Isl. (Aug. 3, 1956, S. S. & Y. N., nos. Mishima-110 & 111). III. on *Justicia procumbens* L. var. *riukiensis* Yamamoto (*Kitsuneno-himago*). Amami-oshima Isl.: Mikata-mura (Jan. 6, 1955, Y. N., no. 1880). Tokunoshima Isl.: Amagi-mura (Sept. 14, 1954, Y. N., no. 1879). Ishigaki Isl.: Ishiaki-shi (March 6, 1955, M. T., no. 2037).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Sakishima Isls.

37. *Puccinia erebia* P. et H. Sydow in Philippine Jour. Sci. VIII, Bot. p. 475, 1913. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 163, 1940; LV, p. 270, 1941; Transact. Sapporo Nat. Hist. Soc. XVII, p. 27, 1941; Ured. Formosa. p. 49, 1943; Uredinolog. Stud. p. 312, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 29, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 11, 1955; Hiratsuka, f., Shimabukuro & Niiro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 31, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 294, fig. 378, 1950).

Syn. *Uredo clerodendricola* Hennings in Hedwigia. XLI, p. 140, 1902. (Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 164, 1933; Sawada, Descript. Cat. Formosan Fung. VI, p. 52, 1933; IX, p. 136, 1943).

Hab. in the Ryukyus. II, III. on *Clerodendron inerme* Gaerth. (*Ibota-kusagi*). Amami-oshima Isl.: Kasari-mura (Dec. 24, 1953, Y. N., no. 1174; Jan. 5, 1955, Y. M., no. 1829); Tatsugo-mura (Aug. 25, 1954, Y. N., no. 1830; Jan. 4, 1955, Y. M., no. 1831); Chinzei-mura (Sept. 21, 1954, Y. N., no. 1832). Kikaishima Isl.: Kikai-machi (Aug. 28, 1954, Y. N., no. 1833). Okinawa Isl.: Haneji-mura (Jan. 15, 1940, H. f., nos. 267 & 268); Naha-shi (Jan. 19, 1940, H. f., nos. 134 & 141; March 15, 1940, Y. T., no. 399); Osato-mura (Jan. 20, 1940, H. f., no. 177); Yontan-mura (Yontanzan-mura) (March 8, 1940, Y. T., no. 379); Itoman-machi (Jan. 21, 1940, H. f., no. 310); Yonabaru-machi (June 6, 1953, H. f. & S. S., no. 878). Iheya Isl. (June 8, 1956, S.

S. & M. T., no. Oki-1146; March 26, M. T., no. Oki-1147). Izena Isl. (Sept. 19, 1955, Y. N., no. Oki-1200). Kumejima Isl.: Nakazato-mura (March 5, 1954, S. S., no. 1228); Gushikawa-mura (Feb. 16, 1957, S. S. & M. T., no. Oki-1286). Miyako Isl.: Ueno-mura (Aug. 3, 1953, S. S., no. 1023); Taira-shi (Aug. 1, 1953, S. S., no. 1024). Ishigaki Isl.: Ohama-machi (Aug. 18, 1954, M. T., no. 2045). Yonaguni Isl. (Aug. 6, 1955, M. T., no. Yae-267).

Distrib. in the Ryukyus: Amami Isls., Okinawa Isls., Sakishima Isls.

38. *Puccinia erythropus* Dietel in Engl. Bot. Jahrb. XXXVII, p. 101, 1905. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 164, 1940; Transact. Sapporo Nat. Hist. Soc. IX, p. 228, 1927; XVII, p. 27, 1941; Ured. Kiushu. p. 64, 1952; Bot. Mag. Tokyo. LIV, p. 164, 1940; Uredinolog. Stud. p. 312, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 30, 1954; S. Ito, Myc. Fl. Jap. II, no. 3, p. 161, fig. 194, 1950; T. Hiratsuka. Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 64, pl. IV, fig. 4, 1958).

Hab. in the Ryukyus. II, III. on *Miscanthus sinensis* Anders. (*Susuki*). Yaku-shima Isl.: Miyanoura (Aug. 9, 1957, S. S. & M. T., no. Yaku-162). Amami-oshima Isl.: Mt. Yuwan-dake (Dec. 18, 1955, S. Sa., no. 4195). Okinawa Isl.: Kanegusuku-mura (Jan. 21, 1940, H. f., no. 195). Kumejima Isl.: Gushikawa-mura (Feb. 20, 1957, S. S. & M. T., no. Oki-1343). Minami-daito Isl. (July 30, 1958, M. T., no. Oki-1378). Kita-daito Isl. (Aug. 6, 1958, M. T., no. Oki-1405). II. on *Miscanthus sinensis* var. *condensatus* Mak. (*Hachijo-susuki*). Kita-daito Isl. (Aug. 6, 1958, M. T., no. Oki-1406).

Distrib. in the Ryukyus: Satsunan Isls., Amami Isls., Okinawa Isls.

39. *Puccinia exhausta* Dietel in Engl. Bot. Jahrb. XXVIII, p. 283, 1900. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 4, 1914; Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 164, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 27, pl. II, fig. 3, 1941; Ured. Formosa. p. 45, 1943; Uredinolog. Stud. p. 312, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 159, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 30, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 11, 1955; Sawada, Descript. Cat. Formosan Fung. I, 368, 1919; IX, p. 47, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 249, Fig. 316, 1950).

Hab. in the Ryukyus. III. on *Clematis grata* Wall. (*Ke-botanzuru*). Okinawa Isl.: Naha-shi (Jan. 18 & 19, 1940, H. f., nos. 116 & 143; March 24, 1940, Y. T., no. 411); Shuri (Naha-shi) (Jan. 10, 1940, H. f., nos. 17, 25 & 26; Nov. 6, 1953, S. S., no. 1027); Mawashi (Naha-shi) (May 3, 1953, H. f. & S. S., no. 982); Nago-machi (May 8, 1953, H. f. & S. S., nos. 980 & 984); Mt. Katsuu-dake (Jan. 14, 1940, H. f., no. 256); Haneji-mura (Aug., 1904, T. Miyagi, no. 1065); Gushikawa-mura (May 1, 1953, H. f. & S. S., no. 983); Kanegusuku-mura (Jan. 21, 1940, H. f., no. 312); Takamine-mura (Jan. 21, 1940, H. f., no. 185); Kochinda-mura (March 27, 1940, Y. T., no. 420). Iheya Isl. (June 8, 1956, S. S. & M. T., no. Oki-1148). Kumejima Isl.: Gushikawa-mura (Feb. 15, 1957, S. S. & M. T., no. Oki-1282). Miyako Isl.: Taira-shi (Aug. 1, 1953, S. S., no. 1026); Karimata (March 26, 1956, S. S. & M. T., nos. Miya-104 & 106). Ishigaki Isl. (Aug. 5, 1953, Y. N., no. 1028).

Distrib. in the Ryukyus: Okinawa Isls., Sakishima Isls.

40. *Puccinia ferruginea* Léveillé in Vaillant, Voyage de la Bonite, Fungi, p. 204 & pl. 140, fig. 5, 1839-46. (Hiratsuka, f., Jour. Jap. Bot. XII, p. 267, 1936; Ured. Formosa. p. 64, 1943; Ured. Kiushu. p. 64, 1952; Uredinolog. Stud. p. 313, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 160, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 30, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 32, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 54, 1955; Katsuki Jour. Jap. Bot.

XXX, p. 32, 1955; Morimoto, Jour. Jap. Bot. XXXVIII, p. 315, 1953; Sawada, Descript. Cat. Formosan Fung. V, p. 50, 1931).

Syn. *Puccinia smilacis-chinae* Hennings in Hedwigia. XL, p. (125) 1901. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 7, 1914; Sawada, Descript. Cat. Formosan Fung. IV, p. 67, 1928).

Hab. in the Ryukyus. III. on *Smilax china* L. (*Sarutori-ibara*). Tanegashima Isl.: Nishinoomote-machi (Sept. 21, 1954, S. S., no. Tane-17; Aug. 13, 1957, S. S. & M. T., nos. Tane-103 & 104). Yakushima Isl.: Anbo (Sept. 5, 1954, S. S., no. 2002); Onoaida—Kojima (Aug. 3, 1954, S. Sa. & Y. H., nos. 2003 & 2004); Kosugidani (Aug. 2, 1957, S. S. & M. T., no. Yaku-199); Anbo—Haro (Aug. 6, 1957, S. S. & M. T., no. Yaku-200). Amami-oshima Isl.: Chinzei-mura (Oct., 1936, T. Tamotsu, no. 1033). Okinawa Isl.: Shuri (Naha-shi) (April 30, 1899, Naoharu Hiratsuka, no. 1165). III. on *Smilax stenopetala* A. Gray (*Satsuma-sankirai*). Iheya Isl. (March 26, 1957, M. T., no. Oki-1149). Ishigaki Isl. (Aug. 5, 1953, Y. N., no. 1148). Yonaguni Isl. (Aug. 5, 1955, M. T., no. Yae-262). III. on *Smilax* sp. Okinawa Isl.: Mt. Kushi-dake (June 5, 1953, H. f. & S. S., no. 1149).

Distrib. in the Ryukyus: Satsunan Isls., Amami Isls., Sakishima Isls.

41. *Puccinia ferruginosa* P. et H. Sydow, Monogr. Ured. I, p. 13, 1902. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 4, 1914; Hiratsuka, f., Mem. Tottori Agric. Coll. III, p. 192, 1935; Jour. Jap. Bot. XI, p. 39, 1935; Bot. Mag. Tokyo. LIV, p. 164, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 27, 1941; Ured. Formosa. p. 52, 1943; Ured. Kiushu. p. 65, 1952; Uredinolog. Stud. p. 313, 1955; Hiratsuka, f. & Hashioka Bot. Mag. Tokyo. LI, p. 44, 1937; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 30, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 11, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 32, 1955; no. 4, p. 163, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 54, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 54, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 313, fig. 43, 1950).

Hab. in the Ryukyus. III. on *Artemisia dubia* Wall. (*Yomogi*). Yakushima Isl.: Nakama—Kurio (Aug. 3, 1954, S. Sa. & Y. H., nos. 1883 & 1884); Kurio—Yudomari (Aug. 8, 1957, S. S. & M. T., no. Yaku-95). Kuroshima Isl. (July 26, 1956, S. S. & Y. N., no. Mishima-32). Okinawa Isl.: Nago-machi (April 19, 1940, Y. T., no. 473; May 23, 1953, M. Nagayama, no. 873); Motobu-machi (May 29, 1953, H. f. & S. S., no. 869); Haneji-mura (Jan. 13 & 15, 1940, H. f., nos. 98 & 283; April 8, 1940, Y. T., no. 429); Mt. Taniu-dake (June 12, 1953, H. f. & S. S., no. 874); Miwa-mura (May 15, 1953, H. f. & S. S., no. 872). Iheya Isl. (June 8, 1956, S. S. & M. T., no. Oki-1150). Kumejima Isl.: Gushikawa-mura (March 7, 1954, S. S., no. 1220). Ishigaki Isl.: Ohama-machi (Feb. 27, 1955, S. S., no. 2053).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

42. *Puccinia festucae* Plowright in Grevillea. XXI, p. 109, 1893. (Hiratsuka, f., Transact. Tottori Soc. Agric. Sci. IV, p. 36, 1932; Transact. Sapporo Nat. Hist. Soc. XVII, p. 79, 1942; Bot. Mag. Tokyo. LVI, p. 56, 1942; Ured. Kiushu. p. 65, 1952; Uredinolog. Stud. p. 313, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 154, fig. 182, 1950).

Hab. in the Ryukyus. II. on *Festuca* sp. (*Festuca elatior* L. ?) (*Cult.*). Okinawa Isl.: Tomari (Naha-shi) (March 10, 1954, M. Nagayama, no. Oki-1226).

Distrib. in the Ryukyus: Okinawa Isls.

43. *Puccinia flavipes* P. et H. Sydow in Sydow & Butler in Ann. Myc. V, p. 497, 1907. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 4, 1914; Hiratsuka, f., Ured. Formosa. p. 62, 1943; Ured. Kiushu. p. 65, 1952; Uredinolog. Stud. p. 313, 1955;

Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 20, 1935; Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 12, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 32, 1955; no. 3, p. 13, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 54, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 54, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 204, fig. 257, 1950).

Hab. in the Ryukyus. II, III. on *Fimbristylis annua* Roem. et Schult. (*Tentsuki*). Tanegashima Isl.: Nishinoomote-machi (Sept. 20, 1954, S. S., no. 1887). Yakushima Isl.: Anbo—Onoaida (Sept. 14, 1954, S. S., no. Yaku-116); Anbo—Haro (Aug. 6, 1957, S. S. & M. T., no. Yaku-154). Nakanoshima Isl. (July 31, 1955, S. S. & Y. N., no. Tokara-66). Amami-oshima Isl.: Tatsugo-mura (Aug. 26, 1954, Y. N., no. 1828). Ishigaki Isl.: Ishigaki-shi (Aug. 24, 1954, M. T., no. 2316). Yonaguni Isl. (Aug. 7, 1955, M. T., no. Yae-280). II. on *Fimbristylis monostachya* Hassk. (*Yari-tentsuki*). Okinawa Isl.: Iheya Isl. (June 9, 1956, S. S. & M. T., no. Oki-1238). II. on *Fimbristylis subbispicata* Nees et Meyen. (*Yama-i*). Nakanoshima Isl. (Aug. 1, 1955, S. S. & Y. N., no. Tokara-62).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

44. *Puccinia glechomatis* De Candolle ex Poir. in Lam., Encycl. Meth. Bot. VIII, p. 245, 1808. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 39, 1935; Ured. Formosa. p. 49, 1943; Ured. Kiushu. p. 65, 1952; Uredinolog. Stud. p. 314, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 159, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 31, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 32, 1955; Sawada, Descript. Cat. Formosan Fung. VI, p. 45, 1933; S. Ito, Myc. Fl. Jap. II, no. 3, p. 297, fig. 382, 1950).

Hab. in the Ryukyus. III. on *Glechoma hederacea* L. var. *grandis* Kudo (*Kakidoshi*) Amami-oshima Isl.: Nase-shi (Nov., 1936, T. Tamotsu, no. 1068).

Distrib. in the Ryukyus: Amami Isls.

45. *Puccinia graminis* Persoon in Syn. Meth. Fung. p. 288, 1801. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. non. 19, p. 15, 1914; Hiratsuka, f., Jour. Jap. Bot. X, p. 621, 1934; Bot. Mag. Tokyo. XLIX, p. 147, 1935; Transact. Sapporo Nat. Hist. Soc. XVII, p. 27, 1941; Ured. Formosa. p. 57, 1943; Ured. Kiushu. p. 66, 1952; Uredinolog. Stud. p. 314, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 161, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 31, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 12, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 55 & pl. II, fig. 17, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 128, fig. 150A & B, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 62, 1958).

Hab. in the Ryukyus. II, III. on *Hordeum sativum* Jess. var. *hexastichon* Hack. (*O-mugi*) (*Cult.*). Okinawa Isl.: Urasoe-mura (March 13, 1940, Y. T., no. 349); Nakijin-mura (May 13, 1956, S. S., no. Oki-1025). Iejima Isl. (May 23, 1954, S. S., no. Oki-1094). II, III. on *Triticum aestivum* L. (*Ko-mugi*) (*Cult.*). Okinawa Isl.: Yontan-mura (Yontanzan-mura) (March 8, 1940, Y. T., no. 384); Ginowan-mura (Feb. 27, 1940, Y. T., no. 370); Mawashi (Naha-shi) (Feb. 23, 1940, Y. T., no. 362); Naha-shi (May 7, 1954, S. S., no. Oki-1429); Takamine-mura (March 3, 1940, Y. T., no. 377); Gushikawa-mura (May 1, 1953, H. f. & S. S., nos. 891 & 892); Goeku-mura (May 1, 1953, H. f. & S. S., nos. 899, 890 & 893); Nishihara-mura (April 13, 1953, M. Nagayama, no. 886). Iejima Isl. (May 23, 1954, S. S., no. Oki-1015). Miyako Isl.: Taira-shi (March 2, 1955, S. S., no. 2048, Miya-52). Ishigaki Isl.: Ohama

(March 9, 1957, S. Higashihirachi, no. Yae-406). II. on *Agropyron tsukushiense* (Honda) Ohwi var. *transiens* (Hack.) Ohwi (*Kamoji-gusa*). Yakushima Isl.: Miyaura (Aug. 9, 1957, S. S. & M. T., no. Yaku-153).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls., Sakishima Isls.

46. *Puccinia hashiokai* Hiratsuka, f. in Jour. Jap. Bot. XVIII, p. 570, 1942. (Hiratsuka, f. Ured. Formosa. p. 63, 1943; Urediol. Stud. p. 315, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 31, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 12, 1955).

Syn. *Uredo taiwaniana* Hiratsuka, f. et Hashioka in Bot. Mag. Tokyo. XLVIII, p. 239, 1934. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 377, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 34, 1941; Sawada, Descript. Cat. Formosan Fung. VII, p. 67, 1942; IX, p. 148, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 210, 1950).

Hab. in the Ryukyus. II. on *Epipremnum mirabile* Schott. (*Habu-kazura*). Okinawa Isl.: Shuri (Naha-shi) (March 12, 1940, Y. T., no. 397). Iriomote Isl.: Inaba (June 21, 1954, S. S., no. 2304).

Distrib. in the Ryukyus: Okinawa Isls., Sakishima Isls.

47. *Puccinia hemerocallidis* Thümen in Bull. Soc. Imp. Nat. Moscou. IV, p. 81, 1880. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 164, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 28, 1941; Ured. Formosa. p. 64, 1943; Ured. Kiushu. p. 66, 1952; Uredinolog. Stud. p. 67, 1952; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 160, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 31, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 163, 1957; Hiratsuka, f., Shimabukuro & Niino, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 32, 1955; no. 3, p. 13, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 54, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 56, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 218, fig. 276, 1950).

Hab. in the Ryukyus. II. on *Hemerocallis aurantiaca* Baker (*Kanzo, Wasuregusa*). Miyako Isl.: Taira-shi (Nov. 27, 1955, S. S., no. Miya-88); Shimochi-machi (Feb. 20, 1955, M. T., no. Miya-155). II, III. on *Hemerocallis disticha* Donn. (*Nokanzo*). Tanegashima Isl.: Minamitani-mura (Sept. 23, 1954, S. S., no. 2034). Yakushima Isl.: Anbo (Sept. 5, 1954, S. S., no. 1996); Onoaida—Haro (Aug. 5, 1954, S. Sa. & Y. H., nos. 1993 & 1994). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., no. Mishima-7). Nakanoshima Isl. (Aug. 2, 1955, S. S. & Y. N., no. Tokara-71; Dec. 26, 1955, Y. N., no. Tokara-308). Amami-oshima Isl.: Nase-shi (Sept., 1935, T. Tamotsu, no. 1058); Tatsugo-mura (Dec. 28, 1953, Y. N., no. 1191); Mikata-mura (Jan. 6, 1955, Y. N., no. 2024). Okinawa Isl.: Motobu-machi (April 18, 1940, Y. T., no. 468; May 29, 1953, H. f. & S. S., no. 899); Shuri (Naha-shi) (May 23, 1953, H. f., no. 900); Haneji-mura (Jan. 13, 1940, H. f., no. 91; April 8, 1940, Y. T., no. 426); Mawashi (Naha-shi) (Jan. 22, 1940, H. f., no. 337); Kunigami-mura (May 29, 1953, H. f. & S. S., no. 901). Kumejima Isl.: Gushikawa-mura (Feb. 16, 1957, S. S. & M. T., no. Oki-1279); Nakazato-mura (Feb. 17, 1957, S. S. & M. T., no. Oki-1281). Miyako Isl.: Gusukube-machi (March 23, 1956, S. S. & M. T., no. Miya-122). II, III. on *Hemerocallis* sp. Amami-oshima Isl.: Tatsugo-mura (Dec. 28, 1953, Y. N., no. 1191).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

48. *Puccinia hordei* Otth in Mitt. Nat. Ges. Bern (1870), p. 114, 1871. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 704, 1935; Ured. Kiushu. p. 67, 1952; Uredinolog. Stud. p. 316, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 32, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 120, 1957; Hiratsuka,

f., Shimabukuro & Niiro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 32, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 67, 1958.

Syn. *Puccinia anomala* Rostrup ex Thumen in Flora. XLI, p. 92, 1878. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 375, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 25, 1941; Ured. Formosa. p. 59, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 133, fig. 154, 1950). *Puccinia simplex* Eriksson et Henning in Zeitschr. f. Pflanzenkr. IV, p. 260, 1894. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 6, 1914; Sawada, Descript. Cat. Formosan Fung. IV, p. 67, 1928; IX, p. 70, 1943).

Hab. in the Ryukyus. II, III. on *Hordeum sativum* Jess. var. *hexastichon* Hack. (*O-mugi*) (*Cult.*). Amami-oshima Isl.: Nase-shi (Dec. 10, 1929, T. Tamotsu, no. 1099). Okinawa Isl.: Haneji-mura (Aug. 8, 1940, Y. T., no. 428); Nago-machi (May 3, 1953, M. Nagayama, no. 884; May 8, 1953, H. f. & S. S., nos. 881, 882 & 883; May 9, 1953, H. f. & S. S., nos. 880 & 885; May 9, 1953, S. S., no. Oki-1002); Gushikawa-mura (May 1, 1953, H. f. & S. S., no. 879); Ginoza-mura (April 17, 1954, S. S., nos. Oki-1022 & 1023). II, III. on *Hordeum sativum* Jess. var. *vulgare* Hack. f. *coeleste* Mak. (*Hadaka-mugi*) (*Cult.*). Okinawa Isl.: Nago-machi (May 9, 1953, S. S., no. Oki-1002).

Distrib. in the Ryukyus: Amami Isls., Okinawa Isls.

49. *Puccinia infra-aequatorialis* Joerstad in Skr. utgitt av Det Norsle Vid. Akad. Oslo. I. Matem.-Nat. Kl. (1933), no. 9, p. 132 & fig. 18, 1934. (Hiratsuka, f., Ured. Kiushu. p. 68, 1952; Uredinolog. Stud. p. 317, 1955; Hiratsuka, f., Ured. Kiushu. p. 68, 1952; Uredinolog. Stud. p. 317, 1955; Hiratsuka, f., Shimabukuro & Niiro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 163, 1957; S. Ito, Myc. Fl. Jap. II, no. 3, p. 323, fig. 419, 1950).

Hab. in the Ryukyus. II. on *Cirsium japonicum* DC. (*No-azami*). Kuroshima Isl. (Aug. 1, 1956, S. S. & Y. N., no. Mishima-22).

Distrib. in the Ryukyus: Tokara Isls.

50. *Puccinia juncelli* Dietel in Ann. Myc. VIII, p. 306, 1910. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 5, 1914; Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. XVI, p. 145, 1940; Ured. Formosa. p. 61, 1943; Ured. Kiushu. p. 68, 1952; Uredinolog. Stud. p. 318, 1955; Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 12, 1955; no. 4, p. 118, 1957; Sawada, Descript. Cat. Formosan Fung. I, p. 372, 1919; S. Ito, Myc. Fl. Jap. II, no. 3, p. 206, fig. 260, 1950).

Hab. in the Ryukyus. II, III. on *Juncellus serotinus* Clarke (*Mizu-gayatsuri*). Tanegashima Isl.: Nishinoomote-machi (Aug. 15, 1957, S. S. & M. T., no. Tane-69). Ishigaki Isl.: Ohama-machi (Aug. 6, 1954, M. T., no. 2305, Yae-10).

Distrib. in the Ryukyus: Satsunan Isls., Sakishima Isls.

51. *Puccinia kuehnii* Butler in Ann. Myc. XII, p. 82, 1914. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 5, 1914; Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 164, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 28, 1941; Ured. Formosa. p. 56, 1943; Uredinolog. Stud. p. 319, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 20, 1935; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 32, 1954; Sawada, Descript. Cat. Formosan Fung. IV, p. 57, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 173, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 47, 1958).

Hab. in the Ryukyus. II. on *Saccharum arundinaceum* Retzius (*Yoshi-susuki*). Okinawa Isl.: Naha-shi (Jan. 11, 1940, H. f., no. 51). II. on *Saccharum officinarum* L. (*Sato-kibi*) (*Cult.*). Miyako Isl.: Taira-shi (May 14, 1952, M. Nagayama, no. 2307).

Distrib. in the Ryukyus: Okinawa Isls., Sakishima Isls.

52. *Puccinia kusanoi* Dietel in Engl. Bot. Jahrb. XXVII, p. 569 & pl. VII, figs. 14 & 15, 1899. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 277, 1935; Transact. Sapporo Nat. Hist. Soc. XVII, p. 28, 1941; Ured. Kiushu. p. 69, 1952; Uredinolog. Stud. p. 388, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 32, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 13, 1956; no. 4, p. 163, 1957; S. Ito, Myc. Fl. Jap. II, no. 3, p. 124, fig. 146, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 65, 1958).

Syn. *Aecidium deutziae* Dietel in Hedwigia. XXXVII, p. 212, 1898. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 709, 1935; Ured. Formosa, p. 66, 1943; Sawada, Descript. Cat. Formosan Fung. VII, p. 63, 1942).

Hab. in the Ryukyus. II. on *Pleioblastus hindsii* Nakai (*Kanzan-chiku*). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., no. Mishima-4). Iwojima Isl. (Aug. 6, 1956, S. S., no. Mishima-75). Suwanosejima Isl. (Aug. 4, 1955, S. S. & Y. N., no. Tokara-95). Akusekishima Isl. (Aug. 6, 1955, S. S. & Y. N., no. Tokara-130). Takarashima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-159; Dec. 22, 1955, Y. N., no. Tokara-236). II, III. on *Pleioblastus linearis* Nakai (*Yanbaru-madake, Ryukyu-chiku*). Okinawa Isl.: Shuri (Naha-shi) (Feb. 19, 1940, Y. T., no. 347). Kumejima Isl.: Nakasato-mura (Feb. 17, 1957, S. S. & M. T., no. Oki-1307).

Distrib. in the Ryukyus: Tokara Isls., Okinawa Isls.

53. *Puccinia kyllingiae-brevifoliae* Miura ex S. Ito & Homma in Transact. Sapporo Nat. Hist. Soc. XV, p. 128, 1938. (Hiratsuka, f., Jour. Jap. Bot. XV, p. 435, 1939; Bot. Mag. Tokyo. LIV, p. 164, 1940; Transact. Sapporo Nat. Hist. Soc. XVI, p. 145, 1940; XVII, p. 28, 1941; Ured. Formosa. p. 62, 1943; Ured. Kiushu. p. 69, 1952; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 32, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 121, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 163, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 54, 1955; Sawada, Descript. Cat. Formosan Fung. IX, p. 56, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 206, fig. 261, 1950).

Syn. *Uredo kyllingiae* Hennings in Hedwigia. XXXV, p. 256, 1896. *Uredo kyllingiae-brevifoliae* Dietel in Engl. Bot. Jahrb. XXXIV, p. 591, 1905.

Hab. in the Ryukyus. II, III. on *Kyllingia brevifolia* Rottb. var. *leiolepis* (Franch. et Sav.) Hara (*Hime-kugu*). Yakushima Isl.: Anbo (June 7, 1951, Y. M., no. 1997). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., no. Mishima-122). Okinawa Isl.: Nagomachi (Jan. 16, 1940, H. f., nos. 103 & 104); Haneji-mura (Jan. 13, 1940, H. f., no. 88); Mt. Katsuu-dake (Jan. 14, 1940, H. f., no. 254); Takamini-mura (Jan. 21, 1940, H. f., no. 188). Miyako Isl.: Taira-shi (Dec. 3, 1955, S. S., no. Miya-92).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

54. *Puccinia lactucae-debilis* Dietel in Ann. Myc. VI, p. 225, 1908. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 5, 1914; Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 165, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 28, 1941; Ured. Formosa. p. 53, 1943; Ured. Kiushu. p. 70, 1952; Uredinolog. Stud. p. 319, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 33, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 14, 1956; no. 4, p. 163, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 54, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 58, pl. II, figs. 18 & 19, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 328, fig. 425A, B & C, 1950).

Syn. *Puccinia lactucae* Dietel in Engl. Bot. Jahrb. XXVIII, p. 285, 1900. (Hira-

tsuka, f., Jour. Jap. Bot. XI, p. 40, 1935).

Hab. in the Ryukyus. O, I, II, III. on *Ixeris japonica* Nakai (*Jishibari*). Kuroshima Isl. (July 25, 1956, S. S. & N. Y., no. Mishima-96). Nakanoshima Isl. (Dec. 24, 1955, Y. N., no. Tokara-325). Okinawa Isl.: Kunigami-mura (April 13, 1940, Y. T., no. 433); Kiyani-mura (March 3, 1940, Y. T., no. 374); Goeku-mura (May 1, 1953, H. f. & S. S., no. 996). Miyako Isl.: Karimata (March 26, 1956, S. S. & M. T., no. Miya-127). O, I, II, III. on *Ixeris nakazonei* Kitamura (*Miyako-jishibari*). Okinawa Isl.: Yanbaru-machi (June 6, 1953, H. f. & S. S., no. 1036); Takamine-mura (May 15, 1953, H. f. & S. S., nos. 1136 & 1137); Ginoza-mura (June 5, 1953, H. f. & S. S., no. 1138); Kunigami-mura (May 29, 1953, H. f. & S. S., no. 1139). Kumejima Isl.: Gushikawa-mura (Feb. 15, 1957, S. S. & M. T., no. Oki-1283). O, I, II, III. on *Ixeris stolonifera* A. Gray (*Iwa-nigana*, *Hime-jishibari*). Tanegashima Isl.: Minamitane-mura (Sept. 23, 1954, S. S., no. 2000). Okinawa Isl.: Haneji-mura (Jan. 13, 1940, H. f., no. 201); Nago-machi (Jan. 16, 1940, H. f., no. 106); Motobumachi (May 29, 1953, H. f. & S. S., no. 997). II, III. on *Ixeris dentata* Nakai (*nigana*). Tanegashima Isl.: Nishinoomote-machi (Aug. 13, 1957, S. S. & M. T., no. Tane-73). Yakushima Isl.: Kosugidani (Aug. 2, 1957, S. S. & M. T., no. Yaku-201); Onoaida—Kojima (Aug. 3, 1954, S. Sa. & Y. H., no. 1999); Onoaida—Kurio (Aug. 7, 1957, S. S. & M. T., no. Yaku-209). II, III. on *Ixeris dentata* Nakai var. *alpicola* Ohwi (*Takane-nigana*). Yakushima Isl.: Hananoego—Mt. Miyanoura-dake (Aug. 1, 1954, S. Sa. & Y. H., no. 2001).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

55. *Puccinia lactucae-denticulatae* Dietel in Engl. Bot. Jahrb. XXXVII, p. 103, 1905. (Hiratsuka, f., Transact. Tottori Soc. Agric. Sci. IV, p. 33, 1932; Bot. Mag. Tokyo. LVI, p. 57, 1942; Ured. Kiushu. p. 70, 1952; Uredinolog. Stud. p. 319, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 55, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 330, fig. 427, 1950).

Hab. in the Ryukyus. II, III. on *Paraixeris denticulata* Nakai (*Yakushiso*). Yakushima Isl.: Onoaida—Haro (Aug. 5, 1954, S. Sa. & Y. H., no. 1941); Anbo (Aug. 1, 1957, S. S. & M. T., no. Yaku-141); Onoaida—Kurio (Aug. 7, 1957, S. S. & M. T., no. Yaku-120). Miyako Isl.: Taira-shi (March 22, 1956, S. S. & M. T., no. Miya-115).

Distrib. in the Ryukyus: Satsunan Isls., Sakishima Isls.

56. *Puccinia lactucae-repentis* Miyabe et T. Miyake ex P. & H. Sydow in Ann. Myc. XI, p. 96, 1913. (Hashioka, Jour. Jap. Bot. XII, p. 885, 1936; Hiratsuka, f., Bot. Mag. Tokyo. XLIX, p. 146, 1935; Jour. Jap. Bot. XIII, p. 591, 1937; Ured. Kiushu. p. 70, 1952; Uredinolog. Stud. p. 319, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 33, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 14, 1956; S. Ito, Myc. Fl. Jap. II, no. 3, p. 330, fig. 428, 1950).

Hab. in the Ryukyus. O, I, III. on *Ixeris repens* A. Gray (*Lactuca repens* Benth. et Hook. f.) (*Hama-nigana*). Takarashima Isl. (Aug. 12, 1955, S. S. & Y. N., no. Tokara-145). Okinawa Isl.: Higashi-mura (June 12, 1953, H. f. & S. S., no. 973). Iheya Isl. (Sept. 22, 1955, Y. N., no. Oki-1151; June 7, 1956, S. S. & M. T., no. Oki-1152).

Distrib. in the Ryukyus: Tokara Isls., Okinawa Isls.

57. *Puccinia lapsanae* Fuckel in Jahrb. Nass. Ver. Nat. XXIII-XXIV, p. 53, 1870. (Hiratsuka, f., Jour. Jap. Bot. XIV, p. 35, 1938; Ured. Formosa. p. 53, 1943; Ured. Kiushu. p. 71, 1952; Uredinolog. Stud. p. 319, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 33, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci.

Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 32, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 331, fig. 429, 1950).

Hab. in the Ryukyus. II, III. on *Lapsana humilis* Makino (*Yabu-tabirako*). Amami-oshima Isl.: Nase-shi (Sept., 1935, T. Tamotsu, no. 1160).

Distrib. in the Ryukyus: Amami Isls.

58. *Puccinia lepturi* Hiratsuka, f. in Transact. Sapporo Nat. Hist. Soc. XVII, p. 28, 1941. (Hiratsuka, f., Uredinolog. Stud. p. 319, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 33, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 12, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, 159, fig. 187, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 74, 1958).

Hab. in the Ryukyus. II, III. on *Lepturus repens* R. Br. (*Hai-shiba*). Okinawa Isl.: Naha-shi (Jan. 9, 1940, H. f., no. 11); Yagajishima Isl. (Jan. 15, 1940, H. f., no. 277, type!). Iheya Isl. (March 26, 1957, M. T., no. Oki-1153; March 25, 1957, M. T., no. Oki-1154). Kumejima Isl.: Gushikawa-mura (Feb. 15, 1957, S. S. & M. T., no. Oki-1270). Ishigaki Isl.: Ohama-machi (Aug. 27, 1954, M. T., no. 2311).

Distrib. in the Ryukyus: Okinawa Isls., Sakishima Isls.

59. *Puccinia levigata* (Syd. et Butl.) Hiratsuka, f. apud Hiratsuka, f. & Yoshinaga in Mem. Tottori Agric. Coll. III, p. 315, 1935. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 375, 1940, p.p.; Transact. Sapporo Nat. Hist. Soc. XVII, p. 29, 1941; Ured. Formosa. p. 60, 1943; Uredinolog. Stud. p. 319, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. LI, p. 45, 1937; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 33, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyu. no. 4, p. 121, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 14, 1956; no. 4, p. 163, 1957; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; Sawada, Descript. Cat. Formosan Fung. VII, p. 49, 1942; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 81, 1958).

Syn. *Diorchidium levigatum* P. et H. Sydow et Butler in Ann. Myc. V, p. 500, 1907.

Hab. in the Ryukyus. II, III. on *Oplismenus compositus* (L.) Beauv. (*Edauchi-chijimizasa*). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., no. Mishima-117). Nakanoshima Isl. (Aug. 2, 1955, S. S. & Y. N., Tokara-24; Dec. 28, 1955, Y. N., no. Tokara-338). Okinawa Isl.: Shuri (Naha-shi) (Nov. 27, 1898, Naoharu Hiratsuka, no. 1161; Feb. 19, 1940, Y. T., nos. 349 & 478). II. on *Oplismenus patens* Honda (*Oba-chijimizasa*). Iriomote Isl.: Komi (Aug. 16, 1955, M. T., no. Yae-355). II. on *Oplismenus undulatifolius* Roem. et Schult. var. *japonicus* (Steud.) Koidz. (*Chijimizasa*, *Ko-chijimizasa*). Tanegashima Isl.: Nishinoomote-machi (Aug. 13, 1957, S. S. & Y. N., no. Tane-53). Yakushima Isl. (S. K.).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

60. *Puccinia levis* (Sacc. et Bizz.) Magnus in Ber. Deutsch. Bot. Ges. IX, p. 190, pl. IX, figs. 28-37, 1891. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 376, text-fig. 1, e, 1940; LV, p. 271, 1941; Transact. Sapporo Nat. Hist. Soc. XVII, p. 29, 1941; Ured. Formosa. p. 60, 1943; Ured. Kiushu. p. 71, 1952; Uredinolog. Stud. p. 319, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 34, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 14, 1956; S. Ito, Myc. Fl. Jap. II, no. 3, p. 175, fig. 211, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 83, 1958).

Syn. *Diorchidium leve* Saccardo et Bizzozero in Michelia. II, p. 648, 1882.

Hab. in the Ryukyus. II, III. on *Digitaria adscendens* (H.B.K.) Henr. (*Mehi-shiba*). Yakushima Isl.: Anbo (Aug. 6, 1957, S. S. & M. T., no. Yaku-73). Takarashima Isl. (Aug. 13, 1955, S. S. & Y. N., no. Tokara-141). Iejima Isl. (May 23, 1954,

S. S., no. Oki-1061). Iheya Isl. (June 7, 1956, S. S. & M. T., no. Oki-1248; March 26, 1957, M. T., no. Oki-1155). Minnajima Isl., Motobu-machi (May 22, 1955, Y. N., no. Oki-1218). Minami-daito Isl. (July 31, 1958, M. T., no. Oki-1379). Kumejima Isl.: Nakazato-mura (Feb. 17, 1957, S. S. & M. T., no. Oki-1298). Iriomote Isl. (Aug. 17, 1955, M. T., no. Yae-292). Yonaguni Isl. (Aug. 3, 1955, M. T., no. Yae-279). II. on *Digitaria adscendens* var. *evalvula* Honda (*Chimoru-mehishiba*). Kotakara-shima Isl. (Dec. 23, 1955, Y. N., no. Tokara-271). II, III. on *Digitaria chinensis* Hornem. (*D. timorensis* Balansa) (*Ko-mehishiba*). Okinawa Isl.: Nishibaru-mura (Jan. 20, 1940, H. f., no. 174). II, III. on *Digitaria henryi* Hendle (*Henri-mehishiba*). Okinawa Isl.: Nishibaru-mura (Jan. 20, 1940, H. f., nos. 168, 169 & 173).

Distrib. in the Ryukyus: Tokara Isls., Okinawa Isls., Sakishima Isls.

61. *Puccinia lophatheri* (Syd.) Hiratsuka, f. in Jour. Jap. Bot. XIV, p. 36, 1938. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 165, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 29, 1941; Ured. Formosa. p. 60, 1943; Uredinolog. Stud. p. 320, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 34, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 12, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 33, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 159, fig. 190, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 82, 1958).

Syn. *Diorchidium lophatheri* P. et H. Sydow in Ann. Myc. XII, p. 107, 1914. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 7, 1914; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 161, 1933; Sawada, Descript. Cat. Formosan Fung. I, p. 375, 1919).

Hab. in the Ryukyus. II, III. on *Lophatherum gracile* Brongn. (*Sasakusa*). Amami-oshima Isl.: Tatsugo-mura (Dec. 28, 1953; Aug. 26, 1954, Y. N., nos. 1181 & 1824); Sumiyo-mura (Sept. 21, 1954, Y. N., no. 1825). Tokunoshima Isl.: Mt. Inokawa-dake (Sept. 19, 1954, Y. N., no. 1826); Mt. Mikyo-dake (Sept. 17, 1954, Y. N., no. 1827). Okinawa Isl.: Shuri (Naha-shi) (Jan. 11, 1940, H. f., no. 45); Mt. Onna-dake (Jan. 12, 1940, H. f., no. 73); Nago-machi (Oct. 20, 1907, T. Miyagi, no. 1059); Mt. Benokiyama (April 10, 1940, Y. T., no. 431); Kunigami-mura (Oct. 14, 1953, S. S., no. 1020). Iheya Isl. (Sept. 21, 1955, Y. N., no. Oki-1156; March 27, 1957, M. T., no. Oki-1157). Ishigaki Isl.: Ohama-machi (Aug. 8 & 27, 1954, M. T., no. 2041). Yonaguni Isl. (Aug. 5, 1955, M. T., no. Yae-283).

Distrib. in the Ryukyus: Amami Isls., Okinawa Isls., Sakishima Isls.

62. *Puccinia magnusiana* Körnicke in Hedwigia. XV, p. 179, 1876. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. IX, p. 229, 1927; XVI, p. 205, 1941; Uredinolog. Stud. p. 321, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 34, 1954; S. Ito, Myc. Fl. Jap. II, no. 3, p. 168, fig. 201, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 56, 1958).

Hab. in the Ryukyus. II, III. on *Phragmites japonica* Steud. (*Tsuru-yoshi*). Okinawa Isl.: Yonabaru-machi (June 6, 1953, H. f. & S. S., no. 858). II. on *Phragmites karka* Trin. (*Seikono-yoshi*, *Seitaka-yoshi*). Iriomote Isl.: Komi (Aug. 15, 1955, M. T., no. Yae-350).

Distrib. in the Ryukyus: Okinawa Isls., Sakishima Isls.

63. *Puccinia metanarthecii* Patouillard in Rev. Myc. (1886), p. 80, 1886. (Hiratsuka, f., Transact. Tottori Soc. Agric. Sci. IV, p. 35, 1932; Jour. Jap. Bot. XI, p. 40, 1935; Mem. Tottori Agric. Coll. III, p. 196, 1935; Uredinolog. Stud. p. 322, 1955; Ured. Kiushu. p. 72, 1952; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 55, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 213, fig. 269, 1950).

Hab. in the Ryukyus. II, III. on *Metanarthecium luteo-viride* Maxim. var. *nutans*

Masam. (*Yakushima-nogiran*). Yakushima Isl.: Hananoego—Mt. Miyanoura-dake (Aug. 1, 1954, S. Sa. & Y. H., nos. 1890 & 1891).

Distrib. in the Ryukyus: Satsunan Isls.

64. *Puccinia minussensis* Thümen in Bull. Soc. Imp. Nat. Moscou, LIII, p. 214, 1878. (Hiratsuka, f., Transact. Tottori Soc. Agric. Sci. II, p. 234, 1931; Bot. Mag. Tokyo. LIV, p. 165, 1940; LVI, p. 57, 1942; Transact. Sapporo Nat. Hist. Soc. XVI, p. 205, 1941; Ured. Formosa. p. 54, 1943; Ured. Kiushu. p. 73, 1952; Uredinolog. Stud. p. 322, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 34, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 12, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 33, 1955; no. 4, p. 163, 1957; S. Ito, Myc. Fl. Jap. II, no. 3, p. 329, fig. 426, 1950).

Syn. *Puccinia lactucicola* Miura ex P. et H. Sydow in Ann. Myc. XI, p. 96, 1913. (Sawada, Descript. Cat. Formosan Fung. IV, p. 59 & pl. II, figs. 2-24, 1928).

Hab. in the Ryukyus. O, I, II, III. on *Lactuca indica* L. (*Akino-nogeshi*). Kuroshima Isl. (July 29, 1956, S. S. & Y. N., no. Mishima-23). Amami-oshima Isl.: Mikatamura (Oct. 20, 1936, T. Tamotsu, no. 977); Koniya-machi (Jan. 7, 1955, Y. N., no. 1823). Okinawa Isl.: Mawashi (Naha-shi) (Jan. 22, 1940, H. f., no. 328; March 25, 1940, Y. T., no. 414); Oroku (Jan. 19, 1940, H. f., no. 127); Urasoe-mura (March 13, 1940, Y. T., nos. 391 & 392); Shuri (Naha-shi) (April 25, 1953, H. f., no. 976; Nov. 16, 1953, S. S., no. 1200); Goeku-mura (May 1, 1953, H. f. & S. S., no. 974); Takamine-mura (May 15, 1953, H. f. & S. S., no. 975). Iejima Isl. (May 23, 1954, S. S., no. Oki-1058). Iheya Isl. (June 9, 1956, S. S. & M. T., no. Oki-1158; March 27, 1957, M. T., no. Oki-1159). Minami-daito Isl. (July 31 & Aug. 5, 1958, M. T., nos. Oki-1380 & 1381). Kumejima Isl.: Nakazato-mura (Feb. 17, 1957, S. S. & M. T., no. Oki-1298). II. on *Lactuca indica* var. *dracoglossa* Kitamura (*Ryuzetsu-sai*) (*Cult.*). Okinawa Isl.: Mawashi (Naha-shi) (May 3, 1955, M. Nagayama, no. Oki-1035); Kitanakagusuku-mura (May 18, 1956, M. T., no. Oki-1356).

Distrib. in the Ryukyus: Tokara Isls., Amami Isls., Okinawa Isls.

65. *Puccinia miscanthi* Miura, Flora of Manchuria & E. Mongolia. III, p. 302 & pl. IV, fig. B, 1928. (Hiratsuka, f., Ured. Kiushu. p. 73, 1952; Uredinolog. Stud. p. 322, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 35, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 12, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyu Isls. no. 3, p. 14, 1956; no. 4, p. 163, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 55, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 46, 1958).

Syn. *Puccinia eulaliae* Auct. (S. Ito, Myc. Fl. Jap. II, no. 3, p. 162, fig. 195, 1950).

Hab. in the Ryukyus. II, III. on *Miscanthus sinensis* Anders. (*Susuki*). Tanegashima Isl.: Furuta (Aug. 13 & 14, 1957, S. S. & M. T., nos. Tane-76 & 80). Yakushima Isl.: Anbo (July 30, 1954, S. Sa. & Y. H., no. 1892; Aug. 1, 1957, S. S. & M. T., no. Yaku-136); Anbo—Haro (Aug. 6, 1957, S. S. & M. T., no. Yaku-107); Miyanoura (Aug. 9, 1957, S. S. & M. T., no. Yaku-179); Ishizuka—Hananoego (July 31, 1954, S. Sa. & Y. H., no. 1898); Kosugidani (Aug. 3, 1957, S. S. & M. T., no. Yaku-108). Takarashima Isl. (Dec. 22, 1955, Y. N., no. Tokara-249). Okinawa Isl.: Shuri (Naha-shi) (May 25, 1953, H. f. & S. S., no. 1123). Iheya Isl. (March 26, 1957, M. T., no. Oki-1160). Miyako Isl.: Shimochi-machi (Feb. 20, 1955, M. T., no. 2049); Taira-shi (Dec. 25, 1954, S. S., no. 2050). Ishigaki Isl. (Aug. 5, 1953, Y. N., no. 2107). II, III. on *Miscanthus sinensis* var. *condensatus* Mak. (*Hachijo-susuki*). Kuroshima Isl. (July 26, 1956, S. S. & Y. N., no. Mishima-30). Iwojima Isl. (Aug. 6, 1956, S. S., nos. Mishima-43 & 49). Takeshima Isl. (Aug. 6, 1956, Y. N., no. Mishima-63).

Nakanoshima Isl. (Aug. 2, 1955, S. S. & Y. N., no. Tokara-58). Suwanoseshima Isl. (Aug. 4, 1955, S. S. & Y. N., no. Tokara-97). Akusekishima Isl. (Aug. 6, 1955, S. S. & Y. N., no. Tokara-120). Amami-oshima Isl.: Shin-mura—Yuwan (Dec. 17, 1955, S. Sa., no. 4198). Kakeroma Isl.: Setake—Sukomo (Dec. 15, 1955, S. Sa., no. 4191). Okinawa Isl.: Mawashi (Naha-shi) (May 29, 1953, M. Nagayama, no. 857). Minami-daito Isl. (July 31, 1958, M. T., no. Oki-1382).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

66. *Puccinia miyoshiana* Dietel in Engl. Bot. Jahrb. XXVII, p. 569 & pl. VII, figs. 16 & 17, 1899. (Hiratsuka, f., Transact. Tottori Soc. Agric. Sci. IV, p. 37, 1932; Bot. May. Tokyo. XLIX, p. 148, 1935; LIV, p. 376, 1940; Transact. Sapporo Nat. Hist. Soc. XVI, p. 206, 1941; XVII, p. 29, 1941; Ured. Kiushu. p. 74, 1952; Uredinolog. Stud. p. 323, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 35, 1954; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 55, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 152, fig. 178, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 79, 1958).

Hab. in the Ryukyus. II, III. on *Bothriochloa parviflora* (R. Br.) Ohwi (*Andropogon micranthus* Kunth.) (*Hime-abura-susuki*). Okinawa Isl.: Haneji-mura (Jan. 13, 1940, H. f., no. 93); Urasoe-mura (March 13, 1940, Y. T., no. 395). II, III. on *Eccoilopus cotulifer* (Thunb.) A. Camus (*Abura-susuki*). Tanegashima Isl.: Nishinoomote-machi (Sept. 27, 1954, S. S., no. 1881). Okinawa Isl.: Nakijin-mura (June 18, 1953, H. f. & S. S., no. 1153); Mt. Katsuu-dake (April 17, 1940, Y. T., no. 464); Motobu-machi (May 29, 1953, H. f. & S. S., nos. 1090 & 1091); Mt. Taniu-dake (June 12, 1953, H. f. & S. S., nos. 1092 & 1093). Kumejima Isl.: Gushikawa-mura (Feb. 20, 1957, S. S. & M. T., no. Oki-1303).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls.

67. *Puccinia nakanishikii* Dietel in Engl. Bot. Jahrb. XXXIV, p. 585, 1905. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 705, 1935; Ured. Formosa. p. 56, 1943; Ured. Kiushu. p. 74, 1952; Uredinolog. Stud. p. 323, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 20, 1935; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; Sawada, Descript. Cat. Formosan Fung. VII, p. 49, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 141, fig. 162, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 52, 1958).

Syn. *Puccinia cymbopogonicola* Sawada in Jour. Taihoku Soc. Agric. & Forestr. VII, p. 23, 1943 (nom. nud.).

Hab. in the Ryukyus. II. on *Andropogon citratus* DC. (*Remon-grass*) (*Cult.*). Tanegashima Isl.: Nishinoomote-machi (Aug. 15, 1957, S. S. & Y. N., no. Tane-62). Yakushima Isl.: Kurio—Yudomari (Aug. 8, 1957, S. S. & M. T., no. Yaku-71). Takarashima Isl. (Aug. 11, 1955, S. S. & Y. N., no. 4161; Dec. 22, 1955, Y. N., no. 4160). II, III. on *Cymbopogon tortilis* Hitchc. var. *goeringii* (Steud.) Hand.-Mazz. (*Ogarukaya*). Yakushima Isl.: Kosugidani (S. K.). Okinawa Isl.: Mt. Katsuu-dake (Jan. 14, 1940, H. f., no. 225). Miyako Isl.: Karimata (Dec. 23, 1955, S. S., no. Miya-26). Iejima Isl. (May 23, 1954, S. S., no. Oki-1077).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Sakishima Isls.

68. *Puccinia nanbuana* Hennings in Hedwigia. XL, p. (26), 1901. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 278, 1935; Mem. Tottori Agric. Coll. III, p. 197, 1935; Transact. Sapporo Nat. Hist. Soc. XVII, p. 30, 1941; Ured. Formosa. p. 48, 1943; Ured. Kiushu. p. 74, 1952; Uredinolog. Stud. p. 324, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 35, 1954, Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 33, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2,

p. 55, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; Sawada, Jour. Taihoku Soc. Agric. & Forestr. VII, p. 36, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 275, fig. 355, 1950).

Hab. in the Ryukyus. II, III. on *Angelica kiusiana* Maxim. (*Oni-udo*). Amami-oshima Isl.: China-mura (March, 1935, T. Tamotsu, no. 1097). Okinawa Isl.: Mabuni-mura (March 2, 1940, Y. T., no. 371); Yonabaru-machi (June 6, 1953, H. f. & S. S., no. 864); Takamine-mura (May 15, 1953, H. f. & S. S., nos. 865, 866 & 867). II, III. on *Angelica shikokiana* Mak. (*Inu-toki*). Yakushima Isl.: Kosugidani (Aug. 8, 1951, K. Togashi & S. K., no. 1885; Sept. 8, 1954, S. S., no. 1886; Aug. 3, 1957, S. S. & M. T., no. Yaku-127); Kosugidani—Hananoego (June 2, 1951, Y. M., no. 1889).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls.

69. *Puccinia nishidana* Hennings in Hedwigia. XL, p. (26), 1901. (Hiratsuka, f., Ured. Kiushu. p. 75, 1952; Uredinolog. Stud. p. 324, 1955, Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 35, 1954; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 55, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 321, fig. 417, 1950).

Syn. *Puccinia cirsi-maritimi* Dietel in Ann. Myc. XX, p. 293, 1922. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. XVII, p. 25, 1941).

Hab. in the Ryukyus. II, III. on *Cirsium brevicaulis* A. Gray (*Shima-azami*). Okinawa Isl.: Takamine-mura (Jan. 21, 1940, H. f., nos. 190 & 191); Mawashi (Naha-shi) (Jan. 22, 1940, H. f., no. 339); Haneji-mura (Jan. 15, 1940, Y. T., no. 381); Kunigami-mura (April 13, 1940, Y. T., no. 445). II, III. on *Cirsium maritimum* Mak. (*Hama-azami*). Yakushima Isl.: Kurio (June 4, 1951, Y. M., no. 1940).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls.

70. *Puccinia oahuensis* Ellis et Everhart in Bull. Torrey Bot. Club. XXII, p. 425, 1895. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 1914; Hiratsuka, f., Ured. Formosa. p. 55, 1943; Ured. Kiushu. p. 75, 1952; Uredinolog. Stud. p. 325, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 20, 1935; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 36, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 13, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 55, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 63, 1928; S. Ito, Jour. Coll. Agric. Tohoku Imp. Univ. III, p. 222, 1909; Myc. Fl. Jap. II, no. 3, p. 176, fig. 212, 1950; T. Hiratsuka, f., Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 59, 1958).

Hab. in the Ryukyus. II, III. on *Digitaria chinensis* Hornem. (*Digitaria timorensis* Balansa) (*Ko-mehishiba*). Okinawa Isl.: Shuri (Naha-shi) (Jan. 10 & 11, 1940, H. f., nos. 15 & 54). Iheya Isl. (March 27, 1957, M. T., no. Oki-1247). II, III. on *Digitaria henryi* Rendle (*Henry-mehishiba*). Okinawa Isl.: Naha-shi (Jan. 18, 1940, H. f., no. 117); Chinen-mura (Jan. 20, 1940, H. f., no. 150); Onna-mura (Jan. 12, 1940, H. f., no. 63); Sashiki-mura (Jan. 20, 1940, H. f., no. 154); Mt. Katsuu-dake (April 17, 1940, Y. T., no. 466); Haneji-mura (Jan. 15, 1940, H. f., no. 287); Oroku (Jan. 19, 1940, H. f., no. 126). Kita-daito Isl. (Aug. 6, 1958, M. T., no. Oki-1407). Minami-daito Isl. (July 31, 1958, M. T., no. Oki-1383). Kumejima Isl.: Gushikawa-mura (Feb. 16, 1957, S. S. & M. T., no. Oki-1275). II, III. on *Digitaria violascens* Link. (*Digitaria ischaemum* Mühl. var. *asiatica* Ohwi) (*Aki-mehishiba*). Yakushima Isl.: Onoaida—Haro (Aug. 5, 1954, S. Sa. & Y. H., no. 2343). Okinawa Isl.: Kane-gusuku-mura (Jan. 21, 1940, H. f., nos. 304, 305 & 314); Onna-mura (Jan. 12, 1940, H. f., no. 81); Haneji-mura (Jan. 15, 1940, H. f., no. 266); Yagaji Isl. (Jan. 15, 1940, H. f., no. 269); Mt. Katsuu-dake (Jan. 14, 1940, H. f., no. 258); Oroku (Jan. 19, 1940, H. f., no. 122); Nishibaru-mura (March 13, 1940, Y. T., no. 387). Iheya

Isl. (Sept. 21, 1955, Y. N., no. Oki-1161; March 27, 1957, M. T., no. Oki-1162). Izena Isl. (Sept. 20, 1955, Y. N., no. Oki-1206). Minami-daito Isl. (Aug. 8, 1958, M. T., no. Oki-1384). Kumejima Isl.: Nakazato-mura (Feb. 17, 1957, S. S. & M. T., no. Oki-1297). Ishigaki Isl.: Ohama-machi (Aug. 6, 1954, M. T., no. 2306; Y-12). II. on *Digitaria adscendens* Henr. (*Mehishiba*). Kumejima Isl.: Gushikawa-mura (Feb. 15, 1957, S. S. & M. T., no. Oki-1323). Miyako Isl.: Karimata (March 26, 1956, S. S. & M. T., no. Miya-103). II, III. on *Digitaria* sp. Okinawa Isl.: Nago-machi (April 19, 1940, Y. T., no. 476).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls., Sakishima Isls.

71. *Puccinia oenanthes-stoloniferae* S. Ito ex Tranzschel, Conspect. Ured. URSS. p. 299, 1939. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. XXII, p. 30, 1941; Ured. Formosa. p. 48, 1943; Ured. Kiushu. p. 75, 1952; Uredinolog. Stud. p. 325; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 36, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 33, 1955; no. 3, p. 14, 1956; no. 4, p. 164, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 56, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 283, fig. 364, 1950).

Hab. in the Ryukyus. II, III. on *Oenanthe javanica* DC. (*Seri*). Tanegashima Isl.: Nishinoomote-machi (Aug. 15, 1957, S. S. & M. T., no. Tane-123). Yakushima Isl.: Miyanoura (Aug. 5, 1951, K. Togashi & S. K., no. 1942). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., nos. Mishima-8 & 26). Takarashima Isl. (Aug. 12, 1955, S. S. & Y. N., no. Tokara-140). Nakanoshima Isl. (Dec. 24, 1955, Y. N., no. Tokara-276). Amami-oshima Isl.: Uken-mura (Dec. 30, 1954, Y. N., no. 1807). Okinawa Isl.: Kanegusuku-mura (Jan. 21, 1940, H. f., no. 302); Naha-shi (Feb. 25, 1940, Y. T., no. 366); Takamine-mura (Jan. 21, 1940, H. f., no. 181); Shuri (Naha-shi) (March 13, 1940, Y. T., no. 393; April 25, 1953, H. f., no. 863; June 10, 1953, S. S., no. 862); Haneji-mura (April 8, 1940, Y. T., no. 427).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls.

72. *Puccinia ophiopogonis* Cummins in Ann. Myc. XXXV, p. 101, 1937. (Hiratsuka, f., Bot. Mag. Tokyo. LV, p. 271, 1941; Ured. Formosa. p. 64, 1943; Uredinolog. Stud. p. 325, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 36, 1954; S. Ito, Myc. Fl. Jap. II, no. 3, p. 220, 1950).

Syn. *Uredo ophiopogonis* P. et H. Sydow in Ann. Myc. I, p. 332, 1903. (Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. LI, p. 46, 1937; Sawada, Descript. Cat. Formosan Fung. VII, p. 66, 1942).

Hab. in the Ryukyus. II. on *Ophiopogon jaburan* Lodd. (*Noshiran*). Ryukyu Isl.: "Loochoo Isls." (O. Warburg. type!).

Distrib. in the Ryukyus: Okinawa Isls. (?)

73. *Puccinia paspalina* Cummins in Bull. Torrey Bot. Club. LXXII, p. 211 & fig. 10, 1945.

Syn. *Uredo paspalina* P. et H. Sydow in Ann. Myc. XV, p. 117, 1917. (Hiratsuka, f., Bot. Mag. Tokyo. LV, p. 272, 1941; Transact. Sapporo Nat. Hist. Soc. XVII, p. 34, 1941; Ured. Formosa. p. 74, 1943; Ured. Kiushu. p. 91, 1952; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 44, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 122, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 36, 1955; no. 3, p. 17, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 58, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 59, 1958; S. Ito, Myc. Fl. Jap. II, no. 3, p. 348, 1950).

Hab. in the Ryukyus. II, III. on *Paspalum scrobiculatum* L. var. *orbiculata* Hack. (*Suzume-no-kobie*). Yakushima Isl.: Kosugidani (Aug. 7, 1951, K. Togashi

& S. K., no. 1520). Takarashima Isl. (Dec. 22, 1955, Y. N., no. Tokara-56). Nakanoshima Isl. (Dec. 24, 1955, Y. N., no. Tokara-331). Amami-oshima Isl.: Kasarimura (Jan. 4, 1955, Y. M., no. 1877). Okinawa Isl.: Haneji-mura (April 8, 1940, Y. T., no. 425); Osato-mura (Jan. 20, 1940, H. f., no. 162). Minami-daito Isl. (July 31 & Aug. 8, 1958, M. T., nos. Oki-1393 & 1394). Kumejima Isl.: Gushikawamura (Feb. 16, 1957, S. S. & M. T., no. Oki-1346). Miyako Isl.: Gusukube-machi (Nov. 26, 1955, S. S., no. Miya-87). Yonaguni Isl. (Aug. 7, 1955, M. T., no. Yae-282).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

74. *Puccinia patriniae* Hennings in Engl. Bot. Jahrb. XXVIII, p. 261, 1900. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 40, 1935; Ured. Formosa. p. 51, 1943; Ured. Kiushu. p. 77, 1952; Uredinolog. Stud. p. 326, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 14, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 56, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 521, 1935; Sawada, Descript. Cat. Formosan Fung. V, p. 52, 1931; S. Ito, Myc. Fl. Jap. II, no. 3, p. 307, fig. 397, 1950).

Hab. in the Ryukyus. III. on *Patrinia villosa* Juss. (*Otokoheshi*). Yakushima Isl.: Kosugidani (June 1, 1951, Y. M., no. 1944; Aug. 2, 1957, S. S. & M. T., nos. Yaku-205 & 212). Miyanoura (Sept. 17, 1954, S. S., no. 1943; Aug. 9, 1957, S. S. & M. T., no. Yaku-178). Nakanoshima Isl. (July 31, 1955, S. S. & Y. N., no. Tokara-51; Dec. 24, 1955, Y. N., no. Tokara-301).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls.

75. *Puccinia phellopteri* P. et H. Sydow, Monogr. Ured. I, p. 406, 1903. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 705, 1934; Ured. Kiushu. p. 77, 1952; Uredinolog. Stud. p. 326; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 36, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 25, 1956; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 284, fig. 366, 1950).

Hab. in the Ryukyus. II, III. on *Glehnia littoralis* Fr. Schm. (*Phellopterus littoralis* Fr. Schm.) (*Hama-bofu*). Yakushima Isl. (S. K.). Takashima Isl. (Aug. 10, 1955, S. S. & Y. N., no. Tokara-189; Dec. 21, 1955, Y. N., no. Tokara-232). Okinawa Isl.: Higashi-mura (June 13, 1953, H. f. & S. S., no. 868). Kumejima Isl.: Gushikawa-mura (March 7, 1954, S. S., no. 1216). Iheya Isl. (June 9, 1956, S. S. & M. T., no. Oki-1163).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls.

76. *Puccinia philippinensis* P. et H. Sydow in Philippine Jour. Sci. VIII, no. 4, sect. C, Bot. p. 266, 1913. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 6, 1914; Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 165, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 30, 1941; Ured. Formosa. p. 61, 1943; Uredinolog. Stud. p. 326, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 37, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 13, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 15, 1956; Sawada, Descript. Cat. Formosan Fung. 1, p. 374, 1920; IX, p. 63, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 202, 1950).

Hab. in the Ryukyus. II, III. on *Cyperus rotundus* L. (*Hama-suge*). Okinawa Isl.: Takamine-mura (Jan. 21, 1940, H. f., no. 184); Ginowan-mura (Feb. 27, 1940, Y. T., no. 369); Shuri (Naha-shi) (Nov. 11, 1953, S. S., no. 1085). Minami-daito Isl. (July 30 & Aug. 5, 1958, M. T., nos. Oki-1385 & 1386). Kita-daito Isl. (Aug. 6, 1958, M. T., no. Oki-1408). Ishigaki Isl.: Ohara-machi (Aug. 10, 1954, M. T., no. 2310); Ishigaki-shi (June 25, 1954, S. S., no. 2300); Mt. Omoto-dake (Aug. 29, 1956,

M. T., no. Yae-416). II. on *Cyperus polystachyos* Rottb. (*Igagayatsuri*). Nakano-shima Isl. (Aug. 1, 1955, S. S. & Y. N., no. Tokara-20).

Distrib. in the Ryukyus: Tokara Isls., Okinawa Isls., Sakishima Isls.

77. *Puccinia phragmitis* (Schum.) Körnicke in Hedwigia. XV, p. 179, 1876. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 376, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 30, 1941; Ured. Kiushu. p. 77, 1952; Uredinolog. Stud. p. 326, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 37, 1954; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 64, 1958).

Syn. *Puccinia arundinacea* Hedwig, f. ex De Candolle, Encycl. Bot. VIII, p. 250, 1808. (S. Ito, Myc. Fl. Jap. II, no. 3, p. 169, fig. 203, 1950).

Hab. in the Ryukyus. II, III. on *Phragmites japonica* Steud. (*Tsuru-yoshi*). Okinawa Isl.: Tomigusuku-mura (Feb. 24, 1940, Y. T., no. 363).

Distrib. in the Ryukyus: Okinawa Isls.

78. *Puccinia phyllostachydis* Kusano in Bull. Coll. Agric. Tokyo Imp. Univ. VIII, p. 2 & pl. VI, figs. 1, 2, 10 & 11, 1908. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. XVII, p. 30, 1941; Ured. Kiushu. p. 77, 1952; Uredinolog. Stud. p. 326, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 37, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 13, 1955; no. 4, p. 118, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 33, 1955; no. 3, p. 15, 1956; S. Ito, Myc. Fl. Jap. II, no. 3, p. 127, fig. 149, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 53, 1958).

Hab. in the Ryukyus. II, III. on *Phyllostachys aurea* Carr. (*Hotei-chiku*) (*Cult.*). Takarashima Isl. (Aug. 8, 1955, S. S. & Y. N., no. Tokara-170). Amami-oshima Isl.: Tatsugo-mura (Dec. 28, 1953, Y. N., no. 1806). Okinawa Isl.: Shuri (Naha-shi) (Feb. 19, 1940, Y. T., no. 348); Naha-shi (Feb. 16, 1940, Y. T., no. 346); Urasoe-mura (Feb. 23, 1940, Y. T., no. 358); Takamine-mura (March 19, 1940, Y. T., no. 408). Iheya Isl. (March 26, 1957, M. T., no. Oki-1165). Minami-daito Isl. (July 30, 31 & Aug. 5, 1958, M. T., nos. Oki-1387, 1388 & 1389). Kita-daito Isl. (Aug. 6, 1958, M. T., no. Oki-1409). Kumejima Isl.: Gushikawa-mura (March 4, 1954, S. S., no. 1231; Feb. 16, 1957, S. S. & M. T., no. Oki-1277). Ishigaki Isl.: Mt. Banna (Jan. 18, 1954, S. S., no. 2052). Yonaguni Isl. (Aug. 5, 1955, M. T., no. Yae-273). II. on *Phyllostachys bambusoides* Sieb. et Zucc. (*Ma-dake*). Yakushima Isl.: Anbo (Aug. 1, 1957, S. S. & M. T., no. Yaku-67); Nagata (Aug. 11, 1957, S. S. & M. T., no. Yaku-80). Nakanoshima Isl. (Dec. 26, 1955, Y. N., no. Tokara-305). Iheya Isl. (Sept. 21, 1955, Y. N., no. Oki-1164). II. on *Bambusa multiplex* Raeusch. (*Horai-chiku*). Yakushima Isl.: Nagata (Aug. 11, 1957, S. S. & M. T., no. Yaku-83). Iheya Isl. (Sept. 21, 1955, Y. N., no. Oki-1164).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

79. *Puccinia pogonatheri* Petch in Ann. Bot. Gard. Peradeniya. V, p. 235, 1912. (Hiratsuka, f., Ured. Formosa. p. 56, 1943; Uredinolog. Stud. p. 327, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 21, 1935; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 37, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 118, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 33, 1955; Sawada, Descript. Cat. Formosan Fung. VII, p. 50, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 172, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus, no. 5, p. 53, 1958).

Hab. in the Ryukyus. II, III. on *Pogonatherum crinitum* Kunth. (*Itachi-gaya*). Yakushima Isl.: Anbo (Aug. 1, 1957, S. S. & M. T., no. Yaku-64). Amami-oshima Isl.: Mt. Yuwan-dake (Dec. 31, 1954, Y. M., no. 1805); Mikata-mura (Jan. 6, 1955, Y. N., no. 2025). Okinawa Isl.: Motobu-machi (May 29, 1953, H. f. & S. S., no.

859); Mt. Kushi-dake (June 5, 1953, H. f. & S. S., no. 860); Mt. Taniu-dake (June 12, 1953, H. f. & S. S., no. 861).

Distrib. in the Ryukyus: Satsunan Isls., Amami Isls., Okinawa Isls.

80. *Puccinia polliniicola* H. Sydow in Ann. Myc. XXIX, p. 156, 1931. (Hiratsuka, f., Ured. Kiushu. p. 78, 1952; Uredinolog. Stud. p. 327, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 37, 1954; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 56, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 15, 1956; Katsuki, Jour. Jap. Bot. XXX, p. 32, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 61, 1958).

Hab. in the Ryukyus. II, III. on *Microstegium vimineum* A. Camus (*Hime-ashiboso*). Yakushima Isl.: Miyanoura (Oct., 1949, S. K., no. 2344). Okinawa Isl.: Naha-shi (Feb. 25, 1940, Y. T., no. 1164). II. on *Microstegium vimineum* A. Camus var. *polystachyum* (Franch. et Sav.) Ohwi (*Ashiboso*). Nakanoshima Isl. (Aug. 3, 1955, S. S. & Y. N., no. Tokara-56). Izena Isl. (Sept. 20, 1955, Y. N., no. Oki-1215).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls.

81. *Puccinia polygoni-amphibii* Persoon, Sun. Meth. Fung. p. 227, 1801. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 40 & 711, 1935; XIV, p. 560, 1938; Bot. Mag. Tokyo. LIV, p. 376, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 31, 1941; Ured. Formosa. p. 45, 1943; Ured. Kiushu. p. 78, 1952; Uredinolog. Stud. p. 327, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLVIII, p. 235, 1934; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 38, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 33, 1955; no. 3, p. 15, 1956; no. 4, p. 164, 1957; Sawada, Descript. Cat. Formosan Fung. VII, p. 50, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 231, fig. 292, 1950).

Syn. *Puccinia polygoni-morrisonensis* Sawada in Jour. Taihoku Soc. Agric. & Forestr. VII, p. 36, 1943 (nom. nud.).

Hab. in the Ryukyus. II, III. on *Polygonum cuspidatum* Sieb. et Zucc. (*Reynoutria japonica* Houtt.) (*Itadori*). Iwojima Isl. (Aug. 9, 1956, S. S. & Y. N., no. Mishima-53). Suwanoseshima Isl. (Aug. 4, 1955, S. S. & Y. N., no. Tokara-107). Amami-oshima Isl.: Tatsugo-mura (Dec. 17, 1953, Y. N., no. 1189); Yamato-mura (Jan. 1, 1955, Y. M., no. 1795); Mikata-mura (Jan. 6, 1955, Y. N., no. 1796); Nase-shi (Dec. 28, 1954, Y. M., no. 1797); Uken-mura (Oct. 5, 1935, T. Tamotsu, no. 1128; Dec. 30, 1954, Y. N., no. 1799); Mt. Yuwan-dake (Dec. 30, 1954, Y. M., no. 1798); Koniya-machi (Oct. 5, 1954, S. K., no. 1800); Sumiyo-mura (Sept. 22, 1954, Y. N., no. 1801); Chinzei-mura (Sept. 22, 1954, Y. N., no. 1802). II, III. on *Polygonum multiflorum* Thunb. (*Tsuru-dokudami*). Okinawa Isl.: Naha-shi (March 24 & May 21, 1940, Y. T.). II. on *Polygonum senticosum* (Meins.) Franch. et Sav. (*Mamakono-shirinugui*). Yakushima Isl.: Kosugidani (Aug. 2, 1957, S. S. & M. T., no. Yaku-85). II, III. on *Polygonum thunbergii* Sieb. et Zucc. (*Persicaria thunbergii* Gross.) (*Mizo-soba*). Yakushima Isl.: Kosugidani—Anbo (Aug. 2, 1954, S. Sa. & Y. H., no. 1959; Aug. 2, 1954, S. Sa. & Y. H., no. 1958). II, III. on *Tovara filiformis* Nakai (*Mizuhiki*). Yakushima Isl.: Kosugidani (Sept. 8, 1954, S. S., no. 1960; Aug. 3, 1957, S. S. & M. T., no. Yaku-202).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls.

82. *Puccinia purpurea* Cooke in Grevillea, V, p. 15, 1876. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 6, 1914; Hiratsuka, f., Bot. Mag. LV, p. 271, 1941; Ured. Formosa. p. 58, 1943; Ured. Kiushu. p. 79, 1952; Uredinolog. Stud. p. 329, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLVIII, p. 235, 1934; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 38, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 13, 1955; Hiratsuka, f., Shimabukuro & Niuro,

Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 15, 1956; Sawada, Descript. Cat. Formosan Fung. IV, p. 64, 1928; S. Ito, Myc. Fl. Jap. II, no. 2, p. 140, fig. 161, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 57, 1958).

Hab. in the Ryukyus. II, III. on *Andropogon citratus* DC. (*Remon-grass*) (*Cult.*). Takarashima Isl. (Aug. 11, 1955, S. S. & Y. N., no. Tokara-156; Dec. 22, 1955; Y. N., no. Tokara-246). II, III. on *Sorghum bicolor* Moench. (*Morokoshi*) (*Cult.*). Nakanoshima Isl. (Aug. 3, 1955, S. S. & Y. N., no. Tokara-33). Takarashima Isl. (Dec. 21, 1955, Y. N., no. Tokara-239). Ishigaki Isl.: Ohama-machi (Feb. 28, 1955, S. S., no. 2047). II, III. on *Sorghum propinquum* Hitchc. (*Sorghum halepense* Pers. var. *muticus* Honda) (*Hime-morokoshi*, *Seiban-morokoshi*). Okinawa Isl.: Shuri (Naha-shi) (May 19 & 20, 1953, H. f., nos. 903, 904 & 905); Nago-machi (May 3, 1957, Eiko Tamaki, Oki-1041). Minami-daito Isl. (Aug. 5, 1958, M. T., no. Oki-1390). II, III. on *Sorghum vulgare* var. *sudanense* Hitch. (*Sudan grass*) (*Cult.*). Okinawa Isl.: Mawashi (Naha-shi) (May 23, 1953, H. f. & S. S., nos. 907 & 908).

Distrib. in the Ryukyus: Tokara Isls., Okinawa Isls., Sakishima Isls.

83. *Puccinia pusilla* P. et H. Sydow apud Sydow & Butler in Ann. Myc. IV, p. 435, 1906. (Hiratsuka, f., Uredinolog. Stud. p. 329, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 38, 1954; Hiratsuka, f. Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 56, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 51, 1958).

Hab in the Ryukyus. II, III. on *Bothriochloa parviflora* Ohwi (*Andropogon micranthus* Kunth.) (*Hime-aburasusuki*). Yakushima Isl.: Funayuki (Oct. 17, 1949, S. K., no. 1945). Okinawa Isl.: Mt. Katsuu-dake (Jan. 14, 1940, H. f., no. 241). Iheya Isl. (June 8, 1956, S. S. & M. T., no. Oki-1167; March 25, 1957, M. T., no. Oki-1190). Kumejima Isl.: Gushikawa (Feb. 16, 1957, S. S. & M. T., no. Oki-1290). Ishigaki Isl.: Kabira (Aug. 11, 1955, M. T., no. Yae-312). Yonaguni Isl. (Aug. 4, 1955, M. T., no. Yae-274).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls., Sakishima Isls.

84. *Puccinia recondita* Roberge ex Desmazières in Bull. Soc. Bot. France. IV, p. 798, 1857; Cummins & Caldwell, Phytopath. XLVI, p. 81, 1956; T. Hiratsuka, Sci. Bull. Facul. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 70, 1958).

Syn. *Puccinia agropyri* Ellis et Everhart in Jour. Myc. VII, p. 131, 1892. (Hiratsuka, f., Bot. Mag. Tokyo. XLVII, p. 712, 1933; Ured. Kiushu, p. 54, 1952; Uredinolog. Stud. p. 300, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 24, 1954; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 51, 1955; S. Ito, Jour. Coll. Agric. Tohoku Imp. Univ. III, p. 238, 1909; Myc. Fl. Jap. II, no. 3, p. 136, fig. 156, 1950). *Puccinia rubigo-vera* Winter, Rabenh. Krypt.-Fl. I, p. 217, 1881. (Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. XVII, p. 31, 1941; Bot. Mag. Tokyo, LVI, p. 58, 1942). *Puccinia triticina* Eriksson in Ann. Sci. Nat. (VIII), IX, p. 270, 1899. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 7, 1914; Hiratsuka, f., Transact. Tottori Soc. Agric. Sci. II, p. 242, 1931; V, p. 232, 1935; Ured. Formosa. p. 55, 1943; Ured. Kiushu, p. 83, 1952; Uredinolog. Stud. p. 335, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLVIII, p. 235, 1934; Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 121, 1957; Sawada, Descript. Cat. Formosan Fung. IV, p. 68, 1928; IX, p. 74, 1943; S. Ito, Jour. Coll. Agric. Tohoku Imp. Univ. III, p. 198, 1909; Myc. Fl. Jap. II, no. 3, p. 131, fig. 152, 1950). *Puccinia agrostidis* Plowright in Gard. Chron. (III), VIII, p. 139, 1890. (Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 11, 1956; S. Ito, Jour. Coll. Agric.

Tohoku Imp. Univ. III, p. 235, 1909; Myc. Fl. Jap. II, no. 3, p. 139, 1950).

Hab. in the Ryukyus. II, III. on *Agropyron tsukushiense* (Honda) Ohwi var. *transiens* (Hack.) Ohwi (*Kamoji-gusa*). Tanegashima Isl.: Nishinoomote-machi (Aug. 15, 1957, S. S. & M. T., no. Tane-116). Yakushima Isl.: Kosugidani—Anbo (Aug. 2, 1954, S. Sa. & Y. H., no. 1545). Okinawa Isl.: Shuri (March 12, 1940, Y. T., no. 385; May 20, 1953, H. f., no. 1132); Mawashi (Naha) (May 3, 1953, H. f., nos. 1129-31 & 1135). II, III. on *Triticum aestivum* L. (*Komugi*) (*Cult.*). Okinawa Isl.: Naha-shi (May 7, 1954, S. S., nos. Oki-1020 & 1021); Goeku-mura (May 1, 1953, S. S., no. Oki-1024). Miyako Isl.: Taira-shi (March 22 & 26, 1956, S. S. & M. T., nos. Miya-89, 111 & 152). Ishigaki Isl.: Ohama-machi (March 1, 1955, M. T., no. Yae-335); Ishigaki-shi (Feb. 23, 1955, M. T., no. 337). II. on *Agrostis matsunurae* Hack. (*Nukabo*). Nakanoshima Isl. (July 31, 1955, S. S. & Y. N., no. T-9).

Distrib. in the Ryukyus: Tokara Isls., Satsunan Isls., Okinawa Isls., Sakshima Isls.

85. *Puccinia rufipes* Dietel in Engl. Bot. Jahrb. XXXII, p. 48, 1902. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 6, 1914; Hiratsuka, f., Jour. Jap. Bot. XI, p. 40 & 278, 1935; Ured. Formosa. p. 58, 1943; Ured. Kiushu. p. 80, 1952; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 161, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 38, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 13, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 34, 1955; no. 3, p. 15, 1956; no. 4, p. 164, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 56, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 18, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 65, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 157, fig. 188, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 49, 1958).

Hab. in the Ryukyus. II, III on *Imperata cylindrica* Beauv. var. *koenigii* Durand et Schinz (*Chigaya*). Tanegashima Isl.: Minamitane-mura (Sept. 23, 1954, S. S., no. 1951); Nishinoomote-machi (Aug. 13, 1957, S. S. & M. T., no. Tane-75). Yakushima Isl.: Anbo—Onoaida (Aug. 3, 1954, S. Sa. & Y. H., no. 1950); Anbo—Haro (Aug. 6, 1957, S. S. & M. T., no. Yaku-146). Takeshima Isl. (Aug. 7, 1956, Y. M., no. Mishima-44). Iwojima Isl. (Aug. 8, 1956, S. S., no. Mishima-74). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., no. Mishima-84). Nakanoshima Isl. (Aug. 1, 1955, S. S. & Y. N., no. Tokara-14; Dec. 25, 1955, Y. N., no. Tokara-295). Suwanoseshima Isl. (Aug. 4, 1955, Y. N., no. Tokara-98). Takarashima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-166). Amami-oshima Isl.: Kasari-mura (Dec., 1953, Y. N., no. 1803). Okinawa Isl.: Shuri (Naha-shi) (Jan. 11, 1940, H. f., no. 36; May 2, 1953, H. f., no. 855); Naha-shi (Jan. 11, 1940, H. f., no. 50); Onna-mura (Jan. 12, 1940, H. f., no. 60); Haneji-mura (Jan. 15, 1940, H. f., no. 282); Mt. Kushi-dake (June 5, 1953, H. f. & S. S., no. 854); Motobu-machi (May 29, 1953, H. f. & S. S., no. 853). Iheya Isl. (Sept. 21, 1955, Y. N., no. Oki-1168; March 27, 1957, M. T., no. Oki-1169). Kita-daito Isl. (Aug. 6, 1958, M. T., no. Oki-1410). Ishigaki Isl.: Ohama-machi (Feb. 27, 1955, S. S., no. 2046). Yonaguni Isl. (Aug. 5, 1955, M. T., no. Yae-285).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakshima Isls.

86. *Puccinia schedonnardi* Kellerman et Swingle in Jour. Myc. IV, p. 95, 1888. (Hiratsuka, f. Uredinolog. Stud. p. 331, 1955).

Hab. in the Ryukyus. II. on *Muhlenbergia japonica* Steud. (*Nezumi-gaya*). Tanegashima Isl.: Nishinoomote-machi (Aug. 13, 1957, S. S. & M. T., no. Tane-138).

Distrib. in the Ryukyus: Satsunan Isls.

87. *Puccinia scirpi-ternatani* Hiratsuka, f. in Transact. Sapporo Nat. Hist. Soc.

XVII, p. 31, 1941. (Hiratsuka, f., Uredinolog. Stud. p. 331, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 38, 1954; Hiratsuka, f., Shimabukuro & Niiro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 34, 1955).

Hab. in the Ryukyus. II, III. on *Scirpus ternatanus* Reinwardt (*O-aburagaya*). Amami-oshima Isl.: Tatsugo-mura (Dec. 28, 1953, Y. N., no. 1183); Mt. Yuwan-dake (Jan. 1, 1954, Y. N., no. 1804). Okinawa Isl.: Mt. Benoki-yama (April 11, 1940, Y. T., no. 441, type!). II. on *Scleria levis* Retz. (*Shinju-gaya*). Iriomote Isl.: Komi (Aug. 15, 1955, M. T., no. Yae-449).

Distrib. in the Ryukyus: Amami Isls., Okinawa Isls., Sakishima Isls.

88. *Puccinia scleriae* (Paz.) Arthur in Mycologia. IX, p. 75, 1917. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 165, 1940; IV, p. 271, 1941; Ured. Formosa. p. 62, 1943; Uredinolog. Stud. p. 331, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 39, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 13, 1955; Hiratsuka, f., Shimabukuro & Niiro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 34, 1955; no. 3, p. 15, 1956; no. 4, p. 164, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 56, 1955).

Syn. *Rostrupia scleriae* Pазschke in Hedwigia. XXXI, p. 96, 1892. (S. Ito, Myc. Fl. Jap. II, no. 3, p. 346, fig. 453, 1950).

Hab. in the Ryukyus. II, III. on *Scleria doederleiniana* Böckl. (*O-shinjugaya*). Yakushima Isl.: Ononaida—Haro (Aug. 5, 1954, S. S. & Y. H., nos. 1947 & 1948); Anbo—Haro (Aug. 6, 1957, S. S. & M. T., no. Yaku-157). Kuroshima Isl. (July 27, 1956, S. S. & Y. N., no. Mishima-38). Akusekishima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-124). Takarashima Isl. (Dec. 22, 1955, Y. N., no. Tokara-228). Amami-oshima Isl.: Kasari-mura (Dec. 24, 1953, Y. N., no. 1177); Mikata-mura (Jan. 6, 1954, Y. N., no. 1788); Santaro-toge (Jan. 6, 1955, Y. M., no. 1789); Uken-mura (Dec. 30, 1954, Y. N., no. 1790); Sumiyo-mura (Sept. 24, 1954, Y. N., no. 1791). Tokunoshima Isl.: Amagi-mura (Sept. 14, 1954, Y. N., no. 1792); Isen-mura (Sept. 16, 1954, Y. N., no. 1793). Okinawa Isl.: Shuri (Naha-shi) (Jan. 11, 1940, H. f., no. 48; March 25, 1940, Y. T., no. 419); Mt. Katsuu-dake (Jan. 14, 1940, H. f., nos. 245 & 246); Mt. Benokiyama (April 11, 1940, Y. T., no. 442); Mt. Kushi-dake (June 5, 1953, H. f. & S. S., no. 1151). Kumejima Isl.: Gushikawa-mura (March 4, 1954, S. S., no. 1213; Feb. 16, 1957, S. S. & M. T., no. Oki-1274). Ishigaki Isl.: Mt. Omoto (Aug. 7 & 17, 1954, M. T., nos. 2043 & 2044; Aug. 29, 1956, M. T., no. Yae-429); "Ishigakishima Isl." (Aug. 6, 1953, Y. N., no. 2112).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

89. *Puccinia smilacis-sieboldii* Hiratsuka, f. in Bot. Mag. Tokyo. LVI, p. 377, 1942. (Hiratsuka, f., Ured. Kiushu. p. 81, 1952; Uredinolog. Stud. p. 332, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 39, 1954; Hiratsuka, f., Shimabukuro & Niiro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 34, 1955; no. 3, p. 16, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 57, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 221, fig. 280, 1950).

Hab. in the Ryukyus. II, III. on *Smilax china* L. (*Sarutori-ibara*). Yakushima Isl. (K. Ide). Takarashima Isl. (Dec. 22, 1955, Y. N., no. Tokara-255). Nakano-shima Isl. (Dec. 24, 1955, Y. N., no. Tokara-31). Suwanoseshima Isl. (Aug. 4, 1955, S. S. & Y. N., no. Tokara-108). Amami-oshima Isl.: Nase-shi (Oct., 1936, T. Tamotsu, no. 1034). Kumejima Isl.: Nakazato-mura (March 4, 1954, S. S., no. 1218). Iheya Isl. (March 27, 1957, M. T., no. Oki-1171). II. on *Smilax china* var. *kuru* Sakaguchi (*Okinawa-sarutori-ibara*). Iheya Isl. (March 27, 1957, M. T., no.

Oki-1357). II, III. on *Smilax nervo-marginata* Hayata (*Sasaba-sankirai*). Okinawa Isl.: Mt. Onna-dake (Jan. 12, 1940, H. f., no. 717). Kumejima Isl.: Gushikawa-mura (March 4, 1954, S. S., no. 1218).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls.

90. *Puccinia sorghi* Schweinitz in Transact. Amer. Phil. Soc. (n.s.), IV, p. 295, 1831. (Hiratsuka, f., Ured. Formosa. p. 58, 1943; Ured. Kiushu. p. 81, 1952; Uredinolog. Stud. p. 333, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 39, 1954; S. Ito, Myc. Fl. Jap. II, no. 3, p. 177, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 61, 1958).

Hab. in the Ryukyus. II. on *Zea mays* L. (*Tomorokoshi*) (*Cult.*). Okinawa Isl.: Mawashi (Naha-shi) (April, 1940, Y. T., no. 461).

Distrib. in the Ryukyus: Okinawa Isls.

91. *Puccinia stauntoniae* Tranzschel et Dietel apud Dietel in Ann. Myc. XXVIII, p. 274, 1930. (Hiratsuka, f., Jour. Jap. Bot. XII, p. 674, 1936; XIV, p. 560, 1938; Bot. Mag. Tokyo. LV, p. 270, 1941; Ured. Formosa. p. 46, 1943; Ured. Kiushu. p. 81, 1952; Uredinolog. Stud. p. 333, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 39, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 34, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 253, fig. 323, 1950).

Hab. in the Ryukyus. III. on *Stauntonia hexaphylla* Decne. (*Mube, Tokiwa-akebi*). Amami-oshima Isl.: Mt. Yuwan-dake (Dec. 31, 1954, Y. M., no. 1760). Okinawa Isl.: Mt. Taniu-dake (June 12, 1953, H. f. & S. S., no. 877).

Distrib. in the Ryukyus: Amami Isls., Okinawa Isls.

92. *Puccinia taiwaniana* Hiratsuka, f. et Hashioka in Transact. Tottori Soc. Agric. Sci. VI, p. 240, 1935. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 376, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 32, pl. II, fig. 6, 1941; Ured. Formosa. p. 59, 1943; Uredinolog. Stud. p. 333, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 39, pl. II, fig. 6, 1954; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 81, 1958; Sawada, Descript. Cat. Formosan Fung. VII, p. 51, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 165, 1950).

Hab. in the Ryukyus. II, III. on *Panicum patens* L. (*Hime-chigozasa*). Okinawa Isl.: Haneji-mura (Jan. 13, 1940, H. f., nos. 94 & 95).

Distrib. in the Ryukyus: Okinawa Isls.

93. *Puccinia tanacetii* de Candolle, Fl. Fr. II, p. 222, 1805.

Syn. *Puccinia absinthii* de Candolle, Fl. Fr. VI, p. 56, 1815. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 375, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 25, 1941; Ured. Kiushu. p. 54, 1952; Uredinolog. Stud. p. 299, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 24, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 11, 1956; S. Ito, Myc. Fl. Jap. II, no. 3, p. 311, fig. 405, 1950).

Hab. in the Ryukyus. II, III. on *Artemisia dubia* Wall. (*Yomogi*). Tanegashima Isl.: Nishinomote-machi (Aug. 13, 1957, S. S. & M. T., no. Tane-65). Takarashima Isl. (Dec. 22, 1955, Y. N., no. Tokara-230). Nakanoshima Isl. (Dec. 25, 1955, Y. N., no. Tokara-303). Okinawa Isl.: Haneji-mura (April 8, 1940, Y. T., no. 424); Shuri (Naha-shi) (May 4, 1953, H. f., no. 978); Chinen-mura (Jan. 20, 1940, H. f., no. 144); Mawashi (Naha-shi) (May 3, 1953, H. f. & S. S., no. 979). Miyako Isl.: Shimochimachi (March 27, 1956, S. S. & M. T., no. Miya-121). II, III. on *Artemisia japonica* Thunb. (*Otoko-yomogi*). Okinawa Isl.: Haneji-mura (Jan. 15, 1940, H. f., no. 279).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

94. *Puccinia thaliae* Dietel in Hedwigia. XXXVIII, p. 250, 1899.

Hab. in the Ryukyus. II. on *Canna indica* L. (*Dandoku*). Iriomote Isl.: Komi (Aug. 14, 1955, M. T., no. Yae-365).

Distrib. in the Ryukyus: Sakishima Isls.

95. *Puccinia tokyensis* P. et H. Sydow, Monogr. Ured. I, p. 377, 1902. (Hiratsuka, f., Jour. Jap. Bot. XI, p. 40, 1935; Transact. Sapporo Nat. Hist. Soc. XVII, p. 32, 1941; Ured. Kiushu. p. 82, 1952; Uredinolog. Stud. p. 334, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 39, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 118, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 34, 1955; no. 4, p. 164, 1957; S. Ito, Myc. Fl. Jap. II, no. 3, p. 281, fig. 362, 1950).

Hab. in the Ryukyus. II, III. on *Cryptotaenia japonica* Hassk. (*Mitsuba*). Yakushima Isl.: Yoshida-Nagata (Aug. 10, 1957, S. S. & M. T., no. Yaku-53). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., nos. Mishima-16 & 92; July 28, 1956, S. S. & Y. N., no. Mishima-25). Amami-oshima Isl.: Santaro-toge (Jan. 6, 1955, Y. M., no. 1759). Okinawa Isl.: Tamashiro-mura (Aug. 23, 1937, Y. T., no. 1067).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls.

96. *Puccinia variiformis* Patouillard in Jour. d. Bot. (1890), p. 57, pl. I, fig. 4, 1890. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 7, 1914; Hiratsuka, f., Ured. Formosa. p. 48, 1943; Ured. Kiushu. p. 83, 1952; Uredinolog. Stud. p. 336, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 159, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 40, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 35, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 57, 1956; Katsuki, Jour. Jap. Bot. XXX, p. 18, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 292, fig. 374, 1950).

Hab. in the Ryukyus. III. on *Hoya carnosa* R. Br. (*Sakura-ran*). Tanegashima Isl.: Furuta (Aug. 14, 1957, S. S. & M. T., no. Tane-126). Yakushima Isl.: Haro (June 5, 1951, Y. M., no. 1946); Nagata (Aug. 11, 1957, S. S. & M. T., no. Yaku-103). Takarashima Isl. (Aug. 8, 1955, S. S. & Y. N., no. Tokara-251). Amami-oshima Isl.: Nase-shi (Nov., 1935, T. Tamotsu, no. 1124); Tatsugo-mura (Dec. 28, 1953, Y. N., no. 1190); Santaro-toge (Dec. 29, 1954, Y. M., no. 1756). Iheya Isl. (Aug. 18, 1958, H. Arakaki, no. Oki-1242).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls.

97. *Puccinia versicolor* Dietel et Holway apud Holway in Bot. Gaz. XXIV, p. 28, 1897. (Hiratsuka, f., Uredinoolg. Stud. p. 336, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 40, 1954; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 76, 1958).

Syn. *Puccinia filipoda* Cummins in Ann. Myc. XXXV, p. 98 & text-fig. 7, 1937. (Hiratsuka, f. in Bot. Mag. Tokyo. LIV, p. 375, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 27, 1941; Ured. Formosa. p. 55, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 156, fig. 184, 1950). *Puccinia themedae* Hiratsuka, f. in Bot. Mag. Tokyo. LVI, p. 379, 1942.

Hab. in the Ryukyus. II, III. on *Heteropogon contortus* Beauv. (*Andropogon contortus* L.) (*Akahige-gaya*). Okinawa Isl.: Urasoe-mura (March 13, 1940, Y. T., nos. 388 & 389).

Distrib. in the Ryukyus: Okinawa Isls.

98. *Puccinia violae* De Candolle, Fl. Fr. VI, p. 62, 1815. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 7, 1914; Hiratsuka, f., Bot. Mag. Tokyo. LV, p. 270, 1941; Ured. Formosa. p. 47, 1943; Ured. Kiushu. p. 83, 1952; Uredinolog. Stud. p. 336, 1955; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 159,

1933; V, p. 243, 1935; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 16, 1956; Katsuki, Jour. Jap. Bot. XXX, p. 18, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 70, 1928; IX, p. 75, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 266, fig. 343, 1950).

Hab. in the Ryukyus. II, III. on *Viola coreana* H. Boiss. (*Ko-tachitsubosumire*). Nakanoshima Isl. (July 31, 1955, S. S. & Y. N., no. Tokara-54; Dec. 25, 1955, Y. N., no. Tokara-297; April 17, 1935, T. Naito). II, III. on *Viola mandshurica* W. Becher (*Sumire*). Yakushima Isl. (S. K.).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls.

99. *Puccinia wattiana* Barclay in Jour. Asiatic. Soc. Bengal. LIX, pt. 2, p. 109, 1890. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 165, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 32, pl. II, fig. 4, 1941; Ured. Formosa. p. 46, 1943; Ured. Kiushu. p. 83, 1952; Uredinolog. Stud. p. 337, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 40, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 35, 1955; no. 3, p. 16, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 57, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 250, fig. 317, 1950).

Hab. in the Ryukyus. III. on *Clematis meyeniana* Walp. (*Yanbaru-senninso*). Tanegashima Isl.: Minamitane-mura (Sept. 23, 1954, S. S., no. 1955). Nakanoshima Isl. (Aug. 1, 1955, S. S. & Y. N., no. Tokara-17; Dec. 24, 1955, Y. N., no. Tokara-317). Amami-oshima Isl.: Kasari-mura (Dec. 24, 1953, Y. N., no. 1173; Jan. 4, 1955, Y. M., no. 1762); Santaro-toge (Dec. 29, 1954 & Jan. 6, 1955, Y. M., nos. 1763 & 1766); Mt. Yuwan-dake (Dec. 31, 1954, Y. M., no. 1767); Tatsugo-mura (Aug. 26, 1954, Y. N., no. 2026); Chinzei-mura (Dec. 22, 1936, T. Tamotsu, no. 1066). Tokunoshima Isl.: Amagi-mura (Sept. 14, 1954, Y. M., no. 2027). Iheya Isl. (June 9, 1956, S. S. & M. T., no. Oki-1431; Sept. 21, 1955, Y. N., no. Oki-1171). Kumejima Isl.: Gushikawa-mura (March 4, 1954, S. S., no. 1227). III. on *Clematis tashiroi* Maxim. (*Yaeyama-senninso*). Okinawa Isl.: Yabu-mura (May 9, 1953, H. f. & S. S., nos. 986, 987 & 988); Motobu-machi (April 15, 1940, Y. T., no. 455); Mt. Taniu-dake (June 12, 1953, H. f. & S. S., no. 1025); Higashi-mura (June 13, 1953, H. f. & S. S., no. 989); Nago-machi (Jan. 13, 1940, H. f., no. 293). Kumejima Isl.: Gushikawa-mura (Feb. 19, 1957, S. S. & M. T., no. Oki-1280); Nakazato-mura (Feb. 17, 1957, S. S. & M. T., no. Oki-1302).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls.

100. *Puccinia zoysiae* Dietel in Engl. Bot. Jahrb. XXXII, p. 48, 1902. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 7, 1914; Hiratsuka, f., Transact. Sapporo Nat. Hist. Soc. XVII, p. 32, p. 1941; Ured. Formosa. p. 59, 1943; Ured. Kiushu. p. 83, 1952; Uredinolog. Stud. p. 338, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 40, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 13, 1955; Hiratsuka, f. Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 35, 1955; no. 3, p. 16, 1956; no. 4, p. 164, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 57, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 18, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 71, 1928; IX, p. 77, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 178, fig. 214, 1950; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 74, 1958).

Syn. *Aecidium paederiae* Dietel in Hedwigia. XXXVI, p. 297, 1897. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 12, 1941; Hiratsuka, f., Jour. Jap. Bot. XI, p. 43 & 284, 1935; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLVIII, p. 240, 1934; Sawada, Descript. Cat. Formosan Fung. I, p. 388, 1919).

Hab. in the Ryukyus. O, I. on *Paederia scandens* (Lour.) Merr. var. *mairei* Hara

(*Hekuso-kazura*, *Yaitobana*). Tanegashima Isl.: Nishinoomote-machi (Aug. 13, 1957, S. S. & M. T., no. Tane-82). Yakushima Isl.: Isso (Aug. 5, 1951, K. Togashi & S. K., no. 1954). Anbo—Haro (Aug. 6, 1957, S. S. & M. T., no. Yaku-115). Takeshima Isl. (Aug. 6, 1956, Y. N., no. Mishima-77). Akusekishima Isl. (Aug. 6, 1955, S. S. & Y. N., no. Tokara-131). Takarashima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-211). Nakanoshima Isl. (Dec. 24, 1955, Y. N., no. Tokara-286). Amami-oshima Isl.: Kasari-mura (Jan. 5, 1955, Y. M., no. 2028); Mikata-mura (Oct. 4, 1954, S. K., no. 1754). Kikaishima Isl.: Kikai-machi (Oct. 8, 1954, S. K., no. 1755). Okinawa Isl.: Shuri (Naha-shi) (Jan. 10, 1940, H. f., nos. 19, 21 & 22); Motobu-machi (May 29, 1953, H. f. & S. S., no. 1071); Mt. Taniu-dake (June 12, 1953, H. f. & S. S., no. 1072); Haneji-mura (Jan. 15, 1940, H. f., nos. 265 & 274a); Kanegusukumura (Jan. 21, 1940, H. f., no. 315); Takamine-mura (May 15, 1953, H. f. & S. S., nos. 1069 1070). Izena Isl. (Sept. 20, 1955, Y. N., no. Oki-1198). Kita-daito Isl. (Aug. 6, 1958, M. T., no. Oki-1411). Kumejima Isl.: Gushikawa-mura (Feb. 16, 1957, S. S. & M. T., no. Oki-1321); Nakazato-mura (Feb. 17, 1957, S. S. & M. T., no. Oki-1318). Miyako Isl.: Shimochi-mura (Aug. 2, 1953, S. S., no. 1073); Ueno-mura (Aug. 3, 1953, S. S., no. 2110). Ishigaki Isl. (Aug. 6, 1953, Y. N., no. 2109). Senkaku-retto (Aug. 2, 1953, Y. N., no. 2111). II, III. on *Zoisia macrostachya* Franch. et Sav. (*Oni-shiba*). Okinawa Isl.: Kunigami-mura (April 13, 1940, Y. T., no. 444; May 29, 1953, H. f. & S. S., no. 1015). II, III. on *Zoisia sinica* Hance. (*Nagami-no-onishiba*). Okinawa Isl.: Onna-mura (Jan. 12, 1940, H. f., no. 59); Yontan-mura (Yontanzan-mura) (March 7, 1940, Y. T., no. 383). II, III. on *Zoisia sinica* var. *sinica* Ohwi (*Zoisia liukuensis* Honda) (*Ko-onishiba*). Okinawa Isl.: Shuri (Naha-sh) (Jan. 11, 1940, H. f., nos. 53 & 56); Yagaji Isl. (Jan. 15, 1940, H. f., no. 272). II, III. on *Zoisia tenuifolia* Trin. (*Korai-shiba*). Okinawa Isl.: Sashiki-mura (Jan. 20, 1940, H. f., nos. 153 & 155); Osato-mura (Jan. 20, 1940, H. f., no. 161); Nishibaru-mura (Jan. 20, 1940, H. f., no. 172); Naha-shi (Jan. 19, 1940, H. f., nos. 131 & 135); Nakijin-mura (June 19, 1953, H. f. & S. S., no. 1016). Izena Isl. (Sept. 19, 1955, S. S., no. Oki-1212). Minami-daito Isl. (Aug. 1, 1958, M. T., no. Oki-391). Kita-daito Isl. (Aug. 6, 1958, M. T., no. Oki-1412). Ishigaki Isl.: Ohama-machi (Feb. 21, 1955, M. T., no. Yae-386).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

Xenostele H. Sydow, 1920

1. *Xenostele liteae* (Pat.) H. Sydow in Ann. Myc. XVIII, p. 178, 1920. (Hiratsuka, f., Bot. Mag. Tokyo. LVI, p. 375, 1942; Ured. Kiushu. p. 42, 1952; Uredinolog. Stud. p. 338, 1955; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 18, 1954; S. Ito, Myc. Fl. Jap. II, no. 3, p. 343, fig. 449, 1950).

Syn. *Aecidium litseae* Patouillard in Bull. Herb. Boiss. no. 1, p. 302, 1893.

Hab. in the Ryukyus. III. on *Cinnamomum japonicum* Sieb. (*Yabu-nikkei*). Okinawa Isl.: Mt. Taniu-dake (June 12, 1953, H. f. & S. S., no. 948). III. on *Neolitsea sericea* Koidz. (*Shiro-damo*). Iheya Isl. (March 27, 1957, M. T., no. Oki-1173).

Distrib. in the Ryukyus: Okinawa Isls.

2. *Xenostele sakamotoi* (Hirats. f. et Yoshinaga) S. Ito et Murayama in Transact. Sapporo Nat. Hist. Soc. XVII, p. 170, 1943. (Hiratsuka, f., Ured. Kiushu. p. 42, 1952; Uredinolog. Stud. p. 339, 1955; Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 120, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 49, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 31, 1955; Morimoto, Jour. Jap. Bot. XXVIII, p. 26,

1953).

Hab. in the Ryukyus. III. on *Distylium racemosum* Sieb. et Zucc. (*Isu*). Yaku-shima Isl.: Anbo—Kosugidani (June 1, 1951, Y. M., no. 2331). Okinawa Isl.: Kuni-gami-mura (Feb. 10, 1956, S. S., no. Oki-1008). Iheya Isl. (March 27, 1957, M. T., no. Oki-1174).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls.

Uredinales Imperfecti

Uredo Persoon, 1861

1. *Uredo alocasiae* P. et H. Sydow, Monogr. Ured. IV, p. 521, 1924. (Hiratsuka, f., Jour. Jap. Bot. XIV, p. 38, 1938; Bot. Mag. Tokyo. LVI, p. 377, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 33, 1941; Ured. Formosa. p. 70, 1943; Ured. Kiushu. p. 90, 1952; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. LI, p. 46, 1937; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 43, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 15, 1955; no. 4, p. 119, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 36, 1955; no. 3, p. 17, 1956; no. 4, p. 164, 1957; Sawada, Descript. Cat. Formosan Fung. VII, p. 64, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 350, 1950).

Hab. in the Ryukyus. II. on *Alocasia macrorhiza* Schott. (*Kuwazu-imo*). Yakushima Isl.: Nagata (Aug. 11, 1957, S. S. & M. T., no. Yaku-56). Kuroshima Isl. (July 28, 1956, S. S. & Y. N., no. Mishima-24). Nakanoshima Isl. (Aug. 2, 1955, S. S. & Y. N., no. Tokara-2; Dec. 25, 1955, Y. N., no. Tokara-304). Akusekishima Isl. (Aug. 6, 1955, S. S. & Y. N., no. Tokara-117). Amami-oshima Isl.: Mt. Yuwandake (Jan. 1, 1955, Y. N., no. 1785). Okinawa Isl.: Shuri (Naha-shi) (Jan. 10, 1940, H. f., nos. 2 & 4); Naha-shi (Jan. 22, 1940, H. f., nos. 325 & 326). Ishigaki Isl.: Ohama-machi (Feb. 22, 1955, S. S., no. 2064).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

2. *Uredo bromi-pauciflorae* S. Ito in Jour. Coll. Agric. Tohoku Imp. Univ. III, p. 246 & pl. XII, fig. 13, 1909. (S. Ito, Myc. Fl. Jap. II, no. 3, p. 348, 1950).

Hab. in the Ryukyus. II. on *Bromus remotiflorus* Ohwi (*Kitsune-gaya*). Tanegashima Isl.: Nishinootemachi (Aug. 13, 1957, S. S. & M. T., no. Tane-140). Yakushima Isl.: Onoaida—Kurio (Aug. 7, 1957, S. S. & M. T., no. Yaku-191).

Distrib. in the Ryukyus: Satsunan Isls.

3. *Uredo cryptogrammes* (Diet.) Hiratsuka, f. in Transact. Myc. Soc. Japan. no. 5, p. 3, 1957. (Hiratsuka, f., Rev. Taxon. Pucciniastr. p. 60, 1958).

Syn. *Hyalopsora cryptogrammes* Dietel in Ann. Myc. VII, p. 356, 1909. *Milesina cryptogrammes* Hiratsuka, f. in Jour. Jap. Bot. XI, p. 42, 1935. (Hiratsuka, f., Monogr. Pucciniastr. p. 152, 1936; Ured. Formosa. p. 4, 1943; Melampsorac. Nippon. p. 153, 1944; Ured. Kiushu. p. 6, 1952; Uredinolog. Stud. p. 250, 1955; S. Ito, Myc. Fl. Jap. II, no. 2, p. 35, 1938).

Hab. in the Ryukyus. II. on *Onychium japonicum* Kunze (*Tachi-shinobu*). Tanegashima Isl.: Nishinootemachi (Aug. 13, 1957, S. S. & Y. N., no. Tane-51). Yakushima Isl.: Kosugidani (Aug. 2, 1954, S. Sa. & Y. H., no. 1334). Okinawa Isl.: Mt. Katsuu-dake (April 17, 1940, Y. T., no. 1223).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls.

4. *Uredo desmodii-pulchelli* P. Sydow in Oesterr. Bot. Zeits. LII, p. 184, 1902. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 11, 1914; Hiratsuka, f., Ured. Formosa. p. 71, 1943; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 24, 1935; Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus.

no. 4, p. 122, 1957; Sawada, Descript. Cat. Formosan Fung. IV, p. 81, 1928; IX, p. 138, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 353, 1950).

Hab. in the Ryukyus. II. on *Desmodium caudatum* DC. (*Miso-naoshi*). Ishigaki Isl.: Mt. Omoto (Aug. 29, 1956, M. T., no. Yae-320).

Distrib. in the Ryukyus: Sakishima Isls.

5. *Uredo dianellae* Dietel in Hedwigia. XXXVII, p. 213, 1898. (Hiratsuka, f., Ured. Formosa. p. 71, 1943; Ured. Kiushu. p. 90, 1952; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 44, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 15, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 36, 1955; no. 3, p. 17, 1956; no. 4, p. 164, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus no. 2, p. 58, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 18, 1955; Morimoto, Jour. Jap. Bot. XXVIII, p. 27, 1953; Sawada, Descript. Cat. Formosan Fung. IX, p. 139, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 350, 1950).

Hab. in the Ryukyus. II. on *Dianella ensifolia* DC. (*Kikyo-ran*). Yakushima Isl.: Kurio (June 4, 1951, Y. M., no. 1503); Onoaida—Kojima (Aug. 3, 1954, S. Sa. & Y. H., no. 1499); Kurio—Okawa (Aug. 4, 1954, S. Sa. & Y. H., nos. 1500 & 1502); Onoaida—Haro (Aug. 5, 1954, S. Sa. & Y. H., no. 1501); Kurio—Yudomari (Aug. 8, 1957, S. S. & M. T., no. Yaku-172). Takeshima Isl. (Aug. 7, 1956, Y. N., no. Mishima-54). Nakanoshima Isl. (Aug. 3, 1955, S. S. & Y. N., no. Tokara-38). Suwanoseshima Isl. (Aug. 4, 1955, S. S. & Y. N., no. Tokara-106). Takarashima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-182). Amami-oshima Isl.: Mt. Yuwan-dake (Dec. 31, 1954, Y. M., no. 1750; Jan. 1, 1955, Y. N., no. 1787); Tatsugo-mura (Dec. 28, 1953 & Aug. 25, 1954, Y. N., nos. 1751 & 1752); Santaro-toge (Dec. 29, 1954, Y. M., no. 1753). Okinawa Isl.: Mt. Yonaha-dake (May 30, 1953, H. f. & S. S., no. 972); Mt. Taniu-dake (June 12, 1953, H. f. & S. S., nos. 969 & 971); Higashi-mura (June 13, 1953, H. f. & S. S., no. 970). Ishigaki Isl.: Ohama-machi (Aug. 10, 1954, M. T., no. 2063).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

6. *Uredo diplazii* (Hiratsuka, f.) Hiratsuka, f. in Transact. Myc. Soc. Japan. no. 5, p. 2, 1957 (Hiratsuka, f., Rev. Taxon. Pucciniestr. p. 58, 1958).

Syn. *Milesina diplazii* Hiratsuka, f. in Bot. Mag. Tokyo. XLVIII, p. 44, fig. 5, 1934. (Hiratsuka, f., Monogr. Pucciniestr. p. 147, 1936; Melamporac. Nippon. p. 152, 1944; Ured. Kiushu. p. 6, 1952; Uredinolog. Stud. p. 250, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 40, 1935; S. Ito, Myc. Fl. Jap. II, no. 2, p. 26, 1938).

Hab. in the Ryukyus. II. on *Athyrium hachijoense* (Nakai) Ohwi (*Diplazium siroyamense* Tagawa) (*Shiroyama-shida*). Yakushima Isl.: Haro (June 5, 1951, Y. M., no. 1899).

Distrib. in the Ryukyus: Satsunan Isls.

7. *Uredo ehretiae* Barclay in Jour. Asiatic Soc. Bengal. LX, pt. 2, p. 228, 1890. (Hiratsuka, f., Ured. Formosa. p. 72, 1943; Sawada, Descript. Cat. Formosan Fung. IV, 82, pl. III, figs. 1-3, 1928; S. Ito, Myc. Fl. II, no. 3, p. 356, 1950).

Hab. in the Ryukyus. II. on *Ehretia dicksoni* Hance. (*Haruba-ehishanoki*). Kumejima Isl.: Gushikawa-mura (March 7, 1954, S. S., no. 1223). Miyako Isl.: Taira-shi (March 22 & 25, 1956, S. S. & M. T., nos. Miya-96 & 97). Iriomote Isl.: Komi (Aug. 17, 1955, M. T., no. Yae-379).

Distrib. in the Ryukyus: Okinawa Isls., Sakishima Isls.

8. *Uredo fagarae* P. et H. Sydow in Ann. Myc. XII, p. 111, 1914. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 11, 1914; Hiratsuka, f. & Hashioka, Bot.

Mag. Tokyo. LI, p. 46, 1937; Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 15, 1955; Sawada, Descript. Cat. Formosan Fung. I, p. 392, 1919, VIII, p. 53, 1943; Transact. Nat. Hist. Soc. Formosa. XXXIII, p. 6, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 354, 1950).

Hab. in the Ryukyus. II. on *Fagara nitida* Roxb. (*Teriha-zansho*, *Kume-zansho*). Ishigaki Isl.: Mt. Banna (Feb. 20, 1955, S. S., no. 2065).

Distrib. in the Ryukyus: Sakishima Isls.

9. *Uredo guettardae* Hiratsuka, f. et Hashioka in Bot. Mag. Tokyo. XLIX, p. 523, 1935. (Hiratsuka, f., Ured. Formosa. p. 72, 1943; Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 15, 1955; Sawada, Descript. Cat. Formosan Fung. VII, p. 65, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 357, 1950).

Hab. in the Ryukyus. II. on *Guettarda speciosa* L. (*Hateruma-giri*). Ishigaki Isl.: Ishigaki-shi (March 2, 1955, M. T., no. 2062).

Distrib. in the Ryukyus: Sakishima Isls.

10. *Uredo horikawai* Y. Morimoto in Jour. Jap. Bot. XXVIII, p. 316, 1953. (Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 58, 1955).

Hab. in the Ryukyus. II. on *Diospyros morrisiana* Hance. (*Diospyros nipponica* Nakai) (Tokiwa-gaki). Yakushima Isl.: Haro (Y. M., type!).

Distrib. in the Ryukyus: Satsunan Isls.

11. *Uredo iyoensis* Hiratsuka, f. et Yoshinaga in Mem. Tottori Agric. Coll. III, p. 334, 1935. (Hiratsuka, f., Jour. Jap. Bot. XIV, p. 561, 1938; Bot. Mag. Tokyo. LVI, p. 59, 1942; Ured. Formosa. p. 73, 1943; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 164, 1957; S. Ito, Myc. Fl. Jap. II, no. 3, p. 355, 1950).

Syn. *Uredo violae-senzanensis* Sawada in Jour. Taihoku Soc. Agric. & Forestr. VII, p. 43, 1943 (nom. nud.).

Hab. in the Ryukyus. II. on *Viola grypoceras* A. Gray (*Tachi-tsubosumire*). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., no. Mishima-97).

Distrib. in the Ryukyus: Tokara Isls.

12. *Uredo lasianthi* H. Sydow apud Sydow & Petrak in Ann. Myc. XXIX, p. 182, 1931. (Hiratsuka, f., Jour. Bot. XI, p. 333, 1935; Ured. Formosa. p. 73, 1943; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 523, 1935; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 44, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 36, 1955; Sawada, Descript. Cat. Formosan Fung. VII, p. 66, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 357, 1950).

Hab. in the Ryukyus. II. on *Mephitidia plaginophylla* Nakai (*Maruba-rurimino-ki*). Amami-oshima Isl.: Tatsugo-mura (Dec. 28, 1953, Y. N., no. 1207); Sumiyo-mura (Dec. 29, 1954, Y. N., no. 1784).

Distrib. in the Ryukyus: Amami Isls.

13. *Uredo leucaenae-glaucae* Hiratsuka, f. et Hashioka in Transact. Tottori Soc. Agric. Sci. V, p. 242, 1935. (Hiratsuka, f., Ured. Formosa. p. 74, 1943; Sawada, Descript. Cat. Formosan Fung. VII, p. 66, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 353, 1950).

Hab. in the Ryukyus. II. on *Acacia farnesiana* Willd. (*Kin-gokan*) (*Cult.*). Ishigaki Isl. (Aug. 11, 1955, M. T., Yae-459).

Distrib. in the Ryukyus: Sakishima Isls.

14. *Uredo moricola* Hennings in Hedwigia. XLI, p. 140, 1902. (Fujikuro, Bot. Mag. Tokyo. XXVIII, p. (482), 1914; Ured. Formosa. p. 73, 1943; Sawada, Descript. Cat. Formosan Fung. I, p. 396, pl. X, figs. 15-17, 1919; S. Ito, Myc. Fl. Jap. II, no. 3,

p. 351, 1950).

Hab. in the Ryukyus. II. on *Morus australis* Poir. (*Shima-guwa*). Takeshima Isl. (Aug. 7, 1956, Y. N., no. Mishima-72).

Distrib. in the Ryukyus: Tokara Isls.

15. *Uredo morifolia* Sawada ex S. Ito & Murayama in Transact. Sapporo Nat. Hist. Soc. XVII, p. 171, 1943. (S. Ito, Myc. Fl. Jap. II, no. 3, p. 351, 1950).

Syn. *Uredo morifolia* Sawada in Descript. Cat. Formosan Fung. I, p. 393, pl. X, figs. 18-20, 1919 (nom. nud.).

Hab. in the Ryukyus. II. on *Morus australis* Poir. (*Shima-guwa*). Yakushima Isl.: Nagata (Aug. 11, 1957, S. S. & M. T., no. Yaku-51). Iwojima Isl. (Tokara Isls.) (Aug. 8, 1956, S. S., no. Mishima-73). Ishigaki Isl.: Yonehara (Aug. 11, 1955, M. T., no. Yae-313); Mt. Omoto-dake (Aug. 29, 1956, M. T., no. Yae-322).

Distrib. in the Ryukyus: Tokara Isls., Sakishima Isls.

16. *Uredo panici-plicati* Sawada ex S. Ito & Murayama in Transact. Sapporo Nat. Hist. Soc. XVII, p. 170, 1943. (Hiratsuka, f., Ured. Formosa. p. 74, 1943; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 44, 1954; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 58, 1955; T. Hiratsuka, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 5, p. 85, 1958; S. Ito, Myc. Fl. Jap. II, no. 3, p. 348, 1950).

Syn. *Ured panici-plicati* Sawada in Jour. Taihoku Soc. Agric. & Forestr. VII, p. 42, 1943 (nom. nud.).

Hab. in the Ryukyus. II. on *Setaria palmifolia* Stapf (*Panicum plicatum* Willd.) (*Sasa-kibi*). Yakushima Isl.: Onoaida (Aug. 3, 1954, S. Sa. & Y. H., nos. 1496, 1497 & 1498). Okinawa Isl.: Mt. Katsuu-dake (Jan. 14, 1940, H. f., no. 231).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls.

17. *Uredo pipturi* (H. Sydow) Hiratsuka, f. in Transact. Myc. Soc. Japan. no. 5, p. 4, 1957; Rev. Taxonom. Pucciniastr. p. 119, 1958.

Syn. *Pucciniastrum pipturi* H. Sydow ex H. Sydow & Petrak in Ann. Myc. XXIX, p. 171, 1931; Hiratsuka, f., Monogr. Pucciniastr. p. 278, 1936.

Hab. in the Ryukyus. II. on *Pipturus arborescens* C. B. Clarke (*O-iwagane*). Ishigaki Isl.: Ishigaki-shi (Aug. 11, 1955, M. T., no. Yae-371); Ohama-machi (Aug. 15, 1958, M. T., no. Yae-370). Iriomote Isl.: Komi (Aug. 14, 1955, M. T., no. Yae-373).

Distrib. in the Ryukyus: Sakishima Isls.

18. *Uredo polygalaecola* Hiratsuka, f. in Bot. Mag. Tokyo. LVI, p. 379, 1942. (Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 17, 1956; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 59, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 354, 1950).

Hab. in the Ryukyus. II. on *Polygala japonica* Houtt. (*Hime-hagi*). Yakushima Isl.: Kosugidani (Aug. 2, 1957, S. S. & M. T., no. Yaku-129). Takarashima Isl. (Aug. 8, 1955, S. S. & Y. N., no. Tokara-155).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls.

19. *Uredo polypodii-superficialis* (Hiratsuka, f.) Hiratsuka, f. in Transact. Myc. Soc. Japan. no. 5, p. 2, 1957. (Hiratsuka, f., Rev. Taxonom. Pucciniastr. p. 57, 1958).

Syn. *Milesina polypodii-superficialis* Hiratsuka, f., Monogr. Pucciniastr. p. 154, 1936. (Hiratsuka, f., Ured. Formosa. p. 6, 1943; Melampsorac. Nippon. p. 151, 1944; Uredinolog. Stud. p. 252, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 41, 1955; Morimoto, Jour. Jap. Bot. XXVIII, p. 25, 1953; Sawada, Descript. Cat. Formosan Fung. VII, p. 59, 1942; S. Ito, Myc. Fl. Jap. II, no. 2, p. 34, 1938).

Hab. in the Ryukyus. II. on *Colysis pothifolia* Presl. (*Polypodium ellipticum* Thunb. var. *pothifolium* Mak.) (*O-iwahitode*). Yakushima Isl.: Onoaida (June 4, 1951, Y. M., nos. 1912 & 1913).

Distrib. in the Ryukyus: Satsunan Isls.

20. *Uredo psychotricola* Hennings in Hedwigia. XXIV, p. 321, 1895. (Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 44, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 15, 1955).

Hab. in the Ryukyus. II. on *Psychotria liukiensis* Hatsusima (*Ryukyu-aoki*). Okinawa Isl.: Kunigami-mura (Aug. 10, 1958, S. S., no. Oki-1250). Iheya Isl. (June 8, 1956, S. S. & M. T., no. Oki-1249). Kumejima Isl.: Gushikawa-mura (March 4, 1954, S. S., no. 1211). Iriomote Isl.: Mt. Sonai (June 23, 1954, S. S., no. 2061).

Distrib. in the Ryukyus: Okinawa Isls., Sakishima Isls.

21. *Uredo sawadae* S. Ito et Otani ex S. Ito & Murayama in Transact. Sapporo Nat. Hist. Soc. XVII, p. 171, 1943. (Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 119, 1957; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 37, 1955; S. Ito, Myc. Fl. Jap. II, no. 2, p. 352, 1950).

Syn. *Uredo sawadae* S. Ito et Otani in Bot. & Zool. IX, p. 662, 1941 (nom. nud.). (Hiratsuka, f., Ured. Formosa. p. 75, 1943).

Hab. in the Ryukyus. II. on *Ficus carica* L. (*Ichijiku*) (*Cult.*). Tanegashima Isl.: Nishinoomote-machi (Aug. 15, 1957, S. S. & N. Y., no. Tane-56). Yakushima Isl.: Onoaida—Kurio (Aug. 7, 1957, S. S. & M. T., no. Yaku-69). Amami-oshima Isl.: Nase-shi (Oct. 3, 1954, S. K., no. 1786). Okinawa Isl.: Motobu-machi (Nov. 27, 1955, M. T., no. Oki-1261). Minami-daito Isl. (Aug. 3 & 7, 1958, M. T., no. 1396).

II. on *Ficus wightiana* Wall. (*Ako*). Minami-daito Isl. (Aug. 4, 1958, M. T., no. Oki-1397).

Distrib. in the Ryukyus: Satsunan Isls., Amami Isls., Okinawa Isls.

22. *Uredo sinensis* Trotter in Saccardo, Syll. Fung. XXIII, p. 942, 1925. (Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 15, 1955).

Syn. *Physopella sinensis* P. et H. Sydow in Ann. Myc. XVII, p. 140, 1919.

Hab. in the Ryukyus. II. on *Cudrania cochinchinensis* Kudo et Masam. var. *gerontogea* Kudo et Masam. (*Kakatsugaya*). Ishigaki Isl.: Ohama-machi (March 1, 1955, M. T., no. 2060).

Distrib. in the Ryukyus: Sakishima Isls.

23. *Uredo stachyuri* Dietel in Engl. Bot. Jahrb. XXXVII, p. 108, 1905. (Hiratsuka, f., Rev. Taxon. Pucciniastr. p. 117, 1958).

Syn. *Pucciniastrum stachyuri* Hiratsuka, f. et Yoshinaga in Mem. Tottori Agric. Coll. III, p. 262, 1935. (Hiratsuka, f., Monogr. Pucciniastr. p. 280, 1936; Melampsorac. Nippon. p. 178, 1944; Uredinolog. Stud. p. 258, 1955; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 42, 1955; S. Ito, Myc. Fl. Jap. II, no. 2, p. 93, 1938).

Hab. in the Ryukyus. II. on *Stachyurus matsuzakii* Nakai (*Hachijo-kibushi*, *Nanban-kibushi*). Yakushima Isl.: Kosugidani (Sept. 7, 1954, S. S., no. 1949); Miya-noura (Aug. 9, 1957, S. S. & M. T., no. Yaku-110). Amami-oshima Isl.: Mt. Yuwan-dake (Dec. 31, 1954, Y. M., no. Y. M.-4).

Distrib. in the Ryukyus: Satsunan Isls., Amami Isls.

24. *Uredo tenuis* (Faull) Hiratsuka, f. in Transact. Myc. Soc. Japan. no. 5, p. 3, 1957. (Hiratsuka, f., Rev. Taxon. Pucciniastr. p. 59, 1958).

Syn. *Milesina philippinensis* H. Sydow ex H. Sydow & Petrak in Ann. Myc. XXIX,

p. 172, 1931. (Hiratsuka, f., Monogr. Pucciniastr. p. 150, 1936; Melampsorac. Nippon. p. 152, 1944; Ured. Kiushu. p. 8, 1952; Uredinolog. Stud. p. 252, 1955; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 523, 1935; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 7, 1954; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 41, 1955; Sawada, Descript. Cat. Formosan Fung. VII, p. 59, 1942; S. Ito, Myc. Fl. Jap. II, no. 2, p. 35, fig. 25, 1938 (non *Uredo philippinensis* P. et H. Sydow, 1906). *Milesia tenuis* Faull in Contrib. Arnold Arboretum, Harvard Univ. II, p. 74, 1932.

Hab. in the Ryukyus. II. on *Nephrolepis auriculata* (L.) Trimen (*Tama-shida*). Yakushima Isl.: Haro (June 4, 1951, Y. M., no. 2326). Okinawa Isl.: Shuri (Naha-shi) (April 29, 1953, H. f., no. 1045).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls.

25. *Uredo yakushimensis* Y. Morimoto in Jour. Jap. Bot. XXVIII, p. 27, 1953. (Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 59, 1955).

Hab. in the Ryukyus. II. on *Psychotria serpens* L. (*Shiratama-kazura*). Yakushima Isl.: Haro (June 4, 1951, Y. M., no. 1519, type!); Kosugidani (Aug. 2, 1957, S. S. & M. T., no. Yaku-125).

Distrib. in the Ryukyus: Satsunan Isls.

Aecidium Persoon, 1801

1. *Aecidium araliae* Sawada ex S. Ito & Murayama in Transact. Sapporo Nat. Hist. Soc. XVII, p. 171, 1943. (S. Ito, Myc. Fl. Jap. II, no. 3, p. 374, 1950).

Syn. *Aecidium araliae* Sawada in Transact. Nat. Hist. Soc. Formosa. XXXIII, p. 97, 1943 (nom. nud.). (Hiratsuka, f., Ured. Formosa p. 65, 1943; Sawada, Descript. Cat. Formosan Fung. IX, p. 119, 1943).

Hab. in the Ryukyus. O, I. on *Schefflera octophylla* Harms. (*Fukanoki*). Yakushima Isl. (S. K.).

Distrib. in the Ryukyus: Satsunan Isls.

2. *Aecidium clerodendri* Hennings in Engl. Bot. Jahrb. XV, p. 6, pl. I, fig. 7, 1892. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 12, 1914; Hiratsuka, f., Ured. Formosa. p. 66, 1943; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLIX, p. 25, 1935; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 41, 1954; Hiratsuka, f., Shimabukuro & Niiro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 35, 1955; no. 3, p. 16, 1956; no. 4, p. 164, 1957; Sawada, Descript. Cat. Formosan Fung. I, p. 386, 1919; S. Ito, Myc. Fl. Jap. II, no. 3, p. 378, 1950).

Hab. in the Ryukyus. O, I. on *Clerodendron trichotomum* Thunb. (*Kusagi*). Takeshima Isl. (Aug. 7, 1956, Y. N., no. Mishima-59). Suwanoseshima Isl. (Aug. 4, 1955, S. S. & Y. N., no. Tokara-96). Takarashima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-212; Dec. 22, 1955, Y. N., no. Tokara-247). Amami-oshima Isl.: Kasarimura (Dec. 24, 1953, Y. N., no. 1171).

Distrib. in the Ryukyus: Tokara Isls., Amami Isls.

3. *Aecidium elaeagni* Dietel in Hedwigia. XXXVII, p. 212, 1898. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 12, 1914; Hiratsuka, f., Ured. Formosa. p. 66, 1943; Ured. Kiushu. p. 65, 1952; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. LI, p. 45, 1937; Hiratsuka, f. & Shimabukuro, Ured. Ryukyus. p. 42, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 4, p. 122, 1957; Hiratsuka, f., Shimabukuro & Niiro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 16, 1956; no. 4, p. 164, 1957; Sawada, Descript. Cat. Formosan Fung. IV, p. 76, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 372, 1950).

Hab. in the Ryukyus. O, I. on *Elaeagnus glabra* Thunb. (*Tsuru-gumi*). Tane-

gahsima Isl.: Nishinoomote-machi (Aug. 13, 1957, S. S. & Y. N., no. Tane-55; Aug. 14, 1957, S. S. & Y. N., no. Tane-61). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., no. Mishima-10). Okinawa Isl.: Shuri (Naha-shi) (May 2, 1953, H. f., nos. 1080 & 1081); Motobu-machi (May 29, 1953, H. f. & S. S., no. 1082). Iheya Isl. (Sept. 21, 1955, Y. N., no. Oki-1175; June 9, 1956, S. S. & M. T., no. Oki-1178). Izena Isl. (Sept. 19, 1955, Y. N., no. Oki-1202). Kumejima Isl.: Gushikawa-mura (Feb. 19, 1957, S. S. & M. T., no. Oki-1295). Yonaguni Isl.: Mt. Urabu (Aug. 7, 1955, M. T., no. Yae-269; Aug. 4, 1955, M. T., no. Yae-278). O, I. on *Elaeagnus thunbergii* Serb. (*Taiwan-akigumi*). Takarashima Isl. (Aug. 8, 1955, S. S. & Y. N., no. Tokara-174). O, I. on *Elaeagnus macrophylla* Thunb. (*Maruba-gumi*). Takeshima Isl. (Aug. 6, 1956, Y. N., no. Mishima-101). Miyako Isl.: Gusukube-machi (March 23, 1956, S. S. & M. T., no. Miyako-123). O, I. on *Elaeagnus maritima* Koidz. (*Akaba-gumi*). Yakushima Isl. (S. K.).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

4. *Aecidium elaeagni-umbellatae* Dietel in Engl. Bot. Jahrb. XXXVII, p. 107, 1905. (Hiratsuka, f., Jour. Jap. Bot. XIV, p. 563, 1938; Ured. Formosa. p. 66, 1943; Ured. Kiushu. p. 86, 1952; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 42, 1954; S. Ito, Myc. Fl. Jap. II, no. 3, p. 372, 1950).

Hab. in the Ryukyus. O, I. on *Elaeagnus* sp. Okinawa Isl.: Mt. Kushi-dake (June 5, 1953, H. f. & S. S., no. 1084).

Distrib. in the Ryukyus: Okinawa Isls.

5. *Aecidium foetidum* Dietel in Engl. Bot. Jahrb. XXVIII, p. 289, 1901. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 12, 1914; Hiratsuka, f., Jour. Jap. Bot. XI, p. 709, 1935; Ured. Formosa. p. 67, 1943; Ured. Kiushu. p. 86, 1952; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. XLVIII, p. 240, 1934; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 42, 1954; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 35, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 77, 1928; V, p. 54, 1931; S. Ito, Myc. Fl. Jap. II, no. 3, p. 379, 1950).

Hab. in the Ryukyus. O, I. on *Mazus miquelii* Mak. var. *stolonifer* Nakai f. *violascens* Nakai (*Sagigoke*). Amami-oshima Isl.: Nase-shi (Feb., 1935, T. Tamotsu, no. 1236).

Distrib. in the Ryukyus: Amami Isls.

6. *Aecidium formosanum* P. et H. Sydow in Ann. Myc. XI, p. 56, 1913. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 12, 1914; Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 166, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 33, 1941; Ured. Formosa. p. 67, 1943; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. LI, p. 45, 1937; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 42, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 14, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 36, 1955; Sawada, Descript. Cat. Formosan Fung. IV, p. 77, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 382, 1950).

Hab. in the Ryukyus. O, I. on *Emilia sonchifolia* DC. (*Usubeni-nigana*). Amami-oshima Isl.: Uken-mura (Dec. 30, 1954, Y. M., no. 1782); Tatsugo-mura (Dec. 27, 1953 & Aug. 25, 1954, Y. N., nos. 1176 & 1781). Tokunoshima Isl.: Isen-mura (Sept. 16, 1954, Y. N., no. 1780). Okinawa Isl.: Naha-shi (Jan. 11, 1940, H. f., no. 31); Shuri (Naha-shi) (Jan. 11, 1940, H. f., no. 39); Mawashi (Naha-shi) (Jan. 22, 1940, H. f., no. 334; Sept. 10, 1951, M. Nagayama, no. 856); Kanegusuku-mura (Jan. 21, 1940, H. f., no. 199); Nishibaru-mura (Jan. 20, 1940, H. f., no. 176); Mt. Katsuu-dake (Jan. 14, 1940, H. f., no. 248); Nago-machi (Jan. 16, 1940, H. f., no. 300). Iheya Isl. (Sept. 22, 1955, Y. N., no. Oki-1177). Minami-daito Isl. (July 31, 1958, M. T., no. Oki-1392). Kita-daito Isl. (Aug. 6, 1958, M. T., no. Oki-1414). Ishigaki Isl.: Ohama-machi (Aug. 17, 1954, M. T., no. 2082; Aug. 28, 1956, M. T., no. Yae-425).

Distrib. in the Ryukyus: Amami Isls., Okinawa Isls., Sakishima Isls.

7. *Aecidium hornotinum* Cummins in Ann. Myc. XXXV, p. 103, 1937. (Hiratsuka, f. & Shimabukuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 14, 1955).

Hab. in the Ryukyus. O, I. on *Meliosma oldhami* Miq. (*Yanbaru-awabuki*). Ishigaki Isl.: Ohama-machi (Feb. 24, 1955, S. S., no. 2088); Mt. Banna (Feb. 19 & 23, 1955, S. S., nos. Yae-121 & 245).

Distrib. in the Ryukyus: Sakishima Isls.

8. *Aecidium innatum* P. et H. Sydow et Butler in Ann. Myc. X, p. 273, 1912. (Hiratsuka, f., Ured. Formosa. p. 67, 1943; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. LI, p. 45, 1937; Sawada, Descript. Cat. Formosan Fung. VII, p. 63, 1942; S. Ito, Myc. Fl. Jap. II, no. 3, p. 370, 1950).

Hab. in the Ryukyus. O, I. on *Glochidion fortunei* Hance. (*Hirami-kankonoki*). Yonaguni Isl.: Sonai (Aug. 6, 1955, M. T., no. Yae-284). O, I. on *Glochidion hongkongense* Müll.-Arg. (*Kakiba-kankonoki*). Ishigaki Isl.: Mt. Banna (Feb. 20, 1955, M. T., no. Yae-336); Ohama-machi (Aug. 17, 1956, M. T., no. Yae-413). Yonaguni Isl.: Mt. Urabu (Aug. 7, 1955, M. T., no. Yae-391).

Distrib. in the Ryukyus: Sakishima Isls.

9. *Aecidium kaernbachii* Hennings in Engl. Bot. Jahrb. XV, p. 5, pl. I, fig. 8, 1892. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 12, 1914; Hiratsuka, f., Ured. Formosa. p. 68, 1943; Hiratsuka, f. & Hashioka, Bot. Mag. Tokyo. LI, p. 45, 1937; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 42, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 14, 1955; Sawada, Descript. Cat. Formosan Fung. I, p. 387, 1919; S. Ito, Myc. Fl. Jap. II, no. 3, p. 376, 1950).

Hab. in the Ryukyus. O, I. on *Ipomoea pes-caprae* Sweet. (*Gunbai-hirugao*). Ishigaki Isl.: Ishigaki-shi (Aug. 6, 1953, Y. N., no. 1011; June 24, 1954, S. S., no. 2086). Iriomote Isl.: Sonai (June 20, 1954, S. S., no. 2081).

Distrib. in the Ryukyus: Sakishima Isls.

10. *Aecidium lysimachiae-japonicae* Dietel in Engl. Bot. Jahrb. XXXIV, p. 590, 1905. (Hiratsuka, f., Bot. Mag. Tokyo. LIV, p. 377, 1940; Transact. Sapporo Nat. Hist. Soc. XVII, p. 33, 1941; Ured. Kiushu. p. 87, 1952; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 42, 1954; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 57, 1955; S. Ito, Myc. Fl. Jap. II, no. 3, p. 375, 1950).

Hab. in the Ryukyus. O, I. on *Lysimachia japonica* Thunb. (*Ko-nasubi*). Yakushima Isl.: Miyanoura (Sept. 17, 1954, S. S., no. 1523). Okinawa Isl.: Mt. Katsuu-dake (April 17, 1940, Y. T., no. 465); Motobu-machi (April 18, 1940, Y. T., no. 467); Mt. Taniu-dake (June 12, 1953, H. f. & S. S., no. 998).

Distrib. in the Ryukyus: Satsunan Isls., Okinawa Isls.

11. *Aecidium machili* Hennings in Hedwigia. XLI, p. 21, 1902. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 12, 1914; Hiratsuka, f., Jour. Jap. Bot. X, p. 662, 1934; XI, p. 43, 1935; Ured. Formosa. p. 68, 1943; Ured. Kiushu. p. 87, 1952; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 43, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 14, 1955; Hiratsuka, f., Shimabukuro & Niino, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 36, 1955; no. 3, p. 16, 1956; no. 4, p. 164, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 57, 1955; Katsuki, Jour. Jap. Bot. XXX, p. 18, 1955; Morimoto, Jour. Jap. Bot. XXVIII, p. 28, 1953; Sawada, Descript. Cat. Formosan Fung. I, p. 388, 1919; S. Ito, Myc. Fl. Jap. II, no. 3, p. 366, 1950).

Hab. in the Ryukyus. O, I. on *Cinnamomum japonicum* Sieb. (*Yabu-nikkei*). Okinawa Isl.: Mt. Katsuu-dake (Jan. 14, 1940, H. f., no. 255); Mt. Taniu-dake (June 12, 1953, H. f. & S. S., nos. 1074 & 1075); Higashi-mura (June 13, 1953, H. f. & S. S., nos. 1076 & 1079); Mt. Kushi-dake (June 5, 1953, H. f. & S. S., nos. 1077 & 1078). O, I. on *Machilus thunbergii* Sieb. et Zucc. (*Tabunoki*). Tanegashima Isl.: Nishinomote-machi (Aug. 12, 1957, S. S. & M. T., no. Tane-72). Yakushima Isl.: Anbo (July 30, 1954, S. Sa. & Y. H., nos. 1514 & 1515); Kurio—Okawa (Aug. 4, 1954, S. Sa. & Y. H., nos. 1513 & 1516); Kosugidani (Sept. 7, 1954, S. S., no. 1524; Aug. 3, 1957, S. S. & M. T., nos. Yaku-77 & 78). Kuroshima Isl. (July 25, 1956, S. S. & Y. N., nos. Mishima-5 & 86). Nakanoshima Isl. (July 31, 1955, S. S. & Y. N., no. Tokara-75; Dec. 24, 1955, Y. N., no. Tokara-90). Suwanose-shima (Aug. 4, 1955, S. S. & Y. N., no. T-90). Takarashima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-171; Dec. 22, 1955, Y. N., no. Tokara-214). Amami-oshima Isl.: Kasari-mura (Dec. 24, 1953, Y. N., no. 1180). Kikaishima Isl.: Mt. Hyakunodai (Aug. 29, 1954, Y. N., no. 2029). Tokunoshima Isl.: Mt. Inokawa-dake (Sept. 19, 1954, Y. N., no. 2030). Okinawa Isl.: Kuni-gami-mura (Oct. 14, 1953, S. S., no. 1095); Nago-machi (Nov. 27, 1953, S. S., no. 1197). Ieshima Isls. (May 23, 1954, S. S., no. Oki-1060). Iheya Isl. (Sept. 21, 1955, Y. N., no. Oki-1179); June 8 & 9, 1956, S. S. & M. T., nos. Oki-1180 & 1181). Kumejima Isl.: Gushikawa-mura (March 4, 1954, S. S., no. 1226). Ishigaki Isl.: Ohama-machi (Feb. 22, 1955, S. S., no. 2083). Iriomote Isl.: Inaba (June 21, 1954, S. S., no. 2080). Senkaku-retto (Aug. 2, 1953, Y. N., no. 1086). Yonaguni Isl. (Aug. 7, 1955, M. T., no. Yae-261). O, I. on *Machilus japonica* Sieb. et Zucc. (*Aogashi*). Yakushima Isl. (K. Ide).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Amami Isls., Okinawa Isls., Sakishima Isls.

12. *Aecidium meliosmae-pungentis* Hennings et Shirai in Engl. Bot. Jahrb. XXVIII, p. 266, 901. (S. Ito, Myc. Fl. Japan. II, no. 3, p. 371, 1950).

Hab. in the Ryukyus. O, I. on *Meliosma rigida* Sieb. et Zucc. (*Yama-biwa*). Okinawa Isl.: Kuni-gami-mura (July 26, 1958, S. S., no. Oki-1033).

Distrib. in the Ryukyus: Okinawa Isls.

13. *Aecidium minoense* P. et H. Sydow in Ann. Myc. XIII, p. 36, 1915. (Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 373, 1950).

Hab. in the Ryukyus. O, I. on *Elacagnus macrophylla* Thunb. (*Maruba-gumi*). Nakanoshima Isl. (July 31, 1955, S. S. & Y. N., no. Tokara-44).

Distrib. in the Ryukyus: Tokara Isls.

14. *Aecidium mori* Barclay in Jour. Asiatic Soc. Bengal. IX, pt. 2, p. 226, 1891. (Fujikuro, Transact. Nat. Hist. Soc. Formosa. no. 19, p. 12, 1914; Hiratsuka, f., Jour. Jap. Bot. XI, p. 43, 1935; Ured. Formosa. p. 69, 1943; Ured. Kiushu. p. 88, 1952; Hiratsuka, f. & Hashioka, Transact. Tottori Soc. Agric. Sci. IV, p. 164, 1933; Hiratsuka, f. & Shimabukuro, Ured. Ryukyu Isls. p. 43, 1954; Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 14, 1955; no. 4, p. 119, 1957; Hiratsuka, f., Shimabukuro & Sato, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 2, p. 57, 1955; Hiratsuka, f., Shimabukuro & Niuro, Sci. Bull. Agric. & Home Econ. Div. Univ. Ryukyus. no. 3, p. 17, 1956; no. 4, p. 164, 1957; Sawada, Descript. Cat. Formosan Fung. IV, p. 77, 1928; S. Ito, Myc. Fl. Jap. II, no. 3, p. 362, 1950).

Hab. in the Ryukyus. (O), I. on *Morus australis* Poir. (*Shima-guwa*). Yakushima Isl.: Miyanoura (Sept. 17, 1954, S. S., no. 1522); Anbo—Haro (Aug. 6, 1957, S. S. & M. T., nos. Yaku-59 & 114). Takeshima Isl. (Aug. 7, 1956, Y. N., no. Mishima-57). Takarashima Isl. (Dec. 22, 1955, Y. N., no. Tokara-237). Okinawa Isl.: Mabuni-mura (March 3, 1940, Y. T., no. 373); Nago-machi (Jan. 14, 1940, H. f., no. 240); Haneji-

mura (Jan. 15, 1940, H. f., no. 289; May 9, 1953, H. f. & S. S., nos. 1053 & 1054). Iejima Isl. (May 23, 1954, S. S., no. Oki-1056). Ishigaki Isl.: Mt. Banna (June 18, 1954, S. S., no. 2089). (O), I. on *Morus bombycis* Koidz. (*Yama-guwa*). Nakanoshima Isl. (July 31, 1955, S. S. & Y. N., no. Tokara-67). Ishigaki Isl. (Jan. 18, 1957, S. Higashihirachi, no. Yae-408).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

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Hab. in the Ryukyus. O, I. on *Clematis maximowicziana* Franch. et Sav. (*Senninso*). Tanegashima Isl.: Nishinoomote-machi (Aug. 15, 1957, S. S. & M. T., no. Tane-105). O, I. on *Clematis meyeniana* Walp. (*Yanbaru-senninso*). Tanegashima Isl.: Nishinoomote-machi (Aug. 13, 1957, S. S. & M. T., no. Tane-90). Miyako Isl.: Taira-shi (March 22 & 27, 1956, S. S. & M. T., nos. Miya-105 & 109). O, I. on *Clematis pierotii* Miq. (*Koba-no-botanzuru*, *Yama-botanzuru*). Tanegashima Isl.: Furuta (Aug. 14, 1957, S. S. & M. T., no. Tane-95).

Distrib. in the Ryukyus: Satsunan Isls., Sakishima Isls.

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Hab. in the Ryukyus. O, I. on *Phyllanthus flexuosus* Müll.-Arg. (*Koban-no-ki*). Amami-oshima Isl.: Mikata-mura (Feb. 5, 1935, T. Tamotsu, no. 1126).

Distrib. in the Ryukyus: Amami Isls.

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Hab. in the Ryukyus. O, I. on *Raphiolepis liukiensis* Nakai (*Hosoba-sharinbai*). Okinawa Isl.: Mt. Onna-dake (Jan. 12, 1940, H. f., no. 84); Mt. Katsuu-dake (Jan. 14, 1940, H. f., nos. 224 & 264). Iheya Isl. (June 9, 1956, S. S. & M. T., no. Oki-1182; Sept. 21, 1955, Y. N., no. Oki-1189). O, I. on *Raphiolepis umbellata* Mak. (*Sharinbai*, *Hama-mokukoku*). Yakushima Isl. (Jan. 2, 1934 & July 18, 1930, K. Ide, nos. 2338 & 2339). Takarashima Isl. (Dec. 22, 1955, Y. N., no. Tokara-229). Okinawa Isl.: Motobu-machi (April 15, 1940, Y. T., no. 459). Ishigaki Isl. (Aug. 6, 1953, Y. N., no. 2087). O, I. on *Tutchelia virgata* Nakai (*Hisakaki-sazanka*). Okinawa Isl.: Mt. Onna-dake (May 8, 1955, M. T., no. Oki-1258).

Distrib. in the Ryukyus: Satsunan Isls., Tokara Isls., Okinawa Isls., Sakishima Isls.

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no. 1918).

Distrib. in the Ryukyus: Satsunan Isls.

19. *Aecidium smilacis-chinae* Sawada in Transact. Nat. Hist. Soc. Formosa. XXXIII, p. 98, 1943 (nom. seminud.). (Hiratsuka, f., Ured. Formosa. p. 77, 1943; Sawada, Descript. Cat. Formosan Fung. IX, p. 131, 1943; S. Ito, Myc. Fl. Jap. II, no. 3, p. 385, 1950).

Hab. in the Ryukyus. O, I. on *Smilax sebeana* Miq. (*Togenashi-kakara*). Okinawa Isl.: Iheya Isl. (June 9, 1956, S. S. & M. T., no. Oki-1208).

Distrib. in the Ryukyus: Okinawa Isls.

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Hab. in the Ryukyus. O, I. on *Tylophora japonica* Miq. (*Tokiwa-kamomezuru*). Amami-oshima Isl.: Santaro-toge (June 6, 1955, Y. M., no. Mori-1). Okinawa Isl.: Kunigami-mura (Feb. 10, 1956, S. S. & M. T., no. Oki-1260). Iheya Isl. (March 27, 1957, M. T., no. Oki-1229).

Distrib. in the Ryukyus: Amami Isls., Okinawa Isls.

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Hab. in the Ryukyus. O, I. on *Zanthoxylum schinifolium* Sieb. et Zucc. (*Inu-zansho*). Kuroshima Isl. (July 31, 1956, S. S. & Y. N., no. Mishima-113). Nakanoshima Isl. (July 31, 1955, S. S. & Y. N., no. Tokara-53; Dec. 26, 1955; Y. N., no. Tokara-306). Takarashima Isl. (Aug. 7, 1955, S. S. & Y. N., no. Tokara-191; Dec. 22, 1955, Y. N., no. Tokara-242). O, I. on *Zanthoxylum becheyanum* K. Koch (*Hire-zansho*). Okinawa Isl.: Yabu-mura (Nov. 20, 1955, S. S., no. Oki-1043). Izena Isl. (Sept. 20, 1955, Y. N., no. Oki-1195).

Distrib. in the Ryukyus: Tokara Isls., Okinawa Isls.

VII. Summary

1. The Ryukyu Archipelago treated in this thesis is 1287 kilometers in length and is located within the lat. 24°—31°51' N. and long. 123°—131° E., while some of the islands belong to Kagoshima Prefecture, Japan at present, Okinawa Island and the islands to the south are under the United States Government's sovereignty. This situation has made free travel difficult. This, and the lack of transportation facilities, have caused slow movement in scientific surveys for these areas. Almost no researches in the field on the islands, except Okinawa Island, have been carried out, until very recent years.

2. The geographical position of the Ryukyu Archipelago, extending north to south, north being tied to the temperate zone and south closed to the tropical zone, has played an important role in the dissemination of rust fungi. In addition, to having an oceanic climate, the Ryukyu Archipelago has very small difference in temperature between day and night, has a high temperature, high rainfall, and high humidity throughout a year. This climatic peculiarity is significant for the growth and propagation of rust fungi.

3. The first study on rust fungi in these islands was carried out by Dr. Naoharu Hiratsuka (1873-1946) and a part of the results of his studies was reported in 1900. From that time on until 1940, T. Miyake, S. Ito, K. Ide and Naohide Hiratsuka, respec-

tively made fragmentary reports. Since then, Y. Morimoto and S. Katsuki have reported on rust fungi from Yakushima Island. Morimoto also made research on rust fungi in Amami Islands. Ranging from 1954 to 1957, seven reports were published by Naohide Hiratsuka, the author and their cooperators.

4. According to the results of the present research carried out by the author, the total number of species of rust fungi from the Ryukyu Archipelago is 269 (Melampsoraceae being 63 species, Pucciniaceae 160 species, and Uredinales Imperfecti 46 species).

5. The author's study on the rust-flora of the Islands has come to the following conclusions:

1) Species of rust fungi are most numerous in Okinawa Islands, the number being 174 species; with the Islands of Satsunan having 154 species; Sakishima Islands 112 species; Amami Islands 110 species and Tokara Islands 104 species.

2) In order to compare the number of species in the Ryukyu Archipelago with that of the neighbouring regions, the Japan Archipelago was divided into four regions; Kyushu, Shikoku, Honshu and Hokkaido; and Formosa, which is located south of the Ryukyu Archipelago, added as one region. The percentage of the common species for each region was calculated and presented in the following; Kyushu 63.94%, Shikoku 61.34%, Honshu 62.83%, Hokkaido 32.34% and Formosa 66.67%. In other words, the number of common species is largest in Formosa and is less in Kyushu, Honshu, Shikoku and Hokkaido in that order. Moreover, a comparison in percentage of the common species in each group of Islands to those above mentioned regions is as follows:

	Formosa	Kyushu	Shikoku	Honshu	Hokkaido
Tokara	75.00%	75.96%	75.00%	78.85%	38.46%
Satsunan	70.97	78.71	78.06	76.13	40.00
Amami	83.64	76.86	72.73	72.73	33.64
Okinawa	70.12	66.09	61.26	62.99	33.78
Sakishima	76.79	55.86	56.25	50.89	23.21

The table shows that Amami Islands, Okinawa Islands and Sakishima Islands have the largest number of rust fungi species common with Formosa, and Satsunan Islands and Tokara Islands in the north, with Kyushu, Shikoku and Honshu.

Analyzing the above mentioned facts, the rust fungi species in the Ryukyu Archipelago can be divided into the two groups; 1) Subtropical and tropical species, and 2) temperate and boreal species. Then, the demarcation line of the two groups should be established between Amami Islands and Satsunan Islands. This coincides with the distribution of pteridophyta and phanerogams.

3) The number of rust fungi species for each zone of the Ryukyu Archipelago is; 129 species in the inner zone, 224 species in the middle zone and 167 species in the outer zone. The reasons for the middle zone having the largest number and inner zone the least seem to be condensed to the following; a) The size of the islands which make up middle zone is larger than that of the others. This, in turn, assures an abundance in both host plants and mountainous areas. b) In Yakushima Island, there are many mountains with heights over 1800 m; and the upper half of them have low temperatures, the average being 14.9°C. There also is snowfall sometimes during season. With these conditions, a considerable number of the temperate and boreal species are found in this area. Thus, in Satsunan Islands, the common species with Hokkaido shows a high percentage of 40 percent. This is the highest degree of similarity (in the number of common species) among the Islands which make up the

Ryukyu Archipelago.

4) The genera and species peculiar to each zone are as follows: a) Those found only in the middle zone, but not in the other zones (outer and inner): 26 genera and 70 species. b) Those found only in the outer zone, but not in the others: 12 genera and 32 species.

Those found only in the inner zone, but not in the others: 6 genera and 7 species. The smaller number of species in the inner zone may be caused mainly by the small size of island, which in turn affects the number of host plant species available for rust fungi.

5) Each zone has its own peculiar geological structure. This fact, however, can not be considered as the factor which results in a large and direct influence on the distribution of rust fungi.

6. If endemic species is defined as "the ones found only in the Ryukyu Archipelago, but not in other areas", the number of the endemic species is nine, as follows: 1) *Hamasporea okinawensis* Hiratsuka, f., 2) *Uromyces kunigamiensis* Shimabukuro, 3) *U. tairae* Hiratsuka, f., 4) *U. thermopsidicola* Shimabukuro, 5) *U. yakushimensis* Hiratsuka, f. et Katsuki, 6) *Puccinia lepturi* Hiratsuka, f., 7) *P. scirpi-ternatani* Hiratsuka, f., 8) *Uredo horikawai* Y. Morimoto and 9) *U. yakushimensis* Y. Morimoto. Besides those mentioned, there are 20 genera and 67 species in Japan, which have not been collected in the areas, outside the Ryukyu Archipelago.

7. Though it is difficult excepting with some species, to make a clear distinction among introduced species, the author has presented the following eleven species; 1) *Coleopucciniella simplex* (Diet.) Hara, 2) *Ravenelia tephrosiicola* Hiratsuka, f., 3) *Gymnosporangium haraeianum* Sydow, 4) *Poliotelium hyalospora* (Sawada) Mains, 5) *Tranzschelia discolor* (Fuck.) Tranzschel et Litwinow, 6) *Uromyces acori* Ramakrishnan et Rangaswami, 7) *U. appendiculatus* Link, 8) *U. baemlerianus* Bubák, 9) *U. fabae* de Bary, 10) *U. mucunae* Rabenhorst and 11) *Puccinia cenchri* Diet. et Holw.

8. As a result of the study on host plants of rust fungi found in the Ryukyu Archipelago, the number of families totals 68. Among these families, those on which a comparatively large number of rust fungi species were found are as follows; Gramineae—47 sp., Leguminosae—22 sp., Compositae—22 sp., Rosaceae—14 sp., Cyperaceae—17 sp., Liliaceae—11 sp., and Euphorbiaceae—11 sp., Rubiaceae—9 sp., Aspiadaceae—8 sp., Pteridaceae—7 sp., etc.

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Explanation of plates

Plate I

- Fig. 1. Uredospores of *Phakopsora formosana* Sydow on *Glochidion obovatum* Sieb. et Zucc. (Takarashima Isl., Aug. 7, 1955, S. S. & Y. N., no. Tokara-180). ×380.
- Fig. 2. Uredospores of *Phakopsora glochidii* (Syd.) Arthur on *Glochidion hongkongense* Müll.-Arg. (Mt. Omoto, Ishigaki Isl., Aug. 21, 1956, M. T., no. Yae-318). ×380.
- Fig. 3. Uredospores of *Crossopsora antidesmae-dioicae* (Syd.) Arthur on *Antidesma japonicum* Sieb. et Zucc. (Gushikawa-mura, Kumejima Isl., Feb. 16, 1957, S. S. & M. T., no. Oki-1276). ×380.
- Fig. 4. Uredospores of *Crossopsora malloti* (Racib.) Cummins on *Mallotus moluccanus* Müll.-Arg. (Yonaguni Isl., Aug. 3, 1955, M. T., no. Yae-315). ×400.
- Fig. 5. Uredospores of *Pucciniostele hashiohakai* (Hiratsuka, f.) Cummins on *Ampelopsis leeoides* (Maxim.) Planch. (Yakushima Isl., Aug. 2, 1957, S. S. & M. T., no. Yak-214). ×380.
- Fig. 6. Uredospores of *Didymopsisorella lemanensis* (Doidge) Hiratsuka, f. on *Toddalia asiatica* L. (Iheya Isl., Sept. 21, 1955, Y. N., Oki-1110). ×380.
- Fig. 7. Uredospores of *Kuehneola malvicola* Arthur on *Malvastrum coromandelianum* Garcke (Minami-daito Isl., July 31, 1958, M. T., no. Oki-1364). ×380.
- Fig. 8. Teleutospores of *Hapalophragmium derridis* Sydow on *Derris uliginosa* (Willd.) Benth. (Taira-shi, Miyako Isl., Dec. 23, 1954, S. S., no. Miy-59). ×380.

Plate II

- Fig. 1. Uredospores of *Sphaerophragmium acaciae* (Cooke) Megnus on *Albizzia lebbek* Benth. (Yaku-mura, Okinawa Isl., Sept. 7, 1955, M. T., no. Oki-1026). ×380.
- Fig. 2. Teleutospores of *Ravenelia hobsoni* Cooke on *Pongamia pinnata* Merr. (Gushikawa-mura, Kumejima Isl., Feb. 20, 1947, S. S. & M. T., no. Oki-1329). ×400.
- Fig. 3. Teleutospores of *Endophyllum emasculatum* Arthur et Cummins on *Breynia formosana* Hayata. (Shimochi-machi, Miyako Isl., Dec. 25, 1954, S. S., Miy-48). ×380.
- Fig. 4. Teleutospores of *Endophyllum griffithiae* (P. Henn.) Raciborski on *Randia sinensis* Schult. (Ohama-machi, Yaeyama Isl., March 8, 1955, M. T., Yae-239). ×380.
- Fig. 5. Teleutospores of *Polioteliium hyalospora* (Sawada) Mains on *Acasia confusa* Merr. (Gushikawa-mura, Kumejima Isl., Feb. 19, 1957, S. S. & M. T., no. Oki-1293). ×380.
- Fig. 6. Uredospores of *Uromyces leptodermus* Sydow on *Setaria italica* (L.) Beauv. (Ishigaki-shi, Ishigaki Isl., June 23, 1957, S. Higashihirachi, no. Yae-407). ×380.
- Fig. 7. Teleutospores of *Uromyces mucunae* Rabenhorst on *Mucuna pruriens* Prodr. (Taira-shi, Miyako Isl., Dec. 22, 1954, S. S., no. Miy-36). ×380.
- Fig. 8. Teleutospores of *Uromyces orientalis* Sydow on *Indigofera trifolia* var. *liukiensis* Matsum. (Karimata, Miyako Isl., Mar. 26, 1956, S. S. & M. T., no. Miy-133). ×380.

Plate III

- Fig. 1. Teleutospores of *Uromyces tairae* Hiratsuka, f. on *Tournefortia argentea* L. (Mabuni-mura, Okinawa Isl., Mar. 2, 1940, Y. T., no. 372). $\times 380$.
- Fig. 2. Teleutospores of *Uromyces thermopsidicola* Shimabukuro on *Thermopsis chinensis* Benth. (Miwa-mura, Okinawa Isl., June 12, 1955, M. T., no. Oki-1003). $\times 380$.
- Fig. 3. Uredospores of *Uromyces yakushimensis* Hiratsuka, f. et Katsuki on *Trichosanthes bracteata* Voigt. (Inoda, Ohama-machi, Ishigaki Isl., Feb. 28, 1955, S. S., no. 2102, Yae-99). $\times 380$.
- Fig. 4. Teleutospores of *Puccinia arundinis-donacis* T. Hiratsuka on *Arundo donax* L. (Shimochi-machi, Miyako Isl., Feb. 17, 1955, M. T., no. Miy-71). $\times 380$.
- Fig. 5. Teleutospores of *Puccinia citrina* Sydow on *Heterosmilax japonica* Kunth. (Iheya Isl., Sept. 22, 1955, Y. N., no. Oki-1140). $\times 380$.
- Fig. 6. Teleutospores of *Puccinia curculigonis* Raciborski on *Curculigo orchioides* Gaertner. (Hirakubo, Ishigaki Isl., Aug. 26, 1954, M. T., no. Yae-75). $\times 380$.
- Fig. 7. Uredospores of *Puccinia erebia* Sydow on *Clerodendron inerme* Gaertn. (Iheya Isl., June 8, 1956, S. S. & M. T., no. Oki-1146). $\times 380$.
- Fig. 8. Teleutospores of *Puccinia lepturi* Hiratsuka, f. on *Lepturus repens* R. Br. (Gushikawa-mura, Kumejima Isl., Feb. 15, 1957, S. S. & M. T., no. Oki-1270). $\times 380$.

Plate IV

- Fig. 1. Uredospores of *Puccinia levigata* (Syd. et Butl.) Hiratsuka, f. on *Oplismenus undulatifolius* Roem. et Schult. var. *japonicus* (Steud.) Koidz. (Nishinootemachi, Tanegashima Isl., Aug. 13, 1957, S. S. & M. T., no. Tane-53). $\times 400$.
- Fig. 2. Teleutospores of *Puccinia lophatheri* (Syd.) Hiratsuka, f. on *Lophatherum gracile* Brongn. (Iyeya Isl., Sept. 21, 1955, Y. N., no. Oki-1156). $\times 380$.
- Fig. 3. Uredospores of *Puccinia paspalina* Cummins on *Paspalum scrobiculatum* L. var. *orbiculare* Hack. (Minami-daito Isl., July 31, 1958, M. T., no. Oki-1393). $\times 380$.
- Fig. 4. Paraphyses of uredosorus of *Puccinia pogonatheri* Petch on *Pogonatherum crinitum* Kunth. (Anbo, Yakushima Isl., Aug. 1, 1957, S. S. & M. T., no. Yak-64). $\times 380$.
- Fig. 5. Uredospores of *Puccinia pollinicola* Sydow on *Microstegium vimineum* A. Camus var. *polystachyum* (Franch. et Sav.) Ohwi. (Izena Isl., Sept. 20, 1955, Y. N., no. Oki-1215). $\times 380$.
- Fig. 6. Teleutospores of *Puccinia scleriae* (Paz.) Arthur on *Scleria doederleiniana* Bockler. (Gushikawa-mura, Kumejima Isl., Feb. 16, 1957, S. S. & M. T., no. Oki-1274). $\times 380$.
- Fig. 7. Uredospores of *Puccinia thaliae* Dietel on *Canna indica* L. (Komi, Iriomote Isl., Aug. 14, 1955, M. T., no. Yae-365). $\times 380$.
- Fig. 8. Teleutospores of *Puccinia variformis* Patouillard on *Hoya carnosa* R. Br. (Furuta, Tanegashima Isl., Aug. 14, 1957, S. S. & M. T., no. Tane-126). $\times 380$.

Plate V

- Fig. 1. Teleutospores of *Puccinia wattiana* Barclay on *Clematis tashiroi* Maxim. (Gushikawa-mura, Kumejima Isl., Feb. 19, 1957, S. S. & M. T., no. Oki-1280). $\times 380$.
- Fig. 2. Aecidiospores of *Aecidium clerodendri* Hennings on *Clerodendron trichotomum* Thunb. (Kasari-mura, Amami-oshima Isl., Dec. 24, 1953, Y. N., no. .

- 1171). ×380.
- Fig. 3. Aecidiospores of *Aecidium formosanum* Sydow on *Emilia sonchifolia* DC. (Ohama-machi, Ishigaki Isl., Aug. 17, 1954, M. T., no. Yae-86). ×400.
- Fig. 4. Aecidiospores of *Aecidium hornotinum* Cummins on *Meliosma oldhami* Miq. (Mt. Banna, Ishigaki Isl., Feb. 19, 1955, S. S., no. Yae-121). ×380.
- Fig. 5. Aecidiospores of *Aecidium innatum* Sydow et Butler on *Glochidion hongkongense* Müll.-Arg. (Mt. Urabu, Yonaguni Isl., Aug. 7, 1955, M. T., no. Yae-391). ×400.
- Fig. 6. Aecidiospores of *Aecidium kaernbachii* Hennings on *Ipomoea pes-caprea* Sweet. (Sonai, Iriomote Isl., June 20, 1954, S. S., no. Yae-156). ×380.
- Fig. 7. Peridial cells of aecidiosorus of *Aecidium smilacis-chinae* Sawada on *Smilax sebeana* Miq. (Iheya Isl., June 9, 1956, S. S. & M. T., no. Oki-1208). ×380.
- Fig. 8. Aecidiospores of *Uredo desmodii-pulchellii* Sydow on *Desmodium caudatum* (Thunb.) DC. (Mt. Omoto, Ishigaki Isl., Aug. 29, 1956, M. T., no. Yae-320). ×380.

Plate VI

- Fig. 1. Uredospores of *Uredo guettardae* Hiratsuka, f. et Hashioka on *Guettarda speciosa* L. (Ishigaki-shi, Ishigaki Isl., Mar. 2, 1955, M. T., no. Yae-141). ×380.
- Fig. 2. Paraphyses of uredosorus of *Uredo guettardae* Hiratsuka, f. et Hashioka on *Guettarda speciosa* L. (Ishigaki-shi, Ishigaki Isl., Mar. 2, 1955, M. T., no. Yae-141). ×380.
- Fig. 3. Uredospores of *Uredo lasianthi* Sydow on *Mephitidia plagiophylla* Nakai (Sumiyo-mura, Amami-oshima Isl., Dec. 29, 1954, Y. N., no. 1784). ×380.
- Fig. 4. Uredospores of *Uredo leucanae-glaucae* Hiratsuka, f. et Hashioka on *Acacia farnesiana* Willd. (Ishigaki Isl., Aug. 11, 1955, M. T., no. Yae-459). ×380.
- Fig. 5. Uredospores of *Uredo moricola* Hennings on *Morus australis* Poir. (Take-shima Isl., Aug. 7, 1956, Y. N., no. Mishima-72). ×400.
- Fig. 6. Uredospores of *Uredo morifolia* Sawada on *Morus australis* Poir. (Yonehara, Ishigaki Isl., Aug. 11, 1955, M. T., no. Yae-313). ×380.
- Fig. 7. Uredospores of *Uredo pipturi* (Syd.) Hiratsuka, f. on *Pipturus arborescens* C. B. Clarke (Tomino, Ishigaki Isl., Aug. 11, 1955, M. T., Yae-371). ×380.
- Fig. 8. Uredospores of *Uredo psychotricola* Hennings on *Psychotria lukuensis* Hatsusima. (Kunigami-mura, Okinawa Isl., Aug. 10, 1958, S. S., no. Oki-1250). ×380.

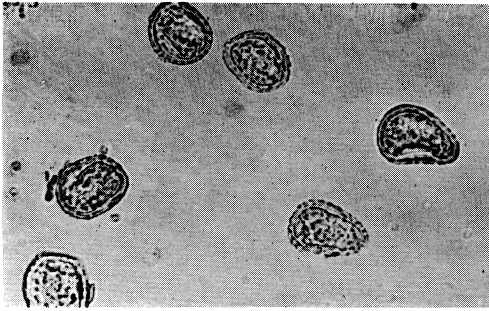


Fig. 1

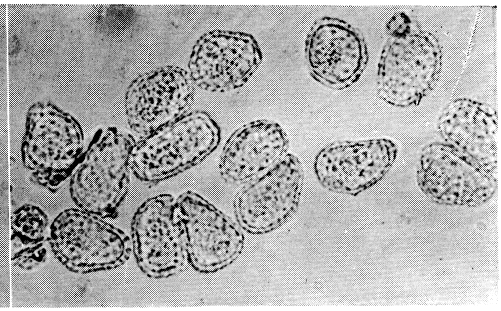


Fig. 2

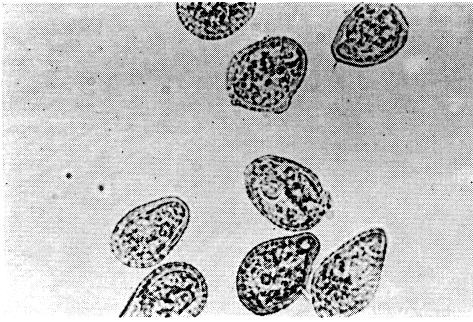


Fig. 3

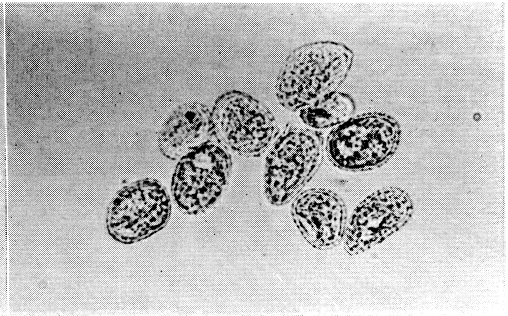


Fig. 4

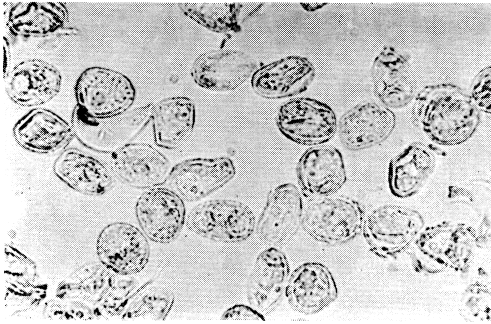


Fig. 5.

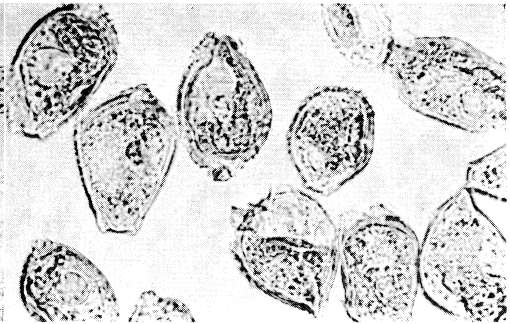


Fig. 6

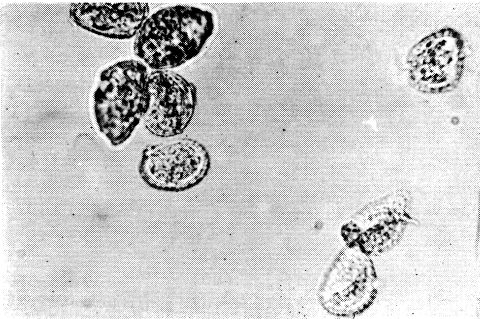


Fig. 7



Fig. 8

PLATE II

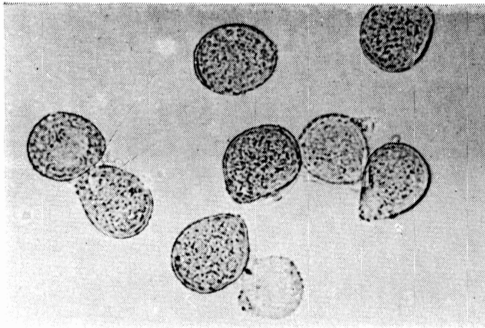


Fig. 1

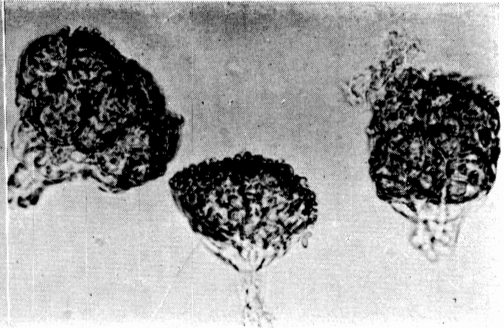


Fig. 2

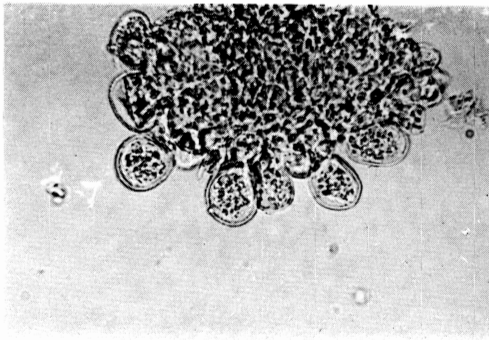


Fig. 3

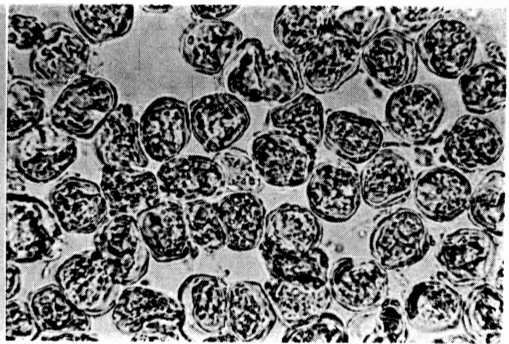


Fig. 4

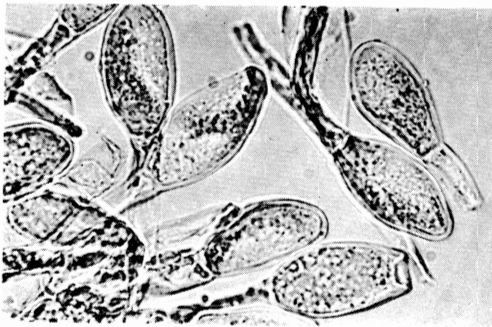


Fig. 5

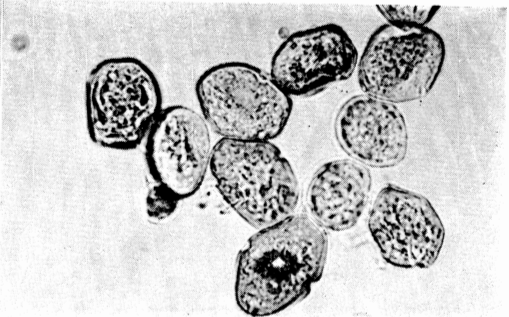


Fig. 6

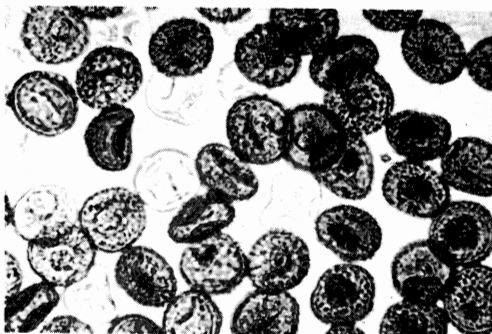


Fig. 7



Fig. 8