

Check List of Midge Galls of Japan, with Descriptions of Newly Recorded Galls

I. Choripetalae

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Introduction

Up to the present, a large number of midge galls has been recorded in the world. In Japan, Monzen^{18, 19, 20)} and Shinji⁶³⁾ published important papers which contain many descriptions of the midge galls accompanied by their Japanese names and figures. The present author also listed the plants attacked by Japanese gall midges in his previous paper.⁷⁶⁾ Further records of Japanese midge galls appear in various papers through a wide range of scientific publications. Because Monzen and Shinji independently described and named the Japanese midge galls, there are considerable confusions in nomenclature of the galls. Therefore, in preparing the present paper, the author expended effort to collect as many records of midge galls as possible from the scattered papers in order to clear up the confusion.

In addition, during recent years the author encountered unrecorded midge galls on various plant species, particularly in southern Japan. They are described under new Japanese names in this paper.

In the present paper, the author lists over 100 sorts of midge gall on 102 plant species belonging to 30 families included in Choripetalae. Unfortunately over 50% of the gall midges are not given scientific names at the present owing to difficulty in the identification of the gall makers by examining only larvae or pupae. However, the author believes that the present check list will facilitate the identification of both the midge galls and the gall makers and aid future study in the cecidological field. This paper will be followed in the future by the second part which contains the gall bearing plants other than Choripetalae.

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Material and Method

The gall bearing plants examined were collected from various parts of Japan in occasional field investigations during the past 12 years. Some of the collected galls were dissected to confirm if they were caused by gall midges. The number of larvae and larval chambers per gall was counted and the developmental stages of the gall midge were also examined. The rest of the galls were retained in the laboratory to rear adult midges.

The arrangement of the plant families in the present list is in systematic order. Entries for each gall are arranged in the following order: (i) Gall bearing organs; (ii) Japanese name of the gall followed by the author name, or, if no author is given, the name is here proposed for the first time (The author names Monzen and Shinji are shortened to Mon. and Sh. respectively); (iii) Scientific name of the gall midge (If the gall making habit or systematic position of the species is doubtful, it is indicated with a question mark. In the case where the gall midge is not identified yet because the gall is known only from larva, the term "Adult unknown" is used); (iv) Reference. Newly recorded galls are briefly described under new Japanese names with collecting data.

The herbarium of the gall bearing plants and the collection of gall midge specimens examined are kept in Entomological Laboratory of Kagoshima University.

Salicaceae

Populus maximowiczii Henry "Doronoki"

Cortex (not gall), unnamed. ? *Mikiola populi* Sh. (51, 76)

Populus nigra L. var. *italica* Koehne "Popura"

Cortex (not gall), unnamed. ? *Mikiola populicola* Sh. (51, 76)

Salix babylonica L. "Shidare-yanagi"

Stem, "Zui-fushi" Mon. (= "Eda-tama-fushi" Sh.). *Rhabdophaga salicivora* Sh. (10, 11, 12, 18, 24, 26, 49, 61, 63, 76)

Stem, "Eda-kobu-fushi" Mon. (= "Tsuto-fushi" Sh.). *Rhabdophaga saliyonai* Sh. (18, 24, 50, 61, 76)

Stem, "Katagawa-fushi" Sh. *Rhabdophaga yanagi* (Sh.). (50, 61, 63, 76)

Salix bakko Kimura "Bakko-yanagi"

Stem, "Zui-fushi" Mon. *Rhabdophaga salicivora* Sh. (12, 18, 76)

Stem, "Eda-kobu-fushi" Mon. (= "Tsuto-fushi" Sh.). *Rhabdophaga saliyonai* Sh. (18, 50, 63, 76)

Salix gilgiana Seem. "Kawa-yanagi"

Terminal bud, "Hana-fushi" Mon. (= "Shintome-fushi" Sh.). *Rhabdophaga rosaria* (H. Loew). (18, 24, 51, 63, 76)

Stem, "Zui-fushi" Mon. *Rhabdophaga salicivora* Sh. (12, 18, 76)

Salix gracilistyla Miq. "Neko-yanagi"

Stem, "Eda-kobu-fushi" Mon. (= "Tsuto-fushi" Sh.). *Rhabdophaga saliyonai* Sh. (18, 50, 63, 76)

Stem, "Katagawa-fushi" Sh. (= "Kobu-fushi" Sh.). *Rhabdophaga yanagi* (Sh.). (48, 63, 76)

Salix hondoensis Koidz. "Ezo-yanagi"

Stem, "Eda-kobu-fushi" Mon. *Rhabdophaga saliyonai* Sh. (18, 24, 50, 76)

Salix integra Thunb. "Inukori-yanagi"

Terminal bud, "Hana-fushi" Mon. *Rhabdophaga rosaria* (H. Loew). (4, 15, 18, 24, 76)

Salix japonica Thunb. "Shiba-yanagi"

Stem, "Katagawa-fushi" Sh. (= "Kobu-fushi" Sh., "Ibo-fushi" Sh.). *Rhabdophaga yanagi* (Sh.). (48, 63, 76)

Leaf, "Hamyaku-fushi" Sh. Adult unknown. (63)

Salix kinuyanagi Kimura "Kinu-yanagi"

Stem, "Zui-fushi" Mon. *Rhabdophaga salicivora* Sh. (12, 18, 49, 76)

Leaf, "Ha-himekobu-fushi" Mon. Adult unknown. (20)

Salix koriyanagi Kimura "Kori-yanagi"

Stem, "Zui-fushi" Mon. (= "Tsuto-fushi" Sh.). *Rhabdophaga salicivora* Sh. (18, 49, 63, 76)

Stem, "Katagawa-fushi" Sh. *Rhabdophaga yanagi* (Sh.). (50, 63, 76)

Stem, "Kakure-eda-fushi" **new gall rec.** *Helicomyia saliciperda* (Dufour). (41, 76).

There are many small chambers under the outer layer of stem, causing at most a feeble swelling. Nakano-shi, Nagano-ken, 29. IV. 1969, S. Takanuma leg.

Salix reinii Franch. et Sav. "Miyama-yanagi"

Stem, "Eda-kobu-fushi" Mon. *Rhabdophaga saliyonai* Sh. (18, 61, 76)

Salix sieboldiana Blume "Yama-yanagi"

Stem, "Eda-kobu-fushi" Mon. *Rhabdophaga saliyonai* Sh. (18, 50, 76)

Stem, "Katagawa-fushi" Sh. *Rhabdophaga yanagi* (Sh.). new host rec. Shinkawa-keikoku, Kagoshima-ken, 20. X. 1969, Y. Tashima leg.; Takakuma-yama, ditto, 6. XI. 1969, Y. Tashima leg.

Salix subfragilis Anders. "Tachi-yanagi"

Terminal bud, "Hana-fushi" Mon. (= "Shintome-fushi" Sh.). *Rhabdophaga rosaria* (H. Loew). (18, 51, 63, 76)

Salix spp.

Stem, "Zui-fushi" Mon. *Rhabdophaga salicivora* Sh. (18, 30, 49)

Stem, "Eda-kobu-fushi" Mon. *Rhabdophaga saliyonai* Sh. (18, 30, 32, 41, 76)

? Leaf, "Hasuji-fushi" Sh. *Rhabdophaga salicifoliae* Sh. (63, 76)

Betulaceae*Alnus hirsuta* Turcz. var. *sibirica* C. K. Schneid. "Yama-hannoki"

Fruit, "Mi-fushi" Mon. Adult unknown. (18)

Corylus heterophylla Fisch. var. *thumbergii* Blume "Hashibami"

Leaf, "Shiro-fushi" Sh. ? *Clinodiplosis corylicola* Sh. (63, 76)

Corylus sieboldiana Blume "Tsuno-hashibami"

Leaf, "Shiro-fushi" Sh. ? *Clinodiplosis corylicola* Sh. (63)

Fagaceae

Fagus crenata Blume "Buna"

Leaf, "Haura-kobu-fushi" Mon. *Janetiella infrafoli* Mon. (18, 23, 76)

Leaf, "Togari-tama-fushi" Mon. *Mikiola fagi* (Hartig). (18, 41, 76)

Leaf, "Kaigara-fushi" Mon. ? *Oligotrophus fagalli* Mon. (18, 23, 76)

Leaf, "Hoso-togari-tamafushi" new name. *Phegomyia tokunagai* Sasakawa & Koyama. (40, 76). They mentioned three other types of galls on *Fagus*-leaves,⁴⁰⁾ but it is unknown whether these galls were caused by gall midges or not.

Leaf, "Tsuno-fushi" Mon. Adult unknown. (20)

Leaf, "Haberi-hoso-fushi" Mon. Adult unknown. (20)

Leaf vein, "Myaku-kobu-fushi" Mon. Adult unknown. (20)

Fagus japonica Maxim. "Inu-buna"

Leaf, "Ke-tsuno-fushi" Mon. *Hartigiola annulipes* Hartig. (18)

Leaf, "Tsuno-fushi" Mon. *Mikiola fagi* (Hartig). (18)

Leaf, "Myaku-kobu-fushi" Mon. Adult unknown. new host rec. This gall is the same as that on *Fagus crenata*, probably caused by the same species. Shiiba, Miyazaki-ken, 27-29. V. 1969, S. Hatsushima leg.

Pasania edulis Makino "Mateba-shii"

Leaf, "Usu-fushi" **new gall rec.** Adult unknown. Barrel-shaped swelling mainly on lower surface of leaf, sometimes on stem or upper surface of leaf, with a hemispherical lid which has a small subconical elevation in the center; height about 2.8mm, maximum width about 2.1mm; monothalamous (Fig. 1). Eboshi-dake, Kagoshima-ken, 15. IX. 1971, A. Mori leg.; Tokiwa, Kagoshima-shi, 28. XI. 1971, A. Mori leg.

Quercus acutissima Carr. "Kunugi"

Leaf, stem, "Hime-kobu-fushi" Mon. *Ametrodiplosis acutissima* (Mon.). (20, 22, 24, 76)

Leaf, "Ha-fukure" Mon. Adult unknown. (19)

Quercus dentata Thunb. "Kashiwa"

Leaf, stem, "Hime-kobu-fushi" Mon. *Ametrodiplosis acutissima* (Mon.). (20, 22, 76)

Quercus gilva Blume "Ichii-gashi"

Leaf, "Haberi-fushi" Sh. Adult unknown. (63)

Quercus serrata Thunb. "Konara"

Leaf, "Haberi-ore" Mon. (= "Haore-fushi" Sh.). ? *Silvestrina quercifoliae* Sh., or *Macrodiplosis volvens* Kieffer. (20, 63, 76)

Leaf, "Hafukure" Mon. Adult unknown. (18)

Quercus variabilis Blume "Abemaki"

Leaf, stem, "Hime-kobu-fushi" Mon. *Ametrodiplosis acutissima* (Mon.). (20, 22, 76)

Ulmaceae

Celtis sinensis Pers. var. *japonica* (Planch.) Nakai "Enoki"

Leaf, "Kobu-fushi" Mon. Adult unknown. (20)

Leaf, petiole, stem, "Togari-tama-fushi" Mon. Midge not identified. (5, 20)

Leaf, "Ko-tsuno-fushi" Mon. Adult unknown. (20)

Moraceae*Ficus retusa* L. "Gajumaru"

Leaf, "Ko-hirata-fushi" **new gall rec.** Adult unknown. Circular feeble blister mainly on lower surface; yellowish green; monothalamous. Very many kinds of galls on the genus *Ficus* have been recorded from Indonesia by Mrs. & Dr. van Leeuwen,⁶⁹⁾ but the similarity between this gall and some of the Indonesian galls is unknown at the present. Isen, Tokuno-shima, Kagoshima-ken, XI. 1970, S. Hashimoto leg.; Amami-ôshima, ditto, 15. III. 1974, T. Sunose leg. (cf. *Ficus wightiana*)

Ficus wightiana Wall. "Akô"

Leaf, "Ko-hirata-fushi" **new gall rec.** Adult unknown. This gall is the same as that on *Ficus retusa*, probably caused by the same species (Fig. 2). Sakurajima, Kagoshima-shi, 24. IX. 1971, K. Takahashi leg.

Humulus japonicus Sieb. et Zucc. "Kanamugura"

Leaf, flower bud, "Haura-fushi" Sh. *Asphondylia humuli* Sh. (59, 61, 63, 76)

Humulus lupulus L. var. *cordifolius* (Miq.) Maxim. "Karahanasô"

Leaf, flower bud, "Haura-fushi" Sh. *Asphondylia humuli* Sh. (61, 63, 76)

Morus alba L. "Kuwa"

Leaf, "Ha-kobu-fushi" Mon. Adult unknown. (20)

Leaf, petiole, "Eboshi-fushi" new name. ? *Diplosis morivorella* M. Naito. (*Diplosis moricola* Matsumura is probably identical with this species). (14, 29, 71, 76)

? Leaf vein, Gall unnamed. ? *Diplosis* sp. Nishikawa. (35)

? Leaf, Gall unnamed. ? *Diplosis* sp. Nishikawa. (35)

Bud, "Shintome-fushi" new name. ? *Diplosis mori* Yokoyama. (31, 33, 34, 42, 67, 68, 71, 76)

Stem, Gall unnamed. ? *Diplosis* sp. Yokoyama. (71, 76)

Bark (not gall), unnamed. ? *Diplosis quadrfasciata* Niwa. (13, 36, 71, 76)

Polygonaceae*Polygonum filiforme* Thunb. "Mizuhiki"

Stem, "Zui-fushi" Sh. Adult unknown. (63)

Amaranthaceae*Achyranthes japonica* (Miq.) Nakai "Inokozuchi"

Stem, "Zui-fushi" Mon. (= "Tsuto-fushi" Sh.). *Lasioptera achyranthii* Sh. (5, 16, 20, 60, 63, 76)

Flower, "Hana-fushi" new name. Adult unknown. (5)

Achyranthes longifolia (Makino) Makino "Yanagi-inokozuchi"

Stem, "Zui-fushi" Mon. (= "Tsuto-fushi" Sh.). *Lasioptera achyranthii* Sh. (20, 60, 61, 63, 76)

Magnoliaceae

Illicium religiosum Sieb. et Zucc. "Shikimi"

Leaf, "Hakobu" new name. Midge not identified (Asphondyliidi). (Fig. 3). (16, 17, 44)

Magnolia kobus DC. "Kobushi"

Leaf, "Hamaki" Mon. (= "Ha-tsuzuri" Sh.). Midge not identified. (20, 63)

Michelia compressa (Maxim.) Sarg. "Ogatamanoki"

Petiole, "Haguki-fushi" new name. Adult unknown. (16)

Ranunculaceae

Cimicifuga sp.

Flower bud, "Tsubomi-fushi" Mon. Adult unknown. (20)

Clematis apiifolia DC. "Botanzuru"

Petiole, "Haguki-fushi" Sh. Adult unknown. (63)

? Leaf, Gall unknown. ? *Mycetodiplosis clematidis* Sh. (63)

Probably the same as leaf gall on *Clematis japonica*.

Clematis japonica Thunb. "Hanshōzuru"

Leaf, "Hafukure-fushi" Sh. ? *Mycetodiplosis clematidis* Sh. (= ? *Silvestris clematii* Sh.). (63)

Clematis stans Sieb. et Zucc. "Kusabotan"

Flower bud, "Tsubomi-fushi" Mon. Adult unknown. (18)

Thalictrum minus L. var. *hypoleucum* (Sieb. et Zucc.) Miq. "Aki-karamatsu"

Terminal bud, "Zui-fushi" Sh. Adult unknown.

Lauraceae

Actinodaphne lancifolia (Sieb. et Zucc.) Meissn. "Kagonoki"

Stem, "Eda-fushi" **new gall rec.** Midge not identified (Asphondyliidi). Crater-like swelling on stem; usually many galls occurring together; monothalamous (Fig. 7). Iso, Kagoshima-shi, 1. V. 1969, A. Mori leg.; Ishiki, ditto, 7. V. 1969, Y. Tanaka leg.

Actinodaphne longifolia (Blume) Nakai "Baribarinoki"

Stem, "Eda-fushi" **new gall rec.** Midge not identified (Asphondyliidi). Many small, hemispherical larval chambers clustered, forming a subcylindrical swelling on stem; length about 60mm, thickness about 17mm (Fig. 8). Takakumayama, Kagoshima-ken, 11. V. 1971, Y. Tashima leg.

Lindera glauca (Sieb. et Zucc.) Blume "Yamakōbashi"

Leaf, "Hamaki" Sh. Adult unknown. (63)

Machilus japonica Sieb. et Zucc. "Hosoba-tabu"

Leaf, "Hoso-usu-fushi" new name. *Daphnephila* sp. Yukawa. (77)

Leaf, "Hafukure" **new gall rec.** Adult unknown. Rather thin, rounded blister on upper and lower surfaces, with a diameter about 4 to 7mm; monothalamous. Ishiki, Kagoshima-shi, 27. XI. 1971, J. Yukawa leg. (cf. *Machilus thunbergii*)

Machilus thunbergii Sieb. et Zucc. "Tabunoki"

Leaf, "Usu-fushi" Sh. (= "Tsubo-fushi" Mon.). *Daphnephila machilicola* Yukawa. (5, 20, 44, 63, 77)

Leaf, "Hafukure" **new gall rec.** Adult unknown. This gall is the same as that on *Machilus japonica*, probably caused by the same species (Fig. 5). Shiroyama, Kagoshima-shi, 7. I. 1971, J. Yukawa, K. Ôhara & N. Ohsaki leg.

Stem, "Eda-fushi" **new gall rec.** Adult unknown. Many small larval chambers clustered, forming an irregular swelling on stem (Fig. 9). Setouchi-chô, Amami-ôshima, Kagoshima-ken, 25. VII. 1975, A. Mori leg.

Neolitsea sericea (Blume) Koidz. "Shirodamo"

Leaf, "Ha-kobu-fushi" new name. *Pseudasphondylia neolitseae* Yukawa. (5, 77)

Saxifragaceae*Astilbe thunbergii* (Sieb. et Zucc.) Miq. var. *congesta* Boiss. "Toriashi-shôma"

Petiole, "Suji-fukure" Sh. ? *Mycetodiplosis astilbensis* Sh. (63, 76)

Deutzia crenata Sieb. et Zucc. "Utsugi"

Leaf, petiole, stem, "Kobu-fushi" Mon. Adult unknown. (5, 20)

Leaf, "Ha-fukure" Mon. Adult unknown. (5, 20)

Hydrangea paniculata Sieb. "Noriutsugi"

Fruit, "Mi-fushi" Mon. ? *Silvestrina hydrangeae* (Sh.). (18, 57, 61, 63, 76)

Hamamelidaceae*Hamamelis japonica* Sieb. et Zucc. "Mansaku"

Leaf, "Ha-fukure" Mon. Adult unknown. (18)

Rosaceae*Marus pumila* Mill. "Seiyô-ringo"

Flower bud, "Haname-fushi" new name. *Contarinia mali* Barnes. (1, 2, 66, 76)

Pourthiaea villosa (Thunb.) Decne var. *laevis* (Thunb.) Stapf "Kamatsuka"

Leaf, "Ha-kobu-fushi" Mon. Adult unknown. (5, 20)

Prunus spinulosa Sieb. et Zucc. "Rinboku" (= "Hiiragi-gashi")

Petiole, "Haguki-fushi" new name. Adult unknown. (16)

Prunus zippeliana Miq. "Bakuchinoki"

Fruit, "Mi-fushi" **new gall rec.** *Asphondylia* sp. Infested fruit less developed than normal one; usually one larva inhabiting each gall (Fig. 4). Shiroyama, Kagoshima-shi, 6. III. 1973, N. Ohsaki leg.

Pyrus pyrifolia Nakai var. *culta* Nakai "Nashi"

? Gall unnamed. ? *Diplosis* sp. (37, 64)

? Gall unnamed. ? *Diplosis* sp. (64, 70)

Rosa multiflora Thunb. "Noibara"

Leaf, petiole, peduncle, "Haore" Mon. (= "Haore" Sh.). ? *Clinodiplosis rosaefolia* Sh. (16, 18, 55, 63, 76)

Stem, "Zui-fushi" Mon. (= "Zui-fushi" Sh.). Adult unknown. (16, 19, 63)

Terminal bud, "Me-fushi" Mon. (= "Shinme-fukure" Sh.). Adult unknown. (20, 63)

- Rubus parvifolius* L. "Nawashiro-ichigo"
 Stem, "Kobu-fushi" Mon. *Lasioptera rubi* Heeger. (5, 16, 23, 63, 76)
- Rubus phoenicolasius* Maxim. "Urajiro-ichigo"
 Stem, "Kobu-fushi" Mon. *Lasioptera rubi* Heeger. (23, 76)
- Rubus trifidus* Thunb. "Kaji-ichigo"
 Stem, "Kobu-fushi" Mon. *Lasioptera rubi* Heeger. (23, 60, 61, 76)
- Rubus* sp. ? "Ki-ichigo"
 Terminal bud, "Shintome-fushi" Sh. Adult unknown. (63)
- Sorbus commixta* Hedl. "Nanakamado"
 Axillary bud, "Me-fushi" Sh. Adult unknown. (63)

Leguminosae

- Cassia nomame* (Sieb.) Honda "Kawara-ketsumei"
 Pod, "Saya-fushi" new name. *Asphondylia* sp. Kanzawa. (27, 65, 76)
- Desmodium rasemosum* (Thunb.) DC. "Nusubito-hagi"
 Pod, "Saya-fushi" new name. *Asphondylia* sp. Kanzawa. (27, 65, 76)
- Glycine max* Merrill "Daizu"
 Pod, "Saya-fushi" new name. *Asphondylia* sp. Kanzawa. (6, 8, 27, 28, 43, 65, 73, 76)
 Petiole, "Haguki-fushi" new name. *Profeltiella soya* (Mon.). (21, 24, 61, 72, 76, 78)
- Glycine soja* Sieb. et Zucc. "Tsuru-mame"
 Pod, "Saya-fushi" new name. *Asphondylia* sp. Kanzawa. (27, 65, 76)
- Indigofera pseudotinctoria* Matsum. "Komatsunagi"
 Pod, "Saya-fushi" new name. *Asphondylia* sp. Kanzawa. (27, 65, 76)
- Lespedeza bicolor* Turcz. "Yama-hagi"
 Pod, "Saya-fushi" new name. *Asphondylia* sp. Kanzawa. (27, 65, 76)
 Leaf, petiole, "Haore" Mon. (= "Tamago-fushi" Sh.). Adult unknown. (5, 20, 63)
 Bud or petiole, "Kobu-fushi" Mon. Adult unknown. (18)
 Stem, "Tsuto-fushi" Sh. *Lasioptera lespedezae* Sh. (56, 61, 63, 76)
- Lespedeza cyrtobotrya* Miq. "Maruba-hagi"
 Stem, "Tsuto-fushi" Sh. *Lasioptera lespedezae* Sh. (56, 63, 76)
- Pueraria lobata* (Willd.) Ohwi "Kuzu"
 Stem, "Tsuto-fushi" Sh. *Lasioptera puerariae* (Sh.). (52, 61, 63, 76)
 Leaf, "Ha-maru-fushi" Mon. (? = "Haura-tama-fushi" Mon.). Adult unknown. (5, 18, 63)
- Sophora flavescens* Aiton "Kurara"
 Pod, "Saya-fushi" new name. *Asphondylia* sp. Kanzawa. (27, 65, 76)
- Vicia amoena* Fisch. "Tsuru-fujibakama"
 Pod, "Saya-fushi" new name. *Asphondylia* sp. Kanzawa. (65, 76)
- Vicia cracca* L. "Kusafuji"
 Leaf, "Haore-fushi" Mon. *Dasineura viciae* (Kieffer). (18, 53, 61, 63, 76)
- Vicia pseudoorobus* Fisch. et Mey "Ôba-kusafuji"
 Leaf, "Shintome-fushi" Sh. *Dasineura vicicola* Sh. (56, 63, 76)
 Leaf, "Haore-fushi" Mon. *Dasineura viciae* (Kieffer). (18, 76)
- Vicia unijuga* A. Br. "Nanten-hagi"
 Leaf, "Shintome-fushi" Sh. *Dasineura vicicola* Sh. (56, 63)

Wisteria floribunda (Willd.) DC. "Fuji"

Flower bud, "Hana-fushi" new name. *Dasineura wisteriae* Mani. (9, 76)

Leaf, "Ha-fukure-fushi" Mon. Adult unknown. (5, 18)

Leaf, "Hamaki" Mon. Adult unknown. (20)

Leaf, "Haore" Mon. Adult unknown. (19)

Rutaceae*Citrus unshiu* Marc. "Unshû-mikan"

Flower bud, "Tsubomi-fushi" new name. ? *Diplosis okadai* Miyoshi. (37, 38, 39, 64, 76)

Euphorbiaceae*Euphorbia pekinensis* Rupr. var. *japonensis* Makino "Takatôdai"

Leaf, "Ha-tsuzuri" Sh. ? *Silvestrina euphorbiae* (Sh.). (58, 63, 76)

Aquifoliaceae*Ilex chinensis* Sims. "Nanamenoki"

Axillary bud, "Me-tama-fushi" Mon. *Asteralobia sasaki* (Mon.). (5, 18, 22, 76)

Ilex crenata Thunb. "Inutsuge"

Axillary bud, "Me-tama-fushi" Mon. (= "Tama-fushi" Sh.). *Asteralobia sasaki* (Mon.). (7, 16, 18, 22, 24, 30, 32, 41, 44, 52, 61, 63, 76)

Ilex crenata Thunb. subsp. *radicans* (Nakai) Tatewaki "Hai-inutsuge"

Axillary bud, "Me-tama-fushi" Mon. *Asteralobia sasaki* (Mon.). new host rec. Ojiyashi, Niigata-ken, 22. V. 1975, K. Senuma leg.

Ilex integra Thunb. "Mochinoki"

Axillary bud, "Me-tama-fushi" Mon. (= "Me-fushi" Sh.). *Asteralobia sasaki* (Mon.). (18, 44, 63, 76)

Ilex pedunculosa Miq. "Soyogo"

Axillary bud, "Me-tama-fushi" Mon. *Asteralobia soyogo* (Kikuti). (7, 18, 30, 76)

Ilex serrata Thunb. "Umemodoki"

Leaf, "Hama-chijimi" Sh. ? *Rhopalomyia ilexifoliae* Sh. (63)

Aceraceae*Acer mono* Maxim. "Itaya-kaede"

Leaf, "Ha-fukure" Mon. Adult unknown. (18)

Leaf, "Ha-chijimi" Mon. Adult unknown. (20)

Leaf, "Hamyaku-fushi" **new gall rec.** Adult unknown. Gouty vein gall on lower surface, opening along a slit on upper surface; each gall containing more than 1 larva. This gall is similar to that on *Acer rubrum* caused by *Dasineura communis* Felt in N. America.³ Ôgino-sen, Hyôgo-ken, 13. VI. 1963, A. Nakanishi leg.; Ichifusa-yama, Kumamoto-ken, 11. V. 1967, J. Yukawa leg.

Balsaminaceae

Impatiens nolitangere L. "Ki-tsurifunesō"

Stem, "Kuki-tama-fushi" Sh. *Lasioptera impatientis* (Osten-Sacken). (45, 47, 48, 61, 63, 76)

Rhamnaceae

Berchemia racemosa Sieb. et Zucc. "Kuma-yanagi"

Petiole, "Haguki-fushi" new name. ? *Clinodiplosis kumayanagi* (Sh.). (54)

Rhamnus crenata Sieb. et Zucc. "Isonoki"

Axillary bud or terminal bud, "Mefukure" Mon. Adult unknown. (19)

Vitaceae

Ampelopsis brevipedunculata (Maxim.) Trautv. var. *heterophylla* Hara "Nobudō"

Fruit, "Mi-fushi" Mon. *Asphondylia baca* Mon. (18, 22, 24, 25, 46, 61, 63, 76)

Leaf, petiole, "Ha-fushi" Sh. Adult unknown. (63)

Vitis coignetiae Pulliat "Yama-budō"

Stem, petiole, "Tsuru-fushi" Sh. *Dasineura vitis* Felt. (63)

Stem, "Tsuru-fukure" Sh. *Dasineura* sp. Sh. (63)

Leaf, "Tokkuri-fushi" Mon. (= "Eboushi-fushi" Sh.). ? *Cecidomyia viticola* Osten-Sacken. (18, 47, 63)

Leaf, "Haura-tokkuri-fushi" Mon. Adult unknown. (20)

Leaf, "Kobu-fushi" Sh. Adult unknown. (63)

Vitis ficifolia Bunge var. *lobata* (Bunge) Nakai "Ebizuru"

Leaf, "Tokkuri-fushi" Mon. This gall is probably the same as that caused by ? *Cecidomyia viticola* on *Vitis coignetiae*. (18)

Leaf, "Ha-kobu-fushi" **new gall rec.** Adult unknown. Subglobular swelling on upper and lower surfaces; diameter 2.5 to 3.1 mm, thickness 3.0 to 4.3 mm; monothalamous. Shiroyama, Kagoshima-shi, 17. V. 1971, J. Yukawa leg.

Vitis flexuosa Thunb. "Gyōjanomizu" (= "Sankaku-zuru")

Petiole, "E-tama-fushi" Sh. Adult unknown. (63)

Vitis vinifera L. "Budō"

Leaf, "Eboushi-fushi" Sh. ? *Cecidomyia viticola* Osten-Sacken. (63)

Fruit, "Mi-fushi" new name. ? *Cecidomyia* sp. (64)

Elaeocarpaceae

Elaeocarpus sylvestris (Lour.) Poir. var. *ellipticus* (Thunb.) Hara "Horutonoki"

Leaf, "Haura-eboushi-fushi" **new gall rec.** Midge not identified. Cone-shaped swelling on lower surface; green, smooth on surface; height 3.1 to 4.4 mm, basal width 2.0 to 2.4 mm; monothalamous (Fig. 6). Shiroyama, Kagoshima-shi, 12. IX. 1973, K. Takahashi leg.; Nakamyō, Kagoshima-ken, 15. I. 1974, K. Takahashi leg.

Tiliaceae*Tilia japonica* Simk. "Shinanoki"Petiole, "E-fukure" Mon. *Contarinia tiliarum* Kieffer. (20)**Actinidiaceae***Actinidia polygama* (Sieb. et Zucc.) Maxim. "Matatabi"Fruit, "Mi-fushi" Mon. *Pseudasphondylia matatabi* (Yuasa & Kumazawa). (18, 63, 74, 76)**Theaceae***Eurya emarginata* (Thunb.) Makino "Hama-hisakaki"Stem, "Eda-kobu-fushi" Mon. Adult unknown. new host rec. This gall is probably the same as that on *Eurya japonica*, caused by the same species. Anbô, Yaku-shima, Kagoshima-ken, 25. VII. 1971, K. Takahashi leg.*Eurya japonica* Thunb. "Hisakaki"Stem, "Eda-kobu-fushi" Mon. Midge not identified (*Asphondyliidi*). (5, 20)**Violaceae***Viola keiskei* Miq. f. *okuboi* (Makino) F. Maekawa "Ke-maruba-sumire"

Petiole, "E-fushi" Mon. Adult unknown. (20)

Elaeagnaceae*Elaeagnus* sp.

Axillary bud, "Me-fushi" Sh. Adult unknown. (63)

Bud, "Me-fukure" Mon. Adult unknown. (20)

Araliaceae*Acanthopanax sieboldianus* Makino "Ukogi"Stem, "Eda-tsuto-fushi" Sh. *Lasioptera ukogi* Sh. (62, 63, 76)

Petiole, "E-tama-fushi" Sh. Adult unknown. (63)

Fatsia japonica (Thunb.) Decne. et Planch. "Yatsude"

Petiole, "Haguki-fushi" Sh. Adult unknown. (63)

Hedera rhombea Sieb. et Zucc. "Kizuta"Fruit, "Mi-fushi" **new gall rec.** *Asphondylia* sp. Galled fruit smaller than normal one; usually 1 larva inhabiting each gall. Nogôchi, Fukuoka-ken, 11. V. 1965, J. Yukawa leg.; Ino, ditto, 18. V. 1965, J. Yukawa leg.; Hiko-san, ditto, 24. V. 1965, T. Saigusa leg.; Ibusuki-shi, Kagoshima-ken, 9. II. 1975, K. Yamagishi leg.

Umbelliferae

Oenanthe javanica (Blume) DC. "Seri"

Fruit, "Mi-fushi" Mon. Adult unknown. (20)

Cornaceae

Aucuba japonica Thunb. "Aoki"

Fruit, "Mi-fushi" Mon. (= "Okuremi" Sh.). *Asphondylia baca* Mon. (18, 22, 63, 75, 76)

Leaf, "Ha-fukure" Sh. Adult unknown. (63)

Aucuba japonica Thunb. var. *borealis* Miyake et Kudo "Hime-aoki"

Fruit, "Mi-fushi" Mon. *Asphondylia baca* Mon. (18)

Summary

Over 100 sorts of midge gall on 102 plant species belonging to 30 families included in Choripetalae are listed. Twelve sorts of gall on 13 plant species recorded, for the first time, from Japan, and they are briefly described under new Japanese names. Three plant species and 1 subspecies are newly recognized as host plants. New Japanese names are given to 16 unnamed galls.

Entries for each gall are arranged in the following order: (i) Gall bearing organs; (ii) Japanese name of the gall followed by the author name, or, if no author is given, the name is proposed for the first time; (iii) Scientific name of the gall midge; (iv) References.

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Explanation of figures

- Fig. 1. Leaf gall, "Usu-fushi" on *Pasania edulis*, "Mateba-shii"
 Fig. 2. Leaf gall, "Ko-hirata-fushi" on *Ficus wightiana*, "Akô"
 Fig. 3. Leaf gall, "Hakobu" on *Illicium religiosum*, "Shikimi"
 Fig. 4. Fruit gall, "Mi-fushi" on *Prunus zipperiana*, "Bakuchinoki"
 Fig. 5. Leaf gall, "Hafukure" on *Machilus thunbergii*, "Tabunoki"
 Fig. 6. Leaf gall, "Haura-eboushi-fushi" on *Elacocarpus sylvestris* var. *ellipticus*, "Horutonoki"
 Fig. 7. Stem gall, "Eda-fushi" on *Actinodaphne lancifolia*, "Kagonoki"
 Fig. 8. Stem gall, "Eda-fushi" *Actinodaphne longifolia*, "Baribarinoki"
 Fig. 9. Stem gall, "Eda-fushi" on *Machilus thunbergii*, "Tabunoki"

