

1952, KAG).

The genus *Farfugium* includes only two species: *F. japonicum* and *F. hiberniflorum*. The former occurs in southern Korea, southwestern Japan, the Ryukyu Islands and Taiwan. It frequently hybridizes with *F. hiberniflorum* in the lowlands of Yakushima and the hybrids are nearly 100% sterile (Yahara et al. 1986).

83. *Ixeris parva* (Kitamura) Yahara, **stat nov.**

Ixeris dentata f. *parva* Kitamura, Comp. Jap. 5: 118, 1956. **Syntypes.** Hana-noego, Y. Doi, July 27, 1932, fr., lectotype, new designation (KYO); Mt. Nagata, Z. Tashiro, Aug. 7, 1923, fr. (KYO).

Japanese name. Yakushima-nigana.

Specimens examined. Near the summit of Mt. Miyanoura (G. Murata & H. Tabata 48, Aug. 3, 1974, fl., fr., KYO); Hananoego to Minamizawa Gorge, 1600 m (K. Iwatsuki et al. 59, Sept. 1, 1977, fr., KYO); Hananoego, 1500 m (K. Inoue & M. Sugiyama, July 14, 1977, fl., TI).

In the highlands of Yakushima, two distinct species of *Ixeris* are found. One is a dwarf form of *I. dentata* with few radical leaves and usually with stolons. The other usually has rosette leaves at flowering time as in *I. alpicola* and has been confused with it (Hatusima 1978, Shimizu 1982). It is also distinguished from the dwarf form of *I. dentata* by its characteristic whitish green leaves with many conspicuous patent teeth along the margins and petioles. Although Kitamura regarded it as a form of *I. dentata*, I regard it as a distinct species. *I. alpicola* is distinguished from *I. dentata* in having the inner involucre bracts more than 8 and fewer hairs in the pappus (Yahara unpublished). *I. parva* has more pappus hairs than *I. alpicola*. On the other hand, it is similar to *I. alpicola* in having rosette leaves at flowering time, linear cauline leaves and whitish green leaves. Number of involucre bracts varies from 5 to 8 in *I. parva*. *I. parva* may be derived from hybridizations between *I. dentata* and *I. alpicola*. Further studies is needed to elucidate the nature of this taxon and it is here tentatively treated as a species.

84. *Ixeris yakuinsularis* Yahara, **sp. nov.**

Ixeris laevigata sensu Hatusima, List, rev. ed. 173, 1986, quoad pl. ex Yakushima.

Species apomicta polyploidea, probabiliter hybridogena inter *I. dentatam* et *I. laevigatam*. A *I. dentata* foliis rosulatis 7–30, lanceolatis et flavidis, foliis caulinis linearibus, a *I. laevigata* foliis tenuioribus et pappis longioribus quam 3.5 mm differt.

Perennial without stolons. Stem erect or spreading at the base, 15–25 cm high. Basal leaves well-developed at flowering time, 7–30, lanceolate to oblong-lanceolate, 5–15 cm long, 0.7–2 cm wide, the cauline ones linear, 2–8 cm long. Inflorescence terminal, compound, the upper branches sometimes clustered. Inner involucre bracts 8–10, 6–7 mm long. Ligulate flowers yellow, 4–5 mm long. Achenes 4.5–5 mm long, beaked, pappus 4–5 mm long.

Type. Around Ohkonotaki (Waterfall), ca. 80 m alt. Oct. 22, 1983. J. Murata, T. Yahara, F. Shimozono and H. T. Im 15747 (TI).

Japanese name. Kosugi-nigana.

Specimens examined. Ohkonotaki (S. Hatusima 41370, Aug. 4, 1986, sterile, KAG); Haru (K. Kawanabe 5074, Jan. 3, 1959, fl., fr., KAG); interior of Nagata (K. Iwatsuki 3290, Aug. 22, 1957, fr., KYO).

This species is a triploid karyotypically distinct from *I. dentata* (Watanabe unpublished). Emasculation did not decrease fruit set and this species is regarded as agamospermous. This is morphologically intermediate between *I. dentata* and *I. laevigata* and suspected to be an allopolyploid between them. It is distinguished from *I. dentata* by its well-developed rosettes, lanceolate and yellowish basal leaves, linear cauline leaves, and from *I. laevigata* by its thinner leaves and longer pappus. *I. laevigata* is an exclusively sexual species, occurring throughout tropical and subtropical Asia, the Ryukyu Islands and southern Kyushu, but not on Yakushima. According to a photograph taken by Mr. J. Aoyama, *I. yakuinsularis* occurs on Tanegashima Island neighbouring to Yakushima.

85. *Myriactis japonensis* Koidzumi, Bot. Mag. Tokyo 38: 98, 1924; Makino et Nemoto, Fl. Jap. ed. 2, 1252, 1931; Masamune, Fl. 441, 1934; Kitamura, Comp. Jap. 1: 387, t. 35, f. 1, 3, 1937; Hara, Enum. 2: 233, 1952; Ohwi, Fl. 1163, 1953; Kitamura et al. Synpet. 68, 1957; Ohwi, Fl. rev. 1325, 1965; Hatusima, List 139, 1978; Kitamura in Satake et al. Wild Fl. 3: 190, 1981. **Type.** Mt. Miyanoura-dake, G. Koidzumi, Sept. 1921, holotype KYO, isotype TI.

Solenogyne japonensis (Koidzumi) Masamune, Prel. Rep. 129, 1929, comb. nud.

Japanese name. Hime-kiku-tabirako (Koidzumi 1924).

Representative specimens examined. Between Kurio and Nagata, 1000 m (S. Sako 6534, Oct. 22, 1966, KAG); Hananoego to Mt. Miyanoura, 1600 m (Suzuki et al., Aug. 7, 1961, fl. bud, TI); Mt. Nagata (Z. Tashiro, Aug. 9, 1923, fl., KYO); Mt. Miyanoura-dake (M. Tagawa 1923, Aug. 17, 1933, KYO); near Hananoego, 1500 m (S. Sako 5869, Nov. 6, 1965, KAG); Hananoego to Minamizawa, 1600 m (K. Iwatsuki et al. 57, Sept. 1, 1977, KYO); Kosugidani to Hananoego, 1400 m (T. Yamazaki, Aug. 24, 1963, fl., TI), ditto 1500 m (S. Hatusima, Oct. 25, 1950, KAG); Hanayama Forest Reserve, along Migimata, 1050–1250 m (J. Murata et al. 15925, Oct. 25, 1983, fl., TI, ditto, Migimata to Mt. Koyoji, 1050–1400 m (J. Murata et al., Oct. 26, 1983, fl., TI); without exact locality (G. Masamune, July 25, 1927, TI); near Yodokoh-goya, 1100–1400 m (S. Mitsuta & D. E. Boufford 47, Oct. 1977, KYO).

This species is close to *M. humilis* Merr. of the high mountains of Taiwan and the Phillipines in its pinnately dissected leaves.

86. *Saussurea yakusimensis* Masamune, J. Trop. Agr. 2: 26, 1930; Fl. 452, 1934. **Type.** Mt. Nagata-dake, G. Masamune, Aug. 23, 1928 (NTU).

Japanese name. Yakushima-higotai (Masamune 1930).

Specimens examined. Mt. Nagata-dake (G. Masamune, July 27, 1927, fl. bud, TI; M. Tagawa 1917, Aug. 17, 1933, fl. bud, KYO, TI), ditto, near the peak (Y. Kimura 39-183, Aug. 4, 1939, fl. bud, TI), ditto, 1850 m (S. Hatusima 14780, Oct. 29, 1950, fl., KAG), ditto, 1886 m (H. T. Im 3456, 2457, 3458, Oct. 2, 1984, fl., TI); Mt. Hichigo-dake (S. Kawagoe, Aug. 18, 1911; KAG; H. Iwagawa, Sept. 5, 1983, fl., KAG; H. T. Im 3429, Sept. 25, 1985, fl., TI).

This species is close to *S. nipponicum* from which it is distinguished by having leaves densely covered with whitish rugose hairs and zigzag stems. *S. nipponicum*