

achenium, habit of the involucre after blossoming, and the comparative lengths of the beak and the body of the achenium. It extends sparingly throughout Japan, especially grows in field, and perishes early in summer.

Lactuca (*Ixeris*) **chelidonifolia** Makino sp. nov. in sched. herb. Sc. Coll. Imp. Univ. Tokyo, 1896.

A glabrous mountainous annual, branching close to the base, 5-40 cm high. Tap-root often obliquely descending, slender, tapering downwards, sometimes branched, with fine rootlets. Stem and branches slender, terete, smooth, often flexuous, the branches more often spreading. Leaves sparse, petioled, oblong or elliptical-oblong in outline, odd-pinnatisected, nearly glaucous beneath, thin and herbaceous, 2-6 cm broad, 4-12 cm long including the petiole; divisions spreading, generally more or less subopposite, apart from one another, 3-4 on each side of the rachis, obliquely ovate, inferior ones smaller, scantily and coarsely lobato-dentate or sometimes lobate, mucronate-acute, gradually or often rather abruptly narrowed towards the base so as to form a petiolule but abruptly dilated at the base and decurrent-adnate to the rachis, larger ones about 3 cm long, $1\frac{1}{2}$ cm wide, teeth deltoid and mucronate-acute, veins not conspicuous; rachis slender, filiform; petiole slender, rather long, slightly dilated and bears small angular stipulaceous leaflets at the base. Corymb small, terminating the stem and branches. Head small, pedicellate. Involucre cylindrical-oblong, furnished with 3 minute blackish-green deltoid-ovate obtuse scaly bracts close to it below; involucreal-bracts 5, linear-strap-shaped, herbaceous, the inner ones much broader and linear-oblong with hyaline margins, even-sided, obtuse and villosulate at the apex, usually trinerved, about 5 mm long in flower and 6 mm in fruit. Receptacle minute, flat. Florets few and 4-5 in each head, all ligulate. Corolla yellow, exceeds the pappus; ligule thin, broadly ligulate, 5-dentate at the end; basal tubular part slender and glabrous. Anther with a broad obtuse tongue at the tip and sagittate at the base, about $1\frac{1}{3}$ mm long. Ovary minute, obovate-oblong, glabrous; style filiform, minutely puberulent above, bifid with 2 slender recurved arms. Pappus many, simple, white but often yellow at the base, finely scabrous. Achenium dark-brown, cylindrical-fusiform, slightly compressed, longitudinally 10-ribbed, not beaked but gradually narrowed above, hispidulous-scabrous above, 4- scarcely 5 mm long.

Nom. Jap. *Kusanoōba-no-kiku* (S. Ōkubo).

Hab. Prov. SHIMOTSUKE: Mt. Nikkō (T. Makino! Aug. 1884; Z.

Matsumura! Aug. 16, 1885, herb. Sc. Coll. Imp. Univ. Tokyo; *K. Nemoto!* Oct. 1892); Prov. MUSASHI: Mt. Yōkami-yama in Chichibu (*T. Makino!* July 16, 1888); Prov. TOSA in Shikoku: Mt. Tebako-yama (*T. Makino!* Aug. 1885; *R. Yatabe!* Aug. 8-9, 1898, herb. Sc. Coll. Imp. Univ. Tokyo).

This rare and singular species is found grown especially on mossy rocks under shady trees in mountainous districts, and flowers late in autumn. Sterile specimens present the appearance entirely uncommon to the genus.

Lactuca (Ixeris) denticulata Maxim. α . typica Maxim. lus pinnatipartitus Makino.

Leaves pinnatipartite, sometimes lyrate, winged-petioled, auricled and amplexicaul at the base, mucronate-obtuse at the apex, flaccid, glaucous beneath; segments patent, few on both sides, unequal in size, cuneato-ovate or oblong, often scantily lobato-dentate or denticulate with mucronate tips, sinuses open and often broadly rounded at the bottom.

Nom. Jap. *Hana-yakushi-sō* (*T. Makino* nom. nov.).

Hab. Prov. TOSA: Mt. Yokogura-yama (*T. Makino!* Oct. 1892), Tokano-mura (*T. Makino!* June 1893); Prov. MUSASHI: Tokyo (*T. Makino!* June 1898).

This differs from the typical form in the pinnatipartite leaves, and is rarely met with in this country, while the latter is very common.

Lactuca (Ixeris) Thunbergii Maxim. var. β . albiflora Makino.

Rhizome short, often shortly branched, the branch sometimes shortly slender and stolon-like. Involucre often very slightly thicker. Florets 7-11 in each head. Corolla white, often tinged externally with light lilac-colour. Achenium finely scabrous. Other characters are as in the type.

Nom. Jap. *Shirohana-nigana* (*T. Makino*).

Hab. Prov. IWASHIRO: Aidzu (Herb! Sc. Coll. Imp. Univ. Tokyo), Mt. Iide-san (l. c. !); Prov. SHINANO: Mt. Togakushi-yama (l. c. !); Prov. ISHIKARI in Hokkaidō: Sapporo (l. c. !); Prov. TOSA: Ochi (*T. Makino!* May 6, 1889), Sakawa (*T. Makino!* May 8, 1889), Godai-san, Kōchi (*T. Makino!* 1892); etc.

Florets of the typical one, *a. flaviflora* m., are usually 6-5 in each head, but sometimes 10-11 in the boreal form, and 7-11 in the white-flowered variety. This variety is found all over this country, though not so common as the type. Asa Gray's *Ixeris albiflora* may be identical to my plant.