Taiwania, **52**(2): 177-183, 2007

A Revision of *Uraria* (Leguminosae) in Taiwan

Hiroyoshi Ohashi[1,3] and Yu Iokawa[2]

(Manuscript received 14 November, 2006; accepted 30 January, 2007)

ABSTRACT: Four species of *Uraria* recorded in the Flora of Taiwan second edition (Huang and Ohashi, 1993) are revised in an identity, author citations, original reference, morphological characters or distributions. The following names are considered to be corrected for the *Uraria* of Taiwan; *Uraria crinita* (L.) Desv. ex DC., *U. lagopodioides* (L.) Desv., *U. neglecta* Prain and *U. picta* (Jacq.) Desv. ex DC.

KEY WORDS: ***Uraria*, Leguminosae, Taiwan.**

INTRODUCTION

In Flora of Taiwan second edition, four species were recognized in the genus *Uraria* in Taiwan (Huang and Ohashi, 1993). They are *U. aequilobata* Hosokawa, *U. crinita* (L.) Desv. ex DC., *U. lagopodioides* (L.) Desv. ex DC. and *U. picta* (Jacq.) DC. Results of a recent study on Chinese *Uraria* (Ohashi et al., 2006) revealed necessity of a revision for these species. This paper aims to revise the genus in the Flora of Taiwan second edition.

TAXONOMIC TREATMENTS

1. Correction for *Uraria aequilobata* Hosokawa

A specimen collected by U. Faurie in Taiwan in 1915 is kept in the herbarium of Harvard University Herbaria (Fig. 1). The specimen was referred to *Uraria lagopodioides* by Merrill, but is apparently referable to *U. neglecta* Prain. *Uraria neglecta* had been mixed with *U. lagopodioides* Wallich, *U. hamosa* Wallich, *U. lagopoides* Royle or *U. lagopus* Royle (Prain, 1897; Schindler, 1928). The epithet must be derived from the overlooked recognition of the species before it was recognized as a new species in 1897. Matsumura (1899) distinguished a variety from *U. hamosa* Wallich based on a specimen collected by Tashiro in Taitung, Taiwan in September 1896, i.e., var. *formosana* Matsumura. There are three herbarium sheets that are type specimens of the variety in TI. One of them was selected as lectotype (Fig. 2) by Ohashi et al. (2006) and the remaining two are isolectotypes (Figs. 3 & 4). Hosokawa (1932) considered the variety as a distinct species and gave a new epithet *aequilobata*, i.e. *U. aequilobata* Hosokawa. He could not use the Matsumura's epithet because there was already the same name *Uraria formosana* (Hayata) Hayata for another species based on a different type. He recorded the species from Taiwan and Hongkong. This taxon is identical with *U. neglecta* Prain.

In the first edition of Flora of Taiwan *Uraria neglecta* was recognized as *U. lagopodioides* (L.) Desv. ex DC. (Huang and Ohashi, 1977) and in the second edition it was as *U. aequilobata* Hosok. (Huang and Ohashi, 1993). However, these treatments must be emended. *Uraria neglecta* is known not only in Hongkong but also in Prov. Fujian, Guangdong, Hainan, Jiangxi, and Zhejiang in China mainland. The species is distributed in Taiwan, China, India, and Nepal.

The new treatment of the names is as follows:

Uraria neglecta Prain in J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. 66: 382 (1897); Ohashi, Iokawa & Dy Phon in J. Jpn. Bot. 81: 347 (2006).

Uraria hamosa Wall. var. *formosana* Matsum. in Ito & Matsum., Tent. Fl. Lutch. 411 (1899) [Type: Formosa orientali: in jurisdictione Taitoo (=Taitung). *Y. Tashiro 10* (TI lectotype and isolectotypes)]; Hayata, Icon. Pl. Formos. 1: 188 (1911).

Uraria aequilobata Hosok. in J. Soc. Trop. Agric., Taiwan 4: 202 (1932); Huang & Ohashi in Fl. Taiwan ed. 2, 3: 379 (1993).

Uraria lagopodioides auct. non (L.) Desv. ex DC.: Huang & Ohashi, Fl. Taiwan 3: 402 (1977), *p. p., incl. syn. cit. U. aequilobata et fig. 658*.

2. Correction for *Uraria crinita* (L.) Desv. ex DC.

In Flora of Taiwan second edition the original publication of *Uraria crinita* (L.) Desv. ex DC. was recorded as published in "J. Bot. 1: 123. 1813", but this is an error. The name of this species appeared for

1. Botanical Garden, Tohoku University, Sendai, 980-0862 Japan.
2. Department of Biology, Joetsu University of Education, Joetsu, 943-8512 Japan.
3. Corresponding author. Email: ohashi@mail.tains.tohoku.ac.jp

臺灣人文藝術 期刊資料庫



Fig. 1. *Uraria neglecta* Prain. Voucher specimen: Formosa. *U. Faurie 8254* (A).

the first time simply as "Il renferme l'*Hedysarum crinitum*" under genus "*Uraria*, Desv." in *Journal de Botanique* (Desvaux, 1813).

Apparently the name was not validly published in the work in 1813. Candolle (1825) validly published the species as "*U. crinita* (Desv! l. c.)" in his Prodromus Systematis Naturalis Regni Vegetabilis 2: 324 (1825) with description, place of origin, and basionyms. Therefore, the correct citation of author of the name is either Desv. ex DC. or DC. with the original publication of the name.

The leaflets of *Uraria crinita* in Taiwan are usually obtuse or mucronate at apex (Fig. 5), not acuminate as described in Flora of Taiwan second edition (1993).

The distribution of this species was recorded in Flora of Taiwan second edition as "India, S. E. Asia, Mainland China and Australia", but the species is not found in Australia. The area of distribution is shown in detail here.

The new treatment for the species is as follows:

臺灣大學學術期刊資料庫



Fig. 2. Lectotype of *Uraria hamaosa* Wall. var. *formosana* Matsum. with the label written by Matsumura and an unpublished name written by Hayata on the sheet (from Ohashi et al., 2006).

Uraria crinita (L.) Desv. ex DC., Prodr. 2: 324 (1825); Huang & Ohashi in Fl. Taiwan ed. 2, 3: 379 (1993), with the invalidly published reference.

Basionym: *Hedysarum crinitum* L., Syst. Nat. ed. 12, 2: 495 (1767), & Mant. Pl. 102 (1767).

Leaflets usually obtuse or mucronate at apex.

Distribution: India, Bangladesh, Myanmar, Thailand, Brunei, Indonesia, Malaya, Phillipines, Papua New Guinea, Sabah. Cambodia, Laos, Vietnam, southern China, Taiwan, and Japan (southern Ryukyus).

3. Author of *Uraria lagopodioides* (L.) Desv. ex DC.

The author of *Uraria lagopodioides* was cited as "(L.) Desv. ex DC." in Flora of Taiwan second edition, but the correct author of the combination is Desvaux. *Hedysarum lagopodioides* L. was considered by Desvaux as a member of *Uraria* first in 1813, but the combination was merely suggestive as was the same case in *U. crinita* mentioned above. However, Candolle (1825) made his new

臺灣大學學術期刊資料庫



Fig. 3. One of isolectotype of *Uraria hamaosa* Wall. var. *formosana* Matsum. with a note written by Hayata on the sheet.

combination based on *Hedysarum lagopoides* Burm. f., not *H. lagopodioides* L. Linnaeus (1753) described the pod of *H. lagopodioides* as "legumina monosperma" on page 1198, not 1057 as cited by Candolle (1825). Candolle (1825) showed a doubt that *H. lagopodioides* L. belongs to a member of *Lespedeza*, but also cited *L. lagopoides* Pers. with *H. lagopodioides*. The combination *Uraria lagopodioides* (L.) was validly published by Desvaux in Mem. Soc. Linn. Paris 4: 309 (1826).

The area of distribution of *Uraria lagopodioides* was insufficient in Flora of Taiwan second edition. This species is more widely distributed in Asia than described in the Flora.

The correct author name and distribution of the species are as follows:

Uraria lagopodioides (L.) Desv. in Mém. Soc. Linn. Paris 4: 309 (1826); Huang & Ohashi in Fl. Taiwan ed. 2, 3: 379 (1993), as erroneously Desv. ex DC.

臺灣大學學術期刊資料庫



Fig. 4. One of isolectotype of *Uraria hamaosa* Wall. var. *formosana* Matsum. with the original label prepared by the collector, Tashiro.

Hedysarum lagopodioides L., Sp. Pl. 1198 (1753) [Type: China. Yunnan. 29 Jun. 1892. Tanant (P [sheet No. 1] neotype designated by Dy Phon & Adema in Taxon 46: 471 (1997))].

Hedysarum lagopoides Burm. f., Fl. Ind. 168, t. 53, fig. 2 (1768), nom superfl.

Uraria lagopoides DC., Prodr. 2: 324 (1825); Hemsl. in Forbes & Hemsl. in J. Linn. Soc. Bot. 23: 178 (1887); Henry in Trans. Asiat. Soc. Jap. 24. Suppl. 34 (1896); Hayata, Icon. Pl. Formos. 1: 188 (1911).

Distribution: Asia and Australia, and in Asia it is found in India, Nepal, Sikkim, Bhutan, Myanmar, Thailand, Brunei, Indonesia, Malaya, Phillipines, Papua New Guinea, Sabah, Cambodia, Laos, Vietnam, southern China, Taiwan, and Pacific Isl.

4. Author citation of Uraria picta (Jacq.) DC.

Uraria picta was first proposed by Desvaux (1813) as "Il renferme l'*Hedysarum pictum*" under "*Uraria*, Desv." on page 123 in *Journal de Botanique*. However, in the Flora of Taiwan second

臺灣大學學術期刊資料庫



Fig. 5. *Uraria crinita* Desv. ex DC. Voucher specimen: Taiwan. Pingtung Co., Litingashan, alt. 100 m. *T.C. Huang et al. 16129* (A).

edition the author name was cited merely as DC. This citation is correct in accordance with the International Code of Botanical Nomenclature Art. 46.4 (McNeille et al., 2006). For a uniformity of the author citation of the name between this species and *U. crinita* in the Flora of Taiwan second edition the citation of author name should be either Desv. ex DC. or DC.

The distribution of this species was indicated insufficiently in Flora of Taiwan second edition, but is revised here.

Uraria picta (Jacq.) Desv. ex DC., Prodr. 2: 324 (1825); Huang & Ohashi in Fl. Taiwan ed. 2, 3: 381 (1993).

Distribution: Africa, Asia and Australia. Asia: Pakistan, Sri Lanka, India, Nepal, Sikkim, Bhutan, Bangladesh, Myanmar, Thailand, Brunei, Indonesia, Malaya, Phillipines, Papua New Guinea, Sabah, Cambodia, Vietnam, southern China, and Taiwan.

臺灣大學學術期刊資料庫

LITERATURECITED

Candolle, A. P. de. 1825. CXLI. *Uraria* Desv. In: Prodromus Systematis Naturalis Regni Vegetabilis **2**: 324-325. Treuttel et Würtz, Paris, France.

Desvaux, N. A. 1813. Précis des caractères de plusieurs genres de la famille des Légumineuses. In: Journal de botanique, appliquée à l'a griculture, à la pharmacie, à la médecine et aux arts. Paris, France. pp. 118-125, pls. 4-6.

Hosokawa, T. 1932. Notulae Leguminosarum ex Asiae-orientale I. J. Soc. Trop. Agric. **4**: 197-203.

Huang, T.-C. and H. Ohashi. 1977. *Uraria*. In: Huang, T.-C. et al. (ed.), Flora of Taiwan, 1st ed. **3**: 399-404. Editorial Committee, Epoch Publishing Co., Ltd., Taipei, Taiwan.

Huang, T.-C. and H. Ohashi 1993. *Uraria*. In: Huang, T.-C. et al. (ed.), Flora of Taiwan, 2nd ed. Flora of Taiwan, **3**: 377-381. Editorial Committee, Dept. Bot., NTU, Taipei, Taiwan.

Linnaeus, C. 1753. Species Plantarum. Facsimile edition Ray Society, London. England, UK. 1200pp.

Matsumura, J. 1899. Leguminosae. In: Ito, T. and J. Matsumura. Tentamen Florae Lutchuensis. J. Sci. College, Imp. Univ. Tokyo. **12**: 393-444.

McNeill, J., F. R. Barrie, H. M. Burdet, V. Demoulin, D. L. Hawksworth, D. Marhold, D. H. Nicolson, J. Prado, P. C. Silva, J. E. Skog, J. H. Wiersema and N. J. Turland. 2006. International Code of Botanical Nomenclature (Vienna Code). Koeltz Scientific Books, Königstein, Germany. 568pp.

Ohashi, H., Y. Iokawa and P. Dy Phon. 2006. The genus *Uraria* (Leguminosae) of China. J. Jpn. Bot. **81**: 332-361 .

Prain, D. 1897. Noviciae Indicae XV. Some additional Leguminosae. J. Asiat. Soc. Bengal, Pt. 2, Nat. Hist. **66**: 347-518.

Schindler, A. K. 1928. Die Desmodiinen in der botanischen Literatur nach Linne. Repert. Spec. Nov. Regni Veg. Beih. **49**: 1-371.

臺灣產豆科兔尾草屬植物之訂正

Hiroyoshi Ohashi[1,3] and Yu Iokawa[2]

(收稿日期：2006 年 11 月 14 日; 接受日期：2007 年 1 月 30 日)

摘　　要

本文分別訂正臺灣植物誌第二版中四種兔尾草屬植物之學名、作者引證、原始文獻出處、形態特徵或地理分佈。臺灣兔尾草屬植物之正確名稱應該是：*Uraria crinita* (L.) Desv. ex DC. (兔尾草)、*U. lagopodioides* (L.) Desv. (大葉兔尾草)、*U. neglecta* Prain (圓葉兔尾草) 以及 *U. picta* (Jacq.) Desv. ex DC. (羽葉兔尾草)。

關鍵詞：兔尾草屬、豆科、臺灣。

1. Botanical Garden, Tohoku University, Sendai, 980-0862 Japan.
2. Department of Biology, Joetsu University of Education, Joetsu, 943-8512 Japan.
3. 通信作者。Email: ohashi@mail.tains.tohoku.ac.jp

臺灣大學學術期刊資料庫