

Sinske HATTORI\* & Chien GAO\*\* : **Two new  
*Frullania taxa from China***

服部新佐\*・高 謙\*\* : 中国産ヤスデゴケ属の二新品

1) ***Frullania* (*Frullania*) *changii*** Hatt. & Gao, sp. nov. Fig. 1.

Planta major, fusca; caulis ca 10 cm longus, irregulariter bipinnatim ramosus; lobi foliorum caulinarum remoti, margine ventrali (ad apicem) inflexo, in plano late subtriangulati-ovati, apicale breviter subacuti, basibus dorsalibus bene arcuatis (sed non auriculatis nec appendiculatis), cellulis parvis ( $17-23 \times 10 \mu$  in medio lobi), parietibus validis, flexuosis cum trigonis subnodulosus; lobuli cauli contigui, paralleli vel leviter nutantes; amphigastria caulina  $\pm$  patentia, in plano orbicularia,  $1/6(-1/5)$ -bifida, subtransverse inserta; rhizoidea haud visa.

Plants sterile, fuscous; stem ca 10 cm long, 0.13-0.15 mm in diam., irregularly bipinnately branched, primary branches obliquely spreading, 1-1.5 cm long, secondary branches less than 5 mm long, 1-5 each primary branch. Lobes of stem-leaves remote, widely spreading, dorsally extending ca 1.5 the stem-width beyond the farther edge of stem, usually with strongly inflexed ventral margins and, in less degree, dorso-basal margins, when flat widely subtriangular-ovate, 0.95-1 mm long and 1.1-1.2 mm wide,  $\pm$  cordate at bases, dorsal bases strongly arched, but hardly auriculate; cavities of marginal cells  $10-12 \times 8-10 \mu$ , of median cells  $17-23 \times 10 \mu$ , of basal cells  $25-40 \times 15-17 \mu$ , cavities pale ocher to reddish brown, walls subhyaline to pale brownish red, flexuously thickened with subnodulose and often  $\pm$  confluent trigones and intermediate thickenings except for the basal cells whose walls have  $\pm$  trabeculately thickened trigones and intermediate thickenings; lobules clavate, contiguous to and parallel with or  $\pm$  leaning (with heads) to the stem, ca 0.26 mm long and 0.15 mm wide, with obtuse apices and arched and  $\pm$  crenulate or nearly smooth mouths; styli filiform, 10-13-celled containing short (2-celled) apical tooth. Stem-underleaves remote,  $\pm$  patent, usually with very narrowly recurved upper margins, when flat nearly orbicular, ca 0.54 mm long and 0.58 mm wide,  $1/6(-1/5)$ -bifid, sinus acute, lobes subtriangular, acute, inser-

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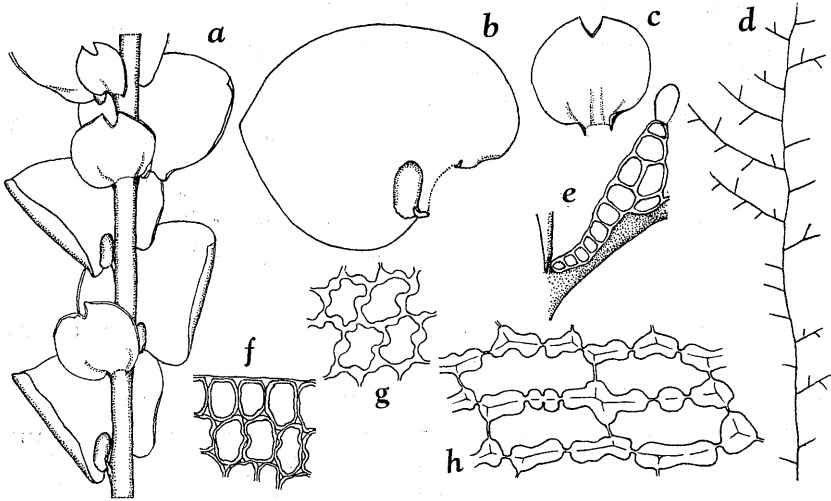


Fig. 1. *Frullania changii* Hatt. & Gao. a: Portion of stem, ventral view,  $\times 22$ . b: Stem-leaf flattened,  $\times 29$ . c: Stem-underleaf flattened,  $\times 29$ . e: Stylus,  $\times 300$ . d: Branching,  $\times 1$ . f-h: Cells of lobe of stem-leaf, f from margin, g from middle, h from base, all  $\times 455$ . Drawn from type.

tions subtransverse, rhizoid-initial areas very poorly developed, rhizoids usually absent.

Type: China. Guangx Prov.: Xing-An Pref.: Mt. Miaoershan, 2040 m, on branches of tree, 5 Sept. 1974, coll. Gao Chien & Chang Kuang-chu 1723—type in NICH; dupl. in hb. Inst. Sylvicul. & Pedol., Acad. Sinic., Shenyang.

Distr.: Known only from the type collection.

The present species is known in sterile condition, but is easily distinguished from any Asian species of sect. *Frullania* by its long stem, widely subtriangular-ovate leaf-lobes with subacute apices, cordate bases (dorsally strongly arched) and *in situ* strongly inflexed ventral margins and by its almost orbicular, 1/6 (-1/5)-bifid underleaves. A tropical Asian species, *Frullania hasskarliana* Lindenb. is similar to the present species, but in *F. hasskarliana* the leaf-lobes are longer and acute or apiculate and the underleaves are usually much longer (comparatively narrower) and often strongly recurved along lateral margins.

2) ***Frullania* (Trachycolea) duthiana** Steph. var. ***szechuanensis*** Hatt. & Gao, var. nov. Fig. 2.

A typo recedit planta majore, lobis foliorum caulinarum laxe imbricatis vel

rarius contiguus, ca 1.1 mm longis et 1.2 mm latis, lobulis ca 0.4 mm longis et latis, amphigastriis caulinis parum remotis, ca 0.8 mm longis et 0.87 mm latis, perianthio pedicellati-clavato, ca 2.6 mm longo et 1.25 mm crasso, solum 3-carinato (sine carinis additis), antice nudo, bracteola intima 1/2-bifida, sinu acuto, lobis triangulatis, acutis, lobo bracteae intimae acuto vel subacuto, lobulo subtriangulato, acuto.

Type : China. Szechuan Prov. : Mt. Omei, Qian-fo Temple, on tree trunk, 2

Aug. 1980, coll. Gao Chien 18815—holotype in NICH; dupl. in hb. Inst. Sylvicul. & Pedol., Acad. Sinic., Shenyang; —, Wanfosi Temple, 3100 m, 2 Aug. 1980, coll. Gao Chien 18861; —, Jinding, on bark of tree, 1 Aug. 1980, coll. Gao Chien 19572; Muli, 3500–4000 m, coniferous forest, on branches of tree, 14 Aug. 1980, coll. Gao Chien 20337; —, 3100 m, on tree trunk, 16 Aug. 1980, coll. Gao Chien 21178; Mt. Erlangshan, 2890 m, on bark of tree, 21 July 1980, coll. Gao Chien 17714; Wolong Natural Preserved Region, 10 Aug. 1979, coll. Q.-z. Zhang 166.

Distr. : Known only from the type collections.

The present variety is larger than the type variety, with larger leaf-lobes and -lobules, underleaves, perianths, and others. The perianths are only 3-keeled without any additional keel and its dorsal surface is completely smooth (without plicae), whereas in the type variety the smaller perianths bear a few additional keels in addition to the 3 main keels. The type variety (var. *duthiana*) has been known from Northwest India, through the Himalayas, to Bhutan, whereas the present variety (var. *szechuanensis*) is known only from the type collections cited

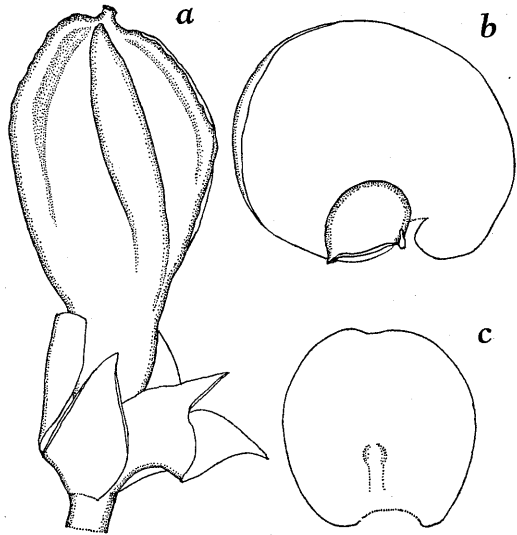


Fig. 2. *Frullania duthiana* var. *szechuanensis* Hatt. & Gao. a: Perianth, bract and bracteole, ventral view,  $\times 22$ . b: Stem-leaf flattened,  $\times 29$ . c: Stem-underleaf flattened,  $\times 29$ . Drawn from holotype (Gao 18815).

above (all from Szechuan Province).

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1) *Frullania changii* の種小名は採集者の一人張光初博士に因む。タイプ標本は 1 点でしかもステリルであったが、アジア産同亜属内でこれに似た種は *F. hasskarliana* しか無い。後者は熱帯アジアに分布し、葉上片が長く、卵形〜だ円形で頂端が尖り、腹葉も通例長く、両側がよく反曲する。

2) *F. duthiana* var. *szechuanensis* は var. *duthiana* よりも大形（植物体のみならず、葉、腹葉なども）で、花被も大きく、単に 3 褶（小形の 2 次褶無し）である。Var. *duthiana* は西北インドからヒマラヤを通じてブータンに知られている。

○ネパール植物誌ヒユ科の追加 (J. M. ムラン) J. Michael MULLIN: Some additions to Amaranthaceae of Nepal

1) The return of some material to British Museum after a long period on loan has shown that a further genus should be added to the account of Amaranthaceae in Hara et al., Enumeration of the flowering plants of Nepal Vol. 3 (1982).

**BOSEA L.**

***Bosea amherstiana*** (Moquin) Hook. f. in Fl. Br. Ind. 4: 716 (1885).

*Deeringia amherstiana* Wall., Cat. 231, n. 6889 (1832), nom. nud.

*Rodetia amherstiana* Moquin in DC., Prodr. 13(2): 323 (1849).

West: *Bis Ram* 445. 1200-2100 m.

W. Himalaya (Kashmir to Nepal).

2) Dr. A. Kanis has recently determined as *Alternanthera paronychioides* St. Hil. a specimen in BM formerly named *A. sessilis* (L.) DC. *A. paronychioides* is a species native to tropical America occasionally recorded in the Old World, presumably as an introduction. It differs from *A. sessilis* in having five not three stamens and oblong not ovate sepals.

***Alternanthera paronychioides*** St. Hil., Voy. Brésil 2: 439 (1833), "*paronychioides*". Pedersen in Darwiniana 14(2-3): 427 (1967).

Cent.: *Codrington* 259. 2160 m,

Tropical America, a rare introduction in Old World tropics.

ネパール産ヒユ科植物に上記 2 種を追加した。

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