

Yoichi YUZAWA* & Sinske HATTORI**: A new
Frullania species from Fukushima, Japan

湯沢陽一*・服部新佐**：福島県産ヤスデゴケ属の1新種

From collections made in Iwaki-shi, Fukushima-ken in Japan, we found a species of *Frullania* that appears to be new to science. This species has curious perianths which bear 5-8 worm-like plicae and scattered swellings and/or \pm foliaceous outgrowths on the surface (including plicae). Further investigation showed that it is closely related to *F. pedicellata* Steph. from the southwestern flank of Japan (=southern Honshu, Shikoku and Kyushu), but in the latter the perianths have only 3 distinct plicae and often 2 smaller additional ones which are narrow and nearly smooth. This species might have been differentiated from *F. pedicellata* in an isolated population in the far north.

Frullania (Trachycolea) **crisplicata** Yuzawa et Hatt., sp. nov. Fig. 1(a-q).

A *F. pedicellata* Steph., species affinisima, differt perianthiis longe rostratis, plicis (5-)6-7(-8) (=3 ventralibus, 2 lateralibus, 2, raro 1 vel 3 dorsalibus), hinc illis protuberantibusque appendiculatis, appendiculis irregulariter squameis. A *F. cristata* Hatt. et *F. hinoi* Kamim. differt amphigastriis obcuneatis, laterale 1-2-dentatis vel raro angularibus.

Plants medium-sized, dull reddish- to blackish-brown when moist, in patches on rocks. Stem 3-5 cm long, ca 110 μ m in diam., with leaves 1.3-1.5 mm wide, irregularly 1-2(-3)-pinnately branched, primary branches ca 1 cm long, obliquely spreading, secondary branches short, ca 5 mm long. Lobes of stem-leaves closely imbricate, widely spreading, dorsally extending for about stem-width beyond the farther edge of stem, slightly concave with narrowly incurved distal portions, when flat elliptical with rounded apices and rounded appendiculate dorsal bases, ca 0.8 mm long and 0.7 mm wide; cavities of marginal cells 18-26 \times 18-22 μ m, of median cells 22-31 \times 18-25 μ m, of basal cells 22-38 \times 22-29 μ m, dull yellowish-green throughout, cell-walls pale yellow, trigones

* Uchigo High School, 3 Komaya, Uchimachi, Uchigo, Iwaki-shi, Fukushima-ken, 670; also the Hattori Botanical Laboratory. 福島県立内郷高等学校.

** Hattori Botanical Laboratory, 3888 Obi-Honmachi, Nichinan-shi, Miyazaki-ken, 889-25. 服部植物研究所.

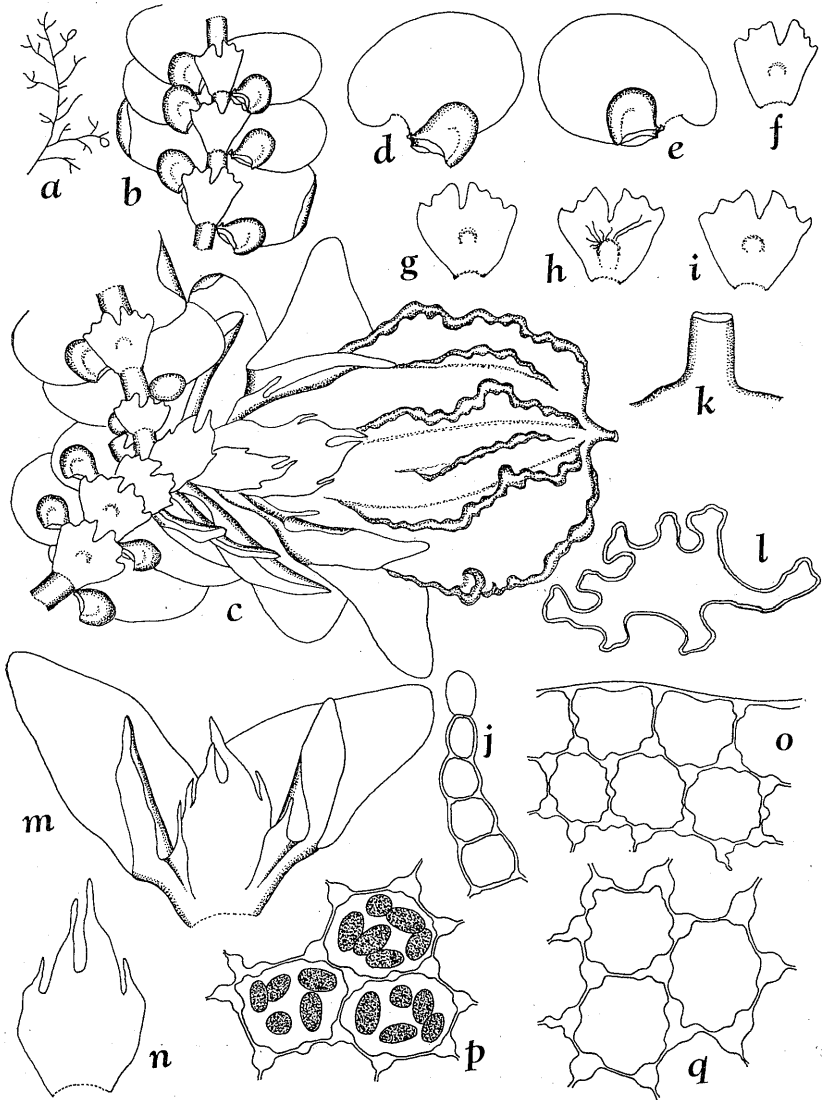


Fig. 1. *Frullania crispiplicata* Yuzawa et Hatt. a. Branching, open circles showing gynoecia, $\times 0.6$. b. Portion of stem, ventral view, $\times 22$. c. Portion of stem, with gynoecium, $\times 22$. d-e. Stem-leaves, $\times 22$. f-i. Stem-underleaves, $\times 22$. j. Stylum, $\times 220$. k. Beak of perianth, $\times 55$. l. Cross-section of perianth, $\times 22$. m. Innermost female bracts and bracteole, $\times 22$. n. Innermost female bracteole, $\times 22$. o-q. Cells of stem-leaf, o from margin, p from middle, with oil-bodies, q from base, all $\times 440$. All drawn from holotype (Y. Yuzawa no. 19521) except p (paratype no. 19522).

large, subtriangular, intermediate thickenings frequent; oil-bodies 4-7 per cell, globose to ellipsoidal, composed of numerous globules. Leaf-lobules distant to contiguous, helmet-shaped, \pm asymmetric, with weakly developed beaks (ca 0.3 mm long and wide), keels ca 30 μ m long. Styli minute, filiform, usually 4-5-celled. Stem-underleaves contiguous to remote, obovate-obcuneate, nearly flat, ca 0.5 mm long and 0.4 mm wide, ca 3 times as wide as stem, 1/4-2/5-bifid, sinus subacute, lobes subtriangular, usually with 2-3 blunt teeth on each outer margin, insertions subtransverse; rhizoid-initial areas weakly developed at middle, rhizoids few, fasciculate.

Diocious (androecium not seen)? Gynoecium terminal on stem or branch, usually with 1 innovation below; bracts 2-3 pairs; innermost bract-lobe oblong-ovate, ca 1.5 mm long and 0.8 mm wide, apex obtuse, margin entire; innermost bracteole oblong-elliptical, 1/3-2/5-bifid, with 1 long tooth on each lateral margin. Perianth pyriform, ca 2.2 mm long and 1.6 mm wide, densely plicate, plicae (5-)6-7(-8), irregularly and strongly nodulose-sinuate, worm-like, often with swellings and/or irregularly scale-like outgrowths on the surface (including plicae), apex subtruncate, beaks ca 150 μ m long and ca 100 μ m wide, mouth smooth, without projecting marginal cells.

Habitat: Japan. Fukushima-ken: Iwaki-shi, Yoshima-valley, ca 100 m alt., on rock, leg. Y. Yuzawa no. 19521 (Holotype in NICH; dupl. in hb Y. Yuzawa) and nos. 19522, 19525 (NICH & hb Yuzawa).

Distr.: Endemic.

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筆者らは、福島県いわき市の好間溪谷からヤスデゴケ属苔類の1新種を見出したので、*Frullania crispiplicata* Yuzawa et Hatt. なる学名を付して記載した。この新種は西日本、四国、九州に分布する *F. pedicellata* に近い種であるが、*F. pedicellata* の花被が通常3褶で平滑であり、褶曲しないのに対し、花被に強く褶曲した(5)6-7(8)褶をもち、褶を含む花被の表面にコブ状乃至不規則な鱗片状の附加物が散在することで区別される。*F. pedicellata* が北方(阿武隈山地)で分化した種であろう。