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# *Plagiochilion oppositus* (Reinw., Blume et Nees) S. Hatt. (Plagiochilaceae), A New Genus and Species Record for Thailand

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**ABSTRACT:** *Plagiochilion oppositus* (Reinw., Blume et Nees) S. Hatt., a new genus and species record of liverworts from Khao Luang, Huai Yang National Park, Prachuap Khiri Khan Province, Thailand, is described and illustrated.

**KEYWORDS:** liverwort, new record, Plagiochilaceae, *Plagiochilion oppositus*

Plagiochilaceae is a large family belonging to Class Hepaticopsida, comprising nearly 2,000 species of liverworts.[1] So far, this family includes 8 genera, namely *Acrochila*, *Pedinophyllum*, *Plagiochila*, *Plagiochilidium*, *Plagiochilion*, *Steereochila*, *Szweykowskia* and *Xenochila*.[2] It is a cosmopolitan family, but some genera are of limited range. Members of this family usually occur in regions with high precipitation, predominantly forested slopes and peaks in tropical and subtropical regions, but also occur in cool to cold rain forests.[1] In Thailand, there is only one genus (*Plagiochila*) with 46 species reported.[3] *Plagiochilion oppositus* (Reinw., Blume et Nees) S. Hatt. is a new record for Thailand and was found during a field trip to the summit of Khao Luang, Huai Yang Waterfall National Park, Prachaup Khiri Khan Province in June 2000 to July 2002. The description below is based on the Thai material.

**Key to genera of the Plagiochilaceae in Thailand**

| | |
|---|---|
| Stem without flagella; leaves alternate or subalternate | ***Plagiochila*** |
| Stem with flagella; leaves opposite | ***Plagiochilion*** |

***Plagiochilion***

S. Hatt., Biosphaera 1: 7.1947. — *Plagiochila* Dum. subg. *oppositae* Carl, Ann. Bryol. suppl. 2: 39. 1932. — *Noguchia* S. Hatt., J. Hattori Bot. Lab. 12: 83.1954.

Plants medium to robust. Stem ascending to erect, with few flagella from ventral side of lower stem; paraphyllia absent; in cross-section cortical cell layers distinctly differentiated from medullary cells. Lateral leaves opposite, orbicular to ovate, with or rarely without marginal dentation; cells along leaf margin with somewhat thick-walled, median and basal leaf-cells with rather thin walls and large trigones. Underleaves lacking. Dioicous. Androecia intercalary, bracts in many pairs, margin entire or weakly toothed. Gynoecia terminal on stem or branches, with innovations, bracts similar to leaves but more strongly toothed. Perianth triangular- or cylindrical-campanulate, mouth truncate to slightly arched, irregularly ciliate-dentate.

***Plagiochilion oppositus*** (Reinw., Blume et Nees) S. Hatt., Biosphaera 1: 7. 1947; Inoue, J. Hattori Bot. Lab. 27: 61.1964.— *Jungermannia opposita* Reinw., Blume et Nees, Hepat. Jav. 236. 1824.—*Plagiochila opposita* (Reinw., Blume et Nees) Dum., Rec. d' Obs. 15.1835.— *Noguchia opposita* (Reinw., Blume et Nees) Inoue, J. Hattori Bot. Lab. 20: 102.1958. Fig 1.

Plants medium, 1.5-5.0 cm long, and 1.5 mm wide; yellowish brown. Stems blackish brown, ascending to erect, usually with one flagella from ventral base of lower stem; in cross-section cortical cells smaller than medullary cells. Rhizoid not found. Lateral leaves obliquely spreading, ovate to suborbicular (scale-like on flagella), usually as wide as, or wider than 0.7-1.1 mm long, 0.8-1.3 mm wide, dorsal margin slightly decurrent, concave, apex subtruncate to rounded, dentate; apical and median leaf-cells 20-26 × 14-20 μm, thick-walled, trigones minute; basal cells 30-50 × 20-30 μm, thin-walled, trigones large, nodulose. Gynoecia terminal, with subfloral innovation, bracts similar to leaves in shape except for the more densely and strongly dentate margin, 1.7 mm long, 2 mm wide,

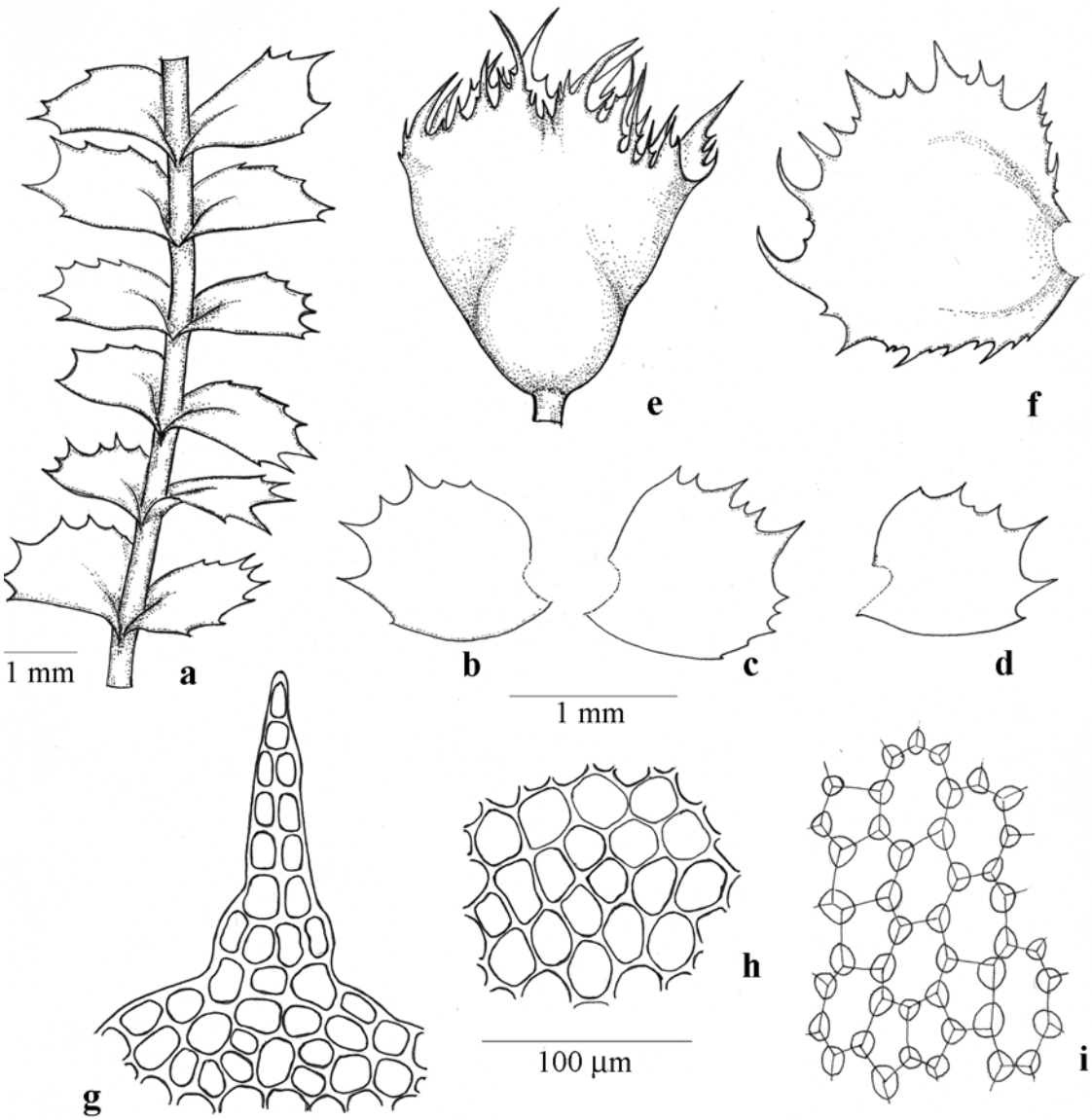


**Fig 1.** ***Plagiochilion oppositus*** (Reinw., Blume et Nees) S. Hatt. a. dorsal part of plants; b.-d. lateral leaves; e. perianth; f. female bract; g. cells at leaf apex; h. cells at leaf median; i. cells at leaf base. Based on *S. Chantanaorrapint 159*.

inflated at base. Perianths ovate to cylindrical, 3-4 mm long and 1.2-1.6 mm wide, mouth rounded to truncate, irregularly dentate at margins. Male plants and sporophytes not found.

**Specimens examined.**— *S. Chantanaorrapint 122, 130, 142, 159, 161, 351, 501, 510* (BCU); *P.W. Richards 2391, R.E. Holttum s.n.* (SING).

**Thailand.**— Prachaup Khiri Khan: Khao Luang, Huai Yang Waterfall National Park.

**Distribution.**— China, Sumatra, Taiwan, Japan, India, Madagascar, East Africa, Bourbon, Hawaii.

**Ecology.**— On tree-trunk in hill-evergreen forest, ca. 1,000-1,200 m.

From the clear description together with the line drawing of Inuoe's work on *P. oppositus,*[4] our plants matched well with that species, therefore we believe that our specimens are the same as that species.

**The distinctive characteristics of the pecies are:-** 1) the distant and dorsally slightly decurrent leaves which are ovate or subreniform or often fan-shaped, 2) the usually large, triangular and sharp teeth on the apex and ventral margin of leaves, 3) the moderately thickened cell-walls and small trigones at margin and middle of leaves, 4) and the cylindrical to ovate perianth which mouth is irregularly dentate.

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