

Mosses New to Hong Kong (I)

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Abstract. Ten moss species - *Garkea flexuosa* (Griffith) Marg. & Nork., *Campylopus laxitextus* Lac., *Fissidens dubius* P. Beauv., *Fissidens ceylonensis* Dozy & Molk, *Fissidens maceratus* Mitt., *Philonotis thwaitesii* Mitt., *Isopterygium minutirameum* (C. Muell.) Jaeg., *Homalia trichomanoides* (Hedw.) B.S.G., *Pogonatum neesii* (C. Muell.) Dozy and *Polytrichum formosum* Hedw. are reported new to Hong Kong. Among them, five are new to Guangdong Province of China.

Even though Hong Kong is small in size (1052 km²) and highly urbanized, it has a rich flora containing at least 2500 species of higher plants and 175 species of ferns. It is a pity that since 1933, the study of bryophytes was suspended for almost half a century and there is at present no checklist of bryophytes in Hong Kong. The Government Herbarium housed a small collection of mosses made more than a hundred years ago.

A half-year preliminary investigation of local mosses was made in 1993 and to the surprise of the authors, Hong Kong still has a rich bryoflora in isolated pockets of microhabitats. A total of 30 field trips was made and more than 500 specimens were collected and deposited in the herbarium of

the Biology Department of Hong Kong Baptist College. The sites visited were usually at least 500 m to 800 m above sea level and most of the mosses were found in deep shade. Many of them were found only in one or two localities. So far, a total of 40 species were identified and 10 of them are new records to Hong Kong.

Mosses are found in lowlands as well as at higher altitudes. Since mountains of various heights abound in different parts of the Colony, conditions within the woodland in these mountains may be very different from that of the outside. It is usually dry and cold (8-15°C) during the winters and most mosses and liverworts would have died down. But those within the woodland, especially alongside the banks of stream seem to thrive

exceptionally well. Some mosses only produce capsules during the winter months and remain vegetative in summer which is hot and humid (25-33°C).

The new records are listed below:

Since Hong Kong is part of the Guangdong Province of China, those new to Guangdong are marked with an asterisk.

Bartramiaceae

* *Philonotis thwaitesii* Mitt.

This is a weed species which can be found almost everywhere, on damp soil, wet rock surfaces, and abandoned fields. It has yellowish green glossy leaves which are closely arranged along the erect stem. The leaves are lanceolate in shape, keeled and with papillae. When dry, all leaves become closely appressed. Sometimes, large patches are found carpeting wet bricks in greenhouses. No capsule was observed.

(So 93820A Confirmed by S.H. Lin)

Dicranaceae

* *Campylopus laxitextus* Lac.

This is a rare species of *Campylopus* which is found at an altitude of 500 m on the bark of *Acacia confusa* such that the tree appears to be covered by a thick velvety carpet of this moss. The leaves are bright green and glossy, incurved, closely appressed, gradually tapering to a pointed tip. The costa occupies around 2/3 the width at the base. The plants are 30 mm long. No capsule was observed.

(So 93726A Confirmed by J.P. Frahm)

Ditrichaceae

Garkea flexuosa (Griffith) Marg. & Nork.

This small species is light green in colour, stem erect, 1-2 cm high and unbranched. Leaves are elongated, entire, ending at the pointed tip, more closely clustered on the lower part of the stem. There are several capsules in the head at the top of the stem, and each capsule is vase-shaped. The

plants are found on rocky surface and soil banks, among grasses at an altitude of 300 m.

(So 93804G Verified by S.H. Lin)

Fissidentaceae

Fissidens maceratus Mitt.

This is a common species of *Fissidens* which can be found on damp soil as well as on potted plants as a weed. The leaves are arranged in 4-5 pairs and are characterized by having its costa ending far below the leaf apex. The margins are entire and has limbidia on apical and dorsal laminae. No capsule was observed.

(So 93803 Confirmed by Z.H. Li)

Fissidens dubius P. Beauv.

This species of *Fissidens* is rather rare and was seen only once at an elevation of 800 m on damp rocks in shade. The plants are robust, with erect yellowish-green leaves. However, no capsules were observed.

(So 931019F Verified by S.H. Lin)

Fissidens ceylonensis Dozy & Molk.

This extremely minute species is also rare locally and has been observed only once at an elevation of 500 m on rock surfaces. The leaves are densely packed and perhaps because of their small size, are not much altered even when dry. Again, no capsules were observed.

(So 93830 Verified by Z.H. Li)

Hypnaceae

* *Isopterygium minutirameum* (C.Muell.) Jaeg.

This delicate little moss has yellowish green glossy leaves, spirally arranged along the flattened stem. The leaves are oval-shaped with a pointed tip; margins entire; with two short costae. It was found together with *Haplocladium microphyllum* (Hedw.) Broth. on rock surfaces at an elevation of 500 m.

(So 93824I Verified by D.K. Li)

Neckeraceae

* *Homalia trichomanoides* (Hedw.) B.S.G.

This yellowish green glossy moss has secondary prostrate stems around which are complanate leaves. The stems are irregularly branched and form a tangled mass. This moss is quite common on higher ground at the base of tree trunks in brightly exposed conditions.
(So 93824X Verified by D.K. Li)

Polytrichaceae

* *Pogonatum neesii* (C. Muell.) Dozy

This is a fairly common species of *Pogonatum* which occurs at an elevation of 500-800 m. Very often several species of *Pogonatum* may be found together in large colonies. The male plants have a characteristic red tinge at the base of the perigonial leaves. One feature of this species is that when moist, the plate-like leaves are spreading but become appressed to the stem when dry. This feature distinguishes it from the other *Pogonatum* species which have very incurved and flexuose leaves when dry. Capsule is suberect and seta is 3 cm long.
(So 931019P Verified by Z. Iwatsuki)

Polytrichum formosum Hedw.

This is a large species whose stem reaches 10 cm, having erect-spreading recurved leaves which are linear-lanceolate in shape. The leaf margins are coarsely dentate throughout. This is a rather rare species and was observed only once on rock surfaces at an elevation of 890 m in moderate shade. It was found together with *Pogonatum neesii*.
(So 931019 Verified by Z. Iwatsuki)

Conclusion

It appears that more new records of bryophytes in Hong Kong can be obtained by a more extensive and intensive search. It is to the advantage of scientists working in this area that the Hong Kong Government has made an effort to protect local flora and fauna by designating almost 70% of the Colony as Country Parks.

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