

广东藓类植物新记录

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摘要: 通过对南岭国家自然保护区藓类植物资源进行调查和文献研究, 本文报道了广东藓类植物新记录属 3 属, 新记录种 30 种。3 个新记录属为螺叶藓属、粗石藓属和角齿藓属。

关键词: 藓类植物; 中国; 广东; 新记录

中图分类号: Q949.35 文献标识码: A 文章编号: 1000-3142(2010)06-0821-04

Additions to the bryophyte flora of Guangdong, China

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Abstract: A series of extensive field investigations were carried out in Nanling National Nature Reserve, Guangdong from August 2008 to July 2009. Thirty moss species and three genera are reported as new records from Guangdong.

The newly recorded genera are *Sakuria*, *Rhabdoweisia* and *Ceratodon*.

Key words: mosses; China; Guangdong; new records

1 Introduction

Guangdong Province is situated between 20°10'—25°31' N and 109°30'—117°10' E. It lies in east Asian monsoon climate strip and has a tropical and subtropical climate with the annual mean temperature 19—22 °C, mean rainfall 1 500—2 000 mm and mean relative humidity ca. 80%. The major vegetation types are dominated by tropical evergreen monsoon rain forest, subtropical evergreen broad-leaves forest and mangrove (Zeng *et al.*, 2001).

Mitten (1891) made the first report about *Frullania hutchinsiae* (\equiv *Jubula hutchinsiae*) in Guangdong. Afterward, Salmon (1900), Renaud *et al.* (1905), Paris (1901, 1909, 1911), Goebel (1910), and Evans (1919) made some reports from Guangdong, but all of these reports hadn't any specimen citations till Reimers (1931), when Reimers (1931) described 4 liverworts and 8 mosses. Dixon (1933)

recorded 12 mosses. Since then, more and more bryologists constantly collected new bryophytes from the province, such as P. C. Chen, P. C. Wu, P. J. Lin, L. Zhang, Z. H. Li, S. Piippo, W. B. Liao, W. J. Huang, Y. Y. Yang, W. Q. Liu, Q. J. Zan, J. Y. Zhang, C. Y. Lan, H. Wu, X. Liao, L. Sun, R. L. Zhu, X. H. Guo, M. L. So, etc. Lin *et al.* (1982) recorded 141 species including 39 liverworts and 102 mosses from Dinghushan in Zhaoqing City, and Li *et al.* (1994) recorded 37 hepatics and 66 mosses from Heishiding in Fengkai County. And also, Wu *et al.* (1992) recorded 124 mosses, 36 liverworts and 1 hornwort from National Chebaling Nature Reserve in Shixing County. At the same year, Zhu *et al.* (1992a, b) studied epiphyllous liverworts from Babaoshan and Dinghushan. Redfearn *et al.* (1996) listed 297 mosses from Guangdong. Li *et al.* (1998) recorded 206 species, 3 subspecies and 1 variety from Nanling National Nature Reserve and Liu *et al.* (1999) recorded 61 species from the Neilingding Island. Zeng *et al.* (2001) recorded 196 mosses from lime-

Received date: 2009-10-18 Accepted date: 2009-12-11

Foundation item: 广东南岭国家级自然保护区项目(074102100) [Supported by Administrative Bureau of Nanling National Nature Reserve(074102100)]

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stone area in northern Guangdong, Jia *et al.* (2001) recorded 1 hornwort, 34 liverworts and 51 mosses from Mt. Wutong in Shenzhen. He *et al.* (2004) recorded 158 mosses from Shimentai Nature Reserve, Yingde County. Liu *et al.* (2007) studied the bryophyte communities in the forest of Heishiding Nature Reserve, and recorded 30 liverworts and 20 mosses.

Following the above publications and the update checklist of Guangdong bryophytes¹⁾, We here report 30 moss species, 3 genera new to this province. All the specimens studied were collected from Nanling National Nature Reserve by the first author from August 2008 to July 2009.

In this list, the family arrangement follows Chen (1963, 1978). Genera and taxa are alphabetically arranged.

2 List of Species

2.1 Ditrichaceae

Ceratodon purpureus (Hedw.) Brid. Genus and species new to Guangdong. Ruyuan Co., Shikengkong, 1 840 m, on granitic rock along trail side, Zhou, 859.

2.2 Dicranaceae

Rhabdoweisia sinensis P. C. Chen. Genus and species new to Guangdong. Ruyuan Co., Tianjingshan TV Station, 1 660 m, on rock in¹⁾ *

2.3 Pottiaceae

Didymodon eroso-denticulatus (C. Muell.) Saito. Ruyuan Co., Shikengkong, 1 820 m, on granitic rock along trail side, Zhou, 853.

Didymodon ferrugineus (Schimp. ex Besch.) M. O. Hill. Ruyuan Co., Tianjingshan TV Station, 1 680 m, on thin soil over rock, Zhou, 294; Yangshan Co., Laoxiongping Town, Dongkeng, 480 m, on seasonally submerged limestone rock along creek, Zhou, 770.

Hydrogonium arcuatum (Griff.) Wijk. et Marg. Yangshan Co., Laoxiongping Town, Dongkeng, 480 m, on seasonally submerged limestone rock along creek, Zhou, 801.

Hydrogonium gracilentum (Mitt.) P. C. Chen. Yangshan Co., Laoxiongping Town, Dongkeng, 480 m, on seasonally submerged limestone rock along creek,

Zhou, 781.

Trichostomum planifolium (Dixon) R. H. Zander. Yangshan Co., Laoxiongping Town, Dongkeng, 580 m, on rock along trail side, Zhou, 762; Yangshan Co., Laoxiongping Town, Dongkeng, 480 m, on seasonally submerged limestone rock along creek, Zhou, 805.

2.4 Bryaceae

Anomobryum gemmigerum Broth. Ruyuan Co., Tianjingshan Yard, Chadong-banpeng Water Station, 770 m, on rock along trail side, Zhou, 244; Yangshan Co., Longtanjiao Yard, Yikeng, 800 m, on rock along slot, Zhou, 153.

Bryum cyclophyllum (Schwaegr.) Bruch et Schimp. Yangshan Co., Wuyuankeng, 200 m, on submerged limestone rock along creek, Zhou, 831; Yangshan Co., Laoxiongping Town, Dongkeng, 480 m, on submerged limestone rock along creek, Zhou, 779.

Bryum handelii Broth. Yangshan Co., Chenjia Town, Tianmen, 940 m, on rock in forest, Zhou, 188.

Bryum salakense Cardot Ruyuan Co., Shikengkong, 1 885 m, on granitic rock along trail side, Zhou, 866.

2.5 Mniaceae

Mnium hornum Hedw. Ruyuan Co., Wuzhishan Waterfalls, 690 m, on thin soil over rock along trail side, Zhou, 447.

2.6 Orthotrichaceae

Macromitrium tosaе Besch. Ruyuan Co., Wuzhishan to Mangshan Station, 1 347 m, on trunk along trail side, Zhou, 583.

2.7 Meteoriaceae

Aerobryidium crispifolium (Broth. et Geh.) M. Fleisch. ex Broth. Ruyuan Co., Tianjingshan TV Station, 1 670 m, on rock along slot, Zhou, 635.

2.8 Neckeraceae

Homaliodendron montagneanum (C. Muell.) M. Fleisch. Ruyuan Co., Wuzhishan to Mangshan Station, 1 350 m, on rock along slot, Zhou, 575.

2.9 Hookeriaceae

Distichophyllum oblongum B. C. Tan et P. J. Lin

*1) He Z. X. & Zhang L. A checklist of bryophytes of Guangdong Province, China, 2003 (unpublished). forest, Zhou, 698.

var. *fanjingense* P. J. Lin et B. C. Tan. This variety differs mainly from var. *oblongum* in having broadly spatulate to obovate and roundly obtuse leaves. Ruyuan Co., Tianjingshan TV Station, 1 680 m, on trunk in forest, Zhou, 297.

2. 10 Brachytheciaceae

Brachythecium pulchellum Broth. et Paris. Ruyuan Co., Shikengkong, 1 880 m, on trunk along trail side, Zhou, 868B, 869; Ruyuan Co., Shikengkong, 1 820 m, on thin soil over granitic rock, Zhou, 854; Ruyuan Co., Wuzhishan, 1 340 m, on thin soil over rock along trail side, Zhou, 517.

Eurhynchium arbuscula Broth. It is characterized by its dendroid plants and its broadly decurrent leaf bases. Ruyuan Co., Shikengkong, 1 760 m, on base of tree along trail side, Zhou, 907.

Eurhynchium longirameum (C. Muell.) Y. F. Wang et R. L. Hu. It is similar to *E. hians*, but it differs by the leaves with broader leaf bases and narrowly acute leaf apices, and by julaceous and attenuate branches. Ruyuan Co., Wuzhishan to Mangshan Station, 1 330 m, on rock along trail side, Zhou, 572B.

Rhynchostegiella leptoneura Dixon et Ther. Yangshan Co., Chenjia Town, Lutian Villiage, Datiekeng, 490 m, on branch in forest, Zhou, 114.

2. 11 Entodontaceae

Entodon caliginosus (Mitt.) A. Jaeger. Zhao & Cao (1998) recorded it, but didn't cite any specimens. It is similar to *E. concinnus* (De Not.) Paris, but it differs by its thicker alar regions consisting of 3-4 layers of cells as opposed to *E. concinnus* that has alar cells in 2 layers. Ruyuan Co., Tianjingshan Yard, Tongqiao Power Station, 450 m, on rock along trail side, Zhou, 622.

Sakuraia conchophylla (Cardot) Nog. Genus and species new to Guangdong. Ruyuan Co., Shikengkong, 1 780 m, on dead branch along trail side, Zhou, 850.

2. 12 Plagiotheciaceae

Plagiothecium euryphyllum (Cardot et Ther.) Z. Iwats. var. *brevirameum* (Cardot) Z. Iwats. Ruyuan Co., Tianjingshan TV Station, 1 670 m, on rock in forest, Zhou, 650; Ruyuan Co., Shikengkong, 1 770 m, on dead branch along trail side, Zhou, 887; Ruyuan Co., Shikengkong, 1 770 m, on base of tree in forest, Zhou,

910.

2. 13 Sematophyllaceae

Clastobryopsis brevinervis M. Fleisch. Ruyuan Co., Shikengkong, 1 770 m, on dead branch along trail side, Zhou, 884; Ruyuan Co., Shikengkong, 1 760 m, on base of tree along trail side, Zhou, 903.

Clastobryopsis robust (Broth.) M. Fleish. Yangshan Co., Huangnikeng, 1 770 m, on trunk in forest, Zhou, 936.

2. 14 Hypnaceae

Ctenidium homalophyllum Broth. et Yas. ex Iishi-ba. This species is characterized by the occasionally irregularly branched stems, the shorter and broader leaf apices, the less falcate stem leaves, wider leaf cells, and smaller alar cells. Ruyuan Co., Wuzhishan Waterfalls, 740 m, on rock along trail side, Zhou, 410.

Gollania clarescens (Mitt.) Broth. Yangshan Co., Chenjia Town, 140 m, on limestone rock along Chenjia River, Zhou, 974.

2. 15 Polytrichaceae

Atrichum angustatum (Brid.) Bruch et Schimp. Ruyuan Co., Wuzhishan, 1 050 m, on soil along trail side, Zhou, 381; Ruyuan Co., Tianjingshan Yard, Tongqiao Power Station, 440 m, on rock along trail side, Zhou, 611. Ruyuan Co., Shikengkong, 1 830 m, on granitic rock along trail side, Zhou, 856.

Pogonatum urnigerum (Hedw.) P. Beauv. Ruyuan Co., Wuzhishan, Shijiukeng Mt., 880 m, on soil along trail side, Zhou, 397.

Polytrichastrum ohioense (Renauld et Cardot) G. L. Sm. Ruyuan Co., Tianjingshan Yard, Chaofa Power Station, 1 000 m, on sandy soil along trail side, Zhou, 205.

3 Acknowledgements

We would like to thank Dr. WANG Fa-Guo, Mr. ZHAI Jun-Wen, Mr. LIN Duo-Qing and other colleagues for their invaluable assistance during field surveys, Dr. ZHANG Li for his helpful suggestion on the manuscript. The study was financially supported by Administrative Bureau of National Nature Reserve (Comprehensive survey on the plants in Nanling National Nature Reserve).

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(上接第 868 页 Continue from page 865)

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