

BRYOPHYTES OF KANHA NATIONAL PARK (MADHYA PRADESH), INDIA

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ABSTRACT

Bryophytes of Kanha National Park (Madhya Pradesh) have been enumerated and a preliminary list includes 11 genera and 15 species under 10 families. The study has revealed the occurrence of *Notothylas anaporata* Udar & Singh which is new record to central India.

Key words : Bryophytes, enumeration, Madhya Pradesh, India

INTRODUCTION

Kanha National Park, located in Mandla district of Madhya Pradesh, lies between 22°20' N and 80°38' E, covers an area of 940 sq kms. Khatia (3 km from Kisli) and Mukki are the two main entry gate to the park. In the 19th century Rudyard Kipling wrote famous novel "Jungle Book", tale based on the wildlife of Kanha. Kanha National Park has deciduous forest type with diverse flora and fauna. Climate of the region is tropical. Here summers are hot and humid with maximum and minimum temperature of 40.6° C and 23.9° C respectively, while winters are pleasant with maximum and minimum temperature of 23.9° C and 11.1° C respectively.

Earlier published records revealed little information on Bryophytes of National Parks and Sanctuaries of India except on Great Himalayan National Park, Himachal Pradesh (Narayan & al., 2001; Singh & Singh, 2003a, b, 2004, 2005a, b, 2006a, b, 2007a-d; Kumar & Singh, 2003; Eravikulam National Park, Kerala (Nair & Madhusoodanan 2001; Madhusoodan & Nair, 2004; Joydihing Wildlife Sanctuary, Assam (Barukial & al., 2002); Achanakmar Sanctuary, Chattisgarh (Nath & al., 2005; Mehao Wildlife Sanctuary, Arunachal Pradesh (Das & Singh, 2005, 2007, 2008; Singh & Das, 2006; Chinnar wildlife Sanctuary (Nair & al., 2006). The present study provides a preliminary list of 15 species belonging to 11 genera under 10 families of bryophytes of the Kanha National park for the first time with their habitat and range of distribution.

The families of liverworts are arranged after the classification of Schuster (1984) and mosses by Vitt (1984).

MATERIALS AND METHODS

The plants were collected from three localities of Kanha National Park viz., Khatia, Chirdongri and Kisli at an altitude of 1200 ft. The specimens were first air dried, then preserved in brown paper packets and deposited in the Bryophyte Herbarium, National Botanical Research Institute, Lucknow (LWG).

ENUMERATIONS

HEPATICAEE

AYTONIACEAE

1. *Reboulia hemisphaerica* (L.) Raddi.

Locality: Khatia; *Habitat:* On soil.

Specimens examined: India, central India, Khatia; 12.10.2004; leg. V.Nath & A.K.Asthana 226813, 226833.

Range of Distribution in India: Eastern Himalaya - Darjeeling, Khasi hills, Kurseong; western Himalaya-Kashmir, Punch, Mussoorie, Dalhousie, Simla, Pangi, Kulu, Spiti, Lahul, Kyelang; south India-N. Kanara, Palni hills, Nagapatam, Madras (Iyenagar), Nilgiri, Kaghan valley; central India-Pachmarhi, Amarkantak (Kapildhara, Doodhdhara, Shambhoodhara), Mt. Abu; Gangetic plain-Sidpur, Modinagar (Meerut).

2. Plagiochasma pterospermum C. Massal

Locality: Khatia; *Habitat:* On soil.

Specimen examined: India, central India, Khatia; 12.10.2004; leg. *V.Nath & A.K.Asthana* 226833.

Range of Distribution in India: Eastern Himalaya; western Himalaya Kumaon Himalaya, Ladakh, Leh; south India - Ootacamand (Rangachariar), Nilgiris, Bombay, Panchgani; central India - Mt. Abu; Punjab & Rajasthan plain-Rajasthan.

TARGIONIACEAE

3. Targionia hypophylla L.

Locality: Khatia; *Habitat:* On soil.

Specimens examined: India, central India, Khatia; 12.10.2004; leg. *V. Nath & A.K.Asthana* 226820, 226821, 226827, 226828, 226830, 226831.

Range of Distribution in India: Eastern Himalaya - Darjeeling, Cherrapunji, Khasi hills, Sikkim; western Himalaya - Mussoorie, Simla, Dalhousie; south India - Lonavala, Khandala, Panchgani, Mahabaleshwar, Madras, Mysore, Victoria falls; central India - Pachmarhi, Amarkantak (Sonmuda, Dhoonipani, Bhriku Kamandal), Mt. Abu.

CYATHODIACEAE

4. Cyathodium cavernarum Kunze

Locality: Khatia; *Habitat:* On soil, and soil covered rocks.

Specimens examined: India, central India, Khatia; 12.10.2004; leg. *V.Nath & A.K.Asthana* 226803, 226816, 226817, 226818, 226819, 226823, 226826.

Range of Distribution in India: Eastern Himalaya - Darjeeling, Assam, Shillong, Khasi & Jaintia hills; western Himalaya - Dehradun, Gulkhal, Karn Prayag, Satkuli, Mussoorie; south India - Bombay, Khandala, Mahabaleshwar, Malabar hill, Panchgani; central India - Pachmarhi, Amarkantak, Gujarat, Baroda; Punjab & Rajasthan - Rajasthan; Gangetic plain - Pratapgarh, Varanasi, Lucknow, Bareilly.

ANTHOCEROTAE

NOTOTHYLACEAE

5. Notothylas anaporata Udar & D.K.Singh

Locality: Khatia; *Habitat:* On soil.

Specimens examined: India, central India, Khatia; 12.10.2004; leg. *V.Nath & A.K.Asthana* 226814, 226815, 226818, 226832.

Range of Distribution in India: South India Maharashtra, Khandala.

MUSCI

BRYACEAE

6. Bryum caespitium L. ex Hedw.

Locality: Kisli; *Habitat:* On soil below *Shorea robusta*

Specimen examined: India, central India, Kisli; 12.10.2004; leg. *V.Nath & A.K.Asthana* 226382 B.

Range of Distribution in India: Eastern Himalaya - Khasi hills; western Himalaya-Nainital, Chakrata, Mussoorie, Simla, Kashmir, Arunachal Pradesh.

7. Bryum capillare L. ex Hedw.

Locality: Khatia, Kisli; *Habitat:* On soil below *Shorea robusta* tree.

Specimens examined: India, central India, Khatia; 12.10.2004; leg. *V.Nath & A.K.Asthana* 226802 Kisli, 226382 A.

Range of Distribution in India: Eastern Himalaya-Darjeeling, Sikkim; western Himalaya-Kashmir, south India - Nilgiri; central India - Amarkantak, Mt. Abu.

8. *Bryum coronatum* Schwaegr. in Suppl. 1 (2): 103, 1816; Gangulee, Moss. E. Ind., 4: 1002, 1974.

Locality: Khatia; *Habitat:* On soil.

Specimens examined: India, central India, Khatia; 12.10.2004; leg. V.Nath & A.K.Asthana 226801, 226825.

Range of Distribution in India: Eastern Himalaya - Sikkim, Darjeeling; western Himalaya; south India - Wayanad, Tamil Nadu, Mahabaleshwar, Khandala, Goa, Andaman Is.; central India - Amarkantak, Orissa, Cuttack, Puri, Koraput; Gangetic plain-Calcutta, Howrah, Hoogli, Midnapore, Burdwan.

9. *Bryum paradoxum* Schwaegr.

Locality: Kisli; *Habitat:* Epiphytic.

Specimen examined: India, central India, Kisli; 12.10.2004; leg. V.Nath & A.K.Asthana 226385.

Range of Distribution in India: Eastern Himalaya - Sikkim, Darjeeling, Khasi hills; western Himalaya - Kashmir; south India - western ghats, Nilgiri, Palni, Arunachal Pradesh.

BARTRAMIACEAE

10. *Philonotis turneriana* (Schwaegr.) Mitt.

Locality: Kisli; *Habitat:* On soil below *Shorea robusta* tree.

Specimens examined: India, central India, Kisli; 12.10.2004; leg. V.Nath & A.K.Asthana 226382, 226390.

Range of Distribution in India: Eastern Himalaya - Darjeeling, Sikkim, Khasi hills; western Himalaya-Kashmir, Simla, Mussoorie, Garhwal, Kumaon, Jaunsar, Arunachal Pradesh; central India - Amarkantak.

THUIDIACEAE

11. *Trachyphyllum inflexum* (Harv.) Gepp.

Locality: Khatia, Chirdongri, Kisli; *Habitat:* On tree bark and on fallen log.

Specimens examined: India, central India, Khatia; 12.10.2004; leg. V.Nath & A.K.Asthana 226804; Chirdongri, V.Nath & A.K.Asthana 226809, 226812; Kisli, V.Nath & A.K.Asthana 226383, 226389, 226393, 226394, 226397, 226399.

Range of Distribution in India: Eastern Himalaya - Darjeeling, Sikkim, Khasi hills; south India-Palni hills (Palamalai, Mundathurai); central India - Pachmarhi, Amarkantak, Orissa, Madhya Pradesh, Kanara.

STEREOPHYLLACEAE

12. *Entodontopsis leucostega* (Brid.) Buck & Ireland

Locality: Khatia, Chirdongri, Kisli; *Habitat:* On tree bark or on fallen log or on soil.

Specimens examined: India, central India, Khatia; 12.10.2004; leg. V.Nath & A.K.Asthana 226805, 226808, 226822; Chirdongri, V.Nath & A.K.Asthana 226810, 226811; Kisli, V.Nath & A.K.Asthana 226384, 226385, 226386, 226388, 226390, 226394, 226395, 226396, 226400.

Range of Distribution in India: Western Himalaya - Kumaon; central India- Pachmarhi, Amarkantak, Girnar hills (Gujarat).

POTTIACEAE

13. *Hyophila involuta* (Hook.) Jaeg.

Locality: Kisli; *Habitat:* On rocks.

Specimens examined: India, central India, Kisli; 12.10.2004; leg. V.Nath & A.K.Asthana 226387, 226398.

Range of Distribution in India: Eastern Himalaya Darjeeling, Sikkim, upper Assam, Khasi hills, Arunachal Pradesh; western Himalaya; south India - western ghats, Shembaganur (Kodaikanal), Nilgiri, Palni, Mysore, Khandala, Mahabaleshwar, Borivli, Bombay, Nicobar Is.; central India - Amarkantak, Gujarat, Orissa, adjacent Madhya Pradesh, Mt. Abu; Gangetic plain - lower Bengal, north Bihar, Chhotanagpur, upper Gangetic plains.

14. *Hyophila rosea* Williams

Locality: Khatia; *Habitat:* On soil.

Specimen examined: India, central India, Khatia; 12.10.2004; leg. V.Nath & A.K.Asthana 226824.

Range of Distribution in India: Western Himalaya Garhwal, Kumaon; south India; central India Amarkantak, Pachmarhi, Orissa, Gujarat, Gangetic plain.

FISSIDENTACEAE

15. *Fissidens orishae* Gangulee

Locality: Khatia, Kisli; *Habitat:* On soil.

Specimens examined: India, central India, Khatia; 12.10.2004; leg. V.Nath & A.K.Asthana 226806; Kisli, V.Nath & A.K.Asthana 226391, 226392.

Range of Distribution in India: Central India - Orissa; Gangetic plain - W. Bengal, Midnapore, Jhargram, Belpahari.

DISCUSSION

The present study of Kanha National Park revealed the occurrence of 15 species belonging to 11 genera and 10 families. Most of the taxa were found growing on soil. *Entodontopsis leucostega*, *Trachyphyllum inflexum*, *Cyathodium cavernarum* and *Targionia hypophylla* were the dominant taxa in the study area. *Notothylas anaporata* is reported as new to central India.

ACKNOWLEDGEMENTS

Authors are grateful to Director, National Botanical Research Institute (Council of Scientific and Industrial Research, New Delhi), Lucknow for encouragement and providing facilities. Our sincere thanks are also due to the Principal Chief Conservator of Forests and Wildlife of Madhya Pradesh for extending their help during plant collection. One of the authors (RK) is thankful to Council of Scientific & Industrial Research, New Delhi for the award of Senior Research Fellowship.

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कान्हा राष्ट्रीय उद्यान (मध्य प्रदेश) भारत के हरितोद्भिद

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सार संक्षेप

कान्हा राष्ट्रीय उद्यान (मध्य प्रदेश) के हरितोद्भिद के आकलन के साथ 11 वंश एवं 10 कुलों के अन्तर्गत 15 जातियों की प्राथमिक सूची दी गई है। अध्ययन से *नोटोथाइलस एनेपोरेटा* उदार एवं सिंह की व्याप्ति स्पष्ट हुई है जो मध्य भारत के लिए नया अभिलेख है।