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LICHENS ON *AGAPETES* D. DON EX G DON (ERICACEAE) IN INDIA

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ABSTRACT

The paper deals with the lichens growing on *Agapetes* D. Don ex G. Don. There are 12 species of lichens belonging to 7 genera under 2 families found to grow on twigs of 13 species *of Agapetes.*

INTRODUCTION

The genus *Agapetes* D. Don ex G. Don with its beautiful flowers is epiphytic shrub or shrub on mossy bed to rocks. It belongs to the subfamily Vaccinioideae of Ericaceae and is common in between 50-2400 m altitudes in tropical to temperate forests of the world. There are about 56 species of *Agapetes* found in India, distributed particularly in the Northeastern states including Sikkim (Airy Shaw1958, 1960, 1967). During the revisionary study of the genus *Agapetes* in India, lichen colonies of foliose type have been observed growing on this plant. As the species of *Agapetes* are mostly epiphytic, presence of lichens on them is quite interesting since lichens too grow as epiphyte. Therefore the present paper throws some light on the lichens growing on various species of the genus *Agapetes.*

MATERIAL AND METHODS

A number of field trips were undertaken in the states of Northeast India, particularly Arunachal Pradesh, Manipur, Meghalaya and Sikkim during the period from March 2000 to May 2003. Accordingly, different species *of Agapetes* were collected with proper field notes. Specimens thus collected were dried and pasted into herbarium sheets and studied thoroughly for their identification by tallying with the preserved herbarium specimens of ASSAM, CAL, Cibachrome from Kew as well as available literature. The lichens growing on these plants were separated, dried and mounted into suitable herbarium packets. Lichen specimens were studied as per standardized lichenological methods and identified with the help of available literature (Awasthi, 1988). All the specimens thus collected are deposited in CAL, Howrah for record.

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RESULTS AND DISCUSSIONS

In the present study, the species of *Agapetes* are found to be common in between 1200 2400 m altitudes mainly in subtropical and temperate forests. They are mostly prevalent as epiphyte on tall trees of primary forests, especially on *Quercus spp., Ficus spp.* and also on the members of family Magnoliaceae. They are common in the sun-facing slope of the hills near water source with their characteristic ligno-tubers. All the species of *Agapetes* grow in close association with different species of orchids, members of family Araceae, ferns, mosses and lichens as well. It has been observed that out of total 34 species of *Agapetes* collected, 13 species are associated with the growth of lichen colonies on their twigs. However, the lichen colonies are present only in small patches in most cases. Table 1 show the species of lichens occurring on *Agapetes* with locality, altitude and collection number.

Table 1: Lichen species occurring/found on *Agapetes* D. Don ex G. Don

Name of the *Agapetes* species	Name of the Lichen species	Lichen Family	Locality, altitude and collection number
Agapetes affinis (Griff) Airy Shaw	*Heterodermia diademata* (Taylor) D. Awasthi	Physciaceae	ML: Jaintia hill, Jowai to Jarain, 1200 m; *Banik* 27450.
A. borii Airy Shaw	*Parmelia mussooriensis* (D. Awasthi) D. Awasthi	Parmeliaceae	MN: Ukhrul dist., Sirhoi hill, 2300-2400 m; *Banik* 27943.
A. buxifolia Nuttall ex Hook.f.	*Hypotrachyna adducta* (Nyl.) Hale	Parmeliaceae	AP: W. Kameng, 23 km before Teuga towards Rupa, 1650 m; *Banik* 27435.
A. forrestii W.E. Evans	*Hypotrachyna scytodes* (Kurok.) Hale	Parmeliaceae	AP: Dibang valley, near Myudia guesthouse, 2200 m; *Banik* 27403.
A. incurvata (Griff.) Sleumer 1200m;	*Hypotrachyna physcioides* (Nyl.) Hale	Parmeliaceae	ML: Khasi hill, Shillon peak, *Banik* 27537.
A. interdicta (Hand.-Mazz.) Sleumer	*Hypotrachyna flexilis* (Kurok.) Hale	Parmeliaceae	AP: Dibang valley, Myudia to Tiwari gaon, 2050 m; *Banik* 27408.
A. mitrarioides Hook.f. ex C.B. Clarke	*Heterodermia* species	Physciaceae	AP: Dibang valley, Mehao lake island, 1550 m; Banik 27430.
A. odontocera (Wight) Hook.f.	*Everniastrum cirrhatum* (Fr.) Hale	Parmeliaceae	ML.: Khasi hill, on the way to Cherrapunji, 1200 m; *Banik* 27888.

Name of the *Agapetes* species	Name of the Lichen species	Lichen Family	Locality, altitude and collection number
A. refracta Ariy Shaw	*Myelochroa entotheiochroa* (Hale) Elix & Hale	Parmeliaceae	AP: W. Kameng, 2.5 km after Nechiphu towards Tenga, 1600 m; *Banik* 27955.
A. serpens (Wight) Sleumer var. *alba* Airy Shaw	*Heterodermia diademata* (Taylor) D. Awasthi	Physciaceae	WB: Kalimpong, Algarah to Lava; *Banik* 27852.
Agapetes species	*Heterodermia japonica* (Sato) Swinsc. & Krog.	Physciaceae	AP: Dibang valley, 4 km down towards Tiwari gaon from Myudia I.B., 2300 m; *Banik* 27410.
Agapetes species	*Parmotrema grayanum* (Hue) Hale and *Ramalina* sp.	Parmeliaceae	AP: Lower Subansiri, Manipaliang to Pange, 1650-1700 m; *Banik* 27968.
Agapetes species	*Evernisastrum cirrhatum* (Fr.) Hale	Parmeliaceae	AP: Lower Subansiri, Manipaliang, 1600 m; *Banik* 27961.

(AP: Arunachal Pradesh, MN: Manipur, ML: Meghalaya, WB: West Bengal)

From the table it is revealed that 12 species of foliose lichens belonging to 7 genera under 2 families occur on 13 species of *Agapetes*. Except *Ramalina sp.* (fruticose lichen) all other species are foliose in nature. Lichen family Parmeliaceae with 6 genera and 9 species is predominant in most cases. Genus *Hypotrachyna* of family Parmeliaceae is found to be the largest with 4 species, followed by *Heterodermia* (Physciaceae) with 3 species. Of the total 13 species of *Agapetes*, 8 are either associated with species of *Heterodermia* or *Hypotrachyna*. On two occasions lichens could not be identified up to the species rank due to scanty materials. Similarly 3 interesting species of *Agapetes* are yet to be identified.

But it is interesting to observe that out of several lichen families only the members of two families *i.e.* Parmeliaceae and Physciaceae are abundant. It may be because of high ecological amplitude of the species belonging to these families.

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भारत में *एगेपेटिस* (इरिकेसी) पर शैवाक

दीपान्विता वणिक एवं प्रणव बेजबरूआ

सार संक्षेप

इस आलेख में *एगेपिटिस* पर उगने वाले शैवाक का विवरण है। *एगपिटिस* की 13 जातियों की टहनियों पर 2 कुलों के अन्तर्गत 7 जेनेरा की 12 शैवाक जातियां उगी हुई मिली।