AN ACCOUNT ON MYXOMYCETES FROM KATHMANDU VALLEY, NEPAL

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ABSTRACT
This paper reports on 11 species of myxomycetes (Arcyria pomiformis, Arcyria incarnata, Arcyria cineria, Stemoitis sp., Didymium flexuosum, Physarum viride, Hemitrichia serpula, Tubifera microsperma, Fuligo cinerea, Mucilago crustacea and Didymium iridis) gathered in 2006-2008 from the adjoining hills (Shivapuri and Godavari) around the Kathmandu valley. Further studies on the phytogeographic relationship, frequency and dominance of the taxa need to be carried out in future.

Key words: Myxomycetes, Kathmandu Valley, Nepal

INTRODUCTION
The vegetation of the Kathmandu Valley comprises of Schima-Castanopsis - Castanopsis forest at lower elevation and Quercus-Laurel and Quercus-Rhododendron forest at the upper elevation. The forest ground has abundant number of substrates (logs, decayed, leaves, humid and damp soil). The climate is cool subtropical to warm temperate. This type of vegetation and climate is suitable to grow species of Myxomycetes.

Some studies on Myxomycetes in Nepal have been done by Poelt (1965), Bhatt (1966), Singh (1971), Onsberg (1973), Singh and Singh (1976), Singh et al. (1977), Hagiwara and Bhandary (1982), Yamamoto and Hagiwara (1990) and Nannenga-Bremekamp and Yamamoto (1988). Based on the studies; the check reference list and historical account of Myxomycetes have been reported (Adhikari and Manandhar 1996, Adhikari 2009). A book entitled “Myxomycetes in Nepal” has been published (Adhikari 2012).

The literature reviews included a total of 26 species of Myxomycetes from Kathmandu Valley (Godawari, Phulchowki, Patan, Thankot, Gokarna, Hattiban, Kamalpokhari, Baneswar, Putali sadak, Swayambhu). Among the reported species, the richest genera were Arcyria (8 spp.), Stemonitis (7 spp.) and Physarum (3 spp.). The rest genera (Badhamia, Clastoderma, Cribraria, Diderma, Didymium, Hemitrichia, Physerella) had one species each. Three species (Arcyria insignis, Clastoderma pulchella and Physarum wingatense) were reported from Godavari and two species (Arcyria cinerea and Cribraria microcarpa) from Phulchowki.

Very little work has been carried out on Myxomycetes from Godavari. But there is no report of Myxomycetes from Shivapuri. Therefore; this study has been conducted in Shivapuri and Godavari (Phulchowki).

MATERIALS AND METHODS
The study was conducted following the standard methods in August 2006, August to September 2007 and July 2008 in the hills of Shivapuri and Godavari. Specimens were collected and identified in National Herbarium, Godavari and Central Department of Botany, Kirtipur. All the specimens were housed in the Central Department of Botany, Tribhuvan University; Kirtipur; Kathmandu, Nepal.
ENUMERATION OF MYXOMYCETES

The scientific names of the species is followed by major reference, habitat, location, year of collection, collection number, collector and distribution. Some species were illustrated (Annex 1).

On wood bark, Shivapuri, 2006/8/3, no. 16, A. Chauhan
Distribution- Cosmopolitan

On rotten wood or falling twigs, Shivapuri, 2006/8/3, no. 05, A. Chauhan
Distribution – Cosmopolitan.

On rotten wood or on rotten bark place of tree, Shivapuri, 2006/8/3, no.01, A. Chauhan.
Distribution: Comopolitan.

On fallen leaves, Shivapuri, 2006/8/20, no. 07; on rotten wood, Godavary, 2007/9/1, no. 25, A. Chauhan.
Distribution - Japan and Nepal.

On fallen leaves, Shivapuri, 2006/8/3, no. 35, A. Chauhan.
Distribution – World wide.

On fallen leaves or twings Shivapuri, 2008/7/ 4, no. 27, A. Chauhan.
Distribution – Cosmopolitan.

**Hemitrichia serpula** (Scap.) Rost. in Emoto, *The Myxomycetes of Japan.* 94; 1977, pl- 47.
on rotten wood, Shivapuri 2007/9/1, no. 11, A. Chauhan; on rotten wood, Godavary, 2007/9/1, no. 06, A. Chauhan
Distribution – Cosmopolitan.

Distribution: World wide.

On rotten wood, Shivapuri, 2007/9/1, no. 10, A. Chauhan.
Distribution: Cosmopolitan.
On rotten wood, Godavari, 2006/8/10, no. 04, A. Chauhan.
Distribution – Cosmopolitan.

On rotten wood, Shivapuri, 2007/8/4, no. 45; on rotten wood, Godavari, 2007/9/1, no. 20, A. Chauhan.
Distribution – World wide.

RESULTS AND DISCUSSION
Among the 11 species, 10 and 4 species of Myxomycetes were collected from Shivapuri and Godawari, respectively. Of the total species, three species (Didyamium flexuosum, Hemitrichia serpula and Tubifera ferruginosa) were common to Shivapuri and Godavari; 7 species (Arcyria pomiformis, Arcyria incarnata, Arcyria cinerea, Didymium iridis, Fuligo cinerea, Mucilage crustacea and Physarum viride) collected from Shivapuri only and one species (Stemonitis cinerea) from Godavari only. Of the total species, eight species (Arcyria pomiformis (Leers.) Rostof., Didyamium flexuosum Yamashiro, Didymium iridis (Ditmar) Fr., Fuligo cinerea (Schw.) Morgan, Mucilage crustacea Wiggers., Physarum viride (Bull.) Pers., Stemonitis cinerea (Bull.) J.F. Grnel, and Tubifera ferruginosa (Batsch.) Gmelin) were not reported previously from Kathmandu Valley and three species (Arcyria cinerea (Bull.) Pers., Arcyria incaranta Pers. and Hemitrichia serpula (Scop.) Rost. were reported from Kathmandu Valley other than Godavari and Shivapuri (Singh and Singh 1976, (Singh et al. 1977, Singh and Singh 1976, Yamamoto and Hagiwara 1990). This study added new species of Myxomycetes to the Kathmandu Valley. Further intensive exploration is necessary to prepare comprehensive list of species of and understand floristic diversity, phytogeographical correlation and the distribution pattern of Myxomycetes of Kathmandu Valley.

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REFERENCE


Annex 1. Photographs of some species of Myxomycetes.

1. *Fuligo cineraea*  
2. *Arcyria cinerea*  
3. *Physarum viride*  
4. *Hemitrichia serpula*  
5. *Didymium flexuosum*  
6. *Tubifera microsperma*

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