



## COMPSOPOGON COERULEUS (BALBIS) MONTAGNE, FRESH WATER RHODOPHYCEAN TAXA FROM HOOGHLY DISTRICT, WEST BENGAL, INDIA

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### ABSTRACT

The present paper was communicated with taxonomic description of *Compsopogon coeruleus* (Balbis) Montagne, a fresh water Rhodophycean member with original citation, phenology, habitat, distribution pattern, ecological note, threats and significance for the first time from Hooghly district, West Bengal, India.

**Keywords:** Taxonomic descripton, *Compsopogon coeruleus* (Balbis) Montagne, Rhodophyceae, Hooghly district, W.B.

### 1. INTRODUCTION

While dealing with floristic survey of algal flora many authors have recorded *Compsopogon coeruleus* (Balbis) Montagne from different parts of India. The first report appears to be the work of Brühl and Biswas [1]. Later Brühl and Biswas [2], Biswas [3], Krishnamurthy [4,5,6], Vaidya [7], pandey *et al.* [8], Pandey and Chaturvedi [9], Anand [10], Chaturvedi and Bhatnagar [11], Pandey [12], Santra and Pal [13] have recorded this taxa from several regions viz. Uttar Pradesh, Gujarat, Jammu, Madras, West Bengal etc. of India.

There is no report of above mentioned species from Hooghly district, West Bengal in respect of phenology, ecological note, threats and significance or scanty information is available regarding the said species from West Bengal.

### 2. MATERIAL AND METHODS

Algal materials had been collected in sterilized glass containers from ponds of different places viz. Khamargachi (23.05°N, 88.43°E), Kamarkundu (22.83°N, 88.20°E) and Rishra (22.71°N, 88.35°E) of Hooghly district, West Bengal (Fig.1). Detailed study was made by examining specimens under Olympus microscope (Model-CH20i) for identification of species. Samples were preserved in 4% formalin. Identification of taxa was accomplished with the help of authentic literatures [5, 7, 10, 11, 13].



Fig. 1 ● Indicates study sites

### 3. RESULTS AND DISCUSSION

*Compsopogon coeruleus* (Balbis) Montagne, a fresh water red alga belonging to the family Erythrotrichiaceae under the order Bangiales of Rhodophyceae from Hooghly district, West Bengal had been recorded and morpho-taxonomically described for the first time. Each currently accepted name had been provided with its author(s)' name. All parameters in

ecological notes were presented in mg/l. except pH and temperature.

Class: Rhodophyceae  
Order : Bangiales  
Family :Erythrotrichiaceae  
Genus : *Compsopogon* Montagne

1. *Compsopogon coeruleus* (Balbis) Montagne, Flore d Alg.154. 1846; Brühl and Biswas in J. Dept. Sci. Calcutta Univ. 5: 1. Pl. 8. Figs. 1-4. Pl. 9. Figs. 5-9. Pl. 10. Figs. 10-23. Pl. 11. Figs. 24-28. 1923; Biswas in Rec. Bot. Surv. India 15(1): 102. Pl. 9. figs. 98 a-b.1949; Krishnamurthy in J. Linn. Soc. Bot.58: 214. pl.1. figs. 1-2. 1962; Pandey in Curr. Sci. 42: 800. figs.1-3.1973; Pandey, Tewari and Pandey in Biblioth. Phycol. 66:241. pl. 1. figs. 1-5. pl.2. figs. 1-5.1983.

**Description:** Plant free floating or attached, alternately branched, developed by diffused growth, bluish- violet or pinkish-grey, coarsy; filaments 5-7 cm. long; branches making an angle of 30-60° with subtending axis; main axis multiseriate, 172.3-182.6µ broad, constitute by central cells which are surrounded by corticated cells; central cells 26.5-45.2µ long and 45.3-68.8 µ broad; corticating cells single layered except in main axis, 15.2-25.5µ long and 11.3-24.6µ broad; branches uniseriate, 42.9-48.3 µ broad; cells of branches 6.6-22.5 µ long and 18.3-48.3µ broad; wall of uniseriate filaments thick and double layered, inner layer rigid and outer layer gelatinized; terminal cells of uniseriate branches with rounded apices; young cells contain single parietal chloroplast which latter fragmented into many small, discoid chloroplasts; nucleus one in each cell; macro and microsporangia present.

**Phenology:** Late November to early March.

**Habitat:** Associated with aquatic grass of the family Poaceae in a Khal at Khamargachi; Pond at Kamarkundu and at Rishra with aquatic plant *Ipomoea*.

**Collection No:** 1011, 1047.

**Date :** 06.02.11,08.03.11.

**Ecological Notes:** Occured in stagnant water and slow flowing water, attached with aquatic plants, bluish green filaments; Rishra, water temperature: 24°C; pH:7.2; NO<sub>3</sub>-N0:1.2; PO<sub>4</sub>:0.08; D.0:6.8; B.0.D:4.8; Khamargachi, water temperature: 23°C; pH:7.3; NO<sub>3</sub>-N0:0.15; PO<sub>4</sub>:0.20; D.0:7.6;B.0.D:4.0; Alkalinity: 124; SO<sub>4</sub>: 4.0.

**Threats:** Anthropogenic activities, loss of habitat and water pollution.

**Significance:** Primary producer and component of aquatic food chain in freshwater ecosystems.

**Distribution:** Uttar Pradesh (pandey et al.,1973; Pandey and Chaturvedi, 1979; Chaturvedi and Bhatnagar,1982; Pandey,1983a); Gujarat (Vaidya,1968); Jammu (Anand,1980); Madras (Krishnamurthy,1953,1962a,b); West Bengal (Brühl and Biswas,1923,24; Biswas,1949; Santra and Pal, 1988).

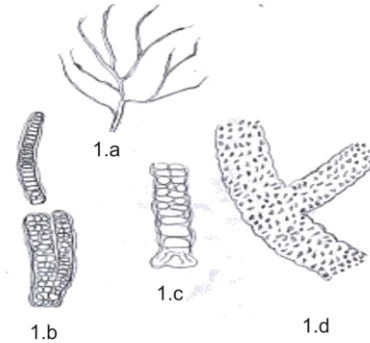


Plate-1: Figs. 1. a-d *Compsopogon coeruleus* (Balbis) Montagne thallus showing main axis with a branch, a basal part. 1. d, a mature branch.

Figs. 2.a *Compsopogon coeruleus* vegetative filaments attaching with *Ipomoea* plant  
Figs. 2.b A mature branch of *Compsopogon coeruleus*.

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