

FRESH WATER ALGAE OF HANNA URAK VALLEY QUETTA

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Abstract

Algal flora of Hanna-Urak Valley, near Quetta, Baluchistan comprised of 39 genera and 89 species distributed in Cyanophyceae (17 spp.), Chlorophyceae (31 spp.), Charophyceae (1 sp.), Xanthophyceae (1 sp.), Bacillariophyceae (36 spp.) and Euglenophyceae (3 spp.), 34 species of which are new records for Pakistan. *Cymbella* (9 spp.), *Navicula* (6 spp.), *Cosmarium* (6 spp.), *Spirogyra* (6 spp.) and *Zygnema* (6 spp.) were more common.

Introduction

Algae make their appearance on a variety of habitats like moist soil surface and other objects subjected to slow or running, cold or hot waters. There are reports of fresh water algae from various parts of Pakistan (Faridi, 1955, 1972; Sarim & Faridi, 1976; Jehan-Ara & Faridi, 1978; Masudul-Hasan, 1978, 1980; Shameel, 1978; Ali & Qureshi, 1979; Anjum *et al.*, 1980) with a more recent report on algae from Baluchistan (Hussain & Anjum, 1982). Algae collected and identified from Hannah-Urak Valley, Quetta are presented in this report.

Hannah-Urak valley lies between longitude 67°00 SE and 68°08 E and between latitude 30°40 N to 30°18 N, with climate classified as sub-tropical, continental, highland, arid type; average rainfall of 10"/year. The highest precipitation received during February is 2.24, 70% of which is in the form of rainfall. Snowfall is received during December through March. Summer remains dry; soil is generally sandy-loam and silty-loam mixed with gravels, pebbles and boulders.

Materials and Methods

Algae were collected from Hanna lake, Urak stream, water channels and other moist habitats where algal growth could be seen during April through September 1980 by hand-picking, squeezing algal mass and submerged objects, scratching stones and other moist objects. Algae preserved in 3% formalin, were identified after reference to Prescott, 1951; Desikachary, 1959; Randhawa, 1959; Siddiqui & Faridi, 1964; Jehan-Ara, & Faridi, 1978.

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LIST OF ALGAE COLLECTED FROM HANNA-URAK VALLEY DURING 1980

I. CYANOPHYCEAE

1. Chroococcales:

*Aphanothece clathrata**
Chroococcus cohaerens
C. limneticus var. *subsalsus*
C. turgidus
Dactylococcopsis raphidioides
Merismopedia glauca
Rhabdoderma irregulare

2. Oscillatoriales:

*Cylindrospermum michailovskaense**
*Lyngbya ceylanica**
L. martensiana
*Oscillatoria acuminata**
O. agardhii
O. foreau
Phormidium autumnale
*P. lucidum**
P. tenue
Spirulina major

II. CHLOROPHYCEAE

1. Ulotrichales:

Binuclearia tetra

2. Chlorococcales:

Characium ambiguum
Scenedesmus arcuatus var. *platydisca**
S. incrassatulus
*Tetraedron minimum**

3. Cladophorales:

Cladophora crispata
C. glomerata

4. Zygnematales:

Closterium diana var. *archuatum**
C. moniliforme
Cosmarium botrytis
C. laeve
C. lundellii var. *corruptum**
C. nitidulum
C. obtusatum var. *undulatum**
C. pseudonitidulum var. *angustissimum**
*Mougeotia maltae**
*Spirogyra bichromatophora**
*S. groenlandica**
*S. lamellosa**
*S. novae-angliae**
S. longata
*Zygnema subcruciatum**
Z. collincianum
*Z. chlabeospermum**
*Z. cyanospermum**
*Z. pectinatum**
*Z. sterile**
Zygonium ericetorum

5. Oedogoniales:

*Oedogonium stichospermum**

6. Tetrasporales:

Gloeocystis gigas

Trachelomonas were planktonic in nature. *Oscillatoria* and *Phormidium* were also present in pure masses with rare occurrence of *Aphanothece*, *Chroococcus* and *Spirulina*.

Species of *Cosmarium*, *Closterium diana* var. *archuatum*, *Aphanothece clathrata*, *Oscillatoria acuminata*, *Phormidium lucidum*, *Scenedesmus arcuatus* var. *platydisca*, and several diatoms such as *Cocconeis grata*, *Cymbella amphicephala*, *C. gracilis*, *Diatoma elongatum* var. *tenuis*, *Frustulia viridula*, *Gomphonema vibrio*, *Navicula gracilis*, *Pinnularia brebsonii*, *P. brunii*, *Surirella minuta* and *S. ovata* are new to Pakistan. In all 34 different species marked with an asterisk are first record for Pakistan, while all of the recorded taxa constitute the first report from Baluchistan.

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