

Check List of Diatoms From Dhule and Nandurbar District Maharashtra (India)



Botany

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ABSTRACT

Diatom samples were collected every fortnight from different places of Sakri and Navapur taluka of Dhule and Nandurbar district respectively (Maharashtra). In all 57 diatoms belonging to 15 genera were recorded. Cymbella, Nitzschia, Gomphonema, Frigalaria, Synedra, Achnanthes and Hantzschia, were found to be dominant forms. All the 57 forms have been recorded first time from this region.

INTRODUCTION

Two talukas i.e. Sakri and Navapur from Dhule and Nandurbar district of Maharashtra are chosen for the systematic account for diatoms.

Though good amount of work has been done on freshwater diatoms of Maharashtra (Barhate and Tarar, 1983; Sarode and Kamat, 1983, 84) no information exists on the diatom flora of Sakri and Navapur taluka. During this investigation number of collections was made. The collections were made from all possible places to get maximum number of diatoms. In present communication 57 species of diatoms belonging to 15 genera is listed. Temperature and PH of water body is also recorded.

MATERIAL AND METHOD

The algal samples were collected from all possible places. All collections were preserved in 4% commercial formalin.

5ml. of concentrated preserved sample was centrifuged and the pellet was washed twice with distilled water and was centrifuged, about 20 ml. of concentrated chromic acid was added to the pellet, shaken vigorously and was kept plugged overnight. The solution was centrifuged and the pellet was washed 3-5 times with distilled water and was centrifuged every time. The pellet was preserved in 2-3 ml. of 70% alcohol.

From this preserved material permanent slides are prepared. From the permanent slides of different collections, diatoms were observed and studied under the low and high power of microscope.

SYSTEMATIC ACCOUNT

BACILLARIOPHYTA

DIATOMATAE

CENTRALES

DISCINEAE

COSCINODISCACEAE

COSCINODISCOIDEAE

Cyclotella Kuetzing

Cyclotella meneghiniana Kuetz.

(Habit- Navapur; T. 230c; PH 8.5)

PENNALES

ARAPHIDINEAE

FRAGILARIACEAE

FRAGILARIOIDEAE

Fragilaria Lyngbye

Fragilaria brevistriata Gurn. f. elongate Sarode et. Kamat

(Habit- Nackatabandhara – Nizampur; T 330c; PH 6.5)

Fragilaria intermedia Grun.

(Habit- Khandbara; T 290c; PH 8)

Fragilaria intermedia Grun v. robusta Sarode et. Kamat

(Habit- Navagaon; T 230c; PH 8.5)

Fragilaria intermedia Grun. f. chandrapurensis Sarode et. Kamat

(Habit- Navapur; T. 290c; PH 6.5)

Synedra Ehrenberg

Synedra acus Kutz. v. acula (Kuetz.) V.H.

(Habit- Vasdara; T. 9.80c; PH 6.5)

Synedra ulna (Nitz.) Ehr. f. stauro-destituta Pant.

(Habit- Navapur; T 260; PH 8.5)

Synedra ulna (Nitz) Ehr. v. biceps Kuetz.

(Habit- Vasdara; T 9.80c; PH 6.5)

Synedra ulna (Nitz.) Ehr. v. subaequalis Grun.

(Habit- Nizampur; T. 300c; PH 8.5)

MONORAPHIDINEAE

ACHNANTHACEAE

COCCONEOIDEAE

Achnanthes Bory

Achnanthes affinis Grun.

(Habit- Navapur; T. 210c; PH 7.5)

Achnanthes exigua Grun.

(Habit- Navagaon; T; 230c; PH 8)

Achnanthes lanceolata (Breb.) Grun. v. tenuis Gonzalves et. Gandhi.

(Habit- Vasdara; T. 19.30c; PH 8)

Achnanthes minutissima (Kuetz.) Grun.

(Habit- Navagaon; T. 280c; PH 7.5)

BIRAPHIDINEAE

NAVICULACEAE

NAVICULOIDEAE

Pleurosigma W.Smith emend. Cleve

Pleurosigma elongatum W. Smith v. karianum (Grun) Cleve.

(Habit- Dusane; T. 290c; PH 7.5)

Caloneis Cleve

Caloneis permagna (Bail) Cleve

(Habit- Navagaon; T. 330c; PH 6.5)

Anomoeoneis Pfizer

Anomoeoneis seriata (Berb.) Cleve. v. modesta A.Cl.

(Habit- Vasdara; T. 9.80c; PH 6.5)

Anomoeoneis sphaerophora (Kuetz.) Pfizer

(Habit- Khandbara; T. 290c; PH 8)

Navicula Bory

Navicula cocconeiformis Gergory

(Habit- Navagaon; T. 230c; PH 8.5)

Navicula densestriata Hustedt

(Habit- Dusane; T. 290c; PH 6.5)

Navicula laterostrata Hustedt

(Habit- Dusane; T. 290c; PH 7.5)

Navicula rostellata Kuetz.

(Habit- Navapur; T. 260c; PH 8.5)

GOMPHOCYMBELLOIDEAE

Amphora Ehrenberg

Amphora ovalis Kuetz. v. pediculus Kuetz.

(Habit- Navagaon; T. 230c; PH 8.5)

Amphora holostica Hustedt

(Habit- Sakri; T. 11.50c; PH 8)

Cymbella Agardh

Cymbella affinis Kuetz.

(Habit- Navagaon; T. 230c; PH 8.5)

Cymbella aspera (Ehr.) Cleve.

(Habit- Nizampur; T. 290c; PH 7)

Cymbella bengalensis Grun.
(Habit- Vasdara; T. 9.80c; PH 6.5)
Cymbella chandolensis Gandhi
(Habit- Navapur; T. 260c; PH 6.5)
Cymbella kerkevarensis A. Cl.
(Habit-Vasdara; T. 9.80c; PH 6.5)
Cymbella pusilla Grun.
(Habit- Nizampur; T. 230c; PH 8.5)
Cymbella stauraneiformis Lagst.
(Habit- Navapur; T. 210 c; PH 7.5)
Cymbella tumidula Grun.
(Habit- Navagaon; T. 280c; PH 8)
Cymbella turgida (Greg.) Cleve.
(Habit- Vasdara; T. 19.30c; PH 8)
Cymbella ventricosa Kuetz.
(Habit-Navagaon; T. 280c; PH 7.5)
Cymbella bharatensis Sarode et. Kamat
(Habit- Dusane; T. 290c PH 7.5)
Cymbella vidarbhsensis Sarode et. Kamat
(Habit- Nackatabandhara; T. 330c; PH 6.5)
Cymbella cistula (Hemp.) Grun v. maculate (Kuetz.) Van. Heurck.
(Habit- Nackatabandhara; T. 330c; PH 6.5)

Gomphonema Agardh

Gomphonema aequatoriale Hustedt.
(Habit- Navagaon; T. 230c; PH 8.5)
Gomphonema constrictum Ehr. v. indica Gandhi
(Habit- Nackatabandhara; T. 330c; PH 6)
Gomphonema intericatum Kuetz. v. pumilum Grun.
(Habit- Navapur; T. 210c; PH 7.5)
Gomphonema montanum Schum v. acuminatum Mayer.
(Habit- Vasdara; T. 9.80c; PH 6.5)
Gomphonema parvulum (Kuetz.) Grun.
(Habit- Nactabanbhara; T. 330c; PH 6.5)
NITZSCHIACEAE
NITZSCHIOIDEAE

Hantzschia Grunov.
Hantzschia amphioxys (Ehr.) Grun.
(Habit- Nackatabandhara; T. 330c; PH 6)
Hantzschia amphioxys (Ehr.) Grun. v. mugadensis Gandhi.
(Habit- Khandbara; T. 290c; PH 8)
Hantzschia amphioxys (Ehr.) v. recta O. Muell. f. typica A.Cl.
(Habit- Navagaon; T. 230c; PH 6.5)

Nitzschia Hassal

Nitzschia gandershemienis Krasske.
(Habit- Vasdara; T. 9.80c; PH 8.5)
Nitzschia microcephala Grun. v. elegantula Grun.
(Habit- Navapur; T. 260c; PH 8.5)
Nitzschia sublinearis Hustedt.
(Habit- Vasdara; T. 9.80c; PH 6)
Nitzschia subtilis Grun. v. paleaceae Grun.
(Habit- Nizampur; T. 300c; PH 8.5)
Nitzschia vasnaii Gandhi
(Habit- Navapur; T. 210c; PH 7.5)
Nitzschia nagpurensis Sarode et. Kamat
(Habit- Navapur; T. 230c; PH 8)
SURIRELLACEAE
SURIRELLOIDEAE

Surirella Turpin

Surirella linearis W. Smith f. kolhapurensis Sarode et. Kamat
(Habit- Vasdara; T. 19.30c; PH 7.5)
Surirella ovata Kuetz. v. pinnata (W. Smith) Hustedt.
(Habit- Navagaon; T. 280c; PH 7.5)
Surirella ovata Kuetz. v. salina (W. Smith) Hustedt.
(Habit- Dusane; T. 290c; PH 7.5)
* T. temperature.

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