

Contributions to the desmids of Rohilkhand Division, U.P., India

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The algal samples collected from different localities in Moradabad and Pilibhit districts of Uttar Pradesh during 1986-87 contained 44 desmid taxa, belonging to 5 genera, and are being reported for the first time from this part of the state.

Key-words—Algae, Desmids, U.P., India.

INTRODUCTION

ALTHOUGH Iyengar and Vimala Bai (1941), Bharati (1965), Suxena and Venkateswarlu (1966, 1968), Agarkar and Agarkar (1973, 1977), Bharati and Bongale (1975), Agarkar *et al.* (1979), Pandey and Pandey (1983), Prasad and Misra (1984, 1985), Hegde (1986), Chaturvedi *et al.* (1987), Pandey *et al.* (1987), Pandey and Habib (1987), Habib *et al.* (1989, 1990), Habib and Pandey (1990), Habib (1990 a,b) studied the desmid flora from different parts of the country, our knowledge of Desmidiaceae in India is still inadequate. The forms recorded here are new additions to the desmid flora of Rohilkhand Division, Uttar Pradesh.

MATERIAL AND METHOD

Collections of algal material were made from different localities in Moradabad and Pilibhit districts during 1986-87. The collected material was kept in 4% formalin and deposited in the Department of Botany, Bareilly College, Bareilly. The identification of desmids was made with the help of systematic accounts given by West and West (1904-12), West *et al.* (1923), Tiffany and Britton (1952), Scott and Prescott (1961), Gronblad and Croasdale (1964), Croasdale (1965), Prescott (1966) and Croasdale and Scott (1976). In all 44 species belonging to five genera have been identified which are listed below mentioning their occurrence and specimen number within bracket.

ENUMERATION OF TAXA

Family - Desmidiaceae

Genus - *Pleurotaenium* Naegeli

Pleurotaenium trabecula (Ehr.) Naeg. var. *robustum* Hust. — Planktonic in a pond near Budh Bazar (IH 653).

Genus - *Euastrum* Ehrenberg

Euastrum evolutum (Nordst.) West *et* West — In a puddle near Asalatpura (IH 668).

E. evolutum (Nordst.) var. *glazivoii* (Boerg.) West *et* West — In a pond near Budh Bazar (IH 853).

E. radiatum Turn. — In a pond near Budh Bazar (IH 653).

Genus - *Cosmarium* Corda

Cosmarium bianum Nordst. — In a pond near Pathar Wali Masjid (IH 667).

C. bituberculatum Fritsch *et* Rich — Planktonic in a pond near Mala Railway Station (IH 312).

C. braunii Reinsch. — In a pond near Railway colony (IH 658).

C. connatum Bréb. var. *connatum* Bréb. — Planktonic in a ditch near Mala Railway Station (IH 340).

C. contractum var. *minutum* (Delp) West *et* West - Planktonic in Mala River (IH 318).

C. cucurbitinum (Biss.) Lutkem var. *subpolymorphum* Nordst. — Planktonic in a pond near Mala Railway Bridge (IH 335).

C. cuneatum Joshua — In a pond near Thaseel School (IH 656).

C. cyclicum Lund. - Planktonic in a ditch near Mala Railway Station (IH 340).

C. depressum (Naeg.) Lund var. *apertum* (Turn.) Hirano - Planktonic in a ditch near Mala Police Station (IH 321).

C. difficile Lutkem. — Planktonic in Mala River (IH 318).

C. divergens Krieger - Planktonic in ditch near Mala Police Station (IH 321).

C. galeritum Nordst. — Planktonic in Mala River (IH 318).

C. garrolense Roy et Biss. — In a pond near Harpal Nagar (IH 655).

C. gonioides West et West var. *variolum* West et West — In a puddle near Asalatpura (IH 668).

C. granatum Bréb. var. *rotundatum* Krieger - Planktonic in a pond, near Mala Railway line (IH 329).

C. granatum Bréb. var. *nordatedtii* Hansg. — In a puddle near Asalatpura (IH 668).

C. isthmochondrum Nordst. — In a pond near Railway line (IH 663).

C. lundellii Delp. var. *corruptum* (Turn.) West et West — In a pond near Harpal Nagar (IH 655) and Planktonic in a pond near Mala Railway Station.

C. meneghinii Bréb. ex. Ralfs — Planktonic in Mala River (IH 318).

C. obsoletum (Hantz.) Reinsch. var. *situense* Gutw. — In a pond near Ismhil Road and Planktonic in Mala River (IH 670).

C. ordinatum Borge — Planktonic in a ditch near Mala River (IH 330).

C. panduriforme Turn. — Planktonic with other algae near Kotwali (IH 657).

C. phaseolus Bréb. var. *onphalum* (Schaarschm.) Racib. — Planktonic in a ditch near Mala Railway Station (IH 340).

C. phaseolus Bréb. var. *subbireme* Racib. — In a pond near Railway line (IH 663).

C. pseudoconnatum Nordst. — Planktonic in Mala River (IH 318).

C. quadratum Ralfs — In a pond near Harpal Nagar (IH 655).

C. quadrifarium Lund. var. *simplex* Krieger — In a puddle near Dariba Maan Rai (IH 669).

C. regnellii Wille forma minor Boldt — In a pond near Budh Bazar (IH 653).

C. reniforme (Ralfs) Arch. — Planktonic in Mala River (IH 318).

C. repandum Nordst. — Planktonic in Mala River (IH 318).

C. sexnatum Gutw. — Planktonic in a pond near Mala Railway line (IH 329).

C. subtransiens Croasdale — In a puddle near Dariba Maan Rai (IH 669).

C. tinctum Ralfs var. *intermedium* Nordst. — In a pond near Thaseel School (IH 656).

C. trilobulatum Reinsch. — Planktonic in Mala River (IH 318).

C. westii Bernard — Planktonic in a pond near Mala Railway Station (IH 312).

Genus - *Staurastrum* Meyen

Staurastrum sebaldi Reinsch var. *ornatum* Nordst. — In a pond near Harpal Nagar (IH 655).

S. subulatum (Ag.) Croasdale — In puddle near Asalatpura (IH 668).

S. sunderbundanse Turn — In a pond near Pathar Wali Masjid (IH 667).

S. triangularis (Lagerh.) Teiling (non Turner) — In a pond near Ismhil Road (IH 670).

Genus - *Arthrodesmus* Ehrenberg

Arthrodesmus convergens Ehr. - In a pond near Railway Colony (IH 658).

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REFERENCES

- Agarkar, D.S. & Agarkar, M.S. 1973. Contribution to the desmids of M.P., India. *Portug Acta Biol.* **12**: 5-18.
- Agarkar, M.S. & Agarkar, D.S. 1977. Desmids from Pachmarhi, M.P. *Hydrobiologia* **54**: 23-32.
- Agarkar, M.S., Agarkar, D.S. & Dixit, R. 1979. Desmids from Bandhavgarh, M.P. *Hydrobiologia* **65**: 213-223.
- Bharati, S.G. 1965. A systematic survey of the desmids of Bombay. *Karnataka Univ. Jour. Sci.* **1**: 97-102.
- Bharati, S.C. & Bongale, U.D. 1975. Systematic account of fresh water algae of Raichur. *Karnataka Univ. Jour. Sci.* **20**: 130-141.
- Chaturvedi, U.K., Pandey, U.C., Habib, I. & Shukla, H.M. 1987. Desmids of Bareilly-II. *Phykos* **26**: 95-102.
- Croasdale, H. 1965. Desmids of Devon Island, N.W.T. Canada. *Trans. Amer. Microsc. Soc.* **84**: 301-305.
- Croasdale, H. & Scott, A.M. 1976. New or otherwise interesting desmids from Northern Australia. *Nova Hedwigia* **27**: 501-596.
- Gronblad, R. & Croasdale, H. 1964. Desmids from Uganda (S.W. Africa). *Acta Bot. Fenn.* **93**: 1-40.
- Habib, I. 1990a. Some desmids from Nainital (Uttar Pradesh), India. *New Botanist* **17**: 245-249.
- Habib, I. 1990b. Desmids from Bombay (Maharashtra), India. *New Botanist* **17**: 143-147.
- Habib, I. & Pandey, U.C. 1990. On some taxa of *Cosmarium* Corda new to Indian desmid flora. *J. Indian bot. Soc.* **69**: 275-276.
- Habib, I., Pandey, U.C. & Chaturvedi, U.K. 1989. Desmids of Bareilly district, Uttar Pradesh-XI. *New Botanist* **16**: 275-278.
- Habib, I., Pandey, U.C. & Chaturvedi, U.K. 1990. Desmids of Bareilly

- district-XIII, U.P., India. *Geophytology* **20**: 54-55.
- Hegde, G.R. 1986. Records of Desmids new to Karnataka State-II. Genus *Cosmarium* Corda. *Phykos* **25**: 123-128.
- Iyengar, M.O.P. & Vimala Bai, B. 1941. Desmid from Kodaikanal, South India. *J. Indian bot. Soc.* **20**: 73-103.
- Pandey, U.C. & Habib, I. 1987. Desmids of Bareilly-I. *J. Indian bot. Soc.* **66**: 291-296.
- Pandey, U.C., Habib, I., Gangwar, F.C. & Shukla, H.M. 1987. A contribution to our knowledge of desmids from Bareilly. *Phykos* **26**: 86-94.
- Pandey, U.C. & Pandey, D.C. 1983. On some desmids new to Allahabad. *J. Indian bot. Soc.* **62**: 166-169.
- Prasad, B.N. & Misra, P.K. 1984. Some new taxa of Desmids from Andaman Islands, India. *Hydrobiologia* **109**: 149-158.
- Prasad, B.N. & Misra, P.K. 1985. Some taxa of *Cosmarium* Link new to Indian Desmid flora. *J. Indian bot. Soc.* **64**: 343-47.
- Prescott, G.W. 1966. Algae of Panama Canal and its tributaries- II. Conjugales. *Phykos* **5**: 1-43.
- Scott, A.M. & Prescott, G.W. 1961. Indonesian Desmids. *Hydrobiologia* **17**: 1-132.
- Suxena, M.R. & Venkateswarlu, V. 1966. Desmids of Andhra Pradesh- III. *J. Osmania Univ.* **3**: 41-60.
- Suxena, M.R. & Venkateswarlu, V. 1968. Desmids of Andhra Pradesh- II. *J. Indian bot. Soc.* **47**: 23-45.
- Tiffany, L.H. & Britton, M.E. 1952. *The Algae of Illinois*. Hafner Publishing Co., N.Y., 407 pp.
- West, W. & West, G.S. 1904-12. *A monograph of the British Desmidiaceae*. The Ray Society, London **1**: 1-224, **2**: 1-204, **3**: 1-272, **4**: 1-191.
- West, W., West, G.S. & Carter, N. 1923. *A Monograph of the British Desmidiaceae-V*. The Ray Society, London.