

Diatom 20: 123-132 (英文)

Prakash Nautiyal, Rachna Nautiyal, Kavita Kala and Jyoti Verma : Taxonomic richness in the diatom flora of Himalayan streams (Garhwal, India)

#### Abstract

New records of diatoms were observed from the River Alaknanda-Ganga, 32 from the Alaknanda and 26 from the Ganga amounting to 58 taxa. The tally of diatom taxa from the Alaknanda-Ganga has risen from 193 reported earlier to 251. Recently, 77 new records of diatom taxa were found among 200 species, varieties and forms from the Mandakini basin drained by River Mandakini, a tributary of the Alaknanda, thus increasing the count to 328 of 30 genera in Garhwal Himalaya. Three of the new records were *Cyclotella* (centrales) and remaining 325 were pennales. The pennate flora was dominated by biraphids (210 taxa) represented by 18 genera. *Navicula* (50), *Cymbella* (39), *Gomphonema* (29) and *Nitzschia* (28), while *Pinnularia* (12) dominated among the rest 13 genera that represented 52 species, showing richness at generic level. The remaining components included 45 araphids of 6 genera, largely *Synedra* (19), *Fragilaria* (14) and *Diatoma* (9) and only 13 raphidioids (*Eunotia* 12 and *Peronia* 1). Notably, 57 monoraphids belonged to just 3 genera. *Achnanthes* (49) dominated them. *Navicula* and *Achnanthes* were the most species rich genera. *Achnanthes* (33, 38) was species rich than *Navicula* (25, 28) in the Alaknanda-Ganga and Mandakini basin, respectively. There was an overall decrease in the raphidioids (12 to 2), monoraphids (45 to 34) and biraphids (115 to 103) from high (Mandakini basin) to low elevation (Ganga), while araphids (32), were comparably higher at mid elevations (Alaknanda).

Key index words : altitudinal variation, diatom flora, Himalayan streams, new records, taxonomic richness