A LOWER BARAKAR MIOFLORA FROM RANIGANJ COALFIELD, W. BENGAL

TIWARI (1973) worked out the palynological succession in the Pusai-Shampur area (type area of the Barakar Formation) in Raniganj Coalfield. The present investigation, for the first time, records a palynological assemblage from Barakar Formation of the Churulia area of the Raniganj Coalfield. The samples were collected from a section exposed in a quarry about 250 meters east of Churulia Railway Station (23°47'15"/87°5'16") in the north-eastern part of the Raniganj Coalfield (for geological succession and Map, see BISWAS, 1966). The samples are sandy carbonaceous shale. Twenty-two genera and 57 species of miospores as listed below have been recovered from them :

Barakarites indicus Bharadwaj & Tiwari ; *B. implicatus* Tiwari ; *B. crassus* Tiwari, *B. decorus* Tiwari ; *B. triquertus* Tiwari ; *Parasaccites diffusus* Tiwari ; *P. obscurus* Tiwari ; *P. distinctus* Tiwari ; *Plicatipollenites indicus* Lele ; *Potonieisporites triangulatus* Tiwari ; *P. congoensis* Bose & Maheshwari ; *P. magnus* Lele & Karim ; *Gondwanopollis concavus* Lele & Maithy ; *G. ganjrensis* Lele & Maithy ; *Korbapollenites novus* Tiwari ; *Rhizomaspora singula* Tiwari ; *R. indica* Tiwari ; *Primuspollenites densus* Tiwari ; *Striatites subtilis* Bharadwaj & Salujha ; *S. rhombicus* Bharadwaj & Salujha ; *S. solitus* Bharadwaj & Salujha ; *S. communis* Bharadwaj & Salujha ; *S. varius* Kar ; *S. obliquus* Srivastava ; *Lahirites parvus* Bharadwaj & Salujha ; *L. rarus* Bharadwaj & Salujha ; *Verticipollenites gibbosus* ; *V. crassus* Bharadwaj & Salujha ; *V. finitimus* Bharadwaj & Salujha ; *V. debilis* Venkatachala & Kar ; *Striatopodocarpites crassistriatus* Srivastava ; *S. haploxylonoides* Srivastava ; *Crescentipollenites fuscus* (Bharadwaj) Bharadwaj, Tiwari & Kar ; *C. korbaensis* (Tiwari) Bharadwaj, Tiwari & Kar ; *C. limpidus* (Balme & Hennelly) Lele & Srivastava ; *Faunipollenites varius* Bharadwaj ; *F. parvus* Tiwari ; *F. perexiguus* Bharadwaj & Salujha ; *F. copiosus* Bharadwaj & Salujha ; *F. goraiensis* (Potonié & Lele) Maithy ; *F. multistriatus* Srivastava ; *Distriatites distinctus* Sinha ; *D. indicus* Sinha ; *D. insolitus* Bharadwaj & Salujha ; *D. bilateralis* Bharadwaj ; *Corisaccites distinctus* Venkatachala & Kar. *Vestigisporites balmei* Hart ; *V. diffusus* Maithy ; *Limitisporites rectus* Leschik ; *L. plicatus* Bose & Kar ; *Vesicaspora ovata* (Balme & Hennelly) Hart ; *V. indica* Tiwari ; *Scheuringipollenites maximus* (Hart) Tiwari ; *S. barakarensis* (Tiwari) Tiwari; *S. tentulus* (Tiwari) Tiwari; *Platysaccus hingirensis* Tiwari ; *Trochosporites tripus* Venkatachala & Kar.

The quantitative analysis of the assemblage is shown in the tables 1 and 2.

Table-1—Percentage distribution of miospore genera and groups

Genus	Percentage frequency	Groups	Percentage frequency
Parasaccites	6	Monosaccates	9
Barakarites	2		
Gondwanopollis	1		
Korbapollenites	3	Reticuloid Disaccates	7
Rhizomaspora	3		
Primuspollenites	1		
Faunipollenites	17	Striate Disaccates	40
Striatites	15		
Lahirites	3		
Verticipollenites	2		
Striatopodocarpites	2		
Crescentipollenites	1		
Scheuringipollenites	23	Nonstriate Disaccates	44
Vesicaspora	16		
Vestigisporites	3		
Limitisporites	2		

Table-2—Percentage distribution of miospore species in the Assemblage

Name of species	Percentage	Name of species	Percentage
Parasaccites diffusus	3	*F. parvus*	3
P. obscurus	1	*F. porexiquus*	3
P. distinctus	2	*F. copiosus*	1
Barakarites indicus	1	*Lahirites rarus*	1.5
B. crassus	1	*L. parvus*	0.5
Gondwanopollis lelei	0.5	*Verticipollanites crassus*	1
G. ganjrensis	1	*V. finitimus*	0.5
Korbapollenites novus	3	*V. dibilis*	0.5
Rhizomaspora indica	3	*Crescentipollenites limpidus*	0.5
Primuspollenites densus	1	*C. korbaensis*	0.5
Striatites communis	6	*Vestigisporites balmei*	0.5
S. varius	4	*V. diffusus*	2.5
S. subtilis	2	*Limitisporites plicatus*	1.5
S. rhombicus	1	*Vesicaspora ovata*	12
S. solitus	1	*V. indica*	4
S. obliquus	1	*Scheuringipollenites maximus*	16
Faunipollenites varius	10	*S. tentulus*	7

Tiwari (1973) recognised three palynozones in the miofloral succession of Barakar type area. Accordingly, the present assemblage is comparable with the Middle Barakar zone in having nonstriate dominance. Bharadwaj (1975) divided the Barakar Formations into two : the older part is dominated by *Scheuringipollenites*—complex while the younger has exclusively *Striatites*—complex. The present assemblage, in having *Scheuringipollenites* dominance, is equivalent to the Lower Barakar assemblage. The Churulia miofloral assemblage resembles the Lower Barakar assemblages of Korba (Zone no. 3 ; Bharadwaj & Srivastava, 1973), Pench Kanhan (Assemblages E & F ; Bharadwaj, Navale & Anand-Prakash, 1974) and South Karanpura (Assemblage A ; Bharadwaj & Tripathi, 1978) where the nonstriate disaccates are subdominant. Thus the present mioflora has been found to be equivalent to the Lower Barakar assemblages of the Lower Gondwana.

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