Fig. 1. Peloidal phosphorite set in a microspherite with interstitial spaces filled by the sparry carbonate and pyrite (Chert Member, Crossed light X 56).

Fig. 2. Dolomite rhomboids in cherty phosphatic with subordinate admixed silesphorite (Chert Member, crossed light X 112).

Fig. 3. Peloidal phosphorite grains in sparry carbonate matrix, having pyrite dissemination, phosphorite Peloids segregated interlocking sparry carbonate grains with alcalcisphorite (Chert Member, PPL X 56).

Fig. 4. Idiomorphic dolomite rhombs in a microspherite matrix with sporadic chert, microspherite (Chert Member, crossed light, X 224).

Fig. 5. Ill sorted peloids of phosphate moderately dispersed in a siliceous matrix with sporadic dolomite rhombs alsilesphorite, (Chert Member, crossed light X 56).

Fig. 6. Sparry carbonate layer showing phosphate peloids loosely dispersed specks of pyrite in carbonate as well as phosphate, alcalcisphorite (Chert Member PPL, X 112).
PLATE 2

Fig. 1. Polycrystalline and monocrystalline quartz grains in a argillaceous matrix. Rock fragments abundant. (Quartz wacke, Gopi chand ka mahal, crossed light X 56).

Fig. 2. Fine to coarse grains with chert and microcline grains in argillaceous matrix (Wacke, Gopi Chand ka Mahal, crossed light X 56).

Fig. 3. Spicules (?) in a microsphorite matrix showing recrystallised silica in the interstices (Chert Member, crossed light, X 56).

Fig. 4. Chalcedonic silica, siliceous spicules grains in microsphorite matrix (Chert Member, crossed light X 112).

Fig. 5. Framboidal (?) pyrite in a siliceous phosphatic matrix pyritiferous phosphorite (Chert Member, PPL, X 56).

Fig. 6. Siliceous spicules with recrystallised chalcedonic silica moderately dispersed in a phosphatic matrix, Biosphorite (Chert Member, crossed light X 112).
PLATE 3

Fig. 1. A photomicrograph showing fine to medium grains embedded in calcareous cement. A calcareous microvein cutting across the middle of the section. (Arenite calcareous cement, Gopi Chand Ka Mahal, PPL X 56).

Fig. 2. The composite quartz grains in the left of the photograph shows sutured contact in the crystal grains (Quartz wacke, Jalikhal, PPL X 56).

Fig. 3. Fine to medium grains and mica flakes having argillaceous cement as the groundmass (wackes, Gopi Chand Ka Mahal, crossed light X 56).

Fig. 4. Medium to coarse grained detrital grains embedded in calcareous cement, boundaries corroded by cement (Arenite calcareous cement, Jalikhal X 56).

Fig. 5. Mica flakes showing parallel linear arrangement and quartz grains embedded in argillaceous matrix (wacke, Jabarkhet, crossed light X 56).

Fig. 6. Fine to medium coarse grained quartz grains in calcareous cement (Arenite calcareous cement, Gopi Chand Ka Mahal, crossed light X 56).
PLATE 4

Fig. 1. Feldspar grains in the middle and lower left (Quartz wacke, Gopi Chand Ka Mahal, crossed light X 112).

Fig. 2. Well sorted quartz grains corroded by calcareous cement having calcareous cement as groundmass (Arenite calcareous cement, Gopi Chand Ka Mahal X 56).

Fig. 3. Microcline in the upper left and chert grains in the lower and middle, quartz grains have cancavo-convex boundaries (Quartz arenite, Gopi Chand Ka Mahal, crossed light X 56).

Fig. 4. Microcline, chert and fine quartz grains in argillaceous cement (Wacke, Gopi Chand Ka Mahal, crossed light X 56).

Fig. 5. Chert grain, the individual crystals are separated by bright interference colours of calcareous cement (Gopi Chand Ka Mahal, crossed light X 224).

Fig. 6. Subangular to subrounded quartz grains developed reaction rims and secondary overgrowth embedded in ferruginous cement (Singtali, PPL X 56).
Fig. 1. Quartz grains showing characteristic concavo-convex boundaries, a plagioclase grain in the middle (Quartz Arenite, Gopi Chand Ka Mahal, X 56).

Fig. 2. Quartz grains, chert fragments in the argillaceous cement (Quartz wacke, Gopi Chand Ka Mahal, crossed light X 56).

Fig. 3. Quartz grains showing sutured contacts in the upper middle and planer contacts in the lower left and concavo-convex boundaries (Quartz arenite, Gopi Chand Ka Mahal, crossed light X 112).

Fig. 4. A single fractured quartz grain having sutured contacts undulose extinction characteristic of the metamorphic origin (Quartz arenite, Gopi Chand Ka Mahal X 112).

Fig. 5. Quartz grains showing concavo-convex boundaries in the middle. The ground mass is the calcareous cement (Quartz arenite, Gopi Chand Ka Mahal, X 112).

Fig. 6. Corroded quartz grains having irregular contacts and wavy due to pressure solution; silica is the precipitating cement (Quartz arenite, Gopi Chand Ka Mahal X 112).
Fig 1. Concentric cum radial elliptical, circular and pseudooolites, along with echinoderm plate upper filled with calcite showing rhombic cleavage (Bansi area, PPL X 56).

Fig 2. Concentric cum radial oolite, having rectangular quartz grain as the nucleus, the outer concentric rim of calcite silicified (Bansi area, Crossed light X 112).

Fig 3. Oolitic lithoclast enclosed simple and compound oolites in it, and the whole embedded in carbonate rock. (Singtali area, PPL X 56).

Fig 4. Spherical oolite having two angular quartz grains as the nucleus embedded in calcitic cement (Bansi area, crossed light X 112).

Fig 5. Circular oolite, having micritic nucleus and silicified outermost concentric rim embedded in carbonate rock (Bansi area crossed light X 112).

Fig 6. Circular cum radial oolite subrounded quartz grain as the nucleus embedded in sparry carbonate rock (Bansi area, crossed light X 112).
Fig 1. Different types of oolites embedded in algal thallus. The algal thallus grain embedded in sparry carbonate (Gajwar area, PPL X 56).

Fig 2. Circular, spherical, elliptical and pseudoolite embedded in sparry carbonate (Gajwar area, PPL X 56).

Fig 3. The molluscan shell filled with sparry carbonate cement. The mould is outlined by the thin micritic envelope. The infilled sparite is mainly blue stained ferron calcite. (Singtali area, crossed light X 56).

Fig 4. Concentric cum radial oolite and a transverse section of an echinoid spine in carbonates. (Gajwar area PPL X 56).

Fig 5. Elliptical oolites and organic fragment infilled with micritic cement developed rhombic cleavage at the boundary. (Gajwar area, crossed light X 56).

Fig 6. Circular, and elliptical oolite in sparry carbonate, in the upper right quartz nucleus have inclusions. The other oolites have calcareous and micritic cements as their nucleus (Singtali area, crossed light X 56).
Fig. 1. A tangential section of an echinoid spine, partially replaced by micritic cement. (Gajwar area, crossed light X 112).

Fig. 2. A well preserved transverse section of an echinoid spine in biosparite (Bansi area, PPL, X 56).

Fig. 3. A transverse section of an *Diplocava*. The zooecia are circular to elliptical and infilled with quartz and micritic cement. Some of the quartz grains are replaced by micrite (Gajwar area, PPL, X 56).

Fig. 4. A longitudinal section of *Diplocava* (Bansi area, PPL, X 112).

Fig. 5. A tangential section of a *Ceriocava nilkanthi* Singh. The zooecia are circular and infilled with micritic cement (Gajwar area, crossed light, X 112).

Fig. 6. A long longitudinal tube of *Ceriocava nilkanthi* Singh. The stem has been replaced by cement (Dogadda area, PPL, X 56).
PLATE 9

Fig. 1. A tangential section of an echinoid spine in biosparite. Calcite cleavage can be seen both passing through the cement and bioclast (Singtali area, PPL. x 56).

Fig. 2.(?) A Dasycladacean algal fragment infilled with micritic cement in the lower part. Echinoid spine infilled with calcite, showing rhombic cleavage and syntaxial rims at the upper corner along with oolite in oosparite.

Fig. 3. Both transverse and longitudinal echinoid spines along with oolites in oosparite (Singtali area, PPL. X 56).

Fig. 4. Intraclasts, oolites and ? algae in the carbonate rock. (Singtali area, crossed light X 56).

Fig. 5. A longitudinal section of a gastropod shell along the axis of spine infilled with micritic cement (Bansi area, crossed light X 112).

Fig. 6. A ? Neomeris sp. transverse section of alga thallus? Dasycladacean or Epimastopora in carbonate rock (Singatli area, crossed light X 56).
Fig. 1. *Neomeris* sp. Algalthallus enclosed elliptical oolites having micritic nucleus, embedded in oosparite rock (Gajwar area, PPL X 56).

Fig. 2. *Diplocava*, echinoid, oolite and algae in oosparite (Gajwar area, PPL X 56).

Fig. 3. Oolites, tangential section of *Diplocava* and molluscan spines in sparite cement (Gajwar area, crossed light X 56).

Fig. 4. A bryozoan bioclast (*Ceriocava*) zooecia infilled with micritic cement and quartz grains (Bansi area, crossed light X 112).

Fig. 5. *Corymbopora* sp. in biosparite (Gajwar area, PPL X 112).

Fig. 6. Echinoid spine, oolites and ? Molluscean shells in oosparite (Gajwar area, crossed light X 56).
PLATE 11

Fig. 1. A photomicrograph showing chamosite oolites embedded in dark, greenish brown colored chamositic mud (Dogadda area, PPL. X 56).

Fig. 2. A photomicrograph showing a single chamosite oolite without foreign nucleus and having a number of concentric rims. A siliceous vein cutting across the upper side of the oolite. (Dogadda area, PPL. X 112).

Fig. 3. A photomicrograph showing squashed and hooked spastoliths by compaction. A microvein passing through the groundmass and oolite is visible. The groundmass is greenish brown coloured chamosite mud and small crystals with high birefringence. (Dogadda area, PPL. X 56).

Fig. 4. A compound calcareous oolite having nucleus of three grains and enclosed in chamosite oolite. (Dogadda area, PPL. X 56).

Fig. 5. Two chamosite oolites having quartz and silicified calcite as their nuclei respectively, having quartz grains and iron oxide as the groundmass. (Dogadda area PPL. X 56).

Fig. 6. A photomicrograph showing two chamosite oolites one having quartz as the nucleus and in the other quartz nucleus have been replaced by ferruginous cement. (Dogadda area PPL. 56).
PLATE 12

Figs. 1, 12. Amphigeisina danica (Poulsen). 1, Lateral view X 200; 12, Lateral view X 30.

Figs. 2, 3. Furnishina sp., 2, Posterior view X 150; 3, Posterior view X 100.

Fig. 4. ?Eoconodontus sp., postero-lateral view X 150.

Figs. 5, 7. Proacodus obliquus Muller; 5, lateral view X 150; 7, lateral view X 150.

Fig. 6. Proconodontus sp., X 150. lateral view.

Figs. 8, 9, 10. Problematoconites perforata Muller; 8, lateral view X 100; 9, lateral view, X 150; 10. enlarged view of the base of fig 9; X 200.

Fig. 11. Furnishina quadrata Muller; lateral view X 80.
PLATE 13

Figs. 1, 2. Fryxellodontus inornatus Miller; 1, postero-lateral view, X 150; 2, antero-lateral view X 100.

Fig. 3. Drepanodus sp., lateral view X 120.

Figs. 4, 5, 16. Prothertziina anabarica Missarzhevsky; 4, lateral view X 30; 5, lateral view X 40; 16, lateral view X 40.

Fig. 6. Oelandodus sp., Van wamel, lateral view X 120.

Figs. 7, 9, 15, 17. Proconodontus; 7, antero-lateral view X 100; 9, postero-lateral view X 120; 15, postero-lateral view X 30; 17, lateral view X 110.

Fig. 8. Furnishina quadrata Muller, lateral view X 150.

Figs. 10, 11, 14. Conotheca mammilata Missarzhevsky; 10, 11, X 160; 14, X 30.

Fig. 12. Amphigeisina danica Bengtson; postero-lateral view X 120.

Fig. 13. Problematoconites perforata Muller; postero-lateral view X 120.

Fig. 15. Prooneotous sp., X 30.
PLATE 14

Figs. 1, 2, 5. Westergaardodina bicuspida Muller; lateral views 1, X 80; 2, X 40; 3, X 80.

Figs. 3, 11. Cordylodus proavus Muller; 3, postero-lateral view X 100; 11, lateral view X 100.

Figs. 4, 8. Prosagittodontus aff. dunderbergiae (Muller); 4, X 40; 8, X 120.

Fig. 6. Clavohamulus cf. elongatus Miller; postero-lateral view; X 120.

Fig. 7. Proconodontus sp., lateral view, x 30.

Figs. 9, 10. Semiacontiodus sp., 9, X 30; 10, X 30.

Fig. 12. Fryxellodontus inornatus Miller; lateral view X 30.

Fig. 13. ? Hirsutodontus cf. simplex (Druce and Jones); X 40.
Figs. 1, 15. *Furnishina quadrata* Muller; 1, lateral view X 200; 15, lateral view X 120.

Figs. 2, 3. *phosphanulus universalis* Muller, Nogami and Lenz; 1 X 40; 2, X 30.

Figs. 4, 16. *Hirsutodontus* cf. *simplex* (Druce and Jones) 4, X 20; 16, X 40.

Fig. 6. *? Torrellella* sp., X 80.

Fig. 7. *Proconodontus* sp., X 150.

Fig. 9. *Prooneotous* sp., X 40.

Fig. 10. *? Westergaardodina bicuspidata* Muller, X 40.

Figs. 5, 8, 11, 12, 13, 14. *Protohertzina anabarica* Missarzhevsky; 5, lateral view X 40; 8, lateral view X 80; 11, lateral view X 30; 12, lateral view X 80; 13, antero-lateral view X 60; 14, postero-lateral view X 40.

Fig. 6. *Torrellella* sp., X 80.
PLATE 16

Fig. 1. *Fryxellodontus inornatus* X 40.

Fig. 2. *Conotheca mammilata* Missarzhevsky X 80.

Figs. 3, 16. *Proscandodus aff. oelandicus* (Muller); 4, postero-lateral view X 30; 16, lateral view X 120.

Figs. 4, 5, ?. 14. *Prosagittodontus aff. dunderbergiae* (Muller);
4, antero-lateral view X 40; 5, lateral view X 120; ? 6, postero-lateral view X 110.

Figs. 7, 8, 12, 13, 18, 19, 20, 21. *Protohertzina anabarica* Missarzhevsky; 7, lateral view X 80; 8, internal cast X 200; 12, postero-lateral view X 120; 13, lateral view X 60; 18, lateral view X 20; 19, antero-lateral view X 20; 20, lateral view X 30; 21, lateral view X 30.

Fig 10. *Drepanodus* sp., Pander; Basal cavity X 30.

Fig. 11 *Utahconus utahensis* Miller; X 80

Fig. 17. *Cordylodus proavus* Muller; lateral view X 20.

Figs. 6, 9, 15. *Semiacontiodus* sp., 6 X 30; 9, X 30; 15, X 20.
PLATE 17

Fig 1, 13. (?) Conotheca Missarzhevsky; detail of the tube. 1 x 120; 13, X 30.

Fig 2. Hyolithellus aff. insolitus Grigorieva; showing transverse symmetrical ribs X 200.

Fig. 3. Hyolithellus cf. isiticus Missarzhevsky; showing lateral view of the tube X 150.

Fig 4. Pseudoorthotheca Cobbold, showing ribs of the tube, X 110.

Fig. 5. Lapworthelle schodackensis Lochman, lateral view, X 90.

Figs. 6, 7, 9. Sunnaginia Missarzhevsky; 6, X 40; 7, X 20; 9, X 40.

Fig. 8. ? Proconodontus postero-lateral view, X 40.

Figs. 10, 14. Hyolithellus vladimirovae Missarzhevsky; 10, exterior of the tube showing symmetrical ribs, X 80; 14, X 110.

Fig 11. Lapworthelle schodackensis Lochman, showing symmetrical ribs X 120.

Fig 12. Spirellus columnarus Jiang regularly coiled tube X 150.
PLATE 18

Figs. 1, 2, 3, 6, 10. *Spirellus shankeri* (Singh and Shukla) 1, helical to irregularly coiled tube X 80; 2, uncoiled tube, X 30; 3, uncoiled tube X 40; 6, coiled tube at the ends X 30; 10, uncoiled hallow tube X 30.

Fig 7. *Prosgittodontus* sp., internal cast, X 40.

Fig. 8. ? *Torrellella* sp

Fig. 11. *Oolivooides multisulcatus* Qian X 150.

Fig. 13. *Sunnaginia* Missarzhevsky X 30.

Figs. 4, 5, 9, 12. *Chancelloria* sp., 4, X 40; 5, X 60; 9, X 70; 12, X 50.
PLATE 19

Figs. 1, 3.? Tumuldauria Missarzhevsky. 1, X 40; 3, X 60.

Fig. 4, 9, 10, 15, 16, 17, 19. Protohertzina anabarica Missarzhevsky; 4, X 30; 9, X 30; 10, X 20; 15, X 30; 16, X 80; 17, X 30; 19, X 30.

Fig. 5. Chancelloria sp., X 160.

Fig. 6. Spirellus shankeri Singh and Shukla X 30.

Fig. 7. Torrellella sp., X 160.

Fig. 8. Proconodontus sp., X 30.

Figs. 11.? Phosphannulus universalis Muller, Nogami and Lenz X 30.

Figs. 13, 14. Circotheca Missarzhevsky., 13, X 60; 14, X 30.

Fig. 18. Oolivooides multisulcatus Qian, X 30.
PLATE 20

Figs 1, 3. 1, *Circotheca* Missarzhevsky, X 150; 3, X 150.

Fig. 2. *Conotheca mammilata* Missarzhevsky X 30.

Fig. 4. ? *Proscandodus* sp., lateral view, X 30.

Figs. 5, 14, 15. *Protohertzina anabarica* Missarzhevsky, 5, posterolateral view X 50; 14, posterior view with basal cavity X 150; 15, detail of lateral view and basal cavity X 150.

Fig. 6. *Prooneotus* sp., internal cast X 30.

Figs. 7, 11, 12, 13. *Torrellella* sp., 7 X 30; 10, X 40; 11, X 30; 12, X 30; 13, X 30.

Figs. 8, 9, 10. Chancelloriid spines; 8, 40 X 40; 9, X 30.
PLATE 21

Figs. 1, 2, 3, 8, 10, 11, 12. *Magnaicanalis mobergi* Walcott; 1, ventral valve external mould X 17; 2, ventral valve external cast X 13; 3, dorsal valve external mould X 14; 8, dorsal valve external cast X 12; 10, dorsal valve cast X 13; 11, dorsal valve internal cast X 14; 12, ventral valve internal cast X 12.

Figs. 4, 5, 6, 9, 14. *Obolella cf. crassa* (Hall) ? Reed; 4. ventral valve, external mould X 13; 5. ventral valve, external cast X 12; 6. ventral valve, internal cast X 15; 9. ventral valve, external cast X 14; 14. dorsal valve, external cast X 14.


Fig. 13. *Lingulella haimantensis*, Reed; 13. dorsal valve, external cast X 11.
PLATE 22


Figs. 5-9. *Lingulella haimantensis*, Reed; 5. ventral and dorsal valves united X 14; 6. ventral valve, external cast X 14; 7. ventral valve, internal mould X 15; 8. dorsal valve, cast X 13; 9. broken ventral valve X 8.

Fig. 10. *Acrothele coriacea*, Oehlert; Dorsal valve X 14.

Figs. 11, 14, 15. *Obolella cf. crassa* (Hall) Reed; 11. ventral valve external mould X 14; 14. ventral valve, external cast X 14; 15. ventral valve, internal mould X 14.

Fig. 13. *Magnicanalis* sp., dorsal valve, internal mould X 14.
PLATE 23

Fig. 1. *Arenicolites* sp., A vertical U-shaped cross-section of an element. 1 div. of the scale = 1cm.

Fig. 2. (?) *Arenicolites* sp., A vertical cross-section of U-shaped burrow. 1 div. of the scale = 1cm.

Fig. 3. *Astropolithon* sp., preserved as groove, surrounded by circular area of ridges. 1 div. of the scale = 1cm.

Fig. 4. *Cochlichnus* sp., regularly meandering trail. 1 div. of the scale = 1cm.

Fig. 5. *Aulichnites* sp., A burrow showing two rounded ridges and a median groove, preserved as epirelief. 1 div. of the scale = 1cm.

Fig. 6. (?) *Dimorphichnus* sp., preserved as positive hyporelief. 1 div. of the scale = 1cm.

Fig. 7. *Diplichnites* sp., showing two rows of paired knibs preserved as hyporelief. 1 div. of the scale = 1cm.

Fig. 8. *Halopora* sp., crowded feeding, stuffed burrow system on the bedding plane. 1 div. of the scale = 1cm.

Fig. 9. (?) *Treptichnus* sp., 1 div. of the scale = 1cm.
Fig. 1. *Arenicolites* like burrow on the sediment surface. 1 div. of the scale = 1 cm.

Fig. 2. ? *Rusophycus* sp., 1 div. of the scale = 1 cm.

Fig. 3. 10. *Cylindrichnus concentricus*, Toots in Howard; lateral view of the burrow on the surface. 10. circular view on the surface. 1 div. of the scale = 1 cm.

Fig. 4. ? *Torrowangea rosei* Webby; along with *Planolites*. 1 div. of the scale = 1 cm.

Fig. 5. *Bergaueria major* Palij; 1 div. of the scale = 1 cm.

Figs. 6-7. 6. polished paired cross-section of *Skolithos* burrow. 7. broken *Skolithos* burrow. 1 div. of the scale = 1 cm.

Figs. 8-9. *Treptichnus* sp., 1 div. of the scale = 1 cm.

Figs. 10, 11. ? *Laevicyclus* sp., 10. cylindrical body on the sediment surface. 11. vertical cross-section burrow. 1 div. of the scale = 1 cm.

Fig. 12. *Plagiogmus* sp., negative epirelief on the surface along with *Skolithos* burrow. 1 div. of the scale = 1 cm.

Fig. 13. A photomicrograph of *Skolithos* burrow X 112.
PLATE 25

Figs. 1, 8. Monocraterion sp., 1. showing funnel like opening on the surface. 8. A monocraterion burrow. 1 div. of the scale =1 cm.

Fig. 2. Vertical cross-section of paired skolithos burrow. 1 div. of the scale =1 cm.

Fig. 3. Taphrhelmintopsis circularis, Crimes et al., showing freely winding trails on the surface as epirelief. 1 div. of the scale =1 cm.

Fig. 4. ? Treptichnus sp., 1 div. of the scale =1 cm.

Fig. 5. Plagiogmus sp., negative epirelief, cutting across. 1 div. of the scale =1 cm.

Fig. 6. (?) Bifungites sp., dumbell like structure. 1 div. of the scale =1 cm.

Fig. 7. A vertical skolithos burrow on the sediment surface. 1 div. of the scale =1 cm.
Fig. 1. A surface view of skolithos burrow on the siltstone surface. Semicircular to circular dots. 1 div. of the scale =1 cm.

Fig. 2. Scolicia sp., showing band like bilaterally symmetrical trails. 1 div. of the scale =1 cm.

Figs. 3. ? Scolicia sp., Single symmetrical trail. 1 div. of the scale =1 cm.

Fig. 4. ? Treptichnus sp., 1 div. of the scale =1 cm.

Fig. 5. Treptichnus sp., 1 div. of the scale =1 cm.

Fig. 6. ? Vendichnus sp., shows two parallel rows of quadratal grooves as hyporelief on the surface of rock. 1 div. of the scale =1 cm.
PLATE 27

Fig. 1. *Chondrites* sp., feeding like structure, the fine branches emerging from a main branch and never meet with each other. 1 div. of the scale = 1 cm.

Fig. 2. *Merostomicnites* sp., two parallel rows of grooves arranged transversely. 1 div. of the scale = 1 cm.

Fig. 3. *Planolites vulgaris* Nicholson and Hindii; planolites burrows corroded with phycodes. 1 div. of the scale = 1 cm.

Fig. 4. ? *Arenicolites* sp., paired arenicolites burrow on the sediment surface. 1 div. of the scale = 1 cm.

Fig. 5. *Monomorphicus* cf. *M. lineatus* Crimes *et al*., showing a series of parallel to curved grooves. 1 div. of the scale = 1 cm.

Fig. 6. ? *Kinneyia* sp., ripple like sedimentary structures. 1 div. of the scale = 1 cm.
Fig. 1. *Enteletes lamarcii*, Fischer De Waldheim; cast of ventral valve X 1.6.

Fig. 2. *Streptorhynchus* sp., exterior of dorsal valve X 1.64.

Fig. 3. *Productus umariensis*, Reed; internal mould of dorsal valve X 1.4.

Fig. 4. ? *Pliochonetes* sp., X 3.

Fig. 5. ? *Megachonetes* sp., internal cast of the dorsal valve X 1.88.

Figs. 6-14. *Coronalosia blijniensis*, Waterhouse and Gupta; 6-9. dorsal valves, internal mould, X 1.5; X 2.4; X 2.0; X 2.5; and X 2.80 respectively; 11. dorsal valve, exterior X 3.1; 12. dorsal valve, exterior X 1.8; 13. dorsal valve, internal cast X 1.5; 14. ventral valve, internal cast X 1.4.
Fig. 1. *Productus umariensis*, Reed: dorsal valve, internal mould X 1.4.

Fig. 2. *Productus gratiosus*, Waagen; X 3.5.

Fig. 3. *Linoproductus cora* (d'orbigny) X 4.0.


Fig. 5. *Cancrinella cf. farleyensis* (Etheridge and Dun); dorsal valve, external moulds X 3.

Fig. 7. *Cancrinella* sp., ventral valve, internal mould X 8.

Fig. 8. *Orthotetes* sp., ventral valve, internal impression X 1.8.

Figs. 9, 10, 12. *Brachythyrinella narsarhensis* (Reed) 9. internal mould X 3.5; 10. dorsal valve, internal moulds X 2; 12. dorsal valve, external mould X 1.6.

Fig. 11. *Waagenoconcha* sp., ventral valve X 1.6.

Fig. 13. *Cancrinella* sp., internal and external moulds on a slab X 2.0.
PLATE 30

Figs. 1, 2, 4, 8, 9, 10. Coronalosia blijniensis, Waterhouse and Gupta;
1. external cast, dorsal valve X 3; 2. dorsal valve, internal mould X 3; 4. dorsal valve, external cast X 2.5;

Fig. 3. ? Anidanthus sp., X 2.5.

Fig 5. ? Deltoplecten sp., X 1.70.

Fig. 6. ? Linoproductus cora X 2.

fig.7. Brachythyrinella narsarhensis (Reed); ventral valve X 1.4.

Figs.11.? Orthotetes sp., Ventral valve, external mould X 2.8.

Fig. 12. ? Brachythyrinella narsarhensis sp., An external mould X 3.
PLATE 31

Figs. 1, 7, 8. *Etheripecten striature*, Waterhouse; 1. X 5; 7. X 1.5 2. X 3.

Figs. 2, 3, 6, 9, (?) *Brachytherinella narsarhensis* (Reed) external mould; 2. X 2; 3. X 2.6; 6. X 1; 9. X 2.6. respectively. Figs. 3, 7.

Fig. 4. *Bicarinella* sp., X 8.

Figs. 5, 10. *Deltopecten* sp., internal mould X 1.5; 10. X 1.5.
PLATE 32

Figs. 1, 2. *Fenestella audeni*, Ganesan; 1. reverse face of the specimen X 1.5; 2. obverse face of the specimen X 1.8.

Figs. 3, 8. *Fenestella aff. eichwaldi* (Stuckenberg); 3. obverse side X 2; 8. reverse face X 1.8.

Figs. 4, 9. *Polypora dieneri* Ganesan; 4. obverse face X 1.8; 9. obverse face X 1.5.

Figs. 5, 6. *Polypora middlemissi* Ganesan; 5. reverse side X 3; 6. reverse side X 1.8.