

LIST OF PLATES

		PAGE NO.
Plate : 1	Expedition to Píram	22
Plate : 2	"Layered Cake" Stratigraphic sequence [cliff section SSE of Píram] [A] Cherty Pebble conglomerate [B] Medium to fine grained sandstone [C] Siltyclay and claystone [D] Coarse pebble gritty conglomerate	33
Plate : 3	[a] The dark yellow to reddish coloured sandstone with wave ripple laminations and vertical burrows of <u>Skolithos</u> and <u>Monocraterion</u> [b] Photomicrograph of the dark yellow to reddish coloured sandstone x 25	38
Plate : 4	[a] Southeast view Píram Island showing teepee structures. Mangrove vegetation in the background [b] Arcuate ridges and polygonal desiccation cracks in the dark yellow to reddish coloured sandstone	43
Plate : 5	[a] Contact between the dark yellow to reddish coloured sandstone and round pebble conglomerate [intertidal zone SSE of Píram] [b] Tightly packed round pebble conglomerate in pebbly, coarse to fine sand, and silty matrix	45
Plate : 6	[a] [i] Close up of polished surfaces of round pebbles displaying rhythmically spaced rind surfaces [ii] Close up of typical round pebble conglomerate with some associated flat pebbles [b] Photomicrograph of round pebble x 25	51
Plate : 7	Associated fossil vertebrate bone with round pebble conglomerate	52
Plate : 8	[a] Close-up of polished fossil vertebrate bone [b] Enlarged view showing the concentration of phosphatic globules in the core part of the above fossil	55

Plate : 9	[a] Bored vertebrate bone embedded in round pebble conglomerate	56
	[b] Close-up of fossil wood with animal borings	
Plate : 10	[a] Close-up of cherty pebble conglomerate	61
	[b] Fossil vertebrate bone embedded in cherty pebble conglomerate	
Plate : 10	[c] Close up of vertebrate teeth in cherty pebble conglomerate	62
Plate : 11	Stratigraphic section [cliff section south of Piram showing beds : [A] Cherty pebble conglomerate [B] Medium to fine grained sandstone [C] Silty clay and claystone [D] Coarse pebble gritty conglomerate. Tepee structures in the foreground	67
Plate : 12	[a] View of foreshore, backshore and dune field from NNE Of Piram	73
	[b] Beach laminations on freshly cut section	
Plate : 13	[a] Structure developed on the dune	76
	[b] Grazing marks with feeding pellets of crab on upper foreshore zone	
Plate : 13	[c] Stabilized dune with vegetation cover	77
	[d] Effect of recent storm. Sand deposit completely covering drifted bullock	
Plate : 14	View looking SE of Piram : Development of tidal flat and salt marsh. Also visible are the mangroves and black sand placers	79
Plate : 15	[a] Compound grains/pelletoidal/quartz sand x 6	97
	[b] Compound grains/black sand x 6	
Plate : 16	Grazing trails of gastropod	108
Plate : 17	[a] Flask shaped pholadidae bivalve borings on vertebrate bone	111
	[b] Pholadidae bivalve borings on round pebble	

Plate : 18	Town of Diu : Town settlement on the stabilized dunes. View looking southwest	120
Plate : 19	Branching palm and xerophytic flora on coastal dune	125
Plate : 20	Panoramic view of the Pleistocene longitudinal dune [Location : south-west of Diu town]	131
Plate : 21	[a] Large-scale dune cross - bedding underneath Diu fort	133
	[b] Small scale contorted bedding quarry section south of Simar village	
Plate : 22	[a] Photomicrograph of algal pellet biocalcarenite x 25	141
	[b] Photomicrograph of foraminiferal calcarenite x 25	
Plate : 22	[c] Photomicrograph of pelecypod biocalcarenite x 25	142
Plate : 23	[a] Development of wave-cut platform southwest of Diu	153
	[b] [i] Wave-cut platform [ii] Pocket beach [iii] stacks : Locality south of Nagoa village	
Plate : 23	[c] Development of Stack south of Nagoa	154
Plate : 24	[a] Formation of spitzkarren, salt marsh in background	158
	[b] Cockling development in calcarenite southern coast of Diu	
Plate : 25	Beach formation near Nagoa	163
Plate : 26	[a] Beach formation south of Vanakbara	164
	[b] Nagoa beach : Wind and current ripples	
Plate : 26	[c] Mosaic of crab pellets in the beach backshore facies	165
Plate : 27	[a] Lamellibranch/foraminiferal sand x 6	193
	[b] Compound grain sand x 6	

Plate : 28	[a] Tracks made by birds in search of food. Trails by creepers are visible alongside tracks	201
	[b] Crustacean pellets in the process of being transported by the receding tidal currents, in the foreshore zone	
Plate : 29	[a] [i] Flat-ribbon shaped gastropod crawling trail with prominent V-shaped bilobate markings [ii] Burrowing gastropod and their mounds	205
	[b] [i] Crawling, and feeding trails of gastropod [ii] Backfilled structures are seen in middle and upper most portion [iii] Gastropod in the act of burrowing	
Plate : 30	Panoramic view of cliff section. SW of Bet Shankhodhar Island with pocket beach developed at the bottom	216
Plate : 31	[a] Flat pebble conglomerate showing [i] Cross beddings [ii] Vertical and horizontal <u>Ophiomorpha</u> burrows	233
	[b] Horizontally bedded flat pebble conglomerate [Location : Cliff section S of Nilkanth Mahadev Mandir]	
Plate : 32	[a] <u>Ophiomorpha</u> burrows piercing through cross-bedded laminae in facies A. Growth of burrows indicates fast rate of deposition	234
	[b] Development of large-scale box work <u>Ophiomorpha</u> burrows in facies A. Indicating variable rate of deposition - no erosion [Location : S. of Nilkanth Mahadev Mandir]	
Plate : 33	[a] Flat pebble conglomerate [Facies - A] showing gradual merging with cross-bedded calcareous sandstone [Facies - B]. Indicating slow rate of deposition.	235
	[b] Contact between Facies A and Facies B. Net work of <u>Thalassinoides</u> burrows underlying Facies - B [Location : Cliff Section SW of Nilkanth Mahadev Mandir]	
Plate : 34	Pholad bivalve borings in flat pebbles [Facies - A]	236

Plate : 35	Herringbone structures in Facies - B	241
Plate : 36	<p>[a] Flaser, wavy and lenticular beddings in cross-bedded calcareous sandstone [Facies - B], indicating fast rate of deposition [Location : West of Dhingeshwar Mandir]</p> <p>[b] Calcareous sandstone [Facies - B] showing flaser bedding through lenticular beddings indicating fast rate of deposition [Location : SW of Dhingeshwar Mandir]</p>	245
Plate : 37	<p>[a] <u>Planolites</u> in Facies - C, with some very small unidentified vertical burrows. In underlying the Facies - B with <u>Thalassinoides</u> burrow network system, is visible</p> <p>[b] Ripple marks and <u>Skolithos</u> burrows in Facies-C [Location : Cliff Section W of Bet Jetty]</p>	248
Plate : 38	<p>[a] <u>Conichnus</u> and <u>Bergaueria</u> burrows in Facies - C</p> <p>[b] <u>Rosselia</u> burrows in Facies - C</p>	249
Plate : 39	<p>[a] <u>Palaeophycus Tubularis</u> burrow in Facies - C</p> <p>[b] <u>Palaeophycus tubularis</u> and <u>P. alternatus</u> burrows in Facies - C</p>	250
Plate : 40	<p>[a] Contact of Facies C and D. Beds almost parallel [Location : W of Dhingeshwar Mandir]</p> <p>[b] [i] Rafted organics [ii] Wavy beddings, and rip-up clasts in Facies - D [Location : S of Belapur]</p>	252
Plate : 41	<p>[a] Section exposed SW of Dhingeshwar showing Facies - D, E, F, G & H. Note : the lensoid of round pebble conglomerate [Facies - F]</p> <p>[b] Section showing contact of Facies - G and H [Location : SW of Dhingeshwar Mandir]</p>	253
Plate : 42	Clay rip up elast, cross and parallel lamination sets in Facies E and G. Note the <u>Ophiomorpha</u> burrows keeping space with the sedimentation [Location : W of Dhingeshwar Mandir]	254
Plate : 43	Mud cracks on the top of Facies - E [Location : NW of Dhingeshwar Mandir]	255

Plate : 44	[a] Flat - topped ripples in Facies - E	257
	[b] Linguid ripples on the top of the Facies - G. A large scale horizontal burrow can be seen at the bottom of the section [Location : NW of Dhingeswar Mandir]	
Plate : 45	[a] <u>Ophiomorpha irregularie</u> and <u>Cylindricum</u> burrows in Facies - E	258
	[b] <u>Zoophycos</u> [?] in Facies - G	
Plate : 46	[a] <u>Ophiomorpha borneensis</u> in Facies E. Development of burrow indicating variable rates of deposition with little erosion till such time the burrow got truncated	259
	[b] Cliff section showing contacts of Facies H, I, J, and K [Location : SW of Dhingeswar Mandir]	
Plate : 47	<u>Ophiomorpha</u> burrow in round pebble conglomerate [Facies - F] [Location : SW of Jetty Cliff Section]	262
Plate : 48	Section SW of Dhingeswar showing Facies E to K. Large scale cross bedding in Facies K	266
Plate : 49	Abhya Mataji Mandir and ridge with wind ripples and coastal vegetation	272
Plate : 50	[a] Foraminiferal/pelletoidal sand x 6	296
	[b] Gastropod/lamellibranch sand x 6	
Plate : 50	[c] Compound grain/foraminiferal sand x 6	297
Plate : 51	[a] <u>Ophiomorpha nodosa</u>	312
	[b] <u>Ophiomorpha irregularie</u>	
Plate : 52	[a] <u>Ophiomorpha</u> box-work burrows, <u>Monocraterion</u>	313
	[b] Close-up of <u>Ophiomorpha</u> box-work burrows	
Plate : 53	<u>Cylindricum</u> in Facies - E	319
Plate : 54	[i] <u>Thalassinoides</u> [ii] <u>Teichichnus</u> in Facies - C	322
Plate : 55	[i] <u>Phycodes</u> [ii] <u>Scolicia</u> [iii] <u>Thalassinoides</u> in Facies - C	327

Plate : 56	[a] <u>Rosselia socialis</u> in Facies - B	334
	[b]. Close-up of <u>Rosselia socialis</u>	
Plate : 57	<u>Scolicia</u> in Facies - C	337
Plate : 58	[a] Mozaic of Crab pellets & food searching coastal bird track	347
	[b] Crab burrow and mozaic of pellets	
Plate : 59	[a] Burrowing gastropods	350
	[b] [i] Crustacean trails [ii] Swash marks in backshore beach	
Plate : 60	[a] Gastropod trails in backshore beach	351
	[b] Gastropod trails in foreshore zone	
Plate : 61	[a] Gastropod trails, faecal pellets and ripple marks in foreshore mudflat	352
	[b] Gastropod trails in foreshore zone	
Plate : 62	[a] Gastropod trails in mud flat	354
	[b] Bioturbation by turritella gastropods in mud flat	
Plate : 63	Mud scrapers nests in foreshore zone	356
Plate : 64	[a] Trace fossils and substrate consistency revealed by <u>Ophiomorpha</u> burrows	362
	[b] <u>Ophiomorpha irregularis</u> and some unidentified burrows indicating variable rates of deposition with erosion	
Plate : 65	[a] Rock borings in hard ground indicating substrate consistency	367
	[b] [i] Vertical <u>Ophiomorpha</u> burrow. Note burrow reinforcements made by the burrowing animal keeping space with the rate of sedimentation [ii] <u>Monocretarion</u> burrow	
Plate : 65	[c] Biogenic reworking of sediments, photograph shows the backfill structure which often contributes to the coastal sediments	368