CHAPTER – III
RESULTS

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RESULTS

The lentic water habitat i.e. ponds, tanks and reservoirs occupy relatively small portion of earths surface as compared to marine and terrestrial habitat. These are found either in natural state or man made and useful to mankind in several respects as sources of drinking water, irrigation, washing, bathing etc. Besides, these habitats provide nutritious food items in the form of fish and other organisms. Fresh water habitats have great aquaculture potential as they provide the most significant byproduct in terms of fish. Therefore, these habitats are alternatively considered to study the biotic and abiotic factors and their interrelationship and influence in order to obtain the maximum possible output in terms of fish and other aquatic organisms useful to mankind.

The inter-relationship between fish and elements of its biotic and abiotic environment are not isolated. They are interdependent and any change in one system of relationship inevitably produces change in the other. All these factors must be taken into account in studying the interaction of fish with any particular elements of its biotic and abiotic environment. Moreover,

the quality of water is described according to its physical, chemical and biological characteristics. The study of physicochemical characters is always useful in determining the quality of water and implementation of the developmental activities because, the rivers, tanks and reservoirs are used as a source of domestic, industrial water supply irrigation and for fish production. The scientific management of man made and natural water bodies in order to utilize it to obtain the maximum economic benefit from fish production will prove as a significant phenomenon for creation of employment opportunities and food for rural communities of a particular region.

The present investigation is formulated to study the physicochemical characters, planktons, macrophytes, fish fauna and fishery status of the fresh water perennial Triputi reservoir.

Five important physical and eight chemical parameters were studied in order to assess the suitability of Triputi reservoir for human use and fish production. The physical parameters considered were temperature, transparency, total dissolved solids, total solids and total suspended solids, whereas, the chemical parameters comprised of pH, dissolved oxygen, free carbon dioxide, hardness, total alkalinity and chloride, phosphate, nitrate contents. The biological study was conducted considering the phytoplankton, zooplankton, macrophytes,

macro zoobenthos and fish fauna of the reservoir. The present fishery status was also studied on the basis of observation of commercial catches and their analysis covering the aspects like species composition, and predominant species in the commercial catches of the reservoir.

PHYSICAL PARAMETERS OF STUDY AREA :

Temperature :

Monthly the results of temperature of surface water samples at four stations (A-D) of the reservoir are presented in table -1 and Fig. No. 4.

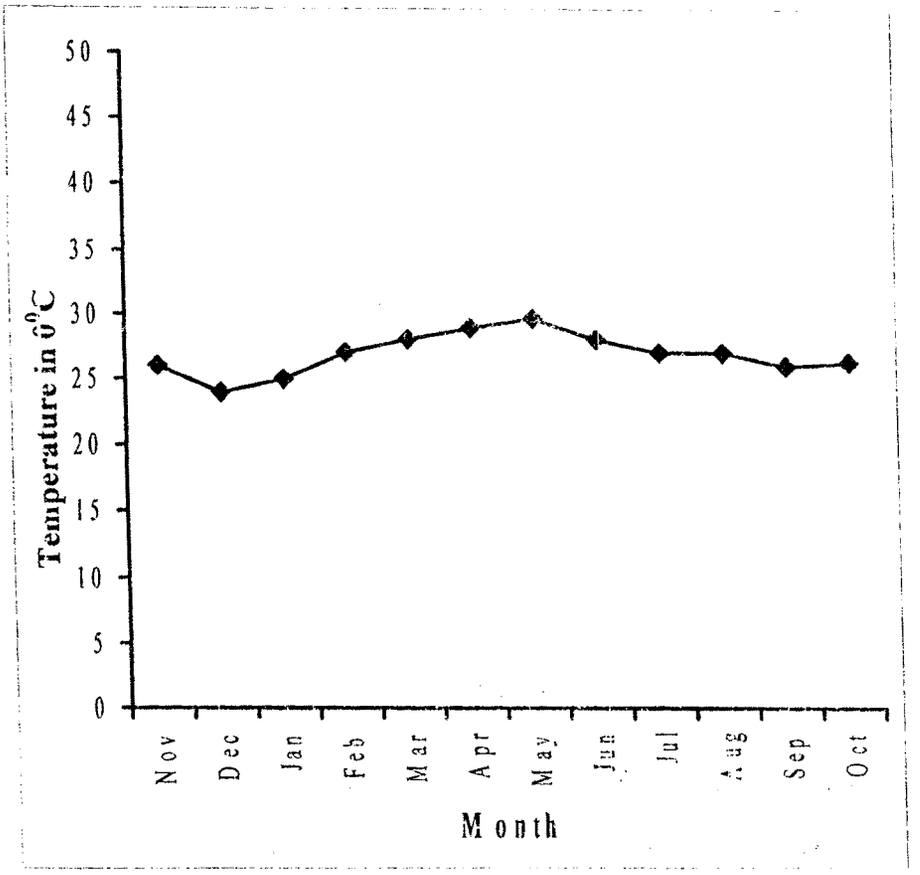
Table No. 1

Monthly variations in temperature (^{0}C) of surface water samples at stations A, B, C and D (Nov. 2006 to Oct. 2007) at Triputi reservoir.

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	26	26	26	26	26
2	Dec.2006	24	24	24	24	24
3	Jan.2007	25	25	25	25	25
4	Feb.2007	27	27	27	27	27
5	Mar.2007	28	28	28	28	28
6	April.2007	29	29	29	29	29
7	May.2007	30	30	29	30	29.75
8	June.2007	28	28	28	28	28
9	July.2007	27	27	27	27	27
10	Aug.2007	27	27	27	27	27
11	Sep.2007	26	26	26	26	26
12	Oct.2007	26	27	26	26	26.25

Fig. No. 4

Monthly variations in temperature (^{0}C) of surface water samples at stations A, B, C and D (Nov. 2006 to Oct. 2007) at Triputi reservoir.



The surface water temperature was fluctuated from 24^{0}c to 30^{0}c at Triputi reservoir. The minimum temperature was recorded in the months of December and maximum in May. The seasonal pattern in temperature fluctuation was recorded as low in winter and monsoon seasons while high in summer and moderate in post monsoon season. Moreover, the temperature range of all the four stations of the reservoir was observed mostly in uniform pattern with slight variations.

Transparency :

Monthly results of transparency at single suitable station of the reservoir presented in Table 2 and Fig. No. 5

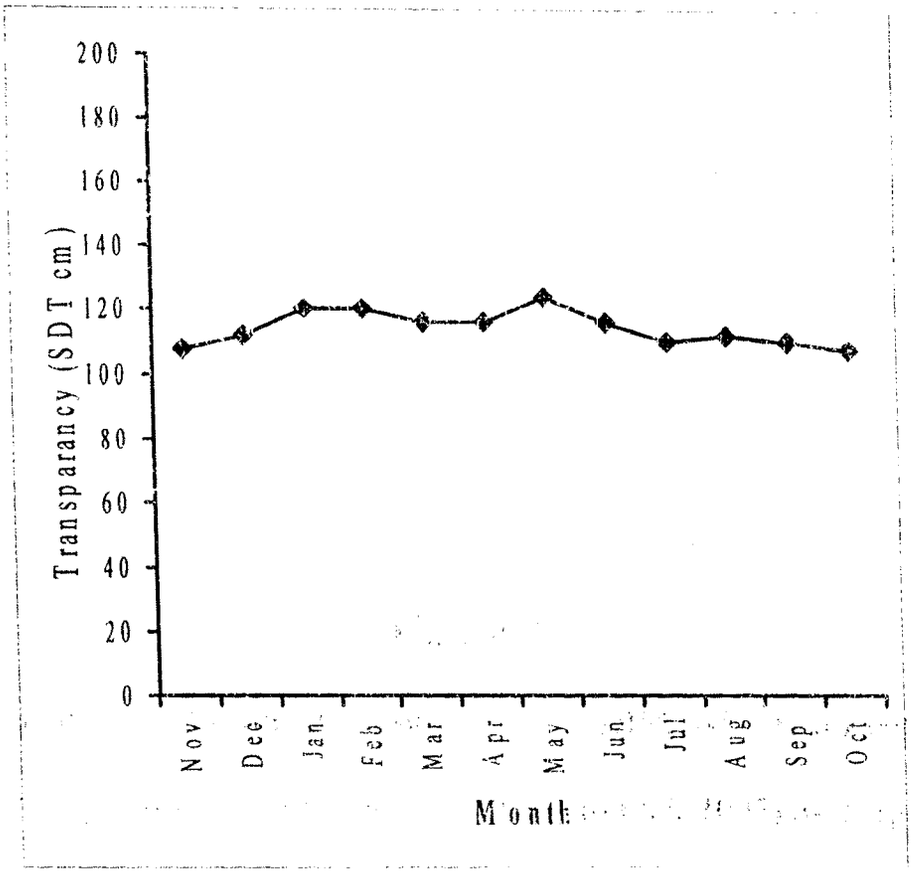
Table No. 2

Monthly Fluctuations in transparency (SDM) of a water column at single suitable stations (Nov.2006 to Oct. 2007) at Triputi Reservoir.

Sr. No	Months	Sample
1	Nov.2006	118
2	Dec.2006	112
3	Jan.2007	120
4	Feb.2007	120
5	Mar.2007	116
6	April.2007	116
7	May.2007	124
8	June.2007	116
9	July.2007	110
10	Aug.2007	112
11	Sep.2007	110
12	Oct.2007	108

Fig. No. 5

Monthly Fluctuations in transparency (SDM) of a water column at single suitable stations (Nov.2006 to Oct. 2007) at Triputi Reservoir.



Secchi disc transparency at single station was varied from 108 cm to 124 cm at Triputi reservoir. The transparency values represented distinct seasonal pattern i.e. the lower transparency values were observed in winter and higher in summer and post monsoon months.

Total Dissolved Solids (T.D.S.)

Monthly total dissolved solids in surface water samples at four stations (A – D) of the reservoir are presented in Table No. 3 and Fig. No. 6

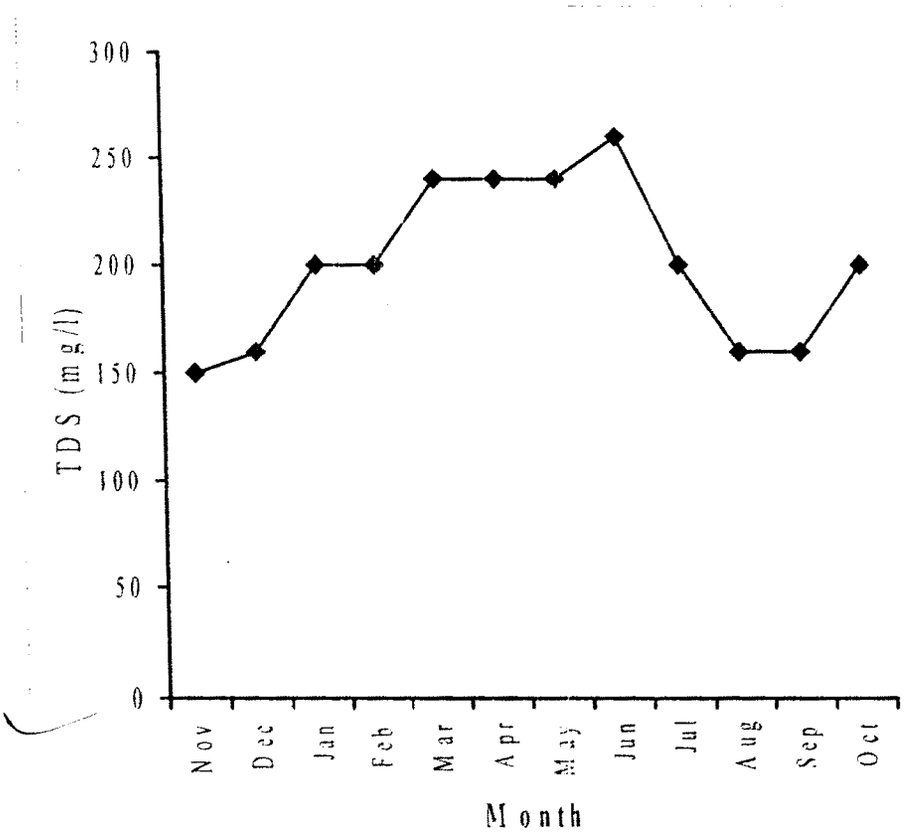
Table No. 3

Monthly variations is total dissolved solids (mg/l) of surface water samples at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	160	120	160	160	150
2	Dec.2006	160	160	160	160	160
3	Jan.2007	200	200	200	200	200
4	Feb.2007	200	200	200	200	200
5	Mar.2007	240	240	240	240	240
6	April.2007	240	240	240	240	240
7	May.2007	240	240	240	240	240
8	June.2007	260	260	260	260	260
9	July.2007	200	200	200	200	200
10	Aug.2007	160	160	160	160	160
11	Sep.2007	160	160	160	160	160
12	Oct.2007	200	200	200	200	200

Fig. No. 6

Monthly variations is total dissolved solids (mg/l) of surface water samples at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir



The value of total dissolved solids were recorded within the range from 160 mg/l to 280 mg/l as minimum in month of August, September, November, and maximum in month of June. In general the higher values of total dissolved solids were observed in monsoon and low in winter and moderate in summer season.

Total Solids (T. S.)

Monthly values of total solids in surface water samples at four stations (A – D) of the reservoir are presented in Table No. 4 and Fig. No. 7

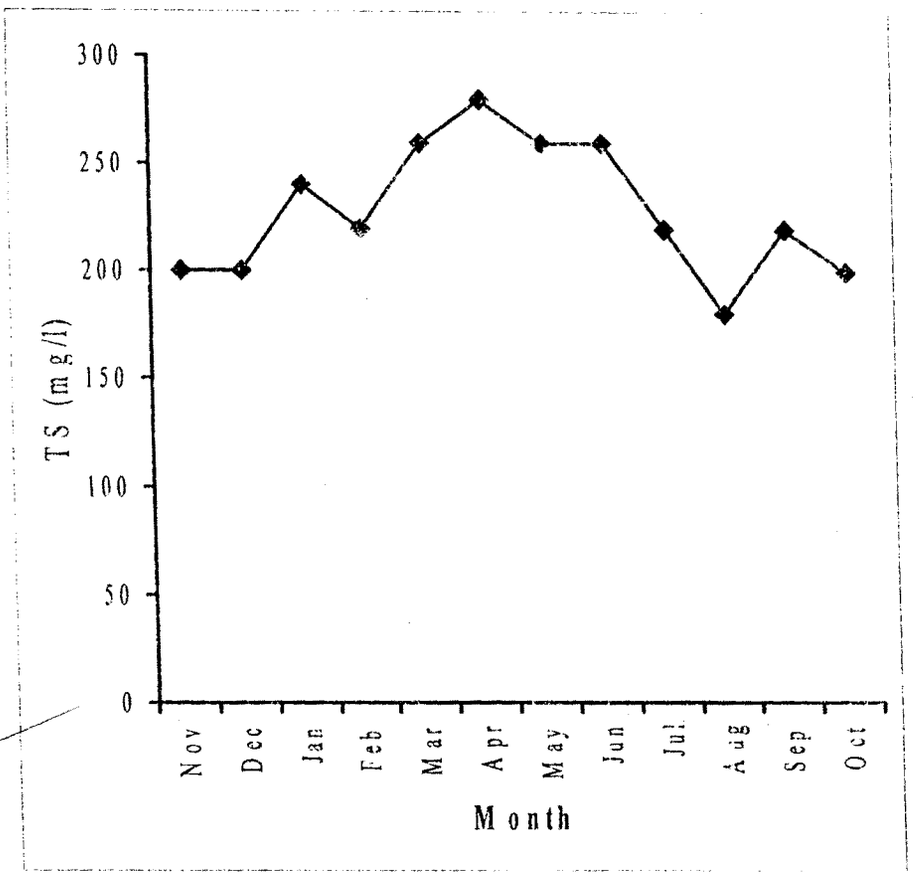
Table No. 4

Monthly variations in total solids (mg/l) of surface water samples at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.

Sr. No	Months	Samples				Mean sample A, B, C, D
		A	B	C	D	
1	Nov.2006	200	200	200	200	200
2	Dec.2006	200	200	200	200	200
3	Jan.2007	240	240	240	240	240
4	Feb.2007	220	220	220	220	220
5	Mar.2007	260	260	260	260	260
6	April.2007	280	280	280	280	280
7	May.2007	260	260	260	260	260
8	June.2007	260	260	260	260	260
9	July.2007	220	220	220	220	220
10	Aug.2007	280	280	280	280	280
11	Sep.2007	220	220	220	220	220
12	Oct.2007	220	220	220	220	220

Fig. No. 7

Monthly variations in total solids (mg/l) of surface water samples at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.



The total solid were recorded within the range from 180 mg/l. to 280 mg/l. with its minimum values in the month of February and maximum in the month of September. In general the seasonal changes in the value of total solids were observed as minimum in summer, moderate in winter and maximum in monsoon.

Total Suspended Solids (T. S. S.)

Monthly values of total suspended solids in surface water sample at four stations (A – D) of these reservoir are presented in Table No. 5 and Fig. No. 8.

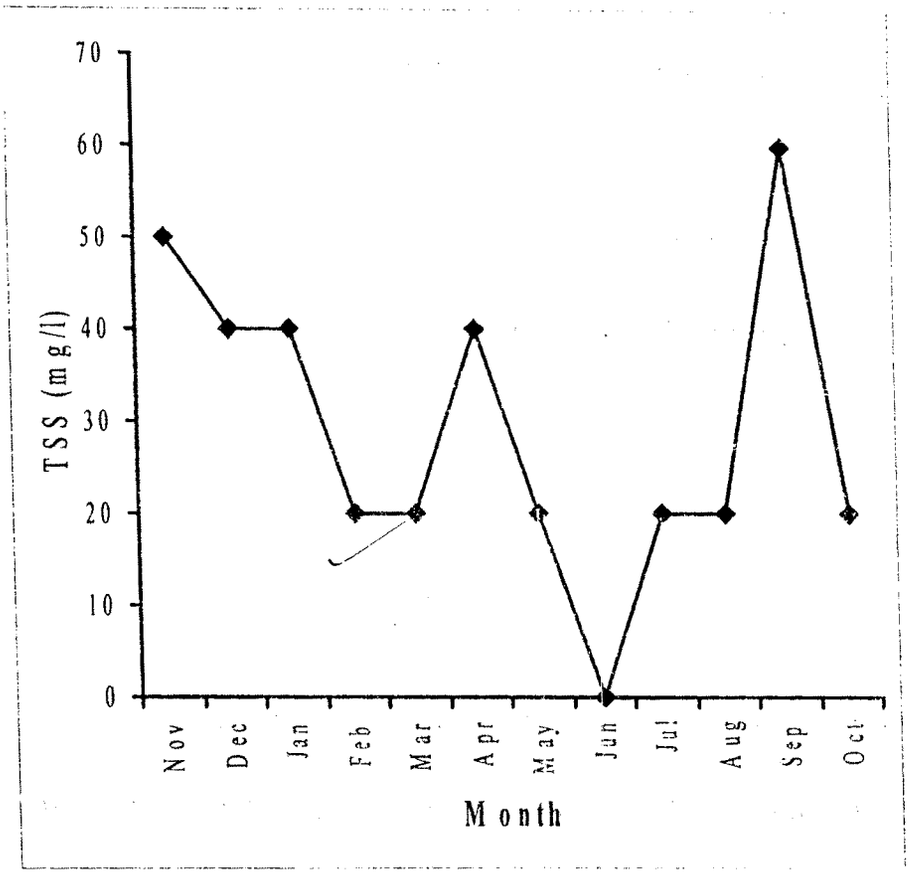
Table No. – 5

Monthly variations in total suspended solid (mg/l) of surface water samples at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	40	40	40	40	40
2	Dec.2006	40	40	40	40	40
3	Jan.2007	40	40	40	40	40
4	Feb.2007	20	20	20	20	20
5	Mar.2007	20	20	20	20	20
6	April.2007	40	40	40	40	40
7	May.2007	20	20	20	20	20
8	June.2007	00	00	00	00	00
9	July.2007	20	20	20	20	20
10	Aug.2007	20	20	20	20	20
11	Sep.2007	60	60	60	60	60
12	Oct.2007	20	20	20	20	20

Fig. No. 8

Monthly variations in total suspended solid (mg/l) of surface water samples at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir



The total suspended solids were recorded within the range from 0 mg/l to 80 mg/l. with its minimum in the month of May and maximum in the month of November. In general the seasonal changes in the values of total suspended solids were observed as minimum in summer, moderate in winter and maximum in monsoon.

CHEMICAL PARAMETERS OF STUDY AREA :

pH (Hydrogen Ion Concentrations):

Monthly results of pH of water samples at four stations (A – D) of the reservoir are represented in Table No. 6 and Fig. No. 9

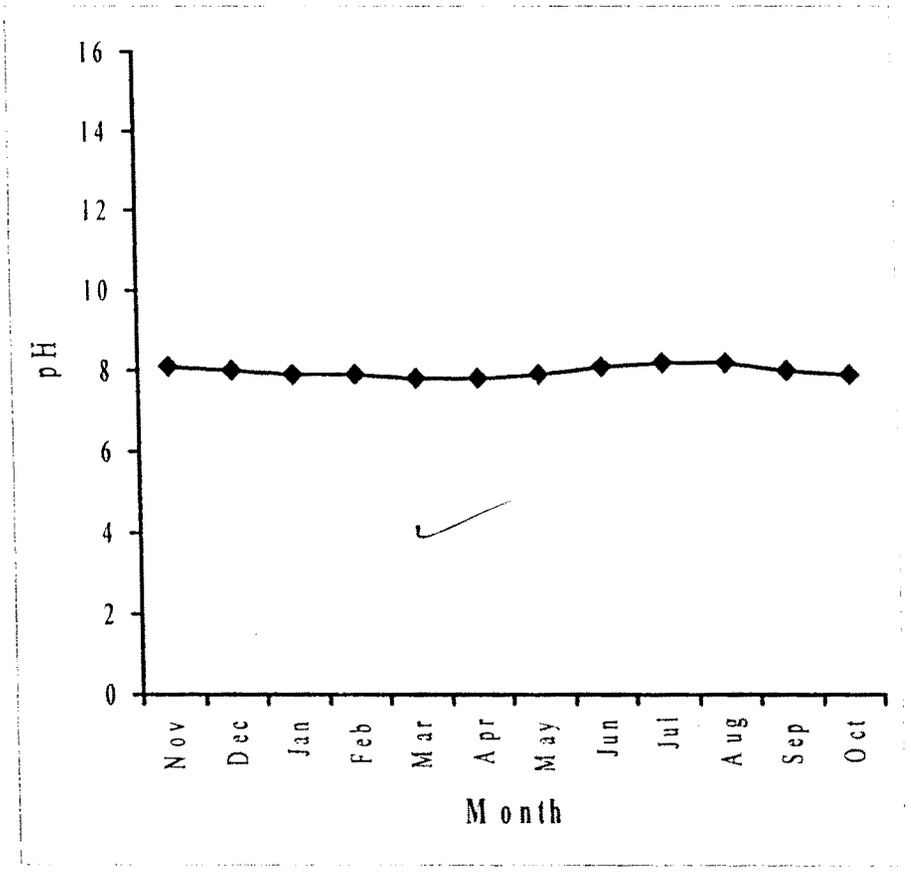
Table No. 6

Monthly variations in pH of surface water samples at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	8.1	8.1	8.1	8.1	8.1
2	Dec.2006	8.0	8.0	8.0	8.0	8.0
3	Jan.2007	7.9	7.9	7.9	7.9	7.9
4	Feb.2007	7.9	7.9	7.9	7.9	7.9
5	Mar.2007	7.8	7.8	7.8	7.8	7.8
6	April.2007	7.8	7.8	7.8	7.8	7.8
7	May.2007	7.9	7.9	7.9	7.9	7.9
8	June.2007	8.1	8.1	8.1	8.1	8.1
9	July.2007	8.2	8.2	8.2	8.2	8.2
10	Aug.2007	8.2	8.2	8.2	8.2	8.2
11	Sep.2007	8.0	8.0	8.0	8.0	8.0
12	Oct.2007	7.9	7.9	7.9	7.9	7.9

Fig. No. 9

Monthly variations in pH of surface water samples at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir



The pH of the samples was alkaline throughout study period in the reservoir. The pH was recorded within the range from 7.8 to 8.2. The low pH was recorded in March and maximum pH was recorded in June. The pH represented its increasing trends in poast summer and monsoon seasons where as, decreasing trend in winter and early summer season.

Dissolved Oxygen :

Monthly values of dissolved oxygen content in the water samples at four stations (A – D) of the reservoir are represented in Table No. 7 and Fig. No. 10.

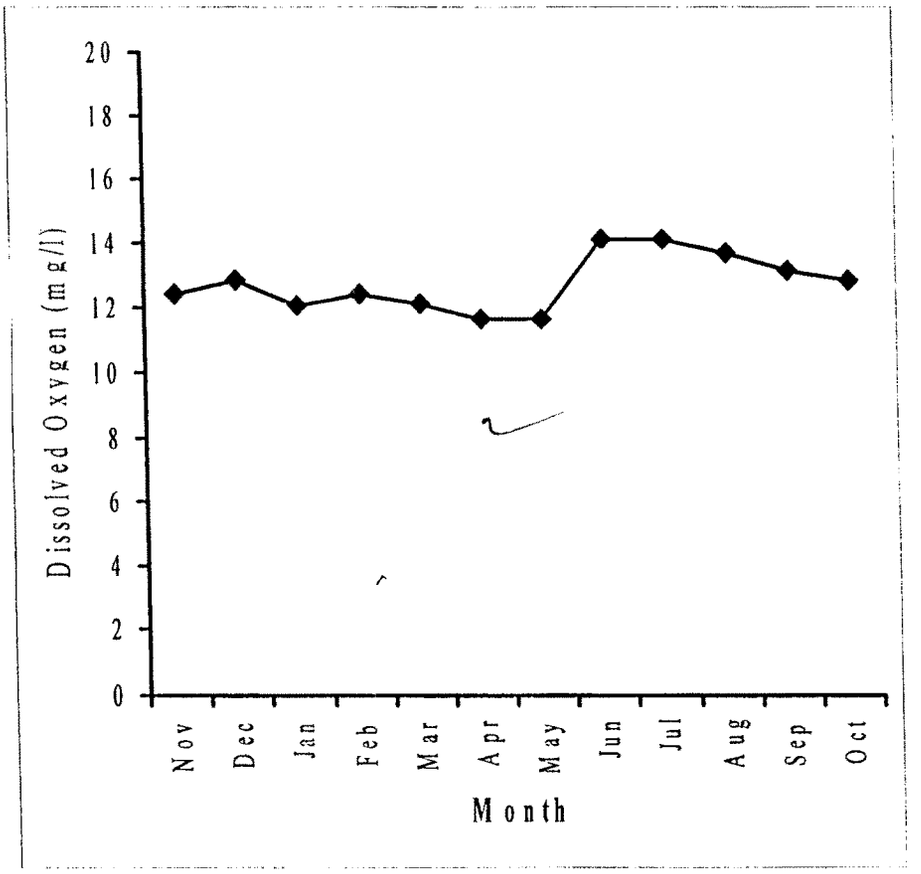
Table No. 7

Monthly variations in dissolved oxygen (mg/l) at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	12.47	12.47	12.47	12.47	12.47
2	Dec.2006	12.88	12.88	12.88	12.88	12.88
3	Jan.2007	12.07	12.07	12.07	12.07	12.07
4	Feb.2007	12.47	12.47	12.47	12.47	12.47
5	Mar.2007	12.07	12.07	12.07	12.07	12.07
6	April.2007	11.67	11.67	11.67	11.67	11.67
7	May.2007	11.67	11.67	11.67	11.67	11.67
8	June.2007	14.08	14.08	14.08	14.08	14.08
9	July.2007	14.08	14.08	14.08	14.08	14.08
10	Aug.2007	13.68	13.68	13.68	13.68	13.68
11	Sep.2007	13.28	13.28	13.28	13.28	13.28
12	Oct.2007	12.88	12.88	12.88	12.88	12.88

Fig. No. 10

Monthly variations in dissolved oxygen (mg/l) at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.



Dissolved oxygen was recorded within the range from 11.67 mg/l to 14.08 mg/l. Minimum dissolved oxygen was recorded in the month of April, May and maximum in the month of July. The values of dissolved oxygen represented bimodal peak, in monsoon with its higher values than the summer season in the reservoir.

Free Carbon Dioxide :

Monthly variations in the free carbon dioxide content in the surface water samples at four station (A – D) of these reservoir are presented in Table No. 8 and Fig. No. 11.

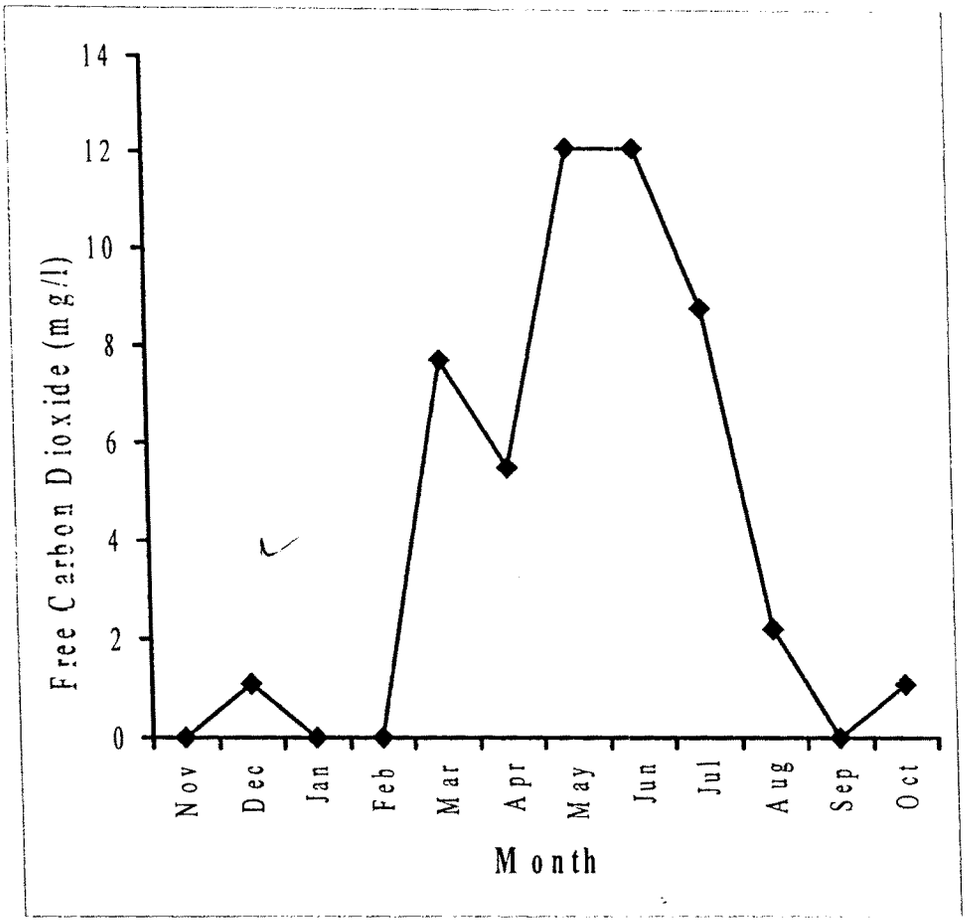
Table No. 8

Monthly variations in free carbon dioxide (mg/l) at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	0	0	0	0	0
2	Dec.2006	0	4.4	0	0	1.1
3	Jan.2007	0	0	0	0	0
4	Feb.2007	0	0	0	0	0
5	Mar.2007	8.8	8.8	4.4	8.8	7.7
6	April.2007	4.4	4.4	4.4	8.8	4.4
7	May.2007	13.2	13.2	13.2	8.8	13.2
8	June.2007	13.2	8.8	13.2	13.2	12.1
9	July.2007	8.8	8.8	8.8	8.8	8.8
10	Aug.2007	0	0	8.8	0	2.2
11	Sep.2007	0	0	0	0	0.0
12	Oct.2007	0	0	0	4.4	1.1

Fig. No. 11

Monthly variations in free carbon dioxide (mg/l) at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.



The free carbon dioxide content in water samples of Truputi reservoir was recorded within the range from 0.0 mg/l to 13.2 mg/l. The maximum concentration of free carbon dioxide was noted in the months of May and June. And 0.00 of carbon dioxide shown in the months from August to February. The seasonal fluctuations in the values of free carbon dioxide could be represented as higher in summer and lower in winter season.

Hardness :

Monthly observations on the hardness as $CaCO_3$ mg/l in surface water samples at four station (A – D) of the reservoir are presented in Table No. 9 and Fig. No. 12.

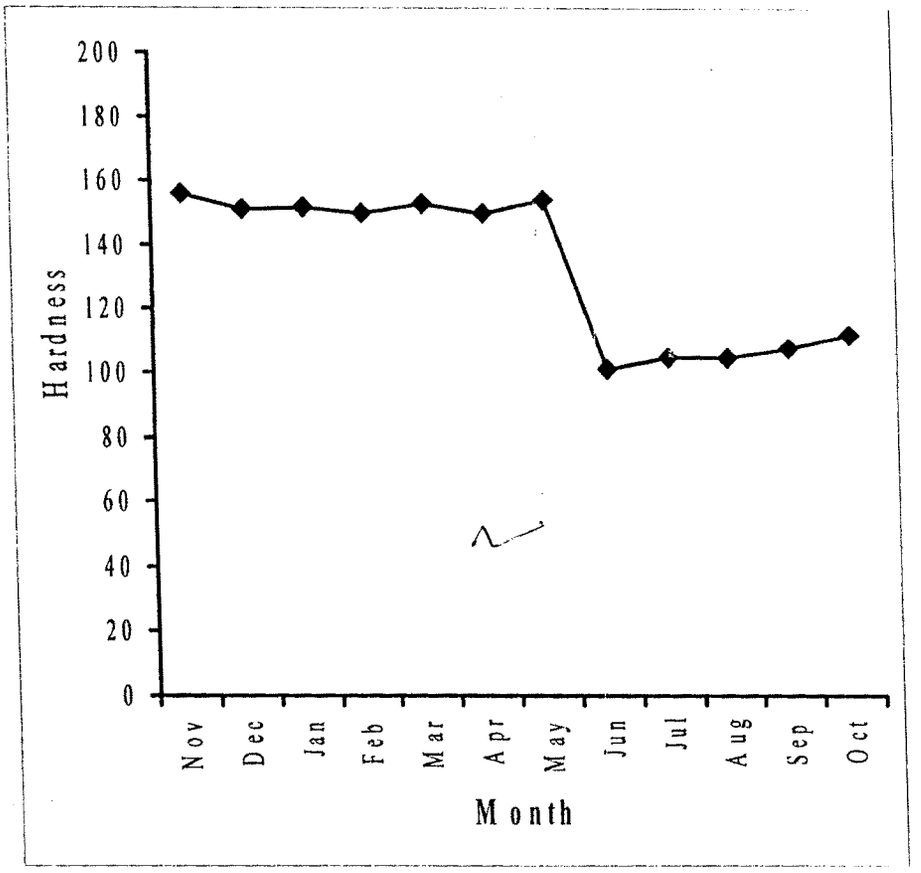
Table No. – 9

Monthly variations in hardness as $CaCO_3$ in mg/l at stations A, B, C and D of (Nov. 2006 to Oct. 2007) at Triputi Reservoir.

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	156	156	156	156	156
2	Dec.2006	148	148	148	148	148
3	Jan.2007	152	152	152	152	152
4	Feb.2007	148	148	148	148	148
5	Mar.2007	152	152	152	152	152
6	April.2007	148	148	148	152	148
7	May.2007	156	156	156	152	155
8	June.2007	100	100	100	104	101
9	July.2007	104	100	104	112	105
10	Aug.2007	112	104	100	104	105
11	Sep.2007	112	104	104	112	108
12	Oct.2007	116	112	116	104	112

Fig. No. 12

Monthly variations in hardness as $CaCO_3$ in mg/l at stations A, B, C and D of (Nov. 2006 to Oct. 2007) at Triputi Reservoir.



The hardness was fluctuated from 100 mg/l to 152.00 mg/l. Minimum hardness was recorded in the month of June and maximum in the month of November. In general the seasonal variations in hardness were represented as minimum in summer and maximum in post monsoon period.

Alkalinity :

Monthly variations of total alkalinity as CaCO3 mg/l of surface water samples at four stations (A – D) of the reservoir are presented in Table No. 10 and Fig. No. 13.

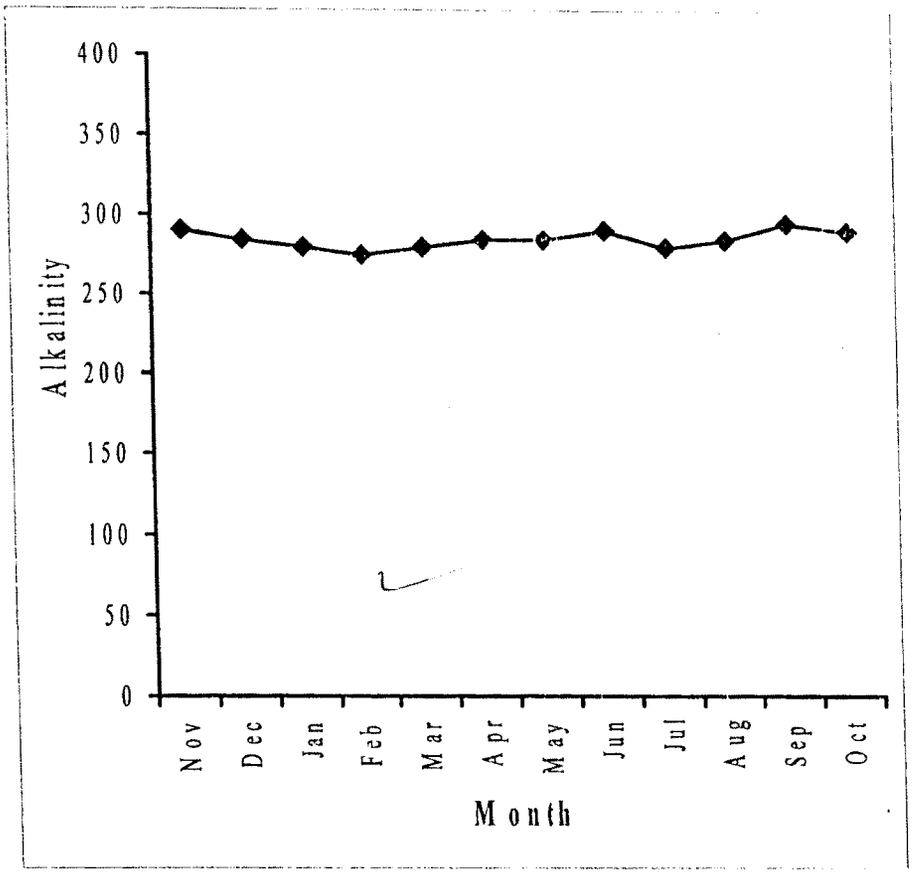
Table No. – 10

Monthly variations in total alkalinity content (mg/l) of surface water sample at stations A, B, C and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	290	290	290	290	290
2	Dec.2006	285	285	285	285	285
3	Jan.2007	280	280	280	280	280
4	Feb.2007	275	275	275	275	275
5	Mar.2007	280	280	280	280	280
6	April.2007	285	285	285	285	285
7	May.2007	285	285	285	285	285
8	June.2007	290	290	290	290	290
9	July.2007	280	280	280	280	280
10	Aug.2007	285	285	285	285	285
11	Sep.2007	295	295	295	295	295
12	Oct.2007	290	290	290	290	290

Fig. No. 13

Monthly variations in total alkalinity content (mg/l) of surface water sample at stations A, B, C and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.



The total alkalinity in the water samples of the reservoir varied from 275.00 mg/l to 295.00 mg/l The minimum alkalinity was recorded in the month of February and maximum higher in post monsoon season, minimum in post winter and moderate in summer season. The seasonal variations in alkalinity could be summarized as minimum in post winter, moderate in summer, slightly decline in monsoon and reached its peak in the post monsoon season.

Chloride :

Monthly chloride content in surface water samples at four stations (A – D) of the reservoir are represented in Table No. 11 and Fig. No. 14.

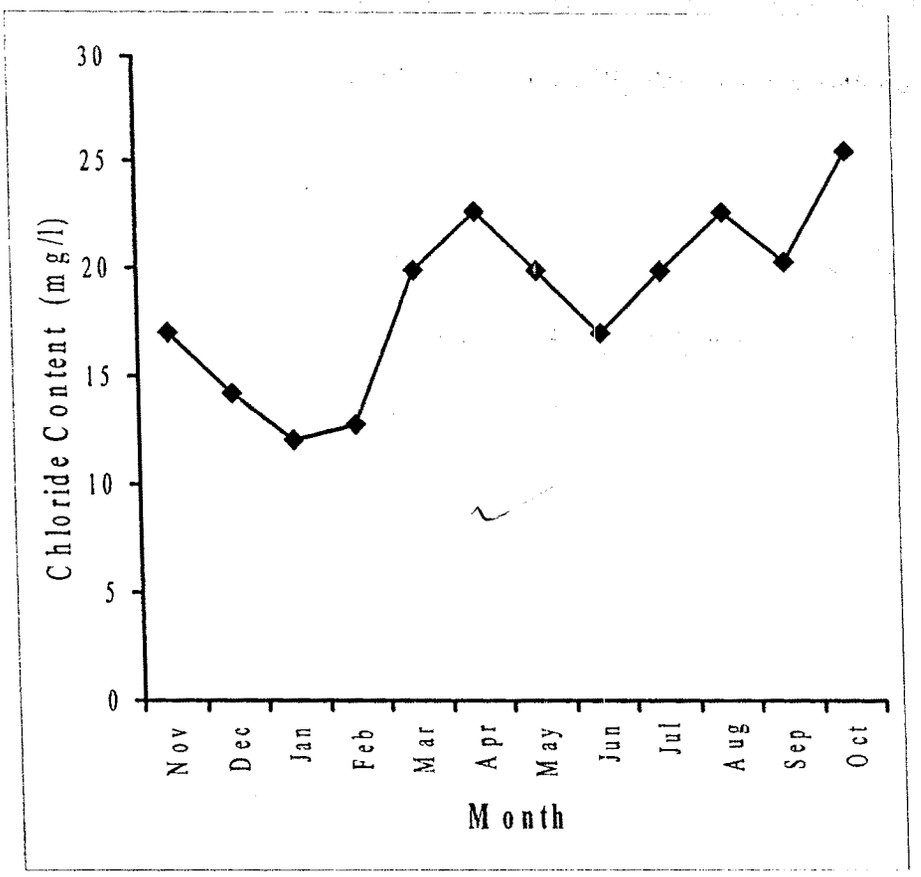
Table No. – 11

Monthly variations in chloride content (mg/l) of surface water sample at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	17.04	17.04	17.04	17.04	17.04
2	Dec.2006	14.20	14.20	14.20	14.20	14.20
3	Jan.2007	11.36	14.20	11.36	11.36	12.07
4	Feb.2007	14.20	11.36	14.20	11.36	12.78
5	Mar.2007	19.88	19.88	19.88	19.88	19.88
6	April.2007	22.72	22.72	22.72	22.72	22.72
7	May.2007	19.88	19.88	19.88	19.88	19.88
8	June.2007	19.88	17.04	17.4	17.04	17.75
9	July.2007	19.88	19.88	19.88	19.88	19.88
10	Aug.2007	19.88	22.72	22.72	22.72	22.01
11	Sep.2007	22.72	19.88	19.88	17.04	19.88
12	Oct.2007	25.56	25.56	22.72	25.56	24.85

Fig. No. 14

Monthly variations in chloride content (mg/l) of surface water sample at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.



The chloride concentration in the water samples was recorded from 11.36 mg/l. to 25.56 mg/l. Minimum chloride content was recorded in the month of January and maximum in April with its moderate range from July to November. In general the seasonal variations in the values of chloride content was represented as minimum in winter, maximum in summer and moderate in monsoon and post monsoon season.

Phosphate :

Monthly phosphate content in surface water samples at four stations (A – D) of the reservoir are represented in Table No. 12 and Fig. No. 15.

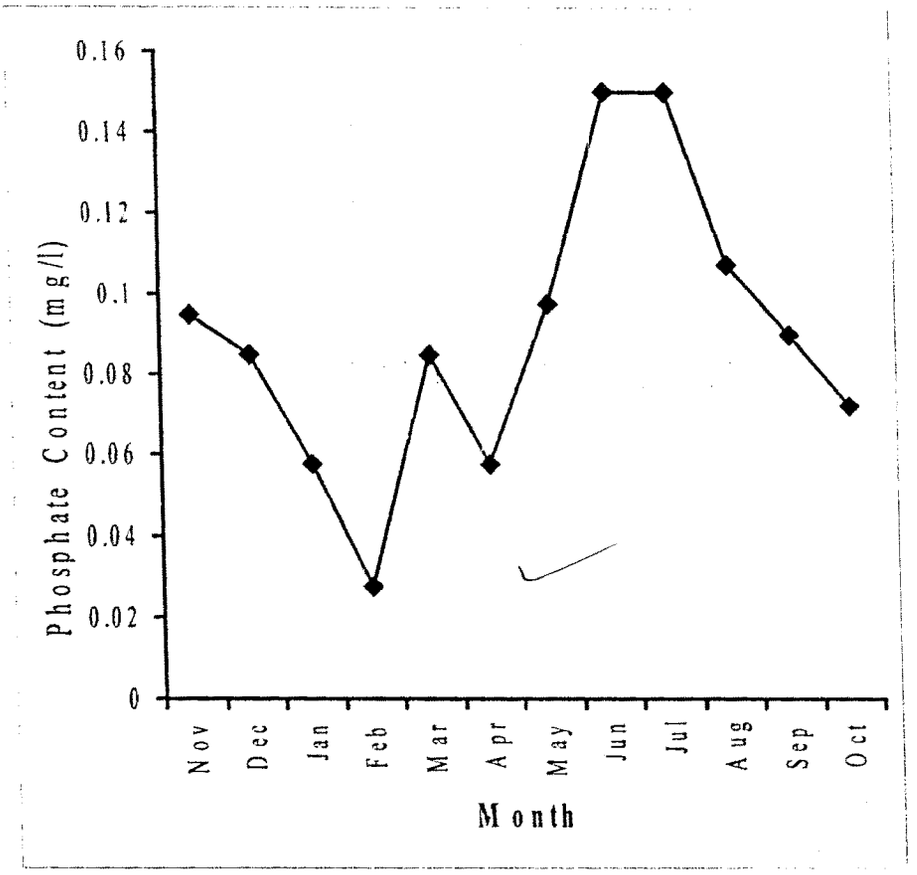
Table No. 12

Monthly variations in phosphate content (mg/l) of surface water sample at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	0.10	0.08	0.10	0.10	0.095
2	Dec.2006	0.08	0.08	0.08	0.10	0.085
3	Jan.2007	0.05	0.05	0.08	0.05	0.0575
4	Feb.2007	0.02	0.05	0.02	0.02	0.0275
5	Mar.2007	0.08	0.08	0.10	0.08	0.085
6	April.2007	0.05	0.08	0.05	0.05	0.0575
7	May.2007	0.08	0.15	0.08	0.08	0.0975
8	June.2007	0.15	0.15	0.15	0.15	0.15
9	July.2007	0.15	0.15	0.15	0.15	0.15
10	Aug.2007	0.10	0.10	0.08	0.15	0.1075
11	Sep.2007	0.08	0.10	0.08	0.10	0.09
12	Oct.2007	0.08	0.08	0.05	0.08	0.0725

Fig. No. 15

Monthly variations in phosphate content (mg/l) of surface water sample at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.



Phosphate content was fluctuated between 0.02 mg/l to 0.15 mg/l. Minimum phosphate content recorded in the month of February and maximum in the month of July. The seasonal variations in the values of phosphate content was represented as minimum in post winter, maximum in monsoon and moderate in summer and post monsoon. However, phosphate values showed its increasing trend from summer and reached its peak in monsoon.

Nitrate :

Monthly fluctuations of nitrate content in surface water samples at four stations (A – D) of the reservoir are presented in Table No. 13 and Fig. No. 16.

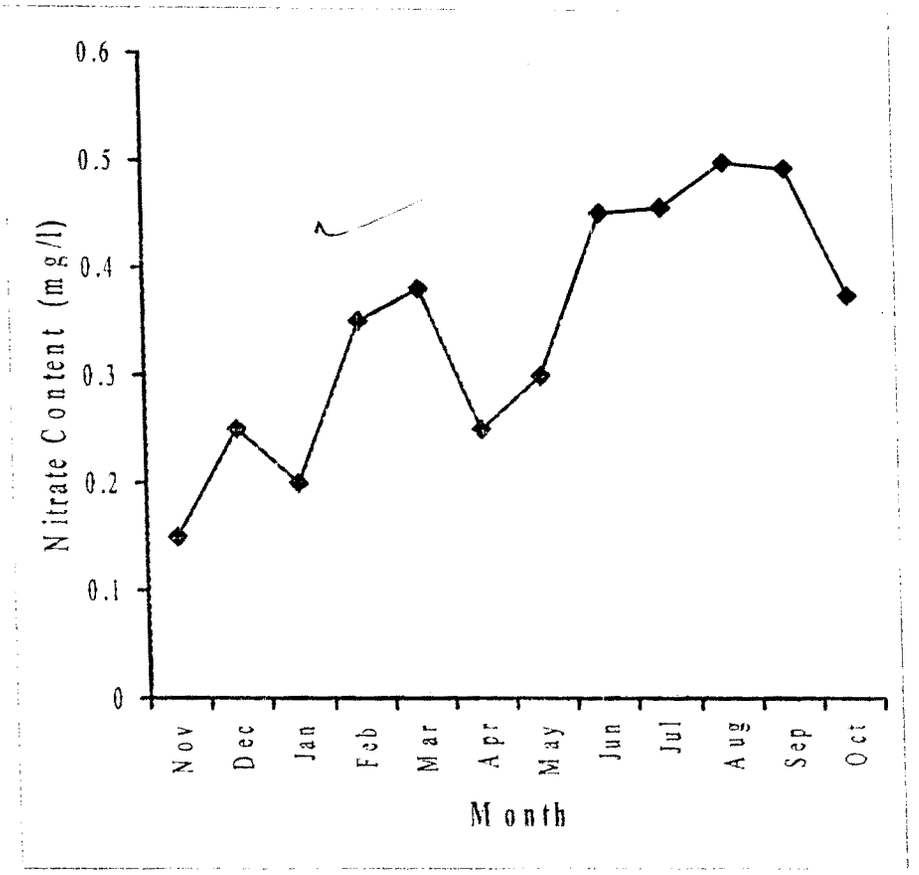
Table No. 13

Monthly variations in Nitrate content (mg/l) of surface water sample at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.

Sr. No	Months	Samples				Mean of sample A, B, C, D
		A	B	C	D	
1	Nov.2006	0.15	0.15	0.15	0.15	0.15
2	Dec.2006	0.25	0.25	0.25	0.25	0.25
3	Jan.2007	0.20	0.20	0.20	0.20	0.20
4	Feb.2007	0.35	0.35	0.35	0.35	0.35
5	Mar.2007	0.38	0.38	0.38	0.38	0.38
6	April.2007	0.22	0.25	0.25	0.25	0.25
7	May.2007	0.30	0.30	0.30	0.30	0.30
8	June.2007	0.45	0.45	0.45	0.38	0.432
9	July.2007	0.45	0.48	0.45	0.45	0.457
10	Aug.2007	0.50	0.50	0.50	0.50	0.50
11	Sep.2007	0.48	0.50	0.50	0.50	0.495
12	Oct.2007	0.45	0.35	0.35	0.35	0.375

Fig. No. 16

Monthly variations in Nitratc content (mg/l) of surface water sample at stations A, B, C, and D (Nov. 2006 to Oct. 2007) at Triputi Reservoir.



Nitrate content in the surface water samples was recorded within the range 0.15 mg/l to 0.50 mg/l. Minimum nitrate content recorded in the month of November and maximum In the month of August, September, low nitrate content with fluctuation trend was noticed in winter and very high in monsoon season.

BIOLOGIAL PARAMETERS :

Phytoplankton :

Seasonal variations of phytoplankton units/l and zooplankton (organisms/l) from November 2006 to October 2007.

The seasonal variations in phytoplankton density were represented as minimum in monsoon and maximum in winter and summer seasons. The bimodal peak in phytoplankton population was observed as in winter and summer.

Phytoplankton belonging to four major groups. Viz. chlorophyceae, Bascillariophyceac, Myxophyceae and Euglenophyceae were identified. Of these, 09 species belonging to 04 orders and 07 families. From class chlorophyceae, 07 Species belong to 02 orders and 05 families from class Bascillariophyceae, 06 species from 025 orders and 04 Families from class Myxophceas and 01 Species from single order and Families of Euglenophcas.

The Chlorophyceaon members included, Volvox, Pediastrum Hydrodictyon, Characiposis, Spirogyra, Cosmarium, Desmidium, Sfaurastrum, Characiposis, Spp. were observed as major components in the plankton samples of the reservoir. Fig

The Bascillariphycean form comprised of Fragellaria, Synendra, Pinnularia, Cymbella, Amphora, Surirella, Cyclotella spp.

were observed as common forms in the plankton samples. (Phytoplankton Fig. No. 1)

Myxophycean members included, *Microcystis, Merispeopedia, Coleosphaerium, Analbena, Spirulina, Goleotricha*, spp. were observed in the reservoir. (Phytoplankton Fig. No. 1) and Euglenophyceac content single member that is *Euglena.*

Zooplanktons :

The numerical density of zooplankton was fluctuated from 50.00 to 72.00 organisms/l. The seasonal variations in zooplankton population were observed as minimum in monsoon and maximum in winter season.

The zooplanktons from five major groups viz. cladocera, Copepoda, Rotifera, Ostracoda and Protozooa were identified Altogether 19 species from eight orders and eight families were identified and recorded from the reservoir. Among Rotifera seven species belonging to order *Bdelloida, Floculariaceas, Plomia* has been identified of which there species form Brachinonideac. The Rotifera species like *Phitodina* Sp. *Filiniaterminales, Asplacha*, sp, *Keratella Tropica, Brachinous Angularis, Brachinous, Falcatus, Dicranophorus* sp. were recorded infrequently in the plankton samples of the reservoir. (Zooplankton Fig. No. 2)

Among Copepoda Diaptomus sp. Nauplius were noticed with consistent occurrence of cyclopoid forms. Cladoerans were represented by *Macorthrix spinosa, Alonella, Exisa, Alona* sp. *Daphnia*, sp. Ostracods by Cypris, Stenoncypis while protozoans were comprised of Arcellla, Difflugia, lobostoma, Centropyxis, Vorticella sp. From the plankton samples of the reservoir. (Zooplankton Fig. No.2)

1) **Class – Monocotyledon**

Family – Najadaceae	*Najas indica*
	Najas minor
Family – Ptamogetonaceae	*Potamogetone Crispus*
	Potamogetone pectinatus
Family – Hydroharitaceac	*Vallisneria spiralis*
	Blyxo octanda
Family – Ceratophyllaceae	*Ceratophyllum demersum*
Family – Cypraceae	*Scripus* sp.

2) Calss – Dicontyledonae

Family – Convolvulaceae	*Ipomea aquaica*
Sub Kingdom – Cryptogamy	*Chara.*

Check list of phytoplankton diversity at Triputi Reservoir.

3) Class – Chlorophyceae

I) Order - Volvocales

Family – Volvocaceae	*Volvex sp.*

II) Order – Chlorococcales

Family – Oocystaceae	*Pediastrum sp.*
Family – Hydrodictyceae	*Hydrodictyon sp.*
Family – Characiaceae	*Characium sp.*

III) Order – Zygnematales

Family – Zygnemataceae	*Spirogyra*
Family – Desmidiaceac	*Cosmarium sp.*
	Desmidium sp.
	Staurastrum sp.

IV) Order - Heterococcales

Family – Characiposidaceae	*Characiposis sp.*

Class – Bascillariophyceae

I) Order – Pinnales (Bascillarials)

Family – Fragillariaceae	*Fragellaria sp.*
	Synendra sp.
Family – Naviculaceae	*Pinnularia sp.*
Family – Cymbellaceae	*Cymbella sp.*

	Amphora sp.
Family – Surellaceae	*Surirella Sp.*
II) Order – Centrale	
Family- coseinodiseaceae	*cyclotella sp.*

Class - Myxophyceae [Cyanophyceae]

I Order – Chrococcales	*Microcystis sp.*
Family – Chrococcaceae	*Merismopedia sp.*
	Coleosphaerium sp.
II) Order – Nostocales	
Family – Nostocaceae	*Anabena sp.*
Family – Oscillatoriceae	*Spirulina sp.*
Family – Rivulariaceae	*Goleolricha sp.*

Class – Euglenophyceae

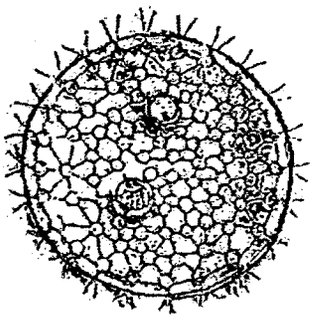
Order – Eugleriodea	
Family – Eulenaceae	*Euglina sp.*

Check list of zooplankton diversity at triputi reservoir.

Class – Crustaceae.

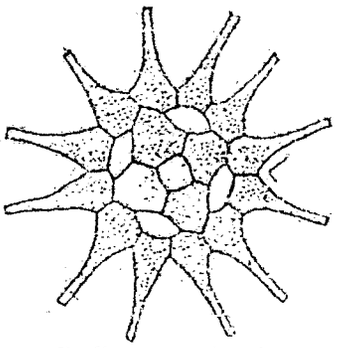
I) Order – Eucopepoda (copepda)	
	Diaptomus sp.
	Nauplius sp.

Fig. 1 : Phytoplanktons

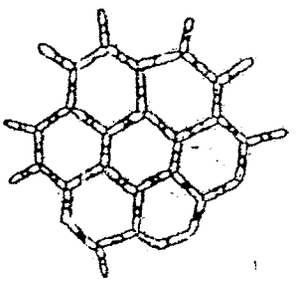


Volvax

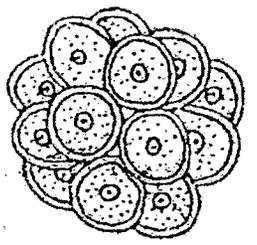
Characium



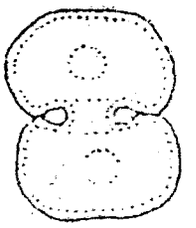
Pediastrum simplex



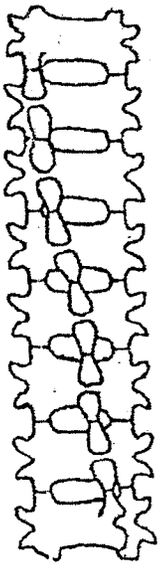
Hydrodictyon



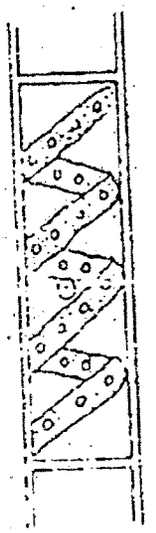
Caelastrum



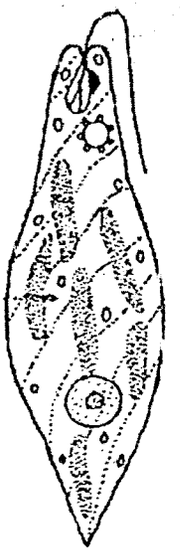
Cosmarium



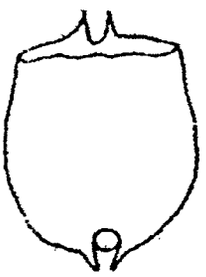
Desmidium



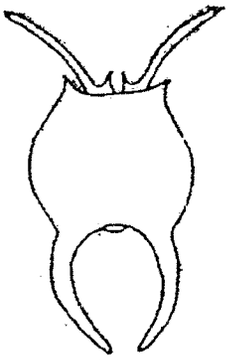
Spirogyra



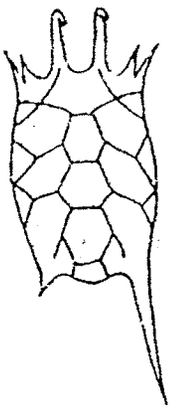
Euglena



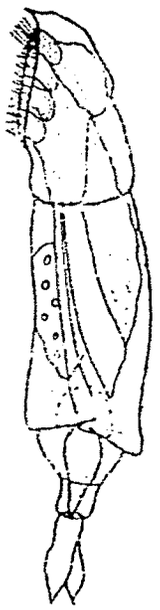
B. angularis



B. falacatus

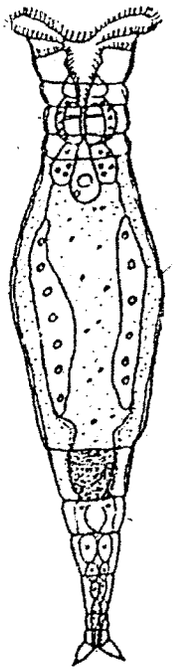


Keratella

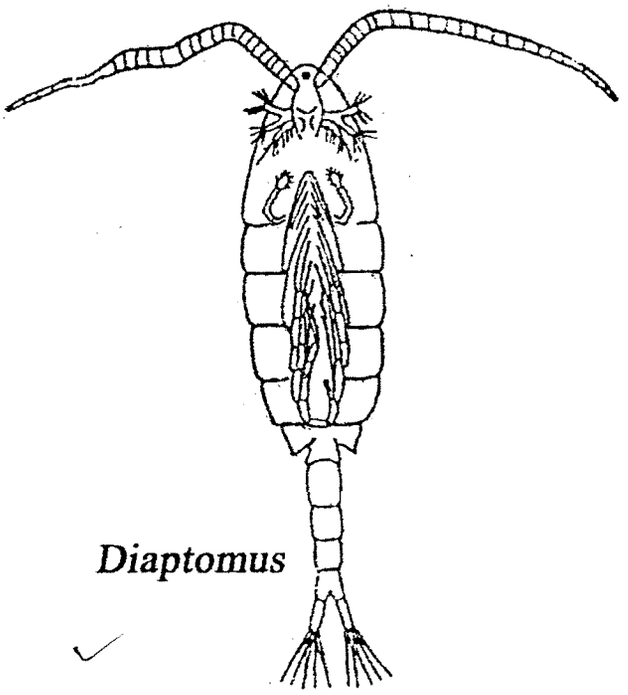


Dicranophorus

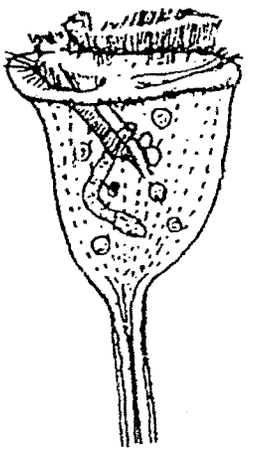
Asplanchna



Philodina



Diaptomus



Vorticella

Family – Eulenaceae	*Macrothrix spinasa*
	Alonella exisa,
	Alona sp.
	Daphnia sp.
2) Rotifera	
I) Order – Chrococcales	
Class – Diagonala	
Family – Philodiniue	
II) Order – Ptornia	
Family – Asplanchidae	*Asplancha sp.*
Family - Brachionidae	*Keratella tropica.*
	Brachinous gngularis
	Brachinous falcalus
Family – Dicranophoridae	*Dicranophorus sp.*
III) Order – Flocullariaceae	
Family – Filiniidae	*Filinia terminals.*
3) Subclass – Ostracoda	
Order - Podocopa	
Family – Cypridae	*Cypris*
	Stenocypris
4) Protista	

I) Order – Arcellinida	*Arcella*
Family – Dffuligidae	*Difflugia lobostoma*
	Centropyxis.
II) Order – Peritrichida	
Family – Vorticellidae	*Vorticella sp.*

Check list of fish fauna : **(Plate No. 2 & 3)**

Indigenous species :

1) *Labeo rohita (Ham) :* Column consuming decaying plants.

2) *Cirrhinus mrigala :* Bottom feeder consuming decaying plants and detritus.

3) *Catla catla* (Ham) : A surface feeder consuming zooplankton

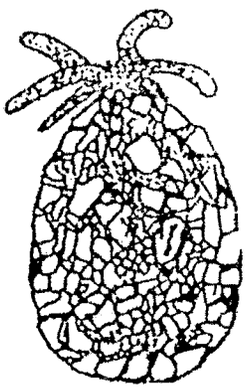
Exotic species :

1) *Ctenopharyngodon idella (Val) :* A feeder on coarse macro vegetation.

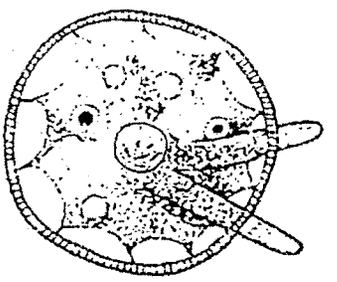
2) *Hypophthalmichthys molitrix (Val) :* A surface feeder on phytoplankton.

3) *Cyprinus carpio (Linn) :* An omnivore and scavenger on both animals and plants.

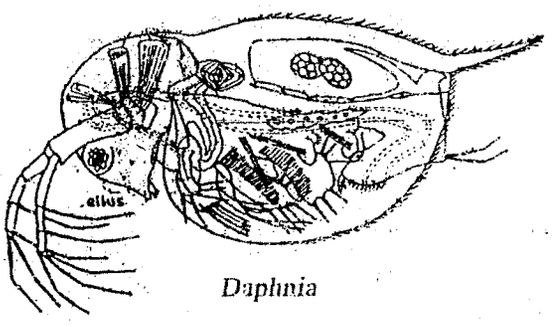
Fig. 2: Zooplanktons



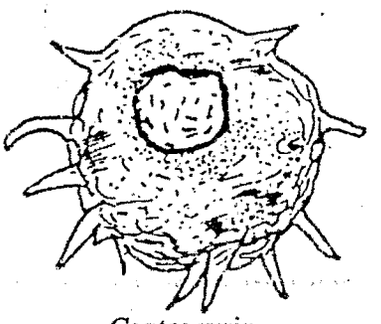
Diffugia



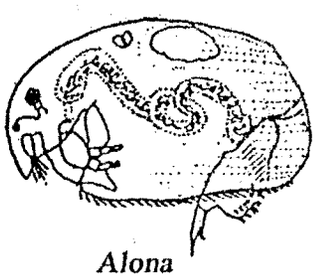
Arcella



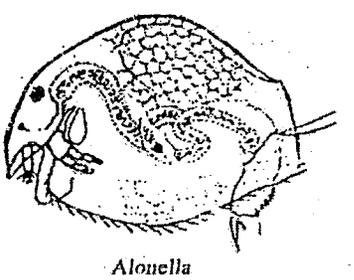
Daphnia



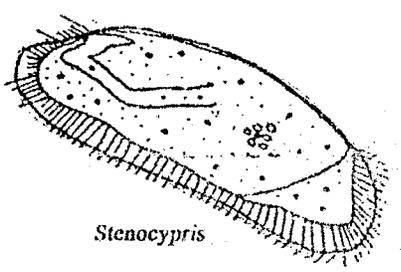
Centropyrix



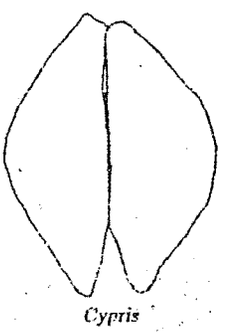
Alona



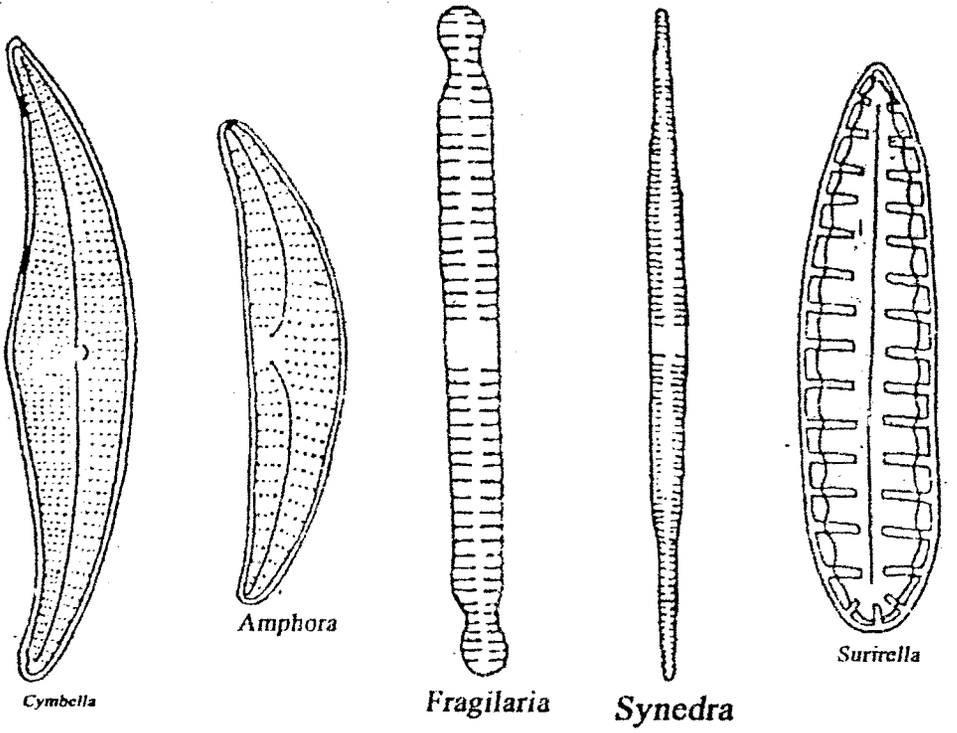
Alonella

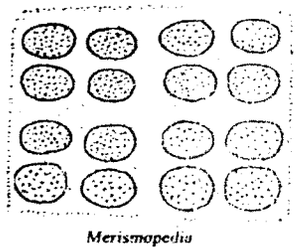


Stenocypris



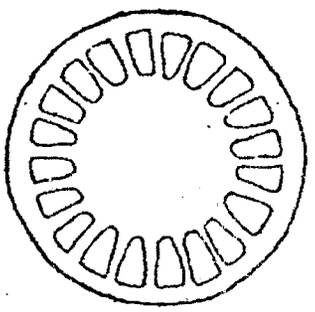
Cypris


Cymbella
Amphora
Fragilaria
Synedra
Surirella


Merismopedia


Anabaena


Gloeotrichia


Cyclotella


Spirulina