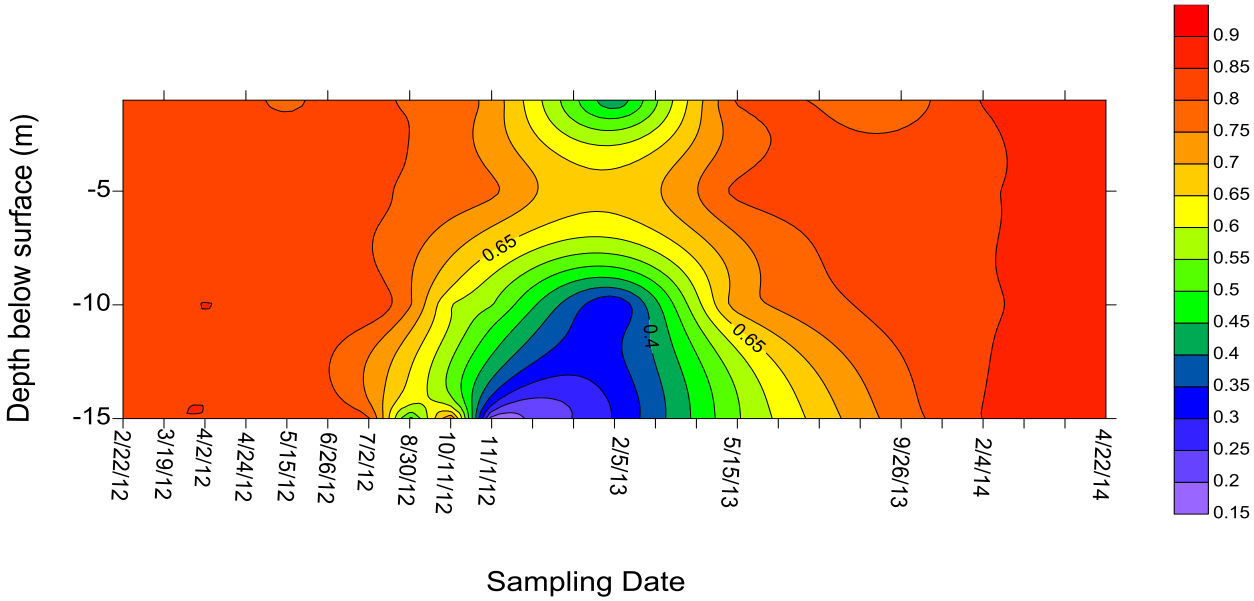

Figure F-17: Ca (mM) isopleth for Cerrillos

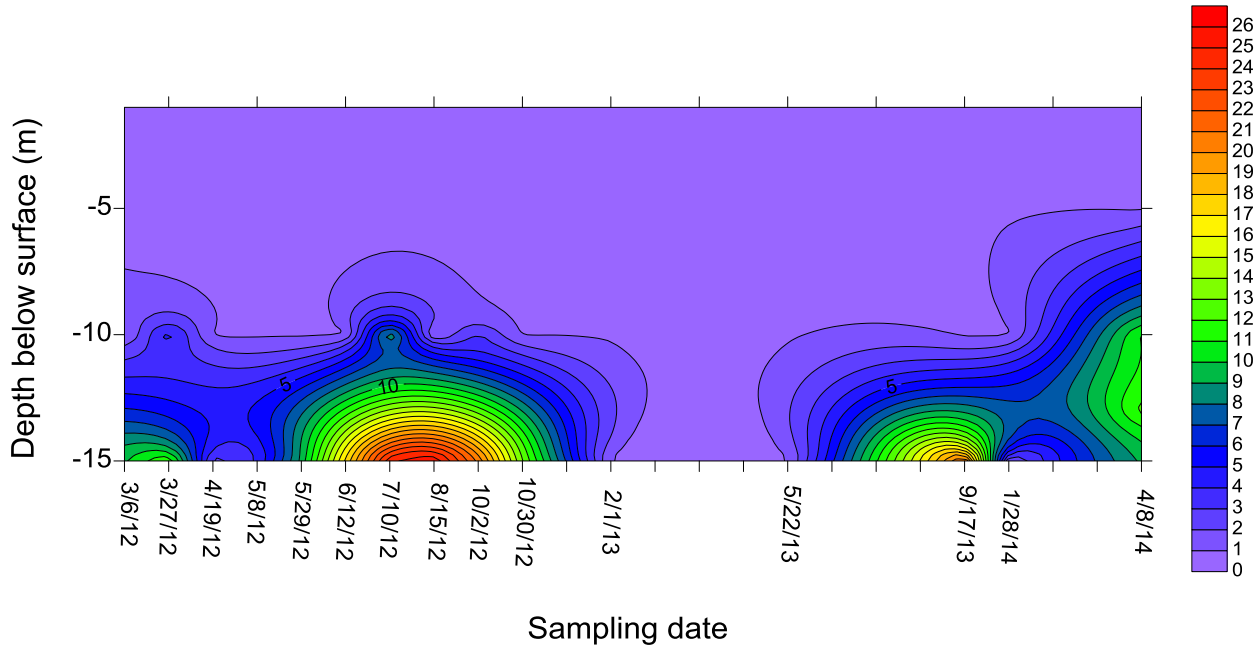

Figure F-18: Fe (µM) isopleth for Guajataca

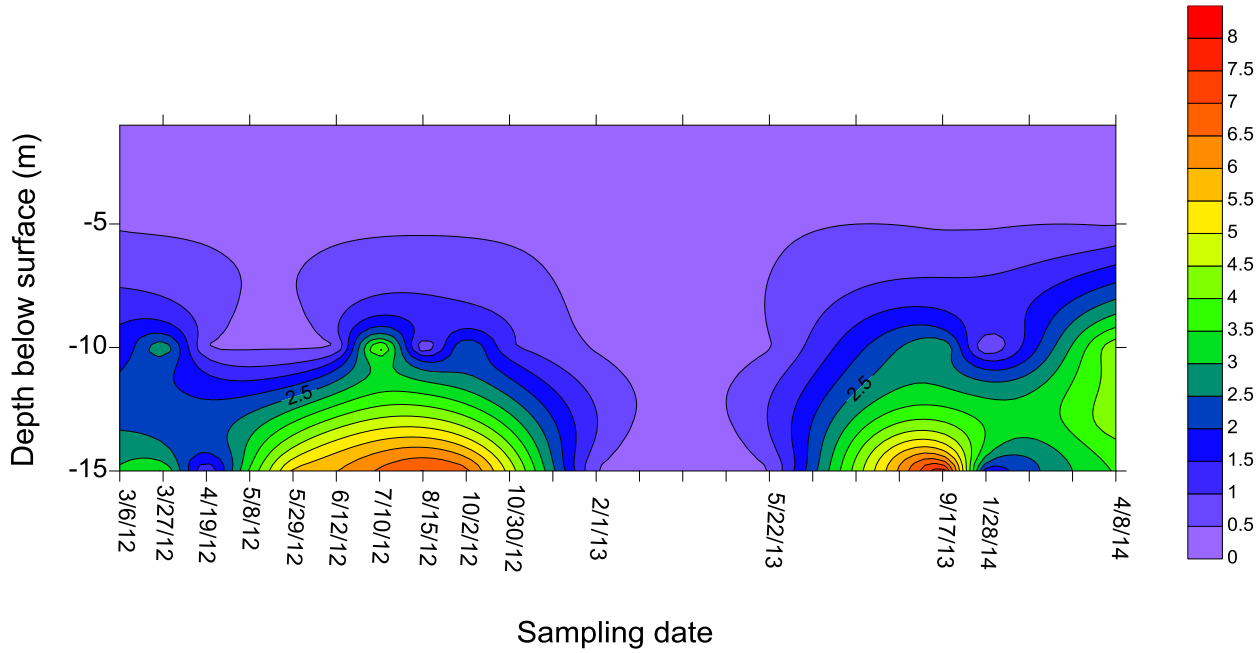

Figure F-19: Mn (µM) isopleth for Guajataca

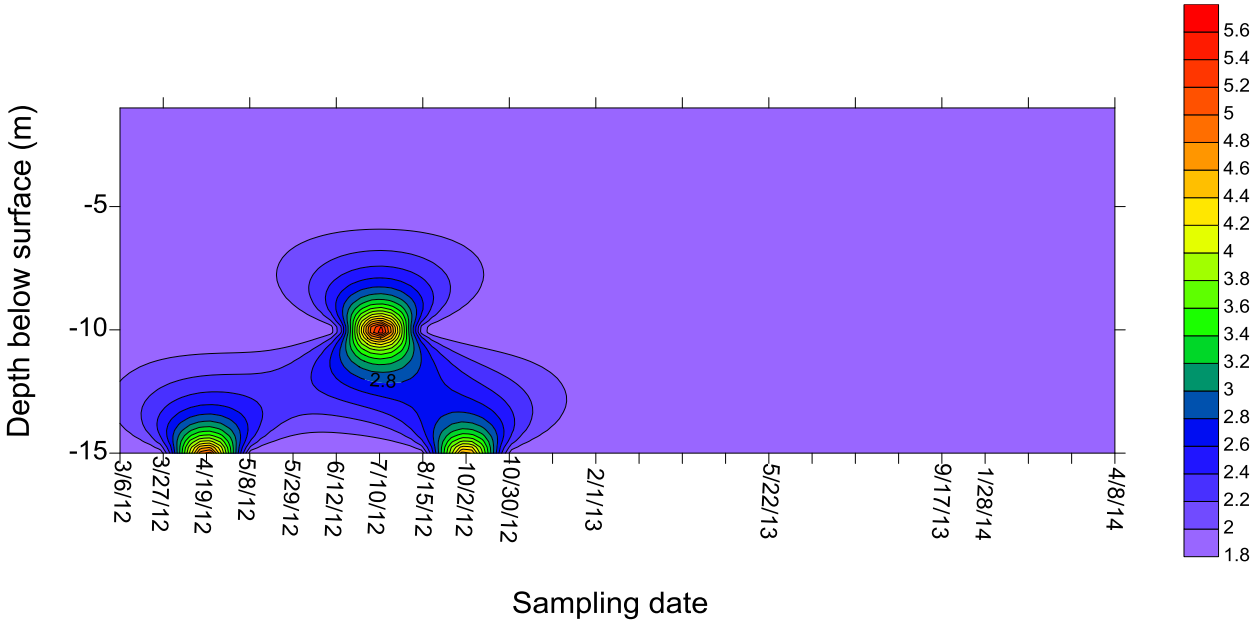

Figure F-20: Al (µM) isopleth for Guajataca

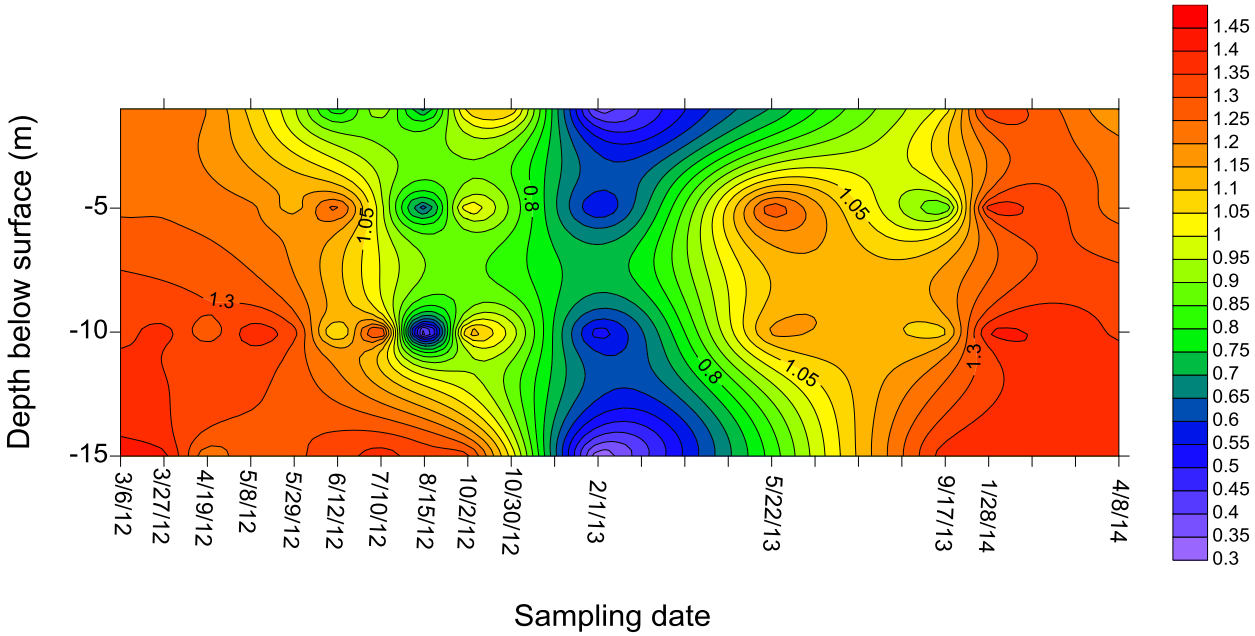

Figure F-21: Ca (mM) isopleth for Guajataca

APPENDIX G: Preliminary analysis of phytoplankton in six Puerto Rican reservoirs (Cells per mL was calculated using the sedimented sample volume)

First Year of study

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Cerrillos **No. sample:** 1
Date collected: March/19/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 0.1ml **Date observed:** March/26/2012
Bongo Net: A B
No. microscope fields of view: 21 13
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A		Quantity Bongo B	
	# cells.	cells/ml	# cells	cells/ml
Chlorophyta				
cf. *Pediastrum simplex* var. *ovalatum*	2	2939.45	1	<1
cf. *Pediastrum simplex* var. *echinulatum*	0	0	1	<1
Charophyta				
cf. *Staurastrum* sp.	1	<1	0	0
Ochrophyta				
cf. *Synedra* sp.	297	436507.94	264	626780.63
Myzozoa				
cf. *Peridiniopsis sp./Peridinium*	51	74955.91	39	92592.59
Total	**351**		**305**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Cerrillos **No. sample:** 2
Date collected: April/24/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 0.5ml **Date observed:** May/14/2012
Bongo Net: A B
No. microscope fields of view: 30 14
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A # cells	cells/ml	Quantity Bongo B # cells	cells/ml
Cyanobacteria				
cf. *Merismopedia* sp.	2	823.045	1	342.94
unknown colonial	10	4115.23	1	342.94
Charophyta				
cf. *Cosmarium* sp.	2	823.05	0	0
cf. *Staurastrum* sp. (live)	4	1646.09	3	1028.81
cf. *Staurastrum* sp. (empty)	2	823.05	3	1028.81
Chlorophyta				
cf. *Pandorina* sp.	2	823.05	1	342.94
cf. *Pediastrum simplex*	0	0	7	2400.55
cf. *Tetraedron minimum*	2	823.05	1	342.94
Ochrophyta				
cf. *Synedra* sp./*Navicula* sp.	230	94650.21	118	40466.39
cf. centric diatom	5	2057.61	7	2400.55
Myzozoa				
cf. *Peridiniopsis* sp. (empty)	13	5349.79	10	3429.36
cf. *Peridiniopsis* sp.(live)	23	9465.02	7	2400.55
Euglenozoa				
c.f. *Trachelomonas* sp.	1	411.52	0	0
Total	**296**		**159**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Cerrillos **No. sample:** 3
Date collected: July/2/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10ml **Date observed:** September/ 17 and 18/2012
Bongo Net: A B
No. microscope fields of view: 31 29
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organims	Quantity Bongo A # cells	cells./ml	Quantity Bongo B # cells	cells/ml
Cyanobacteria				
unknown screw like curved filament	1		1	
unknown cf. *Chroococcus* sp.	2		2	
Charophyta				
cf. *Cosmarium* sp.	3		3	
cf. *Staurastrum* sp. (live)	8		8	
cf. *Staurastrum* sp. (empty)	4		3	
Chlorophyta				
cf. *Pediastrum simplex*	15		6	
cf. *Tetraedron minimum*	3		3	
unknown Chlorophyta filament	6		1	
Ochrophyta				
live pennate	31		75	
empty pennate	38		20	
live centric	2		8	
empty centric	0		0	
Myzozoa				
cf. *Peridiniopsis sp.* (empty)	1		5	
cf. *Peridiniopsis sp.*(live)	4		13	
Total	**118**		**148**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Cidra **No. sample:** 1
Date collected: March/21/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume Volume of sedimented sample: 5ml **Date observed:** April/04/2012 and April/05/2012
Bongo Net: A B
No. microscope fields of view: 32 17
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A		Quantity Bongo B	
	# cells	cells/ml	# cells	cells/ml
Cyanobacteria				
unknown cyanobacterial filament	1	19.29	0	0
Charophyta				
cf. *Staurastrum* sp.	1	19.29	0	0
Chlorophyta				
cf. *Pediastrum simplex*	74	1427.47	90	3267.97
cf. *Pandorina* sp.	1	19.29	0	0
cf. *Tetraedron* sp.	2	38.58	4	145.24
cf. *P. duplex*	4	77.16	2	72.62
cf. *Desmodesmus* sp.	0	0	1	36.31
Ochrophyta	29	559.41	25	907.77
Myzozoa				
cf. *Peridiniopsis* sp.	3	57.87	11	399.42
cf. *Peridinium* sp.	0	0	29	1053.01
Ochrophyta				
cf. *Dinobryon* sp.	33	636.57	51	1851.85
Euglenozoa				
cf. *Phacus* sp.	2	38.58	2	72.62
cf. *Euglena* sp.	1	19.29	1	36.31
cf. *Trachelomonas* sp.	2	38.58	1	36.31
Total	**153**		**217**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Cidra **No. sample:** 2
Date collected: May/01/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 2.5ml **Date observed:** June/01/2012
Bongo Net: A B
No. microscope fields of view: 21 55
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organims	Quantity Bongo A		Quantity Bongo B	
	# cells	cells/ml	# cells	cells/ml
Charophyta				
c.f. *Staurastrum* sp.	0	0	1	
Chlorophyta				
cf. *Pediastrum simplex*	20	1175.78	49	1099.89
cf. *Pandorina* sp.	0	0	7	157.13
cf. *Tetraedron* sp.	0	0	4	89.79
cf. *Desmodesmus* sp.	0	0	1	22.45
Ochrophyta				
Navicula sp.	3	176.37	3	67.34
Centric diatom	2	117.58	0	0
Synedra sp.	0	0	4	89.79
Tabelaria sp.	0	0	1	22.45
Myzozoa				
cf. *Peridiniopsis* sp.	7	411.52	4	89.79
Unknown dinoflagelate	120	7054.67	53	1189.67
Euglenozoa				
cf. *Phacus* sp.	1	58.79	1	22.45
Phacus longicauda	3	176.37	1	22.45
cf. *Euglena acus*	0	0	1	22.45
cf. *Trachelomonas* sp.	2	117.58	0	0
Total	**158**		**130**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Cidra **No. sample:** 3
Date collected: July/12/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10ml **Date observed:** November/11/2012
Bongo Net: A B
No. microscope fields of view: 18 18
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organims	Quantity Bongo A		Quantity Bongo B	
	# cells	cells/ml	# cells	cells/ml
Cyanobactera				
Unknowns screw-like, curved filament	23	394.38	15	257.20
Charophyta				
cf. *Closterium* sp.	2	34.29	0	0
cf. *Cosmarium* sp.	3	51.44	2	34.29
cf. *Staurastrum* sp.	3	51.44	5	85.73
unknown cf. *Staurastrum* sp.	1	17.15	0	0
Chlorophyta				
Eudorina sp.	1	17.15	3	51.44
cf. *Pediastrum duplex*	1	17.15		
cf. *Pediastrum simplex*	51	874.49	66	1131.69
Tetraedron minimum	1	17.15	1	17.15
Unknown cf. *Golenkinia*	1	17.15	1	17.15
Ochrophyta				
empty pennate	4	68.59	5	85.73
live pennate			2	34.29
Myzozoa				
Peridiniopsis sp. (live)	1	17.15	3	51.44
Peridiniopsis sp. (empty)	3	51.44	2	34.29
Unknown cf. *Peridinium* sp. (live)	46	788.75	36	617.28
Unknown cf. *Peridinium* sp. (empty)	4	68.59	7	120.03
Euglenozoa				
Euglena sp.	1	17.15	1	17.15
Phacus longicauda	3	51.44		
Strombomonas sp. (empty)	1	17.15		

Trachelomonas sp.	5	85.73	4	68.59
Ochrophyta *Dinobryon* sp.	103	1766.12	57	977.37
Total				

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Guajataca **No. sample:** 1
Date collected: March/06/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 5ml **Date observed:** March/13/2012 and March/26/2012
Bongo Net: A B
No. microscope fields of view: 30 14
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A		Quantity Bongo B	
	# cells	cells/ml	# cells	cells/ml
Cyanobacteria				
Microcystis sp.	0	0	2	88.18
Charophyta				
Staurastrum sp.	0	0	4	176.37
Chlorophyta				
Scenedesmus sp.1	0	0	1	44.09
Pediastrum simplex	119	2448.56	65	2865.96
Pediastrum simplex var. *ovatum*	0	0	2	88.18
Pediastrum simplex var. *echinulatum*	1	20.58	0	0
Scenedesmus sp.2				
Tetraedron minimum	1	20.58	0	0
	0	0	3	132.28
Ochrophyta				
cf. *Synedra* sp.	6	123.46	59	2601.41
cf. *Navicula* sp.	17	349.79	42	1851.85
Myzozoa				
cf. *Peridiniopsis sp./Peridinium*	3	61.73	10	440.92
Euglenozoa				
cf. *Euglena* sp. 1	0	20.58	4	176.37
cf. *Euglena* sp. 2	1	82.30	0	0
cf. *Trachelomonas* sp.	4		9	396.83
Ochrophyta				
cf. *Dinobryon* sp.	0	0	48	2116.40
Total	**155**		**246**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Guajataca **No. sample:** 2
Date collected: April/19/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 2.5ml **Date observed:** May/14/2012
Bongo Net: A B
No. microscope fields of view: 16 13
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A # cells	cells/ml	Quantity Bongo B # cells	cells/ml
Cyanobacteria				
Unknown colonial	1	77.16	0	0
Merismopedia sp.	0	0	2	189.93
Microcystis sp.	0	0	1	94.97
Charophyta				
cf. *Cosmarium* sp.	1	77.16	1	94.97
cf. *Euastrum denticulatum*	0	0	1	94.97
cf. *Staurastrum* sp. (live)	3	231.48	5	474.83
cf. *Staurastrum* sp. (empty)	1	77.16	0	0
Chlorophyta				
cf. *Pandorina* sp.	0	0	1	94.97
cf. *Pediastrum simplex*	111	8564.81	65	6172.84
cf. *Pediastrum simplex* var. *echinulatum*	1	77.16	0	0
cf. *Tetraedron minimum*	1	77.16	6	569.80
Unknown colonial	5	385.80	5	474.83
Ochrophyta				
Centric diatom	7	540.12	1	94.97
cf. *Synedra* sp.	1	77.16	5	474.83
cf. *Navicula* sp.	4	308.64	6	569.80
cf. *Tabelaria* sp.	2	154.32	4	379.87
Myzozoa				
cf. *Peridiniopsis* sp. (live)	6	462.96	1	94.97
cf. *Peridiniopsis* sp. (empty)	6	462.96	7	664.77
Euglenozoa				
cf. *Euglena* sp.	1	77.16	1	94.97
cf. *Trachelomonas* sp.	17	1311.73	13	1234.57
Ochrophyta				
cf. *Dinobryon* sp.	10	771.60	45	4273.50
Total	**178**		**170**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Guajataca **No. sample:** 3
Date collected: July/10/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10ml **Date observed:** November/13/2012
Bongo Net: A B
No. microscope fields of view: 35 35
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A # cells	cells/ml	Quantity Bongo B # cells	cells/ml
Cyanobacteria				
cf. *Merismopedia* sp.	1	8.82		
cf. *Microcystis* sp.	1	8.82	3	26.46
Charophyta				
cf. *Cosmarium* sp.	1	8.82	3	26.46
cf. *Staurastrum* sp.	1	8.82	2	17.64
Chlorophyta				
cf. *Pediastrum simplex*	69	608.47	38	335.10
cf. *Tetraedron minimum*			2	17.64
Ochrophyta				
empty pennate	8	70.55	5	44.09
Myzozoa				
cf. *Peridiniopsis* sp. (live)	19	167.55	35	308.64
cf. *Peridinium* sp.	5	44.09		
unknown c.f. *Peridiniopsis* sp.	9	79.37	10	88.18
Euglenozoa				
cf. *Euglena* sp.	10	88.18	11	97
cf. *Trachelomonas* sp.	35	308.64	25	220.46
Ochrophyta				
Dinobryon sp.	38	335.10	61	537.92
Total	**197**		**195**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: La Plata **No. sample:** 1
Date collected: March/15/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10ml **Date observed:** March/29/2012
Bongo Net: A B
No. microscope fields of view: 8 13
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organims	Quantity Bongo A		Quantiy Bongo B	
	# cells	cells/ml	# cells	cells/ml
Chlorophyta				
cf. *Pediastrum simplex*	1	38.58	3	71.23
cf. *Pandorina* sp.	17	655.86	2	47.48
cf. *Desmodesmus* sp.	1	38.58	1	23.74
Ochrophyta	375	14467.59	147	3490.03
Myzozoa				
cf. *Peridiniopsis* sp./*Peridinium*	21	810.19	19	451.09
Total	**415**		**172**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: La Plata **No. sample:** 2
Date collected: April/26/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 5ml **Date observed:** June/01/2012
Bongo Net: A B
No. microscope fields of view: 18 12
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A		Quantity Bongo B	
	# cells	cells/ml	# cells	cells/ml
Cyanobacteria				
Unknown filament	247	4235.25	193	4963.992
Unknown colonial	1	17.1468	0	0
Chlorophyta				
cf. *Pediastrum simplex*	7	120.027	7	180.0412
cf. *Pandorina* sp.	0	0	1	25.72016
Ochrophyta				
Synedra sp.	10	171.468	1	25.72016
Navicula sp.	2	34.2936	1	25.72016
Myzozoa				
cf. *Peridiniopsis* sp.	5	85.7339	6	154.321
Total	**272**		**209**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: La Plata **No. sample:** 3
Date collected: July/11 /2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10ml **Date observed:** September/3/2012
Bongo Net: A B
No. microscope fields of view: 25 25
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A # cells		Quantity Bongo B # cells	
Cyanobacteria				
Unknown screwlike curved filament	11	135.80	46	567.90
Charophyta				
cf. *Cosmarium* sp. (live)	11	135.80	14	172.84
cf. *Staurastrum* sp. (live)	17	209.88	23	283.95
cf. *Staurastrum* sp. (empty)	3	37.04	6	74.07
Chlorophyta				
cf. *Pandorina* sp.	7	86.20	5	61.73
Ochrophyta				
live pennate	20	246.91	14	172.84
empty pennate	13	160.49	16	197.53
Myzozoa				
cf. *Peridiniopsis* sp. (live)	30	370.37	65	802.47
cf. *Peridiniopsis* sp. empty)	44	543.21	30	370.37
Euglenozoa				
cf. *Euglena* sp. 1	8	98.77	10	123.46
cf. *Euglena* sp. 2	0		1	12.35
cf. *Euglena* sp. 3	0		1	12.35
cf. *Trachelomonas* sp.	3	37.04	16	197.53
Total	**151**		**247**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Patillas **No.sample:** 1
Date collected: March/13/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10ml **Date observed:** March/16/2012 and April/10/2012
Bongo Net: A B
No. microscope fields of view: 16 13
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A		Quantity Bongo B	
	# cells	cells/ml	# cells	cells/ml
Charophyta				
cf. *Staurastrum* sp.	8	154.32	0	0
Chlorophyta				
cf. *Pediastrum simplex*	47	906.64	26	617.28
cf. *Pediastrum* sp.	1	19.29	0	0
Chlorococal unknown colonial	24	462.96	6	142.45
Ochrophyta				
cf. *Synedra* sp.	3	57.87	1	23.74
cf. *Navicula* sp.	23	443.67	7	166.19
Unknown	1	19.29	0	0
cf. *Tabellaria* sp.	0	0	1	23.74
Myzozoa				
cf. *Peridiniopsis sp./Peridinium*	1	19.29	1	23.74
Euglenozoa				
cf. *Euglena* sp.	4	77.16	5	118.71
cf. *Trachelomonas* sp.	9	173.61	10	237.42
Ochrophyta				
cf. *Dinobryon* sp.	268	5169.75	272	6457.74
Total	**389**		**333**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Patillas **No. sample:** 2
Date collected: April/17/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 5ml **Date observed:** May/17/2012
Bongo Net: A B
No. microscope fields of view: 13 10
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A		Quantity Bongo B	
	# cells	cells/ml	# cells	cells/ml
Charophyta				
cf. *Staurastrum* sp.	1	47.48	0	0
Chlorophyta				
cf. *Pediastrum simplex*	77	3656.22	44	2716.05
Chlorococal unknown colonial	1	47.48	3	185.19
Ochrophyta				
cf. *Synedra* sp.	1	47.48	0	0
cf. *Navicula* sp.	3	142.45	4	246.91
cf. *Tabelaria* sp.	2	94.97	0	0
Myzozoa				
cf. *Peridiniopsis* sp. (live)	0	0	2	123.46
cf. *Peridiniopsis* sp. (empty)	0	0	1	61.73
Euglenozoa				
cf. *Euglena* sp.	0	0	1	61.73
cf. *Trachelomonas* sp.	0	0	1	61.73
Ochrophyta				
cf. *Dinobryon* sp.	150	7122.51	239	14753.09
Total	**235**		**295**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Patillas **No. sample:** 3
Date collected: June/27/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10ml **Date observed:** November/12/2012
Bongo Net: A B
No. microscope fields of view: 23 23
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A		Quantity Bongo B	
	# cells	cells/ml	# cells	cells/ml
Cyanobacteria				
Unknown, screw like, curved filament	1	13.42	0	0
Charophyta				
cf. *Staurastrum* sp. (live)	1	13.42	0	0
Chlorophyta				
cf. *Pandorina* sp.	2	26.84	2	26.84
cf. *Pediastrum simplex*	41	550.19	69	925.93
unknown colonial cf. *Eudorina elegans*	24	322.06	21	281.80
Ochrophyta				
empty pennate	6	80.52		
live pennate	5	67.10	5	67.10
empty centric	1	13.42		
Myzozoa				
cf. *Peridiniopsis* sp. (live)			1	13.42
cf. *Peridiniopsis* sp. (empty)	5	67.10		
unknown cf. *Peridinium* sp.	1	13.42	2	26.84
unknown cf. *Peridiniopsis* sp. (live)	4	53.68	3	40.26
unknown cf. *Peridiniopsis* sp. (empty)			7	93.93
Euglenozoa				
cf. *Euglena* sp.	2	26.84	1	13.42
cf. *Trachelomonas* sp.	18	241.55	15	201.29
Ochrophyta				
cf. *Dinobryon* sp.	35	469.67	38	509.93
Total	**146**		**164**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Toa Vaca **No.sample:** 1
Date collected: March/08/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10ml **Date observed:** March/19/2012
Bongo Net: A B
No. microscope fields of view: 16 17
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A		Quantity Bongo A	
	# cells	cells/ml	# cells	cells/ml
Cyanobacteria unknown cyanobacterium	146	2816.36	39	708.06
Chlorophyta cf. *Pediastrum simplex* cf. *Pandorina*	 3 20	 57.87 381.80	 10 45	 181.55 816.99
Ochrophyta cf. *Synedra* sp. cf. *Navicula* sp. Unknown species	168	3240.74	193	3503.99
Myzozoa cf. *Peridiniopsis* sp./*Peridinium* sp.	2	38.58	0	0
Total	**339**		**287**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Toa Vaca **No.sample:** 2
Date collected: May/02/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 2.5ml **Date observed:** June/01/2012
Bongo Net: A B
No. microscope fields of view: 43 59
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A # cells	cells/ml	Quantity Bongo A # cells	cells/ml
Cyanobacteria				
unknown colonial	91	2762.26	2	41.8498
Charophyta				
Closterium sp.	1	30.3545	0	0
Cosmarium sp.	2	60.709	0	0
Chlorophyta				
Crucigenia sp.	1	30.3545	0	0
cf. *Pediastrum simplex*	8	242.836	11	230.174
cf. *Pandorina*	20	607.09	38	795.145
Tetraedron minimum	10	303.545	4	83.6995
Ochrophyta				
cf. *Synedra* sp.	0	0	1	20.9249
cf. *Navicula* sp.	1	30.3545	1	20.9249
Centric diatom	3	91.0635	0	0
Tabellaria sp.	1	30.3545	0	0
Myzozoa				
unknown dinoflagelate	0	0	4	83.6995
Peridiniopsis sp.	15	455.318	36	753.296
Euglenozoa				
Euglena acus	1	30.3545	0	0
Trachelomonas sp.	5	151.773	7	146.474
Total	**159**		**104**	

Project: Phytoplankton analysis of 6 reservoirs in Puerto Rico (Z-247)
Reservoir: Toa Vaca **No.sample:** 3
Date collected: July/3/2012 **Station:** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10ml **Date observed:** November/12/2012
Bongo Net: A B
No. microscope fields of view: 23 15
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	Quantity Bongo A # cells	cells/ml	Quantity Bongo A # cells	cells/ml
Cyanobacteria				
unknown colonial	75	1006.4	92	1893
Unknown screw-like curved filament	45	603.86	23	473.25
Chlorophyta				
cf. *Pediastrum simplex*	1	13.42	1	20.58
cf. *Pandorina*	10	134.19	6	123.46
Tetraedron minimum	1	13.42	2	41.15
Unknown cf. *Monoraphidium griffithii*	2	41.15	0	0
Ochrophyta				
live pennate			1	20.58
empty pinnate	6	80.52		
Myzozoa				
Peridiniopsis sp.	0	0	1	20.58
Euglenozoa				
c.f. *Phacus longicauda*	0	0	1	20.58
Trachelomonas sp.	4	53.68	0	0
Total				

Second year of study

Project: Phytoplankton analysis of six reservoirs in Puerto Rico (Z-247)
Reservoir: Cerrillos **No. sample:** 1 **Sampling Year:** 2nd
Date collected: January 17, 2013 **Station :** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10mL **Date observed:** 03/12/2013
Bongo net A **No. microscope fields of view:** 14
Bongo net B **No. microscope fields of view:** 19
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	**Quantity Bongo A**		**Quantity Bongo B**	
	# cells	**cells/mL**	**# cells**	**cells/mL**
Chlorophyta				
Pediastrum simplex	4	88.18	3	48.73
Pediastrum simplex var. *echinulatum*	0	0	2	32.49
Tetraedron minimum	6	132.28	3	48.73
Charophyta				
Cosmarium sp.	1	22.05	2	32.49
Euastrum sp.	2	44.09	2	32.49
Scenedesmus sp.	1	22.05	0	0
Staurastrum sp.	13	286.60	14	227.42
Myzozoa				
live *Peridiniopsis* sp.	2	44.09	7	113.71
empty *Peridiniopsis* sp.	3	66.14	7	113.71
Peridinium sp.	1	22.05	3	48.73
Ochrophyta				
live pennate diatom	40	881.83	46	747.24
empty pennate diatom	57	1256.61	46	747.24
Unknowns				
Unknown colonial 1	1	22.05	0	0
Unknown colonial 2	2	44.09	5	81.22
Total	**133**		**149**	

Project: Phytoplankton analysis of six reservoirs in Puerto Rico (Z-247)
Reservoir: Cidra **No. sample:** 1 **Sampling Year:** 2nd
Date collected: January 15, 2013 **Station :** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10mL **Date observed:** 03/19/2013
Bongo net A **No. microscope fields of view:** 15
Bongo net B **No. microscope fields of view:** 15
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	**Quantity Bongo A**		**Quantity Bongo B**	
	# cells	**cells/mL**	**# cells**	**cells/mL**
Chlrophyta				
Pediastrum simplex	24	493.83	23	473.25
Treubaria sp.	1	20.58	0	0
Euglenozoa				
Phacus sp. (small)	1	20.58	3	61.73
Phacus cf. *longicauda*	7	144.03	2	41.15
Trachelomonas sp. dark lorica	3	61.73	1	20.58
Myzozoa				
live *Peridiniopsis* sp.	1	20.58	2	41.15
empty *Peridiniopsis* sp.	1	20.58	0	0
live *Peridinium* sp.	128	2633.74	106	2181.07
empty *Peridinium* sp.	5	102.88	0	0
Ochrophyta				
Dinobryon sp.	3	61.73	9	185.19
live pennate diatom	1	20.58	0	0
empty pennate diatom	0	0	2	41.15
Unknowns				
Unknown colonial	1	20.58	0	0
Unknown with 2 cells	1	20.58	0	0
Total	**177**		**148**	

Project: Phytoplankton analysis of six reservoirs in Puerto Rico (Z-247)
Reservoir: Guajataca **No. sample:** 1 **Sampling Year:** 2nd
Date collected: February 1, 2013 **Station :** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 1mL **Date observed:** 03/11/2013
Bongo net A **No. microscope fields of view:** 14
Bongo net B **No. microscope fields of view:** 14
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	**Quantity Bongo A**		**Quantity Bongo B**	
	# cells	**cells/mL**	**# cells**	**cells/mL**
Charophyta				
Cosmarium sp.	1	220.46	0	0
Scenedesmus sp.	0	0	1	220.46
Staurastrum sp.	1	220.46	2	440.92
Chlorophyta				
cf. *Monoraphidium griffithii*	0	0	1	220.46
Pediastrum simplex	51	11243.39	78	17195.77
Pediastrum simplex var. *echinulatum*				
cf. *Treubaria* sp.	3	661.38	1	220.46
Tetraedron minimum	1	220.46	0	0
	0	0	1	220.46
Euglenozoa				
Euglena sp.	0	0	1	220.46
Myzozoa				
live *Peridiniopsis* sp.	4	881.83	1	220.46
live *Peridiniopsis* sp. (small)	0	0	1	220.46
Ochrophyta				
live pennate diatom	44	9700.18	30	6613.76
Dinobryon sp.	13	2865.96	1	220.46
Total	**118**		**117**	

Project: Phytoplankton analysis of six reservoirs in Puerto Rico (Z-247)
Reservoir: La Plata **No. sample:** 1 **Sampling Year:** 2nd
Date collected: January 24, 2013 **Station :** Central
Preliminary phytoplankton analysis
Volume of sedimented sample: 10 mL **Date observed:** April 30, 2013
Bongo net A **No. microscope fields of view:** 40
Bongo net B **No. microscope fields of view:** 35
Inverted Microscope: Fisher Scientific **Total Magnification:** 400X

Organisms	**Quantity Bongo A**		**Quantity Bongo B**	
	# cells	**cells/mL**	**# cells**	**cells/mL**
Charophyta				
Cosmarium sp.	5	38.58	4	35.27
Staurastrum sp.	2	15.43	3	26.46
Chlorophyta				
c.f. *Monoraphidium* sp.	1	7.72	--	--
Pandorina sp.	10	77.16	1	8.82
Pediastrum simplex	9	69.44	--	--
P. simplex var. *echinulatum*	1	7.72	--	--
Platydorina sp.	3	23.15	--	--
Unknown circular solitary	1	7.72	--	--
Euglenozoa				
Euglena sp.	3	23.15	5	44.09
Phacus longicauda	1	7.72	--	--
Trachelomonas sp.	1	7.72	1	8.82
Myzozoa				
Peridinium sp.	2	15.43	1	8.82
Peridiniopsis sp.	9	69.44	6	52.91
Ochrophyta				
Live pennate diatoms	944	7283.95	832	7336.86
Empty pennate diatoms	172	1327.16	214	1887.13
Dinobryon sp.	1	7.72	1	8.82
Total	**1165**		**1068**	

APPENDIX H: Data collected on the soft phytoplankton analysis of the 6 reservoirs during the first sampling year (2012) by reservoirs and samplings

H-1 Cerrillos

Phytoplankton Composition Analysis Date observed: April/9/2012

Lake	Cerrillos	Sample number	1
Analyzed by	B.I.S.S.	Date collected	March/19/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	11 minutes	RPM meter	1490
Total sedimented sample volume: 100µl			
Microscope's field of view	Bongo A: 17	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 0.1ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organism in towing sample (Cells/L)
Chlorophyta				
Pediastrum simplex var. *ovalatum*	1	1,308.82	<1	520.44
Tetraedron minimum	2	2,617.64	1.04	1040.88
Myzozoa				
empty *Peridiniopsis* sp.	18	23,558.73	9.37	9367.96
live *Peridiniopsis* sp.	14	18,323.46	7.29	7286.19
Ochrophyta				
empty pennate	12	15,705.82	6.25	6245.30
live pennate	394	515,674.41	205.05	205054.12
empty centric	1	1,308.82	<1	520.44
live centric	17	22,249.91	8.85	8847.51
Total	459			

Phytoplankton Composition Analysis Date observed: April/9/2012

Lake	Cerrillos	Sample number	1
Analyzed by	B.I.S.S.	Date collected	March/19/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	11 minutes	RPM meter	1490
Total sedimented sample volume: 100µl			
Microscope's field of view	Bongo B:6	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 0.1ml sample (Cell/ml	Number of organisms in towing sample (Cell/ml)	Number of organisms in towing sample (Cell/L)
Chlorophyta				
Tetraedron minimum	1	1308.82	<1	520.44
Myzozoa				
empty *Peridiniopsis* sp.	7	9161.73	3.64	3643.09
live *Peridiniopsis* sp.	23	30102.82	11.97	11970.16
Ochrophyta				
empty pennate	3	3926.45	1.56	1561.33
live pennate	293	383483.76	152.49	152489.48
live centric	3	3926.45	1.56	1561.33
Euglenozoa				
Trachelomonas sp.	2	2617.64	1.04	1040.88
Total	332			

Phytoplankton Composition Analysis Date observed: June/29/2012

Lake	Cerrillos	Sample number	2
Analyzed by	B.I.S.S.	Date collected	April/24//2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	12056
Total sedimented sample volume: 500µl			
Microscope's field of view	Bongo A: 11	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 0.5ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Cyanobacterium: filament straight	10	4045.438	<1	707.80
Cyanobacterium: filament screwlike coiled	5	2022.719	<1	353.90
unknown cyanobacterium	3	1213.632	<1	212.34
Charophyta				
empty *Cosmarium* sp.	1	404.5438	<1	70.78
live *Staurastrum* sp.	10	4045.438	<1	707.80
empty *Staurastrum* sp.	7	2831.807	<1	495.46
Chlorophyta				
live *Tetraedron minimum*	4	1618.175	<1	283.12
Myzozoa				
empty *Peridiniopsis* sp.	23	9304.508	1.63	1627.95
live *Peridiniopsis* sp.	12	4854.526	<1	849.36
Ochrophyta				
empty pennate	136	55017.96	9.63	9626.12
live pennate	81	32768.05	5.73	5733.20
empty centric	1	404.5438	<1	70.78
live centric	3	1213.632	<1	212.34
Total	296			

Phytoplankton Composition Analysis Date observed: June/29/2012

Lake	Cerrillos	Sample number	2
Analyzed by	B.I.S.S.	Date collected	April/24/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	12056
Total sedimented sample volume: 500µl			
Microscope's field of view	Bongo B: 28	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 0.1ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Cyanobacterium: filament straight	18	2860.749	<1	500.53
Cyanobacterium: filament screwlike coiled	7	1112.514	<1	194.65
unknown cyanobacterium	12	1907.166	<1	333.68
Charophyta				
live *Staurastrum* sp.	4	635.722	<1	111.23
empty *Staurastrum* sp.	8	1271.444	<1	222.46
Chlorophyta				
live *Tetraedron minimum*	7	1112.444	<1	194.65
empty *T. minimum*	3	476.7915	<1	83.42
Myzozoa				
empty *Peridiniopsis* sp.	12	1907.166	<1	333.68
live *Peridiniopsis* sp.	12	1907.166	<1	333.68
Ochrophyta				
empty pennate	163	25905.67	4.53	4532.54
live pennate	44	6992.943	1.22	1223.51
empty centric	3	476.7915	<1	83.42
live centric	9	1430.375	<1	250.26
Total	302			

Phytoplankton Composition Analysis date observed: September/24/2012

Lake	Cerrillos	Sample number	3
Analyzed by	B.I.S.S.	Date collected	july/2/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 10mL			
Microscope's field of view	Bongo A: 45	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Cyanobacterium: filament straight	0	0	0	0
Cyanobacterium: filament screwlike coiled	0	0	0	0
unknown cyanobacteria	1	4.9444	<1 (0.0000)	0.043
Charophyta				
Cosmarium sp.	5	24.722	<1 (0.0002)	0.216
live *Staurastrum* sp.	3	14.833	<1 (0.0001)	0.130
empty *Staurastrum* sp.	6	29.667	<1 (0.0003)	0.260
Chlorophyta				
Pediastrum simplex	16	79.111	<1 (0.0007)	0.692
live *Tetraedron minimum*	3	14.833	<1 (0.0001)	0.130
Myzozoa				
empty *Peridiniopsis* sp.	3	14.833	<1 (0.0001)	0.130
live *Peridiniopsis* sp.	10	49.444	<1 (0.0004)	0.433
Ochrophyta				
empty pennate	154	761.44	<1 (0.0067)	6.66
live pennate	64	316.44	<1 (0.0028)	2.77
empty centric	0	0	0	0
live centric	5	24.722	<1 (0.0002)	0.216
Total	270			

Phytoplankton Composition Analysis Date observed: September/29/2012

Lake	Cerrillos	Sample number	3
Analyzed by	B.I.S.S.	Date collected	july/02/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 10mL			
Microscope's field of view	Bongo B: 17	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 10ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Cyanobacterium: filament straight	0	0	0	0
Cyanobacterium: filament screwlike coiled	7	91.6173	<1 (0.00080)	0.801
unknown cyanobacterium	1	13.0882	<1 (0.00011)	0.114
Charophyta				
Cosmarium sp.	4	52.3527	<1 (0.00046)	0.458
empty *Staurastrum* sp.	3	39.2645	<1 (0.00034)	0.343
Chlorophyta				
Pediastrum simplex	6	78.5291	<1 (0.00069)	0.687
live *Tetraedron minimum*	13	170.146	<1 (0.00149)	1.49
Myzozoa				
empty *Peridiniopsis* sp.	11	143.97	<1 (0.00126)	1.26
live *Peridiniopsis* sp.	14	183.235	<1 (0.00160)	1.60
Ochrophyta				
empty pennate	118	1544.41	<1 (0.01351)	13.51
live pennate	69	903.085	<1 (0.00790)	7.90
empty centric	4	52.3527	<1 (0.00046)	0.46
live centric	11	143.97	<1 (0.00126)	1.26
Total	201			

H-2 Cidra

Phytoplankton Composition Analysis		Date observed: May/29/2012	
Lake	Cidra	Sample number	1
Analyzed by	B.I.S.S.	Date collected	march/21/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	19363
Total sedimented sample volume: 5 ml			
Microscope's field of view	Bongo B:14	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Charophyta				
Staurastrum sp.	1	31.79	<1	0.556
Chlorophyta				
Pediastrum simplex	71	2256.78	<1	39.49
Tetraedron minimum	8	254.28	<1	4.45
Myzozoa				
live *Peridinium* sp.	1	31.79	<1	0.556
unknown dinoflagelates	28	890.00	<1	15.57
Euglenozoa				
Euglena sp.	1	31.79	<1	0.556
Phacus sp. 1	1	31.79	<1	0.556
Phacus sp.2	2	63.57	<1	1.11
Ochrophyta				
empty pennate	11	349.64	<1	6.12
live pennate	2	63.57	<1	1.11
empty centric	2	63.57	<1	1.11
live centric	2	63.57	<1	1.11
Ochrophyta				
Dinobryon sp.	180	5721.40	<1	100.10
Total	310			
Organisms by phylum	Number of organisms Bongo B	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Charophyta				
Staurastrum sp.	1	31.79	<1	0.556
Chlorophyta				
Pediastrum simplex	71	2256.78	<1	39.49
Tetraedron minimum	8	254.28	<1	4.45
Myzozoa				
live *Peridinium* sp.	1	31.79	<1	0.556
	28	890.00	<1	15.57

unknown dinoflagelates				
Euglenozoa				
Euglena sp.	1	31.79	<1	0.556
Phacus sp. 1	1	31.79	<1	0.556
Phacus sp.2	2	63.57	<1	1.11
Ochrophyta				
empty pennate	11	349.64	<1	6.12
live pennate	2	63.57	<1	1.11
empty centric	2	63.57	<1	1.11
live centric	2	63.57	<1	1.11
Ochrophyta				
Dinobryon sp.	180	5721.40	<1	100.10
Total	310			

Phytoplankton Composition Analysis Date observed: July/6 and 10/2012

Lake	Cidra	Sample number	2
Analyzed by	B.I.S.S.	Date collected	May/1/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 5 ml			
Microscope's field of view	Bongo A: 38	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
unknown cyanobacterium (filament, straight)	19	222.4991	<1	3.89
Charophyta				
Scenedesmus sp.	3	35.13144	<1	0.615
Staurastrum sp.	4	46.84192	<1	0.82
Chlorophyta				
Pandorina sp.	10	117.1048	<1	2.05
Pediastrum simplex	26	304.4725	<1	5.33
Pediastrum simplex var. *echinulatum*	1	11.71048	<1	0.205
Tetraedron minimum	34	398.1563	<1	6.97
Myzozoa				
live *Peridiniopsis* sp.	7	81.97336	<1	1.43
c.f. *Peridinium* sp.	112	1311.574	<1	22.95
Euglenozoa				
Euglena c.f. *acus*	5	58.5524	<1	1.02
Phacus c.f. *longicauda*	11	128.81.53	<1	2.25
Trachelomonas sp. 1	1	11.71048	<1	0.205
unknown sp. c.f	28	327.8934	<1	5.74

Ochrophyta				
empty pennate	5	58.5524	<1	1.02
live pennate	1	11.71048	<1	0.205
live centric	1	11.71048	<1	0.205
Ochrophyta				
Dinobryon sp.	2	23.42096	<1	0.41
Total	270			

Phytoplankton Composition Analysis Date observed: July/ 12 and 17/2012

Lake	Cidra	Sample number	2
Analyzed by	B.I.S.S.	Date collected	May/1/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 5 ml			
Microscope's field of view	Bongo B: 72	Total magnification	400X
Microscopes field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
unknown cyanobacterium (filament, straight)	12	74.1664	<1	1.30
Charophyta				
Scenedesmus sp.	4	24.7221	<1	0.43
Staurastrum sp.	2	12.3611	<1	0.22
Chlorophyta				
Pandorina sp.	9	55.6248	<1	0.97
Pediastrum simplex	55	339.929	<1	5.95
Pediastrum simplex var. *echinulatum*	1	6.18053	<1	0.11
Tetraedron minimum	19	117.43	<1	2.05
Myzozoa				
live *Peridiniopsis* sp.	8	49.4442	<1	0.87
empty *Peridiniopsis* sp.	2	12.3611	<1	0.22
cf *Peridinium* sp.	81	500.623	<1	8.76
Euglenozoa				
Euglena c.f. *acus*	3	18.5416	<1	0.32
Phacus c.f. *longicauda*	3	18.5416	<1	0.32
Strombomonas sp.	1	6.18053	<1	0.11
Trachelomonas sp. 1	5	30.9027	<1	0.54
unknown sp.c.f. *Trachelomonas* sp. 2	36	222.499	<1	3.89

Ochrophyta				
empty pennate	14	86.5274	<1	1.51
live pennate	7	43.2637	<1	0.76
live centric	1	6.18053	<1	0.11
Ochrophyta				
Dinobryon sp.	1	6.18053	<1	0.11
Total	263			

Phytoplankton Composition Analysis Date observed: December/11/2012

Lake	Cidra	Sample number	3
Analyzed by	B.I.S.S.	Date collected	July/12/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	1,692
Total sedimented sample volume: 10 ml			
Microscope's field of view	Bongo A: 19	Total magnification	400X
Microscopes field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10 ml sample (Cell/ml)	Number of organisms in towing sample (Cell/ml)	Number of organisms in towing sample (Cell/L)
Cyanobacteria				
unknown cyanobacteria filament straight	27	316.18	<1 (0.00277)	2.77
unknown cyanobacteri a screwlike coiled	25	292.76	<1 (0.00256)	2.56
Charophyta				
live *Staurastrum* sp.	3	35.13	<1(0.00031)	0.31
empty *Staurastrum* sp.	1	11.71	<1 (0.0001)	0.10
Chlorophyta				
Pediastrum simplex	92	1077.36	<1 (0.00942)	9.42
Pediastrum simplex var. *echinulatum*	1	11.71	<1 (0.0001)	0.10
Platydorina sp.	3	35.13	<1 (0.00031)	0.30
Tetraedron minimum	2	23.42	<1 (0.0002)	0.20
Myzozoa				
live *Peridiniopsis* sp.	3	35.13	<1 (0.00031)	0.30
empty *Peridiniopsis* sp.	3	35.13	<1 (0.00031)	0.30
cf. live *Peridinium* sp.	68	796.31	<1 (0.00697)	6.97
cf. empty *Peridinium* sp.	4	46.84	<1 (0.00041)	0.41

Euglenozoa				
Euglena sp.	6	70.26	<1 (0.00061)	0.61
Trachelomonas sp. with dark lorica	1	11.71	<1 (0.0001)	0.10
Ochrophyta				
empty pennate	4	46.84	<1 (0.00041)	0.41
live pennate	2	23.42	<1 (0.0002)	0.20
live centric	2	23.42	<1 (0.0002)	0.20
empty centric	1	11.71	<1 (0.00010	0.10
Ochrophyta				
Dinobryon sp.	83	971.97	<1 (0.0085)	8.50
Total	331			

Phytoplankton Composition Analysis Date observed: December/17/2012

Lake	Cidra	Sample number	3
Analyzed by	B.I.S.S.	Date collected	July/12/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 10 ml			
Microscope's field of view	Bongo B: 24	Total magnification	400X
Microscopes field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 10 ml sample (Cell/ml)	Number of organisms in towing sample (Cell/ml)	Number of organisms in towing sample (Cell/L)
Cyanobacteria				
unknown cyanobacteria filament straight	7	64.9	<1 (0.00057)	0.57
unknown cyanobacteri a screwlike coiled	8	74.17	<1 (0.00065)	0.65
Charophyta				
live *Staurastrum* sp.	4	37.08	<1 (0.00032)	0.32
Chlorophyta				
Pediastrum simplex	141	1307.2	<1 (0.01143)	11.44
Pediastrum simplex var. *echinulatum*	1	9.27	<1 (0.00008)	0.08
Platydorina sp.	2	18.54	<1 (0.00016)	0.16

Tetraedron minimum	1	9.27	<1 (0.00008)	0.08
Myzozoa				
live *Peridiniopsis* sp.	4	37.08	<1 (0.00032)	0.32
empty *Peridiniopsis* sp.	1	9.27	<1 (0.00008)	0.08
cf. small *Peridiniopsis* sp.	2	18.54	<1 (0.00016)	0.16
cf. live *Peridinium* sp.	65	602.6	<1 (0.00527)	5.27
cf. empty *Peridinium* sp.	4	37.08	<1 (0.00032)	0.32
Euglenozoa				
Euglena c.f. *acus*	1	9.27	<1 (0.00008)	0.08
Euglena sp.	2	18.54	<1 (0.00016)	0.16
Phacus sp.	1	9.27	<1 (0.00008)	0.08
Trachelomonas sp. *Trachelomonas*	11	101.98	<1 (0.00089)	0.89
sp. with dark lorica	1	9.27	<1 (0.00008)	0.08
Ochrophyta				
empty pennate	2	18.54	<1 (0.00016)	0.16
live pennate	1	9.27	<1 (0.00008)	0.08
live centric	1	9.27	<1 (0.00008)	0.08
empty centric	1	9.27	<1 (0.00008)	0.08
Ochrophyta				
Dinobryon sp.	21	194.69	<1 (0.0017)	1.70
Total	291			

H-3 Guajataca

Phytoplankton Composition Analysis Date observed: April /3/2012

Lake	Guajataca	Sample number	1
Analyzed by	B.I.S.S.	Date collected	March/6/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		2.5 miles per hour	
Net towing time	10minutes	RPM meter	12, 082
Total sampled volume			
Microscope's field of view	Bongo A: 44	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cell/L)
Charophyta				
Scenedesmus sp.	1	10.11	<1	0.12
Staurastrum sp.	1	10.11	<1	0.12
Chlorophyta				
Pediastrum simplex	106	1072.04	<1	13.13
Pandorina sp.	1	10.11	<1	0.12
Tetraedron minimum	6	60.68	<1	0.12
			<1	0.74
Ochrophyta				
Dinobryon sp.	59	596.70	<1	7.31
Myzozoa				
empty *Peridiniopsis* sp.	1	10.11	<1	0.12
live *Peridiniopsis* sp.	1	10.11	<1	0.12
Euglenozoa				
Trachelomonas sp.	8	80.91	<1	1.0
Euglena sp.	1	10.11	<1	0.12
Ochrophyta				
empty pennate	30	303.41	<1	3.72
live pennate	14	141.59	<1	1.73
live centric	3	30.34	<1	0.37
Total	232			

Phytoplankton Composition Analysis Date observed: April/17 and 23/2012

Lake	Guajataca	Sample number	1
Analyzed by	B.I.S.S.	Date collected	March/6/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		2.5 miles per hour	
Net towing time	10minutes	RPM meter	12, 082
Total sampled volume			
Microscope's field of view	Bongo B: 20	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Phytoplankton Composition Analysis Date observed: August/ 9 and 10/2012

Lake	Guajataca	Sample number	2
Analyzed by	B.I.S.S.	Date collected	April/19/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sampled volume		559.99	
Microscope's field of view	Bongo A: 11	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms	Number of organism in	Number of organism in	Number of organisms in
		167.25	<1 (0.006)	5.72
		559.99	<1 (0.044)	43.6
Trachelomonas sp.	8	178.00	<1 (0.0022)	2.18
Euglena sp.	3	66.75	<1 (0.0008)	0.82
Ochrophyta				
empty pennate	20	445.00	<1 (0.0055)	5.45
live pennate	59	1312.74	<1 (0.0161)	16.08
live centric	8	178.00	<1 (0.0022)	2.18
Total	346			

Organisms by phylum	Number of organisms Bongo A	Number of organism in 2.5 ml sample (Cells/ml)	Number of organism in towing sample (Cells/ml)	Number of organisms in towing sample (Cell/L)
Cyanobacteria				
Cyanobacterium (colonial)	4	70.0	<1 (0.00025)	0.25
Cyanobacterium (filament, straight)	98	1714.9	<1 (0.006)	6.17
Cyanobacteria (filament, screwlike curved)	7	122.49	<1 (0.00044)	0.44
Charophyta				
Cosmarium sp.	1	17.50	<1 (0.000063)	0.063
Euastrum sp.	1	17.50	<1 (0.000063)	0.063
Scenedesmus sp.	5	87.49	<1 (0.000314)	0.31

Staurastrum sp.	1	17.50	<1 (0.000063)	0.063
Chlorophyta				
Ankistrodesmus sp.	1	17.50	<1 (0.000063)	0.063
C*rucigenia tetrapedia*	1	17.50	<1 (0.000063)	0.063
Pediastrum simplex	90	1574.91	<1 (0.0057)	5.65
P. simplex var *echinulatum*	1	17.50	<1 (0.000063)	0.063
Pandorina sp.	2	35	<1 (0.00013)	0.126
Tetraedron minimum	8	139.99	<1 (0.000503)	0.50
Unknown sp. c.f. Volvaceae	2	35	<1 (0.00013)	0.13
Ochrophyta				
Dinobryon sp.	17	297.48	<1 (0.0011)	1.07
Myzozoa				
empty *Peridiniopsis* sp.	1	17.50	<1 (0.000063)	0.063
live *Peridiniopsis* sp.	8	139.99	<1 (0.000503)	0.50
Euglenozoa				
Euglena sp.	5	87.49	0.000314	0.31
unknown c.f. *Trachelomonas* sp.	19	332.48	0.0012	1.19
Ochrophyta				
empty pennate	3	52.50	0.00019	0.19
live pennate	10	174.99	0.00063	0.63
live centric	2	35	0.00013	0.13
empty centric	2	35	0.00013	0.13
Total				

Phytoplankton Composition Analysis Date observed: August/10/2012

Lake	Guajataca	Sample number	2
Analyzed by	B.I.S.S.	Date collected	April/19/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5minutes	RPM meter	8,474
Total sampled volume			
Microscope's field of view	Bongo B: 6	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organism by phylum	Number of organisms Bongo A	Number of organism in 2.5 ml sample (Cells/ml)	Number of organism in towing sample (Cells/ml)	Number of organism in towing sample (Cells/L)
Cyanobacteria				
Cyanobacterium (colonial)	6	890	<1 (0.003195)	3.20
Cyanobacterium (filament, straight)	42	6229.98	<1 (0.022364)	22.36
Cyanobacterium (filament, screwlike curved)	12	1779.99	<1 (0.006390)	6.39
Charophyta				
Cosmarium sp.	2	296.67	<1 (0.001065)	1.07
Euastrum sp.	1	148.33	<1 (0.000532)	0.503
Staurastrum sp.	9	1334.99	<1 (0.004792)	4.80
Chlorophyta				
Ankistrodesmus sp.	2	296.67	<1 (0.001065)	1.07
Pediastrum simplex	75	11124.96	<1 (0.039935)	39.94
Pandorina sp.	6	890	<1 (0.003195)	3.20
Tetraedron minimum	13	1928.33	<1 (0.006922)	6.92
unknown c.f. Chlorophyta colonial	8	1186.66	<1 (0.004260)	4.27
Ochrophyta				
Dinobryon sp.	24	3559.99	<1 (0.012779)	12.78
Myzozoa				
empty *Peridiniopsis* sp.	6	890	<1 (0.039935)	39.94

live *Peridiniopsis* sp.	8	1186.66	<1 (0.004260)	4.26
Euglenozoa				
Euglena sp.	4	593.33	<1 (0.002130)	2.13
unknown c.f. *Trachelomonas* sp.	19	2818.32	<1 (0.010117)	10.12
Trachelomonas sp.	1	148.33	<1 (0.000532)	0.532
Ochrophyta				
empty pennate	4	593.33	<1 (0.002130)	2.13
live pennate	14	2076.66	<1 (0.007455)	
live centric	1	148.33	<1 (0.000532)	
Total	257			

Phytoplankton Composition Analysis Date observed: November/5/2012

Lake	Guajataca	Sample number	3
Analyzed by	B.I.S.S.	Date collected	July/10//2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sampled volume			
Microscope's field of view	Bongo A: 15	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Unknown cyanobacterium (straight filament)	43	637.83	<1 (0.000572)	0.572
Unknown cyanobacteria (filament, screwlike, curved)	5	74.17	<1 (0.000067)	0.067
Charophyta				
Cosmarium sp.	2	29.67	<1(0.000027)	0.027
Staurastrum sp.	2	29.67	<1(0.000027)	0.027
Chlorophyta				
Pediastrum simplex	38	563.67	<1 (0.000506)	0.506
Tetraedron minimum	9	133.50	<1 (0.000120)	0.120
Unknown Chlorophyta colonial	3	44.50	<1 (0.000040)	0.040
Unknown c.f. *Golenkinia*	1	14.83	<1 (0.000013)	0.013
Ochrophyta				
Dinobryon sp.	95	1409.16	<1 (0.001265)	1.265
Euglenozoa				
Euglena sp.	4	59.33	<1(0.000053)	0.053
Trachelomonas sp.	22	326.33	<1 (0.000293)	0.293
Myzozoa				
empty *Peridiniopsis* sp.	3	44.50	<1(0.000040)	0.040
live *Peridiniopsis* sp.	19	281.83	<1 (0.000253)	0.253

Ochrophyta				
empty pennate	14	207.67	<1(0.000186)	0.186
live centric	3	44.50	<1 (0.000040)	0.040
empty centric	2	29.67	<1 (0.000027)	0.027
Total	265			

Phytoplankton Composition Analysis Date observed: November/20/2012

Lake	Guajataca	Sample number	3
Analyzed by	B.I.S.S.	Date collected	July/10//2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sampled volume			
Microscope's field of view	Bongo B:18	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 10ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Microcystis sp.	1	12.36	<1 (0.000011)	0.011
Unknown Cyanobacterium (filament, screwlike curved)	18	222.50	<1 (0.000200)	0.200
Unknown Cyanobacterium (straight filament)	71	877.64	<1 (0.000788)	0.788
Charophyta				
Cosmarium sp.	3	37.08	<1 (0.000033)	0.033
Staurastrum sp.	3	37.08	<1 (0.000033)	0.033
Chlorophyta				
Ankistrodesmus sp.	1	12.36	<1 (0.000011)	0.011
Pediastrum simplex	29	358.47	<1 (0.000322)	0.322
Tetraedon minimum	3	37.08	<1 (0.000033)	0.033
Ochrophyta				
Dinobryon sp.	62	766.39	<1 (0.000688)	0.688

Phytoplankton Composition Analysis Date observed: May/8/2012

Lake	La Plata	Sample number	1
Analyzed by	B.I.S.S.	Date collected	March/15/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3 miles per hour	
Net towing time	5 minutes	RPM meter	10001
Total sedimented sample volume: 10 ml			
Microscope's field of view	Bongo A:5	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Euglenozoa				
Euglena sp.	9	111.25	<1 (0.000100)	0.100
Trachelomonas sp.	15	185.42	<1 (0.000166)	0.166
Ochrophyta				
live pennate	1	12.36	<1 (0.000011)	0.011
empty pennate	24	296.67	<1 (0.000266)	0.266
live centric	1	12.36	<1 (0.000011)	0.011
Myzozoa				
live *Peridiniopsis* sp.	23	284.30	<1 (0.000255)	0.255
empty *Peridiniopsis* sp.	4	49.44	<1 (0.000044)	0.044
dinoflagellates c.f. *Peridiniopsis* sp.	17	210.14	<1 (0.000189)	0.189
Total	285			

H-4. La Plata

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Charophya				
Cosmarium sp.	6	267	<1 (0.0027)	2.73
Scenedesmus sp.	2	89	<1 (0.0009)	0.91
Chlorophyta				
Pandorina sp.	2	89	<1 (0.0009)	0.91
Pediastrum simplex	1	44.5	<1 (0.0005)	0.45

Platydorina sp.	1	44.5	<1 (0.0005)	0.45
Unknown species 2	2	89	<1 (0.0009)	0.91
Unknown c.f. *Treubaria* sp.	1	44.5	<1 (0.0005)	0.45
Myzozoa				
live *Peridiniopsis*	13	578.5	<1 (0.006)	5.90
empty *Peridiniopsis*	8	356	<1 (0.0036)	3.63
Euglenozoa				
Trachelomonas sp.	1	44.5	<1 (0.0005)	0.45
Ochrophyta				
live pennate	222	9878.96	<1 (0.10)	100.83
empty pennate	17	756.5	<1 (0.0008)	7.72
live centric	11	489.5	<1 (0.005)	5.0
empty centric	6	267	<1 (0.003)	2.73
Total	293			

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Chlorophyta				
Pandorina sp.	5	111.25	<1 (0.0011)	1.14
Pediastrum simplex	2	44.50	<1 (0.0005)	0.45
Myzozoa				
live *Peridiniopsis*	30	667.50	<1 (0.007)	6.81
empty *Peridiniopsis*	3	66.75	<1 (0.0007)	0.68
Ochrophyta				
live pennate	214	4761.48	<1 (0.049)	48.59
empty pennate	22	489.50	<1 (0.005)	5.0
live centric	6	133.50	<1 (0.001)	
empty centric	4	89.00	<1 (0.0009)	
Total	295			

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 5 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Cyanobacterium: filament, straight	**234**	**13016**	**<1 (0.228)**	**227.74**
Cyanobacterium: filament, screwlike	**12**	**667.5**	**<1 (0.012)**	**11.68**
Chlorophyta				
Pediastrum simplex	**3**	**166.87**	**<1 (0.003)**	**2.92**
Myzozoa				
live *Peridiniopsis*	**2**	**111.25**	**<1 (0.002)**	**1.95**
empty *Peridiniopsis*	**3**	**166.87**	**<1 (0.003)**	**2.92**
Ochrophyta				
live pennate	**6**	**333.75**	**<1 (0.006)**	**5.84**
empty pennate	**17**	**945.62**	**<1 (0.017)**	**16.55**
live centric	**3**	**166.87**	**<1 (0.003)**	**2.92**
Total	**280**			

Phytoplankton Composition Analysis Date observed: June/20/2012

Lake	La Plata	Sample number	2
Analyzed by	B.I.S.S.	Date collected	April/26/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 5 ml			
Microscope's field of view	Bongo A: 8	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Phytoplankton Composition Analysis Date observed: June/20/2012

Lake	La Plata	Sample number	2
Analyzed by	B.I.S.S.	Date collected	April/26/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 5 ml			
Microscope's field of view	Bongo B: 8	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 5 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)
Cyanobacteria			
Cyanobacterium: filament, straight	272	15130	<1
Cyanobacterium, filament, screwlike coiled	4	222.5	<1
Chlorophyta			
Pandorina sp.	3	166.87	<1
Pediastrum simplex	3	166.87	<1
Tetraedron minimum	2	111.25	<1
Myzozoa			
live *Peridiniopsis*	4	222.5	<1
empty *Peridiniopsis*	6	333.75	<1
Ochrophyta			
live pennate	5	278.12	<1
empty pennate	7	389.37	<1
live centric	13	723.12	<1
empty centric	2	111.25	<1
Total	321		

Phytoplankton Composition Analysis Date observed: September/17/2012

Lake	La Plata	Sample number	3
Analyzed by	B.I.S.S.	Date collected	July 11, 2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 10 ml			
Microscope's field of view	Bongo A: 22	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Unknown colonial cyanobacterium	2	20.23	<1(0.00018)	0.18
Unknown cyanobacterium: filament, straight	11	111.25	<1 (0.00097)	0.97
Unknown cyanobacterium: filament, screwlike coiled	136	13.75.46	<1(0.01203)	12.03
Charophyta				
Cosmarium sp.	23	232.61	<1(0.00203)	2.04
Scenedesmus sp.	1	10.11	<1(0.00009)	0.09
live *Staurastrum* sp.	30	303.41	<1(0.00265)	2.65
empty *Staurastrum* sp.	4	40.46	<1(0.00035)	0.35
Chlorophyta				
Pandorina sp.	5	50.57	<1(0.00044)	0.44
Pediastrum simplex	1	10.11	<1(0.00009)	0.09
Tetraedron minimum	1	10.11	<1(0.00009)	0.09
Myzozoa				
live *Peridiniopsis*	35	353.98	<1(0.00310)	3.10
empty *Peridiniopsis*	49	495.57	<1(0.00434)	4.34
Ochrophyta				
live pennate	30	303.41	<1(0.00265)	2.65
empty pennate	9	91.02	<1(0.00080)	0.80

live centric	12	121.36	<1(0.00106)	1.06
empty centric	1	10.11	<1(0.00009)	0.09
Euglenozoa				
Euglena sp.	6	60.68	<1(0.00053)	0.53
Trachelomonas sp.	9	91.02	<1(0.00080)	0.8
Total	365			

Phytoplankton Composition Analysis

Lake	La Plata	Sample number	3
Analyzed by	B.I.S.S.	Date collected	July 11, 2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 10 ml			
Microscope's field of view	Bongo B: 14	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Unknown cyanobacterium: filament, straight	23	365.53	<1(0.00320)	3.20
Unknown cyanobacterium filament, screwlike coiled	48	762.85	<1 (0.00667)	6.67
Charophyta				
live *Cosmarium* sp.	14	222.50	<1(0.00195)	1.95
live *Staurastrum* sp.	20	317.86	<1(0.00278)	2.78
empty *Staurastrum* sp.	2	31.79	<1 (0.00028)	0.28
Chlorophyta				
Pandorina sp.	4	63.57	<1 (0.00056)	0.56
unknown c.f. *Treubaria* sp.	7	111.25	<1(0.00097)	0.97
unknown c.f. *Monoraphidium griffithii*	2	31.79	<1(0.00028)	0.28
Myzozoa				
live *Peridiniopsis* sp.	54	858.21	<1(0.00751)	7.51
empty *Peridiniopsis*	22	349.64	<1(0.00306)	3.06
Ochrophyta				
live pennate	31	492.68	<1(0.00431)	4.31
empty pennate	9	143.04	<1(0.00125)	1.25
live centric	9	143.04	<1(0.00125)	1.25
empty centric	2	31.79	<1(0.0028)	0.28
Euglenozoa				
Euglena sp.	10	158.93	<1(0.00139)	1.39

Strombomonas sp.	1	15.89	<1(0.00139)	1.39
Trachelomonas sp. (small)	3	47.68	<1(0.00042)	0.42
Trachelomonas sp. (big)	4	63.57	<1(0.00056)	0.56
Total	265			

Phytoplankton Composition Analysis Date observed: May/18/2012

Lake	Patillas	Sample number	1
Analyzed by	B.I.S.S.	Date collected	March/17/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3 miles per hour	
Net towing time	5 minutes	RPM meter	8351
Total sedimented sample volume: 10 ml			
Microscope's field of view	Bongo A:13	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

H-5. Patillas

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Charophyta				
Cosmarium sp.	1	24.72	<1(0.00025)	0.25
Staurastrum sp.	1	24.72	<1(0.00025)	0.25
Chlorophyta				
Pediastrum simplex	65	1606.938	<1(0.0164)	16.4
Pediastrum simplex var echinultum	1	24.72	<1(0.00025)	0.25
Unknown colonial	29	716.94	<1(0.00732)	7.32
Myzozoa				
empty *Peridiniopsis* sp.	1	24.72	<190.00025)	0.25
live *Peridiniopsis* sp.	4	98.89	<19(0.0001)	0.1
Euglenozoa				
Euglena sp.1	3	74.17	<1(0.00076)	0.76
Trachelomonas sp.	9	222.50	<1(0.0023)	2.3

Phytoplankton Composition Analysis Date observed: May/18/2012

Lake	Patillas	Sample number	1
Analyzed by	B.I.S.S.	Date collected	March/17/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3 miles per hour	
Net towing time	5 minutes	RPM meter	8351
Total sedimented sample volume: 10 ml			
Microscope's field of view	Bongo B:10	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Ochrophyta				
empty pennate	8	197.78	<1(0.002)	2
live pennate	5	123.61	<1(0.0013)	1.3
empty centric	2	49.44	<1(0.0005)	0.5
live centric	8	197.78	<1(0.002)	2
Ochrophyta				
Dinobryon sp.	161	3980.26	<1(0.0406)	40.6
Total	298			

Phytoplankton Composition Analysis Date observed: May/18/2012

Lake	Patillas	Sample number	2
Analyzed by	B.I.S.S.	Date collected	April/17/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	8351
Total sedimented sample volume: 5 ml			
Microscope's field of view	Bongo A:12	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Charophyta				
Staurastrum sp.	3	66.88	<1(0.00068)	0.68
Chlorophyta				
Pediastrum simplex	53	1181.57	<1(0.01206)	12.1
Unknown colonial	26	579.64	<1(0.00592)	5.92
Myzozoa				
live *Peridiniopsis* sp.	2	44.59	<1(0.00046)	0.46
Euglenozoa				
Trachelomonas sp.	12	267.53	<1(0.00273)	2.73
Ochrophyta				
empty pennate	4	89.18	<1(0.00091)	0.91
live pennate	9	200.65	<1(0.00205)	2.1
live centric	10	222.94	<1(0.00228)	2.3
Ochrophyta				
Dinobryon sp.	200	4458.77	<1(0.04551)	45.51
Total	319			

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 5 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Celsl/L)
Cyanobacteria				
Unknown cyanobacterium: filament, screwlike coiled	1	37.08318502	<1(0.00065)	0.65
Charophyta				
Staurastrum sp.	2	74.16637004	(0.0013)	1.3
Chlorophyta				
Pediastrum simplex	47	1742.909696	<1(0.03049)	30.5
Myzozoa				
empty *Peridiniopsis* sp.	1	37.08318502	<1(0.00065)	0.65
live *Peridiniopsis* sp.	4	148.3327401	<1(0.0026)	2.6
unknown dinoflagelates	1	37.08318502	<1(0.00065)	0.65
Ochrophyta				
empty pennate	8	296.6654802	<1(0.00519)	5.2
live centric	5	185.4159251	<1(0.00324)	3.24
Ochrophyta				
Dinobryon sp.	234	8677.465295	<1(0.15182)	15.18
Total	303			

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 5 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Unknown cyanobacterium: filament, screwlike coiled	4	197.77	<1(0.00346)	3.46
Chlorophyta				
Pediastrum simplex	29	1433.883	<1(0.02509)	25.1
unknown colonial	1	49.44425	<1(0.00087)	0.87
Myzozoa				
unknown big round dinoflagelates	2	98.88849	<1(0.00173)	1.73
unknown small round dinoflagelates	2	98.88849	<1(0.00173)	1.73
Ochrophyta				
empty pennate	3	148.3327	<1(0.0026)	2.6
live pennate	6	296.6655	<1(0.00519)	5.2
live centric	2	98.88849	<1(0.00173)	1.73
Ochrophyta				
Dinobryon sp.	453	22398.24	<1(0.39189)	391.89
Total	502			

Phytoplankton Composition Analysis Date observed: June/28/2012

Lake	Patillas	Sample number	2
Analyzed by	B.I.S.S.	Date collected	April/17/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	8351
Total sedimented sample volume: 5 ml			
Microscope's field of view	Bongo B:9	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Phytoplankton Composition Analysis Date observed:

Lake	Patillas	Sample number	3
Analyzed by	B.I.S.S.	Date collected	June/27/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 10 ml			
Microscope's field of view	Bongo B:52	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10ml sample (Cell/ml)	Number of organisms in towing sample (Cell/ml)	Number of organisms in towing sample (Cell/L)
Chlorophyta				
Ankistrodemus sp.	1	3.65	<1 (0.00003)	0.032
Pandorina sp.	6	21.89	<1 (0.0002)	0.19
Pediastrum simplex	91	331.92	<1 (0.003)	2.90
c.f. *Eudorina* sp.	12	43.77	<1 (0.0004)	0.38
c.f. *Monoraphidium griffithii*	2	7.30	<1 (0.00006)	0.06
Myzozoa				
live *Peridinium* sp.	1	3.65	<1 (0.00003)	0.032
live *Peridiniopsis* sp. (small)	2	7.30	<1 (0.00006)	0.064
Ochrophyta				
empty pennate	16	58.36	<1 (0.0005)	0.51
live pennate	8	29.18	<1 (0.0003)	0.26
Ochrophyta				
Dinobryon sp.	102	372.05	<1 (0.003)	3.25
Euglenozoa				
Euglena sp.	6	21.89	<1 (0.0002)	0.19
Trachelomonas sp. (small)	10	36.48	<1 (0.0003)	0.32
Trachelomonas sp.	5	18.24	<1 (0.0002)	0.16
Total	260			

H-6. Toa Vaca

Phytoplankton Composition Analysis		Date observed: April/23 and 30 /2012	
Lake	Toa Vaca	Sample number	1
Analyzed by	B.I.S.S.	Date collected	march/13/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3 miles per hour	
Net towing time	5 minutes	RPM meter	1490
Total sedimented sample volume: 10ml			
Microscope's field of view	Bongo A: 17	Total magnification	400X
Microscope's field diameter	0.53 mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cell/L)
Cyanobacteria				
Unknown cyanobacterium: colonial	64	837.64	<1(0.0085)	8.5
Chlorophyta				
Pandorina sp.	34	445	<1(0.0045)	4.5
Tetraedron sp.	25	327.20	<1(0.0033)	3.3
Myzozoa				
empty *Peridiniopsis* sp.	1	13.09	<1(0.0001)	0.1
live *Peridiniopsis* sp.	2	26.18	<1(0.0003)	0.3
Euglenozoa				
Euglena sp.	1	13.09	<1(0.0001)	0.1
Ochrophyta				
empty pennate	33	431.91	<1(0.0044)	4.4
live pennate	87	1138.67	<1(0.0116)	11.6
empty centric	11	143.97	<1(0.0015)	1.5
live centric	52	680.59	<1(0.0069)	6.9
Total	310			

Phytoplankton Composition Analysis Date observed: April/30/2012

Lake	Toa Vaca	Sample number	1
Analyzed by	B.I.S.S.	Date collected	march/13/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3 miles per hour	
Net towing time	5 minutes	RPM meter	1490
Total sedimented sample volume: 10ml			
Microscope's field of view	Bongo B: 24	Total magnification	400X
Microscope's field diameter	0.53 mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Unknown colonial cyanobacterium	22	203.96	<1(0.00208)	2.1
Chlorophyta				
Pandorina sp.	15	139.06	<1(0.00142)	1.42
Tetraedron minimum	1	9.27	<1(0.00009)	0.09
Myzozoa				
empty *Peridiniopsis* sp.	1	9.27	<1(0.00009)	0.09
Euglenozoa				
Euglena sp.	1	9.27	<1(0.00009)	0.09
Ochrophyta				
empty pennate	25	231.77	<1(0.0027)	2.7
live pennate	270	2503.12	<1(0.2555)	255.5
empty centric	1	9.27	<1(0.00009)	0.09
live centric	16	148.33	<1(0.00151)	1.51
Total	354			

Phytoplankton Composition Analysis Date observed: June/12/2012

Lake	Toa Vaca	Sample number	2
Analyzed by	B.I.S.S.	Date collected	may/02/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	2,1331
Total sedimented sample volume: 10ml			
Microscope's field of view	Bongo A: 17	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Unknown colonial cyanobacterium	100	1308.82	<1(0.0229)	22.9
Unknown cyanobacterium: filament straight	82	1073.23	<1(0.0188)	18.8
Charophyta				
empty *Cosmarium* sp.	1	13.09	<1(0.0002)	0.2
Chlorophyta				
Crucigenia sp.	2	26.18	<1(0.0005)	0.5
Pandorina sp.	28	366.47	<1(0.0064)	6.4
Pediastrum simplex	7	91.62	<1(0.0016)	1.6
Tetraedron minimum	45	588.97	<1(0.0103)	10.3
Myzozoa				
empty *Peridiniopsis* sp.	8	104.71	<1(0.0018)	1.8
live *Peridiniopsis* sp.	7	91.62	<1(0.0016)	1.6
unknown round dinoflagelate	2	26.18	<1(0.0005)	0.5
Euglenozoa				
Trachelomonas sp.	6	78.53	<1(0.0014)	1.4
Ochrophyta				
empty pennate	3	39.26	<1(0.0007)	0.7
live pennate	1	13.09	<1(0.0002)	0.2
live centric	17	222.50	<1(0.0039)	3.9
Total	309			

Phytoplankton Composition Analysis Date observed: June/14 and 15/2012

Lake	Toa Vaca	Sample number	2
Analyzed by	B.I.S.S.	Date collected	may/02/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	2,1331
Total sedimented sample volume: 10ml			
Microscope's field of view	Bongo B: 33	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo B	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Unknown colonial cyanobacterium	123	829.315	<1(0.00725)	7.25
Unknown cyanobacterium: filament, straight	34	229.242	<1(0.00201)	2.01
Chlorophyta				
Crucigenia sp.	3	20.2272	<1(0.00018)	0.18
Pediastrum simplex	3	20.2272	<1(0.00018)	0.18
Pandorina sp.	21	141.59	<1(0.00124	1.24
Tetraedron minimum	66	444.998	<1(0.00389)	3.89
Myzozoa				
empty *Peridiniopsis* sp.	11	74.1664	<1(0.00065)	0.65
live *Peridiniopsis* sp	5	33.712	<1(0.00029)	0.29
unknown round dinoflagelate	1	6.7424	<1(0.00006)	0.06
Euglenozoa				
Trachelomonas sp.	3	20.2272	<1(0.00018)	0.18
Ochrophyta				
empty pennate	1	6.7424	<1(0.00006)	0.06
live centric	13	87.6512	<1(0.00077)	0.77
Total	284			

Phytoplankton Composition Analysis Date observed: November/13/2012

Lake	Toa Vaca	Sample number	3
Analyzed by	B.I.S.S.	Date collected	july/03/2012
Station	Center	Depth of sampling (m)	1
Velocity of the boat while towing sample		3.5 miles per hour	
Net towing time	5 minutes	RPM meter	
Total sedimented sample volume: 10ml			
Microscope's field of view	Bongo A: 30	Total magnification	400X
Microscope's field diameter	0.53mm	Inverted Microscope	Leica DMI3000B

Organisms by phylum	Number of organisms Bongo A	Number of organisms in 10 ml sample (Cells/ml)	Number of organisms in towing sample (Cells/ml)	Number of organisms in towing sample (Cells/L)
Cyanobacteria				
Unknown colonial cyanobacterium	127	941.92	<1 (0.0082)	8.240
Unknown cyanobacterium: filament, straight	21	155.75	<1 (0.0014)	1.363
Unknown cyanobacterium: screwlike curved	52	385.67	<1(0.0034)	3.374
Chlorophyta				
Pandorina sp.	22	163.17	<1 (0.0014)	1.427
Tetraedron minimum	5	37.08	<1(0.0003)	0.324
Unknown c.f. *Golenkinia*	1	7.42	<1 (0.0001)	0.065
Unknown c.f. *Monoraphidium griffithii*	6	44.50	<1 (0.0004)	0.389
Myzozoa				
live *Peridiniopsis* sp.	1	7.42	<1 (0.0001)	0.065
empty *Peridiniopsis* sp.	2	14.83	<1 (0.0001)	0.130
Euglenozoa				
Euglena sp.	2	14.83	<1(0.0001)	0.130
Trachelomonas sp.	5	37.08	<1 (0.0003)	0.324
Ochrophyta				
empty pennate	2	14.83	<1 (0.0001)	0.130
live pennate	2	14.83	<1 (0.0001)	0.130
empty centric	4	29.67	<1 (0.0003)	0.260
Ochrophyta				
Dinobryon sp.	1	7.42	<1 (0.0001)	0.065
Total	253			

Second year of study (2013)

H-7. Cerrillos

Phytoplankton Composition Analysis		Date observed		March, 21 2013	
Reservoir	Cerrillos	No. sample	1	Sampling Year	2nd
Date collected	January 17, 2013	Station	Central		
Depth sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	11833
Volume of sedimented sample	10mL	Inverted Microscope		Leica DMI3000B	
No. microscope fields of view in Bongo A	21	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/mL)
Cyanobacteria				
Unknown filament straight	6	63.57	0.00556	0.56
Unknown colonial	17	180.12	0.00158	1.58
Unknown colonial cf. Merismopediaceae	3	31.79	0.00028	0.28
Charophyta				
Cosmarium sp.	1	10.60	0.00009	0.10
Scenedesmus sp.	2	21.19	0.00019	0.19
Scenedesmus c.f. *denticulatus*	6	63.57	0.00056	0.56
Live *Staurastrum* sp.	19	201.31	0.00176	1.76
Live *Staurastrum* sp. 2	2	21.19	0.00019	0.19
Chlorophyta				
Crucigenia tetrapedia	1	10.60	0.00009	0.10
Pediastrum simplex	7	74.17	0.00065	0.65
Pediastrum simplex var. *echinulatum*	2	21.19	0.00019	0.19
Live *Tetraedron minimum*	12	127.14	0.00111	1.11
Empty *Tetraedron minimum*	1	10.60	0.00009	0.10
Unknown colonial Chlorophyta	4	42.38	0.00037	0.37
Myzozoa				
Live *Peridiniopsis* sp.	6	63.57	0.00056	0.56
Empty *Peridiniopsis* sp.	4	42.38	0.00037	0.37
Live *Peridiniopsis* sp. (small)	1	10.60	0.00009	0.10

Peridinium sp.	3	31.79	0.00028	0.28
Ochrophyta				
Centric diatom	3	31.79	0.00028	0.28
Live pennate diatom	100	1059.52	0.00921	9.03
Empty pennate diatom	78	826.43	0.00723	7.23
Total	278			

Phytoplankton Composition Analysis				**Date observed**		**March 18, 2013**	
Reservoir	Cerrillos			No. sample	1	Sampling Year	2nd
Date collected	January 17, 2013			Station	Central		
Depth sampling	1meter			Net towing	5 minutes		
Velocity of the boat while towing sample				3.5 miles per hour		RPM	11833
Volume of sedimented sample	10mL			Inverted Microscope		Leica DMI3000B	
No. microscope fields of view in Bongo B		37		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	B.I.S.S.						

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/mL)
Cyanobacteria				
Unknown colonial	10	60.13	0.00053	0.53
Unknown colonial cf. Merismopediaceae	5	30.07	0.00026	0.26
Charophyta				
Euastrum sp.	2	12.03	0.00011	0.11
Scenedesmus cf. *quadricauda*	1	6.01	0.00005	0.05
Scenedesmus cf. *brasiliensis*	4	24.05	0.00021	0.21
Live *Staurastrum* sp.	25	150.34	0.00132	1.32
Live *Staurastrum* sp. 2	1	6.01	0.00005	0.05
Chlorophyta				
Pediastrum simplex	1	6.01	0.00005	0.05
Live *Tetraedron minimum*	28	168.38	0.00147	1.47
Unknown colonial	3	18.04	0.00016	0.16
Euglenozoa				
Trachelomonas sp. (dark lorica)	1	6.01	0.00005	0.05
Trachelomonas sp. (small)	1	6.01	0.00005	0.05
Myzozoa				
Live *Peridiniopsis* sp.	12	72.16	0.00063	0.63
Empty *Peridiniopsis* sp.	4	24.05	0.00021	0.21
Live *Peridiniopsis* sp. (small)	3	18.04	0.00016	0.16
Peridinium sp.	2	12.03	0.00011	0.11
Ochrophyta				
Centric diatom	4	24.05	0.00021	0.21
Live pennate diatom	190	1142.56	0.01000	10.00

Empty pennate diatom	109	655.47	0.00573	5.73
Total	406			

Phytoplankton Composition Analysis		**Date observed**		August 23, 2013	
Reservoir	Cerrillos	No. sample	2	Sampling Year	2nd
Date collected	May 15, 2013	Station	Central		
Depth sampling	1meter	Net towing	minutes		
Velocity of the boat while towing sample		miles per hour		RPM	
Volume of sedimented sample	1mL	Inverted Microscope		Leica DMI3000B	
No. microscope fields of view in Bongo A	33	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/L)**
Cyanobacteria				
Unknown colonial	9	606.82	0.08898	88.98
Charophyta				
Cosmarium sp.	7	471.97	0.0692	69.21
Live *Staurastrum* sp.	2	134.85	0.0198	19.77
Chlorophyta				
Coelastrum sp.	1	67.42	0.00989	9.89
Pediastrum simplex	12	809.09	0.1186	118.64
Euglenozoa				
Trachelomonas sp. (dark lorica)	1	67.42	0.00989	9.89
Myzozoa				
Live *Peridiniopsis* sp.	5	337.12	0.0494	49.44
Empty *Peridiniopsis* sp.	52	3506.05	0.5141	514.12
Ochrophyta				
Empty centric diatom	1	67.42	0.00989	9389
Live pennate diatom	539	36341.52	5.329	5329
Empty pennate diatom	191	12877.98	1.8884	1888.4
Total	820			

Phytoplankton Composition Analysis		**Date observed**		August 29, 2013	
Reservoir	Cerrillos	No. sample	2	Sampling Year	2nd
Date collected	May 15, 2013	Station	Central		
Depth sampling	1meter	Net towing	minutes		
Velocity of the boat while towing sample		miles per hour		RPM	
Volume of sedimented sample	1mL	Inverted Microscope		Leica DMI3000B	
No. microscope fields of view in Bongo B	35	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown colonial	1	63.57	0.009322	9.322
Unknown filament straight	1	63.57	0.009322	9.322
Charophyta				
Live *Cosmarium* sp.	1	63.57	0.009322	9.322
Empty *Cosmarium* sp.	3	190.71	0.028	27.97
Live *Staurastrum* sp.	2	127.14	0.0186	18.64
Chlorophyta				
Pediastrum simplex	7	445	0.0653	65.25
Myzozoa				
Live *Peridiniopsis* sp.	4	254.28	0.0373	37.29
Empty *Peridiniopsis* sp.	20	1271.42	0.1864	186.44
Live *Peridinium* sp.	3	190.71	0.028	27.97
Ochrophyta				
Live pennate diatom	571	36299.14	5.323	5322.9
Empty pennate diatom	94	5975.69	0.8763	876.27
Total	707			

Phytoplankton Composition Analysis				Date observed		November 13, 2013	
Reservoir	Cerrillos			No. sample	3	Sampling Year	2nd
Date collected	September 26, 2013			Station	Central		
Depth sampling	1meter			Net towing	Minutes		
Velocity of the boat while towing sample				miles per hour		RPM	
Volume of sedimented sample	20 mL			Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo A		39		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	B.I.S.S.						

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown colonial	38	108.4	0.00033	0.3319
Unknown filament s	155	442.15	0.00135	1.354
Unknown filament screw like curved	429	1223.75	0.00375	3.747
Charophyta				
Cosmarium sp.	1	2.85	0.0000087	0.008
Euastrum sp.	6	17.12	0.000052	0.052
Staurastrum sp.	23	65.61	.000201	0.2009
Chlorophyta				
Pandorina sp.	6	17.12	0.000052	0.052
Pediastrum simplex	2	5.71	0.000017	0.0175
Tetraedron minimum	16	45.64	0.00014	0.14
c.f. *Coelastum proboscideum*	6	17.12	0.000052	0.052
Euglenozoa				
Trachelomonas sp.	1	2.85	0.0000087	0.008
Myzozoa				
Live *Peridiniopsis* sp.	37	105.54	0.00032	0.323
Empty *Peridiniopsis* sp.	52	148.33	0.00045	0.454
Peridiniopsis sp. (small)	3	8.56	0.000026	0.026
Ochrophyta				
Live pennate diatom	139	396.50	0.00121	1.21
Empty pennate diatom	95	270.99	0.0008	0.83
Total	1009			

Phytoplankton Composition Analysis				Date observed		November 18, 2013	
Reservoir	Cerrillos			No. sample	3	Sampling Year	2nd
Date collected	September 26, 2013			Station	Central		
Depth sampling	1meter			Net towing	minutes		
Velocity of the boat while towing sample				miles per hour		RPM	
Volume of sedimented sample	20 mL			Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		42		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	B.I.S.S.						

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/mL)
Cyanobacteria				
Unknown colonial	12	31.79	0.000097	0.097
Unknown colonial cf. Chroococcaceae	9	23.84	0.000073	0.073
Unknown filament s	86	227.80	0.0007	0.697
Unknown filament screw like curved	94	248.99	0.00076	0.762
Unknown cf. Noctocacceae	1	2.65	0.000008	0.0081
Charophyta				
Cosmarium sp.	1	2.65	0.000008	0.0081
Euastrum sp.	4	10.6	0.000032	0.032
Staurastrum sp.	18	47.68	0.00015	0.146
Chlorophyta				
Tetraedron minimum	15	39.73	0.00012	0.1217
cf. *Coelastum proboscideum*	1	2.65	0.000008	0.0081
cf. *Coelastum astroideum*	1	2.65	0.000008	0.0081
Euglenozoa				
Trachelomonas sp.	1	2.65	0.000008	0.0081
Myzozoa				
Live *Peridiniopsis* sp.	33	87.41	0.00027	0.267
Empty *Peridiniopsis* sp.	25	66.22	0.0002	0.203
Unknown c.f. dinoflagellate	2	5.30	0.00001	0.016
Ochrophyta				
Live pennate diatom	301	797.29	0.0024	2.441
Empty pennate diatom	90	238.39	0.0007	0.73
Total	694			

H-8. Cidra

Phytoplankton Composition Analysis			Date observed		April 12, 2013
Reservoir	Cidra		No. sample	1	Sampling Year 2nd
Date collected	January 15, 2013		Station	Central	
Depth sampling	1 meter		Net towing	5 minutes	
Velocity of the boat while towing sample			3.5 miles per hour	RPM	12228
Volume of sedimented sample	10mL		Inverted Microscope	Leica DMI3000B	
No. microscope fields of view in Bongo A		39	Total magnification	400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/mL)
Chlorophyta				
Coelastrum cambricum	5	28.53	0.00025	0.25
Crucigenia tetrapedia	1	5.71	0.00005	0.05
Pediastrum simplex	77	439.29	0.00384	3.84
Oocystis sp.	1	5.71	0.00005	0.05
Tetraedron minimum	2	11.41	0.00010	0.10
Euglenozoa				
Euglena acus	2	11.41	0.00010	0.10
Euglena sp.	4	22.82	0.00020	0.20
Empty *Phacus* sp. (small)	3	17.12	0.00015	0.15
Phacus sp. (small)	1	5.71	0.00005	0.05
Phacus longicauda	9	51.35	0.00045	0.45
Trachelomonas sp. (dark lorica)	6	34.23	0.00030	0.30
Strombomonas sp.	2	11.41	0.00010	0.10
Myzozoa				
Live *Peridinium* sp.	402	1193.45	0.02006	20.06
Empty *Peridinium* sp.	4	22.82	0.00020	0.20
Live *Peridiniopsis* sp.	12	68.46	0.00060	0.60
Ochrophyta				
Live pennate diatoms	1	5.71	0.00005	0.05
Empty pennate diatoms	15	85.58	0.00075	0.75

Dinobryon sp.	42	239.61	0.00210	2.10
Total	589			

Phytoplankton Composition Analysis			Date observed		May 14, 2013
Reservoir	Cidra		No. sample	1	Sampling Year 2nd
Date collected	January 15, 2013		Station	Central	
Depth sampling	1 meter		Net towing	5 minutes	
Velocity of the boat while towing sample			3.5 miles per hour	RPM	12228
Volume of sedimented sample	10mL		Inverted Microscope		Leica DMI3000B
No. microscope fields of view in Bongo B		60	Total magnification		400X
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/mL)
Charophyta				
Staurastrum sp.	4	14.83	0.00013	0.13
Chlorophyta				
Coelastrum sp.	3	11.12	0.00010	0.10
Pediastrum simplex	187	693.46	0.00607	6.07
Tetraedron minimum	1	3.71	0.00003	0.03
Euglenozoa				
Euglena sp.	1	3.71	0.00003	0.03
Empty *Phacus* sp. (small)	2	7.42	0.00007	0.07
Phacus longicauda	4	14.83	0.00013	0.13
Strombomonas sp.	1	3.71	0.00003	0.03
Trachelomonas sp.	7	25.96	0.00023	0.23
Myzozoa				
Peridiniopsis sp.	6	22.25	0.00019	0.19
Empty *Peridiniopsis* sp.	3	11.12	0.00010	0.10
Peridinium sp.	185	686.04	0.00600	6.00
Empty *Peridinium* sp.	7	25.96	0.00023	0.23
Ochrophyta				

Live pennate diatoms	1	3.71	.00003	0.03
Empty pennate diatoms	8	29.67	0.00026	0.26
Live centric diatoms	3	11.12	0.00010	0.10
Dinobryon sp.	13	48.21	0.00042	0.42
Total	472			

Phytoplankton Composition Analysis		**Date observed**		September 6, 2013	
Reservoir	Cidra	No. sample	2	Sampling Year	2nd
Date collected	June 11, 2013	Station	Central		
Depth sampling	1 meter	Net towing	minutes		
Velocity of the boat while towing sample		3.5 miles per hour	RPM		
Volume of sedimented sample	5mL	Inverted Microscope	Leica DMI3000B		
No. microscope fields of view in Bongo A	38	Total magnification	400X		
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
c.f. *Anabaena* sp.	2	23.42	0.00029	0.2868
Unknown colonial	4	46.84	0.00057	0.5737
Unknown filament screw like curved	7	81.97	0.0010	1.004
Unknown filament straight	21	245.92	0.003	3.012
Charophyta				
Cosmarium sp.	2	23.42	0.00029	0.2868
Staurastrum sp.	35	409.87	0.0050	5.02
Chlorophyta				
Coelastrum sp.	1	11.71	0.00014	0.1434
cf. *Golenkinia radiata*	1	11.71	0.00014	0.1434
cf. *Monoraphidium griffithii*	5	58.55	0.00072	0.717
Pandorina sp.	7	81.97	0.001	1.004
Pediastrum simplex	31	363.02	0.0044	4.446
Pediastrum simplex var.*echinulatum*	10	117.10	0.00143	1.434
Scenedesmus c.f. *armatus*	2	23.42	0.00029	0.2868
Tetraedron minimum	24			
cf. *Tetraedron trigonum*	1	11.71	0.00014	0.1434
Euglenozoa				
Phacus longicauda	4	46.84	0.000574	0.5737

Strombomonas sp.	5	58.55	0.00072	0.717
Trachelomonas sp.	3	35.13	0.0004303	0.4303
Trachelomonas sp. (small)	3	35.13	0.0004303	0.4303
Unknown Euglenozoa	13	152.24	0.00215	2.15
Myzozoa				
Peridiniopsis sp.	41	480.13	0.00588	5.88
Empty *Peridiniopsis* sp.	15	175.66	0.000215	2.151
Peridinium sp.	171	2002.49	0.0245	24.53
Empty *Peridinium* sp.	3	35.13	0.0004303	0.4303
Ochrophyta				
Live pennate diatoms	7	81.97	0.001	1.004
Empty pennate diatoms	8	93.68	0.0011	1.147
Dinobryon sp.	50	585.52	0.0072	7.17
Total	476			

Phytoplankton Composition Analysis				Date observed		September 12, 2013	
Reservoir	Cidra			No. sample	2	Sampling Year	2nd
Date collected	June 11, 2013			Station	Central		
Depth sampling	1 meter			Net towing	Minutes		
Velocity of the boat while towing sample				3.5 miles per hour		RPM	
Volume of sedimented sample	5mL			Inverted Microscope		Leica DMI3000B	
No. microscope fields of view in Bongo B		38		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	B.I.S.S.						

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown colonial	3	35.13	0.0004303	0.4303
Unknown filament screw like curved	2	23.42	0.000287	0.287
Unknown filament straight	10	117.10	0.00143	1.434
Charophyta				
Cosmarium sp.	1	11.71	0.0001434	0.1434
Staurastrum sp.	21	245.92	0.00301	3.011
Chlorophyta				
cf. *Golenkinia radiata*	1	11.71	0.0001434	0.1434
Pandorina sp.	1	11.71	0.0001434	0.1434
Pediastrum simplex	44	515.26	0.00631	6.3106
Pediastrum simplex var.*echinulatum*	4	46.84	0.0005737	0.5737
Scenedesmus quadricauda	2	23.42	0.0002868	0.2868
Tetraedron minimum	18	210.79	0.002582	2.582
cf. *Tetraedron trigonum*	2	23.42	0.0002868	0.2868
Unknown circular solitary	5	58.55	0.0000717	0.7171
Euglenozoa				
Phacus longicauda	2	23.42	0.0002868	0.2868
Strombomonas sp.	5	58.55	0.00072	0.717
Trachelomonas sp. (dark)	2	23.42	0.0002868	0.2868
Unknown Euglenozoa	6	70.26	0.00086	0.8605
Myzozoa				
Peridiniopsis sp.	41	480.13	0.00588	5.88
Empty *Peridiniopsis* sp.	9	105.39	0.00129	1.2908
Peridinium sp.	162	1897.10	0.02323	23.234
Empty *Peridinium* sp.	2	23.42	0.0002868	0.2868
Ochrophyta				

Live pennate diatoms	3	35.13	0.0004303	0.4303
Empty pennate diatoms	7	81.97	0.00100	1.004
Live centric diatoms	1	11.71	0.0001434	0.1434
Dinobryon sp.	31	363.02	0.00445	4.45
Total	385			

Phytoplankton Composition Analysis		**Date observed**		November 6, 2013	
Reservoir	Cidra	No. sample	3	Sampling Year	2nd
Date collected	September 3, 2013	Station	Central		
Depth sampling	1 meter	Net towing	minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	
Volume of sedimented sample	5mL	Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo A	40	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown colonial	1	11.12	0.000126	0.136
Unknown, screw like, curved filament	14	155.75	0.0019	1.91
Unknown filament straight	10	11.25	0.0014	1.36
Charophyta				
Cosmarium sp.	2	22.25	0.00027	0.27
Staurastrum sp.	8	89	0.0011	1.09
Chlorophyta				
Coelastrum sp.	1	11.12	0.000126	0.136
Eudorina sp.	1	11.12	0.000126	0.136
Micractinium sp.	3	33.37	0.00041	0.409
Pediastrum simplex	10	111.25	0.000136	1.36
Pediastrum simplex var.*echinulatum*	1	11.12	0.000126	0.136
Scenedesmus quadricauda	1	11.12	0.000126	0.136
Tetraedron minimum	2	22.25	0.00027	0.27
Treubaria schmidlei	7	77.87	0.00095	0.954
Euglenozoa				
Euglena acus	1	11.12	0.000126	0.136
Euglena sp.	1	11.12	0.000126	0.136
Phacus sp.	4	44.5	0.000545	0.545
Phacus longicauda	2	22.25	0.00027	0.27
Trachelomonas hispida var. *Crenulatocollis*	35	389.37	0.00477	4.769
Trachelomonas sp.	6	66.75	0.00082	0.818
Unknown Euglenozoa	3	33.37	0.00041	0.409
Myzozoa				
Peridiniopsis sp.	42	467.25	0.0057	5.723

Peridinium sp.	667	7420.35	0.0909	90.879
Empty *Peridinium* sp.	4	44.5	0.000545	0.545
Ochrophyta				
Live pennate diatoms	3	33.37	0.00041	0.409
Empty pennate diatoms	2	22.25	0.00027	0.27
Dinobryon sp.	3	33.37	0.00041	0.409
Total	834			

Phytoplankton Composition Analysis		**Date observed**		November 13, 2013	
Reservoir	Cidra	No. sample	3	Sampling Year	2nd
Date collected	September 3, 2013	Station	Central		
Depth sampling	1 meter	Net towing	minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	
Volume of sedimented sample	5mL	Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B	43	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown colonial	1	10.35	0.000127	0.127
Unknown filament screw like curved	26	269.07	0.003295	3.295
Unknown filament straight	14	144.88	0.00177	1.774
Charophyta				
Cosmarium sp.	1	10.35	0.000127	0.127
Staurastrum sp.	14	144.88	0.00177	1.774
Chlorophyta				
Coelastrum cf. *reticulatum*	1	10.35	0.000127	0.127
Coelastrum microsporum	3	31.05	0.00038	0.380
Micractinium sp.	2	20.70	0.00025	0.253
Pediastrum simplex	8	82.79	0.00101	1.013
Polyedropsis spinulosa	2	20.70	0.00025	0.253
Scenedesmus quadricauda	2	20.70	0.00025	0.253
Tetraedron minimum	1	10.35	0.000127	0.127
Euglenozoa				
Lepocinclis sp.	3	20.70	0.00025	0.253
Phacus sp.	1	10.35	0.000127	0.127
Phacus c.f. *pleuronectes*	4	41.40	0.00051	0.507
Phacus longicauda	4	41.40	0.00051	0.507
Strombomonas sp.	1	10.35	0.000127	0.127
Trachelomonas cf. *hispida* var. *Crenulatocollis*	29			
Treubaria schmidlei	5	51.74	0.00063	0.633
Unknown Euglenozoa	1	10.35	0.000127	0.127
Myzozoa				
Peridiniopsis sp.	41	424.30	0.0052	5.197
Peridinium sp.	833	8620.55	0.1056	105.58

Ochrophyta				
Live pennate diatoms	1	10.35	0.000127	0.127
Empty pennate diatoms	2	20.70	0.00025	0.253
Dinobryon sp.	2	20.70	0.00025	0.253
Total	1002			

H-9. Guajataca

Phytoplankton Composition Analysis		Date observed		March 11, 2013	
Reservoir	Guajataca	No. sample	1	Sampling Year	2nd
Date collected	January 2, 2013	Station	Central		
Depth sampling	1meter	Net towing	5 minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	18371
Volume of sedimented sample	1mL	Inverted Microscope		Leica DMI3000B	
No. microscope fields of view in Bongo A	7	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/mL)
Cyanobacteria				
Unknown cf. *Chroococcus* sp.	3	953.57	0.08342	83.42
Unknown, screw like, curved filament	5	1589.28	0.13903	139.03
Charophyta				
Staurastrum sp.	3	953.57	0.08342	83.42
Chlorophyta				
Micractinium sp.	4	1271.42	0.11123	111.23
Pediastrum simplex	149	47360.52	4.14314	4143.14
Pediastrum simplex var. *echinulatum*	1	317.86	0.02781	27.81
Scenedesmus quadricauda var. *parvus*	1	317.86	0.02781	27.81
Tetraedron minimum	1	317.86	0.02781	27.81
Treubaria triappenduculata	1	317.86	0.02781	27.81
Unknown circular solitary	4	1271.42	0.11123	111.23
Euglenozoa				
Euglena sp.	1	317.86	0.2781	27.81
Myzozoa				
Live *Peridiniopsis* sp.	14	4449.98	0.38929	389.29
Empty *Peridiniopsis* sp. (small)	1	317.86	0.2781	27.81
Empty *Peridiniopsis* sp.	4	1271.42	0.00023	111.23

Ochrophyta				
Live pennate diatom	70	22249.91	1.94644	1946.44
Empty pennate diatom	18	5721.41	0.50051	500.51
Live centric diatom	7	2224.99	0.19464	194.64
Dinobryon sp.	24	7628.54	0.66735	667.35
Total	316			

Phytoplankton Composition Analysis		Date observed		March 15, 2013	
Reservoir	Guajataca	No. sample	1	Sampling Year	2nd
Date collected	January 2, 2013	Station	Central		
Depth sampling	1meter	Net towing	5 minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	18371
Volume of sedimented sample	1mL	Inverted Microscope		Leica DMI3000B	
No. microscope fields of view in Bongo B	28	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/mL)
Cyanobacteria				
Unknown, screw like, curve filament	12	953.57	0.08342	83.42
Unknown, straight filament	7	556.25	0.04866	48.66
Unknown colonial	1	79.46	0.00695	6.95
Charophyta				
Cosmarium sp.	4	317.86	0.02781	27.81
Scenedesmus denticulatus	1	79.46	0.00695	6.95
Scenedesmus quadricuada	2	158.93	0.01390	13.90
Scenedesmus quadricuada var. *parvus*	1	79.46	0.00695	6.95
Staurastrum sp.	1	79.46	0.00695	6.95
Chlorophyta				
Coelastrum c.f. *cambricum*	1	79.46	0.00695	6.95
Golenkinia sp.	3	238.39	0.02085	20.85
Micractinium pusillum	3	238.39	0.02085	20.85
Monoraphidium sp.	1	79.46	0.00695	6.95
Pediastrum simplex	250	19865.99	1.73789	1737.89
Pediastrum simplex var. *echinulatum*	3	238.39	0.02085	20.85
Polyedriopsis spinulosa	2	158.93	0.01390	13.90
Tetraedron minimum	3	238.39	0.02085	20.85
Euglenozoa				
Euglena sp.	1	79.46	0.00695	6.95

Myzozoa				
Live *Peridiniopsis* sp.	13	1033.03	0.09037	90.37
Empty *Peridiniopsis* sp.	13	1033.03	0.09037	90.37
Empty *Peridinium* sp.	1	79.46	0.00695	6.95
Ochrophyta				
Live pennate diatom	37	2940.17	0.25721	257.21
Empty pennate diatom	29	2304.46	0.20160	201.60
Live centric diatom	8	635.71	0.05561	55061
Empty centric diatom	1	79.46	0.00695	6.95
Dinobryon sp.	12	953.57	0.08342	83.42
Total	410			

Phytoplankton Composition Analysis				Date observed		September 13 & 18, 2013	
Reservoir	Guajataca			No. sample	2	Sampling Year	2nd
Date collected	May 22, 2013			Station	Central		
Depth sampling	1 meter			Net towing	minutes		
Velocity of the boat while towing sample				3.5 miles per hour		RPM	
Volume of sedimented sample		5 ml		Inverted Microscope		Leica DMI3000B	
No. microscope fields of view in Bongo A			40	Total magnification		400X	
Microscope field diameter		0.53 mm					
Analyzed by	B.I.S.S.						

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
c.f. *Anabaena* sp.	7	77.87	0.00119	1.19
Microcystis sp.	24	267.00	0.00409	4.09
Unknown colonial	155	1724.37	0.0264	26.40
Unknown, screw like, curved filament	8	89	0.0014	1.36
Unknown straight filament	213	2369.62	0.0363	36.28
Charophyta				
Cosmarium sp.	6	66.75	0.0010	1.02
Unknown cf. *Cosmarium* sp.	2	22.25	0.0003	0.34
Euastrum sp.	2	22.25	0.0003	0.34
Staurastrum sp.	37	411.62	0.0063	6.30
Chlorophyta				
Coelastrum sp.	3	33.37	0.00051	0.51
Crucigenia tetrapedia	2	22.25	0.0003	0.34
cf. *Dictyosphaerium*	1	11.12	0.00017	0.17
cf. *Golenkinia radiata*	1	11.12	0.00017	0.17
cf. *Lagerheimia citriformis*	1	11.12	0.00017	0.17
Pandorina sp.	63	700.87	0.0107	10.73
Pediastrum simplex	46	511.75	0.0078	7.83
Pediastrum simplex var.*echinulatum*	5	55.62	0.0009	0.85
Polyedriopsis spinulosa	2	22.25	0.0003	0.34
Scenedesmus quadricauda	1	11.12	0.00017	0.17
Scenedesmus cf. *denticulatus*	1	11.12	0.00017	0.17
Tetraedron minimum	41	456.12	0.00698	6.98
cf. *Tetraedron caudatum* var. *longispinum*	1	11.12	0.00017	0.17
Treubaria cf. *schmidlei*	5	55.62	0.0009	0.85

Euglenozoa				
cf. *Euglena* sp.	2	22.25	0.0003	0.34
Unknown Euglenozoa	44	489.50	0.0075	7.50
Myzozoa				
Peridiniopsis sp.	114	1268.24	0.0194	19.42
Empty *Peridiniopsis* sp.	52	578.50	0.0089	8.87
Ochrophyta				
Live pennate diatoms	418	4650.23	0.0712	71.19
Empty pennate diatoms	74	823.25	0.0126	12.60
Live centric diatoms	7	77.87	0.0012	1.19
Empty centric diatoms	6	66.75	0.0010	1.02
Dinobryon sp.	94	1045.75	0.0160	16.01
Total	1438			

Phytoplankton Composition Analysis		Date observed	October 7, 2013		
Reservoir	Guajataca	No. sample	2	Sampling Year	2nd
Date collected	May 22, 2013	Station	Central		
Depth sampling	1 meter	Net towing	Minutes		
Velocity of the boat while towing sample		3.5 miles per hour	RPM		
Volume of sedimented sample	5 ml	Inverted Microscope	Nikon Eclipse TS100		
No. microscope fields of view in Bongo B	41	Total magnification	400X		
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
c.f. *Anabaena* sp.	1	10.85	0.00017	0.166
Microcystis sp.	14	151.95	0.0023	2.326
Unknown colonial	69	748.90	0.0115	11.47
Unknown, screw like, curved filament	5	54.27	0.0008	0.831
Unknown, straight filament	53	575.24	0.0088	8.806
Charophyta				
Cosmarium sp.	3	32.56	0.0005	0.498
Euastrum sp.	1	10.85	0.00017	0.166
Staurastrum sp.	10	108.54	0.00166	1.662
Chlorophyta				
Coelastrum sp.	1	10.85	0.00017	0.166
Golenkinia radiata	1	10.85	0.00017	0.166
Pandorina sp.	12	130.24	0.002	2
Pandorina morum	1	10.85	0.00017	0.166
Pediastrum simplex	44	477.56	0.00731	7.311
Pediastrum simplex var.*echinulatum*	2	21.71	0.00033	0.332
Polyedriopsis spinulosa	1	10.85	0.00017	0.166
Scenedesmus sp.	1	10.85	0.00017	0.166
Tetraedron minimum	7			
Treubaria cf. *triappendiculata*	1	10.85	0.00017	0.166
Unknown circular solitary	5			
Unknown cf. *Tetraedron* sp.	1	10.85	0.00017	0.166
Euglenozoa				
cf. *Euglena* sp.	3	32.56	0.0005	0.498
Unknown Euglenozoa	9	97.68	0.0015	1.5
Myzozoa				

Peridiniopsis sp.	26	282.19	0.0043	4.320
Empty *Peridiniopsis* sp.	10	108.54	0.00166	1.662
Ochrophyta				
Live pennate diatoms	179	1942.80	0.02974	29.74
Empty pennate diatoms	19	206.22	0.00316	3.157
Dinobryon sp.	24	260.49	0.00399	3.988
Total	503			

Phytoplankton Composition Analysis		**Date observed**		November 19, 2013	
Reservoir	Guajataca	No. sample	3	Sampling Year	2nd
Date collected	September 17, 2013	Station	Central		
Depth sampling	1 meter	Net towing	minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	
Volume of sedimented sample	20 ml	Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo A	40	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Microcystis sp.	30	83.44	0.000255	0.255
Unknown colonial	5	13.91	0.000043	0.043
Unknown, screw like, curved filament	7	19.47	0.000059	0.059
Unknown filament straight	68	189.12	0.000579	0.579
Charophyta				
Cosmarium sp.	1	2.78	0.0000085	0.0085
Euastrum sp.	1	2.78	0.0000085	0.0085
Staurastrum sp.	9	25.03	0.0000766	0.0766
Chlorophyta				
Pandorina sp.	10	27.81	0.0000852	0.0852
Pediastrum simplex	302			
Pediastrum simplex var. *echinulatum*	1	2.78	0.0000085	0.0085
Tetraedron minimum	3	8.34	0.0000255	0.0255
Euglenozoa				
cf. *Euglena* sp.	5	13.91	0.000043	0.043
Unknown Euglenozoa	19	52.84	0.000162	0.162
Trachelomonas sp. (small)	3	8.34	0.0000255	0.0255
Myzozoa				
Peridiniopsis sp.	18	50.06	0.000153	0.1532
Empty *Peridiniopsis* sp.	31	86.22	0.000264	0.264
Unknown dinoflagellate	2	5.56	0.000017	0.017
Ochrophyta				
Live pennate diatoms	8	22.25	0.000068	0.0681
Empty pennate diatoms	6	16.69	0.000051	0.0511
Dinobryon sp.	55	152.97	0.000468	0.468
Total	584			

H-10. La Plata

Phytoplankton Composition Analysis			Date observed		April 19, 2013
Reservoir	La Plata		No. sample	1	Sampling Year 2nd
Date collected	January 24, 2013		Station	Central	
Depth sampling	1meter		Net towing	5 minutes	
Velocity of the boat while towing sample			3.5 miles per hour	RPM	15296
Volume of sedimented sample	10mL		Inverted Microscope		Leica DMI3000B
No. microscope fields of view in Bongo A		37	Total magnification		400X
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/mL)
Charophyta				
Cosmarium sp.	10	60.13	0.00053	0.52
Empty *Staurastrum* sp.	2	12.03	0.00011	0.11
Live *Staurastrum* sp.	6	36.08	0.00032	0.32
Chlorophyta				
Coleastrum cf *pseudomicroporum*	1	6.01	0.00005	0.05
cf. *Micractinium* c.f. *pusillum*	2	12.03	0.00011	0.11
cf. *Monoraphidium* sp.	4	24.05	0.00021	0.21
Pandorina sp.	22	132.30	0.00116	1.16
Pediastrum simplex	3	18.04	0.00016	0.16
Pediastrum simplex var. *echinulatum*	1	6.01	0.00005	0.05
Platydorina cf. *caudata*	2	12.03	0.00011	0.11
Scenedesmus cf. *quadricauda*	2	12.03	0.00011	0.11
Treubaria cf. *schmidlei*	1	6.01	0.00005	0.05
Euglenozoa				
Euglena sp.	9	54.12	0.00047	.047
Phacus longicauda var. *insecta*	1	6.01	0.00005	0.05
Trachelomonas sp. (small)	1	6.01	0.00005	0.05
Empty *Trachelomonas* sp.	2	12.03	0.00011	0.11
Myzozoa				
Peridinium sp.	1	6.01	0.00005	0.05
Live *Peridiniopsis* sp.	2	12.03	0.00011	0.11
Empty *Peridiniopsis* sp.	11	66.15	0.00058	0.58

Ochrophyta				
Live pennate diatoms	1066	6410.38	0.05608	56.08
Empty pennate diatoms	443	2663.98	0.02330	23.30
Live centric diatoms	9	54.12	0.00047	0.47
Empty centric diatoms	1	6.01	0.00005	0.05
Dinobryon sp.	1	6.01	0.00005	0.05
Total	1593			

Phytoplankton Composition Analysis		**Date observed**		August 2, 2013	
Reservoir	La Plata	No. sample	1	Sampling Year	2nd
Date collected	January 24, 2013	Station	Central		
Depth sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	15296
Volume of sedimented sample	10mL	Inverted Microscope		Leica DMI3000B	
No. microscope fields of view in Bongo B	38	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Charophyta				
Cosmarium sp.	1	5.86	0.0000512	0.0512
Staurastrum sp.	4	23.42	0.0002049	0.2045
Empty *Staurastrum* sp.	2	11.71	0.0001024	0.1024
Chlorophyta				
Pandorina sp.	5	29.28	0.0002561	0.2561
P. simplex	2	11.71	0.0001024	0.1024
P. simplex var. *echinulatum*	3	17.57	0.0001537	0.1537
Scenedesmus cf. *quadricauda*	1	5.86	0.0000512	0.0512
Treubaria sp.	1	5.86	0.0000512	0.0512
Empty *Treubaria* sp.	1	5.86	0.0000512	0.0512
Euglenozoa				
Euglena acus	2	11.71	0.0001024	0.1024
Euglena sp.	4	23.42	0.0002049	0.2045
Trachelomonas sp. (dark)	1	5.86	0.0000512	0.0512
Trachelomonas sp. (small)	3	17.57	0.0001537	0.1537
Myzozoa				
Peridiniopsis sp.	15	87.83	0.0007683	0.7683
Empty *Peridiniopsis* sp.	13	76.12	0.0006659	0.6659
Peridinium sp.	3	17.57	0.0001537	0.1537
Ochrophyta				
Live pennate diatom	1333	7805.03	0.0682791	68.279
Empty pennate diatom	469	2746.11	0.0240232	24.023
Live centric diatom	5	29.28	0.0002561	0.2561
Empty centric diatom	4	23.42	0.0002049	0.2045
Dinobryon sp.	4	23.42	0.0002049	0.2045
Total	1875			

Phytoplankton Composition Analysis			**Date observed**	October 2, 2013	
Reservoir	La Plata		No. sample	2	Sampling Year 2nd
Date collected	June 6, 2013		Station	Central	
Depth sampling	1meter		Net towing		
Velocity of the boat while towing sample				RPM	
Volume of sedimented sample	1mL		Inverted Microscope	Nikon TS100	
No. microscope fields of view in Bongo A		39	Total magnification	400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Chlorophyta				
Pandorina sp.	4	228.20	0.01397	13.97
Pandorina morum	1	57.05	0.00349	3.49
P. simplex	1	57.05	0.00349	3.49
P. simplex var. *echinulatum*	1	57.05	0.00349	3.49
Platydorin cf. *caudata*	10	570.51	0.03494	34.94
Polyedriopsis spinulosa	2	114.10	0.0069	6.99
Treubaria cf. *triappendiculata*	1	57.05	0.00349	3.49
Myzozoa				
Peridiniopsis sp.	170	9698.68	0.5939	593.91
Empty *Peridiniopsis* sp.	33	1882.68	0.1153	115.29
Ochrophyta				
Live pennate diatom	69	3936.52	0.2411	241.06
Empty pennate diatom	49	2795.50	0.1712	171.19
Empty centric diatom	6	342.31	0.021	20.96
Dinobryon sp.	1	57.05	0.00349	3.49
Total	348			

Phytoplankton Composition Analysis			**Date observed**	October 4, 2013	
Reservoir	La Plata		No. sample	2	Sampling Year 2nd
Date collected	June 6, 2013		Station	Central	
Depth sampling	1meter		Net towing	minutes	
Velocity of the boat while towing sample			3.5 miles per hour	RPM	
Volume of sedimented sample	1mL		Inverted Microscope	Nikon TS100	
No. microscope fields of view in Bongo B		42	Total magnification	400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown filament screw like curved	2	105.95	0.006488	6.488
Charophyta				
Cosmarium sp.	2	105.95	0.006488	6.488
Chlorophyta				
c.f. *Golenkinia radiata*	1	52.98	0.003244	3.244
Pandorina sp.	6	317.86	0.019464	19.46
Pandorina morum	1	52.98	0.003244	3.244
P. simplex var. *echinulatum*	1	52.98	0.003244	3.244
Platydorin cf. *caudata*	6	317.86	0.019464	19.46
Polyedriopsis spinulosa	1	52.98	0.003244	3.244
Treubaria cf. *schmidlei*	2	105.95	0.006488	6.488
Unknown solitary	13	741.66	0.045417	45.417
Euglenozoa				
Unknown Euglenozoa	4	228.20	0.013974	13.974
Myzozoa				
Peridiniopsis sp.	192	10953.80	0.670773	670.77
Empty *Peridiniopsis* sp.	36	2053.84	0.12577	125.77
Ochrophyta				
Live pennate diatom	59	3366.01	0.20612	206.12
Empty pennate diatom	26	1483.33	0.09083	90.834
Empty centric diatom	7	399.36	0.02446	24.455
Total	359			

Phytoplankton Composition Analysis		**Date observed**		November 21, 2013	
Reservoir	La Plata	No. sample	3	Sampling Year	2nd
Date collected	September 10, 2013	Station	Central		
Depth sampling	1meter	Net towing	minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	
Volume of sedimented sample	4 mL	Inverted Microscope		Nikon TS100	
No. microscope fields of view in Bongo A	39	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
c.f. *Cylindrospermum* sp.	1	14.26	0.000273	0.273
Unknown filament straight	23	328.04	0.006278	6.278
Unknown filament screw like curved	15	213.94	0.00409	4.094
Chlorophyta				
Actinastrum sp.	3	42.79	0.000819	0.819
cf. *Golenkinia radiata*	9	128.36	0.002456	2.456
Micractinium sp.	9	128.36	0.002456	2.456
Pandorina sp.	11			
Platydorin caudata	2	28.53	0.000546	0.5456
Polyedriopsis spinulosa	2	28.53	0.000546	0.5456
Scenedesmus quadricauda	1	14.26	0.000273	0.273
Treubaria c.f. *schmidlei*	2	28.53	0.000546	0.546
Unknown solitary	8	114.10	0.00218	2.183
Euglenozoa				
Trachelomonas sp.	1	14.26	0.000273	0.273
Myzozoa				
Peridiniopsis sp.	164	2339.09	0.04476	44.762
Empty *Peridiniopsis* sp.	55			
Unknown dinoflagellate	1	14.26	0.000273	0.273
Ochrophyta				
Live pennate diatom	14	199.68	0.00382	3.821
Empty pennate diatom	12	171.15	0.00328	3.275
Total	333			

H-11. Patillas

Phytoplankton Composition Analysis		Date observed		October 16, 2013	
Reservoir	Patillas	No. sample	1	Sampling Year	2nd
Date collected	January 22, 2013	Station	Central		
Depth sampling	1meter	Net towing	5 minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	16005
Volume of sedimented sample	10mL	Inverted Microscope		Nikon TS100	
No. microscope fields of view in Bongo A	37	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown filament screw like curved	1	6.01	0.000053	0.0526
Unknown filament straight	2	12	0.000105	0.1052
Charophyta				
Staurastrum sp.	2	12	0.000105	0.1052
Chlorophyta				
Ankistrodesmus falcatus var *mirabilis*	3	18.04	0.000158	0.1578
Golenkinia radiata	1	6.01	0.000053	0.0526
P. simplex	31	186.42	0.011416	11.416
Tetraedron minimum	2	12	0.000105	0.1052
Unknown solitary	3	18.04	0.000158	0.1578
Myzozoa				
Peridiniopsis sp.	1	6.01	0.000053	0.0526
Ochrophyta				
Empty pennate diatom	3	18.04	0.000158	0.1578
Dinobryon sp.	194	1166.62	0.071439	71.44
Total	243			

Phytoplankton Composition Analysis		**Date observed**		October 31, 2013	
Reservoir	Patillas	No. sample	1	Sampling Year	2nd
Date collected	January 22, 2013	Station	Central		
Depth sampling	1meter	Net towing	5 minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	16005
Volume of sedimented sample	10mL	Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B	35	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Charophyta				
Cosmarium sp.	1	6.36	0.0000389	0.0389
Chlorophyta				
Pediastrum simplex	65	413.21	0.00253	2.53
Tetraedron minimum	1	6.36	0.0000389	0.0389
Myzozoa				
Peridiniopsis sp. (small)	1	6.36	0.0000389	0.0389
Empty *Peridiniopsis* sp.	4	25.43	0.0001557	0.1557
Ochrophyta				
Live pennate diatom	6	38.14	0.0002336	0.2336
Empty pennate diatom	4	25.43	0.0001557	0.1557
Dinobryon sp.	1299	8257.90	0.05057	50.569
Total	1381			

Phytoplankton Composition Analysis		Date observed		October 11, 2013	
Reservoir	Patillas	No. sample	2	Sampling Year	2nd
Date collected	June 18, 2013	Station	Central		
Depth sampling	1meter	Net towing	5 minutes		
Velocity of the boat while towing sample		3.7 miles per hour		RPM	
Volume of sedimented sample	10mL	Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo A	37	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown filament screw like curved	502	3018.77	0.02641	26.41
Unknown filament straight	36	216.49	0.00189	1.89
cf. *Anabaena* sp.	1	6.01	0.000053	0.053
Chlorophyta				
Ankitrodesmus falcatus var. *mirabilis*	1	6.01	0.000053	0.053
cf. *Eudorina* sp.	6	36.08	0.002209	2.21
P. simplex	33			
P. simplex var. *echinulatum*	1	6.01	0.000053	0.053
cf. *Pleurotaenium* sp.	1	6.01	0.000053	0.053
Tetraedron minimum	1	6.01	0.000053	0.053
cf. *Tetrastrum* sp.	3	18.04	0.001105	1.10
Unknown solitary	11	66.15	0.004051	4.05
Euglenozoa				
Euglena sp.	2	12.03	0.000736	0.74
Strombomonas sp.	1	6.01	0.000053	0.053
Unknown Euglenozoa	9	54.12	0.003314	3.31
Myzozoa				
Peridiniopsis sp.	27	162.36	0.009943	9.94
Empty *Peridiniopsis* sp.	20	120.27	0.007365	7.36
Peridinum sp.	40	240.54	0.01473	14.73
Empty *Peridinium* sp.	1	6.01	0.000053	0.053
Ochrophyta				
Live pennate diatom	25	150.34	0.009206	9.21
Empty pennate diatom	37	22.50	0.013625	13.63
Live centric	2	12.03	0.000736	0.74
Empty centric diatom	4	24.05	0.001473	1.47

Dinobryon sp.	5	30.07	0.001841	1.74
Total	769			

Phytoplankton Composition Analysis		**Date observed**		November 8, 2013	
Reservoir	Patillas	**No. sample**	2	Sampling Year	2nd
Date collected	June 18, 2013	**Station**	Central		
Depth sampling	1meter	**Net towing**	5 minutes		
Velocity of the boat while towing sample		3.7 miles per hour		**RPM**	
Volume of sedimented sample	20 mL	**Inverted Microscope**		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B	39	**Total magnification**		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown, screw like, curved filament	251	715.99	0.00313	3.132
Unknown, straight filament	11	31.38	0.000137	0.137
cf. *Anabaena* sp.	1	2.85	0.000012	0.012
Chlorophyta				
cf. *Eudorina* sp.	8	22.82	0.0001	0.1
Pediastrum simplex	19	54.20	0.000237	0.237
Unknown solitary	10	28.53	0.000125	0.125
Euglenozoa				
Euglena sp.	2	5.71	0.000025	0.024
Unknown Euglenozoa	9	25.67	0.000112	0.112
Myzozoa				
Peridiniopsis sp.	17	48.49	0.000212	0.212
Peridiniopsis sp. (small)	4	11.41	0.00005	0.05
Empty *Peridiniopsis* sp.	10	28.53	0.000125	0.125
Peridinum sp.	40	114.10	0.000499	0.499
Unknown c.f. dinoflagellate	9	25.67	0.000112	0.112
Ochrophyta				
Live pennate diatom	8	22.82	0.0001	0.1
Empty pennate diatom	31	88.43	0.000387	0.387
Empty centric diatom	5	14.26	0.000062	0.062
Dinobryon sp.	3	8.56	0.000037	0.037
Total	438			

Phytoplankton Composition Analysis		**Date observed**		November 21, 2013	
Reservoir	Patillas	No. sample	3	Sampling Year	2nd
Date collected	September 19, 2013	Station	Central		
Depth sampling	1meter	Net towing	5 minutes		
Velocity of the boat while towing sample		3.5 miles per hour		RPM	16005
Volume of sedimented sample	20mL	Inverted Microscope		Nikon TS100	
No. microscope fields of view in Bongo A	36	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
cf. *Cylindrospermum* sp.	2	5.71	0.0000175	0.0175
Unknown, screw like, curved filament	205	584.77	0.00179	1.790
Unknown, straight filament	16	45.64	0.00014	0.14
Charophyta				
Cosmarium sp.	1	2.85	0.0000087	0.0087
Staurastrum sp.	49			
Chlorophyta				
Micractinium sp.	1	2.85	0.0000087	0.0087
Pediastrum simplex	20	57.05	0.000175	0.175
Tetraedron minimum	30	85.58	0.000262	0.262
Unknown solitary	33	94.13	0.000288	0.288
Euglenozoa				
Strombomonas sp.	1	2.85	0.0000087	0.0087
Myzozoa				
Peridiniopsis sp.	42	119.81	0.000367	0.367
Peridiniopsis sp. (small)	20	57.05	0.000175	0.175
Empty *Peridiniopsis* sp.	17	48.49	0.000148	0.148
Unknown dinoflagellate	8	22.82	0.00007	0.07
Ochrophyta				
Live pennate diatom	246	701.73	0.00215	2.149
Empty pennate diatom	27	77.02	0.000236	0.236
Total	718			

H-12. Toa Vaca

Phytoplankton Composition Analysis			**Date observed**	November 4, 2013	
Reservoir	Toa Vaca		No. sample	2	Sampling Year 2nd
Date collected	May 8, 2013		Station	Central	
Depth sampling	1meter		Net towing	5 minutes	
Velocity of the boat while towing sample			3.5 miles per hour	RPM	
Volume of sedimented sample	40mL		Inverted Microscope	Nikon Eclipse TS100	
No. microscope fields of view in Bongo A		30	Total magnification	400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown colonial	1	1.85	0.00000284	0.00284
Unknown, screwlike, curved filament	1	1.85	0.00000284	0.00284
Unknown, straight filament	157	291.10	0.0004457	0.4457
Chlorophyta				
Pandorina sp.	1	1.85	0.00000284	0.00284
Pediastrum simplex	64			
Tetraedron minimum	1	1.85	0.00000284	0.00284
Myzozoa				
Peridiniopsis sp.	11	20.40	0.0000312	0.0312
Empty *Peridiniopsis* sp.	10	18.54	0.0000284	0.0284
Ochrophyta				
Live pennate diatom	23	42.65	0.0000653	0.0653
Empty pennate diatom	60	111.25	0.00017	0.17
Total	329			

Phytoplankton Composition Analysis		**Date observed**		November 6, 2013	
Reservoir	Toa Vaca	No. sample	2	Sampling Year	2nd
Date collected	May 8, 2013	Station	Central		
Depth sampling	1meter	Net towing	5 minutes		
Velocity of the boat while towing sample		5 miles per hour		RPM	
Volume of sedimented sample	40mL	Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B	37	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown colonial	17	25.56	0.0000391	0.0391
Unknown, straight filament	185	278.12	0.000426	0.4258
Charophyta				
Cosmarium sp.	1	1.50	0.0000023	0.0023
Chlorophyta				
Crucigenia tetrapedia	2	3.01	0.0000046	0.0046
Pediastrum simplex	4	6.01	0.0000092	0.0093
Tetraedron minimum	4	6.01	0.0000092	0.0093
Myzozoa				
Peridiniopsis sp.	31	46.60	0.000071	0.0713
Empty *Peridiniopsis* sp.	3	4.51	0.0000069	0.0069
Ochrophyta				
Live pennate diatom	78	117.26	0.00018	0.1795
Empty pennate diatom	74	111.25	0.00017	0.1703
Dinobryon sp.	1	1.50	0.0000023	0.0023
Total	400			

Phytoplankton Composition Analysis		Date observed		November 27, 2013	
Reservoir	Toa Vaca	No. sample	3	Sampling Year	2nd
Date collected	September 12, 2013	Station	Central		
Depth sampling	1meter	Net towing	5 minutes		
Velocity of the boat while towing sample		5 miles per hour		RPM	
Volume of sedimented sample	50mL	Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo A	37	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown cf. Chroococcaceae	194	233.32	0.0002858	0.2858
Unknown colonial	22	26.46	0.00003241	0.0324
Unknown, screw like, curved filament	142	170.78	0.0002092	0.2092
Unknown, straight filament	142	170.78	0.0002092	0.2092
Chlorophyta				
Crucigenia tetrapedia	3	3.61	0.00000442	0.00442
Pediastrum simplex	2	2.41	0.00000295	0.00295
Tetraedron minimum	46	55.32	0.00006776	0.06776
Heterokontophyta				
cf. *Goniochloris* sp.	1	1.2	0.00000147	0.00147
Myzozoa				
Peridiniopsis sp.	121	145.53	0.00017823	0.17823
Empty *Peridiniopsis* sp.	13	15.64	0.00001915	0.01915
Ochrophyta				
Live pennate diatom	117	140.72	0.0001734	0.17234
Empty pennate diatom	29	34.88	0.00004272	0.04272
Total	832			

Third year of study (2014)
H-13 Cerrillos

Phytoplankton Composition Analysis		**Date observed**		February 20, 2014	
Reservoir	Cerrillos	No. sample	1	Sampling Year	3rd
Date of collection	February 4, 2014	Station	Central		
Depth of sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		5 mph		RPM	
Volume of sedimented sample	200 µl	Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo A	37	Total magnification		400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**	**No. organisms towing sample (Cells/L)**
Cyanobacteria				
Unknown colonial	18	5412.14	1.66	1657
Unknown colonial cf. Merismopediaceae	19	5712.82	1.75	1749
Charophyta				
cf. *Scenedesmus* sp.	3	902.02	0.28	276
Live *Staurastrum* sp. 1	5	1503.37	0.46	460
Live *Staurastrum* sp. 2	10	3006.75	0.93	921
Empty *Staurastrum* sp. 2	16	4810.79	1.47	14
Chlorophyta				
Coelastrum cf. *proboscodeum*	10	3006.75	0.93	921
Cosmarium sp.	1	300.67	0.09	92
Crucigenia tetrapedia	4	1202.7	0.37	368
Pandorina sp.	6	1804.05	0.55	552
Pandorina cf. *morum*	4	1202.7	0.37	368
Pediastrum simplex	5	1503.37	0.46	460
Live *Tetraedron minimum*	8	2405.4	0.74	736
Myzozoa				
Live *Peridiniopsis* sp.	26	7817.54	2.39	2393
Empty *Peridiniopsis* sp.	20	6013.49	1.84	1841
Ochrophyta				

Live pennate diatom	1187	356900.67	109.28	109286
Empty pennate diatom	105	31570.83	9.67	9666
Total	**1447**			

Phytoplankton Composition Analysis		Date observed	March 18, 2014		
Reservoir	Cerrillos	No. sample	1	Sampling Year	3rd
Date of collection	February 4, 2014	Station	Central		
Depth of sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		5 mph	RPM		
Volume of sedimented sample	200 µl	Inverted Microscope	Nikon Eclipse TS100		
No. microscope fields of view in Bongo B	39	Total magnification	400X		
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**
Cyanobacteria				
Unknown colonial	40	11410.21	3.49	3493
Unknown colonial cf. Merismopediaceae	25	7131.38	2.18	2183
Charophyta				
Live *Staurastrum* sp. 1	4	1141.02	0.35	349
Live *Staurastrum* sp. 2	15	4278.83	1.31	1310
Empty *Staurastrum* sp. 2	12	3423.06	1.05	1048
Chlorophyta				
Coelastrum cf. *proboscodeum*	13	3708.32	1.14	1135
Coelastrum sp.	3	855.77	0.26	262
Cosmarium sp.	1	285.26	0.09	87
Crucigenia tetrapedia	2	570.51	0.17	174
Pandorina sp.	4	1141.02	0.35	349
Pandorina cf. *morum*	2	570.51	0.17	174
Pediastrum simplex	11	3137.81	0.96	960
Scenedesmus cf. *ovalternus*	1	285.26	0.09	87
Live *Tetraedron minimum*	3	855.77	0.26	262
Euglenozoa				
Unknown	1	285.26	0.09	87
Myzozoa				
Live *Peridiniopsis* sp.	35	9984	3.06	3057
Empty *Peridiniopsis* sp.	19	5419.85	1.66	1659

Peridiniopsis sp. (small)	3	855.77	0.26	262
Ochrophyta				
Live pennate diatom	1549	441860.5	135.29	135290
Empty pennate diatom	74	21108.89	6.46	6463.18
Live centric	1	285.26	0.09	87
Empty centric	2	570.51	0.17	174
Unknown				
Unknown solitary	2	570.51	0.17	174
Total				

Phytoplankton Composition Analysis		Date observed	May 15, 2014		
Reservoir	Cerrillos	No. sample	2	Sampling Year	3rd
Date of collection	April 22, 2014	Station	Central		
Depth of sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		5 mph	RPM	7635	
Volume of sedimented sample	5 ml	Inverted Microscope	Nikon Eclipse TS100		
No. microscope fields of view in Bongo A	42	Total magnification	400X		
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**
Cyanobacteria				
Unknown colonial	31	328.45	0.004	4.02
Unknown, filamentous, screw like	1	10.6	0.00013	0.13
Charophyta				
Cosmarium sp.	25	265.88	0.0032	3.24
Euastrum sp.	5	53	0.00065	0.65
Staurastrum sp. 1	87	921.78	0.011	11.29
Staurastrum sp. 2	14	148.33	0.002	1.82
Chlorophyta				
Crucigenia tetrapedia	2	21.2	0.00026	0.26
Pandorina morum	1	10.6	0.00013	0.13
Pandorina sp.	15	158.93	0.0019	1.95
Pediastrum simplex	1	10.6	0.00013	0.13
Pediastrum simplex var. *biwaense*	5	53	0.00065	0.65
Scenedesmus acuminatus	1	10.6	0.00013	0.13
Tetraedron minimum	10	105.95	0.0013	1.3
Unknown solitary	8	84.76	0.0010	1.04
Euglenozoa				
Euglena sp.	1	10.6	0.00013	0.13
Trachelomonas sp.	2	21.2	0.00026	0.26
Myzozoa				
Peridiniopsis sp.	382	4047.37	0.05	49.57

Empty *Peridiniopsis* sp.	89	942.97	0.0115	11.55
Peridinium sp.	11	116.55	0.0014	1.43
Ochrophyta				
Live pennate diatom	971	10287.94	0.126	126
Empty pennate diatom	189	2002.5	0.0245	24.53
Total	**1850**			

Phytoplankton Composition Analysis			Date observed		June 20, 2014	
Reservoir	Cerrillos		No. sample	2	Sampling Year	3rd
Date of collection	April 22, 2014		Station	Central		
Depth of sampling	1 meter		Net towing	5 minutes		
Velocity of the boat while towing sample			5 mph		RPM	7635
Volume of sedimented sample	5 ml		Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		36	Total magnification		400X	
Microscope field diameter	0.53 mm					
Analyzed by	B.I.S.S.					

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Unknown colonial	18	222.5	0.0027	2.73
Unknown Merismopediaceae	10	123.61	0.0015	1.51
Charophyta				
Cosmarium sp.	24	293.67	0.0036	3.63
Euastrum sp.	5	61.81	0.00076	0.76
Spondylosium sp.	3	37.08	0.00045	0.45
Staurastrum sp. 1	114	1409.16	0.017	17.26
Staurastrum sp. 2	19	234.86	0.0029	2.88
Chlorophyta				
Pandorina morum	3	37.08	0.00045	0.45
Pandorina sp.	12	148.33	0.0018	1.82
Pediastrum simplex	13	160.69	0.00197	1.97
P. simplex var. *echinulatum*	3	37.08	0.00045	0.45
Tetraedron minimum	17			
Euglenozoa				
Trachelomonas sp. (dark)	5	61.81	0.00076	0.76
Dynophyta				
Peridiniopsis sp.	408	5043.31	0.062	61.77
Peridinium sp.	8	98.89	0.0012	1.21
Ochrophyta				
Live pennate diatom	878	10853.01	0.13	132.92
Empty pennate diatom	254	3139.71	0.038	38.45

Total	**1791**			

H-14 Cidra

Phytoplankton Composition Analysis		Date observed	March 7, 2014		
Reservoir	Cidra	No. sample	1	Sampling Year	3rd
Date of collection	February 5, 2014	Station	Central		
Depth of sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		5 mph		RPM	
Volume of sedimented sample	5 ml	Inverted Microscope	Nikon Eclipse TS100		
No. microscope fields of view in Bongo A	37	Total magnification	400X		
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	No. organisms Bongo	No. organisms mL sample (Cells/mL)	No. organisms towing sample (Cells/mL)	No. organisms towing sample (Cells/mL)
Cyanobacteria				
Unknown, filamentous, screw like	9	108.24	0.0013	1.33
Unkown, filamentous, straight	11	132.3	0.0016	1.62
Unknown colonial cf. Merismopediaceae	1	12.03	0.00015	0.15
Charophyta				
Staurastrum sp. 1	14	168.38	0.0021	2.06
Staurastrum sp. 3	25	300.67	0.0037	3.68
Chlorophyta				
Ankitrodesmus gracillis	1	12.03	0.00015	0.15
Scenedesmus acuminatus var. *acuminatus*	1	12.03	0.00015	0.15
Scenedesmus denticulatus	1	12.03	0.00015	0.15
Scenedesmus quadricauda	15	180.40	0.0022	2.21
Scenedesmus cf. *smithii*	2	24.05	0.0003	0.29
Scenedesmus sp.	3	36.08	0.0004	0.44
Pediastrum simplex	5	60.13	0.0007	0.74
Tetraedron minimum	13	156.35	0.002	1.91
Treubaria schmidlei	4	48.11	0.0006	0.59
Euglenozoa				
Phacus longicauda	6	72.16	0.0009	0.88

Phacus cf. *pleuronectes*	1	12.03	0.00015	0.15
Phacus sp.	3	36.08	0.0004	0.44
Strombomonas sp.	5	60.13	0.0007	0.74
Trachelomonas sp.	8	96.22	0.001	1.18
Myzozoa				
Peridiniopsis sp. (small)	20	240.54	0.003	2.95
Peridiniopsis sp.	21	252.57	0.003	3.09
Peridinium sp.	1137	13674.68	0.167	167.48
Ochrophyta				
Dinobryon sp.	26	312.7	0.004	
Live pennate diatom	6	72.16	0.0009	0.88
Empty pennate diatom	8	96.22	0.001	1.18
Total	**1346**			

Phytoplankton Composition Analysis			Date observed	March 19, 2014	
Reservoir	Cidra		No. sample	1	Sampling Year	3rd
Date of collection	February 5, 2014		Station	Central	
Depth of sampling	1 meter		Net towing	5 minutes	
Velocity of the boat while towing sample			5 mph	RPM	
Volume of sedimented sample	5 ml		Inverted Microscope	Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		35	Total magnification	400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**
Cyanobacteria				
Unknown, filamentous, screw like	15	190.71	0.0023	2.34
Unkown, filamentous, straight	14	178	0.002	2.18
Unknown colonial	28	356	0.004	0.47
Charophyta				
Cosmarium sp.	3	38.14	0.0005	0.47
Staurastrum sp. 1	19	241.57	0.003	2.96
Staurastrum sp. 3	15	190.71	0.002	2.34
Chlorophyta				
Ankitrodesmus gracillis	1	12.71	0.0002	0.16
Coelastrum sp.	9	114.43	0.001	1.40
Coelastrum reticulatum	2	25.43	0.0003	0.31
Scenedesmus acuminatus var. *acuminatus*	4	50.86	0.0006	0.62
Scenedesmus cf. *bicaudatus*	2	25.43	0.0003	0.31
Scenedesmus denticulatus	6			
Scenedesmus quadricauda	2	25.43	0.0003	0.31
Scenedesmus sp.	12	152.57	0.002	1.87
Pediastrum simplex	8	101.71	0.001	1.25
Tetraedron minimum	17	216.14	0.003	2.65
Tetraedron cf. *caudatum*	6	76.29	0.0009	0.93
Tetraedron gracile	2	25.43	0.0003	0.31

Tetraedron trigonum	2	25.43	0.0003	0.31
Treubaria schmidlei	4	50.86	0.0006	0.62
Euglenozoa				
Euglena acus	1	12.71	0.0002	0.16
Euglena sp.	5	63.57	0.0008	0.78
Lepocinclis sp.	2	25.43	0.0003	0.31
Phacus longicauda	3	38.14	0.0005	0.47
Phacus sp.	5	63.57	0.0008	0.78
Strombomonas sp.	1	12.71	0.0002	0.16
Trachelomonas sp.	12	152.57	0.002	1.87
Myzozoa				
Peridiniopsis sp. (small)	12	152.57	0.002	1.87
Peridiniopsis sp.	10	127.14	0.002	1.56
Peridinium sp.	605	7692.11	0.09	94.21
Ochrophyta				
Dinobryon sp.	25	317.86	0.004	3.89
Live pennate diatom	16	203.43	0.002	2.49
Empty pennate diatom	15	190.71	0.002	2.34
Live centric diatom	4	50.86	0.0006	0.62
Total	**887**			

Phytoplankton Composition Analysis				Date observed		June 23, 2014	
Reservoir	Cidra			No. sample	2	Sampling Year	3rd
Date of collection	April 15, 2014			Station	Central		
Depth of sampling	1 meter			Net towing	5 minutes		
Velocity of the boat while towing sample				5 mph		RPM	
Volume of sedimented sample	5 ml			Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo A		44		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	B.I.S.S.						

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/L)**
Cyanobacteria				
Cylindrospermum sp.	1	10.11	0.00012	0.124
Unknown filament screw like curly	146	1476.59	0.018	18.08
Unknown filament straight	4	40.45	0.0005	0.5
Unknown colonial	16	161.82	0.002	1.98
Unknown Merismopediacea	5	50.57	0.0006	0.62
Charophyta				
Cosmarium sp.	3	30.34	0.0004	0.37
Cosmarium tenue	6	60.68	0.0007	0.74
Staurastrum sp. 1	88	890	0.011	10.90
Staurastrum sp. 3	29	293.29	0.004	3.59
Chlorophyta				
Coelastrum sp.	10	101.14	0.001	1.24
Coelastrum cf. *reticulatum*	2	20.23	0.0003	0.25
Scenedesmus acuminatus var. *acuminatus*	3	30.34	0.0004	0.37
Scenedesmus quadricauda	7	70.8	0.0009	0.87
Scenedesmus sp.	8			
Schroederia spiralis	1	10.11	0.00012	0.124
Pediastrum simplex	54	546.13	0.007	6.69
P. simplex var. *echinulatum*	4	40.45	0.0005	0.5
Tetraedron minimum	15	151.7	0.002	1.86

Tetraedron cf. *caudatum* var. *longispinum*	4	40.45	0.0005	0.5
Treubaria schmidlei	3	30.34	0.0004	0.37
Euglenozoa				
Euglena sp.	2	20.23	0.0003	0.25
Lepocinclis sp.	2	20.23	0.0003	0.25
Phacus longicauda	4	40.45	0.0005	0.5
Phacus sp.	6	60.68	0.0007	0.74
Trachelomonas sp.	3	30.34	0.0004	0.37
Dinophyta				
Peridiniopsis sp. (small)	85	859.66	0.011	10.53
Peridiniopsis sp.	74	748.41	0.009	9.17
Peridinium sp.	978	9891.1	0.12	121.14
Ochrophyta				
Dinobryon sp.	55	556.25	0.0068	6.81
Empty pennate diatom	2	20.23	0.0003	0.25
Empty centric diatom	5	50.57	0.0006	0.62
Total	**1624**			

Phytoplankton Composition Analysis				Date observed		June 26, 2014	
Reservoir	Cidra			No. sample	2	Sampling Year	3rd
Date of collection	April 15, 2014			Station	Central		
Depth of sampling	1 meter			Net towing	5 minutes		
Velocity of the boat while towing sample				5 mph		RPM	
Volume of sedimented sample	5 ml			Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		39		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	B.I.S.S.						

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/mL)
Cyanobacteria				
Unknown filament screw like curly	82	935.64	0.011	11.46
Unknown colonial	36	410.77	0.005	5.03
Charophyta				
Cosmarium sp.	8	91.28	0.0011	1.12
Cosmarium tenue	4	45.64	0.0006	0.56
Staurastrum sp. 1	96	1095.38	0.013	13.42
Staurastrum sp. 3	33	376.54	0.005	4.61
Chlorophyta				
Coelastrum sp.	14	159.74	0.002	1.96
Coelastrum cf. *reticulatum*	1	11.41	0.0001	0.14
Micractinium cf. *pusillum*	2	22.82	0.0003	0.28
Scenedesmus acuminatus var. *acuminatus*	3	34.23	0.0004	0.42
Scenedesmus quadricauda	3	34.23	0.0004	0.42
Scenedesmus sp.	8			
Schroederia spiralis	1	11.41	0.0001	0.14
Pediastrum simplex	34			
P. simplex var. *echinulatum*	3	34.23	0.0004	0.42
Tetraedron minimum	11	125.5	0.002	1.54
Tetraedron cf. *caudatum* var. *longispinum*	2	22.82	0.0003	0.28

Tetraedron trigonum	1	11.41	0.0001	0.14
Treubaria schmidlei	3	34.23	0.0004	0.42
Euglenozoa				
Euglena sp. (small)	4	45.64	0.0006	0.56
Euglena sp.	2	22.82	0.0003	0.28
Lepocinclis sp.	2	22.82	0.0003	0.28
Phacus longicauda var. *insecta*	1	11.41	0.0001	0.14
Phacus sp.	3	34.23	0.0004	0.42
Trachelomonas sp.	3	34.23	0.0004	0.42
Dinophyta				
Peridiniopsis sp. (small)	98	118.2	0.014	13.7
Peridiniopsis sp.	67	764.48	0.009	9.36
Peridinium sp.	905	10326.24	0.126	126.47
Ochrophyta				
Dinobryon sp.	55	627.56	0.008	7.69
Empty pennate diatom	1	11.41	0.0001	0.14
Empty centric diatom	3	34.23	0.0004	0.42
Total	**1491**			

H-15 Guajataca

Phytoplankton Composition Analysis		Date observed	March 20, 2014		
Reservoir	Guajataca	No. sample	1	Sampling Year	3rd
Date of collection	January 28, 2014	Station	Central		
Depth of sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		5 mph		RPM	
Volume of sedimented sample	10 ml	Inverted Microscope	Nikon Eclipse TS100		
No. microscope fields of view in Bongo A	40	Total magnification	400X		
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	No. organisms Bongo	No. organisms mL sample (Cells/mL)	No. organisms towing sample (Cells/mL)	No. organisms towing sample (Cells/mL)
Cyanobacteria				
Microcystis sp.	36	200.25	0.001	1.23
Unknown, filamentous, screw like	25	139.06	0.0009	0.85
Unknown, filamentous, straight	70	389.37	0.002	2.38
Unknown, colonial cf. Merismopediaceae	15	83.44	0.0005	0.51
Charophyta				
Cosmarium sp.	19	105.69	0.0006	0.65
Staurastrum sp. 1	45	250.31	0.0002	1.53
Chlorophyta				
Coelastrum sp.	1	5.56	0.00003	0.03
Crucigenia tetrapedia	4	22.25	0.00014	0.14
Euastrums sp.	2	11.12	0.00007	0.07
Scenedesmus acuminatus var. *acuminatus*	3			
Scenedesmus quadricauda	1	5.56	0.00003	0.03
Scenedesmus sp.	1	5.56	0.00003	0.03
Pediastrum simplex	455			
Pediastrum simplex var. *echinulatum*	8	44.5	0.0003	0.27
Tetraedron minimum	29	161.31	0.0009	0.99
Treubaria triappendiculata	1	5.56	0.00003	0.03

Euglenozoa				
Euglena acus	11	61.19	0.0004	0.37
Phacus longicauda	65			
Phacus sp.	11	61.19	0.0004	0.37
Trachelomonas sp.	5	27.81	0.0002	0.17
Myzozoa				
Peridiniopsis sp.	217	1207.06	0.007	7.39
Empty *Peridiopsis* sp.	37	205.81	0.001	1.26
Peridinium sp.	2	11.12	0.00007	0.07
Ochrophyta				
Dinobryon sp.	60	333.75	0.002	2.04
Live pennate diatom	697	3877.05	0.024	23.74
Empty pennate diatom	100	556.25	0.003	3.41
Total	**1920**			

Phytoplankton Composition Analysis			Date observed		March 25, 2014	
Reservoir	Guajataca		No. sample	1	Sampling Year	3rd
Date of collection	January 28, 2014		Station	Central		
Depth of sampling	1 meter		Net towing	5 minutes		
Velocity of the boat while towing sample			5 mph		RPM	
Volume of sedimented sample	10 ml		Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		41	Total magnification		400X	
Microscope field diameter	0.53 mm					
Analyzed by	B.I.S.S.					

Organisms	No. organisms Bongo	No. organisms mL sample (Cells/mL)	No. organisms towing sample (Cells/mL)	No. organisms towing sample (Cells/mL)
Cyanobacteria				
Microcystis sp.	34	184.51	0.001	1.13
Unknown, filamentous, screw like	72	390.73	0.002	2.39
Unknown, filamentous, straight	273	1481.52	0.009	9.07
Unknown colonial cf. Merismopediaceae	100	542.68	0.003	3.32
Unknown colonial	110	596.95	0.004	3.66
Charophyta				
Cosmarium sp.	9	48.84	0.0003	0.3
Spondylosium sp.	22	119.39	0.0007	0.73
Staurastrum sp. 1	73	396.16	0.002	2.43
Chlorophyta				
Coelastrum sp.	3	16.28	0.0001	0.1
Crucigenia tetrapedia	1	5.43	0.00003	0.03
Euastrums sp.	4	21.71	0.0001	0.13
Scenedesmus acuminatus var. *acuminatus*	5			
Scenedesmus quadricauda	1	5.43	0.00003	0.03
Pandorina morum	1	5.43	0.00003	0.03
Pediastrum simplex	348	1888.5	0.0116	11.56
P. simplex var. *duodenarium*	13	70.55	0.0004	0.43
Pediastrum simplex var. *echinulatum*	9			

Polyedriopsis spinulosa	1	5.43	0.00003	0.03
Tetraedron minimum	27	146.52	0.0009	0.9
Treubaria triappendiculata	4	21.71	0.0001	0.13
Euglenozoa				
Euglena acus	3	16.28	0.0001	0.1
Euglena proxima	1	5.43	0.00003	0.03
Euglena sp.	4	21.71	0.0001	0.13
Lepocinclis sp.	4	21.71	0.0001	0.13
Phacus longicauda	51	276.77	0.002	1.69
Phacus sp.	12	65.12	0.0004	0.4
Trachelomonas sp.	2	10.85	0.00007	0.07
Myzozoa				
Peridiniopsis sp.	207	1123.35	0.007	6.88
Peridinium sp.	4	21.71	0.0001	0.13
Ochrophyta				
Dinobryon sp.	131	710.91	0.004	4.35
Live pennate diatom	610	3310.35	0.02	20.27
Empty pennate diatom	85	461.28	0.0028	2.82
Total	**2224**			

Phytoplankton Composition Analysis		Date observed	July 1, 2014		
Reservoir	Guajataca	No. sample	2	Sampling Year	3rd
Date of collection	April 8, 2014	Station	Central		
Depth of sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		5 mph	RPM		
Volume of sedimented sample	10 ml	Inverted Microscope	Nikon Eclipse TS100		
No. microscope fields of view in Bongo A	39	Total magnification	400X		
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**
Cyanobacteria				
Anabaena sp.	1	5.71	0.000036	0.036
Microcystis sp.	57	325.19	0.0020	2.03
Unknown filament screw like curly	128	730.25	0.0046	4.56
Unknown filament straight	467	2664.28	0.017	16.65
Unknown colonial cf. Merismopediaceae	134	764.48	0.0048	4.78
Unknown colonial	85	484.93	0.003	3.03
Charophyta				
Cosmarium sp.	18	102.69	0.006	0.64
Cosmarium tenue	10	57.05	0.00036	0.36
Staurastrum sp. 1	13	74.17	0.00046	0.46
Chlorophyta				
Ankistrodesmus sp.	1	5.71	0.000036	0.036
Coelastrum pseudomicrosporum	2	11.41	0.000071	0.071
Crucigenia tetrapedia	3	17.12	0.00011	0.11
Euastrum sp.	5	28.53	0.00018	0.18
Scenedesmus acuminatus var. *acuminatus*	2	11.41	0.000071	0.071
Scenedesmus sp.	4	22.82	0.00014	0.14
Pandorina morum	1	5.71	0.000036	0.036
Pandorina sp.	1	5.71	0.000036	0.036

Pediastrum simplex	434	2476.02	0.015	15.47
Pediastrum simplex var. *echinulatum*	11	62.76	0.00039	0.39
Tetraedron caudatum var. *longispinum*	5	28.53	0.00018	0.18
Tetraedron minimum	93	530.58	0.0033	3.32
Treubaria sp.	1	5.71	0.000036	0.036
Euglenozoa				
Euglena acus	2	11.41	0.000071	0.071
Euglena sp.	13	74.17	0.00046	0.46
Phacus longicauda var. insecta	9	51.35	0.00032	0.32
Trachelomonas sp.	3	17.12	0.00011	0.11
Dinophyta				
Peridiniopsis sp.	76	433.59	0.0027	2.71
Peridinium sp.	4	22.82	0.00014	0.14
Ochrophyta				
Dinobryon sp.	201	1146.73	0.0072	7.17
Live pennate diatom	1299	7410.93	0.46	46.31
Empty pennate diatom	97	553.4	0.0035	3.46
Total	**3180**			

Phytoplankton Composition Analysis				Date observed		July 7, 2014	
Reservoir	Guajataca			No. sample	2	Sampling Year	3rd
Date of collection	April 8, 2014			Station	Central		
Depth of sampling	1 meter			Net towing	5 minutes		
Velocity of the boat while towing sample				5 mph		RPM	
Volume of sedimented sample	10 ml			Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		37		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	B.I.S.S.						

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/L)
Cyanobacteria				
Anabaena sp.	2	12.03	0.000075	0.075
Microcystis sp.	84	505.13	0.0032	3.16
Unknown filament screw like curly	116	697.56	0.0044	4.36
Unknown filament straight	263	1581.55	0.0099	9.88
Unknown colonial cf. Merismopediaceae	24	144.32	0.0009	0.9
Unknown colonial	19	114.26	0.0007	071
Charophyta				
Cosmarium sp.	4	24.05	0.0002	0.15
Cosmarium tenue	5	30.07	0.0002	0.19
Staurastrum sp. 1	5	30.07	0.0002	0.19
Chlorophyta				
Ankistrodesmus sp.	1	6.01	0.00038	0.038
Euastrum sp.	1	6.01	0.00038	0.038
Scenedesmus acuminatus var. *acuminatus*	1	6.01	0.00038	0.038
Scenedesmus sp.	1	6.01	0.00038	0.038
Pediastrum simplex	278	1671.75	0.01	10.45
Pediastrum simplex var. *echinulatum*	3	18.04	0.0001	0.11
Tetraedron caudatum var. *longispinum*	3	18.04	0.0001	0.11

Tetraedron minimum	20	120.27	0.00075	0.75
Treubaria sp.	4	24.05	0.00025	0.15
Euglenozoa				
Euglena acus	3	18.04	0.0001	0.11
Euglena sp.	6	36.08	0.0002	0.23
Lepocinclis sp.	2	12.03	0.000075	0.075
Phacus longicauda var. insecta	6	36.08	0.0002	0.23
Phacus sp.	2	12.03	0.000075	0.075
Trachelomonas sp.	4	24.05	0.00025	0.15
Dinophyta				
Peridiniopsis sp.	32	192.43	0.0012	1.2
Peridinium sp.	3	18.04	0.0001	0.11
Ochrophyta				
Dinobryon sp.	102	613.38	0.004	3.83
Live pennate diatom	913	5490.32	0.034	34.31
Empty pennate diatom	46	276.62	0.0017	1.73
Total	**1951**			

H-16 La Plata

Phytoplankton Composition Analysis		**Date observed**	April 4, 2014
Reservoir	La Plata	No. sample 1	Sampling Year 3rd
Date of collection	January 21, 2014	Station	Central
Depth of sampling	1 meter	Net towing	5 minutes
Velocity of the boat while towing sample		5 mph	RPM
Volume of sedimented sample	5 ml	Inverted Microscope	Nikon Eclipse TS100
No. microscope fields of view in Bongo A	41	Total magnification	400X
Microscope field diameter	0.53 mm		
Analyzed by	B.I.S.S.		

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/L)**
Cyanobacteria				
Unknown filament screw like curly	6	65.12	0.0008	0.8
Unkown filament straight	34	369.02	0.005	4.52
Unknown colonial	1	10.85	0.0001	0.13
Charophyta				
Cosmarium sp.	8	86.80	0.0008	1.04
Staurastrum sp. 1	28	303.80	0.0028	3.64
Chlorophyta				
Micractinium sp.	2	**21.70**	**0.0002**	**0.26**
Scenedesmus acuminatus var. *acuminatus*	1	10.85	0.0001	0.13
Pandorina morum	1	10.85	0.0001	0.13
Pandorina sp.	12			
Pediastrum simplex	1	10.85	0.0001	0.13
Pediastrum simplex var. *echinulatum*	1	10.85	0.0001	0.13
Platydorina caudata	1	10.85	0.0001	0.13
Polyedriopsis spinulosa	3	32.55	0.0003	0.39
Tetraedron minimum	1	10.85	0.0001	0.13
Treubaria schmidlei	2	21.70	0.0002	0.26

Unknown solitary	293	3076.50	0.0293	38.1
Euglenozoa				
Phacus longicauda	1	10.85	0.0001	0.13
Trachelomonas sp.	3	32.55	0.0003	0.39
Dinophyta				
Peridiniopsis sp.	699	7586.68	0.093	92.92
Peridinium sp.	1	10.85	0.0001	0.13
Ochrophyta				
Live pennate diatom	70	759.75	0.009	9.30
Empty pennate diatom	54	586.1	0.007	7.18
Live centric diatom	1	10.85	0.0001	0.13
Total	**1224**			

Phytoplankton Composition Analysis			Date observed		April 10, 2014	
Reservoir	La Plata		No. sample	1	Sampling Year	3rd
Date of collection	January 21, 2014		Station	Central		
Depth of sampling	1 meter		Net towing	5 minutes		
Velocity of the boat while towing sample			5 mph		RPM	
Volume of sedimented sample	5 ml		Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		37	Total magnification		400X	
Microscope field diameter	0.53 mm					
Analyzed by	B.I.S.S.					

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**
Cyanobacteria				
Unknown, filamentous, straight	23	276.62	0.0034	3.39
Charophyta				
Cosmarium sp.	3	36.08	0.00044	0.44
Staurastrum sp. 1	27	324.73	0.004	3.98
Staurastrum sp. 3	1	12.03	0.00015	0.15
Chlorophyta				
Coelastrum cf. *pseudomicrosporum*	1	12.03	0.00015	0.15
Micractinium sp.	4	48.11	0.0006	0.59
Pandorina morum	2	24.05	0.0003	0.29
Pandorina sp.	3	36.08	0.00044	0.44
Pediastrum duplex	1	12.03	0.00015	0.15
Pediastrum simplex	7			
Pediastrum simplex var. *echinulatum*	2	24.05	0.0003	0.29
Platydorina caudata	1	12.03	0.00015	0.15
cf. *Schroederia spiralis*	1	12.03	0.00015	0.15
cf. *Schroederia setigera*	1	12.03	0.00015	0.15
Tetraedron minimum	1	12.03	0.00015	0.15
Uknown solitary	245	2946.61	0.036	36.09
Euglenozoa				
Strombomonas sp.	2	24.05	0.0003	0.29
Myzozoa				

Peridiniopsis sp.	519	6242.00	0.076	76.45
Ochrophyta				
Live pennate diatom	74	890	0.011	10.9
Empty pennate diatom	23	276.62	0.0034	3.39
Total	**941**			

Phytoplankton Composition Analysis			Date observed		July 10, 2014	
Reservoir	La Plata		No. sample	2	Sampling Year	3rd
Date of collection	April 10, 2014		Station	Central		
Depth of sampling	1 meter		Net towing	5 minutes		
Velocity of the boat while towing sample			5 mph		RPM	
Volume of sedimented sample	10 ml		Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo A		38	Total magnification		400X	
Microscope field diameter	0.53 mm					
Analyzed by	B.I.S.S.					

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/L)**
Cyanobacteria				
Cylindrospermum sp.	8	46.84	0.00029	0.287
Unknown filament straight	54	316.18	0.0019	1.94
Unknown filament screw like curly	263	1539.93	0.00943	9.43
Charophyta				
Cosmarium sp.	1	5.86	0.000036	0.36
Staurastrum sp. 3	3	17.57	0.00011	0.11
Chlorophyta				
Actinastrum sp.	25	146.38	0.0009	0.9
Coelastrum cf. *cambricum*	1	5.86	0.000036	0.36
Coelastrum cf. *pseudomicrosporum*	1	5.86	0.000036	0.36
Micractinium sp.	1	5.86	0.000036	0.36
Oocystis sp.	1	5.86	0.000036	0.36
Pandorina morum	1	5.86	0.000036	0.36
Pandorina sp.	1	5.86	0.000036	0.36
Pediastrum simplex	4	23.42	0.00014	0.14
Platydorina caudata	4	23.42	0.00014	0.14
Scenedesmus sp.	3	17.57	0.00011	0.11
Tetraedron minimum	9	52.7	0.00032	0.32
Treubaria sp.	2	11.71	0.000072	0.072
Euglenozoa				
Euglena sp.	12	70.26	0.00043	0.43

Phacus longicauda var. *insecta*	1	5.86	0.000036	0.36
Trachelomonas sp.	5	29.28	0.00018	0.18
Dinophyta				
Peridiniopsis sp.	234	1370.13	0.0084	8.39
Peridinium sp.	1	5.86	0.000036	0.36
Ochrophyta				
Live pennate diatom	1	5.86	0.000036	0.36
Empty pennate diatom	21	122.96	0.00075	0.75
Empty centric diatom	16	93.68	0.00057	0.57
Total	**673**			

Phytoplankton Composition Analysis			Date observed		July , 2014	
Reservoir	La Plata		No. sample	2	Sampling Year	3rd
Date of collection	April 10, 2014		Station	Central		
Depth of sampling	1 meter		Net towing	5 minutes		
Velocity of the boat while towing sample			5 mph		RPM	
Volume of sedimented sample	10 ml		Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		40	Total magnification		400X	
Microscope field diameter	0.53 mm					
Analyzed by	B.I.S.S.					

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cell/mL)**	**No. organisms towing sample (Cell/mL)**	**No. organisms towing sample (Cell/L)**
Cyanobacteria				
Cylindrospermum sp.	15	83.44	0.0005	0.51
Unknown colonial	39	216.94	0.0013	1.33
Unknown filament straight	64	356	0.0022	2.18
Unknown filament screw like curly	252	1401.75	0.0086	8.58
Charophyta				
Cosmarium sp.	1	5.56	0.00003	0.034
Staurastrum sp. 3	2	11.12	0.000068	0.068
Chlorophyta				
Actinastrum sp.	28	155.75	0.00095	0.95
Coelastrum cf. *pseudomicrosporum*	1	5.56	0.00003	0.034
Micractinium sp.	2	11.12	0.000068	0.068
Pandorina sp.	1	5.56	0.00003	0.034
Pediastrum simplex	2	11.12	0.000068	0.068
Scenedesmus acuminatus	1	5.56	0.00003	0.034
Scenedesmus sp.	2	11.12	0.000068	0.068
Schroederia spiralis	1	5.56	0.00003	0.034
Tetraedron minimum	5	27.81	0.0002	0.17
Euglenozoa				
Euglena sp.	10	55.62	0.0003	0.34
Dinophyta				
Peridiniopsis sp.	218	1212.62	0.007	7.43

Peridiniopsis sp. (small)	2	11.12	0.000068	0.068
Peridinium sp.	1	5.56	0.00003	0.034
Ochrophyta				
Live pennate diatom	5	27.81	0.00017	0.17
Empty pennate diatom	22	122.37	0.00075	0.75
Empty centric diatom	4	22.25	0.00014	0.14
Total	**680**			

H-17 Patillas

Phytoplankton Composition Analysis		**Date observed**	April 24, 2014		
Reservoir	Patillas	No. sample	1	Sampling Year	3rd
Date of collection	January 30, 2014	Station	Central		
Depth of sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		4.7 mph	RPM		
Volume of sedimented sample	10 ml	Inverted Microscope	Nikon Eclipse TS100		
No. microscope fields of view in Bongo A	37	Total magnification	400X		
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**
Cyanobacteria				
Unknown, filamentous, straight	15	90.20	0.0006	0.588
Unknown, filamentous, screw like	24	144.32	0.0009	0.94
Charophyta				
Spondylosium sp.	2	12.03	0.00008	0.078
Staurastrum sp. 1	8	48.11	0.0003	0.31
Chlorophyta				
Micractinium sp.	1	6.01	0.00004	3.13
Pediastrum simplex	80	481.08	0.0031	3.14
Pediastrum simplex var. *echinulatum*	5	30.07	0.0002	0.2
Tetraedron minimum	38	228.51	0.001	1.49
Euglenozoa				
Euglena sp.	1	6.01	0.00004	3.13
Lepocinclis sp.	1	6.01	0.00004	3.13
Phacus longicauda	1	6.01	0.00004	3.13
Myzozoa				
Peridiniopsis sp.	37	222.5	0.0014	1.45
Empty *Peridiniopsis* sp.	10	60.13	0.0004	0.39
Ochrophyta				
Dinobryon sp.	562	3379.58	0.022	22.02

Live pennate diatom	13	78.18	0.0005	0.51
Empty pennate diatom	17	102.23	0.0007	0.67
Empty centric	3	18.04	0.0001	0.12
Total	**818**			

Phytoplankton Composition Analysis		**Date observed**	May 6, 2014		
Reservoir	Patillas	No. sample	1	Sampling Year	3rd
Date of collection	January 30, 2014	Station	Central		
Depth of sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		4.7 mph	RPM		
Volume of sedimented sample	10 ml	Inverted Microscope	Nikon Eclipse TS100		
No. microscope fields of view in Bongo B	36	Total magnification	400X		
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**
Cyanobacteria				
Unkown, filamentous, straight	33	203.96	0.0013	1.33
Unkown, filamentous, screw like	14	86.52	0.0006	0.56
Charophyta				
Staurastrum sp. 1	6	37.08	0.0002	0.24
Chlorophyta				
Pediastrum simplex	119	735.48	0.005	4.79
Pediastrum simplex var. *echinulatum*	3	18.54	0.0001	0.12
Tetraedron minimum	37	228.68	0.001	1.49
Treubaria sp.	1	6.18	0.00004	0.04
Myzozoa				
Peridiniopsis sp.	19	117.43	0.0008	0.77
Empty *Peridiniopsis* sp.	10	61.81	0.0004	0.40
Ochrophyta				
Dinobryon sp.	609	3763.94	0.0245	24.52
Live pennate diatom	10	61.81	0.0004	0.40
Empty pennate diatom	20	123.61	0.0008	0.81
Total	**881**			

Phytoplankton Composition Analysis				Date observed		July 23, 2014	
Reservoir	Patillas			No. sample	2	Sampling Year	3rd
Date of collection	April 29, 2014			Station	Central		
Depth of sampling	1 meter			Net towing	5 minutes		
Velocity of the boat while towing sample				5 mph		RPM	
Volume of sedimented sample	10 ml			Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo A		40		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	B.I.S.S.						

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/mL)
Cyanobacteria				
Unknown filament straight	21	116.81	0.00072	0.72
Unknown filament screw like curly	215	1195.93	0.0073	7.32
Charophyta				
Cosmarium sp.	2	11.12	0.000068	0.07
Cosmarium tenue	7	38.94	0.00024	0.24
Euastrum sp.	1	5.56	0.00003	0.034
Staurastrum sp. 1	127	706.43	0.0046	4.6
Chlorophyta				
Coelastrum sp.	2	11.12	0.00007	0.07
Pediastrum simplex	45	250.31	0.0016	1.63
Pediastrum simplex var. *echinulatum*	7	38.94	0.00025	0.25
Tetraedron minimum	73	406.06	0.0027	2.65
Unknown colonial	16	89	0.0006	0.58
Dinophyta				
Peridiniopsis sp.	87	483.94	0.0032	3.15
Peridiniopsis sp. (small)	18	100.12	0.0007	0.65
Peridinium sp.	139	773.18	0.005	5.04
Euglenozoa				
Euglena sp.	2	11.12	0.000068	0.07
Phacus sp.	1	5.56	0.00003	0.034
Trachelomonas sp.	1	5.56	0.00003	0.034

Ochrophyta				
Dinobryon sp.	148	823.25	0.0054	5.36
Live pennate diatom	12	66.75	0.0004	0.43
Empty pennate diatom	72	400.5	0.0026	2.61
Empty centric diatom	17	94.56	0.0006	0.62
Total				

Phytoplankton Composition Analysis				Date observed		July 30, 20145	
Reservoir	Patillas			No. sample	2	Sampling Year	3rd
Date of collection	April 29, 2014			Station	Central		
Depth of sampling	1 meter			Net towing	5 minutes		
Velocity of the boat while towing sample				5 mph		RPM	
Volume of sedimented sample	10 ml			Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		35		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	B.I.S.S.						

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/L)
Cyanobacteria				
Unknown filament straight	45	286.07	0.018	1.75
Unknown filament screw like curly	222	1411.28	0.0086	8.64
Unknown colonial	16	101.71	0.0006	0.62
Charophyta				
Staurastrum sp. 1	101	642.07	0.004	4.18
Chlorophyta				
Pediastrum simplex	25	158.93	0.001	1.04
Pediastrum simplex var. *echinulatum*	4	25.43	0.0002	0.17
Tetraedron caudatum var. *longispinum*	1	6.35	0.00004	0.04
Tetraedron minimum	48	305.14	0.002	1.99
Tetraedron cf. *regulare* var. *incus*	1	6.35	0.00004	0.04
Unknown colonial	23	146.21	0.001	0.95
Dinophyta				
Peridiniopsis sp.	44	279.71	0.0018	1.82
Peridiniopsis sp. (small)	14	89	0.0006	0.58
Peridinium sp.	241	1532.07	0.01	9.98
Euglenozoa				
Trachelomonas sp.	4	25.43	0.0002	0.17
Unknown Euglenozoa	2	12.71	0.00008	0.08
Ochrophyta				

Dinobryon sp.	130	826.43	0.0054	5.39
Live pennate diatom	4	25.43	0.0002	0.17
Empty pennate diatom	35	222.5	0.0015	1.45
Empty centric diatom	3	19.07	0.0001	0.12
Total	**963**			

H-18 Toa Vaca

Phytoplankton Composition Analysis		Date observed	May 7, 2014		
Reservoir	Toa Vaca	No. sample	1	Sampling Year	3rd
Date of collection	February 13, 2014	Station	Central		
Depth of sampling	1 meter	Net towing	5 minutes		
Velocity of the boat while towing sample		5 mph	RPM		
Volume of sedimented sample	10 ml	Inverted Microscope	Nikon Eclipse TS100		
No. microscope fields of view in Bongo A	37	Total magnification	400X		
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	No. organisms Bongo	No. organisms mL sample (Cells/mL)	No. organisms towing sample (Cells/mL)	No. organisms towing sample (Cells/mL)
Cyanobacteria				
Unknown, colonial	8	48.11	0.0003	0.29
Unknown, filamentous, screw like	2	12.03	0.00007	0.07
Unknown cf. Merismopediaceae	1	6.01	0.00004	0.04
Charophyta				
Cosmarium sp.	4	24.05	0.0002	0.15
Chlorophyta				
Coelastrum pseudomicrosporum	11	66.15	0.0004	0.41
Micractinium sp.	7	42.09	0.0003	0.26
Pediastrum simplex	5	30.07	0.0002	0.18
Scenedesmus c.f. *acutiformis*	14	84.19	0.0005	0.52
Scenedesmus arcuatus	3	18.04	0.0001	0.11
Tetraedron minimum	20	120.27	0.0007	0.74
Tetrastrum sp.	5	30.07	0.0002	0.18
Treubaria schmidlei	2	12.03	0.00007	0.07
Euglenozoa				
Lepocinclis sp.	3	18.04	0.0001	0.11
Phacus sp.	1	6.01	0.00004	0.04
Myzozoa				
Peridiniopsis sp.	368	2212.96	0.014	13.55

Empty *Peridiniopsis* sp.	29	174.39	0.001	1.07
Peridinium sp.	9	54.12	0.0003	0.33
Ochrophyta				
Live centric diatom	5	30.07	0.0002	0.18
Empty centric diatom	31	186.42	0.0011	1.14
Live pennate diatom	26	156.35	0.001	0.96
Empty pennate diatom	55	330.74	0.002	2.03
Total	**609**			

Phytoplankton Composition Analysis			Date observed	May 15, 2014	
Reservoir	Toa Vaca		No. sample	1	Sampling Year 3rd
Date of collection	February 13, 2014		Station	Central	
Depth of sampling	1 meter		Net towing	5 minutes	
Velocity of the boat while towing sample			5 mph	RPM	
Volume of sedimented sample	10 ml		Inverted Microscope	Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		42	Total magnification	400X	
Microscope field diameter	0.53 mm				
Analyzed by	B.I.S.S.				

Organisms	**No. organisms Bongo**	**No. organisms mL sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**	**No. organisms towing sample (Cells/mL)**
Cyanobacteria				
Unknown, colonial	24	127.14	0.0008	0.78
Unknown, filamentous, screw like	2	10.6	0.00007	0.06
Charophyta				
Cosmarium sp.	3	15.89	0.0001	0.1
Chlorophyta				
Micractinium sp.	2	10.6	0.00007	0.06
Pandorina sp.	1	5.3	0.00003	0.03
Pediastrum simplex	11	58.27	0.0004	0.36
Scenedesmus acuminatus	1	5.3	0.00003	0.03
Scenedesmus c.f. *acutiformis*	6	31.79	0.0002	0.19
Scenedesmus arcuatus	2	10.6	0.00007	0.06
Tetraedron minimum	8	42.38	0.0003	0.26
Euglenozoa				
Phacus sp.	1	5.3	0.00003	0.03
Myzozoa				
Peridiniopsis sp.	225	1191.96	0.0073	7.3
Empty *Peridiniopsis* sp.	18	95.36	0.0006	0.58
Peridinium sp.	9	47.68	0.0003	0.29
Ochrophyta				
Live centric diatom	6	31.79	0.0002	0.19
Empty centric diatom	20	105.95	0.0007	0.65

Live pennate diatom	26	137.74	0.0008	0.84
Empty pennate diatom	28	148.33	0.0009	0.91
Total	**393**			

Phytoplankton Composition Analysis				Date observed		September 19, 2014	
Reservoir	Toa Vaca			No. sample	2	Sampling Year	3rd
Date of collection	April 24, 2014			Station	Central		
Depth of sampling	1 meter			Net towing	5 minutes		
Velocity of the boat while towing sample				5 mph		RPM	
Volume of sedimented sample	2 ml			Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo A		40		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	C.J.S.F. =Carlos J. Santos Flores						

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/L)
Cyanobacteria				
Unknown colonial	79	2196.99	0.670301649	670.0
Unknown colonial c.f Merismopediaceae	78	2169.18	0.661816818	661.2
Unknown filament screw like curly	57	1585.17	0.483635367	483.6
Charophyta				
Staurastrum sp. 1	6	166.86	0.050908986	50.9
Chlorophyta				
Coelastrum cf. *pseudomicrosporum*	27	750.87	0.229090437	229.1
Coelastrum sp.	3	83.43	0.025454493	25.4
Micractinium sp.	11	305.91	0.093333141	93.3
Pandorina morum	9	250.29	0.076363479	76.4
Pediastrum simplex	137	3809.97	1.162421847	1162.4
Scenedesmus acuminatus var. *acuminatus*	14	389.34	0.118787634	118.8
Scenedesmus sp.	4	111.24	0.033939324	33.9
Tetraedron minimum	15	417.15	0.127272465	127.3
Tetrastrum sp.	3	83.43	0.025454493	25.4
Euglenozoa				
Euglena sp.	2	55.62	0.016969662	17.0
Trachelomonas sp.	13	361.53	0.110302803	110.3

Dinophyta				
Peridiniopsis sp.	232	6451.92	1.968480792	357.66
Peridinium sp.	7	194.67	0.059393817	0.85
Ochrophyta				
Live pennate diatom	456	12681.36	3.869082936	3869.1
Empty pennate diatom	139	3865.59	1.179391509	1179.4
Total	**1292**			

Phytoplankton Composition Analysis				Date observed		August 1, 2014	
Reservoir	Toa Vaca			No. sample	2	Sampling Year	3rd
Date of collection	April 24, 2014			Station	Central		
Depth of sampling	1 meter			Net towing	5 minutes		
Velocity of the boat while towing sample				5 mph		RPM	
Volume of sedimented sample	2 ml			Inverted Microscope		Nikon Eclipse TS100	
No. microscope fields of view in Bongo B		40		Total magnification		400X	
Microscope field diameter	0.53 mm						
Analyzed by	B.I.S.S.						

Organisms	No. organisms Bongo	No. organisms mL sample (Cell/mL)	No. organisms towing sample (Cell/mL)	No. organisms towing sample (Cell/L)
Cyanobacteria				
Unknown colonial	66	1835.62	0.56	56.20
Unknown colonial cf. Merismopediaceae	120	3337.49	0.102	102.19
Unknown filament screw like curly	36	1001.25	0.03	30.66
Charophyta				
Staurastrum sp. 1	2	55.62	0.002	1.70
Chlorophyta				
Coelastrum cf. *pseudomicrosporum*	16	445	0.014	13.63
Coelastrum sp.	1	27.81	0.0009	0.85
Micractinium sp.	11	305.94	0.009	9.37
Pandorina morum	2	55.62	0.002	1.70
Pandorina sp.	1	27.81	0.0009	0.85
Pediastrum simplex	91	2530.93	0.077	77.49
Scenedesmus acuminatus var. *acuminatus*	8	222.5	0.0007	6.81
Scenedesmus sp.	6	166.87	0.0005	5.11
Tetraedron minimum	8	222.95	0.0068	6.81
Tetrastrum sp.	1	27.81	0.0009	0.85
Euglenozoa				
Euglena sp.	1	27.81	0.0009	0.85
Trachelomonas sp.	6	166.87	0.005	5.11
Dinophyta				

Peridiniopsis sp.	420	116.87	0.36	357.66
Peridinium sp.	1	27.81	0.0009	0.85
Ochrophyta				
Live pennate diatom	545	15157.8	0.46	464.11
Empty pennate diatom	227	6313.41	0.19	193.31
Total	**1569**			

APPENDIX I: Calculations to determine the cells per milliliters found in each sampling

First year of study
I-1. Cerrillos reservoir

First sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \pi$ 490.87
Area of the microscope field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22$
Observed area = (area of microscope's field of view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ volume sample settled

Observed area in Bongo A: 3.75 mm^2
Conversion factor for Bongo A: 130.88

Observed area in Bongo B: 1.32 mm^2
Conversion factor for Bongo B: 130.88

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.5miles/hour
Velocity of the boat in miles/minutes= (3.5miles/hour)/60 minutes=0.058
Net towing time: 11 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0583 miles/minutes)(11 minutes)= 0.642 miles
(0.642 miles)(1609.3m)= 1032.66 meters
nets in the distance traveled by the boat= 1032.655984 meters/1.7m= 607.44
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
$(0.0414m^3)$ (607.445)= 25.15 m^3
25148210.43 ml

Second sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.9\ mm^2$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22\ mm^2$
Observed area = (area of microscope's field view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ settled volume of sample

Observed area in Bongo A: 2.43 mm^2
Conversion factor for Bongo A: 202.27

Observed area in Bongo B: 6.18 mm^2
Conversion factor for Bongo B: 79.47

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes=0.0583
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0583 miles/minutes)(5 minutes)= 0.29 miles
(0.29 miles)(1609.33m)= 469.38 meters
nets in the distance traveled by the boat=469.39 meters/1.7m= 276.11
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
$(0.0414m^3)$ (276.11)= 11.43 m^3
(11.43 m^3)(1,000,000 ml) = 11,430,976.32 ml

Third sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521mm^2$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344\ mm^2$
Observed area = (area microscope's field view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ settled volume of sample

Observed area in Bongo A: 9.93mm^2
Conversion factor for Bongo A: 49.44

Observed area in Bongo B: 3.75
Conversion factor for Bongo B: 130.88

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes=0.058
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.058 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.33m)= 469.39 meters
nets in the distance traveled by the boat=469.3879167 meters/1.7m= 276.1105392
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
($0.0414m^3$) (276.11)= 11.43 m^3
(11.43 m^3)(1,000,000 ml) = 11,430,976.32 ml

I-2.Cidra reservoir

First sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.87\ mm^2$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22\ mm^2$
Observed area = (area microscope fields of view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ volume sample settled

Observed area in Bongo A: 5.52 mm^2
Conversion factor for Bongo A: 89.00

Observed area in Bongo B: 3.09 mm^2
Conversion factor for Bongo B: 158.93

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes= 0.058 miles/min
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.058 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.334m)= 469.39 meters
nets in the distance traveled by the boat= 469.39 meters/1.7m= 276.11
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
($0.0414m^3$) (276.11)= 11.43 m^3

$(11.43\ m^3)(1{,}000{,}000\ ml) = 11430000\ ml$

Second sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521\ mm^2$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344\ mm^2$
Observed area = (area microscope fields of view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ volume sample settled

Observed area in Bongo A: $8.38mm^2$
Conversion factor for Bongo A: 58.55

Observed area in Bongo B: $15.88\ mm^2$
Conversion factor for Bongo B: 30.90

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =$(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m) = 0.041m^3$

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes= 0.0583miles/min
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0583 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.334m)= 469.389 meters
nets in the distance traveled by the boat= 469.389 meters/1.7m= 276.11
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
$(0.041m^3)\ (276.11) = 11.43\ m^3$
$(11.431\ m^3)(1{,}000{,}000\ ml) = 11431449.19\ ml$

I-3. Guajataca reservoir

First sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.87$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22$
Observed area = (area of microscope's field of view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ volume sample settled

Observed area in Bongo A: 9.71mm^2
Conversion factor for Bongo A: 50.57

Observed area in Bongo B: 4.41 mm^2
Conversion factor for Bongo B: 111.25

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 2.5miles/hour
Velocity of the boat in miles/minutes= (2.5miles/hour)/60 minutes=0.042
Net towing time: 10 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.042miles/minutes)(10 minutes)= 0.42 miles
(0.42 miles)(1609.334m)= 670.56 meters
nets in the distance traveled by the boat=670.56 meters/1.7m= 394.45

Sampled volume = (Net volume) (# nets in the distance traveled by the boat)
(0.0414m^3)(394.45)= 16.33 m^3

Second sample

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$
Observed area = (area of microscope's field of view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ volume sample settled

Observed area in Bongo A: 11.22
Conversion factor for Bongo A: 43.75

Observed area in Bongo B:
Conversion factor for Bongo B:

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes=0.0583
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0583 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.33m)= 469.39 meters
nets in the distance traveled by the boat=469.39 meters/1.7m= 276.11
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
($0.0414m^3$) (276.11)= 11.43097632 m^3
(11.43097632 m^3)(1,000,000 ml) = 11,430,976.32 ml

Third sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$
Observed area = (area of microscope's field of view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ volume sample settled

Observed area in Bongo A: 3.309
Conversion factor for Bongo A: 148.33

Observed area in Bongo B: 3.97
Conversion factor for Bongo B: 123.61

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes=0.0583
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0583 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.33m)= 469.39 meters
nets in the distance traveled by the boat=469.39 meters/1.7m= 276.11
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
($0.0414m^3$) (276.11)= 11.43 m^3
(11.43 m^3)(1,000,000 ml) = 11,430,976.32 ml

I-4. La Plata reservoir

First sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.87\ mm^2$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22\ mm^2$
Observed area = (area microscope fields of view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ settled sample volume

Observed area in Bongo A: 1.10 mm^2
Conversion factor for Bongo A: 444.99

Observed area in Bongo B: 2.21 mm^2
Conversion factor for Bongo B: 222.50

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =$(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3 miles/hour
Velocity of the boat in miles/minutes= (3 miles/hour)/60 minutes= 0.05
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.05 miles/minutes)(5 minutes)= 0.25 miles
(0.25 miles)(1609.334m)= 402.33 meters
nets in the distance traveled by the boat= 402.33 meters/1.7m= 236.67
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
$(0.0414m^3)$ (236.67)= 9.80 m^3
$(9.80\ m^3)$(1,000,000 ml) = 9,800,000 ml

Second sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.87\ mm^2$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22\ mm^2$
Observed area = (area microscope fields of view)(# field view observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ settled sample volume

Observed area in Bongo A: 1.76 mm^2
Conversion factor for Bongo A: 278.12

Observed area in Bongo B: 1.76 mm^2
Conversion factor for Bongo B: 278.12

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes= 0.0583
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0583 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.334m)= 469.39 meters
nets in the distance traveled by the boat= 469.3890833 meters/1.7m= 276.1112255
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
(0.0414m^3) (276.1112255)= 11.43 m^3
(11.43 m^3)(1,000,000 ml) = 11431004.74 ml

Third sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.87\ mm^2$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22\ mm^2$
Observed area = (area microscope fields of view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ settled sample volume

Observed area in Bongo A: 4.85 mm^2
Conversion factor for Bongo A: 101.13

Observed area in Bongo B: 3.088 mm^2
Conversion factor for Bongo B: 158.91

Bongo net:
length: 1.7m diameter: 30.5cm=0.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes= 0.0583

Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0583 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.334m)= 469.39 meters
nets in the distance traveled by the boat= 469.39 meters/1.7m= 276.11
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
($0.0414m^3$) (276.11)= $11.43m^3$
($11.43\ m^3$)(1,000,000 ml) = 11431004.74 ml

I-5. Patillas reservoir

First sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.87\ mm^2$
Area of the microscope field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22\ mm^2$
Observed area = (area of microscope's field of view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ volume sample settled

Observed area in Bongo A: 1.99 mm^2
Conversion factor for Bongo A: 247.22

Observed area in Bongo B: 2.21 mm^2
Conversion factor for Bongo B: 222.94

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3 miles/hour
Velocity of the boat in miles/minutes= (3 miles/hour)/60 minutes= 0.05
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.05 miles/minutes)(5 minutes)= 0.25 miles
(0.25 miles)(1609.334m)= 402.33 meters
nets in the distance traveled by the boat= 402.33 meters/1.7m= 236.67
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
($0.0414m^3$) (236.67)= $9.80\ m^3$
($9.80\ m^3$)(1,000,000 ml) = 9,800,000 ml

Second sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.871mm^2$
Area of the microscope field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22\ mm^2$
Observed area = (area of microscope's field of view)(# fields of view observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ volume sample settled

Observed area in Bongo A: 2.65 mm^2
Conversion factor for Bongo A: 185.41

Observed area in Bongo B: 1.98 mm^2
Conversion factor for Bongo B: 247.22

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volumen =$(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes= 0.0583
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0583 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.334m)= 469.39 meters
nets in the distance traveled by the boat= 469.39 meters/1.7m= 276.11
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
$(0.0414m^3)$ (276.11)= 11.43 m^3
$(11.43\ m^3)$(1,000,000 ml) = 11431004.74 ml

I-6. Toa Vaca reservoir

First sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.87mm^2$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22\ mm^2$
Observed area = (area microscope's field view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ settled volume of sample

Observed area in Bongo A: 3.75mm^2
Conversion factor for Bongo A: 130.88

Observed area in Bongo B: 5.29 mm^2

Conversion factor for Bongo B: 92.71

Bongo net:
length: 1.7m diameter: 30.5cm=0.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 3 miles/hour
Velocity of the boat in miles/minutes= (3 miles/hour)/60 minutes=0.05
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.05 miles/minutes)(5 minutes)= 0.25 miles
(0.25 miles)(1609.33m)= 402.33 meters
nets in the distance traveled by the boat=402.33 meters/1.7m= 236.67
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
(0.0414m^3) (236.67)= 9.80 m^3
(9.80 m^3)(1,000,000 ml) = 9,800,000 ml

Second sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.87$ mm^2
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22$ mm^2
Observed area = (area microscope's field view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ settled volume of sample

Observed area in Bongo A: 3.75 mm^2
Conversion factor for Bongo A: 130.88

Observed area in Bongo B: 7.28 mm^2
Conversion factor for Bongo B: 67.42

Bongo net:
length: 1.7m diameter: 30.5cm=0.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes=0.0583
Net towing time: 5 minutes

Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0583 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.33m)= 469.39 meters
nets in the distance traveled by the boat=469.39 meters/1.7m= 276.11
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
($0.0414m^3$) (276.11)= 11.43 m^3
(11.43 m^3)(1,000,000 ml) = 11,430,976.32 ml

Third sampling

Area of the sedimentation chamber: $\pi r^2 \rightarrow \pi(12.5mm)^2 \rightarrow 490.87\ mm^2$
Area of the microscope's field of view: $\pi r^2 \rightarrow \pi(0.265mm)^2 \rightarrow 0.22\ mm^2$
Observed area = (area microscope's field view)(# field views observed)
Conversion factor= Area of the sedimentation chamber / Observed area
cells/ml= (conversion factor)(# cells observed)/ settled volume of sample

Observed area in Bongo A: 6.62 mm^2
Conversion factor for Bongo A: 74.17

Observed area in Bongo B: mm^2
Conversion factor for Bongo B:

Bongo net:
length: 1.7m diameter: 30.5cm=0.305m radius: 0.1525m
Net volumen =(1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.5 miles/hour
Velocity of the boat in miles/minutes= (3.5 miles/hour)/60 minutes=0.0583
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0583 miles/minutes)(5 minutes)= 0.292 miles
(0.291666667 miles)(1609.33m)= 469.39 meters
nets in the distance traveled by the boat=469.3879167 meters/1.7m= 276.11
Sampled volume = (Net volume)(# nets in the distance traveled by the boat)
($0.0414m^3$) (276.11)= 11.43 m^3
(11.43 m^3)(1,000,000 ml) = 11,430,976.32 ml

Second Year of Study

I-7. Cerrillos

First sampling

Number of fields counted in Bongo A (F): 21
Number of fields counted in Bongo B (F): 37
Volume of sample settled (V): 10ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.87$
Area of the microscope fields of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.22$

Bongo net:
Length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.5miles/hour
Velocity of the boat in miles/minutes=
(3.5miles/hour)/60 minutes=0.058
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.058 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.344m)= 469.392 meters
net in the distance traveled by the boat=
469.392 meters/1.7m= 276.113
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
$(0.0414\ m^3)\ (276.113)= 11.4310757\ m^3$
$(11.4310757m^3)(1,000,000\ ml)= 11,431,075.7\ ml$

Second sampling Date: May 15, 2013

Number of field counted in Bongo A (F): 33
Number of field counted in Bongo B (F): 35
Volume of sample settled (V): 1 ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m

Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 1.8 kts (knots) = 2.088 mph
Velocity of the boat in miles/minutes=
(2.088 miles/hour)/60 minutes=0.0348 miles/minutes
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0348 miles/minutes)(5 minutes)= 0.174 miles
(0.174 miles)(1609.344m)= 280.025856 meters
net in the distance traveled by the boat=
280.025856 meters/1.7m= 164.7210918
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (164.7210918)= 6.819453199 m^3
(6.819453199 m^3)(1,000,000 ml)= 6,819,453.199 ml

Third sampling Date: September 26, 2013

Number of field counted in Bongo A (F): 39
Number of field counted in Bongo B (F): 42
Volume of sample settled (V): 20 ml
Total Area the sedimentation chamber (TA): πr^2
→ π(12.5mm)^2 → 490.8738521
Area of the microscope field of view (A): πr^2
→ π(0.265mm)^2 → 0.220618344

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.083333333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.083333333miles/minutes)(5 minutes)= 0.416666667 miles
(0.416666667 miles)(1609.344m)= 670.56 meters
net in the distance traveled by the boat=
670.56 meters/1.7m= 394.4470588

Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
($0.0414\ m^3$) (394.4470588)= $16.33010824\ m^3$
($16.33010824\ m^3$)(1,000,000 ml)= 16,330,108.24ml

I-8. Cidra

First sampling

Number of fields counted in Bongo A (F): 39
Number of fields counted in Bongo B (F): 60
Volume of sample settled (V): 10ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.874$
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.221$

Bongo net:
Length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.5miles/hour
Velocity of the boat in miles/minutes=
(3.5miles/hour)/60 minutes=0.058
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.058 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.344m)= 469.392 meters
net in the distance traveled by the boat=
469.392 meters/1.7m= 276.113
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
($0.0414\ m^3$) (276.113)= $11.4310757\ m^3$
($11.4310757m^3$)(1,000,000 ml)= 11,431,075.7 ml

Second sampling Date: June 11, 2013

Number of field counted in Bongo A (F): 38
Number of field counted in Bongo B (F): 38
Volume of sample settled (V): 5 ml
Total Area the sedimentation chamber (TA): πr^2

→ $\pi(12.5mm)^2$ → 490.8738521
Area of the microscope field of view (A): πr^2
→ $\pi(0.265mm)^2$ → 0.220618344

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 5 miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.083333333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.083333333miles/minutes)(5 minutes)= 0.416666667 miles
(0.416666667 miles)(1609.344m)= 670.5600005meters
net in the distance traveled by the boat=
670.5600005meters/1.7m= 394.4470591
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
$(0.0414\ m^3)\ (394.4470591)= 16.33010825\ m^3$
$(16.33010825\ m^3)(1{,}000{,}000\ ml)= 16{,}330{,}108.25\ ml$

Third sampling Date: September 3, 2013

Number of field counted in Bongo A (F): 40
Number of field counted in Bongo B (F): 43
Volume of sample settled (V): 5 ml
Total Area the sedimentation chamber (TA): πr^2
→ $\pi(12.5mm)^2$ → 490.8738521
Area of the microscope field of view (A): πr^2
→ $\pi(0.265mm)^2$ → 0.220618344

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 5 miles/hour
Velocity of the boat in miles/minutes=

(5miles/hour)/60 minutes=0.083333333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.083333333miles/minutes)(5 minutes)= 0.416666667 miles
(0.416666667 miles)(1609.344m)= 670.5600005meters
net in the distance traveled by the boat=
670.5600005meters/1.7m= 394.4470591
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (394.4470591)= 16.33010825 m^3
(16.33010825 m^3)(1,000,000 ml)= 16,330,108.25 ml

I-9. Guajataca

First sampling

Number of fields counted in Bongo A (F): 7
Number of fields counted in Bongo B (F): 28
Volume of sample settled (V): 1ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.874$
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.221$

Bongo net:
Length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 3.5miles/hour
Velocity of the boat in miles/minutes=
(3.5miles/hour)/60 minutes=0.058
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.058 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.344m)= 469.392 meters
net in the distance traveled by the boat=
469.392 meters/1.7m= 276.113
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (276.113)= 11.4310757 m^3

$(11.4310757m^3)(1{,}000{,}000\ ml) = 11{,}431{,}075.7\ ml$

Second sampling Date: May 22, 2013

Number of field counted in Bongo A (F): 40
Number of field counted in Bongo B (F): 41
Volume of sample settled (V): 1ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m) = 0.0414m^3$

Velocity of the boat while towing sample: 4 miles/hour
Velocity of the boat in miles/minutes=
(4 miles/hour)/60 minutes= 0.066666667
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.066666667miles/minutes)(5 minutes)= 0.333333333 miles
(0.333333333 miles)(1609.344m)= 536.448 meters
net in the distance traveled by the boat=
536.448 meters/1.7m= 315.5576471
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
$(0.0414\ m^3)\ (315.5576471) = 13.06408659\ m^3$
$(13.06408659\ m^3)(1{,}000{,}000\ ml) = 13{,}064{,}086.59\ ml$

Third sampling Date: September 17, 2013

Number of field counted in Bongo A (F): 40
Number of field counted in Bongo B (F):
Volume of sample settled (V): 1ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 5 miles/hour
Velocity of the boat in miles/minutes=
(5 miles/hour)/60 minutes= 0.083333333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.083333333miles/minutes)(5 minutes)= 0.416666667 miles
(0.416666667 miles)(1609.344m)= 670.56 meters
net in the distance traveled by the boat=
670.56 meters/1.7m= 394.4470588
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (394.4470588)= 16.33010824 m^3
(16.33010824 m^3)(1,000,000 ml)= 16,330,108.24 ml

I-10. La Plata

First sampling

Number of fields counted in Bongo A (F): 37
Number of fields counted in Bongo B (F):
Volume of sample settled (V): 10 ml
Total Area the sedimentation chamber (TA): πr^2
→ π(12.5mm)^2 → 490.874
Area of the microscope field of view (A): πr^2
→ π(0.265mm)^2 → 0.221

Bongo net:
Length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 3.5miles/hour
Velocity of the boat in miles/minutes=
(3.5miles/hour)/60 minutes=0.058
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)

(0.058 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.344m)= 469.392 meters
net in the distance traveled by the boat=
469.392 meters/1.7m= 276.113
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (276.113)= 11.4310757 m^3
(11.4310757m^3)(1,000,000 ml)= 11,431,075.7 ml

Second sampling Date: June 6, 2013

Number of field counted in Bongo A (F): 39
Number of field counted in Bongo B (F): 42
Volume of sample settled (V): 10 ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.083333333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.083333333 miles/minutes)(5 minutes)= 0.416666667miles
(0.416666667miles)(1609.344m)= 670.56 meters
net in the distance traveled by the boat=
670.56 meters/1.7m= 394.4470588
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (394.4470588)= 16.33010824 m^3
(16.33010824 m^3)(1,000,000 ml)= 16330108.24 ml

Third sampling Date: September 10, 2013

Number of field counted in Bongo A (F): 39
Number of field counted in Bongo B (F):

Volume of sample settled (V): 4 ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 4 miles/hour
Velocity of the boat in miles/minutes=
(4miles/hour)/60 minutes= 0.066666667
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.066666667miles/minutes)(5 minutes)= 0.333333333 miles
(0.333333333 miles)(1609.344m)= 536.448 meters
net in the distance traveled by the boat=
536.448 meters/1.7m= 315.5576471
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
$(0.0414\ m^3)\ (315.5576471)= 13.06408659\ m^3$
$(13.06408659\ m^3)(1{,}000{,}000\ ml)= 13{,}064{,}086.59\ ml$

I-11. Patillas

First sampling

Number of field counted in Bongo B (F): 60
Volume of sample settled (V): 10ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.874$
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.221$

Bongo net:
Length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.5miles/hour
Velocity of the boat in miles/minutes=
(3.5miles/hour)/60 minutes=0.058
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.058 miles/minutes)(5 minutes)= 0.292 miles
(0.292 miles)(1609.344m)= 469.392 meters
net in the distance traveled by the boat=
469.392 meters/1.7m= 276.113
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (276.113)= 11.4310757 m^3
(11.4310757m^3)(1,000,000 ml)= 11,431,075.7 ml

Second sampling Date: June 18, 2013

Number of field counted in Bongo A (F): 37
Number of field counted in Bongo B (F): 39
Volume of sample settled (V): 10ml and 20 ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 3.7miles/hour
Velocity of the boat in miles/minutes=
(3.7miles/hour)/60 minutes= 0.061666667
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.061666667miles/minutes)(5 minutes)= 0.308333333 miles
(0.308333333 miles)(1609.344m)= 496.2144 meters
net in the distance traveled by the boat=
496.2144 meters/1.7m= 291.8908235
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (291.8908235)= 12.08428005 m^3

(12.08428005 m^3)(1,000,000 ml)= 12,084,280.05 ml

Third sampling Date: September 19, 2013

Number of field counted in Bongo A (F): 36
Number of field counted in Bongo B (F):
Volume of sample settled (V): 20 ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow$ 490.8738521
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow$ 0.220618344

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 5 miles/hour
Velocity of the boat in miles/minutes=
(5 miles/hour)/60 minutes= 0.083333333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.083333333miles/minutes)(5 minutes)= 0.416666667 miles
(0.416666667 miles)(1609.344m)= 670.56 meters
net in the distance traveled by the boat=
670.56 meters/1.7m= 394.4470588
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (394.4470588)= 16.33010824 m^3
(16.33010824 m^3)(1,000,000 ml)= 16330108.24 ml

I-12. Patillas

First sampling Date: January 22, 2013

Number of fields counted in Bongo A (F): 37
Number of fields counted in Bongo B (F): 35
Volume of sample settled (V): 10ml
Total Area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow$ 490.8738521
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow$ 0.220618344

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 3.5miles/hour
Velocity of the boat in miles/minutes=
(3.5miles/hour)/60 minutes=0.058333333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.058333333 miles/minutes)(5 minutes)= 0.291666665 miles
(0.291666665 miles)(1609.344m)= 469.3919973 meters
net in the distance traveled by the boat=
469.3919973 meters/1.7m= 276.1129396
Sample volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (276.1129396)= 11.4310757 m^3
(11.4310757m^3)(1,000,000 ml)= 11,431,075.7 ml

Second sampling Date: May 8, 2013

Number of field counted in Bongo A (F): 30
Number of field counted in Bongo B (F): 37
Volume of sample settled (V): 40 ml
Total Area the sedimentation chamber (TA): πr^2
→ π(12.5mm)^2 → 490.8738521
Area of the microscope field of view (A): πr^2
→ π(0.265mm)^2 → 0.220618344

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.083333333 miles/minutes
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.083333333 miles/minutes)(5 minutes)= 0.416666667 miles

(0.416666667 miles)(1609.344m)= 670.5600005 meters
net in the distance traveled by the boat=
670.5600005 meters/1.7m= 394.4470591
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (394.4470591)= 16.33010825 m^3
(16.33010825 m^3)(1,000,000 ml)= 16,330,108.25 ml

Third sampling Date: September 12, 2013

Number of field counted in Bongo A (F): 37
Number of field counted in Bongo B (F):
Volume of sample settled (V): 40 ml
Total Area the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow$ 490.8738521
Area of the microscope field of view (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow$ 0.220618344

Bongo net:
long: 1.7m diameter: 30.5cm=.305m radio: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.083333333 miles/minutes
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.083333333 miles/minutes)(5 minutes)= 0.416666667 miles
(0.416666667 miles)(1609.344m)= 670.5600005 meters
net in the distance traveled by the boat=
670.5600005 meters/1.7m= 394.4470591
Sampled volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (394.4470591)= 16.33010825 m^3
(16.33010825 m^3)(1,000,000 ml)= 16,330,108.25 ml

Third Year

I-13 Cerrillos

1. **First sampling** Date: February 4, 2014

Number of fields counted in Bongo A (F): 37
Number of fields counted in Bongo B (F): 39
Volume of sample settled (V): 200 µl
Total area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of views (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.0833333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0833333 miles/minutes)(5 minutes)= 0.4166667 miles
(0.4166667 miles)(1609.344m)= 670.5600000 meters
nets in the distance traveled by the boat=
670.5600000 meters/1.7m= 394.4470588
Sample volume collected = (Net volume)(# nets in the distance traveled by the boat)
$(0.0414\ m^3)\ (394.4470588)= 16.3301082\ m^3$
$(16.3301082\ m^3)(1{,}000{,}000\ ml)= 16{,}330{,}108.24\ ml$

2. Second sampling Date: April 22, 2014

Number of fields counted in Bongo A (F): 42
Number of fields counted in Bongo B (F): 36
Volume of sample settled (V): 5 ml
Total Area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of views (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
length: 1.7m **diameter:** 30.5cm=.305m **radius:** 0.1525m

Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.0833333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0833333 miles/minutes)(5 minutes)= 0.4166667 miles
(0.4166667 miles)(1609.344m)= 670.5600000 meters
 # net in the distance traveled by the boat=
670.5600000 meters/1.7m= 394.4470588
Sample volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (394.4470588)= 16.3301082 m^3
(16.3301082 m^3)(1,000,000 ml)= 16,330,108.24 ml

I-14 Cidra reservoir

1. **First sampling** Date: February 5, 2014

Number of fields counted in Bongo A (F): 37
Number of fields counted in Bongo B (F): 35
Volume of sample settled (V): 200 µl
Total area of the sedimentation chamber (TA): πr^2
→ π(12.5mm)^2 → 490.8738521
Area of the microscope field of views (A): πr^2
→ π(0.265mm)^2 → 0.220618344

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)π(0.1525m)^2(1.7m)= 0.0414m^3

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.0833333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0833333 miles/minutes)(5 minutes)= 0.4166667 miles

(0.4166667 miles)(1609.344m)= 670.5600000 meters
nets in the distance traveled by the boat=
670.5600000 meters/1.7m= 394.4470588
Sample volume collected = (Net volume)(# nets in the distance traveled by the boat)
(0.0414 m^3) (394.4470588)= 16.3301082 m^3
(16.3301082 m^3)(1,000,000 ml)= 16,330,108.24 ml

2. Second sampling Date: April 15, 2014

Number of fields counted in Bongo A (F): 44
Number of fields counted in Bongo B (F): 39
Volume of sample settled (V): 5 ml
Total Area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of views (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
length: 1.7m **diameter:** 30.5cm=.305m **radius:** 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.0833333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0833333 miles/minutes)(5 minutes)= 0.4166667 miles
(0.4166667 miles)(1609.344m)= 670.5600000 meters
 # net in the distance traveled by the boat=
670.5600000 meters/1.7m= 394.4470588
Sample volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (394.4470588)= 16.3301082 m^3
(16.3301082 m^3)(1,000,000 ml)= 16,330,108.24 ml

I-15 Guajataca reservoir

1. **First sampling** Date: January 28, 2014

Number of fields counted in Bongo A (F): 40
Number of fields counted in Bongo B (F): 41
Volume of sample settled (V): 200 µl
Total area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of views (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.0833333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0833333 miles/minutes)(5 minutes)= 0.4166667 miles
(0.4166667 miles)(1609.344m)= 670.5600000 meters
nets in the distance traveled by the boat=
670.5600000 meters/1.7m= 394.4470588
Sample volume collected = (Net volume)(# nets in the distance traveled by the boat)
$(0.0414\ m^3)\ (394.4470588)= 16.3301082\ m^3$
$(16.3301082\ m^3)(1,000,000\ ml)= 16,330,108.24\ ml$

2. Second sampling Date: April 8, 2014

Number of fields counted in Bongo A (F): 39
Number of fields counted in Bongo B (F):
Volume of sample settled (V): 10 ml
Total Area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of views (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
length: 1.7m **diameter:** 30.5cm=.305m **radius:** 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)

$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 4.9 miles/hour
Velocity of the boat in miles/minutes=
(4.9 miles/hour)/60 minutes=0.0816667
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0816667 miles/minutes)(5 minutes)= 0.4083335 miles
(0.4083335 miles)(1609.344m)= 657.1490682 meters
 # net in the distance traveled by the boat=
657.1490682 meters/1.7m= 386.5582754
Sample volume collected = (Net volume)(# net in the distance traveled by the boat)
$(0.0414\ m^3)\ (386.5582754)= 16.0035126\ m^3$
$(16.0035126\ m^3)(1{,}000{,}000\ ml)= 16{,}003{,}512.6\ ml$

I-16 La Plata reservoir

1. **First sampling** Date: January 21, 2014

Number of fields counted in Bongo A (F): 41
Number of fields counted in Bongo B (F): 37
Volume of sample settled (V): 200 µl
Total area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of views (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.0833333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0833333 miles/minutes)(5 minutes)= 0.4166667 miles
(0.4166667 miles)(1609.344m)= 670.5600000 meters
nets in the distance traveled by the boat=

670.5600000 meters/1.7m= 394.4470588
Sample volume collected = (Net volume)(# nets in the distance traveled by the boat)
(0.0414 m^3) (394.4470588)= 16.3301082 m^3
(16.3301082 m^3)(1,000,000 ml)= 16,330,108.24 ml

2. Second sampling Date: April 10, 2014

Number of fields counted in Bongo A (F): 38
Number of fields counted in Bongo B (F):
Volume of sample settled (V): 10 ml
Total Area of the sedimentation chamber (TA): πr^2
→ $\pi(12.5mm)^2$ → 490.8738521
Area of the microscope field of views (A): πr^2
→ $\pi(0.265mm)^2$ → 0.220618344

Bongo net:
length: 1.7m **diameter:** 30.5cm=.305m **radius:** 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
(1/3)$\pi(0.1525m)^2(1.7m)$= 0.0414m^3

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.0833333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0833333 miles/minutes)(5 minutes)= 0.4166667 miles
(0.4166667 miles)(1609.344m)= 670.5600000 meters
 # net in the distance traveled by the boat=
670.5600000 meters/1.7m= 394.4470588
Sample volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (394.4470588)= 16.3301082 m^3
(16.3301082 m^3)(1,000,000 ml)= 16,330,108.24 ml

I-17 Patillas reservoir

1. **First sampling** Date: January 30, 2014

Number of fields counted in Bongo A (F): 37
Number of fields counted in Bongo B (F): 36
Volume of sample settled (V): 200 µl
Total area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of views (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 4.7miles/hour
Velocity of the boat in miles/minutes=
(4.7 miles/hour)/60 minutes= 0.0783333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0783333 miles/minutes)(5 minutes)= 0.3916667 miles
(0.3916667 miles)(1609.344m)= 630.3264000 meters
nets in the distance traveled by the boat=
630.3264000 meters/1.7m= 370.7802353
Sample volume collected = (Net volume)(# nets in the distance traveled by the boat)
$(0.0414\ m^3)\ (370.7802353)= 15.3503017\ m^3$
$(15.3503017\ m^3)(1{,}000{,}000\ ml)= 15350301.74\ ml$

2. Second sampling Date: April 29, 2014
Number of fields counted in Bongo A (F): 40
Number of fields counted in Bongo B (F):
Volume of sample settled (V): 10 ml
Total Area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of views (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
length: 1.7m **diameter:** 30.5cm=.305m **radius:** 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.0833333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0833333 miles/minutes)(5 minutes)= 0.4166667 miles
(0.4166667 miles)(1609.344m)= 670.5600000 meters
 # net in the distance traveled by the boat=
670.5600000 meters/1.7m= 394.4470588
Sample volume collected = (Net volume)(# net in the distance traveled by the boat)
(0.0414 m^3) (394.4470588)= 16.3301082 m^3
(16.3301082 m^3)(1,000,000 ml)= 16,330,108.24 ml

I-18 Toa Vaca reservoir

1. **First sampling** Date: February 13, 2014

Number of fields counted in Bongo A (F): 37
Number of fields counted in Bongo B (F): 42
Volume of sample settled (V): 200 µl
Total area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of views (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
length: 1.7m diameter: 30.5cm=.305m radius: 0.1525m
Net volume = (1/3)π (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.0833333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0833333 miles/minutes)(5 minutes)= 0.4166667 miles
(0.4166667 miles)(1609.344m)= 670.5600000 meters
nets in the distance traveled by the boat=
670.5600000 meters/1.7m= 394.4470588

Sample volume collected = (Net volume)(# nets in the distance traveled by the boat)
($0.0414\ m^3$) (394.4470588)= $16.3301082\ m^3$
($16.3301082\ m^3$)(1,000,000 ml)= 16,330,108.24 ml

2. Second sampling Date: April 24, 2014

Number of fields counted in Bongo A (F): 40
Number of fields counted in Bongo B (F):
Volume of sample settled (V): 10 ml
Total Area of the sedimentation chamber (TA): πr^2
$\rightarrow \pi(12.5mm)^2 \rightarrow 490.8738521$
Area of the microscope field of views (A): πr^2
$\rightarrow \pi(0.265mm)^2 \rightarrow 0.220618344$

Bongo net:
length: 1.7m **diameter:** 30.5cm=.305m **radius:** 0.1525m
Net volume = $(1/3)\pi$ (radius of net)^2(length of net)
$(1/3)\pi(0.1525m)^2(1.7m)= 0.0414m^3$

Velocity of the boat while towing sample: 5miles/hour
Velocity of the boat in miles/minutes=
(5miles/hour)/60 minutes=0.0833333
Net towing time: 5 minutes
Distance = (Velocity of the boat in miles/minutes)(Net towing time)
(0.0833333 miles/minutes)(5 minutes)= 0.4166667 miles
(0.4166667 miles)(1609.344m)= 670.5600000 meters
 # net in the distance traveled by the boat=
670.5600000 meters/1.7m= 394.4470588
Sample volume collected = (Net volume)(# net in the distance traveled by the boat)
($0.0414\ m^3$) (394.4470588)= $16.3301082\ m^3$
($16.3301082\ m^3$)(1,000,000 ml)= 16,330,108.24 ml

APPENDIX J: Some of the organisms observed in the six reservoirs (years 2012 & 2013)

CERRILLOS RESERVOIR

Fist year of sampling

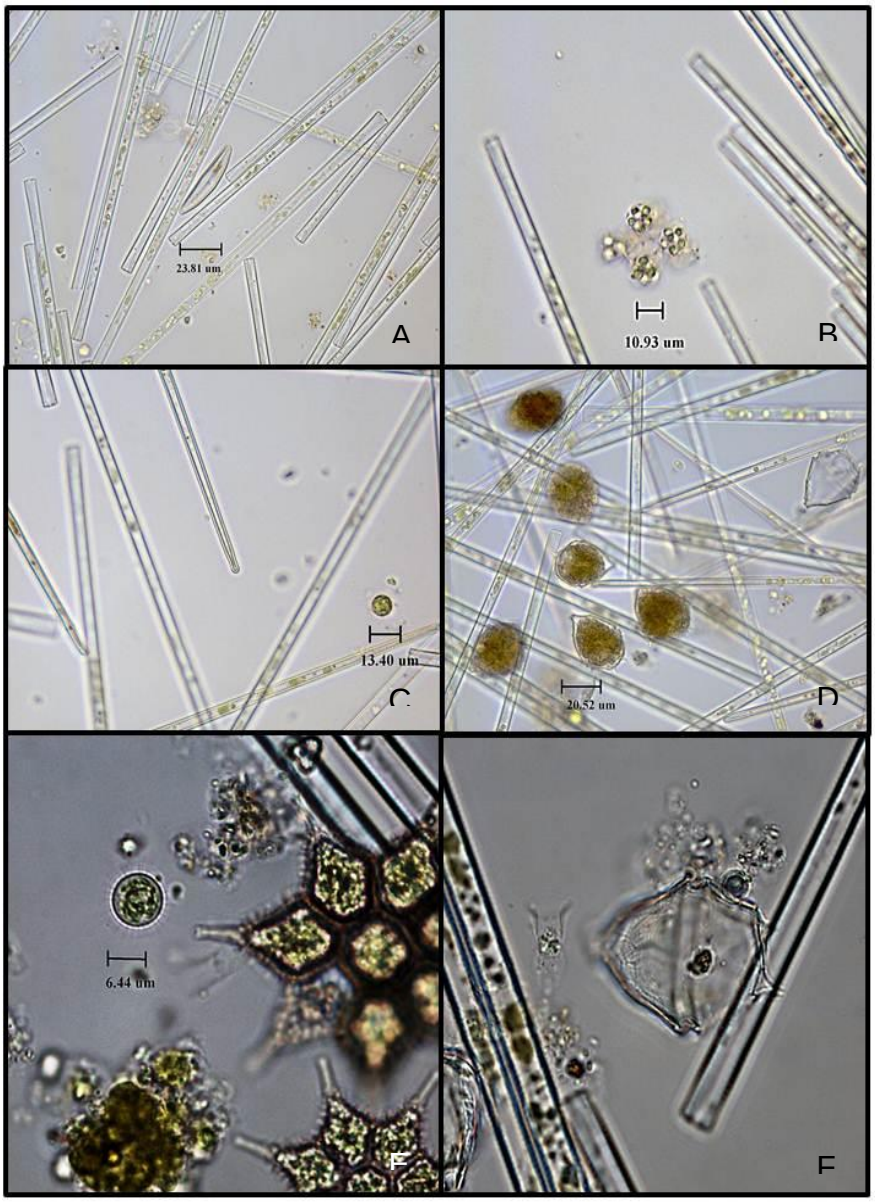

Figure J.1. Some of organisms observed during the first analysis of Cerrillos reservoir samples; (A) *Cymbella* sp. and *Synedra* sp, (B) unknown colonial phytoplankton, (C) pennate and centric diatoms, (D) live and empty *Peridiniopsis* sp., (E) *Pediastrum simplex* var. *echinulatum* and centric diatom, and (F) *Dinobryon sertularia* and empty *Peridiniopsis* sp.

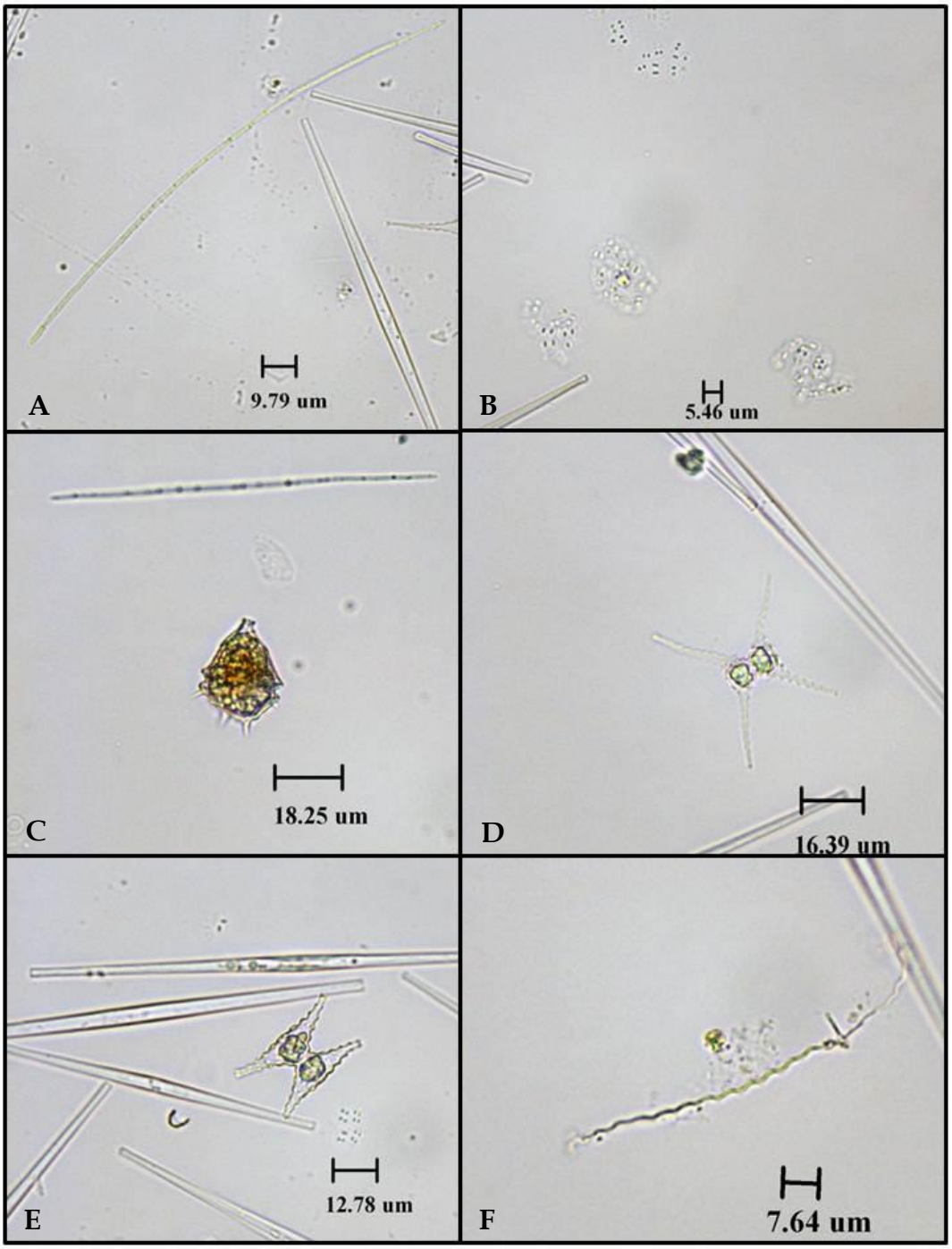

Figure J.2. Algae found during the second sampling (2012) in Cerrillos reservoir: (A)unknown straight filament cyanobacteria, (B) unknown colonial cyanobacteria, (C) *Peridiniopsis* sp., (D) *Staurastrum* sp., (E) another species of *Staurastrum* similar to *S. anatinum*, (F) unknown screwlike curved cyanobacterium.

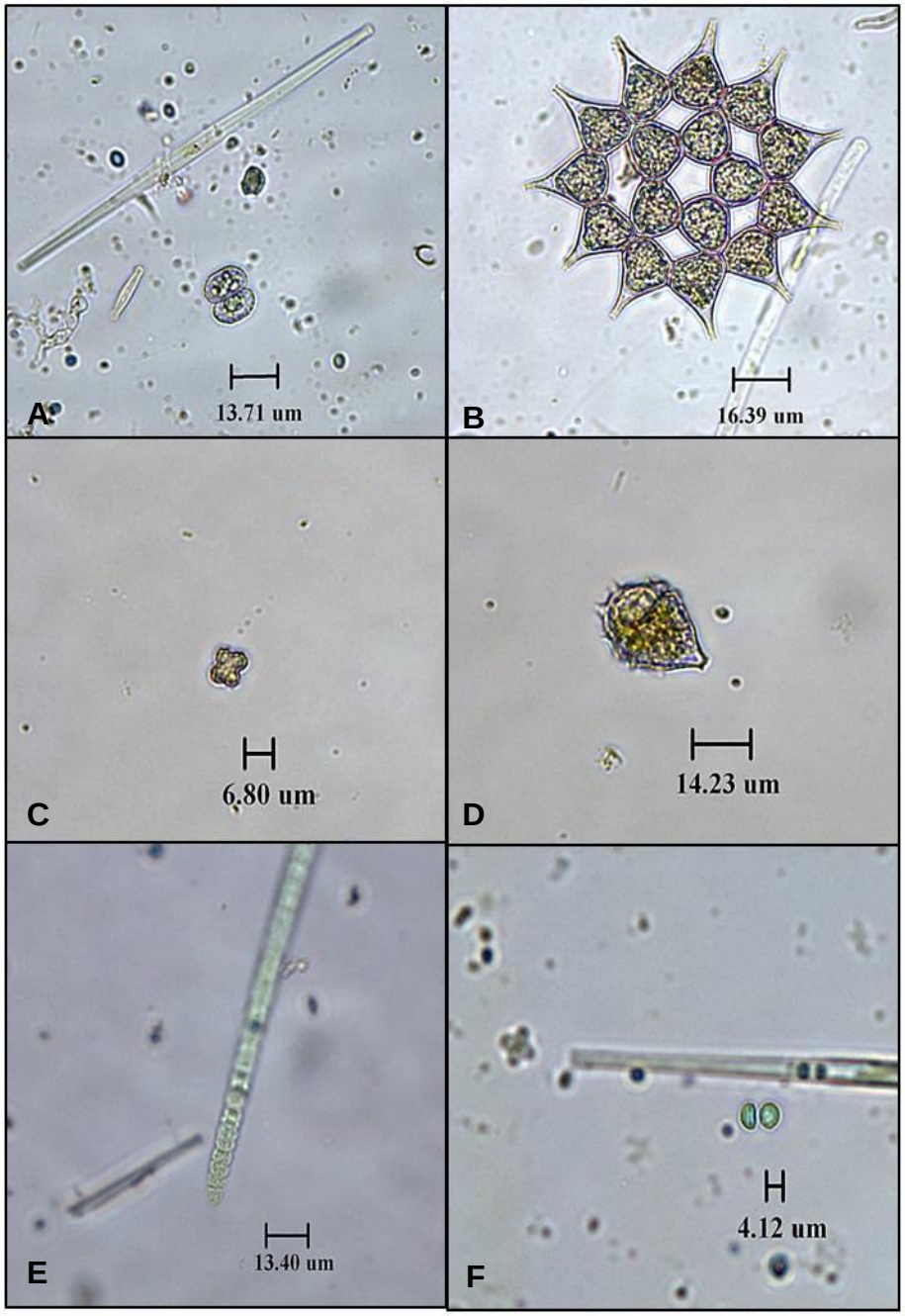

Figure J.3. Some of the taxa observed during the third sample collection in Cerrillos reservoir: (A) *Cosmarium* sp., diatom pennate, (B) *Pediastrum simplex*, (C) *Tetraedron minimum*, (D) dinoflagellate cf. *Peridiniopsis* sp., (E) unknown filamentous cyanobacterium and (F) unknown colonial cyanobacterium (?*Chroococcus* sp.).

Second year of sampling

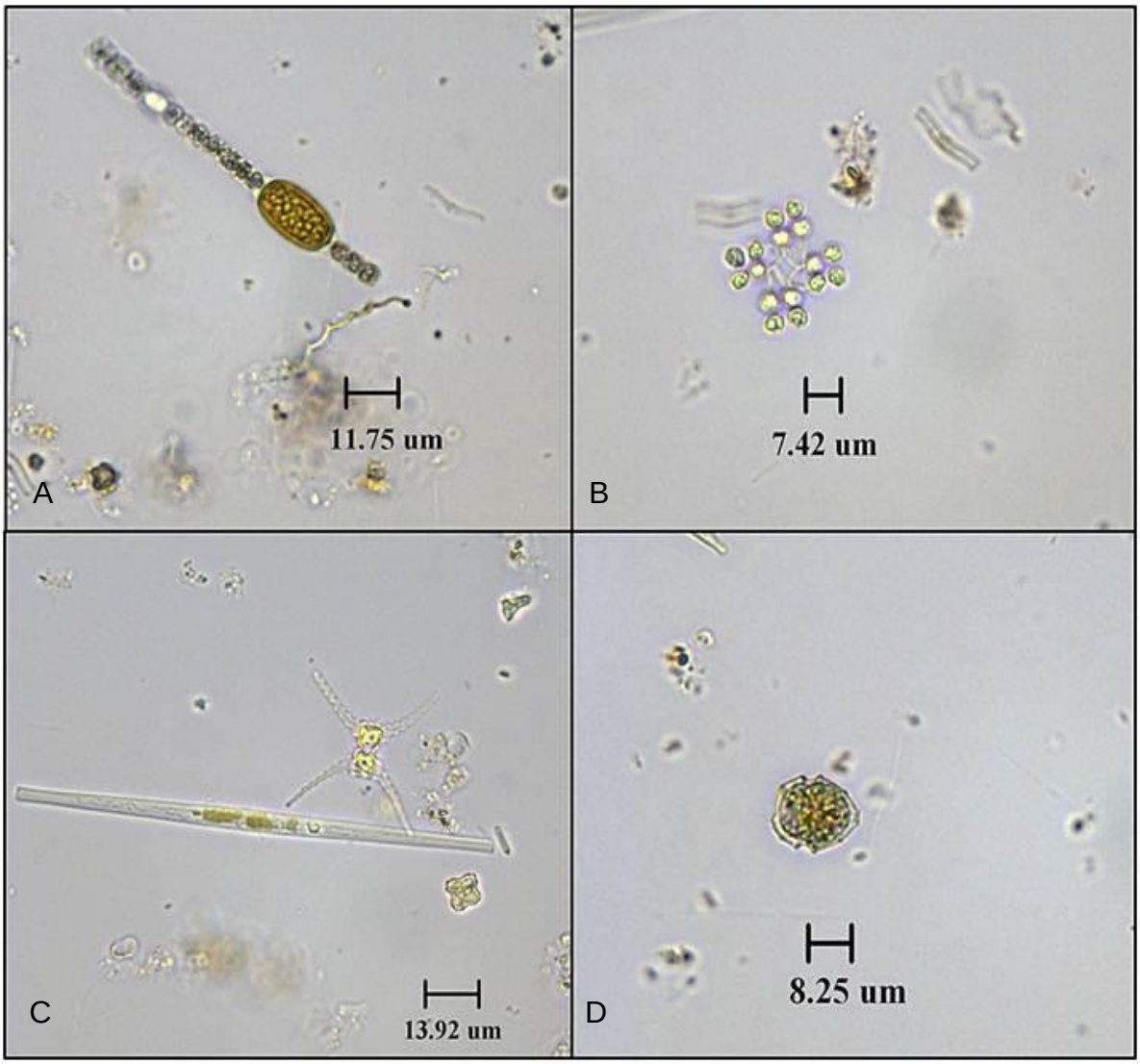

Figure J.4. Other algae observed in the third sample (2012) of Cerrillos: (A) unknown filamentous cyanobacterium that produced heterocyst and *Spirulina*, (B) another unknown colonial cyanobacterium cf. Merismopediaceae that forms a colony similar to the genus *Snowella*, (C) *Staurastrum* sp., *Tetraedron minimum* and pennate diatom, (D) dinoflagellate cf. *Peridiniopsis* sp.

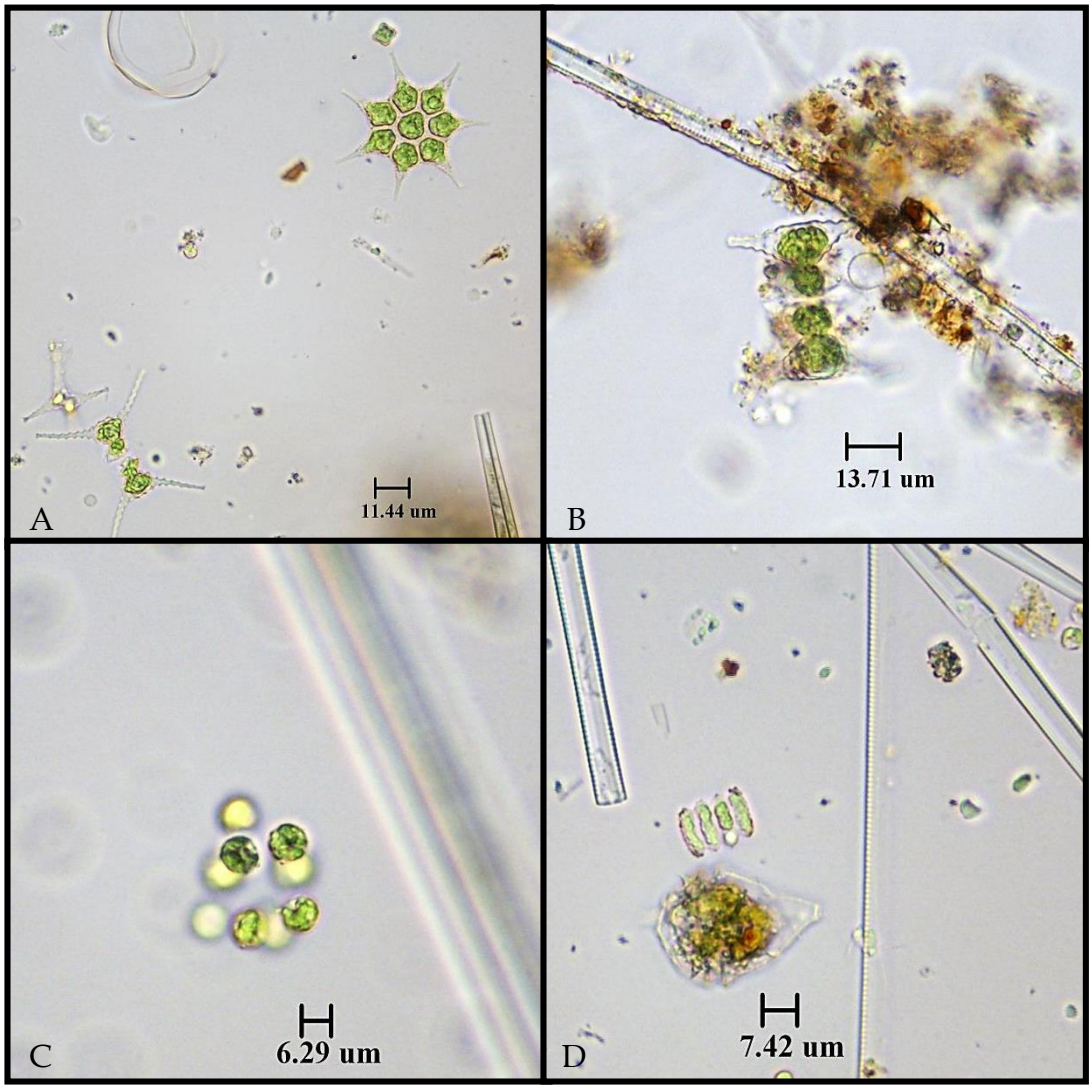

Figure J.5. Some of the organisms observed in Bongo A, first sample of the second year of study: (A) *Pediastrum simplex*, *Tetraedron minimum* and *Staurastrum* sp. morphotype 1, (B) *Staurastrum* sp. morphotype 2, (C) unknown colonial form categorized as Chlorophyta, (D) *Peridiniopsis* sp. and an unknown similar to *Scenedesmus denticulatus*.

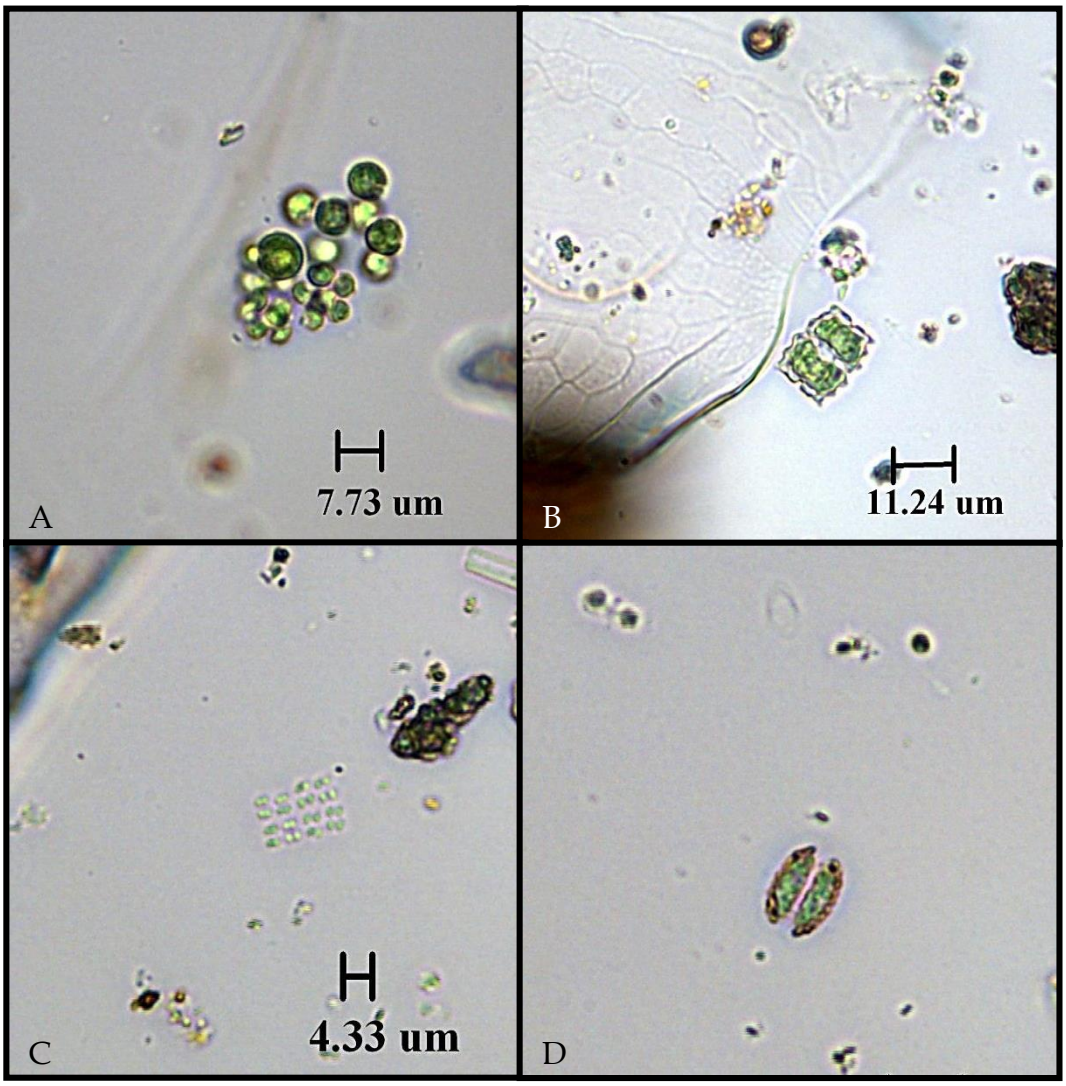

Figure J.6. Some of the organisms observed in Bongo B, first sample of the second year of study: (A) Unknown colonial Chlorophyta, (B) *Euastrum* sp., (C) unknown colonial similar to Merismopediaceae, (D) unknown similar to *Scenedesmus brasiliensis*.

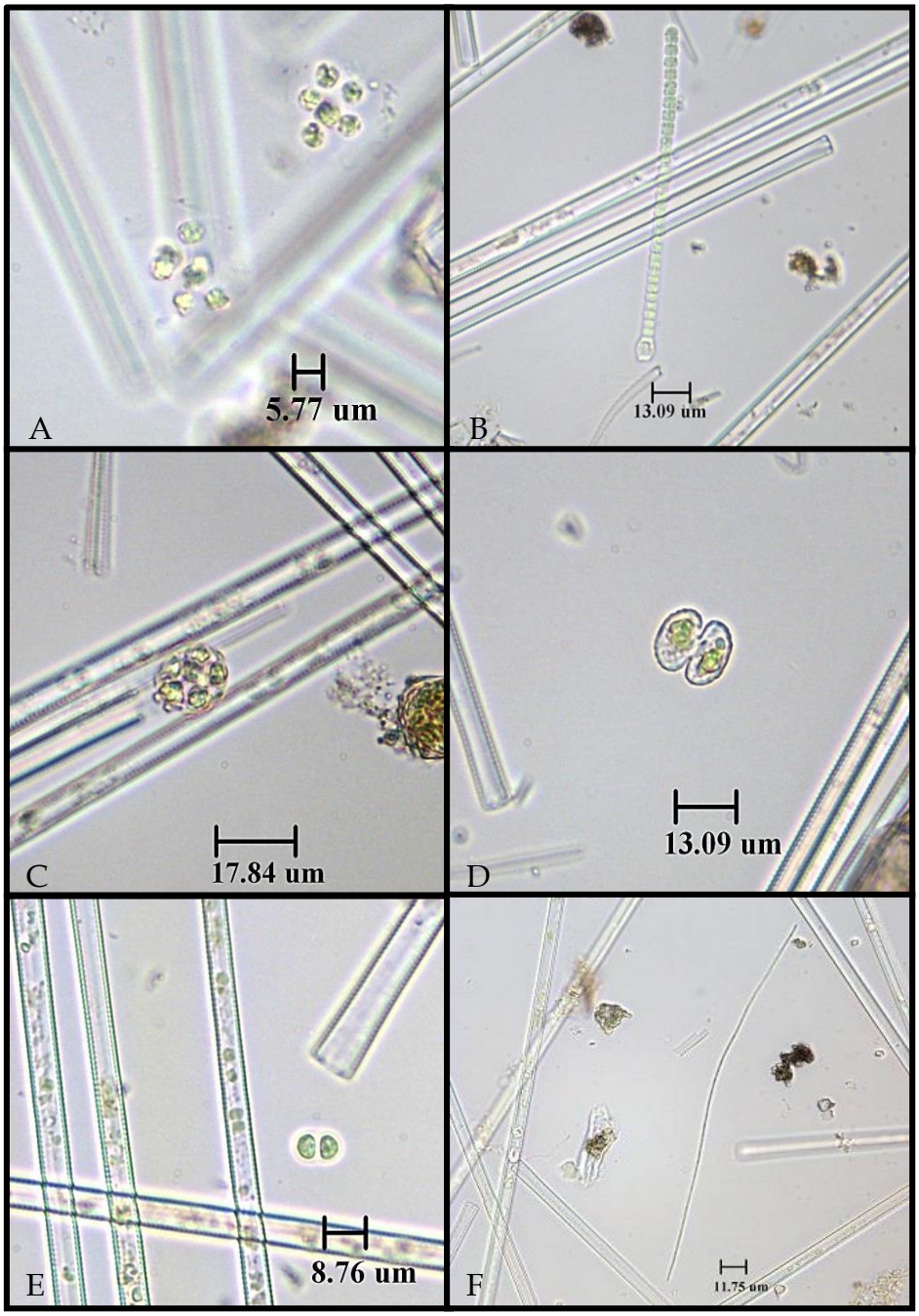

Figure J.7. Some of the organisms observed in Cerrillos Reservoir during the second year of study: (A) Unknown colonial cyanobacteria, (B) Unknown cf. Nostocaceae, (C) *Coelastrum* sp., (D) *Cosmarium* sp., (E) Unknown cf. Chroococcaceae, (F) Filamentous, straight cyanobateria.

CIDRA RESERVOIR
First year of sampling

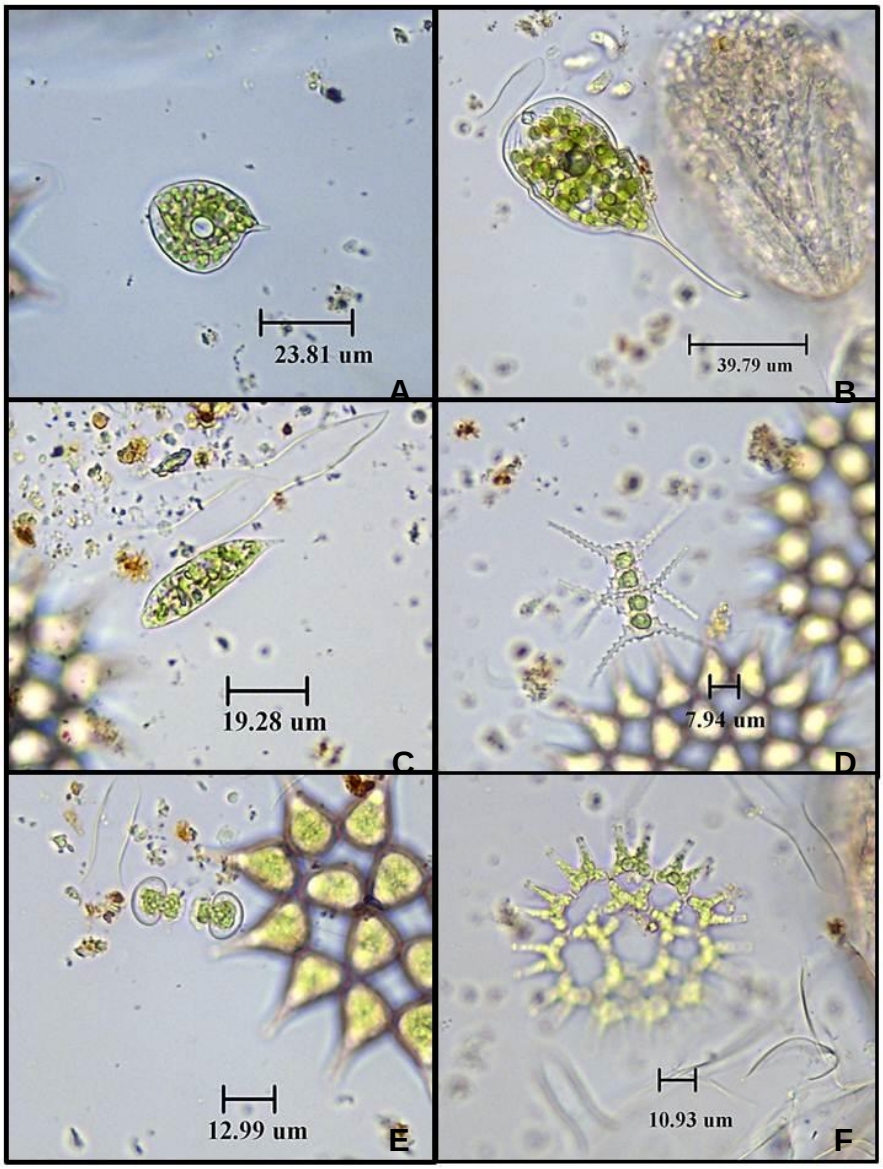

Figure J.8. Species of observed in Cidra reservoir: Euglenophyta, (A) *Phacus* sp., (B) *Phacus longicauda*, (C) *Euglena* cf. *proxima*, and Chlorophyta, (D) *Staurastrum* sp., (E) *Cosmarium* sp., and (F) *Pediastrum duplex* (and around it the chryophyte *Dinobryon sertularia*).

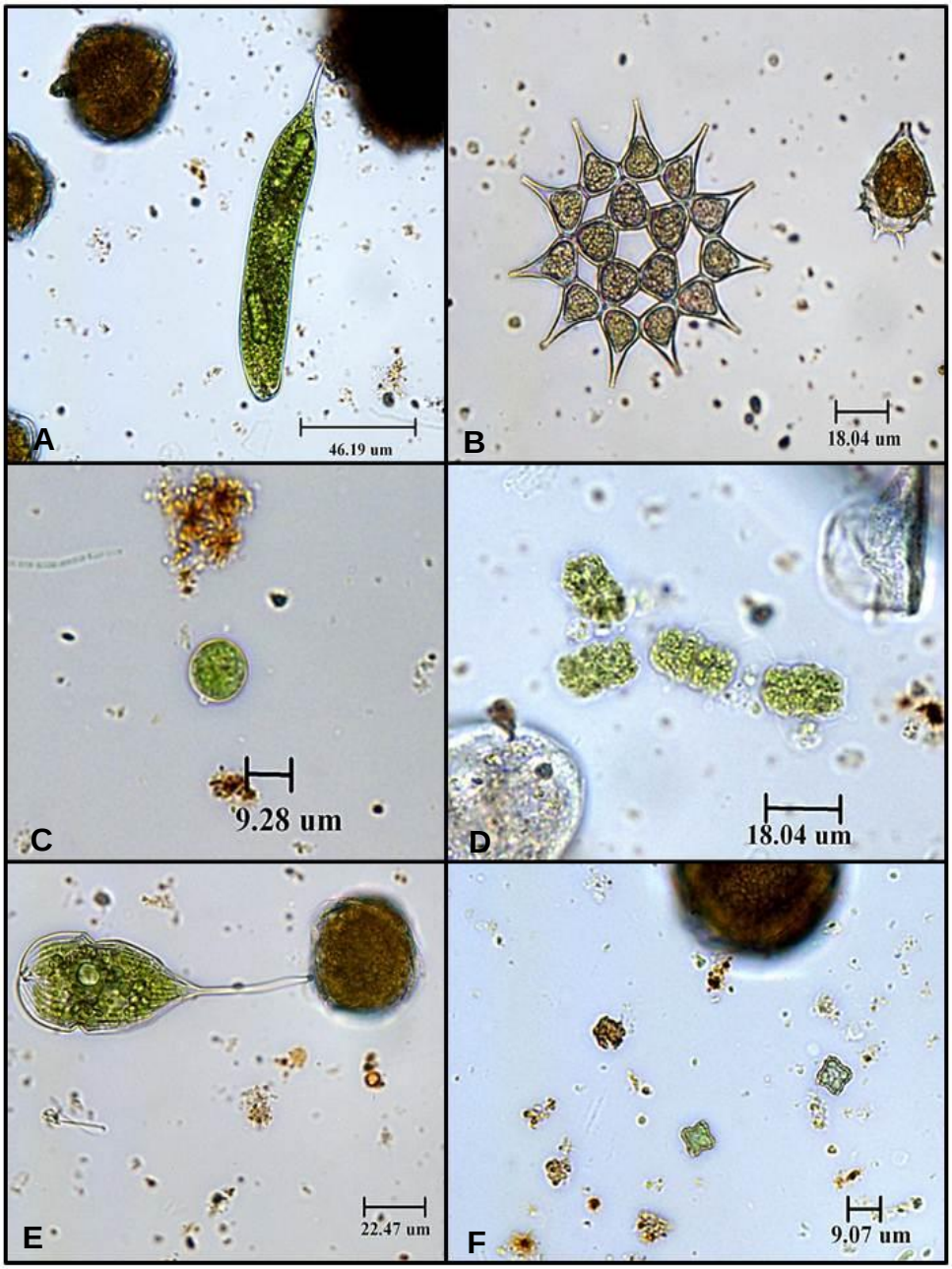

Figure J.9. Taxa found in Cidra's samples during the second sampling (2012): (A) *Euglena acus* and *Peridinium* sp., (B) *Pediastrum simplex* and *Peridiniopsis* sp., (C) unknown alga similar to the genus *Trachelomonas* and straight filament cyanobacterium, (D) *Pandorina* sp. (E) *Phacus longicauda* and *Peridinium* sp., and (F) *Tetraedron minimum*.

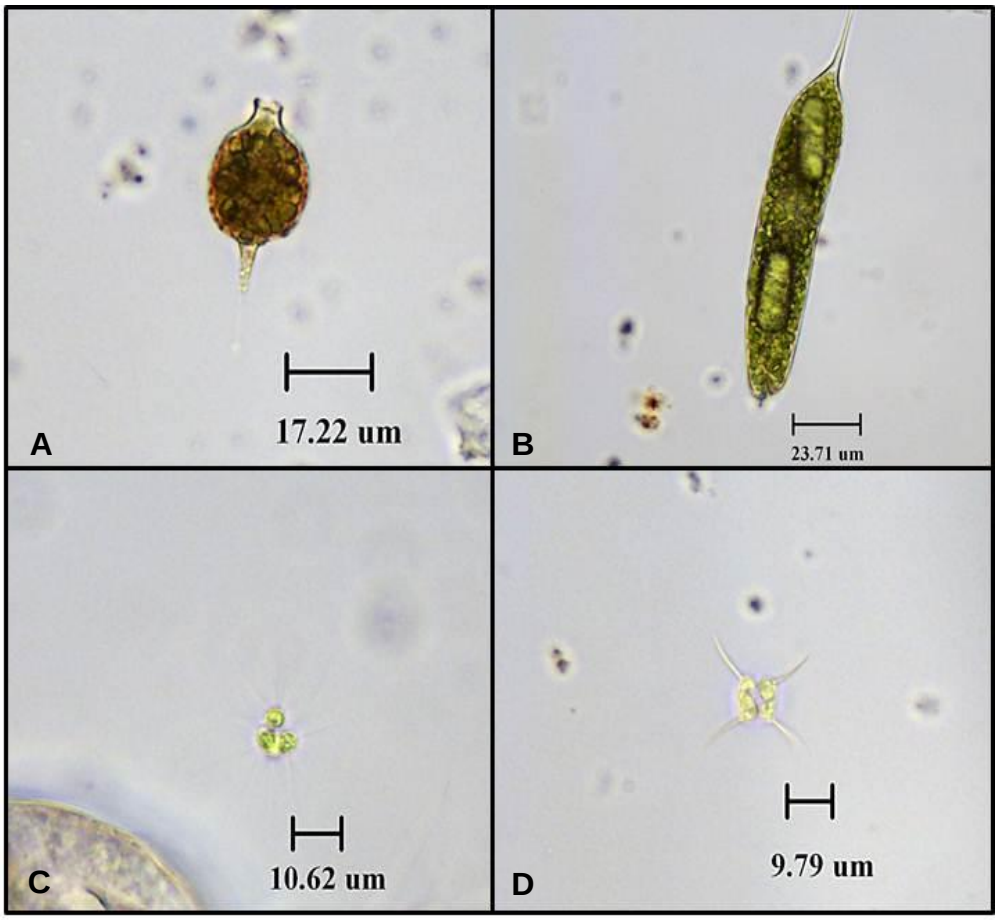

Figure J.10. Other algae observed in the second sampling (2012) of Cidra reservoir: (A) *Strombomonas* sp., (B) *Euglena acus*, (C) alga similar to *Micractinium* sp., (D) *Scenedesmus* sp.

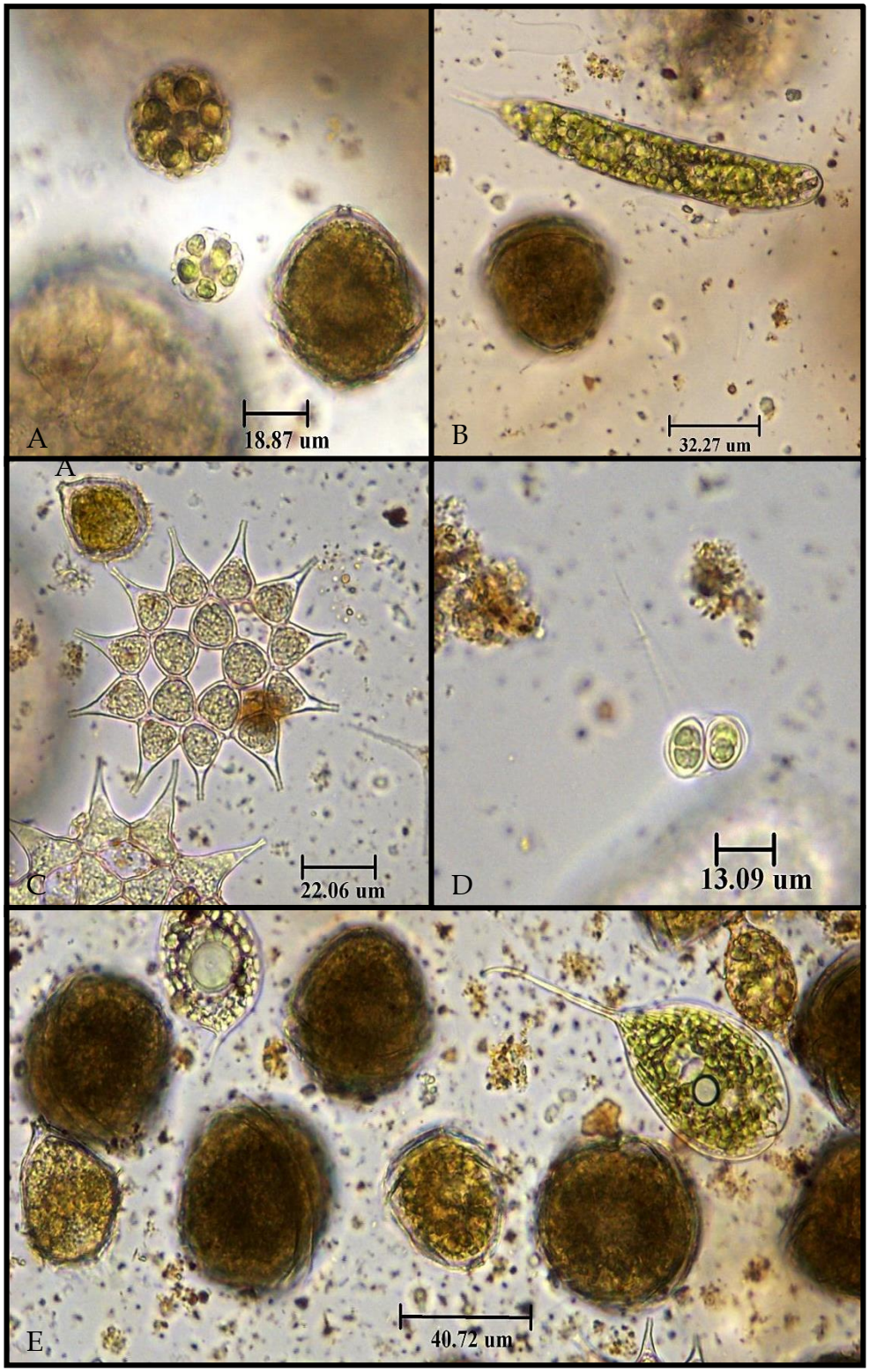

Figure J.11. Some of the algae found in the first sample of the second year of study, Bongo A: (A) *Coelastrum cambricum and Peridinium* sp., (B) *Euglena acus* and *Dinobryon* sp., (C) *Pediastrum simplex* and *Peridiniopsis* sp., (D) *Oocystis* sp., (E) *Phacus longicauda* and *Phacus* sp.