

TABLES

Table 1
Mean length(TL), carapace height (CH) , eggs per brood, total eggs produced and instar duration in *Pseudosida bidentata* female

Instar No.	MeanTL (mm±SE)	Mean CH (mm± SE)	Mean Number of eggs per brood	Cumulative number of eggs (Σmx)	Mean Instar duration in hrs	Cumulative duration of instars in hrs
1	0.721±0.032	0.250±0.014	0		21.5	21.5
2	0.808±0.076	0.285±0.020	0		21.5	43.0
3	1.100±0.062	0.391±0.015	0		29.0	72.0
4	1.300±0.030	0.533±0.008	4.37	4.37	38.0	110.0
5	1.416±0.034	0.550±0.010	7.2	11.50	36.0	146.0
6	1.526±0.023	0.604±0.009	10.33	21.83	36.0	182.0
7	1.664±0.015	0.686±0.009	10.4	32.23	37.0	219.0
8	1.760±0.007	0.756±0.002	12.2	44.43	37.0	256.0
9	1.796±0.014	0.762±0.009	12.6	57.03	37.0	293.0
10	1.852±0.012	0.772±0.006	14.0	71.03	37.0	330.0
11	1.864±0.008	0.788±0.002	15.2	86.23	38.0	368.0
12	1.912±0.007	0.806±0.004	12.4	98.63	36.0	404.0
13	1.940±0.012	0.834±0.002	4.0	102.63	38.0	442.0
14	1.986±0.013	0.860±0.006	3.5	106.13	38.0	480.0
15	2.030±0.008	0.892±0.003	2.0	108.13	43.0	523.0
16	2.042±0.007	0.906±0.004	0	108.13	42.0	565.0
17	2.046±0.003	0.906±0.001	0	108.13	45.0	610.0

Table 2

Size increment in *Pseudosida bidentata* female

Instar No.	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		mm	%		mm	%
1	0.721			0.250		
2	0.808	0.087	12.06	0.285	0.035	14.00
3	1.100	0.292	36.14	0.391	0.106	37.19
4	1.300	0.200	18.18	0.533	0.142	36.32
5	1.416	0.116	8.92	0.550	0.017	3.19
6	1.526	0.110	7.77	0.604	0.054	9.82
7	1.664	0.118	7.73	0.686	0.082	13.58
8	1.760	0.116	6.97	0.756	0.07	10.20
9	1.796	0.036	2.05	0.762	0.006	0.79
10	1.852	0.056	3.12	0.772	0.01	1.31
11	1.864	0.012	0.65	0.788	0.016	2.07
12	1.912	0.048	2.58	0.806	0.018	2.28
13	1.940	0.028	1.46	0.834	0.028	3.47
14	1.986	0.046	2.37	0.860	0.026	3.12
15	2.030	0.044	2.22	0.892	0.032	3.72
16	2.042	0.012	0.59	0.906	0.014	1.57
17	2.046	0.004	0.20	0.906	0	0.00

Table 3
Correlation coefficients for 8 life history characters in *P. bidentata* female

	1	2	3	4	5	6	7	8
1.Total length (TL)	----	0.997	-----		* 0.337	0.966	0.906	0.930
2.Carapace height (CH)					* 0.294	0.962	0.907	0.945
3.Increment of TL				0.863	* -0.081	-0.882	* -0.233	* -0.574
4. Increment of CH					* -0.060	-0.646	* -0.067	* -0.442
5 Mean clutch size						* -0.357	* 0.223	* 0.027
6. Total egg production							0.590	0.968
7.Instar duration								0.823
8. Instar number								

* indicates that there is no correlation between the variables at 5% level of confidence.

Table 4

The mean length (TL), carapace height (CH) and percentage of growth increment/day in *Pseudosida bidentata* male.

Days	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		(mm)	%		(mm)	%
1	0.683			0.241		
*2	0.975	0.292	42.75	0.341	0.100	41.49
*3	1.120	0.225	23.08	0.430	0.089	26.10
4	1.142	0.022	1.96	0.440	0.010	2.33
*5	1.148	0.006	0.53	0.448	0.008	1.82
6	1.152	0.004	0.35	0.460	0.012	2.68
7	1.160	0.008	0.69	0.472	0.012	2.61
8	1.172	0.012	1.03	0.504	0.032	6.78
9	1.186	0.014	1.19	0.520	0.016	3.17
10	1.190	0.004	0.34	0.542	0.022	4.23
11	1.190	0	0.00	0.546	0.004	0.74
12	1.196	0.006	0.50	0.562	0.016	2.93
13	1.198	0.002	0.17	0.576	0.002	0.36
14	1.198	0	0.00	0.580	0.004	0.69
15	1.198	0	0.00	0.588	0.008	1.38
16	1.198	0	0.00	0.602	0.014	2.38
17	1.200	0.002	0.17	0.620	0.018	2.99
18	1.200	0	0.00	0.620	0	0.00
19	1.202	0.002	0.17	0.624	0.004	0.65
20	1.202	0	0.00	0.636	0.012	1.92
21	1.202	0	0.00	0.640	0.004	0.63
22	1.208	0.006	0.50	0.640	0	0.00
23	1.208	0	0.00	0.640	0	0.00

* indicates moulting

Table 5
Mean length (TL), carapace height (CH), eggs per brood, total eggs produced;
and instar duration in *Latonopsis australis* female

Instar No.	Mean TL (mm± SE)	Mean CH (mm± SE)	Mean Number of eggs per brood	Cumulative number of eggs (Σmx)	Mean instar duration in hrs	Cumulative duration of instars in hrs
1	0.608±0.013	0.256±0.009	0	0	26.0	26.0
2	0.728±0.018	0.312±0.014	0	0	28.0	54.0
3	0.888±0.023	0.356±0.010	0	0	28.0	82.0
4	1.104±0.036	0.472±0.023	4.2	4.2	31.5	113.5
5	1.240±0.028	0.496±0.016	7.4	11.6	32.1	145.6
6	1.661±0.042	0.714±0.020	11.3	22.9	38.0	183.6
7	1.721±0.018	0.738±0.014	12.3	35.2	42.0	225.6
8	1.836±0.013	0.754±0.008	13.4	48.6	48.0	273.6
9	1.952±0.003	0.772±0.006	8.0	56.6	48.0	321.6
10	1.986±0.006	0.804±0.002	7.5	64.1	48.0	369.6
11	2.002±0.002	0.826±0.004	5.0	69.1	48.0	417.6
12	2.016±0.005	0.840±0.002	4.0	73.1	50.0	467.6

Table 6

Size increment in *Latonopsis australis* female

Instar No.	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		mm	%		mm	%
1	0.608			0.256		
2	0.728	0.120	19.74	0.312	0.056	21.88
3	0.888	0.160	21.98	0.356	0.044	14.10
4	1.104	0.216	24.32	0.472	0.116	32.58
5	1.240	0.136	12.32	0.496	0.024	5.08
6	1.661	0.421	33.95	0.714	0.218	43.95
7	1.721	0.060	3.61	0.738	0.024	3.36
8	1.836	0.115	6.68	0.754	0.016	2.17
9	1.952	0.116	6.32	0.772	0.018	2.39
10	1.986	0.034	1.74	0.804	0.032	4.15
11	2.002	0.016	0.81	0.826	0.022	2.74
12	2.016	0.014	0.70	0.840	0.014	1.69

Table 7
Correlation coefficients for 8 life history characters in *L. australis* female

	1	2	3	4	5	6	7	8
1.Total length (TL)		0.996			0.678	0.939	0.975	0.962
2.Carapace height (CH)					0.695	0.927	0.967	0.954
3.Increment of TL				0.925	* 0.279	* -0.389	* -0.262	* -0.280
4. Increment of CH					* 0.198	* -0.294	* -0.209	* -0.195
5 Mean clutch size						* 0.442	0.602	* 0.478
6. Total egg production							0.975	0.978
7.Instlar duration								0.964
8. Instlar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 8
Mean length (TL), carapace height (CH), eggs per brood, total eggs produced and instar duration in *Diaphanosoma sarsi* female

Instar No.	Mean TL (mm± SE)	Mean CH (mm± SE)	Mean number of eggs per brood	Cumulative number of eggs (Σmx)	Mean instar duration in hrs	Cumulative duration of instar in hrs
1	0.552±0.023	0.184±0.016	0	0	24.0	24.0
2	0.732±0.035	0.248±0.012	0	0	24.5	48.5
3	0.809±0.027	0.302±0.013	4.2	4.2	32.0	80.5
4	0.840±0.018	0.330±0.006	5.4	9.6	30.0	110.5
5	0.904±0.020	0.364±0.012	8.5	18.1	30.6	141.1
6	0.990±0.016	0.372±0.007	10.0	28.1	32.0	173.1
7	1.022±0.008	0.404±0.004	11.2	39.3	32.5	205.6
8	1.060±0.023	0.412±0.004	12.0	51.3	34.0	239.6
9	1.096±0.008	0.428±0.012	13.0	64.3	36.0	275.6
10	1.120±0.006	0.436±0.007	8.5	72.8	36.0	311.6
11	1.152±0.004	0.448±0.003	9.0	81.8	37.5	349.1
12	1.212±0.007	0.462±0.004	9.0	90.8	39.0	388.1
13	1.280±0.002	0.472±0.001	9.5	100.3	38.0	426.1
14	1.300±0.006	0.482±0.002	9.0	110.3	39.0	465.1
15	1.320±0.004	0.486±0.003	7.5	117.3	39.0	504.1

Table 9

Size increment in *Diaphanosoma sarsi* female

Instar No.	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		mm	%		mm	%
1	0.552			0.184		
2	0.732	0.180	32.61	0.248	0.064	34.78
3	0.809	0.077	10.52	0.302	0.054	21.77
4	0.840	0.031	3.83	0.330	0.028	9.27
5	0.904	0.064	7.62	0.364	0.034	10.30
6	0.990	0.086	9.51	0.372	0.008	2.20
7	1.022	0.032	3.23	0.404	0.032	8.60
8	1.060	0.038	3.72	0.412	0.008	1.98
9	1.096	0.036	3.40	0.428	0.016	3.88
10	1.120	0.024	2.19	0.436	0.008	1.87
11	1.152	0.032	2.86	0.448	0.012	2.75
12	1.212	0.060	5.21	0.462	0.014	3.13
13	1.280	0.068	5.61	0.472	0.010	2.16
14	1.300	0.020	1.56	0.482	0.010	2.12
15	1.320	0.020	1.54	0.486	0.004	0.83

Table 10

Correlation coefficients for 8 life history characters in *D. sarsi* female

	1	2	3	4	5	6	7	8
1.Total length (TL)		0.985			0.714	0.953	0.961	0.979
2.Carapace height (CH)					0.797	0.910	0.963	0.946
3.Increment of TL				0.731	* -0.341	* -0.377	* -0.379	* -0.359
4. Increment of CH					* -0.419	* -0.588	* -0.482	* -0.558
5 Mean clutch size						* 0.556	0.716	0.609
6. Total egg production							0.922	0.993
7.Instlar duration								0.999
8. Instlar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 11

Mean length (TL), carapace height (CH), eggs per brood, total eggs produced and instar duration in *Ceriodaphnia cornuta* female

Instar No.	Mean TL (mm±SE)	Mean CH (mm±SE)	Mean Number of eggs per brood	Cumulative number of eggs (Σmx)	Mean Instar duration in hrs	Cumulative duration of instars in hrs
1	0.232±0.013	0.120±0.006	0	0	23.1	23.1
2	0.352±0.033	0.248±0.021	0	0	23.0	46.1
3	0.426±0.023	0.288±0.008	2	2	24.2	70.3
4	0.462±0.008	0.352±0.012	3.3	5.3	24.7	95.0
5	0.520±0.026	0.408±0.016	6.3	11.6	26.5	121.5
6	0.576±0.004	0.424±0.006	6.6	18.2	26.7	148.2
7	0.606±0.012	0.440±0.008	8.6	26.8	27.3	175.5
8	0.616±0.002	0.446±0.004	9.3	36.1	30.3	205.8
9	0.624±0.006	0.449±0.002	6.6	45.4	30.0	235.8
10	0.636±0.010	0.452±0.006	6.0	51.4	29.3	265.1
11	0.650±0.006	0.464±0.002	4.6	56	33.0	298.1
12	0.672±0.012	0.476±0.008	2.0	58	33.3	331.4
13	0.672±0.002	0.496±0.002	0.70	58.7	33.3	364.7
14	0.678±0.006	0.496±0.002	1.30	60.0	33.4	398.1
15	0.682±0.004	0.496±0.002	2.0	62.0	34.6	432.7
16	0.682±0.002	0.496±0.004	1.0	63.0	33.3	466.0
17	0.696±0.002	0.498±0.002	0	63.0	30.0	496.0

Table 12

Size increment in *Ceriodaphnia cornuta* female

Instar No.	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		mm	%		mm	%
1	0.232			0.120		
2	0.352	0.120	51.72	0.248	0.128	106.67
3	0.426	0.074	21.02	0.288	0.040	16.13
4	0.462	0.036	8.45	0.352	0.064	22.22
5	0.520	0.058	12.55	0.408	0.056	15.91
6	0.576	0.056	10.77	0.424	0.016	3.92
7	0.606	0.03	5.21	0.440	0.016	3.77
8	0.616	0.01	1.65	0.446	0.006	1.36
9	0.624	0.008	1.30	0.449	0.003	0.67
10	0.636	0.012	1.92	0.452	0.003	0.67
11	0.650	0.014	2.20	0.464	0.012	2.65
12	0.672	0.022	3.38	0.476	0.012	2.59
13	0.672	0	0.00	0.496	0.020	4.20
14	0.678	0.006	0.89	0.496	0	0.00
15	0.682	0.004	0.59	0.496	0	0.00
16	0.682	0	0.00	0.496	0	0.00
17	0.696	0.014	2.05	0.498	0.002	0.40

Table 13

Correlation coefficients for 8 life history characters in *C. cornuta* female

	1	2	3	4	5	6	7	8
1. Total length (TL)		0.990			* 0.203	0.902	0.886	0.891
2. Carapace height (CH)					* 0.241	0.852	0.851	0.854
3. Increment of TL				0.881	* -0.027	-0.693	-0.673	-0.628
4. Increment of CH					* -0.159	-0.648	-0.612	-0.592
5 Mean clutch size						* -0.097	* -0.042	* -0.200
6. Total egg production							0.952	0.965
7. Instar duration								0.906
8. Instar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 14

Mean length(TL), carapace height (CH), eggs per brood, total eggs produced and instar duration in *Scapholeberis kingi* female

Instar No.	Mean TL (mm±SE)	Mean CH (mm±SE)	Mean Number of eggs per brood	Cumulative number of eggs (Σ mx)	Mean Instar duration in hrs	Cumulative duration of instars in hrs
1	0.290±0.040	0.187±0.012	0	0	32	32
2	0.376±0.052	0.226±0.024	0	0	32	64
3	0.483±0.010	0.283±0.016	1.5	1.5	34.5	98.5
4	0.504±0.015	0.328±0.004	2.5	4.0	35.0	133.5
5	0.536±0.016	0.344±0.008	4.0	8.0	36.0	169.5
6	0.568±0.030	0.368±0.002	5.0	13.0	36.0	205.5
7	0.640±0.022	0.424±0.001	7.5	20.5	36.0	241.5
8	0.684±0.003	0.440±0.001	9.0	29.5	38.0	279.5
9	0.694±0.002	0.440±0.001	11.0	40.5	38.0	317.5
10	0.704±0.001	0.456±0.003	14.0	54.5	39.5	357.0
11	0.704±0.001	0.460±0.002	10.0	64.5	36.5	393.5
12	0.724±0.004	0.486±0.006	8.0	72.5	36.0	429.5
13	0.731±0.002	0.496±0.002	9.0	81.5	38.0	467.5

Table 15

Size increment in *Scapholeberis kingi* female

Instar No.	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		(mm)	%		(mm)	%
1	0.290			0.187		
2	0.376	0.086	29.66	0.226	0.036	19.25
3	0.483	0.107	28.46	0.283	0.057	25.22
4	0.504	0.021	4.35	0.328	0.045	15.90
5	0.536	0.032	6.35	0.344	0.016	4.88
6	0.568	0.032	5.97	0.368	0.024	6.98
7	0.640	0.072	12.68	0.424	0.056	15.22
8	0.684	0.044	6.88	0.440	0.016	3.77
9	0.694	0.01	1.46	0.440	0	0.00
10	0.704	0.01	1.44	0.456	0.016	3.64
11	0.704	0	0.00	0.460	0.004	0.88
12	0.724	0.02	2.84	0.486	0.026	5.65
13	0.731	0.007	0.97	0.496	0.01	2.06

Table 16

Correlation coefficients for 8 life history measurements in *S.kingi* female

	1	2	3	4	5	6	7	8
1.Total length (TL)		0.993			0.911	0.840	0.900	0.946
2.Carapace height (CH)					0.900	0.866	0.881	0.963
3.Increment of TL				0.806	* -0.466	* -0.539	* -0.382	* -0.487
4. Increment of CH					* -0.391	* -0.433	* -0.290	* -0.358
5 Mean clutch size						0.791	0.926	0.868
6. Total egg production							0.675	0.966
7.Instar duration								0.801
8. Instar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 17

Mean length (TL), carapace height (CH), eggs per brood, total eggs produced and instar duration in *Simocephalus serrulatus* female

Instar No.	Mean TL (mm \pm SE)	Mean CH (mm \pm SE)	Mean number of eggs per brood	Cumulative number of eggs (Σ mx)	Mean instar duration in hrs	Cumulative duration of instars in hrs
1	0.576 \pm 0.016	0.296 \pm 0.020	0	0	43.00	43.00
2	0.600 \pm 0.008	0.344 \pm 0.022	0	0	43.33	86.33
3	1.108 \pm 0.040	0.664 \pm 0.024	0	0	43.66	130.0
4	1.144 \pm 0.028	0.880 \pm 0.016	5.2	5.2	44.0	174.0
5	1.344 \pm 0.032	0.988 \pm 0.018	6.8	12	44.5	218.5
6	1.560 \pm 0.026	1.106 \pm 0.012	8.7	20.7	44.6	263.1
7	1.624 \pm 0.016	1.136 \pm 0.013	14.6	35.3	44.5	307.6
8	1.832 \pm 0.008	1.150 \pm 0.006	16.9	52.2	44.0	351.6
9	2.000 \pm 0.012	1.280 \pm 0.008	18.0	70.2	46.0	397.6
10	2.050 \pm 0.016	1.360 \pm 0.002	18.6	88.8	49.6	447.2
11	2.120 \pm 0.006	1.560 \pm 0.004	26.2	115	50.2	497.4
12	2.280 \pm 0.002	1.560 \pm 0.001	10.4	125.4	50.6	548.0
13	2.280 \pm 0.003	1.580 \pm 0.004	10.0	135.4	50.4	598.4
14	2.280 \pm 0.006	1.586 \pm 0.002	6.2	141.6	52.2	650.6
15	2.280 \pm 0.002	1.586 \pm 0.004	6.0	147.6	52.0	702.6
16	2.280 \pm 0.002	1.586 \pm 0.002	4.0	151.3	52.0	754.6

Table 18

Growth increment in *Simocephalus serrulatus* female

Instar No.	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		(mm)	%		(mm)	%
1	0.576			0.296		
2	0.600	0.024	4.17	0.344	0.048	16.22
3	1.108	0.508	84.67	0.664	0.320	93.02
4	1.144	0.036	3.25	0.880	0.216	32.53
5	1.344	0.200	17.48	0.988	0.108	12.27
6	1.560	0.216	16.07	1.106	0.188	19.03
7	1.624	0.064	4.10	1.136	0.030	2.71
8	1.832	0.208	12.81	1.150	0.014	1.23
9	2.000	0.168	9.17	1.280	0.130	11.30
10	2.050	0.050	2.50	1.360	0.080	6.25
11	2.120	0.070	3.41	1.560	0.200	14.71
12	2.280	0.160	7.55	1.560	0	0.00
13	2.280	0	0.00	1.580	0.020	1.28
14	2.280	0	0.00	1.586	0.006	0.38
15	2.280	0	0.00	1.586	0	0.00
16	2.280	0	0.00	1.586	0	0.00

Table 19

Correlation coefficients for 8 life history measurements in *Simocephalus serrulatus*

	1	2	3	4	5	6	7	8
1.Total length (TL)		0.988			* 0.547	0.913	0.863	0.951
2.Carapace height (CH)					* 0.544	0.902	0.869	0.945
3.Increment of TL				N.A	N.A	N.A	N.A	N.A
4. Increment of CH					* 0.054	* -0.481	* -0.397	* -0.443
5 Mean clutch size						* 0.325	* 0.252	* 0.347
6. Total egg production							0.972	0.979
7.Instlar duration								0.944
8. Instlar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 20

Mean length (TL), carapace height (CH), eggs per brood, total eggs produced; and instar duration in *Moina brachiata* female.

Instar No.	Mean TL (mm± SE)	Mean CH (mm± SE)	Mean Number of eggs per brood	Cumulative number of eggs (Σ mx)	Mean Instar duration in hrs	Cumulative duration of instars in hrs
1	0.528 ± 0.016	0.272 ± 0.007	0	0	11.0	11
2	0.636 ± 0.019	0.332 ± 0.004	0	0	11.0	22
3	0.758 ± 0.016	0.508 ± 0.008	6.4	6.4	21.0	43
4	0.805 ± 0.041	0.528 ± 0.028	12.4	18.8	22.0	65
5	0.988 ± 0.024	0.684 ± 0.006	15.6	34.4	23.0	88
6	1.008 ± 0.010	0.698 ± 0.002	14.7	51	23.5	111.5
7	1.096 ± 0.022	0.706 ± 0.003	7.7	58.7	24.5	136
8	1.152 ± 0.016	0.712 ± 0.001	10.2	68.9	26.0	162
9	1.196 ± 0.012	0.720 ± 0.004	14.7	83.6	26.0	188
10	1.248 ± 0.008	0.732 ± 0.006	15.7	99.3	25.5	213.5
11	1.292 ± 0.004	0.742 ± 0.002	12.0	111.3	32.0	245.5
12	1.302 ± 0.002	0.752 ± 0.002	5.0	116.3	35.0	280.5

Table 21

Size increment in *Moina brachiata* female.

Instar No.	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		mm	%		mm	%
1	0.528			0.272		
2	0.636	0.108	20.45	0.332	0.06	22.06
3	0.758	0.122	19.18	0.508	0.176	53.01
4	0.805	0.047	6.20	0.528	0.02	3.94
5	0.988	0.183	22.73	0.684	0.156	29.55
6	1.008	0.020	2.02	0.698	0.014	2.05
7	1.096	0.088	8.73	0.706	0.008	1.15
8	1.152	0.056	5.11	0.712	0.006	0.85
9	1.196	0.044	3.82	0.720	0.008	1.12
10	1.248	0.052	4.35	0.732	0.012	1.67
11	1.292	0.044	3.53	0.742	0.01	1.37
12	1.302	0.01	0.77	0.752	0.01	1.35

Table 22
Correlation coefficients for 8 life history characters in *M. brachiata* female

	1	2	3	4	5	6	7	8
1.Total length (TL)		0.952			0.585	0.963	0.924	0.977
2.Carapace height (CH)					0.733	0.848	0.906	0.876
3.Increment of TL				0.834	* 0.100	* -0.362	* -0.195	* -0.309
4. Increment of CH					* -0.003	* -0.466	* -0.206	* -0.415
5 Mean clutch size						* 0.445	* 0.512	* 0.459
6. Total egg production							0.891	0.994
7.Instar duration								0.923
8. Instar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 23
Mean length(TL), carapace height (CH), eggs per brood, total eggs produced and instar duration in *Moinodaphnia macleayi* female

Instar No.	Mean TL (mm ± SE)	Mean CH (mm ± SE)	Mean Number of eggs per brood	Cumulative number of eggs (Σ mx)	Mean Instar duration in hrs	Cumulative duration of instars in hrs
1	0.480±0.052	0.296±0.048	0	0	23.26	23.26
2	0.584±0.022	0.312±0.010	0	0	23.56	46.82
3	0.628±0.048	0.432±0.016	2.2	2.2	29.3	76.12
4	0.724±0.020	0.492±0.012	4.2	6.4	30.4	106.52
5	0.764±0.025	0.518±0.008	7.6	14.0	32.2	138.72
6	0.814±0.029	0.600±0.010	9.0	23.0	33.98	172.7
7	0.873±0.017	0.624±0.006	11.0	34.0	33.72	206.42
8	0.908±0.032	0.652±0.012	13.4	47.4	34.22	240.64
9	0.973±0.008	0.699±0.004	13.8	61.2	34.40	275.4
10	0.990±0.005	0.718±0.006	17.2	78.4	36.0	311.04
11	1.001±0.027	0.729±0.012	18.4	96.8	37.08	348.12
12	1.056±0.008	0.760±0.002	19.6	116.4	37.04	385.16
13	1.072±0.002	0.777±0.001	14.4	130.8	37.80	422.96
14	1.076±0.010	0.777±0.001	10.0	140.8	38.0	460.96
15	1.097±0.003	0.780±0.003	5.6	146.4	38.0	498.96
16	1.104±0.002	0.786±0.001	2.5	148.9	36.0	534.96
17	1.104±0.002	0.786±0.001	2.0	150.9	28.0	562.96

Table 24

Size increment in *Moinodaphnia macleayi* female

Instar No.	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		(mm)	(%)		(mm)	(%)
1	0.480			0.296		
2	0.584	0.104	21.67	0.312	0.016	5.40
3	0.628	0.044	7.53	0.432	0.120	38.46
4	0.724	0.096	15.29	0.492	0.150	34.72
5	0.764	0.040	5.52	0.518	0.026	5.28
6	0.814	0.050	6.54	0.600	0.082	15.83
7	0.873	0.059	7.25	0.624	0.024	4.00
8	0.908	0.035	4.01	0.652	0.028	4.49
9	0.973	0.065	7.16	0.699	0.047	7.21
10	0.990	0.017	1.75	0.718	0.019	2.72
11	1.001	0.011	1.11	0.729	0.011	1.53
12	1.056	0.055	5.49	0.760	0.031	4.25
13	1.072	0.016	1.52	0.777	0.017	2.24
14	1.076	0.004	0.37	0.777	0	0.00
15	1.097	0.021	1.95	0.780	0.003	0.39
16	1.104	0.007	0.64	0.786	0.006	0.77
17	1.104	0	0.00	0.786	0	0.00

Table 25

Mean length (TL), carapace height (CH) and percentage of growth increment in *Moinodaphnia macleayi* male

Day	Mean TL (mm ± SE)	Mean CH (mm ± SE)	Length increment		Height increment	
			TL increment	%TL	CH increment	%CH
1	0.380±0.028	0.218±0.012				
2*	0.464 ±0.016	0.236±0.008	0.084	22.11	0.018	8.26
3	0.568 ±0.026	0.272±0.016	0.104	22.41	0.036	15.25
4*	0.688 ±0.012	0.320±0.005	0.12	21.13	0.048	17.65
5	0.706 ±0.002	0.332±0.002	0.018	2.62	0.012	3.75
6	0.708 ±0.001	0.346±0.006	0.002	0.28	0.014	4.22
7	0.712 ±0.001	0.360±0.001	0.004	0.56	0.014	4.05
8	0.712 ±0.006	0.360±0.002	0	0	0	0.00
9	0.724 ±0.002	0.370±0.002	0.012	1.69	0.01	2.78
10	0.736 ±0.004	0.376±0.002	0.012	1.66	0.006	1.62
11	0.748 ±0.004	0.376±0.003	0.012	1.63	0	0
12	0.762 ±0.002	0.376±0.002	0.014	1.87	0	0
13	0.762 ±0.001	0.376±0.001	0	0	0	0

*indicates moulting on Day 2nd and 4th.

Table 26

Correlation coefficients for 8 life history characters in *M. macleayi* female

	1	2	3	4	5	6	7	8
1.Total length (TL)		0.992			* 0.521	0.922	0.810	0.961
2.Carapace height (CH)					* 0.568	0.893	0.845	0.938
3.Increment of TL				0.581	* -0.088	-0.607	* -0.303	* -0.571
4. Increment of CH					* -0.128	* -0.544	* -0.150	* -0.489
5. Mean clutch size						* 0.286	0.729	* 0.305
6. Total egg production							0.641	0.982
7.Instar duration								0.667
8. Instar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 27
Mean length (TL), carapace height (CH), eggs per brood, total eggs produced; and instar duration in *I. spinifer* female.

Instar No.	Mean TL (mm± SE)	Mean CH (mm± SE)	Mean number of eggs per brood	Cumulative number of eggs (Σ mx)	Mean Instar duration in hrs	Cumulative duration of instars in hrs
1	0.336±0.018	0.238±0.014	0	0	68.0	68.0
2	0.584±0.028	0.448±0.018	2.0	2	52.0	120.0
3	0.648±0.012	0.480±0.006	2.5	4.5	42.0	162.0
4	0.664±0.014	0.496±0.004	4.0	8.5	44.0	206.0
5	0.682±0.008	0.520±0.008	6.0	14.5	44.0	250.0
6	0.696±0.004	0.544±0.009	12.0	26.5	44.0	294.0
7	0.708±0.002	0.584±0.001	7.0	33.5	44.5	338.5
8	0.714±0.005	0.588±0.002	5.0	38.5	46.0	384.5
9	0.730±0.002	0.592±0.004	4.0	42.5	46.5	431.0
10	0.748±0.006	0.600±0.001	7.5	50	48.0	479.0
11	0.762±0.008	0.624±0.010	4.5	54.5	48.5	527.5
12	0.818±0.004	0.648±0.002	4.0	59.5	50.0	577.5
13	0.830±0.006	0.662±0.003	2.0	61.5	42.0	619.5

Table 28

Size increment in *I. spinifer*

Instar No.	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		mm	%		mm	%
1	0.336			0.238		
2	0.584	0.248	73.81	0.448	0.210	88.24
3	0.648	0.064	10.96	0.480	0.032	7.14
4	0.664	0.016	2.47	0.496	0.016	3.33
5	0.682	0.018	2.71	0.520	0.024	4.84
6	0.696	0.014	2.05	0.544	0.024	4.62
7	0.708	0.022	3.16	0.584	0.040	7.35
8	0.714	0.006	0.85	0.588	0.004	0.68
9	0.730	0.016	2.24	0.592	0.004	0.68
10	0.748	0.018	2.47	0.600	0.008	1.35
11	0.762	0.014	1.87	0.624	0.024	4.00
12	0.818	0.056	7.35	0.648	0.024	3.85
13	0.830	0.012	1.47	0.662	0.014	2.16

Table 29

Correlation coefficients for 8 life history characters in *I. spinifer*

	1	2	3	4	5	6	7	8
1. Total length (TL)		0.989			* 0.394	* 0.394	-0.774	0.852
2. Carapace height (CH)					* 0.407	0.854	N. A	0.885
3. Increment of TL				0.972	* -0.274	* -0.361	* 0.098	* -0.358
4. Increment of CH					* -0.185	* -0.376	* 0.081	* -0.377
5. Mean clutch size						* 0.229	* -0.467	N. A
6. Total egg production							* -0.303	0.992
7. Instar duration								* -0.380
8. Instar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 30
The mean length (TL), carapace height CH), eggs per brood, total eggs produced and instar duration in *Macrothrix triserialis* female

Instar No.	Mean TL (mm± SE)	Mean CH (mm± SE)	Mean number of eggs per brood	Cumulative number of eggs (Σmx)	Mean instar duration in hrs	Cumulative duration of instars in hrs
1	0.410±0.016	0.248±0.008	0	0	29	29.0
2	0.464±0.034	0.366±0.012	0	0	29	58.0
3	0.608± 0.026	0.376±0.016	5.5	5.5	30.5	88.5
4	0.704±0.018	0.400± 0.032	14.2	19.7	30.5	119.0
5	0.780± 0.026	0.512± 0.010	17.5	37.2	32.5	151.5
6	0.800± 0.010	0.526± 0.006	20.4	57.6	32.5	184.0
7	0.840± 0.016	0.536± 0.004	18.0	75.6	32.5	216.5
8	0.896± 0.003	0.544± 0.002	22.0	97.6	34.0	250.5
9	0.908± 0.002	0.560± 0.006	21.5	119.1	34.0	284.5
10	0.924± 0.012	0.582± 0.008	24.2	143.3	36.0	320.5
11	0.960±0.003	0.600± 0.001	20.2	163.5	36.5	357.0
12	0.966± 0.002	0.608±0.003	18.0	181.5	30.0	387.0

Table 31

Size increment in *Macrothrix triserialis* female

Instar No.	Mean TL (mm)	Length increment		Mean CH (mm)	Height increment	
		mm	%		mm	%
1	0.410			0.248		
2	0.464	0.054	13.73	0.366	0.118	47.58
3	0.608	0.144	31.03	0.376	0.01	2.73
4	0.704	0.096	15.79	0.400	0.024	6.38
5	0.780	0.076	10.80	0.512	0.112	28.00
6	0.800	0.02	2.56	0.526	0.014	2.73
7	0.840	0.04	5.00	0.536	0.01	1.90
8	0.896	0.056	6.67	0.544	0.008	1.49
9	0.908	0.012	1.34	0.560	0.016	2.94
10	0.924	0.016	1.76	0.582	0.022	3.93
11	0.960	0.036	3.90	0.600	0.018	3.09
12	0.966	0.006	0.63	0.608	0.008	1.33

Table 32

The mean length (TL), carapace height (CH) and percentage of growth increment in *M. triserialis* male

Days	Mean TL (mm±SE)	Length increment		Mean CH (mm±SE)	Height increment	
		mm	%		mm	%
1	0.408±0.014			0.248± 0.002		
*2	0.432± 0.002	0.024	5.88	0.256± 0.006	0.008	3.23
3	0.434± 0.008	0.002	0.46	0.260± 0.002	0.004	1.56
4	0.448± 0.012	0.014	3.23	0.272± 0.008	0.012	4.62
5	0.472± 0.010	0.024	5.36	0.294± 0.006	0.022	8.09
6	0.488±0.002	0.016	3.39	0.302± 0.004	0.008	2.72
7	0.496± 0.005	0.008	1.64	0.306± 0.002	0.004	1.32
8	0.506± 0.004	0.01	2.02	0.312± 0.002	0.006	1.96
9	0.518± 0.002	0.012	2.37	0.318± 0.004	0.006	1.92

* indicates moulting on 2nd day.

Table 33

Correlation coefficients for 8 life history characters in *M. triserialis*

	1	2	3	4	5	6	7	8
1.Total length (TL)		0.971			0.946	0.889	0.758	0.947
2.Carapace height (CH)					0.909	0.880	0.739	0.936
3.Increment of TL				* 0.239	* -0.281	* -0.525	* -0.211	* -0.437
4. Increment of CH					* -0.282	* -0.363	* -0.201	* -0.339
5 Mean clutch size						0.754	0.807	0.827
6. Total egg production							0.658	0.987
7.Instar duration								0.691
8. Instar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 34
Mean length (TL), carapace height (CH), eggs per brood, total eggs produced; and instar duration in *Alona pulchella* female

Instar No.	Body length (mm± SE)	Carapace height (mm± SE)	Mean Number of eggs per brood	Cumulative number of eggs (Σmx)	Mean instar duration in hrs	Cumulative duration of instars in hrs
1	0.325±0.012	0.183±0.008	0	0	23.5	23.5
2	0.350±0.028	0.214±0.013	0	0	23.5	47.0
3	0.425±0.010	0.250±0.006	2	2	26.5	73.5
4	0.446±0.018	0.264±0.004	2	4	30.4	103.9
5	0.472±0.022	0.286±0.009	2	6	30.2	134.1
6	0.486±0.016	0.298±0.005	2	8	32.0	166.1
7	0.508±0.008	0.308±0.003	2	10	32.6	198.7
8	0.510±0.006	0.312±0.002	2	12	32.0	230.7
9	0.516±0.006	0.316±0.001	2	14	32.5	263.2
10	0.520±0.004	0.332±0.002	2	16	37.4	300.6
11	0.522±0.001	0.326±0.001	2	18	38.8	339.4
12	0.525±0.001	0.328±0.002	2	20	38.6	378.0

Table 35

Size increment in *Alona pulchella* female

Instar No.	Mean TL mm	Length increment		Mean CH mm	Height increment	
		mm	%		mm	%
1	0.325			0.183		
2	0.350	0.025	7.69	0.204	0.021	11.47
3	0.425	0.075	21.42	0.250	0.046	22.54
4	0.446	0.021	4.94	0.264	0.014	5.60
5	0.472	0.026	5.82	0.286	0.022	8.33
6	0.486	0.014	2.96	0.298	0.012	4.19
7	0.508	0.022	4.52	0.308	0.01	3.36
8	0.510	0.002	0.39	0.312	0.004	1.30
9	0.516	0.006	1.17	0.316	0.004	1.28
10	0.520	0.004	0.77	0.332	0.006	1.90
11	0.522	0.002	0.38	0.326	0.004	1.20
12	0.525	0.003	0.57	0.328	0.002	0.61

Table 36

Correlation coefficients for 8 life history characters in *A. pulchella*

	1	2	3	4	5	6	7	8
1. Total length (TL)		0.996			0.884	0.881	0.907	0.902
2. Carapace height (CH)				0.978	0.857	0.905	0.929	0.924
3. Increment of TL					* 0.093	* -0.529	* -0.448	* -0.490
4. Increment of CH					* 0.058	* -0.551	* -0.463	* -0.507
5. Mean clutch size						0.616	0.719	0.648
6. Total egg production							0.958	0.997
7. Instar duration								0.962
8. Instar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 37
Mean length (TL), carapace height (CH), eggs per brood, total eggs produced; and instar duration in *Oxyurella singalensis* female

Instar No	Mean TL (mm± SE)	Mean CH (mm± SE)	Mean Number of eggs per brood	Cumulative number of eggs (Σ mx)	Mean Instar duration in hrs	Cumulative duration of instars in hrs
1	0.504±0.008	0.328±0.012	0		36.0	36
2	0.520±0.010	0.344±0.006	0		38.5	74.5
3	0.544±0.023	0.400±0.016	2	2	40.2	114.7
4	0.672±0.034	0.408±0.012	2	4	44.5	159.2
5	0.680±0.016	0.456±0.010	2	6	48.0	207.2
6	0.692±0.006	0.464±0.004	2	8	53.4	260.6
7	0.704±0.008	0.468±0.002	2	10	50.5	311.1
8	0.719±0.006	0.472±0.002	2	12	52.0	363.1
9	0.725±0.012	0.506±0.001	2	14	55.2	418.3
10	0.742±0.002	0.506±0.001	2	16	58.6	476.9
11	0.764±0.006	0.508±0.002	2	18	60.0	536.9
12	0.782±0.003	0.512±0.001	2	20	62.0	598.9
13	0.806±0.008	0.524±0.004	2	22	84.0	682.9
14	0.824±0.002	0.536±0.002	2	24	74.0	756.9
15	0.824±0.001	0.536±0.001	2	26	74.0	830.9
16	0.824±0.002	0.536±0.001	0	26	62.0	892.9
17	0.824±0.001	0.536±0.001	0	26	67.0	959.9

Table 38
Size increment in *Oxyurella singalensis* female

Instar number	Mean TL(mm)	Length increment		Mean CH (mm)	Height increment	
		mm	%		mm	%
1	0.504			0.328		
2	0.520	0.016	3.17	0.344	0.016	4.88
3	0.544	0.024	4.62	0.400	0.056	16.28
4	0.672	0.128	23.53	0.408	0.008	2.00
5	0.680	0.008	1.19	0.456	0.048	11.76
6	0.692	0.012	1.76	0.464	0.008	1.75
7	0.704	0.012	1.73	0.468	0.004	0.86
8	0.719	0.015	2.13	0.472	0.004	0.85
9	0.725	0.006	0.83	0.506	0.034	7.20
10	0.742	0.017	2.34	0.506	0	0.00
11	0.764	0.022	2.96	0.508	0.002	0.40
12	0.782	0.018	2.36	0.512	0.006	1.18
13	0.806	0.034	4.35	0.524	0.012	2.34
14	0.824	0.018	2.23	0.536	0.012	2.29
15	0.824	0	0.00	0.536	0	0.00
16	0.824	0	0.00	0.536	0	0.00
17	0.824	0	0.00	0.536	0	0.00

Table 39
Correlation coefficients for 8 life history characters in *O. singalensis* female

	1	2	3	4	5	6	7	8
1.Total length (TL)		0.971			* 0.252	0.946	0.894	0.941
2.Carapace height (CH)					* 0.317	0.932	0.874	0.928
3.Increment of TL				N. A	* 0.298	* -0.281	* -0.160	* -0.277
4. Increment of CH					N. A	N.A	N. A	N. A
5 Mean clutch size						* 0.047	* 0.240	* 0.000
6. Total egg production							0.910	0.995
7.Instlar duration								0.888
8. Instar number								

* indicates that there is no correlation between the variables at 5% level of confidence

Table 40

The mean length (TL), mean carapace height(CH), and percentage of growth increment of *Oxyurella singalensis* male.

Days	Mean TL	Length increment		Mean CH	Height increment	
		mm	%		mm	%
1	0.442			0.272		
2	0.474	0.032	7.24	0.286	0.014	5.15
3	0.502	0.028	5.91	0.300	0.014	4.90
*4	0.516	0.014	2.79	0.320	0.020	6.67
5	0.520	0.004	0.78	0.322	0.002	0.63
6	0.520	0.000	0.00	0.322	0.000	0.00
7	0.522	0.002	0.38	0.324	0.002	0.62
8	0.526	0.004	0.77	0.328	0.004	1.23
9	0.530	0.004	0.76	0.332	0.004	1.22
10	0.536	0.006	1.13	0.334	0.002	0.60
11	0.540	0.004	0.75	0.334	0.000	0.00
12	0.544	0.004	0.74	0.336	0.002	0.60
13	0.546	0.002	0.37	0.336	0.000	0.00
14	0.550	0.004	0.73	0.338	0.002	0.60
15	0.554	0.004	0.73	0.340	0.002	0.59
16	0.558	0.004	0.72	0.344	0.004	1.18
17	0.560	0.002	0.36	0.344	0	0.00
18	0.560	0	0.00	0.344	0	0.00
19	0.560	0	0.00	0.344	0	0.00
20	0.560	0	0.00	0.344	0	0.00
21	0.560	0	0.00	0.344	0	0.00
22	0.560	0	0.00	0.344	0	0.00
23	0.560	0	0.00	0.344	0	0.00

* indicates moulting on 4th day

Table 41 Population growth in *M. triserialis*

Date	Pre-adult	Parthenogenetic females	Males	Ephippial females	Total
28-11-04	846	270	0	0	1124
30-11-04	1592	294	0	0	1886
2/12/04	2416	640	18	0	3074
4/12/04	5614	1098	42	36	6790
6/12/04	4846	1912	120	98	6976
8/12/04	10116	1051	356	1612	13135
10/12/04	7546	1904	646	3546	13642
12/12/04	8306	1062	422	4836	14256
14-12-04	9407	3608	656	2568	16239
16-12-04	6728	1732	460	826	9746
18-12-04	3610	3674	18	120	7422
20/12/04	2496	2826	08	0	5330
22/12/04	974	2710	12	16	3712
24/12/04	720	3218	0	0	4216

Table 42**Mean duration of pre-adult, primiparous and adult of the cladocerans studied**

Sl.No.	Name of species	Pre-adult (PID)	Primiparous	Adult (AID)
1	<i>P. bidentata</i>	24	38	38.42
2	<i>L. australis</i>	27.33	31.5	42.85
3	<i>D. sarsi</i>	24.25	32	35.04
4	<i>C. cornuta</i>	23	24.2	30
5	<i>S. kingi</i>	32	34.5	36.68
6	<i>S. serrulatus</i>	43.33	44	48.04
7	<i>M. brachiata</i>	11	21	25.85
8	<i>M. macleayi</i>	23.41	29.3	34.43
9	<i>I. spinifer</i>	68	52	45.96
10	<i>M. triserialis</i>	29	30.5	32.9
11	<i>A. pulchella</i>	23.5	26.5	33.1
12	<i>O. singalensis</i>	37.25	40.2	59.03

Table 43 Size at different stages of growth in the cladocerans

No.	Name of species	Size at birth (SaB)		Size at first reproduction (SFR)		Relative size		Maximum mean size	
		TL	CH	TL	CH	RL	RH	TL	CH
1	<i>P. bidentata</i>	0.697	0.246	1.3	0.533	0.42	0.346	2.046	0.906
2	<i>L. australis</i>	0.512	0.208	1.104	0.472	0.464	0.441	2.016	0.84
3	<i>D.sarsi</i>	0.522	0.184	0.809	0.302	0.552	0.609	1.32	0.486
4	<i>C. cornuta</i>	0.232	0.120	0.426	0.288	0.545	0.471	0.696	0.498
5	<i>S. kingi</i>	0.29	0.187	0.483	0.283	0.594	0.66	0.731	0.496
6	<i>S.serrulatus</i>	0.576	0.296	1.144	0.88	0.399	0.336	2.28	1.586
7	<i>M. brachiata</i>	0.496	0.256	0.758	0.508	0.496	0.504	1.302	0.752
8	<i>M.macleayi</i>	0.48	0.296	0.628	0.432	0.764	0.685	1.104	0.786
9	<i>I. spinifer</i>	0.304	0.208	0.584	0.448	0.521	0.464	0.83	0.662
10	<i>M.triserialis</i>	0.318	0.207	0.608	0.376	0.474	0.468	0.966	0.608
11	<i>A. pulchella</i>	0.291	0.175	0.425	0.25	0.685	0.7	0.525	0.328
12	<i>O. singalensis</i>	0.492	0.318	0.544	0.4	0.803	0.672	0.824	0.536

Table 45 Life history parameters of the cladocerans studied

Sl. No.	Species studied	Maximum size (mm)		Number of instars			Life span		Egg production		
		Total length (TL)	Carapace height (CH)	Pre-adult Instars	Adult instars	Total instars	Maximum life span (L max) days	Mean life span (Σlx) days	Maximum clutch size (E max) Eggs/brood	Cumulative number of eggs produced (Σmx)	Rate of egg production (REP)
1	<i>P. bidentata</i>	2.046	0.906	3	14	17	25.41	9.85	15.2	108.13	9.0919
2	<i>L. australis</i>	2.016	0.84	3	9	12	19.49	7.95	13.4	73.1	7.9021
3	<i>D. sarsi</i>	1.32	0.486	2	13	15	21	9.0	13.0	117.3	9.2632
4	<i>C. cornuta</i>	0.696	0.498	2	15	17	20.66	8.23	9.3	63.0	4.8039
5	<i>S. kingi</i>	0.731	0.496	2	11	13	19.47	8.14	14.0	81.5	7.3434
6	<i>S. serrulatus</i>	2.28	1.586	3	13	16	31.44	13.37	26.2	151.3	12.2752
7	<i>M. brachiata</i>	1.302	0.752	2	10	12	11.69	5.63	15.6	116.3	11.771
8	<i>M. macleayi</i>	1.104	0.786	2	15	17	23.45	9.23	19.6	150.9	11.4968
9	<i>I. spinifer</i>	0.83	0.662	1	12	13	25.81	11.43	12.0	61.5	5.7637
10	<i>M. triserialis</i>	0.966	0.608	2	10	12	16.1	7.55	24.2	181.5	17.9329
11	<i>A. pulchella</i>	0.525	0.328	2	10	12	15.75	-	2.0	20.0	1.923
12	<i>O. singalensis</i>	0.824	0.536	2	15	17	39.99	17.14	2.0	26.0	1.848



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