APPENDIX

Appendix 1- Correlation matrix of Genus *Myrmeleon* (Larvae and cocoon)

	LBL	LBW	LHL	LHW	ML	CD	CW
LBL		0.80473	0.60146	0.34574	-0.17687	0.12778	-0.11653
LBW	0.80473		0.69062	0.56905	0.15387	0.11844	0.051048
LHL	0.60146	0.69062		0.17983	0.005667	0.24225	0.020434
LHW	0.34574	0.56905	0.17983		0.4716	0.059899	0.042294
ML	-0.17687	0.15387	0.005667	0.4716		0.25671	0.081101
CD	0.12778	0.11844	0.24225	0.059899	0.25671		-0.13696
CW	-0.11653	0.051048	0.020434	0.042294	0.081101	-0.13696	

Appendix 2-. Correlation matrix of larval morphometry of *M Pseudohyalinus*

	Body length	Body width	Head length	Head width	Mandible
Body length		0.91568	0.73665	0.71957	0.72723
Body width	0.91568		0.8006	0.76198	0.69873
Head length	0.73665	0.8006		0.64598	0.72421
Head width	0.71957	0.76198	0.64598		0.66934
Mandible	0.72723	0.69873	0.72421	0.66934	

Appendix 3- Correlation matrix of larval morphometry of *M. hyalinus*

	Body length	Body width	Head length	Head width	Mandible
Body length		0.84912	0.76261	0.7287	0.62649
Body width	0.84912		0.66228	0.70823	0.66881
Head length	0.76261	0.66228		0.78247	0.65186
Head width	0.7287	0.70823	0.78247		0.812
Mandible	0.62649	0.66881	0.65186	0.812	

Appendix 4- One Way Anova Comparing means among species and the genus-LBL

Test for equal means					
	Sum of sqrs	df	Mean square	F	p (same)
Between groups:	0.0175	2	0.00875	0.1739	0.8407
Within groups:	3.47125	69	0.050308	Permutation p (n=99999)	
Total:	3.48875	71	0.8478		

Appendix 5- One Way Anova Comparing means among species and the genus-LBW

	Sum of sqrs	df	Mean square	F	p (same)
Between groups:	0.071944	2	0.035972	3.006	0.05604
Within groups:	0.825833	69	0.011969	Permutation p (n=99999)	
Total:	0.897778	71	0.05772		

Appendix 6- One Way Anova Comparing means among species and the genus-LHL

Test for equal means					
	Sum of sqrs	df	Mean square	F	p (same)
Between groups:	0.035833	2	0.017917	3.645	0.03127
Within groups:	0.339167	69	0.004915	Permutation p(n=99999)	
Total:	0.375	71	0.02611		

Appendix 7- One Way Anova Comparing means among species and the genus-LHW

Test for equal means					
	Sum of sqrs	df	Mean square	F	p (same)
Between groups:	0.067778	2	0.033889	17.7	6.23E-07
Within groups:	0.132083	69	0.001914	Permutation p (n=99999)	
Total:	0.199861	71	1.00E-05		

Appendix 8- One Way Anova Comparing means among species and the genus-ML

Test for equal means					
	Sum of sqrs	df	Mean square	F	p (same)
Between groups:	0.0325	2	0.01625	6.694	0.002203
Within groups:	0.1675	69	0.002428	Permutation p(n=99999)	
Total:	0.2	71	0.00269		

Appendix 9- Soil texture and components in different soil samples collected from different habitats of Kerala

Sl No	District		Study area	Sand (%)	Silt (%)	Clay (%)	Texture class
1	PKD	AA	Parli	91	6	3	Fine sand
2	PKD		Edathara	87.8	0	12.2	sand
3	PKD		Pezhumpara	81.8	4	14.2	sand
4	TCR		Murukkumpara	97	2	1	Fine sand
5	PKD	HDA	Parli Manamthody	85.8	2	12.2	sand
6	TCR		Wadakkancherry	92	5	3	Fine sand
7	TCR		Nedupuzha	97	2	1	Fine sand
8	TCR		Kodungallur	85.8	2	12.2	sand
9	TVRM		Vellayani	87.8	0	12.2	sand
10	KNNR		Thalassery	77.8	4	18.2	sand
11	WYND		Kattikulam	71.8	4	24.2	sand
12	MLPM		Nilambur Dippo	85.84	2	12.16	sand
13	MLPM		Irrigation office	85.84	2	12.16	sand
14	MLPM		Idimuzhikkal	89.84	2	12.16	sand
15	PTMA		Tiruvalla	89.84	0	10.16	sand
16	PKD		Moyan modal school	81.84	2	16.16	sand
17	TCR		vettikkattiri	81.84	4	14.16	sand
18	PKD		Kanniyampuram	89.84	0	10.16	sand
19	PKD		Kinavallur	89.84	0	10.16	sand
20	PKD	FB	Thiruvizhamkunnu	97	2	1	Fine sand
21	MLPM		Bengalow kunnu	85.84	0	14.16	sand
22	PKD		Dhoni temple	85.84	2	12.16	sand
23	PKD	RB	Parali Riverbank	97	2	1	Fine sand
24	TCR		Poomala	83.8	0	16.2	sand
25	TCR		Ezhattumugham	87.8	0	12.2	sand
26	WYND		Kuruva	87.8	0	12.2	sand
27	TCR		Thumboormuzhi	79.84	4	16.16	sand

Appendix 10 -Average diameter progress in each hour in different conditions of second instar larvae

Diameter	1	2	3	4	5	6	7	8	9	10	11	12	Next day
sand fed	1.6	1.51	1.51	1.65	1.68	1.67	1.64	1.89	2.49	2.46	2.54	2.54	2.49
sand starved	1.98	1.96	1.97	1.88	1.88	1.90	1.99	2.25	2.63	2.98	2.96	2.96	3.01
soil fed	2.04	2.06	2.02	2.02	2.09	2.29	2.33	2.30	2.54	3.56	3.61	3.60	3.65
soil starved	2.12	2.31	2.29	2.26	2.24	2.21	2.33	2.36	2.83	3.13	3.08	3.19	3.13
Average	1.94	1.96	1.95	1.95	1.97	2.02	2.07	2.20	2.62	3.03	3.05	3.07	3.07

Appendix 11- Average diameter progress in each hour in different conditions of third instar larvae

Diameter	1	2	3	4	5	6	7	8	9	10	11	12	Next day
sand fed	1.92	1.95	1.99	2.04	2	1.97	1.98	2.09	1.98	2.29	2.85	3	3.39
sand starved	2.34	2.27	2.59	2.48	2.49	2.45	2.44	2.65	3.08	3.81	3.49	3.49	3.50
soil fed	1.92	1.95	1.99	2.04	2	1.97	1.98	2.09	1.98	2.29	2.85	3	3.39
soil starved	2.06	2.43	2.48	2.41	2.43	2.36	2.5	2.53	2.47	2.74	2.9	2.9	3.24
Average	2.06	2.15	2.26	2.24	2.23	2.19	2.23	2.34	2.38	2.79	3.02	3.09	3.38

Appendix 12- Average depth progress in each hour in different conditions of second instar larvae

Depth	1	2	3	4	5	6	7	8	9	10	11	12	Next day
sand fed	1.1	0.92	0.97	1.07	1.03	1.03	1.03	1.25	1.5	1.57	1.62	1.62	1.48
sand starved	1.38	1.25	1.24	1.18	1.23	1.23	1.31	1.38	1.64	1.89	1.89	1.89	1.85
soil fed	1.31	1.29	1.21	1.26	1.28	1.38	1.41	1.41	1.57	2.07	2.31	2.26	2.19
soil starved	1.38	1.53	1.38	1.31	1.28	1.34	1.39	1.43	1.71	1.85	1.85	1.89	1.91
Average	1.29	1.25	1.19	1.20	1.20	1.25	1.29	1.37	1.60	1.85	1.92	1.92	1.86

Appendix 13- Average depth progress in each hour in different conditions of third instar larvae

Depth	1	2	3	4	5	6	7	8	9	10	11	12	Next day
sand fed	1.27	1.25	1.3	1.32	1.24	1.23	1.23	1.28	1.18	1.35	1.74	1.79	2.05
sand starved	1.34	1.43	1.56	1.54	1.55	1.44	1.51	1.72	1.93	2.19	2.19	2.19	2.19
soil fed	1.27	1.25	1.3	1.32	1.24	1.23	1.23	1.28	1.18	1.35	1.74	1.79	2.05
soil starved	1.31	1.59	1.55	1.56	1.47	1.48	1.56	1.52	1.53	1.77	1.91	1.89	2.10
Average	1.29	1.38	1.43	1.43	1.38	1.35	1.38	1.45	1.46	1.67	1.89	1.91	2.09

Appendix 14- Intraspecific interactions-Results of cannibalism experiments

		Second instar			Third instar		
		Dead %	Pupated%	No change%	Dead%	Pupated%	No change%
Well fed vs Well fed		50	-	50	50	-	50
Well fed vs Fed	Well fed	70	-	30	70	-	30
	fed	30	-	70		20	80
Well fed vs Starved	Well fed	40	-	60	20	10	70
	Starved	70	-	30	50	-	50
Fed vs Starved	Fed	90	-	10	70	-	30
	Starved	10	-	90		70	30
Fed vs Fed		50	20	30	80	10	10
Starved vs Starved		50		50	50		50