APPENDIX C

APPENDIX C

RAREFACTION FORMULA AND STATISTICAL OUTPUTS

RAREFACTION FORMULA

The rarefaction curves were calculated by the following method (see Krebs, 1989) as:

$$E(S_n) = \text{ABSOLUTE SUM of } 1 - \left[\frac{\binom{N - N_i}{n}}{\binom{N}{n}}\right]$$

where $E(Sn_)$ = expected number of species in a random sample of n individuals

S = total number of species in species i

N_i = number of individuals in species i

N = total number of individuals in collection = SUM N_i

n = value of sample size (number of individuals) chosen from standardization (n = or < N)

N = number of combinations of n individuals that
n can be chosen from a set of N individuals = N!/n!(N-n)!

APPENDIX 3. CORRELATION MATRIX FOR RAIN FALL AND WATER LEVELS MACROINVERTEBRATES - PEARSON'S r FOR NO. SPP & INDIV. PER COVER TYPE REPLICATE - DRFIT FENCE DATA 1994-1995

CRITICAL r value, (p < 0.05) WITH 22 DEGREES OF FREEDOM = +/- 0.404

COVER TYPE SPP. & INDIV.	MIA WCMS RAINFALL	G - 972 WATER LEVEL	G - 975 WATER LEVEL	NO. SIGNIF.	DIRECTION
DMM1SP	0.0511	0.5833	0.4925	2	POSITIVE
DMM1IN	-0.0900	0.4837	0.4946	2	POSITIVE
DMM2SP	0.1795	0.8485	0.7805	2	POSITIVE
DMM2IN	0.2531	0.6014	0.5925	2	POSITIVE
DMM3SP	0.3282	0.6759	0.5193	2	POSITIVE
DMM3IN	0.4747	0.4307	0.3482	2	POSITIVE
SDM1SP	0.1591	0.5314	0.3968	1	POSITIVE
SDM1IN	-0.1147	0.3395	0.3433		
SDM2SP	0.2585	0.2735	-0.1421		
SDM2IN	0.4585	0.4752	0.2704	2	POSITIVE
SDM3SP	0.5553	0.6065	0.2870	2	POSITIVE
SDM3IN	0.4792	0.4937	0.3365	2	POSITIVE
P75_1SP	0.5244	0.8091	0.6411	3	POSITIVE
P75_1IN	0.4321	0.3966	0.3456	1	POSITIVE
P75_2SP	0.4031	0.8296	0.6481	2	POSITIVE
P75_2IN	0.5486	0.5149	0.3413	2	POSITIVE
P75_3SP	0.5241	0.4612	0.1689	2	POSITIVE
P75_3IN	0.5513	0.2552	0.1217	1	POSITIVE
P50_1SP	0.3776	0.5136	0.2562	1	POSITIVE
P50_1IN	-0.1258	0.0964	0.0402		
P50_2SP	0.4698	0.6337	0.3411	2	POSITIVE
P50_2IN	0.5661	0.4180	0.3010	2	POSITIVE
P50_3SP	0.1629	0.3111	-0.0988		
P50_3IN	0.0823	0.2677	0.0860		
MARSH1SP	0.3610	0.5243	0.2772	1	POSITIVE
MARSH1IN	-0.1004	0.0983	-0.0053		
MARSH2SP	0.3988	0.3045	-0.0571		
MARSH2IN	-0.0106	0.1313	0.0246		
MARSH3SP	0.2152	0.1801	-0.0873		
MARSH3IN	-0.2054	0.0626	0.0281		

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APPENDIX 3. CORRELATION MATRIX FOR RAIN FALL AND WATER LEVELS
FISHES - PEARSON'S r FOR NO. SPP & INDIV. PER
COVER TYPE REPLICATE - DRFIT FENCE DATA 1994-1995
CRITICAL r value, (p < 0.05) WITH 22 DEGREES OF FREEDOM = +/- 0.404

COVER TYPE SPP. & INDIV.	MIA WCMS RAINFALL	G - 972 WATER LEVEL	G - 975 WATER LEVEL	NO. SIGNIF.	DIRECTION
DMM1IN	0.3089	0.3093	0.2971		
DMM2SP	0.3874	0.6560	0.6366	2	*POSITIVE*
DMM2IN	0.3560	0.4141	0.3988		
DMM3SP	0.3580	0.7983	0.7742	2	*POSITIVE*
DMM3IN	0.4080	0.2915	0.2377	1	*POSITIVE*
SDM1SP	0.0475	0.4597	0.4633	2	*POSITIVE*
SDM1IN	0.1006	0.3526	0.3528		
SDM2SP	-0.1282	0.3852	0.2388		
SDM2IN	-0.2504	0.0830	0.0036		
SDM3SP	0.2495	0.6569	0.4950	2	*POSITIVE*
SDM3IN	0.0398	0.3913	0.2473		
P75_1SP	0.2714	0.7849	0.7795	2	*POSITIVE*
P75_1IN	0.5212	0.4544	0.4143	3	*POSITIVE*
P75_2SP	0.3959	0.6637	0.5191	2	*POSITIVE*
P75_2IN	0.1416	0.3926	0.2697		
P75_3SP	0.3307	0.7250	0.6229	2	*POSITIVE*
P75_3IN	0.2611	0.2855	0.1869		
P50_1SP	0.2106	0.3371	0.1781		
P50_1IN	-0.1691	0.0671	0.0134		
P50_2SP	0.1246	0.8181	0.7945	2	*POSITIVE*
P50_2IN	0.4030	0.3422	0.2308		
P50_3SP	0.2646	0.6837	0.5100	2	*POSITIVE*
P50_3IN	0.1674	0.1678	-0.0856		
MARSH1SP	0.3907	0.3135	0.0635		
MARSH1IN	-0.0284	0.0561	-0.0935		
MARSH2SP	0.2942	0.2981	0.0529		
MARSH2IN	-0.0795	0.1272	-0.0000		
MARSH3SP	0.0314	0.2388	-0.0069		
MARSH3IN	-0.1111	0.0793	-0.0463		

DOC#6 1 4

APPENDIX 3. CORRELATION MATRIX FOR RAIN FALL AND WATER LEVELS
HERPTILES - PEARSON'S r FOR NO. SPP & INDIV. PER
COVER TYPE REPLICATE - DRFIT FENCE DATA 1994-1995
CRITICAL r value, ($p < 0.05$) WITH 22 DEGREES OF FREEDOM = +/- 0.404

COVER TYPE SPP. & INDIV.	MIA WCMS RAINFALL	G - 972 WATER LEVEL	G - 975 WATER LEV	NO. SIGNIF.	DIRECTION
DMM1SPP	0.3000	0.0323	-0.2821		
DMM1IND	0.1092	-0.0991	-0.4265	*1*	*NEGATIVE*
DMM2SPP	0.1239	0.0681	-0.2995		
DMM2IND	0.1609	0.0606	-0.3001		
DMM3SPP	0.0713	-0.1680	-0.4389	*1*	*NEGATIVE*
DMM3IND	0.1593	-0.0457	-0.2828		
SDM1SPP	0.3825	0.3213	0.0653		
SDM1IND	0.1580	0.0018	-0.2730		
SDM2SPP	-0.2320	-0.2342	-0.4218	*1*	*NEGATIVE*
SDM2IND	-0.2099	-0.3075	-0.5118	*1*	*NEGATIVE*
SDM3SPP	0.2724	0.0433	-0.2468		
SDM3IND	0.1264	0.0006	-0.2969		
P75_1SPP	0.0116	0.3545	0.2130		
P75_1IND	-0.1157	0.2895	0.1568		
P75_2SPP	-0.1338	-0.3006	-0.4953		
P75_2IND	-0.1518	-0.3604	-0.4865	*1*	*NEGATIVE*
P75_3SPP	0.3176	0.5319	0.2774	*1*	*NEGATIVE*
P75_3IND	0.2815	0.3667	0.0308		
P50_1SPP	0.2117	0.1234	-0.0918		
P50_1IND	0.0190	0.0384	-0.1948		
P50_2SPP	0.1976	0.1148	-0.2998		
P50_2IND	0.1990	0.0971	-0.2980		
P50_3SPP	0.0069	-0.2216	-0.6323	*1*	*NEGATIVE*
P50_3IND	-0.0901	-0.2267	-0.6080	*1*	*NEGATIVE*
MRSH1SPP	0.1990	0.0839	-0.2954		
MRSH1IND	0.0008	0.0701	-0.1937		
MRSH2SPP	0.0250	-0.0333	-0.3595		
MRSH2IND	-0.0332	0.0098	-0.2912		
MRSH3SPP	-0.0820	-0.0519	-0.2392		
MRSH3IND	-0.0557	-0.0296	-0.2352		

DOC#6 1 4

APPENDIX 3. INDEX OF DISPERSION CALCULATIONS AND INTERPRETATIONS

MACROINVERTEBRATES FROM DRIFT FENCE DATA 1994 -1995

	MEAN	VARIANCE	I INDEX	CHI SQUARE	INTERPRETATION
APPLE SNAIL	2.533	9.552	3.771	52.789	RANDOM
CRAYFISH	375.800	232485.743	618.642	8660.991	RANDOM
DRAGONFLY LARVAE	2.333	12.810	5.490	76.857	RANDOM
DYTISCID BEETLE	34.133	990.267	29.012	406.164	RANDOM
LETHOCERUS	27.733	743.210	26.798	375.178	RANDOM
GRASS SHRIMP	181.867	68362.981	375.896	5262.546	RANDOM
GYRINID BEETLE	0.600	1.257	2.095	29.333	RANDOM
LUBBER GRASSHOPPER	3.867	21.838	5.648	79.069	RANDOM
PAPER SNAIL	1.400	3.400	2.429	34.000	RANDOM
RAMSHORN SNAIL	2.400	14.257	5.940	83.167	RANDOM

DOC#6114

APPENDIX 3. INDEX OF DISPERSION CALCULATIONS AND INTERPRETATIONS

FISHES FROM DRIFT FENCE DATA 1994 -1995

	MEAN	VARIANCE	I INDEX	CHI SQUARE	INTERPRETATION	COVER TYPES
GAR	0.133	0.267	2.000	28.000	CLUMPED	P75
YELLOW BULLHEAD CATFISH	0.067	0.067	1.000	14.000		
BROWN BULLHEAD CATFISH	0.133	0.124	0.929	13.000		
WALKING CATFISH	0.800	1.171	1.464	20.500		
SHEEPSHEAD MINNOW	0.133	0.124	0.929	13.000		
GOLDEN TOPMINNOW	22.467	420.695	18.725	262.154	CLUMPED	P50 MRSH
MARSH KILLIFISH	69.200	2411.743	34.852	487.925	CLUMPED	P75 SDM
FLAGFISH	34.933	995.352	28.493	398.901	CLUMPED	P50 MRSH
BLUEFIN KILLIFISH	5.267	30.781	5.844	81.823	CLUMPED	MARSH
PIKE KILLIFISH	7.067	168.781	23.884	334.377	CLUMPED	SDM
MOSQUITOFISH	253.533	36112.695	142.438	1994.127	CLUMPED	MR 5075
LEAST KILLIFISH	2.733	14.210	5.199	72.780	CLUMPED	MRSH P75
SAILFIN MOLLY	33.667	1118.238	33.215	465.010	CLUMPED	MR 5075
BOORK SILVERSIDE	0.067	0.067	1.000	14.000		
BLUESPOTTED SUNFISH	0.600	0.971	1.619	22.667		
WARMOUTH	1.667	2.381	1.429	20.000		
BLUEGILL	0.533	0.410	0.768	10.750		
DOLLAR SUNFISH	0.133	0.124	0.929	13.000		
REDEAR SUNFISH	7.133	63.552	8.909	124.729	CLUMPED	75 MR 50
SPOOTED SUNFISH	0.933	2.352	2.520	35.286	CLUMPED	MARSH
LARGE MOUTH BASS	0.133	0.124	0.929	13.000		
SWAMP DARTER	0.333	0.667	2.000	28.000	CLUMPED	SDM
OSCAR	1.400	23.971	17.122	239.714	CLUMPED	MARSH
JEWELFSH	70.600	5214.114	73.854	1033.960	CLUMPED	7550 SDM
BLACK ACARA	45.733	2100.210	45.923	642.921	CLUMPED	SD 50 DM
NICARAGUAN CICHLID	2.133	3.838	1.799	25.188		
SPOTTED TILAPIA	0.333	0.667	2.000	28.000	CLUMPED	P75

DOC#6114

APPENDIX 3. INDEX OF DISPERSION CALCULATIONS AND INTERPRETATIONS

HERPTILES FROM DRIFT FENCE DATA 1994 -1995

	MEAN	VARIANCE	I INDEX	CHI SQUARE	INTERPRETATION	COVER TYPES
CRICKET FROG	0.933	1.638	1.755	24.571		
COTTONMOUTH	1.667	4.810	2.886	40.400	CLUMPED	P75 P50
AMPHIUMA	3.333	8.238	2.471	34.600	CLUMPED	P50 SDM
GREEN ANOLE	1.133	3.267	2.882	40.353	CLUMPED	MRSH P50
BROWN ANOLE	5.533	52.124	9.420	131.880	CLUMPED	DMM
OAK TOAD	6.267	46.495	7.419	103.872	CLUMPED	P75 SDM
SOUTHERN TOAD	1.133	4.267	3.765	52.706	CLUMPED	MARSH
SNAPPING TURTLE	0.200	0.171	0.857	12.000		
BLACK RACER	2.067	4.781	2.313	32.387	CLUMPED	SDM P75
RINGNECK SNAKE	0.200	0.171	0.857	12.000		
CORN SNAKE	0.400	0.543	1.357	19.000		
GREENHOUSE FROG	11.133	843.838	75.794	1061.114	CLUMPED	SDM DMM
S.E. 5-LINED SKINK	1.133	9.695	8.555	119.765	CLUMPED	P75
MUD SNAKE	0.467	0.838	1.796	25.143		
NARROWMOUTH TOAD	2.800	16.029	5.724	80.143	CLUMPED	SDM DMM
GREEN TREEFROG	0.733	1.924	2.623	36.727	CLUMPED	DMM
SQUIRREL TREEFROG	0.200	0.171	0.857	12.000		
MUD TURTLE	2.267	6.781	2.992	41.882	CLUMPED	MARSH
KINGSNAKE	0.333	0.524	1.571	22.000		
LITTLE GRASS FROG	0.067	0.067	1.000	14.000		
BANDED WATER SNAKE	3.000	4.429	1.476	20.667		
FL. GRN. WATER SNAKE	5.933	30.924	5.212	72.966	CLUMPED	MRSH P50
NEWT	0.467	0.838	1.796	25.143		
GLASS LIZARD	0.467	0.838	1.796	25.143		
CUBAN TREEFROG	0.667	1.095	1.643	23.000		
CHORUS FROG	0.067	0.067	1.000	14.000		
DWARF SIREN	0.067	0.067	1.000	14.000		
PIG FROG	5.000	18.714	3.743	52.400	CLUMPED	P50 P75
LEOPARD FROG	14.533	49.981	3.439	48.147	CLUMPED	P75 P50
CRAYFISH SNAKE	2.467	9.838	3.988	55.838	CLUMPED	P50 MRSH
SIREN	3.733	35.210	9.431	132.036	CLUMPED	DMM SDM
BOX TURTLE	0.333	0.238	0.714	10.000		
RIBBON SNAKE	2.200	2.029	0.922	12.909		
GARTER SNAKE	2.867	6.410	2.236	31.302	CLUMPED	P75

DOC#9914

APPENDIX 3. INDEX OF DISPERSION CALCULATIONS AND INTERPRETATIONS
BIRDS FROM STRIP TRANSECT DATA 1994 -1995

	MEAN	VARIANCE	I INDEX	CHI SQUARE	INTERPRETATION	COVER TYPES
DOUBLE CRESTED CORMORANT	0.200	0.200	1.000	4.000	RANDOM	
GREAT-BLUE HERON	0.800	0.700	0.875	3.500	RANDOM	
GREEN HERON	1.200	1.200	1.000	4.000	RANDOM	
LITTLE BLUE HERON	0.600	0.800	1.333	5.333	RANDOM	
GREAT EGRET	1.800	7.200	4.000	16.000	CLUMPED	P50/MARSH
TRICOLOR HERON	0.400	0.300	0.750	3.000	RANDOM	
WOOD STORK	0.200	0.200	1.000	4.000	RANDOM	
RED SHOULDERED HAWK	0.400	0.800	2.000	8.000	RANDOM	
MARSH HAWK (N. HARRIER)	0.200	0.200	1.000	4.000	RANDOM	
AMERICAN KESTREL	0.200	0.200	1.000	4.000	RANDOM	
COMMON MOOREHEN	0.200	0.200	1.000	4.000	RANDOM	
COMMON SNIPE	1.400	4.300	3.071	12.286	CLUMPED	MARSH
MOURNING DOVE	0.200	0.200	1.000	4.000	RANDOM	
GROUND DOVE	0.200	0.200	1.000	4.000	RANDOM	
COMMON NIGHT HAWK	0.600	0.800	1.333	5.333	RANDOM	
BELTED KINGFISHER	0.800	1.200	1.500	6.000	RANDOM	
YELLOWSHAFTED FLICKER	0.800	3.200	4.000	16.000	CLUMPED	P75
RED BELLIED WOODPECKER	1.600	1.800	1.125	4.500	RANDOM	
YELLOW BELLIED SAPSUCKER	0.400	0.800	2.000	8.000	RANDOM	
DOWNY WOODPECKER	0.600	0.300	0.500	2.000	RANDOM	
WESTERN KINGBIRD	0.200	0.200	1.000	4.000	RANDOM	
GREAT CRESTED FLYCATCHER	0.400	0.800	2.000	8.000	RANDOM	
EASTERN PHOEBE	1.000	3.000	3.000	12.000	CLUMPED	P50
BLUEJAY	3.200	6.200	1.938	7.750	RANDOM	
HOUSE WREN	0.200	0.200	1.000	4.000	RANDOM	
CAROLINA WREN	3.600	30.300	8.417	33.667	CLUMPED	DMM/SDM
MOCKINGBIRD	1.200	4.700	3.917	15.667	CLUMPED	P75
GRAY CATBIRD	1.000	2.000	2.000	8.000	RANDOM	
BLUE GRAY GNATCATCHR	3.800	9.700	2.553	10.211	RANDOM	
LOGGERHEAD SHRIKE	2.200	5.700	2.591	10.364	RANDOM	
WHITE EYED VIREO	0.200	0.200	1.000	4.000	RANDOM	

CONTINUED ON NEXT PAGE

DOC#614

APPENDIX 3. INDEX OF DISPERSION CALCULATIONS AND INTERPRETATIONS
BIRDS FROM STRIP TRANSECT DATA 1994 -1995 CONTINUED.

	MEAN	VARIANCE	I INDEX	CHI SQUARE	INTERPRETATION	COVER TYPES
BLACK WHITE WARBLER	0.600	0.800	1.333	5.333	RANDOM	
NORTHERN PARULA	0.600	0.800	1.333	5.333	RANDOM	
YELLOW RUMPED WARB	4.800	57.200	11.917	47.667	CLUMPED	P75
PRAIRIE WARBLER	2.800	19.200	6.857	27.429	CLUMPED	P75
PALM WARBLER	11.400	52.300	4.588	18.351	CLUMPED	P75/SDM/
COMMON YELLOWTHROAT	19.000	502.000	26.421	105.684	CLUMPED	MARSH
YELLOWBREASTED CHAT	0.400	0.300	0.750	3.000	RANDOM	
AMERICAN REDSTART	0.600	1.800	3.000	12.000	CLUMPED	SDM
MEADOWLARK	12.400	188.800	15.226	60.903	CLUMPED	P75/P50
RED-WINGED BACLKBIRD	11.800	408.700	34.636	138.542	CLUMPED	MARSH
BOAT TAILED GRACKLE	5.000	83.000	16.600	66.400	CLUMPED	P50
COMMON GRACKLE	0.600	0.800	1.333	5.333	RANDOM	
CARDINAL	2.200	4.700	2.136	8.545	RANDOM	
RUFOUS-SIDED TOWHEE	1.400	4.300	3.071	12.286	CLUMPED	SDM
SWAMP SPARROW	0.200	0.200	1.000	4.000	RANDOM	

DOC#6614

APPENDIX 3. INDEX OF DISPERSION CALCULATIONS AND INTERPRETATIONS

MAMMALS FROM TRAPS, STATIONS & FAUNAL TRANSECTS 1994-1995

	MEAN	VARIANCE	I INDEX	CHI SQUARE	INTERPRETATION	COVER TYPES
BLACK RAT	0.200	0.200	1.000	4.000	**RANDOM**	
BOBCAT	3.600	6.300	1.750	7.000	**RANDOM**	
COTTON MOUSE	1.000	2.000	2.000	8.000	**RANDOM**	
CAT DOMESTIC	0.400	0.800	2.000	8.000	**RANDOM**	
DOG DOMESTIC	4.400	3.300	0.750	3.000	**RANDOM**	
GRAY FOX	1.800	3.200	1.778	7.111	**RANDOM**	
HISPID COTTON RAT	3.200	7.700	2.406	9.625	**RANDOM**	
HOUSE MOUSE	0.200	0.200	1.000	4.000	**RANDOM**	
MARSH RABBIT	2.000	1.500	0.750	3.000	**RANDOM**	
MARSH RICE RAT	2.600	1.300	0.500	2.000	**RANDOM**	
NINE-BANDED ARMADILLO	2.400	18.800	7.833	31.333	**CLUMPED**	DMM
RACCOON	9.800	24.700	2.520	10.082	**RANDOM**	
OTTER	0.400	0.800	2.000	8.000	**RANDOM**	
S.E. SHORT-TAILED SHREW	0.200	0.200	1.000	4.000	**RANDOM**	
OPOSSUM	2.000	1.000	0.500	2.000	**RANDOM**	
DEERWHITE-TAILED DEER	4.800	2.200	0.458	1.833	**RANDOM**	

DOC#614

data file: KSRAW.STA [4 cases with 9 variables]
KOLMOGROV-SMIRNOV TEST Results Raw Data

FILE INFO PAGE:
DRIFT FENCE DATA INCLUDED AND EXCLUDED.
There is no significant difference in the data set whether the drfit fence data is included or excluded;
the trend (shape of the distribution) remains the same.

VARIABLE SPECIFICATIONS:

No	Name	Format	MD Code	Long Label
1	DATA	9.1	-9999	DATA CODED AS 1=WITH, 2=WITHOUT DRFIT DATA
2	P_LEVEL	8.4	-9999	PROBABILITY LEVEL ALL ARE p> 0.05, NOT SIGNIF.
3	MEANGRP1	9.2	-9999	GROUP 1 MEAN
4	MEANGRP2	9.2	-9999	GROUP 2 MEAN
5	STD_DEV1	9.2	-9999	
6	STD_DEV2	9.2	-9999	
7	VALID_N	8.2	-9999	
8	MAX_NEG	8.1	-9999	
9	MAX_POS	8.2	-9999	

0 CASE	1 DATA	2 P_LEVEL	3 MEANGRP1	4 MEANGRP2	5 STD_DEV1	6 STD_DEV2	7 VALID_N	8 MAX_NEG	9 MAX_POS
WETLAND	#SPECIES	p > .10	33.00	24.00	6.63	6.28	5&5	0.0	.60
WETLAND	#SPECIES	p > .10	29.40	26.40	10.26	9.02	5&5	0.0	.40
NON-WETL	#INDIVID	p > .05	291.80	105.20	74.08	67.92	5&5	0.0	.80
NON-WETL	#INDIVID	p > .10	179.40	112.20	104.86	57.06	5&5	0.0	.60

DOC#614

data file: BOTHYRS.STA [24 cases with 7 variables]
MEAN MONTHLY WATER LEVELS AT 7 GAGES 1994 - 1995

0 CASE	1 G1488	2 G976	3 G3253	4 G594	5 G968	6 G975	7 G972
JAN 1994	6.590	4.660	3.060		6.520	5.890	4.300
FEB	6.590	4.820	3.240		6.620	5.900	4.520
MAR	6.530	4.660	2.080		6.850	5.740	4.250
APR	6.200	4.050	1.480		6.520	5.280	4.810
MAY	6.140	4.570	2.830	6.340	6.280	5.380	4.890
JUN	5.980	4.580	3.580	6.330	6.220	5.430	5.050
JUL	5.860	4.380	3.360	6.150	6.220	5.160	4.750
AUG	6.510	5.200	4.820	6.760	7.220	5.980	5.350
SEP	6.970	5.720	5.840	7.210	7.740	6.430	5.590
OCT	7.160	6.140	6.180	7.270	7.780	6.560	5.650
NOV	7.320	5.990		7.400	8.080	6.710	5.770
DEC	7.320	5.960		7.350	8.130	6.660	5.740
JAN 1995	7.240	5.870		7.320	7.820	6.560	5.670
FEB	6.980	5.330	5.060	7.020	7.210	6.150	5.310
MAR	6.830	5.220	4.530	6.910	6.980	6.000	5.160
APR	6.590	4.490	2.640	6.280	6.760	5.640	4.800
MAY	6.390	4.290	2.010	6.120	6.550	5.520	4.690
JUN	6.720	4.930	3.830	6.700	6.880	6.060	5.270
JUL	6.900	5.800	6.060	7.060	7.080	6.350	5.480
AUG	6.950	5.460	5.720	6.920	7.310	6.290	5.460
SEP	7.130	5.540	5.770	6.990	7.610	6.410	5.490
OCT	7.420	5.960	6.070	7.270	8.010	6.780	5.760
NOV	7.060	5.630	6.010		7.650	6.500	5.550
DEC	6.870	5.170	4.910		7.180	6.150	5.320

STAT. BASIC STATS	Analysis of Variance (codeyrs.sta) Marked effects are significant at p < .05000 Parametric One-way ANOVA							
Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
WATER	153.3977*	6*	25.56628*	83.18409*	152*	.547264*	46.71656*	0.00*

STAT. NONPAR STATS	Kruskal-Wallis ANOVA by Ranks (codeyrs.sta) Independent (grouping) variable: CODE Kruskal-Wallis test: H (6, N= 159) = 116.7597 p =.0000		
Depend.: WATER	Code	Valid N	Sum of Ranks
Group 1	G1488	24	2810.000
Group 2	G976	24	1003.000
Group 3	G3253	21	681.000
Group 4	G594	18	2203.000
Group 5	G968	24	3132.000
Group 6	G975	24	1931.000
Group 7	G972	24	960.000

data file: ANOVAS2.STA [15 cases with 4 variables]
MACROINVERTEBRATE DATA FOR ANOVAS

	1 COVER	2 NO_INDS	3 NO_SPP	4 DIVRSITY
1	DMM	274.000	8.000	1.476
2	DMM	328.000	7.000	.714
3	DMM	199.000	10.000	1.322
4	SDM	501.000	9.000	1.432
5	SDM	287.000	6.000	.931
6	SDM	778.000	8.000	.846
7	P75	918.000	7.000	.896
8	P75	472.000	8.000	1.204
9	P75	206.000	7.000	1.987
10	P50	575.000	6.000	.855
11	P50	785.000	7.000	1.000
12	P50	2112.000	8.000	.667
13	MARSH	394.000	7.000	1.205
14	MARSH	887.000	9.000	.983
15	MARSH	774.000	8.000	.696

STAT. NONPAR STATS	Kruskal-Wallis ANOVA by Ranks (anovas2.sta) Independent (grouping) variable: COVER Kruskal-Wallis test: H (4, N= 15) = 6.600000 p =.1586		
Depend.: NO_INDS	Code	Valid N	Sum of Ranks
DMM	1	3	9.00000
SDM	2	3	23.00000
P75	3	3	23.00000
P50	4	3	36.00000
MARSH	5	3	29.00000

STAT. NONPAR STATS	Kruskal-Wallis ANOVA by Ranks (anovas2.sta) Independent (grouping) variable: COVER Kruskal-Wallis test: H (4, N= 15) = 2.333334 p =.6747		
Depend.: NO_SPP	Code	Valid N	Sum of Ranks
DMM	1	3	30.00000
SDM	2	3	25.00000
P75	3	3	20.00000
P50	4	3	16.50000
MARSH	5	3	28.50000

STAT. NONPAR STATS	Kruskal-Wallis ANOVA by Ranks (anovas2.sta) Independent (grouping) variable: COVER Kruskal-Wallis test: H (4, N= 15) = 2.733334 p =.6034		
Depend.: DIVRSITY	Code	Valid N	Sum of Ranks
DMM	1	3	29.00000
SDM	2	3	24.00000
P75	3	3	31.00000
P50	4	3	15.00000
MARSH	5	3	21.00000

data file: ANOVAS2.STA [15 cases with 4 variables]
DATA FOR ANOVAS FOR FISHES

	1 COVER	2 NO_INDS	3 NO_SPP	4 DIVRSITY
1	DMM	198.000	10.000	2.387
2	DMM	185.000	17.000	2.289
3	DMM	543.000	12.000	1.580
4	SDM	156.000	13.000	2.627
5	SDM	175.000	12.000	1.767
6	SDM	584.000	13.000	2.701
7	P75	734.000	12.000	2.305
8	P75	650.000	12.000	2.430
9	P75	935.000	17.000	2.498
10	P50	636.000	16.000	2.561
11	P50	1111.000	14.000	2.215
12	P50	1031.000	12.000	2.219
13	MARSH	514.000	18.000	2.245
14	MARSH	505.000	16.000	2.525
15	MARSH	471.000	16.000	2.175

STAT. NONPAR STATS	Kruskal-Wallis ANOVA by Ranks (anovas2.sta) Independent (grouping) variable: COVER Kruskal-Wallis test: H (4, N= 15) = 10.50000 p =.0328		
Depend.: NO_INDS	Code	Valid N	Sum of Ranks
DMM	1	3	15.00000
SDM	2	3	12.00000
P75	3	3	36.00000
P50	4	3	39.00000
MARSH	5	3	18.00000

STAT. NONPAR STATS	Kruskal-Wallis ANOVA by Ranks (anovas2.sta) Independent (grouping) variable: COVER Kruskal-Wallis test: H (4, N= 15) = 4.028716 p =.4022		
Depend.: NO_SPP	Code	Valid N	Sum of Ranks
DMM	1	3	18.50000
SDM	2	3	19.00000
P75	3	3	21.50000
P50	4	3	24.00000
MARSH	5	3	37.00000

STAT. NONPAR STATS	Kruskal-Wallis ANOVA by Ranks (anovas2.sta) Independent (grouping) variable: COVER Kruskal-Wallis test: H (4, N= 15) = 2.266666 p =.6868		
Depend.: DIVRSITY	Code	Valid N	Sum of Ranks
DMM	1	3	17.00000
SDM	2	3	31.00000
P75	3	3	29.00000
P50	4	3	22.00000
MARSH	5	3	21.00000

data file: ANOVAS2.STA [15 cases with 4 variables]
AMPHIBIAN AND REPTILE DATA FOR ANOVAS

	1 COVER	2 NO__INDS	3 NO__SPP	4 DIVRSITY
1	DMM	99.000	8.000	3.439
2	DMM	85.000	21.000	3.477
3	DMM	76.000	17.000	3.112
4	SDM	173.000	15.000	3.296
5	SDM	58.000	16.000	3.537
6	SDM	100.000	18.000	3.634
7	P75	96.000	22.000	3.418
8	P75	112.000	22.000	3.790
9	P75	75.000	20.000	3.895
10	P50	73.000	16.000	2.133
11	P50	64.000	17.000	3.647
12	P50	86.000	16.000	3.737
13	MARSH	85.000	16.000	2.193
14	MARSH	46.000	15.000	3.519
15	MARSH	33.000	12.000	3.367

STAT. NONPAR STATS	Kruskal-Wallis ANOVA by Ranks (anovas2.sta) Independent (grouping) variable: COVER Kruskal-Wallis test: H (4, N= 15) = 4.867023 p =.3012		
Depend.: NO__INDS	Code	Valid N	Sum of Ranks
DMM	1	3	27.50000
SDM	2	3	31.00000
P75	3	3	31.00000
P50	4	3	19.00000
MARSH	5	3	11.50000

STAT. NONPAR STATS	Kruskal-Wallis ANOVA by Ranks (anovas2.sta) Independent (grouping) variable: COVER Kruskal-Wallis test: H (4, N= 15) = 7.584398 p =.1081		
Depend.: NO__SPP	Code	Valid N	Sum of Ranks
DMM	1	3	23.50000
SDM	2	3	21.00000
P75	3	3	41.00000
P50	4	3	22.50000
MARSH	5	3	12.00000

STAT. NONPAR STATS	Kruskal-Wallis ANOVA by Ranks (anovas2.sta) Independent (grouping) variable: COVER Kruskal-Wallis test: H (4, N= 15) = 3.766669 p =.4385		
Depend.: DIVRSITY	Code	Valid N	Sum of Ranks
DMM	1	3	18.00000
SDM	2	3	25.00000
P75	3	3	35.00000
P50	4	3	26.00000
MARSH	5	3	16.00000

STAT. BASIC STATS	Correlations (bothyrs.sta) Marked correlations are significant at p < .05000 N=15 (Casewise deletion of missing data)						
Variable	G1488	G976	G3253	G594	G968	G975	G972
G1488	1.00	.87 *	.79 *	.89 *	.94 *	.96 *	.84 *
G976	.87 *	1.00	.96 *	.98 *	.91 *	.95 *	.96 *
G3253	.79 *	.96 *	1.00	.95 *	.85 *	.89 *	.95 *
G594	.89 *	.98 *	.95 *	1.00	.91 *	.95 *	.96 *
G968	.94 *	.91 *	.85 *	.91 *	1.00	.96 *	.90 *
G975	.96 *	.95 *	.89 *	.95 *	.96 *	1.00	.95 *
G972	.84 *	.96 *	.95 *	.96 *	.90 *	.95 *	1.00

DOC#6 14

data file: G972DATA.STA [12 cases with 11 variables]
USGS G972 MONTHLY MEAN WATER LEVELS 1985-1995

0 C.	1 YR85	2 YR86	3 YR87	4 YR88	5 YR89	6 YR90	7 YR91	8 YR92	9 YR93	10 YR94	11 YR95
JAN	4.570	5.440	5.420	5.570	4.900	4.260	3.530	4.870	5.260	4.300	5.670
FEB	4.080	5.330	5.380	5.530	4.410	4.290	3.730	4.790	4.960	4.520	5.310
MAR	3.970	5.360	5.460	5.500	4.220	4.100	3.750	4.110	4.920	4.250	5.160
APR	3.790	5.440	5.470	5.290	3.510	4.020	4.020	3.890	4.740	4.810	4.800
MAY	3.190	4.780	5.230	5.180	3.370	3.350	3.650		4.130	4.890	4.690
JUN	3.470	5.200	5.020	5.420	3.680	4.180	4.260		4.710	5.050	5.270
JUL	5.060	5.640	5.150	5.570	4.420	4.300	4.740		4.900	4.750	5.480
AUG	5.410	5.630	5.040	5.730	4.530	4.780	5.330		4.970	5.350	5.460
SEP	5.510	5.640	5.240	5.720	4.820	4.900	5.440		5.030	5.590	5.490
OCT	5.590	5.510	5.480	5.650	4.910	4.940		4.920	5.150	5.650	5.760
NOV	5.500	5.460	5.550	5.480	4.470	4.160		5.280	4.760	5.770	5.550
DEC	5.440	5.440	5.560	5.060	4.310	3.440	4.950	5.100	4.320	5.740	5.320

STAT. BASIC STATS	Analysis of Variance (anova972.sta) Marked effects are significant at p < .05000 UGSG G972, 1985-1995, MEAN MONTHLY WATER LEVELS							
Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
WATR972	25.94165*	10*	2.594165*	27.93725*	114*	.245064*	10.58568*	.000000*

DOC#6 1 4

data file: G975DATA.STA [12 cases with 11 variables]

0 C.	1 YR85	2 YR86	3 YR87	4 YR88	5 YR89	6 YR90	7 YR91	8 YR92	9 YR93	10 YR94	11 YR95
JAN	4.660	6.020	5.810	5.960	4.620	3.720	3.170	5.340		5.890	6.560
FEB	4.010	5.790	5.600	5.860	4.080	3.730	3.610	4.710		5.900	6.150
MAR	3.770	5.790	5.780	5.710	3.880	3.690	3.470	4.260		5.740	6.000
APR	3.850	5.990	5.700	5.190	3.490	3.950	3.570	4.010	5.910	5.280	5.640
MAY	2.850	5.160	4.990	4.680	3.250	3.200	3.850	3.010	5.560	5.380	5.520
JUN	3.360	5.310	4.420	5.660	3.580	4.350	4.740	5.640	5.980	5.430	6.060
JUL	5.420	6.170	4.770	6.130	4.480	4.300	5.760	5.910	6.020	5.160	6.350
AUG	5.860	6.250	4.750	6.300	4.810	4.620	6.090	6.290	5.960	5.980	6.290
SEP	6.200	6.280	5.220	6.300	5.260	4.950	6.200	6.240	6.000	6.430	6.410
OCT	6.270	6.120	5.810	6.260	5.280	5.330	6.410		6.200	6.560	6.780
NOV	6.210	5.920	5.970	5.950	4.450	4.440	6.170		6.080	6.710	6.500
DEC	6.070	5.820	5.940	5.140	4.260	3.390	5.780		5.930	6.660	6.150

STAT. BASIC STATS	Analysis of Variance (anova975.sta) Marked effects are significant at p < .05000 USGS G975 1985-1995, MEAN MONTHLY WATER LEVELS							
Variable	SS Effect	df Effect	MS Effect	SS Error	df Error	MS Error	F	p
WATR975	58.26828*	10*	5.826828*	67.74906*	115*	.589122*	9.890693*	.000000*