LENGTH-WEIGHT RELATIONSHIPS OF ALABAMA FISHES

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The tables presented herein contain length-weight data of Alabama fishes from river and river impoundment surveys conducted by the fisheries staffs of Auburn University Agricultural Experiment Station and the Alabama Department of Conservation, and those surveys made in cooperation with the Tennessee Valley Authority, Georgia Game and Fish Commission, and the Florida Game and Freshwater Fish Commission. The values presented in the following tables represent data collected during the period of 1949 to 1964.

Pages 1 through 80 contain total length-weight values for 95 species of fish arranged alphabetically by common name. The common names used are those given in the American Fisheries Society Special Publication No. 2 (1960), with the following exceptions: The carp, Cyprinis carpio, is called the common carp, following FAO usage to distinguish it from Chinese and Indian carps. The deep-bodied Israeli strain of mirror carp is recorded separately because its length-weight relationships are different from the more cylindrical scaled common carp found in rivers and impoundments. Four species of exotic tilapias are listed as the Java, Nile, Congo, and Tampa tilapias. The southern variety of brown bullhead is listed as the speckled (brown) bullhead. Rock bass are listed as northern and southern rock bass.

Data for certain species of fish collected from the rivers and river impoundments are supplemented with data for the same species raised in ponds. This was done to extend the range of the length-weight relationships

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and tables in which pond data were included and designated as such. A few tables of length-weight data from ponds are included for species absent or rarely collected from river waters.

The fish used to obtain these data were measured individually to determine total length and most of them were placed in inch-groups and weighed in aggregate. This procedure undoubtedly reduced the range between maximum and minimum weights for each inch-group.

The values in the tables that follow were calculated by a computer program (Swingle, W. E., 1964, Auburn University Agr. Exp. Sta., Zool.-Ent. Dept. Series, Fisheries No. 1, 19 pp.). They are self-explanatory, with the possible exception of the condition index and calculated weights.

The condition index is of the form:

$$C = \frac{W}{L^3} \times 10^5$$

where W is the average empirical weight in pounds and L is the inch integer for an inch-group. The standard calculated weights are from equations of the form:

$$W = a\,L^b \quad \text{or} \quad \log(W) = \log(a) + b\log(L)$$

The parameters a, b, and log (a), as well as the correlation coefficient, r, and the standard error of the estimate $s_{y\,x}$, are presented in the table beginning on page 81. It was necessary to compute *two* or more standard length-weight equations for many species to adequately describe the length-weight relationship over the entire range of the data. The range over which a single standard length-weight equation was computed was selected by determining the point (or points) where the increment of increase or decrease in the condition index changed in magnitude. These points were used to divide the data into groups for which a single equation was computed.

The polynomial calculated weights given in the tables are from equations

of the form:

$$W = b_o + b_1 L + b_2 L^2 + b_3^3$$

The parameters b_0, b_1, b_2 and b_3 of this equation are presented in the table beginning on page 81. This table also gives the length intervals over which the equations were calculated, the number of observations (n) used in the calculations, and the number of fish included in these observations. The polynomial equations adequately described the length-weight relationships during a longer length interval for some species than did the standard equations; however, in the tables that follow, the length interval was the same for both equations, unless otherwise indicated.

The author made little use of the condition index other than the selection of length intervals for which a single standard equation adequately described the data, but prefered to use the LeCren relative condition index and a modification of this equation to compare populations and individual fish. For comparisons of condition between individual fish, the relative condition index (LeCren, E.D., 1951, Jour. Animal Ecol., 20(2):201-209), Kn was expressed as follows:

$$Kn = \frac{W}{A}$$

where W equals the weight of the individual fish and $\overset{A}{W}$ is the calculated weight computed from the standard equation for a fish of the same length from the same population. For comparisons of the average condition between populations, W became the calculated weight computed from the standard equation for a particular population and $\overset{A}{W}$ became the weight computed from the standard equation for fish of the same length for all populations in the state, i.e. the $\overset{A}{W}$ values are those given under the heading "standard calculated weights" and are taken to represent the "state averages." Thus, the LeCren relative condition index reduces the condition of fish to a multiple of the computed "state average" weight (Figure 1).

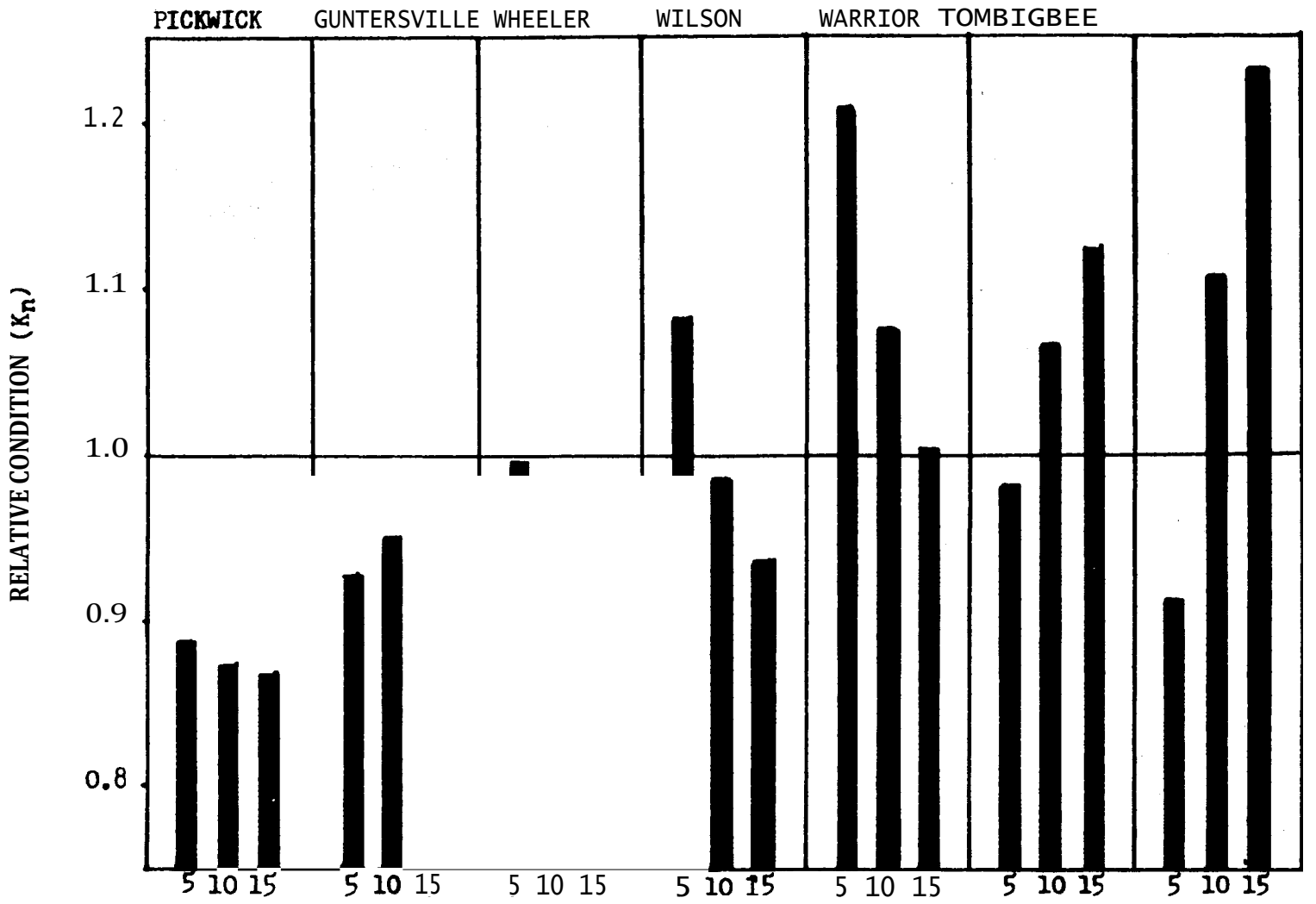

FIGURE 1

COMPARISON OF THE RELATIVE CONDITION OF FRESHWATER DRUM OF LENGTHS 5, 10, AND 15 INCHES FROM 7 POPULATIONS

INDEX TO SPECIES

Alabama Hog Sucker	Hypentelium etowanum (Jordan)	1
American Eel	Anguilla rostrata (LeSueur)	2
Atlantic Needlefish	Strongylura marina (Walbaum)	3
Bay Anchovy	Anchoa mitchilli (Val.)	4
Bigeye Chub	Hybopsis aestivalis (Girard)	4
Bigmouth Buffalo	Ictiobus cyprinellus (Val.)	5-6
Black Bullhead	Ictalurus melas (Raf.)	6
Black Crappie	Pomoxis annularis (Raf.)	7
Black Drum	Pogonias cromis (Linn.)	8
Blackspotted Topminnow	Fundulus olivaceus (Storer)	8
Blacktail Redhorse	Moxostoma erythrurum (Raf.)	9
Blacktail Shiner	Notropis venustus (Girard)	10
Blue Catfish	Ictalurus furcatus (LeSueur)	11-12
Bluegill	Lepomis macrochirus (Raf.)	13
Blue Sucker	Cycleptus elongatus (LeSueur)	13
Bluntnose Minnow	Pimephales notatus (Raf.)	14
Brook Silverside	Labidesthes sicculus (Cope)	14
Bullhead Minnow	Pimephales vigilax (Baird & Girard)	14
Chain Pickerel	Esox niger (LeSueur)	15
Channel Catfish	Ictalurus punctatus (Raf.)	16-17
Cherryfin Shiner	Notropis roseipinnis (Hay)	17
Common Carp, Israeli Mirror	Cyprinus carpio Linn.	18-19
Common Carp, Scaled	Cyprinus carpio Linn.	20-21
Congo Tilapia	Tilapia aelanopleura (Dum.)	22
Creek Chub	Semotilus atromaculatus (Mitchill)	22
Emerald Shiner	Notropis atherinoides Raf.	23
Fathead Minnow	Pimephales promelas Raf.	24
Flat Bullhead	Ictalurus platycephalus (Girard)	24

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Flathead Catfish	Pylodictis olivaris (Raf.)	25-26
Flier	Centrarchus macropterus (Lac.)	27
Freckled Madtom	Noturus nocturnus Jordon & Gilbert	27
Freshwater Drum	Aplodinotus grunniens Raf.	28-29
Gizzard Shad	Dorosoma cepedianum (LeSueur)	30
Golden Redhorse	Moxostoma erythrurum (Raf.)	31
Golden Shiner	Notemigonus crysoleucas (Mitchill)	32
Goldfish	Carassius auratus (Linn.)	33
Green Sunfish	Lepomis cyanellus Raf.	34
Highfin Carpsucker	Carpiodes velifer (Raf.)	35
Java Tilapia	Tilapia mossambica (Peters)	36
Largemouth Bass	Micropterus salmoides (Lac.)	37
Largescale Menhaden	Brevoortiapatronus Goode	38
Logperch	Percina caprodes (Raf.)	38
Longear Sunfish	Lepomis megalotis (Raf.)	39
Longnose Gar	Lepisosteus osseus (Linn.)	40-41
Mooneye	Hiodon tergisus LeSueur	42
Mosquito Fish	Gambusia affinis (Baird & Girard)	42
Nile Tilapia	Tilapia nilotica Linn.	43
Northern Hog Sucker	Hypentelium nigricans (LeSueur)	44
Northern Rock Bass	Ambloplites rupestris rupestris (Raf.)	44
Orangespotted Sunfish	Lepomis humilis (Girard)	45
Paddlefish	Polyodon spathula (Walbaum)	46-48
Piafish	Lagodon rhoaboides (Lian.)	48
Pirate Perch	Aphredoderus sayanus (Gilliaas)	49
Pugnose Minnow	Opsopoeodus emiliae Hay	49
Quillback	Carp des cyprinus (LeSueur)	50

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Redbreast Sunfish	Lepomis auritus (Linn.)	51
Redear Sunfish	Lepomis microlophus (Gunther)	51
Redeye Bass	Micropterus coosae Hubbs & Bailey	52
Riffle Minnow	Phenacobius catostomus Jordan	53
River Carpsucker	Carpiodes carpio (Raf.)	53
River Redhorse	Moxostoma carinatum (Cope)	54
Sauger	Stizostedion canadense (Smith)	55
Shortnose Gar	Lepisosteus platostomus Raf.	56
Silverband Shiner	Notropis shumardi (Girand)	57
Silver Chub	Hybopsis storeriana (Kirtland)	57
Silverjaw Minnow	Ericymba buccata Cope	58
Silverstripe Shiner	Notropis stilbius (Jordan)	58
Silvery Minnow	Hybognathus nuchalis Agassiz	58
Skipjack Herring	Alosa chrysochloris (Raf.)	59
Smallmouth Bass	Micropterus dolomieui (Lac.)	60
Smallmouth Buffalo	Ictiobus bubalus (Raf.)	61-62
Southern Flounder	Paralichthys lethostigma Jordan & Gilbert	63
Southern Rock Bass	Ambloplites rupestris ariommus Viosca	63
Speckled (Brown) Bullhead	Ictalurus nebulosus (LeSueur)	64
Speckled Chub	Hybopsis aestivalis (Girard)	65
Speckled Madtom	Noturus leptacanthus Jordan	65
Spot	Leiostomus xanthurus Lac.	66
Spotfin Shiner	Notropis spilopterus (Cope)	66
Spotted Bass	Micropterus punctulatus (Raf.)	67
Spotted Gar	Lepisosteus oculatus (Winchell)	68
Spotted Sucker	Minytrema melanops (Raf.)	69
Spotted Sunfish	Lepomis punctatus (Val.)	70
Stoneroller	Campostoma anomalum (Raf.)	70

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Striped Mullet	Mugil cephalus Linn.	71
Striped Shiner	Notropis chrysocephalus (Raf.)	71
Tampa Tilapia	Tilapia heudeloti Dam.	72
Threadfin Shad	Dorosoma petenense (Gunther)	73
Walleye	Stizostedion vitreum (Mitchill)	74
Warmouth	Chaenobryttus gulosus (Cuvier)	75
Weed Shiner	Notropis texanus (Girard)	75
White Bass	Roccus chrysops (Raf.)	76
White Catfish	Ictalurus catus (Linn.)	77
White Crappie	Pomoxis annularis Raf.	78
Yellow Bass	Roccus mississippiensis (Jordan & Eigenmann)	79
Yellow Bullhead	Ictalurus natalis (LeSueur)	C

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **ALABAMA HOG SUCKER**

Length	Number of Fish	Range in Weight Minimum	Range in Weight Maximum	Average Empirical Weight	Calculated Weights Standard	Calculated Weights Polynomial	Condition Index
2	17	0.004	-	0.0053	0.0033	-	66.17
3	42	0.006	0.013	0.0084	0.010	-	30.95
4	3	0.013	-	0.020	0.024	0.019	31.77
5	4	0.035	-	0.050	0.045	0.045	40.00
6	8	0.070	-	0.070	0.076	0.084	32.40
7	5	0.11	0.14	0.13	0.12	0.13	38.48
8	1	0.21	-	0.21	0.17	0.19	41.01

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF AMERICAN EEL

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
5	14	0.00050	0.010	0.0063	0.0050	–	5.00
6	11	0.003	–	0.0062	0.0094	0.011	2.86
7	23	0.0087	0.025	0.020	0.016	0.031	5.80
8	6		–	0.039	0.025	0.047	7.71
9	11	–		0.074	0.038	0.061	10.18
10	12	0.034	0.10	0.051	0.055	0.076	5.18
11	4	0.026	0.10	0.068	0.077	0.092	5.10
12	9	0.060	0.15	0.11	0.10	0.11	6.49
13	16	0.13	0.21	0.18	0.14	0.14	8.19
14	–	–	–	–	0.18	0.17	–
15	6	0.15	–	0.20	0.23	0.21	5.77
16	5	0.18	0.30	0.23	0.28	0.25	5.71
17	4	0.30	0.35	0.34	0.35	0.31	6.86
18	1	–	–	0.40	0.43	008	6.85
19	5	–	–	0.51	0.51	0.47	7.49
20	–	–	–	–	0.61	0.57	–
21	5	0.50	0.66	0.62	0.73	0.69	6.69
22	5	0.70	0.85	0.82	0.85	0.84	7.70
23	3	0.80	1.25	1.10	1.00	1.00	9.04
24	3	1.10	1.40	1.30	1.15	1.19	9.40

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF ATLANTIC NEEDLEFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
3	1	–	–	0.001	0.0010	–	3.70
4	4	0.0015	0.0022	0.002	0.0025	0.0023	3.12
5	1	–	–	0.008	0.0050	0.0080	6.40
6	4	0.01	–	0.011	0.0088	0.013	5.20
7	15	0.008	0.021	0.014	0.014	0.017	4.10
8	11	0.015	0.030	0.025	0.022	0.022	4.81
9	6	0.028	0.035	0.031	0.031	0.029	4.29
10	5	0.030	0.038	0.036	0.043	0.039	3.60
11	2	–	–	0.060	0.058	0.052	4.50
12	1	–	–	0.070	0.076	0.069	4.05
13	2	–	–	0.10	0.099	0.092	4.55
14	1	–	–	0.16	0.12	0.12	5.83
15	6	0.10	0.13	0.12	0.15	0.16	3.60
16	4	–	–	0.22	0.19	0.20	5.31
17	1	–	–	0.30	0.23	0.25	6.10

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF BAY ANCHOVY

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	14551	–	–	0.00082	0.00080	–	82.3
2	20252	–	–	0.0012	0.0017	–	15.3

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF BIGEYE CHUB

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
	6	• DOC..	• DC	• DOO8	. DDC	DOO	• E
		O DC	DC DC	0.0020	DO2		2
	0	'.00 0	0.011	0.0090	0.0066	0.0063	•
4	37	0.010	0.017	0.016	0.012	0.015	25.6
5	1	–	–	0.033	0.020	0.032	26.4

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **BIGMOUTH BUFFALO***

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	380	0.0079	-	0.008	0.005	-	98.7
3	19622	0.0136	-	0.014	0.016	-	50.4
4	25900	0.029	0.038	0.032	0.038	-	49.9
5	4514	0.05	0.06	0.06	0.07	-	44.7
6	809	0.10	0.12	0.11	0.13	-	50.1
7	126	0.16	0.38	0.22	0.20	0.26	66.6
8	183	0.27	0.63	0.32	0.30	0.36	63.4
9	9	0.44	0.80	0.74	0.43	0.47	101.2
10	-	-	-	-	0.59	0.60	-
11	8	0.60	-	0.60	0.78	0.78	45.1
12	32	0.70	1.30	0.96	1.02	1.00	55.3
13	310	1.17	1.40	1.25	1.29	1.27	57.0
14	144	1.37	2.48	1.56	1.62	1.60	56.8
15	123	1.80	2.30	2.09	1.99	2.05	62.0
16	122	1.70	2.70	2.30	2.41	2.34	56.1
17	85	2.48	3.17	2.65	2.65	2.70	53.8
18	129	2.75	3.70	3.20	3.20	3.14	54.9
19	109	3.30	3.95	3.93	3.82	3.68	57,3
20	26	4.23	4.63	4.25	4.53	4.33	53.1
21	6	4.44	5.50	4.72	5.32	5.11	51.0
22	11	5.30	8.00	6.32	6.20	6.02	59.3
23	12	6.75	6.85	6.95	7.18	7.09	57.1
[illegible]	0	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
25	15	9.00	10.40	9.76	9.46	9.73	62.46

*Includes data for pond fish.

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF BIGMOUTH BUFFALO

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
26	16	11.35	-	11.35	10.77	11.33	64.57
27	8	13.15	-	13.15	12.20	13.13	66.80

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF BLACK BULLHEAD

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	33	–	–	0.00055	0.00036	0.00070	54.5
2	49	–	–	0.0021	0.0032	0.0027	26,0
3	830	–	–	0.015	0.012	0.014	55.6
4	1128	–	–	0.031	0.028	0.030	48.7
5	9	–	–	0.049	0.057	0.049	39.11

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **BLACK CRAPPIE**

Length	Number of Fish	Range in Weight Minimum	Maximum	**Average** Empirical Weight	Calculated **Weights** Standard	Polynomial	Con-dition Index
1	295	0.0007	0.002	0.0008	0.0005		85.76
2	3,772	0.001	0.007	0.004	0.004	0.004	46.51
3	2,839	0.005	0.013	0.009	0.012	0.017	32.03
4	7,592	0.020	0.057	0.031	0.028	0.033	48.31
5	2,157	0.022	0.100	0.05	0.06	0.06	39.77
6	458	0.063	0.110	0.08	0.10	0.10	37.41
7	50	0.01	0.25	0.16	0.15	0.15	45.18
8	42	0.13	0.40	0.23	0.23	0.24	45.57
9	52	0.17	0.50	0.31	0.32	0.35	42.99
10	51	0.23	0.60	0.42	0.44	0.50	41.64
11	13	0.60	0.76	0.68	0.58	0.69	51.43
12	2	0.80	1.00	0.90	0.76	0.93	52.08
13	1	1.40		1.40	0.98	1.22	63.72
14	4	1.55	-	1.55	1.19	1.58	56.48

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **BLACK DRUM**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-dition Index
4	**50**	**-**	**-**	**0.010**	**0.011**	**0.010**	**15.6**
5	**106**	**-**	**-**	**0.026**	**0.024**	**0.026**	**21.1**
6	**163**	**-**	**-**	**0.052**	**0.044**	**0.052**	**24.1**
7	**8**	**-**	**-**	**0.063**	**0.074**	**0.062**	**18.2**

LENGTH-EIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **BLACKSPOTTED TOPMINNOW**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-dition Index
1.	**43**	**0.00077**	**0.0011**	**0.0010**	**0.0010**	**0.0016**	**102.32**
2/	**108**	**0.0010**	**0.0033**	**0.0027**	**0.0031**	**0.0025**	**33.91**
3	**66**	**0.0050**	**0.020**	**0.0083**	**0.0060**	**0.0089**	**30.86**

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF BLACKTAIL REDHORSE

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
4	35	0.012	0.10	0.033	0.026	–	52.0
5	45	0.040	0.10	0.046	0.050	0.069	37.0
6	75	0.050	0.17	0.10	0.086	0.083	46.7
7	92	0.10	0.20	0.13	0.14	0.12	37.4
8	115	0.15	0.35	0.19	0.20	0.19	37.2
9	74	0.15	0.45	0.27	0.29	0.28	37.7
10	117	0.24	0.50	0.38	0.39	0.39	37.9
11	113	0.40	0.89	0.55	0.52	0.53	41.5
12	71	0.50	1.10	0.65	0.68	0.70	37.9
13	52	0.60	1.10	0.86	0.86	0.90	39.1
14	46	0.83	1.25	1.13	1.07	1.13	41.2
15	15	1.20	1.55	1.40	1.32	1.38	41.5
16	13	1.57	2.20	1.72	1.60	1.67	42.1
17	12	1.70	2.30	2.05	1.91	1.99	4[illegible].9
18	5	2.10	2.70	2.28	2.27	2.34	39.1
19	4	2.55	2.68	2.65	2.66	2.72	38.6
20	2	3.00	3.10	3.05	3.10	3.14	38.1

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF BLACKTAIL SHINER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
1	92	0.00021	0.0050	0.0015	–	–	151.2
2	669	0.00057	0.011	0.0027	0.0026	0.0030	33.2
3	981	0.0030	0.024	0.0091	0.0078	0.0092	33.7
4	892	0.0043	0.044	0.017	0.017	0.017	26.5
5	283	0.010	0.050	0.034	0.031	0.032	27.0
6	4	0.040	0.070	0.063	0.051	0.059	28.9

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF BLUE CATFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
	1 1	0.000	0.0012	0.0009	–		2.
2	6132	0.00033	0.0071	0.0033	0.0027	0.0007	40.8
		[illegible]	[illegible]	[illegible]	0.0091	0.012	28.8
4	1970	0.008	0.044	0.018	0.021	0.026	27.7
5	1150	0.013	0.13	0.041	0.041	0.045	32.8
6	2358	0.045	0.15	0.062	0.070	0.073	28.5
7	1717	0.043	0.19	0.10	0.11	0.11	29.2
8	1402	0.067	0.28	0.15	0.16	0.16	29 5
9	1361	0.14	0.44	0.24	0.23	0.23	32.7
10	745	0.19	0.52	0.32	0.31	0.32	31.5
11	606	0.30	0.75	0.40	0.41	0.43	30.2
12	473	0.44	1.08	0.53	0.54	0.56	30.6
13	464	–	1.00	0.67	0.68	0.71	30.5
14	390	0.63	1.16	0.88	0.87	0.89	31.9
15	280	0.95	1.46	1.09	1.10	1.10	32.4
16	265	1.04	–	1.36	1.36	1.35	33.3
17	191	1.20	1.95	1.65	1.67	1.66	33.5
18	133	1.05	2.60	1.99	2.03	2.01	34.2
19	111	1.44	3.44	2.45	2.43	2.43	35.7
20	88	2.	.1	.08	2.8	2 1	
21	[illegible]	2.8	. 0	. 6	. 0	.46	6
22	61	3.50	4.85	4.03	3.98	4.09	37.9
23	65	4.34	5.75	4.75	4.62	4.80	39.1
24	28	5.13	6.33	5.54	5.33	5.60	40.09

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF BLUE CATFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior. Index
25	33	5.60	7.00	6.42	6.47	6.45	41.1
26	29	6.37	8.75	7.32	7.		
27	18	7.19	9.00	8.34	8.51	7-99	42
28	21	9.00	10.93	9.64	9.69	9.18	43.9
29	12	9.20	12.90	10.15	10.97	10.61	41.6
30	11	10.50	15.60	12.61	12.38	12.26	46.7
31	9	11.00	15.80	14.39	13.91	14.12	480
32	7	14.38	18.10	15.97	15.56	16.15	48.73
33	6	14.15	19.20	16.93	17.37	18.35	47.1
34	8	14.70	19.75	18.79	19.31	20.68	47.8
35	1	–	–	22.00	21.41	23.13	51.31
36	–	–		–	23.67	25.66	–
37	1	–	–	27.50	26.09	28.26	54.3
38		27.00	28.95	28.27	28.68	30.91	51.51
39	–	–	–	–	31.45	33.58	
40	4	30.00	41.51	38.63	34.42	36.25	60.35
41	–	--	–	–	37.57	38.90	
42	2	43.80	45.00	44.40	40.93	41.51	59.9
43	1	–	–	I		I	
44	–				48.29	L6.51	
45				49.9	52.31	48.85	54.75
46	–					1.06	
L7	2	50.00	52.00	51.00	61.05	53.12	49.12

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF BLUEGILL

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	52376	0.00036	0.0090	0.0011	–	–	117.9
2	34314	0.0015	0.023	0.0047	0.0049	0.0056	58.3
3	21516	0.0020	0.018	0.016	11.017	0.019	57.8
4	13103	0.020	0.10	0.041	0.042	0.043	63.8
5	8259	0.014	0.14	0.081	0.083	0.084	64.9
6	5020	0.063	–	0.14	0.15	0.15	66.6
7	1810	0.15	0.40	0.23	0.24	0.24	67.0
8	324	0.20	0.63	035	0.35	0.36	
9*	m	0.53	0.91	0.77	–J	–	105.6
10	7	0.83	1.12	0.96	–	–	–
11	2	1.01	2.04	1.52	–	–	–
12	–	–	–	–	–	–	–
13	–	–	–	–	–	–	–
14	1	–	–	3.50	–	–	–

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF BLUE SUCKER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
18	2	1.55	2.00	1.78	1.83	1.77	30 4
19	–	–	–	–	2.17	2.17	–
20	2	2.30	3.00	2.65	2-56	2-66	33 1
21	1	3.20	–	3.20	2.99	3.19	34.6
22	–			–	3.46	3.72	–
23	–			–	3.99	4.22	–
24	–			–	4.57	4.64	–
25	1	4.95		4.95	5-20	4.95	31 7

*Inch-groups 9 to 14 are from ponds

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **BLUNTNOSE MINNOW**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	170	0.0026	0.0064	0.0032	0.0032	0.0036	39.85
3	73	0.0050	0.015	0.0076	0.0087	0.0081	28.10
4	10	0.020	-	0.020	0.018	0.020	31.25

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **BROOK SILVERSIDE**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	16	0.00033	0.00066	0.00050	0.00047	0.00050	50.00
2	259	0.00050	0.0033	0.0019	0.0019	0.0017	23.35
3	36	0.0030	0.0065	0.0044	0.0041	0.0045	16.46
4	1	0.010	-	0.010	0.0072	0.0098	15.62

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **BULLHEAD MINNOW**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	2641	0.000066	0.0033	0.0010	0.00076	0.0011	101.06
2	1519	0.0013	0.0080	0.0030	04037	0.0033	37.3

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **CHAIN PICKEREL**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
3	1	0.003	-	0.003	0.004	0.0	11.1
4	3	0.013	-	0.013	0.010	0.012	20.8
5	75	0.023	0.028	0.023	0.02	0.016	18.2
6	128	0.039	0.040	0.04	0.04	0.03	18.2
7	52	0.04	0.08	0.06	0.06	0.06	18.8
8	35	0.07	0.09	0.09	0.09	0.09	18.0
9	35	0.12	0.13	0.14	0.13	0.14	18.8
10	11	0.15	0.18	0.18	0.19	0.20	17.9
11	13	0.22	-	0.23	0.25	0.26	17.6
12	12	0.28	-	0.28	0.32	0.34	15.9
13	14	0.37	-	0.39	0.42	0.43	17.7
14	9	0.48	-	0.48	0.53	0.53	17.4
15	6	0.59	1.20	0.79	0.66	0.64	23.4
16	5	0.72	1.10	0.87	0.81	0.77	21.3
17*	15	1.31	-	1.33	1.24	1.22	27.0
18	58	1.29	1.41	1.40	1.44	1.42	24.0
19	34	1.58	1.71	1.67	1.66	1.67	24.4
20	7	1.80	-	1.80	1.90	1.95	22.5
21	4	2.02	-	2.02	2.15	2.24	21.8
22	4	1.92	3.10	2.51	2.43	2.53	23.6
23	6	2.77	-	2.77	2.74	2.81	22.8
24	1	2.79	-	2.79	3.06	3.06	20.2
25	2	3.37	-	3.37	3.46	3.26	21.6

***Chain pickerel in inch-groups 17-25 were from 1 fertilized and 1 unfertilized pond.**

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF CHANNEL CATFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	4856	0.00014	0.0044	0.0008		-	83.9
	•	[illegible]	[illegible]	e [illegible]			
3	7800	0.00089	0.030	0.0068	0.0079	0.0089	25,2
4	2452	0.0067	0.067	0.019	0.018	0.020	29.3
5	2898	0.013	0.083	0.034	0.035	0.037	26.8
6	2582	0.026	0.13	0.056	0.060	0.062	26.0
7	1734	0.050	0.22	0.094	0.095	0.097	27.3
8	1583	0.080	0.25	0.14	0.11	0.14	27.0
9	1211	-	0.31	0.19	0.20	0.20	26.7
10	1057	0.095	0.53	0.28	0.27	0.28	27.6
11	953	0.23	0.65	0.38	0.37	0.35	28.6
12	750	0.33	0.79	0.50	0.50	0.52	29.0
13	594	0.50	-	0.68	0.65	0.70	30.8
14	434	0.50	1.90	0.83	0.83	0.87	30.3
15	341	0.55	1.38	1.02	1.04	1.07	30.2
16	248	0.50	1.90	1.28	1.29	1.29	31.2
17	149	0.73	2.06	1.57	1.57	1.55	32.2
18	92	1.20	2.40	1.90	1.90	1.86	32.6
19	57	1.70	2.70	2.22	2.27	2.23	32.8
20	29	2.45	3.75	2.89	2.69	2.67	36.1
	16	3.00	3.75	3.29	3.16	3.18	35.5
22	12	2.00	4.50	3.47	3.68	3.79	32.6
23	3	2.50	4.30	3.60	4.26	4.50	29.6
24	1	-	-	5.3	4.91	5.31	38.3

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF CHANNEL CATFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
25	–	–	–	–	5.61	6.25	–
26	2	6.50	7.14	6.87	6.39	7.32	39.1

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF CHERRYFIN SHINER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	201	–	–	0.00012	0.00013		
2	3115	–		0.0016	0.0015	–	20.4
3	12	–		0.0050	0.0058	–	18.5

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF COMMON CARP, ISRAELI MIRROR*

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
4	8	0.037	-	0.037	0.036	-	58.6
5	55	0.10	-	0.100	0.071	0.065	80.0
6	264	0.11	-	0.11	0.12	0.10	48.8
7	93	0.14	-	0.14	0.19	0.17	42.0
8	12	0.22	-	0.22	0.29	0.27	42.3
9	82	0.30	0.50	0.50	0.41	0.41	67.9
10	446	0.40	0.70	0.59	0.57	0.58	59.1
11	377	0.65	0.83	0.68	0.75	0.78	51.1
12	478	0.90	1.11	1.02	0.98	1.01	58.8
13	858	1.05	1.65	1.20	1.25	1.28	54.5
14	406	1.43	1.84	1.54	1.56	1.58	56.2
15	193	1.68	2.15	1.95	1.91	1.90	57.8
16	23	2.44	2.60	2.46	2.32	2.46	60.1
17					4.00	3.70	
18	1	4.90	-	4.90	4.64	4.86	84.0
19	5	4.60	-	6.20	5.35	5.94	90.4
20	16	5.65		7.55	6.12	6.95	94.4
21	67	6.30		8.73	6.95	7.89	94.2
22	77	8.45	9.73	9.70	7.85	8.75	91.1
23	16	9.53	10.20	9.61	8.82	9.54	79.0
24	58	9.78		9.78	9.86	10.27	70.7
25	106	10.60		10.60	10.97	10.93	67.8
26	89	11.48	-	11.48	12.16	11.52	65.3
27	28	12.56		12.56	13.43	12.06	63.8

*Data from ponds.

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF COMMON CARP, ISRAELI MIRROR

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
28	3	11.87	-	11.87	14.77	12.54	54.1
29	1	13.30	-	13.30	16.19	12.96	54.5

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **COMMON CARP, SCALED***

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	3		0.003	0.003	0.001	–	333.33
3	14,370	0.010	0.100	0.015	0.021	–	57.75
4	8.335	0.022	0.16	0.030	0.046	–	47.02
5	2,897	0.042	0.23	0.073	0.084	0,12	58.25
6	156	0.059	0.30	0.16	0.14	0.19	73.27
7	343	0.10	0.45	0.18	0.21	0.26	51.50
8	52	0.13	0.31	0.23	0,30	0.34	45.18
9	49	0.37	0.50	0.38	0.42	0.44	51.65
10	19	0.40	0.60	0.52	0.56	0.56	52.42
11	35	0.66	0.75	0.67	0.72	0.70	50.46
12	24	0.85	1.00	0.90	0.91	0.87	52.30
13	23	1.00	1.17	1.08	1.14	1.08	49.27
14	30	1.18	1.75	1.39	1.39	1.32	50.78
15	59	1.25	2.06	1.56	1.68	1.61	46.30
16	49	1.60	2.50	1.99	2.01	1.94	48.62
17	81	1.84	2.60	2.11	2.37	2.32	42.88
18	73	2.00	4.00	2.68	2.77	2.76	46.03
19	40	2.08	4.20	3.09	3.21	3.26	45.05
20	35	2.84	4.65	3.59	3.69	3.82	44.81
21	23	3.69	6.00	4.56	4.22	4.45	49.23
22	21	4.13	8.70	5.23	4.79	5.16	49.15
23	8	4.60	7.60	6.00	5.41	5.94	4901
24	9	6.00	7.90	6.91	6.08	6.80	49.99

*Scaled variety found in rivers.

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF COMMON CARP, SCALED*

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
25	3	7.70	8.00	7.80	6.79	7.75	49.92
26	5	7.30	8.65	8.44	7.56	8.79	48.02
27	2	7.20	8.50	7.85	8.38	9.93	39.88
28	1		12.2	12.20	9.26	11.16	55.57
29	–	–	–	–	10.19	12.50	–
30	2	12.80	16.80	14.80	11.18	13.95	54.81

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF CONGO TILAPIA*

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	21,756	0.001	0.002	0.0013	0.0009		133.0
2	160,472	0.004	0.008	0.006	0.007	0.006	78.2
3	161,617	0.010	0.019	0.014	0.023	0.018	50.2
4	35,039	0.04	0.12	0.05	0.05	0.05	73.8
5	17,498	0.08	0.10	0.10	0.10	0.10	79.3
6	7,814	0.14	0.22	0.17	0.18	0.18	77.3
7	1,348	0.27	0.32	0.29	0.28	0.30	84.1
8	599	0.40	0.50	0.47	0.41	0.46	91.1
9	308	0.56	0.95	0.63	0.58	0.67	86.1
10	44	0.82	1.00	0.93	0.79	0.94	93.2

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF CREEK CHUB

Length	Number of Fish	Range W Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	71	0.00073	-	0.0011	0.00069	-	105.63
2	74	0.0018	0.0041	0.0035	0.0042	0.0047	43.58
3	27	0.0070	0.015	0.012	0.012	0.012	45.26
4	6	0.025	0.033	0.032	0.025	0.026	50.00
	6	0.047	0.049	0.049	0.044	0.055	39.33
6	-	-	-	-	0.071	0.10	-
	1	0.18	-	0.18	0.11	0.18	51.89

*Pond

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF EMERALD SHINER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	2133	0.000055	0.004	0.00082	-	-	82.04
2	10022	0.0013	0.0040	0.0020	0.0020	0.0020	24.9
3	3468	0.0028	0.0096	0.0059	0.0059	0.0059	22.0
4	133	0.0044	0.025	0.014	0.013	0.016	22.6

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **FATHEAD MINNOW***

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	88,049	-	-	0.00079	0.0007	0.0007	78.70
2	71,721	-	-	0.0023	0.0028	0.0022	28.84
3	19,639	-	-	0.0069	0.0061	0.0068	25.42

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **FLAT BULLHEAD**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	14	0.0020	0.0030	0.0028	0.0029	-	34.82
3	22	0.0096	0.010	0.012	0.011	0 022	44.44
4	7	0.022	0.050	0.027	0.026	0.041	41.98
5	9	0.046	0.10	0.060	0.054	0.061	48.00
6	4	0.10	-	0.10	0.096	0.092	47.45
7	8	0.13	0.20	0.14	0.16	0.14	40.74
8	5	0.19	-	0.21	0.24	0.22	40.03
9	1	0.33	-	0.33	0.35	0 33	45.26

*Pond data

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF FLATHEAD CATFISH

Length	Number of Fish	Range in Weight Minimum	Range in Weight Maximum	Average Empirical Weight	Calculated Weights Standard	Calculated Weights Polynomial	Condition Index
	249	0.00040	0.0030	0.0012	[illegible]	[illegible]	124.9
	1152	0.0017	0.012	0.0045	0.0033	0.0071	56.2
5	1044	0.0049	0.060	0.0095	0.011	0.0093	35.0
	294	0.0080	0.038	0.017	0.025	0.021	26.0
			0.070	0.0	[illegible]	[illegible]	[illegible]
6	18	0.0	[illegible]	0.080	0.080	0.080	6.8
	217	0.090	0.20			[illegible]	
8	136	0.10	0.31	0.19	0.18	0.19	37.1
9	124	0.10	0.44	0.27	0.26	0.27	37.3
10	71	0.20	0.60	0.36	0.35	0.37	36.4
			0.8	0	6		38.6
12	87	0.38	0.88	[illegible]		[illegible]	
	6	0.60	1.0	0.83	0.80		[illegible]
[illegible]	47	[illegible]	[illegible]	[illegible]	1.01	[illegible]	
15	59	0.90	1.80	1.26	1.26	1.22	37.[illegible]
16	29	1.20	2.00	1.55	1.54	1.50	37.7
17	27	1.50	2.06	1.79	1.87	1.84	36.5
18	21	1.[illegible]	2.[illegible]0	2.12	2.[illegible]2	2.2	6.4
19	14	2.2	2.90	2.62	2.6	2.[illegible]0	8.2
20		100	6	3.52	3.14	2	44.0
	11	100	[illegible]	168	6	81	7
	4	4.00	4.70	4.33	4.25	4.46	40.6
	8	100	6.20	10	0	6	
24	2	5.50	7.50	6.50	5.61	5.93	47.0

continued on next sheet

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **FLATHEAD** CATFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	ron-dition Index
25	4	5.90	7.10	6.87	6.88	6 63	44.0
26	1	–	–	8.00	7.87	8.00	45.51
27	4	8.20	9.00	8.59	8.96	9.28	43.6
28	5	9.60	12.50	10.44	10.16	10.51	47.5
29	4	10.2	13.44	12.23	11.46	11.72	50.12
30	1	–	–	13.50	12.88	12.94	50.0
31	–	–	–	–	14.42	14.23	–
32	1	–	–	16.90	16.08	15.63	51.57
33	–	–	–	–	17.88	17.16	–
34	–	–	–	–	19.82	18.87	–
35	–	–	–	–	21.89	20.80	–
36	3	23.00	24.25	23.83	21.12	22.98	51.08

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF FLIER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	1	–	–	0.010	0.0099	0.010	125.00
3	3	–	–	0.027	0.027	0.025	98.76
4	8	–	–	0.056	0.056	0.059	87.89
5	10	–	–	0.11	0.099	0.10	84.00
6	1	–	–	0.15	0.16	0.15	69.44

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF FRECKLED MADTOM

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	17	0.00090	–	0.0011	0.0011	0.0014	111.76
2	95	0.0027	0.0037	0.0028	0.0043	0.0031	35.26
3	6	0.0066	–	0.0083	0.0094	0.012	30.86
4	12	0.010	0.031	0.022	0.017	0.020	34.50

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF FRESHWATER DRUM

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	104	0.00023	–	0.00032	0.00039	–	31.7
2	1462	0.0017	0.011	0.0046	0.002	–	57.1
3	13837	0.0033	0.032	0.012	0.011	0.013	44.5
4	17694	0.010	0.10	0.020	0.025	0.034	32.0
5	5553	0.021	0.10	0.043	0.049	0.059	34.4
6	5812	0.042	0.20	0.086	0.086	0.092	39.7
7	7575	0.076	0.31	0.14	0.14	0.14	39.4
8	5363	–	0.37	0.19	0.20	0.20	37.9
9	5166	0.17	0.47	0.29	0.29	0.28	39.8
10	4361	0.20	0.56	0.40	0.40	0.39	40.2
11	2953	0.30	0.88	0.54	0.53	0.53	40.6
12	1712	–	1.10	0.69	0.69	0.69	39.7
13	926	0.49	1.33	0.92	0.87	0.90	41.9
14	484	0.50	1.95	1.19	1.09	1.15	43.3
15	305	0.56	1.90	1.38	1.34	1.45	41.0
16	127	0.60	2.30	1.91	1.62	1.79	46.7
17	68	1.00	2.90	2.26	1.95	2.19	46.0
18	43	1.20	3.30	2.74	2.32	2.65	46.9
19	32	1.55	4.71	3.56	3.22	3.20	51.9
20	17	2.80	4.80	3.94	3.90	3.99	49.2
21	10	3.70	5.60	5.34	4.67	4.86	57.7
22	10	4.60	6.03	5.75	5.56	5.81	54.0
23	5	[illegible].40	[illegible]	[illegible]	6.56	6.84	58.0
24	7	7.50	8.45	7.94	7.68	7.95	57.5

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF FRESHWATER DRUM

Length	Number of Fish	Range in Weight Minimum	Range in Weight Maximum	Average Empirical Weight	Calculated Weights Standard	Calculated Weights Polynomial	Condition Index
25	6	8.60	9.90	9.23	9.94	9-13	59_1
26	5	10.20	–	11.02	10.35	10.39	62.7
27	4	8.50	11.70	11.03	11.91	11.74	56.01
28	1	–	–	11.50	13.64	13.17	52.4
29	2	14.50	16.50	15.50	15.54	14.68	63.5

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF GIZZARD SHAD

Length	Number of Fish	Range Minimum	Weight M	Average Empirical Weight	Calculated Weights S	Polynomial	Con-ditior Index
	279	–	–	0.00075	–		75.3
2	54,457	0.0012	0.0095	0.0035	0.0039	0.0055	44.1
3	90774	0.0090	0.034	0.011	0.012	0.012	41.7
4	27076	0.010	0.041	0.023	0.026	0.025	36.2
5	8715	0.025	0.095	0.047	0.048	0.048	37.7
6	11006	0.040	0.14	0.084	0.078	0.088	38.8
	13535	0.050	0.20	0.10	0.12	0.12	30.5
	7823	0.10	0.32	0.18	0.18	0.20	34.5
9	18956	0.17	0.47	0.27	0.26	0.27	40.0
10	16137	0.23	0.50	0.34	0.35	0.35	33.9
11	12296	0.32	0.71	0.43	0.46	0.45	32.5
12	5307	0.40	0.90	0.51	0.59	0.58	29.5
13	527	0.50	1.10	0.78	0.74	0.75	35.6
15	69	1.20	1.50	1.44	1.12	1.26	42.8
16	21	1.00	1.90	1.67	1.35	1.62	40.8
17	4	2.00	2.10	2.05	1.61	2.07	41.7

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF GOLDEN REDHORSE

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
2	3	0.001	0.01	0.0070	0.0034		87.5
3	99	0.0033	0.027	0.018	0.012	0.0089	66.9
4	165	0.018	0.065	0.032	0.030	0.030	49.3
5	79	0.025	0.13	0.057	0.060	0.071	45.7
6	33	0.075	0.25	0.12	0.11	0.12	54.9
7	41	0.095	0.30	0.17	0.17	0.17	48.3
8	59	0.13	0.35	0.22	0.23	0.21	42.3
9	79	0.17	0.44	0.30	0.31	0.32	41.3
10	58	0.30	0.63	0.44	0.42	0.44	43.5
11	77	0.40	0.80	0.55	0.54	0.57	41.1
12	121	0.50	1.04	0.74	0.69	0.73	42.7
13	126	0.60	1.15	0.90	0.87	0.90	40.8
14	223	0.88	1.50	1.12	1.06	1.09	41.0
15	246	–	1.93	1.25	1.29	1.31	37.
16	194	1.27	2.00	1.59	1.54	1.54	38.8
17	111	1.18	2.10	1.78	1.82	1.81	36.2
18	23	1.20	2.51	2.17	2.13	2.09	37.2
19	10	2.10	2.80	2.51	2.48	2.41	36.7
20	13	2.49	–	2.84	2.85	2.76	35.5
21	6	2.90	–	2.53	3.27	3.14	38.1

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **GOLDEN SHINER***

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	294013	0.0036	-	0.0037	0.0007	-	365.2
2	151928	0.0020	0.005	0.0054	0.004	0.004	67.8
3	67498	0.0059	0.013	0.0077	0.011	0.009	28.3
4	34996	0.010	0.020	0.015	0.02	0.02	23.5
5	2571	0.03	0.07	0.03	0.04	0.04	26.9
6	586	0.05	0.10	0.07	0.06	0.07	30.1
7	776	0.07	0.12	0.11	0.09	0.11	32.2
8	179	0.14	0.20	0.16	0.13	0.17	31.6
9	2	0.20	0.30	0.25	0.18	0.25	34.3

***Includes pond data**

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **GOLDFISH***

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	9866	0.001	0.008	0.0012	0.0008	-	120.6
2	89297	0.001	0.02	0.008	0.006	-	101.1
3	123897	0.01	0.02	0.015	0,018	0.018	56.6
4	21451	0.02	0.06	0.03	0.04	0.05	51.1
5	2957	0.04	0.15	0.07	0.08	0.09	55.0
6	537	0.07	0.20	0.13	0.14	0.15	60.1
7	1336	0.12	0.28	0.26	0.21	0.23	76.2
8	1319	0.22	0.48	0.40	0.31	0.33	78.7
9	286	0.39	0.57	0.48	0.44	0.47	66.3
10	126	0.45	0.88	0.72	0.60	0.65	72.0
11	90	0.80	1.07	0.97	0.79	0.86	72.8
12	36	0.50	1.54	1.11	1.01	1.12	64.1
13	30	0.60	1.70	1.45	1.28	1.44	66.2
14	5	1.70	-	1.84	1.58	1.81	67.1
15	2	1.40	2.40	1.90	1.93	2.24	56.3
16	1	3.20	-	3.20	2.33	2.73	78.1

***Pond** data

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF GREEN SUNFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	5097	0.00020	0.0086	0.0030	–	–	297.1
2	4428	0.0004	0.038	0.0058	0.0051	0.0066	72.9
3	2757	0.0067	0.063	0.017	0.017	0.019	63.4
4	1400	0.011	–	0.039	0.041	0.045	60.6
5	462	0.022	0.15	0.082	0.083	0.086	65.8
6	111	0.083	0.25	0.15	0.14	0.15	67.9
7	24	0.10	0.30	0.22	0.22	0.21	64.1
8	5	0.30	0.38	0.33	0.33	0.33	64.8

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF HIGHFIN CARPSUCKER

Length	Number of Fish	Range in Weight Minimum	Range in Weight Maximum	Average Empirical Weight	Calculated Weights Standard	Calculated Weights Polynomial	Con-ditior. Index
7	39	–	–	0.17	0.18	0.19	50.9
8	3	0.19	0.28	0.25	0.26	0.30	48.8
9	5	0.39	0.44	0.42	0.38	0.41	58.2
10	3	–	–	0.60	0.52	0.53	59.7
11	8	0.63	0.75	0.70	0.69	0.68	52.9
12	10	0.75	1.00	0.85	0.90	0.86	48.9
13	2	–	–	1.00	1.14	1.08	45.5
14	11	1.14	1.50	1.36	1.42	1.37	49.8
		1.	1.	1.61	1.75	1.72	47.6
16	5	1.90	2.20	2.14	2.13	2.16	52.2
17	5	2.72	2.94	2.83	2.56	2.68	57.5
18	3	3.00	3.26	3.17	3.04	3.32	54.3

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **JAVA TILAPIA** *

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	165689	0.00003	0.0103	0.0021	0.001	-	207.6
2	518181	0.0036	0.0187	0.0057	0.007	0.010	71.0
3	369944	0.011	0.0441	0.0163	0.022	0.024	60.6
4	266151	0.025	0.083	0.037	0.05	0.05	57.3
5	136037	0.07	0.15	0.08	0.09	0.08	63.0
6	66818	0.11	0.37	0.13	0.14	0.14	60.9
7	21907	0.19	0.24	0.22	0.21	0.22	64.8
8	4531	0.26	0.70	0.32	0.31	0.33	62.6
9	830	0.35	0.53	0.50	0.42	0.47	68.3
10	636	0.51	0.63	0.67	0.56	0.66	66.9
11	89	0.68	-	0.98	0.73	0.89	73.9
12	89	1.28	-	1.28	0.92	1.18	74.3
13	2	1.60	-	1.60	1.14	1.52	72.8
14	8	1.88	-	1.88	1.39	1.93	68.3

***Pond** data

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF LARGEMOUTH BASS

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	190	0.0023	0.015	0.0045	0.0039	0.0063	56.3
3	1083	0.0053	0.030	0.014	0.013	0.013	50.1
4	1554	0.0060	0.065	0.027	0.030	0.030	42.9
5	1283	0.030	0.13	0.056	0.058	0.060	44.5
6	839	0.035	0.20	0.10	0.10	0.10	46.3
7	391	0.050	0.31	0.17	0.16	0.17	50.3
8	234	0.19	0.40	0.24	0.23	0.25	47.5
9	202	0.20	0.50	0.33	0.33	0.35	45.3
10	208	0.30	0.75	0.46	0.45	0.47	46.5
11	119	0.50	1.40	0.68	0.64	0.72	50.9
12	121	0.25	1.26	0.87	0.85	0.82	50.4
13	70	0.80	1,38	1.08	1.09	1.03	49.2
14	66	0.90	2.00	1.35	1.38	1.34	49.3
16	27	1.75	2.50	2.06	2.10	2.19	50.2
17	25	2.00	3.09	2.63	2.55	2.70	53.5
18	13	2.00	3.80	3.20	3.05	3.24	54.8
19	7	3.00	4.50	3.70	3.62	3.80	53.9
20	4	3.90	5.90	4.76	4.26	4.36	59.5
21	3	5.00	6.43	5.56	4,98	4.90	60.0

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **LARGESCALE MENHADEN**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior. Index
3	14	–	–	0.014	0.016	0.014	52.9
4	231	–	–	0.041	0.033	0.041	
5	40	–	–	0.053	0.059	0.055	42.6

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **LOGPERCH**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-dition Index
1	335	0.00071	0.0020	0.0017	–	–	167.8
2	3591	0.0015	0.0060	0.0021	0.0026	0.0035	26.0
3	625	0.0010	0.024	0.0084	0.0080	0.0079	31.2
4	1151	0.0046	0.040	0.013	0.013	0.020	20.33
.5	65	0.013	0.070	0.035	0.034	0.038	28.3
6	19	0.040	0.10	0.062	0.056	0.060	28.7
7	–	–	–	–	0.086	0.083	–
8	23	–	–	0.10	0.13	0.11	19.5

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF LONGEAR SUNFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	1292	0.00036	0.015	0.0030	–	–	300.2
2	4539	0.0017	0.012	0.0054	0.0061	0.0061	67.9
		[illegible]	[illegible]	[illegible]	[illegible]	0.023	73.5
4	2872	0.017	0.10	0.044	0.045	0.048	68.9
5	867	0.040	0.19	0.087	0.086	0.088	69.2
6	153	0.033	0.22	0.13	0.14	0.15	61.8
7	8	0.15	0.44	0.22	0.23	0.23	63.0

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF LONGNOSE GAR

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	2	0.002	–	0.002	0.0004	–	25.00
	–	–	–	–	0.0018	–	
4	–	–	–	–	0.0043	–	–
5	1	0.008	–	0.008	0.009	–	6.40
6	–	–	–	–	0.015	–	–
7		0.014	0.020	0.017	0.025		4.95
8	10	0.022	0.034	0.032	0.037	–	6.17
9	7	0.03	0.25	0.106	0.054	0.082	14.50
10	9	0.05	0.10	0.06	0.075	0.097	6.22
11	3	0.10	0.20	0.13	0.10	0.12	10.01
12	11	0.09	0.40	0.16	0.13	0.14	9.00
13	17	0.10	0.81	0.17	0.17	0.17	7.68
14	6	0.17	0.19	0.20	0.21	0.20	7.28
15	2	0.20	–	0.20	0.26	0.24	5.92
16	1	0.38	–	0.38	0.32	0.29	9.27
17	4	0.26	0.32	0.27	0.39	0.35	5.54
18					0.	0.42	–
19	–	–	–	–	[illegible]	0.51	–
20	2	0.50	1.00	0.75	0.65	0.60	9.37
21	4	0.50	–	0.58	0.75	0.71	6.20
22	1	0.70		0.70	0.87	0.84	6.57
23	4	0.90	1.00	0.95	1.00	0.98	7.80
24	1	1.70		1.70	1.14	1.14	12.29
25	2	1.50	2.20	1.85	1.30	1.31	11.84

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF LONGNOSE GAR

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
26	-	-	-	-	1.47	1.51	-
27	1	2.60	-	2.60	1.65	1.73	13.20
28	3	1.80	-	2.13	1.85	1.97	9.71
29	1	1.80		1.80	2.06	2.23	7.38
30	4	2.20	2.30	2.23	2.29	2.52	8.24
31	6	1.80	2.57	2.35	2.54	2.83	7.88
32	3	2.57	-	2.57	2.80	3.17	7.83
33	3	3.77	-	3.77	3.09	3.54	10.48
34	2	3.50	5.50	4.50	3.39	3.93	11.44
35	1	3.30	-	3.30	3.71	4.36	7.69
36	3	3.50	-	4.50	4.05	4.81	9.64
37	1	6.50	-	6.50	4.41	5.30	12.83
38	-	-	-	-	4.79	5.82	-
39	1	6.50	-	6.50	5.20	6.37	10.95
40	-	-	-	-	5.62	6.96	-
41	-	-	-	-	6.07	7.59	-
42	-	-	-	-	6.55	8.25	-
43	1	11.50	-	11.50	7.04	8.96	14.46
44	-	-	-	-	7.57	9.70	-
45	-	-	-	-	8.12	10.48	-
46	-	-	-	-	8.69	11.30	-
47	1	10.70	-	10.70	9.29	12.17	10.30

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF MOONEYE

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
3	23	0.0045	0.015	0.0083	0.0072	–	30.7
4	107	0.010	0.024	0.017	0.018	–	26.3
5	123	–	–	0.026	0.038	0.026	20.8
6	33	0.040	0.083	0.063	0.069	0.060	29.0
7	32	0.10	0.17	0.11	0.12	0.11	33.0
8	17	0.13	0.20	0.19	0.18	0.19	36.9
9	67	0.22	0.40	0.26	0.26	0.28	35.1
10	10k	0.20	0.50	0.35	0.37	0.39	34.7
11	35	0.37	0.65	0.51	0.50	0.51	38.2
12	8	0.50	0.80	0.68	0.67	0.66	39.4

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF MOSQUITO FISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	9	–	–	0.0010	0.0013	–	100.0
2	112	–	–	0.0018	0.0018	–	–

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **NILE TILAPIA***

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	70,531	0.0010	0.0082	0.0015	0.001	-	149.3
2	262,664	0.003	0.014	0.0058	0.007	0.007	73.4
3	232,817	0.014	0.025	0.018	0.023	0.015	66.0
4	203,232	0.038	0.044	0.04	0.05	0.04	64.6
5	128,055	0.066	0.13	0.08	0.10	0.08	63.9
6	54,576	0.13	0.17	0.15	0.17	0.15	67.6
7	14,731	0.21	0.34	0.27	0.26	0.25	78.4
8	13,178	0.36	0.58	0.40	0.38	0.39	77.6
9	4,740	0.34	0.62	0.58	0.53	0.56	79.4
10	2,305	0.60	0.84	0.79	0.72	0.79	79.3
11	1,078	0.98	1.19	1.05	0.95	1.06	78.8
12	511	1.19	1.65	1.48	1.21	1.39	85.5
13	148	1.58	1.92	1.74	1.52	1.78	79.2
14	11	1.81	2.20	190	1.88	2.24	69.2

*Pond data

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF NORTHERN HOG SUCKER

Le h	Number of Fish	Range in Minimum	Weight Maximum	Average Empirical Wei ht	Calculated Weights Standard	Pol omial	Con-dition Index
3	1	–	–	0.0090	0.0099		33.33
4	1	–	–	0.020	0.023	0.039	31.25
5	5	0.047	0.050	0.050	0.045	0.064	40.00
6	4	–	–	0.10	0.078	0.081	46.29
7	2	0.10	0.11	0.11	0.12	0.10	30.61
8	2	0.15	0.19	0.17	0.18	0.15	33.20
9	1	–	--	0.27	0.26	0.23	37.03
10	2	–	–	0.32	0.36	0.37	'31.50
11	1	–	–	0.63	0.47	0.58	47.33

I1ENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF NORTHERN ROCK BASS

Le g h	Number of Fish	Range in Minimum	Weight MAximum	Average Empirical Weight	Calculated Weights Standard	Po omial	Con-dition Index
1	2	–	–	0.0020	0.0011	–	200 00
	–	–	–		0.0078		
3				0.010	0.024	0.0022	37.03
4	3	–	–	0.037	0.054	0.037	58.33
5	4			0.085	0.10	0.096	68.00
6	10	–	–	0.19	0.16	0.18	86.57
7	5			0.28	0.26	0.29	81.63
8	5			0.42	0.38	0.43	82.03
9	1	–	–	0.60	0.52	0.60	82.30

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **ORANGESPOTTED SUNFISH**

Length	Number of Fish	Range in Weight Minimum	Range in Weight Maximum	Average Empirical Weight	Calculated Weights Standard	Calculated Weights Polynomial	Condition Index
1	00	0.0010	0.002	0.0026	[illegible]	[illegible]	
2	[illegible]	0 [illegible]	0 01	0.0037	[illegible]	[illegible]	
3	1303	0.0036	[illegible]	[illegible]	[illegible]	[illegible]	
4	125	0.013	0.10	0.029	0.032	0.040	5.5
5	110	0.060	0.088	0.077	0.0	0.0	61.6
6	6	0.10	0.13	0.11	0.090	0.11	48.6

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **PADDLEFISH**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
3	3	0.0100	-	0.010	0.003	-	37.0
4	-	-	-	-	0.006	-	-
5	-	-	-	-	0.12	-	-
6	1	0.015	-	0.015	0.02	0.02	6.9
7	8	0.030	0.081	0.08	0.03	0.04	21.9
8	6	0.036	0.044	0.04	0.05	0.05	7.5
9	14	0.05	0.077	0.06	0.06	0.07	8.7
10	25	0.07	0.10	0.08	0.09	0.09	8.2
11	19	0.10	0.13	0.11	0.12	0.11	8.4
12	11	0.11	0.16	0.13	0.15	0.14	7.6
13	5	0.16	0.30	0.20	0.19	0.17	8.9
14	-	-	-	-	0.23	0.21	-
15	1	0.30	-	0.30	0.28	0.25	8.9
16	1	0.19	-	0.39	0.34	0.31	9.5
17	3	040	0	0	• 40	[illegible]	• [illegible]
18	2	0.50	0.60	0.55	0.48	0.45	9.4
19	1	0.50	-	0.50	0.56	0.54	7.3
20	10	0.50	0.80	0.62	0.64	0.64	7.8
21	6	0.94	-	0.94	0.74	0.76	10.2
		• .1	[illegible]	0 [illegible]	0 84	0 89	
23	19	1.00	1.35	1.12	0 96	1.04	9 2
24	11	1.00	1_50	1.22	1.13	1.21	8.8
		[illegible] I	[illegible]			. •	[illegible]
26	15	1 1 25	12 00	1_60	1 53	1.61	9.1

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **PADDLEFISH**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
27	7	1.50	2.30	1.89	1.76	1.85	9.58
28	11	1.50	3.10	2.36	2.03	2.07	10.76
29	8	2.10	3.30	2.48	2.32	2.31	10.17
30	7	2.00	3.00	2.44	2.64	2.58	9.02
31	4	2.25	3.20	2.74	2.99	2.88	9.18
32	4	2.70	4.20	3.20	3.37	3.21	9.76
33	3	2.75	4.00	3.25	3.79	3.59	9.04
34	3	3.50	4.90	4.38	4.25	4.01	11.15
35	6	3.25	4.50	4.08	4.74	4.49	9.52
36	2	4.75	6.00	5.38	5.28	5.02	11.52
37	-	-	-	-	5.86	5.62	-
38	3	4.25	6.94	5.90	6.48	6.28	10.74
39	5	5.25	8.38	7.03	7.16	7.01	11.84
40	2	9.50	11.38	10.44	7.88	7.81	16.31
41	1	10.00	-	10.00	8.66	8.71	14.50
42	-	-	-	-	9.49	9.69	-
43	5	7.50	11.10	8.87	10.38	10.76	11.15
44	1	11.00	-	11.00	11.33	11.93	12.91
45	1	11.25	-	11.25	12.34	13.20	12.34
46	2	15.25	18.38	16.82	13.42	14.58	17.27
47	1	16.00	-	16.00	14.57	16.07	15.41
48	-	-	-	-	15.78	17.68	-
49	-	-	-	-	17.07	19.41	-
50	-	-	-		18.44	21.26	-

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF PADDLEFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
51	2	20.00	25.5	22.75	19.88	23.26	17.15
52	1	26.50	-	26.50	21.41	25.38	18.84

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF PINFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	28	0.007	–	0.007	0.006		89.28
3	39	0.015	–	0.015	0.018		56.98
4	9	0.03	–	0.03	0.036	0.035	52.08
5	40	0.06	–	0.06	0.06	0.07	50.00
6	5	0.12	–	0.12	0.10	0.11	55.55
7	3	0.13	–	0.13	0.14	0.14	38.87

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF PIRATE PERCH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-dition Index
1	6	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	161.7
		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
		[illegible]	[illegible]	[illegible]		[illegible]	

LENGTH—WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF PUGNOSE MINNOW

Le :t	Number of F·sh	Range in Weight imum	: 'um	Average Empirical We:	Calculated Weights St.	Pol	Con—dition
1	147	0.00060	0.0013	0.00083	0.00084	0.00080	82.99
2	62	0.0013	—	0.0021	0.00229	0.00190	26.20
3	5	0.0045	—	0.0048	0.00411	0.00510	17.77

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF QUILLBACK

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	2	–	–	0.0020	0.00076	–	200.0
2	6	–	–	0.0037	0.0054	–	45.8
3	4	–	–	0.015	0.017	–	55.5
4	3	0.020	0.035	0.030	0.038	–	46.9
5	4	–	–	0.10	0.072	–	80.0
6	21	0.071	0.20	0.10	0.12	–	47.4
7	48	0.11	0.20	0.17	0. 9	0.15	49.8
8	157	0.21	0.26	0.25	0.27	0.25	49.-
9	164	0.32	0.40	0.35	0.38	0.38	
10	93	0.45	0.70	0.49	0.51	0.53	49.2
11	196	0.56	0.75	0.69	0.67	0.71	52.1
12	163	0.80	0.95	0.91	0.86	0.92	52.4
13	52	0.97	1.25	1.11	1.08	1.15	50.5
14	8	1.40	1 50	1.[illegible]	1.33	1.41	51.9
15	9	1.13	2.00	1.78	1.61	1.70	52.6
16	16	1.80	2.38	2.09	1.94	2.01	51.2
17	5	2.06	2.75	2.50	2.30	2.35	50.9
18	6	1.25	3.31	2.65	2.70	2.71	45.5
19	1	–	–	2.88	3.15	3.10	

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF REDBREAST SUNFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	31	–	–	0.0020	–	–	196.8
2	19	0.0020	.0095	0.0056	0.0061	0.0051	69.7
3	34	0.011	0.035	0.030	0.021	0.023	111.0
4	48	0.038	0.065	0.044	0.050	0.055	68.1
5	45	0.060	0.19	0.097	0.097	0.11	77.8
6	34	0.13	0.23	0.17	0.17	0.18	77.3
7	46	0.20	0.35	0.29	0.27	0.27	84.8
8	10	0.34	0.50	0.36	0.40	0.40	70.1

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF REDEAR SUNFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	55	0.00067	–	0.0011	–	–	109.1
2	1993	0.0010	0.013	0.0063	0.0053	0.0049	78.3
3	290	0.010	0.040	0.015	0.017	0.018	54.6
4	420	0.015	0.068	0.049	0.041	0.044	76.7
5	550	0.03	0.20	0.076	0.079	0.084	60.5
6	266	0.10	0.25	0.14	0.14	0.14	64.6
7	232	0.17	0.30	0.22	0.21	0.22	63.7
8	124	0.20	0.41	0.32		0.32	61.9
9	34	0.20	0.53	0.46	0 =	0.45	62.6
10	26	0.50	0.70	0.66	0.62	0.61	66.1

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF REDEYE BASS

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	54	0.0020	0.0050	0.0040	0.0031	0.0009	50.2
3	603	0.006	0.015	0.011	0.011	0.010	39.6
4	235	0.018	0.040	0.018	0.027	0.029	28.7
5	12	0.040	0.10	0.053	0.054	0.059	42.7
6	18	0.070	0.13	0.10	0.095	0.10	47.8
7	5	0.11	0.20	0.16	0.15	0.17	47.8
8	4	0.23	0.32	0.26	0.23	0.25	51.3
9	3	0.38	0.40	0.39	0.34	0.35	53.9
10	3	–	–	0.50	0.47	0.48	50.0
11	4	0.50	0.60	0.57	0.63	0.63	43.2
12	2	–	–	0.80	0.83	0.81	46.3
13	1	–	–	1.10	1.02	1.03	50.1

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF RIFFLE MINNOW

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior. Index
2	22	0.0050	–	0.0055	0.0053	0.0055	68.2
3	35	0.011	–	0.013	0.013	0.013	46.6
4	24	–		0.023	0.023	0.020	36.4

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF RIVER CARPSUCKER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-dition Index
13	2	–	–	1.25	1.19	1.20	56.9
14	3	–	–	1.47	1.44	1.51	53.4
15	17	1.57	1.69	1.67	1.72	1.75	49.5
16	17	1.69	2.50	2.09	2.03	2.00	50.9
17	6	2.20	2.40	2.37	2.38	2.32	48.2
18	8	2.50	2.84	2.80	2.75	2.77	48.0

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF RIVER REDHORSE

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
10	1	-	-	0.30	0.40	0.42	30.0
11	-	-	-	-	0.53	0.57	-
12	2	-	-	0.70	0.69	0.74	40.5
13	3	-	-	0.90	0.87	0.92	41.0
14	5	1.00	1.10	1.04	1.09	1.12	37.9
15	5	1.27	1.40	1.30	1.33	1.34	38.5
16	3	-	-	1.80	1.61	1.60	43.9
1		1.90	2.10	1 98	•	90	0.3
18	4	1.90	2.17	2.10	2.28	2.24	36.0
19	3	-	-	2.53	2.67	2.62	36.9
20	7	3.10	3.22	3.16	3.10	3.07	39-5
21	6	3.37	4.00	3.57	3.58	3-57	3Š-5
22	1	-	-	4.00	4.11	4.14	37.6
23	-	-	-	-	4.6		
24	4	5.00	5.07	5.05	5.31	5.49	36.5
25	2	5.90	7.30	6.60	5.99	6.29	42.2

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SAUGER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
5	30	0.020	0.10	0.054	0.041	0.059	43.2
6	76	0.043	0.10	0.063	0.069	0.065	29.2
7	74	0.063	0.19	0.11	0.11	0.11	32.4
8	23	0.095	0.25	0.16	0.16	0.17	30.9
9	21	0.20	0.38	0.28	0.22	0.24	3.3
10	17	0.20	0.50	0.33	0.30	0.32	33.5
11	37	0.30	0.50	0.40	0.41	0.41	30.2
12	31	0.40	0.67	0.53	0.53	0.52	30.8
13	33	0.56	0.88	0.69	0.67	0.67	31.4
14	36	0.59	1.13	0.80	0.84	0.86	29.2
15	47	0.78	1.25	1.01	1.04	1.06	30.0
16	17	1.20	2.00	1.37	1.26	1.29	33.4
17	18	1.34	1.70	1.40	1.51	1.53	28.5
18	5	1.56	2.00	1.75	1.80	1.78	30.0
19	2	-		2.00	2.11	2.02	29.1
20	1	-	-	2.30	2.47	2.26	28.7

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SHORTNOSE GAR

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
11	1	–	–	0.20	0.16	0.17	15.0
12	7	0.18	–	0.20	0.21	0	
13	2	0.18	0.30	0.24	0.28	0.27	10.9
14	–	–	–	–	0.36	0.35	–
15	1	–	–	0.38	0.45	0.44	11.3
16	–	–	–	–	0.56	0.56	–
17					0.70	0.69	
18					0.85	0.85	–
19	1	–	–	1.19	1.02	1.03	17.3
20	–	–	–	–	1.21	1.23	–
21	–	–	–	–	1.43	1.46	–
22	7	1.69	–	1.81	1.68	1.71	17.0
23	3	1.70	1.94	1.86	1.96	1.99	15.3
24	–	–	–	–	2.27	2.29	–
25	2	2.70	2.76	2.73	2.61	2.63	17.4
26	2	2.88	3.06	2.97	2.98	2.99	16.9

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SILVERBAND SHINER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	49	0.00066	0.0010	0.00067	0.00055	0.00080	67.3
2	808	0.00090	0.0050	0.0022	0.0028	0.0029	27.7
3	4411	0.0047	0.011	0.0077	0.0072	0.0082	28.6
4	445	0.0060	0.023	0.014	0.015	0.015	22.1

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SILVER CHUB

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	14		001	0			
	[illegible]	[illegible] 00092	[illegible]	[illegible] 002	[illegible]	[illegible]	[illegible]
3	1114	0.0023	0.014	0.0088	0.0085	0.0091	3^2-4
4	782	0.011	0.027	0.017	0.017	0.019	27.3
5	30	0.020	0.045	0.040	0.030	0.03k	32.0
6	8		–	0.061	0.046	0.054	28.0

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **SILVERJAW MINNOW**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-dition Index
1	82	0.00050	-	0.00083	0.00063	0.00060	82.92
2	371	0.0017	0.0033	0.0020	0.0027	0.0025	25.60
3	42	0.0040	0.011	0.0060	0.0062	0.0067	22.04
4	1	-	-	0.014	0.011	0.014	21.87

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **SILVERSTRIPE SHINER**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-dition Index
1	1363	0.00049	0.00080	0.00070	0.00058	0.00070	70.1
2	1961	0.0013	0.0041	0.0015	0.0026	0.0027	19.4
3	558	0.0042	0.010	0.0065	0.0062	0.0066	24.1
4	627	0.0065	0.019	0.013	0.012	0.012	20.8

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **SILVERY MINNOW**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-dition Index
1	3	0.00033	-	0.00033	0.00044	0.00020	33.33
2	95	0.0020	0.0047	0.0031	0.0024	0.0027	38.81
3	42	0.0060	-	0.0060	0.0064	0.0058	24.04
4	5	0.010	-	0.010	0.013	0.0099	15.62

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SKIPJACK HERRING

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
1	6	0.00040	0.0012	0.0011	-		106.7
2	212	0.0020	0.0050	0.0033	0.0031	0.0037	41.2
3	923	0.0028	0.074	0.014	0.0093	0.012	52.5
4	2288	0.0067	0.11	0.022	0.020	0.022	34.0
5	556	0.012	0.088	0.034	0.037	0.039	27.5
6	783	0.045	0.11	0.057	0.060	0.066	26.2
7	383	0.050	0.20	0.10	0.10	0.11	28.8
8	311	0.080	0.44	0.15	0.15	0.15	29.5
9	258	0.10	0.38	0.23	0.22	0.22	31.7
10	369	0.15	0.50	0.34	0.31	0.32	34.5
11	530	0.30	0.70	0.50	0.42	0.44	37.8
12	214	0.30	0.70	0.62	0,55	0.58	35.6
13	99	0.55	1.00	0.78	0.71	0.74	35.7
14	158	0.70	1.10	009	0.90	0.92	35.9
15	156	0.83	1.60	1.14	1.12	1.13	33.7
16	28	0.88	1.79	1.29	1.37	1.35	31.5
17	9	1.30	1.88	1.65	1.66	1.60	33.6
18	4	1.30	2.38	1.86	1.99	1.86	31.9

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **SMALLMOUTH BASS**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
	130	0.0038	0.0075	0.0042	0.0038	–	52.9
3	561	0.0093	0.020	0.013	0.012	0.011	49.7
4	546	0.0038	0.050	0.028	0.029	0.025	43.4
5	255	0.027	0.13	0.055	0.056	0.059	
6	114	0.060	0.18	0.10	0.097	0.11	46.8
7	b3	0.10	0.25	0.15	0.15	0.17	45.2
8	41	0.15	0.40	0.25	0.23	0.24	48.1
	32	0.25	0.44	0.32	0.32	0.32	43.9
10	19	0.43	0.63	0.49	0.44	0.40	8.8
	15	0.44	0.98	0.71	0.63	0.61	53.6
	4	0.70	0.84	0.77	0.82	0.77	44.3
13				0.88	1.05	1.00	40.5
14	2	–	–	1.27	1.[illegible]	1.30	46.5
1		–	–		1.61	1.65	
16	1	–	–	2.13	1.95	2.05	52.0
17	–	–	–	–	2.34	2.50	–
18	1	–	–	3.00	2.77	2.99	51.4
19	1	–	–	3.50	3.26	3.52	51.0

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SMALLMOUTH BUFFALO

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
3	14	0.0128	0.0133	0.013	0.014		48.41
4	39	0.020	0.050	0.035	0.034		54.28
5	127	0.050	0.125	0.076	0.066		60.85
6	222	0.082	0.135	0.10	0.12	0.14	47.96
7	120	0.17	0.25	0.19	0.18	0.19	54.34
8	35	0.26	0.40	0.25	0.28	0.28	48.90
9	75	0.05	0.56	0.39	0.40	0.39	52.96
10	162	0.08	0.69	0.53	0.55	0.53	53.35
11	261	0.11	1.05	0.73	0.73	0.71	54.65
12	251	0.69	1.50	0.98	0.95	0.93	56.76
13	478	0.84	1.63	1.24	1.21	1.19	56.32
14	601	1.30	2.08	1.57	1.52	1.50	57.21
15	405	1.38	2.50	1.81	1.87	1.86	53.51
16	339	1.80	3.25	2.21	2.28	2.28	54.07
17	225	2.13	3.50	2.67	2.74	2.76	54.32
18	157	2.21	5.50	3.17	3.26	3.31	54.34
19	112	2.54	4.70	3.88	3.84	3.92	56.51
20	70	3.80	5.68	4.80	4.49	4.60	59.99
21	49	4.54	6.30	5.46	5.21	5.36	58.94
22	37	4.60	7.15	6.23	6.00	6.20	58.54
23	10	6.42	8.50	7.10	6.87	7.12	58.37
24	4	6.25	8.06	7.34	7.82	8.13	53.07
25	6	8.00	–	10.05	8.83	9.23	64.32
26	6	9.65	12.60	10.87	9.97	10.43	61.82

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SMALLMOUTH BUFFALO

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
27	2	10.8	–	11.50	11.19	11.73	58.42
[illegible]		0			[illegible]		[illegible]
29	2	15.0	17.5	16.25	13.90	14.64	66.62
30	1	14.4	-	14.40	15.41	16.26	53.33

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SOUTHERN FLOUNDER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weight Standard	Polynomial	Condition Index
2	4	0.0070	–	0.0078	0.0049	0.0061	96.87
3	5	0.011	0.015	0.014	0.013	0.014	51.85
4	9	0.010	–	0.016	0.026	0.021	24.82
5	1	0.050	–	0.050	0.045	0.03k	40.00
6	–	–	–	–	0.069	0.058	–
7	–	–	–	–	0.10	0.096	–
8	2	0.15	–	0.15	0.14	0.15	29.29

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SOUTHERN ROCK BASS

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	8	0.0010	0.0025	0.0021	0.0014	–	212.50
2	17	0.0055	0.0075	0.0065	0.0084	0.015	81.61
3	21	0.014	0.033	0.022	0.024	0.028	82.01
4	48	0.033	0.050	0.043	0.050	0.047	66.40
5	11	0.83	0.10	0.095	0.090	0.082	76.36
6	5	0.10	0.16	0.13	0.14	0.14	59.25
7	2	0.28	–	0.28	0.21	0.24	80.17
8	3	0.30	0.35	0.35	0.30	0.37	68.35
9	1	0.60	–	0.60	0.41	0.57	82.30

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **SPECKLED (BROWN) BULLHEAD***

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical W ght	Calculated weights Standard	Polynomial	Con-dition Index
	47150	0.0028	-	0.0034	0.0008	-	338.5
	11771	0.0030	0.0074	0.007	0.006	-	83.5
3	2920	0.001	0.020	0.017	0.017	-	64.8
4	183	0.020	0.045	0.035	0.037	-	54.3
5	246	0.03	0.10	0.050	0.070	0.038	39.9
6	225	0.07	0.13	0.085	0.115	0.090	39.1
	77	0.08	0.30	0.13	0.17	0.16	38.2
	279	0.18	0.26	0.22	0.25	0.26	42.3
	1405	0.25	0.40	0.32	0.35	0.39	44.0
10	941	0.44	0.75	0.44	0.47	0.53	44.4
11	260	0.52	0.99	0.68	0.61	0.72	51.1
12	301	0.69	1.20	0.98	0.78	0.92	56.7
13	83	0.97	1.19	1.12	0.97	1.16	50.9
14	153	1.19	1.63	1,30	1.19	1,42	47.5
15	206	1.35	2.27	1.57	1.44	1.72	46.4
16	131	1.80	2.16	1.94	1.72	2.05	47.4
17	76	1.99	2.59	2.54	2.04	2.41	51.6
18	36	2.95		2.95	2.39	2.80	50.6

***Includes** pond data

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **SPECKLED CHUB**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-dition Index
1	2	0.0010	-	0.0010	0.0010	0.0010	100.00
2	23	0.0020	0.0030	0.0024	0.0024	0.0025	29.89
3	7	0.0036	-	0.0037	0.0040	0.0038	13.75

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **SPECKLED MADTOM**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior. Index
1	4	-	-	0.00075	0.00070	0.00070	75.0
2	47	-	-	0.0058	0.0043	0.0064	73.1
3	42	-	-	0.011	0.0088	0.0092	39.5
4	22	-	-	0.019	0.019	0.019	30.3
5	1	-	-	0.040	0.036	0.040	32.0

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **SPOT**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-dition Index
2	152	0.004	–	0.004	0.003	0.004	49.34
3	68	0.007	–	0.007	0.011	0.006	27.23
4	34	0.023	–	0.023	0.028	0.029	36.76
5	13	0.077	–	0.077	0.056	0.067	61.53
6	7	0.11	–	0.11	0.10	0.12	52.91
7	13	0.17	–	0.17	0.16	0.18	49.33
8	2	0.25	–	0.25	0.24	0.24	48.82
9	1	0.30		0.30	0.35	0.30	41.15

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **SPOTFIN SHINER**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
2	2665	0.001	–	0.0014	0.0020	0.0023	17.6
3	19	–	–	0.011	0.011	0.011	39.0

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SPOTTED BASS

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
1	33	0.00020	0.0020	0.0011	–	–	112.1
2	6420	0.0010	0.060	0.0031	0.0029	0.0033	39.0
3	4214	0.0017	0.026	0.0093	0.010	0.011	34.6
4	1665	0.0092	0.050	0.021	0.024	0.026	33.1
5	483	0.006	0.095	0.050	0.049	0.051	39.9
6	356	0.050	0.14	0.087	0.086	0.089	40.2
7	254	0.087	0.25	0.14	0.14	0.14	41.9
8	173	0.13	0.35	0.22	0.21	0.22	42.1
9	147	0.20	0.47	0.30	0.30	0.31	41.2
10	84	0.31	0.63	0.43	0.42	0.43	42.7
11	71	0.40	0.80	0.57	0.60	0.77	42.6
12	53	0.60	1.00	0.80	0.80	0.81	46.2
13	43	0.75	1.30	1.01	1.00	0.97	45.8
14	22	0.90	1.70	1.21	1.25	1.23	14.2
15	27	1.20	2.00	1.53	1.54	1.57	45.3
16	15	1.20	2.20	1.92	1.88	1.95	46.9
17	8	1.60	2.80	2.39	2.27	2.35	48.6
18	7	2.10	3.10	2.80	2.70	2.75	48.0

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **SPOTTED GAR**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
6	2	0.02	-	0.020	0.017	0.015	9.3
7	2	0.015	-	0.015	0.03	0.03	4.4
8	10	0.04	0.10	0.05	0.04	0.05	10.2
9	24	0.03	0.19	0.08	0.07	0.07	10.8
10	9	0.05	0.10	0.09	0.09	0.10	8.7
11	6	0.10	0.20	0.15	0.13	0.14	11.0
12	11	0.10	0.31	0.18	0.17	0.18	10.4
13	5	0.19	0.23	0.22	0.22	0.23	9.9
14	3	0.16	0.38	0.23	0.28	0.29	8.5
15	2	0.40	-	0.40	0.36	0.37	11.9
16	1	0.50	-	0.50	0.44	0.46	12.2
17	11	0.50	0.70	0.64	0.57	0.54	13.0
18	6	0.50	0.80	0.60	0.69	0.74	10.3
19	12	0.60	150	0.89	0.83	0.91	13.0
20	13	0.70	1.10	0.92	0.99	1.06	11.4
21	13	1.00	3.78	1.44	1.16	1.21	15.6
22	8	1.00	1.72	1.34	1.36	1.36	12.6
23	8	1.20	1.70	1.49	1.58	1.55	12.2
24	5	1.50	2.00	1.78	1.83	1.77	12.9
25	6	1.60	2.70	2.15	2.10	2.05	13.8
26	1	2.00	-	2.00	2.40	2.40	11.4
27	3	2.50	2.66	2.55	2.73	2.84	13.0
28	-	-	-	-	309	3.38	-
29	2	4.30	-	4.30	3.48	4.04	17.6

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SPOTTED SUCKER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
2	1	–	–	0.0010	0.0029	0.0011	12.5
3	422	0.0096	0.020	0.010	0.010	0.013	37.8
4	161	0.013	0.054	0.021	0.024	0.023	32.2
5	26	0.025	0.10	0.047	0.046	0.050	37.5
6	2	0.0	0.18	0.095	0.086	0.06	.0
7	97	0.090	0.20	0.14	0.14	0.14	40.1
				0.18	0.20		
9	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	0.30	38.5
10	203		0.59	0.39	0.39	0.41	38.9
11	182	0.32	0.81	0.50	0.52	0.54	37.6
12	6	0. 0	1.00	0. 1	0.68	0 69	0.8
14	88	0.75	1.30	1.04	1.08	1.07	37.9
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
16	10	1.20	1.6	1.61	61		
17	[illegible]	[illegible]	[illegible]	[illegible]			

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF SPOTTED SUNFISH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	4	0.0055	–	0.0078	0.0077	0.0090	96.87
3	38	0.018	0.019	0.020	0.023	0.019	72.90
4	39	0.035	–	0.040	0.049	0.051	63.06
5	103	0.097	–	0.098	0.090	0.097	78.40
6	42	0.15	--	0.15	0.15	0.15	68.01
7	1	0.21	–	0.21	0.22	0.20	59.76

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF STONEROLLER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	33	–	–	0.0076	0.0051	0.0061	94.7
3	29	0.0056	–	0.010	0.013	0.015	38.3
4	21	0.020	0.033	0.024	0.027	0.022	37.2
5	5	–	–	0.040	0.045	0.045	32.0
6	1	–	–	0.10	0.070	0.098	46.3

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF STRIPED MULLET

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
3	5	0.026		0.026	0.018	0.026	96.29
					0.037	0.064	-
5	-	-			0.07	0.09	
6	1	0.10	-	0.10	0.10	0.11	46.29
7	2	0.15	-	0.15	0.15	0.14	[illegible]
8	5	0.20	-	0.20	0.21	0.18	39.06
9	1	0.20	-	0.20	0.29	0.24	27.43
10	-	-	-	-	0.37	0.32	-
11	6	0.40	0.53	0.48	0.47	0.43	36.31
12	15	0.52	0.60	0.55	0.59	0.58	32.02
13	1	0.90	-	0.90	0.72	0.78	40.96
14	-	-	-	-	0.6	1.02	-
15	-	-	-	-	1.03	1.33	-
16	2	1.70	-	1.70	1.21	1.71	41.50

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **STRIPED SHINER**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
3	38	0.0066	0.016	0.0070	0.0094	0.0098	25.92
4	7	0.018	0.042	0.028	0.024	0.028	43.52
5	7	0.041	0.051	0.048	0.050	0.046	38.28
6	1	0.10	-	0.10	0.092	0.10	46.75

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF TAMPA TILAPIA *

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	882	0.0015		0.0017	0.001	-	170.1
2	956	0.0035	0.0058	0 005	0 007	-	61.5
3	619	0.017		0.017	0.02	0.012	62.8
4	420	0.04		0.04	0.05	0.05	62.5
5	2	0.07		0.07	0.09	0.10	60.0
6	-	-		-	0.14	0.17	
7	1	0.30		0.30	0.22	0.27	87.5
8	7	0.39		0.39	0.31	0.38	75.3
9	8	0.50		0.50	0.44	0.53	68.6
10	1	0.70		0.70	0.59	0.69	70.0

*Pond data

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF THREADFIN SHAD

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior. Index
1	83923	0.00031	0.0023	0.00095	-	-	94.6
2	103391	0.0011	0.011	0.0029	0.0031	0.0037	36.1
3	133115	0.0039	0.065	0.010	0.0096	0.011	37.3
4	41458	0.0017	0.050	0.022	0.021	0.022	34.2
5	25891	0.016	0.10	0.048	0.040	0.046	38.05
6	4267	-	0.12	0.070	0.060	0.065	32.5
7	535	0.05	0.14	0.092	0.098	0.10	26.9
8	119	0.10	0.19	0.12	0.15	0.16	22.7
9	38	0.20	0.27	0.21	0.22	0.23	29.5
10	25	0.25	0.40	0.31	0.30	0.32	31.5
11	24	0.40	0.45	0.42	0.41	0.42	31.4
12	9	0.49	0.54	0.52	0.54	0.51	30.0
13	2	0.58	0.63	0.61	0.70	0.61	27.5

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF **WALLEYE**

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior Index
	5	–	–	0.020	0.018	0.020	31.3
5	11	0.020	0.060	0.039	0.035	0.037	31.3
6	23	0.038	0.070	0.050	0.062	0.062	23.1
7	3	–	–	0.073	0.10	0.099	21.4
8	1	–	–	0.20	0.15	0.15	39.1
9	3	–	–	0.20	0.22	0.21	27.4
10	1	–	–	0.30	0.30	[illegible]	30.0
11	2	–	–	0.39	0.41	[illegible]	29.7
12	2	–	–	0.50	0.54	0.53	28.9
13	2	–	–	0.75	0.69	0.69	34.1
14	–				[illegible]	[illegible]	–
15		1.00	–	1.05	1.07	1.08	31.1
16	3	–	–	1,37	1.31	1.33	33.4
17	2	–	–	1.70	1.58	1.61	34.6
18	5	1.80	1.90	1.88	1.89	1.93	32.2
19	–	–	–	–	2.24	2.29	–
20	1	–	–	2.80	2.62	2.69	35.0
21	–	–	–		3.05	3.14	–
22	1	–	–	3.60	3.53	3.63	33.8

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF WARMOUTH

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	4704	0.00018	0.0033	0.0028	–	–	1281.5
2	2068	0.00067	0.045	0.0047	0.0058	0.0062	58.6
3	572	0.0063	0.070	0.020	0.020	0.028	75.7
4	685	0.017	–	0.052	0.049	0.056	81.1
5	300	0.031	0.25	0.079	0.097	0.10	62.9
6	149	0.05	0.38	0.17	0.17	0.18	77.1
7	64	0.13	0.45	0.29	0.28	0.29	83.1
8	21	0.30	1.30	0.44	0.42	0.45	85.0

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF WEED SHINER

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	67	–	–	0.00097	0.00094	0.00090	97.0
2	112	–	–	0.0043	0.0039	0.0042	53.5
3	153	–	–	0.0083	0.0090	0.0079	30.6
4	3	–	–	0.018	0.016	0.018	28.1

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF WHITE BASS

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
2	93	0.0020	0.0084	0.0073	–	–	91.4
3	139	0.0050	0.050	0.012	0.013	0.0084	43.7
4	432	0.015	0.057	0.034	0.031	0.031	52.8
5	743	–	0.13	0.049	0.061	0.067	39.6
6	450	0.050	0.19	0.13	0.10	0.12	59.0
7	285	0.10	0.24	0.17	0.16	0.18	48.9
8	165	0.19	0.36	0.29	0.25	0.27	56.5
9	95	0.25	0.50	0.39	0.35	0.37	53.6
10	89	0.40	0.71	0.53	0.48	0.50	53.3
11	214	0.50	0.81	0.66	0.63	0.64	49.3
12	200	0.67	1.10	0.87	0.82	0.82	50.k
13	95	0.80	1.13	1.02	1.04	1.02	46.4
14	116	0.90	1.60	1.23	1.30	1.24	44.6
15	82	1.13	1.56	1.47	1.60	1.50	43-4
16	10	1.50	2.13	1.75	1.93	1.79	42.7
17	1	–	–	2.31	2.32	2.11	47.0

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF WHITE CATFISH*

Length	Number of Fish	Range in Weight Minimum	Maximum	Averat7e Empirical Weight	Calculated Weights Standard	Pol7nomial	Con-dition Index
		0.00050	–	0.00050	0.00043		50.00
	77	0.0035	0.0048	0.0041	0.0035	0.0028	51.62
	25	0.0050	0.012	0.0097	0.012	0.017	35.40
4	9	0.028	–	0.028	0.028	0.034	43.40
5	16	0.030	0.053	0.052	0.055	0.060	41.50
6	4	0.10	0.11	0.11	0.094	0.098	49.07
		0.14	0.20	0.17	0.15	0.15	9. 6
–					0.22	0.2	–
					0 2	0.33	–
–					0.44	0.46	
11	1	• •	–	0 60	0	0.	. 8
–					0.76	0.82	
–					0.96	1.07	–
–					1.20	1.36	
–					1.48	1.70	
16	1	2.10	–	2.10	1.80	2.10	51.26

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF WHITE CRAPPIE

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Con-ditior. Index
1	173	0.00027	0.0020	0.00051	–	–	50.7
2	1796	0.0010	0.025	0.0037	0.0036	0.0045	46.5
3	2325	0.0036	0.024	0,010	0.012	0.011	38.1
4	778	0.012	0.076	0.027	0.030	0.029	41.9
5	339	0.025	0.11	0.057	0.059	0.062	45.5
6	173	0.075	0.25	0.10	0.10	0.11	48.2
7	210	–	0.28	0.15	0.16	0.18	44.5
8	162	0.14	0.70	0.25	0.25	0.27	49.7
9	157	0.19	0.62	0.35	0.35	0.38	48.1
10	67	0.30	0.63	0.52	0.49	0.52	51.5
11	51	0.22	0.87	0.69	0.65	0.68	51.9
12	41	0.44	1.30	0.86	0.85	0.87	49.6
13	19	0.75	1.34	1.04	1.09	1.09	47.5
14	8	1.40	1.75	1.57	1.36	1.35	57.3
15	4	0.90	1.75	1.43	1.68	1.63	42.3
16	2	–	–	2.19	2.05	1.96	53.5

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF YELLOW BASS

Length	Number of Fish	Range in Weight Minimum	Range in Weight Maximum	Average Empirical Weight	Calculated Weights Standard	Calculated Weights Polynomial	Condition Index
2	793	0.0046	0.0080	0.0057	0.0032	–	71.1
3	1210	0.0048	0.032	0.0086	0.012	0.0089	31.8
4	195	0.011	0.033	0.023	0.029	0.025	35.7
5	394	0.020	0.10	0.062	0.058	0.060	49.6
6	786	0.063	0.20	0.10	0.10	0.12	47.5
7	356	0.11	0.50	0.17	0.17	0.19	51.0
8	644	0.19	0.37	0.28	0.26	0.27	53.9
9	428	0.29	0.50	007	0.37	0.37	50.4
10	232	0.38	0.69	0.49	0.52	0.48	48.9
11	30	0.45	0.75	0.58	0.70	0.60	43.6
12	3	0.71	0.74	0.72	0.92	0.73	41.8

LENGTH-WEIGHT RELATIONSHIPS IN INCHES AND POUNDS OF YELLOW BULLHEAD

Length	Number of Fish	Range in Weight Minimum	Maximum	Average Empirical Weight	Calculated Weights Standard	Polynomial	Condition Index
1	5	0.001	0.004	0.0016	0.0009	-	160.0
2	49	0.003	0.020	0.0050	0.006	0.005	62.2
3	64	0.008	0.025	0.010	0.017	0.012	38.5
4	22	0.020	0.090	0.030	0.04	0.03	46.2
5	51	0.030	0.055	0.05	0.07	0.06	41.4
6	48	0.075	0.17	0.09	0.11	0.11	40.5
7	38	0.11	0.30	0.16	0.17	0.17	47.4
8	10	0.20	0.50	0.25	0.24	0.26	48.8
9	27	0.30	0.52	0.37	0.32	0.37	51.1
10	17	0.40	0.70	0.42	0.43	0.50	42.4
11	12	0.60	-	0.60	0.55	0.67	45.1
12	19	0.87	1.00	0.89	0.69	0.87	51.5
13	6	0.94	-	0.98	0.86	1.10	44.8
14	3	1.37	-	1.37	1.05	1.37	49.8

ESTIMATED PARAMETERS OF LENGTH-WEIGHT EQUATIONS

Species	Length* interval	r	y.x	n	Number of fish	b	$ax10^5$	log(a)	b_0	b_1	2	b_3
Alabama Hog Sucker	2-8	0.980	0.127	17	81	2.85	45.69	-3.34	0.0626	-0.0449	0.00929	-0.000203
American Eel	5-24	0.955	0.217	74	144	3.47	1.89	-4.72	-0.262	0.0796	-0.0073	0.00027
Atlantic Needlefish	3-17	0.982	0.114	42	65	3.13	3.21	-4.49	-0.0436	0.0214	-0.0028	0.00015
Bay Anchovy	1-2	0.742	0.187	5	34,803	1.09	80.5	-3.09				
Bigeye Chub	1-5	0.925	0.191	28	552	2.20	59.1	-3.23	-0.00387	0.00696	-0.00306	0.000623
Bigmouth Buffalo	S:2-16 P:2-14	0.984	0.111	104	52,163	3.00	58.7	-3.23	-0.4390	0.1857	-0.0214	0.00132
"	S:17-27 P:15-27	0.979	0.051	89	549	3.30	22.9	-3.64	-2.6391	0.8686	-0.0702	0.0022
Black Bullhead	1-5	0.970	0.151	14	2,049	3.14	36.4	-3.43	0.0114	-0.0183	0.00816	-0.000598
Black Crappie	1-14	0.972	0.185	174	17,328	2.97	46.78	-3.33	-0.035	0.030	-0.007	0.00093
Black Drum	4-7	0.980	0.088	4	327	3.37	10.4	-3.98	0.531	-0.330	0.0664	-0.00412
Blackspotted Topainnow	1-3	0.733	0.250	23	217	1.619	101.70	-2.993	0.00572	-0.00624	0.00215	0.000097
Blacktail Redhorse	4-20	0.978	0.101	196	906	2.97	41.9	-3.38	0.331	-0.105	0.00994	0.000117
Blacktail Shiner	2-6	0.888	0.196	143	2,829	2.72	39.2	-3.41	-0.0258	0.025	-0.00708	0.000877
Blue Catfish	2-12	0.973	0.139	409	24,035	2.94	35.9	-3.44	-0.0251	0.0166	-0.00278	0.000454
"	13-24	0.968	0.065	359	2,123	3.36	12.3	-3.91	-0.696	0.213	-0.020	0.00092
" "	25-47	0.986	0.047	96	197	3.55	6.9	-4.16	150.66	-14.33	0.435	-0.00371

*Inch groups fitted by standard (S) and polynomial (P) equations.

ESTIMATED PARAMETERS

Species	Length interval	r	$s_{y.x}$	n	Number of fish	b	axl0	log(a)	0	b_1	b_2	b_3
Bluegill	2-6	0.954	0.157	619	82,212	3.07	58.9	-3.23	-0.0214	0.0216	-0.0066	0.00131
	7-8	0.770	0.079	198	2,150	2.95	75.4	-3.12	23.37	-8.66	1.06	-0.042
Blue Sucker	18-25	0.951	0.061	6	6	3.19	18.3	-3.74	54.7973	-8.4025	0.4235	-0.0067
Bluntnose Minnow	2-4	0.887	0.161	12	253	2.43	60.17	-3.22	0.00718	-0.00339	0.000021	0.000407
Brook Silversides	1-4	0.870	0.204	21	312	1.96	47.7	-3.32	0.00014	0.00042	-0.00011	0.000155
Bullhead Minnow	1-2	0.868	0.260	75	4,356	2.26	76.4	-3.12	0.0162	-0.0271	0.0138	-0.00172
Chain Pickerel	1-16	0.985	0.093	26	388	3.14	13.4	-3.87	0.1003	-0.0428	0.0052	0.000006
" "	17-25	0.910	0.082	23	142	2.61	77.6	-3.11	18.0349	-2.8501	0.1500	-0.0024
Channel Catfish	3-10	0.964	0.132	752	21,317	2.94	31.2	-3.51	-0.0103	0.00659	-0.00104	0.000327
	11-26	0.965	0.075	703	3,682	3.30	13.8	-3.86	-4.85	0.974	-0.0648	0.00174
Cherryfin Shiner	1-3	0.996	0.0775	4	5,548	3.42	13.6	-3.87				
Common Carp Israeli	S:4-16 P:4-15	0.983	0.075	36	3,272	3.00	56.4	-3.25	0.4314	-0.1654	0.0188	-0.000085
" " Israeli	S:17-29 P 16-29	0.925	0.081	20	490	2.62	239.0	-2.62	-30.0427	2.8737	-0.0584	0.00036
Congo Tilapia	1-10	0.988	0.129	57	406,495	2.92	95.3	-3.02	0.0076	-0.0029	-0.0012	0.00108
Common Carp Scaled	1-14	0.967	0.184	117	31,344	2.63	123.6	-2.91	0.088	-0.0486	-0.0089	0.00007
Common Carp Scaled	14-30	0.958	0.060	146	352	3.07	38.3	-3.41	-6.818	1.0745	-0.0564	0.00146

ESTIMATED PARAMETERS

Species	Length interval	r	y.x		Number of fish	b	$a \times 10^{-}$	log(a)		b_1	b_2	b_3
Creek Chub	1-7	0.960	0.179	25	185	2.58	69.6	-3.16	-0.00899	0.0123	-0.00473	0.000966
Emerald Shiner	2-4	0.835	0.215	42	13,623	2.73	29.7	-3.53	0.0101	-0.0085	0.00203	0.000121
Fathead Minnow	1-3	0.988	0.102	3	179,409	1.93	73.33	-3.13	0.000002	0.0012	-0.00078	0.00038
Flat Bullhead	2-9	0.988	0.112	23	71	3.197	31.4	-3.50	-0.120	0.0864	-0.0176	0.00151
Flathead Catfish	2-12	0.978	0.142	501	3,564	2.89	44.9	-3.35	0.0269	-0.0166	0.00293	0.000219
"	13-24	0.975	0.0539	193	279	3.18	23.0	-3.64	4.73	-0.726	0.0336	-0.0000517
	25.36	0.975	0.052	23	26	3.44	10.6	-3.97	-174.1	17.12	-0.560	0.00656
Flier	2-6	0.999	0.020	5	23	2.51	174.3	-2.76	0.0721	-0.0695	0.0221	-0.00139
Freckled Madtom	1-4	0.927	0.202	11	130	1.95	111.1	-2.95	0.0137	-0.0217	0.0106	-0.00118
Freshwater Drum	1-18	0.983	0.121	1144	73,545	3.00	40.0	-3.40	-0.0707	0.0412	-0.00657	0.000704
" "	19-29	0.941	0.0776	55	99	3.72	5.6	-4.25	2.27	-0.629	0.0342	0.0000755
Gizzard Shad	2-6	0.931	0.164	212	192,307	2.73	58.6	-3.23	-0.0101	0.0138	-0.0047	0.000857
	7-17	0.957	0.078	647	74,892	2.89	45.2	-3.34	-1.30	0.419	-0.0431	0.00177
Goldfish	1-16	0.975	0.180	115	251,236	2.90	75.1	-3.12	-0.0403	0.0224	-0.0034	0.0008
Golden Redhorse	2-7	0.914	0.196	79	420	3.12	39.1	-3.41	0.178	-0.137	0.0323	-0.00185
	8-21	0.953	0.091	319	1,346	2.77	71.1	-3.15	-0.388	0.0639	-0.00094	0.00028

ESTIMATED PARAMETERS

Species	Length interval	r	y.x	n	Number of fish	b	ax10	log(a)	b_0	b_1		
Golden Shiner	1-9	0.953	0.178	47	552,544	2.55	65.7	-3.18	-0.0057	0.0080	-0.0026	0.00054
Green Sunfish	2-4	0.839	0.242	235	8,585	3.01	63.8	-3.20	-0.0268	0.0318	-0.0116	0.00204
	5-8	0.788	0.137	118	602	2.97	68.9	-3.16	-2.77	1.33	-0.209	0.0113
Highfin Carpsucker	7-18	0.982	0.064	34	101	3.02	49.8	-3.30	01.56	0.482	-0.0467	0.00194
Java Tilapia	1-14	0.969	0.208	172	1550,912	2.70	112.0	-2.95	-0.0164	0.0174	-0.0040	0.00091
Largemouth Bass	2-10	0.970	0.139	519	5,984	2.96	49.7	-3.30	0.0173	-0.0113	0.0023	0.000337
Largemouth Bass	11-21	0.949	0.0815	251	490	3.16	32.8	-3.48	11.82	-2.38	0.154	-0.00270
Largescale Menhaden	3-5	0.990	0.0660	5	287	2.59	90.7	-3.04	-0.323	0.213	-0.0424	0.00300
Logperch	2-8	0.904	0.208	109	5,474	2.81	36.4	-3.44	0.0271	-0.0247	0.00716	-0.000355
Longear Sunfish	2-7	0.930	0.171	352	11,649	2.88	83.4	-3.08	-0.0296	0.0246	-0.0054	0.00104
Longnose Gar	2-47	0.973	0.189	82	120	3.12	5.72	-4.24	-0.103	0.0419	-0.004	0.00019
Mooneye	3-12	0.986	0.104	77	550	3.27	20.0	-3.70	0.136	-0.0704	0.00980	-0.0000256
Mosquitofish	1-2	0.303	0.236	5	121	0.48	127.8	-2.89				
Nile Tilapia	1-14	0.990	0.122	144	988,577	2.86	100.1	-3.00	0.0196	-0.0102	0.00032	0.00084
Northern Hog Sucker	3-11	0.986	0.088	14	19	2.98	37.5	-3.43	-0.460	0.256	-0.0433	0.0026
Northern Rock Bass	1-9	0.976	0.151	15	31	2.79	113.4	-2.94	0.0371	-0.0447	0.0106	0.000135
Orangespotted Sunfish	2-6	0.822	0.229	93	5,277	2.53	96.9	-3.01	0.0342	-0.0326	0.0103	-0.000440
Paddlefish	S:6-23 P:6-26	0.983	0.097	120	163	2.88	11.7	-3.93	-0.1382	0.0441	-0.0040	0.00019

ESTIMATED PARAMETERS

Paddlefish	S:24-52 P:27-52	0.972	0.078	93	96	3.81	0.6	-5.20	-14.4930	1.6154	-0.0602	0.00084
Pinfish	2-7	0.994	0.061	6	124	2.48	115.05	-2.94	0.132	-0.114	0.031	-0.002
Pirate Perch	1-3	0.833	0.233	15	44	1.99	133.6	-2.37	0.00704	-0.0102	0.00471	-0.0000545
Pugnose Minnow	1-3	0.915	0.126	15	214	1.44	84.2	-3.34	0.00093	0.00027	0.00019	0.00014
Quillback	1-19	0.937	0.094	95	958	2.83	76.5	-3.12	0.202	-0.103	0.0137	-0.0000116
Redbreast Sunfish	2-8	0.963	0.167	49	267	3.01	76.4	-3.12	-0.00803	0.00042	0.00042	0.000706
Redear Sunfish	2-10	0.967	0.136	323	3,937	2.96	67.9	-3.17	0.00258	-0.00408	0.00171	0.000474
Redeye Bass	2-13	0.987	0.125	56	944	3.12	35.4	-3.45	0.00100	-0.00378	0.00105	0.000410
Riffle Minnow	2-4	0.948	0.111	8	86	2.15	118.9	-2.92	-0.106	0.111	-0.0357	0.00393
River Carpsucker	13-18	0.940	0.044	13	54	2.58	159.9	-2.80	-38.14	7.53	-0.488	0.0109
River Redhorse	10-25	0.989	0.048	30	52	2.94	46.2	-3.33	-1.85	0.394	-0.0261	0.000936
Sauger	5-10	0.896	0.137	75	248	2.88	39.8	-3.40	0.927	-0.379	0.0504	-0.00187
	11-20	0.956	0.061	110	220	3.02	29.3	-3.53	3.66	-0.811	0.0589	-0.00109
Shortnose Gar	11-26	0.987	0.085	16	26	3.43	4.2	-4.37	0.505	-0.0747	0.0022	0.000167
Silverband Shiner	1-4	0.858	0.242	41	5,713	2.34	55.5	-3.26	0.0035	-0.00555	0.00309	-0.000243
Silver Chub	1-6	0.909	0.263	73	6,919	2.44	58.2	-3.23	0.00146	-0.00194	0.00121	0.0000972
Silverjaw Minnow	1-4	0.945	0.130	19	496	2.09	63.1	-3.20	0.00084	-0.000889	0.000683	0.000091
Silverstripe Shiner	1-4	0.944	0.143	35	4,509	2.15	58.7	-3.23	0.00092	-0.00156	0.00133	-0.0000594
Silvery Minnow	1-4	0.952	0.146	8	145	2.42	44.3	-3.35	-0.00176	0.00199	0.000052	0.0000438

ESTIMATED PARAMETERS

Species	Length interval	r	y.x		NuAller of fish		axl0	log(a)	b_o	b_1	2	3
Skipjack Herring	2-6	0.889	0.193	141	4,762	2.69	48.8	-3.31	-0.0271	0.0247	-0.0062	-0.000780
11	7-18	0.961	0.109	288	2,519	3.17	20.9	-3.68	0.554	-0.166	0.0155	-0.000124
Smallmouth Bass	2-10	0.960	0.142	160	1,742	2.95	48.8	-3.31	0.11	-0.0759	0.0157	-0.000524
It	11-19	0.961	0.070	26	44	3.00	47.8	-3.32	5.02	-1.05	0.0693	-0.000968
Smallmouth Buffalo	3-30	0.992	0.058	612	3,830	3.04	49.83	-3.30	0.067	-0.009	-0.002	0.0007
Southern Flounder	2-8	0.946	0.208	10	22	2.42	90.68	-3.04	-0.0283	0.0285	-0.00732	0.000827
Southern Rock Bass	1-9	0.987	0.111	38	116	2.58	140.0	-2.85	-0.0361	0.0427	-0.0120	0.00163
Speckled Bullhead*	1-8	0.957	0.234	103	66,443	2.76	81.9	-3.09	0.0979	-0.0600	0.0088	0.00016
Speckled Chub	1-3	0.961	0.061	7	32	1.217	104.2	-2.98	-0.00203	0.00423	-0.00141	0.000219
" "	3-5	0.853	0.126	19	65	2.77	41.8	-3.38	0.0108	-0.00122	-0.00152	0.000587
Speckled Madtom	1-2	0.647	0.361	13	51	2.59	70.7	-3.15	-0.00013	-0.0015	0.00235	0.0000175
Spot	2-9	0.989	0.114	8	290	3.14	35.65	-3.45	0.078	-0.067	0.016	-0.0007
Spottail Goby	1-5	0.940	0.144	5	81	1.245	402.3	-2.39	-0.00284	0.0123	-0.00533	0.000942
Spotted Bass	2-10	0.973	0.152	537	13,867	3.09	33.6	-3.47	-0.00217	0.00239	-0.000813	0.000490
Spotted Bass	11-18	0.946	0.0618	106	177	3.06	38.5	-3.41	16.16	-3.30	0.221	-0.00441
Spotted Gar	6-16	0.873	0.165	38	74	3.31	4.6	-4.34	-0.1423	0.0448	-0.0047	0.00027
"	17-29	0.894	0.096	79	89	3.40	3.8	-4.42	-22.3789	3.1924	-0.1507	0.0025
Spotted Sucker	2-5	0.854	0.185	35	610	3.00	36.9	-3.43	-0.0998	0.0944	-0.0281	0.00304
" "	6-17	0.965	0.0839	343	1,611	2.99	40.6	-3.39	-0.460	0.130	-0.0113	0.000706
Spotfin Shiner	2-3	0.917	0.258	3	2,688	4.12	11.3	-3.94	-0.0387	0.0186	0.0042	-0.00165

*Southern variety of brown bullhead

ESTIMATED PARAMETERS

Species	Length interval	r	y.x		Number of fish		a x10	log(a)	b_0	b_1	b_2	
Spotted Sunfish	2-7	0.985	0.088	15	227	2.58	121.01	-2.92	3.0821	-0.0749	0.0216	-0.00120
Stoneroller	2-6	0.883	0.222	7	89	2.39	96.4	-3.02	-0.0733	0.0760	-0.0233	0.00256
Striped Mullet	3-16	0.982	0.083	20	38	2.50	118.57	-2.93	-0.215	0.127	-0.019	0.0012
Striped Shiner	3-6	0.928	0.140	12	53	3.29	25.2	-3.50	-0.422	0.313	-0.0750	0.00623
Tampa Tilapia	1-10	0.989	0.147	13	2,896	2.75	104.3	-2.98	0.0292	-0.0328	0.0087	0.00011
Threadfin Shad	2-5	0.889	0.207	255	303,855	2.80	44.5	-3.35	-0.0453	0.0476	-0.0150	0.00183
	6-13	0.908	0.158	99	5,019	3.16	20.9	-3.68	0.624	-0.238	0.0293	-0.000351
Walleye	4-22	0.993	0.087	32	69	3.11	23.5	-3.63	-0.0120	0.00897	-0.00188	0.000409
Warmouth	2-8	0.940	0.203	320	3,860	3.08	68.0	-3.17	-0.0605	0.0521	-0.0130	0.00181
Weed Shiner	1-4	0.990	0.066	17	335	2.05	94.6	-3.02	-0.0076	0.0131	-0.0055	0.000961
White Bass	3-17	0.978	0.136	305	3,209	2.98	50.1	-3.30	-0.00237	-0.0075	0.00294	0.000289
White Catfish	1-16	0.990	0.133	18	137	3.01	43.3	-3.36	-0.0309	0.0231	-0.00456	0.000714
White Crappie	2-16	0.977	0.169	353	6,305	3.05	43.2	-3.36	0.0222	-0.0167	0.0033	0.000334
Yellow Bass	2-12	0.971	0.137	233	5,071	3.15	36.4	-3.44	0.103	-0.0703	0.0139	-0.000304
Yellow Bullhead	1-14	0.973	0.191	63	371	2.66	93.4	-3.03	0.0115	-0.0071	0.00114	0.00045