

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Whitewood Creek, Lawrence County
09-0056-00
2001

Table 1. Population and Biomass Estimates for Whitewood Creek

Site Number: 43
Site Midpoint (Latitude, Longitude): 44.62164896, -103.47136669
Survey Completed by: Chadwick Ecological Services
Stream Classification: BR0

Date Sampled: 09/27/2001
Site Length (m): 97
Mean Width (m): 4.9
Number of Pass: 3
Conductivity (umhos/cm):
pH:
Water Temperature (C): 14.0
Voltage:

Species	Size Class	Total Number Captured	Est. # in site	Upper 95% CI	Lower 95% CI	# per Hectacre	Kg per Hectacre	# per Km	# per Acre	lb. per Acre	# per Mile	Mean Length (mm)	Mean Weight (grams)
Brown Trout	<200mm	1	1	1	1	20	0	10	8	0.14	17	99.0	7.6
Brown Trout	All	1	1	1	1	20	0	10	8	0.14	17	99.0	7.6
Creek Chub	All	165	170	176	165	3446	9	1753	1396	8.21	2820	62.4	2.7
Longnose Dace	All	400	411	420	402	8331	23	4237	3374	20.73	6818	62.1	2.8
Mountain Sucker	All	1	1	1	1	20	0	10	8	0.27	17	117.0	15.0
White Sucker	All	43	43	44	43	872	3	443	353	2.84	713	68.5	3.6

Site Number: 44
Site Midpoint (Latitude, Longitude): 44.62092026, -103.47188053
Survey Completed by: Chadwick Ecological Services
Stream Classification: None

Date Sampled: 09/26/2001
Site Length (m): 109
Mean Width (m): 6.3
Number of Pass: 3
Conductivity (umhos/cm):
pH:
Water Temperature (C): 15.5
Voltage:

Species	Size Class	Total Number Captured	Est. # in site	Upper 95% CI	Lower 95% CI	# per Hectacre	Kg per Hectacre	# per Km	# per Acre	lb. per Acre	# per Mile	Mean Length (mm)	Mean Weight (grams)
Creek Chub	All	3	3	3	3	47	0	28	19	0.19	44	76.3	4.5
Longnose Dace	All	54	54	56	54	852	2	495	345	2.07	797	62.6	2.7

Plains Killifish	All	1	1	1	1	16	0	9	6	0.05	15	70.0	3.6
Sand Shiner	All	93	93	94	93	1467	1	853	594	1.06	1373	41.6	0.8
Stone Cat	All	13	13	15	13	205	4	119	83	3.14	192	106.2	17.2
White Sucker	All	5	5	5	5	79	1	46	32	0.47	74	88.6	6.7

Site Number: 131
Site Midpoint (Latitude, Longitude): 44.58943150, -103.52027768
Survey Completed by: Chadwick Ecological Services
Stream Classification: None

Date Sampled: 09/26/2001
Site Length (m): 93
Mean Width (m): 7.6
Number of Pass: 3
Conductivity (umhos/cm):
pH:
Water Temperature (C):
Voltage:

Species	Size Class	Total Number Captured	Est. # in site	Upper 95% CI	Lower 95% CI	# per Hectacre	Kg per Hectacre	# per Km	# per Acre	lb. per Acre	# per Mile	Mean Length (mm)	Mean Weight (grams)
Bluegill	All	8	8	9	8	105	0	86	42	0.18	138	46.6	1.9
Creek Chub	All	47	50	56	47	656	2	538	266	1.59	865	62.4	2.7
Longnose Dace	All	124	138	152	124	1810	4	1484	733	3.62	2388	58.2	2.2
Stone Cat	All	18	19	23	18	249	3	204	101	2.35	329	85.4	10.6
White Sucker	All	40	40	42	40	525	4	430	212	3.19	692	81.9	6.8

Site Number: 295
Site Midpoint (Latitude, Longitude): 44.51740810, -103.60458517
Survey Completed by: Chadwick Ecological Services
Stream Classification: BR3

Date Sampled: 09/25/2001
Site Length (m): 103
Mean Width (m): 6.1
Number of Pass: 3
Conductivity (umhos/cm):
pH:
Water Temperature (C): 15.0
Voltage:

Species	Size Class	Total Number Captured	Est. # in site	Upper 95% CI	Lower 95% CI	# per Hectacre	Kg per Hectacre	# per Km	# per Acre	lb. per Acre	# per Mile	Mean Length (mm)	Mean Weight (grams)
Brown Trout	<200mm	23	23	25	23	377	4	223	153	3.66	359	106.4	10.9
Brown Trout	>=200mm	2	2	2	2	33	6	19	13	5.18	31	254.5	177.0
Brown Trout	All	25	25	27	25	410	10	243	166	8.84	391	118.2	24.2

Longnose Dace	All	582	1131	1461	801	18541	81	10981	7509	72.00	17668	72.9	4.3
Mountain Sucker	All	16	16	18	16	262	5	155	106	4.40	250	113.6	18.8
Stone Cat	All	1	1	1	1	16	0	10	7	0.37	16	131.0	25.0
White Sucker	All	185	186	189	185	3049	19	1806	1235	16.54	2906	81.8	6.1

Stream sites are classified based on the estimates of adult trout over eight inches that exist within the site. Estimates are derived from 3-pass backpack electrofishing surveys at 100-meter sites within streams. While all fish in the site are collected and measured, only trout species are used for classifications. Sites are numbered in accordance for the distance (m) from the stream confluence of a higher order stream/river.

Based on number of trout in excess of eight inches	
Class BR1	Number of wild Brown Trout exceeds 150 per acre
Class BR2	Number of wild Brook Trout ranges from 25 to 150 per acre
Class BR3	Number of wild Brown Trout is less than 25 per acre
Class BK1	Number of wild Brook Trout exceeds 150 per acre
Class BK2	Number of wild Brook Trout ranges from 25 to 150 per acre
Class BK3	Number of wild Brook Trout is less than 25 per acre
Class RB1	Number of wild Rainbow Trout exceeds 25 per acre
Class RB2	Number of wild Rainbow Trout is less than 25 per acre

Table 2. Species composition and population estimates on Whitewood Creek, 1991-2001

Site 43

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Oct 11, 1996	1	1-1	
	Sep 28, 2000	22	21-26	
	Sep 27, 2001	1	1-1	
Brown Trout >=200mm	Oct 11, 1996	2	2-2	BR3
	Sep 28, 2000	11	11-11	BR2
Creek Chub	Sep 27, 2001	170	165-176	
Longnose Dace	Oct 11, 1996	3	3-3	

Longnose Dace	Sep 28, 2000	1113	1114-1157
	Sep 27, 2001	411	402-420
Mountain Sucker	Sep 27, 2001	1	1-1
White Sucker	Oct 11, 1996	3	3-3
	Sep 28, 2000	9	9-9
	Sep 27, 2001	43	43-44

Site 44

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Creek Chub	Oct 09, 1996	1	1-5	
	Sep 26, 2001	3	3-3	
Longnose Dace	Oct 09, 1996	3	3-3	
	Sep 27, 2000	109	102-118	
	Sep 26, 2001	54	54-56	
Plains Killifish	Sep 26, 2001	1	1-1	
Sand Shiner	Sep 27, 2000	2	2-2	
	Sep 26, 2001	93	93-94	

Stone Cat	Oct 09, 1996	65	49-91
	Sep 27, 2000	27	21-42
	Sep 26, 2001	13	13-15
White Sucker	Oct 09, 1996	1	1-2
	Sep 27, 2000	27	25-32
	Sep 26, 2001	5	5-5

Site 131

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Bluegill	Sep 26, 2001	8	8-9	
Brown Trout <200mm	Oct 10, 1996	1	1-1	
	Sep 27, 2000	1	1-1	
Creek Chub	Oct 10, 1996	1	1-1	
	Sep 27, 2000	6	6-8	
	Sep 26, 2001	50	47-56	
Longnose Dace	Oct 10, 1996	3	3-3	
	Sep 27, 2000	1088	1024-1152	

Longnose Dace	Sep 26, 2001	138	124-152
Mountain Sucker	Sep 27, 2000	1	1-1
Stone Cat	Sep 27, 2000	57	39-91
	Sep 26, 2001	19	18-23
White Sucker	Oct 10, 1996	22	21-26
	Sep 27, 2000	32	32-34
	Sep 26, 2001	40	40-42

Site 295

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brown Trout <200mm	Oct 11, 1996	5	5-6	
	Nov 04, 1999	27	24-34	
	Sep 28, 2000	34	34-35	
	Sep 25, 2001	23	23-25	
Brown Trout >=200mm	Nov 04, 1999	10	10-12	BR3
	Sep 28, 2000	2	2-3	BR3
	Sep 25, 2001	2	2-2	BR3

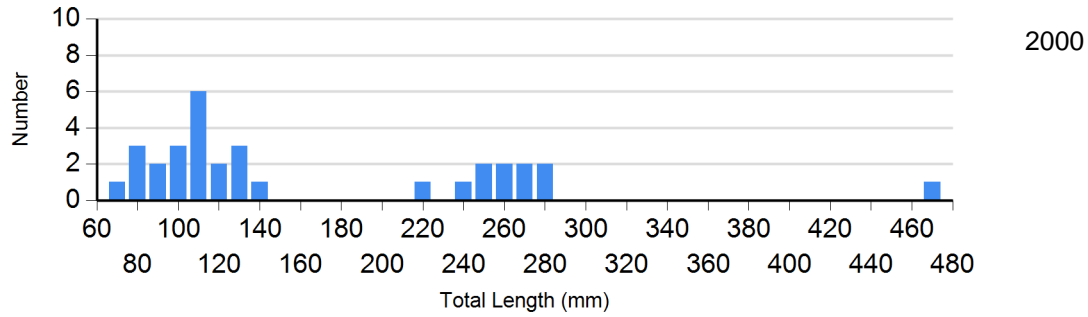
Longnose Dace	Oct 11, 1996	2	3-4
	Nov 04, 1999	357	358-390
	Sep 28, 2000	1776	1777-1827
	Sep 25, 2001	1131	801-1461
Mountain Sucker	Oct 11, 1996	8	8-9
	Sep 28, 2000	16	12-30
	Sep 25, 2001	16	16-18
Stone Cat	Sep 25, 2001	1	1-1
White Sucker	Oct 11, 1996	1	1-1
	Nov 04, 1999	1	1-1
	Sep 28, 2000	2	2-4
	Sep 25, 2001	186	185-189

Length Frequency Distribution

Length frequency histogram of species sampled by year.

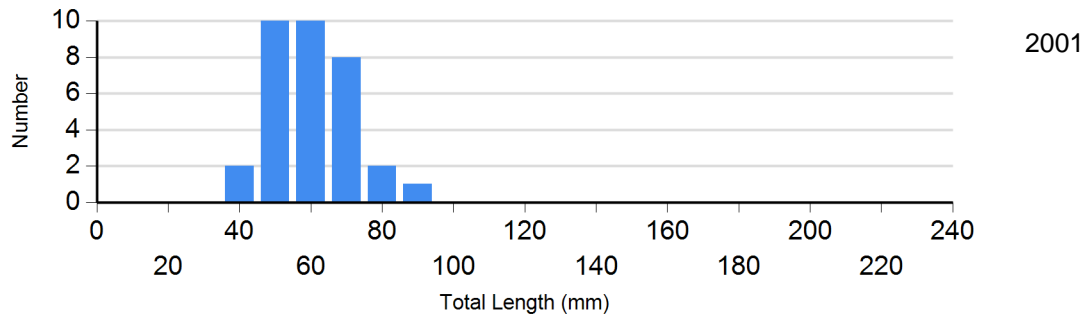
Site: 43

Species: Brown Trout



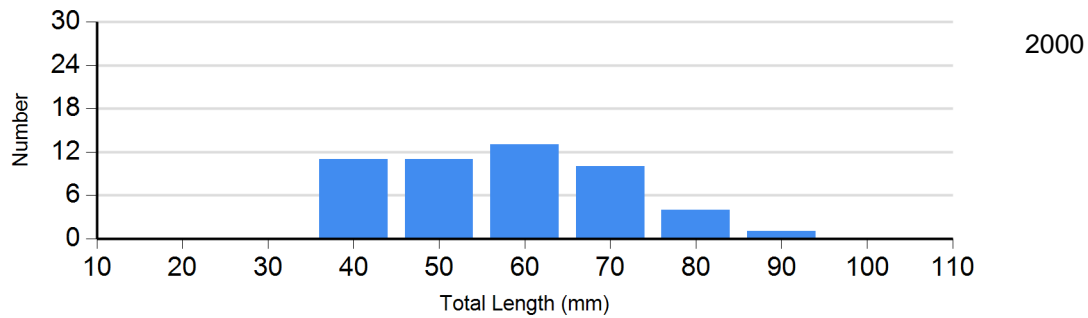
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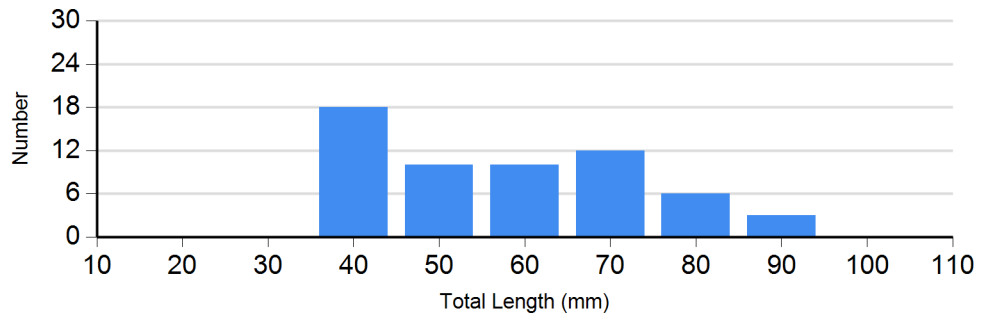
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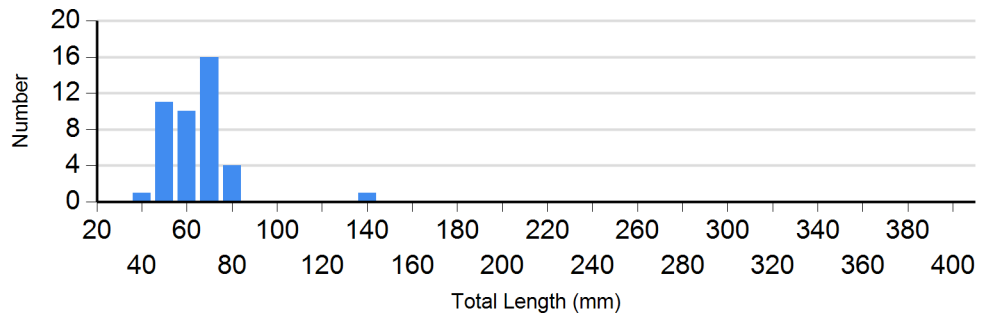
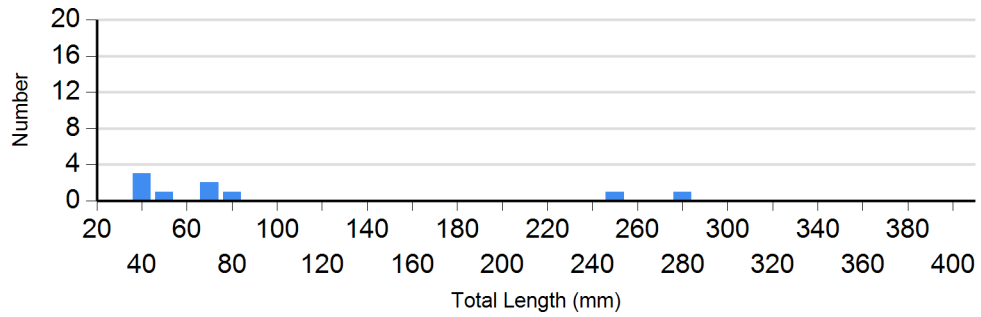
Site: 43

Species: Longnose Dace

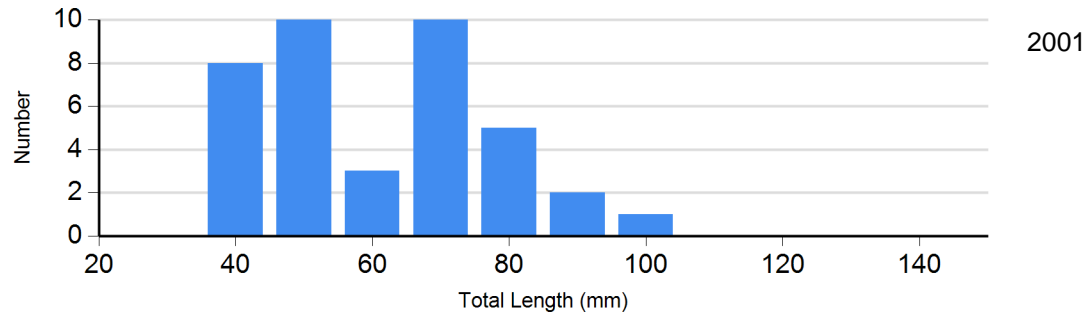
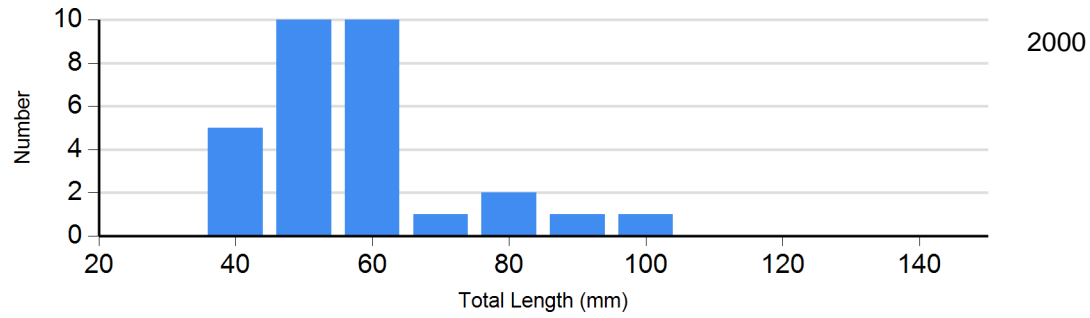




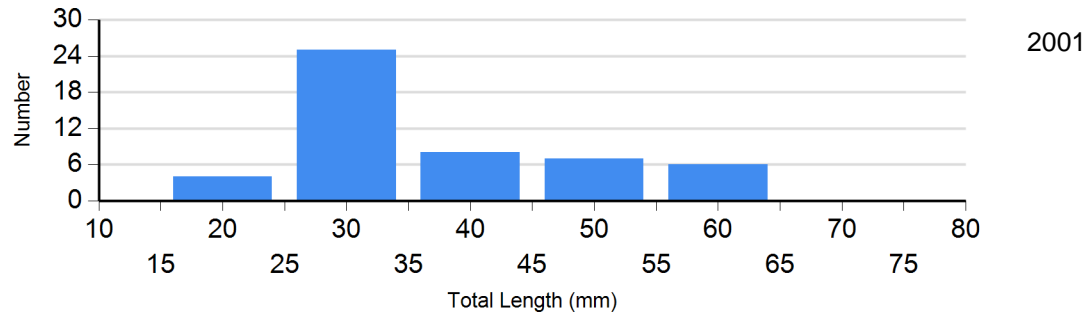
Site: 43
Species: White Sucker



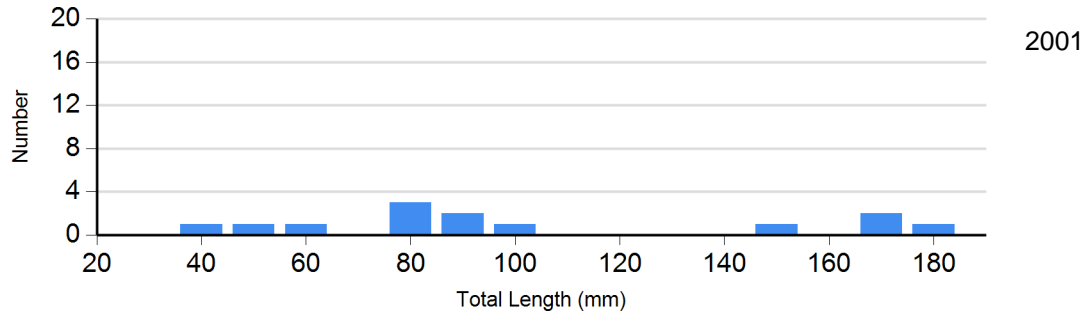
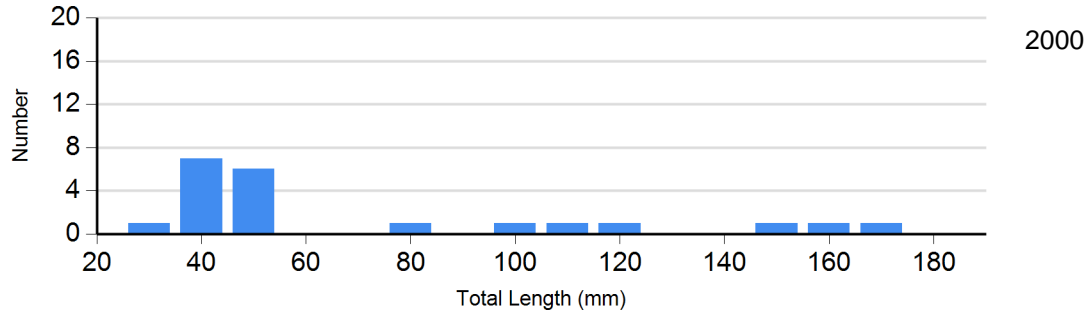
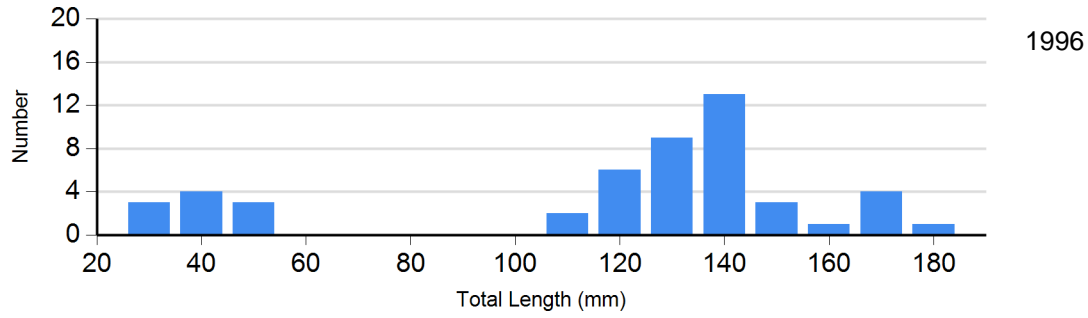
Site: 44
Species: Longnose Dace



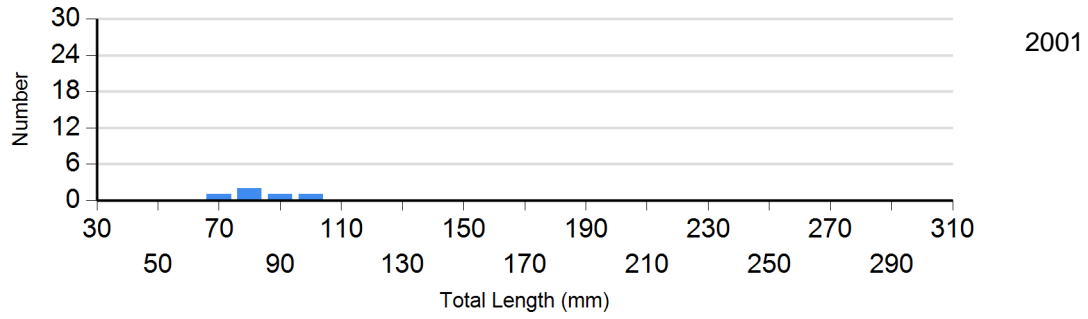
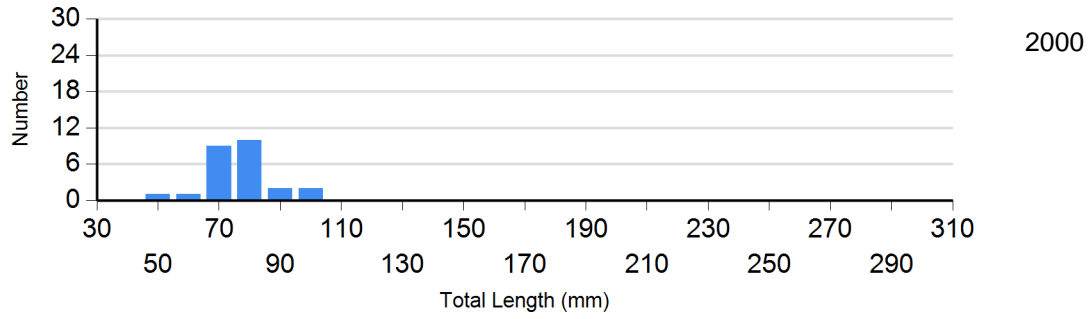
Site: 44
Species: Sand Shiner



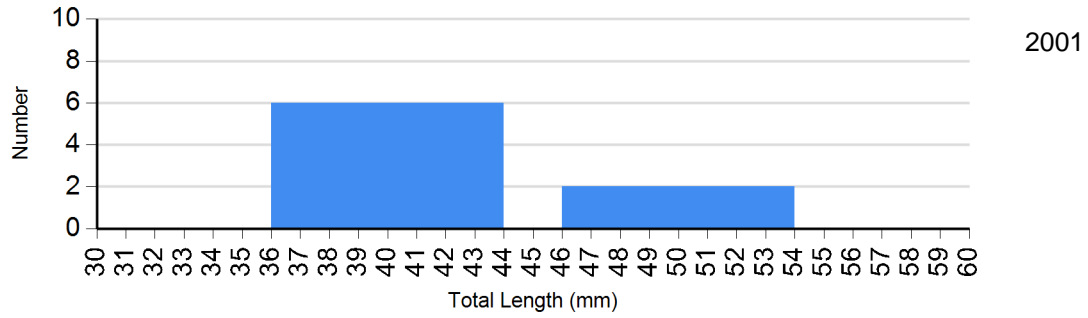
Site: 44
Species: Stone Cat



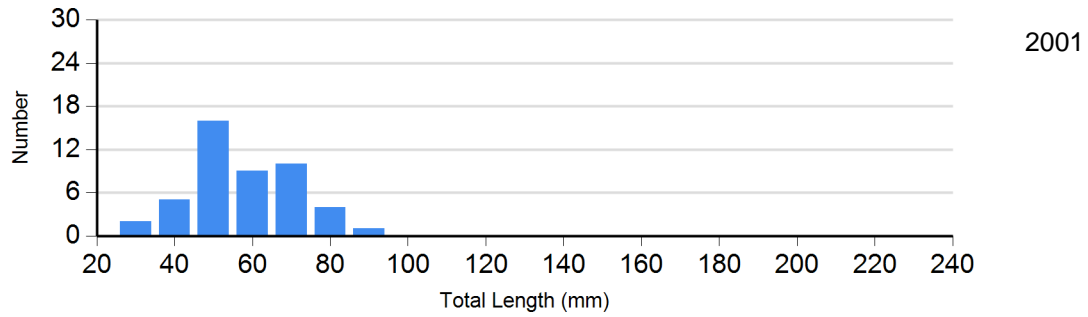
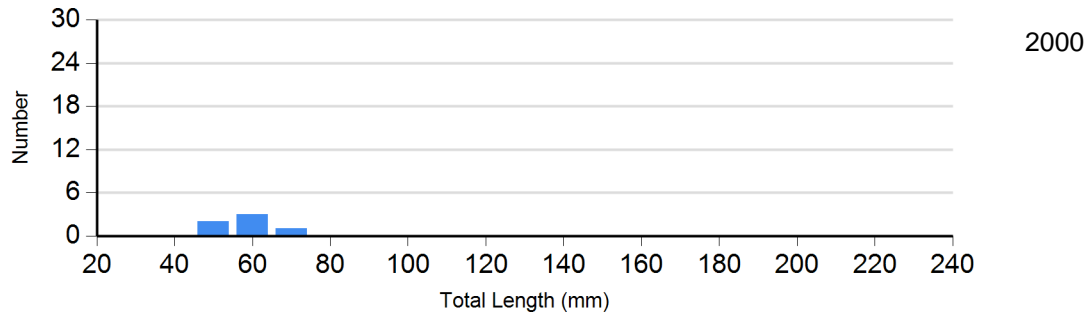
Site: 44
Species: White Sucker



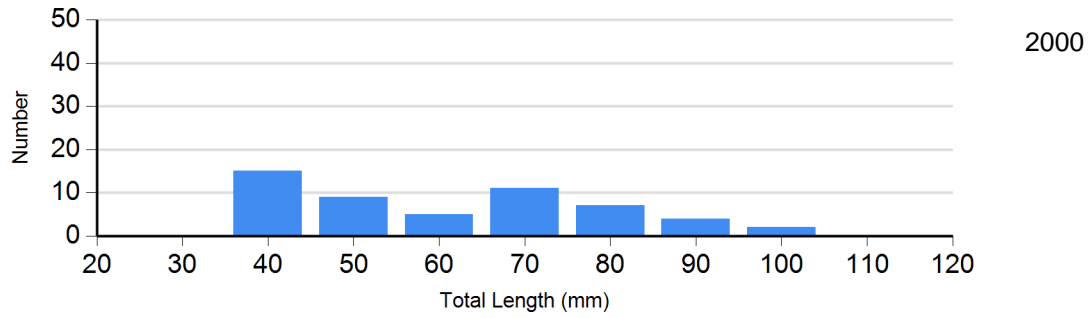
Site: 131
Species: Bluegill

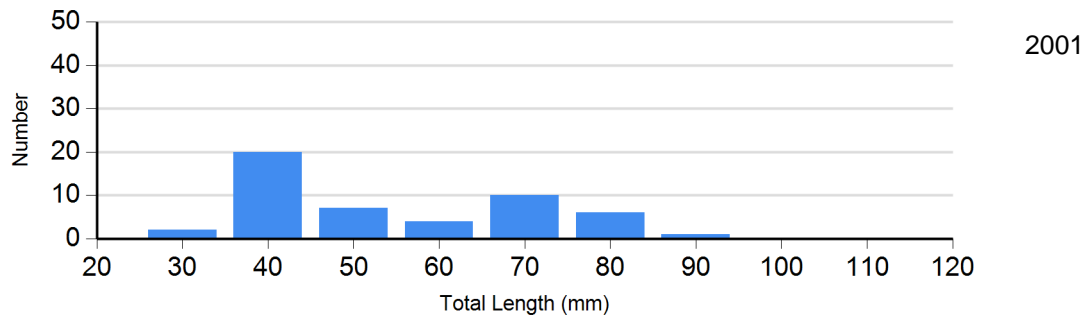


Site: 131
Species: Creek Chub

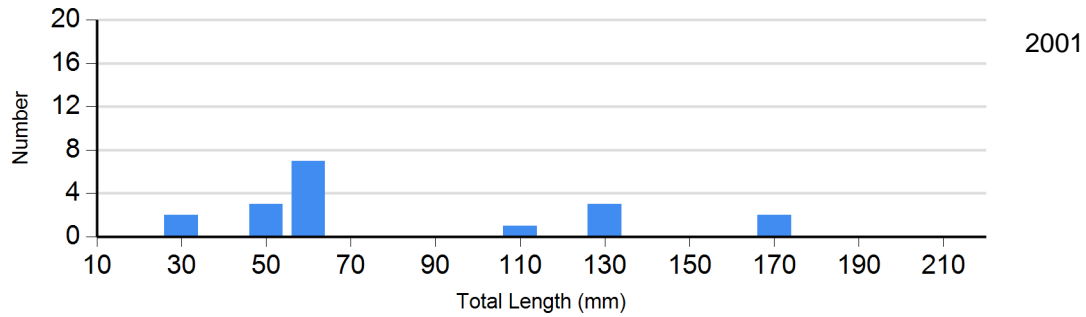
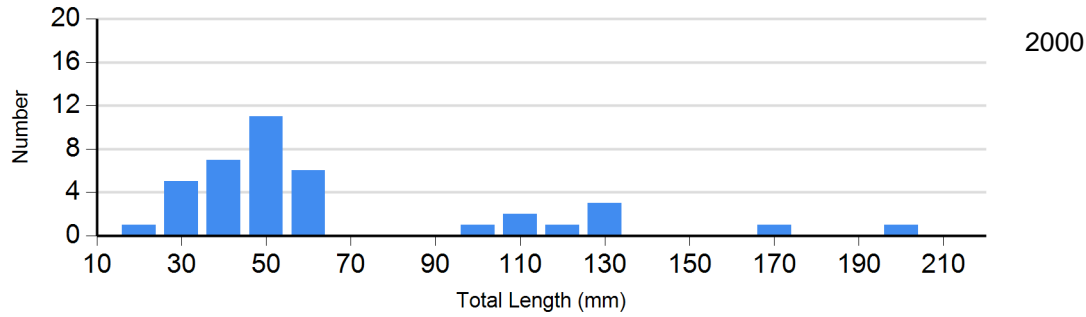


Site: 131
Species: Longnose Dace

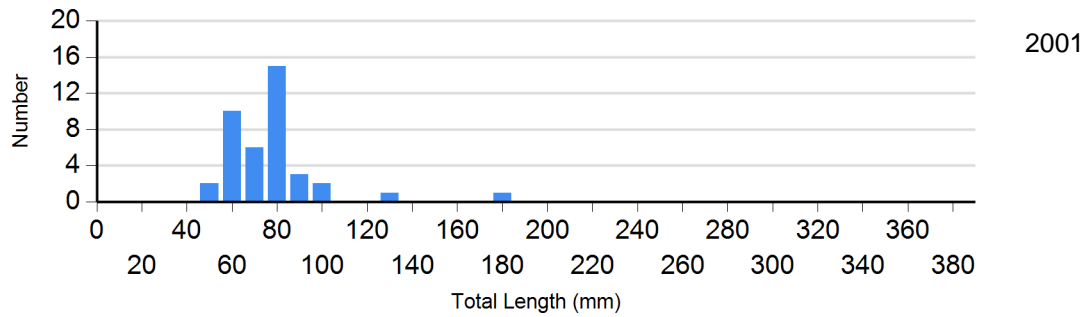
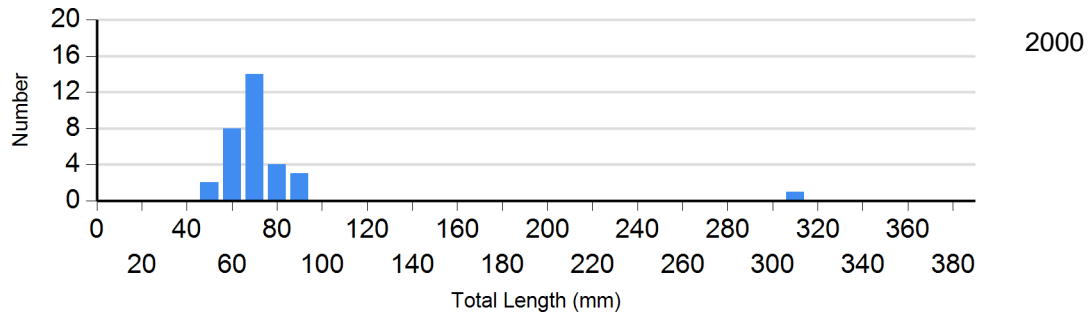
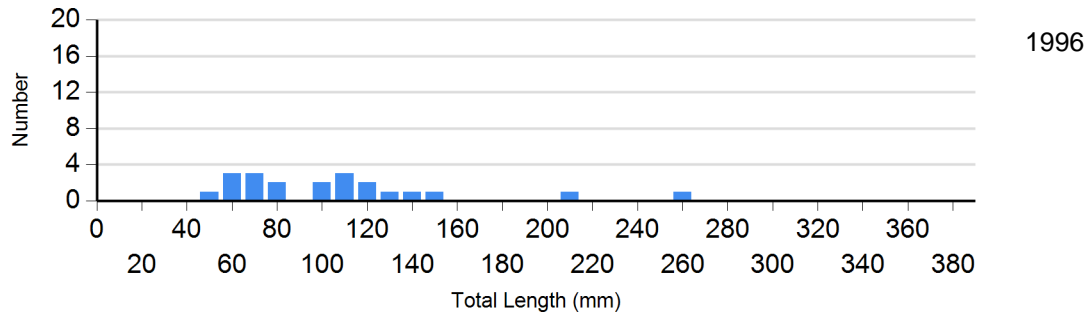




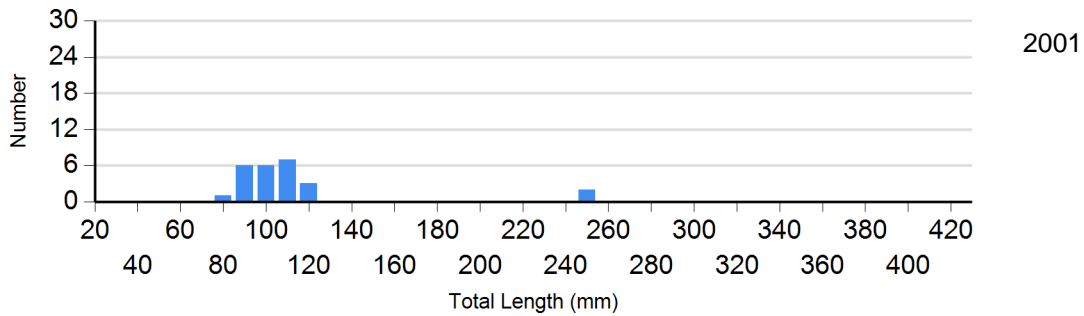
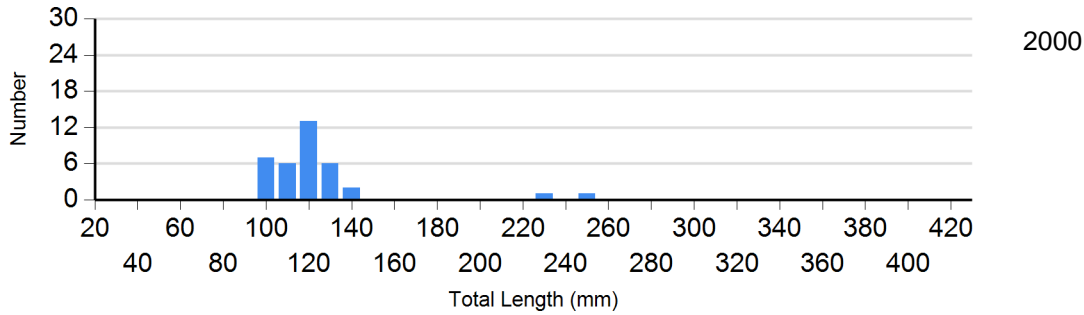
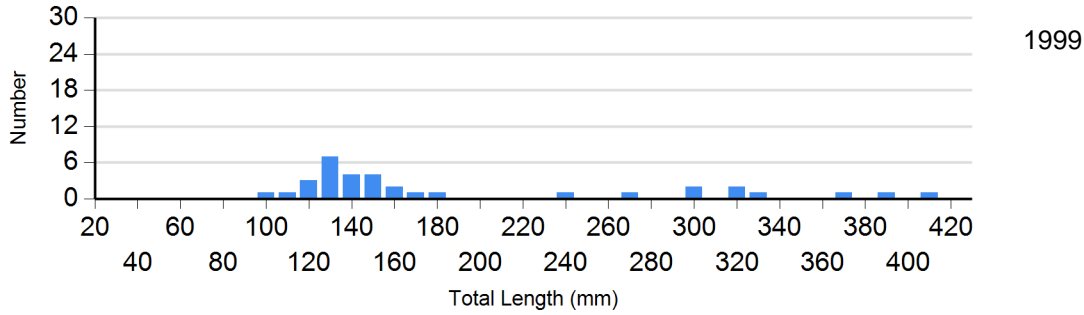
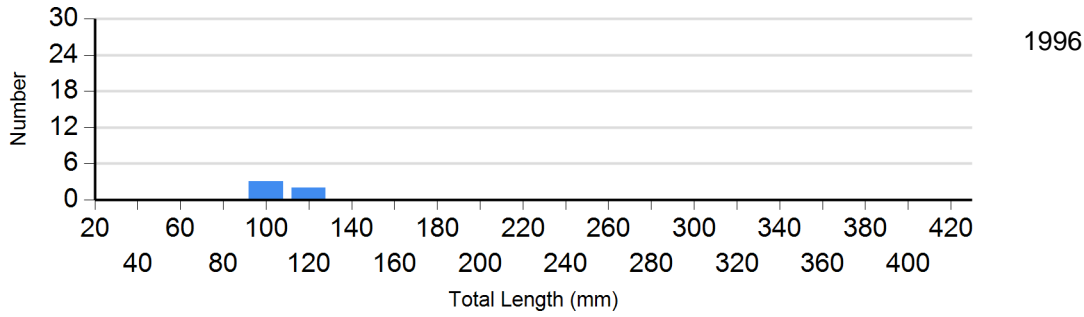
Site: 131
Species: Stone Cat



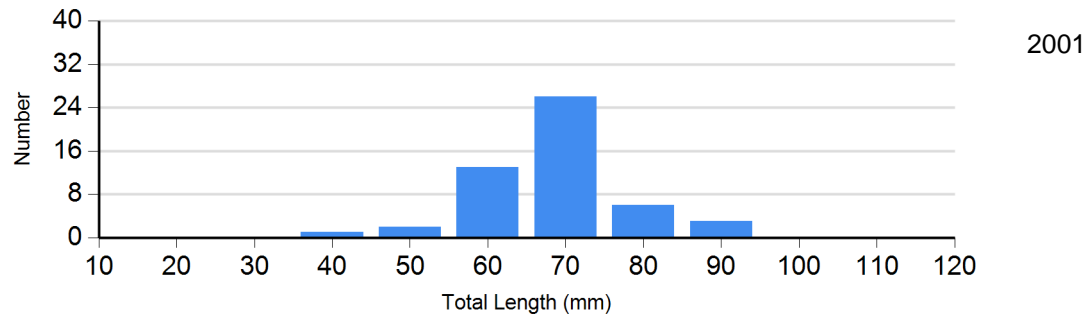
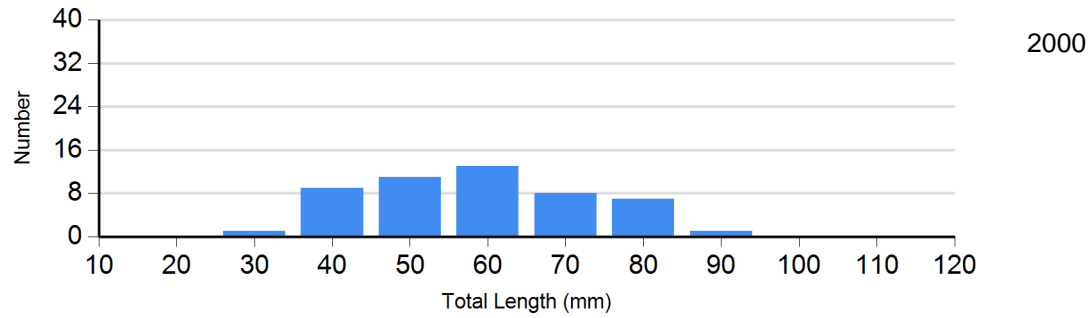
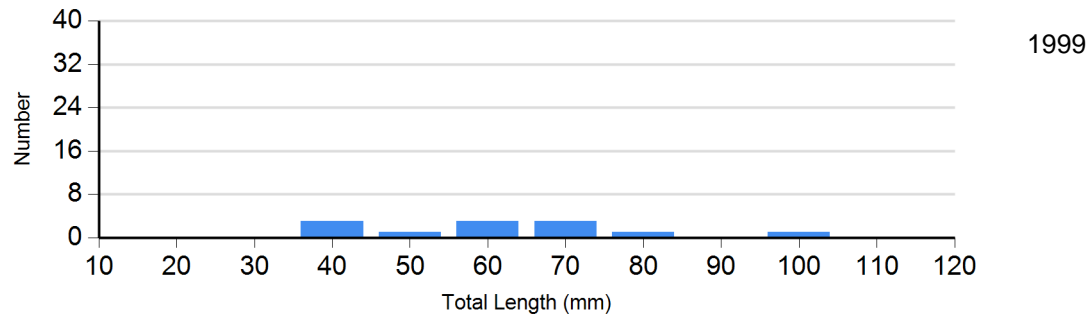
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Species: White Sucker



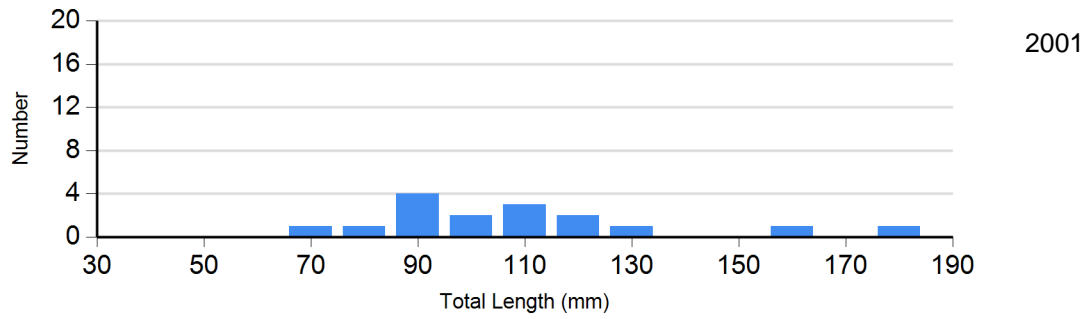
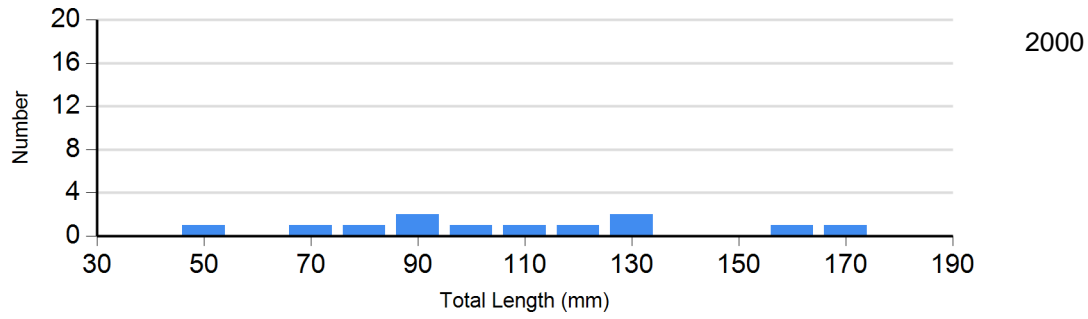
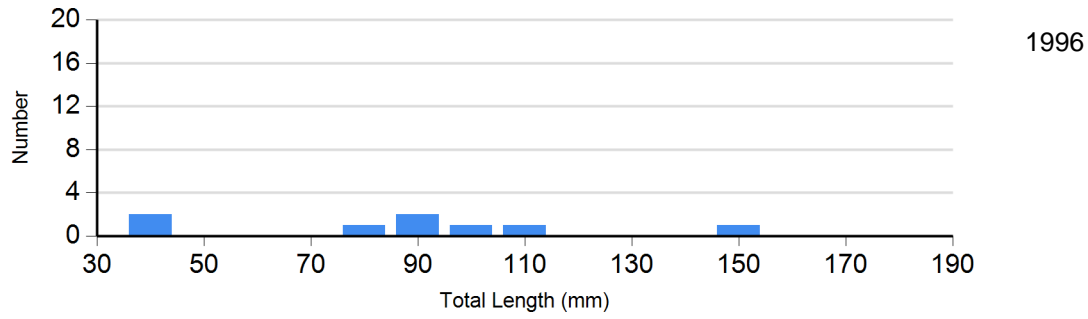
Site: 295
Species: Brown Trout



Site: 295
Species: Longnose Dace



Site: 295
Species: Mountain Sucker



Site: 295
Species: White Sucker

