

**SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY**  
**Whitewood Creek, Lawrence County**  
**09-0056-00**  
**2006**

Table 1. Population and Biomass Estimates for Whitewood Creek

**Site Number:** 43 **Date Sampled:** 10/12/2006 **Conductivity (umhos/cm):**  
**Site Midpoint (Latitude, Longitude):** 44.62164896, -103.47136669 **Site Length (m):** 99 **pH:**  
**Survey Completed by:** Chadwick Ecological Services **Mean Width (m):** 3.5 **Water Temperature (C):**  
**Stream Classification:** BR2 **Number of Pass:** 3 **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	3	3	4	3	86	13	30	35	11.94	49	243.3	156.0
Brown Trout	All	3	3	4	3	86	13	30	35	11.94	49	243.3	156.0
Common Carp	All	119	119	121	119	3400	16	1202	1377	14.45	1934	68.2	4.8
Longnose Dace	All	90	102	116	90	2914	6	1030	1180	5.60	1658	56.4	2.2
Mountain Sucker	All	1	1	2	1	29	1	10	12	0.66	16	129.0	26.0
White Sucker	All	18	18	18	18	514	1	182	208	1.05	293	57.1	2.3

**Site Number:** 131 **Date Sampled:** 10/11/2006 **Conductivity (umhos/cm):**  
**Site Midpoint (Latitude, Longitude):** 44.58943150, -103.52027768 **Site Length (m):** 121 **pH:**  
**Survey Completed by:** Chadwick Ecological Services **Mean Width (m):** 6.9 **Water Temperature (C):**  
**Stream Classification:** BR3 **Number of Pass:** 3 **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	14	2	8	6	1.81	13	239.0	140.0
Brown Trout	All	1	1	1	1	14	2	8	6	1.81	13	239.0	140.0

Common Carp	All	420	426	432	420	6174	32	3521	2500	28.76	5665	93.4	5.2
Green Sunfish	All	2	2	2	2	29	0	17	12	0.36	27	100.0	14.0
Longnose Dace	All	7	7	9	7	101	0	58	41	0.44	93	76.4	4.8
Stone Cat	All	3	3	3	3	43	0	25	18	0.32	40	82.0	8.3
White Sucker	All	80	81	84	80	1174	32	669	475	28.55	1077	117.7	27.2

**Site Number:** 295  
**Site Midpoint (Latitude, Longitude):** 44.51740810, -103.60458517  
**Survey Completed by:** Chadwick Ecological Services  
**Stream Classification:** None

**Date Sampled:** 10/12/2006  
**Site Length (m):** 98  
**Mean Width (m):** 7.0  
**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)
Common Carp	All	62	62	63	62	886	2	633	359	1.66	1018	56.5	2.1
Longnose Dace	All	266	290	307	273	4143	7	2959	1678	6.01	4761	51.4	1.6
White Sucker	All	73	73	75	73	1043	2	745	422	2.17	1199	54.4	2.3

**Site Number:** 295  
**Site Midpoint (Latitude, Longitude):** 44.51740810, -103.60458517  
**Survey Completed by:** Chadwick Ecological Services  
**Stream Classification:** None

**Date Sampled:** 10/12/2006  
**Site Length (m):** 98  
**Mean Width (m):** 4.5  
**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)
Common Carp	All	44	81	159	44	1800	12	827	729	10.92	1330	82.0	6.8
Sand Shiner	All	1	1	1	1	22	1	10	9	1.27	16	52.0	64.0
Shorthead Redhorse	All	20	24	34	20	533	5	245	216	4.55	394	94.2	9.6

White Sucker	All	7	7	8	7	156	4	71	63	3.41	115	109.0	24.6
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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	
<b>Class BR1</b>	Number of wild Brown Trout exceeds 150 per acre
<b>Class BR2</b>	Number of wild Brook Trout ranges from 25 to 150 per acre
<b>Class BR3</b>	Number of wild Brown Trout is less than 25 per acre
<b>Class BK1</b>	Number of wild Brook Trout exceeds 150 per acre
<b>Class BK2</b>	Number of wild Brook Trout ranges from 25 to 150 per acre
<b>Class BK3</b>	Number of wild Brook Trout is less than 25 per acre
<b>Class RB1</b>	Number of wild Rainbow Trout exceeds 25 per acre
<b>Class RB2</b>	Number of wild Rainbow Trout is less than 25 per acre

Table 2. Species composition and population estimates on Whitewood Creek, 1996-2006

**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	
	Oct 09, 2002	1	1-2	
Brown Trout >=200mm	Oct 11, 1996	2	2-2	BR3
	Sep 28, 2000	11	11-11	BR2
	Oct 09, 2002	2	2-2	BR3

Brown Trout >=200mm	Oct 14, 2003	1	1-1	BR3
	Oct 12, 2006	3	3-4	BR2
Common Carp	Oct 12, 2006	119	119-121	
Longnose Dace	Oct 11, 1996	3	3-3	
	Sep 28, 2000	1113	1114-1157	
	Sep 27, 2001	411	402-420	
	Oct 09, 2002	158	137-179	
	Oct 14, 2003	473	460-486	
	Oct 12, 2006	102	90-116	
Mountain Sucker	Sep 27, 2001	1	1-1	
	Oct 09, 2002	3	3-3	
	Oct 14, 2003	1	1-1	
	Oct 12, 2006	1	1-2	
Stone Cat	Oct 09, 2002	2	2-3	
White Sucker	Oct 11, 1996	3	3-3	
	Sep 28, 2000	9	9-9	

White Sucker	Sep 27, 2001	43	43-44
	Oct 09, 2002	26	26-28
	Oct 14, 2003	8	8-8
	Oct 12, 2006	18	18-18

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**Site 131**

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<b>Species/Size</b>	<b>Date</b>	<b>Pop Est.</b>	<b>(95% C.I.)</b>	<b>Stream Classification</b>
Brown Trout <200mm	Oct 10, 1996	1	1-1	
	Sep 27, 2000	1	1-1	
Brown Trout >=200mm	Oct 11, 2006	1	1-1	BR3
Common Carp	Oct 11, 2006	426	420-432	
Green Sunfish	Oct 10, 2002	1	1-1	
	Oct 11, 2006	2	2-2	
Longnose Dace	Oct 10, 1996	3	3-3	
	Sep 27, 2000	1088	1024-1152	
	Sep 26, 2001	138	124-152	
	Oct 10, 2002	64	62-68	

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Longnose Dace	Oct 15, 2003	206	203-211
	Oct 11, 2006	7	7-9
Mountain Sucker	Sep 27, 2000	1	1-1
Stone Cat	Sep 27, 2000	57	39-91
	Sep 26, 2001	19	18-23
	Oct 10, 2002	3	3-4
	Oct 15, 2003	17	17-19
	Oct 11, 2006	3	3-3
White Sucker	Oct 10, 1996	22	21-26
	Sep 27, 2000	32	32-34
	Sep 26, 2001	40	40-42
	Oct 10, 2002	7	7-7
	Oct 15, 2003	3	3-3
	Oct 11, 2006	81	80-84

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	
	Oct 09, 2002	14	14-16	
	Oct 14, 2003	3	3-3	
Brown Trout >=200mm	Nov 04, 1999	10	10-12	BR3
	Sep 28, 2000	2	2-3	BR3
	Sep 25, 2001	2	2-2	BR3
	Oct 09, 2002	2	2-2	BR3
Common Carp	Oct 12, 2006	62	62-63	
	Oct 12, 2006	81	44-159	
Longnose Dace	Oct 11, 1996	2	3-4	
	Nov 04, 1999	357	358-390	
	Sep 28, 2000	1776	1777-1827	



Longnose Dace	Sep 25, 2001	1131	801-1461
	Oct 09, 2002	397	349-445
	Oct 14, 2003	695	653-737
	Oct 12, 2006	290	273-307
Mountain Sucker	Oct 11, 1996	8	8-9
	Sep 28, 2000	16	12-30
	Sep 25, 2001	16	16-18
	Oct 09, 2002	6	6-7
	Oct 14, 2003	2	2-2
Sand Shiner	Oct 12, 2006	1	1-1
Shorthead Redhorse	Oct 12, 2006	24	20-34
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

White Sucker	Oct 09, 2002	85	83-89
	Oct 14, 2003	14	14-15
	Oct 12, 2006	73	73-75
	Oct 12, 2006	7	7-8

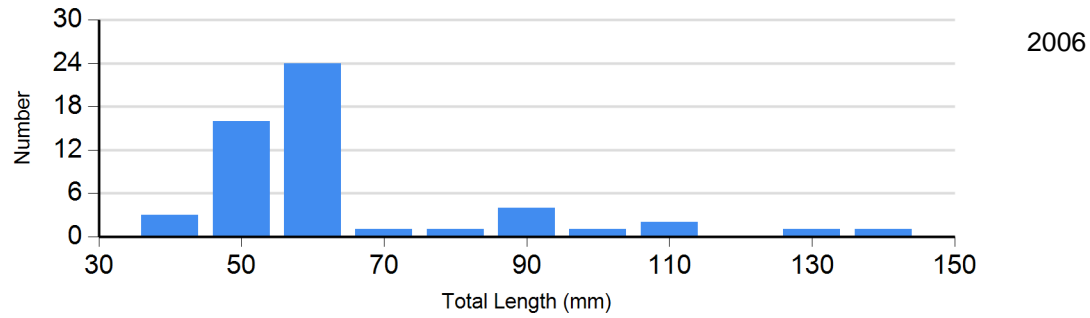
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## Length Frequency Distribution

Length frequency histogram of species sampled by year.

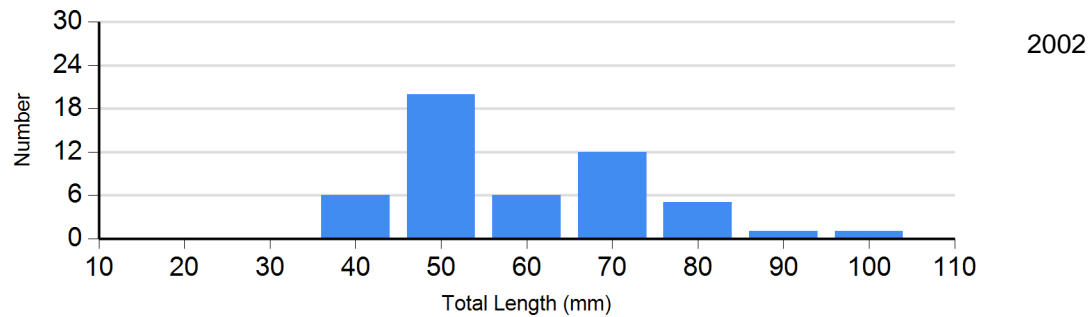
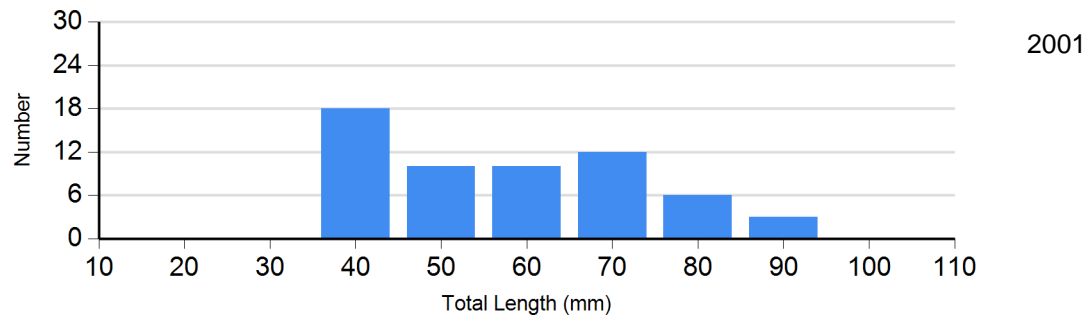
**Site:** 43

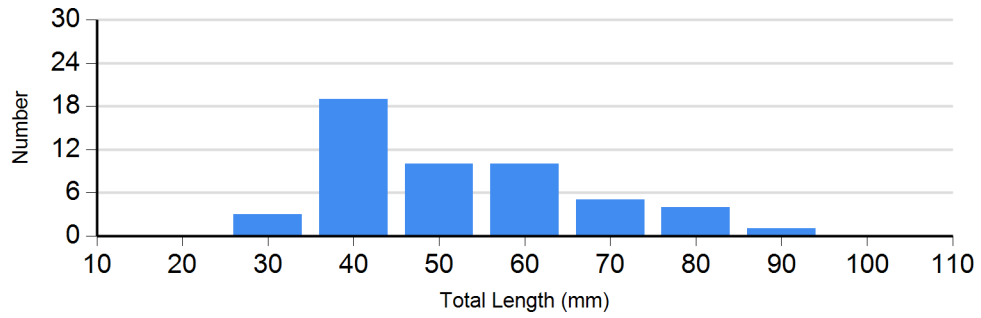
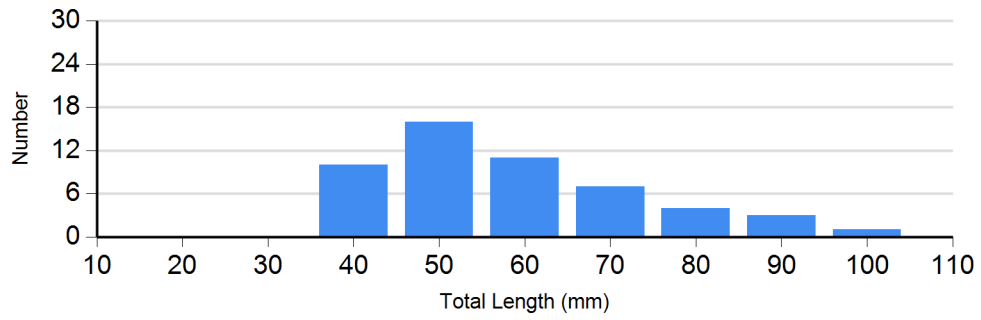
**Species:** Common Carp



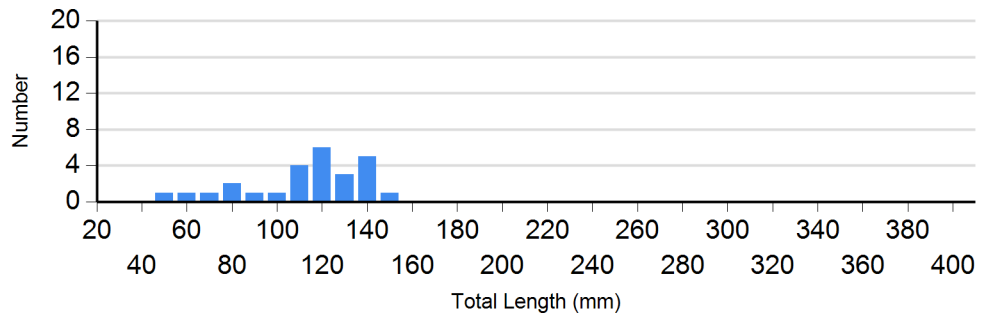
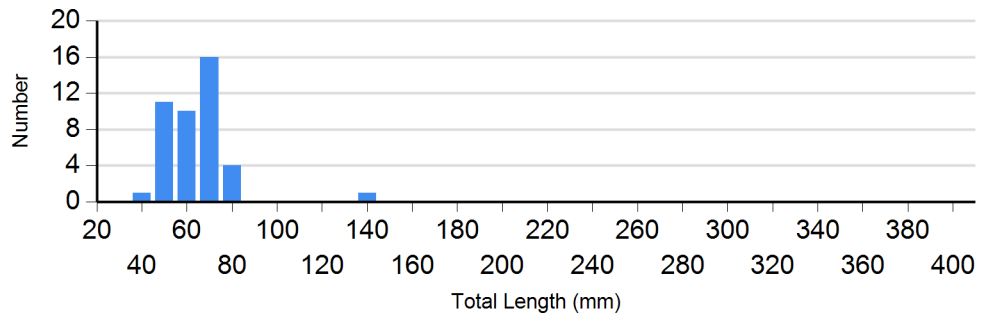
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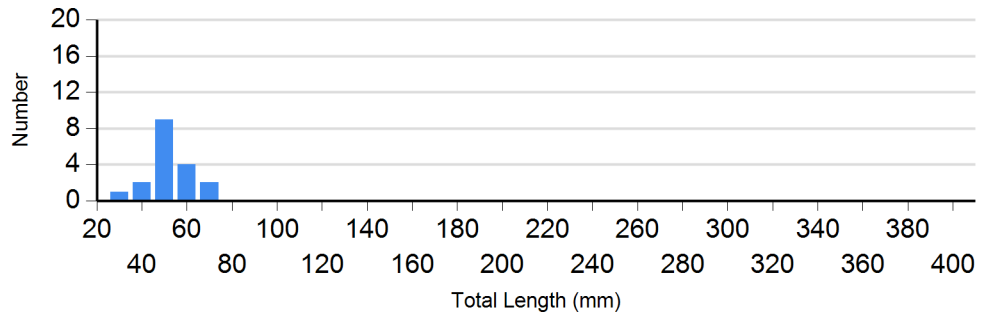
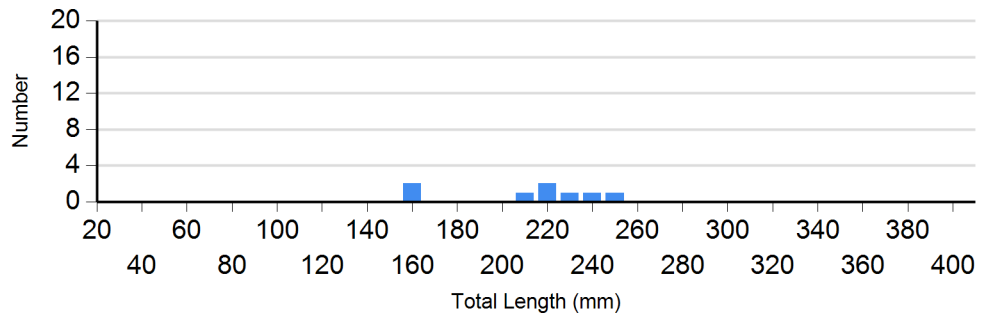
**Species:** Longnose Dace



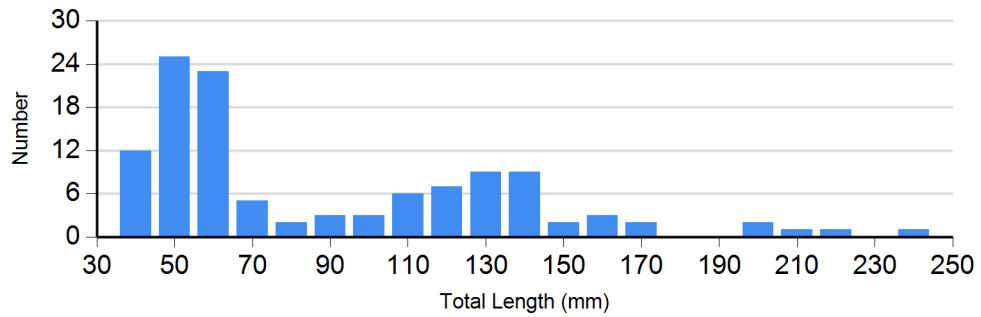


**Site: 43**  
**Species: White Sucker**

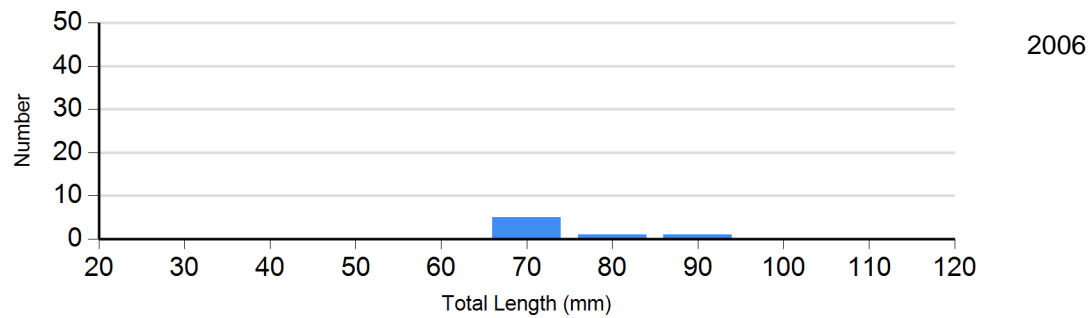
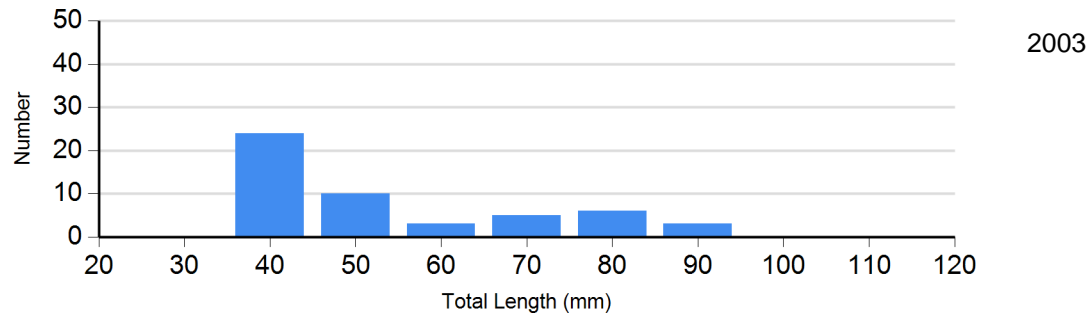
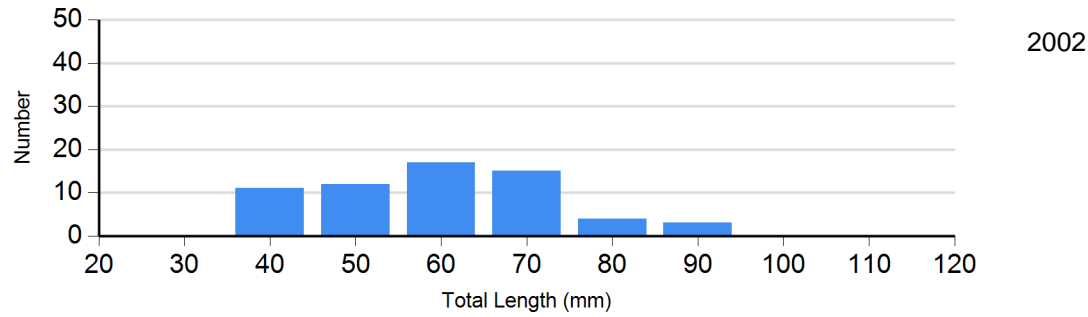
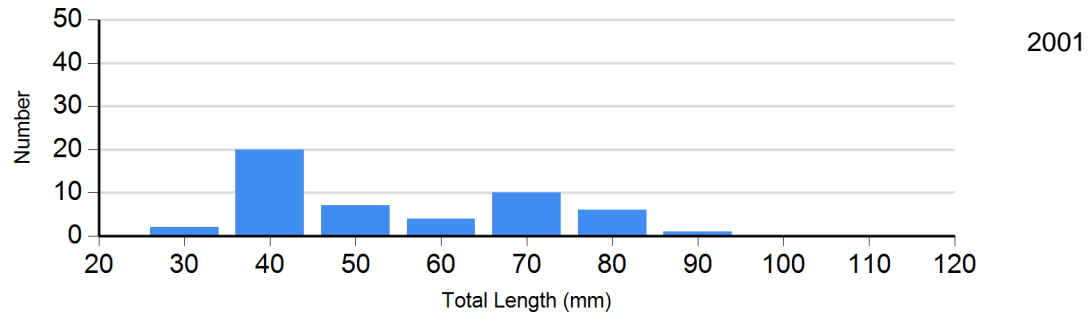




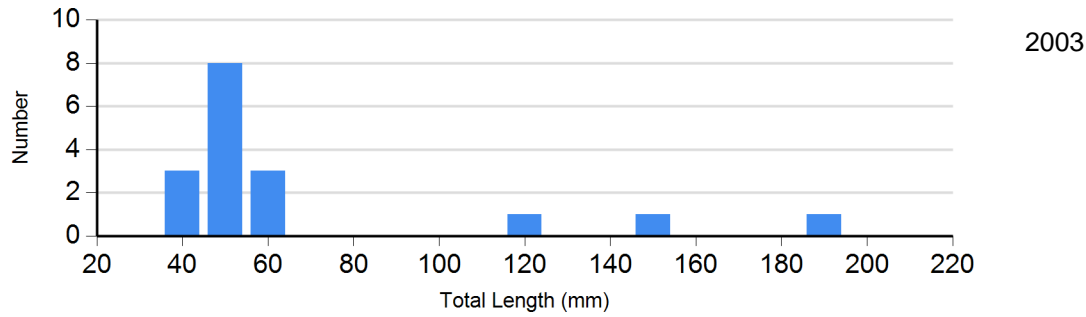
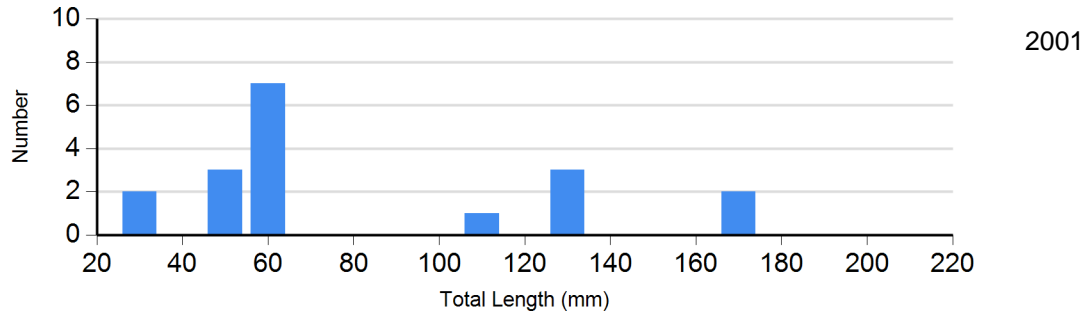
**Site:** 131  
**Species:** Common Carp



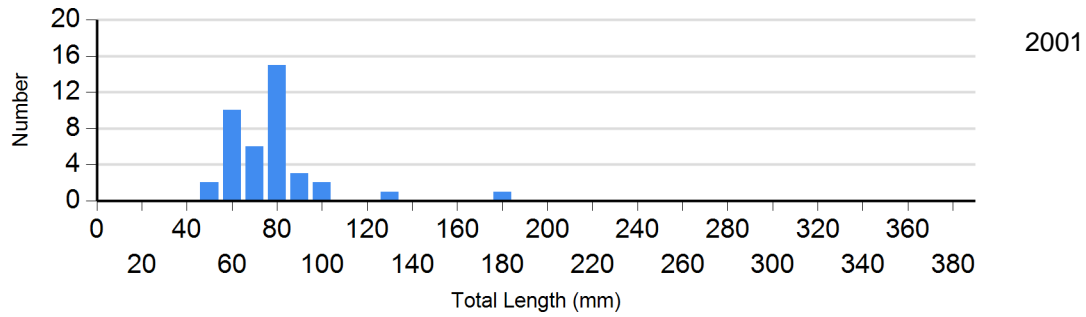
Site: 131  
Species: Longnose Dace

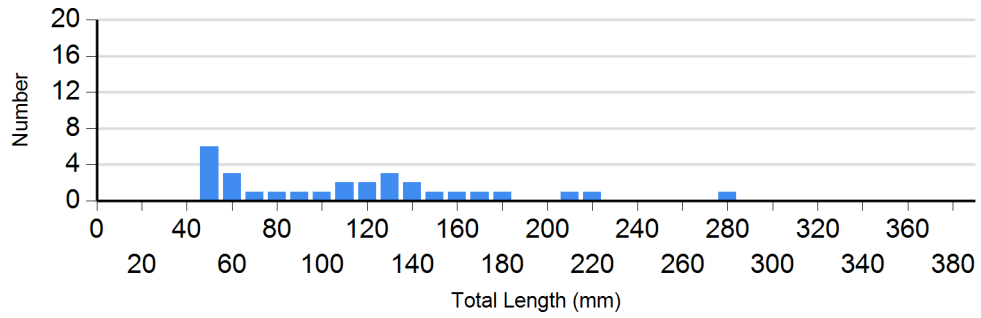
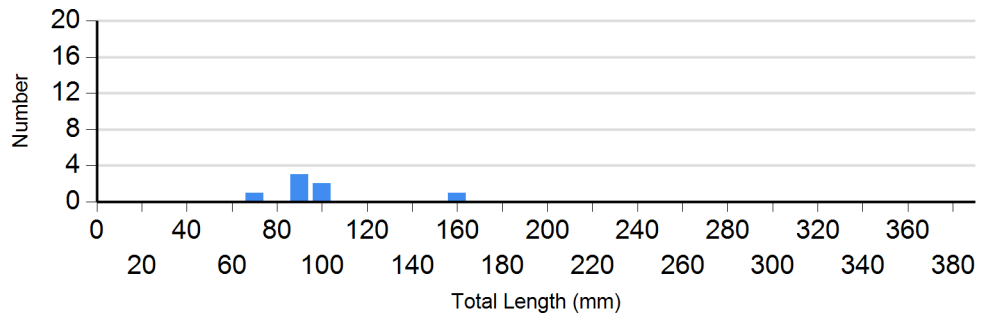


**Site:** 131  
**Species:** Stone Cat

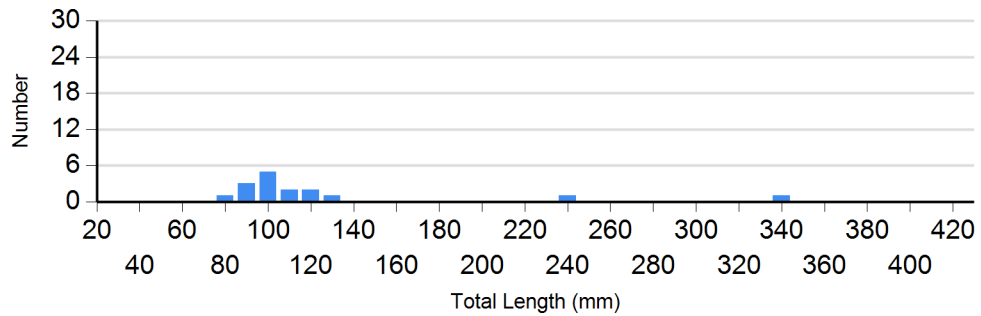
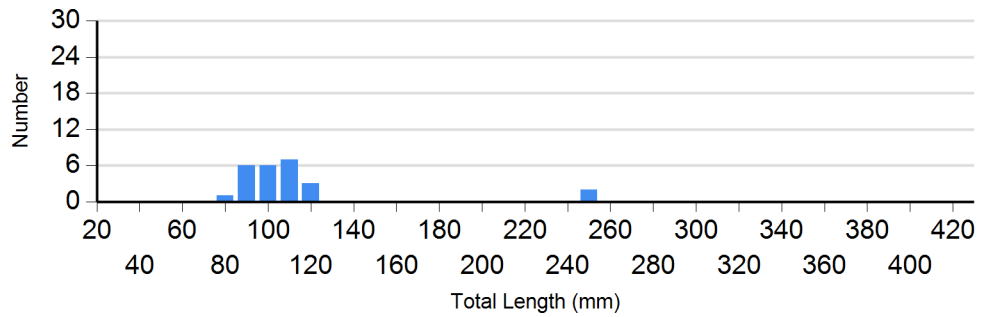


**Site:** 131  
**Species:** White Sucker



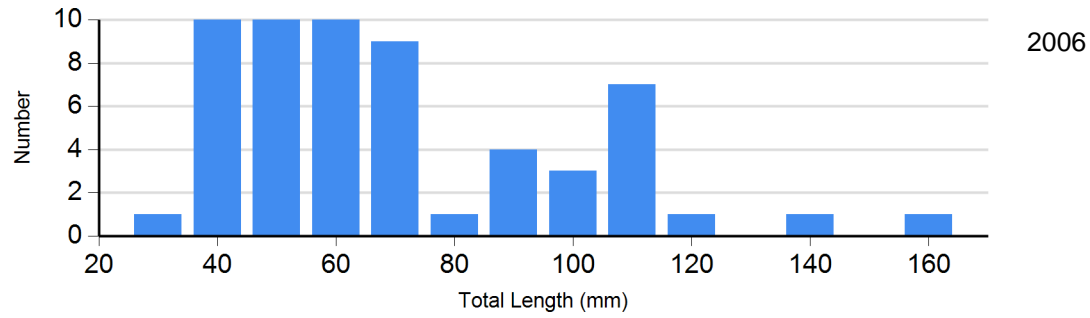


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**Species:** Brown Trout

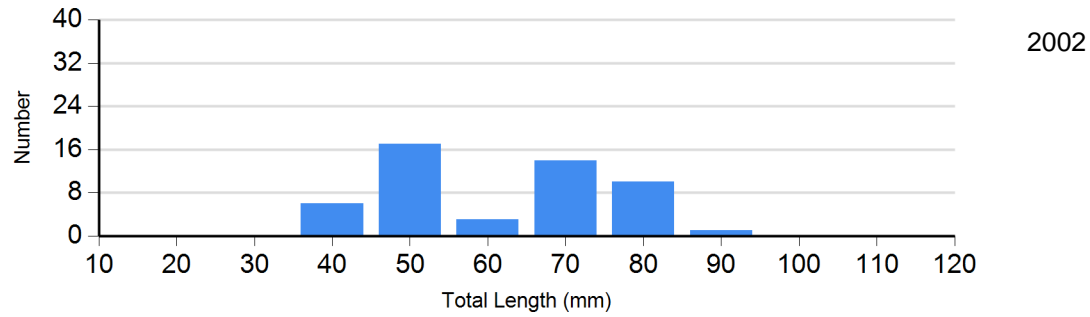
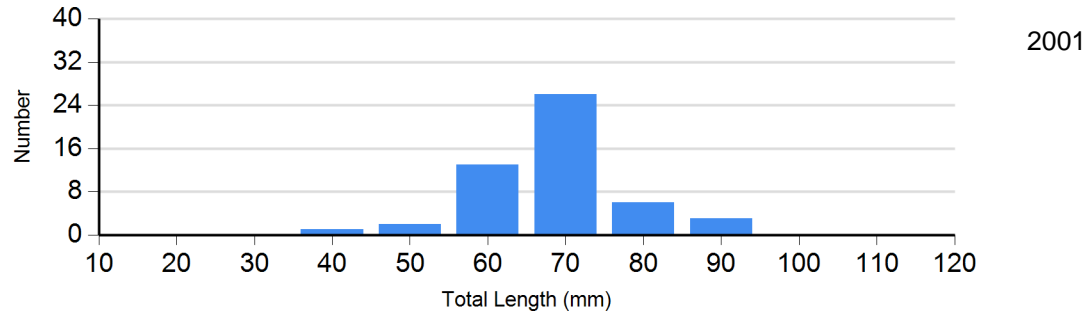


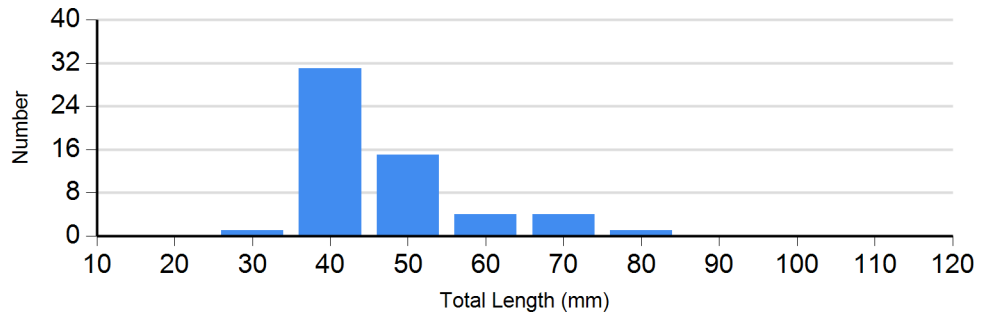
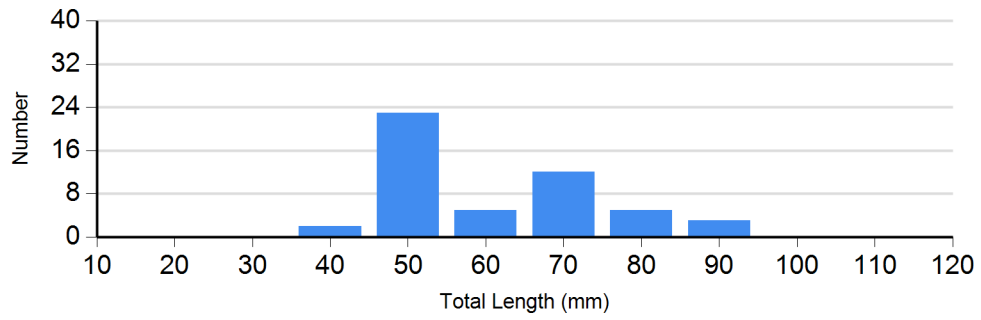


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Species: Common Carp

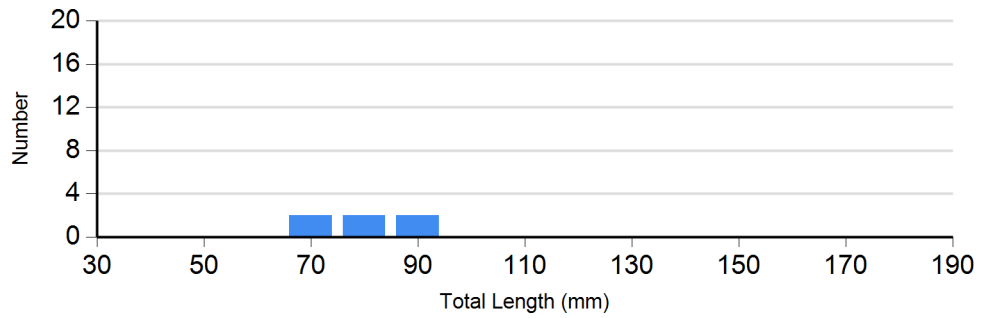
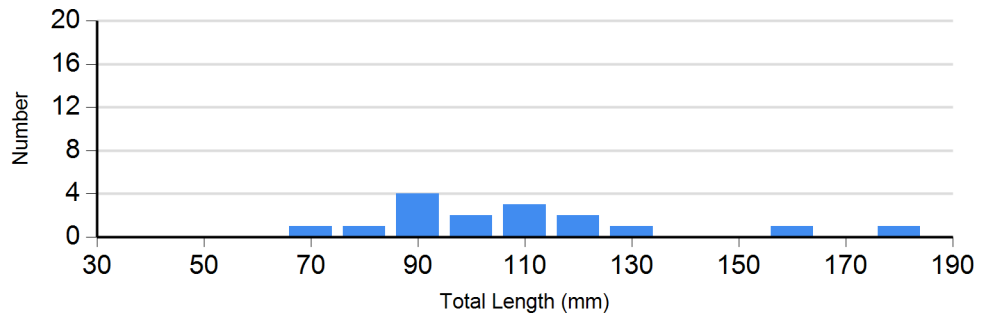


Site: 295  
Species: Longnose Dace

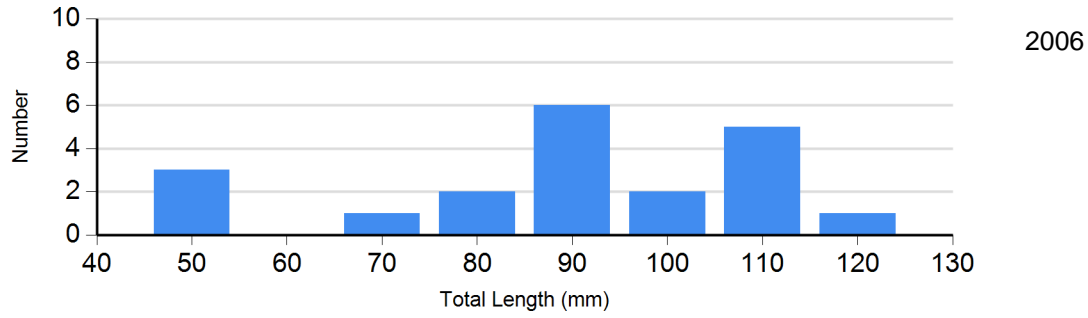




**Site:** 295  
**Species:** Mountain Sucker



**Site:** 295  
**Species:** Shorthead Redhorse



**Site:** 295  
**Species:** White Sucker

