

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Boxelder - North Fork, Lawrence County
09-0069-00
1993

Table 1. Population and Biomass Estimates for Boxelder - North Fork

Site Number: 112

Site Midpoint (Latitude, Longitude): 44.22303907, -103.69113208

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK1

Date Sampled: 05/25/1993

Site Length (m): 100

Mean Width (m): 1.5

Number of Pass: 3

Conductivity (umhos/cm): 250

pH: 7.5

Water Temperature (C): 18.0

Voltage: 250

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)
Brook Trout	<200mm	42	46	53	42	3151	122	460	1276	108.91	740	147.0	38.7
Brook Trout	>=200mm	10	10	11	10	685	73	100	277	65.13	161	215.9	106.5
Brook Trout	All	52	56	63	52	3836	198	560	1553	177.23	901	160.3	51.8
Longnose Dace	All	28	47	94	28	3219	11	470	1304	9.55	756	59.6	3.3

Site Number: 122

Site Midpoint (Latitude, Longitude): 44.22324608, -103.69991690

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK2

Date Sampled: 05/27/1993

Site Length (m): 100

Mean Width (m): 1.9

Number of Pass: 3

Conductivity (umhos/cm): 255

pH: 8.0

Water Temperature (C): 15.0

Voltage: 350

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)
Brook Trout	<200mm	10	10	10	10	532	15	100	215	13.20	161	135.6	27.8
Brook Trout	>=200mm	2	2	2	2	106	14	20	43	12.11	32	229.0	127.5
Brook Trout	All	12	12	12	12	638	28	120	259	25.31	193	151.2	44.4
Longnose Dace	All	371	469	523	415	24947	68	4690	10103	60.89	7546	59.5	2.7
Mountain Sucker	All	18	20	26	18	1064	11	200	431	9.50	322	88.3	10.0
White Sucker	All	24	28	38	24	1489	30	280	603	26.65	451	105.5	20.0

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 Boxelder - North Fork, 1983-1993

Site 112

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	May 25, 1993	46	42-53	
Brook Trout >=200mm	May 25, 1993	10	10-11	BK1
Longnose Dace	May 25, 1993	47	28-94	

Site 122

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	May 27, 1993	10	10-10	
Brook Trout >=200mm	May 27, 1993	2	2-2	BK2
Longnose Dace	May 27, 1993	469	415-523	

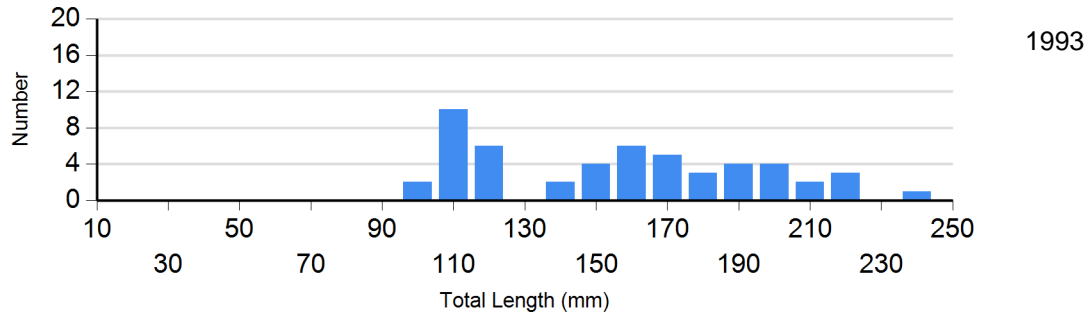
Mountain Sucker	May 27, 1993	20	18-26
White Sucker	May 27, 1993	28	24-38

Length Frequency Distribution

Length frequency histogram of species sampled by year.

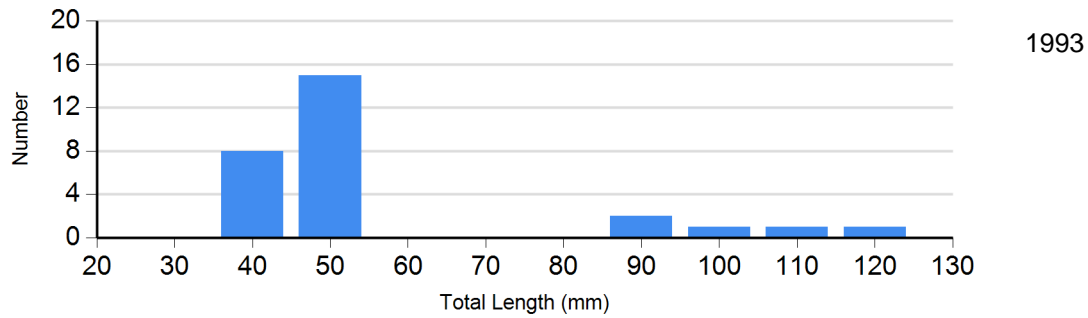
Site: 112

Species: Brook Trout



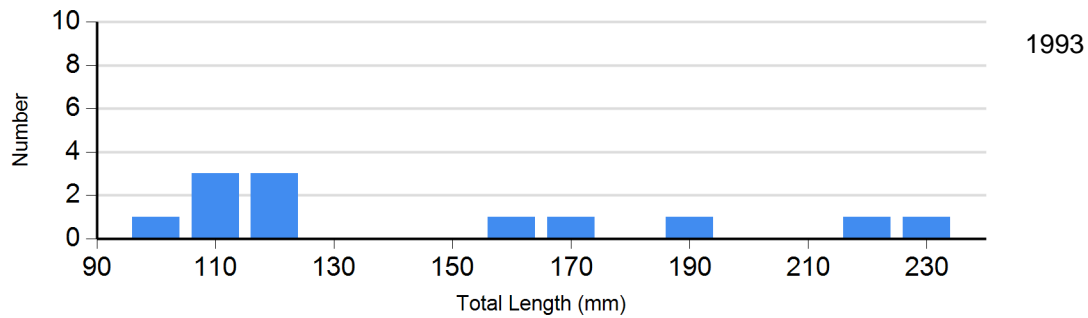
Site: 112

Species: Longnose Dace

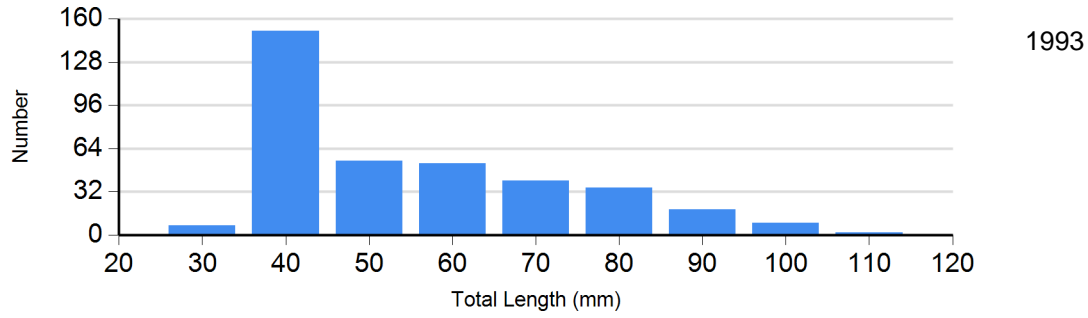


Site: 122

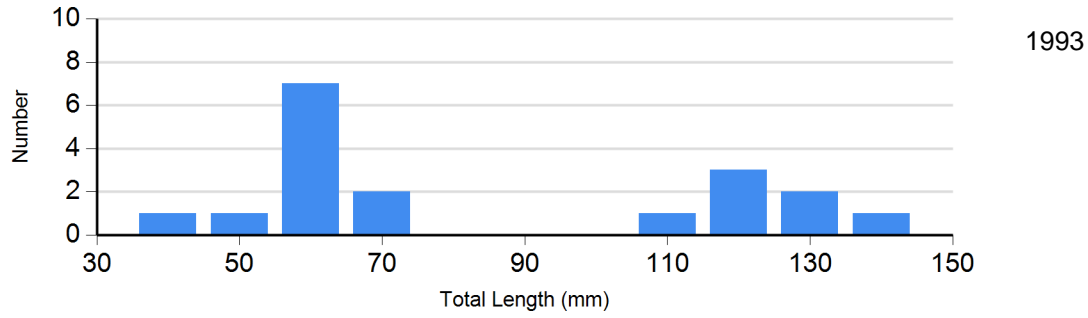
Species: Brook Trout



Site: 122
Species: Longnose Dace



Site: 122
Species: Mountain Sucker



Site: 122
Species: White Sucker

