

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Iron Creek (South), Pennington County
02-0082-00
1994

Table 1. Population and Biomass Estimates for Iron Creek (South)

Site Number: 44	Date Sampled: 07/25/1994	Conductivity (umhos/cm): 140
Site Midpoint (Latitude, Longitude): 43.86962276, -103.38047094	Site Length (m): 100	pH: 7.2
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 2.2	Water Temperature (C): 17.0
Stream Classification: BK0, RB1	Number of Pass: 3	Voltage: 400

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	16	16	17	16	721	5	160	292	4.56	257	70.0	7.1
Brook Trout	All	16	16	17	16	721	5	160	292	4.56	257	70.0	7.1
Longnose Dace	All	1324	1450	1489	1411	65315	183	14500	26453	163.29	23331	55.5	2.8
Mountain Sucker	All	17	17	19	17	766	10	170	310	9.29	274	106.5	13.6
Rainbow Trout	>=200mm	2	2	2	2	90	10	20	36	9.21	32	241.5	114.5
Rainbow Trout	All	2	2	2	2	90	10	20	36	9.21	32	241.5	114.5
White Sucker	All	326	340	351	329	15315	95	3400	6203	84.78	5471	48.8	6.2

Site Number: 152	Date Sampled: 07/25/1994	Conductivity (umhos/cm): 84
Site Midpoint (Latitude, Longitude): 43.83688225, -103.43574684	Site Length (m): 100	pH: 7.8
Survey Completed by: South Dakota Game, Fish and Parks	Mean Width (m): 2.5	Water Temperature (C): 19.0
Stream Classification: BK3, BR0, RB0	Number of Pass: 3	Voltage: 450

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	321	336	347	325	13228	133	3360	5357	119.11	5406	88.0	10.1

Brook Trout	>=200mm	1	1	1	1	39	4	10	16	3.48	16	212.0	99.0
Brook Trout	All	322	336	347	325	13228	138	3360	5357	122.78	5406	88.3	10.4
Brown Trout	<200mm	2	2	2	2	79	3	20	32	2.81	32	158.0	40.0
Brown Trout	All	2	2	2	2	79	3	20	32	2.81	32	158.0	40.0
Longnose Dace	All	45	51	61	45	2008	18	510	813	15.69	821	94.9	8.8
Rainbow Trout	<200mm	2	2	2	2	79	2	20	32	2.04	32	139.5	29.0
Rainbow Trout	All	2	2	2	2	79	2	20	32	2.04	32	139.5	29.0

Site Number: 176

Site Midpoint (Latitude, Longitude): 43.83582547, -103.45186014

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK2, RB0

Date Sampled: 07/21/1994

Site Length (m): 105

Mean Width (m): 2.9

Number of Pass: 3

Conductivity (umhos/cm): 75

pH: 8.0

Water Temperature (C): 13.0

Voltage: 400

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	357	368	377	359	12690	158	3505	5139	141.37	5639	94.8	12.5
Brook Trout	>=200mm	2	2	3	2	69	6	19	28	5.17	31	204.0	84.0
Brook Trout	All	359	370	379	361	12759	165	3524	5167	147.46	5670	95.4	12.9
Longnose Dace	All	40	39	48	40	1345	9	371	545	8.22	598	86.3	6.8
Rainbow Trout	<200mm	1	1	1	1	34	0	10	14	0.40	15	111.0	13.0
Rainbow Trout	All	1	1	1	1	34	0	10	14	0.40	15	111.0	13.0

Site Number: 193

Site Midpoint (Latitude, Longitude): 43.82768749, -103.46039550

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK0

Date Sampled: 07/20/1994

Site Length (m): 103

Mean Width (m): 2.1

Number of Pass: 3

Conductivity (umhos/cm): 86

pH: 8.9

Water Temperature (C): 16.0

Voltage: 400

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	408	412	417	408	19252	231	4000	7797	206.33	6436	95.3	12.0
Brook Trout	All	408	412	417	408	19252	231	4000	7797	206.33	6436	95.3	12.0

Site Number: 195

Site Midpoint (Latitude, Longitude): 43.82834180, -103.46252843

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK0

Date Sampled: 07/20/1994

Site Length (m): 101

Mean Width (m): 2.5

Number of Pass: 3

Conductivity (umhos/cm): 80

pH: 8.2

Water Temperature (C): 13.0

Voltage: 400

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	336	365	384	346	14600	148	3614	5913	132.27	5815	91.2	10.1
Brook Trout	All	336	365	384	346	14600	148	3614	5913	132.27	5815	91.2	10.1

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 Iron Creek (South), 1984-1994

Site 44

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 25, 1994	16	16-17	
Longnose Dace	Jul 25, 1994	1450	1411-1489	
Mountain Sucker	Jul 25, 1994	17	17-19	
Rainbow Trout >=200mm	Jul 25, 1994	2	2-2	RB1
White Sucker	Jul 25, 1994	340	329-351	

Site 152

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 25, 1992	233	221-245	

Brook Trout <200mm	Jul 25, 1994	336	325-347	
Brook Trout >=200mm	Jun 25, 1992	1	1-1	BK3
	Jul 25, 1994	1	1-1	BK3
Brown Trout <200mm	Jun 25, 1992	3	3-4	
	Jul 25, 1994	2	2-2	
Brown Trout >=200mm	Jun 25, 1992	4	4-6	BR3
Longnose Dace	Jun 25, 1992	51	52-60	
	Jul 25, 1994	51	45-61	
Rainbow Trout <200mm	Jun 25, 1992	6	6-8	
	Jul 25, 1994	2	2-2	

Site 176

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 25, 1992	110	108-114	
	Jul 21, 1994	368	359-377	
Brook Trout >=200mm	Jul 21, 1994	2	2-3	BK2
Brown Trout <200mm	Jun 25, 1992	1	1-1	

Brown Trout >=200mm	Jun 25, 1992	7	7-7	BR3
Longnose Dace	Jun 25, 1992	29	21-50	
	Jul 21, 1994	39	40-48	
Rainbow Trout <200mm	Jul 21, 1994	1	1-1	

Site 193

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jun 26, 1992	205	200-211	
	Jul 07, 1993	139	136-144	
	Jul 20, 1994	412	408-417	
Brown Trout <200mm	Jun 26, 1992	1	1-1	
	Jul 07, 1993	1	1-1	

Site 195

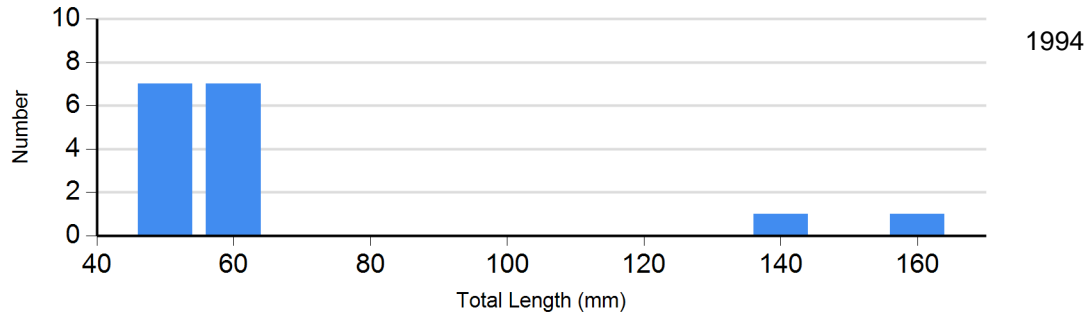
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Brook Trout <200mm	Jul 06, 1992	206	182-230	
	Jul 07, 1993	98	94-104	
	Jul 20, 1994	365	346-384	
Brook Trout >=200mm	Jul 06, 1992	2	2-3	BK2

Length Frequency Distribution

Length frequency histogram of species sampled by year.

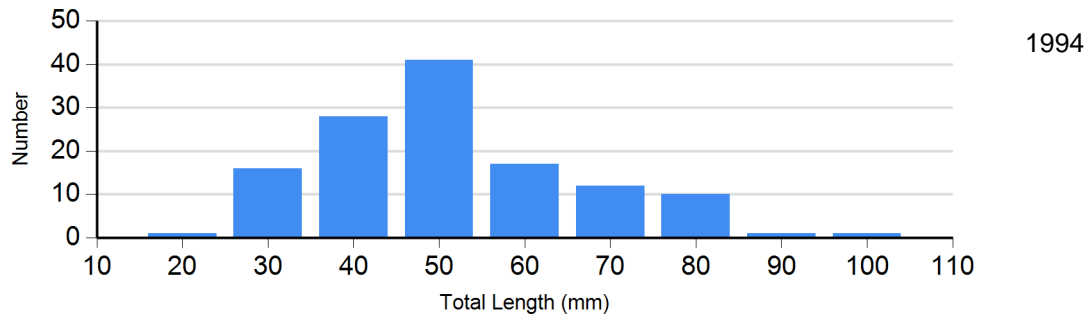
Site: 44

Species: Brook Trout



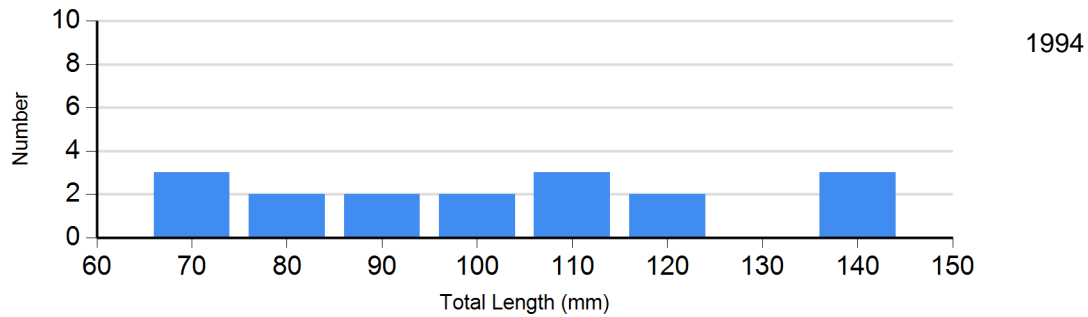
Site: 44

Species: Longnose Dace

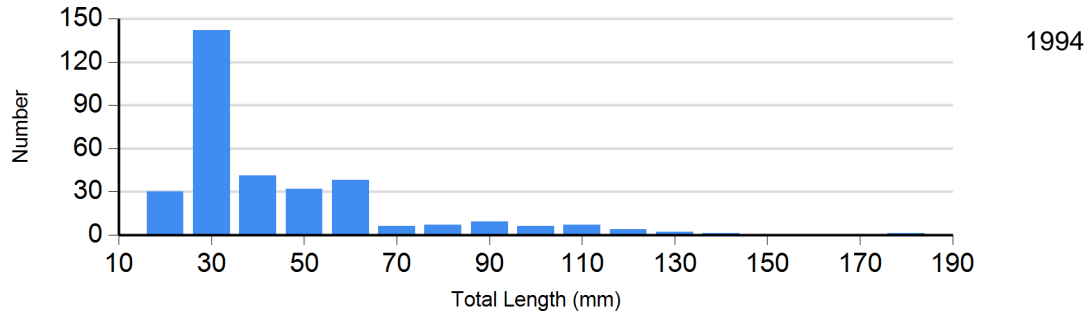


Site: 44

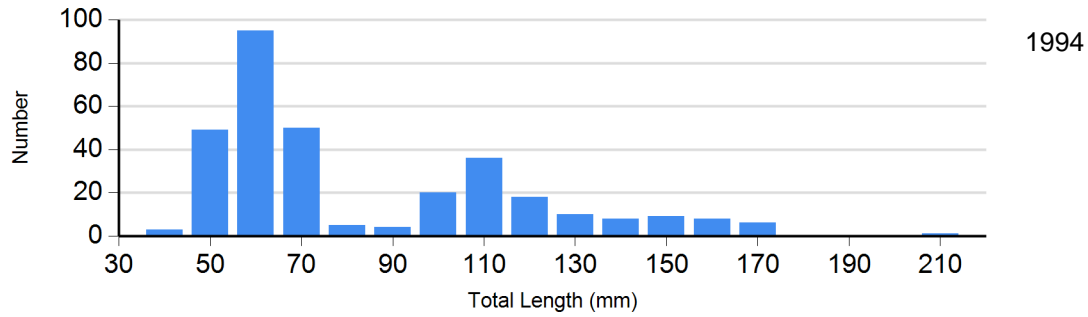
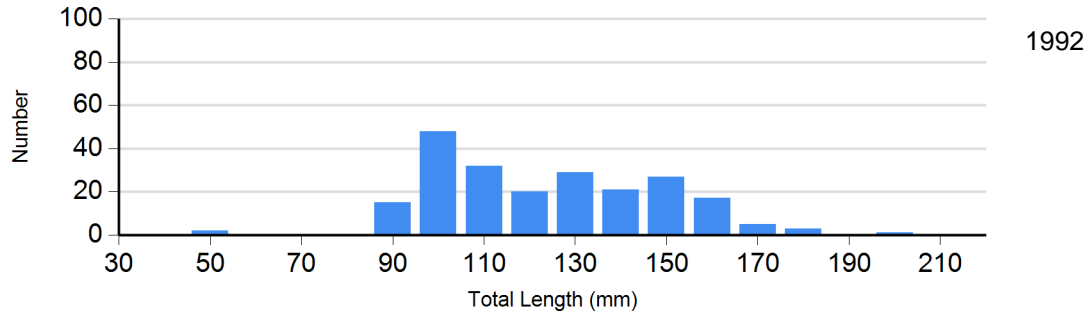
Species: Mountain Sucker



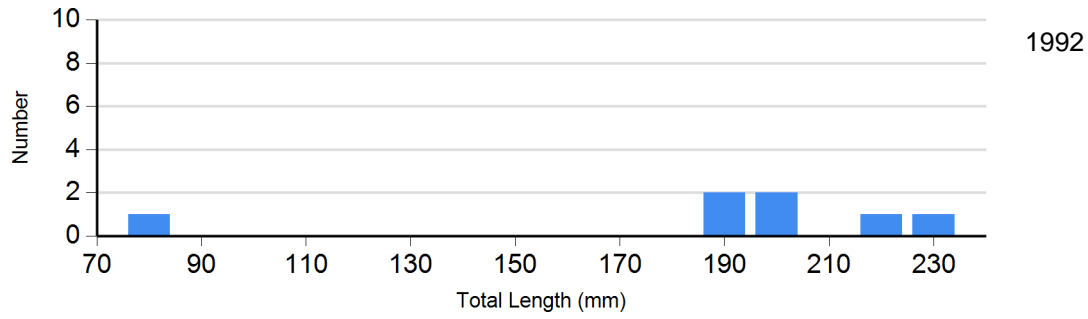
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Species: White Sucker



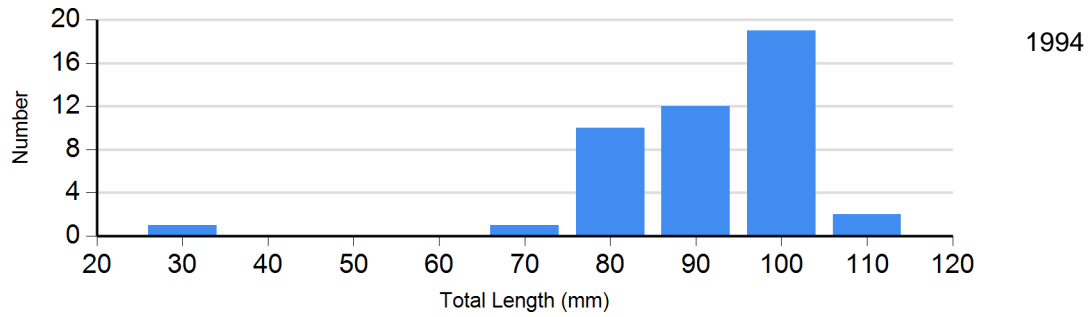
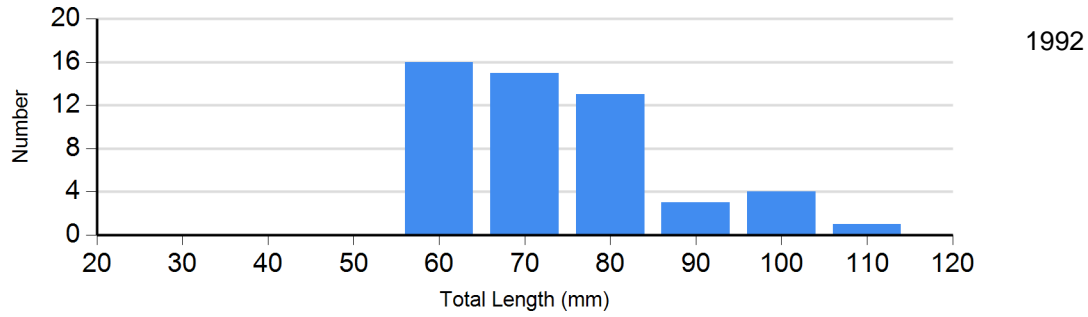
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Species: Brook Trout



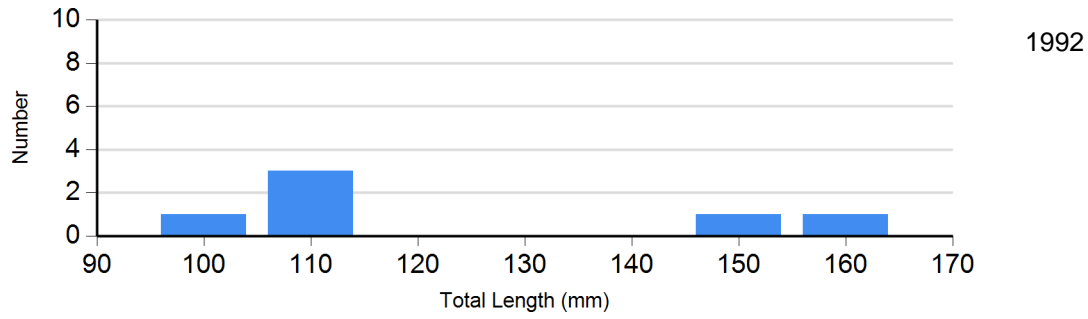
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Species: Brown Trout



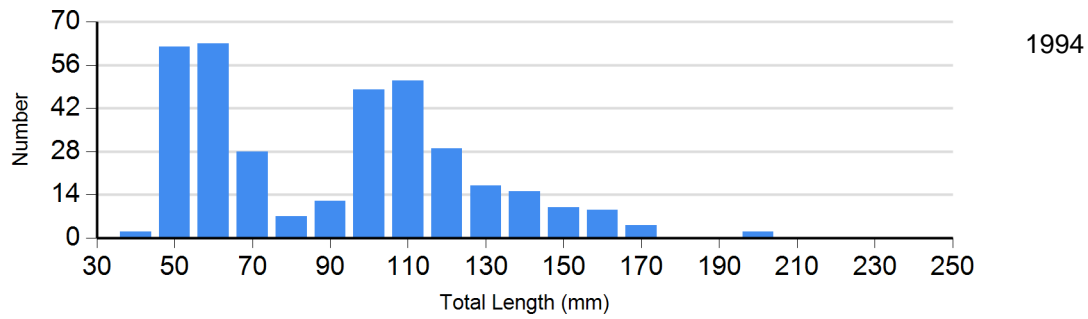
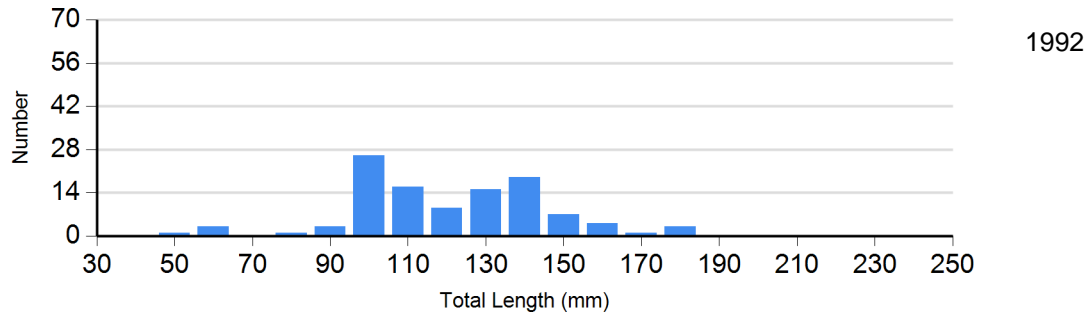
Site: 152
Species: Longnose Dace



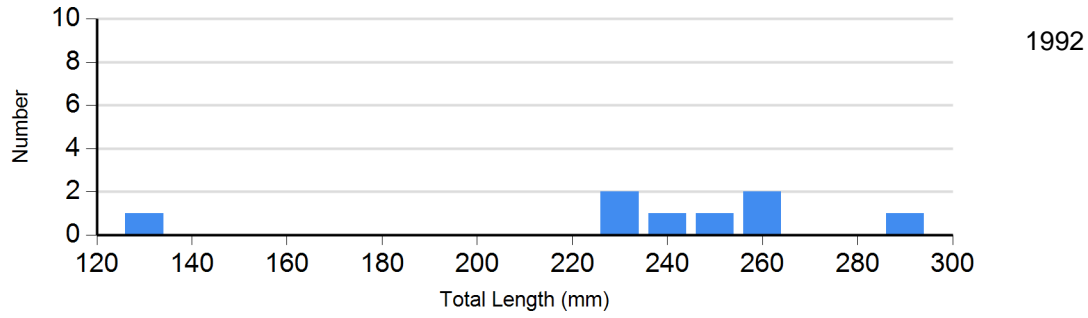
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Species: Rainbow Trout



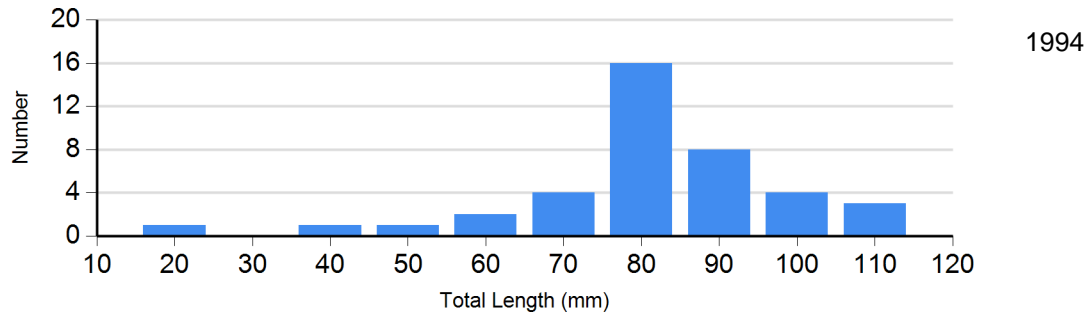
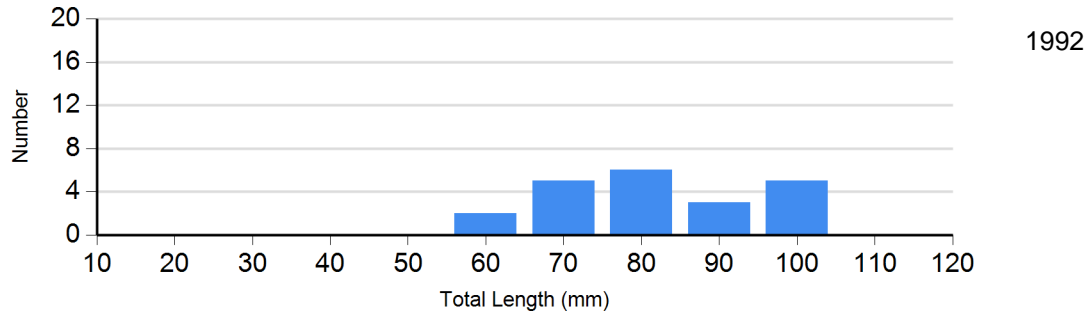
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Species: Brook Trout



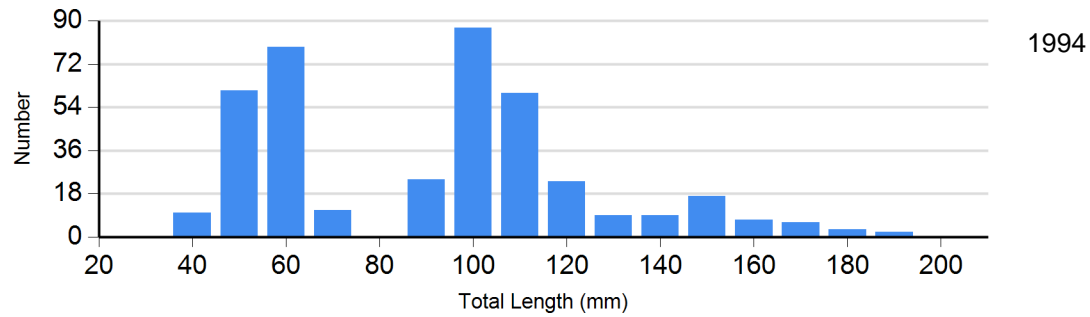
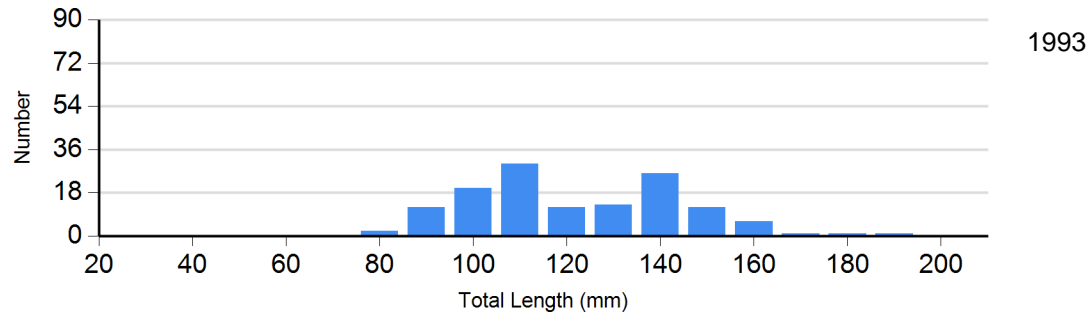
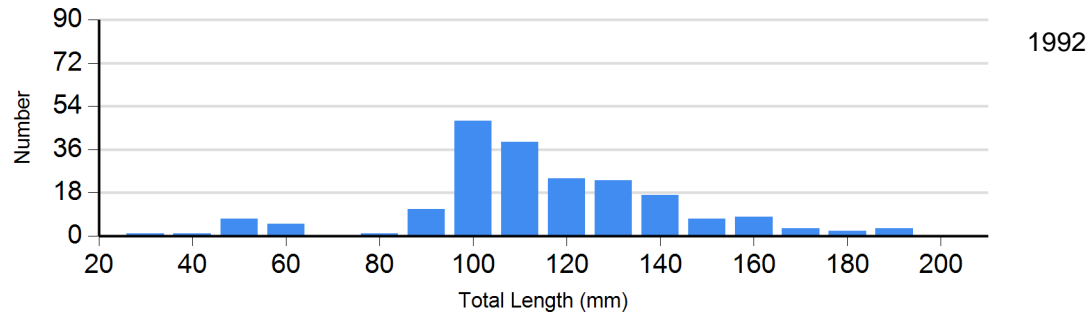
Site: 176
Species: Brown Trout



Site: 176
Species: Longnose Dace



Site: 193
Species: Brook Trout



Site: 195
Species: Brook Trout

