

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Fall River, Fall River County
27-0023-00
2017

Table 1. Population and Biomass Estimates for Fall River

Site Number: 30
Site Midpoint (Latitude, Longitude): 43.40294269, -103.41199702
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: None

Date Sampled: 10/08/2017
Site Length (m): 100
Mean Width (m): 5.9
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)
Creek Chub	All	14	14	15	14	238	8	140	96	7.51	225	111.5	35.3
Green Sunfish	All	10	10	11	10	170	10	100	69	8.79	161	129.6	57.9
Jack Dempsey	All	1	1	2	1	17	0	10	7	0.21	16	88.0	14.0
Mountain Sucker	All	1	1	1	1	17	1	10	7	0.68	16	170.0	45.0
White Sucker	All	14	14	16	14	238	36	140	96	31.83	225	168.9	149.8

Site Number: 88
Site Midpoint (Latitude, Longitude): 43.41812442, -103.45778048
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: None

Date Sampled: 08/10/2017
Site Length (m): 100
Mean Width (m): 4.4
Number of Pass: 3
Conductivity (umhos/cm):
pH:
Water Temperature (C): 24.0
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)
Creek Chub	All	45	46	49	45	1035	51	460	419	45.13	740	159.4	48.8
Jack Dempsey	All	114	114	115	114	2564	125	1140	1039	111.35	1834	105.6	48.6
White Sucker	All	8	8	10	8	180	20	80	73	17.95	129	194.0	111.7

Site Number: 117

Site Midpoint (Latitude, Longitude): 43.43429803, -103.48116151

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: None

Date Sampled: 08/08/2017

Site Length (m): 100

Mean Width (m): 7.4

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)
Jack Dempsey	All	88	89	92	88	1201	32	890	486	28.71	1432	102.0	26.8
Longnose Dace	All	25	25	27	25	337	2	250	137	1.81	402	71.4	6.0
White Sucker	All	2	2	2	2	27	2	20	11	1.55	32	184.5	64.5

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 Fall River, 2007-2017

Site 30

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Creek Chub	May 20, 2015	36	24-66	
	Jun 20, 2016	9	9-10	
	Oct 08, 2017	14	14-15	
Green Sunfish	May 20, 2015	2	2-6	
	Jun 20, 2016	8	8-9	
	Oct 08, 2017	10	10-11	
Jack Dempsey	Oct 08, 2017	1	1-2	

Longnose Dace	Jun 20, 2016	37	35-42
Mountain Sucker	May 20, 2015	2	2-2
	Jun 20, 2016	6	6-8
	Oct 08, 2017	1	1-1
White Sucker	May 20, 2015	17	17-18
	Jun 20, 2016	18	18-20
	Oct 08, 2017	14	14-16

Site 88

Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Creek Chub	May 19, 2015	26	26-27	
	Jun 20, 2016	5	5-7	
	Aug 10, 2017	46	45-49	
Jack Dempsey	May 19, 2015	23	23-25	
	Jun 20, 2016	100	96-106	
	Aug 10, 2017	114	114-115	
Mountain Sucker	May 19, 2015	4	4-4	

White Sucker	May 19, 2015	8	7-14
	Jun 20, 2016	2	2-3
	Aug 10, 2017	8	8-10

Site 117

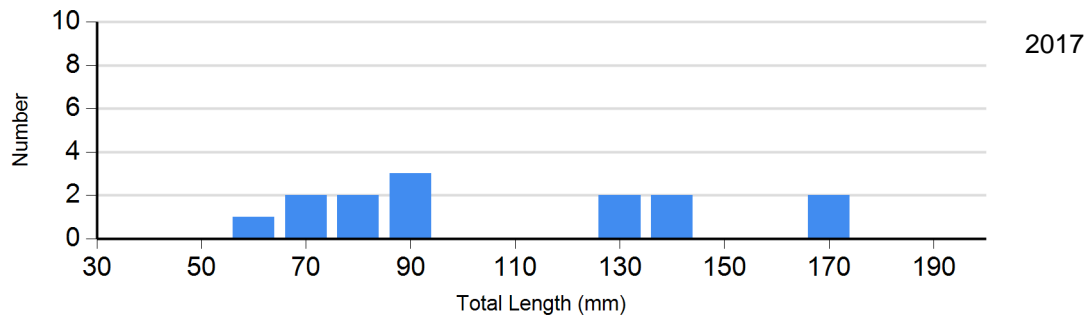
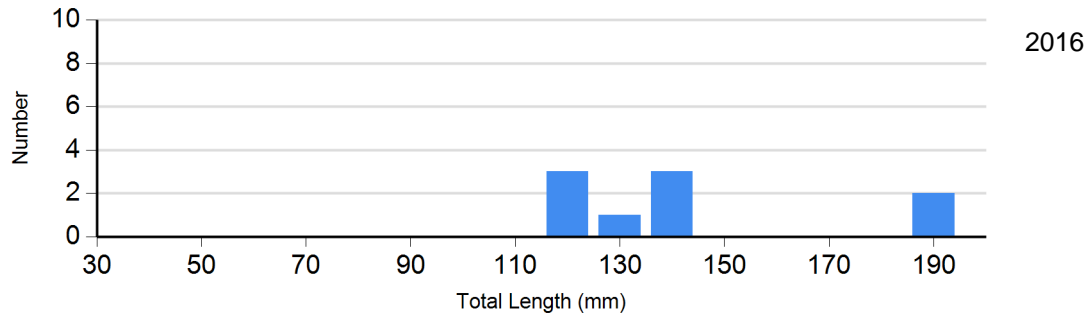
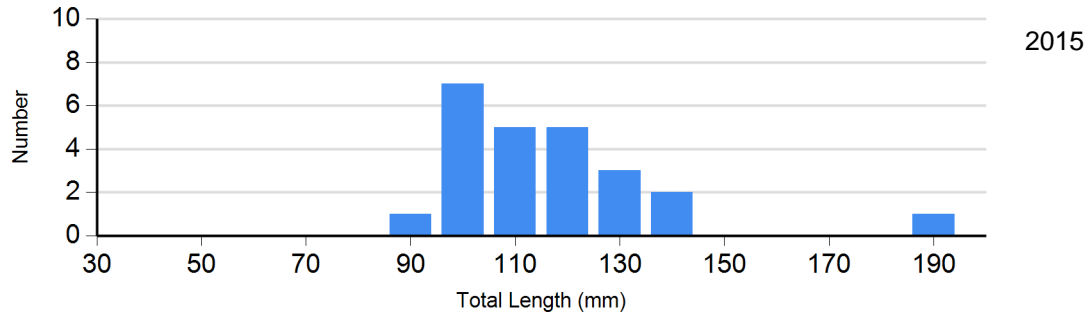
Species/Size	Date	Pop Est.	(95% C.I.)	Stream Classification
Creek Chub	May 19, 2015	9	9-10	
	Jun 20, 2016	37	31-49	
Green Sunfish	May 19, 2015	1	1-1	
	Jun 20, 2016	2	2-3	
Jack Dempsey	May 19, 2015	699	170-1908	
	Jun 20, 2016	39	37-44	
	Aug 08, 2017	89	88-92	
Longnose Dace	Aug 08, 2017	25	25-27	
White Sucker	Jun 20, 2016	6	6-7	
	Aug 08, 2017	2	2-2	

Length Frequency Distribution

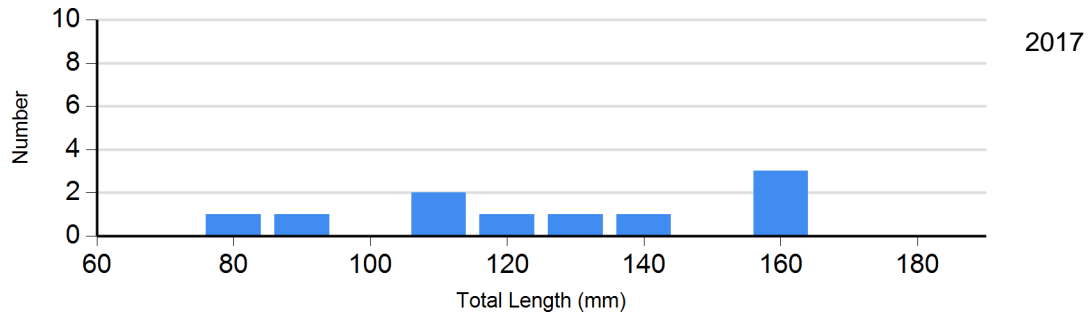
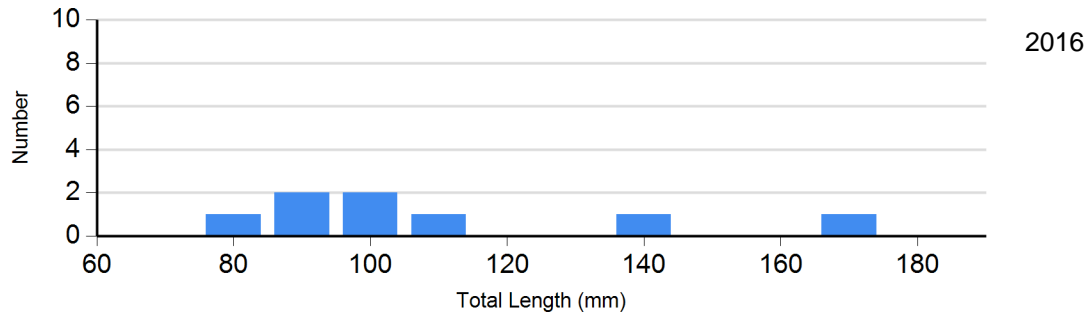
Length frequency histogram of species sampled by year.

Site: 30

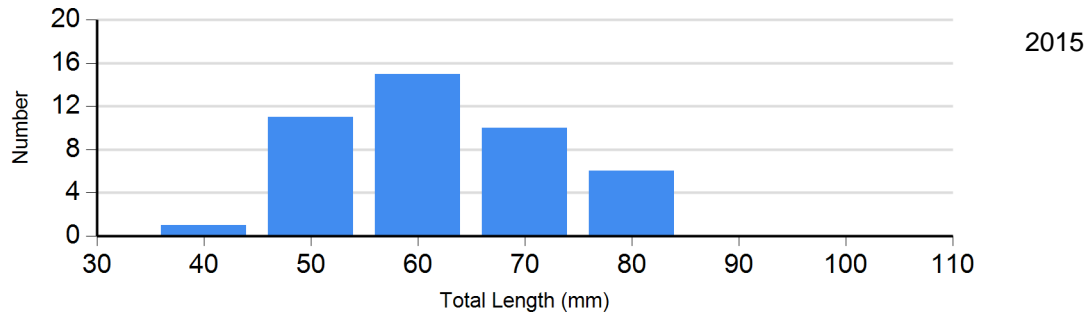
Species: Creek Chub

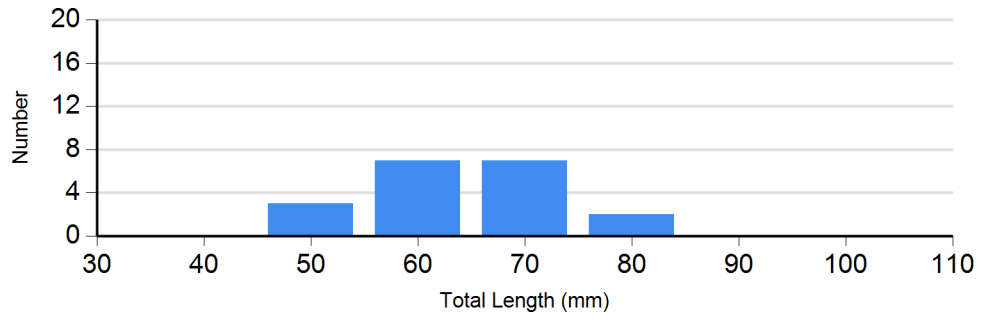
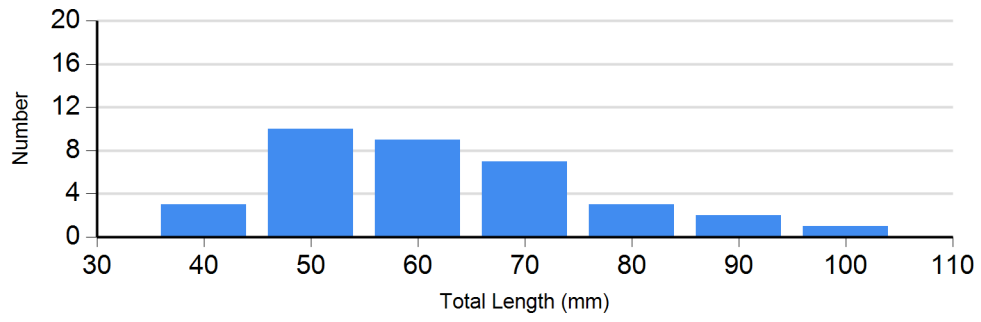


Site: 30
Species: Green Sunfish

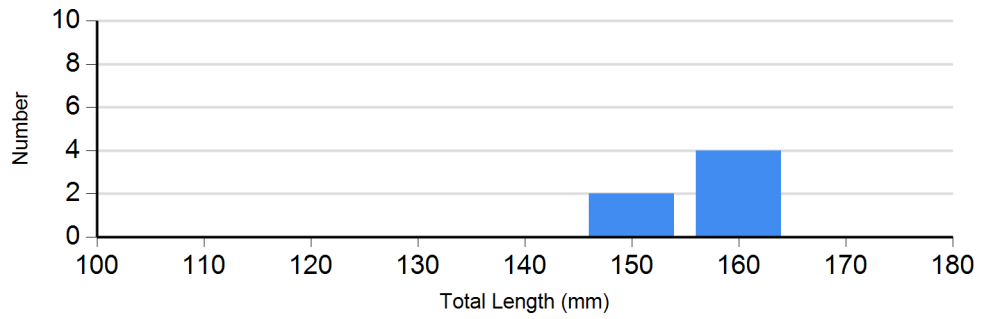


Site: 30
Species: Longnose Dace

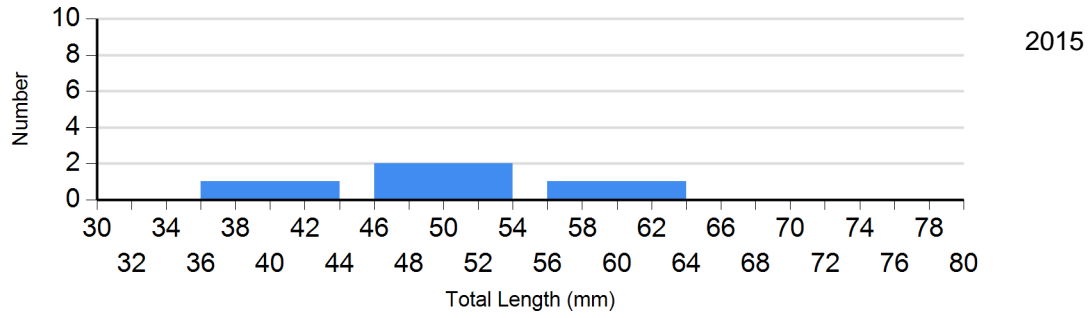




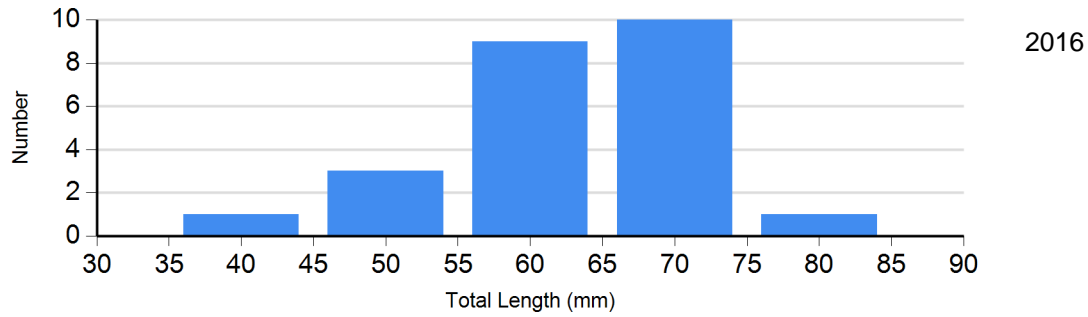
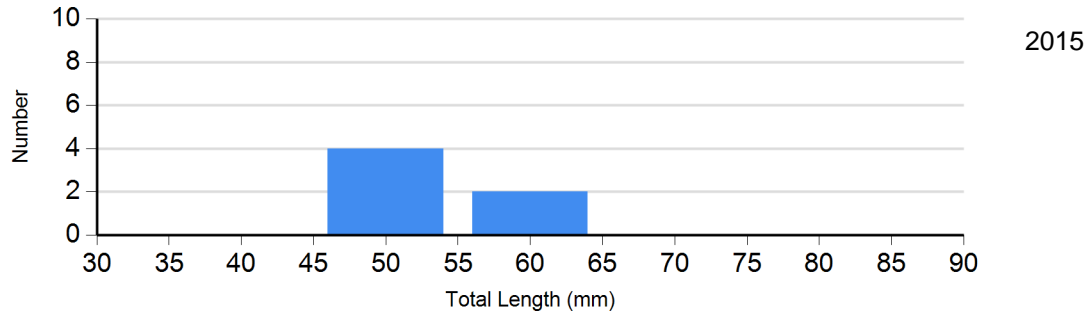
Site: 30
Species: Mountain Sucker



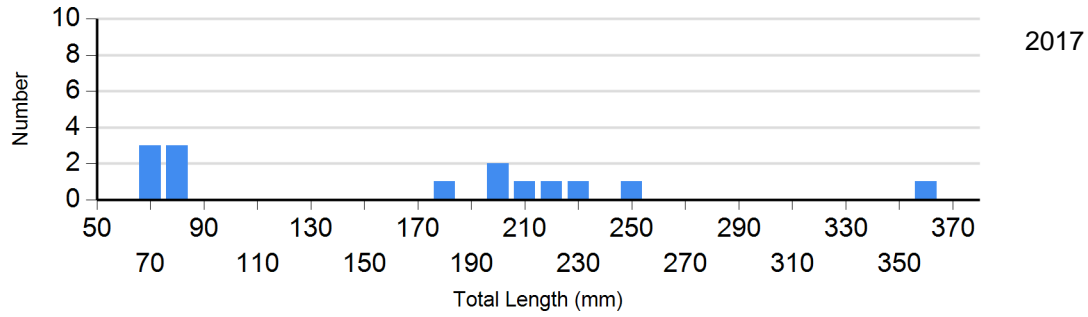
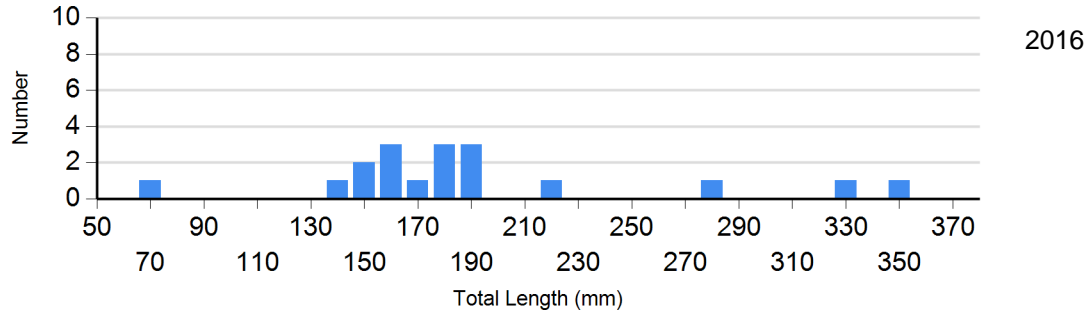
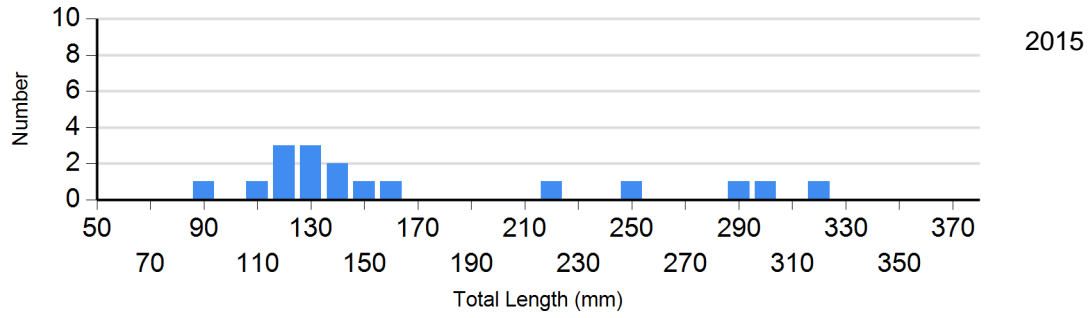
Site: 30
Species: Plains Topminnow



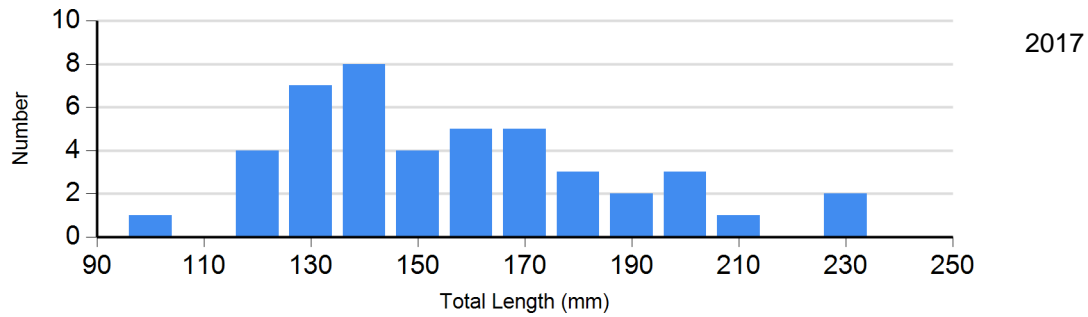
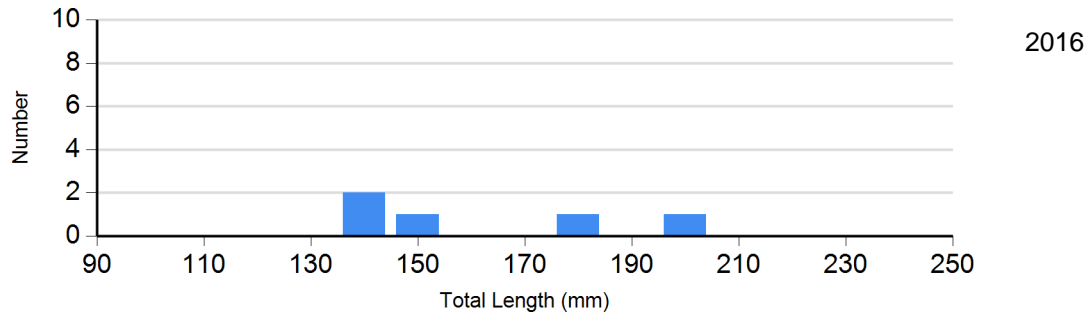
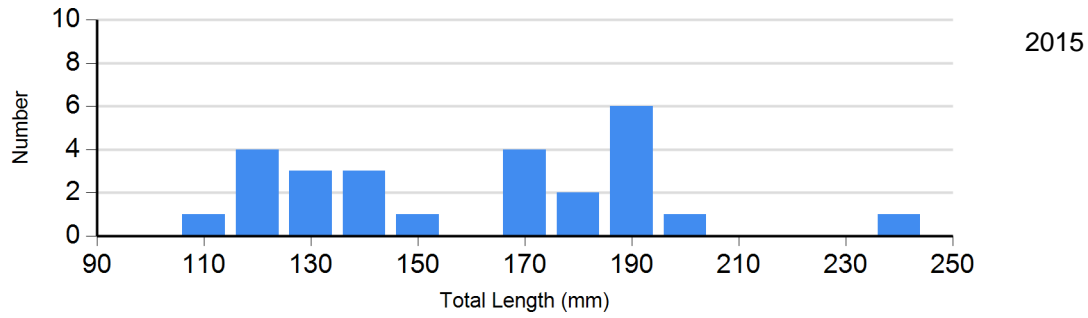
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Species: Sand Shiner



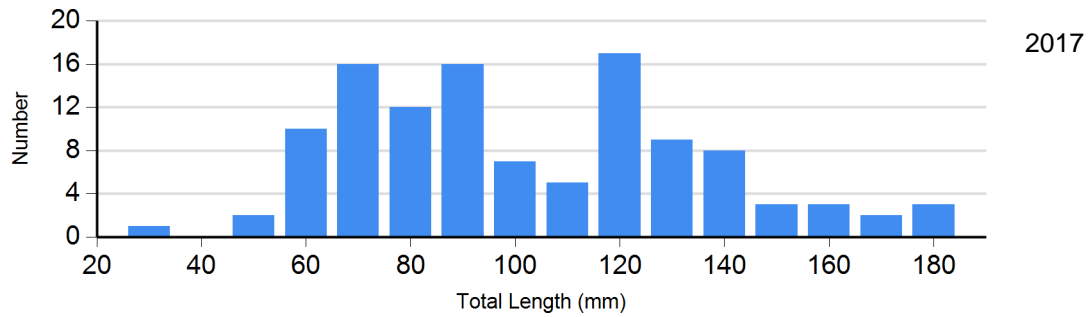
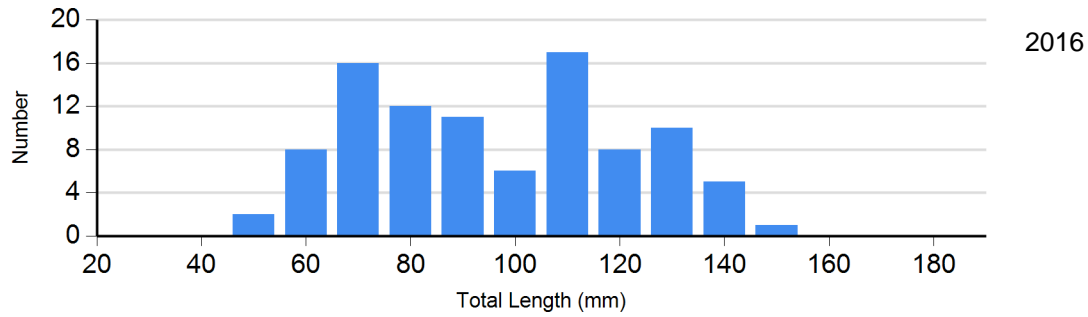
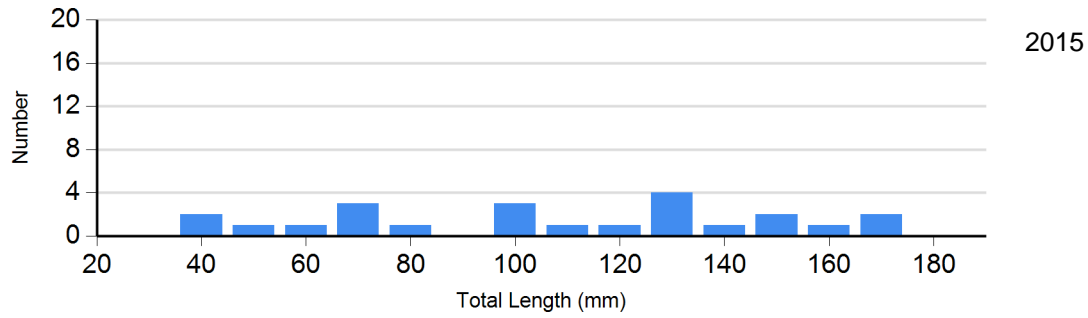
Site: 30
Species: White Sucker



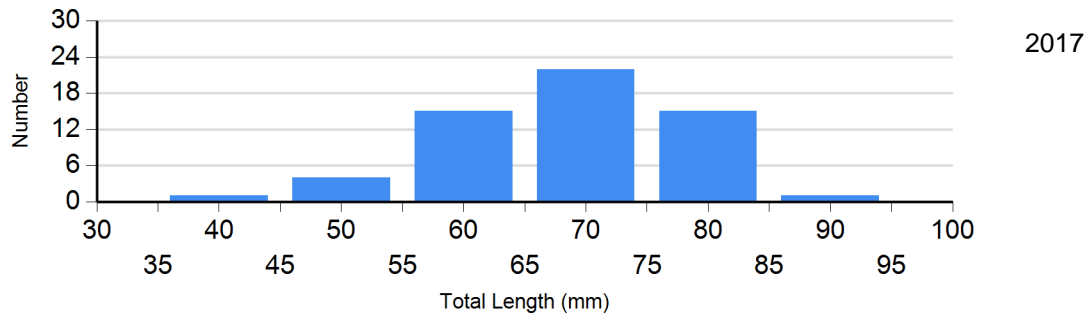
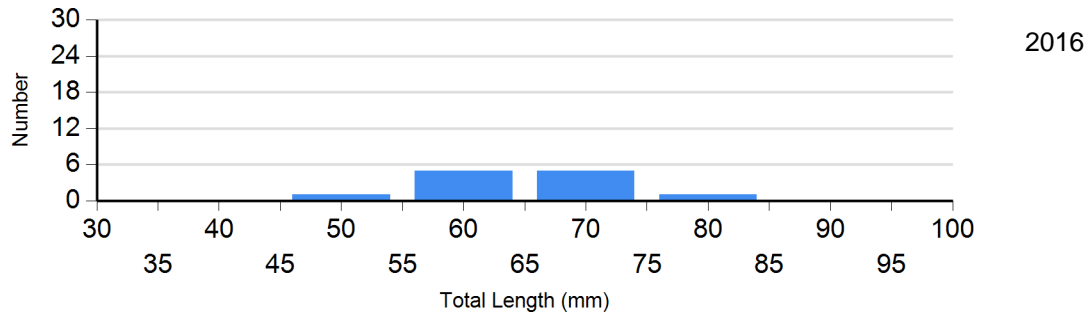
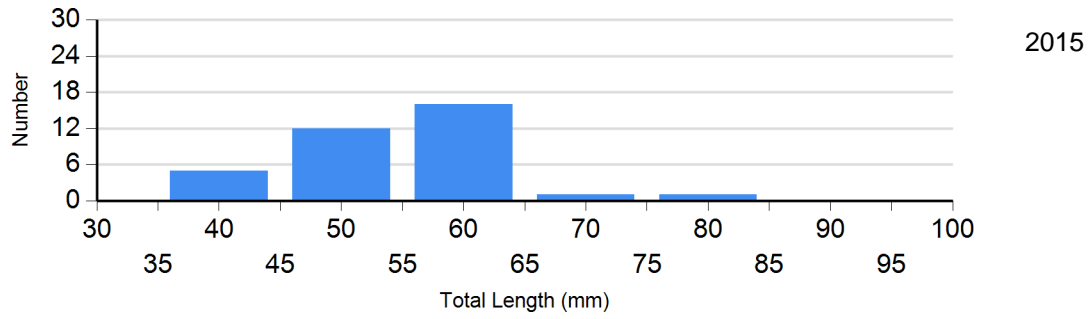
Site: 88
Species: Creek Chub



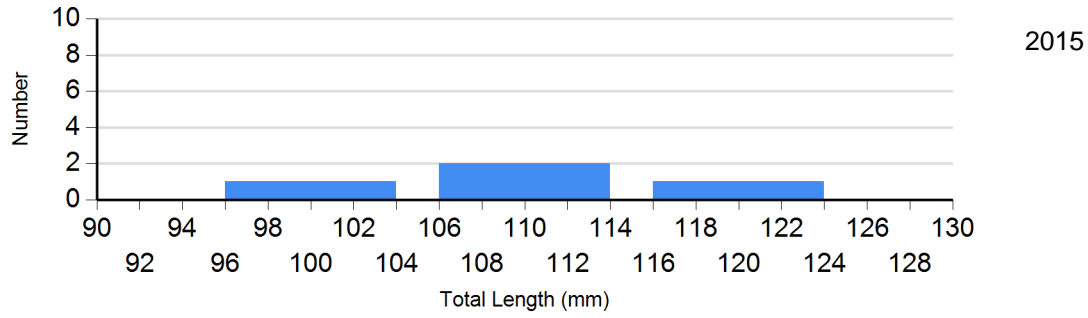
Site: 88
Species: Jack Dempsey



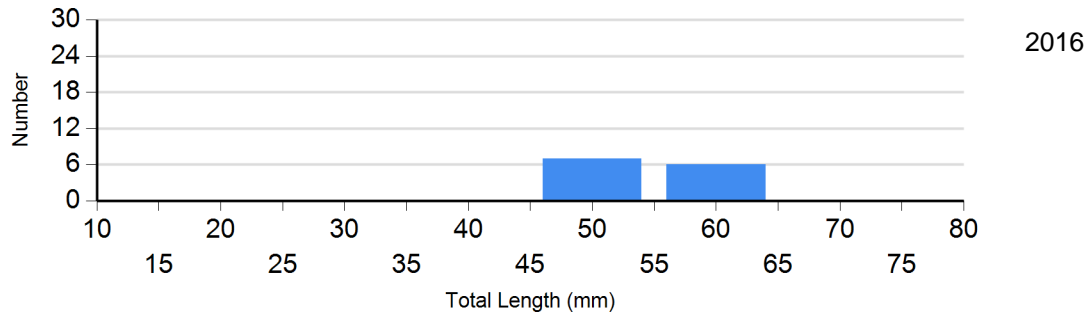
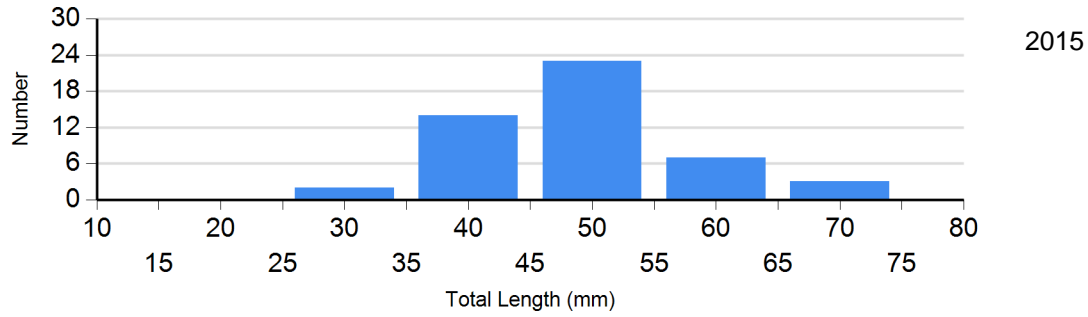
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Species: Longnose Dace

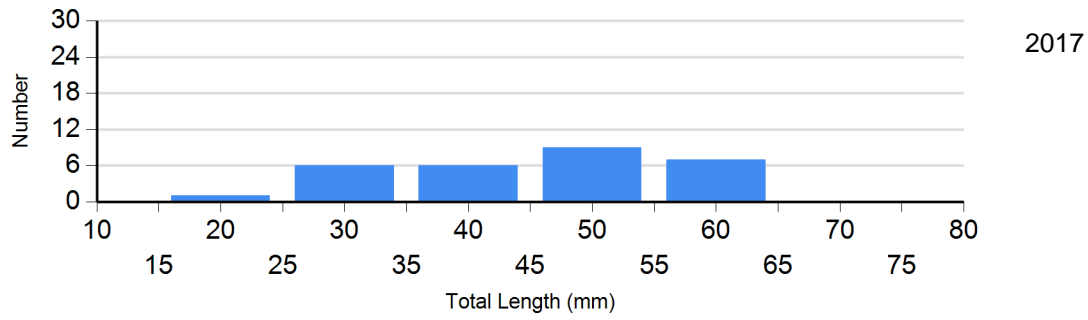


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Species: Mountain Sucker

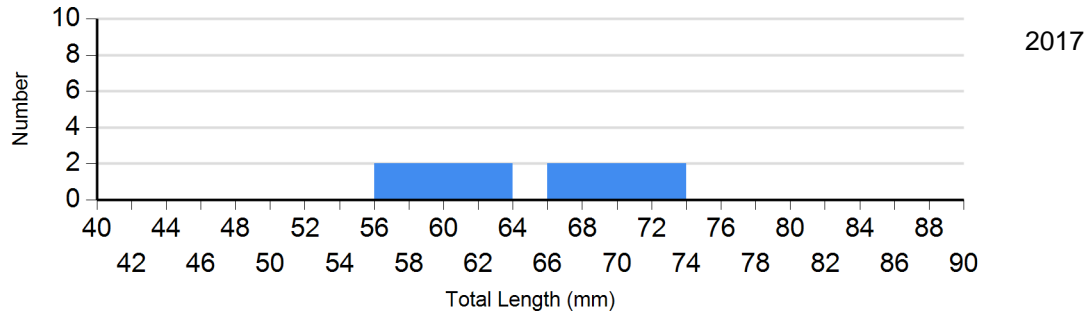
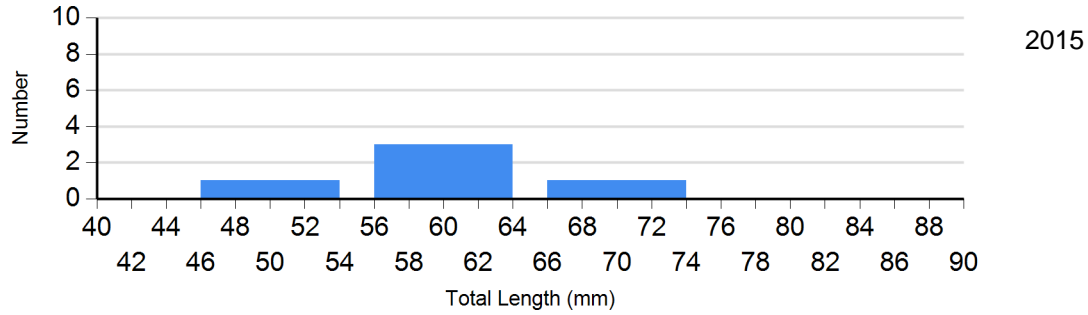


Site: 88
Species: Plains Topminnow

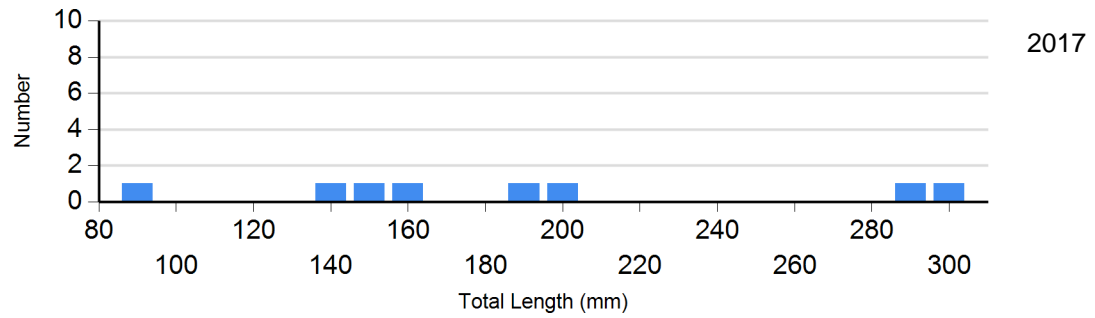
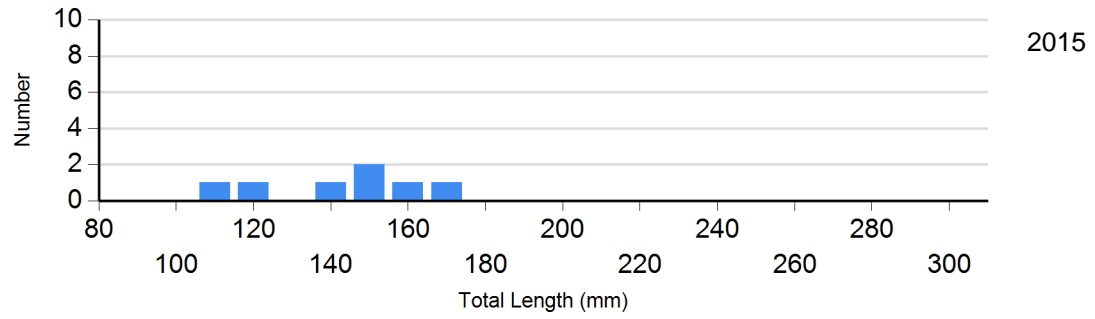




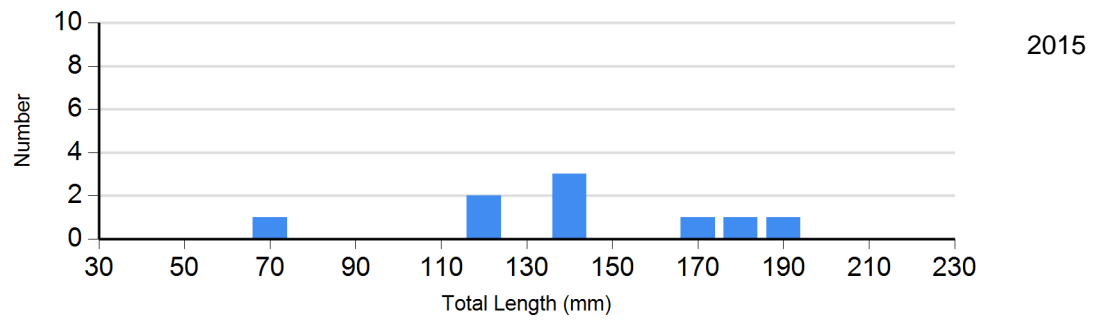
Site: 88
Species: Sand Shiner

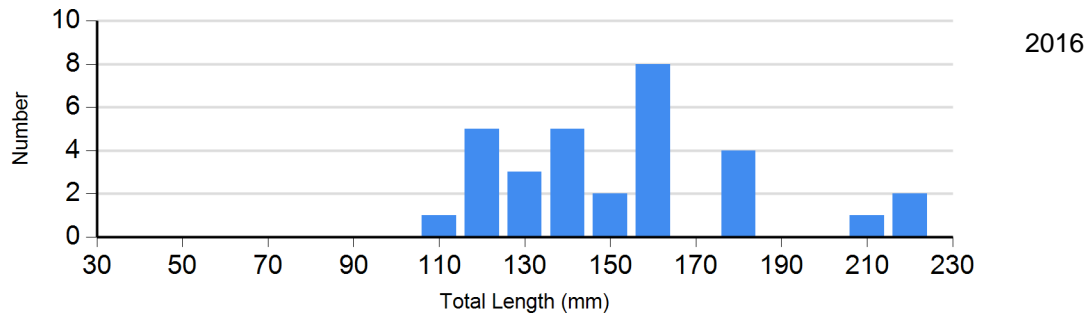


Site: 88
Species: White Sucker

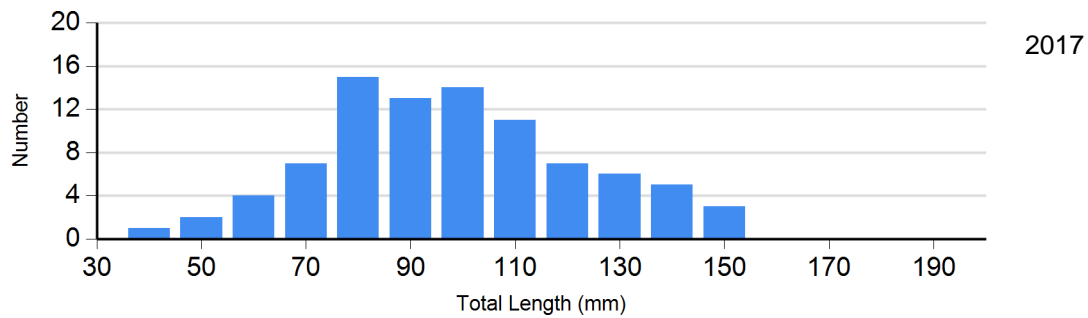
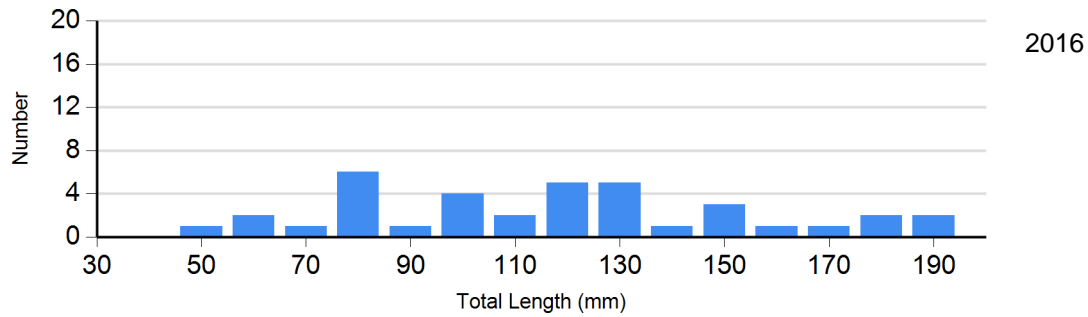
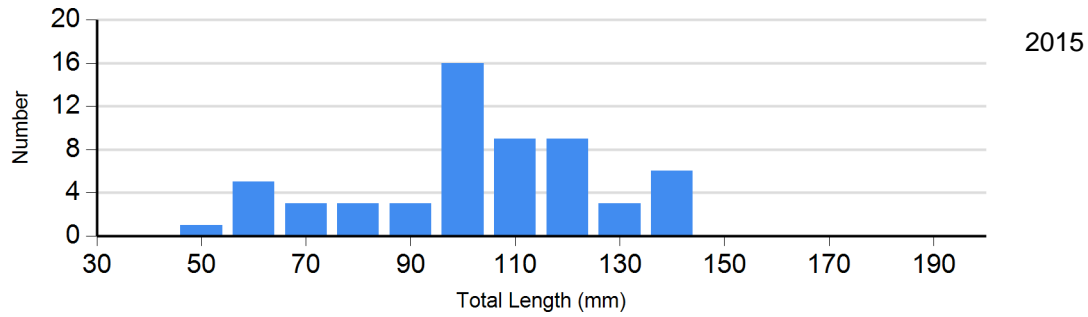


Site: 117
Species: Creek Chub

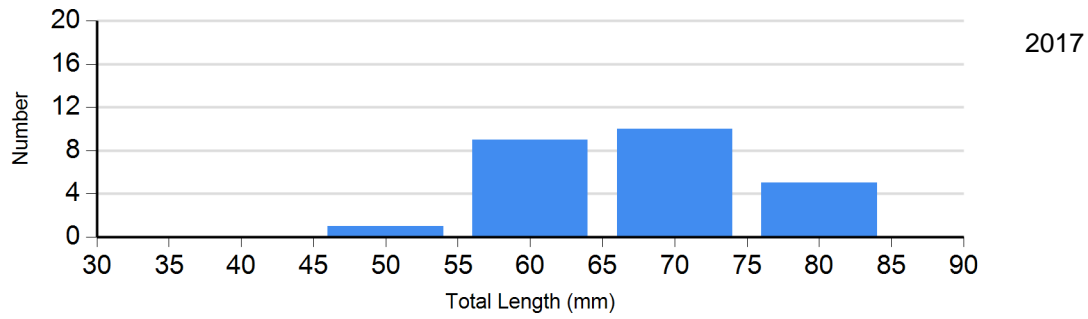
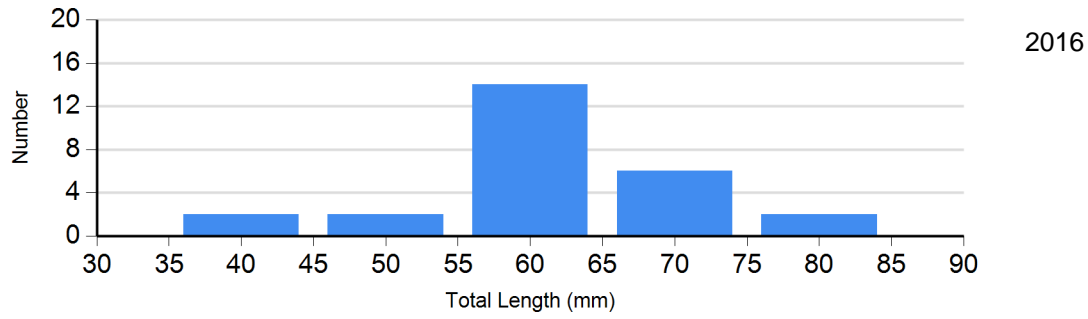
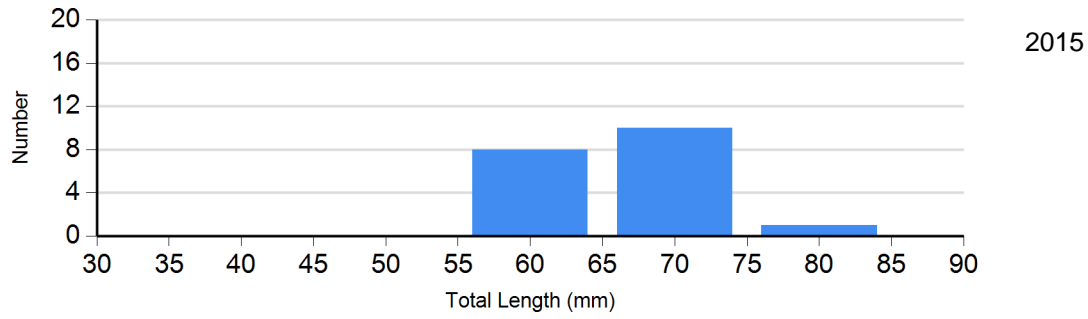




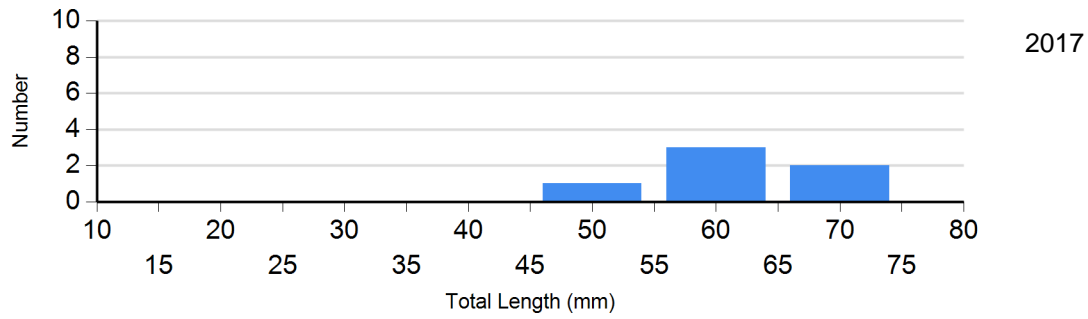
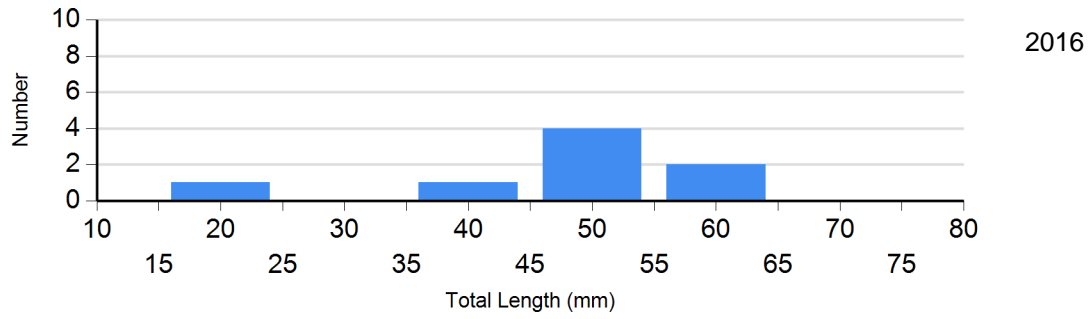
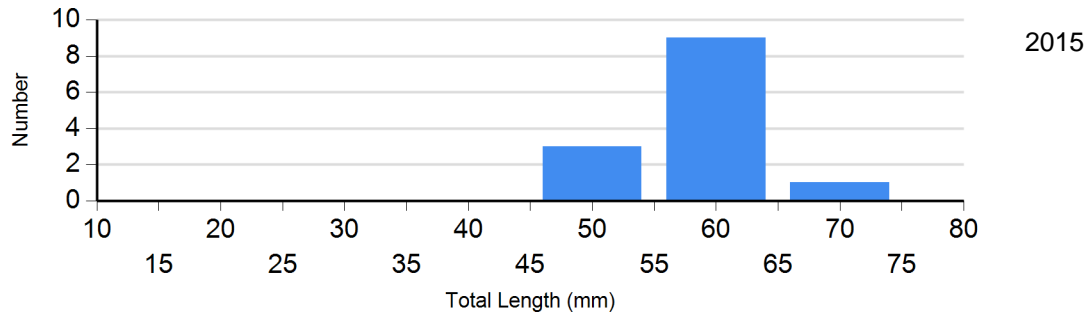
Site: 117
Species: Jack Dempsey



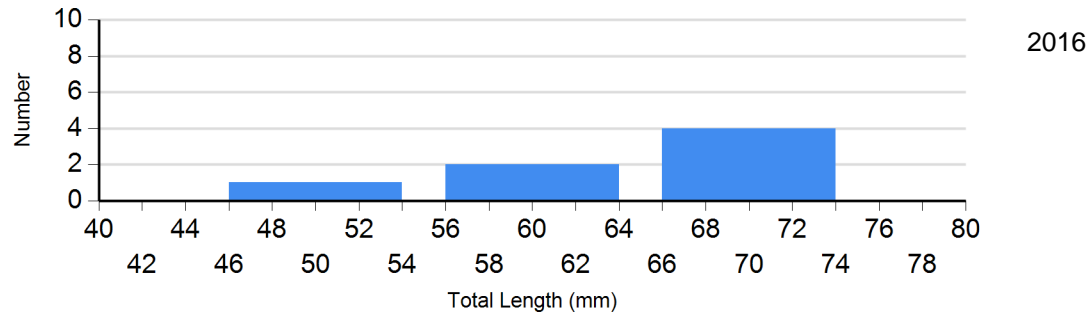
Site: 117
Species: Longnose Dace



Site: 117
Species: Plains Topminnow



Site: 117
Species: Sand Shiner



Site: 117
Species: White Sucker

