

SOUTH DAKOTA BLACK HILLS COLD STREAM SURVEY
Whitewood Creek, Lawrence County
09-0056-00
2009

Table 1. Population and Biomass Estimates for Whitewood Creek

Site Number: 43
Site Midpoint (Latitude, Longitude): 44.62164896, -103.47136669
Survey Completed by: Unknown Consultant Firm for mining
Stream Classification: BR3

Date Sampled: 10/21/2009
Site Length (m): 100
Mean Width (m): 0.0
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) |
|-----------------|------------|-----------------------|----------------|--------------|--------------|----------------|-----------------|----------|------------|--------------|------------|------------------|---------------------|
| Brown Trout | <200mm | 5 | 5 | 5 | 5 | 0 | 0 | 50 | 0 | 0.00 | 80 | 134.6 | 24.0 |
| Brown Trout | >=200mm | 8 | 8 | 8 | 8 | 0 | 0 | 80 | 0 | 0.00 | 129 | 305.3 | 307.3 |
| Brown Trout | All | 13 | 13 | 13 | 13 | 0 | 0 | 130 | 0 | 0.00 | 209 | 239.6 | 198.3 |
| Creek Chub | All | 209 | 213 | 218 | 209 | 0 | 0 | 2130 | 0 | 0.00 | 3427 | 99.4 | 26.8 |
| Fathead Minnow | All | 1 | 1 | 1 | 1 | 0 | 0 | 10 | 0 | 0.00 | 16 | 62.0 | 3.0 |
| Longnose Dace | All | 393 | 450 | 481 | 419 | 0 | 0 | 4500 | 0 | 0.00 | 7241 | 66.2 | 5.4 |
| Mountain Sucker | All | 42 | 42 | 44 | 42 | 0 | 0 | 420 | 0 | 0.00 | 676 | 102.2 | 27.5 |
| Stone Cat | All | 4 | 8 | 42 | 4 | 0 | 0 | 80 | 0 | 0.00 | 129 | 119.8 | 32.3 |
| White Sucker | All | 58 | 58 | 59 | 58 | 0 | 0 | 580 | 0 | 0.00 | 933 | 199.4 | 187.0 |

Site Number: 44
Site Midpoint (Latitude, Longitude): 44.62092026, -103.47188053
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: None

Date Sampled: 08/17/2009
Site Length (m): 100
Mean Width (m): 9.6
Number of Pass: 1
Conductivity (umhos/cm): 1342
pH: 8.6
Water Temperature (C): 19.6
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) |
|--------------------|------------|-----------------------|----------------|--------------|--------------|----------------|-----------------|----------|------------|--------------|------------|------------------|---------------------|
| Common Carp | All | 1 | 1 | 1 | 1 | 10 | 18 | 10 | 4 | 16.29 | 16 | 440.0 | 1746.0 |
| Flathead Chub | All | 2 | 2 | 2 | 2 | 21 | 0 | 20 | 8 | 0.36 | 32 | 129.5 | 19.5 |
| Mountain Sucker | All | 3 | 3 | 3 | 3 | 31 | 0 | 30 | 13 | 0.24 | 48 | 87.3 | 8.5 |
| Shorthead Redhorse | All | 4 | 4 | 4 | 4 | 42 | 5 | 40 | 17 | 4.37 | 64 | 186.5 | 117.3 |

Site Number: 44

Site Midpoint (Latitude, Longitude): 44.62092026, -103.47188053

Survey Completed by: Unknown Consultant Firm for mining

Stream Classification: BR3

Date Sampled: 10/20/2009

Site Length (m): 100

Mean Width (m): 0.0

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) |
|--------------------|------------|-----------------------|----------------|--------------|--------------|----------------|-----------------|----------|------------|--------------|------------|------------------|---------------------|
| Brown Trout | >=200mm | 1 | 1 | 1 | 1 | 0 | 0 | 10 | 0 | 0.00 | 16 | 268.0 | 212.0 |
| Brown Trout | All | 1 | 1 | 1 | 1 | 0 | 0 | 10 | 0 | 0.00 | 16 | 268.0 | 212.0 |
| Creek Chub | All | 8 | 8 | 10 | 8 | 0 | 0 | 80 | 0 | 0.00 | 129 | 89.0 | 46.8 |
| Flathead Chub | All | 1 | 1 | 1 | 1 | 0 | 0 | 10 | 0 | 0.00 | 16 | 140.0 | 21.0 |
| Green Sunfish | All | 9 | 9 | 10 | 9 | 0 | 0 | 90 | 0 | 0.00 | 145 | 76.4 | 17.4 |
| Longnose Dace | All | 89 | 108 | 130 | 89 | 0 | 0 | 1080 | 0 | 0.00 | 1738 | 71.7 | 11.7 |
| Mountain Sucker | All | 11 | 11 | 11 | 11 | 0 | 0 | 110 | 0 | 0.00 | 177 | 115.5 | 21.6 |
| Sand Shiner | All | 5 | 5 | 5 | 5 | 0 | 0 | 50 | 0 | 0.00 | 80 | 64.2 | 5.8 |
| Shorthead Redhorse | All | 6 | 6 | 7 | 6 | 0 | 0 | 60 | 0 | 0.00 | 97 | 121.7 | 28.8 |
| Stone Cat | All | 56 | 87 | 137 | 56 | 0 | 0 | 870 | 0 | 0.00 | 1400 | 111.0 | 20.8 |
| White Sucker | All | 1 | 1 | 5 | 1 | 0 | 0 | 10 | 0 | 0.00 | 16 | 194.0 | 92.0 |

Site Number: 131
Site Midpoint (Latitude, Longitude): 44.58943150, -103.52027768
Survey Completed by: Unknown Consultant Firm for mining
Stream Classification: BR0

Date Sampled: 10/20/2009
Site Length (m): 100
Mean Width (m): 0.0
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) |
|--------------------|------------|-----------------------|----------------|--------------|--------------|----------------|-----------------|----------|------------|--------------|------------|------------------|---------------------|
| Brown Trout | <200mm | 1 | 1 | 1 | 1 | 0 | 0 | 10 | 0 | 0.00 | 16 | 117.0 | 13.0 |
| Brown Trout | All | 1 | 1 | 1 | 1 | 0 | 0 | 10 | 0 | 0.00 | 16 | 117.0 | 13.0 |
| Creek Chub | All | 46 | 50 | 57 | 46 | 0 | 0 | 500 | 0 | 0.00 | 805 | 118.8 | 33.8 |
| Fathead Minnow | All | 1 | 1 | 1 | 1 | 0 | 0 | 10 | 0 | 0.00 | 16 | 66.0 | 3.0 |
| Green Sunfish | All | 4 | 4 | 6 | 4 | 0 | 0 | 40 | 0 | 0.00 | 64 | 76.3 | 9.0 |
| Longnose Dace | All | 341 | 446 | 507 | 385 | 0 | 0 | 4460 | 0 | 0.00 | 7176 | 53.9 | 2.8 |
| Mountain Sucker | All | 27 | 37 | 59 | 27 | 0 | 0 | 370 | 0 | 0.00 | 595 | 64.2 | 3.4 |
| Shorthead Redhorse | All | 1 | 1 | 2 | 1 | 0 | 0 | 10 | 0 | 0.00 | 16 | 62.0 | 3.0 |
| Stone Cat | All | 19 | 18 | 26 | 19 | 0 | 0 | 180 | 0 | 0.00 | 290 | 118.8 | 24.2 |
| White Sucker | All | 34 | 58 | 112 | 34 | 0 | 0 | 580 | 0 | 0.00 | 933 | 88.2 | 28.2 |

Site Number: 295
Site Midpoint (Latitude, Longitude): 44.51740810, -103.60458517
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BR3

Date Sampled: 06/23/2009
Site Length (m): 100
Mean Width (m): 9.2
Number of Pass: 1

Conductivity (umhos/cm): 606
pH: 8.3
Water Temperature (C): 21.5
Voltage: 200

| 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 | 11 | 1 | 10 | 4 | 1.12 | 16 | 210.0 | 116.0 |

| | | | | | | | | | | | | | |
|-----------------|-----|----|----|----|----|-----|---|-----|-----|------|-----|-------|-------|
| Brown Trout | All | 1 | 1 | 1 | 1 | 11 | 1 | 10 | 4 | 1.12 | 16 | 210.0 | 116.0 |
| Mountain Sucker | All | 24 | 24 | 24 | 24 | 261 | 6 | 240 | 106 | 5.27 | 386 | 120.2 | 22.7 |

Site Number: 295
Site Midpoint (Latitude, Longitude): 44.51740810, -103.60458517
Survey Completed by: Unknown Consultant Firm for mining
Stream Classification: BR3

Date Sampled: 10/21/2009
Site Length (m): 100
Mean Width (m): 0.0
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) |
|-----------------|------------|-----------------------|----------------|--------------|--------------|----------------|-----------------|----------|------------|--------------|------------|------------------|---------------------|
| Brown Trout | <200mm | 14 | 14 | 16 | 14 | 0 | 0 | 140 | 0 | 0.00 | 225 | 133.4 | 24.0 |
| Brown Trout | >=200mm | 10 | 10 | 11 | 10 | 0 | 0 | 100 | 0 | 0.00 | 161 | 315.9 | 387.7 |
| Brown Trout | All | 24 | 24 | 26 | 24 | 0 | 0 | 240 | 0 | 0.00 | 386 | 209.5 | 175.5 |
| Creek Chub | All | 35 | 35 | 36 | 35 | 0 | 0 | 350 | 0 | 0.00 | 563 | 59.4 | 2.8 |
| Longnose Dace | All | 2540 | 4809 | 5446 | 4172 | 0 | 0 | 48090 | 0 | 0.00 | 77377 | 63.5 | 4.1 |
| Mountain Sucker | All | 141 | 154 | 167 | 141 | 0 | 0 | 1540 | 0 | 0.00 | 2478 | 85.7 | 12.2 |
| Stone Cat | All | 4 | 4 | 4 | 4 | 0 | 0 | 40 | 0 | 0.00 | 64 | 172.0 | 57.8 |
| White Sucker | All | 6 | 6 | 7 | 6 | 0 | 0 | 60 | 0 | 0.00 | 97 | 156.2 | 77.0 |

Site Number: 367
Site Midpoint (Latitude, Longitude): 44.47244974, -103.62471159
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: None

Date Sampled: 06/23/2009
Site Length (m): 100
Mean Width (m): 6.8
Number of Pass: 1
Conductivity (umhos/cm): 1045
pH: 9.6
Water Temperature (C): 17.2
Voltage: 150

| 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) |
|---------------|------------|-----------------------|----------------|--------------|--------------|----------------|-----------------|----------|------------|--------------|------------|------------------|---------------------|
| Longnose Dace | All | 1 | 1 | 1 | 1 | 15 | 0 | 10 | 6 | 0.01 | 16 | 43.0 | 1.0 |

Mountain Sucker All 51 51 51 51 751 16 510 304 13.90 821 111.6 20.7

Site Number: 515
Site Midpoint (Latitude, Longitude): 44.41178603, -103.69411585
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BR2

Date Sampled: 08/12/2009
Site Length (m): 100
Mean Width (m): 8.5
Number of Pass: 1
Conductivity (umhos/cm): 1224
pH: 9.2
Water Temperature (C): 22.0
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) |
|-----------------|------------|-----------------------|----------------|--------------|--------------|----------------|-----------------|----------|------------|--------------|------------|------------------|---------------------|
| Brown Trout | <200mm | 11 | 11 | 11 | 11 | 129 | 2 | 110 | 52 | 1.73 | 177 | 93.5 | 15.0 |
| Brown Trout | >=200mm | 17 | 17 | 17 | 17 | 199 | 137 | 170 | 81 | 122.41 | 274 | 379.9 | 687.7 |
| Brown Trout | All | 28 | 28 | 28 | 28 | 328 | 200 | 280 | 133 | 178.41 | 451 | 267.4 | 608.5 |
| Mountain Sucker | All | 91 | 91 | 91 | 91 | 1067 | 31 | 910 | 432 | 28.07 | 1464 | 99.1 | 29.5 |

Site Number: 539
Site Midpoint (Latitude, Longitude): 44.39558878, -103.70337461
Survey Completed by: South Dakota Game, Fish and Parks
Stream Classification: BR2, RB2

Date Sampled: 08/12/2009
Site Length (m): 100
Mean Width (m): 6.8
Number of Pass: 1
Conductivity (umhos/cm): 1239
pH: 8.8
Water Temperature (C): 16.7
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) |
|-----------------|------------|-----------------------|----------------|--------------|--------------|----------------|-----------------|----------|------------|--------------|------------|------------------|---------------------|
| Brown Trout | >=200mm | 15 | 15 | 15 | 15 | 221 | 112 | 150 | 89 | 99.66 | 241 | 340.1 | 505.3 |
| Brown Trout | All | 23 | 23 | 23 | 23 | 339 | 171 | 230 | 137 | 152.82 | 370 | 253.9 | 505.3 |
| Mountain Sucker | All | 91 | 91 | 91 | 91 | 1340 | 53 | 910 | 543 | 47.46 | 1464 | 126.0 | 39.7 |
| Rainbow Trout | >=200mm | 2 | 2 | 2 | 2 | 29 | 20 | 20 | 12 | 17.83 | 32 | 378.5 | 678.0 |
| Rainbow Trout | All | 3 | 3 | 3 | 3 | 44 | 30 | 30 | 18 | 26.74 | 48 | 286.0 | 678.0 |

Site Number: 612

Site Midpoint (Latitude, Longitude): 44.35478049, -103.73811696

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BR1

Date Sampled: 08/14/2009

Site Length (m): 100

Mean Width (m): 4.9

Number of Pass: 1

Conductivity (umhos/cm): 497

pH: 8.8

Water Temperature (C): 15.2

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) |
|-------------|------------|-----------------------|----------------|--------------|--------------|----------------|-----------------|----------|------------|--------------|------------|------------------|---------------------|
| Brown Trout | <200mm | 30 | 30 | 30 | 30 | 610 | 36 | 300 | 247 | 32.26 | 483 | 144.8 | 59.2 |
| Brown Trout | >=200mm | 22 | 22 | 22 | 22 | 447 | 70 | 220 | 181 | 62.42 | 354 | 238.7 | 156.3 |
| Brown Trout | All | 52 | 52 | 52 | 52 | 1057 | 115 | 520 | 428 | 102.79 | 837 | 184.5 | 108.9 |

Site Number: 628

Site Midpoint (Latitude, Longitude): 44.34916370, -103.75287279

Survey Completed by: South Dakota Game, Fish and Parks

Stream Classification: BK0, BR1

Date Sampled: 08/17/2009

Site Length (m): 100

Mean Width (m): 5.6

Number of Pass: 1

Conductivity (umhos/cm): 430

pH: 8.8

Water Temperature (C): 14.8

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 | 12 | 12 | 12 | 12 | 214 | 9 | 120 | 87 | 7.83 | 193 | 126.7 | 41.0 |
| Brook Trout | All | 12 | 12 | 12 | 12 | 214 | 9 | 120 | 87 | 7.83 | 193 | 126.7 | 41.0 |
| Brown Trout | <200mm | 58 | 58 | 58 | 58 | 1034 | 63 | 580 | 419 | 56.37 | 933 | 143.1 | 61.1 |
| Brown Trout | >=200mm | 34 | 34 | 34 | 34 | 606 | 113 | 340 | 245 | 100.85 | 547 | 250.0 | 186.3 |
| Brown Trout | All | 92 | 92 | 92 | 92 | 1640 | 194 | 920 | 664 | 173.29 | 1480 | 182.6 | 118.3 |

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, 1999-2009

Site 43

| Species/Size | Date | Pop Est. | (95% C.I.) | Stream Classification |
|---------------------|--------------|----------|------------|-----------------------|
| Brown Trout <200mm | Sep 28, 2000 | 22 | 21-26 | |
| | Sep 27, 2001 | 1 | 1-1 | |
| | Oct 09, 2002 | 1 | 1-2 | |
| | Oct 21, 2009 | 5 | 5-5 | |
| Brown Trout >=200mm | Sep 28, 2000 | 11 | 11-11 | BR2 |
| | Oct 09, 2002 | 2 | 2-2 | BR3 |
| | Oct 14, 2003 | 1 | 1-1 | BR3 |

| | | | | |
|---------------------|--------------|------|-----------|-----|
| Brown Trout >=200mm | Oct 12, 2006 | 3 | 3-4 | BR2 |
| | Oct 21, 2009 | 8 | 8-8 | BR3 |
| Common Carp | Oct 12, 2006 | 119 | 119-121 | |
| Creek Chub | Sep 27, 2001 | 170 | 165-176 | |
| | Oct 09, 2002 | 49 | 48-52 | |
| | Oct 14, 2003 | 9 | 9-9 | |
| | Oct 21, 2009 | 213 | 209-218 | |
| Fathead Minnow | Oct 21, 2009 | 1 | 1-1 | |
| Longnose Dace | 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 | |
| | Oct 21, 2009 | 450 | 419-481 | |
| Mountain Sucker | Sep 27, 2001 | 1 | 1-1 | |
| | Oct 09, 2002 | 3 | 3-3 | |

| | | | |
|-----------------|--------------|----|-------|
| Mountain Sucker | Oct 14, 2003 | 1 | 1-1 |
| | Oct 12, 2006 | 1 | 1-2 |
| | Oct 21, 2009 | 42 | 42-44 |
| Stone Cat | Oct 09, 2002 | 2 | 2-3 |
| | Oct 21, 2009 | 8 | 4-42 |
| White Sucker | Sep 28, 2000 | 9 | 9-9 |
| | Sep 27, 2001 | 43 | 43-44 |
| | Oct 09, 2002 | 26 | 26-28 |
| | Oct 14, 2003 | 8 | 8-8 |
| | Oct 12, 2006 | 18 | 18-18 |
| | Oct 21, 2009 | 58 | 58-59 |

Site 44

| Species/Size | Date | Pop Est. | (95% C.I.) | Stream Classification |
|---------------------|--------------|-----------------|-------------------|------------------------------|
| Brown Trout >=200mm | Oct 20, 2009 | 1 | 1-1 | BR3 |
| Common Carp | Oct 15, 2003 | 1 | 1-1 | |
| | Aug 17, 2009 | 1 | 1-1 | |

| | | | |
|-----------------|--------------|-----|---------|
| Creek Chub | Sep 26, 2001 | 3 | 3-3 |
| | Oct 15, 2003 | 5 | 5-5 |
| | Oct 20, 2009 | 8 | 8-10 |
| Fathead Minnow | Sep 27, 2000 | 1 | 1-5 |
| | Oct 15, 2003 | 12 | 12-12 |
| Flathead Chub | Sep 27, 2000 | 1 | 1-1 |
| | Aug 17, 2009 | 2 | 2-2 |
| | Oct 20, 2009 | 1 | 1-1 |
| Green Sunfish | Oct 20, 2009 | 9 | 9-10 |
| Longnose Dace | Sep 27, 2000 | 109 | 102-118 |
| | Sep 26, 2001 | 54 | 54-56 |
| | Oct 10, 2002 | 7 | 7-8 |
| | Oct 15, 2003 | 118 | 113-125 |
| | Oct 20, 2009 | 108 | 89-130 |
| Mountain Sucker | Aug 17, 2009 | 3 | 3-3 |
| | Oct 20, 2009 | 11 | 11-11 |

| | | | |
|--------------------|--------------|-----|---------|
| Sand Shiner | Sep 27, 2000 | 2 | 2-2 |
| | Sep 26, 2001 | 93 | 93-94 |
| | Oct 10, 2002 | 253 | 248-259 |
| | Oct 15, 2003 | 70 | 71-85 |
| | Oct 20, 2009 | 5 | 5-5 |
| Shorthead Redhorse | Aug 17, 2009 | 4 | 4-4 |
| | Oct 20, 2009 | 6 | 6-7 |
| Stone Cat | Sep 27, 2000 | 27 | 21-42 |
| | Sep 26, 2001 | 13 | 13-15 |
| | Oct 10, 2002 | 2 | 2-3 |
| | Oct 15, 2003 | 22 | 19-30 |
| | Oct 20, 2009 | 87 | 56-137 |
| White Sucker | Sep 27, 2000 | 27 | 25-32 |
| | Sep 26, 2001 | 5 | 5-5 |
| | Oct 10, 2002 | 6 | 6-6 |
| | Oct 15, 2003 | 8 | 8-9 |

White Sucker

Oct 20, 2009

1

1-5

Site 131

| Species/Size | Date | Pop Est. | (95% C.I.) | Stream Classification |
|---------------------|--------------|-----------------|-------------------|------------------------------|
| Brown Trout <200mm | Sep 27, 2000 | 1 | 1-1 | |
| | Oct 20, 2009 | 1 | 1-1 | |
| Brown Trout >=200mm | Oct 11, 2006 | 1 | 1-1 | BR3 |
| Common Carp | Oct 11, 2006 | 426 | 420-432 | |
| Creek Chub | Sep 27, 2000 | 6 | 6-8 | |
| | Sep 26, 2001 | 50 | 47-56 | |
| | Oct 10, 2002 | 149 | 147-153 | |
| | Oct 15, 2003 | 61 | 61-62 | |
| | Oct 20, 2009 | 50 | 46-57 | |
| Fathead Minnow | Oct 10, 2002 | 1 | 1-1 | |
| | Oct 15, 2003 | 8 | 8-9 | |
| | Oct 20, 2009 | 1 | 1-1 | |
| Green Sunfish | Oct 10, 2002 | 1 | 1-1 | |

| | | | |
|--------------------|--------------|------|-----------|
| Green Sunfish | Oct 11, 2006 | 2 | 2-2 |
| | Oct 20, 2009 | 4 | 4-6 |
| Longnose Dace | Sep 27, 2000 | 1088 | 1024-1152 |
| | Sep 26, 2001 | 138 | 124-152 |
| | Oct 10, 2002 | 64 | 62-68 |
| | Oct 15, 2003 | 206 | 203-211 |
| | Oct 11, 2006 | 7 | 7-9 |
| | Oct 20, 2009 | 446 | 385-507 |
| Mountain Sucker | Sep 27, 2000 | 1 | 1-1 |
| | Oct 20, 2009 | 37 | 27-59 |
| Shorthead Redhorse | Oct 20, 2009 | 1 | 1-2 |
| 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 |

| | | | |
|--------------|--------------|----|--------|
| Stone Cat | Oct 20, 2009 | 18 | 19-26 |
| White Sucker | 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 |
| | Oct 20, 2009 | 58 | 34-112 |

Site 295

| Species/Size | Date | Pop Est. | (95% C.I.) | Stream Classification |
|---------------------|--------------|-----------------|-------------------|------------------------------|
| Brown Trout <200mm | 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 | |
| | Oct 21, 2009 | 14 | 14-16 | |
| Brown Trout >=200mm | Nov 04, 1999 | 10 | 10-12 | BR3 |

| | | | | |
|---------------------|--------------|------|-----------|-----|
| Brown Trout >=200mm | Sep 28, 2000 | 2 | 2-3 | BR3 |
| | Sep 25, 2001 | 2 | 2-2 | BR3 |
| | Oct 09, 2002 | 2 | 2-2 | BR3 |
| | Jun 23, 2009 | 1 | 1-1 | BR3 |
| | Oct 21, 2009 | 10 | 10-11 | BR3 |
| Common Carp | Oct 12, 2006 | 62 | 62-63 | |
| | Oct 12, 2006 | 81 | 44-159 | |
| Creek Chub | Oct 09, 2002 | 22 | 15-44 | |
| | Oct 14, 2003 | 2 | 2-4 | |
| | Oct 21, 2009 | 35 | 35-36 | |
| Longnose Dace | Nov 04, 1999 | 357 | 358-390 | |
| | Sep 28, 2000 | 1776 | 1777-1827 | |
| | Sep 25, 2001 | 1131 | 801-1461 | |
| | Oct 09, 2002 | 397 | 349-445 | |
| | Oct 14, 2003 | 695 | 653-737 | |
| | Oct 12, 2006 | 290 | 273-307 | |

| | | | |
|--------------------|--------------|------|-----------|
| Longnose Dace | Oct 21, 2009 | 4809 | 4172-5446 |
| Mountain Sucker | Sep 28, 2000 | 16 | 12-30 |
| | Sep 25, 2001 | 16 | 16-18 |
| | Oct 09, 2002 | 6 | 6-7 |
| | Oct 14, 2003 | 2 | 2-2 |
| | Jun 23, 2009 | 24 | 24-24 |
| | Oct 21, 2009 | 154 | 141-167 |
| Sand Shiner | Oct 12, 2006 | 1 | 1-1 |
| Shorthead Redhorse | Oct 12, 2006 | 24 | 20-34 |
| Stone Cat | Sep 25, 2001 | 1 | 1-1 |
| | Oct 21, 2009 | 4 | 4-4 |
| White Sucker | Nov 04, 1999 | 1 | 1-1 |
| | Sep 28, 2000 | 2 | 2-4 |
| | Sep 25, 2001 | 186 | 185-189 |
| | Oct 09, 2002 | 85 | 83-89 |
| | Oct 14, 2003 | 14 | 14-15 |

| | | | |
|--------------|--------------|----|-------|
| White Sucker | Oct 12, 2006 | 73 | 73-75 |
| | Oct 12, 2006 | 7 | 7-8 |
| | Oct 21, 2009 | 6 | 6-7 |

Site 367

| Species/Size | Date | Pop Est. | (95% C.I.) | Stream Classification |
|-----------------|--------------|----------|------------|-----------------------|
| Longnose Dace | Jun 23, 2009 | 1 | 1-1 | |
| Mountain Sucker | Jun 23, 2009 | 51 | 51-51 | |

Site 515

| Species/Size | Date | Pop Est. | (95% C.I.) | Stream Classification |
|---------------------|--------------|----------|------------|-----------------------|
| Brown Trout <200mm | Aug 12, 2009 | 11 | 11-11 | |
| Brown Trout >=200mm | Aug 12, 2009 | 17 | 17-17 | BR2 |
| Longnose Dace | May 03, 2005 | 365 | 366-396 | |
| Mountain Sucker | May 03, 2005 | 4 | 5-7 | |
| | Aug 12, 2009 | 91 | 91-91 | |

Site 539

| Species/Size | Date | Pop Est. | (95% C.I.) | Stream Classification |
|--------------------|--------------|----------|------------|-----------------------|
| Brown Trout <200mm | May 03, 2005 | 3 | 3-4 | |

| | | | | |
|-----------------------|--------------|-----|---------|-----|
| Brown Trout <200mm | Sep 27, 2005 | 31 | 31-32 | |
| Brown Trout >=200mm | May 03, 2005 | 16 | 16-16 | BR2 |
| | Sep 27, 2005 | 13 | 13-14 | BR2 |
| | Aug 12, 2009 | 15 | 15-15 | BR2 |
| Longnose Dace | May 03, 2005 | 283 | 284-305 | |
| | Sep 27, 2005 | 51 | 51-51 | |
| Mountain Sucker | May 03, 2005 | 59 | 47-78 | |
| | Sep 27, 2005 | 45 | 45-46 | |
| | Aug 12, 2009 | 91 | 91-91 | |
| Rainbow Trout >=200mm | Aug 12, 2009 | 2 | 2-2 | RB2 |

Site 612

| Species/Size | Date | Pop Est. | (95% C.I.) | Stream Classification |
|---------------------|--------------|-----------------|-------------------|------------------------------|
| Brook Trout <200mm | Jun 21, 1999 | 4 | 4-4 | |
| | Sep 17, 1999 | 17 | 17-18 | |
| | Jun 29, 2000 | 7 | 7-8 | |
| | Sep 18, 2000 | 113 | 107-121 | |

| | | | | |
|---------------------|--------------|-----|---------|-----|
| Brook Trout >=200mm | Jun 21, 1999 | 8 | 8-9 | BK2 |
| | Sep 17, 1999 | 5 | 5-5 | BK2 |
| | Jun 29, 2000 | 6 | 6-9 | BK2 |
| | Sep 18, 2000 | 4 | 4-5 | BK2 |
| Brown Trout <200mm | Jun 21, 1999 | 44 | 27-86 | |
| | Sep 17, 1999 | 221 | 210-232 | |
| | Jun 29, 2000 | 52 | 51-56 | |
| | Sep 18, 2000 | 168 | 156-180 | |
| | Aug 14, 2009 | 30 | 30-30 | |
| Brown Trout >=200mm | Jun 21, 1999 | 25 | 25-27 | BR2 |
| | Sep 17, 1999 | 31 | 31-32 | BR1 |
| | Jun 29, 2000 | 27 | 27-29 | BR1 |
| | Sep 18, 2000 | 33 | 33-34 | BR1 |
| | Aug 14, 2009 | 22 | 22-22 | BR1 |
| Longnose Dace | Jun 21, 1999 | 2 | 2-6 | |
| | Sep 17, 1999 | 20 | 10-70 | |

| | | | | |
|-----------------------|--------------|---|------|-----|
| Longnose Dace | Jun 29, 2000 | 8 | 9-13 | |
| | Sep 18, 2000 | 8 | 8-10 | |
| Rainbow Trout >=200mm | Jun 29, 2000 | 1 | 1-1 | RB2 |

Site 628

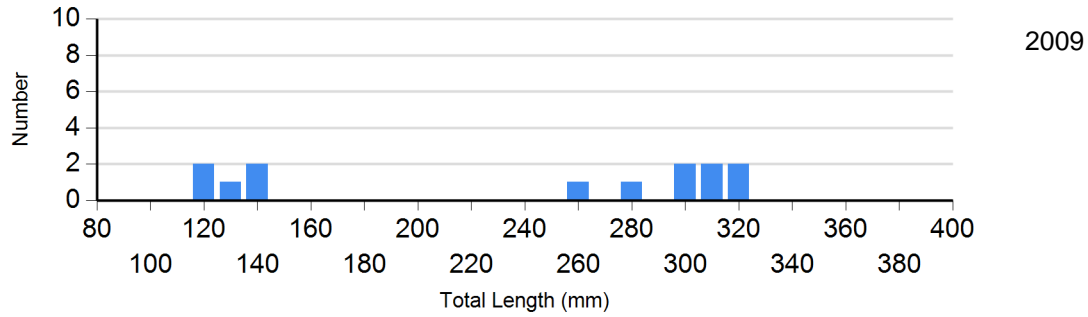
| Species/Size | Date | Pop Est. | (95% C.I.) | Stream Classification |
|---------------------|--------------|-----------------|-------------------|------------------------------|
| Brook Trout <200mm | Aug 17, 2009 | 12 | 12-12 | |
| Brown Trout <200mm | Aug 17, 2009 | 58 | 58-58 | |
| Brown Trout >=200mm | Aug 17, 2009 | 34 | 34-34 | BR1 |

Length Frequency Distribution

Length frequency histogram of species sampled by year.

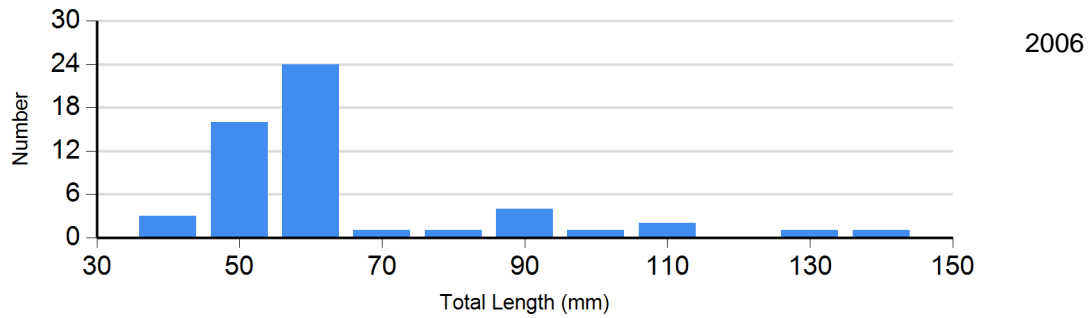
Site: 43

Species: Brown Trout



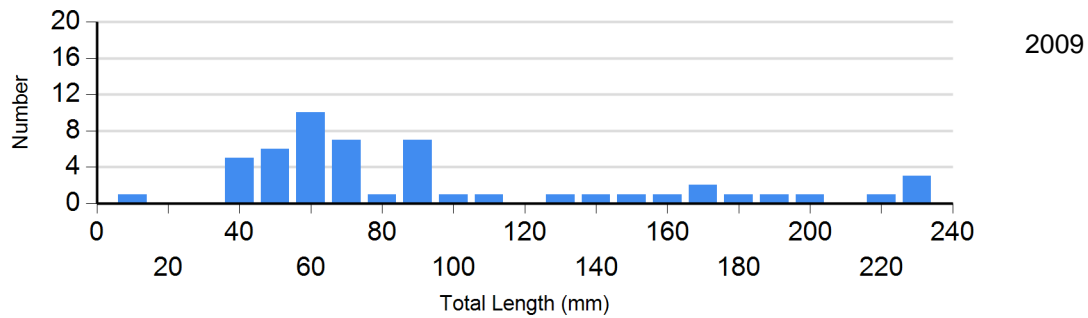
Site: 43

Species: Common Carp

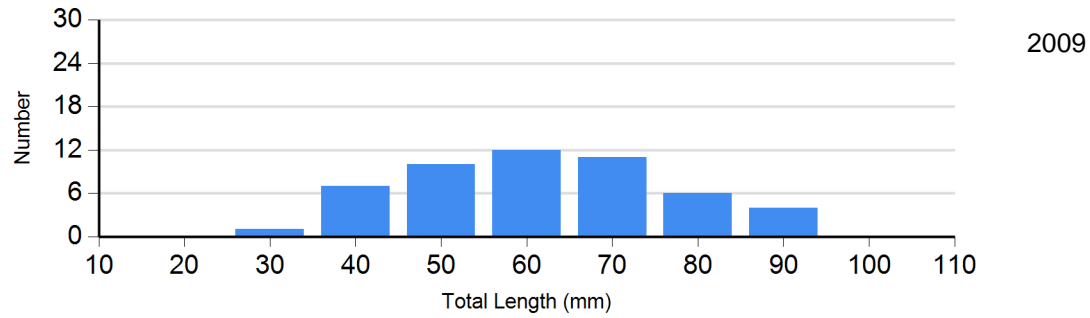
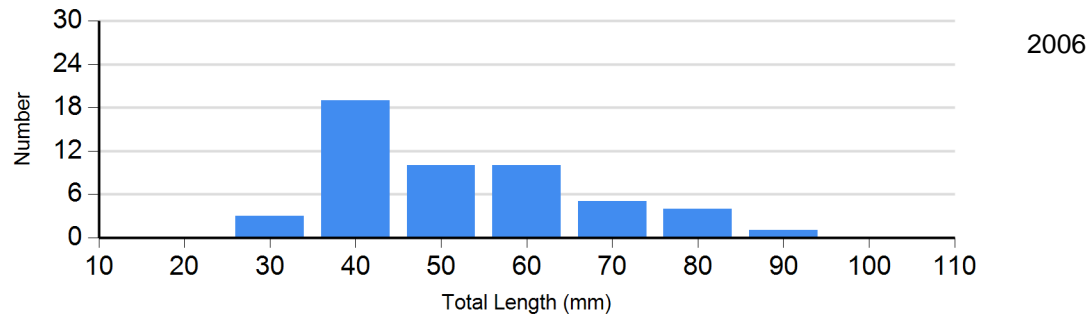


Site: 43

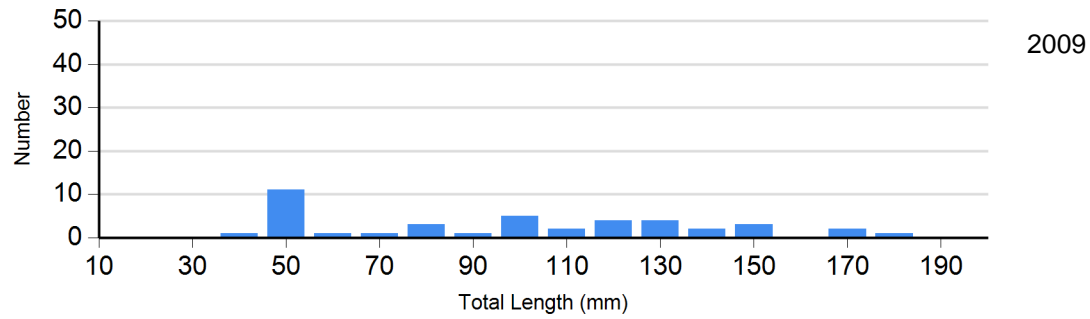
Species: Creek Chub



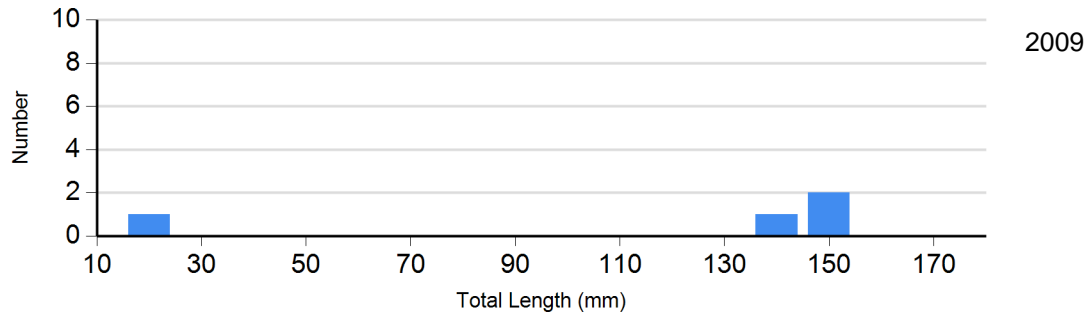
Site: 43
Species: Longnose Dace



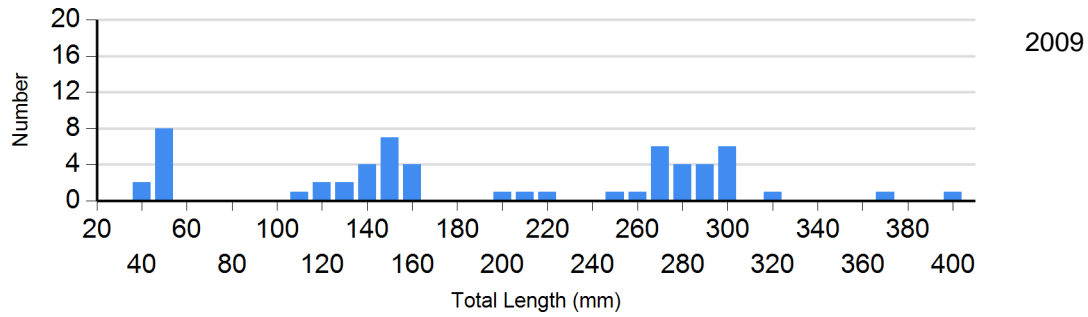
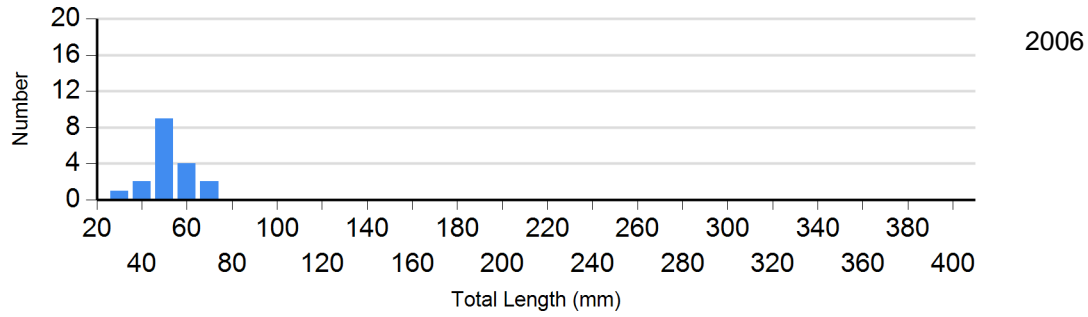
Site: 43
Species: Mountain Sucker



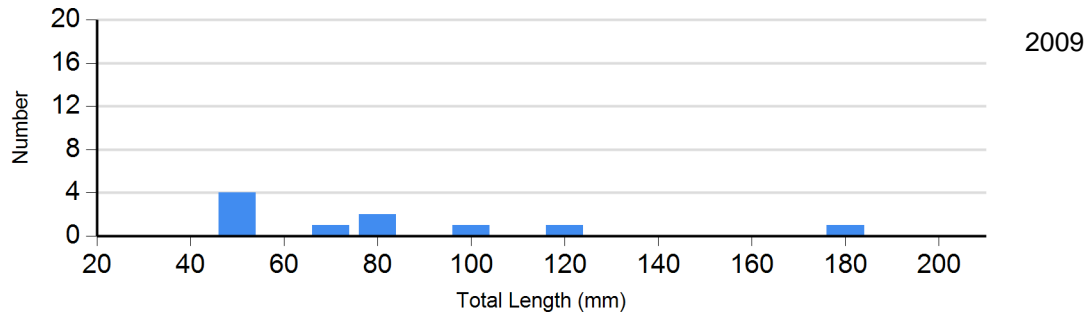
Site: 43
Species: Stone Cat



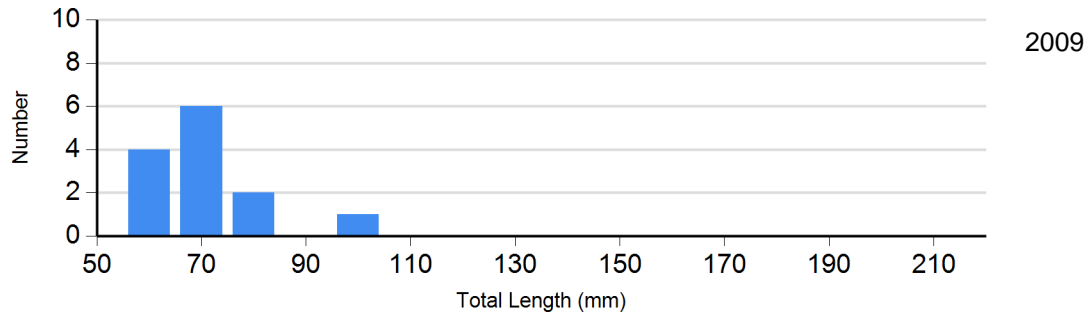
Site: 43
Species: White Sucker



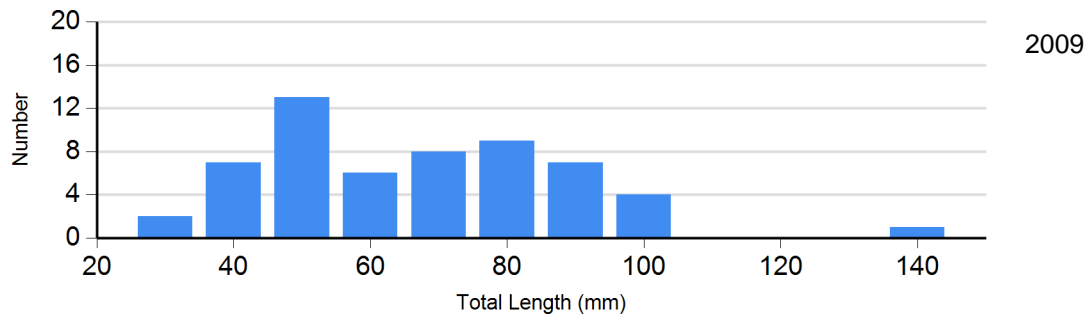
Site: 44
Species: Creek Chub



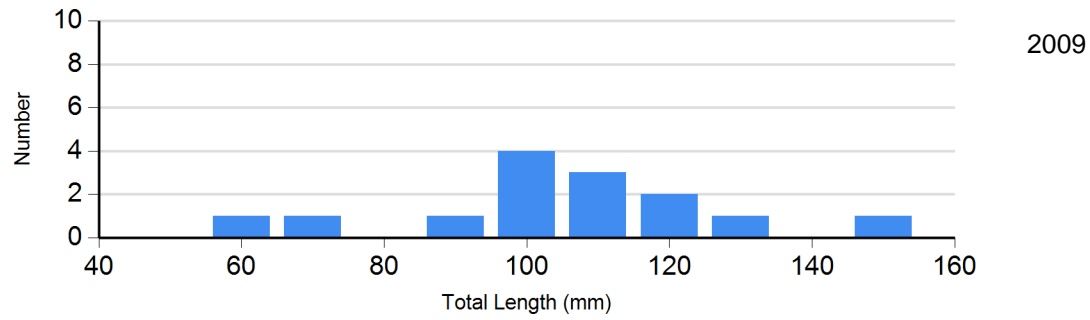
Site: 44
Species: Green Sunfish



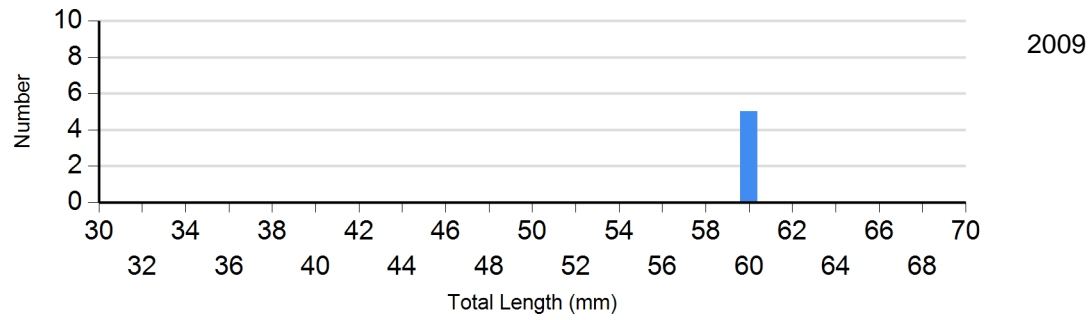
Site: 44
Species: Longnose Dace



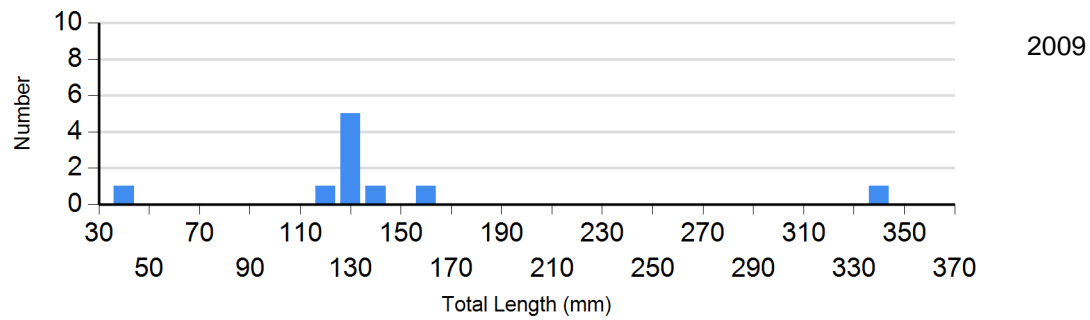
Site: 44
Species: Mountain Sucker



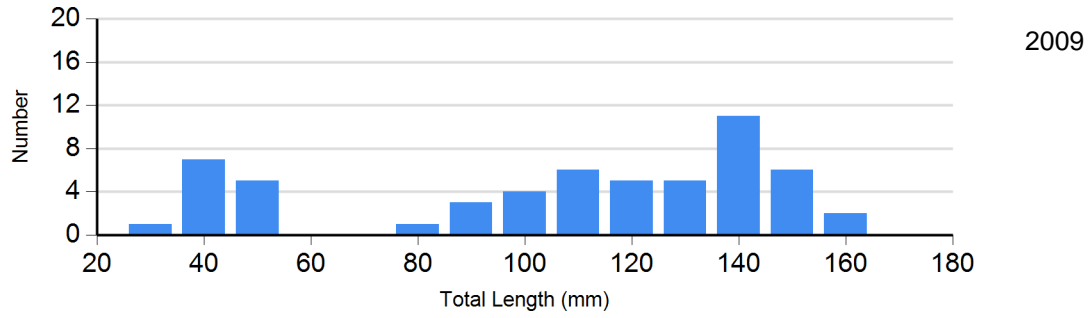
Site: 44
Species: Sand Shiner



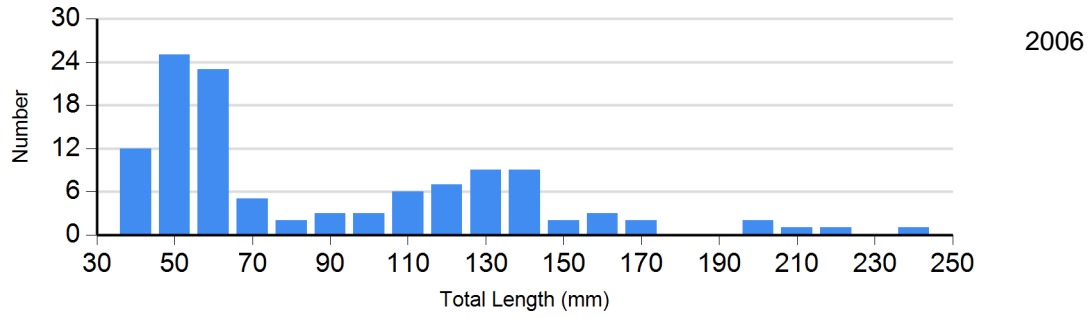
Site: 44
Species: Shorthead Redhorse



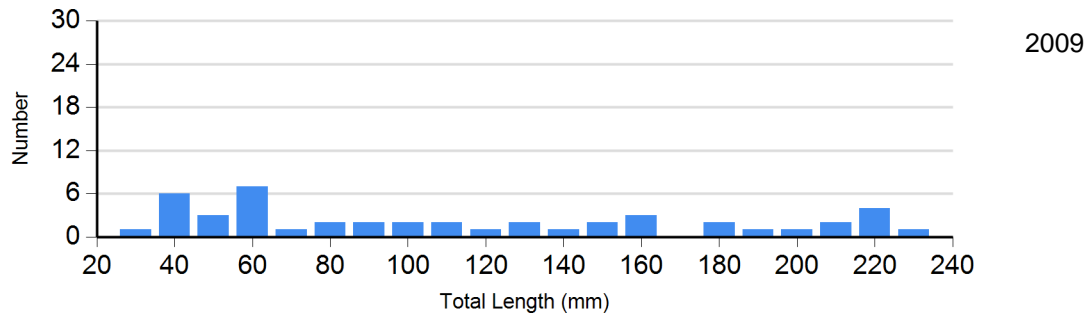
Site: 44
Species: Stone Cat



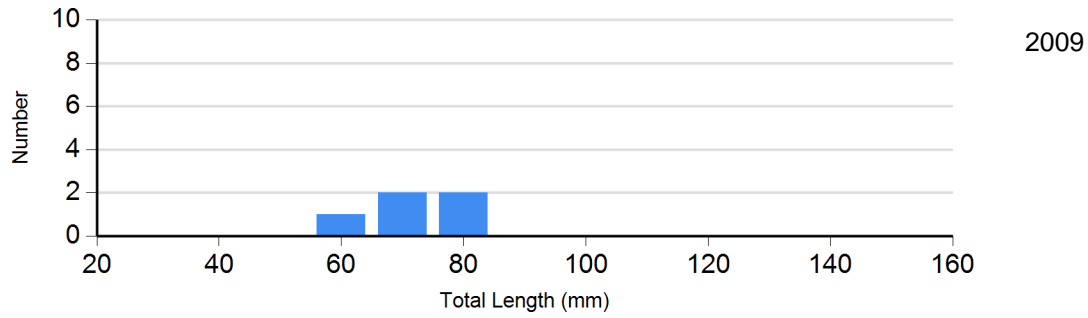
Site: 131
Species: Common Carp



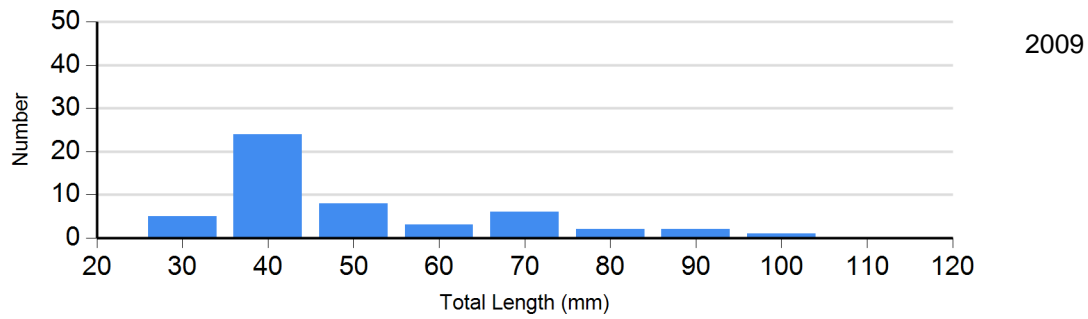
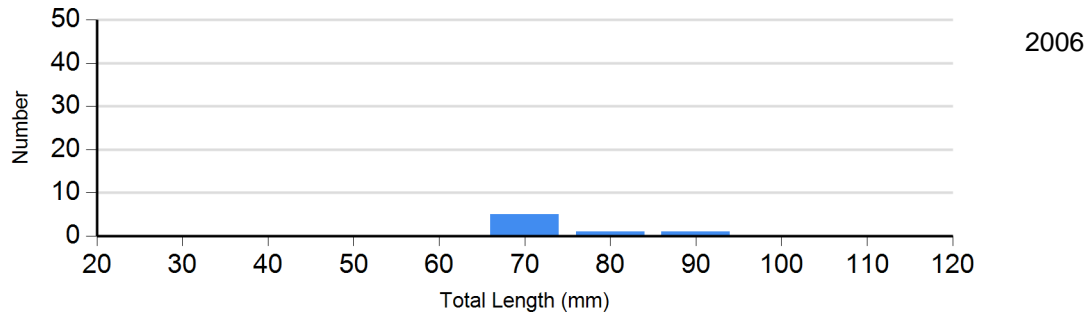
Site: 131
Species: Creek Chub



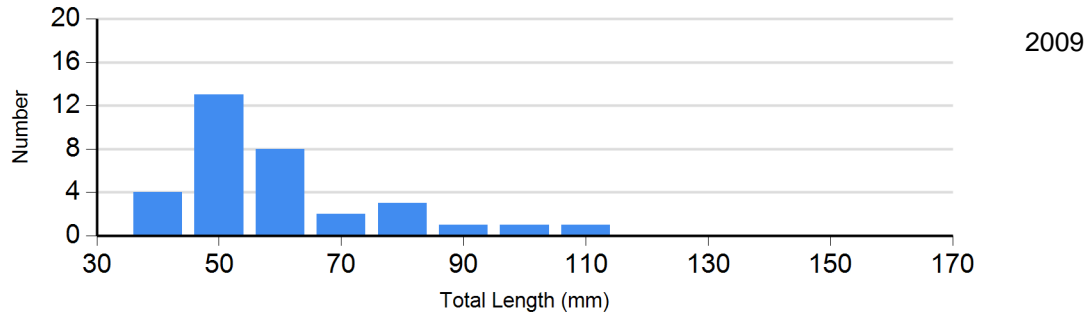
Site: 131
Species: Green Sunfish



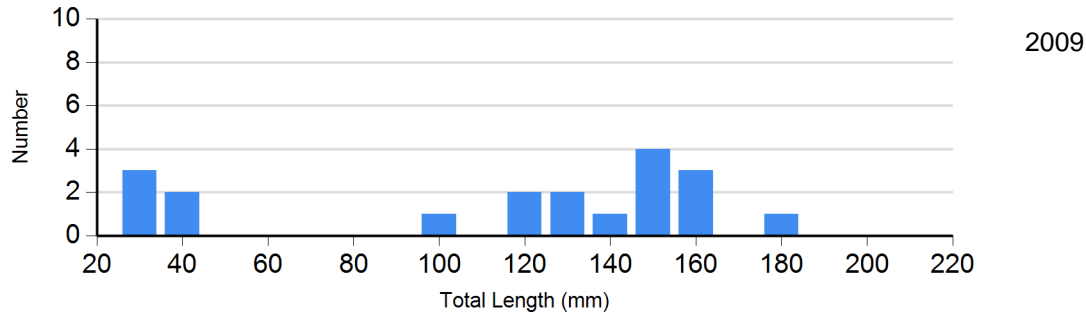
Site: 131
Species: Longnose Dace



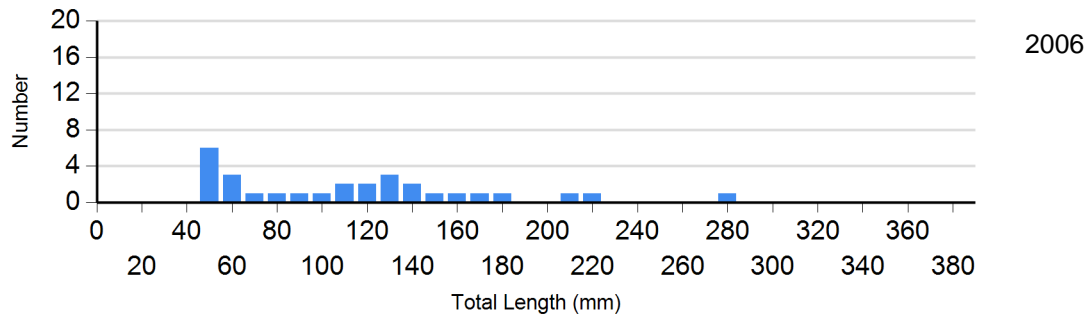
Site: 131
Species: Mountain Sucker

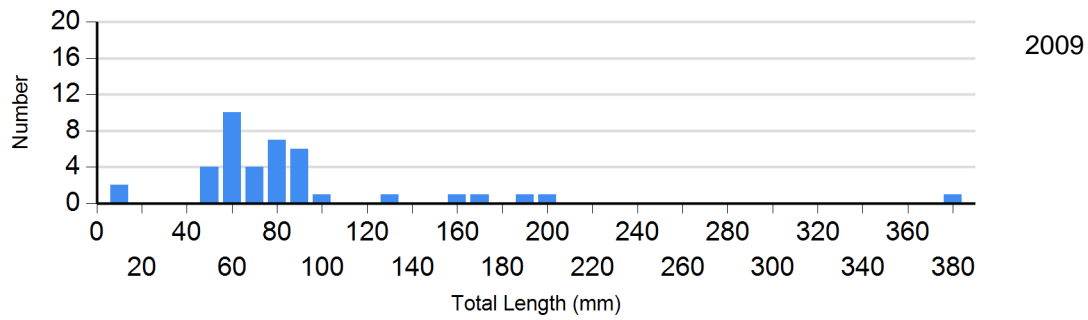


Site: 131
Species: Stone Cat

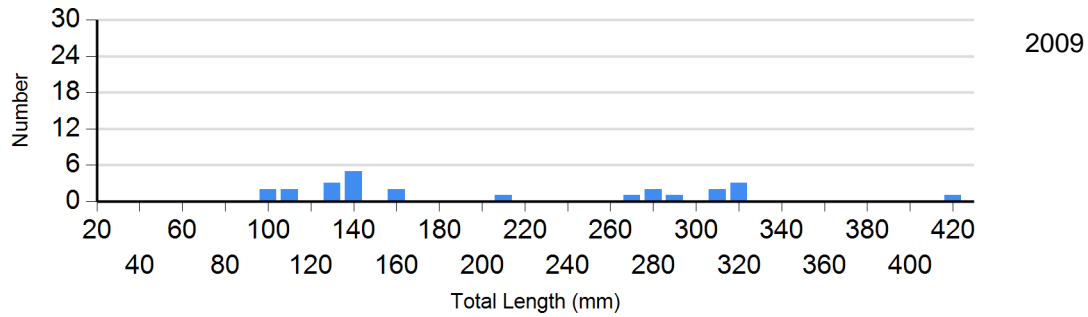


Site: 131
Species: White Sucker

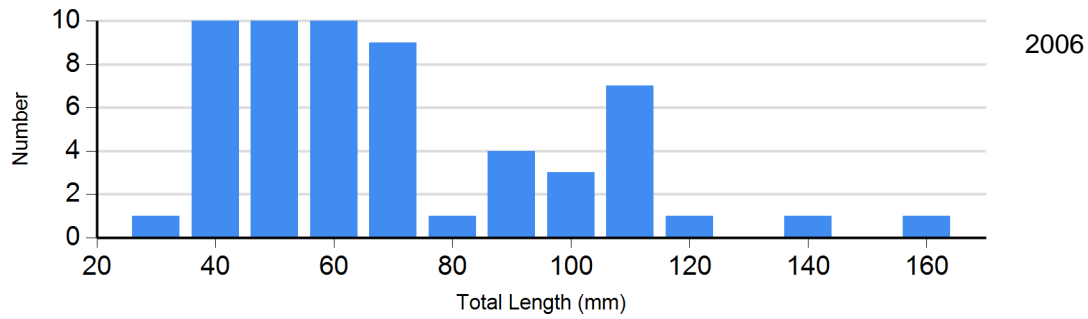




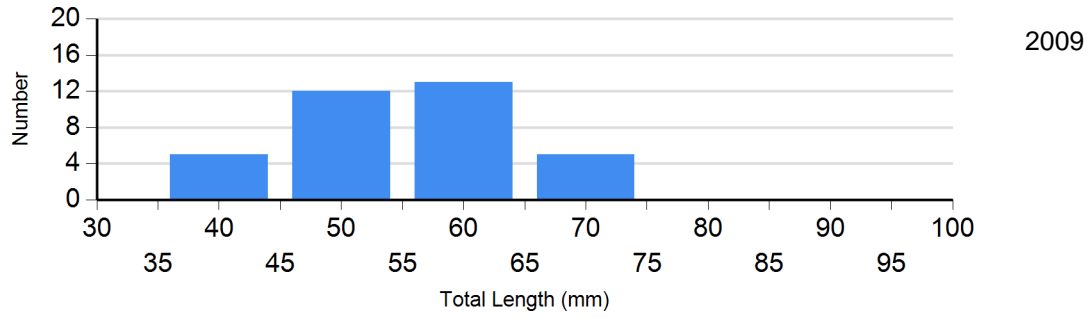
Site: 295
Species: Brown Trout



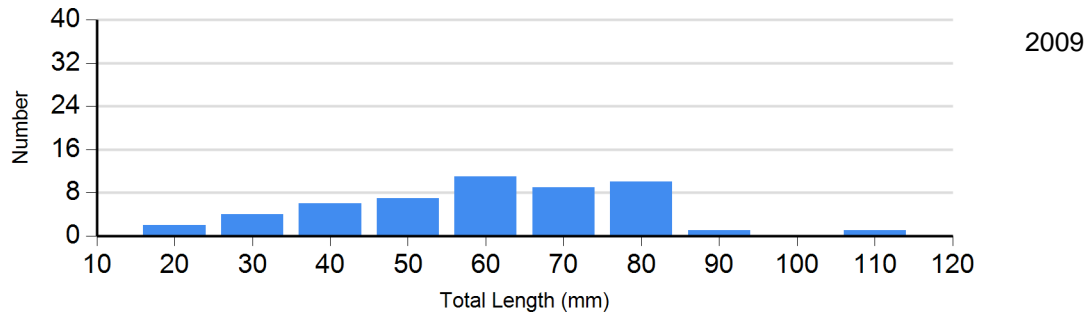
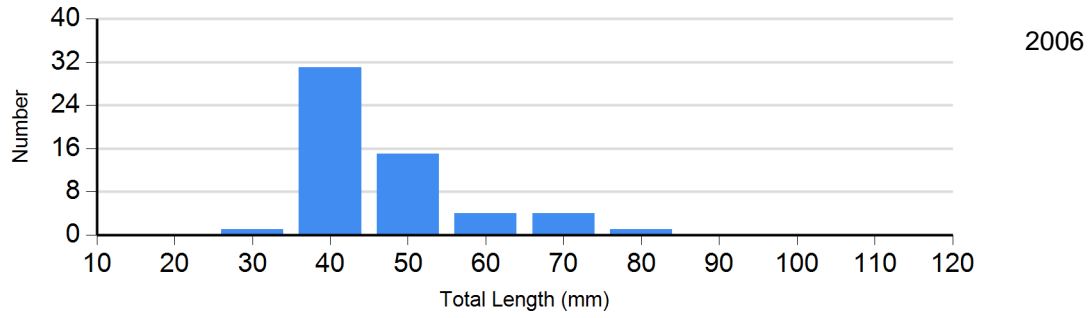
Site: 295
Species: Common Carp



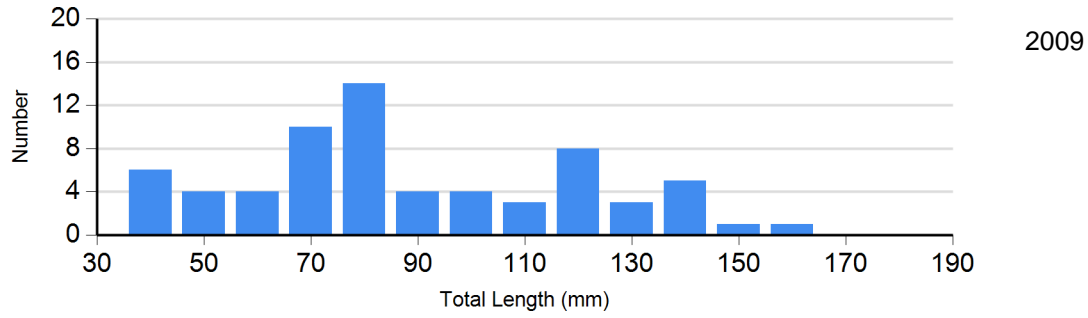
Site: 295
Species: Creek Chub



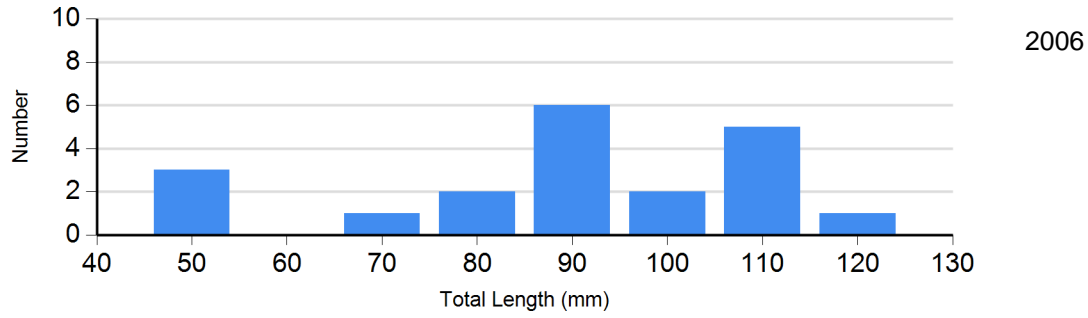
Site: 295
Species: Longnose Dace



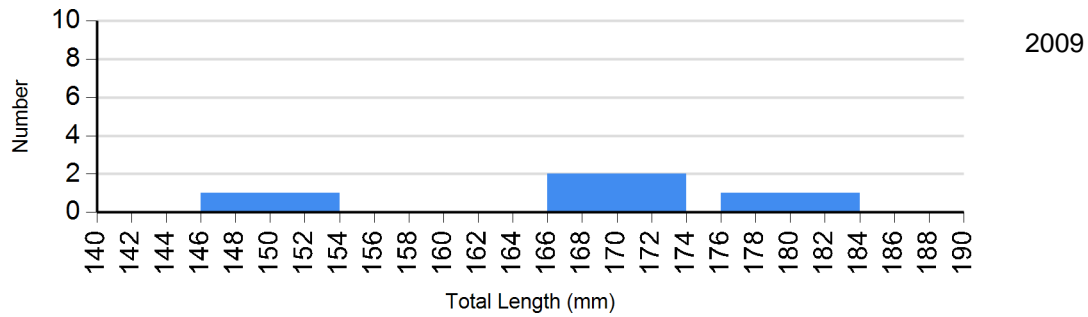
Site: 295
Species: Mountain Sucker



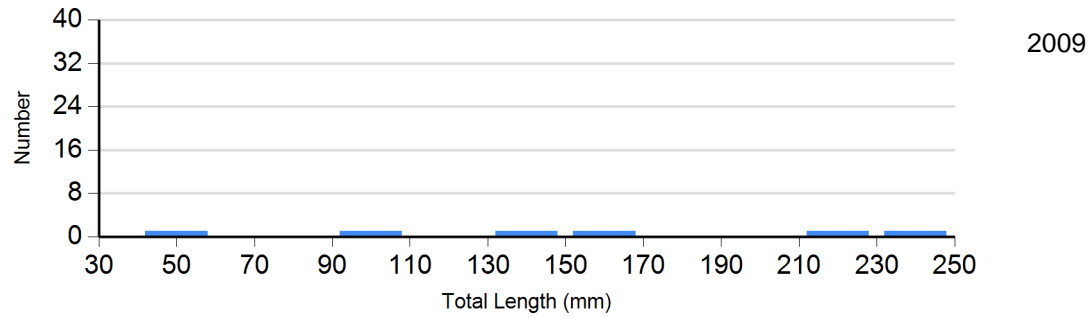
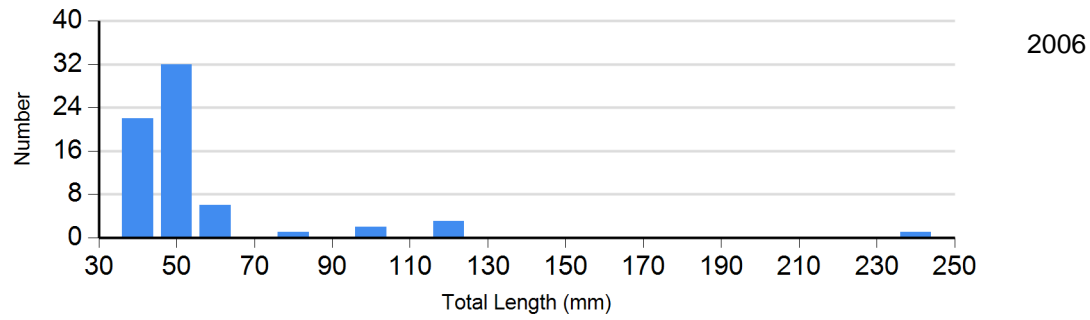
Site: 295
Species: Shorthead Redhorse



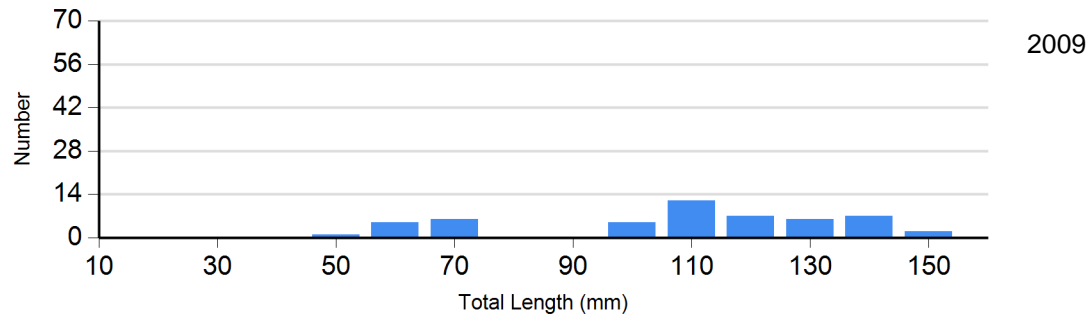
Site: 295
Species: Stone Cat



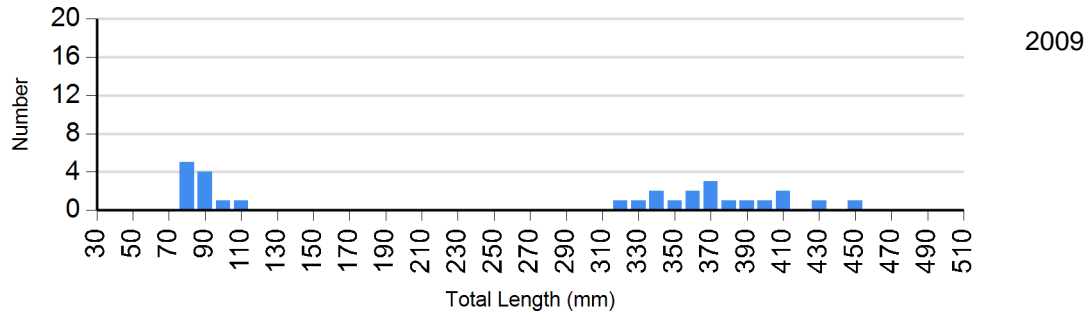
Site: 295
Species: White Sucker



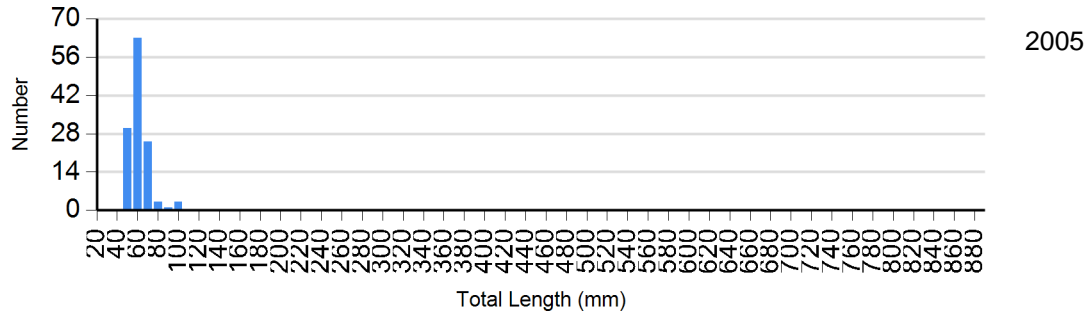
Site: 367
Species: Mountain Sucker



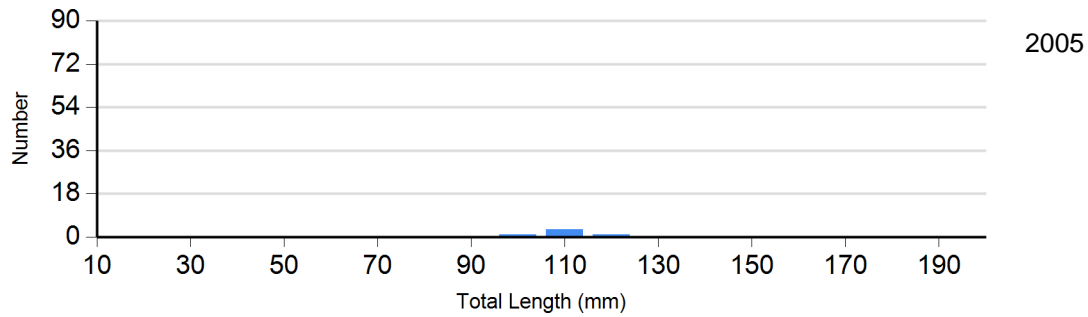
Site: 515
Species: Brown Trout

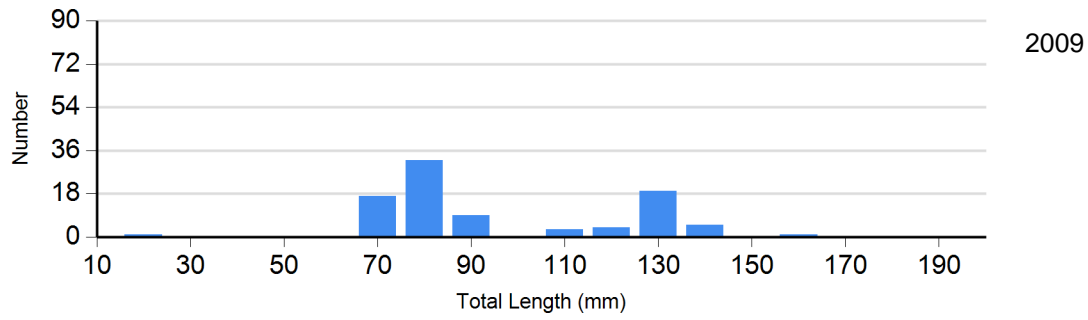


Site: 515
Species: Longnose Dace

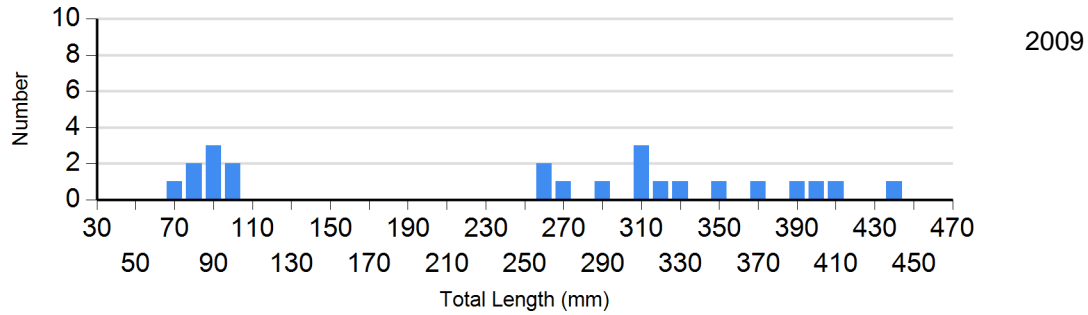
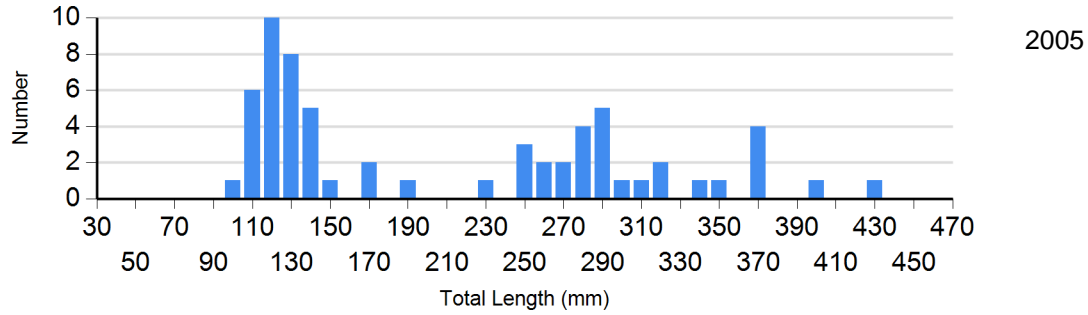


Site: 515
Species: Mountain Sucker

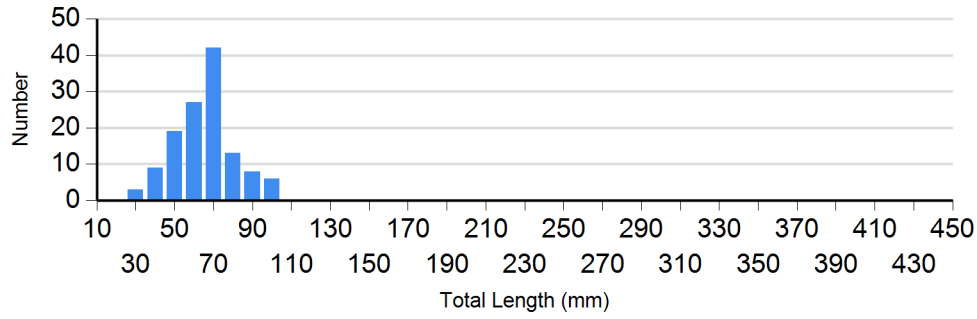




Site: 539
Species: Brown Trout

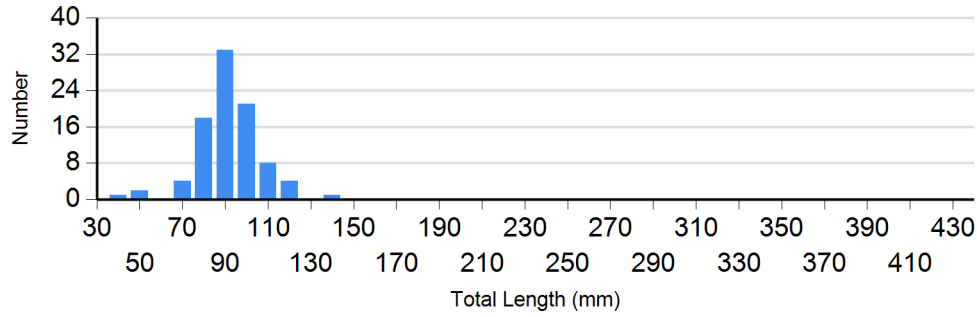


Site: 539
Species: Longnose Dace

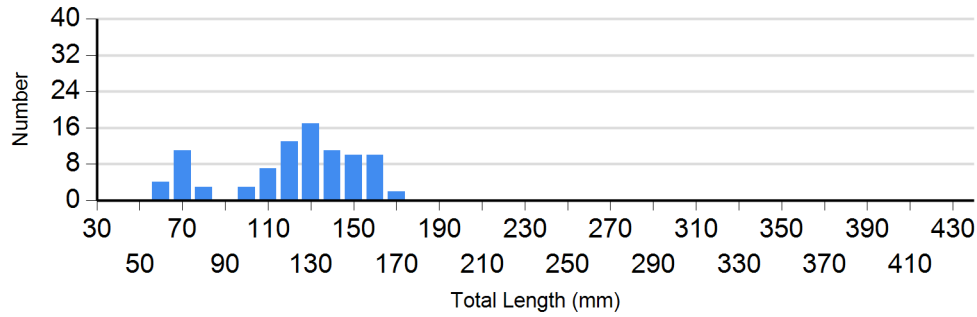


2005

Site: 539
Species: Mountain Sucker

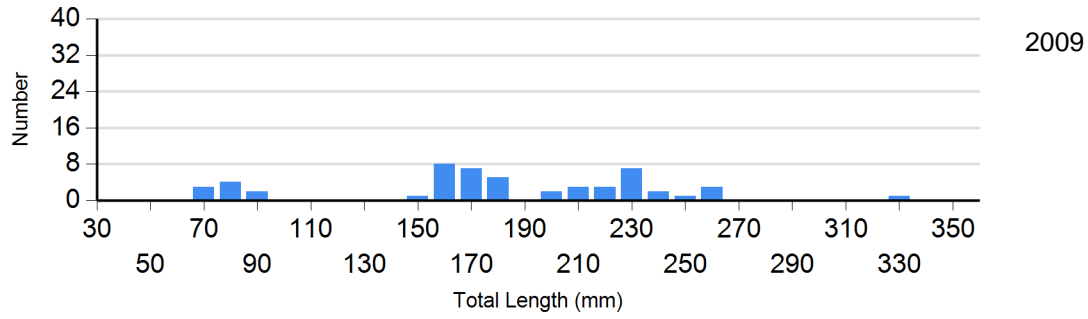


2005

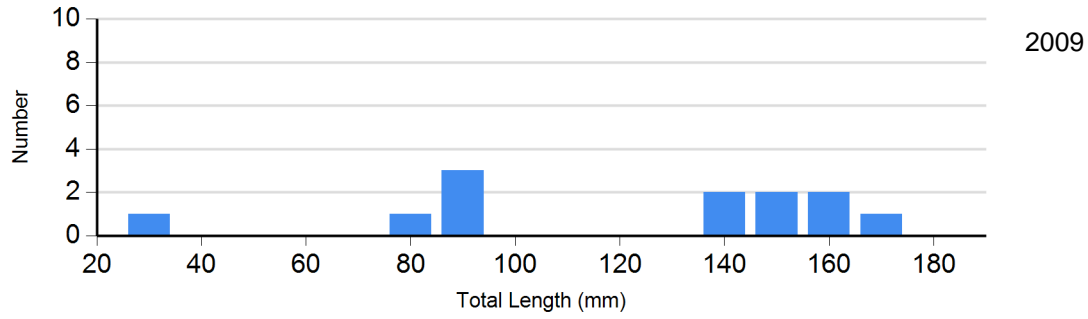


2009

Site: 612
Species: Brown Trout



Site: 628
Species: Brook Trout



Site: 628
Species: Brown Trout

