Flannelmouth Sucker  
(*Catostomus latipinnis*)

- **Large-bodied**  
  - Up to 30 inches  
- **Long lived**  
  - Breed at 6 years of age  
- **Widely distributed**  
  - Colorado River and tributaries  
  - Recent population declines  
- **Threats**  
  - Non-native fishes  
  - Water development  
  - Habitat fragmentation  

- Protected under interstate conservation agreement  
- Conservation actions  
  - Non-native eradication  
  - Allowing passage at diversions
Bluehead Sucker

(*Catostomus discobulus*)

- **Medium sized**
  - Grows to 14 inches

- **Widespread**
  - Occupy higher elevations than Flannelmouth Sucker
  - Also found in Snake River and Bear River basins

- **Protected under interstate conservation agreement**

- **Conservation actions**
  - Increasing passage at diversions
  - Non-native eradication

- **Threats**
  - Water development
  - Hybridization with non-native suckers
Roundtail Chub

(*Gila robusta*)

- **Large Minnow**
  - Grows to 17 inches
- **Widespread though rare**
  - Inhabits Colorado River main-stem and most large tributaries
  - Population declining
  - Lower Colorado River population is a candidate for federal listing
- **Threats**
  - Habitat loss from water development and river morphology changes (i.e. loss of sediment and temperature changes)
  - Non-native fishes
- **Protected under interstate conservation agreement**
- **Conservation actions**
  - Non-native eradication
  - Habitat restoration including flow regime alteration and non-native vegetation removal

Protected under interstate conservation agreement
Sampling Reaches
Sampling Methodology

- Sample 20 sites within each station
  - Sites are contiguous areas of similar habitat (run, riffle, pool, backwater);
  - Select individual sites in proportion to the availability of habitats
- Conduct three-pass depletion seining
  - *Attempt* to seine ~ 5 x 10 m area (not always possible);
  - Seine by moving downstream;
  - Place fish from first two passes in separate buckets;
Sampling Methodology

- Categorize site according to:
  - Habitat type;
  - Dominant substrate type

- Habitat measurements...
  - Measure width and length of *area seined*, using meter tape;
  - Estimate depth of *area seined* by averaging depths experienced on each end of seine;
  - Measure width and length of overall habitat sampled (note >25 m for such areas).
Results

- High abundance of Flannelmouth Sucker in Reach U2-U1
- Abundance of Bluehead Sucker relatively low
- No Roundtail Chub observed
Results

- High numbers of Flannelmouth Sucker fry in reaches U2-U1 (n=494; 88% of total FM captured in all reaches; 298 of total FM were not measured)
- Large adult FM congregated in Reaches L2-L3

![Graph showing total length (mm) vs. number of Flannelmouth Sucker fry]

Total length (mm) | Number of Flannelmouth Sucker fry
---|---
0-10 | 186
31-40 | N=262
Results

- Very few Bluehead Suckers captured (n=7)
- 408 unidentifiable Sucker fry 11-30 mm captured; 91% of those captured in Reaches U2-U1
- 215 unidentifiable fry captured; 96% of those captured in Reaches U2-U1
Results

- 42 Speckled Dace captured
- 76% captured in Reaches U2-U1
- Multiple ages classes; reproduction confirmed
Non native fish captures

- 18 Brown Trout captured; 94% were captured in Reaches L1-L2
- Calf Creek inflow at beginning of Reach L1 the likely source
Habitat
Hoop Netting

- Goal: to collect Roundtail Chub fin clips for genetic analysis prior to supplemental stocking.
- provide an additional sampling effort for Three Species monitoring of the Escalante River
Methods

- 15 nets
  - Set over a two day period
  - Set overnight
  - Set in locations where RTCH were caught in previous sampling efforts (2015)
  - Targeted RTCH habitat (deep pools with low velocity, deep runs w/cover)
  - Water depth, temperature, set time, UTM at each site.
Methods

- Pull nets the next day
- Fish collected in live wells
- All fish measured
- Non-natives removed
- Natives released
Results

- No Roundtail Chub captured

<table>
<thead>
<tr>
<th>Species</th>
<th>Total captures</th>
<th>Flannelmouth Sucker</th>
<th>Bluehead Sucker</th>
<th>Speckled Dace</th>
<th>Brown Trout</th>
<th>Flathead Catfish</th>
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</thead>
<tbody>
<tr>
<td>Total captures</td>
<td>80</td>
<td>19</td>
<td>34</td>
<td>6</td>
<td>3</td>
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<tr>
<td>Adult</td>
<td>0.293</td>
<td>0.070</td>
<td>0.125</td>
<td>0.022</td>
<td>0.011</td>
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<tr>
<td>Young</td>
<td>0.000</td>
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<td>0.000</td>
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<tr>
<td>Total</td>
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<td>0.022</td>
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</table>
Results

Number of Flannelmouth Sucker

Total length (mm)

N=80
Results

Number of Bluehead Sucker

Total length (mm)

N=19
Spot seining

- Seined pools and runs not ideal for hoop nets between sets
- All fish captured were identified and measured
- Non-natives were removed
- Natives released
Table 1. Total fish captured and catch per effort during spot seining of the Escalante River, June 26-27, 2016.

<table>
<thead>
<tr>
<th>Date</th>
<th>Number of Seine Hauls</th>
<th>Flannelmouth Sucker</th>
<th>Bluehead Sucker</th>
<th>Specled Dace</th>
<th>Brown Trout</th>
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<tr>
<td></td>
<td></td>
<td>Total</td>
<td>CPE&lt;sup&gt;1&lt;/sup&gt;</td>
<td>Total</td>
<td>CPE&lt;sup&gt;1&lt;/sup&gt;</td>
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<td>6/27/2016</td>
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<td>43</td>
<td>38</td>
<td>0.884</td>
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<td>0.256</td>
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<tr>
<td>Total</td>
<td>103</td>
<td>61</td>
<td>0.592</td>
<td>19</td>
<td>0.184</td>
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</tbody>
</table>

<sup>1</sup>CPE = catch per effort
Results

Number of Flannelmouth Sucker

N=61

Number of Bluehead Sucker

N=19
Conclusion

- Native sucker reproduction confirmed
- Recruitment from 2015 year class was unconfirmed
- Large, older adult native sucker population is robust
- No Roundtail Chub present in sampling reaches