

Using Creel Data from Minnesota Tributaries to Lake Superior in an Attempt to Increase Steelhead Angler Recruitment and Retention



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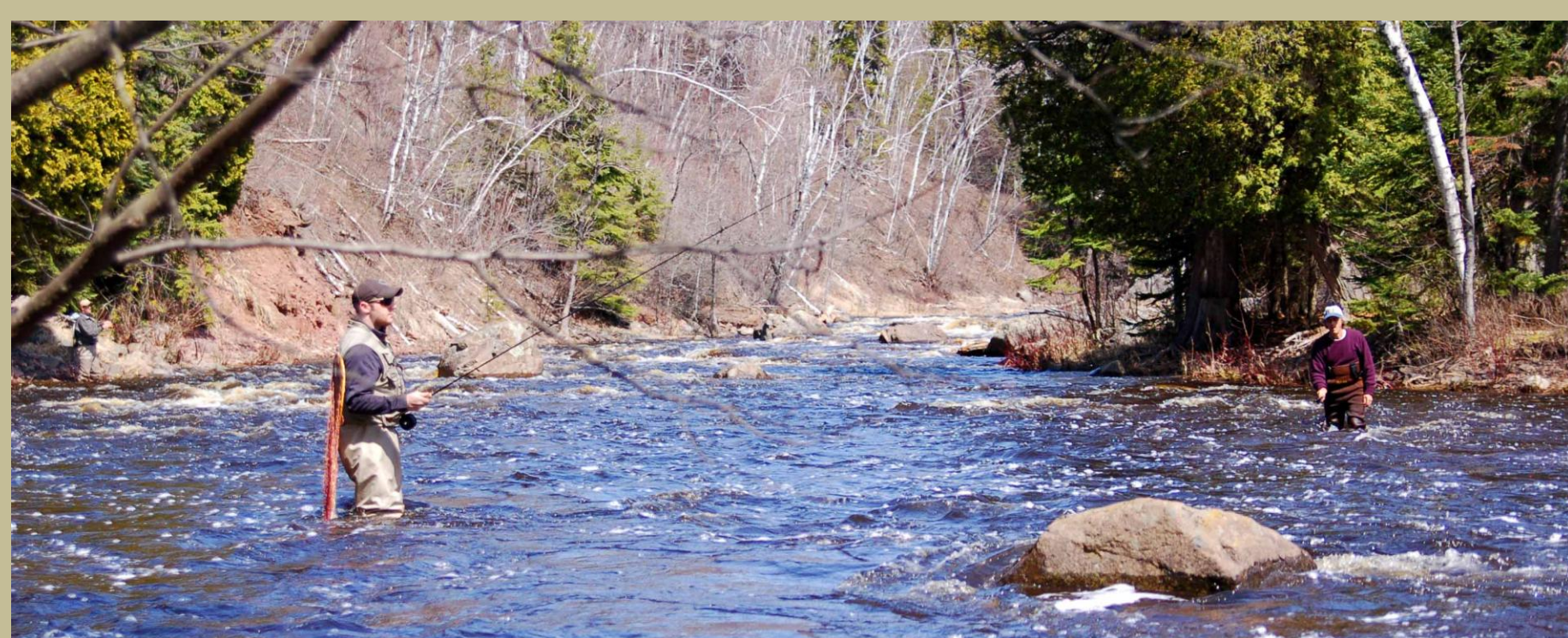
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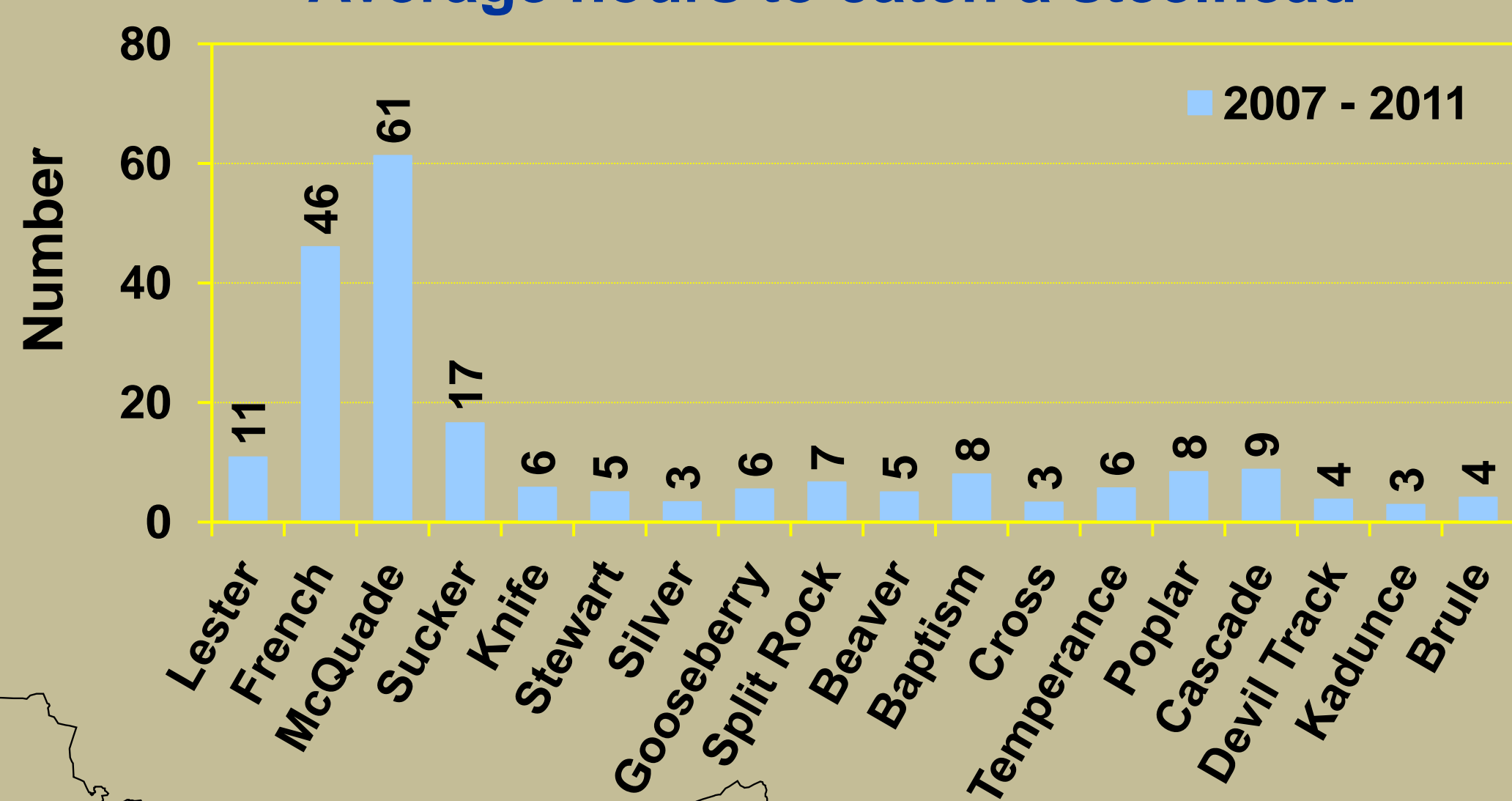


Abstract

Angler recruitment and retention continues to be a priority of the Minnesota Department of Natural Resources. Angler retention is greatly influenced by the success anglers have during the first few trips when fishing for a species they have never pursued. Therefore, if data collected from creel surveys can be easily analyzed to assist beginner anglers in their attempts to catch fish, then such analysis should be considered. The main objectives for most creel surveys include determining catch, catch rate, and pressure. While collecting the data to determine these metrics, creel clerks also collect other data that is seldom used. From 1992 through 2011 annual spring creel surveys were conducted on seventeen Minnesota tributaries to Lake Superior that targeted anglers fishing for migratory rainbow trout. Throughout this 20 year time span, anglers provided specific data on over 3,500 steelhead they caught. This information included date, time, water temperature, weather conditions, instream water levels, lure type, and fishing method, among others. This poster is an example of summarized information on a steelhead fishery that can be shared with beginner anglers in a variety of forums to increase the likelihood they are successful and return to fish.



Average hours to catch a steelhead



Conditions when Steelhead were Caught

•Water Temperature

4% (32.0–34.9), 13% (35.0–39.9), 27% (40.0–44.9), 27% (45.0–49.9), 20% (50.0–54.9), 7% (55.0–59.9), 2% (60.0–64.9)

•Weather Conditions

27% (clear), 38% (partly cloudy), 24% (overcast), 9% (rain), 2% (snow)

•Water Levels

60% (falling), 30% (stable), 10% (rising)

•Water Stage

36% (high), 45% (average), 19% (low)

•Wind Direction

34% (north), 33% (east), 20% (south), 13% (west)

•Wind Speed

23% (calm), 49% (light), 24% (moderate), 4% (strong)

Dates and Times when Steelhead were Caught

•Date

3% (3/21 – 4/3), 23% (4/4 – 4/17), 43% (4/18 – 5/1), 27% (5/2 – 5/15), 4% (5/16 – 5/29)

•Time

29% (weekday early, 6:00 AM – 1:59 PM)
 30% (weekday late, 2:00 PM – 9:59 PM)
 18% (weekend early, 6:00 AM – 1:59 PM)
 23% (weekend late, 2:00 PM – 9:59 PM)

Presentations used to Catch Steelhead

•Fishing Method

83% (drift with yarn or prepared), 7% (fly), 5% (still/bobber), 4% (cast artificial), 1% (mixed)

•Lure

43% (yarn), 21% (prepared), 20% (artificial), 10% (mixed), 6% (worm)

Information available on the web

•Angler updates are posted every Monday and Friday throughout the spring creel season by the MNDNR at: <http://www.dnr.state.mn.us/areas/fisheries/lakesuperior/management.html>

•Hourly stream discharge meters (USGS, MNDNR, MNPCA)

-Knife River <http://waterdata.usgs.gov/mn/nwis/uv?04015330>

-Pigeon River <http://waterdata.usgs.gov/nwis/uv?04010500>

-Sucker, Baptism, and Brule, rivers

<http://www.dnr.state.mn.us/waters/csg/index.html>

•Minnesota Steelhead Fishing <http://www.minnesotasteelheader.com>

