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Abstract Submission

Symposium: Fish Under the Radar: Native, Non-game, and Taken for Granted [ID # [9468](https://afs.confex.com/afs/2020/webprogrampreliminary/Session9468.html)]

**Title:**

Population Characteristics of Commercially Harvested Bigmouth Buffalo in NW Iowa Lakes

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**Abstract:**

Bigmouth Buffalo (*Ictiobus cyprinellus*) are native to the Missouri and Mississippi River drainages from Louisiana, United States to Alberta, Canada, and are commercially harvested across the Midwest and sold for human consumption in large metropolitan areas. However, little is known about how the commercial harvest of this species affects population characteristics, and recent studies have shown that Bigmouth Buffalo may live 100 years or more. Fish may compensate for harvest through multiple pathways, either through decreased natural mortality or through the physical responses of increased individual growth and condition. We examined how natural mortality and the physical mechanisms of compensation to harvest changed in response to a range of exploitation rates in six northwest Iowa lakes from 2017 to 2019. Capture-mark-recapture analyses using Barker’s joint live-recapture/tag-recovery model showed that \_\_\_\_\_\_\_\_\_\_\_ effect of harvest on natural mortality, while changes to individual growth and condition were not significantly related to the degree of biomass removed in all lakes. Commercial harvest of Bigmouth Buffalo from shallow, natural lakes of Iowa should be monitored to ensure this native species is not extirpated within its historic range.