

# Susquehanna River

## Channel Catfish survey 2016 through 2018



*Area 6 Fisheries Manager Mike Kaufmann with a Channel Catfish caught near Wrightsville during 2017*

With completion of the [Strategic Plan for the Management of Catfishes in Pennsylvania \(catfish plan\) in 2012](#), Fisheries Management Division biologists began targeted surveys using hoop nets for Channel Catfish in popular Catfish fisheries across the Commonwealth. Surveys were conducted to establish baseline information to characterize Channel Catfish populations, track and monitor long-term trends in fish abundance, and understand population size and age structure characteristics for fisheries management purposes. These surveys were the first systematic efforts made by the PFBC to gather information to better manage Pennsylvania's natural and hatchery supported Channel Catfish fisheries.

Among the most popular and productive of the natural fisheries is the middle and lower Susquehanna River extending from the Fabri Dam in Sunbury downstream to the Pennsylvania Maryland state line crossing Conowingo Reservoir. For this survey the middle and lower Susquehanna River were divided into 50 unique segments with eleven randomly selected locations surveyed between 2016 and 2018; six were in the middle Susquehanna River (Sunbury to York Haven) and five were in the lower Susquehanna River (York Haven to PA/MD border). Sampling locations were selected for placement of baited, tandem hoop nets arranged in four, three-net series. Hoop nets were baited with commercial cheese logs and deployed to fish for approximately 72 hours. After the 72-hour soak period, hoop nets were tended to remove and process the catch. Captured Channel Catfish were counted, measured (total length), and released. These data were used to develop catch per unit effort (CPUE) statistics used to characterize population relative abundance and fish size structure.

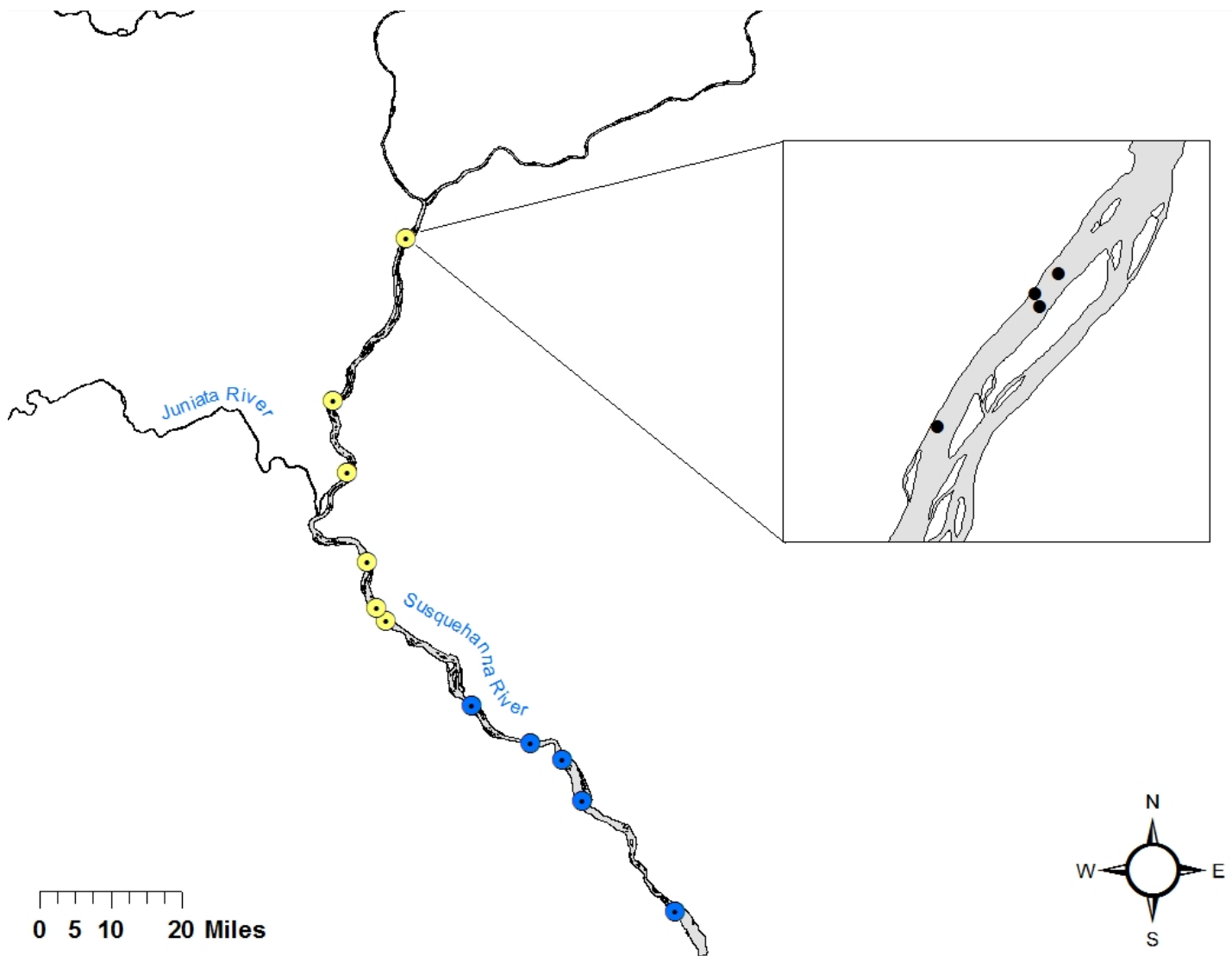


Figure 1. Locations of Channel Catfish surveys at the middle Susquehanna River (yellow) and lower Susquehanna River (blue) between 2016 and 2018. Inset map shows an example of how hoop nets may be deployed (black dots) within a given site.

Catch per unit effort values for Channel Catfish varied among and within sites (Table 1). Median CPUE values ranged from 1.5 to 30.5 fish per series for the middle Susquehanna River and 5.5 to 74.5 fish per series for the lower Susquehanna River. Catch varied among individual hoop net series from 0 (Clemson Island) to 142 fish (York Haven/ Bainbridge). Generally, CPUE values were highest at sites in the lower Susquehanna River reach; however, catches were considered favorable to offer worthwhile fishing opportunities in both. Analysis of the length-frequency distribution of hoop net catch for both reaches showed that Channel Catfish ranged between 12 and 31 inches in length (Figure 2). There was representation across the full range of adult length groups suggesting strong and consistent recruitment through natural reproduction. Noteworthy, Channel Catfish  $\leq 12$  inches were too small to be captured in nets so their absence in the catch doesn't represent young of year, yearling, or slightly older juvenile fish abundance. The catch of angler-preferred length Channel Catfish, approximately 24 inches and longer, was good in both reaches with no indication of excessive angler exploitation or natural mortality occurring.

Table 1: Median and range of catch per unit effort (CPUE; fish per series) of baited, tandem hoop nets at each site surveyed at the middle and lower Susquehanna River between 2016 and 2018.

	Reach	Median CPUE (fish/ series)	Range CPUE (fish/ series)
Middle	Shady Nook	30.5	14 - 64
	Liverpool	11.5	7 - 14
	Clemson Island	1.5	0 - 22
	Rockville	8.0	2 - 12
	City Island	26.5	23 - 30
	New Cumberland	28.0	9 - 61
Lower	York Haven/ Bainbridge	74.5	22 - 142
	Lower Donegal Twp.	41.5	31 - 121
	Wrightsville	42.0	14 - 59
	Lake Clarke	13.0	2 - 51
	Conowingo	5.5	2 - 21

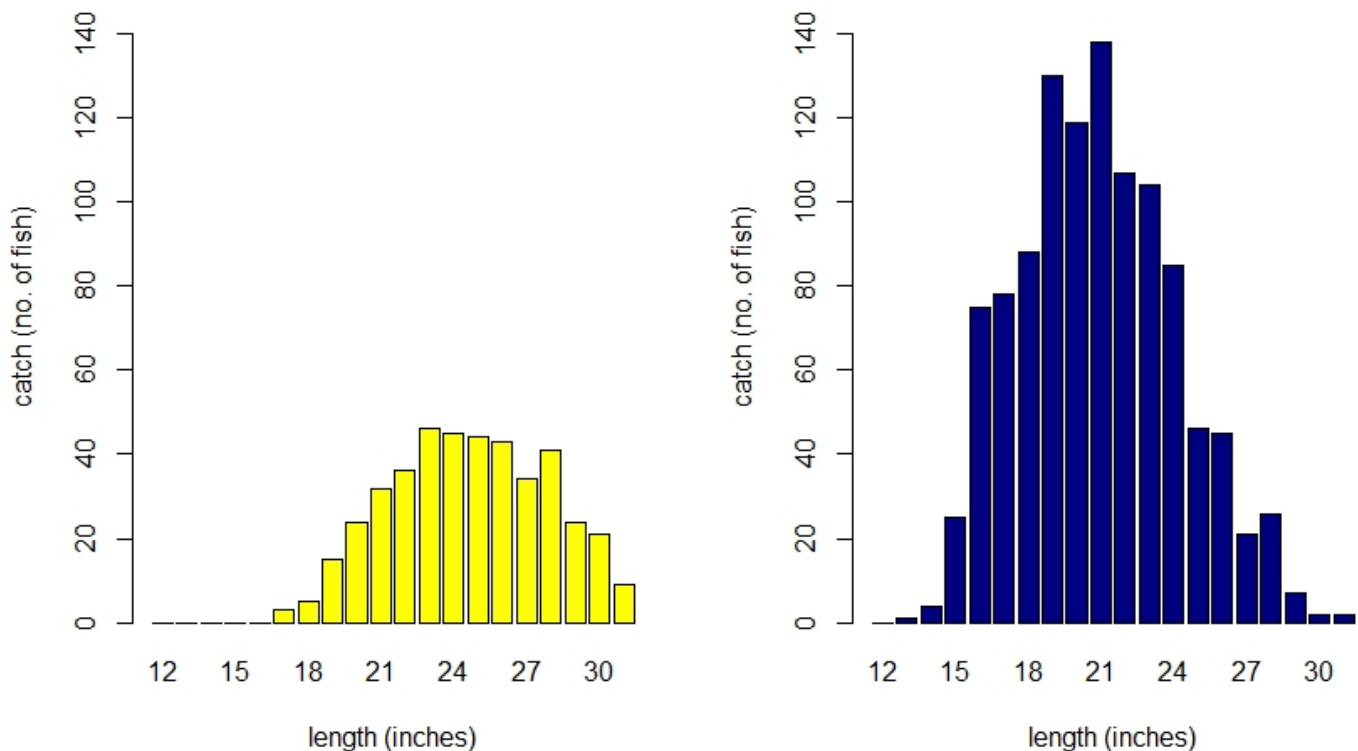


Figure 2: Length-frequency distribution (catch per 1-inch length group) of Channel Catfish caught during hoop net surveys at the middle (yellow) and lower (blue) Susquehanna River. Values reflect cumulative catch across the reach.

Anglers looking to fish for Channel Catfish throughout the middle and lower Susquehanna River can find strong numbers of Catfish across a broad range of sizes. Anglers looking to catch high numbers of fish may want to target the lower Susquehanna River between York Haven Dam and Columbia-Wrightsville while anglers

seeking a greater portion of their catch comprised of larger fish may want to consider the middle Susquehanna River. Channel Catfish in the middle and lower Susquehanna River reaches are regulated under [Commonwealth Inland Waters](#) regulations with no minimum size limit for harvest and a 50 fish per day creel limit, combined with other panfish species. Anglers harvesting Channel Catfish are reminded there is a [fish consumption advisory](#) of one meal per month for Channel Catfish greater than 20 inches for the Susquehanna River encompassing Snyder, Northumberland, Juniata, Perry, Dauphin, Cumberland, York, and Lancaster Counties.

Regardless of which reach anglers choose to fish quality Channel Catfish opportunities are available from shore or boat for those fishing the middle and lower reaches of the Susquehanna River.

***Geoff Smith, Susquehanna River Biologist***