

Wind-Caused Fish Kills

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There are many records of the raining of fish during violent thunderstorms and heavy rains (1). We were unable to find any record of fish kills due to high winds or tornadoes in Oklahoma. During our long-term seining surveys of Oklahoma waters, we have observed two fish kills that were wind related.

On 22 June 1985, during our overnight gill net surveys of Wister Lake at Potts Creek Landing, we observed a massive fish kill caused by high winds and a small tornado. About 2 a.m. a fast-moving, violent thunderstorm with a small tornado and heavy rainfall moved through the area. The high winds from a southwesterly direction produced large (1.0 m to 1.5 m) waves. The wind was strong enough to blow the crests off the waves. The next morning we observed thousands of fish on the ground, 3 m to 5 m above the waterline. This mass of killed and dying fish was composed of young-of-the-year *Lepomis* sp., *Micropterus* sp., *Pomoxis* sp., and a mixture of minnows and topminnows. We estimate that in a 100-m stretch of the shoreline 920 specimens were dead. In areas with pools of standing water, above the normal water level, we found many living and dying fish.

On 19 September 1993 during the Oklahoma Academy of Science Fall Field Trip to the Black Mesa State Park, we observed at Lake Carl Etling large numbers of dead *Dorosoma cepedianum* entangled in massive piles of green, filamentous algae, which had been blown onto the bank above the normal water level. During the previous evening, there had been very strong straight winds (50-75 mph) from the west blowing into the dam area of the lake. We observed 30- 50 dead gizzard shads per 100 m of the shoreline. We also observed additional specimens being blown onto the shore while we were seining. The water temperature was 19 °C, not low enough to cause a hypothermic shad kill.

REFERENCES

1. Dees LT. Rains of fish. Washington (DC): US Dept Interior, US Dept Fish and Wildlife Services, Fishery Leaflet 512; 1961.

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