

Abstract

The effects of catch-and-release related fight and air exposure times on post-release stress response or mortality of fishes has repeatedly been investigated, but rarely have anglers been observed to determine fight and air exposure times to which caught-and-released fish are actually exposed. We observed anglers land and either harvest or release yellow perch (*Perca flavescens*), smallmouth bass (*Micropterus dolomieu*), white crappie (*Pomoxis annularis*), and black crappie (*P. nigromaculatus*) to evaluate associated fight time and air exposure time. A total of 237 fight and 312 air exposure times were recorded; mean fight time was 10.1 s (range 1 to 40 s), mean air exposure of released fish was 20.1 s (range 2 to 141 s), and 95% of anglers subjected fish to < 24 s of fight time and < 51 s of air exposure. Landing crappie required less time ($\bar{X} = 8.5$ s) than landing yellow perch ($\bar{X} = 12.8$ s) or smallmouth bass ($\bar{X} = 12.9$ s). Air exposure was longer for yellow perch ($\bar{X} = 28.1$ s) and smallmouth bass ($\bar{X} = 25.9$ s) than for crappie ($\bar{X} = 14.9$ s), and small fish were subjected to less air ($\bar{X} = 17.6$ s) than larger fish ($\bar{X} = 28.5$ s). Results of the present study suggest that air exposure and fight times for warmwater and coolwater fish released by Idaho anglers are relatively short and therefore appear to be biologically inconsequential. Further work is needed to support or refute these findings for actual anglers across a larger geographic area.

Keywords: air exposure, fight time, warmwater, coolwater, catch-and-release

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