Table 1.

Impoundments sampled, surface area (ha), years of spring electrofishing, and year(s) of shoreline rotenone application, if any (“control”). Impoundments are located across central to southern Alabama, USA.

|  |  |  |  |
| --- | --- | --- | --- |
| Impoundment | Size (ha) | Years Electrofished | Year(s) Treated |
| Anderson | 2.8 | 2017, 2018 | control |
| AE1 | 1.6 | 2017, 2018, 2019 | control |
| Big Pit | 11 | 2017, 2018, 2019 | control |
| FP3 | 0.7 | 2017, 2018, 2019 | control |
| Drummond3 | 8.8 | 2018, 2019 | control |
| Meriwether | 3.4 | 2018, 2019 | control |
| Williams | 3.3 | 2018, 2019 | control |
| Promise | 1.9 | 2018, 2019 | control |
| Little Pit | 4 | 2017, 2018, 2019 | 2017, 2018 |
| S3 | 4 | 2017, 2018, 2019 | 2017, 2018 |
| Horseshoe | 1.3 | 2017, 2018, 2019 | 2017, 2018 |
| Drummond1 | 8.7 | 2018, 2019 | 2018 |
| Britton | 2.2 | 2018, 2019 | 2018 |
| Zachry | 5.3 | 2018, 2019 | 2018 |
| Dead | 2.2 | 2018, 2019 | 2018 |

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Figure 1.

Map of small impoundments studied in Alabama, USA. Control (untreated) impoundments are grey triangles and rotenone treatment impoundments are black circles. Horseshoe (treatment), Little Pit (treatment), and Big Pit (control) are all three within 50 meters of each other, so the symbols almost completely overlap.

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Figure 2.

Largemouth Bass (top) and Bluegill (bottom) loge total seine catches immediately before (days 1 and 21) and after (days 2 and 22) the first (“App. 1”; black lines) and second (“App. 2”; grey lines) shoreline rotenone applications in small impoundments located across central to southern Alabama, USA. Solid lines denote treated impoundments and dashed lines denote controls. Observations were pooled across years (2017 and 2018) and error bars represent the 2.5th and 97.5th percentiles (95% confidence intervals).

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Figure 3.

Largemouth Bass (top) and Bluegille (bottom) loge total seine catches in small impoundments located across central to southern Alabama, USA immediately before rotenone application (day 1) and at mid-summer after both rotenone applications (day 42). Solid lines denote impoundments that received shoreline rotenone treatments, and dashed lines denote controls. Data were pooled across years (2017, 2018) and error bars represent 95% confidence intervals.

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Figure 4.

Temporal trends in Largemouth Bass loge mean length-at-age-1 in control (dashed lines) and treatment (solid lines) small impoundments located across central to southern Alabama, USA. Open circles denote untreated impoundments, while closed circles denote impoundments treated with rotenone. Solid lines leading from a closed circle to another closed circle represent the impoundments that were treated twice (e.g., see Table 1). Times treated (untreated control, once, twice) was the variable of interest in our model, and this portrays how the model compared those different levels of treatment. The interaction term is testing whether the slopes of the solid lines (i.e., one or two years of treatment) differ from the slopes of the dashed lines (controls). Error bars represent the 95% confidence intervals of the data when the sample size for that year was greater than two impoundments.

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Figure 5.

Temporal trends in age-1 Largemouth Bass (top) and >80 mm Bluegill (bottom) loge electrofishing catch-per-unit-effort (CPUE; fish caught per 30 minutes electrofishing) in control (dashed lines) and treatment (solid lines) small impoundments located across central to southern Alabama, USA. Open circles denote untreated impoundments, while closed circles denote impoundments treated with rotenone. Data are presented as in Figure 4.