

Aquatic insects in the diets of non-native fish species, red shiner (*Cyprinella lutrensis*) and green sunfish (*Lepomis cyanellus*), from tributaries of the Gila River watershed, Arizona – competition with native species?

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Oral Presentation

The Gila River watershed, Arizona has many perennial streams with native fish assemblages that have been impacted through the introduction of exotic fish species. Through the introduction of non-native fish species, the community assemblages and ecosystem structure and function have been altered. Little attention has been paid to the dietary habits of the non-native species in this area, but should their diets overlap with that of the native species, it raises a concern that native species could be adversely affected. This study examined diet by evaluating the stomach contents of two common non-native fish species, red shiner (*Cyprinella lutrensis*) and green sunfish (*Lepomis cyanellus*) from streams with large native fish communities. Over 300 red shiners were sampled from four sites on Aravaipa Creek, and over 150 green sunfish were sampled from multiple sites along Bonita Creek. Individual fish were measured, weighed, and the stomachs were dissected. Insects from the stomach were identified to the lowest taxonomic group possible and compared to the diets of native fish species as found by Minkley et al., 1981. We found dietary overlap among native and non-native fish species. Common insects that were similar among groups were Mayflies (Ephemeroptera, Baetidae) and Caddisflies (Trichoptera, Hydropsychidae). These findings indicate that there are similarities in diet and that close monitoring and possible intervention may be needed.