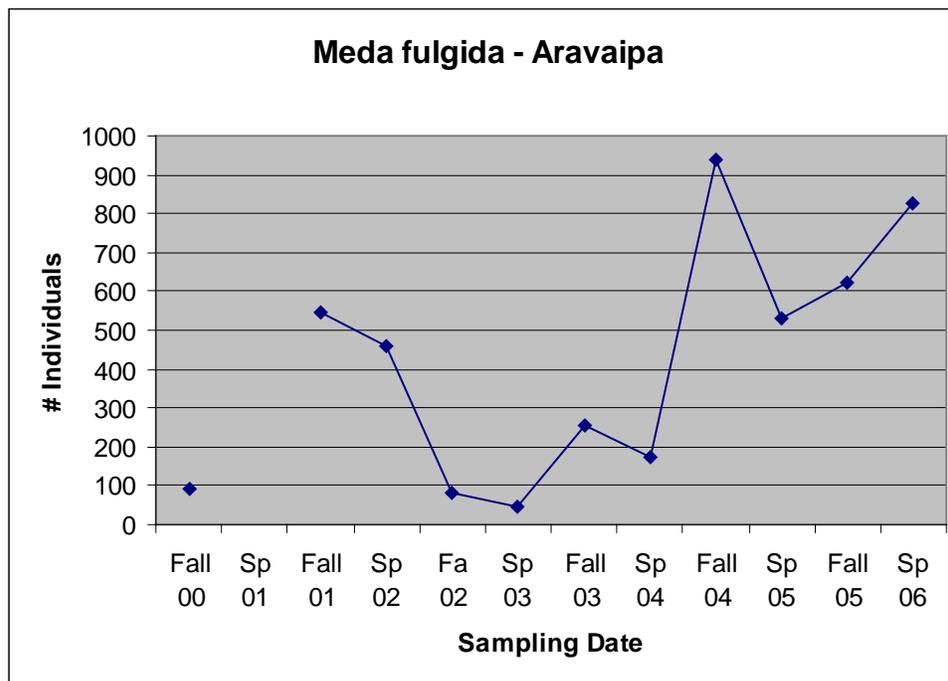


Status of *Meda fulgida* in Aravaipa Creek, Arizona
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Peter Reinthal, Department of Ecology and Evolutionary Biology, University of Arizona started sampling fishes at Aravaipa Creek, Arizona in 2002. We have been sampling using (1) seining 200 meters at nine localities, (2) block and shock for 200 meters at six localities and (3) three pass depletion sampling at one site. Presented below is the number of spinedace combined from the nine seine localities for spring and fall sampling efforts. By comparing seining with block-shock results, there is a greater proportional representation of spinedace when fish are collected by seining. The data from fall 00 and fall 01 is from Dave Brown and Peter Unmack, ASU and no data were available from spring 2001.



As you can see, there is considerable variation in the numbers of individuals at Aravaipa. Numbers declined precipitately in 2002 through 2004 but recovered in fall 2004 and the population appears to be doing well for the past two years. The fish look healthy and are reproducing with little parasite load. There was good recruitment this spring and they appear to have bred early, probably due to warmer waters sooner due to lack of rain.

Distribution:

At all times, spinedace were found at the four easterly most sample sites and occasionally at the fifth site albeit in low numbers. On only one occasion was an

individual spikedace sampled at any of the four westerly most sites. This indicates that their distribution is regularly restricted to the upper half of perennial flow and not the entire creek.

Concerns:

Red shiners (*Cyprinella lutrensis*), green sunfish (*Lepomis cyanellus*) and yellow bullheads (*Ameiurus natalis*) are regularly found in Aravaipa Creek. The distribution of shiners is restricted to the western part of the creek where they do not overlap with spikedace. Green sunfish are restricted to where Horse Camp tributary enters Aravaipa. Bullheads are found in the lower 2/3 of the creek. Presently, exotics do not appear to be having an impact on spikedace but this could change. We have initiated a research program to examine heavy metal contamination in Aravaipa fishes (see below).

Future Plans:

I will continue to do biannual sampling of Aravaipa fishes. To minimize impacts on fishes, we will sample nine sites with seines in the spring and nine sites with block and shock in the fall and not use both techniques during any one sampling. We will continue to do population estimates at a 100 meter stretch at Turkey Creek (upper east).

We have put together a team of University of Arizona scientists to study heavy metals (specifically lead) in Aravaipa food webs. We just received notification of EPA funding for a project – “Monitoring the Effects of Phytostabilization of Mine Tailings on Water Quality in Aravaipa Creek, Southern Arizona: Sources, Deposition and Pathways of Heavy Metals”. This is a coordinated effort with phytostabilization efforts of mine tailings at Klondyke, near the headwaters of Aravaipa Creek.