Lethal versus Nonlethal Methods of Aging Lutjanus campechanus

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This project involved the analysis of the otoliths and scales of red snapper. Extracting these otoliths are lethal. Extracting scales is nonlethal. This project will not only benefit further research in having an easier extraction method, but it will also benefit the fish. We would be able to determine the age of the fish without having to euthanize it. I believe the scale age will differ greatly from the age determined from the otolith. Fifty-two fish were sampled from the Roy Martin Young Anglers Fishing Tournament and he first two days of the Alabama Deep Sea Fishing Rodeo held in July of 2015. Otoliths were extracted from each fish along with the scales from the left side. All processing and analysis occurred at the Dauphin Island Sea Lab in my mentor's lab. The scales were placed on a microscope slide to be looked at. Each ring stretched from one side of the scale to the other was determined a year. The otoliths had to grinded down to the core on one side then glued to a microscope slide. Once dried, the were sawed down to half a millimeter thick using a jeweler's saw. The otoliths were then covered with liquid cover slip and placed under the microscope to be aged. It was determined that the scale age was much lower than the actual age with an average difference of three years below. With a larger sampling size, I believe there could be an equation formulated to calculate the actual age from the predicted age.

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