Mutton snapper (*Lutjanus analis*) Abundance Indices Based on a Fishery-Independent Visual Census Survey from the Florida Keys, Florida

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**METHODS**

Visual surveys were conducted from May 1999 to October 2007. Thirty nine randomly select sites (13 in Zone A, 10 in Zone B, 6 in Zone C and 10 in Zone D) were conducted each month. Density (# fish/100 m²) was used as an index of relative abundance. Density estimates by year, strata, and zone were used for spatial comparisons.

**RESULTS**

- There were a total of 2198 dives conducted, and mutton snapper were only found in 539 dives.
- Mutton snapper were found on reefs ranging from low to high relief and from low to high bottom complexity.
- Increase in rates in 2004 and 2006 was due to divers observing proportionately higher numbers of juveniles.
- There were more adult mutton snappers in the Upper Keys (Zone A) and Lower Keys (Zone D) than in the Middle Keys (Zones B and C).
- Adult mutton snapper were observed in deeper waters.
- Only four species out of 22 were associated with mutton snapper life stages.

**CONCLUSIONS**

- Density of mutton snapper for each year was similar and the apparent differences between years were attributable to factors such as: life stage (adult & juveniles), reef type, zone, bottom complexity.
- Examining the visual survey data by life stage (juvenile or adult) allows us to develop an index for both life stages.
- The survey allowed us to determine the species associated with mutton snapper.
- Our visual census survey provides a relative index of abundance of mutton snapper in the Florida Keys.
- These data will continue to provide a reliable index for the management of this valuable resource.

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