



Mid-Atlantic Fishery Management Council

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MEMORANDUM

Date: September 24, 2021
To: Council
From: Julia Beaty, staff
Subject: HMS Diet Study

In 2018, the Council funded a study on the diets of yellowfin and bigeye tunas, and white and blue marlins, with the goal of better understanding the role of chub mackerel in the diets of these predators of stakeholder interest. Principal investigator Dr. Walt Golet will present the results of his research to the Council on October 5, 2021. A final report is not yet available. This memo summarizes the methods and conclusions relevant to chub mackerel based on Dr. Golet's recent presentations to the Mackerel, Squid, and Butterfish Advisory Panel and the Scientific and Statistical Committee.

Dr. Golet also provided detailed summary tables and figures, which are available [here](#).

For this study, 758 non-empty stomachs from yellowfin and bigeye tunas were obtained from commercial and recreational fisheries, including recreational fishing tournaments, from throughout the Mid-Atlantic and Southern New England, primarily in 2018 and 2019. Thirty six white marlin and 17 blue marlin stomachs were also obtained. The marlin sample sizes were limited by regulations on landings. Stomach contents were identified to the lowest possible taxonomic level using visual identification, hard part analysis, and genetic barcoding.

Illex squid were found to be one of the most important prey items in the stomachs of yellowfin and bigeye tunas. They were also found to a lesser extent in the marlin stomach samples.

Chub mackerel were determined to be an exceptionally small component of the diets of tunas and marlins. Specifically, only two chub mackerel were identified in yellowfin tuna stomachs and seven chub mackerel were identified in two white marlin stomachs.