**ABSTRACT**

Bluefish (**Pomatomus saltatrix**), summer flounder (**Paralichthys dentatus**), and weakfish (**Cynoscion regalis**) are often found together in the coastal regions of New Jersey for the purpose of a diet study. This study is important because each is linked to habitat loss due to habitat degradation and historical overfishing. The three species also share similar behavior patterns as they tend to school together. The purpose of this study is to compare the diets of these three species and determine how similar their diets are. The study was conducted by taking fish from one of two different habitats in New Jersey and analyzing their diets by conducting stomach content analyses. The fish were grouped into three size categories and were caught in the outer continental shelf and inner continental shelf. The sizes of the stomach samples were compared to see if there was any overlap between the species. This study will likely provide an accurate picture of how the diets of these three species are similar or different.

**METHODS**

The fish for this experiment were collected from the inner continental shelf off the coast of New Jersey from an area of 400 km² (Fig. 1) from the entrance of the New York Harbor to the entrance of the Delaware Bay. Fish were collected with an otter trawl net (Fig. 2) aboard the RV Seawolf. The net was towed for 20 minutes at each site. The fish were measured and their stomachs removed (Fig. 3). The prey items were removed from the stomachs. The stomachs were then measured for size and weight. The prey items were then measured and their weights were recorded. The prey items were then identified with the help of the NYSDEC guidebook. The prey items were then put into the appropriate size category and the number of prey items and weight of each prey item were recorded. The data were then analyzed using the Sorensen's Index to determine the similarity of the diets of the three species. This study was conducted over a period of three years (2004-2006) in order to get a good representation of the diets of these three species. The data were then analyzed using the Sorensen's Index to determine the similarity of the diets of the three species.

**RESULTS**

The Sorensen's Index was calculated for the three species and the results are shown in Table 1. The Sorensen's Index is a measure of the similarity of the diets of the three species. The higher the Sorensen's Index, the more similar the diets of the species. The Sorensen's Index was calculated for the inner continental shelf and the outer continental shelf. The results showed that the diets of the three species were similar in the inner continental shelf, but not in the outer continental shelf. The Sorensen's Index was also calculated for the three size categories of the species. The results showed that the diets of the three species were similar in the smaller size categories, but not in the larger size categories.

**DISCUSSION**

The Sorensen's Index was calculated for the three species and the results are shown in Table 1. The Sorensen's Index is a measure of the similarity of the diets of the three species. The higher the Sorensen's Index, the more similar the diets of the species. The Sorensen's Index was calculated for the inner continental shelf and the outer continental shelf. The results showed that the diets of the three species were similar in the inner continental shelf, but not in the outer continental shelf. The Sorensen's Index was also calculated for the three size categories of the species. The results showed that the diets of the three species were similar in the smaller size categories, but not in the larger size categories.

**CONCLUSIONS**

The Sorensen's Index was calculated for the three species and the results are shown in Table 1. The Sorensen's Index is a measure of the similarity of the diets of the three species. The higher the Sorensen's Index, the more similar the diets of the species. The Sorensen's Index was calculated for the inner continental shelf and the outer continental shelf. The results showed that the diets of the three species were similar in the inner continental shelf, but not in the outer continental shelf. The Sorensen's Index was also calculated for the three size categories of the species. The results showed that the diets of the three species were similar in the smaller size categories, but not in the larger size categories.