**Abstract**

Cutlassfish is an important fishery product in the Northwest Pacific Ocean. Due to the increase in demand, the catch of cutlassfish has increased year by year, which will further affect its reproductive activities. In order to understand how the reproductive strategies of cutlassfish are affected by fishing at different temperatures, this study took *Trichiurus japonicus* as the research species and sampled from 6 sites from 22˚N to 38˚N. Numerically generated the simulated fish population by the original data, and then used 3 trawling methods with different mesh sizes to simulate different fishing intensities, and compared the changes in fecundity before and after fishing. This study found that, in all sites, when fish increased body mass, in addition to their pre-anal length, their batch fecundity also increased. Besides, in locations with higher latitudes, the declining ratio in batch fecundity due to fishing will be higher. The reason is that the average pre-anal length of high latitude fish is longer, making them easier to be caught, and when fishing with a mesh size of 200mm, most of the fish in each all locations will be caught and have difficulty to show the distribution trend of the declining ratio of batch fecundity between different latitudes (in other words, the latitude effect generally disappears). Together, this research expands the study regions of cutlassfish, revealing the impact of fishing on the batch fecundity at different latitudes, and providing insight into fishing regulation under cutlassfish fishing industry.

Keywords

cutlassfish, batch fecundity, fishing, reproductive strategy