عنوان مقاله:

Population structure of banana shrimp, Penaeus merguiensis De Man, ۱۸۸۸ in the Strait of Hormoz, Persian Gulf

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خلاصه مقاله:

Monthly length frequency data of banana shrimp, Penaeus merguiensis were collected from the coastal waters of the north east of the Persian Gulf, from January ۲۰۱۲ to January ۲۰۱۳. Software package FiSAT was used to analyze the length frequency data. Growth parameters, mortalities, exploitation rate and recruitment pattern were estimated from the carapace length in the area. Based on length – weight relationships, the estimated parameter a was ۰.۰۰۱۵ for males and females and b was ۲.۸۰۱۵ for males and ۲.۷۸۵۲ for females. The estimated growth parameters: $L_\infty=$۳۹.۵ mm, K=۱.۸ year–۱ and $t_0=$-۰.۰۸ year–۱ for males and $L_\infty=$۵۰ mm, K=۱.۵ year–۱ and $t_0=$-۰.۰۹ year–۱ for females. Longevity was estimated ۱.۶۷ and ۲.۰۰ years for males and females, respectively. The estimated mortality coefficients, were Z=۵.۹ (۴.۸۹ – ۶.۹۲) year–۱ (α=۰.۰۵), M=۲.۹ year–۱ and F=۳.۰ year–۱ for males and Z=۵.۷ (۴.۹۴–۶.۳۷) year–۱ (α=۰.۰۵), M=۲.۵ year–۱ and F=۳.۲ year–۱ for females. The length at first capture, Lc estimated from the probability of capture routine was ۲۳.۳ mm for males and ۲۴.۲ mm for females. Sex ratio (M:F=۱.۱:۱) was significantly different to ۱:۱. The exploitation rates of shrimp were ۰.۴۹ and ۰.۵۶ for males and females, respectively which could get higher because the survival of spawning stock after the fishing season is related to environmental factors and has less effect on the next year's biomass. Recruitment was continued throughout the year but with one major peak in July to November.

کلمات کلیدی:

Penaeus merguiensis, Population dynamics, Persian Gulf.

لینک ثابت مقاله در پایگاه سیویلیکا:

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