Exploring Seasonal Habitat Use by Juvenile Fish Species in Algoa Bay, South Africa Using Remote Underwater Video Surveillance

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This research was undertaken to study the behaviour and the use of different habitats by juvenile fishes within the shallow areas of Algoa Bay. Although some researchers have studied the shallow coastal areas in this region, there is still limited research as most of the earlier used methods could not target certain areas such as vegetated shallow areas without damaging these habitats. The aim was to investigate which habitats (inside and outside the bay) are important to juvenile fishes in the shallow water areas of Algoa Bay. Sampling in this study was conducted in three seasons, that is late summer, winter and spring. Remote underwater stereo videos (RUVs) (non-baited) were used for data collection since they do not damage fish environments and do not affect their behaviour. YSI- multiparameter probe was used to measure physico-chemical parameters (Temperature, salinity, turbidty and dissolved oxygen) in the water column. A total of 271 fishes and 13 species were recorded during the sampling period in Algoa Bay. The most abundant juvenile fish were blacktail and strepie in both sites (inside and outside the bay). Results indicate that juvenile fish preferred vegetated sites outside the bay compared to sandy sites inside the bay. The total abundance was dominated by juveniles (< 100 mm TL) in both sites. Turbidity and temperature were the important factors structuring fish assemblages. The hypothesis was rejected, as there were more species outside the bay. Both recorded fish species are important commercial species in South African coastal waters and all the individuals recorded in videos were juveniles. As such, these habitats need to be protected/conserved.

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