ORAL PRESENTATION

AN ARTIFICIAL INTELLIGENCE BASED FISHERIES RESEARCH ON THE EVALUATION OF GNATHIID PARASITISM IN GOLDBLOTCH GROUPER OF ISKENDERUN BAY

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Self-Organizing Maps (SOM), a type of Artificial Neural Network (ANN), is a data clustering tool that provides a way of representing multi-dimensional data in two-dimensional space. The maps are produced preserving topological relations between parameters of the input vectors. Unlike multi-layered feed forward neural networks, SOM employs unsupervised learning training mechanism. Interestingly, it requires no prior knowledge regarding the solution. The variety of the applications which employ SOM for data analysis reported in the literature is a clear indication of its acceptance as a powerful data analysis tool. SOM may, not only, present better viewing opportunities in such cases that displaying the relationships between the factors effecting the problem is impossible, but also, provides better exploration of the data. Application of SOM on the data collected in fisheries science provided enhanced outcomes and better understanding on the data collected. In this paper, SOM is discussed and reviewed in view of aquaculture and fisheries research based on the prevalence of isopods in the buccal cavity of one grouper species. The research was carried out to determine the seasonal patterns and potential impacts of the parasites on the goldblotch grouper using the SOM which were conducted in Iskenderun Bay.

Keywords: Self-organizing maps, Artificial Neural Network, fish parasites, Iskenderun Bay