Turbidity in Freshwater is caused by presence of suspended particles such as clay, silt, finely divided organic matter, plankton and other microscopic organisms, the minimum turbidity 12.8 NTU was observed in February while maximum 130 NTU in November Figure 12.However, the observed value were higher than the permissible level recommended by Iraq for drinking water for all months, the statistical analysis showed a significant difference among all months (P<0.05).

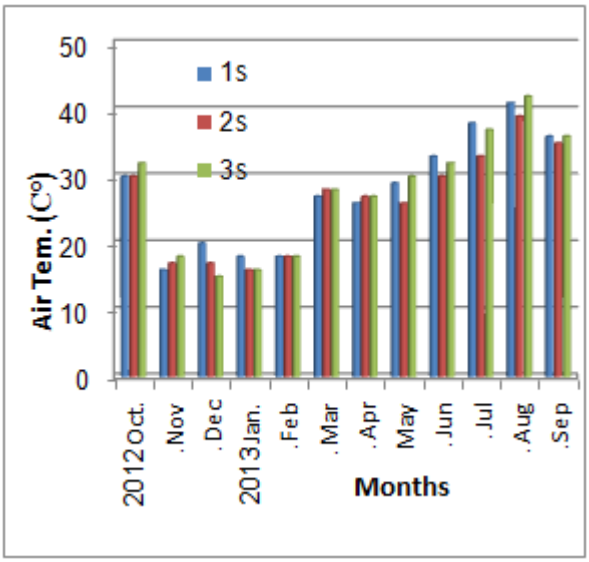

Figure 2: Months Variation in Air Temperature

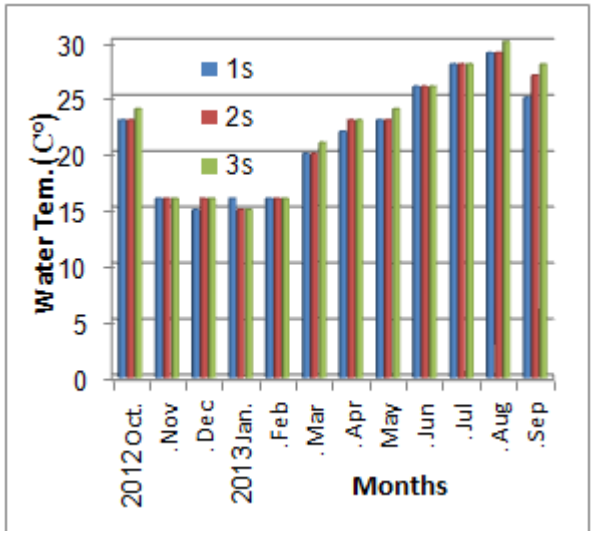

Figure 3: Months Variation in Water Temperature during study period

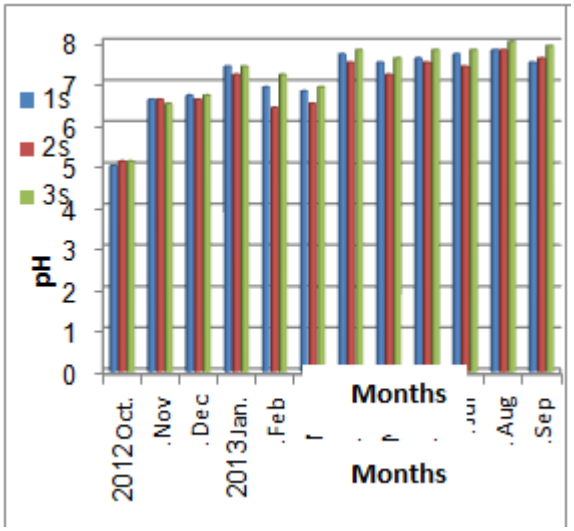

Figure 4: Months Variation in pH during study period

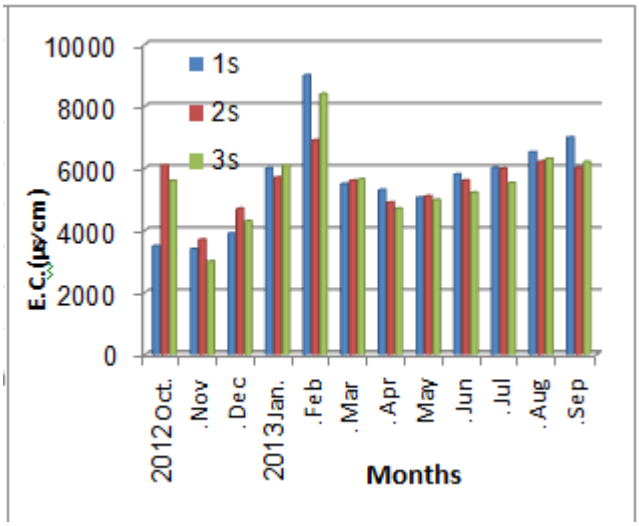

Figure 5: Months Variation in EC during study period

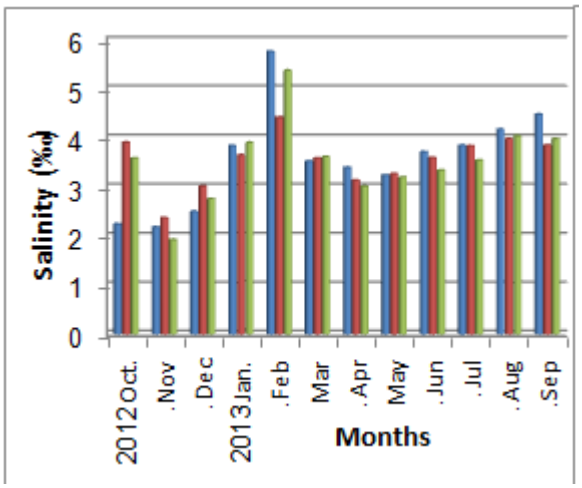

Figure 6: Months Variation in Salinity during study period

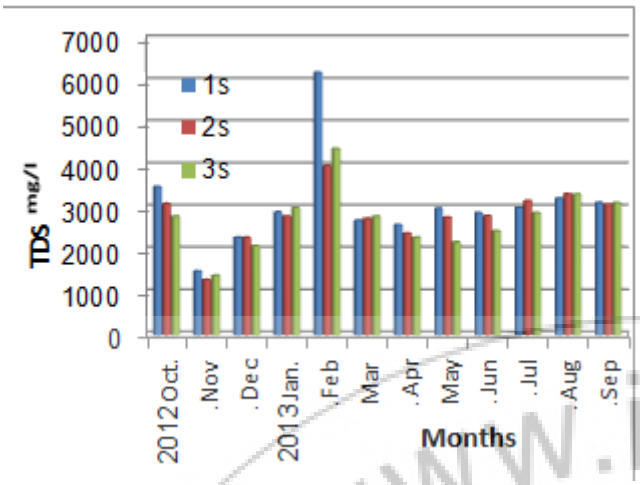

Figure 7: Months Variation in TDS during study period

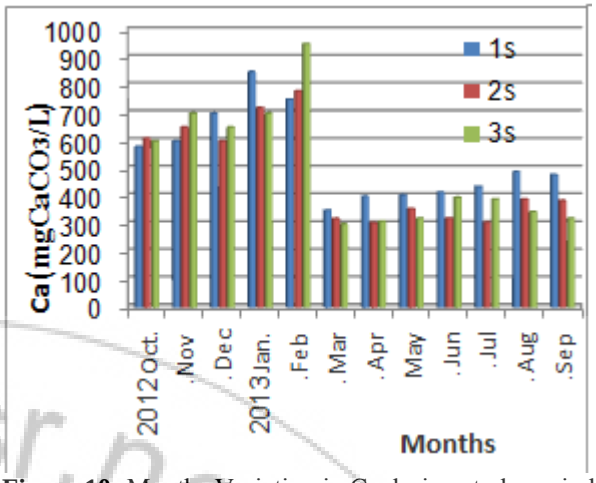

Figure 10: Months Variation in Ca during study period

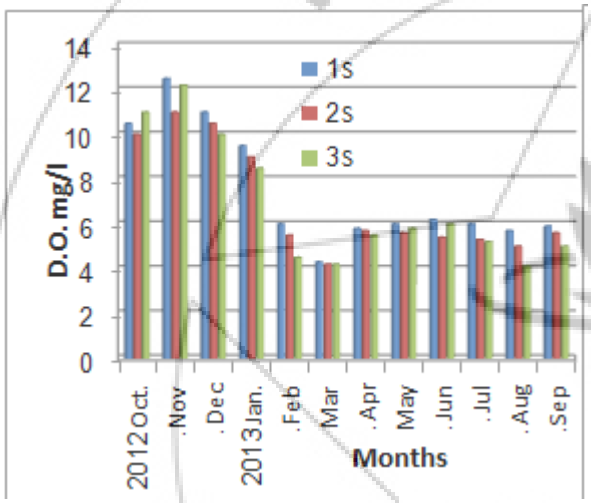

Figure 8: Months Variation in DO during study period

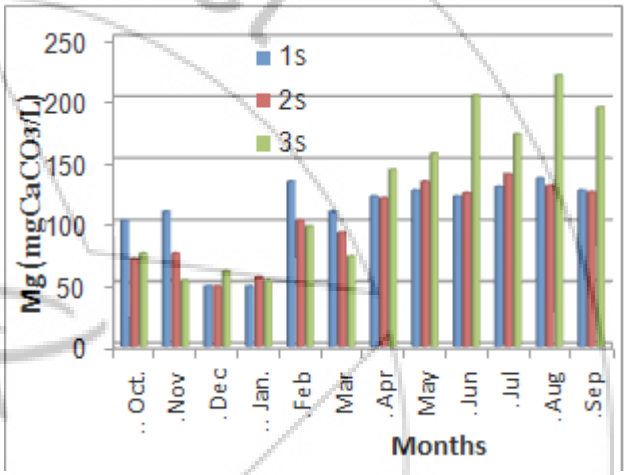

Figure 11: Months Variation in Mg during study period

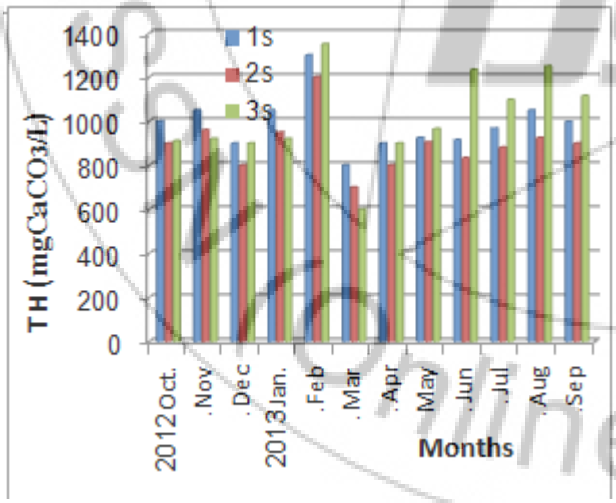

Figure 9: Months Variation in TH during study period

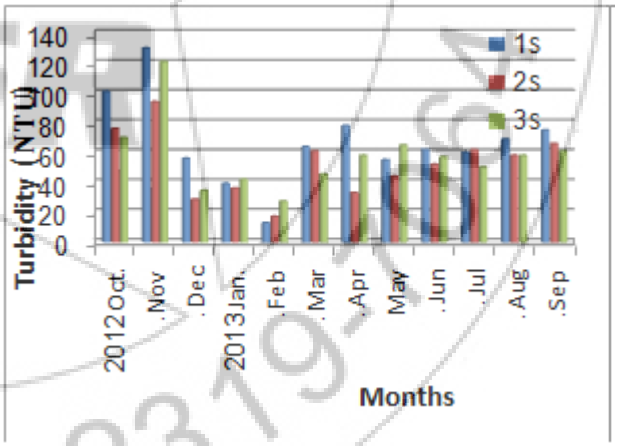

Figure 12: Months Variation in Turbidity during study sites

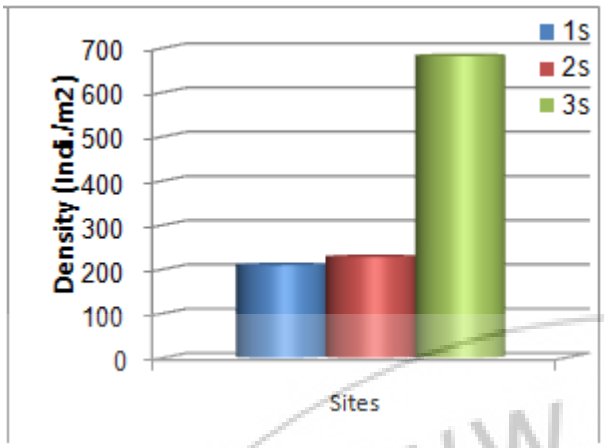

Figure 13: Total Density of Mollusksin study period

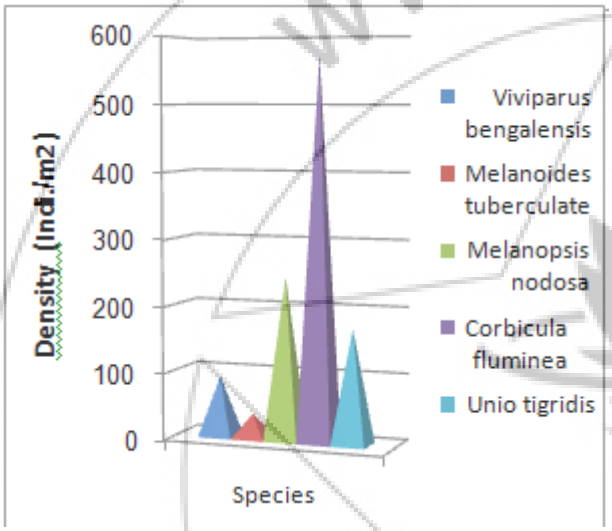

Figure 14: Total Density of Mollusca Species during Seasons

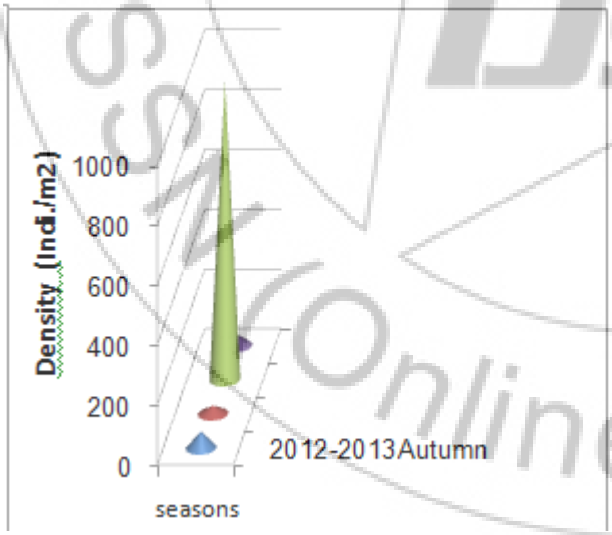

Figure 15: Total Density of Mollusca species during Study period

A total of 5 Mollusca species belonging to 5 families under class Bivalva and Gastropoda were collected from the sites of investigation during the study period. These species are: *Corbiculafluminea* (Corbiculidae), *Uniotigridis* (Unionidae), *Melanoidestuberculate* (Thiaridae), *Melanopsisnodosa* (Melanopsidae) and *Viviparusbengalensis* (Viviparidae). The total number of the collected mollusca was 1118.1 Indi /m^2 from which 209.07, 227.25, and 681.71 individuals were recorded at sites 1, 2and 3 respectively Figure 13.the results showed the highest density values in St.3 and lowest in St.1 Figure 13and showed significant deference ($p<0.05$) between months for the species *Melanoidestuberculate*, *Melanopsisnodosa*and*Uniotigridis* only, and negative correlation between the Mollusca density and Ca hardness of the study area that were presented .Calcium availability is considered to be one of the major limiting factors affecting the distribution of many freshwater aquatic organisms including mollusks [16]. Molluscs rely on calcium for growth of their shell and so are highly dependent on calcium availability for survival, demonstrating reduced growth rate, survival and reproductive output in low calcium environments [17].This was confirmed by the negative correlation in the present study.

According to the numbers of collected mollusca, the species were arranged in ascending as: *Melanoidestuberculate* (36.36 Indi /m^2),*Viviparusbengalensis*(90.09 Indi/ m^2), Uniotigridis (172.71 Indi/ m^2), *Melanopsisnodosa* (245.45 Indi/ m^2) and *Corbiculafluminea* (572.69 Indi/ m^2) Figure 14.

Seasonally, the total catch of freshwater Mollusca showed its highest value during spring, followed by autumn, then summer, whereas the least catch was recorded in Winter Figure 15.

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