

*Short Communication*

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**Report on the Occurrence of Parthenogenetic  
Brine Shrimp in Solar Salt Works of  
Karachi Coast (Pakistan)**

RAZIA SULTANA, S. G. A. SHAH AND R. B. QADRI  
*PCSIR Laboratories Complex, Karachi-75280, Pakistan*

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The brine shrimp *Artemia* is now well recognized as the major one live food in various aquaculture operations from hatchery to grow-out phases and also in aquarium pet industry throughout the world. The beneficial role of *Artemia* in the production of salt has also been described by various workers [1-3]. Natural populations of *Artemia* are found in salt lakes and more frequently in coastal saltworks. In salt works *Artemia* is found between the salinity range 100 to 250 ppt. *Artemia* has a cosmopolitan but discontinuous distribution. Geographical isolation has resulted in the separation of more than 150 strains [4]. The most recent review by Vanhaecke *et al.* [5] on biogeography of *Artemia* records its presence in 360 localities situated in 54 countries, temporal populations, which have been established as a result of inoculation are not included in this list. *Artemia* has been recorded from various localities in neighbouring countries such as India, Iran, China, Turkey and Kuwait [5]. This constitutes the first record of *Artemia* from Pakistan although, this natural population of *Artemia* has been present in this saltworks for at least 25 years. The site is located at 24° 48'N 66° 58'E (near Karachi). The population parthenogenetic since no males were found. This had been appears to be concluded by Browne and Mac Donald [6] that in Asia all brine shrimp populations are parthenogenetic with the exception of Iranian population. The individuals have a bright pinkish red colour. The average total length of egg bearing female was 8.68±0.91 mm (n=85). The average

diameter of whole hydrated cysts was 259±16.0 µm (n=140). The dominant mode of reproduction was ovoviviparous in May (when population was initially discovered). Individuals of all stages, from newly hatched nauplii to adults, were present in the sample. The population density was high with large aggregations at or near the surface, Water temperature was 30° and salinity ranged from about 140 to 180 ppt in various ponds containing *Artemia*. The population was well established in May (7.5.1991) but after one month (on 12th June) almost the entire population was dead. This may have been due to a drastic and unusual rise in water temperature, which reached about 39°- 40° at that time (maximum air temperature : 43°). A few mud skippers, *Paraeophthalmus*, and large numbers of insects were associated with the *Artemia* population.

**Key words:** *Artemia*, Occurrence Karachi coast.

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