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Preliminary survey of invertebrate in the Shatt Al-Arab River, Iraq.

Daoud, Y.T; Shihab, A.F. and Hassan, K.S

Department of Biology, College of Science, University of Basrah, Basrah, Iraq.

Shatt Al-Arab River is one of the most important water bodies of soutern Iraq. Previous studies on the identification of the invertebrate are limited. Ahmed (1975) made a systematic studies on Mollusca living in Shatt Al-Arab and the Arabian Gulf. Abdul-Karim (1978) studied the water beetles (Dytiscidae) in Shatt Al-Arab.

Present work is an attempt to give an overview idea on the occurence, distribution and ecological relationship of the invertebrate species living in Shatt Al-Arab and its tributaries Which provide a basic requirements for further researchs.

Description of the area

Shatt Al-Arab River is formed from the confluence of the two major Rivers (Tigris and Euphrates) at Qurna. Shatt Al-Arab flows into the Arabian Gulf, therefore, it is an estuary and is affected by the high and low tide of the Arabian Gulf. Shatt Al-Arab water is characterized as being mixed with limited vertical stratification of tenperature (Saad and Kell, 1975), and chloranities (Hug et al, 1978), it is also Known that estuaries are less diversed and more productive.

Materials and Methods

Samples from six tribtaries namely, Al, Shafi, Al-Tanoma, Al-Bradhia, Al-Khora, Al-Sarragi and Al-Shashai and intertidal zone of Shatt Al-Arab, were collected Novenber 1985 till Febrruary 1986. Samples taken from the tributaries were collected by hand net, while thise from the intertidal zone were taken by digging the mud. All samples were sorted out in the laboratory, and the animals obtained were preserved in 70-75% alcogol for identification.

Results and Discussion

a. Identification:

The results show that samples contain the following taxa:

1. Phylum annelida:

A. Class Oligochaeta: **Tubifex** spp. ?

Nemalycastis indica (Southern).

Dendronereides heteropoda (southern).

B. Class polychaeta:

. Phylum Arthropoda:

A. Class Crustacea:

a. Order Isopoda: **Sphaeroma annandalei** stebbing.

Annina mesopotamica (Ahmed).

Asellus coxalis*

b. Order Amphipoda: **Parhyale basrensis** Salman.

c. Order Decapoda: **Sesarma boulengeri** Calman.

Elamenopsis kampi

Caridina babaulti basrensis Al- Adhub and Hamza.

Atyaephyra desmaresti mesopotamica Al-Adhub.

B. Class Insecta:

a. Order Odonata: **Perithemis** spp.*

Leucorrhinia spp.*

Orthemis spp.*

Ladona spp.*

b. Order Coleoptera: **Oreodytes** spp.*

* new record in shat Al- Arab or its tributaries.

c. Order Diptera	**Tendipes tentans**
	Tabanus atratus
d. Order Lepidoptera	**Nymphula spp.***
3. Phylum Mollusca:	
A . Class Gastropoda	**Lymnaea tenera euphretica** Mussen
	Bulinus truncatus*
	Gyraulus convexiusculus Hutton.
	Neritina crepidulare Lamarck.
	Viviparus benalensis Lamarck.
	Theodoxus jordani Sowerby.
	Melanopsis nodosa Ferussac.
	Melanoides tuberculata Muller.
B. Class Bivalvia:	**Unio tigridis** Bourguignat.
	Pseudodontopsis euphraticus Bourguignat
	Corbicula fluminalis Muller.
	Corbicula Fluminea Muller.

b. Ecology of the taxa:

1. Annelida: The two species of polycheata mentioned above are widely distributed in intertidal zone of shatt Al- Arab and its tributories and its density increased in polluted areas, while that of Oligocheata is mostly abundant in subtidal zone of shatt Al-Arab.

2. Arthropoda:

A. Crustacea:

a. Isopoda: The present studies show that both **S. annandalei** which live in burrows, and **A. mespotamica** are more abundant in the intertidal zone of shatt Al- Arab than its

tributaries, with the density of the former species was much higher than the latter.

A. **coxalis** had not been previously recorded in shatt Al-Arab or its tributaries. In the present study it was collected from the tributaries only, found in the area rich with algal materials.

b. Amphipoda: mut Copilal p. basrensis is very abundant species in both areas (tributaries and intertidal zone) of shatt Al-Arab. Mostly it was collected with plants such as **ceratophyllum demersum** or **Vallisneria spiralis.**

c. Decapode: S. **boulengeri** was the most abundant species, it lives in burrow in the supratidal zone of shatt Al- Arab, while **E. kampi** is less abundant and lives in the subtidal zone of shatt Al-Arab. Both species were also recorded in the tributaries.

C. **babaulti basrensis** and A. **desmaresti mesopotamica** were collected from both shatt Al- Arab and its tributaries. It appeared rhat the occurence of one species might effect the presence of the other. It, therefore, seems very necessary to study the ecological relationship between the two soecies.

B. Insecta:

a. Odonata: The four genera are very abundant in the tributaries with dense vegetation. However, they can be found in subtidal zone of shatt Al- Arab. All four genera are recorded for the first time in the area.

b. coleoptera: **Oreodytes** spp. was mostly abundant in both intertidal zone and tributaries of shatt Al- Arab. It is recorded for first time from shatt Al- Arab.

c. Diptera: T. **tentans** was most abundant in shallow water, rich in vegitation. It is widely spread species. T. **atratus** was collected from tributaries and intertidal zone or wherever small invertebrates present.

d. Lepidoptera: **Nymphula** is the only genus obtained belong to this order, one specimen was collected from Al-shashai branch of shatt Al- Arab River.

3. Mollusca:

A. Gastropda: **T. jordani, M. nodosa, M. tuberculata** and **G. convexiusculus** are most abundant in the intertidal zone but they are less abundant in tributaries. **v. bengalensis** and **B. truncatus** were recorded only in tributaries. The iccurrence of both **Lymnaea** and **Bulinus** may indicate a possible interaction between the two species.

B. Bivalvia: Both **U. tigridis** and **p. euphraticus** are rarely occurred in the ntertidal areas. The abundence of the related species **c. fluminalis** and **c. fluminea** were relatively high in the intertidal zone. A very few specimens of both species were collected from tributaries. Morton (1977) reported that the two species may posses intrinsically different life cycle, thus, this could explain the coexistance of both species. However, futher studies on the interaction between the two species is needed.

Summery

The occurrence and distribution of the invertebrates in shatt Al- Arab and some of its tributaries were investigated. The animals groups are: 3 species of annelida, 8 species of crustacea, 8 species of insecta and 12 species of mollusca. Eight species were recorded for the first time in the present study.

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الخلاصة

تضمن البحث دراسة تشخيص وتوزيع الحيوانات اللافقرية في شط العرب وبعض فروعه . فلقد تم تشخيص ثلاثة انواع من الديدان الحلقية ، وثمانية انواع من القشريات وثمانية انواع من الحشرات واثنا عشر نوعاً من النواعم ، وفي هذا الدراسة تم تشخيص ثمانية انواع من الحيوانات اللافقرية لاول مرة في العراق .