

Saurida tumbil

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(%97.36)

%44.28

%55.60

**FOOD HABIT OF *Saurida tumbil* IN IRAQI MARINE
WATERS,
NORTHWEST ARABIAN GULF / IRAQ**

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ABSTRACT

Food habit was studied of *Saurida tumbil* in Iraqi marine waters, northwest of Arabian Gulf. The results revealed that this species is carnivorous. Fishes dominated the food items consumed in diet importance constituting 97.36 % of large individuals following by shrimps 2.54% and *Sepia* sp. 0.1%, whereas young individuals fed on shrimps, which constituted %55.6, fish

(44.28%) and sepia (0.12%). A cannibalism phenomenon apparently noticed for young individuals. Data analysis indicated that both feeding activity and feeding intensity varied from month to month and generally higher during warm months.

Saurida (Kuronuma and Abe, 1986) .(Randall, 1983)
tumbil

Rao, 1964; Kuthalingam,)

1959
Euzen .(Zhang and Yang, 1986; Rao, 1981; Kuthalingam *et al.*, 1978;
S. undosquamis & S.tumbil (1987)
Ali *et al.* (1993)

(48°.45' – 48°.50')

1999

(1)

(29°.48' – 29°.45')

20-6

.2000

%23.5 %28.3 %48.2

.(AlBadran, 1995)

()

(0.1)

.Ball (1961)

% 4

.(160 > 160 <)

(Gordon, 1977):

$$100 \times \left(\frac{\quad}{\quad} \right) =$$

$$\frac{\quad}{\quad} =$$

$$100 \times \left(\quad \right)$$

(Windell and Bowen, 1978)

.(Jones, 1986)

$$AI = (\%N + \%V) \%F : \quad (\text{Pinkas } et \text{ al.}, 1971) \quad (\text{IRI})$$

$$= \%N \quad = AI$$

$$= \%F \quad = \%V$$

:

:

$$IRI\% = \frac{AI}{\sum AI}$$

نشاط التغذية وشدتها

(%94.74)

(%54.54)

.(2)

%90

%47.36

		/	3.33
		/	2.07
2.3		/	3.5
			/
التغيرات الشهرية في مكونات الغذاء			
	()		
	(%100)	(%80.64)	(%89.63)
	(%20.86)		(%33.46)
			(%33.33)
	%79.14	%66.11	
(%6.06)	(%10.39)		(%4.00)
	(%93.02)	(%99.36)	()
%36.95	%10.1		
		(%36.11)	
(%9.54)			
		%9.68	
			%15
<i>Upeneus</i>	()		
<i>Thryssa</i>	<i>Leiognathus bindus</i>	<i>Ilisha</i> spp.	<i>sulphureus</i>
<i>Solea</i>	<i>elongata</i>	<i>Saurida tumbil</i>	<i>mystax</i>
	(<i>Platycephalus indicus</i>		<i>Cynoglossus</i> sp.
	<i>Sardinella</i> spp.	()	
<i>Johnius</i> sp.	<i>Bathygobius</i> spp.		<i>Caranx</i> spp.

2006 69-57 (1)	(24)	()
<i>Atropus atropus</i>	<i>Alepes kalla</i>	<i>Liza sp.</i>
<i>Sepia sp.</i>	<i>Penaeus spp.</i>	<i>Metapenaeus spp.</i>
		<i>Otolithes ruber</i>

مكونات الغذاء الكلية

) % 4.82		% 47.23	%47.94
%56.46			(4
	%60.39	%2.15	%41.38
		%55.84	
		.	%1.95
%80.55	%92.45		
%17.31	%5.5		%87.88
		(4)	%17.36
		.	

دليل الأهمية النسبي لمكونات الغذاء المختلفة

(5)

	%44.28	%55.60
%97.36		.(%0.12)
%2.54		
		(%0.1)

Lagler *et al.* (1962)

Jayaramaiah *et al.* (1996)

al.

(Bibik *et al.*, 1971)

(Al-Zubaidi, 1998)

(Randall, 1983)

97.36%

(Carnivore)

(Cannibalism)

Zhang and Yang (1986) Rao (1981)

Rao (1981)

(<)

(>)

Kuthalingam (1959)

Euzen (1987)

(Cephalopods)

Kuthalingam *et al.* (1978)

Neendakara

.(Daud and Taha, 1986)

(Hussein and Mahdi, 1999)

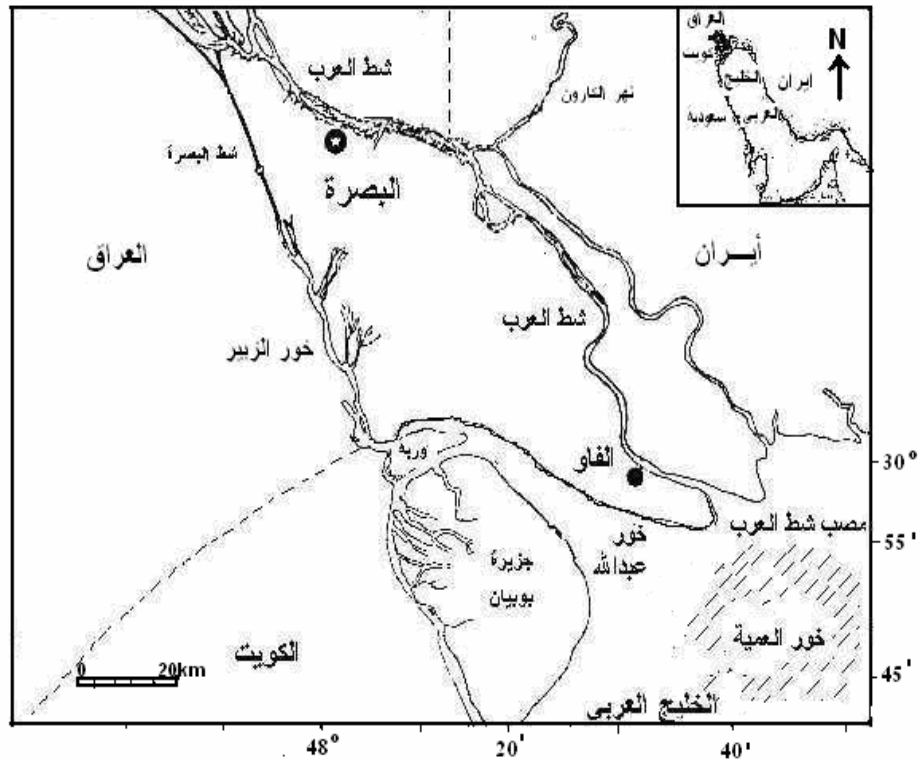
)(Nikolski, 1663) .(Faltas, 1996)

- AlBadran, B. (1995). Lithofacies of recent sediments of Khor Abdullah and Shatt Al- Arab delta, northwest Arabian Gulf. *Iraqi J. Sci.*, 36 (4): 1133- 1147.
- Ali, T. S.; Mohamed, A. R. M. and Hussain, N. A. (1993). Trophic interrelationships of demersal fish assemblage in the northwest Arabian Gulf, Iraq. *Asian Fish. Sci.*, 6: 255- 264.
- Al- Zubaidi, A. M. H. (1998). Distribution and abundance of the zooplankton in the Shatt Al- Arab estuary and northwest Arabian Gulf. Ph. D. thesis, College of Sci., Univ. of Basrah, 135 p.
- Ball, J. N. 1961. On the food of the brown trout of liyn tagid. *Proc. Zool. Sco. Lond.*, 173: 599- 622.
- Bibik, V. A.; Iushin, A. E.; Spiridorov, B. A.; Assrev, Y. P. and Kozakov, E. G. (1970). Results of the investigation of the third research expedition of Azcherniro on board the SRTM Myslitel to the Arabian Gulf, December 1969- March 1970. *Iraqi Fishing State Company*, 124 p.
- Daud, S. K. and Taha, M. S. M. (1986). Stomach contents of selected demersal fish species from South China Sea. *Ekspedisi Matahari*, 85. *In* A. K.; Mohamed, M. I. and Ambak, M. A. (eds). A study on the offshore water of the Malaysian EEZ. *Mohsin*, (3): 187- 192.
- Euzen, O. (1987). Food habits and diet composition of some fish of Kuwait. *Kuwait Bull. Mar. Sci.*, (9): 65- 85.
- Faltas, S. N. (1996). Food and feeding habits of gurnards, *Trigla lucerna* Linnaeus, 1758 and *Trigloporus lastovisa* (Brunnich, 1768) in the Egyptian Mediterranean waters. *Bull. Nat. Inst. Oceanogr. & Fish.*, A. R. E., 22: 167- 179.

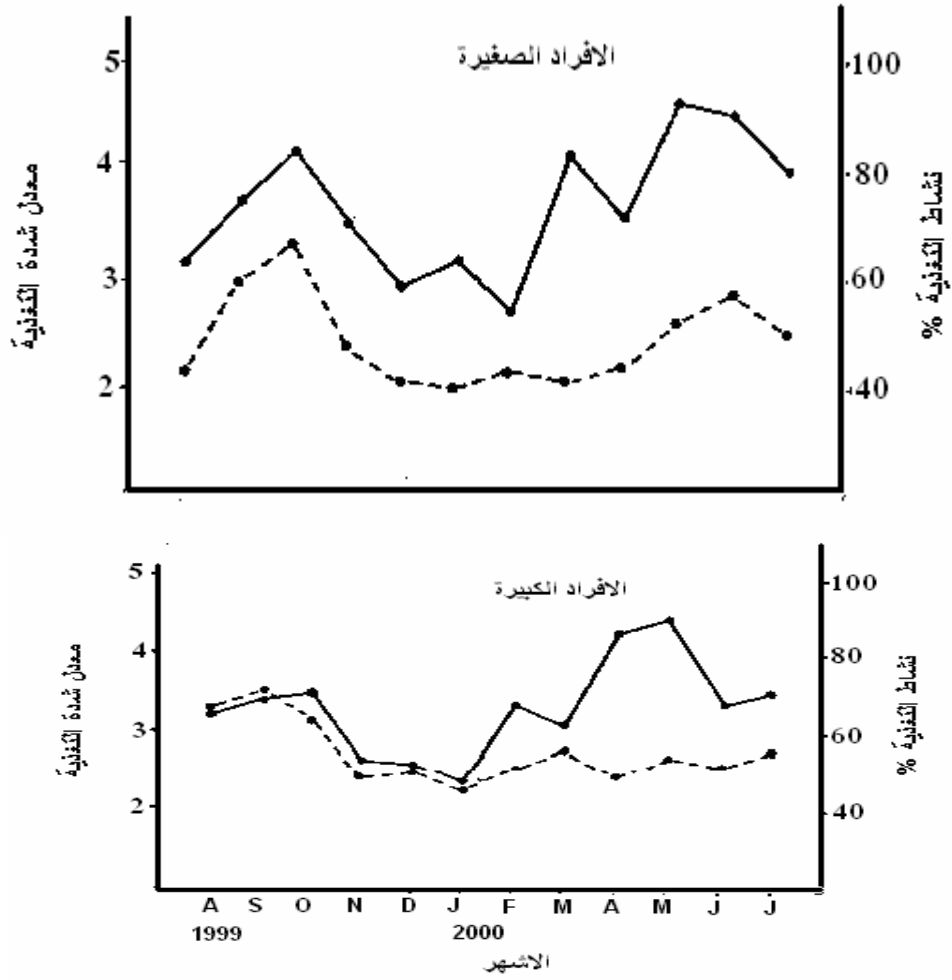
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- Gordon, J. D. (1977). The fish population in shore water of the west costal Scotland. The food and feeding of the whiting (*Merlangius merlangius* L.). J. Fish Biol., 11 (6): 513- 529.
- Hussein, S.A. and Mahdi, A.A. (1999). Comparative study on relative importance of various dietary items for two Sciaenids *Johnnieops sina* and *Johnius belangerii* (Cuvier, 1830), collected from the Shatt Al-Arab estuary, northwest Arabian Gulf, Iraq. Basrah J. Agric. Sci., 12(1): 13-19.
- Jayaramaiah, D.; Hanumanthappa, H. and Chandra- Mohan, K. (1996). Food and feeding habits of *Upeneus vittatus* (Lacepede) from Mangalore coast. Environ. Ecol., 14 (2): 425- 428.
- Jones, D. A. (1986). Fields guide to the seashores of Kuwait and the Arabian Gulf. Univ. Kuwait, 192 p.
- Kuronuma, K. and Abe, Y. (1986). Fishes of the Arabian Gulf. Kuwait Inst. Sci. Res., Kuwait, 356 p.
- Kuthalingam, M. D. K. (1959). *Saurida tumbil* (Bloch): Development and feeding habits. J. Zool. Soc. India., 11 (2): 116- 124.
- Kuthalingam, M. D. K; Lirington, P. and Sadasiva. P. S. (1978). Observations on the catches of the mechanised boats at Neendakara. Indian J. Fish., 25 (1- 2): 98- 108.
- Lagler, K. F.; Bardach, J. E. and Miller, R. R. (1962). Ichthyology: The study of fishes. Wiley Toppan, 545 p.
- Pinkas, L.; Oliphant, M. A. and Iverson, I. L. (1971). Food habits of albacore, blue fin tuna and bonito in California waters. State of California, and the Resources Agency, Department of Fish and Game, Fish Bull., 152: 1-105.
- Randall, J. E. (1983) Red Sea Reef Fishes. IMMEL Publishing. Road, London. 192 p.
- Rao, K. V. S. (1964). Food and feeding habits of fishes from trawl catches in the Bay of Bengal with observation on diurnal variation in the nature of the feed. Indian J. Fish., 11 (1): 277-314.
- Rao, K. V. S. (1981). Food and feeding of lizardfishes (*Saurida* spp.) from northwestern part of Bay of Bengal. Indian J. Fish., 28 (1-2): 47-64.
- Windell, J. T. and Bowen, S. H. 1978. Methods for study of fish diets based on analysis of stomach contents. In Methods for the Assessment of

Fish Production in Fresh Waters. 3rd ed. (T. Bagenal, ed.), PP. 219-226. Oxford Blackwell Sci. Publi. 365pp.

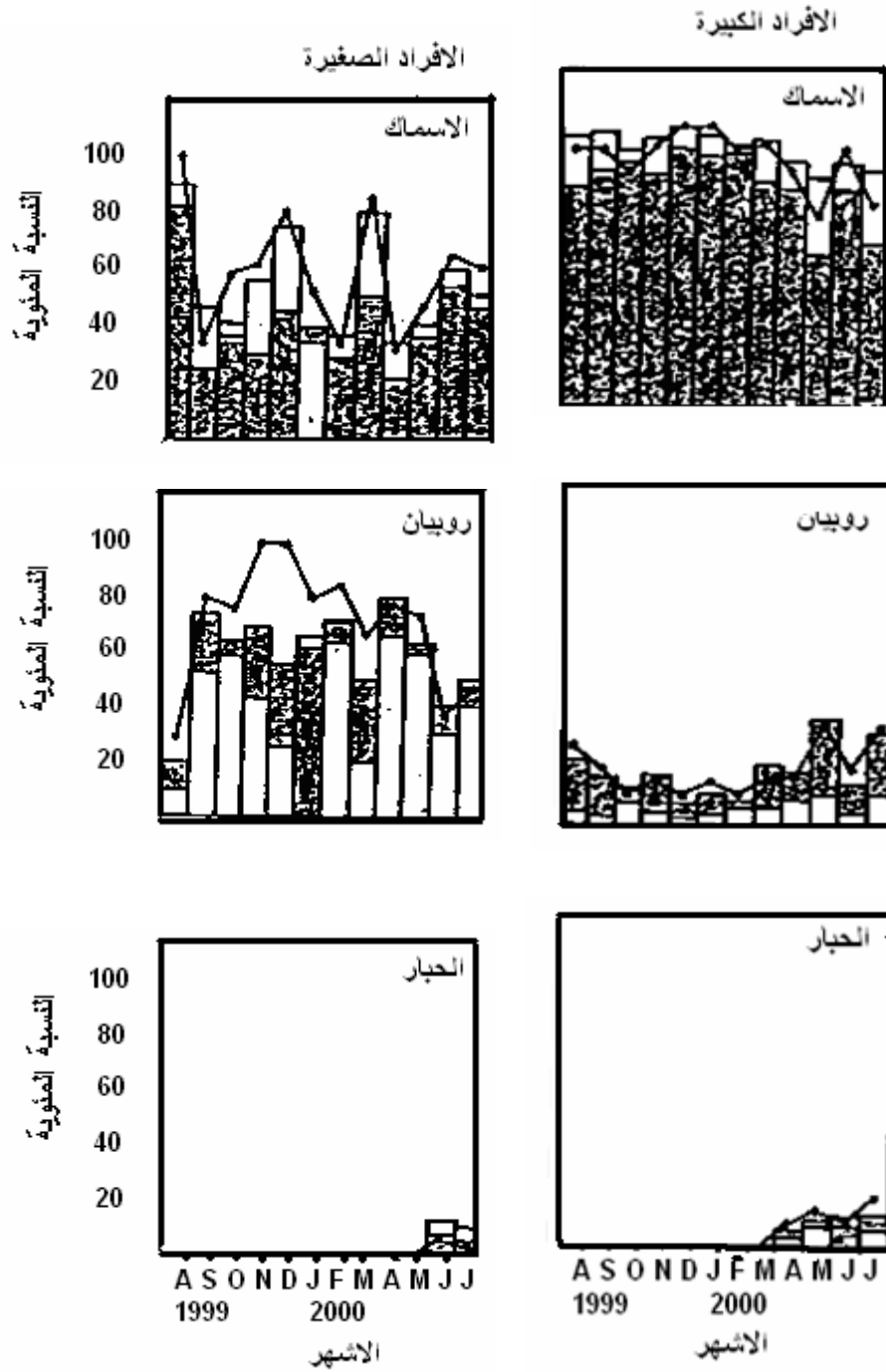
Zhang, Q. Y. and Yang, G. L. (1986). Study on feeding habits of lizard fishes in South Fujion and Taiwan Bank fishing ground. J. Fish. China Shuichan Xuebao, 10 (2): 213-222.



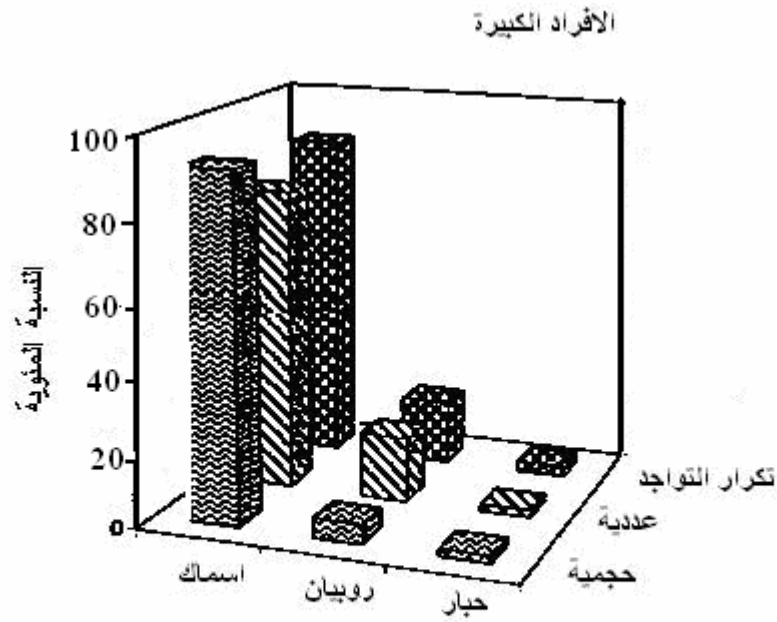
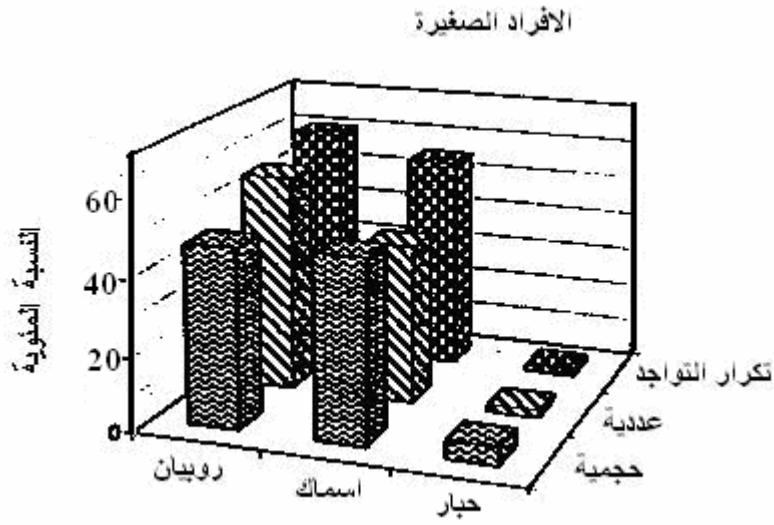
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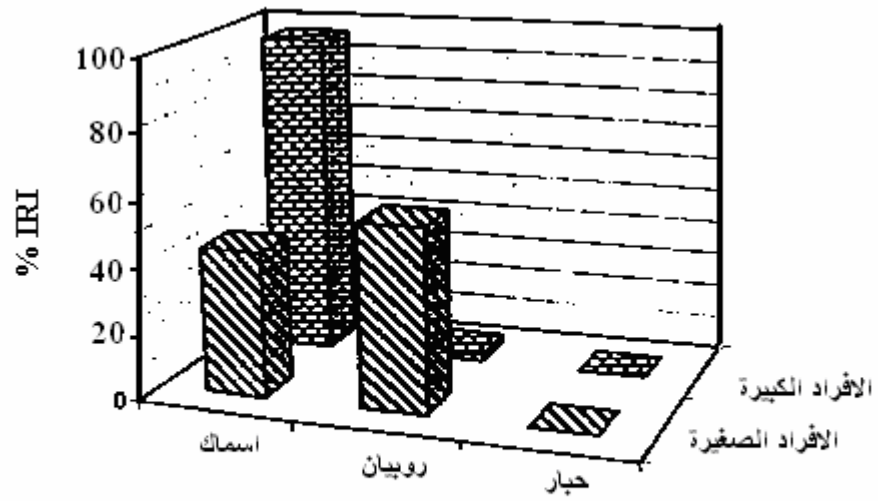
شكل (2) التغيرات الشهرية في نشاط التغذية وشدتها
 لأسماك ابو المهيل في المياد البحرية العراقية



شكل (3) التغيرات الشهرية في النسبة المئوية للحجم □ والعدد ▨ والتكرار — لمكونات غذاء أسماك أبو شهيل



شكل (4) النسبة المئوية الحجمية والعددية وتكرار التواجد لمكونات غذاء اسماك ابوالمهيل



شكل (5) النسبة المئوية لقيم دليل الأهمية النسبي لاسماك ابو الهيل