
Scartelaos tenuis

*

(// : // :)

Scartelaos tenuis

%

S. tenuis

% /

%

%

%

/ (Relative Length Gut)

Scartelaos tenuis :

...

Scartelaos tenuis

(Amundsen *et al.*, 1996)

(Murdy, 1989)

Periophthalmus Periophthamodon

Scartelaos Boleophthalmus

(Murdy, 1989)

Amundsen *et al.*,)

(1996

(Castello, 1990) .

(Clayton, 1993)

S. tenuis

(Castello,1990)

(° 'N ° 'E)

Colombini *et al.*, 1996; Nieder,)

(2001

%

$=V_i$ (Elliott, 1997) $(F\%)$
 $=O_i$
 $F\% = (N_i / N) \times 100$
 $A\% = (\sum S_i / \sum St) \times 100$
 (Amundsen et al., 1996)
 (CV)
 $CV = \frac{ES}{TS} \times 100$
 $(Euzen., 1987)$
 CV
 ES
 $=N$
 $=N_i$

Excel
 SYSTAT 9 SPSS 11.5
 2003
 $()$
 $=S_i$
 $=St_i$

(Amundsen et al, 1996)
 $=FP$
 $F_p = \frac{N_p \times 100}{N_i}$
 $=N_p . P$
 $=N_i . P$
 $F_p < \%$ $\% < F_p < \%$ $F_p > \%$

(Castello, 1990)

$()$
 $(/)$
 $(/)$
 $(/)$
 $(/)$
 $V = \frac{E_v \times 100}{N}$
 $=Ev .$ $=V .$
 $=N .$

(Castello,1990) $()$ I_p
 Marshal and)
 $I_p = \frac{V_i O_i}{\sum (V_i O_i)}$
 $()$

%

%

/

/

/

/

/

FP

()

()

()

-

/

Archive of SID

S. tenuis

CV	()
	()
	()
	()
	()

:CV

S. tenuis

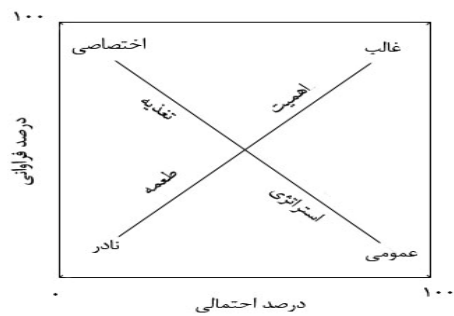
/								/		/		/		
			/	/	/	/	/	/	/	/	/	/	/	
		/	/			/		/		/		/		
/	/					/		/		/		/		

S. tenuis

FP	IP
/	/
	/
/	/
/	/
/	/

FP

IP



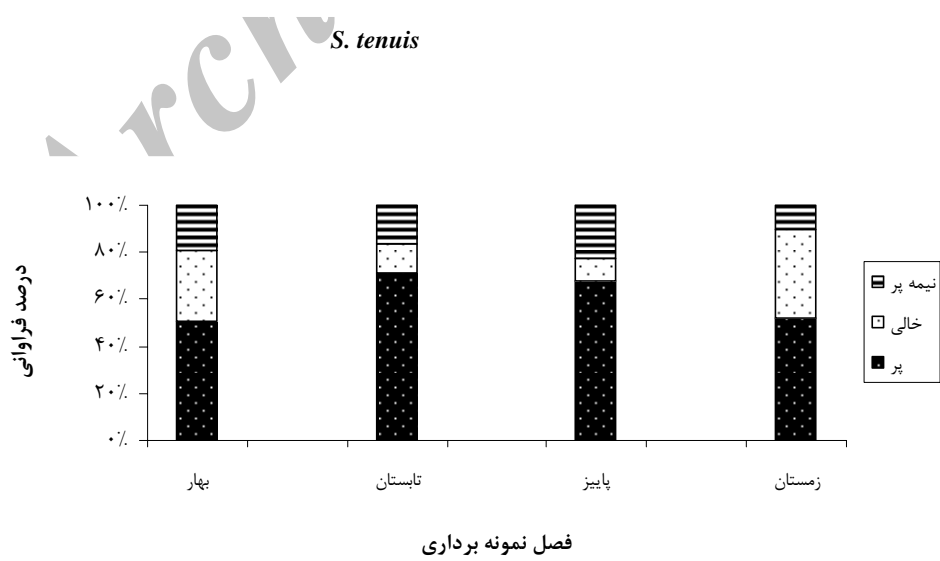
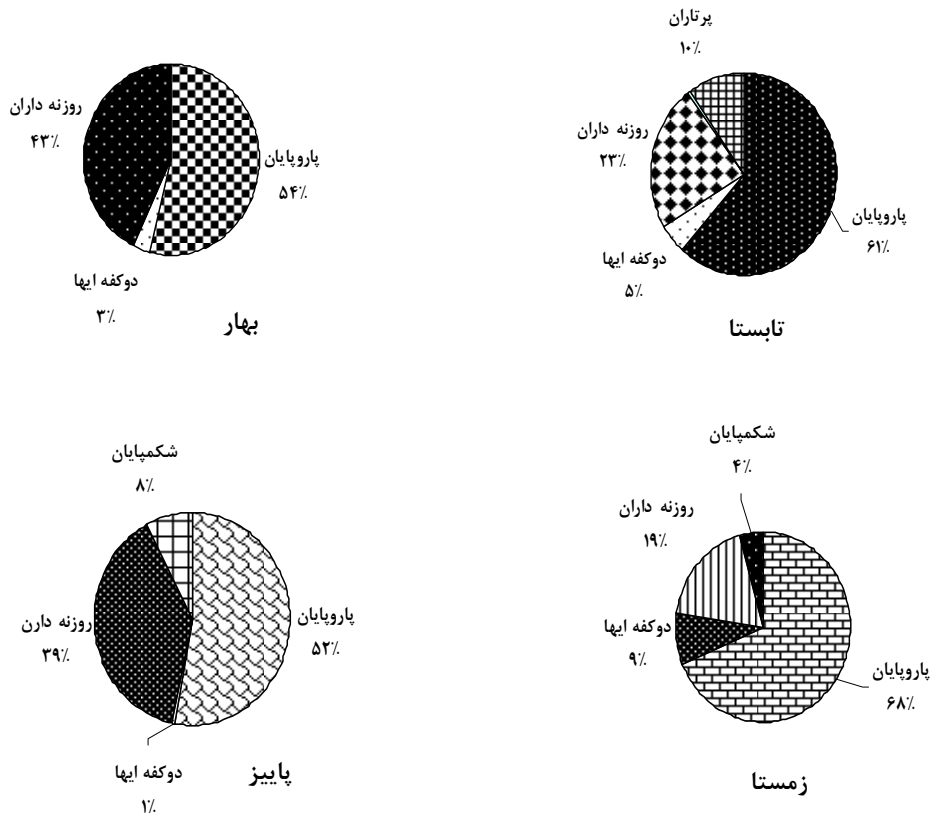
الف

S. tenuis () .



ب

()



S. tenuis

(Wainwright and Richard, 1995)

S. tenuis

(Sayar and

Reader, 1996; Cooke *et al*, 2003)

Piet, 1998;)

(Drewe *et al*, 2004

()

()

(Nikolsky, 1999)

(Park *et al*, 2008)

/ ± /

(Bates *et al*, 2008)

Stebbins and Kalk, 1961; Colombini *et al*, 1996;)

(Nieder, 2001

References

- Amundsen, P.A., Gabler, H.M., Staldvik, F.J., 1996. A new approach to graphical analysis of feeding strategy from stomach content data- modification of the Costello (1990) method. *Journal of Fish Biology*. 48, 607-614.
- Bates, B.K., Kundzewicz, Z.W., Palutikof, J.P., 2008. Climate change and water. Technical paper VI.
- Castello, M.J., 1990. Predator feeding strategy and prey importance: A new graphical analysis. Brief communication. *Journal of Fish Biology*. Vol. 36. 261-263.
- Clayton, D.A., 1993. Mudskipper. *Oceanography. Mar. Biology. Annual. Review*.31, 507-577.
- Colombini, I., Berti, R., Nocita, A., Chelazzi, L., 1996. Foraging strategy of the mudskipper *Perioththalmus sobrinus* Eggert in a Kenyan mangrove. *Journal of Experimental Marine Biology and Ecology* 197, 219-235.
- Cooke, S.J., Grant, E.C., Schreer, J.F., Philipp, D.P., 2003. Low temperature cardiac response to exhaustive exercise in fish with different levels of winter quiescence. *Comp. Biochemistry. Physiology, A*. 157-165.
- Drewe, K.E., Horn, M.A., Dickson, K.A., Gawlicka, A., 2004. Insectivore to frugivore ; ontogenetic changes in gut morphology and digestive enzyme activity in the characid fish *Brycon guatemalensis* from Costa Rican rain forest streams. *Journal of Fish Biology* 64, 890-902.
- Euzen, E., 1987. Food habits and diet composition of some fish Kuwait Bulletin Science. Vol. 9, 65-85.
- Marshal, S., Elliott, M., 1997. A comparison of universal and multivariate numerical and graphical techniques for determining inter and intraspecific feeding relationship in estuarine fish. *Journal of Fish Biology*. 51. 526-545.
- Murdy, E. O., 1989. A taxonomic revision and cladistic analysis of the Oxudercinae gobies (Gobiidea Oxudercinae). *Rec Aust. Mus.* 11 (Suppl), 1-93.
- Nieder, J., 2001. Amphibious behavior and feeding ecology of the four-eyed blenny (*Dialommus fuscus*, Labrisomidae) in the intertidal zone of the island of Santa Cruz (Galapagos, Ecuador). *Journal of Fish Biology* 58, 755-767.
- Nikolsky, G.V., 1999. *Ecology of fishes*. Allied Scientific Publisher. 352.
- Park, K.D., Kim, J.K., Chang, D.S., Kim, J.I., Woong, C., 2008. Age and growth of mudskipper, *Scartelaos gigas* from Korea. *Journal of Animal Cells and System* 12: 305-311.

-
- Piet, G.J., 1998. Ecomorphology of a size- structured tropical fresh water fish community. *Environmental Biology of fishes*. 51, 67-86.
 - Sayar, M.D.J., Reader, J.P., 1996. Exposure of goldskinny, rock cook and corkwing wrasse to low temperature and low salinity. Survival, blood physiology and seasonal variation. *Journal of Fish Biology*. 49: 41-63.
 - Stebbins, R.C., Kalk, M., 1961. Observation on natural history of mudskipper *Periophthalmus sobrinus* . 18-27.
 - Wainwright, P.C., Richard, B.A., 1995. Predicting pattern of prey use from morphology of fishes. *Environmental Biology of Fishes* 44, 97-113.

Archive of SID

Feeding Habits of *Scartelaos tenuis* in Bushehr Province, Iran.

L. Abdoli¹, B. Kiabi², E. Kamrani³, A. Abdoli*⁴, E. Rezazadeh Katehsari⁵
and M. Keshavarz⁶

¹Lecturer, Department of Fisheries, University of Hormozgan, Bandar Abbas, I.R. Iran

²Associate professor, Faculty of Biological Science, Shahid Beheshti University, I.R. Iran

³Associate professor, Department of Marine Biology, Faculty of Science, University of Hormozgan, Bandar Abbas, I.R. Iran.

⁴Associate professor, Department of Biodiversity, Environment Sciences Research Center, Shahid Beheshti University, I.R. Iran.

⁵MSc, Faculty of Agricultural and Natural Resources, University of Hormozgan, Bandar Abbas, I.R. Iran

⁶Lecturer, Department of Marine Biology, Faculty of Science, University of Hormozgan, Bandar Abbas, I.R. Iran

(Received: 26/09/2010, Accepted: 04/10/2011)

Abstract

This study was conducted to determine the feeding habits of Mudskipper *Scartelaos tenuis*. One hundred and eighty one specimens were collected in the northern part of Persian Gulf in Bushehr province during spring 2007 to winter 2008. Specimens caught by hand and dip net. Specimens fixed in 10% formalin and transferred to laboratory. Stomach contents were analyzed; possibility and frequency of prey were calculated with standard methods. Results showed that in *S.tenuis* copepods with IP index of 69.18% was the dominant and specific food item. There was no seasonal variation in food items. Stomach emptiness was the highest (32%) in winter and lowest (10%) in autumn. The RLG index was 1.4 that indicated the fish was omnivorous. Totally Stomach emptiness index was 20% that suggested the fish being a voracious feeder.

Keywords: *Scartelaos tenuis*, Feeding habits, Bushehr province, Iran