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On the occurrence and diurnal rhythm of *Eurydice truncata*  
(Isopoda) off Mauretania

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#### Summary

A dense population of *Eurydice truncata* Norman was observed in the course of studies on the macrozoobenthos of the North-West African continental shelf between  $23^{\circ}$  N and  $25^{\circ}$  N. Up to almost 18,000 individuals/m<sup>2</sup> were found. This animal lives on small crabs which it catches in the plankton. *E. truncata* inhabits the sediment during the day time, rising to the pel-agial during the night to catch its prey.

#### Résumé

Pendant les études portant sur la macrofaune benthique du socle continental nord ouest africain entre  $23^{\circ}$  de longitude nord et  $25^{\circ}$  de longitude nord nous a frappé un dense peuplement de *Eurydice truncata* Norman. On a trouvé quelque 18.000 individus par 1 m<sup>2</sup>. *E. truncata* mange de petits crustacés qu'il attrappe dans le plancton. Pendant la journée, *E. truncata* vit dans le sédiment et monte, la nuit, dans la zone pélagique pour y chercher sa proie.

The isopods form a regularly observed component of the macrozoobenthos in the shelf regions off N.W. Africa. In particular, a dense population of *Eurydice truncata* Norman was noticed in the region between  $23^{\circ}$  N and  $25^{\circ}$  N. This animal was found both in benthos and plankton samples.

This paper is based on work performed during the period 1970 - 1976 on board the research vessels "Ernst Haeckel" belonging to the Institut für Hochseefischerei und Fischver-

arbeitung and "Alexander von Humboldt" belonging to the Institut für Meereskunde of the Academy of Sciences of the GDR.

The plankton samples were collected by means of a UNESCO standard closing net (type 2). The benthos samples were obtained by means of a bottom grab (van Veen, 0.12 m<sup>2</sup>). Some of the grab samples were immediately fixed complete (without sieving) in a formalin/sea water mixture (1:9). The animals were subsequently removed from the rough mussel shell sediment under a stereoscopic microscope (6.3 x 0.63). Some of the values were obtained from part-samples taken from the grab samples by means of a tubular bottom sampler (42 cm<sup>2</sup>).

*Eurydice truncata* inhabits the upper 2 - 3 mm of the loose mussel shell sediment. Aquarium observations have revealed that these animals do not penetrate deeper into the sediment. When disturbed, they swim out of the sediment. *E. truncata* is a very skillful and fast swimmer.

*E. truncata* is the species with the highest numbers of individuals found in the region of our experiments. For example, a single grab sample taken at station 1/76 AH (b) (23°24' N, 16°25.5' W, February 27th, 1976, depth: 30 m) contained 2.157 individuals. This works out to about 18.000 animals/m<sup>2</sup>. In a comparable region off the Indian coast, *Eurydice peraticis* Jones was observed in concentrations exceeding 2.000 individuals/m<sup>2</sup> (Eleftheriou and Jones, 1976). *Eurydice* is a dominant species in both regions. On the schill bank off Mauretania, however, the average frequency with which the species is found is lower due to the presence of the lancelet *Branchiostoma senegalense* Webb (Gosselck, 1975; Gosselck, in press). The occurrence of *E. truncata* is not so evenly distributed as the lancelet. For example, no *Eurydice truncata* were found at 4 of 21 closely situated stations (table 1), although lancelets were regularly observed there. However, both species are to be regarded as the most characteristic and frequently occurring benthic organisms in this region.

samples from the region concerned revealed the presence of no small benthic crab species, the prey of *E. truncata* must obviously be of planktic origin.

This assumption was confirmed by the analysis of 83 plankton hauls taken at various seasons and times of day. *Eurydice* was found in 12 of these samples, all of which were obtained during the night time.

Similar observations have been made with regard to two other *Eurydice* species found off the Indian coast (Eleftheriou and Jones, 1976). Analysis of the stomach contents of *E. peraticis* and *E. indicis* showed a carnivorous diet consisting of surf plankton (copepods, decapods and fish larvae, mysids etc.). These species also catch their prey at night, as has already been described for *Eurydice* species in the temperate zones by Salvat (1966).

#### Literature cited

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Table 1: Numbers of individuals of *Eurydice truncata*. The figures marked by an asterisk (\*) were obtained from complete samples (0.42 m<sup>2</sup>), the remaining figures originating from part-samples (42 cm<sup>2</sup>).

Stat.Nr.	Position	Date	Depth (m)	Nr. of individuals	
1/71AH	a	23°20'N 16°20'W	30.9.1971	27	714
	b				28
	c				-
	d				336
	e				1400
2/71AH	a	23°20'N 16°24.8'W	30.9.1971	29	186
	b				56
	c				448
	d				-
	e				58
3/71AH	a	23°20'N 16°28.5'W	30.9.1971	33	196
	b				28
	c				28
4/71AH	a	23°20'N 16°32'W	30.9.1971	35	1624
	b				56
	c				56
5/71AH	a	23°20'N 16°35.3'W	30.9.1971	40	-
	b				28
	c				364
	d				84
	e				-
2/72AH	a	23°20'N 16°24.8'W	22.6.1972	29	630 *
	b				1180 *
3/72AH	a	23°20'N 16°30'W	22.6.1972	28	239 *
1/76AH	a	23°24'N 16°25.5'W	27.2.1976	30	480 *
	b				2151 *
	c				467 *

The gut contents of *Eurydice truncata* consist mainly of parts of crustacean limbs. These parts belong to very small crab species. Since the investigation of unsieved benthos