

# On the Copepods diversity in the Central Adriatic in 1971

by

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## Summary

In 1971 the copepods diversity in the Central Adriatic was studied. It was observed that the index of diversity increased from the coastal waters to the open sea, probably as a consequence of the variability of the main environmental characteristics. The seasonal oscillations of this index has been examined, too.

## Résumé

On a étudié au cours de l'année 1971 la variété des copépodes dans l'Adriatique Centrale et on a remarqué que l'index de la diversité augmentait des eaux littorales envers celles de la haute mer, conséquence probable du changement des caractéristiques de l'environnement. Aussi a-t-on examiné les oscillations saisonnières de cet index.

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The data about the seasonal distribution of copepods, the frequency of species and the seasonal oscillations of density in 1971 [REGNER D., 1973] allowed us to study the copepods diversity from the three stations in the Central Adriatic, using the formula by GLEASON [1922]. So, the decreasing of copepods number/m<sup>3</sup>, the increasing of number of species, and the increasing of copepods diversity has been found from the coastal waters to the open sea (Tab. 1).

Tableau I.

The number of copepods/m<sup>3</sup>, number of species,  
and index of diversity in the Central Adriatic in 1971

	Kaštela Bay the coastal area	Pelegrin the channel region	Stončica the open sea
number of copepods/m <sup>3</sup>	136	66	41
number of species	32	53	57
diversity	6,3	12,7	15,1

*Rapp. Comm. int. Mer Médit.*, 23, 9, pp. 95-96, 1 fig. (1976).

Considering the index of diversity and the variability of some hydrographic factors (the increases of salinity and temperature of sea water going towards the open sea, BULJAN, 1956) it could be supposed that the copepods diversity was partly the consequence of these changes. In the same time, the inverted ratio between the annual amplitudes of temperature and salinity (Tab. 2) and the index of diversity has been established.

Tableau 2

The annual amplitudes of temperature and salinity (10 m)  
(BULJAN, *the unpublished paper*) and the index of diversity in 1971

	Kaštela Bay the coastal area	Pelegrin the channel region	Stončica the open sea
annual amplit. of temperature	10,68	8,68	10,11
annual amplit. of salinity	3,66	1,41	1,20
index of diversity	6,3	12,7	15,1

In the coastal waters, where these amplitudes were higher, the diversity was smaller, and in the open sea, where the annual amplitudes of hydrographic factors were smaller, the diversity of copepods was higher.

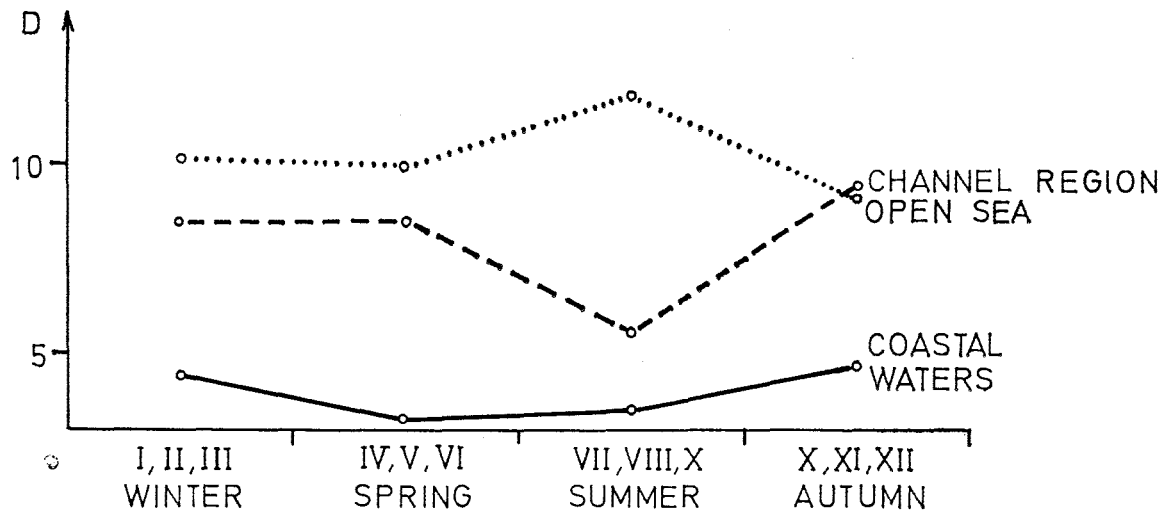


FIG. 1. — The seasonal oscillations of copepods diversity in the Central Adriatic in 1971.

The seasonal oscillations of copepods diversity has been studied, too (Fig. 1). In the coastal and channel region, the extreme diversity index was in autumn, and in the open sea it was in summer. In the coastal waters, the extreme diversity was covered with the extreme salinity, too.

#### References

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 REGNER (D.), 1973. — Sezonska raspodjela kopepoda u srednjem Jadranu u 1971., *Ekologija*, 8, 1, pp. 139-146.