

**Inventory of the Rijeka Bay marine flora (North Adriatic)**

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The Rijeka Bay marine flora seldom was subject of botanists' interest (VOUK, 1915; BENACCHIO, 1938; LINARDIC, 1949). Basic data on the inventory and distribution of benthic flora in Rijeka Bay were obtained by research carried at the Krk Island in 1976-1978 and 1981 (ZAVODNIK *et al.*, 1981). Additional surveys were performed at the Cres Island, along the eastern coast of the Istrian peninsula, and along the northern coast of Rijeka Bay. It is a relatively close area, encircled to the south and east by Cres and Krk Islands, and to the north and west side by the mountain highlands of Risnjak and Učka. The coast is rocky and mostly steep, somewhere quite vertical. Only in the Krk Island area the coast is gently sloping. Over the whole Bay, within the compact rocky coast, small gravel beaches are interslated. At gently sloping sites, at the depth of 2-3 meters, the rocky bottom is substituted by sandy sediments which are often rich in organogenic detritus. The deep bottom plain is characterized by coastal terrigenous ooze. The area close to the Rijeka city is considerably affected by wastes of urban and industrial origin, especially the northern coastal area between the Lovran-Opatija Riviera and Kraljevica townlet, and in particular Bakar Bay.

Our field research and samplings were carried over the whole Rijeka Bay, at 65 transects mostly surveyed by SCUBA divers. The bionomic zones of supralittoral, mediolittoral, infralittoral, and partly circalittoral were studied.

Table I. Taxonomic survey of the Rijeka Bay algal flora

	RHODOPHYTA		PHAEOPHYTA		CHLOROPHYTA		Total No.
	No.	%	No.	%	No.	%	
Species and infra species taxa	188	59	69	21	63	20	320

The analysis of the plant material enabled the accomplishment of a relatively rich inventory of the Rijeka Bay benthic flora. In total 320 taxa (species, subspecies, varieties and forms) were recorded (Table I). Besides these eucariot algae, 9 species Cyanophyta, and 4 marine phanerogams (Angiospermae) were identified.

With an account to the diversity of marine benthic flora studied Rhodophyta absolutely dominated (190 taxa = 58.7 %). The Phaeophyta and Chlorophyta taxa shared in about the same relations i.e. 69 (21.6 %) and 63 (19.7 %) taxa (Table I). The established R/P ratio was 2.7.

Table II. Species numbers and floristic composition of Rijeka Bays algal groups.

Distributional elements: AM = Atlantic-Mediterranean, MM = Medit., AMP = Atlantic- Medit. - Pacific, AMI = Atlantic-Medit.-Indian, CT = Circumtropic, AD = endemic Adriatic, CP = Cosmopolitan

	RHODOPHYTA		PHAEOPHYTA		CHLOROPHYTA		Total	
	No.	%	No.	%	No.	%	No.	%
AM	109	58.0	31	44.9	44	69.8	184	57.5
MM	53	28.2	19	27.5	11	17.5	83	25.9
AMP	11	5.9	0	0.0	2	3.2	13	4.1
AMI	5	2.7	2	2.9	0	0.0	7	2.2
CT	2	1.1	5	7.2	0	0.0	7	2.2
AD	1	0.5	6	8.7	1	1.6	8	2.5
CP	7	3.7	6	8.7	5	7.9	18	5.6
Total	188		69		63		320	

By its origin, the Rijeka Bay benthic flora, and generally also the flora of the entire Adriatic Sea is not homogeneous: it comprehends floristic elements from several phytogeographic regions (Table II). With regard to the number of taxa, and percentage portions Atlantic-Mediterranean and typical Mediterranean floristic elements (in total 267 taxa = 83.3 %) are characteristic in the area surveyed. The other five phytogeographic regions contribute to the Rijeka marine algal flora by only 16.7 % of the taxa identified.

**REFERENCES**

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