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BIOLOGICAL AND SAPROBIC EXAMINATION OF THE GRAVEL PIT ADJACENT TO DOKI SITE

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Introduction

Numerous water accumulations have been built for various purposes: hydroelectric power stations, irrigations, fisheries, water supplies for the communities, recreation and others.

A special type of water accumulation being built mechanically is the gravel pit. In the SR Croatia there are very few data on biological and saprobic examinations of such biotopes. Many authors (Malosej et al. 1973, Črc and Munjko 1974, Pavletić et al. 1974, Habdija and Erben 1973) studied water accumulations of larger magnitudes (Omladinsko and Bajer lakes in Gorski Kotar).

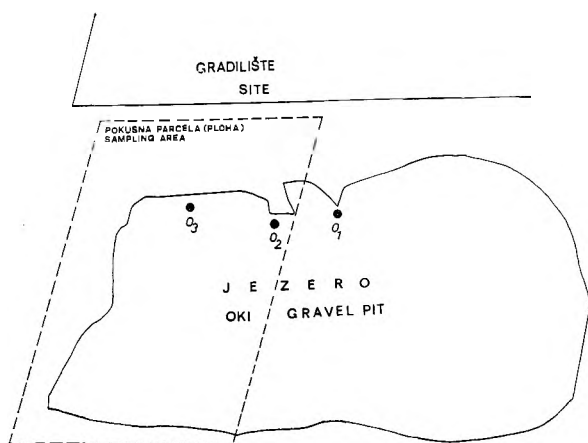
The subject of our examinations was the gravel pit within the plant site of the Organic Chemical Industry (OKI), Zagreb*.

Area of Examination and Methods

The gravel pit is located at the eastern edge of Zagreb, in the Žitnjak area, between the railroad Čulinec — Velika Gorica and the main sewer collector Zagreb — Ivanja Rijeka, within the plant fence and in the area of the old river Savica. The depression obtained by mechanization is filled with water in the approximate area of 6 hectares (approximately 15 acres). The shore length of the lake is 1900 m and the average depth is 4 m. The water level of the gravel pit follows those of the river Sava and Žitnjak underground waters. Fish have been planted in the gravel pit and it is used as a sport fishing resort for OKI's personnel and in case of water shortages, as a source of fire water and addition to the cooling water stream used in the plant.

* The investigations on the OKI gravel pit were performed with financial help of DOKI factory.

Since the construction of a new polystyrene plant, DOKI (a joint venture of OKI and The Dow Chemical Company) is in progress in the vicinity of the gravel pit examinations were needed to establish the reference data which should serve to determine to what extent this construction and later plant operations would affect the water quality and the gravel pit surrounding.



Sl. 1. Položaj ispitivanih točaka u šljunčari
 Fig. 1. Position of the sampling points

The biocenological examination of the benthos and plankton at three locations O_1 , O_2 and O_3 (Fig. 1) was completed in December 1975. Samples of benthos and plankton were taken qualitatively and quantitatively. Quantitative samples of benthos were collected along the shore using the net by Surber (1934), and qualitative samples were taken with an ordinary benthos net, 4 — 5 meters from the shore. Zooplankton was collected with a plankton net having pore opening of 112 microns, and phytoplankton with a plankton net having pore openings of 40 microns. For the quantitative sampling of zooplankton at every sampling station 100 liters of water was filtered.

The samples were immediately transferred to the laboratory, where the fresh material was used for partial determination of species. The material preserved in 4% formaldehyde was analysed over the period of the following 20 days.

The presence of individual species is given according to the scale of Knöpp (1954) and represented by the numbers 1—7.

The saprobiological index after Rotschein (S_R — saprobiological index) 1962., and the saprobiological evaluation after Zelinka & Marvan 1961., on the basis of phytoplankton, zooplankton and phyto-benthos indicators, is given.

Results and Discussion

Quantitative and Qualitative Structure of Zooplankton

The total quantitative and relative (pct) structure of zooplankton from station O₁ is presented in Table 1., and the qualitative and relative (pct) structures of zooplankton from stations O₂ and O₃ are listed in Tables 2 and 3.

In the zooplankton sample from O₁, 4 species of *Rotatoria*, 5 species of *Cladocera*, 2 species of *Copepoda* and 2 species of *Bryozoa* were found. The most predominant is the group of crabs *Cladocera* with 142 units in 100 liters of water, amounting to 46% of total zooplankton representative found. The group of crabs *Copepoda* is represented with 31 individuals in 100 l of water, amounting to 10.23%. The larvae of lower crabs (*nauplia*) are significant. There are 55 individuals in 100 l of water, amounting to 18.55% of the total number of zooplankton organisms. It follows that lower crabs are the predominant group of the zooplankton from station O₁.

The analysis of the sample from station O₂ gave one representative of *Nematoda* but the species was not determined, 3 species of *Rotatoria*, 5 species of *Cladocera*, one *Copepoda*, 2 species of *Bryozoa* and larvae

Table 1. Quantitative Structure of Zooplankton and Relative Amounts of Species from Station O₁, December 1975.

Tabela 1. Kvantitativna struktura zooplanktona i procentualni odnosi vrsta na postaji O₁, u prosincu 1975.

Species Vrste	Number of individuals in 100 l Broj jedinki u 100 l	Pct (%) Procentualni odnos (%)
Rotatoria		
<i>Asplanchna girodi</i> De Guerne	5	1.65
<i>Brachionus angularis</i> Gosse	25	8.25
<i>Keratella cochlearis</i> Gosse	34	11.22
<i>Polyarthra remata</i> Skorikov	11	3.63
Cladocera		
<i>Alona rectangula</i> Sars	9	2.97
<i>Bosmina longirostris</i> O. F. Müller	14	4.62
<i>Ceriodaphnia quadrangula</i> O. F. M.	17	5.61
<i>Chydorus sphaericus</i> O. F. M.	98	32.34
<i>Moina</i> sp.	4	1.32
Copepoda		
<i>Acanthocyclops</i> sp. (development stage)	24	2.31
<i>Diaptomus</i> sp. " "	7	2.31
Larvae of lower crabs-nauplia	55	18.15
Bryozoa		
<i>Plumatella fungosa</i> Pall. — statoblasts	many	
<i>Plumatella repens</i> L. — statoblasts	many	

Table 2. Qualitative Structure of Zooplankton and Relative Amounts of Species from the Station O₂, December 1975.

Tabela 2. Kvalitativna struktura zooplanktona i procentualni odnos vrsta na postaji O₂ u prosincu 1975.

Species Vrste	Percentage (%) Procentualni odnos (%)
Nematoda	5.51
Rotatoria	
<i>Asplanchna girodi</i> De Guerne	0.78
<i>Brachionus angularis</i> Gosse	2.36
<i>Keratella cochlearis</i> Gosse	3.93
Cladocera	
<i>Alona rectangula</i> Sars	2.36
<i>Bosmina longirostris</i> O. F. Müller	1.57
<i>Ceriodaphnia quadrangula</i> O. F. M.	6.29
<i>Chydorus sphaericus</i> O. F. M.	59.05
<i>Moina</i> sp.	2.36
Copepoda	
<i>Diaptomus</i> sp. (development stage)	2.36
Larvae of lower crabs — nauplia	13.38
Bryozoa	
<i>Plumatella repens</i> L. — statoblasts	many
<i>Plumatella fungosa</i> Pall. — statoblasts	many

of lower crabs. The most represented species is *Chydorus sphaericus* O. F. M. (*Cladocera*), 59.05% of the total zooplankton organisms from the station O₂.

As shown in Table 3, station O₃ has almost the same representatives from the groups *Nematoda*, *Cladocera*, *Copepoda*, *Bryozoa*, and the larvae of lower crabs as stations O₁ and O₂. The most represented species are *Chydorus sphaericus* from the group *Cladocera* with 34.51% and the larvae of lower crabs with 23%.

Qualitative Structure of Phytoplankton

Table 4. shows the qualitative structure of phytoplankton from the stations O₁, O₂ and O₃.

Among the phytoplankton organisms, there are members of 3 phylum; *Cyanophyta* (Blue — Green Algae), *Chrysophyta* (Golden Algae), and *Chlorophyta* (Green Algae).

There are 6 species of *Cyanophyta*. The most common species is the *Oscillatoria irrigua*, with a frequency of 4. A less common species is the *Microcystis flos-aquae*, with a frequency of 2. Species *Oscillatoria amoena*, *Os. deflexoides*, *Phormidium luridum* and *Ph. valderiae* are presented as sole members.

Relative to the number of species present, the predominant algae are the *Chrysophyta*. About 24 species belong to the class *Diatoms* (*Bacillariophyceae*). The predominant species is the *Navicula rhynchocephala*

Table 3. Qualitative Structure of Zooplankton and Relative Amounts of Species from the Station O₃, December 1975.

Tabela 3. Kvalitativna struktura zooplanktona i procentualni odnos vrsta na postaji O₃, u prosincu 1975.

Species Vrste	Percentage (%) Procentualni odnos (%)
Nematoda	11.50
Rotatoria	
<i>Asplanchna girodi</i> De Guerne	2.65
<i>Brachionus angularis</i> Gosse	3.53
<i>Keratella cochlearis</i> Gosse	0.88
<i>Polyarthra remata</i> Skorikov	0.88
Cladocera	
<i>Alona rectangula</i> Sars	3.53
<i>Ceriodaphnia quadrangula</i> O. F. M.	4.42
<i>Chydorus sphaericus</i> O. F. M.	34.51
<i>Daphnia longispina</i> O. F. M.	0.88
<i>Moina</i> sp.	1.76
Copepoda	
<i>Acanthocyclops</i> sp. (development stage)	6.19
<i>Diaptomus</i> sp. (development stage)	6.19
Larve of lower crabs — nauplia	23.00
Bryozoa	
<i>Plumatella repens</i> L. — statoblasts	many
<i>Plumatella fungosa</i> Pall. — statoblasts	many

with a frequency 4. Besides those, there are some other species with a frequency of 3, like *Fragilaria crotonensis*, *Navicula lanceolata*, *N. radiosa*, *Nitzschia paleacea*, and *Synedra ulna* var. *danica*. The remaining species found are either very small in number or single.

The *Clorophyta* division is represented by 2 species, *Scenedesmus obliquus* and *Sc. quadricauda*, which are sole members.

Qualitative Structure of Phyto- and Zoobenthos

According to the number of species phytobenthos is considerably more developed than zoobenthos. Table 5. indicates that phytobenthos consists mostly of *Chrysophyta* (46 species) with the species *Navicula rhynchocephala*, *Na. radiosa*, and *Synedra ulna* var. *danica* dominating. Somewhat less represented are species *Amphora ovalis*, *Achnanthes nodosa*, *Cyclotella comta*, *Cymbella amphicephala*, *C. ventricosa*, *Fragilaria crotonensis*, *Gyrosigma attenuatum*, *Navicula cryptocephala*, *N. lanceolata*, *Nitzschia capitellata*, *Nitz. kuetzingiana* and *Stauroneis anceps*. Other species were found single.

Table 4. Qualitative Structure of Phytoplankton from Stations 0₁, 0₂ and 0₃, December 1976.

Tabela 4. Kvalitativna struktura fitoplanktona na postajama 0₁, 0₂ i 0₃, u prosincu 1975

Species Vrste	Frequency Učestalost
Chyanophyta	
<i>Microcystis flos-aquae</i> Kirch	2
<i>Oscillatoria amoena</i> Gom.	1
<i>Os. deflexoides</i> Elenk. et. Kos.	1
<i>Os. irrigua</i> Kütz.	4
<i>Phormidium luridum</i> Gom.	1
<i>Ph. valderiae</i> Geitl.	1
Chrysophyta	
Diatomeae	
<i>Achnanthes nodosa</i> A. Cl.	1
<i>Amphora ovalis</i> Kütz.	1
<i>Cyclotella stelligera</i> Cl.	1
<i>Cymbella amphicephala</i> Näg.	2
<i>Cy. ventricosa</i> Kütz.	1
<i>Fragilaria crotonensis</i> Kitt.	3
<i>Navicula cryptocephala</i> Kütz.	1
<i>Na. falaisiensis</i> Grun.	1
<i>Na. gracilis</i> Ehr.	1
<i>Na. lanceolata</i> Kütz.	1
<i>Na. pupula</i> var. <i>rostrata</i> Hust.	1
<i>Na. radiosa</i> Kütz.	3
<i>Na. rhynchocephala</i> Kütz.	4
<i>Na. viridula</i> Kütz.	1
<i>Nitzschia acicularis</i> W. Sm.	1
<i>Ni. capitellata</i> Hust.	2
<i>Ni. dissipata</i> Grun.	1
<i>Ni. heustleriana</i> Grun.	2
<i>Ni. paleacea</i> Grun.	3
<i>Ni. sigmoidea</i> W. Sm.	1
<i>Ni. subtilis</i> Grun.	1

The blue-green algae (*Cyanophyta*) are represented with 10 species, and the dominating species from genus *Phormidium* are *Phormidium luridum*, *Ph. valderiae*, *Ph. papyraceum* and *Ph. ambiguum*.

Of the green algae (*Chlorophyta*) 8 species were found. Genus *Scenedesmus* was represented by 5 species, genus *Pediastrum* by 1, and genus *Staurastrum* by 2 species. All species were found single except *Scenedesmus quadricauda* which is somewhat better represented than the others.

According to the number of species zoobenthos was less represented than phytobenthos. It was limited to the *Oligocheaeta*, *Cladocera* (lower crabs), *Copepoda* (lower crabs) groups, and insects larvae of the orders *Ephemera*, *Trichoptera* and *Diptera* which were either single or scarcely present. The most represented species was *Alona rectangula* (*Cladocera*), with the frequency of 6.

Saprobic Status of the Gravel Pit

Of the animal and plant species found, only a few can be considered biological indicators. Table 6. lists such species with a complete indicator values in the corresponding limnosaprobic zones.

Phytobenthos and Phytoplankton representatives mainly belong to the beta — mesosaprobic degree, while zooplankton belongs to oligosaprobic and beta-mesosaprobic degree of limnosaprobity.

Phytoplankton representatives show the saprobiological index after Rotschein (S_R) 51.3 and saprobic stage after Zelinka — Marvan 5.3. Zooplankton indicates the S_R 62.3 and saprobic stage 4.1, while phytobenthos shows the S_R 53.3 and saprobic stage after Zelinka — Marvan 5.5.

The total saprobiological evaluation of the gravel pit examined shows that the points investigated belonged to the beta-mesosaprobic stage of limnosaprobity at the time of the examinations.

Conclusion

Qualitative and quantitative zoocenological and phytocenological examinations of plankton and benthos from the three points near the shore line of the OKI gravel pit were carried out in December 1975 (Fig. 1).

The Plankton consisted of 13 representatives of zooplankton of which 4 species were from the class *Rotatoria*, 7 species from the class *Crustacea* from the order *Cladocera* and *Copepoda*, and 2 species of *Bryozoa* (Table 1).

Phytoplankton was represented by a greater number of species; a total of 32 species were found, 6 from division *Cyanophyta*, 24 from division *Chrysophyta*, and 2 species from division *Chlorophyta* (Table 4).

Species of phytobenthos were even more numerous. In total, 65 species of algae were found: 10 species from division *Cyanophyta*, 46 species from division *Chrysophyta*, and 8 species from division *Chlorophyta* (Table 5).

In the samples of zoobenthos, certain species of crabs were found which are usually found in plankton; the dominating species was *Alona rectangularis* from the order *Cladocera*. Other groups of animals *Oligochaeta* and insect larvae were found in small numbers only. This conclusion does not rule out the existence of a considerably larger number of zoobenthos species in other seasons. Therefore the results obtained indicate the situation at the time of the examination only.

The saprobiological evaluation of the gravel pit examined indicated that the sampling points belonged to beta-mesosaprobic degrees according to the saprobity level by Zelinka & Marvan (Table 7).

In order to obtain a more complete insight into the dynamics of the living processes in the biotop examined, such examinations should be carried out more frequently at time intervals of 1 year minimum.

For the determination of possible influences on the structure of the living communities, which the newly built polystyrene plant might exert, additional local and laboratory examinations 1 to 2 years after the start are needed.

Table 5. Qualitative Structure of Phyto- and Zoobenthos from Stations 0₁, 0₂ and 0₃, December 1975.

Tabela 5. Kvalitativna struktura fito- i zoobentosa na postajama 0₁, 0₂ i 0₃ u prosincu 1975.

Species Vrste	Frequency Učestalost
PHYTOBENTHOS	
Cyanophyta	
<i>Lyngbya martensiana</i> Menegh.	1
<i>Merismopedia punctata</i> Neyen	1
<i>Microcystis flos-aquae</i> Kirch.	1
<i>Oscillatoria deflexoides</i> Elenk. et Koss.	1
<i>Os. irrigua</i> Kütz.	2
<i>Phormidium ambiguum</i> Gom.	1
<i>Ph. papyraceum</i> Gom.	3
<i>Ph. luridum</i> Gom.	2
<i>Ph. valderiae</i> Geitl.	3
<i>Spirulina subtilissima</i> Kütz.	1
Chrysophyta	
<i>Dinobryon divergens</i> Imh.	1
<i>Achnanthes microcephala</i> Grun.	1
<i>Ac. nodosa</i> A. Cl.	2
<i>Amphora ovalis</i> Kütz.	3
<i>Caloneis silicula</i> Cl.	1
<i>Cocconeis placentuala</i> var. <i>intermedia</i> Cl.	1
<i>Cyclotella comta</i> Kütz.	2
<i>Cy. stelligera</i> Cl. et Grun.	1
<i>Cymatopleura solea</i> W.	1
<i>Cymbella affinis</i> Kütz.	1
<i>Cy. amphicephala</i> Näg.	2
<i>Cy. cymbiformis</i> W. H.	1
<i>Cy. ventricosa</i> Kütz.	2
<i>Eucocconeis flexella</i> Kütz.	1
<i>Eunotia exigua</i> var. <i>compacta</i> Hust.	1
<i>Eu. veneris</i> O. Müll.	1
<i>Fragilaria crotonensis</i> Kitt.	2
<i>Fr. leptostauron</i> Hust.	1
<i>Gomphonema olivaceum</i> Kütz.	1
<i>Go. olivaceum</i> var. <i>calcareum</i> Cl.	1
<i>Go. parvulum</i> Grun.	1
<i>Go. parvulum</i> var. <i>lagenulum</i> Hust.	1
<i>Gyrosigma attenuatum</i> W. Sm.	2
<i>Gy. kuetzingii</i> Cl.	1
<i>Navicula cryptocephala</i> Kütz.	2
<i>Na. dicephala</i> W. Sm.	1
<i>Na. lanceolata</i> Kütz.	2
<i>Na. gracilis</i> Ehr.	1
<i>Na. oblonga</i> Kütz.	1
<i>Na. pupula</i> var. <i>rostrata</i> Hust.	1
<i>Na. radiosa</i> Kütz.	5
<i>Na. rhynchocephala</i> Kütz.	5
<i>Na. rostellata</i> Kütz.	1
<i>Nitzschia acicularis</i> W. S	1
<i>Ni. capitellata</i> Hušt.	2
<i>Ni. kuetzingiana</i> Hilse	2

Species Vrste	Frequency Učestalost
<i>Ni. palea</i> W. Sm.	1
<i>Ni. paleacea</i> Grun.	1
<i>Pinnularia viridis</i> uhr.	1
<i>Stacronois anceps</i> Ehr.	2
<i>St. anceps f. gracilis</i> Cl.	1
<i>Surirella robusta</i> Ehr.	1
<i>Synedra ulna</i> Ehr.	1
<i>Sy. ulna var. danica</i> Grun.	4
<i>Sy. ulna var. biceps</i> Schaf.	1
<i>Tribonema minus</i> Hazen	1
Cholorophyta	
<i>Pediastrum boryanum</i> (Turp.) Menegh.	1
<i>Scenedesmus abundans</i> Ch.	1
<i>Sc. bijugatus</i> Kütz.	1
<i>Sc. disciformis</i> Fott. et Ko.	1
<i>Sc. obliquus</i> Kütz.	1
<i>Sc. quadricauda</i> Breb.	2
<i>Staurastrum dejectum</i> Breb.	1
<i>St. polymorphum</i> Breb.	1
ZOOBENTHOS	
Oligochaeta	2
Cladocera	
<i>Alona rectangula</i> Sars	6
Copeopda	
<i>Cyclops sp.</i>	2
Ostracoda	
<i>Cypridopsis vidua</i> O. F. Müller	2
Ephemera (larva)	1
Trichoptera (larva)	1
Chironomida	
<i>Polypedilum sp.</i>	1
<i>Limulchironomus gr. tritonus</i> Niefb.	2
<i>Cryptochironomus sp.</i>	2
<i>Ablabesmya gr. lentiginosa</i> Fries.	1
<i>Procladius</i>	2

Table 6. Saprobiological Analysis of the OKI Gravel Pit December 1975.

Tabela 6. Saprobioگیjska analiza šljunčare u prosincu 1975.

Species Vrste	Indicator Value Indikatorska vrijednost					
	x	o	b	a	p	G
Fitoplankton						
Phytoplankton						
<i>Microcystis flos-aquae</i> Kirchn.		1	8	1		4
<i>Amphora ovalis</i> Kütz.	1	3	4	2		1
<i>Cymbella ventricosa</i> Kütz.	2	4	3	1		1
<i>Fragilaria crotonensis</i> Kitt.		6	4			3
<i>Navicula cryptocephala</i> Kütz.			3	7		4
<i>Na. gracilis</i> Ehr.		4	5	1		2
<i>Na. radiosa</i> Kütz.		4	6			3
<i>Na. viridula</i> Kütz.			2	8		4
<i>Nitzschia acicularis</i> W. Sm.			3	7		4
<i>Ni. dissipata</i> Grun.		5	5			3
<i>Ni. heufferiana</i> Grun.		4	6			3
<i>Ni. sigmoidea</i> W. Sm.		1	8	1		4
<i>Scenedesmus obliquus</i> Kütz.			7	3		4
<i>Sc. quadricauda</i> Bréb.		2	6	2		3
Zooplankton						
<i>Asplanchna girodi</i> De Guerne		6	4			3
<i>Brachionus angularis</i> Gosse			5	5		3
<i>Keratella cochlearis</i> Gosse	2	5	3			2
<i>Polyarthra remata</i> Skorikov		10				5
<i>Alona rectangula</i> Sars		7	3			3
<i>Bosmina longirostris</i> O. F. Müller	1	4	4	1		1
<i>Ceriodaphnia quadrangula</i> O. F. M.	2	5	3			2
<i>Chydorus sphaericus</i> O. F. M.	1	3	4	1		1
<i>Daphnia longispina</i> O. F. M.		1	8	1		4
Fitobentos						
Phytobenthos						
<i>Microcystis flos-aquae</i> Kirchn.		1	8	1		4
<i>Phormidium papyraceum</i> Gom.		+	+			
<i>Dinobryon divergens</i> Imh.		2	7	1		3
<i>Amphora ovalis</i> Kütz.	1	3	4	2		1
<i>Caloneis silicula</i> Cl.		5	5			3
<i>Cyclotella comta</i> Kütz.	1	7	2			3
<i>Cymatopleura solea</i> W. Sm.		1	5	4		2
<i>Cymbella affinis</i> Kütz.		4	6			3
<i>Cy. ventricosa</i> Kütz.	2	4	3	1		1
<i>Gomphonema olivaceum</i> Kütz.	1	3	3	3		1
<i>Go. olivaceum var. calcareum</i> Cl.			7	3		4
<i>Go. parvulum</i> Grun.	1	2	4	3		1
<i>Gyrosigma attenuatum</i> W. Sm.		2	8			4
<i>Navicula cryptocephala</i> Kütz.		+	3	7		4
<i>Na. dicephala</i> W. Sm.		+	+			
<i>Na. gracilis</i> Ehr.	+	4	5	1		2
<i>Na. oblonga</i> Kütz.		+	+			
<i>Na. radiosa</i> Kütz.		4	6	+		3
<i>Na. rostellata</i> Kütz.		8	2			4
<i>Nitzschia acicularis</i> W. Sm.			3	7		4

Species Vrste	Indicator Value Indikatorska vrijednost					
	x	o	b	a	p	G
<i>Ni. palea</i> W, Sm.			3	6	1	3
<i>Pinnularia viridis</i> Ehr.			9	1		5
<i>Stauroneis anceps</i> Ehr.			+			
<i>Synedra ulna</i> Ehr.	1	2	4	3	+	1
<i>Sy. ulna var. biceps</i> Shönf.		1	9			5
<i>Tribonema minus</i> Hazen	+	+	+			
<i>Scenedesmus bijugatus</i> Kütz.			10			5
<i>Sc. obliquus</i> Kütz.			7	3		4
<i>Sc. quadricauda</i> Bréb.		2	6	h2		3

Table 7. Saprobiological Evaluation of the Gravel Pit in December 1975.

Tabela 7. Saprobiološki procjena šljunčare u prosincu 1975.

	x	o	b	a	p	G	Ocjena saprobnosti po Zelinka-Marvanu Saprobiological Evalua- tion after Zelinka-Marvan
Phytoplank- ton	0,1	2,6	5,3	2	—	51,3	beta ($b = 5,3$)
Zooplank- ton	0,6	4,1	4	1,3	—	62,3	oligo ($o = 4,1$)
Phyto- benthos	0,1	2,7	5,5	1,6	0,1	52,3	beta ($b = 5,5$)
The average value and total saprobiological evaluation of the OKI gravel pit is 55,3 Srednja vrijednost i ukupna saprobiološki procjena jezera OKI iznosi 55,3							beta

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SADRŽAJ

BIOLOGIJSKA I SAPROBIOLOGIJSKA ISTRAŽIVANJA ŠLJUNČARE NA GRAĐEVNOJ PARCELI DOKI

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U radu su izneseni podaci o kvalitativnim i kvantitativnim fitocenološkim i zoocenološkim istraživanjima na šljunčari u blizini Organsko-kemijske industrije u Zagrebu (DOKI), uz koju se gradi nova tvornica polistirena.

Odabrane su 3 karakteristične postaje na kojima su uzimani uzorci fitoplanktona i zooplanktona, te fitobentosa i zoobentosa. U planktonu smo utvrdili 13 predstavnika zooplanktona, dok je fitoplankton sa 32 vrste znatno bogatiji. U fitobentosu je nađeno 65 vrsti alga, a u zoobentosu samo nekoliko skupina životinja. Ti rezultati pokazuju samo trenutnu situaciju u vrijeme ispitivanja. Da bi se dobila potpunija slika o bogatstvu životnih zajednica, potrebno je istraživanja proširiti na period od najmanje godinu dana.

Izgradnjom nove tvornice polistirena na ovom području doći će do promjene u strukturi biocenoza. Da bi se ispitao utjecaj spojeva ove tvornice, potrebno je terenska i laboratorijska ispitivanja proširiti i na dulje periode.

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