HIDROGRAFSKI INSTITUT JUGOSLAVENSKE RATNE MORNARICE
HYDROGRAPHIC INSTITUTE OF THE YUGOSLAV NAVY

„ANDRIJA MOHOROVIČIĆ"

1974 – 1976

IZVJEŠTAJ I REZULTATI
OCEANOGRAFSKIH ISTRAŽIVANJA JADRANSKOG MORA

REPORTS AND RESULTS
OF THE OCEANOGRAPHIC INVESTIGATIONS IN THE ADRIATIC SEA

ZOOPLANKTON – SIPHONOPHORAE

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ZOOPLANKTON

Zooplankton je prikupljen oceanografskim brodom „Andrija Mohorovičić", za vrijeme 4 sezonska krstarenja (1. – Sept. – Oct. 1974. 3. – April – Maj 1975., 4. –Feb. 1976., 5. – Juni 1976), koja su obuhvatila cijeli Jadran od najsjevernijih dijelova do Otranta. Uključeno je 3! stalnih postaja na 8 transekata.

Materijal je prikupljen standardnom planktonskom mrežom tkanja 250 mikrona, 113 cm diametra i 350 cm dužine. Potezi s kutem izvlače nja većim od 25^{o} nisu uzeti u obzir za izračunavanje kvantitativnih vrijednosti. Lovine su bile vertikalne obuhvaćajući slojeve dno – površina 30 m – površina. Uzorci su fiksirani 2,5% neutraliziranim formalinom.

Totalni broj primjeraka je izračunat ili iz poduzoraka do 1/60 cijele lovine, ili pregledom cijele lovine. Za izračunavanje biomase zooplank tona su uzete u obzir samo uzorci 30 m – površina, a materijal je sušen na 60^{o} i spaljivan na $800^{o}C$.

Svi kvalitativni podaci su prikazani kao totalni broj (No/m^2), dok su podaci za biomasu izračunavani kao $br./m^3$.

ZOOPLANKTON

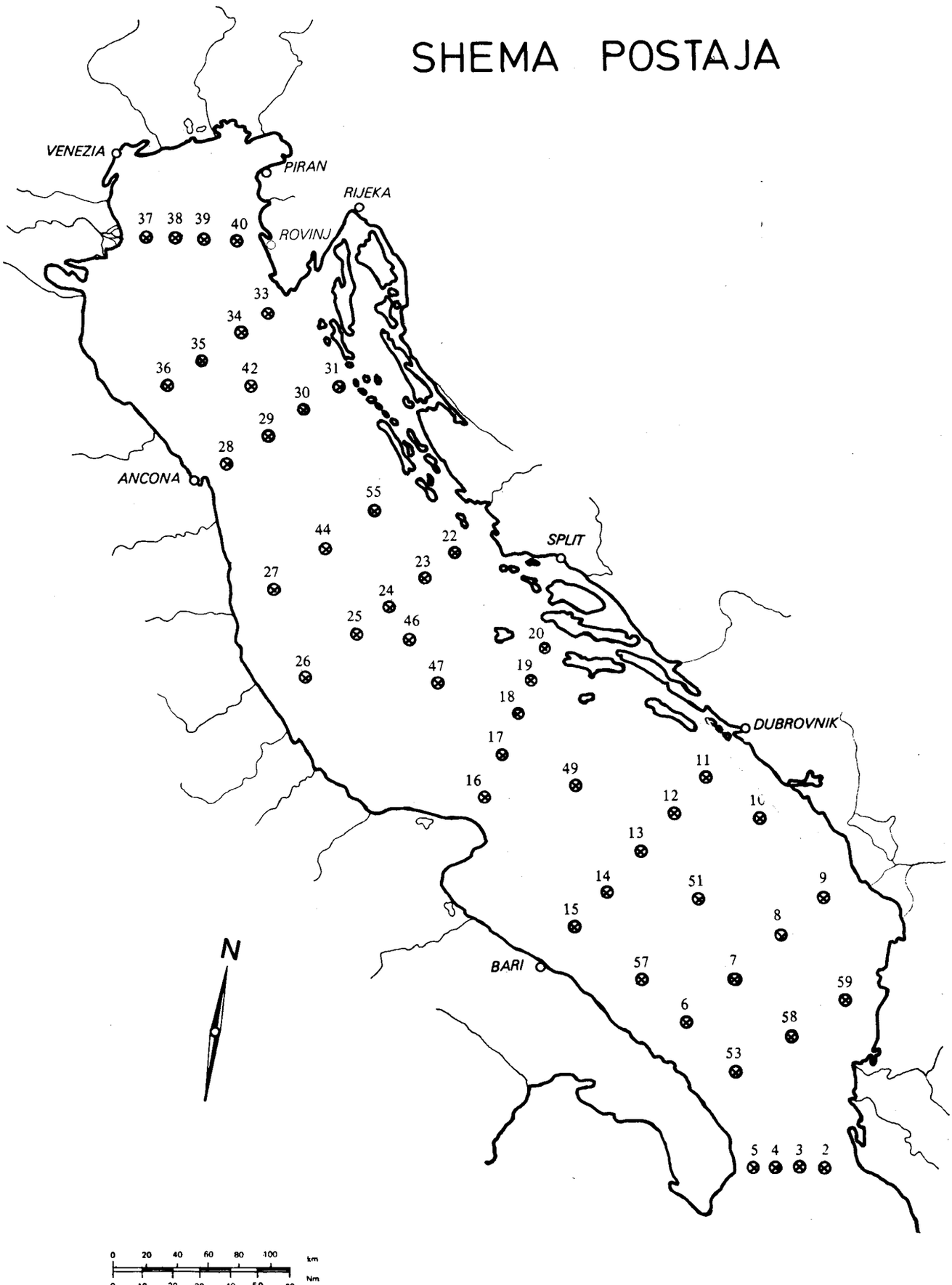
The zooplankton was sampled by the oceanographic vessel „Andrija Mohorovičić" during the course of 4 seasonal cruises (1.: Sept. – Oct. 1974.; 3.: April – May 1975.; 4.: Feb. 1976.; 5.: June 1976.), covering the entire Adriatic Sea from the most northern areas till the Strait of Otranto. It was included 35 fixed stations along 8 transects.

The material was collected using the standard plankton net, 250 microns mesh netting, 113, cm in diameter and 350 cm in lenght. Tows with a wire angle greater than 25^{o} were not considered in evaluating the quantitative data. Tows were vertical encompassed bottom–surface, and 30 m – surface layers. Samples were fixed with 2,5% neutralized formaldehyde.

The total number of specimens were counted either in an aliquot up to 1/60 of the total sample, or the total sample entirely. For zooplank ton biomass evaluation were considered only those samples of 30 m – surface and material was dried at $60^{o}C$ and incinerated at $800^{o}C$.

All the qualitative data are given as a total numbers (No/m^2), while biomass data are calculated as a $number/m^3$.

SHEMA POSTAJA



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SIPHONOPHORA-CALYCOPHORAE

List of species

1. Rosacea cymbiformis (Delle Chiaje, 1882)
2. Hippopodius hippopus (Forskal, 1776)
3. Vogtia pentacantha Kölliker, 1853
4. Sulculeolaria chuni (Lens & Van Riemsdijk, 1908)
5. Sulculeolaria quadrivalvis Blainville, 1834
6. Sulculeolaria turgida (Gegenbaur, 1853)
7. Lensia conoidea (Keferstein & Ehlers, 1860)
8. Lensia multicristata (Moser, 1925)
9. Lensia fowleri (Bigelow, 1911)
10. Lensia subtilis (Chun, 1886)
11. Lensia campanella (Moser, 1925)
12. Lensia meteori (Leloup, 1934)
13. Muggiaea kochi (Will, 1844)
14. Chelophyes appendiculata (Eschscholtz, 1829)
15. Eudoxoides spiralis (Bigelow, 1911)
16. Clausophyes ovata (Keferstein & Ehlers, 1860)
17. Sphaeronectes gracilis (Claus, 1873)
18. Sphaeronectes irregularis (Claus, 1873)
19. Sphaeronectes gamulini Carré, 1966
20. Sphaeronectes fragilis Carré, 1968
21. Abylopsis tetragona (Otto, 1823)
22. Bassia bassensis (Quoy & Gaimard, 1834)

Abbreviations:

nect. = nectophor
a.n. = anterior nectophor
p.n. = posterior nectophor
gon. = gonophor
M.k.+L.s. gonophores = Muggiaea kochi and Lensia subtilis gonophores.

* - tows with a wire angle greater than 25°

Cruise		1				3				4				5			
Profile		I				I				I				I			
Station		37	38	39	40	37	38	39	40	37	38	39	40	37	38	39	40
Depth to bottom		33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33
Depth of sampling		25	30	30	30	30	30	30	30	30	25	30	30	30	30	30	25
Hour		14	12	10	07	16	13	11	10	18	15	13	10	17	14	12	09
M. kochi	nect.	980	250	800	1800	13	36	210	420	122	142	130	36	44	23	220	210
	bract.	450	320	760	880	9	17	180	260	118	380	190	34	9	10	180	200
M.k.+L.s.	gonophor.	1050	480	1040	1780	15	28	520	1100	370	720	600	128	31	46	320	530
L. subtilis	a.n.														1		
	p.n.																
	bract.																
S. gracilis	nect.							17									

Cruise		1				3				4				5			
Profile		II				II				II				II			
Station		36	35	34	33	36	35	34	33	36	35	34	33	36	35	34	33
Depth to bottom		45	58	55	47	45	58	55	47	45	58	55	47	45	58	55	47
Depth of sampling		30	30	30	30	30	50	50	30	30	50	50	30	40	50	50	40
Hour		24	22	21	18	11	14	15	17	23	02	04	06	10	13	14	10
M. kochi	nect.	260	270	280	38	280	350	450	120	88	170	138	48	330	205	340	420
	bract.	190	220	180	21	550	420	380	110	160	320	290	130	240	195	360	470
M.k.+L.s.	gonophor.	270	450	410	48	850	800	780	260	360	510	420	280	510	940	880	820
L. subtilis	a.n.						2	1			4	6				8	
	p.n.						1				2	3				3	
	bract.						8	1			18	16				12	
S. gracilis	nect.			1			5	8		2	42	7	15		3		
S. irregularis	nect.										2						

Cruise		1				3				4				5			
Profile		III				III				III				III			
Station		28	29	30	31	28	29	30	31	28	29	30	31	28	29	30	31
Depth to bottom		70	75	75	65	70	75	75	65		75	75	65	70	75	75	65
Depth of sampling		50	30	65	60	60	60	60	60		60	60	55	65	70	70	60
Hour		08	11	13	16	16	15	12	09		17	15	10	18	14	13	10
M. kochi	nect.	340	128	182	190	250	560	480	610		240	450	146	160	320	92	32
	bract.	260	92	85	164	480	640	880	800		360	810	210	170	330	88	52
M.k.+L.s.	gonophores	370	150	130	320	1100	1300	1050	1150		810	1460	320	330	690	320	210
L. subtilis	a.n.				2	8	11	42	58		26	46	7	4	9	8	14
	p.n.					2	7	18	26		14	18	8	2	6	4	7
	bract.	1	8			42	46	56	110		52	120	34	13	22	60	28
E. spiralis	nect.								1								
S. gracilis	nect.	9	52	18	17	18	7	4	3		44	19	16	6	33	26	11
S. irregularis	nect.		22		13	28	68	340	5		6	11	3				21
A. tetragona	a.n.								1								
	p.n.								1								

Cruise		1				3					4					5				
Profile		IV				IV					IV					IV				
Station		25	24	23	22	26	25	24	23	22	26	25	24	23	22	26	25	24	23	22
Depth to bottom		260	273	224	210	110	260	273	224	210	110	260	273	224	210	110	260	273	224	210
Depth of sampling		200*	250	200	190	90	250*	250*	100*	100*	100	250	250	200	190	95	250	270*	220	190
Hour		09	21	01	13	09	05	02	22	17	24	22	18	15	13	10	07	14	23	18
S. chuni	a.n.		3	2	2															
	p.n.		3	2	2															
L. fowleri	a.n.							5							1					
	bract							4												
	gon.							2												
L. meteori	a.n.		12	15	5		6	24				9	18	23	23		8	3		2
L. subtilis	a.n.	19	21	23	95	142	130	88	96	34	6	110	84	86	220	2	14	110	70	40
	p.n.	17	17	11	38	74	96	46	78	28	4	105	52	92	106	1	11	80	18	25
	bract	38	10	20	115	370	210	128	270	60	150	156	56	88	260	16	5	130	90	106
M. kochi	nect.	340	34	30	105	380	170	160	380	320	290	220	32	180	370	2550	54	180	172	164
	bract	430	16	27	92	59	190	82	770	310	320	170	28	90	220	4800	8	220	320	224
M.k.+L.s.	gonophor.	520	50	56	230	2200	1040	700	1520	950	1200	520	240	380	980	6050	36	820	1100	670
C. appendiculata	a.n.				2															
E. spiralis	nect.		2	1	1	7	11	15	10	28	2	3	1	3	1	1		1		1
	bract		1	1		1	7	14	42	44		2		2	1					
	gon.		2			5	9	10	44	68		2		2	1					
S. gracilis	nect.	11	52	26	15	20	200	110	66	44	16	134	84	58	62	460	130	17	102	7
S. irregularis	nect.		26	17	14	2	18	5	38	12	3	14	6	4	13	13	5	6	17	
S. gamulini	nect.													1				1		
A. tetragona	a.n.		2						2									2	1	
	p.n.		1																	
	bract																	1		
	gon.																	1		
B. bassensis	a.n.												1							

Cruise		1					3					4					5				
Profile		V					V					V					V				
Station		16	17	18	19	20	16	17	18	19	20	16	17	18	19	20	16	17	18	19	20
Depth to bottom		125	145	175	155	105	125	145	175	155	105	125	145	175	155	105	125	145	175	155	105
Depth of sampling		100*	130	150	150*	90	120*	120*	160	140	90	100	110	170	140*	100	100	100	170	150	100
Hour		23	21	19	23	21	16	18	10	12	14	07	08	12	14	11	08	11	16	09	20
H. hippopus	nect.																		1		
S. chuni	a.n.		3			2													6	1	
	p.n.																				
L. meteori	a.n.	6	4	66								7							2	2	
L. subtilis	a.n.	90	40	128	160	160	120	84	280	130	145	92	128	240	98	65	34	70	330	168	52
	p.n.	50	18	72	130	145	80	62	210	80	46	42	72	110	80	40	16	32	180	50	41
	bract	130	92	200	250	230	510	420	480	530	230	136	220	450	260	160	60	110	510	560	180
M. kochi	nect.	410	162	32	210	220	280	410	310	74	104	260	190	370	720	530	790	920	150	46	82
	bract	470	84	27	190	210	460	440	420	96	68	205	260	320	430	480	1050	1200	240	88	140
M.k.+L.s.	gonoph.	880	330	256	520	780	2300	2400	1500	960	1600	780	740	1420	1360	1150	1840	2240	1520	780	490
C. appendicul.	a.n.				4	5		1		1									2		
	p.n.					3		1											2		
	bract					2		1											2		
	gon.					2		1		1									1		
E. spiralis	nect.	1	1	3	2	3	2	22	26	38	18	1	2		2				14	2	1
	bract	1		2		2	12	80	70	432	26	1	2	1	3				15		1
	gon.	1	1	2		1	18	120	80	512	48	1	3	1	2				22		1
S. gracilis	nect.	20	30	16	2		15	2	42	21	26	6	28	54	17	3	36	52	21	44	6
S. irregul.	nect.	6	3	17		1	9	1	54	74	3	2	2	1			9	14	15	32	15
S. gamulini	nect.													1							
A. tetragona	a.n.		1				3	1	2	3	2				1	1			10	3	
	p.n.							1							1				1	1	
	bract			1	2		1	1		2					1	1			7	1	
	gon.			1	1		2	1		1					1	1			8	1	

Cruise		1					3					4					5				
Profile		VI					VI					VI					VI				
Station		15	14	13	12	11	15	14	13	12	11	15	14	13	12	11	15	14	13	12	11
Depth to bottom		148	820	1100	1180	164	148	820	1100	1180	164	148	820	1100	1180	164	148	820	1100	1180	164
Depth of sampling		130*	800	1000	1100	160*	120*	800*	1000	300	150*	130	600	1000*	1000	150	130	670	950	970*	160*
Hour		03	07	13	23	02	04	01	19	14	09	21	19	15	03	09	21	01	04	10	14
H. hippopus	nect.								3						1	2					1
	larv.							2													
V. pen.. n.	nect.		2											2							
S. quadrival .n.				1						1											
	p.n.			1						1											
C. turgida	a.n.										1									2	
	p.n.										1									2	
S. chuni	a.n.	2	1	1		5															
	p.n.	2				2															
L. conoidea	a.n.		3	5					4	3								22	14	20	
	p.n.		1															6	3	8	
	bract			4					2										1	7	
	gon.			4					2										1	6	
L. multicris.	a.n.													3	2						
	p.n.													2							
L. fowleri	a.n.		13	7	1			5	9	17	3		1					16	9	9	
	p.n.		8	7	1			1		7								11	3	6	
	bract		3	6	3			6	12	52	2							7	7	7	
	gon.		5	6	4			9	58	48	2							2	11	9	
L. subtilis	a.n.	66	190	170	78	390	110	46	28	44	60	96	108			5	80	180	170	190	160
	p.n.	38	162	145	66	170	80	22	20	26	54	32	90			3	38	98	76	85	90
	bract	18	78	58	29	680	280	62	15	25	210	158	140			7	130	122	66	65	190
L. campanel.	a.n.					2					3										
L. meteori	a.n.	5	92	152	19			110	132	340			8	17	7			138	180	210	35
M. kochi	nect.	120	68	1	1	230	700	30	1	3	180	110	54			17	1430			9	212
	bract	98	6		1	450	600	25	6		210	205	70			13	1160			2	230
M.k.+L.s.	gonoph.	270	320	150	75	1520	2400	280	190	120	580	680	290	13	3	36	2450	380	250	310	940
C.appendicul.	a.n.		2	1	1	54		1		1	1		1		2		20	18	4	13	6
	p.n.		1	1		12		1		1			1		2		6	8	3	2	2
	bract		2			8				1							8	7	14	10	1
	gon.		3			9		1		7	3						4	5	11	18	4
E. spiralis	nect.	1	2	1	5	23	20	48	11	15	20	1	1	1		1	14	22	6	11	15
	bract	2	1		18	9	28	120	4	24	160	1		1		1	21	17	16	12	32
	gon.	16	2	1	26	42	70	136	21	28	200	1		1		1	25	34	38	16	24
C. ovata	a.n.				2				1				3								
	p.n.				1				1				2								
	bract								1				1								
S. gracilis	nect.	12	9	15	9	12	25	12	7	12	40	7	21			8	7	9		11	4
S. irregular.	nect.			6			44	5	1	18	38		6				6	2	3		21
S. gamulini	nect.																		1		
S. fragilis	nect.			1																	
A. tetragona	a.n.		1	1	1	1	2	3	3	9	16				3	1	7	14	5	12	2
	p.n.		1	1	1		2	2		2	10				3	1	2	6	5	4	
	bract		3	1	2	2	36	14	15	34	38			1	3	18	6	9	7	9	1
	gon.		5	2	1	2	40	15	12	29	42			1	3	16	5	5	4	11	1