

Island of Dugi otok through History: Ethnohistorical and Demographic Processes on the Island of Dugi otok, Croatia

Tarik Kulenović

Institute for Anthropological Research, Zagreb, Croatia

ABSTRACT

The present paper aims at describing the most relevant background data on geomorphological, economic, ethnohistoric and demographic features of the island of Dugi otok. As an introduction to future holistic anthropological research on the island, it seeks to identify both internal and external impulses of change and/or continuity of the island population structure within a wider socio-cultural and historical context. As migrations and its demographic fluctuations, we also investigate Dugi otok's most important economic branch – fishery. The purpose of this paper is to provide insight into these Dugi otok population's activities. For better understanding of migrations, we include amigration matrix of Dugi otok.

Key words: *Dugi otok, migrations, fishery, Croatia*

Introduction

A long-term anthropological research of the population structure of the East Adriatic rural populations^{1,2}, conducted on a number of Adriatic islands^{3–6} and other regions, has now been extended to the investigation of the population structure of the island of Dugi otok.

It is the largest (114.44 km²) and the longest (45 km) island of the Zadar's group of Northern Dalmatian islands⁷. Because of its position, Dugi otok is explicitly an outer island in Zadar's group, since its South-West coast is positioned toward the open sea. As Marković⁸ noted the island does not have water springs or water streams, and Small and Large lakes, along with the Long Field are under the water during the winter season.

In geological framework, basic elements are chalk limestones and dolomites. The furthest Northern part of the island (Bokašin – Božava – rt Borji) is composed of lowerchalk limestone and breča-aggregates. The largest part of Dugi otok is built from lowerchalk mineral limestone with two larger zones (Solišćica – Totka i Luka – Triluke) and the smaller one (Lučina – Savar – cape Pelegrin) of elaborate brown-gray dolomites. Southern part of the island is rock country, the middle and the western parts are covered in macchia, and the remaining parts of the island are suitable for cultivation of olives, figs and vineyards, as well as other types of fruits and vegetables⁸.

Ethno-History and Demography of the Island of Dugi otok

The settlements history

Dugi otok is within Zadar's island group that is part of the Dalmatian mainland. As noted by Marčić⁹ it is a holokarst area that has, due to atmospheric influences, very limited fertile land and rare water springs. The island has characteristic macchia that is to say a very weak and poor environment that can not feed a larger population. According to Marčić⁹ that is the reason why in the past this island was poorly inhabited, especially during the times when order and peace ruled deep within the hinterland.

Marković¹⁰ states how Dugi otok was inhabited since the earlier Stone Age. Up on the hills there are remains of Illyric structures. Phoenicians and Greeks just needed protected coves for shelters in case of bad weather. It was only the Romans who, on the islands of Zadar's archipelago, had their navigation bases between Italy and Dalmatia. Here Marčić⁹ finds an explanation as to why the main Roman settlement on Dugi otok, Telašćica – Tilagus, was overlooking the open sea and was not, as today's settlements, turned toward Zadar, as the gravitational center in the Middle and New Age. Marković¹⁰ notes finding of Roman settlements and industrial buildings. On portage of Mala Proversa a Roman pastoral castle was preserved (villa rustica) with the remainings of a

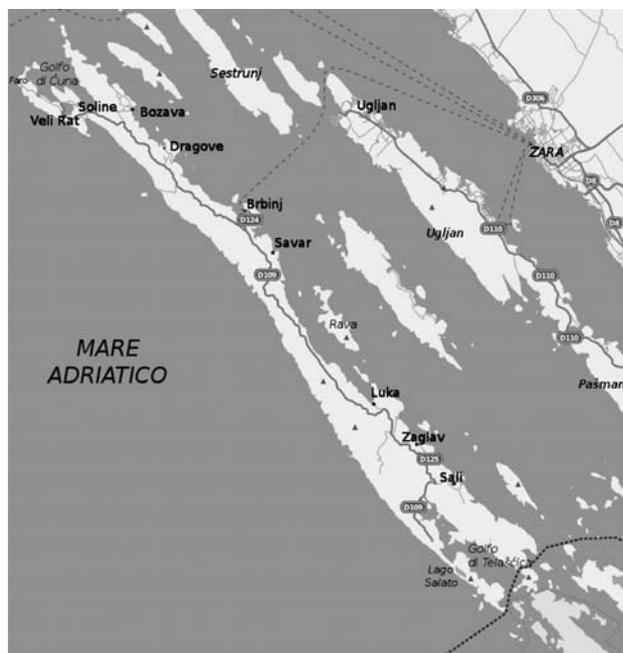


Fig. 1. The island of Dugi otok.

pool. In the old Latin documents Dugi otok is mentioned under the name of *Insula Major*, *Insula Magna* and *Insula Tilagus*. This is consistent with the Croatian name *Veli otok* – *Large Island* (first caption in Glagolitic script dated 1460) that partly remained to this day. Constantine Porphyrogenitus mentioned the island under the name of Pizuh¹¹.

Dugi otok is included in the portulan (handwritten) maps of the Adriatic. The two maps of Petar Vesconte dated 1315 to 1318 still exist. One is kept in the Correr Museum in Venice, and the other in the National Library in Vienna. On these maps island is noted under the name of Templi. On the portulan map of Adriatic from 1325, made by Angelino Dalorto, Dugi otok is also mentioned (Templi). Several dozens of portulan maps from the 15th century were saved. Jakob de Giroladis, Andrea Bianco, Gratius Benincasa, Antonio Pelegan and Francesco Cezano are mentioned as their authors. On Giroladis's map there is a note on Solišćica (p. Allega) on Dugi otok.

The Port on Dugi otok (S. Stefano) and Dugi otok (Li Templi) island is inhabited and has several settlements. Besides Veliki Rt and Solin that are positioned on the shores of two great bays, Solišćica and Pantera, the other Dugi otok's dwellings are on the North-Eastern side.

Those are Božava, Dragove, Brbinj, Savar, Luka, Žman, Zaglav and Sali. Four out of ten (10) present time Dugi otok's dwellings, have pre-Slavic names, indicating their old age. These are Sali, Žman, Savar and Brbinj. The settlement formation that lasted to this day started in the 14th century, upon the mainland and other islands' dwellers arrival. The capital of Dugi otok is Sali, with fishery as main industry. Other settlements are explicitly agricultural. Their appearance is that of compact groups

(total of 12 groups on the island), mostly composed of two parts: older, above the coast and the younger one along the port itself.

Migrations and population history

Čuka¹² notes that the demogeographical development in the past depended on the natural-geographical conditions responsible for economic development. She points out that it is not by chance that settlements are located in the vicinity of the largest field and fertile dolomite zones spread along the Northeast coast of Northwest and Southeast part of the island. The first population migration from the main lands to the island took place in the first half of the Middle Ages at 332.

That is when the Roman population increased its migration to the islands, fleeing from the Barbarians. Marčić⁹ considers that to be the reason why they left stronger trace in today Slavic toponomastics. Slavs intensified their transfer from mainland to the islands during the time of the first Croatian national rulers. Marčić⁹ is of opinion that disorderly life and continuous battles between various magnates and dukes on the mainland, as well as Hungarian-Croatian army battles for the Adriatic dominance, forced the people onto the island where life was more peaceful. He notes that already in the 12th century Slavs totally repressed the Romans in the city. However, until the 15th century since that first Slavic element¹³ remains very little.

The second large migration took place in the 15th century during the time of Turkish intrusions from the East of the Balkan peninsula. At that time large masses of Dinar's population start moving to the islands, including also the Dugi otok. These immigrants, with dark-Vlach element, instinctively started with destruction of forests for gaining the surface for pasture of their large herds. Venice organized them through the military. They were needed for the battles with the Ottoman Empire¹⁴ that was approaching by the sea*.

Because of the settlement development, newly arrived people had less and less place for the cattle. Therefore, they gradually turn to agriculture abandoning livestock farming. In the beginning the immigrants had great difficulties with adjusting to the sea hence fishery which was handled by fishermen from Italy who settled by the Sali village**. Marčić remarks that in some villages not even in his time a true seaman was formed and that this is how he can make a distinction between the old and the new immigrants.

The strengthening of the Ottoman penetrations, increased the migrations from the mainland to the island, although the life for the new immigrants was very difficult in the poor island environment. Turmoil and insecurity on the mainland helped in deciding on moving to the island. In fact, Venice, which was the best organized country during that period, held the island and had the strength for securing the life of its citizens.

Demographic development of Dugi otok can be traced far into the past. First population census took place in 1527. Čuka¹² points out how that census was incomplete,

TABLE 1
POPULATION MOVEMENT ON THE DUGI OTOK FROM 1608 TO 1840*

Settlement/year	1608	1759	1818	1840
Božava	83	122	186	139
Brbinj	129	256	284	210
Dragove	71	186	195	211
Luka	212	182	173	159
Sali	455	437	490	506
Savar	124	135	195	161
Soline	0**	117	150	149
Veli Rat	105***	161	171	189
Zaglav	46	98	101	No data
Žman	338	284	212	180
Total:	1563	1978	2146	2023

* Source: Čuka, Anica: »Utjecaj litoralizacije na demografski razvoj Dugog otoka«, Geoadrija 11/1 (2006); ** Information stored in the village of Veli Rat; *** Contains data for the settlement Soline

and that the first total Dugi otok population took place in 1608. The data from that and the following population censuses until 1857 are listed in the Table 1.

They show population growth in Dugi otok settlements from 17th to 19th century. It is most likely that the islands were so highly populated in the 19th century due to constant migrations from the mainland. However, the population could not survive on agriculture alone. Therefore, people, especially after the Kandian War (1645.–1669.), turned to new occupations. Cattlemen and farmers started to adapt to fishery as main source of food and income.

As of 1857 Habsburgh Monarchy undertakes regular periodical population censuses in which population is documented per settlement of residence. Increase of population is visible in all settlements resulting in doubling the total number of island inhabitants until 1921 and continued to grow.

Through history we can speak of two great migrations of the population from the mainland to Dugi otok. The first one is the settlement of fugitives from the Ottoman breakthrough from the mainland to the island. During the II World War a new large migration from mainland to islands took place. In fact, partizans, due to the German offensive, moved from mainland to islands. Dugi otok was the partizans army headquarters.

By the end of the war we have people moving from the island to the mainland. Negative demographic tendencies are also visible. The difference can be seen in tables 2 and 3. The number of inhabitants increases all the way up to the end of WW II., and then starts to decline.

This is connected with the migrations from the island to the mainland. Namely, mainland had better opportunities for finding work, as well as having better communal living conditions. With internal migrations island-mainland, settlers migrate abroad, following traditional Dalmatian migration routes, to America. However, islanders also migrate to France, while migrations to Ger-

many and Italy are less present. Reasons for external migrations, along with search for better economical life conditions, partially are also of political nature.

Number of live-born children on the island since 1963 (when recording started) is in constant, slight decrease. Considering increase of health care level we can conclude that decrease in live-born children is the result of several factors.

Emigration from islands, decrease of permanently settled, as well as decline of birth giving by fertiled age Dugi otok population on island itself. Reasons for those we can detect in an economical sphere. Emigration from Dugi otok is motivated by better job opportunities on mainland, outside the island. Decrease of birth giving is a reflection of desire for better living conditions for a lesser number of descendants. This conclusion is also supported by the data on natural growth rate. It tells us about islands continuous negative natural growth since 1969. More people died than they are born. Data on negative natural growth rate confirm the data on decrease of island inhabitants. Settlers in fertile age leave the island, very often to nearby Zadar and further all around the World. This is how Dugi otok has more and more »temporary« inhabitants. We speak of people born on the island, who live away from it, visiting it from time to time, during holidays and on the vacation.

In the migration matrix we implemented the approach of Špoljar Vržina¹⁵ and as a year of a certain period we set the years of start of the war (1914, 1941, 1991) as turnover years. Information shows us that the Dugi otok was, at the end of the 19th and at the beginning of the 20th century, an explicitly closed community. Only 8.5% (119 out of 1388), spouses were born outside the Dugi otok. We hear speak of nearby islands (such as Zverinac, Sestrunj, Veli Iž...) and the city of Zadar. This ratio remained also in the period from 1930 to 1940 (170 out of 1534 – 11%) to have, after the WW II, an increase of people born outside the island in new marriages, up to 27.65% (605 out of

TABLE 2
POPULATION MOVEMENT ON DUGI OTOK FROM 1857 TO 1948 PER SETTLEMENT*

Settlement/year	1857	1869	1880	1890	1900	1910	1921	1931	1948	Variance %
Božava	180	0	195	239	277	261	335	248	260	44.4
Brbinj	202	233	230	238	309	333	328	327	328	62.4
Dragove	219	500	221	285	352	323	392	333	381	73.8
Luka	162	181	212	257	365	384	406	350	375	131.5
Sali	449	644	586	713	830	880	1117	1097	1230	173.9
Savar	151	167	178	177	202	242	284	298	286	89.4
Soline	225	0	249	294	304	329	329	329	384	70.7
Veli Rat**	263	533	230	320	315	337	452	300	286	-
Verunić	0	0	77	49	61	48	0	103	99	-
Zaglav	112	0***	142	177	222	222	286	254	408	264.3
Žman	210	276	308	412	493	499	653	572	633	201.4
Total:	2173	2534	2628	3164	3730	3858	4582	4211	4670	114.9

* Source: Čuka, Anica: »Utjecaj litoralizacije na demografski razvoj Dugog otoka«; ** Contains data for Verunić 1857, 1869 and 1921; *** In 1869 data included in settlement Sali.

TABLE 3
POPULATION MOVEMENT ON DUGI OTOK FROM 1948 TO 2001 PER SETTLEMENT*

Settlement	1948	1953	1961	1971	1981	1991	1991	2001	Variance 1948–2001. in %
Božava	260	269	262	248	139	166	129	127	-51.2
Brbinj	328	336	296	272	104	168	75	85	-74.1
Dragove	381	370	332	311	78	139	51	42	-89.0
Luka	375	364	298	333	135	164	117	99	-73.6
Sali	1230	1227	1178	1106	877	1190	790	769	-37.5
Savar	286	282	245	239	167	140	103	57	-80.1
Soline	384	376	347	356	145	124	73	66	-82.8
Veli Rat	286	282	245	239	167	140	103	83	-71.0
Verunić	99	105	97	80	0	0	0	57	-42.5
Zaglav	408	398	355	366	237	369	192	184	-54.9
Žman	633	570	486	420	275	328	217	203	-67.9
Total	4670	4579	4093	3919	2250	2873	1794	1772	-62.1

* Source: Čuka, Anica: »Utjecaj litoralizacije na demografski razvoj Dugog otoka«, Geoadrija 11/1 (2006).

2188 spouses). Since 1991 to this day, this ratio is growing up to 61.81% (157 out of 254 spouses). This implicated an opening of Dugi otok that is less and less a closed island community. Furthermore, while at the end of the 19th and at the beginning of the 20th century, out of spouses born outside the island prevail the men who arrive to the island as workers or state administrators, after the WWII the share of women born outside the island exceeds 50% and remains to this day. This tells us that men born on the island leave the island more often, probably in search of work and better living conditions, and their migrations remain become permanent through marriage with women in the area they migrated to.

An interesting point is an emotional need to have the marriage registered in the Court Registar at Dugi otok, and so, since 1960 in the Registry in Sali and Božava there is a subsequent registration of marriages that took place somewhere else (in Europe and in America). One of reasons for increase of spouses born outside the Dugi otok is also a maternity hospital in Zadar.

In the past, the usual home birth-giving with the assistance of midwife, is now replaced for birth in the hospital. Therefore, more and more women give birth in Zadar, among the Dugi otok dwellers there is a joke that only those babies whose mothers were late for the boat were born on the Dugi otok.

TABLE 4
NUMBER OF LIVE-BORN ON THE ISLAND OF DUGI OTOK FROM 1963 TO 1992 PER SETTLEMENT (SETTLEMENT TALLY FROM 1991)*

Name of Island Settlement	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	
Božava	3	2	6	2	1	5	1	3	0	1	0	0	1	2	2	0	0	0	2	4	2	4	3	4	3	1	2	1	0	0	
Brbinj	1	1	4	5	5	3	3	1	9	8	2	1	0	0	3	0	0	1	3	1	6	0	1	0	1	1	0	1	0	0	
Dragove	2	1	0	8	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	
Luka	3	7	1	6	4	2	2	2	4	1	3	0	1	1	0	1	2	3	0	1	1	0	0	1	2	0	0	1	1	0	
Sali	19	16	20	14	16	18	8	10	7	13	11	12	8	12	13	9	14	14	15	13	11	16	10	6	12	10	9	6	10		
Savar	3	5	3	2	4	2	3	1	0	1	2	0	1	0	1	1	0	0	0	0	0	0	1	0	0	0	0	0	0	0	
Soline	8	7	6	5	7	2	2	0	2	3	1	0	0	3	2	2	0	1	1	0	0	0	1	2	0	1	0	0	0	0	
Veli Rat	8	5	7	2	7	6	2	5	2	4	2	2	1	2	1	1	0	1	0	2	0	0	0	0	0	0	0	0	3	0	0
Zaglav	4	6	6	5	5	2	5	6	1	7	0	1	1	2	2	2	2	4	0	2	1	0	2	1	1	3	1	1	2	1	
Žman	9	4	3	7	9	5	2	3	6	3	5	4	7	5	0	3	1	0	3	1	1	2	0	2	2	1	3	1	1	2	
Dugi otok	60	54	56	56	58	45	29	33	29	40	29	20	24	20	24	23	16	23	23	27	25	17	23	20	17	18	17	17	10	13	

* Source: Čuka, Anica: »Utjecaj litoralizacije na demografski razvoj Dugog otoka«, Geoadrija 11/1 (2006.)

TABLE 5
NATURAL GROWTH ON DUGI OTOK DURING THE PERIOD FROM 1963 TO 1992 PER SETTLEMENT (SETTLEMENT TALLY 1991)*

Name of Island Settlement	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991
Božava	0	0	4	0	-3	-1	-5	1	-3	-3	-3	-3	-1	-1	0	-3	-3	0	3	2	4	2	1	3	-2	-1	-2	-1	
Brbinj	-1	-2	2	5	2	2	1	-5	3	5	0	-3	-1	-3	1	-6	0	0	-3	-2	5	-3	-3	-1	-1	0	-1	-1	0
Dragove	-4	1	-1	5	0	-4	1	-2	-3	-6	0	0	-1	-4	-4	-2	-1	0	-5	-2	-2	-2	0	1	-3	-3	-1	-4	-1
Luka	1	5	-2	4	2	0	0	1	2	-2	-1	-4	-5	-5	0	-4	-3	-3	-2	-1	-5	-5	-5	-1	-3	-4	-7	-7	-1
Sali	5	v9	10	-1	6	7	-4	-5	-9	-1	-7	-1	2	-2	-1	2	-10	5	0	4	-3	-1	-3	3	-10	-5	-1	-1	-4
Savar	-1	4	2	0	2	1	2	-1	-4	-3	1	-1	-1	-1	0	-2	-6	-1	-1	-2	-3	0	-1	-1	-1	-1	-1	-1	0
Soline	5	0	2	1	5	1	-3	1	-2	-2	0	-3	-5	-3	-1	-3	-5	0	-5	-1	-7	-1	-4	0	1	-2	-3	-4	-3
Veli Rat	6	-2	3	1	2	-1	-5	4	-1	1	-1	1	0	0	-4	-6	-3	-2	-4	1	-4	-4	-3	-3	-1	0	-2	2	-2
Zaglav	0	-2	3	3	2	-2	3	4	-1	5	-2	-4	0	-3	-4	-3	-1	1	-7	-1	-6	-3	-3	-3	-1	-1	-4	-1	-1
Žman	4	-2	-2	3	5	2	-7	-1	0	-7	-3	-7	2	-4	-6	1	-2	-7	-5	-4	-9	-6	0	-7	-2	-3	-6	-7	-6
Dugi otok	15	11	21	21	23	5	-17	-3	-18	-13	-16	-25	-10	-26	-20	-24	-30	-15	-32	-4	-31	-24	-19	-11	-18	-21	-27	-26	-19

* Source: Čuka, Anica: »Utjecaj litoralizacije na demografski razvoj Dugog otoka«, Geoadrija 11/1 (2006.)

TABLE 6
MIGRATION MATRIX DUGI OTOK*

Settlement	Men/Women	1858–1913	1914–1940	1941–1990.	1991–2008.	Total
Božava	M	25	49	54	3	131
	F	46	48	54	1	149
Brbinj	M	15	14	41	1	71
	F	13	20	54	1	88
Dragove	M	108	61	43	2	214
	F	95	75	41	0	211
Luka	M	12	65	50	4	131
	F	4	72	55	0	131
Sali	M	94	123	335	26	578
	F	107	126	302	27	562
Savar	M	85	69	31	3	188
	F	95	70	38	1	204
Soline	M	96	65	45	3	209
	F	107	75	50	3	235
Veli Rat	M	90	66	51	3	210
	F	94	77	58	1	230
Verunić	M	19	8	14	0	41
	Ž	27	11	7	0	45
Zaglav	M	64	61	55	9	189
	Ž	56	52	54	5	167
Žman	M	11	75	78	3	167
	Ž	6	82	73	3	164
Outside the Island	M	75	111	297	71	554
	Ž	44	59	308	86	497
Total	M	694	767	1094	127	2683
	Ž	694	767	1094	127	2683

* Informations gathered from following sources: Matica vjenčanih Sali 1897.–1948.; Matična knjiga vjenčanih 1959.–1992., matično područje Sali, mjesta (sela, zaseoci) Sali (Čuh, Drakovac, Dugonjiva, Gmaino polje, Katina, Lavdara, Pečina, Sestrice, Stivanje polje); Matica vjenčanih Sali 1946.–1952.; Matica vjenčanih Zaglav 19546.–1952.; Matica vjenčanih Žman 1946.–1952.; Matica vjenčanih Luka 1946.–1952.; Matica vjenčanih, matični ured Sali, matično područje Sali, mjesto: Sali, Zaglav, Žman, Luka 25.06.1994.–24.06.2008.; Matična knjiga vjenčanih za godinu 1959.–2002., Matično područje Zaglav–Žman, mjesta (sela, zaseoci) Zaglav, Žman, Žmančica; Matična knjiga vjenčanih 1959.–1992., matično područje Luka, mjesta: Luka; Matica vjenčanih Žman 1922.–1948.; Matica vjenčanih Zaglav 1859.–1948.; Matična knjiga vjenčanih, matično područje Veli Rat, zaseoci Verunić i Polje, 1959.–1993.; Matica vjenčanih Luka 1919.–1948.; Matica vjenčanih Božava 1897.–1946.; Matica vjenčanih Božava 1947.–1992.; Matica vjenčanih Zverinac 1947.–1949.; Matica vjenčanih Veli Rat 1863.–1948.; Matica vjenčanih Dragove 1939.–1948.; Matica vjenčanih Božava 1953.–1998.; Matica vjenčanih Dragove 1946.–1992.; Matica vjenčanih Brbinj 1933.–1948.; Matica vjenčanih Brbinj 1946.–1951.; Matica vjenčanih Savar 1918.–1948.; Matična knjiga vjenčanih Savar 1947.–1952.; Matična knjiga vjenčanih Verunić 1947.–1948.; Matična knjiga vjenčanih Veli Rat 1946.–1952.; Matica vjenčanih (Registro matrimoniale) Savar 1858.–1919., Matica vjenčanih (Registro matrimoniale) Dragove 1858.–1938.; Matica vjenčanih (Registro matrimoniale) Soline 1863.–1948.; Matična knjiga vjenčanih Soline 1946.–1952.; Matična knjiga vjenčanih Savar 1959.–1993.; Matična knjiga vjenčanih Božava 1959.–1993.; Matična knjiga vjenčanih 1959.–1993.; Matična knjiga vjenčanih Brbinj 1959.–1993.; Matična knjiga vjenčanih Dragove 1959.–1993.; Matica vjenčanih Županijski ured Zadar, Matični ured Božava, matično područje Božava 1994.–1998., mjesta: Božava, Brbinj, Dragove, Savar, Sestrunj, Soline, Veli Rat, Verunić, Zverinac.

Fishery on the Island of Dugi otok

In the oldest historical document on fishery in Dalmatia dated from 955 there is a mention of fishery in the Telašćica port on the South-East part of the island. The document states how Zadar's noblemen donated their fishery right in Telašćica and around the island of Molat

to St. Krševan monastery in Zadar as they could not agree on sharing of the catch. The main fishery ground in Telašćica was in the Pasjak bay South-West of Magrovica, called Megarus at the time, where *Lacertos* – Plavica – Bluish (*Scomber colias japonicus*), as mentioned in the documentation, was fished. During the 11th through 16th century there are also numerous notes on court proceed-

ings between fishermen and St. Krševan monestary regarding sharing-spitting of caught fish as fishermen were bound to give a forth of their total catch to the monestary.

There are two main center points in Dugi otok fishery, on the outermost parts of the island. Those are in the area of port Telašćica on the Southeastern part of the island. The second is the Solišćica bay with the surrounding little islands and bays on the Southwestern part of the island.

It is presumed that the first fishermen settlement was in the most secluded part of Telašćica, today's bay Jazu. The main fishing settlement, Sali, is already mentioned in 1282. First sardine fishing using lights started in Zadar's archipelago with Salians in 1524 Zadar's patrician Šimun Cedolini on Islands of Kornat fishery points. At the time Cedolini had a privilege to use sardine fishing points. In return he had an obligation to supply Zadar's population with 200 barrels of salted sardines per year. Sali fishermen were relieved of this obligation only in 1676 due to reduced number of net haulers. Zadar's monestary St Krševan collected 15–16 thousand of gold coins (dukat) from fishery. As an indicator as to how important fishery within the Dugi otok aquatorium was for the Venetian Republic we have data that in 1684 they supplied two galleies under the command of Nikola and Petar Corponese for the purpose of defending the fishermen catching the small blue fish from pirates' attacks. Starting in 1676 owners of net haulers were obligated to pay to parish church in Sali a twentyfifth part (1/25) of catch within Kornats and the Southeastern fishery areas of Dugi otok. This obligation included all the fishermen who came to fish in this area. As per Dalamatia's providur fishermen had to report on the daily basis their catch in Sali and on the small island Panitula of Islands of Kornat where main catch registrar and collectors of all types of duties were located.

A larger scale of tuna fishing in Sali started in 1820. This was carried out by manufacturing of larger shifting polandar nets and later large shifting tuna nets. Shifting tuna nets were then introduced by fishermen from Luka

and Solin. A fishery plant Mardešić was opened in Sali, that is open even to this day. This plant is bankrupt and in the process of resolving ownership structures that are not, to this day, finalized.

Conclusion

Analyzing the data for the period from 1858 to 2008, we can see that the Dugi otok follows the trend¹⁶ present within the island communities in Croatia¹⁷. From the closed community in the second half of the 19th century, Dugi otok is, due to migrations caused by economic and political conditions, at the beginning of the 21st century transformed into an worldspread community. Communication among them is more and more through the Internet and other manners of virtual communication. Dugi otok is also taken in by depopulation, as well as aging of permanently settled citizens. Industry concentrations in centers such as Zadar and Zagreb and bankruptcy of local industries such as Mardešić plant, most certainly had an impact for migrations because of work. Distance of Dugi otok from the mainland (an hour's drive by ferry from Zadar), higher living expenses and shortage of numerous benefits available in large urban centers, also had an impact on depopulation.

On the other hand, it is exactly the depopulations and the distance from the mainland that protected the Dugi otok from negative influence of modern life and pollution as its permanent companion. Also, thanks to access of food resources (fishery, agriculture) Dugi otok dwellers have shown to be more resistant to world economic crisis than the dwellers of other larger urban centers. As per advertising materials available on Internet, economic development of Dugi otok, the dwellers base on tourism, and the natural beauty and ecological healthy environment that has, as an oasis, succeeded to protect itself in a time of global ecological pollution.

In conclusion, preliminary demographic research on the island of Dugi otok proved worthy and showed potentials for further anthropological research.

REFERENCES

1. RUDAN P, Antropološka istraživanja istočnog Jadrana [In Croat] (Hrvatsko antropološko društvo, 1987). — 2. RUDAN P, ROBERTS D. F, SUJOLDŽIĆ A, MACAROL B, ŽUŠKIN E, KAŠTELAN A, Coll Antropol, 6 (1980) 1. — 3. RUDAN P, ROBERTS DF, SUJOLDŽIĆ A, MACAROL B, SMOLEJ N, KAŠTELAN A, Coll Antropol, 6 (2008) 1. — 4. SUJOLDŽIĆ A, Coll Antropol, 12 (1988) 2. — 5. ŠKREBLIN L, ŠIMIČIĆ L, SUJOLDŽIĆ A, Coll Antropol, 26 (2002) 2. — 6. MALNAR A, Coll Antropol, 32 (2008) 4. — 7. Zadarska županija Available from: URL <http://www.karta.hrvatske.net/zadarska-zupanija>. — 8. LOKOVŠEK T, CAFUTA V, KROFEL M, PODVRŠIĆ B, STERGARŠEK J, VUKELIĆ E, JAČIMOVIĆ V, AUPIĆ N, ČEHOVIN A: Dugi otok 2002: Ekosistemi Dalmacije: poročila s tabora študentov biologije na Dugem otoku (2002) [In Slov]. — 9. MARČIĆ L, Glasnik Geografskog društva, Beograd 15, 1929. — 10. MARKOVIĆ M, Hrvatski otoci na Jadranu [In Croat] (Jesenski i Turk, Zagreb,

- 2004). — 11. BATOVIĆ Š, Dugi otok: zbornik radova znanstvenoga skupa »Dugi otok – prošlost i kulturna baština,« Zadar 24. i 25. studenog 1988. [In Croat] (Matica hrvatska, 1997) — 12. ČUKA A, Geoadrija, 11 (2006) 63. — 13. ANZULOVIĆ I, Zadarska smotra: časopis za kulturu, znanost i umjetnost, 47 (1998) 4. — 14. ANZULOVIĆ I, Zadarska smotra: časopis za kulturu, znanost i umjetnost, 47 (1998) 1. — 15. ŠPOLJAR-VRŽINA S, Uobličavanje populacijske strukture kroz stoljetni proces migracija – prilog antropološkim istraživanjima Istočnog Jadrana. [In Croat] (Institut za medicinska istraživanja i medicinu rada Sveučilišta u Zagrebu, Zagreb, 1992) — 16. LAJIĆ I, NEJAŠMIĆ I, PODGORELEC S, Otočani. Otočka demografska istraživanja. [In Croat] (Centar za razvoj otoka Ekonomskog instituta, Zagreb, 199) — 17. BABIĆ D, LAJIĆ I, PODGORELEC S, Otoci dviju generacija [In Croat] (IMIN, 2004).

T. Kulenović

*Institute for Anthropological Research, Gajeva 32, 10000 Zagreb, Croatia
e-mail: tarik.kulenovic@inantro.hr*

DUGI OTOK KROZ POVIJEST: ETNOHISTORIJSKI I DEMOGRAFSKI PROCESI NA DUGOM OTOKU, HRVATSKA

S A Ž E T A K

Rad obrađuje relevantne podatke o geomorfološkim, ekonomskim, etnohistorijskim i demografskim obilježjima Dugog otoka. Kao uvod za buduća holistička antropološka istraživanja otoka, u radu identificiramo unutarnje i vanjske impulse promjene ili kontinuiteta populacijske strukture otoka unutar šireg socio-kulturalnog i povijesnog konteksta. Uz migracije i demografske fluktuacije, istražujemo i najvažniju ekonomsku djelatnost na Dugom otoku – ribarstvo. Cilj rada je pružiti uvid u ove aktivnosti dugootočke populacije. Radi boljeg razumijevanja migracija, u radu donosimo i migracijsku matricu za Dugi otok.