

## Red coral (*Corallium rubrum* L. 1758) in Montenegro – past and present

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### ABSTRACT

Red coral (*Corallium rubrum* L.) is well known since antiquity and because of its intense and permanent colour it has been used for jewellery, different religious and social purposes. Unfortunately, because of slow grow and long tradition of commercial, very destructive, harvesting by dredging stocks nowadays are overharvested. Data on this valuable marine resource in Montenegro almost doesn't exist. However, in Kotor Historical Archive several documents of administrative-political acts (1686-1892) testify about collection of precious coral in Montenegrin waters. Review of all scientific papers and technical reports for the area of Montenegro has shown only one recent reference indicating presence of very few, small colonies of *C. rubrum* in the Boka Kotorska Bay. Unfortunately, during last 20 years this finding or any other is not confirmed by our SCUBA diving field work and presence of *C. rubrum* in Montenegrin waters is questionable, especially up to the 40m depth.

**Keywords:** *Corallium rubrum*, red coral, harvesting, Adriatic Sea

### INTRODUCTION

Precious corals refers to about thirty species that belong to the *Corallium* and *Paracorallium* genera. Red coral (*Corallium rubrum* L. 1758) is endemic to the Mediterranean and adjacent Atlantic waters of Western Africa (Trainito, Baldaconi 2016; Cattaneo-Vietti et al., 2016). It is well known

since antiquity and because of its intense and permanent colour it has been used for jewellery, different religious and social purposes (Trainito, Baldaconi 2016). Unfortunately, because of slow grow and long tradition of commercial, very destructive, harvesting by dredging stocks nowadays are

overharvested (Tsounis et al., 2013). Because of that *C. rubrum* is listed as protected species under different national and international legislative documents (Bern Convention, Barcelona convention, CITES Convention, EU Habitat Directive) (Otero et al., 2017).

## MATERIAL AND METHODS

Review of all scientific papers and technical reports for the area of Montenegro has been performed as well as review of documents of administrative-political acts (1686-1892) in Kotor Historical Archive. Furthermore, for different projects, during last 20 years it was realized more than 500 hours of SCUBA diving in the Montenegrin waters up to 40m depth.

## RESULTS AND DISCUSSION

Data on this valuable marine resource in Montenegro almost doesn't exist. However, in Kotor Historical Archive (IAK) several documents of administrative-political acts (UP) (1686-1892) testify about collection of precious coral in Montenegrin waters. A permission to coral harvesting dated on 4th January 1686 is the oldest found document on this topic (IAK, fond - UP-V, 26) (Fig. 1).

On 6th January 1686 associate provveditore (not named but at that time it was Giovanni Battista Calbo) grants Vito Valentino permission to collect corals, outside of Boka Kotorska Bay. Furthermore, with him in this job, under threat of criminal sanctions, nobody should interfere. This permission has been delivered on the basis of License which has been issued by Dalmatian general

provveditore Gerolamo Cornaro, on 22nd July 1685.

After this one, we found several documents testifying about permissions for collection as well as different social conflicts provoked by this lucrative activity.

A permission to collect corals into neighboring waters of the Boka Kotorska Bay has been issued to Iseppo Montenegro from Trapano di Sicilia on 13th August 1717 (IAK, fond UP-XXXVI, 193).

Ivo Perov Morizz from Luštica came in person to the municipal office complaining to Staniša Vukov Lazarevic and son of Đuro Lazarevic who outside of the bay, on the location Ponta Veslo, has been in conflict with one man from Dubrovnik and his brother Rade who were collecting corals. Man from Dubrovnik has been killed and they tried to kill his brother Rade. Because of slander that they forcibly took things of killed man, various acts of violence and treats, Ivo from Luštica was asking legal protection (IAK, fond UP-LXVI, 619, Kotor, 3. I 1745).

Giacomo Boldu, general provveditore wrote to the associate provveditore (on 28th April 1746) regarding the latest Decision on prohibition of coral collection to foreign boats on the sea and from the shore of his subordinates Province IAK, fond UP-LXVI, 619, Kotor, 3. I 1745).

Mayors from Zadar has been writing to extraordinary provveditore (on 18th December 1748) to publish the attached notice intended to encourage people to engage more in very beneficial activity of coral collection (IAK, fond UP-LXVII, 115).

Command of Meljine writes (3rd October 1892) to Directorate of Krtoli if they would be agree if Maritime Government in Trieste allows Ivo Kordić from Zlarin to collect corals without charging a fee, for 5 years (Fig. 2).

Hof

Espresso: Com. al Baron Cuare Bougierich del Trigo  
 capitano d'Alto: che visto il gale detto m...  
 unenarsi in questo Porto colle altre circumsp...  
 Joristi, gale detta consumar qui la sua f...  
 con ricercando il gale: semi: alto per...  
 Ad 22 X: 1686

Hof

Com. al gale, capitano della Galea del...  
 che consegnar debba all'...  
 di quale...  
 de...  
 specie...  
 de...  
 Anno L. 4 Genio 1686

Hof

Avvenuta La Licenza di 22 Luglio caduto concessa al...  
 Valentino e compagni dall'Almo et...  
 Gial...  
 dall'...  
 de Coralli; Com...  
 molestia o vero immaginabile danno sotto pena della...  
 indignatione et altre, che...  
 Anno L. 6 Genio 1686

Hof

Fu fatto il...  
 ...  
 ...  
 Com. all'...  
 qualunque...

Figure 1. The oldest found permission of coral harvesting for Montenegro dated on 4th January 1686

(in the box)  
65



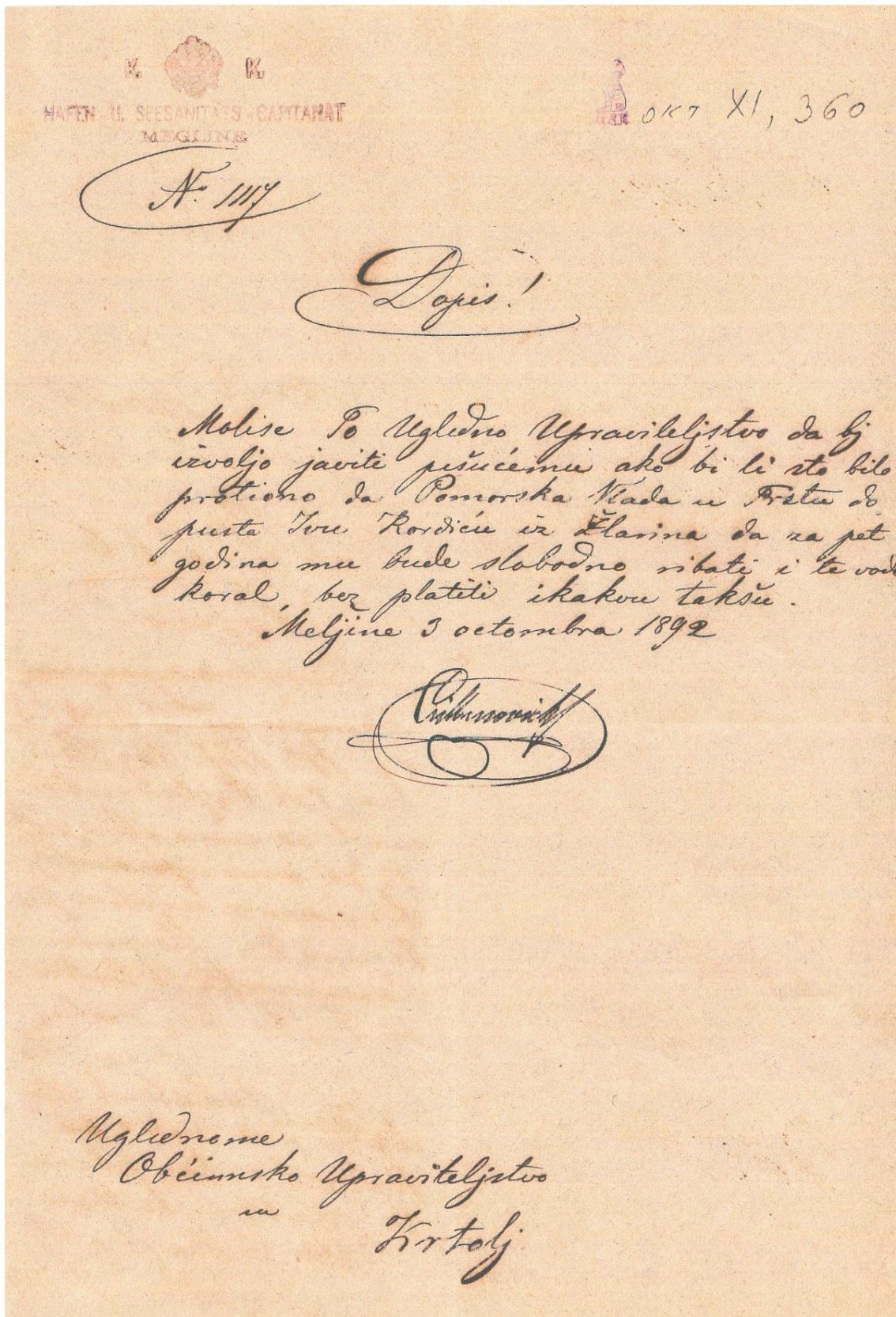


Figure 2. Command of Meljine writes to Directorate of Krtoli in 1892



Directorate of Krtoli replays on 23rd November 1892 saying that they have nothing against such permission (Fig. 3) (IAK, fond UP-LXIX,154).

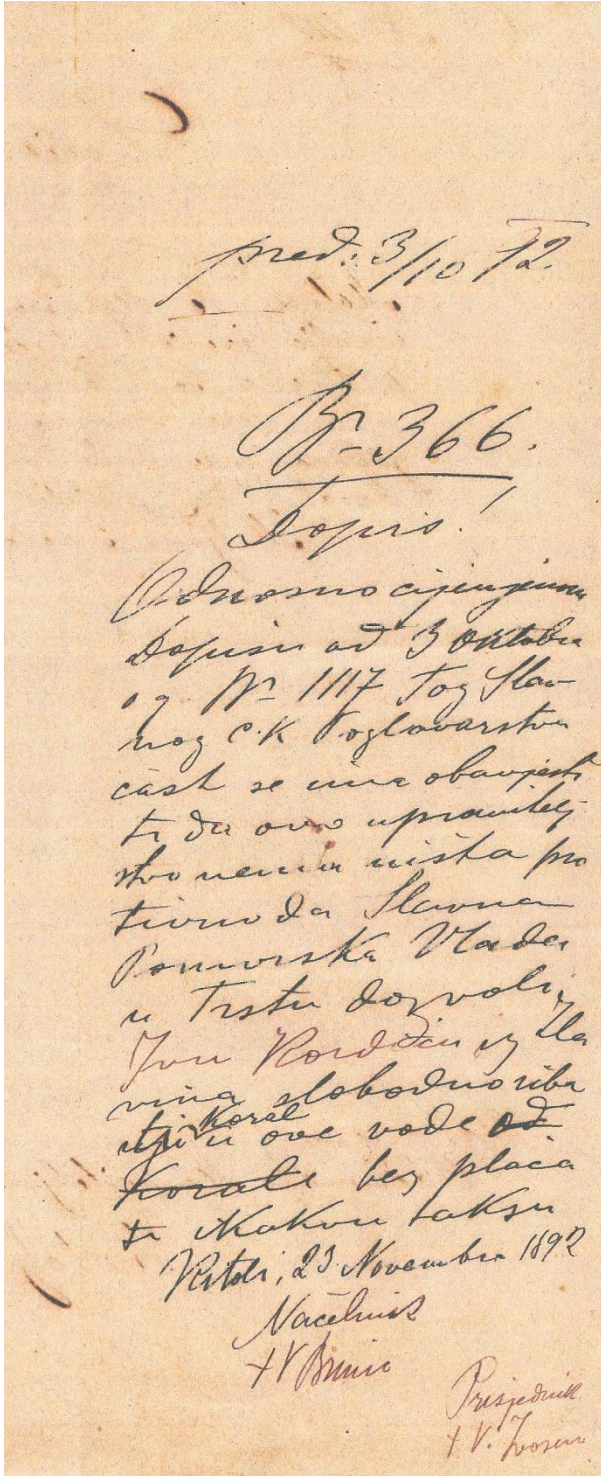


Figure 3. Directorate of Krtoli in 1892 approves coral harvesting

Review of all scientific papers and technical reports for the area of Montenegro has shown only one recent reference by Stjepčević et al. (1986) indicating presence of very few, small colonies of *C. rubrum* in the Boka Kotorska Bay, location Verige. Unfortunately, during last 20 years this finding or any other is not confirmed by our SCUBA diving field work and presence of *C. rubrum* in Montenegrin waters is questionable, especially up to the 40m depth.

Intensive harvesting of red coral in Croatia has resulted in decline of almost 75% of the population over the past 40 years (CITES 2017). Although *C. rubrum* is protected species by the national legislation (Službeni list 76/06. 2006) and several international conventions, there was no any scientific research so far targeting this species in Montenegro. However, this would be necessary in order to evaluate state of the population, possibilities of recolonisation and proposal of proper protection and management.

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## **Crveni koral (*Corallium rubrum* L. 1758) u Crnoj Gori – prošlost i sadašnjost**

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### **SAŽETAK**

Crveni koral (*Corallium rubrum* L.) je dobro poznat od davnina i zbog svoje intenzivne i trajne boje koristio se za nakit, različite religijske i društvene svrhe. Nažalost, danas je prelovljen zbog sporog rasta i duge tradicije komercijalizacije i vrlo destruktivnog sakupljanja različitim dredžama. Podaci o ovom vrijednom resursu iz mora u Crnoj Gori skoro da ne postoje. Ipak, u Kotorskom Istorijskom arhivu nekoliko dokumenata od administrativno-političkih akata (1686 – 1892) svjedoče o sakupljanju vrijednog korala u crnogorskim vodama. Pregled svih naučnih radova i tehničkih izvještaja za područje Crne Gore pokazuje samo jedan skoriji navod gdje se navodi prisustvo samo nekoliko, malih kolonija *C. rubrum* u Bokokotorskom zalivu. Nažalost, tokom poslednjih 20 godina ovaj nalaz ili bilo koji drugi nije potvrđen našim terenskim istraživanjem SCUBA ronjenjem pa je prisustvo *C. rubrum* u crnogorskim vodama upitno, pogotovo do dubine od 40m.

**Ključne riječi:** *Corallium rubrum*, crveni koral, sakupljanje, Jadransko more