

BLUE WORLD INSTITUTE

Adriatic Dolphin Project Lošinj

# INTERNSHIP INFORMATION PACK



Dear students,

First of all I would like to thank you for showing interest in our work and marine wildlife. We are a group of scientists working in a Non-Governmental Organisation (NGO) named Blue World Institute of Marine Research and Conservation with an aim to carry out scientific research and conservation projects and promote environmental awareness. We conduct research on wild bottlenose dolphins through the Adriatic Dolphin Project for over 30 years. In recent years the Internship program started to be more and more important for us and students became a crucial part of the project. As an intern at Blue World Institute you will learn how data collection is done, what programs we use, how we analyse data and which results we get. We encourage you to be independent and educate you to be future researchers. If you are passionate about the sea, marine organisms and ecology, this is the place to be. As you, I started to look for interhips and found this place on the internet. One month here and a strong will to learn as much as possible brought me to the position of researcher and member of this team. If you are interested, you can find more details in this text. If you want to know more about our organisation, please visit our web page <http://www.blue-world.org/>

I hope to meet you in Veli Lošinj,

Tihana Vučur, internship coordinator



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# 1. ADRIATIC DOLPHIN PROJECT

## 1.1 About us

The Blue World Institute of Marine Research and Conservation is a non-profit Non-Governmental Organisation (NGO) from Veli Lošinj, Croatia. It was set up in 1999 with the intention to carry out scientific research and conservation projects, and promote environmental awareness in the Lošinj-Cres archipelago, Croatia and Adriatic region as a whole. Continuing research initiated in 1987, the Blue World Institute carries out three major programmes: **research, conservation and education.**

The **Adriatic Dolphin Project (ADP)** is the research program of the Blue World Institute which aims to research population ecology, genetics, acoustics and habitats of bottlenose dolphins and other Cetacean species in the Adriatic Sea. It is the longest ongoing research program on bottlenose dolphins in Mediterranean. The ADP, since its start, has successfully integrated scientific research with practical conservation and education. In addition to the waters of the Cres and Lošinj archipelago, the Adriatic Dolphin Project has operated around the island of Vis since 2007 and North Dalmatia since 2013. The Adriatic Dolphin Project is now recognized worldwide, which is reflected in numerous international partners and cooperation with experts from the fields of biology, and ecology of marine mammals.



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# 1. ADRIATIC DOLPHIN PROJECT

## 1.2 Study area

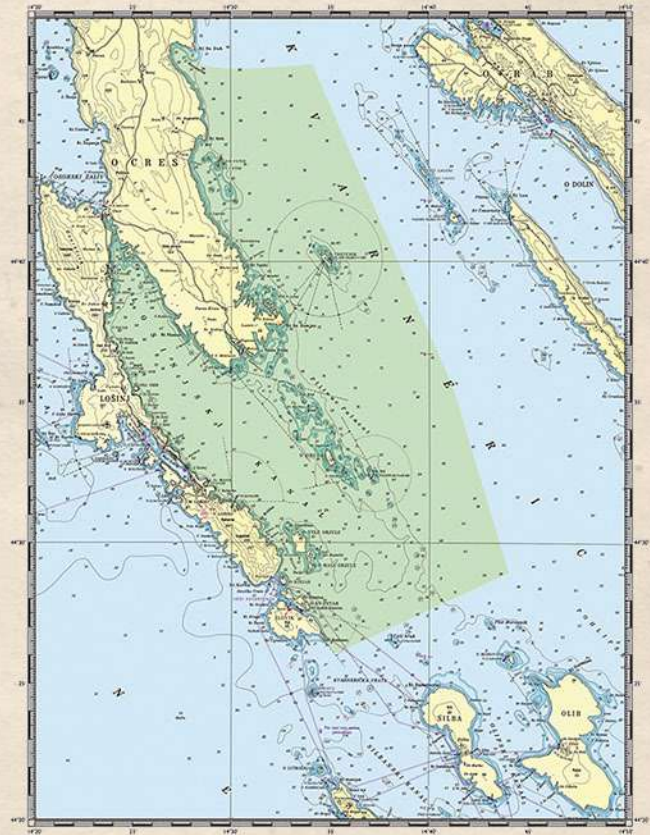
Country: Croatia

Region: Primorsko-goranska County

County administration: Rijeka

The Adriatic Sea is a long extension of the Mediterranean Sea connected through the narrow Otranto Strait. The basin is 200 km wide and 800 km in length covering approximately 162,000 km<sup>2</sup>.

The main field base of Adriatic Dolphin Project is situated on the island Lošinj covering a study area in the North Adriatic from Istria to the Sea of Vir. The value of the area is not just due to presence of bottlenose dolphin community but also because of the rich submarine life, historical artefacts, bird nesting sites and marine turtle foraging grounds.





# 1. ADRIATIC DOLPHIN PROJECT

## 1.3 Research



Research focuses bottlenose dolphins and other large marine vertebrates (mostly Cetaceans, sea turtles and cartilaginous fish) with an aim to contribute to their conservation and the protection of the marine environment. Results of research are translated into activities to raise public awareness and education. Our offices and field activities are based on the Adriatic islands, showing our support to sustainable development of local, insular communities through cooperation and an interdisciplinary approach to conservation.

**Visual surveys** – A method used during navigation in search of cetaceans and other marine vertebrates. When species of interest are spotted everyone on the board gets instructions from the researchers and data collection begins. During the sighting, the boat is driven on a minimum speed, following the code of conduct in order to minimize disturbance to the animals.

**Photo-Identification** - During an encounter with dolphins, researchers photograph cuts and scars on the dorsal fins of dolphins. These scars occur naturally during the interactions and are unique to each dolphin, like a fingerprint. The "capture" of these fins on photograph provides an indirect non-invasive method to record the presence of the dolphin in a sighting. Data obtained using this method creates a detailed picture of the state of dolphins and their use of habitat. Identified individuals are followed for many years, which enables us to assess the birth and mortality rates of the dolphins, as well as their social relations.





**Bio Acoustics** - The abundance of the Cres-Lošinj dolphin population showed a significant decline of over 30% between 1995 and 2003. This decrease was suggested to be related to human induced environmental modifications. Level of sea ambient noise has an impact on bottlenose dolphins because they rely on hearing to monitor the environment and use sound to communicate, navigate and forage. The aim of this research was to assess the relationship between underwater noise, boat traffic and the seasonal spatial variation of the distribution of bottlenose dolphins. Data were collected using a hydrophone on ten acoustic stations. Multi-annual monitoring for a period of almost five years has gathered enough information about the impact of sound pollution on the habitat use of dolphins. The results highlight areas within Cres-Lošinj archipelago where human pressures may have become incompatible with dolphin welfare particular in summer tourist season.



**Behaviour** - Previous studies have already pointed directly to numerous recreational vessels as major factor influencing different aspect of dolphin wellbeing. The primary goal was to examine to what extent boat traffic influences the behavior of this population and to define a code of conduct for vessels during dolphin encounters. Sampling method was focal group sampling and ten mutually exclusive behavioral states were defined. The results shown that 90% of encounters were with recreational boats and 92% of them invoked negative response. In the presence of boats, dolphins decrease feeding and resting behavior and increase traveling behavior. They also form tight groups and perform longer dives.



# 1. ADRIATIC DOLPHIN PROJECT

## 1.4 Species of interest

Research focuses on large marine vertebrates (mostly Cetaceans, sea turtles and cartilaginous fish) with an aim to contribute to their and marine environment protection and conservation. In the northern and central Adriatic the bottlenose dolphin is the only cetacean species with permanent and stable population and our systematic boat surveys are aimed at this species. However, other species may occur in the region, giving us opportunity to collect data about the visiting species. Besides cetaceans, the crew of the Adriatic Dolphin Project is also involved in work on research and conservation of loggerhead turtles in the Adriatic.

### **Bottlenose dolphin (*Tursiops truncatus*)**

The bottlenose dolphin is one of the most widely distributed species in the Mediterranean. Data from research in North Adriatic for 2011 suggest that the local population counts 184 resident individuals, present all year round in the study area. Their distribution changes depending on the season, likely due to the shift in prey distribution. Based on this research, the study area was proclaimed as part of Croatian National Ecological Network and a Site of Conservation Interest of the European Union NATURA 2000 network.

In 2010 and 2013, the BWI carried out aerial surveys of the complete Adriatic Sea. These surveys confirmed that the common bottlenose dolphin is the most widely distributed cetacean species in the Adriatic Sea with an abundance estimated to be around 10,000 individuals in throughout the basin.







**Striped dolphin (*Stenella coeruleoalba*)** - The striped dolphin is considered to be the most abundant cetacean species in the Mediterranean Sea, this also appears to be the case for the Adriatic Sea. However, they are only regularly sighted in the southern part of the basin where they may occur in large herds of some hundreds of individuals, in the northern Adriatic Sea they are occasionally seen, but in smaller groups from one to three individuals. Using data from aerial surveys, the abundance is estimated to be around 20,000 individuals throughout the whole Adriatic Sea.



**Common dolphin (*Delphinus delphis*)** - The common dolphin has experienced a generalized and major decline in the Mediterranean region over the last 30–40 years. Today is considered regionally extinct in the Adriatic Sea. Over the last three decades, sightings in the Northern Adriatic Sea have been very rare, mostly by animals visiting from the Mediterranean Sea. The last sighting in the Cres-Lošinj research area was in 1997. During the aerial surveys not one specimen was recorded.



**Fin whale (*Balaenoptera physalus*)** - is found in the Mediterranean Sea deep waters. In the Adriatic most records rely on strandings and sightings of stray individuals in north and central part of the basin. A few sightings occur in the central Adriatic, probably due to prey distribution. Recent research indicates that fin whales regularly enter the southern and central Adriatic Sea, and that abundance probably depends on the abundance of krill. During the aerial survey, only one individual was observed.



**Loggerhead turtle (*Caretta caretta*)** - The Loggerhead sea turtle is most abundant turtle in the Mediterranean Sea. The Northern and Central Adriatic represent one of the two largest neritic habitats shared by juvenile and adult animals originating from Greece and Turkey. Based on data from aerial surveys the abundance is estimated on around 80,000 individuals in the whole Adriatic Sea.

# 1. ADRIATIC DOLPHIN PROJECT

## 1.4 Staff



**Nikolina Rako Gospić (Croatia)**  
ADP Scientific Program Director  
Ph.D. University of Split, Croatia  
M.Sc. University of Trieste, Italy



**Tihana Vučur (Croatia)**  
ADP Researcher  
M.Sc. University of Zagreb, Croatia



**Marko Radulović (Croatia)**  
ADP Researcher  
M.Sc. University of Hamburg, Germany



**Marinela Cukrov Car (Croatia)**  
ADP Researcher  
M.Sc. University of Zagreb, Croatia



## 2. INTERNSHIP AT ADP

### 2.1 A typical day on the project

Well, first of all, there is no typical day. Schedule may vary depending on the sea state, weather conditions and research priorities. It is important that you are flexible and bear in mind that dolphins are wild animals and work with them is not 100% predictable.

**Day 1** - When you arrive in the base, lectures will be given explaining duties on the boat and what is Blue World Institute and ADP all about. After that you will be introduced to our daily routine and dealt with duties and tasks.

**Other days** - Typically days are spent in the office, where students help out researchers or in the Lošinj Marine Education Center. During the office days you will deal with logging data, photo identification of dorsal fins, creating catalogues, exploring new softwares, preparing presentations and reports, learning from each other and working on what ever is actual at that moment in the research department.

The weather is unpredictable, so it may happen that we are on the sea every week or only once in a whole month. Area surveys are conducted from a 6 m long inflatable boat, in search for dolphins. On the boat you will mainly deal with scanning the horizon, and when with the dolphins you will help with data collection.

It is important that you bring water, food and appropriate layers of clothing on the boat. Although the weather on the island is mild, driving for hours on the sea can chill you.

Keep an open mind while you are here and you may just find the research of your dreams. Although dolphins are our primary focus, there are many opportunities for exploring fields related to the sea.

In your free time you may visit the island, enjoy the beauty of discovering new paths and beaches. There are many hiking and biking trails and seasonal activities like asparagus foraging in the spring and olive harvesting in fall.





## 2. VOLUNTEERING AT ADP

### 2.2 Accommodation

You will be hosted in Veli Lošinj. The house provides a bedroom for interns, two for volunteers, two bathrooms, kitchen and a terrace. Beds, sheets and blankets are provided. There is a washing machine in the house and you can use it. Everybody at the project is expected to do his or her share in the household. The daily household duties include cooking, dishwashing and general housekeeping. All participants alternate in housekeeping and cooking shifts. There is no smoking within the accommodation.

The project is also advertised in many countries, so it is possible that your colleagues are from different European countries or even further.

The house has Wi-Fi and a computer is available in office in Veli Lošinj (walking distance cca 15 min). You can use it any time during the opening hours.

In addition, some bars and restaurants in Mali and Veli Lošinj offer Wi-Fi access for their guests.



Veli Lošinj





## 2. INTERNSHIP AT ADP

### 2.3 Food

You buy your own food from local grocery shops. There are few small shops close to the house, but you can use car for shopping in supermarkets, which is a 10 minutes drive. Please bring with you some recipes if you are not familiar with cooking. There are some local restaurants where you may choose to eat, at your own expense.



### 2.4 Island Lošinj

The coastline of Lošinj is extremely diverse; it consists of many large and small bays and underwater caves. The office is located in the old village of Veli Lošinj (3 km distant from Mali Lošinj – the biggest island town in Croatia) on the sheltered east coast of the island. There are more than 95 species of fish found in the waters around the island, and other top predators such as tuna, sharks and swordfish regularly visit this area. The marine environment around Lošinj is one of the cleanest parts of the Northern Adriatic Sea with underwater visibility consistently over twenty meters. We encourage you to explore the island and take advantage of the untouched natural environment that surrounds you.



## 2. INTERNSHIP AT ADP

### 2.5 Conditions for participation

Students applying for internship must be:

- Currently studying (marine) biology, ecology or similar
- Over 18 years old;
- Able to tolerate hot or cold weather and long periods on the boat under the sun;
- Speak English;
- Be aware that the project director or project manager has the right of expelling you from the field base, in case your behaviour and attitude may obstruct the normal research activities.

\* Note: Participation in the internship program for students of University of Zagreb is credited with ECTS points. You should inquire if you could be awarded ECTS points at your university too.





### 3. EXPENSES AND AVAILABLE PERIODS

The cost of the program is 25 EUR per day, during the Spring and Autumn. The payment can be made on the spot, in order to avoid any additional costs for students while paying via bank or PayPal. Places are available from **1st February to 31st May** and from **1st October to 30th November**. Minimum period is one month.

#### What is included in the cost?

- Accommodation
- Utilities
- Lectures by researchers
- Scientific supervision during the intership
- Fuel for field trips
- Internet access at the accommodation and LMEC
- Internship Certificate

#### What is not included in cost?

- Food and beverages
- Travel expenses to and from Mali Lošinj
- Alcoholic drinks
- Personal expenses (e.g. cosmetics, telephone)
- Insurance (we recommend you to take travel health insurance)

Those interested in internship at ADP should contact us in English at: [tihana.vucur@blue-world.org](mailto:tihana.vucur@blue-world.org). and fill online application form. Please, tell us what period you are interested in, what are you studying (current year) and enclose your CV. We will contact you back.



## 4. TRAVEL INFORMATION

### 4.1 What to pack

Please, try to bring no more than one large bag and a backpack as space is limited in our flat . Take your warm clothing for the boat. Bear in mind that there will be a washing machine at your disposal. Take into consideration the month you are coming to Croatia and check online for weather conditions



Therefore, we strongly suggest that you also bring:

- Sunscreen (SPF 50+), sunglasses and hat
- Windproof / waterproof jacket
- Underlayers
- Soft layer
- Sneakers/boots/non-slip shoes
- Any necessary medication

Other things we suggest you take:

- Laptop, camera
- Headphones
- Umbrella
- Insect repellent spray or lotion
- Ear plugs for light sleepers
- Some cooking recipes

Documents and insurance

Croatia is an EU country so EU citizens need only a valid ID card. For other countries please check your requirements, but we are suggesting you to take your VALID passport. We recommend that you provide yourself with travel insurance (most important could be medical).

### 4.2 Some useful information

Official language is Croatian, but almost everybody can speak at least basic English. Young people generally speak English well, while many also speak German and Italian. You can expect that English will be spoken among all team members.

Croatia is an EU country and one of the most important tourist destination of the Mediterranean. It is generally a very safe place for tourists and crime rate is very low.

Croatian currency is Kuna (KN). 1 EUR is around 7.4 KN; 1 USD is around 6.5 KN.

Time zone in Croatia is +1UTC; +2UTC in summer

Power standard is 220V/50Hz and you will need power plug for for a Schuko socket (CEE 7/3)





## 5.3 Getting there

### Arrival and departure

It is not possible to arrive at the research station earlier than the start date of the period or stay longer. In case you travel to Lošinj earlier you are requested to arrange for your own accommodation. Please contact the field base the day or two before you are due to arrive to confirm your mode of transport and time of arrival, so that a member of the crew can meet you.

The information given here was correct at time publishing. Please check timetables, connections and routes personally. You will have to make your own travel-arrangements.



#### By bus

Autotrans is the bus company that drives to Lošinj. On following web page you can check departing cities, time and prices: [www.arriva.com.hr/hr/hr/naslovna](http://www.arriva.com.hr/hr/hr/naslovna). Info. tel. +385 (0)51 660 660.. Members of the team can welcome you on a bus station and walk you to the accommodation.



#### By plane

There are cheap flights to Pula, Rijeka, Split, Zadar and Zagreb in Croatia, and Venice and Trieste in Italy. For timetables of flights, you can check Croatia Airlines ([www.croatiaairlines.hr](http://www.croatiaairlines.hr)), easyJet (<https://www.easyjet.com/en>), Ryanair ([www.ryanair.com](http://www.ryanair.com)), GO ([www.go-fly.com](http://www.go-fly.com)), Wizz Air ([www.wizzair.com](http://www.wizzair.com)). There is also air-line flying from Germany, [www.eurowings.com](http://www.eurowings.com)



#### By boat

Everyday there is catamaran from Rijeka to Mali Lošinj, please visit web page for further information [www.jadrolinija.hr](http://www.jadrolinija.hr) You can reach Mali Lošinj also from Zadar by ferry, for more information check: [www.jadrolinija.hr/en/](http://www.jadrolinija.hr/en/). If you are arriving with boat or catamaran, please let us know and we will organize that somebody picks you up on a ferry/catamaran station.



#### By car

If you prefer to travel by car, you can drive to Brestova (close to Opatija) if coming from Italy/Slovenia directions, or to Valbiska (Krk Island) if coming from Zagreb direction, where you can get a small ferry that will bring you on the island of Cres from which driving you can reach Lošinj. Please contact us through email for the ferry schedules or check yourself on [www.jadrolinija.hr/en/](http://www.jadrolinija.hr/en/) under sailing schedule and then District of Rijeka. When you arrive in Veli Lošinj, you have parking place 15 min walking distance from the accomodation.



#### By train

There are trains from most of the major cities of continental Europe to Zagreb, Rijeka or Trieste. Please enquire at your departure point. The train station in Rijeka is 200m west of the bus station.

## 5. INTERNS' THOUGHTS

"I had the fortune of being accepted into Blue World Institute's internship program in the winter of 2016. My three month plan was to live on Lošinj in the provided housing in Mali Lošinj, eat the local fare, and learn about bottlenose dolphins and the copious data entry that goes along with animal population studies. When I arrived, I was greeted by Tihana, a Blue World research scientist for the last 4 years, coordinates interns and volunteers, and ticks away the hours on her computer studying the complex patterns of dolphin socialization, their dorsal fin scars and nicks (or lack there of). She warmly introduced me to the house, the routines, and the other interns I would be sharing this experience with; two Finnish girls and an American. At Blue World Institute, you are given tasks that will aid their research and will get you accustomed with photo identification, data organization, and interpersonal skills. You are, at times, left to your own devices which can either harbor boredom or creativity depending on the individual. You are also given free time to explore and immerse yourself in a community much different than your own, especially if you come from northeast America like I did.

Throughout those three months I taught myself about GIS and homerange tools, which I had not played with since my university days five years prior. I made bonds with people from all over the world; scientists, chefs, musicians, students, environmental activists, and more. I read a lot of scientific papers and got reacquainted with ideas and professors I had once been taught by. Though there were frustrating aspects of research science, learning to independently solve problems was a necessary step. When things weren't going my way, I had to toughen up and learn how to ask for help, but when I did, I got it and more. I was patient with progress and accepting of defeat (like when our system crashed and hadn't been backed up... that wont be happening again!). Needless to say, I enjoyed myself and as my fellow interns began to plan their journeys back home I didn't feel quite ready to throw in the towel. I was asked to help with summer dolphin watching, I took about 1 minute to decide, and accepted their offer to remain a further 4 months.

The dolphin watching days were much different than the data days. Instead of staying indoors most of the day on a computer, I was up early, bicycling to work, interacting with foreign tourists, and guiding them while on the sea surrounding our island. It was exhausting and exhilarating. Karlo, the captain of our Dolphin Watching Adriatic tornado boat was an amazing mentor and friend. He taught me nautical know-how and regularly engaged me in philosophical conversations. Being on the sea makes your troubles melt away and I had a few to think about such as a family back in America that wanted me home, the slow Croatian bureaucracy which made it difficult to legally stay on the island, and the question of 'what next?'. Thanks to the sea, the dolphins, and Blue World Institute I was much more calm about these worries and this calm has carried over into my life back at home.

While every scientific community has its quirks, and Blue World has many, BWI has a certain magic that keeps its ships (research and tourist) flying. This magic is woven into Blue World's history by its amazingly diverse and dedicated staff as well as interns and volunteers of past. Pete, Nikolina, Tihana, Marko, Marinela, Mateja, and Andrea, full time Blue World staff, were a part of my daily life in Veli Lošinj and each made an impression on me. They are incredibly hard working, most of the time eating lunch in front of their computers to finish a proposal, a paper, or a thought (take a walk you guys!). With completely different personalities each had their own way of making me feel welcome, appreciated, and supported. I would not have been able to complete my internship/volunteer work if it weren't for Marinela, of the Marine Education Center, who stuck by my side and advocated for me every step of the way during my temporary permit approval process.

Blue World Institute of Marine Research and Conservation gave me the opportunity to embrace a new way of life and I am so happy that I did. My first ever trip to Europe was a success of great magnitude. If anyone reading this is thinking of interning or volunteering with Blue World Institute; do it! You have nothing to lose and everything to gain, most of all confidence in yourself and motivation for future conservation research. "

Alex Lacy, USA, 2016