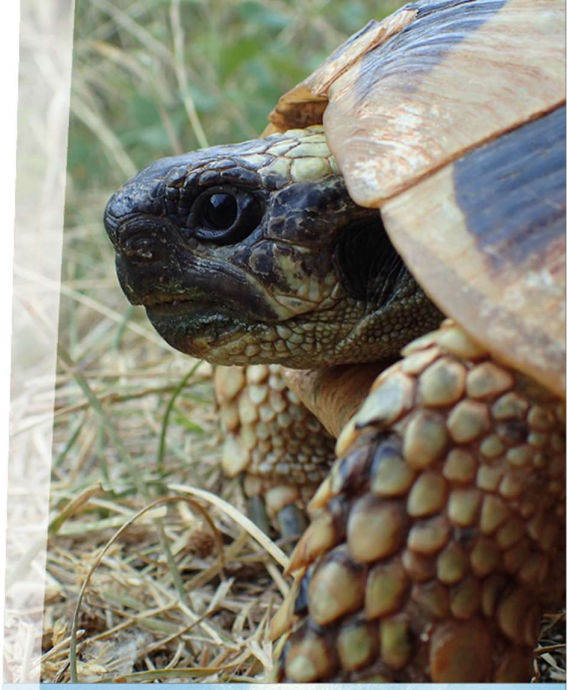
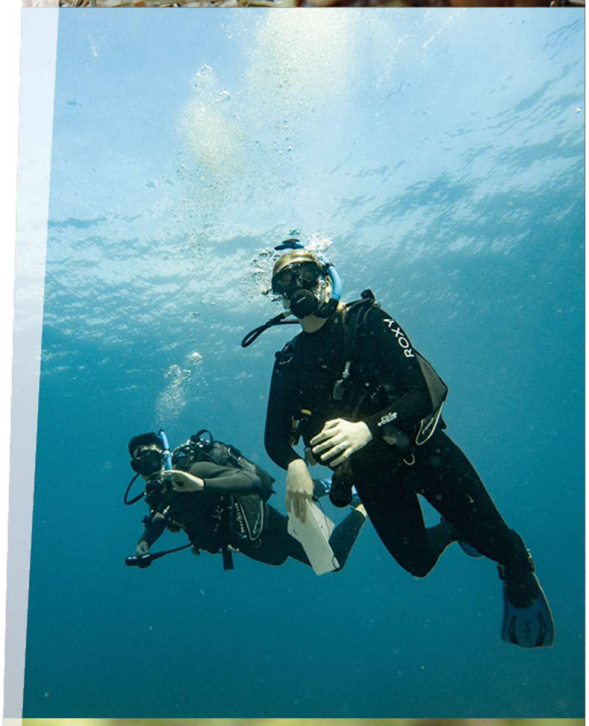
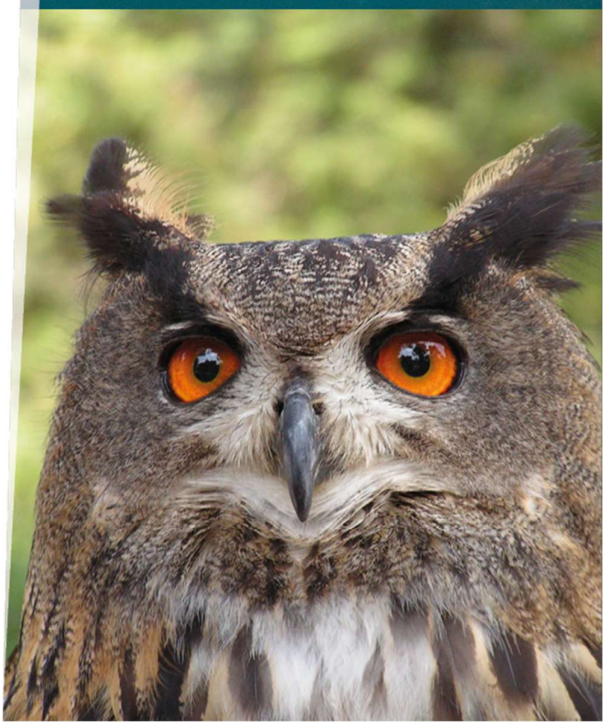
OPERATION WALLACEA

Croatia School's Booklet 2026







Contents

1. Structure of the Croatian Expedition

This expedition combines a week working in the spectacular Krka National Park and a second week on Silba Island or Krk Island in northern Dalmatia. The Krka National Park, lying only a short drive from the coastal city of Split, surrounds the middle-lower course of the Krka River, as it runs through limestone karst valleys on a steep gradient towards the Dalmatia coast. The island of Silba, which has a population of just 250 people, is a beautiful car free with stunning beaches and marine biodiversity. Here the Opwall partners have built a diving and marine research centre. Krk is a large Croatian island in the northern Adriatic Sea, connected to the mainland by a bridge. Groups here will work with a well-established diving centre who have been operating on Krk for over 20 years.

Groups will fly into the city of Split and take a bus straight from the airport to the Krka National Park, where they will be based in a camp on the plateau above the valley. After a week in Krka, where the students will work on a mixture of research projects focused on the unique fauna of the forests, caves and river valleys, the groups will travel by bus to Zadar (approx. 1.5 hrs) and take the ferry to the island of Silba (approx. 4 hrs) or travel by bus all the way to Krk (approx. 4hrs). On Silba and Krk the groups will spend a week learning to dive or participating in an Adriatic marine ecology course and assisting in several marine research projects. After this week, they will travel back to fly home either from Zadar or Split (see figure 1).

Figure 1: Map of Croatia showing the locations of Split, Krka NP, Zadar, Silba Island and Krk Island.

2. Week 1: Krka National Park

The high Dinaric Arc mountains which run along the border of Bosnia and Croatia separate much of the European continental fauna from the Mediterranean fauna of coastal Croatia. The Krka River in only 60 km runs from the high Dinaric mountains down to the sea and contains an excellent example of this speciation gradient. The National Park is rich biodiversity because of the long geographical isolation of the valley and has over two hundred bird species, a variety of reptiles and amphibians and strictly protected mammals such as wolves and wildcats. Since much of the water in the karst (limestone) region is found underground, the cave systems and this habitat provide the highest rate of new species discoveries from any habitat in Europe. One of the unique cave species is the blind Cave Salamander featured in a 2012 David Attenborough film of 10 species to be included in an imaginary conservation Ark. The salamander is the third most genetically distinct amphibian in the world with its closest relative found now in the Yucatan Peninsula of Mexico having separated 200 million years ago when Pangea supercontinent was separating.

Week 1 Itinerary

The groups will be met in Split on the Thursday when their flight arrives, and will be taken to the research base in Krka by bus. The journey takes an hour and a half to two hours. When they arrive, they will be given some time to settle into the camp, before attending a series of safety and welcome presentations. The objectives from these presentations are:

- To explain the overall objectives of the Krka surveys
- To explain the risks associated with working in this area, including:
- Safe trekking procedures
- Appropriate footwear and other clothing
- Avoiding heatstroke

The core research project focuses on the baseline monitoring of birds, bats, butterflies, caves, habitats, herpetofauna and mammals. There is also the opportunity to take part in the specialist research projects on bat fly parasites, population monitoring of swallowtail butterflies and the ecology of cat snakes. Groups of up to 6-8 students will rotate around each of these projects. School students and their teachers will be placed in separate groups to university students who may also be on site. Before each survey, students will be given a comprehensive briefing by the survey leader to explain the objectives, methods, and any relevant safety information. There will also be daily lectures delivered as part of a Mediterranean ecology course either during midday or in the evening depending on the guest lecture schedule. On the last day in Krka, the groups will spend the day visiting the picturesque Krka waterfalls and learning about the natural history of the area.

Day	Group 1	Group 2	Group 3	Group 4	Group 5
Thursday	Arrive Krka late-afternoon. Welcome and Health & Safety presentation.				
Friday am	Herpetofauna survey	Bird point count	Cave lab	Butterfly survey	Mammal survey
Friday Afternoon	**Lecture 1: Research at Krka National Park** **Lecture 2: Birds**				
Friday pm	Mammal camera trap analysis	Habitat surveys	Cave visit	Bird mist net set up	Bat workshop
Friday Evening	Cricket survey	Rest	Sherman trap setup	Cat snake survey	Bat survey
Saturday am	Mammal survey	Butterfly survey	Bird mist netting	Herpetofauna survey	Cave lab
Saturday Afternoon	**Lecture 3: Herpetofauna**				
Saturday pm	Bird workshop	Bat workshop	Habitat survey	Mammal camera trap data	Cave visit
Saturday Evening	Cat snake surveys	Bat survey	Rest	Scientific drawing workshop	Mammal Walk
Sunday am	Cave lab	Mammal survey	Herpetofauna survey	Bird Point Count	Butterfly survey
Sunday Afternoon	**Lecture 4: Mammals**				
Sunday pm	Cave visit	Mammal data	Bat lab	Habitat survey	Bird Mist Netting
Sunday Evening	Guest Lecture	Guest Lecture	Bat survey	Guest Lecture	Guest Lecture
Monday am	Bird Mist Netting	Cave lab	Butterfly survey	Mammal survey	Herpetofauna survey
Monday Afternoon	**Lecture 5: Invertebrates**				
Monday pm	Habitat survey	Cave visit	Bird Workshop	Bat lab	Mammal data entry
Monday Evening	Rest	Hedgehog Walk	Cat snake survey	Bat survey	Cricket survey
Tuesday am	Butterfly survey	Herpetofauna survey	Mammal survey	Cave lab	Bird point count
Tuesday Afternoon	**Lecture 6: Bats**				

Tuesday pm	Bat lab	Bird Mist Netting	Mammal Data	Cave visit	Habitat survey
Tuesday Evening	Bat survey	Guest Lecture	Guest Lecture	Guest Lecture	Guest Lecture
Wednesday	Visit to the Skradinski Buk and Roški Slap Waterfalls – viewing the waterfalls and learning about the formation of the Krka Valley environment.				
Thursday am	Depart for Silba/Krk Island early in the morning				

3. Biodiversity Monitoring

Invertebrate surveys

Butterflies are excellent indicators of environmental change, and are sensitive to both long-term and short-term changes, such as climate change leading to shifting phenological patterns. This is due to their short life spans and quick generational turnover, as you will quickly see population declines after previously mentioned events. They can be used as a proxy for how well other invertebrates are doing, particularly as a food source for species at higher trophic levels. Around 40 species of diurnal butterfly have been recorded in the Krka national park including two species of swallowtails. However, data on the ecology of these species is still missing and for this group the project will concentrate on completing Pollard counts of butterfly communities in 6 different vegetation communities and habitats. All butterflies along the Pollard count will be recorded and analysis can compare usage of different habitats/vegetation communities. Observations on food plants, timings of daily activity, heights of flight and other factors can also be included in the analysis for different species.

In the case of crickets, the objective is to produce a species list for the park using sweep net surveys over a wide range of grassland and scrub habitats. The population density of crickets is also being established by a mark and recapture project.

Herpetofauna surveys

These surveys are performed by completing standard search times in different habitats and heights in the valley. Capture – mark – recapture techniques will also be employed on certain species. The Park authorities are keen to determine how the Four Lined Snake (*Elaphe quatuorlineata*) which grows to 2.5m, the venomous Nose Horned Viper (*Vipera ammodytes*) and the Leopard Rat Snake (*Zamenis situla*) separate their niches. In addition, the surveys will be recording the distribution of the giant Glass Lizard (*Pseudopus apodus*), which grows to a length of 1.2m and tortoises (*Testudo hermanni*). Night surveys are also done for the Cat Snake (*Telescopus fallax*) which is the only nocturnally active snake species in the region.

Cave visit

Prior to the visit, students will be introduced to cave ecosystems and learn how caves are found and mapped. The cave visit is led by the science staff team at sites closed to the public and will involve identifying and counting the different cricket species to estimate diversity of groups adapted to cave living. In some cases additional soil, sand, and guan samples from different

parts of the cave system will be taken and analysed to find out what is living there (bacteria, fungi, insects, etc.).

Bird surveys

The bird surveys involve dawn morning point counts at a series of habitats within the valley and surrounding area. This is to examine how habitat affects the bird communities and to monitor changes in the bird communities between years. Constant effort mist netting has also been conducted for several years in the valley to monitor the populations of birds found within the park, with over two hundred species of bird recorded in the park alone.

Habitat surveys

Habitat surveys are conducted to get an idea of the ecosystem architecture of our transects, so we can characterise the difference between our study sites and explain spatial and temporal patterns observed in the other taxa. They involve a number of different measurements which are taken in plots along the transects, these measurements include the slope angle, canopy density, GPS points of the plot, number of tree saplings present, understory vegetation density and cover, grass height and individual tree measurements.

Bat surveys

Each team will spend one night helping with the bat mist netting surveys. In addition, the echolocation calls of bats will be recorded using a bat detector to determine if there are additional species present. The population dynamics and differential habitat use of the bat species in the park is currently being investigated.

Nocturnal Surveys

Each survey team will lead an opportunistic night walk for a group during the week exploring what species can be observed at dusk. Some teams have a particular focus species such as the herpetofauna team look for the rare nocturnal cat snake and the mammal team look for hedgehogs and other mammals. However as sightings cannot be guaranteed it in an opportunity for participants to put their learning into practice and identify species across the taxa groups.

4. Research and learning objectives

The Krka National Park authorities have established a research base station in the centre of the valley that they want to develop into a central biodiversity research hub for the eastern Adriatic region. Two new museums have been built on the site to illustrate the unique ecology of the valley and the historical context since there are numerous Roman sites in the Park and surrounding plateaus. The Opwall role in this plan is to develop the most detailed biodiversity annual monitoring programme of key taxa yet undertaken in Croatia and from this programme, examine community structure and changes over time. The site selected for a long-term study of biodiversity in the valley is a 20km stretch between two major waterfalls and encompassing a lake and the full variety of habitats found in the valley. The survey site includes the river, valley sides and surrounding plateau areas and the research objectives are:

- To describe the Orthopteran communities and identify any species that are under threat
- To describe the habitat associations of the butterfly community
- To describe niche separation in the diurnal snake species found in the valley
- To provide ecological data on the rare nocturnal Cat Snake
- To describe the bird community in the valley and their habitat associations and changes in abundance between years
- To provide data from a permanent mist netting and ringing site in the Krka valley on bird moult patterns and longevity
- To provide additional data on the cave fauna of the valley
- To quantify the bat fauna of the Krka valley

Learning outcomes from week 1

The students should achieve the following learning outcomes from the fieldwork, practicals, lectures and discussions/activities:

- Be able to define karst landscape
- Be able to describe the biogeography of the Dinaric mountains
- Be able to explain speciation processes that have occurred in the region
- Be able to identify and describe the ecology of the herpetofauna of the region
- Be able to identify 5 common bird species from their call and/or by sight
- Be able to identify the most common small and large mammals
- Be able to discuss human-wildlife conflicts in the Dinaric mountains
- Identify the major threats and conservation efforts in the region

5. Week 2: Silba Island / Krk Island

For the second week, the groups will be based on Silba Island or Krk Island. Silba is a small island with an area of 15 km², home to 250 inhabitants during winter. This increases greatly in the summer months as the islands welcomes many Croatian tourists. It is a very scenic and peaceful island, free of cars and other vehicles. Krk, which is a larger island, is home to numerous beautiful beaches and fascinating marine life. Tourism in both these islands is increasing each year and with higher numbers the threats to the local fishery and marine habitats have also increased. As a result, Croatian NGO's have been formed to develop marine research centres on the islands. Their research aims to map and quantify the marine habitats and associated species with an aim of establishing a long-term monitoring programme to assess whether increased tourism is adversely affecting these marine communities. Large parts of the marine area around Silba and Krk have been designated as a Natura 2000 areas and are home to the largest breeding colony of Shag (*Phalacochorax aristotelis*) in the Adriatic. They are also home to endemic seagrass *Posidonia oceanica* which supports high levels of biodiversity and also acts as a refuge and nursery for juvenile fish.

Week 2 itinerary

On Thursday morning, the group will leave Krka site to catch a ferry from Zadar to Silba Island or a bus to Krk Island. Students here will either:

- Complete an Open Water SCUBA diving course, with some additional science lectures **OR**
- Complete the full Adriatic Ecology course with SCUBA (if an already qualified diver) and/or snorkel practicals to illustrate the lectures. Students will also have the chance to participate in some of the biodiversity surveys.

Day	Open Water group	Full Adriatic Ecology course - snorkeling	Full Adriatic Ecology course - diving
Thursday noon	Arrive and settle in		
Thursday pm	Intro lecture	Intro lecture	Intro lecture
Thursday eve	**Lecture**		
Friday am	Swim test	Snorkel check	Check dive
Friday pm	Confined water	Snorkel	Buoyancy dive
Friday eve	**Lecture**		
Saturday am	Confined water	Snorkel survey training	Dive survey training
Saturday pm	Confined water	Snorkel survey	Dive survey
Saturday eve	**Lecture**		
Sunday am	Confined water	Snorkel survey training	Dive survey training
Sunday pm	Open Water 1	Snorkel survey	Dive survey
Sunday eve	**Lecture**		
Monday am	Open water 2	Snorkel survey training	Dive survey training
Monday pm	Open water 3	Snorkel survey	Dive survey
Monday eve	**Lecture**		
Tuesday am	Open water 4 & Dive certification	Fun snorkel	Fun dive
Tuesday pm	Marine ID workshop	Marine ID workshop	Marine ID workshop
Tuesday eve	Packing & social evening		
Wednesday am	Depart Silba/Krk Island		

The practicals will include trips to various sites around the islands to conduct underwater visual census (UVC) surveys on the marine fish, sea urchins, benthic organisms and sea grass meadows. Before each of the groups departs for the field to take part in one of the surveys they will be given a comprehensive briefing by the survey leader to explain the objectives, the methods, and any relevant safety information.

The expedition finishes at 07.30 hrs on the Wednesday at the end of the second week. The group will then take a ferry or coach to Zadar where the bus will wait and take them to Zadar or Split airports.

Biodiversity Monitoring

Fish surveys

Fish surveys are done using underwater visual census (UVC) surveys in areas around the Greben Islets that are proposed as potential No Take Zones. Analysis of the footage will be completed back in the lab with the students helping.

Sea-urchin surveys

Line transects of 10m length and 2m width are completed at the range 3-8m depth. The researcher records the presence and types of echinoderms found in the transect with a special emphasis on sea urchins. Data recorded include whether the urchins are adult or juvenile and their location (e.g. sheltered in a hole or crevice). Sea urchins in the Adriatic compete with valuable commercial fish species such as White and Gilthead Sea Bream which also feed on algae.

Sea-grass surveys

The north Adriatic has some of the most extensive seagrass beds in the Mediterranean and because of the exceptional water clarity these seagrass meadows extend in some areas down to a depth of 40m. These meadows are important nursery areas for many juvenile fish and crucial for security of the fishery. The aims of this project are:

- To map and monitor the distribution of sea grass beds around Silba/Krk Island
- To assess the health of *Posidonia oceanica*
- To quantify the percentage coverage of invasive algae around Silba/Krk Island

This team will be doing detailed surveys of the seagrass beds up to 15m depth using the same protocol used in all MPAs in Croatia. At each site a buoy will be set down, and from this buoy a circle marked out with a 10m radius. Quadrats will be placed randomly on the seabed within the circle and the following data will be collected by groups of students:

Group 1

- Taking a photo of each quadrat so the edge of the quadrat is just in the frame of the photo
- Describe seagrass species composition
- Measure the depth of each quadrat

Group 2

- Count seagrass rhizomes within the quadrats
- Estimate percentage of seagrass and algal cover and species composition

- Estimate percentage of dead matter

Group 3
- Describe sediment composition into mud, fine sand, sand, coarse sand and gravel
- Identify any macroinvertebrates within the quadrat

6. Research and learning objectives

The research objectives for the dive and marine research centres are:

- Establish baseline data on the fish communities around the No Take Zones.
- Determine the distribution of sea urchins and habitat interaction around the islands
- Monitor seagrass *Posidonia oceanica* medows and their interaction with invasive algae

The Adriatic Ecology course consists of lectures and in water practicals. The course teaches identification of common genera and species of algae and other macroinvertebrates, identification of the major fish families and common species. It is designed to introduce a variety of methods and practices used for scientific research in the marine environment.

Adriatic Ecology course

The Adriatic Ecology course covers the following topics which are designed to train students in the ecology, conservation issues and survey techniques that are being used on the surveys. The lectures, films and practical exercises on this course will help the students become immersed in the ecology and conservation issues of the Mediterranean and will cover the following areas:

Lecture 1: Introduction to local ecological zone, Adriatic Marine Ecology and research objectives
Lecture 2: Marine Survey techniques
Lecture 3: Flora and fauna biodiversity
Lecture 4: Threats to marine ecosystems
Lecture 5: Marine Protected Areas in the Mediterranean and Croatia

Learning outcomes from week 2

The students should achieve the following learning outcomes from the fieldwork and activities at the Silba/Krk Island site:

- To understand the importance and changes of flora and fauna in different marine ecosystems
- To understand the threats to the Mediterranean Sea and coast
- Be able to identify at least 5 marine invertebrates and 10 fish species
- Be able to conduct snorkel and SCUBA based surveys of marine flora and fauna

- To understand small-scale fisheries and the importance of MPAs and no take zones
- To understand the importance of seagrass and its connection to fish biodiversity and climate

7. Open Water SCUBA dive training

Full course

This course consists of theory lessons and tests which are completed with instruction from a fully trained Dive Instructor at the research centre. This is accompanied by a series of skills that need to be learned and mastered. These are completed in shallow water in front of the base. Once the theory and skills training has been completed the students will then complete 4 Open water dives to qualify them to a maximum depth of 18m. They will then be signed off as qualified Open Water divers and will be registered with PADI/IRTDA, bot internationally recognised diving organisations. For PADI, students will need to register online prior to the expedition and download all of their learning materials onto a device that they must bring to site (laptop/phone/tablet). For IRTDA, they will be emailed a PDF booklet of the dive theory. For both courses, theory should be completed before arriving to site.

Referral course (Silba only)

For those students who have completed both the dive theory and confined water sessions prior to expedition they can complete their Open Water Referral Course on site. The students will first complete a check dive with their instructor to demonstrate that they still confidently perform the necessary skills needed to progress on to complete their open water dives.

Once referral students have successfully completed the final stages of their Open Water course, they will be able to progress on to the Adriatic marine ecology course. Referral students will be able to join at a stage where they can get the chance to learn about the application of survey techniques in the marine environment and how that supports the management natural resources.

8. Links to biology, geography and environmental science syllabuses

The following tables suggest how specifications for Biology, Geography and Environmental Studies might link with your expedition experience through lectures, practicals or in discussion topics: keywords are used for the matching. Topics which have been greyed-out are unlikely to be relevant at this expedition location.

Table 1: Biology

Topic	Biology	AQA		C	CCEA		C.Int		Ed/Sal		OCR		SQA		WJEC		AP	IB
	Levels: S=AS 2=A2 H =Highers	S	2		S	2	S	2	S	2	S	2	H	AH	S	2		
Evolution, Classification and DNA	Evolution; Speciation; Species; Endemism; Gene pool; Allopatric; Sympatric; Isolation; Variation; Adaptive radiation Adaptation; Wallace; Darwin		☐	☐		☐		☐	☐		☐		☐	☐		☐	☐	☐
	Classification; Taxonomy; Binomial system; Dichotomous Keys	☐		☐	☐			☐	☐	☐	☐			☐	☐			☐
	PCR; Genome sequencing; Genetic fingerprinting; DNA profile		☐	☐	☐					☐		☐	☐			☐	☐	☐
Ecology and Ecosystems	Ecology; Habitat; Niche; Abiotic; Biotic		☐	☐	☐		☐		☐	☐	☐					☐	☐	☐
	Biome; Ecosystems; Rainforests; Deserts; Coral reefs; Mangroves; Marine; Coasts; Hot arid; Semi-arid; Woodland Bush; Tropics; Tropical		☐	☐		☐	☐					☐				☐	☐	☐
	Populations; Competition; Interspecific; Intraspecific; Predator Prey; density dependent; independent: Symbiosis		☐	☐		☐	☐					☐				☐	☐	☐
	Succession; Climax community		☐			☐				☐	☐	☐				☐		☐
	Biodiversity	☐		☐	☐			☐	☐	☐	☐				☐		☐	☐
	Practical work; Field techniques; Ecological sampling; Random sampling; Transects; Capture, mark, release and recapture; Biodiversity indexes; Data handling and; presentation; Quadrats; Statistical testing; Measuring; GIS; Research tools		☐	☐		☐				☐	☐	☐	☐	☐		☐	☐	☐
	Written reports; Research project; Report; Case studies			☐					☐				☐	☐		☐	☐	☐
Agriculture, Human activities, Conservation and Sustainability	Sustainability	☐		☐					☐	☐		☐				☐		
	Agriculture; Agricultural impact; Agricultural exploitation; Cultivation crops; Food production; Sustainable agriculture; Sustainability; Forestry; Timber; Deforestation; Fisheries; Over fishing; Deforestation; Human management; Human effects; Human activities	☐				☐						☐	☐			☐	☐	
	Fair-Trade; Coffee; Rain Forest Alliance; Ecotourism; Tourism; Carbon trading; Greenhouse gas emission control (REDD)															☐		

	Indicator species; Pollution; Climate change; Global warming Carbon footprint; Fossil fuels		☐	☐		☐				☐	☐		☐				☐	☐
	International conservation; Endangered species; Invasive species; Biological control; Pests; CITES; Ethical, Local; Global	☐	☐	☐		☐		☐			☐	☐	☐			☐		☐
	National Parks; Wildlife reserves							☐										☐
	Environment; Environmental monitoring; Environmental impact; SSSI																	
Behaviour	Animal behaviour; Primate Social behaviour; Courtship; Territory; Co-operative hunting; Herbivores; Grazing	☐		☐	☐			☐				☐	☐	☐		☐	☐	☐

Table 1: Highlighted in Black are topics that you might experience at your research site. Key: C = Cambridge. Pre-U, C.int = Camb. Int. CCEA = N.Ireland; Ed/Sal = Edexcel Salters, S= SQA ; Edex = EdExcel ; IB = International Bacc; AP=Advanced Placement (v. 20/11/14)

Table 2: Geography and Environmental Science

Topic	Environmental Science APES and ESS	IB ESS	AP ES	UK Geography A Levels AQA, Edexcel, eduqas and OCR
Evolution, Classification and DNA	Evolution; Speciation; Species; Endemism; Gene pool; Allopatric; Sympatric; Isolation; Variation; Adaptive radiation Adaptation; Wallace; Darwin	☐		There has been a complete revision of UK Geography A levels. Although our expeditions are possibly not going to be as relevant to Geographers as they are to Biologists there are a significant number of topics covered by the various examination boards in which matching occurs with reference to: • human impact on ecosystems • ecosystems in general • biodiversity • sustainability • fair trade • work of NGOs • deforestation • GIS • carbon trading • climate change • case studies linked to biomes such as rainforests. All exam boards expect experience of field investigation techniques, statistical use and data manipulation which are very relevant to their experiences whilst on location at their expedition site. Almost all boards now require an independent investigation by students which fits really well with the present
	Classification; Taxonomy; Binomial system; Dichotomous Keys			
	PCR; Genome sequencing; Genetic fingerprinting; DNA profile			
Ecology and Ecosystems	Ecology; Habitat; Niche; Abiotic; Biotic	☐	☐	
	Biome; Ecosystems; Rainforests; Deserts; Coral reefs; Mangroves; Marine; Coasts; Hot arid; Semi-arid; Woodland Bush; Tropics; Tropical	☐	☐	
	Populations; Competition; Interspecific; Intraspecific; Predator Prey; density dependent; independent: Symbiosis	☐	☐	
	Succession; Climax community	☐		
	Biodiversity	☐	☐	
	Practical work; Field techniques; Ecological sampling; Random sampling; Transects; Capture, mark, release and recapture; Biodiversity indexes; Data handling and; presentation; Quadrats; Statistical testing; Measuring; GIS; Research tools	☐	☐	
	Written reports; Research project; Report; Case studies	☐	☐	
Agriculture, Human activities, Conservatio	Sustainability	☐	☐	
	Agriculture; Agricultural impact; Agricultural exploitation; Cultivation crops; Food production; Sustainable agriculture; Sustainability; Forestry; Timber; Deforestation; Fisheries; Over fishing; Deforestation; Human management; Human effects; Human activities	☐	☐	
	Fair-Trade; Coffee; Rain Forest Alliance; Ecotourism; Tourism; Carbon trading; Greenhouse gas emission control (REDD)	☐		

n and Sustainability	Indicator species; Pollution; Climate change; Global warming Carbon footprint; Fossil fuels	☒	☒	IRPs although the topic chosen must relate to their exam syllabus so topics such as the REDD scheme are possible choices. Their IRPs are between 3,000 and 4,000 words and should take up 4 days minimum to achieve. AQA have defined primary data as "Primary data is defined as unmanipulated data, either collected in the field or a raw dataset" which will work well with past data sets and the research data they help to collect when on their expedition. Specific detailed exam board matching is available on request.
	International conservation; Endangered species; Invasive species; Biological control; Pests; CITES; Ethical, Local; Global	☒		
	National Parks; Wildlife reserves			
	Environment; Environmental monitoring; Environmental impact; SSSI	☒		
Behaviour	Animal behaviour; Primate Social behaviour; Courtship; Territory; Co-operative hunting; Herbivores; Grazing			

Table 2: Highlighted in Black are topics that you might experience at your research site. Key: IB ESS = Env Systems and Societies; APES = Advanced Placement Env. Science (v. 20/11/14)

Academic Benefits and background reading

Apart from the most obvious values of going on an expedition such as contributing towards conservation, the physical challenge and adventurous travel, the experience can also benefit a student by increasing their chances of gaining entry to university or being successful in a job application and impressing at interview. This can be achieved in many different ways but it will often depend upon which country and educational system a learner is from. Common to most countries the experience will:

- Enhance their understanding of course syllabuses
- Allow learners to gain specific qualifications such as:
- Research Qualifications e.g. Extended Essays for IB and UK EPQs
- University Course Credits
- Creativity, Action and Service (CAS) for IB
- Universities Award from ASDAN

IRPs or Individual Research Projects

In the last few years an increasing number of students joining our research programmes are taking this opportunity to undertake IRPs. These research projects take many different forms, but what they all have in common is the need to pose and answer a research question. Examples of these include Extended Project Qualification (EPQ), Extended Essay (EE) for IB, as well as many different projects specific to many educational systems worldwide.

We are able to support the dissertation essay style research question; however individual scientific investigations (in which students design and collect their own data) are more difficult to facilitate given the short amount of time students are present on-site and the logistical constraints within which our expeditions operate.

It is a great opportunity for a student to witness first-hand many of the aspects of their research question and, in many cases, they will have access to samples of past datasets for their project. Students may also have the opportunity to talk with the actual scientists involved which will give them a convincing 'slant' to the way in which they answer their research question.

Much of the research they will be able to get involved with is specific to their expedition location. The projects that students will come into contact with range from students helping to collect ecological and biodiversity data through to working and learning alongside the scientists where primary data collection by school students is less practical or more difficult.

For success with IRPs, careful planning is needed by the student and a lot of the work will be done prior to their expedition. They will need close guidance from their school supervisor and the scientists in the field need to be briefed so that support can be provided where they can. We have now developed an application system to ensure that the student will be able to realistically undertake such a project, that their choice of topic is appropriate to their expedition site, the science staff 'on-site' are aware of the project and where practical can assist in a constructive way before, during and after their expedition.

More information:

Use this link or email schoolresearchprojects@opwall.com

Suggested background reading list:

Bradt Travel Guide: Croatia
Piers Letcher and Rudolf Abraham – (2016) ISBN: 13: 9781784770082
(nhbs.com)

DK Eyewitness Travel Guide: Croatia (2015) ISBN-10: 1465426140
(Amazon)

Eastern Europe: An Introduction to the People, Lands, and Culture. ABC-CLIO. ISBN 978-1-57607-800-6. Retrieved 18 October 2011. Richard C. Frucht (2005).

Red List of Plant Taxons, Animal Taxons (Mammals) of the Republic of Croatia
E.Draganovic – State Institute for Nature Conservation (1994) ISBN:9539606829
(nhbs.com)

Bradt Wildlife Guide: Central and Eastern European Wildlife: A Visitor's Guide
Gerard Gorman – (2008) ISBN-13: 9781841622316
(nhbs.com)

The Status and Distribution of European Mammals – IUCN

Helen Temple – (2007) ISBN-13: 9789279048159
(nhbs.com)

RSPB Birds of Britain and Europe
Rob Hume (2014) RSPB Birds of Britain and Europe
(nhbs.com)

Adriatic East Coast: Seeing Birds and Experiencing Nature in Historic Landscapes on the Mediterranean Coast – EuroNatur Travel Guide.
Martin Schneider-Jacoby – (2012) ISBN-13: 9783000359521
(nhbs.com)

Field Guide to the Amphibians & Reptiles of Britain and Europe
Jeroen Speybroeck – (2016) ISBN-13: 9781408154595
(nhbs.com)

British & European Wild Flowers: Identification Guide
Pamela Forey (2007) ISBN-13: 9781844518401
(nhbs.com)

Flowers of Greece and the Balkans: A Field Guide
Oleg Polunin (1987) ISBN-10: 0192819984
(2nd hand from Amazon)

The Northern Adriatic Ecosystem: Deep Time in a Shallow Sea
Frank McKinney (2007) ISBN-13: 9780231132428
(nhbs.com)

Marine Wildlife of the Mediterranean
Enric Ballesteros (2015) ISBN-13: 9788415885276
(nhbs.com)