

Operation Wallacea



**Obtaining Certificate of Personal Effectiveness
for
Honduras
2010**

Introduction

The Certificate of Personal Effectiveness is worth 70 UCAS points and therefore can give the holder a significant advantage when applying for University places, as well providing transferable skills that can be invaluable in later life.

In order to be eligible to receive the Certificate, you need to be able to demonstrate that you have completed the curriculum which is made up from several “challenges”, which are, in turn, available from six modules (there are specific challenges which we recommend). You also need to submit portfolio evidence which proves competence in the following skills:

Problem Solving
Communication through Discussion
Working with Others
Research
Oral Presentation
Improving Own Learning and Performance

There are five basic stages to an Opwall expedition, each of which facilitates completion of different aspects of the Certificate:

Fundraising for your expedition

In order to raise the funds to go on an Opwall trip, groups of students work together over a 12-18 month period, during which time they plan, organise and run various fundraising events and activities. The Operation Wallacea fundraising coordinator will visit the group to help facilitate the initial discussion. Students will be divided into groups of up to 5 individuals, and will arrange a date for a subsequent meeting, during which each student will be expected to produce a business plan for their fundraising efforts. This meeting will be attended by an Opwall moderator who will assess the plans and the discussions within the groups, and will also set a date for another meeting to assess the fundraising progress. Individuals will be expected to show evidence of preparing for the discussions, as well as submitting a Plan/Do/Review sheet which records progress against objectives.

Recommended Challenge: Business Enterprise (from module 2 “Work Related Activities), 50 hrs (5 credits)

Skills requirements satisfied: Problem Solving; Communication through Discussion

Evidence to be Submitted: Plan, do, review sheet for problem solving; Plan do review sheet for communication through discussion, Evidence of fundraising (diary of activities, photos, video footage etc); Discussion Evidence Sheet and Observer Checklist (completed by the Operation Wallacea moderator) for the group sessions; document summarising your fundraising performance against your original targets, with recommendations for future improvements.

Preparing for your expedition

You will be having a presentation from Operation Wallacea staff about how to prepare for the expedition. After this presentation you will then need to divide into groups of 5 or 6 who form an expedition working group with responsibility for ensuring all the preparation for each of the group members. The group should decide on how various tasks are assigned and monitored such as completion of information forms, vaccinations, health and insurance issues, ensuring all group members have managed to source the equipment and clothing required for the forest and the dive

week, obtaining the PADI Open Water Diver Manual and completing the theory lessons in advance, travel and visa arrangements.

Recommended Challenge: International Travel and Experience (from module 4 “Global Awareness”), 20 hrs (2 credits).

Skills requirements satisfied: Working with Others.

Evidence Submitted: Evidence sheet; Witness statement from Opwall assessor.

Planning a research project

Your research project needs to be planned in advance of the expedition with background literature research completed on one of the topics below

- Biodiversity and Man’s impact on wildlife
- Forest disturbance and logging
- Reptile and amphibian communities
- Honduran birds
- Cloud forest mammals

The first task is to choose a research topic and then develop a research question that you will be investigating. Example research questions for each topic are:

Biodiversity and Man’s impact on wildlife

Why are there so many species in Central American forests?

Has deforestation in Central America slowed?

Can ecotourism provide a viable alternative income for Cusuco National Park

Forest disturbance and logging

How can you quantify levels of forest disturbance?

How does the forest structure vary across the Cusuco cloud forest Park?

What is the benefit of protecting cloud forests over 1800m in Honduras?

Reptile and amphibian communities

How can you estimate the diversity and population levels of reptiles and amphibians?

What are the main species groupings of amphibians and reptiles in Cusuco Park?

What are the impacts of Chytrid fungus on amphibian populations in Central America

Honduran birds

The advantages and disadvantages of point and transect counting to describe bird communities

Does mist netting adequately describe the bird fauna of the island?

What is the conservation status of birds in Cuba and how have these been determined?

Cloud forest mammals

How do you estimate tapir populations?

Describe the social structure of howler monkeys

Describe the small mammal communities of the Cusuco Park ?

Once you have decided your research question you then need to complete background research on the question using a variety of sources (books, internet, magazines, journals, film etc). Before 1 May 2010 you then need to submit to Operation Wallacea a 2 -3 page report summarising the answer to your research question. The remaining part of the research project is done on site (see week 1)

Expedition week 1

During your first week in the field you will be spending 2 days on a jungle skills course, 2 days helping with forest habitat measurements and 2 days having lectures on cloud forest biodiversity and working with scientists on the various surveys. During this time you need to talk with the scientists on site about your research question and then produce a final written version of your research report. This needs to be handed in before leaving site.

While on site, you will also need to prepare and deliver a short presentation about your research project findings. You will need to use some of your evenings over that first week to develop the visual material for the slide (overhead transparencies, PowerPoint slides). All students are encouraged to be creative with their presentation which may include aspects of drama, leaflets, drawings and whiteboards in order to engage the listeners in their presentations. You will then need to give the presentation and will be assessed on the quality of your presentational skills by an Opwall CoPE assessor on site.

Recommended Challenge: Extended Study (from module 6 “Extended Project”), 30 hrs (3 credits)

Skills requirements satisfied: Planning and Carrying out a Piece of Research; Planning and Giving an Oral Presentation.

Evidence Submitted: Student Research Evidence Sheet; Desk study of research question; Final version of research report; Presentation materials; Presentation Evidence Sheet; Observer Checklist for Presentation (completed by Opwall assessor);

Expedition Week 2

Week 2 of the expedition will be spent on Cayo Menor or Utila Island where you will have 3 options:

To complete a PADI Open Water dive qualification. This is an internationally recognised entry-level qualification for diving.

To complete a reef ecology training course which consists of twice daily lectures and in-water practicals done either by snorkelling or diving if the student is already qualified. This course aims to teach students how to identify the commoner species of fish, macro-invertebrates and corals found on the reefs in their area, basic ecology of coral reefs and survey techniques used. There are 3 tests administered during this week, which students will need to pass in order to complete this challenge.

To complete your theory and confined water training in the UK before coming out so that when you are on site you only need to do 4 open water dives (3 days) and then spend the rest of the time (3 days) on a shortened version of the reef ecology course, which will be assessed with 1 test.

Whichever of these options you chose, you will need to keep a log of your progress, as well as fill in the Plan/Do/Review sheet, so that at the end of the week you have portfolio evidence which you can submit alongside the proof of your passing the Open Water or Reef Ecology course.

Recommended Challenge: Skill Development (from module 5 “Enrichment Activities), 50 hrs (5 credits).

Skills requirements satisfied: Improving your own Learning and Performance.

Evidence Submitted: Plan/Do/Review Sheet; activity log; witness statement from Opwall assessor; PADI Open Water Diver certification number or Reef Ecology certificate.

Timetable for completion of your portfolio of evidence

Fundraising meeting – this where an Opwall staff member will explain about how other school groups have raised the funds needed to join the expedition

CoPE briefing – this is where an Opwall staff member will give a presentation about how to achieve CoPEs part of your fundraising, expedition planning and expedition experience.

Assessment meeting 1 – this is where a CoPE assessor will visit the school to observe groups of 5 or 6 students in group discussions over their planning of fundraising activities. Their portfolio of evidence for the problem solving and communicating through discussion skills will also be assessed.

Preparing for your expedition briefing – this is where an Opwall staff member with first hand experience of the expedition site gives a presentation about what the students will be doing on the expedition and advice on how to prepare. The group is then divided into smaller groups of 5 – 6 students who then work over the next few weeks to complete the planning for their expedition. In addition the presenter will help the students decide on their research question

Assessment meeting 2 – this is where a CoPE assessor will visit the school to observe groups of 5 or 6 students in group discussions for the final stage of planning for their expeditions. The portfolio of evidence for working with others will also be assessed.

Before you go in the field - You need to submit to Operation Wallacea the following:

- Desk study research report
- Portfolio evidence for problem solving
- Portfolio evidence for communicating with others
- Portfolio of evidence for working with others

Week 1 in the field – you will complete your research report and give a presentation on your work. You will need to hand in the portfolios of evidence for research and presentation skills.

Week 2 in the field – you will complete your improving your learning portfolio of evidence and hand it in before leaving site

September – Opwall moderates all the portfolios of evidence and submits the successful candidates to ASDAN.

October – ASDAN issues CoPE certificates so the qualification can be included in university applications.

Appendix – Reading lists for example research questions

The reading lists below are a starting point for each example research question and further reading is suggested for more in depth investigation.

Introduction material for all Honduras projects

- Book – A Neotropical Companion by John Kricher, Princeton University Press.
- Report - Field R & Long PR (2007) *Cusuco National Park, Honduras: Field Report*, available online at <http://www.opwall.com/Library/Honduras/Honduras%20Terrestrial/Management/Cusuco%20Field%20Report%202007.pdf>
- Documentary - BBC Planet Earth, Episode 8: Jungles
- Documentary - BBC Planet Earth, Episode 9: Freshwater
- Documentary - BBC Life of Mammals, Episode 8: Tree Dwellers

Why are there so many species in Central American forests?

- Report – Biodiversity hotspots <http://www.biodiversityhotspots.org/xp/hotspots/mesoamerica/Pages/default.aspx>
- Report – Conservation International <http://www.biodiversityhotspots.org/xp/hotspots/mesoamerica/Pages/biodiversity.aspx>
- Statistics – Honduran Biodiversity http://en.wikipedia.org/wiki/Central_America#Biodiversity

Has deforestation in Central America slowed?

- Report - <http://rainforests.mongabay.com/deforestation/2000/Honduras.htm>
- Statistics - <http://www.biodiversityhotspots.org/xp/hotspots/mesoamerica/Pages/biodiversity.aspx>
- Article – Deforestation in Central America <http://www.rideforclimate.com/journals/?p=84>

Can ecotourism provide a viable alternative income for Cusuco National Park?

- Article - Holmes B (2009) Noisy ecotourists get wild birds in a flap. *New Scientist*, available online at <http://www.newscientist.com/article/dn17204-noisy-ecotourists-get-wild-birds-in-a-flap.html>

- Text - Wearing S (2009) *Ecotourism: Impacts, Potentials and Possibilities*. Oxford: Elsevier, Chapters 4, 5, and 6 (pp 65-135)
- Article – Eco-tourism: A sustainable trade? <http://news.bbc.co.uk/1/hi/sci/tech/6179901.stm>
- Text – Tourism and National Parks: Issues and implications by Richard Butler and Stephen Boyd.
- Article - Quammen D (2006) Hallowed ground: Nothing is ever safe. *National Geographic*, available online at <http://ngm.nationalgeographic.com/2006/10/world-parks/quammen-text/1>

How can you quantify levels of forest disturbance?

- Academic paper - Watt, D. A. 1998. Measuring disturbance in tropical forests: a critique of the use of species-abundance models and indicator measures in general. *Journal of Applied Ecology* 35: 467-469. <http://www.jstor.org/pss/2405213>
- Slik J. W. F. 2004. Assessing tropical lowland forest disturbance using plant morphology and ecological attributes. *Forest ecology and Management* Vol. 205: 1-5 p241-250. http://www.sciencedirect.com/science?_ob=ArticleURL&_udi=B6T6X-4DVBJTY-1&_user=10&_coverDate=02%2F01%2F2005&_rdoc=1&_fmt=high&_orig=search&_sort=d&_docanchor=&view=c&_searchStrId=1237202532&_rerunOrigin=google&_acct=C000050221&_version=1&_urlVersion=0&_userid=10&md5=5aff0fb1b406cabf14ebb2d565e14c06

How does the forest structure vary across the Cusuco cloud forest Park?

- Definition - Wikipedia (2009) Cloud Forest http://en.wikipedia.org/wiki/Cloud_forest (accessed 23.09.2009)
- Academic paper - E. H. Helmer, O. Ramos, T. del M. Lopez, M. Quinones and W. Diaz. 2002. Mapping the Forest Type and Land Cover of Puerto Rico, a component of the Caribbean Biodiversity Hotspot. *Caribbean Journal of Science* Vol. 38 (3-4): 165-183. http://www.fs.fed.us/global/iitf/pubs/ja_iitf_2002_helmer001.pdf

What is the benefit of protecting cloud forests over 1800m in Honduras?

- Definition - Wikipedia (2009) Cloud Forest http://en.wikipedia.org/wiki/Cloud_forest (accessed 23.09.2009)
- UNESCO (2000) Decision time for cloud forests. *IHP Humid Tropics Programme Series 13* Cambridge: UNESCO
- Report – The Cloud Forest Agenda UNEP <http://www.ourplanet.com/wcmc/pdfs/cloudforests.pdf>

How can you estimate the diversity and population levels of reptiles and amphibians?

- Text - Blomberg S & Shine R (2006) Reptiles. In WJ Sutherland (Ed.) *Ecological Census Techniques: A Handbook* Cambridge: Cambridge University Press pp 297-307

- Text - Halliday T (2006) Amphibians. In WJ Sutherland (Ed.) *Ecological Census Techniques: A Handbook* Cambridge: Cambridge University Press pp 278-296
- Text - Herpetofauna Worker's Manual by Tony Gent and Steve Gibson
- Journal Paper – Which Method's Are Most Effective for Surveying Rain Forest Herpetofauna? <http://www.jstor.org/pss/1565833>

What are the main species groupings of amphibians and reptiles in Cusuco Park?

- Academic paper - Wilson, L. D. and McCranie, J. R. 2004. The Herpetofauna of the cloud forests of Honduras. *Amphibian and Reptile Conservation* 3 (1): 34-48. <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC289145/>
- Article – Central American Herpetofauna http://pubget.com/paper/pgtmp_istor1441404?title=The%20Origins%20and%20History%20of%20the%20Central%20American%20Herpetofauna

What are the impacts of Chytrid fungus on amphibian populations in Central America?

- Article - Holland J (2009) Vanishing amphibians. *National Geographic* April 2009, available online at <http://ngm.nationalgeographic.com/2009/04/amphibian/holland-text>
- Academic paper - Puschendorf, R., Castaneda, F. and McCranie, J. R. 2006. Chytridiomycosis in Wild Frogs from Pico Bonito National Park, Honduras. *Ecohealth* Vol.3 (3): 178-181. <http://www.springerlink.com/content/2470032p58368067/>
- Definition and sampling video - <http://www.amphibianark.org/chytrid.htm>

The advantages and disadvantages of point and transect counting to describe bird communities

- Text - Gibbons DW & Gregory RD (2006) Birds. In WJ Sutherland (Ed.) *Ecological Census Techniques: A Handbook* Cambridge: Cambridge University Press pp 308-350
- Text – Bird Census Techniques by Colin Bibby, Neil Burgess and David Hill
- Article – Avian ecology field methods http://en.wikipedia.org/wiki/Avian_ecology_field_methods

Does mist netting adequately describe the bird fauna of the Cusuco National Park?

- Text - Gibbons DW & Gregory RD (2006) Birds. In WJ Sutherland (Ed.) *Ecological Census Techniques: A Handbook* Cambridge: Cambridge University Press pp 308-350

- Definition - http://en.wikipedia.org/wiki/Mist_net
- Article - Using two survey methods to determine a suburban bird population by C Hansrote and M Hansrote - <http://elibrary.unm.edu/sora/NABB/v016n04/p0114-p0118.pdf>
- Academic paper – Derlindati, J., Enrique and Caziani, M., Sandra. 2005. Using canopy and understory mist nets and point counts to study bird assemblages in Chaco forests. The Wilson Bulletin 117(1): 92-99. Abstract found at <http://www.bioone.org/doi/abs/10.1676/03-063?cookieSet=1&journalCode=wils.1>
- Academic paper – Whitman, A. A., Hagan, J. M. and Brokaw, N. V. L. 1997. A comparison of two bird survey techniques used in a subtropical forest. The Condor Vol. 99(4): p955-965. Abstract found at <http://cat.inist.fr/?aModele=afficheN&cpsidt=2062566> .
- Academic paper – Martin, T. E. Blackburn, G. A. & Simcox, W. (2010) An assessment of the effectiveness of two methods in describing a neotropical cloud forest bird community. Ornithologia Neotropical 21: 131–147, 2010

What is the conservation status of birds in Honduras and how have these been determined?

- Report – Birdlife International http://www.birdlife.info/docs/AmRDBPDFs/Amazilia_luciae_eng.pdf
- Report – Status of birds http://www.birdlife.info/docs/AmRDBPDFs/Amazilia_luciae_eng.pdf
- Statistics – All Honduran birds species and their threatened status http://en.wikipedia.org/wiki/List_of_birds_of_Honduras

How do you estimate tapir populations?

- Report – Cusuco annual report 2006 (Tapir section p59-70) <http://www.opwall.com/Library/Honduras/Honduras%20Terrestrial/Management/Cusuco%20Field%20Report%202006.pdf>
- Report – Cusuco Methodologies 2009 (tapir section) <http://www.opwall.com/Expeditions/Honduras/Honduran%20research%20programme/METHODOLOGIES%20AND%20OBJECTIVES%20FOR%20THE%202009%20CUSUCO%20NATIONAL%20PARK%20SURVEYS.pdf>
- Academic paper – A. J. Noss et al. 2003. Camera trapping and Radio Telemetry Study of Lowland Tapir (*Tapirus terrestris*) in Bolivian Dry Forests. Tapir Conservation Vol. 12: 1 http://atrium.tapirs.org/documents/Noss_AJ_et_al_2003_A_Camera_trapping_and_radio_telemetry_study_of_lowland_tapri_Tapirus_terrestris_in_Bolivian_Dry_Forest.pdf

Describe the social structure of howler monkeys.

- Definition - http://en.wikipedia.org/wiki/Howler_monkey

- Academic paper – Silver, S.C. Ostro, L. E. T. Yeager, C. P. and Horwich, R. 1998. Feeding Ecology of the Black Howler Monkey (*Alouatta pigra*) in Northern Belize. American Journal of Primatology 45: 263-279. <http://www.communityconservation.org/publications/feedeco98.pdf>
- Thesis – Impact of Forest Fragmentation on Home Range and Group Composition of Mantled Howler Monkeys (*Alouatta palliata palliata*) in Manacal, Honduras and a Suggested Plan for Future Management of the Area by Elisabeth Wulffeld
<http://www.opwall.com/Library/Honduras/Honduras%20Terrestrial/Primates/Howler%20monkey%20thesis.pdf>

Describe the small mammal communities of the Cusuco Park.

- Text - Krebs C (2006) Mammals. In WJ Sutherland (Ed.) *Ecological Census Techniques: A Handbook* Cambridge: Cambridge University Press pp 351-369
- Text - Fiona Reid (1998). *A Field Guide to the Mammals of Central America and Southeast Mexico*.
- Academic paper – Myton B. 1974. Utilization of space by *Peromyscus leucopus* and other small mammals. Ecology 55: 277-290. <http://www.jstor.org/pss/1935216>