

Honduras - Reading lists and research questions

The following research questions and accompanying reading lists are provided to give everyone a chance to think about the scientific work and research areas that they might encounter at your expedition site. The list is a starting point for those doing CoPE and other extended project work and you may wish to alter the question or go in a slightly different direction but do consult your tutor/Opwall before deciding in your final topic: make sure it is practical and you are really interested in it.

The reading lists are only 'starters' and NOT meant to be a definitive list for your research. You will get many leads from these and we have chosen a good range of sources from academic papers to video clips. We have checked all of the internet links but these constantly change with time so expect some not to work (cut and paste into your web browser address bar if you have an electronic version of this booklet). We have tried to direct you to the summary abstracts of many of the papers cited as they are not easily available unless you have access to a University library or a journal 'on-line'.

Do make use of the research library on the OpWall website - <http://www.opwall.com>
If you do use a reference ALWAYS quote as much detail as you can and if possible, the original citation.

If you want to find further academic papers go to the Mendeley Website - www.mendeley.com/research-papers/. This website allows you to find more references free of charge and the links they provide can even get you to the original article: if not, try cutting and pasting the title into 'google' and you will be surprised what you get!

A level keyword link	Research area	Research questions	Suggested reading list
Tropical Rainforests	Background	General reading for Honduras	<p>Book - An introduction to cloud forest trees. Monteverde, Costa Rica by Haber, W.A., Zuchowski, W., & Bello, E. 2000. 2nd edition. Mountain Gem publications</p> <p>Book - A Neotropical Companion: An introduction to the animals, plants, & ecosystems of the new world tropics by Kricher, J. 1997. Princeton University Press</p> <p>Book - A Naturalists Guide to the Tropics by Lambertini, M. 2000. University Of Chicago Press</p> <p>Book - A Neotropical Companion by John Kricher, Princeton University Press.</p> <p>Report - Long PR (2009) Cusuco National Park, Honduras: Field Report, available online at http://www.opwall.com/Library/Opwall%20library%20pdfs/Reports/Honduras/Honduras%20Terrestrial/2009%20Cusuco%20report.pdf</p> <p>Electronic media - Documentary BBC Planet Earth, Episode 8: Jungles</p> <p>Electronic media - Documentary BBC Planet Earth, Episode 9: Freshwater</p> <p>Electronic media - Documentary BBC Life of Mammals, Episode 8: Tree Dwellers</p>
ID Guides	Background	General	<p>Book - Birds of Mexico and Northern Central America by Howell, S.N.G., Webb, S. 1995. Oxford University Press</p> <p>Book - Reptiles of Central America by Kohler, G. 2003. Herpeton Elke Kohler</p> <p>Book - A Field Guide to the Mammals of Central America and Southeast Mexico by Reid, F.A. 1997. Oxford University Press.</p>
Survival	Background	General	Book - AS Survival Guide Wiseman, J. 1999. Collins GEM.
Sampling	Background	Sampling	Book - Ecological Census Techniques: A Handbook (2 nd Edition) by Sutherland, W.J. 2006. Cambridge University Press, Cambridge.
ecotourism national park conservation	Biodiversity and Man s impact on wildlife	Can ecotourism provide a viable alternative income for	Academic paper: Sound the stressor: how Hoatzins (<i>Opisthocomus hoazin</i>) react to ecotourist conversation - Daniel S. Karp and Terry L. Root - Biodiversity and Conservation, 2009, Volume 18, Number 14, Pages 3733-3742

		Cusuco National Park?	<p>http://www.springerlink.com/content/hu8g74217981p481/fulltext.html Article - Eco-tourism: A sustainable trade? James Mair - DEC 2006 - http://news.bbc.co.uk/1/hi/sci/tech/6179901.stm Electronic media - Exploring Cusuco National Park (From the Backpacker) - hottest spot for ecotourism. http://www.lonelyplanet.tv/Clip.aspx?key=028DCD23F5569BC8 Electronic media - Jungle Expedition to Cusuco National Park - http://www.youtube.com/watch?v=dECMgDU-jYg Academic paper - The Implications of Ecotourism for Developing Countries: The Case of Cusuco National Park,. Honduras. A dissertation submitted to the University of Manchester - Daniela Hasses SEP 2004 - request via email to OpWall. Article - Hope for the people - Honduras - Cusuco National Park - http://junglexpedition.wordpress.com then search with cusuco and http://www.junglexpedition.org/?p=162</p>
human impact rainforest deforestation	Biodiversity and Mans impact on wildlife	Has deforestation in Central America slowed?	<p>Report - Honduras Forest Information and data - http://rainforests.mongabay.com/deforestation/2000/Honduras.htm Other - Statistics - http://www.biodiversityhotspots.org/xp/hotspots/mesoamerica/Pages/biodiversity.aspx Other (website) - World deforestation rates and forest cover statistics, 2000-2005 Rhett A. Butler, mongabay.com November 16, 2005 http://news.mongabay.com/2005/1115-forests.html Article - Deforestation in Central America 2006 : http://www.biodiversityhotspots.org/xp/hotspots/mesoamerica/Pages/biodiversity.aspx Academic paper - De Fries R, Hansen A & Turner BL (2007) Land use change around protected areas: Management to balance human needs and ecological function. Ecological Applications 17: 1031-1038 Article - Operation Wallacea Trust - Management of the Cusuco Cloud Forests in Honduras - http://www.opwall.com/Trust/Pages/honduras_cusuco.shtml Article - What are the underlying causes of deforestation? The World Guide 1999/2000 by the Third World Institute. - http://www.wrm.org.uy/deforestation/indirect.html Book - P. W. Richards, University of Wales, Bangor - The Tropical Rain Forest An Ecological Study 2nd Edition - 1996 ISBN: 9780521421942</p>
biodiversity mesoamerica	Biodiversity and Mans impact on wildlife	Why are there so many species in Central American forests?	<p>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 Other (website)- Honduran Biodiversity - http://en.wikipedia.org/wiki/Central_America#Biodiversity Article - Habitat Loss and Extinction in the Hotspots of Biodiversity - Brooks, TM; Mittermeier, RA; Mittermeier, CG, et al, CONSERVATION BIOLOGY Volume: 16 Issue: 4 Pages: 909-923 Published: AUG 2002 - abstract can be found on - http://onlinelibrary.wiley.com/doi/10.1046/j.1523-1739.2002.00530.x/abstract Article - Biodiversity hotspots for conservation priorities - Norman Myers, Russell A. Mittermeier, Cristina G. Mittermeier, Gustavo A. B. da Fonseca & Jennifer Kent - Nature - Volume: 403 Pages 853- 858 Published FEB 2000 - available at http://biolambiental.posgrado.unam.mx/pdf/Myers2000.pdf</p>
fair trade sustainability	Biodiversity and Mans impact on wildlife	What has been the impact Fair Trade coffee on Cusuco National Park?	<p>Article - Hope for the people - Honduras - Cusuco National Park - http://junglexpedition.wordpress.com/2010/02/04/hope-for-the-people-san-pedro-sula-honduras-cusuco-national-park/ Report - Environment and Development in the Buffer Zone of Cusuco National Park, Honduras: Experiences, Problems and Prospects - 2005 - http://www.opwall.com/Library/Opwall%20library%20pdfs/Reports/Honduras/Honduras%20Terrestrial/Buenos%20Aires%20report%20[2005].pdf Report - CUSUCO NATIONAL PARK PROPOSED MANAGEMENT SCHEME 2006 Dr. Tim Coles Dr. Richard Field - http://www.wallaceatrust.org/Resources/Honduras/Ecotourism%20development%20in%20Cusuco.pdf Other - definition - Fair trade - From Wikipedia, the free encyclopedia - http://en.wikipedia.org/wiki/Fair_trade Article - WorldBank.org - A world first Fair trade cashews for biodiversity conservation Tony Whitten, 2008-03-30 - http://blogs.worldbank.org/eastasiapacific/a-world-first-fair-trade-</p>

			cashews-for-biodiversity-conservation
climate change human impact	Biodiversity and Mans impact on wildlife	Has global climate change had any impact on Cusuco National Park?	<p>Book - Townsend, J. H. and L. D. Wilson The Amphibians and Reptiles of Cusuco National Park, Honduras. Los Anfibios y Reptiles del Parque Nacional Cusuco, Honduras 2008 http://www.herplitsales.com/?page=shop/flypage&product_id=142297&keyword=cusuco&searchby=title&offset=0&fs=1&CLSN_3267=12923202733267ddf3ea72f8b44bad39</p> <p>Report - Cusuco National Park, Honduras Status, ecology and conservation of a cloud forest 2008 - http://www.opwall.com/Library/Opwall%20library%20pdfs/Reports/Honduras/Honduras%20Terrestrial/2008%20honduras%20preliminary%20report.pdf</p> <p>Article - Rainforests and Climate Change www.rainforestfoundationuk.org/Rainforests_and_Climate_Change</p> <p>Article - Fate of the rainforest is 'irreversible' The Independent March 2009 - http://www.independent.co.uk/environment/climate-change/fate-of-the-rainforest-is-irreversible-1643083.html</p>
classification rainforest population	Cloud forest mammals	Describe the small mammal communities of the Cusuco Park.	<p>Book - Krebs C (2006) Mammals. In WJ Sutherland (Ed.) Ecological Census Techniques: A Handbook Cambridge: Cambridge University Press pp 351-369</p> <p>Book - Fiona Reid (1998). A Field Guide to the Mammals of Central America and Southeast Mexico.</p> <p>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</p>
population sampling ecology	Cloud forest mammals	How do you estimate tapir populations?	<p>Report - Cusuco annual report 2006 (Tapir section p59-70) http://www.opwall.com/Library/Honduras/Honduras%20Terrestrial/Management/Cusuco%20Field%20Report%202006.pdf</p> <p>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</p> <p>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</p> <p>Article - Tapir Population modeling Using Vortex http://www.tapirs.org/action-plan/vortex-modelling.html</p> <p>Other - Tapir Specialist Group - http://www.tapirs.org/about-tsg/index-about.html</p> <p>Academic paper - Lizcano DJ & Cavelier J (2000) Population density and habitat availability of the mountain tapir (Tapirus pinchaque) in the Central Colombian Andes. Biotropica 32: 165-173. http://atrium.tapirs.org/biblio_display_info.php?id=2752&q=mountain</p> <p>Report - Philip Wheeler and Asri Dwiyahreni - Large mammal monitoring in Lambusango . http://www.opwall.com/Library/Opwall%20library%20pdfs/Reports/Indonesia/Indonesia%20Terrestrial/Mammals/Wheeler%20and%20Dwiyahreni%20-%20Large%20mammal%20monitoring%20in%20Lambusango.pdf</p>
captive breeding conservation	Cloud forest mammals	Can captive breeding of mammals help to conserve rare species? (tapir?)	<p>Book - Brooks DM, IUCN/SCC Tapir Specialist Group 1997 - Tapirs: status survey and conservation action plan - http://books.google.co.uk/books?id=UrVNNnCcMC&printsec=frontcover&source=gbs_ge_summary_r&cad=0#v=onepage&q&f=false</p> <p>Article - 3.12.1 Tapirs - FAO - http://www.fao.org/docrep/T0750E/t0750e0k.htm#3.12.1%20tapirus%20terrestris%20(amazonian%20tapir)</p> <p>Other - website - Tapir Specialist Group - http://www.tapirs.org/news/malay-relocate.html</p> <p>Academic paper - Da Silva et al - Genetic Approaches Refine Ex Situ Lowland Tapir (Tapirus terrestris) Conservation - Journal of Heredity 2010 - http://jhered.oxfordjournals.org/content/101/5/581.abstract</p> <p>Book - Primack, Richard B. Essentials of Conservation Biology. Chapter 14: pages 361-393 - CAPTIVE BREEDING & SPECIES - http://www-personal.umich.edu/~dallan/nre220/outline23.htm#REINTRODUCTIONS</p>
classification rainforest	Cloud forest mammals	Describe the social structure	<p>Other - Definition http://en.wikipedia.org/wiki/Howler_monkey</p> <p>Academic paper - Silver, S.C. Ostro, L. E. T. Yeager, C. P. and Horwich, R.</p>

population primate behaviour		of howler monkeys	1998. Feeding Ecology of the Black Howler Monkey (<i>Alouatta pigra</i>) in Northern Belize. <i>American Journal of Primatology</i> 45: 263-279. http://www.communityconservation.org/publications/feedeco98.pdf Academic paper – Thesis - Impact of Forest Fragmentation on Home Range and Group Composition of Mantled Howler Monkeys (<i>Alouatta palliata</i>) 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 - available on request from OpWall
PCR DNA	Field work techniques	Can biodiversity DNA investigations be completed in field labs?	Other - dissertation activity - HM201 Barcoding the diversity of Cusuco cloud forest - full reading list - http://www.opwall.com/Expeditions/Honduras/Honduran%20research%20programme/Dissertations/Suggested%20reading%20forest/Suggested%20reading%20documents/HM201%20-%20Barcoding.pdf Article - Hebert PDN, Stoeckle MY, Zemlak TS, Francis CM (2004) Identification of Birds through DNA Barcodes. <i>PLoS Biol</i> 2(10): e312. doi:10.1371/journal.pbio.0020312 - http://www.plosbiology.org/article/info%3Adoi%2F10.1371%2Fjournal.pbio.0020312 Academic paper - Barker RH - Use of PCR in the field. <i>Parasitol Today - Trends in Parasitology</i> , Volume 10, Issue 3, 117-119, 1 January 1994 - http://www.cell.com/trends/parasitology/abstract/0169-4758(94)90013-2 Other - definition - PCR - From Wikipedia, the free encyclopedia - http://en.wikipedia.org/wiki/Polymerase_chain_reaction
ecology niche trophic level	Forest Conservation	Why are fig trees so important for the forest fauna?	Book - P. W. Richards, University of Wales, Bangor - <i>The Tropical Rain Forest An Ecological Study</i> 2nd Edition 1996 ISBN: 9780521421942 Other - definition - Ficus - http://en.wikipedia.org/wiki/Ficus Other - website - Figweb - http://www.figweb.org/Ficus/index.htm Book - Burrows, J and S - <i>Figs of Southern & South-Central Africa</i> - http://www.figweb.org/Ficus/Fig_book/Figs_of_Africa.htm
conservation rainforest	Forest disturbance and logging	What is the benefit of protecting cloud forests over 1800m in Honduras?	Book - P. W. Richards, University of Wales, Bangor - <i>The Tropical Rain Forest An Ecological Study</i> 2nd Edition 1996 ISBN: 9780521421942 Other - Definition Wikipedia (2009) Cloud Forest http://en.wikipedia.org/wiki/Cloud_forest (accessed 23.09.2009) Article - UNESCO (2000) Decision time for cloud forests. IHP Humid Tropics Programme Series 13 Cambridge: UNESCO - http://www.activeremedy.org.uk/pages/files/other/Cloud_forests.pdf Report - The Cloud Forest Agenda UNEP http://www.unep-wcmc.org/forest/cloudforest/presspack/PDF/Clouds%20final%20LR.pdf
conservation sampling human impact	Forest disturbance and logging	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. <i>Journal of Applied Ecology</i> 35: 467-469. http://www.jstor.org/pss/2405213 Academic paper - Slik J. W. F. 2004. Assessing tropical lowland forest disturbance using plant morphology and ecological attributes. <i>Forest ecology and Management</i> Vol. 205: 1-5 p241-250. http://www.phylodiversity.net/fslik/ForestEcolManag2005.pdf Book - P. W. Richards, University of Wales, Bangor - <i>The Tropical Rain Forest An Ecological Study</i> 2nd Edition 1996 ISBN: 9780521421942 Book - P. W. Richards, University of Wales, Bangor - <i>The Tropical Rain Forest An Ecological Study</i> 2nd Edition 1996 ISBN: 9780521421942
ecology niche rainforest habitat	Forest disturbance and logging	How does the forest structure vary across the Cusuco cloud forest Park?	Other - 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. <i>Caribbean Journal of Science</i> Vol. 38 (3-4): 165-183. http://www.fs.fed.us/global/iitf/pubs/ja_iitf_2002_helmer001.pdf Book - P. W. Richards, University of Wales, Bangor - <i>The Tropical Rain Forest An Ecological Study</i> 2nd Edition 1996 ISBN: 9780521421942

conservation sampling biodiversity	Honduran birds	Does mist netting adequately describe the bird fauna of the reserve?	<p>Book - Gibbons DW & Gregory RD (2006) Birds. In WJ Sutherland (Ed.) Ecological Census Techniques: A Handbook Cambridge: Cambridge University Press pp 308 350</p> <p>Other - Definition http://en.wikipedia.org/wiki/Mist_net</p> <p>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</p> <p>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/10.1676/03063?cookieSet=1&journalCode=wils.1</p> <p>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</p> <p>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 - http://www.opwall.com/Library/full%20pub%20list%20alphabetical.shtml</p>
conservation sampling biodiversity transect	Honduran birds	The advantages and disadvantages of point and transect counting to describe bird communities?	<p>Book - Gibbons DW & Gregory RD (2006) Birds. In WJ Sutherland (Ed.) Ecological Census Techniques: A Handbook Cambridge: Cambridge University Press pp 308 350</p> <p>Book - Bibby CJ, Burgess ND, Hill DA, Mustoe, SH. (2002) Bird Census Techniques (Second edition). Academic press: London</p> <p>Article - Avian ecology field methods http://en.wikipedia.org/wiki/Avian_ecology_field_methods</p> <p>Book - Howell SNG, Webb S. (2005) A Guide to the Birds of Mexico and Northern Central America, Oxford: Oxford University Press</p>
conservation sampling biodiversity	Honduran birds	What is the conservation status of birds in Honduras and how have these been determined?	<p>Other - Statistics All Honduran birds species and their threatened status http://en.wikipedia.org/wiki/List_of_birds_of_Honduras</p> <p>Report - Honduran Emerald Amazilia luciae - http://www.birdlife.org/datazone/speciesfactsheet.php?id=1934</p> <p>Other - Birdlife globally threatened bird forum forum - http://www.birdlife.org/globally-threatened-bird-forums/</p> <p>Other - Birdlist website - Honduran birds - http://www.birdlist.org/honduras.htm</p>
classification biodiversity	Reptile and amphibian communities	What are the main species groupings of amphibians and reptiles in Cusuco Park?	<p>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/</p> <p>Article - Central American Herpetofauna http://pubget.com/paper/pgtmp_jstor1441404?title=The%20Origins%20and%20History%20of%20the%20Central%20American%20Herpetofauna</p> <p>Other - ID Herps of Honduras - http://travel.mongabay.com/honduras/honduras_herps.html</p>
alien species invasive conservation population biodiversity	Reptile and amphibian communities	What are the impacts of chytrid fungus on amphibian populations in Central America?	<p>Article - Holland J (2009) Vanishing amphibians. National Geographic April 2009, available online at http://ngm.nationalgeographic.com/2009/04/amphibian/holland_text</p> <p>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/</p> <p>Electronic media - Definition and sampling video http://www.amphibianark.org/chytrid.htm</p>
population biodiversity	Reptile and amphibian communities	How can you estimate the diversity and population levels of reptiles and amphibians?	<p>Book - Blomberg S & Shine R (2006) Reptiles. In WJ Sutherland (Ed.) Ecological Census Techniques: A Handbook Cambridge: Cambridge University Press pp 297 307</p> <p>Book - Halliday T (2006) Amphibians. In WJ Sutherland (Ed.) Ecological Census Techniques: A Handbook Cambridge: Cambridge University Press pp 278 296</p> <p>Book - Gent T and Gibson S (2003). Herpetofauna Workers Manual. JNCC, Peterborough.</p> <p>Book - Bennett D (1999). Expedition Field Techniques: Reptiles and Amphibians. Expedition Advisory Centre, Royal Geographical Society, London. - http://www.rgs.org/NR/rdonlyres/9E3CF152-C817-470C-AC0C-C8FE82A8CBAD/0/Reptilesupdated.pdf</p> <p>Academic paper - Which Method s Are Most Effective for Surveying Rain Forest Herpetofauna?</p>

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