

Egypt: 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	List – Egypt Terrestrial
general	Background	General reading for Egypt	Book – Lonely Planet Guide – discover Egypt http://shop.lonelyplanet.com/egypt/discover-egypt-1?lpaffil=lpdest-shoppod
ID Guides	Background	General ID	Book - Hoath Richard, A field guide to the mammals of Egypt - ISBN-13: 9789774162541 Full text from books.google.co.uk put into search bar bio geography egypt Book - Bertel Bruun and Sherif Baha el Din Common Birds of Egypt ISBN: 9774242394 Book – Sherif Baha El Din A guide to the Reptiles and Amphibians of Egypt ISBN: 9774249798 Book – Larsen TB The Butterflies of Egypt ISBN: 8788757145 Book – electronic Dietz C Illustrated identification key to the bats of Egypt 2005 http://www.mammalwatching.com/Palearctic/Otherreports/Bat%20Key%20for%20Egypt.pdf
general	Background	Sampling	Book - Ecological Census Techniques: A Handbook (2 nd Edition) by Sutherland, W.J. 2006. Cambridge University Press, Cambridge.
Human impact conservation	Biodiversity and man's impact on wildlife	What are the threats facing the birds of St Katherine's Protectorate?	Report - Country Profile – Egypt Status and Trends in Biodiversity Convention on Biological Diversity http://www.cbd.int/countries/profile.shtml?country=eg Other – website Sinaibirds - http://www.sinaibirds.com/index.htm

			<p>Book – on-line UNEP Global Deserts Outlook - http://www.unep.org/geo/gdoutlook/</p>
Human impact conservation	Biodiversity and man's impact on wildlife	<p>What are the main human induced pressures on the wildlife communities and ecosystems of the St. Katherines Protectorate?</p>	<p>Report: EAA 2004, Growth in Tourism in South Sinai: challenges facing tourism development. http://st-katherine.net/downloads/Challenges%20Facing%20Tourism.pdf</p> <p>Other – Saint Katherine Protectorate - http://en.wikipedia.org/wiki/Saint_Katherine_Protectorate</p> <p>Report - Country Profile – Egypt Status and Trends in Biodiversity Convention on Biological Diversity http://www.cbd.int/countries/profile.shtml?country=eg</p> <p>Report: Egypt: National Strategy and Action plan for Biodiversity Conservation 1998 http://www.cbd.int/doc/world/eg/eg-nbsap-01-en.pdf</p>
Human impact conservation adaptation	Biodiversity and man's impact on wildlife	<p>The Sinai Baton Blue is the smallest butterfly in the world: how is it adapted for survival and what are the main threats to its future survival?</p>	<p>Article: Global warming's effects extend to World's Smallest Butterfly. Science Daily Aug 2005, http://www.sciencedaily.com/releases/2005/08/050805175531.htm</p> <p>Academic paper - GILBERT F, RASHAD S, KAMEL M, EL DIN ISMAIL A, JAMES M & ZALAT S, 2010. Monitoring of the endemic Sinai Baton Blue butterfly Pseudophilotes sinaicus in the St Katherine Protectorate, South Sinai. Egyptian Journal of Biology, 12, 18-26. http://ajol.info/index.php/ejb/article/viewFile/56575/45001</p>
Human impact conservation Climate change global warming	Biodiversity and man's impact on wildlife	<p>How is global warming affecting the wildlife of the Sinai?</p>	<p>Article: Global warming's effects extend to World's Smallest Butterfly. Science Daily Aug 2005, http://www.sciencedaily.com/releases/2005/08/050805175531.htm</p> <p>Report: Global Warming Images – Sinai Desert - http://www.globalwarmingimages.net/category_Sinai_Desert.html</p>
Human impact conservation biodiversity	Biodiversity and man's impact on wildlife	<p>The biodiversity of desert is relatively low compared to other ecosystems – why is this and how do you measure it?</p>	<p>Article – Operation Wallace ES101 St Katherine biodiversity atlas project http://www.opwall.com/Expeditions/Egypt/Egyptian%20research%20programme/Training%20Courses/Research%20projects%20&%20training.shtml</p> <p>Other – Definition Biodiversity - http://en.wikipedia.org/wiki/Biodiversity</p> <p>Academic paper - Ayyad, M. A., Fakhry, A. M., & Moustafa, A. R. A. (2000). Plant biodiversity in the Saint Catherine area of the Sinai Peninsula, Egypt. <i>Biodiversity & Conservation</i>, 9(2), 265-281. http://www.springerlink.com/content/u1400647wm87247p/</p> <p>Article – Global Environment Biodiversity Desert</p>

			http://www.admwebstudios.co.uk/Biodiversity10.htm
evolution adaptation endemism	Bio Geography	Describe the Bio-geographical history of Egypt and how this has shaped the species that now inhabit the area?	Report - Country Profile – Egypt Status and Trends in Biodiversity Convention on Biological Diversity http://www.cbd.int/countries/profile.shtml?country=eg Book - Hoath Richard, A field guide to the mammals of Egypt - ISBN-13: 9789774162541 Full text from books.google.co.uk put into search bar bio geography Egypt
Deserts adaptation	Desert adaptation	How are plants adapted for life in the Sinai desert?	Book – Mares, M Encyclopedia of Deserts 1999 put into google search – book loadable from books.google.co.uk Book – on-line UNEP Global Deserts Outlook - http://www.unep.org/geo/gdoutlook/ Academic paper - GUENTHER R, GILBERT F, ZALAT S, SELIM K & THE VOLUNTEERS OF OPERATION WALLACEA IN EGYPT, 2005. Vegetation and grazing in the St Katherine Protectorate, South Sinai, Egypt. Egyptian Journal of Biology, 7, 55-65 http://www.opwall.com/Library/Research%20Reports%20-%20Egypt.shtml
Deserts adaptation	Desert adaptation	How are desert animals adapted to survive in the Sinai desert?	Book – Mares, M Encyclopedia of Deserts 1999 put into google search – book loadable from books.google.co.uk Book – on-line UNEP Global Deserts Outlook - http://www.unep.org/geo/gdoutlook/
Biodiversity conservation national parks	Environment al monitoring	What is the biodiversity atlas project and how does it help to manage the National Parks of Egypt?	Article – Operation Wallace ES101 St Katherine biodiversity atlas project http://www.opwall.com/Expeditions/Egypt/Egyptian%20research%20programme/Training%20Courses/Research%20projects%20&%20training.shtml Other – Definition Biodiversity - http://en.wikipedia.org/wiki/Biodiversity Academic paper - Ayyad, M. A., Fakhry, A. M., & Moustafa, A. R. A. (2000). Plant biodiversity in the Saint Catherine area of the Sinai Peninsula, Egypt. <i>Biodiversity & Conservation</i> , 9(2), 265-281. http://www.springerlink.com/content/u1400647wm87247p/
PCR DNA	Field work techniques	Can biodiversity DNA investigations be completed in field labs?	Article - Hebert PDN, Stoeckle MY, Zemlak TS, Francis CM (2004) Identification of Birds through DNA Barcodes. PLoS Biol 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. Parasitol Today - Trends in Parasitology, 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
Biodiversity sampling deserts	Field work techniques Environmental monitoring	How do you estimate the distribution, abundance and biodiversity of birds in the Sinai Protectorate?	Academic paper - White, M. L. J., Gilbert, F., & S, Z. (2007). Bird surveys and distance sampling in St Katherine Protectorate, South Sinai, Egypt in 2007. <i>Egyptian Journal of Biology</i> , 9, 60-68. White, M. L. J., Gilbert, F., & S, Z. (2007). Bird surveys and distance sampling in St Katherine Protectorate, South Sinai, Egypt in 2007. <i>Egyptian Journal of Biology</i> , 9, 60-68. Find in OpWall reports http://www.opwall.com/Library/Research%20Reports%20-%20Egypt.shtml Other – website Sinaibirds - http://www.sinaibirds.com/index.htm
Sampling grazing deserts desertification	Field work techniques Environmental monitoring	How would you investigate the effects of grazing on the health of local plant communities?	Academic paper - GUENTHER R, GILBERT F, ZALAT S, SELIM K & THE VOLUNTEERS OF OPERATION WALLACEA IN EGYPT, 2005. Vegetation and grazing in the St Katherine Protectorate, South Sinai, Egypt. <i>Egyptian Journal of Biology</i> , 7, 55-65 http://www.opwall.com/Library/Research%20Reports%20-%20Egypt.shtml Other – article Grazing http://en.wikipedia.org/wiki/Grazing
human impact endangered conservation deserts	Impacts of Man on Sinai wildlife	What are the main threats to current Sinai wildlife?	Report - Country Profile – Egypt Status and Trends in Biodiversity Convention on Biological Diversity http://www.cbd.int/countries/profile.shtml?country=eg Report: Egypt: National Strategy and Action plan for Biodiversity Conservation 1998 http://www.cbd.int/doc/world/eg/eg-nbsap-01-en.pdf Other – Saint Katherine Protectorate - http://en.wikipedia.org/wiki/Saint_Katherine_Protectorate Book – on-line UNEP Global Deserts Outlook - http://www.unep.org/geo/gdoutlook/
Biodiversity sampling deserts	Mammals, Reptiles and Birds	How do you estimate the distribution, abundance and biodiversity of reptiles in the Sinai Protectorate?	Academic paper – White ML Surveys and comparisons of birds and reptiles in St. Katherine Protectorate, Egypt, 2007 http://www.opwall.com/Library/Research%20Reports%20-%20Egypt.shtml Academic paper - Schmidt, K. P., & Marx, H. (1956). The Herpetology of Sinai. <i>Fieldiana Zoology</i> , 39(4), 21-40. Retrieved from http://openlibrary.org/books/OL7128800M/The_herpetology_of_Sinai
Biodiversity sampling deserts	Mammals, Reptiles and Birds	How do you estimate the distribution, abundance and biodiversity of bats in the Sinai	Academic papers – OpWall research library – 3 reports http://www.opwall.com/Library/Research%20Reports%20-%20Egypt.shtml Academic paper - Benda, P., Dietz, C., Andreas, M., Hotovy, J., Lucan, R. K., Maltby, A., Meakin, K., Truscott, J. & Vallo, P. (2008) Bats (Mammalia: Chiroptera) of the Eastern

		Protectorate?	Mediterranean and Middle East. Part 6. Bats of Sinai (Egypt) with some taxonomic, ecological and echolocation data on that fauna. <i>Acta Soc. Zool. Bohem.</i> 71, 1-103 http://www.opwall.com/Library/full%20pub%20list%20alphabetical.shtml Book – electronic Dietz C Illustrated identification key to the bats of Egypt 2005 http://www.mammalwatching.com/Palearctic/Otherreports/Bat%20Key%20for%20Egypt.pdf
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