

## **Appendix 10: Outline of the Quantitative Monitoring course**

### Introduction

Resources provided: free software for analysis of monitoring data, papers in PDF, notes, webpages

The basis of systematic monitoring

Baseline description of what is there

Monitoring of indicators

Testing hypotheses, e.g. testing for trends

What to monitor ? Indicators

Threats (building, hunting, etc)

Habitat size, fragmentation, connectedness

A habitat classification for Egypt

The importance of habitat size for extinction risk

Consequences of area reductions - higher extinction risk

Populations and metapopulations: the Sinai Baton Blue

Size & connectedness using satellite imagery

Presence / absence of species

Importance of secure identification: survey of available guides: build up PA-specific guide

Minimum data required for mapping

The BioMAP mapping scheme and its objective - maps of potential distribution

The Biodiversity Portal - an information centre for biodiversity (the CHM)

Abundance of single species

Sampling and sampling schemes

Plants - quadrats, plotless methods, permanent quadrats, remote sensing

All organisms - quadrats, distance methods, marking methods, indirect techniques

Performance of single species

Performance as Darwinian fitness. Methods of measuring

Community composition

Conversion to a single number - species richness, species diversity

Ordination of community data relative to control sites to give quality index

Testing hypotheses

Hypotheses and the scientific method. Null hypotheses. General & specific questions

Degrees of freedom, significance, measurements, error distributions, entering data

Differences (chi-squared, ANOVA, the GLM approach) and trends (correlation, regression)

Summary