

12.2.6 Biological evidence

Naturalistic scientists (Atran 1990; 1998) collect almost any sort of evidence. Although it is best to plan for a project by practising how to collect and preserve plants, insects, mushrooms, fish, birds, and soil samples, it is also important to be creative and collect samples when they are realistically available and not be overly concerned about having a perfect sample. At the end of the day, an imperfect sample is better than no sample at all. Common sense should be a good judge about how to collect many samples and what should be collected. For example, preservation in alcohol or drying is often better than storage in water or at environmental temperature because most organisms will decay in the natural environment if left alone. Therefore, by creating an unnatural environment they may be preserved in some fashion. It is not unusual for people within a community to have methods for preserving materials, such as taxidermy, and these should be used when available.

p. 294 When collecting samples, it is very valuable to collect them in at least triplicate if at all possible; one set for local national deposit, one set for distribution to different international experts for identification, and one set for deposit in another location, either at a different national location or internationally. Sample sets need to all be cross-numbered and labelled the same, so that data determined in one can be shared with the others. The primary set that is deposited locally is evidence that may be accessed by local collaborators and will eventually be the most useful and likely most accessed, so this should be the best set. The set that is distributed to experts will be broken up into separate units with specific items sent to specific experts who are identified as having particular expertise and being likely to identify a particular sample. For example, a beetle expert might be sent all of the beetles, while a humming bird expert might be sent the humming birds for identification. The experts will not send the samples back but will send back identifications and will incorporate the samples into larger international collections. The third collection is basically an insurance policy. Fires, wars, and other things can happen that can result in the loss of, or damage to, a repository. By being placed in a completely different location, the third collection represents a different set that can be used to replace the first if it should become lost or damaged in future.

12.3 Data Analysis

Each of the methods described is incomplete without leading to an analytical method. The hypothesis, data collection method, and data analysis method all combine to make a complete chain of logic. Results may often be analysed for frequency of mentioned items (Bernard 2002), list length (Brewer 1995), or salience (Smith 1993). Hoffman and Gallaher (2007) have reviewed a range of methods developed for analysing the importance placed on uses of plants and vegetation by people who use them. The same methods should apply to almost any things studied that people interact with from the environment.

12.3.1 Biodiversity

Collection of biodiversity information using participants from local communities and relying on their local expertise rather than on one's external university training is sometimes called 'parataxonomy'.

p. 295 Parataxonomy is being used increasingly to survey areas and to learn about the ethno-species or morpho-species diversity ↵ recognized within an area (Pfeiffer and Uril 2003; Janzen 2004; Sillitoe 2007) and to estimate local biological species richness (Oliver and Beattie 1993; Basset et al. 2000; Basset et al. 2004; Jinxiu et al. 2004).

For those who are not biologists, some important points need to be made about the relationships between common/vernacular names (in any language) and scientific names. Scientific names are not magical or more factually correct; they are often derived from common names at one point in the past and now serve as