11.1 Introduction[1]

Since plants are a very important part of the material and cultural heritage of all communities, those who are interested in studying the culture of a people require an understanding of the plants associated with them (Fosberg 1960). To understand plants and their association with the people, it is important to know the identity of the plant species used by them. Knowing the vernacular name of a plant used by a community assists with communication within that community but fails to provide information to a broader group. Furthermore, the information on how this plant is used by other communities remains inaccessible to most researchers. Therefore, it is important to link local plants to their scientific names so that all the information about these plants is available to everyone (Conn 1994). However, the identification of plants is often quite difficult and requires careful examination of the features of the plant and comparison with other previously identified species. Therefore, carefully prepared botanical collections are always required to identify plants ↳ with certainty. Furthermore, our scientific understanding of the relationship between plants is constantly being revised, particularly as new techniques and data, such as molecular data, are becoming available; the names of many species have been changed to reflect these changes. Therefore, the lodging of botanical collections in scientific herbaria and museums is important for acquiring the currently correct scientific name for a plant. Since each collection will be available for further study at a later stage, the scientific name can be corrected based on modern knowledge, thus ensuring that vernacular names always remained linked to the correct scientific literature.

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This chapter provides a brief introduction to the techniques used for collecting botanical specimens that will enable fieldworkers to provide specimens of plants that are adequate for identification and valuable for scientific study.

11.1.1 Botanical identification

Many different types of publications provide information about the diversity of the flora of a region. These publications include:

1. Checklists: a simple list of plants of a specific area. Sometimes these lists are annotated with brief descriptive notes, such as Charters (2003–) and Press, Shrestha, and Sutton (2000–). Local authorities, especially environmental agencies, frequently have unpublished checklists that are often more current than the published lists. These checklists can also be very useful for identifying plants from a specific area. However, a high level of botanical taxonomic knowledge is usually required to use these lists effectively to assist in identification.

2. Field guides: usually provide readily observable features that can be used in the field for distinguishing plants of a specific area, usually with brief descriptions, often with illustrations, of the most common plants of an area (e.g. Balgooy 1997; 1998; 2001; Court 2000). Sometimes field guides are only a list of botanical names and photographs and/or illustrations. However, many popular field guides are excellent (e.g. Harden, McDonald, and Williams 2006; Hutton 2008; Steenis 1949–) and these publications are usually adequate for identifying the plants of a specific region.

3. Floras: descriptions, identification tools (keys), illustrations, and images of plants of a specific area, for example Nee (2004, 2008), Stannard (1995), Steenis (1949–). Recently, more of these floras are readily available via the internet, such as Conn and Damas (2006–), Conn et al. (2004–), Flora of Guianas (1885–), Flora of North America (1993–), Hoch (2000–), Western Australian Herbarium (1998–). eFloras (2009) is an excellent on-line resource that provides a comprehensive listing of electronic floras (e.g. Flora of China 1994; Ulloa Ulloa and Jørgensen 2004) and checklists, as well as other information.