Medicinal plants of the Argentine Yungas plants of the Las Yungas biosphere reserve, Northwest of Argentina, used in health care

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Abstract. We have compared the species richness of medicinal plants and the differential patterns of use amongst settlements in the Andean communities of Northwest Argentina which have differing levels of isolation. About 259 ethnoespecies, belonging to 74 plant families, were included, representing between 70 and 80% of the total estimate. The results indicate that Coronopus didymus is the most relevant and important species. The method of use of medicinal plants and the ailments treated by rural doctors compared to those of the layperson is different. Native and exotic plants are used differently according to the body system treated. There are some relationships between internal and external use and body systems and recipes. The greater medicinal species richness found in the less isolated locations is due to external enriching cultural influences.

Introduction

The main goal of early Ethnobotanical studies was the documentation of endangered knowledge whilst today many projects collect data for biodiversity conservation and community development, focusing on the ecological feasibility of the indigenous management strategies (Frei et al. 2000). An implicit assumption of these studies is that plants are economically, culturally and ecologically important (Frei et al. 2000; Hersh-Martinez 2002). The recognition of this human component of the traditional ecological knowledge and of forest landscape management held by the resident cultures has led to a model of ‘community-based’ conservation (Gadgil et al. 1993). But it is important to recognize that, in many cases, local people have developed behaviors which have had a conservational impact without these initial aims; practices that, in general, look for the best results in local economy. It is important to remember that management of natural resources is foremost a question about social relations, that is to say, about the social net who is regulating the access to these resources (Kalland 2000).
In the same sense, Ethnobotanical studies have become increasingly valuable in the development of health care and conservation programs in different parts of the world (Balick 1996). In each culture the importance of each medicinal plant varies; some are hardly ever used, while others are important medicinal resources. Even so, numerous papers have called attention to the lack of information on the relative importance of medicinal plants (or other useful plants) within a culture (Moerman 1996; Ankili et al. 1999).

Many rural populations throughout the tropics rely on medicinal plants because of their effectiveness, the lack of modern alternatives and their cultural preferences. However, the distribution and extent of local knowledge and the use of medicinal plants in these societies are being altered by exposure to modern culture, increased trade and access to modern conveniences (including modern medicines). In fact, local knowledge cannot be treated as an insulated domain, since the majorities are interacting with exogenous knowledge (Osseweijer 2000).

On the other hand, forest conversion and land degradation can reduce the availability of medicinal plants and can also affect local knowledge of interests in medicinal plant use (Caniago and Siebert 1998).

In the present work the use of medicinal plants in populations residing within the Argentine Yungas Biosphere Reserve is investigated. Within the zone studied are the Baritu National Park and the National Reserve ‘El Nogalar.’ Both reserves are of recent creation (in 2002 and 2003, respectively) but the National Park dates back to 1974. According to Brown (1995) and Brown et al. (2001), this region has the highest biodiversity levels and rural population numbers in the Montane Cloud Forest of Argentina, but also it represents one of the biomes within the national territory most threatened by productive activities such as logging, grazing forest conversion into cropland.

Today, Pre-Columbian and Spanish colonial influences are still to be seen in the area but modern influences are constantly altering the traditional medical systems and the use of medicinal plants, as noted by Frei et al. (1998) with respect to Mexican communities. Recently, several studies concerning the use of medicinal plants have been undertaken in Northwestern Argentina (Iharlegui and Hurrell 1992; Hurrell and de la Sota 1996; Lupo and Echenique 1997). The community health issue has also been investigated on a few occasions from an anthropological viewpoint (Torres 1982; Palma 1994; Madrid de Zito Fontan and Palma 1997). Some studies on ethnomedicine have been undertaken in neighboring areas of the Salta province (Hurrell 1990, 1991; Martinez and Pochettino 1992) but there is only one ethnopharmacological study dealing specifically with the medicinal plants used within the Yungas biogeographic province (Hilgert 2001).

Ellen and Harris (2000) have defined indigenous knowledge as local, orally transmitted and constantly reinforced by experience; they have also expressed the importance of not placing local knowledge outside culture. Taking into account the above mentioned concept, the goals of the present paper are the