

An ITTO fellow doing ethnobotanical studies says that protecting the woodlots of the Ifugao people in the Philippines would help conserve the region's biodiversity

By Marilyn T. Rondolo

Forestry and Environment Research Division

Philippine Council for Agriculture, Forestry and Natural Resources Research and Development

Los Baños, Laguna 4030 Philippines

t 63-49-536 0017

f 63-49-536 0016

merilyn@ultra.pcarrd.dost.gov.ph



A woodlot's lot: important, but may be lost through time—a *muyung* in Ifugao Province. Photo: M. Rondolo

IN 1993 the Philippines, a megadiverse country, ratified the Convention on Biological Diversity, under which all countries are expected to manage their biological resources sustainably. But how can a good biodiversity conservation plan be prepared if resource managers and decision-makers have limited knowledge of the country's biological resources?

Apart from being megadiverse, the Philippines archipelago has several indigenous cultural communities with a vast knowledge of their environment, including in the identification, use and management of biological resources. Such knowledge could be used to help develop biodiversity conservation plans.

Ifugaos are indigenous inhabitants of Ifugao Province, one of the highland provinces of northern Luzon, a Philippine island. The Ifugao people are known for their upland wet rice cultivation ('rice terraces'), woodcarvings (which are of export quality), and woodlot management. A woodlot, known locally as *muyung* or *inalahan*, is a privately managed secondary forest or forest garden.

My doctorate dissertation (Rondolo 2000) documented the plant knowledge and practices of the Ifugao people

and investigated the threats to these resources. This article summarises some of the findings that I later presented to stakeholders through a series of workshops in the Ifugao community, with the help of an ITTO Fellowship grant.

Aim and objectives

The main aim of my research was to help plant resource managers and decision-makers prepare a plant diversity conservation plan for Ifugao that takes into account the province's plant genetic and cultural resources and the threats to these resources. My objectives were to:

- identify Ifugao's useful plants;
- document the identity, uses and cultivation methods of these lesser-known plants; and
- identify threats to Ifugao plants.

Methodology

Sixty-seven woodlot owners who were willing to participate in the study served as respondents. The study focused on plants used for: baskets and other containers; food; fuelwood; house construction materials; medicines; veterinary remedies; and woodcarving. The knowledge of woodlot owners was collected using pre-tested questionnaires during inventories of their individual woodlots. Information collected included: plant name; growth form; part used; cultivation status; use; animal treated (for plants used in veterinary remedies); and methods of collection, preparation and, where appropriate, cooking.

For the woodlot inventory, 67 plots measuring 25 m x 25 m each were established and sampled in detail. These plots were located in the centre of each woodlot to minimise edge effects. Plant specimens were collected, dried and identified by systematists from the Ecosystems Research and Development Bureau (ERDB) and the Forest Products Research and Development Institute at Los Baños in Laguna.

Useful families

Table 1: Uses for plants grown in woodlots in the Ifugao community, the Philippines

Use	Number of plant families	Most common family	Plant part used
Food	36	Myrtaceae, Palmae	Fruits, leaves, tubers, shoots, flowers, stems, buds, seeds
Fuelwood	43	Moraceae, Euphorbiaceae	Stems and branches of trees and stems of bamboo plants
House construction	36	Euphorbiaceae	Stems and branches of trees and stems of bamboo plants
Medicine	28	Asteraceae	Leaves, sap, stem, bark, fruits and flowers
Veterinary	12	Musaceae	Leaves, fruits, seeds and sap
Woodcarving	5	Meliaceae	Branches and stems

Results

Woodlot plant composition

Overall, the woodlots contained 264 mostly indigenous plant species belonging to 71 plant families. Euphorbiaceae was the most common family (24 species) followed by Moraceae (fig or breadfruit family), Meliaceae, Leguminosae (pea family), Poaceae (grass family), Anacardiaceae (mango family) and Rubiaceae. The number of species found per woodlot ranged from 13 to 47 species (average = 30); most were endemic to the region.

Ifugao classification system

Unknown to most outsiders, Ifugaos have their own plant classification systems. They used the term *tuboh* (sprouted from the ground) to mean plants and to differentiate these from animals. They classify plants based on taxo-morphological characteristics and according to use. In particular, their classification system for rattans is more detailed and accurate than that of a formally trained systematist.

Uses of the woodlot plants

Of the 264 plant species, 234 were considered useful (with many having more than one use) and the rest (mostly grasses) were reported to have no known use. Table 1 summarises some of the data collected.

All woodlots contained plants that were used as fuelwood, materials for house construction, food and medicines. Most woodlots (97%) had veterinary plants in them.

Conversion?

Ifugaos possess knowledge about the uses and husbandry of a wide range of local plant biodiversity, much of which is not widely known outside their community and would be useful in plant diversity conservation.

Ifugao woodlots are very rich in plant diversity and therefore play an important role in conserving the Ifugaos' plant resources—particularly

since much of the surrounding primary forest has been cleared. Unfortunately, woodlots are increasingly being converted into other land-uses as the Ifugao people seek cash income: for example, almost all of the woodlots studied contained commercial plantings of coffee (88%), banana (66%) and citrus (49%). Moreover, seven woodlots were being cleared for residential development to accommodate a growing upland population. Unless such conversion is stopped, there will be no Ifugao woodlots to speak of in the future. And as the woodlots disappear, so too will a substantial part of the region's biodiversity.

In an effort to save the Ifugao woodlots from extinction, I presented the results of my study to various stakeholders in the region last year via workshops. Comments such as those below were common:

The list of Ifugao endemic species is timely. I personally do not want to use exotic species any more in our reforestation activities in Ifugao Province because they are not compatible with the native plants of our woodlots. Besides, we need to revive our native species as a way of conserving our biodiversity. I will make it sure that in our reforestation plans these species will be included – Mr Edgar Pambig

The list of species found in our woodlots indicates that there are indeed native species that we can now use in rehabilitating the woodlots. It is now easier to decide on the kind of species to be used. Thank you for turning over the results of your research – Mr Ignacio Bonulna

Reference

Rondolo, M. 2000. *The changing Ifugao woodlots: its implications for indigenous plant knowledge and biodiversity*. Ph.D. dissertation, Australian National University, Canberra, Australia.

ITTO Fellowships offered

ITTO offers fellowships through the Freezailah Fellowship Fund to promote human resource development and to strengthen professional expertise in member countries in tropical forestry and related disciplines. The goal is to promote sustainable management of tropical forests, the efficient use and processing of tropical timber, and better economic information about the international trade in tropical timber.

Eligible activities include:

- participation in short-term training courses, training internships, study tours, lecture/ demonstration tours and international/ regional conferences;
- technical document preparation, publication and dissemination, such as manuals and monographs; and
- post-graduate studies.

Priority areas: eligible activities aim to develop human resources and professional expertise in one or more of the following areas:

- improving the transparency of the tropical timber market;
- improving the marketing and distribution of tropical

timber species from sustainably managed sources;

- improving market access for tropical timber exports from sustainably managed sources;
- securing the tropical timber resource base;
- improving the tropical timber resource base, including through the application of criteria and indicators for sustainable forest management;
- enhancing technical, financial and human capacities to manage the tropical timber resource base;
- promoting increased and further processing of tropical timber from sustainably managed sources;
- improving the marketing and standardisation of tropical timber exports; and
- improving the efficiency of tropical timber processing.

In any of the above, the following are relevant:

- enhancing public relations, awareness and education;
- improving statistics;
- research and development; and
- sharing information, knowledge and technology.

Selection criteria: Fellowship applications will be assessed against the following selection criteria (in no priority order):

- consistency of the proposed activity with the Program's objective and priority areas;
- qualifications of the applicant to undertake the proposed fellowship activity;
- the potential of the skills and knowledge acquired or advanced under the fellowship activity to lead to wider applications and benefits nationally and internationally; and
- reasonableness of costs in relation to the proposed fellowship activity.

The maximum amount for a fellowship grant is US\$10 000. Only nationals of ITTO member countries are eligible to apply. The next deadline for applications is **13 March 2002** for activities that will begin no sooner than July 2002. Applications are appraised in May and November each year.

Further details and application forms (in English, French or Spanish) are available from Dr Chisato Aoki, Fellowship Program, ITTO; Fax 81-45-223 1111; itto@itto.or.jp (see page 2 for ITTO's postal address).