

Ethnobotanical Survey of Medicinal Plants

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Abstract- *Ethnobotany is the systematic study of the relationships between plants and people. It is not simply the study of the human "use" of plants; rather, ethnobotany locates plants within their cultural context in particular societies, and situates peoples within their ecological contexts. Ethnobotanists examine:*

- *the culturally specific ways that humans perceive and classify different kinds of plants*
- *the things humans do to plant species, such as destroying "weeds" or "domesticating" and planting specific kinds of food and medicinal plants*
- *the ways in which various members of the plant world influence human cultures.*

This inquiry ranges from the geopolitical impact of the European demand for spices (which helped to launch the Age of Exploration) to the role of hallucinogenic snuffs used by Amazonian shamans in religious rituals.

Attributes such as creativity, reason, and curiosity, coupled with a desire to benefit others—attributes common in the scientific community—aids those studying ethnobotany to make important contributions. For example, the study of indigenous food production and local medicinal knowledge offers the promise of practical implications for developing sustainable agriculture and discovering new medicines.

I. INTRODUCTION

Ethnobotany is considered a branch of ethnobiology, the study of past and present interrelationships between human cultures and the plants, animals, and other organisms in their environment. Like its parent field, ethnobotany makes apparent the connection between human cultural practices and the sub-disciplines of biology.

Ethnobotanical studies range across space and time, from archaeological investigations of the role of plants in ancient civilizations to the bioengineering of new crops. Furthermore, ethnobotany is not limited to nonindustrialized or nonurbanized societies. In fact, co-adaptation of plants and human cultures has changed—and perhaps intensified—in the context of urbanization and globalization in the twentieth and twenty-first centuries. Nonetheless, indigenous, non-

Westernized cultures play a crucial role in ethnobotany, as they possess a previously undervalued knowledge of local ecology gained through centuries or even millennia of interaction with their biotic (living) environment.(1)

The significance of ethnobotany is manifold. The study of indigenous food production and local medicinal knowledge may have practical implications for developing sustainable agriculture and discovering new medicines. Ethnobotany also encourages an awareness of the link between biodiversity and cultural diversity, as well as a sophisticated understanding of the mutual influence (both beneficial and destructive) of plants and humans.

II. REVIEW OF LITERATURE

Why might plants have come to function as the material basis for human culture? The combination of their immobility (terrestrial plants must remain rooted in the soil) and tremendous production of cellulose makes plants a far more efficient and reliable source of building materials and food than animals.

The biochemical diversity of plants, which contributes to their myriad medicinal and dietary uses, might also be traced in part to their immobility. Plants produce chemicals as a way of interacting with other organisms in their environment, either for mutual gain—such as enlisting animals in the transport of pollen or seeds—or as a mechanism of defense, to repel or poison predators or parasites. Modern societies depend on chemical agents in plants for 25 percent of prescription drugs and nearly all recreational chemicals, such as the caffeine in coffee, the nicotine in tobacco, and the theophylline in tea.(2,3)

Historic roots of ethnobotany



An Arabic edition of Dioscorides's *De Materia Medica* (circa 1334) describes the medicinal features of cumin and dill.

Although ethnobotany did not emerge as an academic discipline until the end of the nineteenth century, its roots extend back to Greek, Roman, and Islamic sources. In 77 C.E., the Greek surgeon Dioscorides published *De Materia Medica*, a catalog of about 600 plants found in the Mediterranean. This illustrated book of *herbal* (a book that describes the appearance, medicinal properties, and other characteristics of plants used in herbal medicine), which influenced scholars through the Middle Ages, contained information on how and when each plant was gathered, its use by the Greeks, and whether or not it was edible. (Dioscorides even provided recipes.) He also assessed the economic potential of these plants.

However, the systematic study of plants was not confined to the West: The earliest known herbal was compiled by Chinese emperor Shen Nung sometime before 2000 B.C.E., and both the Incas of South America and the Aztecs of Mesoamerica maintained botanical gardens.

The Renaissance in Europe saw a revival of interest in ethnobotany, which was intensified by geographic exploration and later colonialism. In 1542, Renaissance artist Leonhart Fuchs published *De Historia Stirpium*, a catalogue of 400 plants native to Germany and Austria. John Gerard (1545-1611/12) published the most popular of sixteenth century herbals, the *General Historie of Plants*, which remained in print for over 400 years. John Ray (1686-1704) provided the first definition of species in his *Historia Plantarum*.

In 1753, the Swedish botanist Carl Linnaeus wrote *Species Plantarum*, which included

information on approximately 5,900 plants. Linnaeus, known as "the father of taxonomy," is famous for popularizing the binomial method of nomenclature, in which all living organisms are assigned a two-part name (genus, species).

III. DISCUSSION

Folk classification refers to how members of a language community name and categorize plants and animals. This type of ethnobotanical study relies on an *emic* approach: That is, a description of behavior in terms meaningful (consciously or unconsciously) to the actor.

The first individual to study an *emic* perspective of the plant world was Leopold Glueck, a German physician working in Sarajevo. His 1896 publication on the traditional medicinal uses of plants by rural people in Bosnia may be considered the first modern ethnobotanical work.(4)

Archaeoethnobotany



Guila Naquitz Cave, site of the oldest known remains of maize.

Archaeoethnobotany (or *paleoethnobotany*) is the study of the ethnobotany of the ancient past. It is closely linked to ethnobotany, as it is difficult to understand the ecology of modern environments without considering the environmental history that often involves prehistoric human interventions.

The history of the domestication of the cereal grain maize (commonly known as "corn") is of particular interest to archaeoethnobotanists. The process is thought by some to have started 7,500 to 12,000 years ago. Recent genetic evidence suggests that maize domestication occurred 9000 years ago in central Mexico, perhaps in the highlands between Oaxaca and Jalisco. Archaeological remains of early maize cobs, found at Guila Naquitz Cave in the Oaxaca Valley, date back roughly 6,250 years; the oldest cobs from caves near

Tehuacan, Puebla, have been dated to approximately 2750 B.C.E.

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IV. CONCLUSION

The significance of ethnobotany is manifold. The study of indigenous food production and local medicinal knowledge may have practical implications for developing sustainable agriculture and discovering new medicines. Ethnobotany also encourages an awareness of the link between biodiversity and cultural diversity, as well as a sophisticated understanding of the mutual influence (both beneficial and destructive) of plants and humans. In this unit, we will discuss the historic roots of ethnobotany and a brief knowledge about different areas associated with it. The unit intends to highlight the role that local people's knowledge and cultural perspectives can play in resource management and conservation.

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