

Utilitarian Redundancy, Plant evolutionary history, and medicinal plant use patterns among the Shipibo-Konibo in the Peruvian Amazon Rainforest

Michael A. Coe and Orou G. Gaoue

Throughout history, human societies have developed an interconnected relationship between the natural world and their material and non-material elements of culture. Plants, for example, are often primary sources of medicine, resources for shelter, food, trade and catalysts for artistic expression and divination. This research examines how the evolutionary relationship between plants may affect use patterns of medicinal plants that are important to human societies.

Our research focuses on how the evolutionary relationship between medicinal plants may affect the therapeutic use, local preference and harvesting practices of the Shipibo-Konibo community of Paoyhan, an indigenous community, located in the Ucayali river region of the Peruvian Amazon rainforest. To do so, we conducted interviews and group discussions with local plant experts and observed medicinal plant use. We then, used a plant evolutionary tree and statistical models to examine the relationships between medicinal plant use patterns and local harvesting practices.

Our results show that medicinal plants that have similar therapeutic uses by local people experience greater levels of harvest than medicinal plants with unique uses to treat a given illness. However, this relationship between the level of harvest and therapeutic use was dependent on the local preference of medicinal plants over others for treating a given illness. Finally, we show how the evolutionary relationship between medicinal plants may affect local medicinal plant use patterns and harvesting practices.



*A Shipibo-Konibo woman sits among freshly harvested Uña de Gato (*Uncaria tomentosa* (Willd. ex Schult.) DC.), a medicinal plant used for treating illness. Photo by Laura Dev.*

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