PLANT RESOURCES USED BY THE AYOREO OF THE PARAGUAYAN CHACO

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Schmeda-Hirschmann, Guillermo (Departamento de Ciencias Biológicas, Universidad de Talca, Casilla 747, Talca, Chile). PLANT RESOURCES USED BY THE AYOREO OF THE PARAGUAYAN CHACO. Economic Botany 48(3):252-258. 1994. An ethnobotanical study was carried out among the Ayoreo of the Paraguayan Chaco to document their use of food plants. Scientific and Ayoreo names as well as uses have been provided for 33 gathered and 12 cultivated food plants. The agricultural and gathering practices are presented and discussed.

Plantas alimenticias de los Ayoreo del Chaco Paraguayo. Se realizó un estudio etnobotánico entre los Ayoreo del Chaco Paraguayo para documentar su empleo de plantas alimenticias. Se presentan los nombres científicos y Ayoreo, así como el uso de 33 plantas alimenticias objeto de recolección y de 12 especies cultivadas.

Key Words: Ayoreo; Paraguayan Chaco; gathering; agriculture; edible plants.

Little is known of the natural resources used by the ethnic groups living in the Paraguayan Chaco. Except for the ethnobotanical studies of the Maká and Lengua-Maskoy cultures (Arenas 1981, 1982), the information available is sparse and not properly documented with voucher herbarium specimens.

The Ayoreo are a hunter-gatherer people traditionally occupying an area of some 330,000 square kilometers in Paraguay and Bolivia, delimited by 16°-22° S and 58°-64° W (Bormida and Califano 1978). A few decades ago, they lived in an environment with restricted natural resources in an economy of relative abundance. The population included some 1500 individuals settled in the Central Chaco at Gesudi and Campo Loro, as well as at the Mission Maria Auxiliadora by the Paraguay River, in the settlements of Isla Alta and Cucarani. Two families lived at Chovoreca (see map). The Ayoreo language belongs to the linguistic family, Zamuco, as does that of their neighbours, the Chamacoco. Seven Ayoreo clans are recognized and are distinguished by different signs used for the identification of small forest paths, or differences in textile handicrafts. The seven clans are the Chikenoi, Etacore, Pikanerai, Dosapei, Kutamurajá, Posorajá and Juumini.

The objective of the present work is to document the use of plants as food by the Ayoreo, including both the cultivated and gathered species.

STUDY AREA

The surveyed area is part of the Chaco vegetation zone, a vast alluvial plain located in the central part of South America (Fig. 1). In the central Paraguayan Chaco, where the settlements of Gesudi and Campo Loro are located, the vegetation is a xeromorphic forest with trees 15-20 m tall, and a continuous stratum of trees some 8-10 m high. The dominants are Aspidosperma quebracho-blanco, Chorisia insignis, Schinopsis quebracho-colorado, Castela coccinea, Prosopis kuntzei, Bulnesia sarmientoi, Capparis tweediana, C. retusa, C. speciosa, Zyziphus mistol, Caesalpinia paraguayensis, Sideroxylon obtusifolium and several species of Cactaceae and Bromeliaceae. Maria Auxiliadora is located in the wet Chaco and is now divided into Isla Alta, near Colonia Peralta, and Cucarani, some 12-15 km south by the Paraguay River. The dominant vegetation is a Copernicia alba (Palmae) savanna associated with a xerohygrophilic forest with trees 10-12 m tall: Prosopis alba; Geoffroea spinosa;

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Maytenus vitis-idaea; Zyziphus mistol; Capparis spp. and Acacia caven. Bromeliads are richly represented in this forest. Chovoreca is an almost inaccessible settlement. The vegetation at Chovoreca resembles the Brazilian “cerrado” formation, with Acrocomia aculeata, Anadenanthera macrocarpa, Bignoniaceae, Leguminosae, Vochysiaceae, several Arecaceae and legumes.

The mean annual rainfall ranges between 400 and 1300 mm according to the zone. Rains are irregular both in season and location, but usually coincide with the spring and summer. There is a dry season from May to September. In the humid eastern part of the Chaco, rain is common throughout the year. Temperatures vary from more than 45°-48°C in the central and northern part of the Chaco in the summer months, to 1°-2°C or less during the night in winter. Mean annual temperatures are 20°-25°C (Ramella and Spichiger 1989; Spichiger et al. 1991).

**METHODS**

Information was obtained by interviews with adults recognized as having a high level of knowledge of their culture. In most cases, interviewees had spent a significant part of their lives in the forest before contacting “civilization.”

Field work was carried out at the following settlements: Campo Loro (April 1987, November 1988); Gesudi (November 1990); Chovoreca (February 1991); and María Auxiliadora, comprising both the Isla Alta and Cucarani (November–December 1991). Plant specimens were either collected in the forests or from the Ayoreo gardens with the help of Ayoreo informants. Ayoreo names and uses of edible plants were documented for each specimen. The data were cross-checked with informants in other settlements. Most of the work was carried out with the help of the following informants whose ages are shown in parentheses: Gabriel Gajakai (50-60), belonging to the clan Chikenoi and from Gesudi; Luis Ijaoi (28) from the clan Dosapei and also from Gesudi; and José Ikevi (approximately 50) and Cachui Gajajai (55) both from the clan Posorají, living at Chovoreca. In the Misión María Auxiliadora, most work was carried out with the help of Abueji Jurumi (70-75), from the clan Juumini and living at Isla Alta; Ingoi Ari (70-75), from the clan Pikanerai and also residing at Isla Alta; and Seei Dosapek (70) from Cucarani. In Campo Loro, Mateo Sobode (35-40) of the clan Chikenoi assisted by contacting other older informants in the settlement. Mythic narrations, songs and invocations were recorded and translated by Spanish speaking Ayoreo. The Ayoreo names were written in Spanish, as developed by the Summer Academy of Language (New Tribes Missions). The grammar was verified in some cases by the Ayoreo teachers at María Auxiliadora.

Voucher herbarium specimens were identified at the United States National Herbarium, Smithsonian Institution, Washington, D.C. (US) by Stephen F. Smith, Dan Nicholson, Lyman B. Smith, R. W. Read and W. J. Hahn, and specimens have been deposited at the Smithsonian Institution, Washington (US) and at the Herbarium of the University of Talca (Chile).

**PLANTS GATHERED BY THE AYOREO**

The plants are listed in alphabetical order. Entries consist of botanical name, voucher, specimen number (Schmeda collection), common name as recorded by us and additional data on their uses. Table 1 summarizes the plants most commonly cultivated by the Ayoreo.

**ACHATOCARPACEAE**

*ACHATOCARPUS PRAECOX* Griseb., S 1479, Esokenéjna, shrub. The ripe fruit is similar in form to *esó* (*Sideroxylon obtusifolium*). Of limited consumption.