

FOOD PLANTS OF THE ANDES

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Throughout the Andes the traveler finds remains of civilizations whose members often surpassed in numbers, skill, and artistic feeling the present population. It is difficult to understand how a large population could have existed in these lands where rainfall is scanty and the soil rocky and where the temperature frequently varies 50 degrees in a few hours. Here only a few edible wild plants grew and wild animals were scarce. Yet a large part of the Andes was inhabited by peoples who not only lived there but found enough time and energy to build monumental structures and to develop artistic and technical skills.

Only the cultivation of plants especially adapted to the highlands enabled these civilizations to survive. Their skill in farming and in the selection of plants is shown by the large numbers of known varieties of the principal crops. In this area more than 400 named varieties of potatoes occur, and the variation within some of these varieties is almost as great as that in all the potatoes of the United States.

We know what foods these ancient peoples used. In the dry western foothills of the Andes, remains of the actual plants are often dug out of the old ruins. Sometimes these plants are found in rubbish heaps, together with broken pots, old clothes, ashes, and charcoal. Occasionally jars of food or seed are found. These appear to have been storage vessels that had been forgotten or abandoned. Food was often placed in graves.

ARCHAEOLOGICAL TRACES

Even where the climatic conditions were unfavorable for the preservation of vegetal material, we can occasionally find modeled replicas of fruits, vegetables, and seeds, or vessels decorated with figures of the foods. The best examples of vessels showing food plants are from the Chimú culture of northwestern Peru. These are shown in Case 21 in the Hall of South American Archaeology (Hall 9) on the first floor. The most interesting vessels are in the form of food plants modeled with remarkable skill and fidelity. These representations can be identified with certainty, but when the plant is represented in a painting or in a design woven in cloth, the design is often so stylized that it is difficult to distinguish the plant.

Besides the evidence left by the old inhabitants, we can gather some information on ancient foods from records left by the Spanish conquerors, rulers, and priests. The first Spaniards were mainly soldiers and left very few references to foods. When they did write about plants, they often applied the names they had learned in Cuba and Central America, and their descriptions were brief and often inaccurate. Some of the names introduced from the Caribbean area,

such as *maíz* (like our word "maize"), have spread throughout Spanish America and in many places replace the native word.

More accurate records of plants and food habits were made when Spanish rule of the countries had been established. By this time, however, many plants had been introduced and later writers often could not determine which plants were indigenous.

LIVE AS IN PREHISTORIC DAYS

Many of the Indians live today as they did before the Spanish invasion. There is very little difference between the Inca village shown in Hall B on the ground floor and



ANCIENT PERUVIAN GOD—

—clothed in a cloak of maize to symbolize fertility. Statue in Hall of Food Plants (Hall 25). Other similar gods and goddesses are represented in the Central and South American collections of the Department of Anthropology (Halls 8 and 9).

the Indian communities of the present. The descendants of the Inca tribes may use metal points on their hoes and see airliners fly overhead; yet they still live on their ancient foods and speak their Indian language. From them we can secure living plants for our studies and specimens for comparison with the prehistoric remains.

In the highest parts of the Andes the principal food is the potato. The numerous cultivated varieties belong to several species. Wild potatoes are occasionally harvested and some of these are hard to distinguish from cultivated varieties. Most of these wild potatoes and many of the cultivated ones must be treated to remove a bitter taste. This is usually done by soaking them in water, letting them freeze during the cold nights, and then stamping out the water. After the potatoes are dried they can be stored for many years before using. The

best dried potatoes are called *tuntcha* and the most common type is called *chuño*.

Many potatoes, especially the larger ones, are eaten immediately. All potatoes taste insipid when they are prepared in the highlands where water boils at 175 degrees, and several hours are needed before they are cooked. But if Andean potatoes are prepared near sea level or in a pressure cooker, some have flavor and texture superior to the potatoes of the United States.

NASTURTIUMS AS FOOD

A peculiar food plant of the Andean highlands is a nasturtium with large tubers. Just as in the potato, there are wild species of nasturtium, and the difference between wild and cultivated ones is often very slight. The nasturtium we grow for flowers is also grown in Peru but the flowers are eaten in salad unless used for ornamental purposes.

In the highlands where corn could not grow and in places where the soil was poor, a close relative of the common pigweed of the United States was grown. This plant, called *quinoa*, has been found in some of the oldest ruins on the Pacific slopes. *Quinoa* should not be confused with quinine, the tree whose bark is used as a preventative and cure for malaria. Both *quinoa* and quinine are native in the Andes.

The importance of *quinoa* is diminishing because it is difficult to prepare and has a low market value. Barley replaces it on the better soils, provided there is sufficient rainfall.

The principal food of nearly all the major Indian civilizations was corn. It is still the most important plant of the Americas and is grown in more varied habitats than any other important food. Corn is planted near Lake Titicaca at altitudes of 13,000 feet, on the lowlands near sea level, in deserts with ten inches of rainfall per year, and in tropical forests with 96 inches of rainfall per year. Besides varieties for special climates, there are varieties for definite uses. One of these has a purple dye used for fabrics and drinks.

CORN AS ART MOTIF

Because corn was so important, there is much old pottery decorated with designs based on ears of corn. Small clay models, which were probably used as offerings to insure good crops, are often found. One of these clay models was erroneously described as a fossil ear of corn. This mistake is readily explained because some of the models are so accurately made that even the place where the silks were attached is shown. For many years the clay model was considered a real fossil but finally when cut open was found to be only a clay rattle.

A similar ancient clay model is exhibited in Case 12 of Hall 25 (Food Plants and Palms), together with a pottery jar made about 1,000 years ago in coastal Peru. Other cases in Hall 25 contain models of native American food plants in use today.



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