THE HOPI INDIAN COLLECTION IN THE UNITED STATES NATIONAL MUSEUM

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INTRODUCTION.

This publication aims to give an impression of the arts and industries of a tribe of Pueblo Indians at a period when they were little modified by outside influences. It may serve as a guide to the Hopi collection now exhibited in the Natural History building of the United States National Museum. Handbooks of this character which are made up virtually of extended labels of the collections are projected for other sections of the exhibit of Ethnology.

The following descriptive label for the family group case displayed in the west north hall of the Natural History Museum of the Smithsonian Institution in Washington gives a brief account of the Hopi:

The Hopi Indians occupy stone-built villages in northeastern Arizona. They were first seen by white men in 1540 when Tobar and Padilla were dispatched by Coronado to visit them. On account of the isolation of their country, they have preserved to a greater degree than other tribes the arts and customs of the Pueblos. They are farmers and depend mainly upon corn for their subsistence. Among the arts in which they are skillful, are weaving, basket-making, and wood-carving, and in the minor art of cookery they are widely known among the Indians. The group represents the parching, grinding, and baking of maize which goes on in every household. A woman and little girl grind on the slanting millstones the corn prepared by the parcher. The baker spreads with her hand the batter on the heated stone slab and the result is the paperlike bread called piki. Another woman is weaving a basket of yucca leaves. The man brings in from the field a backload of corn ears and the boy exhibits triumphantly a rabbit which he has killed with the curved boomerang club peculiar to the Hopi.

AGRICULTURE AND REARING.

Agriculture is the principal occupation of the Hopi. They are industrious and resourceful tillers of the soil under conditions which would seem hopeless to a farmer. Their efforts are principally devoted to raising corn, but wheat, beans, squashes, and common vegetables are grown. They preserve an agriculture of native cotton, *Gossypium hopi*, which they use for ceremonial purposes.[1]

[1] Lewton, F. L., The Cotton of the Hopi Indians: a new species of Gossypium, Smithsonian Misc. Coll., vol. 60, No. 6, Oct. 23, 1912.

Corn is planted in the sandy soil along the washes, dependence for its ripening being placed on the winter snows and the summer thunderstorms. In spite of the conditions, large quantities of corn are produced. The fields are cleared of brush in February and leveled. Planting begins in April and the crop is gathered in September. Spring frosts and sandstorms are drawbacks to the success of the crops, and sometimes floods injure the low-lying fields. The tools used are a planting stick usually with wedge point (pl. 19, fig. 4), but sometimes having a blade (pl. 19, fig. 5). A hole is dug and from 6 to 12 or more grains placed therein and covered. The hills are about 6 feet apart. The plant is small and rarely 5 feet high, the ears shooting near the ground.

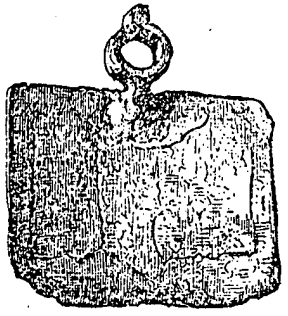

FIG. 1.—IRON BROAD HOE OF SPANISH PATTERN.

The field is kept clear of weeds by means of hoes, usually the heavy homemade blade of Spanish pattern, like those seen among the Rio Grande Pueblos (fig. 1), sometimes of wood (pl. 19, fig. 6), and anciently, according to tradition, of stone. These implements

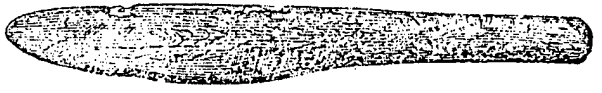

FIG. 2.—HAND DIBBLE OF WOOD.

are smooth spatulate blades of fine stone (see Archeology, second floor, east side), found mostly in the northern cliff-house region, but never in ancient Hopi sites. The Hopi call them *wiki*, hoes, regard them as sacred objects, and place them on the altars of some of their ceremonies, but there is little evidence that the fine spatulate stones were actual hoes, though the Hopi may have anciently used stone hoes. The wooden hand trowel for tending plants appears to be a survival (fig. 2).

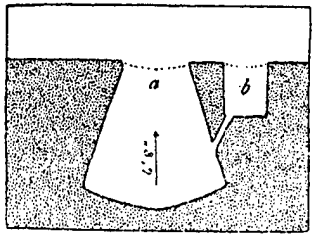

FIG. 3.—FIELD PIT OVEN FOR ROASTING GREEN CORN; *a*, FIRE PIT; *b*, FLUE.

Corn is gathered by removing the ears and transporting them to the pueblo in wicker carrying baskets on the back (see family group) or in blankets over the back or on the burro. The fodder is gathered by breaking off the stalks and tying them in bundles. It is usually almost valueless, as the leaves are frayed or whipped off by the wind. Much of it is used in the green state during the roasting-ear season, when a part of the crop is baked

in field pit ovens (fig. 3), and either eaten at feasts or strung on cord to be dried for winter provision. Husking pegs of bone or wood have been observed among the Hopi, but it is not known that this implement is ancient. Corn ears are stored in the house in a place reserved for the purpose, is often sorted by the colors, and is occasionally taken out, sunned, and brushed to free it from dust and insects (pl. 20). It is also stored by crops, one year's being held over in case of failure due to a bad season. This custom is said to have arisen on account of famines, which have often plagued the Hopi in former years. Hopi corn is a pure breed of ancient strain, 12 rowed, white, yellow, red, carmine, dark blue, black, and variegated. The cobs are slender, the ears 5–7 inches long, generally perfect, and the grains regular and not indented (pl. 21).

The Hopi have also pop corn and sweet or sugar corn, both probably introduced. Sweet corn is referred to as the particular possession of the Middle Mesa Pueblo Shemopavi, where it is raised in some amount.[1]

In the cornfields scarecrows consisting of sheep scapulae, tin cans, etc. (pl. 22, fig. 3), are set up.

For cleaning brush from the fields, a curious rake-fork is used (pl. 19, fig. 1, Cat. No. 128767, collected by Mrs. M. C. Stevenson). It consists of a three-tined branch of a juniper tree, peeled, and across the tines is secured by lashing a strengthening rod of wood.

For picking the fruit of the prickly pear, wooden tweezers, *natcha*, are used (pl. 19, figs. 2, 3). The fruit is picked with the tweezers and rolled in sand until the spines are removed. The Navaho, Zuñi, Pima, Papago, and other southwestern tribes use similar implements.

A great number of varieties of beans are grown by the Hopi and these form a substantial addition to their fare. They are named *pala mozhri*, red beans, *avatch mozhri*, speckled beans, etc., from their color or markings. Success also sometimes attends the planting of peas. Squashes, gourds, pumpkins, melons, and onions are raised. As in Mexico, the flowers of the squash are much appreciated as a dainty food.

Of cultivated fruits, the Hopi have only peaches which were introduced among the Pueblos several centuries ago by the Spaniards. The trees are planted on sand slopes below the pueblos and as there are no peach diseases or insect enemies in the region, they flourish to a considerable age. At this elevation, however (6,500 feet), frosts render the crop precarious. The Hopi are extravagantly fond of the fruit and a good yield is a matter of great rejoicing. The berries of the rhus and prickly pears furnish the only native fruits in the immediate environment of the Hopi.

[1] Collins, G. N., A drought-resisting adaptation in seedlings of Hopi maize, Journ. Agricultural research, Washington, D. C., vol. 1, No. 4, Jan. 10, 1914.

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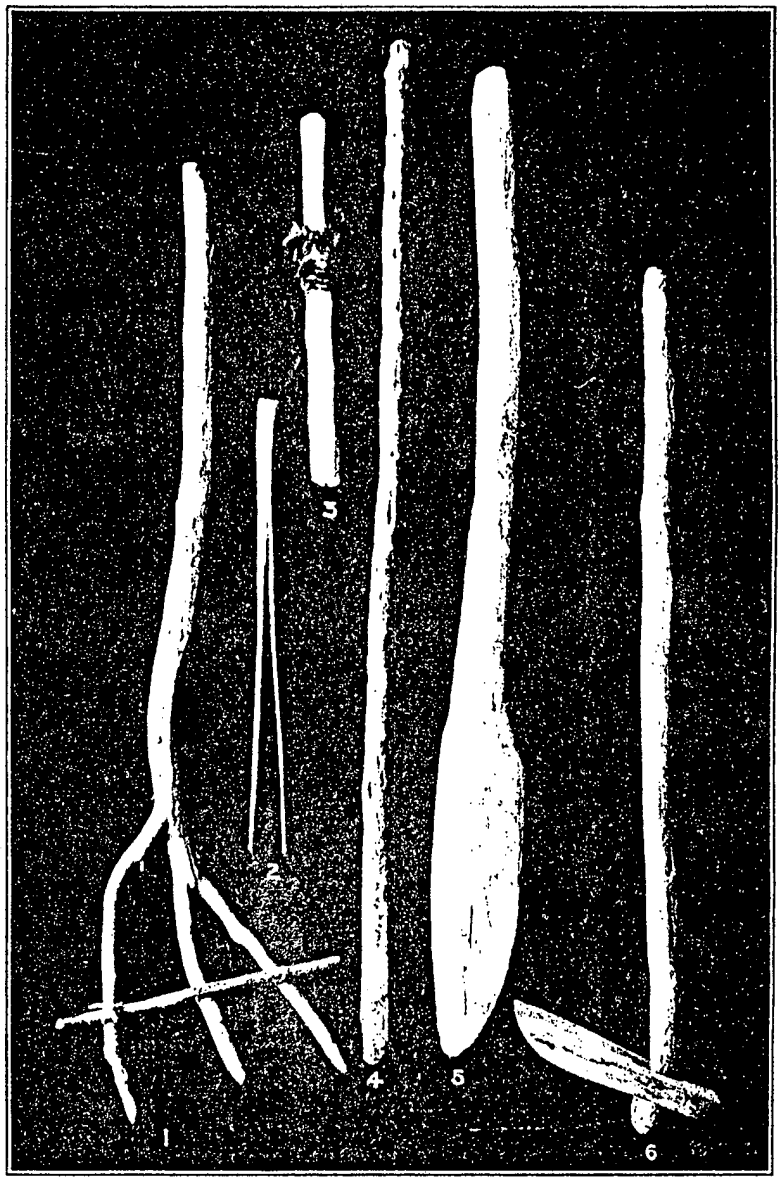
are used like the flute in ceremonial consecration of medicine as well as to imitate bird calls. A whistle made by enclosing a leaf or grass blade between two pottery disks is sometimes used (fig. 48).

The Hopi use a flute consisting of a gourd having a sound hole. This interesting object is a decoy for deer. (Cat. No. 22865, U.S.N.M.) Gourd trumpets or megaphones supposed to represent the hoarse bellowings of the great plumed serpent, are used in the *Pa lu lu kong* ceremony.

As will be seen from the descriptions above, the Hopi have merely a few primitive instruments, the flute being the highest in the scale of invention. No string instrument occurs among the Hopi.



AGRICULTURAL IMPLEMENTS.

FOR DESCRIPTION SEE PAGE 236 237.

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