### STICKNEY

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## THE USE OF MAIZE BY WISCONSIN INDIANS.

In an entertaining and instructive chapter upon "The Indian as an Agriculturalist," [1] Mr. Lucien Carr has amassed a wonderful amount of information on the agricultural attainments of the Indian tribes formerly dwelling in North America east of the Mississippi. He devotes most of his attention to the eastern and southern portions of this region, passing over the Wisconsin Indians with a few general statements limited to a single paragraph.

Wisconsin is on the borderland of the profitable culture of maize when this culture is assisted by the devices of civilization. In some portions of the state, on the warmer soils, this crop is about as sure as it is anywhere. In other districts, notably in the northern part, on the heavy red clay, in all probability maize growing will never be very remunerative. [2] With these facts in mind, it may be of interest to gather from the records of the early missionaries and travelers the information which may there be found bearing upon the agricultural attainments of the Wisconsin Indians, thereby localizing, in some degree, the work to which reference has been made.

#### THE HISTORY OF THE PLANT.

On his return from the new world, Columbus carried to Spain specimens of many new plants and animals. It is quite likely that among the plants thus introduced to Europe, was the one known to us as maize or Indian corn. [3] The distribution of this plant over the eastern hemisphere was very rapid.

<sup>[1]</sup> Smithsonian Report, 1891, pp. 807 et seq. Washington, 1893.

<sup>[2]</sup> W. A. Henry, "Indian Corn," in Northern Wisconsin, p. 18. Madison, 1896.
[3] J. W. Harshberger, "Maize; A Botanical and Economic Study," p. 75. Philadelphia, 1893.

and within a few years it was being cultivated in many parts of Europe and had even reached far-off China. [4] Maize is an Arawak word of South American origin, adopted by Columbus in its Haytien form mahiz. [5] In Europe, generally speaking, all grain used for human food is called corn. The early immigrants to America brought this custom with them, and finding a new grain here, they included it in the term, identifying it by the prefix "Indian." In many places the qualifying word has been dropped, so that to-day the three terms are used interchangeably—maize, corn, Indian corn.

The most noticeable peculiarities of maize are the large size of the kernel of grain and of the plant itself. The grain is the largest known. The plant commonly ranges from four to ten feet in height, but a variety sixteen to eighteen inches tall has been described [6], and plants thirty feet in height have been reported from the West Indies. [7] Sometimes as many as nine ears from six to ten inches long grow on each plant, and each ear has from eight to sixteen or more rows of kernels. [8]

It is believed that this plant is indigenous to America, and it is considered the most important contribution made by America to the vegetable food supply of the world. The place of its origin has not been definitely determined, and its culture is of so long standing that it is difficult to identify the wild plant from which it was developed. It is generally believed, however, that this plant originated somewhere in Mexico or Central America, possibly "near the ancient seat of the Maya tribes, north of the Isthmus of Tehuantepec and south of the twenty-second degree of north latitude." [9] The Euchlaena grasses, the wild plants most closely resembling it, grow in that region,

<sup>[4]</sup> E. I. Sturtevant, "Indian Corn," in Trans. N. Y. Agr. Soc., 1877-1882, pp. 37-74.

<sup>[5]</sup> J. W. Harshberger, op. cit., p. 88.

<sup>[6]</sup> Bonafous' "Nat, Hist, dn Maïs," quoted by Sturtevant.

<sup>[7]</sup> E. L. Sturtevant, op. cit., p. 61.

<sup>[8]</sup> Sturtevant (p. 59) lists 22 varieties according to the number of rows of kernels, from 8-rowed to 36-rowed; according to colors he lists twenty varieties.

<sup>[9]</sup> J. W. Harshberger, op. cit., p. 54.

and it seems likely that maize was domesticated by the Mayas. the most advanced of North American Indians. There are to-day a great many varieties of maize, but most of these varieties were known to the Indians before the advent of the white men. The Europeans found maize in cultivation from Chili and La Plata River in the South to the Great Lakes and St. Lawrence River in the North. [10] It has been remarked that the development of this semi-tropical plant into a great food supply so far north as it was found forms the subject of an interesting study of the agricultural instincts of the Indian, and that while the plant might have moved east or west accidentally, "skilful cultivation and careful attention to the selection and improvement of variety" were necessary to its northward move-[11] The wide distribution of the plant and the existence of its many varieties argue that its domestication occurred at some very remote time.

America possessed a number of wild grasses having more or less resemblance to the wheat, rye and oats of the old world; but the superiority of maize was so marked that for the most part cultivation of the other cereals was neglected. Maize was so widely and so largely cultivated as to provide partial subsistence to the greater part of the American Indians. If they had not possessed this plant, it is doubtful if cereal agriculture would have had a place in their advancement. The other cereals can not be successfully grown without working the entire surface of the field. This process would be very difficult without the help of the plough, drawn by the larger domesticated animals. They did not possess these animals, unless the buffalo was so used. There is no evidence to show that it was, although Joliet suggested that their "young wild oxen may be easily learned to plough their land." [12] While the other

<sup>[10]</sup> On the range of aboriginal maize-culture see D. G. Brinton, "The Myths of the New World," p. 24. New York, 1868. Harshberger, op. cit., p. 129; Lucien Carr, "The Food of Certain North American Indians," etc., p. 4 and notes. Worcester, 1895.

<sup>[11]</sup> P. R. Hoy, "Who Built the Mounds?" in Trans. Wis. Acad. of Sciences, Arts and Letters, vol. vi, p. 86. Madison, 1883.

<sup>[12] &</sup>quot;Letter," in Smith's Wisconsin, vol. i, p. 302. Madison, 1854.

cereals require the reduction of the whole surface of the field to a state of tilth, in maize culture it was only necessary for the Indian to grub up the spot where the seed was dropped.

It seems to be true that no agriculture other than that of the cereals has been the foundation of a condition of life approximating civilization. This is largely owing to the fact that the seeds of cereal grasses, as compared with other agricultural products, are very rich in the great food requisites of the nervous and muscular systems. As a stimulant to human activities, in its heat-producing properties, maize equals the flesh of some animals and exceeds that of others. [13] Cereal agriculture is the highest form of this art, hence those who practice it must be more advanced in culture than those who depend for vegetable food upon fruits or nuts or the results of minor agriculture. Cereal agriculture gives man a regular though varied employment during most of the year, thereby directly tending "to render the unit of human labor a constant quantity." When this has been accomplished, a good start toward civilization has been made. Thus we find the American Indian in the peculiar condition of a combined hunter and agricultural life, his position in the culture scale being largely dependent upon the predominance in his life of the habits of the hunter or of those milder agricultural duties regulated by the recurring seasons.

The Indians of eastern United States, at the period of their discovery by Europeans, were sedentary. That is, they had their home villages, near which were their caches and fields, and to which they returned after their plundering forays or their hunting excursions. These villages were moved from time to time, as circumstances demanded, but not ordinarily for any great distance. The Indians were still in the hunter state, their agriculture nowhere being sufficient entirely to supply them with food. [14] But at this period maize was being

<sup>[13]</sup> W. O. Atwater, "Foods; Nutritive Value and Cost." Washington, 1894.

<sup>[14]</sup> J. W. Powell, "Indian Linguistic Families," etc., p. 31, in Seventh Annual Report, Bureau of American Ethnology. Washington, 1891.

raised to some extent wherever on the continent and adjacent islands its culture would bring good results. Although it is impossible to tell how much land was cultivated by any one tribe, or what degree of reliance for the food supply was placed upon maize culture by any tribe or group of tribes, the early explorers and settlers recorded a vast amount of data showing that maize was grown generally and in considerable quantities.

### THE WAY IN WHICH IT WAS GROWN.

At all times and in all places maize was grown by the Indians in much the same way. The first necessary step in its culture was the clearing of the ground. Some spot was selected whose vegetable growth suggested great fertility of the soil. The undergrowth of bushes and small trees was cut down, and the large trees were girdled a few feet above the ground after being stripped of some of their branches. The ground was then burned over, the fire destroying the dry branches and bushes and even attacking the larger trees. Among the blackened tree trunks the maize was then planted in irregular rows three or four feet apart, the ground having first been broken up with primitive hoes. The seed was soaked in water for several days before planting, and nine or ten grains were placed in each hill. When the blades showed a few inches above the ground, they were "hilled up." The weeds were removed once or twice during the season. Among some tribes a lookout was maintained, guarding against the depredations of birds and thieves. The planting and the general care of the crop were usually, although not invariably, entrusted to the women, who, we are told, worked in common in some instances, finishing the planting of one field before beginning another. Feasts were commonly given to the workers by those whom they assisted.

Stirring the earth around the young plants in destroying the weeds doubtless suggested the advantage to be gained by heaping the earth around them. The repetition of this process from

year to year gradually formed small hillocks or mounds, these later developing into a more or less continuous ridge. has been advanced as an explanation of the garden beds which were found in greatest numbers in Michigan and Wisconsin. [15] Lapham describes these as follows: "Another evidence of former cultivation occurs, consisting of low, broad, parallel ridges, as if corn had been planted in drills. They \* \* \* average four feet in width and the depth of the walk between them is about six inches. These appearances, which are here denominated 'garden beds,' indicate an earlier and more perfect system of cultivation than that which now prevails." [16]. Lapham also describes the hillocks, calling them "Indian corn hills," and says that the corn being planted in the same spot year after year, the annual additions bring the soil into the form of hillocks.

In the earlier period of maize culture, the method of essartage doubtless obtained. Under this method small separate clearings were made as has been described. The return in the first crop was very large, fine land yielding four hundred for one and the poorest land rarely falling below eighty for one. [17] After the land had been weakened by several successive crops, it was deserted and another clearing was made. In the course of time a rank growth of weeds sprang up in the first clearing. The Indian might then return, burn the weeds and other growth and plant another crop. In a year or two the clearing was again deserted. The Indians early learned that the fertility of the soil might be renewed in some degree by the application of refuse matter of various sorts. It may be that in visiting an old clearing it was noticed that the vicinity of the former dwelling, where organic refuse had accumulated, possessed an unusual fertility. Lafitau says that great importance was attached to the burning of the tall dried stalks of a former

<sup>[15]</sup> E. J. Payne, "History of America," vol. i. p. 310. Oxford and New York,

<sup>[16] &</sup>quot;Antiquities of Wisconsin," p. 19. Washington, 1855.

<sup>[17]</sup> Payne, op. cit., p. 367.

crop. The Plymouth Pilgrims were told by the Indians that "in old grounds excepte they gott fish and set with it, it would come to nothing." The Mexican tribes had a special name for the land once occupied by human habitations, and it was considered very valuable for purposes of agriculture.

After conquering the earth and getting his crop well started, the Indian agriculturist often met certain obstacles to the successful result of his labors. Long periods of very dry weather blighted his plants; early frosts nipped them before maturity; or they were destroyed by the attacks of his enemies. Experience gained in combatting these difficulties probably taught him to store corn for food as well as for seed, and among the more advanced tribes it led to the adoption of irrigation as a defense against the disasters incident to continued and oftrecurring drought. With a little care in storing, ripe maize can be kept for many years, and such stores as these were the first form of wealth based on the produce of the soil. Among the Indians each woman conducted her harvest separately, carrying home the maize grown in her field, or burving it in a cache in some convenient place. If carried home, the grain was either stored in a granary or in the top of the house, or was hung in the house in festoons of ears braided together.

### MAIZE AMONG THE EASTERN TRIBES.

Before turning our attention to the Wisconsin Indians, it may be well to take a glance at the eastern tribes which were more or less related to them. About A. D. 1003, after a winter in Vinland, Thorwald found an island far to the westward on which was a corn-crib of wood. Other Northmen are reported to have found corn in later voyages, but the identity of the grain is not established. When Cartier, in 1535, sailed up St. Lawrence River he found the Indians at Hochelaga (Montreal) cultivating large fields of maize, and storing the grain in their houses. Champlain in 1610 said that maize was the chief food

of the Indians around Lakes Erie and Ontario, and that they stored it in large quantities, enough to last several years. When Champlain ascended Ottawa River he found Indian corn fields, the plants being then about four inches high, and pounded meal was one of the foods set before him at an Indian feast. The Iroquois raised maize in large quantities and kept it in store from year to year. It is said that while some of their neighbors were hunters, at the time of their first contact with Europeans these tribes were distinguished as agriculturists. In New England, Champlain found the natives cultivating the ground and raising enough maize for their winter use. He reported that the corn grew to a height of five or six feet, and that hoes of wood or bone were used in its cultivation. Captain John Smith testifies that in 1614 he found these Indians raising corn in large quantities. In Mourt's Relation, we read that the Pilgrims in the long winter of 1620-21 "bought greate stores of venison and eighte hogsheads of corne and beanes." They bought these stores from neighboring Indians. In the following spring their Indian friends instructed them in "bothe ve manner how to set it, and after how to dress and tend it." A few years later the English destroyed in Connecticut more than 200 acres of corn belonging to the Pequots; and in 1675 the English took possession of, and harvested, a thousand acres of corn belonging to King Philip. In 1609, in Southwestern New York, Henry Hudson saw a house in which was stored a large amount of corn, while enough to load three ships lay drying near by. The Indians of New Jersey and Pennsylvania raised corn and beans which they sold to the white settlers. Kalm says that the Swedish settlers were obliged to buy maize of the Indians for both sowing and eating. William Penn reports that the Delawares and the Shawnees whom he found in Pennsylvania lived on maize prepared in many ways.

The earliest account of the Virginia Indians is that of Thomas Hariot, written in 1587. He describes maize and the method followed by these Indians in its cultivation. He lists

four varieties, white, red, yellow and blue, and adds: "All of these yield a very white and sweet flour, being used according to his kind, it maketh a very good bread." Captain John Smith and Beverly are among the early writers who give additional information. Beverly says: "The Indian corn was the staff of food upon which the Indians did ever depend." [18] Le Clerq writes that the Neutrals, the Hurons, and the Nipissings were sedentary peoples. [19]

The statements contained in this rapid survey are enough to show that maize culture was an important art among the eastern Indians, and that its successful practice was confined to no one tribe. Farther to the south it was even more important than among the northern tribes.

In the consideration of maize culture by the American Indians, two points seem worthy of special emphasis. These are, first, the Indians taught white men the value of this grain and the proper way to grow it; second, more than two centuries of civilized cultivation have done substantially nothing in the matter of improvement of its varieties. [20]

#### THE WISCONSIN INDIANS AND THEIR USE OF MAIZE.

The task of classifying North American Indians according to their ethnic traits has been attempted several times without satisfactory results. The Bureau of American Ethnology has adopted the linguistic classification as that of highest promise. Under this system the Bureau recognizes fifty-eight distinct families, as residing, at the time of their first contact with Europeans, in that part of North America lying north of Mexico. A glance at the map which accompanies Major

<sup>[18]</sup> Upon the raising of maize by the eastern and southern Indians, consult Carr, "The Mounds of the Mississippi Valley," in Smithsonian Report, 1891; Cyrus Thomas. "Mound Exploration," in Twelfth Annual Report, Bureau of Ethnology, and their references.

<sup>[19] &</sup>quot;Establishment of the Faith," vol. i, p. 110, Shea's translation. New York, 1881.

<sup>[20]</sup> Sturtevant, "Indian Corn and the Indian," in American Naturalist vol. xix, p. 233.

Powell's paper discloses the fact that more than one-half of these families dwelt along the Pacific Coast, each occupying a comparatively small district. Only seven families are noted in the region east of the Mississippi, but among these seven are three of the most important, the Siouan, the Iroquoian and the Algonquian. Wisconsin was the meeting place of the first and last of these, and bands of the Huron relatives of the famous Iroquois were at one time driven by the latter to Wisconsin soil. The Siouan family was represented by the Winnebagoes, left in Wisconsin in the westward migration of the family, and bands of Issanti Sioux also dwelt in the western part of the state, northward from the site of La Crosse. Most of the Wisconsin Indians, however, belonged to the Algonquian family.

The territory occupied by the portions of the Algonquian family which practiced agriculture, extended, broadly speaking, from the southern limits of Virginia and Kentucky to the St. Lawrence, and from the Mississippi to the Atlantic. Included in this territory were the habitat of the famous Iroquois confederacy in Central New York, and the land of the Sioux and Winnebagos in Wisconsin. Aside from these exceptions, all the Indians in the territory were Algonquins. This family once formed a single tribe dwelling near the Great Lakes. When the separation took place is not known. The traditions of most of the tribes do not carry them back very many years before the coming of the Europeans. As the Algonquin tribes have the common root min for maize, it is almost certain, however, that this cereal was cultivated by them before the division. The Wisconsin tribes belonging to the Algonquian family were the Ojibwa or Chippewa, Menomonee, Outagamie or Fox, Sac, Miami, Kickapoo and Mascoutin, while bands of the Ottawa and of Illinois lived in the state long enough to entitle them to our attention.

Although a few adventurous Frenchmen had penetrated to their villages before that time, the history of the Wisconsin

Indians in their contact with Europeans may be said to have begun about the year 1670. At this period the Pottawattomies dwelt along the peninsula between Lake Michigan and Green Bay and on the islands in that bay. Across the bay to the west were the Menomonees or Folles Avoines, near the river now bearing their name. At the head of the bay, a mixed village of Sacs, Pottawattomies and Winnebagoes clustered around the mouth of Fox River. The main town of the Sacs was about twelve miles up this river, and along Green Bay, Fox River, and in the neighborhood of Lake Winnebago dwelt the Indians from whom this lake took its name. On Wolf River were the Foxes, the one Algonquin tribe to come into contact with the French without yielding them ready allegiance. The since lost Mascoutins with their allies, the Miamis and the Kickapoos, dwelt on the banks of Fox River above the mouth of the Wolf. Along the southern shore of Lake Superior the Oiibwas had lived for several centuries, while a considerable number of Ottawas were in the vicinity of Chequamegon Bay. A few years earlier there was a village of Hurons at the headwaters of Black River. Driven westward by the Iroquois, they foolishly incurred the enmity of the Sioux, who speedily drove them east again after a comparatively short stay on Wisconsin soil. Marquette and Allouez found Illinois Indians at Chequamegon Bay, whither the savages had been attracted by the fishing and trading. In later years these Indians were often in Wisconsin on hunting excursions or war forays. Finally, along both banks of the Mississippi and St. Croix Rivers were strong bands of the eastern Sioux. Stubbornly contesting every foot of the way, they were finally driven from Wisconsin by the Chippewas, but in the last half of the seventeenth century they were numerous in the northwestern part of the state.

Major Powell asserts that notwithstanding the general impression of the present time, Siouan migration has generally trended westward, and that in comparatively late prehistoric

times it is believed that most of the Siouan tribes dwelt east of the Mississippi. [21] The Green Bay region was the territory of the Winnebagoes until the prowess of the Iroquois confederacy drove some of the Algonquin tribes westward, to settle in the fertile valley of the Fox. The Winnebagoes were formerly very numerous, but were almost exterminated by the Illinois. Wisconsin Indians first appear on the page of written history in the "Relation" of 1640, where Vimont, naming Nicolet as his authority, writes. "One enters the second mer douce upon the shores of which are the Maroumine; farther still on the same shores dwell the Ouinipigou, a sedentary people (peuples sedentaires) who are very numerous. [22] On the same page Vimont explains his use of the word sedentaire: "Toutes ces nations sont sedentaire, comme j'ay desia dit, elles cultivent la terre." Allouez, one of the best of the early authorities, says that he found at Green Bay only one village, comprised of several nations, "Ousaki, Pouteouatamis, Outagami, Ouinibigoutz, containing about 600 souls." He adds that all of these people have fields of Indian corn, gourds, beans and tobacco. [23] In 1728 Lignery's expedition was sent against the Foxes. This expedition was composed of 400 Frenchmen and some 800 or 900 Indians. Emanuel Crespel, a Recollet priest, accompanied the expedition and wrote an account of the journey. After telling about the enticing of the Menomonees into a combat and then the surrounding of the town of the Sacs, of whom all escaped but four, these four dying by torture, Crespel says that, on August 24th, "we arrived at the village of the Puants much disposed to destroy any inhabitants that might be found there; but their flight had preceded our arrival, and we had nothing to do but to burn their wigwams and ravage their fields of Indian corn, which is their principal article of food." -[24] Carver's journey in 1766 brought him to the Winnebago

<sup>[21] &</sup>quot;Indian Linguistic Families," p. 112.

<sup>[22] &</sup>quot;Relatious des Jesuites," 1640, p. 35. Quebec ed., 1858.

<sup>[23] &</sup>quot;Relation," 1670, p. 94, (references are to the Quebec Edition).

<sup>[24] &</sup>quot;Letter," in Wis. Hist. Coll., vol. v, p. 90.

town which he und ruled by a queen whom he terms "the good old lady. He says that the land near the town is very fertile and abo ds with "grapes, plums and other fruits which grow spontaneously. The Winnebagos raise on it a great quantity of lanian corn, beans, pumpkins, squash and water melons with some tobacco." [25]

Before in ing to Wisconsin, the Pottawattomies dwelt in the lov- peninsula of Michigan. They were driven hence by e Iroquois as early as 1638. Their wanderings led them to the islands at the outlet of Green Bay, whe : they gradually spread along the adjacent mainland. T ian says that of all the western Indians, those of this trib were the most docile and affectionate toward the French Perrot states that these Indians were closely related to the .es and the Sacs. Radisson says that he and Groseilliers st at a winter with the Pottawattomies (about 1660), and his ac ount contains the first passage bearing upon their field indus es. He says: "I can assure you I liked noe country as I /e that wherein we wintered; for whatever a man could de: e was to be had in great plenty, viz: staggs, fishes in ance, & all sort of meat, corne enough." [26] In 1667, ab. in wrote that this tribe planted fields of Indian corn to say hemselves from the famine which was too common in this re ion. [27] Two years later Allouez stated that this tribe h: fields of Indian corn, beans, gourds and some tobacco. [28] 672 it was reported that four different peoples dwelt at the d of the Bay of the Puants, living partly on the results of r hunting and fishing, and partly upon what they gathered in the earth. [20] Perrot spent the winter of 1665-6 with e Pottawattomies. In the following spring he visited the iamis and their allies and formed a trading alliance with them.

<sup>[25] &</sup>quot;Travels," p. 30. Philadelphia, 1784.

<sup>[26] &</sup>quot;Third Voyage of Radisson," Wis. Hist. Coll., vol. xi, p. 70.

<sup>[27] &</sup>quot;Relation," 1667, p. 18.

<sup>[28] &</sup>quot;Relation," 1669-70, p. 94.

<sup>[29] &</sup>quot;Relation," 1672, p. 38.

The Pottawattomies tried to prevent this alliance, and upon Perrot's return to their village, fearing his wrath, they gave him a sack of maize and five beaver pelts "to remove the anger from his heart." [30]

In the autumn of 1679, La Salle's party coasted the western shore of Lake Michigan. Father Hennepin was in the party and he tells of a storm which kept them in camp two days, so that they consumed their provisions, "that is to say, the Indian corn and squashes that we bought of the Poutouatomis." [31] On the 1st of October they came to another Pottawattomie village. La Salle feared that his men would steal his goods and desert, so he kept on for three leagues. Then, landing, he sent messengers back to buy corn, but the Indians had fled from the village. Hennepin says that the men "took what Indian corn they could carry," and in the morning the Indians, relieved of their fears, brought in more corn. Just a year later Tonty was obliged to desert the Illinois country. He reached Lake Michigan and he says, after sailing on Lake Michigan, "as far as La Touissant we were wrecked, 20 leagues from the village of the Poutouatomis. Our provisions failing us, I left a man to take care of our things and went off by land. But \* we did not arrive at this village till St. Martin's Day [November 11th, 1680]. During this journey we lived on wild garlick which we were obliged to grub up from under the snow. When we arrived we found no savages; they were gone to their winter quarters. We were obliged to go to the places they had left, where we obtained hardly as much as two handfuls of Indian corn a day, and some frozen gourds which we piled up in a cabin at the water's side." [32] Hennepin journeyed across Wisconsin this same year, but he says nothing about the Jesuit mission at the Bay, or the Indian tribes in its immediate vicinity. La Potherie's history contains nothing later than 1701.

<sup>[30] &</sup>quot;Memoire," p. 279. Paris and Leipzig, 1864.

<sup>[31] &</sup>quot;Description of Louisiana," p. 110, Shea's translation. New York, 1880.

<sup>[32] &</sup>quot;Memoir," in French's Hist. Coll. of Louisiana, vol. i, p. 58.

In it he states that all the Indians of the Bay region are happily placed, as the country is beautiful and the fields are fertile for Indian corn. [33] Later we read about the Pottawattomies, "Their isle is abundant in grain and well tempered." [34] By 1718 many of this tribe had returned to the vicinity of Detroit and it is stated that the women cultivated Indian corn, beans, peas, squashes and melons, which "come up very fine." [35]

The Sacs at one time dwelt near Detroit River, and in common with other Algonquin tribes were driven westward by the powerful Iroquois. About 200 of them were on the shores of Lake Superior in the time of Allouez. In the "Relation" for 1667 (p. 21), we read: "As for the Ousakis, they are savages beyond all others. They are numerous, but wanderers and vagabonds in the woods without any settled home." Contrary to this testimony is that of Allouez and Dablon. Both include this tribe in their descriptions of the country around Green Bay, and both testify to the agricultural attainments of the Sacs. [36] La Hontan states that the Sacs, the Pottawattomies and some Menomonees have their villages on the shores of Fox River and mentions corn as one of their productions. [37] The testimony of Carver in 1767 is more exact. The Sacs before this time had moved westward and he found their chief village on the Wisconsin River. After describing their town, he writes: "In their plantations which lie adjacent to their houses, and which are neatly laid out, they raise great quantities of Indian corn, beans, melons, etc., so that this place is esteemed the best market for traders to furnish themselves with provisions, of any within eight hundred miles of it." [38]

The Foxes or Outagamies called themselves Musquakies. Chased from their ancient homes by the Iroquois, they took

<sup>[33] &</sup>quot;Histoire de l'Amerique Septentrionale," vol. ii, p. 79.

<sup>[34]</sup> Cadillac in "Margry," vol. v, p. 120.

<sup>[35]</sup> New York Colonial Documents, vol. ix. p. 887.

<sup>[36] &</sup>quot;Relation," 1667, p. 18; 1670, p. 94.

<sup>[37] &</sup>quot;Nouveaux Voyages," vol. i, p. 137. La Haye, 1715.

<sup>[38] &</sup>quot;Travels," p. 33. Philadelphia edition, 1784.

refuge in the country of the Sacs, twenty-five or thirty leagues from Green Bay, towards the southwest. Allouez estimated them at one thousand warriors and one hundred and twenty of them were with him at Chequamegon. Warren tells of their many conflicts with the Ojibwas. In 1670, their chief village was on Wolf River. At that period Allouez writes of them: "They are placed in an excellent country. The earth, which is black, yields them Indian corn in abundance. They live by hunting during the winter, but towards its end they return to their lodges and there live on Indian corn which they placed in cache in the autumn, and which they season with fish." [30] Four years before, in 1666, they were visited by Perrot. La Potherie says that the land around their village was of excellent quality and gave the savages an abundance of Indian corn, but at the time of Perrot's visit they were destitute of all things and the sight of their misery aroused his pity. [40] Hennepin passed through their country when he returned from the West in the fall of 1680. He states that all this country where the Miamis formerly dwelt is as fine as that of the Illinois, and that the "Outaougamy," as well as the Mascoutins and Kickapoos, "sow Indian corn for their subsistence." [41] In 1718 it was officially reported to the French government that, "The Foxes \* \* \* are as industrious as can be; raise large quantities of Indian corn, and have a different language from the Outaoues." [42] Lignery's expedition in 1728, whose destruction of the crops of the Winnebagoes has been noted, was unable to catch the Foxes, and accordingly laid waste their country, burning the villages and destroying the fields of Indian corn, peas, beans and gourds, of all of which the savages had great abundance. Crespel says: "The country here is beautiful, the soil is fertile,

<sup>[39] &</sup>quot;Relation," 1670, p. 98,

<sup>[40]</sup> Tailhan's notes to Perrot's "Memoire," p. 266.

<sup>[41] &</sup>quot;Narrative" in Shea's Discovery and Exploration of the Mississippi River, p. 142. New York, 1852.

<sup>[42] &</sup>quot;Memoir Upon the Indians Between Lake Erie and the Mississippi," 1718, in N. Y. Col. Doc., vol. ix, p. 889.

the game plenty and of fine flavor." [43] Carver writes as though the raising of maize by the Foxes was a generally accepted fact. [44]

The identity of the Mascoutins is one of the knotty problems in Western history. Sagard had the right idea of their location when he placed their country beyond that of the Winnebagos. [45] In all probability the Miamis joined them not long before their first encounter with the French, and doubtless the tribes were closely related. Shea traced the Mascoutins down to 1763, at which date they were dwelling on the Wabash to the number of ninety. [46] La Potherie vaguely states that a contagious disease was fatal to many Mascoutin chiefs about 1690. [47] It is likely that at last they were confounded with the Kickapoos. The allied Miami, Mascoutin and Kickapoo tribes numbered about three thousand warriors. Marquette speaks highly of the Miamis and says: "The Maskoutens and Kickabous are ruder and more like peasants." [48]

Nicholas Perrot was in Wisconsin as early as 1665, and passed nearly all the time from 1685 to 1700 in the region then dependent on Green Bay. Writing about the western Indians for the information of the Governor of Canada, he said that Indian corn was to the Indian what bread was to the French, and that lacking corn, the Indians thought they fasted, no matter how much fish or flesh they might possess. [49] Later he writes: "The savage nations which inhabit the prairies are happily placed. There are animals and birds in great number, with an infinite number of rivers full of fish. The men are naturally laborious, and attached to cultivating the earth, which is very fertile for Indian corn." [50] Perrot's western exper-

<sup>[43] &</sup>quot;Letter," loc. cit., p. 91.

<sup>[44] &</sup>quot;Travels," p. 113, ed. cit.

<sup>[45] &</sup>quot;Le Grand Voyage du Pays des Hurons," p. 201.

<sup>[46] &</sup>quot;The Indian Tribes of Wisconsin," in Wis. Hist. Coll., vol. iii, p. 133.

<sup>[47]</sup> Op. cit., vol. ii, p. 249.

<sup>[48] &</sup>quot;Relation," p. 14, in Shea's Discovery, etc.

<sup>[49] &</sup>quot;Memoire," p. 51.

<sup>[50] &</sup>quot;Memoire," p. 56.

iences were mainly among the Fox River tribes and the Sioux. And it is altogether likely that the Mascoutins, the Miamis and the Kickapoos were the tribes which he had in mind when writing these passages. When he first visited the Miamis, he was given a feast composed of sagamité, "ou bouillie de blé d'Inde, de viande sèche et d'épis nouveaux de maïs." [51]

Allouez found the Mascoutins established in a very fine place. He was harangued by one of their old men, who said, among other things: "Listen, my Manitou, I give thee wherewith to smoke, that the earth may yield us corn, that the rivers may furnish us with fish, that sickness shall no more kill us, that we may no more be afflicted with famine." [52] Soon after this he visited the Kickapoos, and they brought him "a kettle full of fat meat and Indian corn." Dablon also mentions a dish of Indian corn boiled in fat and says that he easily continued his discourses, as the feast was of Indian corn only. [53] When on their way to the Mississippi in 1673, Joliet and Marquette stopped at the villages of these Indians. Marquette says: "Their soil is very good, producing much corn. The savages also raise a quantity of grapes from which good wine could be made if one wished." [54] Dablon says that he is not surprised that the Miamis promptly joined their allies in this favored place, the beauty of which had about it "something of a terrestrial paradise." A century later the Miamis had moved southeastward into Indiana and Ohio and in 1794 General Wayne wrote of them in these words: "The Miamis of the Lake and Au Glaize appear like one continued village for a number of miles, both above and below this place; nor have I ever before beheld such immense fields of corn in any part of America from Canada to Florida." [55]

<sup>[51]</sup> Tailhan's notes to "Memoire," p. 272.

<sup>[52] &</sup>quot;Relation." 1670, p. 99.

<sup>[53] &</sup>quot;Relation," 1671, p. 46.

<sup>[54] &</sup>quot;Narrative," in Shea's Discovery, etc., p. 14.

<sup>[55]</sup> Quoted by Manypenny, "Our Indian Wards," p. 84. Cincinnati, 1880.

About Chequamegon Bay, we read from information furnished by Allouez: "It is a beautiful bay, at the head of which is situated the great village of the Indians who here have fields of corn and live a sedentary life. There are 800 men carrying arms divided among seven different nations who live together in peace." At this time these people lived mainly by fishing and cultivating the ground. They were not great hunters. It seems that they raised corn in considerable quantities, for they stored it in caches dug in the sand near their fields. A few vears later Marquette mentions incidentally that on a certain occasion all the Ottawa Christians were in the fields harvesting their Indian corn. Turning back to 1668 we read: "One part of the year they live on the bark of trees, another part on pulverized fish bones, and the balance of the time on fish or on Indian corn, which sometimes is very scarce and sometimes sufficiently abundant." The importance of corn to these Indians and the extent of their agriculture seem to be mooted points, and one early writer has given evidence of this. In the "Relation" of 1670, after a somewhat elaborate description of Lake Superior fisheries, there follows this statement: "Thus has Providence provided for these poor peoples, who in default of hunting and of fields of corn, live chiefly by fishing." A few pages later in the same "Relation," we read of the same people: "They dwell on the Point, living on fish and corn and rarely by hunting." The year following, Chequamegon Point and neighboring islands are described: "Where the Ottawas and the Tionnontaté Hurons retire either to fish or for corn." [56]

A hundred years later, on the largest and best of the islands at the mouth of Green Bay, Carver found an Ottawa village of twenty-five houses. He says that among this people he ate a very uncommon sort of bread, composed of corn cut from the cob while in the milk, kneaded into a paste, and baked in the hot embers after being enclosed in leaves of bass-wood. Carver adds: "And better flavored bread I never eat in any coun-

<sup>[56] &</sup>quot;Relations," 1667, p. 9; 1668, p. 21; 1670 pp. 85, 86 and 88.

try." [57] The Ottawas of Wisconsin were closely related to those of Mackinac and l'Arbre Croche. These places, because of the advantages for fishing and the excellence of the land for bearing Indian corn, had long been favorite Indian dwelling places. Hennepin says that "the Hurons and Ottawas cultivate Indian corn on which they subsist the entire year, together with fish. They make their sagamité of water and the meal of their corn which they crush with a pestle in the trunk of a tree hollowed out by fire." [58] La Hontan also speaks of the raising of corn by these Indians. [59] Cadillac says that the Indians at Mackinac have harvests consisting of Indian corn, peas, beans, pumpkins and watermelons. [60] Alexander Henry, the trader, reports that the Ottawas of l'Arbre Croche grow maize for supplying the traders at Mackinac and that when compared with the Ojibwas they seem to be much advanced in civilization. [61]

The Illinois Indians with their related tribes occupied the country from Ohio across the Mississippi and northward as far as the Fox and Wisconsin Rivers. The early writers often refer to them. They are described as dwelling to the south in five large villages, "one of which extends for three leagues, the cabins being built on a line." [62] Next we learn that "they live always by the earth, sowing Indian corn which they have in great abundance. They have melons as large as those of France and a quantity of roots and fruits." [63] Marquette says that game is abundant among them and that they never suffer famine, for they always gather a good crop of corn. Allouez tells us that these Indians "live on Indian corn and other fruits of the earth which they cultivate on the prairies like

<sup>[57] &</sup>quot;Travels," p. 26.

<sup>[58] &</sup>quot;Description of Louisiana," p. 101.

<sup>[59] &</sup>quot;Nouveaux Voyages," p. 114.

<sup>[60]</sup> In "Margry," vol. v, p. 81.

<sup>[61] &</sup>quot;Travels," pp. 47, 52, 126. New York, 1809.

<sup>[62] &</sup>quot;Relation," 1670, p. 86.

<sup>[63] &</sup>quot;Relation," 1671, p. 91.

other Indians." According to Father Marest, the women prepared the ground for sowing. Joliet states that the women are aided in this work by the old men, and that the ground is so fertile as to yield three crops of corn each year. "When they have sown their corn they go a-hunting." Father Membré records the winter hunt, saying: "It is the custom of these tribes at harvest time to put their Indian corn in eaches, in order to keep it for summer when meat easily spoils, and to go and pass the winter in hunting wild cattle or beaver, carrying very little grain." Membré later says that these Indians can have fields anywhere because of the richness and fertility of the soil. [64] Dablon speaks of the lack of superstition among the Illinois, suggesting that this may be because they live on corn "which readily grows in the good lands which they occupy" [65], hence they are not fishermen and do not fear the dangers of the lakes. These references might be multiplied, but enough have been given to show that the agricultural position of the Illinois was acknowledged, all the testimony tending in one direction.

According to Ojibwa tradition, the first home of this tribe was on the shores of the Atlantic. Journeying westward, their first stop was at the site of Montreal, and then their fires were lighted along the shores of Lake Huron. Then came another move to the outlet of Lake Superior, followed by still another westward movement to La Pointe and the head of the lake. In 1670-71 the Ottawas left Wisconsin soil, journeying eastward to Manitoulin Island and St. Ignace. After their departure, the Ojibwas gradually straggled back to the region of Chequamegon Bay, which they had deserted many years before. Warren says, in his traditional history of this tribe, that they were on La Pointe Island about 1500 A. D., living mainly by fishing. He adds: "They also practiced the arts of agriculture to an extent not since known among them. Their

<sup>[64] &</sup>quot;Narratives" of Marquette, Allouez and Membré, in Shea's "Discovery," etc., and Joliet's Letter, in Smith's "Wisconsin," vol. i, p. 301.
[65] "Relatiou," 1671, p. 48.

gardens are said to have been extensive, and they raised large quantities of Mundamin (Indian corn) and pumpkins." [66] Hennepin gives direct testimony as to the position of the eastern Ojibwas, those known as the Saulteurs, dwelling at Sault Ste. Marie. He says that these Indians do not plant any Indian corn, as their soil is not adapted to it, and "the fogs on Lake Conde [Superior], which are very frequent, stifle all the corn that they might be able to plant." [67]

Alexander Henry passed one winter at Chequamegon, living all winter on fish alone, "seeing no bread." In 1773 he distributed some seed maize among the Indians near Ontonagon River, which they planted, it resulting in good crops for two years. He says that they ate the grain green and saved only a small quantity for sowing, and hence ran the risk of losing their seed. [68] Carver thus describes the Ojibwa or Chippewa town near the headwaters of Chippewa river: "The houses are built after the Indian manner, and have neat plantations behind them." [69]

When the Petun Hurons were at the headwaters of Black River, they had some small patches of corn. [70] Later they moved to the shores of Lake Superior and again mingled with the Ottawas.

In the "Relation" of 1640 also appears the name of the Nadvesiv as one of the western tribes. Two years later it is stated that they live eighteen days' journey from Sault Ste. Marie, nine days by water and nine days by land; also "These people cultivate the earth like the Hurons, raising Indian corn and tobacco." [71] Their language differs from the Huron and Algonquin. Radisson gives additional testimony. After describing the winter famine in the village of the Hurons, he says: "Some 2 moons after there came 8 ambassadors from

<sup>[66]</sup> W. W. Warren, "History of the Ojibways," in Minn. Hist. Coll., vol. v, p. 97.

<sup>[67] &</sup>quot;Description of Louisiana," p. 101.

<sup>[68] &</sup>quot;Travels," pp. 198, 199, 206, 233, 234.

<sup>[69] &</sup>quot;Travels," p. 54.

<sup>[70] &</sup>quot;Relation," 1663, p. 20.

<sup>[71] &</sup>quot;Relation," 1642, p. 97.

the nations of Nadoueseronons, that we call now the Nation of the beefe. These men each had 2 wives, loadened of oats, corne that grows in that countrey, of a small quantity of Indian corne, w'th other graines, & it was to present to us, w'ch we received as a great favour and token of friendshippe." A little later he says of the Sioux: "They sow corne, but their harvest is small. They soyle is good, but the cold hinders it and ye graine is very small." [72] In conflict with this is Marquette's statement: "They do not know how to cultivate the earth, contenting themselves with a kind of marsh grass which we call folle avoines." [73] Allouez tells us that the Sioux "have fields in which they do not raise Indian corn, but only tobacco." [74]

La Salle did not visit the Sioux, but he carefully gathered information about the western Indians. On August 22nd, 1682, he wrote of the region of the Sioux: "Moreover, this country is uninhabitable, unfit for cultivation, there being nothing but marshes full of wild rice, on which these nations live." According to Carver, the Sioux or Naudowessies, "have no bread nor any substitute for it." [75]

The Menomonees were reported in the "Relation" of 1640. They are known in all the early records as the wild rice eaters, and were not great agriculturists. La Hontan writes: "The Sakis, Poutaoutamis and some Malominis have their villages situated on the shore of this river. The Jesuits also there have a mission. There is much trading in peltries and Indian corn, which these Indians sell to the coureurs de bois who come and go, for this is the shortest and easiest passage to the Mississippi." [76] La Potherie says that the Menomonees have but little corn, living only by hunting and fishing. [77] Marquette

<sup>[72] &</sup>quot;Fourth Voyage." in Wis. Hist. Coll., vol. xi, pp. 83, 93.

<sup>[73] &</sup>quot;Relation," 1671, p. 39.

<sup>[74] &</sup>quot;Relation," 1667, p. 23; cf. "Relation," 1642, p. 37.

<sup>[75] &</sup>quot;Travels," p. 113.

<sup>[76] &</sup>quot;Nouveaux Voyages," vol. i, p. 137.

<sup>[77] &</sup>quot;Histoire de l'Amerique Septeutrionale," vol. ii, p. 79.

gives a good description of wild rice and its use by the Menomonees, but he says nothing about their use of maize.

Thus we find that one narrator describes a tribe as being almost destitute, and another writer says that this same tribe is happily placed in a fertile land, abounding not only in maize, but in other vegetable foods. Thus the Sacs in 1667 are said to be worthless vagabonds with no settled home, yet La Hontan eighteen years later finds them supplying maize to the Green Bay market, and Carver in the next century gives them a notable commendation. The existence of famine among the Indians is not conclusive proof of the absence of field work and its resultant harvest. The red race is proverbially improvident, and we know that enough food to last months if carefully used was often consumed in a single feast. The festins à manger tout and the exacting laws of hospitality were responsible for many of the Indian's hardships in the matter of food.

There are many references to the use of wild rice, not only by the Menomonees, but also by the Ojibwas and the eastern Sioux, and it may be asserted with safety that wild rice was the chief vegetable food of these three groups, and that to them it was far more important than maize. It is probable that they paid some attention to maize culture, but this art did not reach a high position among them as a source of food supply. [78] The abundance of wild rice and the ease with which it might be gathered had something to do with this, but danger from frosts was the chief cause. In Northern Wisconsin at the present time it is observed that as early as August frosts sometimes damage maize in small clearings. The danger from this source is removed to some extent by the large increase of cleared space which follows the settling of the country. This phenomenon was noticed in other parts of Wisconsin, and early settlers south of the center of the state for a long time supposed that they could not successfully grow maize. Now it is as sure

<sup>[78]</sup> Wild rice today forms about one-fifth of the food of the Chippewas in Minnesota, although at times they raise good sized fields of corn.

a crop with them as it is with their neighbors in Illinois. [79] The clearings of the Indians in Northern Wisconsin were never large enough to give their crops protection from this danger. The northern tribes, therefore, probably ate their corn before its maturity, relying upon trade for the larger part of their seed corn. As the Illinois and other southern tribes often reached Lake Superior on their trading trips, this was no difficult matter. La Potherie tells of some Miamis' giving maize to the Sioux.

As the northern tribes were lowest in the scale of agricultural development, so the southern Indians were highest. Even before white men appeared among them, the Indians had a well-developed trade in furs and other commodities. The advent of the whites stimulated their field industries by furnishing them with a better market and with greatly improved tools, both of which advantages they were quick to understand and ready to grasp wherever soil and climate were favorable.

Summing up the results of this investigation, we find:

First: That the Wisconsin Indians dwelling north of the line of profitable maize culture gave some attention to the grain, and at times raised it in considerable quantities.

Second: That the Indians of Central and Southern Wisconsin raised maize in large quantities, enough to supply their own needs and leave them a surplus to be used in trade, although as agriculturists they never attained a position equal to that held by the Iroquois Confederacy or the tribes of the South.

GARDNER P. STICKNEY.

Milwaukee, Wisconsin, March 9th, 1897.

<sup>[79]</sup> On the feasibility of maize culture in Northern Wisconsin, see Prof W. A. Henry, "Indian Corn," in Northern Wisconsin, a handbook published by order of the Wisconsin Legislature.

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