portions of the country-side. The verdurous sides of the planting are the sides of the frame; the foreground is the bottom and the sky is the top. L. H. BAILEY.

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THE ORIGINAL TYPE OF CORN.

REFERRING to the article by Mr. Hershey in a recent number of *Science*, there are six types of corn, viz.: dent corn, flint corn, pop corn, sweet corn, soft corn and pod corn. Each of the first five has well marked structural differences in the kernel. Dr. Sturtevant proposed to distinguish these differences by calling these types agricultural species. The kernel of the pod corn does not present structural differences markedly unlike that of the flint corn, and probably under proper conditions would take on the characters of dent corn, but this type differs from all the others in that each kernel has a husk of its own, besides the usual husk that covers the ear; hence the name pod corn.

It has been claimed that this type of corn has been found growing wild in the Rocky Mountains and one observer reports it from Brazil. Just how authentic these observations are I do not know. I have some doubts about them, but be that as it may, this type has a special interest to Mr. Hershey in that it is quite customary for it to have fairly well-formed ears in the tassel, each kernel being covered with husks, and the whole ear more or less covered with a husk, although the outer husk is generally rather slight for reasons which will appear later on.

The transition from corn bearing its seeds in the tassel to that having ears at the joints is not hard to imagine, when we recognize that each joint has a tendency to produce an ear or throw out a sucker. Suckers, that is, stalks of smaller size than the main stalks and frequently barren, result from the lower joints of the main stalk, and ears from the upper ones when anything develops from these joints.

Now if we assume it likely that originally each joint threw out a sucker, which at that time would be a stalk bearing at its top both staminate and pistillate flowers, it is not difficult to see that these suckers might easily be modified into ears, that is, stalks bearing only pistillate flowers. Obviously, in the process of natural selection, those plants would be most likely to survive which had the most pollen in the upper tassel, or, in other words, in the tassel of the main stalk, because the pollen tends to descend. On the other hand, the ovaries on tassels lower down on the suckers would be more likely to be fertilized by virtue of their position. It would thus come about that there would be less and less ovaries produced on the upper tassel and less pollen on the lower ones, until we had only pistillate flowers below and staminate ones above.

There are varieties to-day, such as Blount's Prolific, which have six to eight ears upon a stalk; but these varieties are almost uniformly inferior to those varieties with but one ear per stalk for the production of grain. We can readily understand, therefore, that man in semi-civilized times early recognized that, for the production of grain, the only part of the plant then used, those plants with the fewer ears were superior, and hence selected such until the one-eared varieties resulted.

All varieties tend to sucker, more or less, when planted thinly; that is, to produce more stalks than there were seeds planted. The supernumerary stalks come from the joints at the base of the main plant. If you plant four kernels of Brazillian flour-corn, a variety belonging to the soft corn type, you will get, under normal conditions, about twelve stalks of corn. About three joints of each main plant produce stalks or suckers. While suckers frequently produce ears, they have a tendency to be barren, and they are more prone than the main stalks to produce corn in the tassel, although the production of corn in the tassel is more common generally than Mr. Hershey evidently supposes.

All ears are borne at the end of stalks, much more reduced in length than those we commonly call suckers. Yet the length of these stalks varies greatly in different varieties, and practical men prefer, other things equal, the ear with the shorter stalk or shank. Of course, in early times those plants having the grain on the shorter stalks would be selected, both because the stalk would be of no possible advantage and because the shorter the stalks the more completely the ear would be covered with husk, due to the fact that the husks are but slightly modified leaves. Indeed, this may have come about from natural selection. if corn ever in this form grew in a state of nature, due to the fact that the husk is a protection from its natural enemies, and hence the more husk on the ear the less would be the liability of the seeds being destroyed, hence the greater likelihood of such plants being perpetuated. THOMAS F. HUNT.

Ohio State University.

—Immediately following the World's Congress on Horticulture at Chicago in August last, a series of meetings was held to consider the advisability of organizing a horticultural society which shall include every country of the globe. After much discussion, in which many eminent men from various parts of the world engaged, the World's Horticultural Society was organized and the election of the three general officers was held on the 25th of August. This new society is designed, in the language of the constitution, "to promote correspondence and to facilitate exchange of plants and information between the countries of the world. This society can coördinate and extend the work of all existing societies, compile statistics, promote legislation and education, prepare correspondence directories, diffuse all the latest information from the various parts of the globe, consider means of transportation and facilitate the exchange of varieties and every commodity in which pomologists, viticulturists, florists, vegetable gardeners and other horticulturists are interested. The society will probably meet occasionally at the various International Exhibitions, upon which occasions, also, it can greatly aid in procuring exhibits from all parts of the world. The Society now requests the earnest and early support of its friends. The Vice Presidents of the various countries will be announced soon, and the organization will then be quickly completed. The Society needs the co-operation of every enlightened horticulturist and every important horticultural organization. Prosper J. Berckmans, President, Augusta, Georgia, U. S. A.; Henri L. DeVilmorin, Vice President, No. 22 Avenue de la Bourbonnais, Paris, France; L. H. Bailey, Ithaca, N. Y., U. S. A., Secretary-Treasurer for the United States, and temporary Secretary-Treasurer at Large.

—The American Academy of Arts and Sciences, at a meeting held in Boston on Nov. 8, voted to grant—from the C. M. Warren Fund for Encouraging Chemical Research—the sum of $300 to Professor C. F. Mabery, of Cleveland, Ohio, in aid of his investigations on the American sulphur petroleums.

—Another of Robert S. Ball's popular books on Astronomy, entitled, "In the High Heavens," is to be published soon by J. B. Lippincott Company. It will be profusely illustrated by drawings in the text and a number of full-page colored plates.