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A Systematic Study of the Squashes and Pumpkins

By E. F. Castetter and A. T. Erwin

In no other important group of vegetables is there more widespread confusion regarding nomenclature and classification than in pumpkins and squashes. Even the generic terms are misused and a number of varieties of pumpkins are called squashes, and conversely. Renaming of varieties has also run riot. The Table Queen, for example, a comparatively recent introduction, is listed under at least six different names. The renaming of varieties is in the long run a detriment to all concerned. The grower soon learns the facts in the case and his reaction toward a dealer who sells seed of standard varieties under new names is anything but favorable. The seedsman of today must succeed on the basis of quality by disseminating superior strains of standard varieties rather than by presenting known varieties under new names. The introduction of novelties is not to be discouraged, but the renaming of an existing variety and calling it a novelty does not make it such.

The purpose of this study is threefold: first, to define the terms "pumpkin" and "squash" and to indicate in simple and clear cut fashion the distinguishing characteristics of each; second, to classify the several varieties according to horticultural groups; third, to determine authentic names according to the accepted rules of nomenclature which govern in general science and in other branches of horticulture, and to accompany the names with accurate descriptions of the varieties concerned.

HOW TO TELL A PUMPKIN FROM A SQUASH

Much confusion exists both in horticultural literature and in the mind of the laity as to the use of the terms pumpkin and squash. In some sections the bush varieties are classed as squashes and most of the vining sorts as pumpkins. Sturtevant¹ says, "The American use of the word (squash) is so confusing that it can only be defined as applying to those varieties of cucurbits which are grown in gardens for table use; the word pumpkin applies to those varieties grown in the fields for stock purposes."

¹The authors wish to make acknowledgment to Dr. George T. Moore, Director of the Missouri Botanical Garden, for the loan of seed catalog files, to Professor E. B. Huber of this institution; also to numerous seedsmen, especially Mr. L. R. Robinson, who have assisted the authors in various ways.
Pumpkins are often called squashes, but squashes are rarely called pumpkins, which is significant. Field pumpkins and cow pumpkins are terms often used in the earlier literature. In the introduction of varieties of pumpkins of value for culinary purposes, the term squash was employed because it was logically associated with foods for human consumption—a distinction based entirely upon usage. A classification on this basis is wholly impractical, since some varieties are used for both table and stock. Likewise, the same varieties are grown in both field and garden, hence this distinction does not hold.

The seedsmen and growers have thoroly implanted the idea that any variety of merit for table use as a vegetable is to be called a squash regardless of its botanical relationship. But it is a fact that baked pumpkin is quite as palatable as baked squash.

The pumpkins belong to either of two species, *Cucurbita pepo* or *Cucurbita moschata*, and the squashes to *Cucurbita maxima*. A detailed description of each species is given in following pages. A simple character which may be readily applied by the layman to determine whether a given specimen is a pumpkin or a squash is this: Pumpkins at maturity have a hard, woody fruit stalk, which is rather distinctly furrowed longitudinally, and may or may not be conspicuously enlarged at attachment to fruit; on the other hand, squashes when ripe have a soft, spongy fruit stalk, which is not noticeably furrowed. These two types are shown in figs. 1 and 2. By comparing the fruit stalks of the Large Cheese and Connecticut Field pumpkins with that of the Hubbard squash one will readily observe the typical fruit stalk characters of pumpkins and squashes. It may also be noted that pumpkins contain both bush and running varieties, while so far as the authors know there are no bush varieties of the true squash.

**DO PUMPKINS AND SQUASHES MIX?**

The belief is widespread among growers that pumpkins and squashes will readily cross if grown near each other. During
the past five years the senior author has made several hundred hand pollinations each season to ascertain the facts regarding the possible mixing of pumpkins and squashes. In this work both pistillate and staminate flower buds were tied up the evening before opening to prevent chance pollination, and hand pollination was followed throughout the experiment, thus insuring the use of varieties of known parentage. It should also be noted that pure lines were used as the parents in each case, so that there could be no question as to the identity of the varieties and species used in the work.

It was found that *C. pepo*, var. Connecticut Field pumpkin, will cross with *C. moschata*, var. Large Cheese pumpkin. However, it must be kept clearly in mind that here we are dealing with two species of pumpkins, rather than with a pumpkin and a squash.

In another series an effort was made to cross *C. pepo*, var. Connecticut Field pumpkin, with varieties of *C. maxima*, chiefly the Hubbard squash. The total result of many such pollinations was three fertile seeds. The plants from these seeds were entirely sterile. Our conclusion is, therefore, that under field conditions the true squashes rarely, if ever, cross with varieties of pumpkins belonging to the species *C. pepo*.

In a third series of pollinations the Hubbard squash, *C. maxima*, was used as one parent and the Large Cheese pumpkin, which belongs to *C. moschata*, as the other. These crosses were successful and a number of fertile seeds were secured. We may therefore conclude that true squashes, *C. maxima*, will cross with one branch of the pumpkin family, *C. moschata*, represented by such varieties as the Large Cheese and the Cushaws.

In answering the question: "Do pumpkins and squashes mix??", it must first of all be kept clearly in mind just what is meant by the terms "pumpkin" and "squash," and, second, that there are two different branches of the pumpkin family, *C. pepo* and *C. moschata*. The true squashes, *C. maxima*, will readily cross with one branch of the pumpkin family, *C. moschata*, but not with the other, *C. pepo*. The fact that true squashes will cross with one species of pumpkin but not with the other no doubt accounts for the conflicting opinions on this subject.

**NATIVITY**

Pumpkins and squashes are probably native plants; at least they were used by the North American Indian long before the invasion of the white man, and this fact is abundantly verified by students of American Flora and of Ethnology. Alphonse de Candolle,² however, believes *Cucurbita maxima* native to the old

world, and Naudin\textsuperscript{2} believes \textit{Cucurbita pepo}, \textit{Cucurbita maxima} and \textit{Cucurbita moschata} originated in the old world. Wittmach\textsuperscript{4} favors the American origin of pumpkins and squashes, insasmuch as he found seed of \textit{Cucurbita maxima} in old Peruvian tombs.

Pickering\textsuperscript{5} reports that \textit{Cucurbita maxima} was observed by DeSoto in Florida in 1542, and was known to have been cultivated by the North American tribes as far north as the St. Lawrence River. L. H. Bailey,\textsuperscript{6} in Pickering's Chronological History of Plants, attributes the origin of the word "squash" to the American Indian word "\textit{wata hti}"—real squash; "\textit{wata miha sned}"—long squash, etc.

Grinnell\textsuperscript{7} states that the squash was cultivated by the Cheyennes from earliest time. Fewkes\textsuperscript{7} notes the finding of squash seed in some of the mortuary bowls, and regards this as indicating the ancient use of this vegetable for food. He also reports that one of the southern clans of the Hopi Indians was called the "\textit{Patun}," or squash family.

Dr. Elmer E. Higley, of Ames, Iowa, for years a missionary among the Hopi Indians, informs the authors that the squash blossom is a sacred emblem of the Hopi, signifying fertility; and it is one of the chief emblems worked into form by the Navajo silversmith, as is shown in the sketch (fig. 3) of a Navajo necklace, the original of which is the property of Dr. Higley.

Gilmore\textsuperscript{8} reports the allusion to the squash in some of the oldest religious songs of the Prina tribe of the southwest. "On the summit of Taatukam sees the squash standing." Religious expression, notes Gilmore, is one of the most conservative elements and does not take on anything new.

Gray & Trumball\textsuperscript{9} in summing up the evidence regarding the nativity of pumpkins and squashes, say: "We find abundant evidence, especially as respects North America—that (1) in

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\textsuperscript{5}Pickering, Charles. Chronological History of Plants. Boston, 1879.

\textsuperscript{6}Grinnell, G. B. The Cheyenne Indians. Vol. 2. 166. 1923.


various parts of the country, remote from each other, the cultivation of one or more species of cucurbits by the Indians was established before those places are known to have been visited by Europeans; (2) these species or varieties were novel to Europeans, and were regarded by botanists of the sixteenth and seventeenth centuries, as well as by the voyageurs and first colonists, as natives or denizens of the region in which they were found; and (3) they became known only under American names; one of these names (squash) becoming, in popular use, generic, and two others (Maecock and Cushaw) surviving as names of varieties into the present century.”

“If,” states Werkenthin, “we consider the stability of types, and the additional fact that so far as determined, the originals of cultivated types have their prototype in nature, it seems reasonable to suppose that the record of the appearance of types will throw light upon the country of their origin. We may hence conclude that as the present types have all been recorded in the Old World, there must be a connection between the fact of the discovery of America, and the fact of the appearance of pumpkins and squashes in Europe.”

**KEY TO ANNUAL CULTIVATED SPECIES OF CUCURBITA**

**A. Leaves**
1. Prickly, deep sinuses between lobes. .................. C. pepo
2. Not prickly, sinuses indistinct or absent
   a. Lobes pointed, with rare exceptions leaves soft hairy with white spots at intersections of veins ...................................... C. moschata
   b. Lobes rounded; rough hairy, kidney shaped, white spots never present. ............. C. maxima

**B. Fruit Stalks**
1. Cylindrical, soft and spongy, yielding readily to thumbnail .......................... C. maxima
2. Distinctly five sided, regularly grooved, hard
   a. Flaring at attachment to fruit. .......... C. moschata
   b. Not noticeably flaring or enlarged at attachment to fruit ................. C. pepo
3. Roughly cylindrical, not definitely five sided, irregularly grooved, not flaring or noticeably enlarged at attachment to fruit; hard .......... C. moschata

**C. Seeds**
1. Color, grayish white to tan; margin thickened, deeper in color and different in texture from body of seed; seed scar slanting, rounded or horizontal. C. moschata
2. Margin, when present, identical in color and texture with body of seed
   a. White, or brown to bronze—seed scar slanting .................................. C. maxima
   b. Tan colored, Seed scar horizontal or rounded ........................... C. pepo

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SPECIES, VARIETIES AND GROUPS OF PUMPKINS

Only 3 of the 10 species of cucurbita are of economic importance in the United States. These are Cucurbita pepo and Cucurbita moschata, which comprise the pumpkins; and Cucurbita maxima, to which all varieties of squashes belong.

In no other branch of horticulture are the rules of nomenclature so flagrantly violated as with vegetable crops. In this publication the authors have followed the code of nomenclature prepared by the joint committee from the American Seed Trade Association and the Vegetable Growers’ Association of America.

The pumpkins and squashes described have all been grown on the grounds of the Iowa Agricultural Experiment Station during the past five years. For the purpose of verification, seed of each variety was secured from a number of representative seedsmen throughout the United States.

The study embraced 98 forms, although the names of many proved to be synonymous. So far as known, this list comprises all of the important sorts at present listed by American seedsmen. Obsolete and rare varieties are not included.

A. Cucurbita pepo L. Plants have running or busy, five-sided, usually prickly, stems, which in the running varieties have distinct ridges and grooves. Leaf stalks and blades spiny, the blades three to seven-lobed with distinct sinuses between the lobes. Both staminate and pistillate flower stalks obtusely five-sided. Corolla

*Market Growers Journal, January 1, 1921.
Fig. 7. Staminate flowers of *Cucurbita pepo*. A. On the evening previous to opening. B. On the morning of opening.

orange-yellow, the tube flaring and lobes pointed. Calyx tube of staminate flower bulbous, slightly constricted just below the sepals; that of pistillate flower short and disc like. Sepals distinctly tapered, fleshier than in *C. maxima*, and those

Fig. 8. A and B. Pistillate flowers in the same relation as above.
of the pistillate flower reduced in size. In contrast with *C. maxima*, the tip of the corolla remains pointed up to the time of the opening of the flower. Fruit stalk very hard at maturity, five-sided, distinctly grooved; often slightly enlarged or flaring at attachment to fruit. Shell of fruit hard at maturity, not yielding readily to the thumbnail. Seeds tan colored, with a horizontal or rounded scar; margin identical in color and texture with body of seed.

The following is a list of varieties belonging to *Cucurbita pepo*.

- Cocozelle
- Connecticut Field
- Delicata
- Early White Bush Scallop
- Early Yellow Bush Scallop
- Fordhook
- Fordhook Bush
- Fort Berthold
- Golden Custard
- Golden Oblong
- Long Island White Bush Scallop
- Long White Marrow
- Mammoth Tours
- Mammoth White Bush Scallop
- Mandan
- Omaha
- Panama
- Perfect Gem
- Pie Pumpkin
- Sandwich Island
- Strickler
- Sugar Pumpkin
- Table Queen
- Vining Cocozelle
- White Summer Crookneck
- White Vining
- Vegetable Marrow
- Winter Nut
- Yellow or Golden Summer
- Crookneck
- Zucchini

B. *Cucurbita moschata*. Duch. This species is much more variable than either *C. pepo* or *C. maxima*, it being difficult to ascribe definite characteristics which cover all varieties. The plants have running stems, which in most cases are five-sided; in a few forms, however, they are rather cylindrical with narrow ridges and grooves. Leaves and stems usually soft hairy or, rarely, rough hairy; leaf blades with three to five lobes, and with very few exceptions characterized by white spots at intersections of veins. These spots, however, differ in appearance from those which occasionally occur on the leaves of *C. pepo*. Flowers coarser and firmer than in other species. Corolla lemon-yellow, the tube somewhat flaring, with lobes intermediate in shape between the pointed of *C. pepo* and the rounded of *C. maxima*. Peduncles more or less five-sided, with or without grooves. With few exceptions this species has noticeably long stamens. Calyx tube of staminate flower quite variable in shape, that of pistillate disc-like, both often five-sided and flanged at top;
sepal
long or short, rather flat, with or without leaflike termina-
tions. As in C. pepo, and in contrast to C. maxima, the flowers
on the evening previous to opening are pointed at the tip.

Shell of fruit hard, altho in some cases thin. The fruit stalk of C.
moschata is typically five-sided, noticeably grooved and distinctly flare-
ing at attachment to fruit. However, in a few varieties these char-
acters are somewhat modified, that is, roughly cylindrical in outline,
indifferently grooved and neither flaring nor noticeably enlarged at
attachment to fruit. Fruit stalks are hard. The Japanese Pie is an
exception to the above in that the shell is soft, fruit stalk very thick and only medium hard. The
seeds of this species range from a grayish white to tan, the dis-
tinct margin thickened, deeper in color, and different in texture
from the body of the seed. Seed scar slanting, horizontal or
rounded.

Russell11 devised a key based on seed scar characteristics, in
which he classified Cucurbita moschata under "Scar normally
squarely truncate or rounded . . ." The writers have given
especial attention to the seed scar and are unable to corroborate
the findings of Russell on this point, their investigations reveal-
ing that in Cucurbita moschata the scar may be slanting,
rounded or horizontal.

These descriptions of Cucurbita pepo, Cucurbita maxima and
Cucurbita moschata embrace and supplement, in modern and
simple terminology, the original descriptions by Linnaeus and
Duchesne; from these it will be seen the characters of Cucurbita
pepo and Cucurbita maxima are clean cut and definite, whereas those of Cu-
curbita moschata are difficult of de-
marcation. Also this species has some
characters similar to those of Cucurbita pepo, and others not unlike those
of Cucurbita maxima.

Duchesne12 in his original descrip-
tion of Cucurbita moschata states:
"This species, very difficult to de-
limit, is comprised of several varieties
too little observed to determine well."

11Russell, Paul. Identification of the commonly
cultivated species of Cucurbita by
14:265-269. 1924.
Also: "Lamarck did not find sufficient differences to consider it a distinct species." The present indefinite and inconstant characters of \textit{Cucurbita moschata}, together with the uncertainty of Duchesne and Lamarck in recognizing it as a separate species, suggest the possibility of hybrid origin. The following varieties belong to \textit{Cucurbita moschata}:

- Calhoun
- Chirimen
- French Cocanoot
- Japanese Pie
- Large Cheese
- Mammoth Golden Cushaw
- Quaker Pie
- Small Golden Cushaw
- Striped Cushaw
- Tennessee Sweet Potato
- White Cushaw

![Fig. 12. Pistillate flower of \textit{Cucurbita moschata} just previous to and after opening.]

**VARIETIES OF PUMPKINS**

*(\textit{Cucurbita pepo} and \textit{Cucurbita moschata})*

- **Acorn.** See Table Queen.
- **Big Tom.** See Connecticut Field.
- **Boston Pie.** See Sugar.
- **Calhoun.** Shape very similar to that of Large Cheese but much smaller—about 9x6 inches. Weight 5 to 6 pounds. Color creamy buff. Shell smooth, thin and hard. Flesh salmon, thick, fine grained and sweet. Fruit stalk hard, five-sided, flaring conspicuously at attachment to fruit. An excellent variety for pies but not now commonly grown. Originated by a Mr. Calhoun and listed by Peter Henderson as early as 1891.
- **Chirimen.** The Chirimen is of Japanese origin, short cylin-

![Fig. 13. Staminate flower of \textit{C. Moschata} in bud and full bloom.]

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drical in shape, much flattened at both ends; strongly grooved and warded. Size 11x5 inches, weight about 8 pounds. Skin at first dark green, turning to brown when fully ripe. Shell hard at maturity; flesh lemon yellow, very thick, making the fruit heavy for its size. Fruit stalk hard, rather slender, five-sided, grooved, with five ridges which flare out at attachment to fruit. Matures late. Not extensively grown on account of its very hard shell and rather poor quality.

**Cocozelle.** This Italian summer pumpkin is of the bush type, the plants being very leafy and compact. Leaves are many lobed and quite prickly. Fruit about 16x5 inches; weight 5 pounds. Shape rather cylindrical but somewhat pointed at stem end. Skin smooth, dark green with lighter green to yellow stripes; shell and fruit stalk hard at maturity, the flesh greenish white. Usually eaten when 6 to 8 inches long, at which time flesh is white and shell soft. Of Italian origin, listed by Burpee as early as 1891.

**Connecticut Field.** Fruit large (weight about 25 pounds); variable in shape, some being depressed and flattened at the ends, others round or elongated; somewhat grooved. Skin smooth, orange yellow in color. Shell thin, hard. Flesh coarse, sweet, greenish yellow in color. Frequently grown in cornfields. Used for pies, canning and as a stock feed. This variety yielded at the rate of 16 tons per acre on the Station grounds. An old American variety, probably grown by the Indians in New England before the coming of the white man. The name “Big Tom” was given to a selection of Connecticut Field by Johnson & Stokes in 1904.

**Cymlin (Cymling).** See Early White Bush Scallop.

**Delicata.** Shape oblong, size 9x4 inches; weight 2 to 3 pounds. Skin irregularly striped with orange and green. Shell hard. Flesh yellow, firm, inclined to be stringy. The Delicata may be used as either a summer or winter pumpkin. Quite prolific. Offered by Burpee as early as 1896.

**Des Moines.** See Table Queen.

**Early White Bush Scallop.** Fruit flat, the edge scalloped, 8 inches across by 3 inches thick. Weight 2 to 3 pounds. Skin white, smooth or occasionally warded. Shell hard at maturity. Flesh white, thick, fine grained until it reaches maturity, when it becomes coarse and tough. An early, prolific summer pumpkin of the bush type. Usually eaten before shell becomes hard. Both the White and Yellow Bush Scallops have been listed by seedsmen for more than 55 years.

**Early Yellow Bush Scallop.** Very similar to the Early White
Bush except that the skin is golden yellow in color. It is a selection from the Early White Bush.

**English Cream Marrow.** See Fordhook.

**Fordhook.** Fruit oblong, slightly grooved, tapered at stem end; 8 to 10 inches long, about 4 inches thick; weight 1½ to 2 pounds. Skin smooth, cream to light lemon-yellow; shell hard. Flesh very thick, dry and sweet, straw colored. Very desirable as a summer pumpkin, but also well adapted for winter use, keeping until June. Plants of this variety are feebly running. Listed by Henderson as early as 1891.

**Fordhook Bush.** Very similar to Fordhook except that it is of the bush type. Not commonly grown.

**Fort Berthold.** Fruit similar in shape to the Small Sugar pumpkin, but smaller. Size 3x7 inches, weight 2½ pounds. Skin smooth, orange yellow or cream; shell thin, hard. Flesh rather firm, fine grained, lemon yellow in color; of good quality. This very early hardy pumpkin was obtained by Geo. F. Will, of Oscar H. Will & Co., seedsmen, directly from the Mandan Indians on the Fort Berthold Reservation in North Dakota.

**French Cocoaanut.** Fruit elongated, slightly tapered at both ends. Size 24x10 inches. Weight 15 pounds. Skin creamy buff. Shell thin, hard; flesh deep salmon. Fruit stalk five-sided. This squash is not adapted to northern latitudes on account of its late maturity.

**French Tours.** See Mammoth Tours.

**Giant Summer Crookneck.** See Strickler.

**Golden Custard.** Fruit similar in shape to Early White Bush; 12 to 14 inches across, 4 inches thick. Skin golden orange, flesh creamy yellow. A selection from Early Yellow Bush Scallop; very prolific. Offered by Johnson & Stokes as early as 1893.

**Golden Oblong.** Fruit cylindrical, slightly grooved; size 12x7 inches, weight 7 pounds. Skin smooth, golden-orange in color, shell hard. Flesh deep yellow, thick and sweet. Keeps well. This variety was introduced and catalogued by the W. Atlee Burpee Seed Co. in 1889.

**Green Vining (or Trailing) Vegetable Marrow.** See Vining Cocozelle.

**Green Bush Vegetable Marrow.** See Cocozelle.

**Italian (Vegetable) Marrow.** See Cocozelle.

**Japanese Pie.** Fruit pear shaped, the neck elongated and us-
ually not curved. Skin dark green, sometimes with lighter green stripes. Shell soft at maturity. Flesh salmon in color, fine grained and sweet. Fruit stalk very thick, medium hard at maturity, neither distinctly grooved nor flaring. An early variety. Used for pies by canners and as a stock feed. Catalogued by Johnson & Stokes as early as 1893.

Jonathan. See White Cushaw.

Kentucky Field. See Large Cheese.

Large Cheese. Shape like that of a cheese box, much flattened at both ends, grooved; size 14x8 inches, weight about 10 pounds. Skin creamy buff color, smooth; shell thin, hard at maturity; flesh deep salmon yellow. Fruit stalk grooved, rather slender and flaring conspicuously at its five-sided attachment to fruit. It is very hardy, productive and a good keeper. Grown extensively for canning purposes. On the Station grounds yields of 13 tons per acre were secured. A few seedsmen consider the Large Cheese and Kentucky Field as two distinct varieties. Our experience with crops grown from seeds obtained from many seed houses indicates that at present the Large Cheese and the Kentucky Field cannot be considered as different varieties. It is probable that at one time two varieties did exist, but confusion of the two types by seedsmen and growers has practically eliminated any distinction. As a result the names Large Cheese and Kentucky Field are used indiscriminately in many catalogs. The Large Cheese is a very old, well established American variety of pie pumpkin, having been listed by Sinclair & Moore as early as 1826.

Long Island White Bush Scallop. Fruits similar to Early White Bush but thicker, and not so noticeably scalloped. Not commonly cultivated.

Long White Marrow. A summer pumpkin of the bush type. Fruit oblong, somewhat tapered at the stem end; size 12 by 4 inches, weight 3 to 4 pounds. Skin smooth, light cream in color, shell hard at maturity. Flesh white, fine grained and sweet. Very desirable as a summer pumpkin. An abundant cropper. Offered by W. Atlee Burpee Seed Co. as early as 1900.

Mammoth Golden Cushaw. Shape similar to an inverted letter "j," the blossom end of fruit swollen and containing the seeds, the neck long, slender and curved. Size 20x9 inches. Weight 12 pounds. Skin dull gold in color, the flesh thin and rich yellow; shell thin, hard at maturity. Sometimes used by canners, but more often as a stock feed. Fruit stalk rather slender, grooved, five-sided, moderately flaring where it joins the fruit. Offered by B. K. Bliss as early as 1844.
Mammoth Tours. Fruit long, cylindrical, size 24x12 inches; weight 30 pounds. Skin smooth, mottled green, orange and yellow. Shell hard, thin. Flesh deep cream in color, coarse, stringy. Seeds very large. Used as stock feed. Listed as early as 1873 by Peter Henderson. Of French origin.

Mammoth White Bush Scallop. A selection from Early White Bush; fruits larger—12x4 inches—more warty and of later maturity. Not commonly grown. This variety was listed by the Livingston Seed Co. as early as 1891.

Mammoth Yellow Bush Scallop. See Golden Custard.

Mandan. A slightly running variety. Fruit small (weight about 2 pounds), round, flattened at both ends. Skin greenish white, white with green stripes or green mottled; often warted. Shell hard at maturity. Flesh fine grained, sweet, white to greenish white in color. Used as a summer pumpkin before shell hardens, or as a winter pumpkin at maturity. Keeps well. This pumpkin was secured from the Mandan Indians by Oscar H. Will & Co., seedsmen, who improved by selection and introduced it. It is the earliest of all pumpkins and is well adapted to regions having a short growing season. It is also quite hardy.

Omaha. Fruit oblong, somewhat pointed at stem end, slightly grooved. Size 10x6 inches, weight 4 pounds. Skin smooth, orange colored. Shell thin, hard. Flesh lemon yellow, rather coarse. An early variety. This pumpkin was obtained from the Omaha Indians of Nebraska about 10 years ago by Dr. Melvin R. Gilmore of the Museum of the American Indian of New York City, and was introduced by Oscar H. Will & Co., seedsmen.

Panama. Fruit bell shaped, with deep grooves at the large end. Size 6x4 inches, weight 1 to 2 pounds. Skin smooth, lemon colored; shell hard. Flesh light orange. Variable in quality and texture. It is named for the town of Panama, Iowa, near which it was originally grown.

Patty Pan. See Early White Bush Scallop.

Perfect Gem. Fruit rather spherical, flattened at both ends, distinctly grooved. About 5x6 inches, weight 2 to 3 pounds. Skin straw colored, shell hard; flesh cream colored, fine grained and sweet. An early, very productive sort, commonly used as a summer pumpkin, now little cultivated. Described in Burpee’s catalog as early as 1882.

Pie Pumpkin. Similar to Sugar Pumpkin, slightly larger. Weight 7 pounds. Skin light orange in color, netted.
Shell hard. Matures earlier than Sugar and is also more prolific. The Pie Pumpkin has been known in this country for more than 40 years. The name Winter Luxury was given to a special strain of it by Johnson & Stokes in 1893, after six years of selection by a veteran pumpkin grower.

**Quaker Pie.** Shape variable but predominately pear shaped, often slightly grooved. Size 12x7 inches, weight 9 pounds. Skin smooth, deep buff color; shell thin, hard. Flesh coarse, firm, light orange. Very similar in some respects to Large Cheese, from which, however, it differs greatly in shape. This variety originally came from Washington County, N. Y., where it was grown for a great many years by a family of Quakers or Friends. Offered by Burpee as early as 1891.

**Sandwich Island.** Coarse plants, stems and leaves very prickly; stems deeply grooved. Fruit nearly cylindrical, somewhat tapering toward the stem end; prominently grooved. Size about 20 inches long and 12 inches thick; weight 25 pounds. Skin brownish yellow, smooth; shell hard. Flesh thick, deep yellow, seed cavity small. A hardy drought-resistant variety, not well adapted to many regions on account of its late maturity.

**Small Golden Cushaw.** Shape similar to the Mammoth Golden Cushaw but much smaller. Size 10x5 inches, weight 7 pounds. Not commonly grown.

**Small Sugar.** See Sugar.

**Strickler.** Similar to the Yellow Summer Crookneck but more warty and larger, sometimes reaching a length of 24 inches. Offered by Johnson & Stokes as early as 1893.

**Striped Cushaw.** Fruit of the Crookneck type, the neck not so long nor so distinctly curved as the Golden Cushaws; blossom end much swollen, containing the seeds. Size variable, averaging about 16x10 inches, weight 13 pounds. Skin smooth, white with netted green stripes. Shell thin, hard at maturity. Flesh yellow, solid, fine grained. Fruit stalk medium thick, rather cylindrical, slightly five-sided and enlarged at attachment to fruit, the neck having five ridges extending downward from under attachment of fruit stalk. Widely cultivated.

The Cushaws, as a group, are very prolific and widely used by canners, altho often used as stock feed. Cataloged by Johnson & Stokes as early as 1893.

**Sugar Pie.** See Sugar Pumpkin.

**Sugar Pumpkin.** Fruit small, weight 4 to 5 pounds; round with flat ends, grooved. Skin brownish yellow; shell hard.
Flesh thick, fine grained, dry, sweet, yellow in color. Matures late and stores well. Excellent for canning and pies. This variety yielded 10 tons per acre in our trial plots. This is an old well-established variety which probably originated in New England. Listed as early as 1884 by Henderson.

**Sweet Cheese.** See Large Cheese.

**Table Queen.** Small fruit, slightly elongated, pointed at the blossom end and distinctly grooved. Size 7x4 inches; weight 2 pounds. Its size commends it for table use for when halved and baked it makes an adequate serving for two people. Skin smooth and dark green at maturity. Shell thin and hard. Flesh thick, deep yellow in color and usually of excellent quality. Very productive and a good keeper.

The only undesirable feature of this pumpkin is its uncertain quality, and an effort is being made at this station by E. S. Haber to develop superior strains; the seed of which, however, is not yet available for distribution. Golden and ivory strains exist but are not in common cultivation.

The origin of this variety is uncertain. It was first illustrated and described in the catalog of the Iowa Seed Company, 1913, under the name of Table Queen. Previous to that time it was grown by Sestier Brothers and other market gardeners near Des Moines under the name of "Danish squash." This name was used on account of the fact that the seed was supposed to have been brought to Des Moines from Denmark by a local lumberman. This report regarding the importation of seed has not been confirmed. On the other hand, a letter to the senior author from Haehnfeldt & Jensen Lt., seedsmen at Odense, Denmark, under date of March 5, 1926, states that "Squash is not and cannot be grown in this country as the climatic conditions are not adapted to its culture."

That the Table Queen originated in Denmark seems open to serious question. This point of view is further supported by the fact that this variety is unknown so far as we have been able to learn in the European seed trade. A perusal of the leading seed catalogs of these countries fails to find either this variety or one similar to it listed. The fact is clearly established, however, that in the United States this variety was first grown commercially near Des Moines, Iowa.

Dr. Melvin R. Gilmore, in a letter to the senior author under date of March 5, 1927, reports: "There is a variety cultivated by the Arikara on Fort Berthold Reservation in North Dakota which is similar but not identical." Geo. F. Will of Bismark, North Dakota, who has made a special study of the economic plants grown by the American Indian, informs the junior author under date of March 12, 1927, that the Arikara tribe
“grew a black heart-shaped squash very similar in appearance to Table Queen. It was not anywhere near equal to it in quality.”

This variety was renamed Des Moines Table Queen at the 1919 annual meeting* of the Iowa Vegetable Growers Association. However, this action is contrary to the code of nomenclature adopted by the American Seed Trade Association and the Vegetable Growers’ Association of America, that is, that the name first published for a variety shall be the accepted and recognized name. For this reason the authors have decided to adhere to the original name.

In 1924 an enterprising Wyoming seedsman announced a “new horticultural product” called the “Yama,” purporting to be a cross between Golden Bantam Sweet Corn and Hubbard Squash. One of the leading railroad companies became interested and purchased the entire season’s output of this Wyoming grower to feature on their dining cars. A leading magazine** published in one of its issues a description of this “new vegetable.” Knowing the impossibility of crossing two vegetables so widely different as corn and squash, the junior author investigated the Yama and found it to be nothing more than the well known Table Queen pumpkin.

This variety has also been listed under the name of Acorn, Delicious, and Kitchenette, names belonging to other varieties which are entirely distinct from the Table Queen. It is also called Individual.

**Tennessee Sweet Potato.** Fruit pear or bell shaped. Size 15x8 inches, weight 15 pounds. Skin white, often with lightly netted green stripes. Shell very hard at maturity. Flesh solid, thick, light lemon yellow and sweet. Fruit stalk thick, neither strongly grooved nor flaring. It has good keeping qualities. Used for pies and baking. Listed by Burpee as early as 1886.

**Vining Cocozelle.** Very similar to Bush Cocozelle but of the running type and fruits somewhat smaller.

**White Cushaw.** Very similar to the Striped Cushaw except that the skin is of creamy white color and the neck somewhat shorter. The fruit is also firmer than the green striped, therefore stores better. Both the Striped and White Cushaws were offered by Johnson & Stokes as early as 1893. All Cushaw pumpkins are named for a Mr. Cushaw, who first grew the Mammoth Golden Cushaw.

**White Summer Crookneck.** Similar to the Yellow Summer Crookneck but more warty and larger, sometimes reaching a

*Transactions of Iowa Horticultural Society. 54:311, 1919.
**Popular Mechanics, March, 1925.
length of 24 inches. Offered by Johnson & Stokes as early as 1893.

**White Vining (or Trailing) Vegetable Marrow.** A running type of summer pumpkin, the fruits of which are similar to Long White Marrow except that the size is somewhat larger, averaging about 16x5 inches. Cataloged by D. M. Ferry & Co. as early as 1871.

**Winter Luxury.** See Pie Pumpkin.

**Winter Nut.** In shape much like an apple with a depression at stem end; from which radiate a number of deep grooves. Size 7x5 inches, weight 4 pounds. Skin smooth, cream colored. Shell hard. Flesh solid, of rich nutty flavor, cream colored. First listed by John Lewis Childs Seed Co., Flora Park, N. Y., in 1922. The original seed was brought to this country from Germany or Poland.

**Winter Queen.** See Pie Pumpkin.

**Yellow (or Golden) Summer Crookneck.** Fruit small, 9 to 12 inches in length, weight about 3 pounds. The neck is long, narrow and distinctly curved, the blossom end swollen and containing the seeds. Skin golden yellow in color, warty. Shell hard at maturity. Flesh greenish white to light yellow, according to maturity; fine grained. An early summer pumpkin of the bush type, quite prolific; should be used before shell hardens as the flesh becomes stringy and bitter. It is the most widely used of all the summer pumpkins because of its excellent quality. Listed by D. M. Ferry & Co. as early as 1871.

**Zucchini.** A bush type very similar to Cucozelle, but the fruit is green with a lighter gray mottled effect.

**GROUPS OF PUMPKINS**

* (Cucurbita pepo and Cucurbita moschata)*

Both pumpkins and squashes exhibit wide variation as to color, size, form and season. When all of the varieties are assembled, however, and their resemblances studied, it is found that groups can be formed, and that the varieties of a given group are more closely akin to each other than they are to the varieties outside of that group. Each group is named after the most typical and representative variety of that assemblage. Thus the Hubbard group contains squashes differing more or less in size and color yet sharing a number of characteristics in common, giving them a group relationship; and with very few exceptions the group relationship of the varieties listed is clear and definite.
Connecticut Field Group (C. *pepo*). Fruits are either round with flattened ends, or oblong; surface grooved. This group includes some of the best known pie varieties; a few forms, however, are grown primarily for stock feed. Vines are of the running habit. The following varieties belong to this group.

- **Connecticut Field Pumpkin**
- **Sugar Pumpkin**
- **Pie Pumpkin**
- **Fort Berthold**
- **Golden Oblong**
- **Mammoth Tours**
- **Omaha**
- **Sandwich Island**

Cheese Group (C. *moschata*). Smooth, creamy buff, thin shelled fruits of various shapes. Popular with canners, also desirable as stock feed on account of the thin shell. All varieties have running plants.

- **Calhoun**
- **French Cocoanut**
- **Large Cheese**
- **Quaker Pie**

Cushaw Group (C. *moschata*). Plants of the running type. Fruits smooth, with a curved or straight neck, and much enlarged at the blossom end. Used extensively by canners. With the exception of the Tennessee Sweet Potato, the thin shell makes them quite desirable as stock feed also.

- **Japanese Pie**
- **Mammoth Golden Cushaw**
- **Small Golden Cushaw**
- **Striped Cushaw**
- **Tennessee Sweet Potato**
- **White Cushaw**

Fordhook Group (C. *pepo*). Rather small fruits, quite variable in shape, but all characterized by distinct grooves and ridges. This group embraces both summer and winter pumpkins, also bush and running plants.
Patty Pan Group (*C. pepo*). Fruits flat, edge scalloped. Summer pumpkins of the bush type. They are used before the shell hardens because the flesh becomes tough and bitter at maturity. Altho popularly known as squashes, the fruit stalk and other botanical characters clearly show this group to be pumpkins.

**Crookneck Group** (*C. pepo*). Fruits golden yellow or white, thickly warded and with long curved necks. Like the Patty Pans, these are used only as summer pumpkins.

**Vegetable Marrow Group** (*C. pepo*). Fruit oblong, skin smooth, shell hard at maturity, ranging in color from cream to dark green. Used only as summer pumpkins before shell hardens. Plants of both bush and running habit.
Cocozelle  
Long White Marrow  
Vining Cocozelle  

White Vining Vegetable Marrow  
Zucchine

The Mandan and Chirimen pumpkins have not sufficient characteristics in common with the above groups to warrant their classification with any one of the them.

**SPECIES, VARIETIES AND GROUPS OF SQUASHES**

**C. Cucurbita maxima** Duch. Vines strongly running, stems cylindrical or nearly so, but not grooved. Stem, leaf blades and leaf stalks differ from those of *C. pepo*, being rough hairy rather than spiny. Leaf blades somewhat kidney shaped, without distinct sinuses between the rounded lobes. Staminate flower stalk cylindrical. Corolla tube of both flowers nearly cylindrical, the lobes rounded and reflexed. Calyx tube of staminate flower roughly cone shaped, that of pistillate flower disc like; sepals of both flowers linear. On the evening previous to the opening of the flower, the tip of the corolla spreads somewhat. Fruit stalk cylindrical in outline, fleshy, remaining soft at maturity. Shell hard in some varieties, soft in others. The color of seeds is usually white, but may be brown or bronze. Maxima is characterized by a slanting seed scar. The following seed scar. The following varieties belong to *C. maxima*:

- Alligator
- American Turban
- Arikara
- Atlas
- Autumnal Marrow
- Banana
- Bay State
- Delicious
- Delicious—Golden
- Essex Hybrid
- Estampes
- Faxon’s Brazilian
- Genuine Mammoth
- Gilmore

Fig. 21. Type of fruit stalk characteristic of *Cucurbita maxima*. Note the cylindrical outline and indistinct grooves.

Fig. 22. Seed of *Cucurbita maxima* showing slanting seed scar.

Fig. 23. Typical kidney-shaped leaf of *Cucurbita maxima*. 

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Fig. 24. Staminate flower of *Cucurbita maxima* in bud and bloom. Note that the tip of the bud is truncate instead of pointed as it is in the case of the pumpkins, *Cucurbita pepo* and *Cucurbita moschata*.

Fig. 25. Pistillate bud and flower of *Cucurbita maxima*.
**Varieties of Squashes (Cucurbita maxima)**

**Alligator.** An elongated type of winter squash, cylindrical, somewhat pointed at both ends. Size 24x7 inches, weight 18 pounds. Skin dark green, smooth, surface bumpy, with longitudinal grooves. Shell hard, flesh deep yellow. This variety is a sport from the Banana Squash, being first observed in 1923 in Jackson County, Michigan. Listed by S. M. Isbell & Co., in 1926.

**American Turban.** As the American Turban is of rather obscure hybrid origin and tends to sport, the color and quality are variable. The fruit is shaped like a turban—short cylindrical, flattened at both ends—with a button-like indentation at the blossom end. Size 10x7 inches, weight 8 pounds. Skin somewhat rough, usually deep lemon-yellow; shell inclined to be soft at maturity, yielding to the thumbnail. Flesh deep orange, dry, fine grained and firm. This squash is not now commonly grown as it is a poor keeper and there is considerable waste on account of the inedible button like indentation. Listed by Peter Henderson & Co. as early as 1873.

**Arikara.** Fruit slightly elongated, rather spindle shaped. Size 12x9 inches; weight 8 pounds. Skin smooth, light salmon, often with areas of bluish green, and with a greenish gray patch at blossom end; shell hard. Flesh bright orange streaked with green, fine grained, mealy and dry. This is an early variety, an excellent cropper and keeps exceptionally well.

This winter squash was obtained from the Arikara Indians on the Fort Berthold reservation in North Dakota by Dr. Melvin R. Gilmore of the Museum of the American Indian, New York City, and was introduced by Oscar H. Will & Co.

**Atlas.** Fruit variable, usually egg-shaped; grooved. Average size 20x13 inches, average weight 35 pounds. Skin smooth, glossy, reddish yellow. Shell soft at maturity, yielding to the thumbnail. Flesh yellow, rather coarse but of fair quality. Used extensively by canners. The Atlas is a selection from the Mammoth Chili and was introduced by the Iowa Seed Co., in 1898.

**Autumnal Marrow.** Shaped somewhat like that of the Hubbard but not curved at the ends. Size 14x9 inches, weight 6 to 9 pounds. Skin pock marked, light orange in color. Shell hard at maturity. Flesh orange colored, used largely by canners. This squash when introduced by J. M. Ives, of Salem, Mass., in 1831-32, was of small size (5 to 6 pounds), fine grained, dry and sweet, and of excellent quality. Much of its original excellence has been lost by crossing it with other varieties, so that at present it is quite variable in shape and size, while the quality is...
often poor. On account of its good keeping properties the Autumnal Marrow is a very popular variety with farmers.

**Banana.** Fruit elongated, banana shaped. Average size 16x6 inches, weight 12 pounds. Skin smooth, greenish gray with long light streaks. Shell soft. Flesh light orange, fine grained, sweet with a nutty flavor. While this squash is not widely grown, probably on account of its soft shell and consequent poor keeping qualities, it is one of the most delicious of all squashes, and deserves much wider usage. Listed by Johnson & Stokes as early as 1893.

A lemon colored Banana squash has also been introduced but has never been extensively grown.

**Bay State.** Shape is turban like, with a button at the blossom end; the color slate gray. Size 10x7 inches; weight 7 pounds. Shell smooth, very hard and thick. Flesh lemon yellow, very thick, mealy, dry and fine grained. It is of good quality and an excellent keeper. This squash was introduced about 1888 by Aaron Lew, the same seedsman who introduced the Essex Hybrid. Its cultivation has been confined largely to New England.

**Boston Marrow.** See Autumnal Marrow.

**Delicious.** Fruit rather top-shaped, pointed at blossom end, altho variable. Size 12 by 8 inches, weight 8 pounds. Skin smooth, dark green, with lighter stripes at blossom end; shell hard at maturity. Flesh deep orange, firm, thick, fine grained, and of excellent flavor. The Delicious is regarded by many as the finest of all squashes in quality. It stores well, notwithstanding its rather medium thick shell. Introduced by Gregory in 1903 and offered by Ferry the same year.

**Delicious-Golden.** A new variety developed by Gill Bros. Seed Co. and introduced by them in 1926. It is the result of a cross between the Delicious and Autumnal Marrow. Skin, shape and texture similar to the Delicious, color a golden yellow like that of the Autumnal Marrow.

**Early Golden Marrow.** See Prolific Marrow.

**Essex Hybrid.** Shaped like a turban with a button like projection at the blossom end. Size 9x6 inches, weight 10 pounds. Skin varying in color from yellow to orange, sometimes splashed with green. The shell differs from that of the American Turban in being always hard and thick. Flesh orange color, coarse and mealy. This squash is a hybrid between the American Turban and the Green Hubbard, having the shape of the former and the shell of the latter. It was introduced by Aaron Lew, seedsman, more than 45 years ago.
**Estampes (Etampes).** This variety is short cylindrical, flattened at the ends, and grooved. Size 18x10 inches, weight about 30 pounds. It is heavier in proportion to its size than any other pumpkin or squash. Surface often rough, bumpy; skin reddish orange, the grooves usually lighter. Shell soft at maturity, yielding to thumbnail. Flesh very thick and sweet, bright yellow. It is a favorite among canners, is sometimes used for exhibition purposes, but perhaps finds its widest use as a food for dairy cattle, in which respect it is regarded as unexcelled. Of French origin, listed by Burpee as early as 1882.

**Faxon's Brazilian.** Nearly spherical in shape, diameter about 10 inches; weight 7 pounds. Skin salmon with lighter stripes, shell soft. Flesh coarse grained, very firm, light orange in color. A good keeper but not in wide use. Of Brazilian origin. Listed by Henderson as early as 1894.

**Genuine Mammoth.** Fruit nearly spherical with the blossom end pointed, or somewhat flattened at both ends; usually grooved. Very large, 24x18 inches; weight about 60 pounds, but occasionally reaching 100 pounds. Skin dull salmon in color, often netted. Flesh bright yellow, firm, rather coarse. Fair in quality; sometimes used by canners, but usually grown for exhibition purposes and as a stock feed. This variety out-yielded all other sorts of either pumpkins or squashes grown at Ames, producing 20 tons per acre. Shell soft. This variety is said to be of French origin and was listed as Genuine Mammoth by Burpee in 1884; also offered by Johnson & Stokes under the name of King of the Mammoths in 1885.

**Gilmore.** Elongated, pointed at blossom end. Size 15x7 inches. Skin salmon splotched with bluish green. Shell hard, flesh light orange. Of good quality. An early, hardy and productive variety. The Gilmore is a cross between the Winnebago and the Arikara, the type of which has been standardized by selection. It was named for Dr. Melvin R. Gilmore, of the Museum of the American Indian, who obtained the seed of both parents from Indian Tribes. This squash was introduced by Oscar H. Will & Co., who first cataloged it in 1926.

**Hubbard-Blue.** Attractive clear greenish-blue in color; similar in all other respects to the Green Hubbard except that it is not so prolific.

**Hubbard-Chicago Warted.** Very similar to the Green Hubbard, but more warty and somewhat larger. Weight about 15 pounds. The color is deeper, almost black, turning to a bronze green when fully matured. Listed by Johnson & Stokes as early as 1900.
Hubbard-Golden. Differs from the Green Hubbard in color, size and time of maturity. The skin is orange-red, with cream-colored stripes toward the blossom end, and moderately warted. Weight about 9 pounds. It is somewhat earlier than the Green Hubbard. Commonly used for canning. Very desirable as a winter squash as it is an excellent keeper. This variety came on the market about 1898.

Hubbard-Green. Fruit nearly spherical, tapering into a neck at the stem end and to a curved, pointed projection at the blossom end. Size 13x9 inches, weight about 13 pounds. Surface rough and bumpy, skin dark green in color with dirty white stripes toward the blossom end; at maturity often turning to brownish green. Shell thick, hard; flesh orange-yellow, very thick, fine-grained, dry and sweet. The Hubbard is more widely used in the United States than any other variety of squash. As a winter squash it is unexcelled in quality and as a keeper.

The history of the Hubbard has been traced back to 1798, when a specimen was brought into Marblehead, Mass., by a market man named Green. James J. H. Gregory states this variety was first brought to his attention about 1855 by an old washwoman, named Hubbard, and when he introduced it in 1856 he gave it the name of the person who brought it to his attention.

Hubbard-Improved. See Green Hubbard.

Hubbard-Kitchenette. Fruit similar in shape to the Green Hubbard; size 9x6 inches, weight 5 pounds. Skin glossy, dark green. The Kitchenette has been secured by repeated inbreeding of the Green Hubbard. The strain was developed by R. W. Bushnell at the Minnesota Agricultural Experiment Station. It is the equal of the Green Hubbard in all respects, but growers have found it to be a light cropper. It has the desirable feature of being smaller in size, hence more marketable than the Green Hubbard, which is too-large for the average family.

Ironclad. Fruit oblong, somewhat pointed at blossom end, medium to large in size, about 15x12 inches; weight 12 to 18 pounds. Skin smooth, somewhat grooved, silvery gray with lighter stripes in the grooves toward blossom end. Shell hard at maturity; flesh bright yellow, firm. The Ironclad was introduced into the United States by the Aggler & Musser Seed Co., Los Angeles, who secured the seed from South Africa. Not widely grown.

Jumbo. See Genuine Mammoth.

King of the Mammoths. See Genuine Mammoth.

**Mammoth Chili.** Shape varies from nearly spherical to elongated and pointed at blossom end. Size 16x12 inches, and above. Weight varies greatly but averages about 30 pounds. The largest specimen we have grown weighed 98 pounds, altho specimens weighing 200 pounds have been reported. Skin smooth, mottled orange and yellow with lighter stripes. Shell soft. Flesh light orange, coarse grained, only fair in quality. Used as a stock feed and for show purposes. Listed by Peter Henderson as early as 1873.

**Mammoth King.** See Genuine Mammoth.

**Mammoth Whale.** Fruit elongated, slightly tapered at both ends. Size 2 to 3 feet by 9 inches; weight 18 pounds and above. Skin olive green with lighter stripes; smooth. Shell soft. Flesh light orange in color, firm, rather coarse. Not widely grown. Offered to the public by Burpee as early as 1901.

**Marblehead.** The shape is very much like a lemon, slightly pointed at the blossom end. Size 12x9 inches, weight 8 pounds. Skin bluish gray, bumpy; shell very thick and hard. Flesh light orange, dry and sweet. Many regard the Marblehead as identical with the Blue Hubbard, but the true Marblehead is a distinct variety, differing from the Blue Hubbard in shape, earlier maturity, harder shell and lighter colored flesh. It fully equals the Hubbard in quality and as a keeper. This variety was introduced by James J. H. Gregory, who named it after the town of Marblehead, Mass. It has been well established that the first seed was brought to this country from a foreign land by an old sea captain. Altho the date of the introduction is not known, it was listed by Peter Henderson as early as 1874.

**Orange Marrow.** See Prolific Marrow.

**Pike’s Peak.** See Sibley.

**Plymouth Rock.** Very similar to the Banana except in the coloring. The skin is greenish gray with flecks of lighter shades—whence the name.

**Potiron.** See Genuine Mammoth.

**Prolific Marrow.** Fruit varies from lemon to spindle shaped. Size and weight quite variable, but averaging 13x9 inches and about 15 pounds. Skin orange red, shell medium soft, somewhat warted. Flesh bright yellow, moist, sweet, very firm, rather coarse. This squash is of good quality but not widely used. Very prolific and matures quite early. Introduced in New England by a seedsman named Dunlap, and catalogued by Burpee as early as 1888.

**Sibley.** Fruit elongated, strongly tapering at the blossom
end; size 12x8 inches, weight 9 pounds. Skin smooth, slate gray in color; shell hard at maturity. Flesh lemon-yellow, thick, fine-grained and very sweet. Seeds large, bronze colored. In quality equal to the Hubbard, but not so well known. A good keeper. Named and cataloged the Sibley by the old seed firm of Hiram Sibley.

**Victor.** Somewhat similar in shape and appearance to the Warren, but usually without the button at blossom end; often the fruit is slightly pointed at both ends. Size 9x6 inches, weight 8 pounds. Skin orange red in color, surface pebbly. Shell very thick and hard. Flesh firm, sweet, fine grained. This squash is quite prolific. First cataloged by Gregory Seed Co.

**Warren.** Fruit turban shaped, extremely warty with a large button at blossom end. Size 10x8 inches; weight 15 pounds. Skin orange red; shell very thick and hard. Flesh thick, firm, and fine grained; bright orange in color. A good cropper. This variety first appeared in 1887, when a single vine bearing three fruits was found in a field of Essex Hybrid squashes grown by a Mr. Warren of Marblehead, Mass. It was introduced to the public by the Gregory Seed Co. in 1890.

**Winnebago.** Fruit elongated, tapered at both ends. Size 16x7 inches; weight 10 to 12 pounds. Skin dark green, somewhat warty. Shell hard; flesh deep lemon colored, firm, rather coarse grained and sweet. The Winnebago squash was secured from the Winnebago Indians of Nebraska by Dr. Melvin R. Gilmore of the Museum of the American Indian of New York City, and was introduced by Oscar H. Will & Co., seedsmen.

**GROUPS OF SQUASHES (Cucurbita maxima)**

**Banana Group.** Fruits elongated and somewhat tapering at both ends; not so well known as the Hubbard group but contains some varieties of excellent quality. The following belong to this group:

Banana
Alligator
Gilmore
Mammoth Whale
Plymouth Rock
Winnebago

Fig. 26. Banana squash.
**Hubbard Group.** Fruits of a general ovoid shape and always pointed at blossom end. Surface varies from smooth to strongly warted, in color ranges from deep green to orange. This group comprises a number of the most widely grown varieties of squashes. They store well and are popular for table use.

![Fig. 27. Green Hubbard squash.](image)

Arikara  
Autumnal Marrow  
Blue Hubbard  
Chicago Warted Hubbard  
Delicious  
Golden Delicious

**Turban Group.** Turban shaped fruits, usually with a button at blossom end. With the exception of the American Turban, the thick hard shell of the fruits makes this a group of good keepers. Not widely cultivated.

American Turban  
Essex Hybrid  
Bay State  
Victor  
Warren

![Fig. 28. American Turban squash.](image)

**Mammoth Group.** Large squashes, used for exhibition purposes, canning and stock feed, some specimens weighing more than 100 pounds. The varieties are sometimes erroneously listed as pumpkins at fairs and other exhibits.

![Fig. 29. Genuine mammoth squash](image)

Atlas  
Estampes  
Genuine Mammoth  
Mammoth Chili

The foregoing lists include all of the commonly cultivated varieties of squashes except Faxon's Brazilian, which cannot be placed with any particular group.