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## A Variation in the Black Walnut

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## A VARIATION IN THE BLACK WALNUT.

L. H. PAMMEL AND CHARLOTTE M. KING.

Several years ago Professor A. B. Noble of the English Department of Iowa State College called my attention to a peculiar walnut which he thought might be hybrid between the butternut (*Juglans cinerea*) and the black walnut (*Juglans nigra*). He again called my attention to the same tree last fall, in October, 1917.

The history of the tree, as given to me by Professor Noble, is as follows: The tree came up from some walnuts gathered and discarded. It has borne a crop of walnuts for a number of years. All fruits on this tree have been essentially the same. Other seedlings from the same batch had normal walnuts. The trunk of the varying walnut tree appears to be of the black walnut type, a straight trunk with upright branches. The bark of the young stems and branches is light brown, covered with thin scales; the bark of the main trunk is of the same general color, with scales more deeply divided, more roughened and darker in color than the butternut. The leaves look like those of the common black walnut, the leaflets are ovate lanceolate and taper pointed, smooth above, lower surface and petioles downy. The fruit is somewhat pyriform, contracted near the base, light yellowish green, somewhat roughened by small hairs and is about the same size as the common black walnut. The nut resembles the nut of the common black walnut in that it is dark brown, corrugated, not ribbed as the butternut. The odor of the tree as well as the taste of the nut was that of the walnut.

In cutting off some of the branches some five inches of the stub were allowed to remain on the tree and a part of the bark was removed from the body of the tree, leaving this exposed to the weather. When the stub was properly cut close to the trunk of the tree it was found that this portion of the wood was dark in color, showing the regular character of the heart wood. The remaining wood was light in color, the color of the sap wood of the walnut. This led those who trimmed the tree to believe that it must be a hybrid between the black walnut and butternut. We have not scanned the literature on hybrids. The *Juglans nigra* has been hybridized with several species of *Juglans*, notably the California walnut, *Juglans californica*.

Seeds have been planted, and what they will develop into will be watched with interest.

A somewhat similar case was found by one of us near Hamilton, Illinois, in 1918.

It is possible that some one has recorded this variation before. Dr. C. S. Sargent in describing *Juglans nigra* says "oblong or slightly pyriform"<sup>1</sup>.

At the meeting of the Iowa Academy in Ames, Mr. Paul Rowe of Indianola called attention to a variation in the black walnut. The two examples of variation show some deviation from the usual type. In one case the greatest dimension is from stem to blossom, giving a form approaching the mutant described in this paper; the second nut has greatest dimension "at right angles to the plane of division of the nut." This is another interesting variation.

<sup>1</sup>Manual of the Trees of North America, 128.

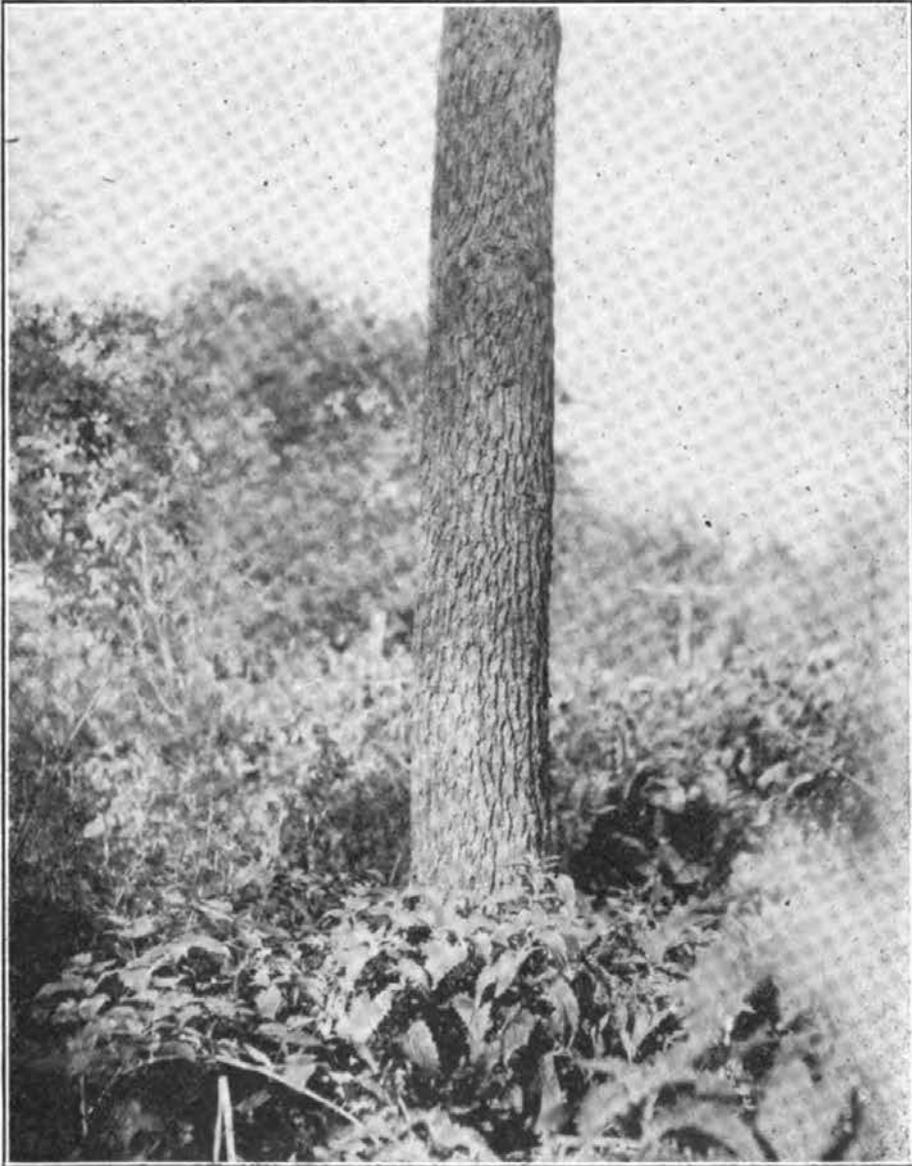


Fig. 43.—Trunk of mutant walnut tree. Photographed by C. M. King.



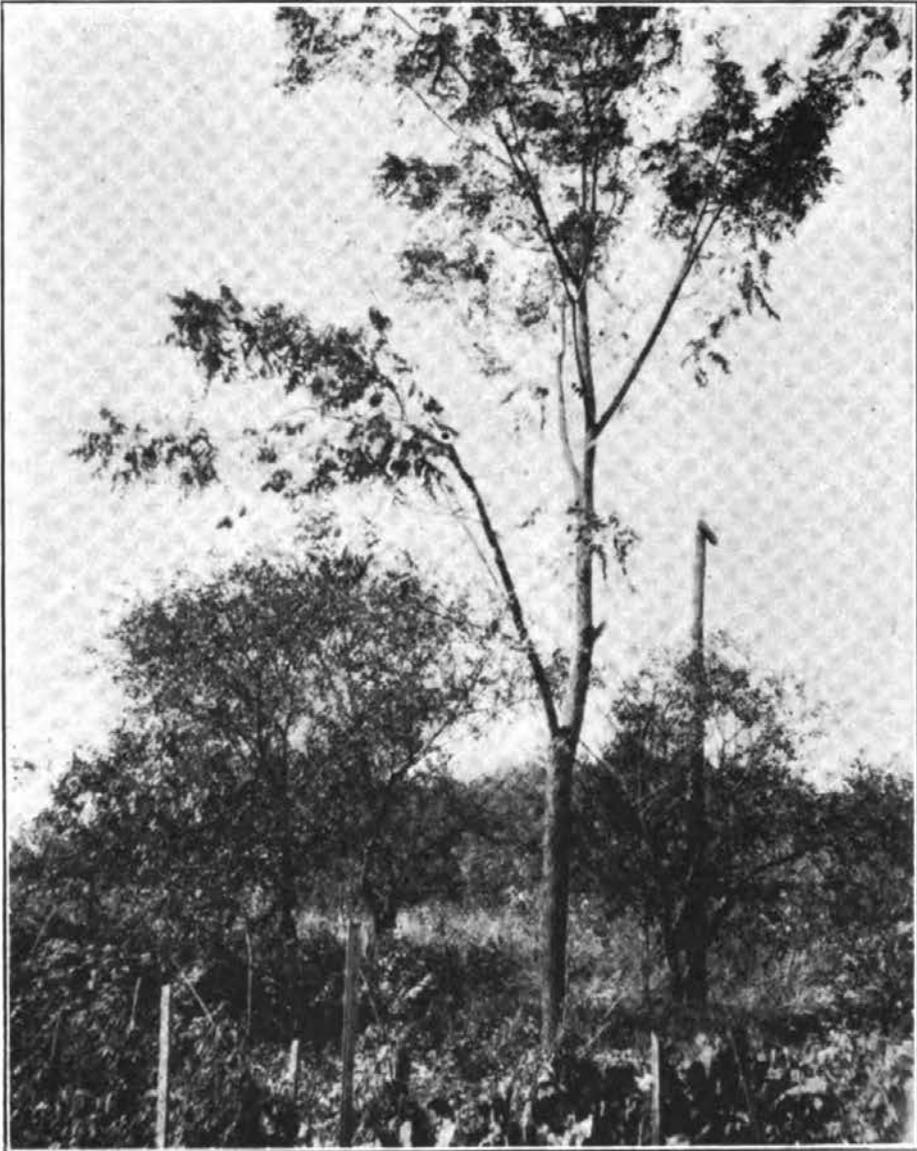
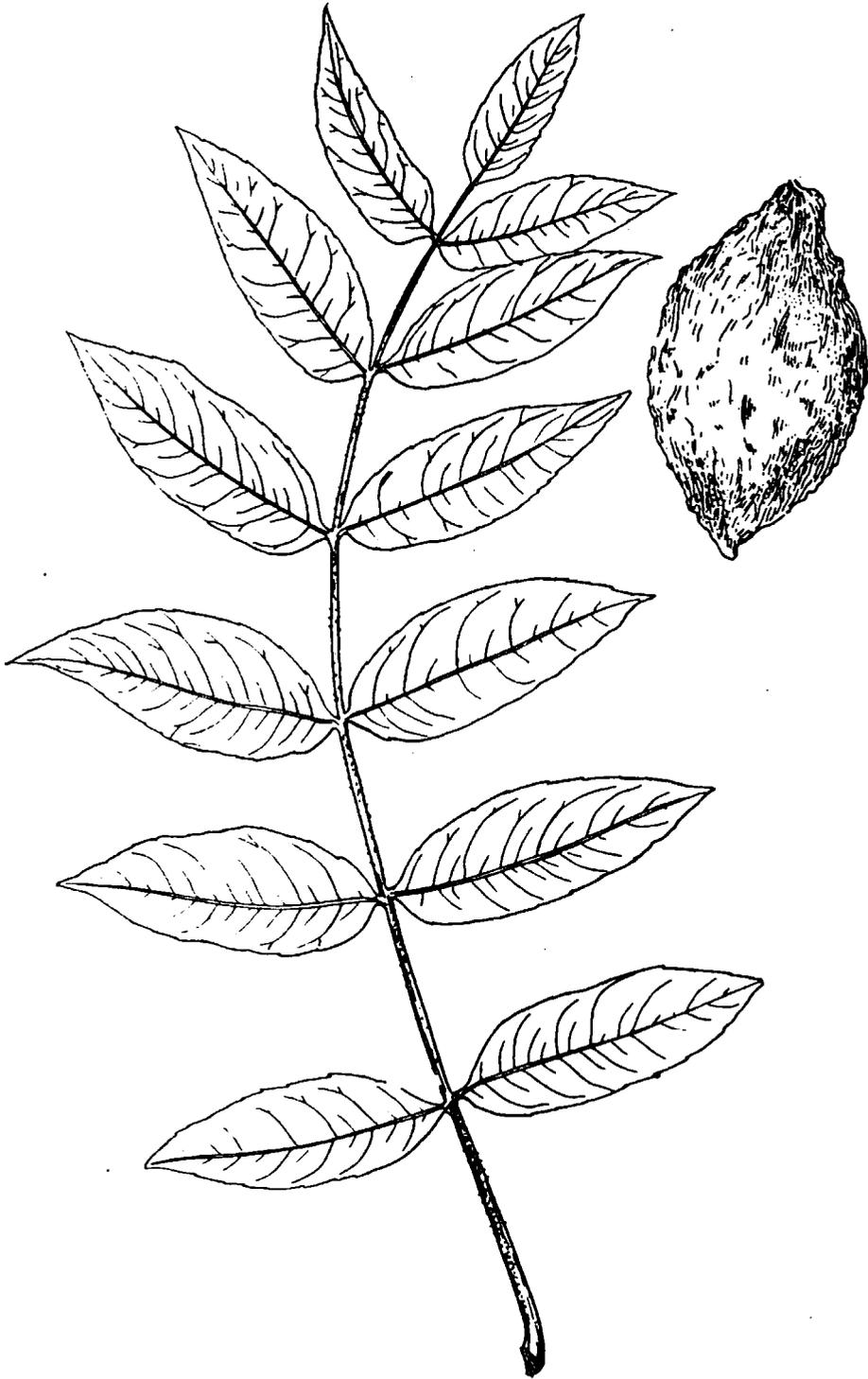


Fig. 44.—Tree of the mutant walnut, in fruit. Photographed by C. M. King.



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Leaf and fruit of mutant walnut. From drawing by C. M. King.