

## 45020 to 45022—Continued.

bearing good crops of fruit, and this naturally brings up the question, Is the productiveness of these trees due to the fact that they have been topped? It rather looks as though it may be, and it would be well worth while experimenting with some of the old seedling trees in southern California to see if topping would render them more productive. Topping is not done here with the intention of making the trees produce more fruit; it has been purely accidental in these two cases. The large limbs have been cut back within a foot or two of their union with the trunk. From the stubs numerous sprouts have made their appearance, and on these much more fruit is produced than upon the fruiting branches of the ordinary crown.

"The tree from which this bud wood was taken has a trunk about 10 inches in diameter, and the crown is now about 10 feet broad. I counted over 50 fruits on the tree, which is a large crop for a cherimoya.

"In form the fruits are heart shaped or bluntly conical, much freer from irregularities than many varieties, of large size, averaging about a pound in weight. The surface is clean and almost smooth, the carpellary areas being indicated by raised lines.

"This is a variety of pleasing form and appearance, of good size for handling and marketing, and the quality seems to be good. It ripens earlier here than most of the other seedlings, the first fruits having already dropped, while the fruits on most of the other trees I have seen are still immature. It should be tried in California."

45021. ANNONA CHERIMOLA Mill. Annonaceæ.

Cherimoya.

"(No. 165. Cuttings from the sitio of Julio Guerra, Antigua, July 16, 1917.) A productive variety of the *cherimoja*, or *anona* as it is called in the Guatemalan highlands.

"The tree is small, though not young. Apparently it has been cut back heavily, leaving only one limb of the several which formerly composed the crown. The height of the tree at present is about 15 feet, while the trunk is about 8 inches thick at the base. The crown is slender and unsymmetrical.

"At this date (July 16) the tree is carrying 102 young fruits and is still flowering. The season of ripening is from November to January. In form the fruits are cordate to conical. When ripe the larger ones will weigh more than 1 pound. The surface is rough, the carpellary areas on some specimens giving rise to short protuberances, while on other specimens the protuberances are almost wanting.

"Julio Guerra says the ripe fruit has very white flesh and is of good quality. The unusual productiveness of the parent tree commends the variety for trial in California and Florida."

45022. CHAMAEDOREA sp. Phœnicaceæ.

Pacaya palm.

"(No. 167a. Seeds from San Cristobal, Department of Alta Vera Paz, July 16, 1917.) Nearly every garden in Coban, San Cristobal, and other towns of Alta Vera Paz contains a number of these attractive palms, grown not so much for ornament as for the edible inflorescences which they produce. In some parts of central Guatemala, such as San Antonio Aguas Calientes, the *pacaya* is occasionally seen, but it appears to be much more abundant in Vera Paz than in any other section of the Republic. It is cultivated at varying altitudes, the lowest observed being about 3,000 feet and the highest 5,200. From the fact that it succeeds at such high elevations as 5,000 feet it must be considered