

The Cattley

(Commonly known as the strawberry guava)

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The cattley guavas are listed in the 1942 edition of "Standardized Plant Names" as **Psidium littorale**, the red fruited form; and **Psidium littorale lucidum**, the yellow form. The plant belongs to the family **Myrtacea**, is a close relative of the Feijoa, and is somewhat more distantly related to the Eucalyptus. The cattley is a native of Brazil, but came to this country by way of Europe.

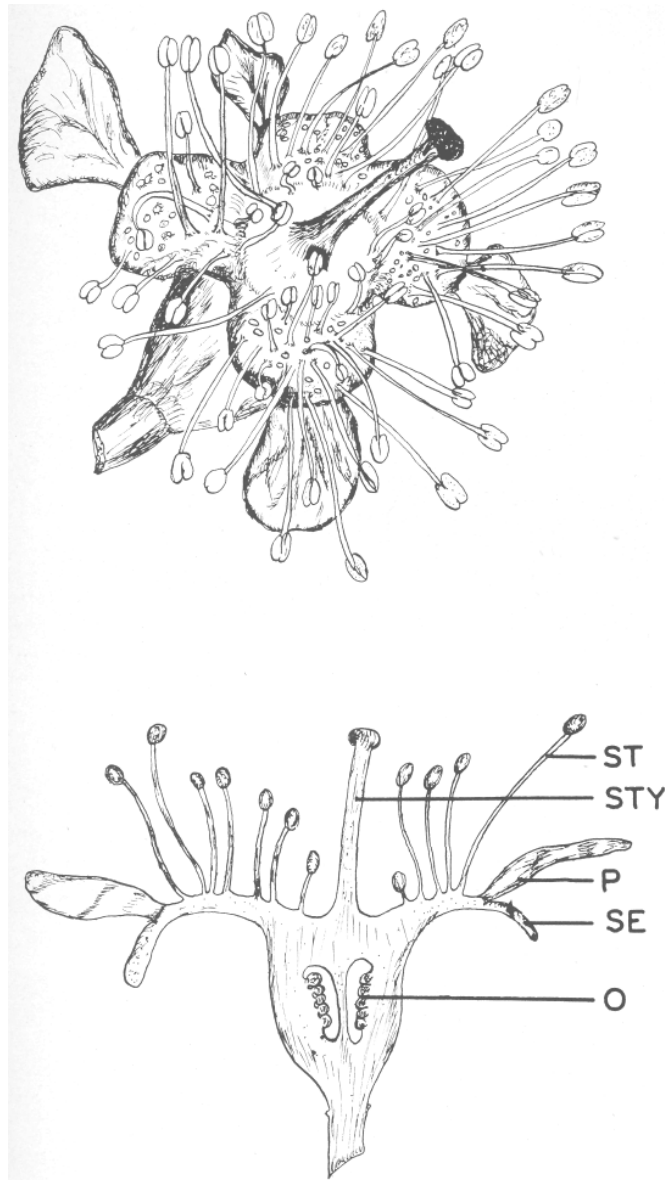
The red cattley has been widely grown throughout Southern California for many years as a door-yard shrub or small tree, and as an evergreen hedge bordering driveways. The chief advantages of the cattley over the true guava, **Psidium guajava**, lie in its much wider adaptability to variable soil and moisture conditions, and particularly to its much greater resistance to frost. The red cattley withstands temperatures as low as 22 degrees, and may be grown wherever the orange is grown without artificial heating. The yellow cattley is less widely grown because of its greater susceptibility to frost, but it thrives in foothill and coastal districts wherever lemons are grown without heating.

The cattley is a delicious and wholesome fruit, eaten fresh out of hand; skin, seeds, and all. The red form is also widely used for jelly making, the jelly having a distinctive flavor and beautiful deep red color. Ordinarily the plant is a large shrub, but on good soil, if given room and water, it attains a height of 12 to 15 feet. Under such favorable conditions it bears heavy crops regularly, the fruits ripening progressively from early September to March with the peak of the crop in December. The season of maturity is shorter (October to December) at interior locations, and considerably extended (late August to March) at locations near the coast such as Santa Barbara.

Cattleys are propagated almost exclusively from seed. So far as known, no asexually propagated variety has been established. There is a wide variation among seedlings with respect to habit of growth, size of fruit, number of seeds, and season of maturity. In spite of the inviting opportunity to improve the cattley by selection and asexual propagation, so far practically nothing has been done. While size of fruits on the same plant varies from year to year, size may be considerably increased by thinning the fruit, or by pruning. On account of its very thin paper-like bark, it is very difficult to bud or graft. It can be propagated by layering, by rooting soft tip cuttings under glass and, very probably, by root cuttings. So far nothing has been done toward developing an improved variety of the red cattley which will come true from seed. Seedlings of the yellow form show considerably less variation than those of the more common red form.

There is no record of any disease affecting this plant, in California at least, and its only insect enemy appears to be the greenhouse thrips (**Heliothrips haemorrhoidalis**), which occurs only occasionally and is quite easily controlled by spraying.

The cattley is well worthy of much greater use as a fruit producing door-yard tree. One reason for present lack of appreciation of it is the custom of nurserymen to sell large numbers of seedlings for use as evergreen hedges and for the covering of banks for landscape effects. In such crowded situations, often with inadequate water, the fruit is small and of such poor quality (seedy) as to create indifference or even prejudice.



(Upper) General view of Cattley flower which contains four petals, many stamens and a single style and stigma.

(Lower) Median section through Cattley flower showing style, sty; stamen, st; petal, p; sepal, se; ovules, o which develop into seed.

Analyses

A. L. Stahl; Florida Expt. Station Bulletin 283, 1935

	Ave. Wt. grams	Sp. Gr.	% Seed	% Edible	% Water	% Total Sugar	% Oil	% Protein	% Ash
Red Cattley	11.1	1.007	6.0	94.0	84.9	4.42	0.46	0.75	1.50
Yellow Cattley	12.1	1.02	10.3	89.7	84.2	4.32	0.67	0.80	0.75
P. guajava	15.6	1.03	20.0	80.0	86.1	4.46	0.57	0.79	0.48

Vitamin C Content

Fresh Weight Basis

Analyses made at the University of California at Los Angeles by the potentiometric method,* in October, 1944, gave 51.7 mg. of ascorbic acid for 100 grams of fresh fruit of the red cattley and 51.8 mg. for the yellow form. While this is a relatively high content of vitamin C, roughly comparable to lemon juice, fresh broccoli, or kale, it is considerably lower than that of the tropical guava which varies widely from 100 to 500 mg. per 100 grams.

Seed Content

From a large sample of fruit gathered from a number of different plants, 100 fruits one-half inch in diameter and another 100, one inch in diameter, were selected. The seed counts were as follows:

Size	Small	Large
Average weight	3.11 grams	12.30 grams
Average number of seeds	8.4	21.2
Range of seed number	2-29	7-43
Average weight of fruit per seed	0.37 grams	0.58 grams
Average weight of seeds	0.014 grams	0.022 grams
Percent of edible portion excluding seeds	96.3	96.3

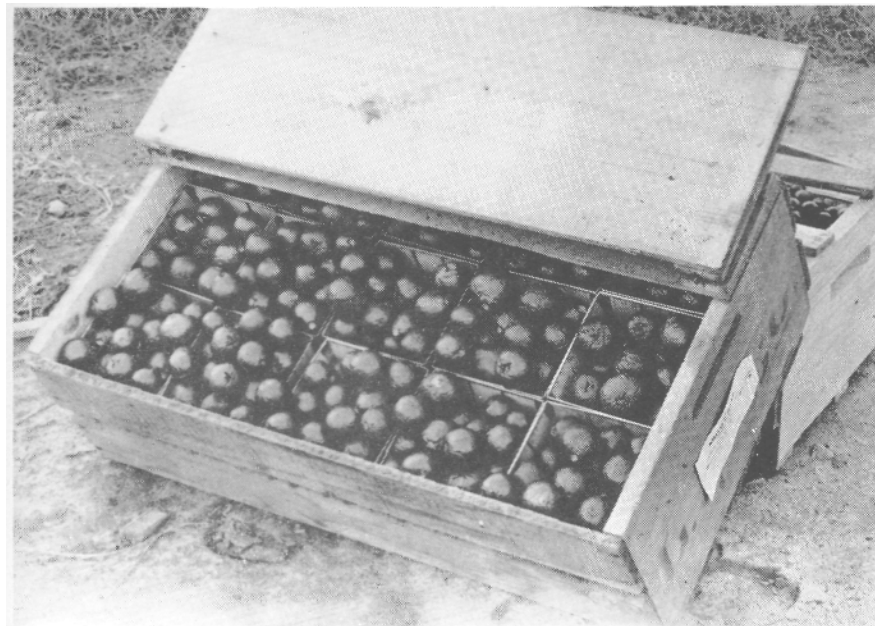
*Ramsey, J. B. and E. L. Colichman, Ind. Eng. Chem. Ed. 14:319-321; 1942.

Commercial Possibilities

By the time the cattley fruit reaches full maturity and is most delicious to eat out of hand, the skin has become too delicate and soft to withstand rough handling. When at its best the life of the fruit is short, only three or four days without refrigeration. By picking firm fruits a little short of full maturity; careful handling in picking and packing; and by shipping under refrigeration; the cattley can be delivered in merchantable condition to any market in the United States west of the Rocky Mountains. It has a very distinct advantage in its midwinter season of ripening, at which time it does not compete with strawberries, bush berries, stone fruits, melons, etc. The cattley is usually packed and marketed in crated berry baskets. Because of its habit of setting too many fruits, the size of many individual fruits is often small. Fruits too small for retail as fresh fruit may be manufactured into jelly or a paste, for which there are various uses. The problem of small fruits can, however, be largely overcome by propagation of large fruited forms and also by such pruning as will serve to thin the fruit. When intended to be used exclusively

for manufacture, the lower branches should be pruned up so that canvas can be spread under the trees and the ripe fruit shaken down. This has to be repeated at intervals because of the long period over which the fruit reaches maturity. The total production per plant is quite large. Scarcely any other subtropical fruit, unless it be the feijoa, bears more prolifically than the cattley.

Up to the present time there have been few commercial plantings. Perhaps the most outstanding one in California is that of Mr. Wm. R. Wolford near La Mesa. This planting consists of a little over 3000 trees, planted 9 by 9 feet, or about 5 acres. These trees are about fifty years old. Production in 1943 was approximately 30 tons, only 20 tons of which were harvested on account of lack of labor. Some of this fruit was marketed locally in berry baskets. Most of the tonnage was bought by a Los Angeles firm which made it into paste before shipment to the East.



Crate of red Cattleys packed
at the Wolford ranch.



Cattley orchard at the
Wolford ranch.