**Oranges**

*J.McPhee*

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John McPhee is a journalist who likes to probe deeply into a subject, usually an obscure one or at least seemingly insignificant. In the process you will learn a lot about a tiny subject you had no idea really existed, at least not at such an extension. More often then not you will learn more than you really want to know.

A typical object of McPhee's curiosity is the orange. Admittedly not an obscure one, who has never eaten let alone seen an orange? And nowadays frozen concentrate orange juice is more or less staple on the breakfast table, surely making up the lions share of all the oranges which are grown.

The book was written in the mid 60's. Now this is over forty years ago. The middle-aged men he encounters and interviews all came to age during the depression, and most likely are dead by now, when the book is being republished.

So McPhee does a lot of research and enters the subject from a great many angles, although most of the time he seems stuck in Florida. He traces the history of the fruit, coming from southern China and gradually dispersing all over the world. There are different kinds of oranges, as well as there are different kinds of citrus fruits in addition to the orange. The grape fruit, the lemon, the lime, the mandarin (clementines and tangerines are just regional varieties of the mandarin) and the pomelo. There is also the citron, which is intriguing, as 'citron' is the Germanic name for 'lemon'. What does it really design in English? It certainly is not the lemon, but something different. In fact it was formerly referred to as the Persian apple. The cousins of oranges are mentioned in passing, but surely oranges as the most common and commercially most viable, takes center stage.

Oranges can be grown by planting seeds, or maybe more efficiently grafted as shoots onto other citric trees. There is a lot of fluidity between the boundaries in the citrus family. The quality of an orange depends on so many factors, n addition to climate, soil and sun, the individual position on the tree can make quite a difference. The orange tree cannot take frost. 28 F is the limit. This is sometimes achieved in major growing areas such as Florida. The consequences may be only short of catastrophic, but if not too severe, a boost to the industry as supply dwindles demand is unaffected and prices rise. A groove dispersed with ponds is in good shape, as water acts as heat reservoirs. A desperate measures to protect trees is to spray them with water turning into isicles. As long as fresh water is supplied the temperature does not go below 32 F. And when ice is formed, heat is produced.

Now oranges have a history. One can trace their appearance as well as their cultivation in northern lands through the famous Orangieries connected to various European courts. They also have etymology, the name orange being explained. No reference to either the German 'Apfelsin' or the related Dutch 'Sinasappel' both testifying to the Chinese provience - Chinese apple. So why are oranges so praised? The sweetness of taste, is the obvious explanation. Also its beneficial medical aspects played a big role as it was noted that citrus prevented scurvy on long sea-voyages. The essence of the orange is the

juice. The most desirable way of consuming an orange is not to eat it but to drink it. The orange is typically hard to peal. Most people seem to need some tool, some kind of knife to effect it. The mandarines, on the other hand are blessed with loose fitting peal that easily ruptures without breaking into small pieces, and makes the deshrouding a pleasure rivaling that of actual consumption. Now freshly squeezed orange jice does not last very long. It quickly turns acid and bitter by the influence of air and oxidation. The great challenge has been to make the juice commercially viable. There is the solution of the chilled juice, which used to be brought to New York from Florida in white boats with large containers dumping their loads into Queens for packaging. Now, this is considered ineffective (those crews had a carefree time on the boats, not much to be done, except to treasure the leisure) and instead the chilled juice is pre-pacaged and lugged all over the States by train. The next step is the concentrate marketed by Minute Maid, already in the 60's turned into a subsidiary of Coca-Cola. The original attempt was an abysmal failure. After the excess water had been removed, the juice lost all its taste, and when diluted in water tasted nothing but sugared water. The great invention was to reintroduce fresh juice into the concentrate, a step so trivial that at first a patent was refused. Now the concentrate is carried to the stage when three cups of water to each cup of frozen concentrate is enough. To concentrate it further and thus calling for more dilution would not allow the finished drink to be cool enough. Such are the mundane considerations that go into marketing.

There is of course research on citrus. People write Ph.D. thesises, publish scholarly articles, experiments are being done. There is a huge documentation, and entire libraries devoted to it. The budgets of such endeavors are of course dwarfed by that which goes into advertising. To maintain the market share is of course of utmost importance. Highly educated families tend to drink more orange juice for breakfast. No doubt due to the perceived C-vitamin content, which of course is compromised during the concentration process and due to evaporate with storage.

A processing plant looks more like an oil-refinery than anything else. Huge containers into which oranges are dumped before being led through the squeezing process and its several stages, each intended to increase the sugar content. Everything is used and reused. The peels supply valuable oils and fragrances which to be reintroduced in the finished product to enhance its apparent freshenness and naturalness. The peels are eventually ground up and served as fodder. That makes the refineries smell good, and make Florida milk taste a little bit like orangeade.

The green orange tree and its luminous fruit makes up for a pretty sight. Whole groves of them surely provide an accumulative effect. A pleasant subject to research.

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