

Facts about dry land vegetation <Part 3>

In this third part of the series, I would like to introduce the wild watermelon (*Citrullus colocynthis*) that commonly occurs on dunes in the Arabian Peninsula.

It was in the book “Desert - Remaining Arid World” written by Professor Iwao Kobori where I first got to know *Citrullus colocynthis*. I was impressed by the fact that many interesting plants occur in deserts, having evolved to be drought tolerant. The first time I actually saw the plant was in the eastern part of the Rub' al khali desert, when I was walking in the dunes that span the inland area of the UAE. Sands were forming a small mound just like a baseball mound and I saw the vine like plant that covered the sands. Examining closely, I saw many tennis ball size fruits, which looked just like watermelons with vertical stripes. I immediately remembered thinking. “Hurray, this is *Citrullus colocynthis*!”



Then I observed many similar mounds around me. The patches that are covered by the vines attract shifting sands little by little, and eventually form a mound. States of fruits varied from green fruits with clear stripes to totally dry up yellow fruits. The dried fruit husks were just skin and seeds and when one shook them, they made a pleasant sound like a musical instrument. They reminded me of baby toys made of celluloid.



The desert was a habitat for a number of small animals such as fox, hare and mouse. And nomadic pastoralists passed with camels, goats and sheep. I was wondering why the wild watermelon is not eaten by these animals, and found that there was plant's wisdom behind this. It is extremely bitter. They say camels that eat it squint and grimace. I tried it myself and it was indeed very bitter.

After shaking dried up this wild watermelon, creating a rattling sound, opening the skin brings many seeds out. Some brought back these seeds to Japan to breed drought resistant watermelon, however I heard that it was just impossible to conquer the bitter taste.

After the first encounter with *Citrullus colocynthis*, I had an unexpected second encounter. It was at the pharmacy in the old souk in the capital Damascus, Syria. It was a very different kind of pharmacy. A variety of leaves, roots and fruits, as well as dried lizards and other dubious items were crammed together on display. Customers explain their complaints to the shop owner and he then mixes different materials and explains quantity and frequency of use. This pharmacy must have been dispensing effective medicines as whenever I visited the pharmacy it was full of customers. I was taken there by a counterpart when I was suffering from diarrhea. Some three plants were mixed and dispensed, which indeed worked well. When I saw *Citrullus colocynthis* on the counter of the pharmacy I felt as if I had met an old friend. The plant is actually grown in different parts of Europe as a medicinal plant, and the fruit is known to have purging effect. The plant is also mentioned in the Bible.



Recently we sometimes hear the name ‘Kalahari watermelon’. This plant is also a wild watermelon that occurs in the Kalahari Desert. The compound called citrulline is attracting the attention of many companies as there is a potential for the compound to be useful for cosmetic and pharmaceutical products. Nara Prefecture is promoting the revival of traditional Japanese vegetables. Kalahari watermelon is also used as part of agriculture, commerce and industry collaboration activities to revitalize towns. Inspired by this idea, I would like to explore the use of *Citrullus colocynthis* for revitalizing town and rural areas in arid regions.