Giorgio Gallesio, Pomologist and Precursor of Gregor Mendel

SILVIO MARTINI
Berna, Switzerland

Count Giorgio Gallesio (1772–1839) was one of the great pomologists of his day. He obtained a Doctor's Degree in Jurisprudence in 1793 at the University of Pavia in Italy. He was a member of the Commission that was sent to Paris to do homage to Napoleon on the occasion of his marriage to Mary Louise. He was Underprefect of Savona in 1810, and of Pontremoli in 1814. After the overthrow of Napoleon, he was a member of the Legislative Commission of the Republic of Genoa. And lastly, he was Secretary of the Legation in the Representation of Genoa to the Congress of Vienna.

The name of Gallesio lives on, not only because of his varied political activities, but also because of his writing. He began his literary career with his "Traitu du Citrus", Paris, 1811, a new sort of book, far superior to the few predecessors. It contains much biological and agricultural information. In the first chapter he discusses his theories on the breeding of plants, already made known in 1810 at a meeting of the Institut de France in Paris. His ideas were not well received there, since they were opposite to the views of most of the members. However, most of Gallesio's deductions proved right (1).

In the last chapter, his history of the citrus fruits shows extraordinary knowledge of the subject. He attributes the importation of the sweet orange into Italy to the Ligurers, during the time of the Crusades. Until that time, the introduction of the sweet orange into Europe was credited to the Portuguese. This chapter on citrus fruit is truly botanical geography, and has been quoted by De Candolle, who considered Gallesio a most authoritative source (2).

After 14 years of experimenting in the breeding of plants such as ranunculus, pinks, roses, pears, peaches, oranges and lemons, he published a booklet entitled "Teoria della Riproduzione vegetale," Pisa, 1816. His observations in this booklet made Gallesio a true precursor of Gregor Men-

Fig. 1. **A portrait of Giorgio Gallesio, Italian pomologist, author and breeder.**

del (1822–1884) (3). The following quotations are typical and basic:

"I have pollenized white, flowering pinks with pollen from red flowering pinks and reversely; the seed I have germinated gave me pinks of mixed colors. Thus the natural reproduction gave heterogeneous results, and these have the appearance now of one and now of the other origin, depending on which one of them is dominated."

From the above evidence with regard to his use of the terms "mixed colors", "dominated" and "dominante", one must acknowledge that Gallesio was a true precursor of Gregory Mendel.

It would be interesting to know if Mendel knew of the translation of Gallesio published in Vienne in 1814 (5). In any event, Darwin knew two works of Gallesio, for he quotes them in one of his works as follows: ".... the descent of the various species, Gallesio, who devoted nearly all his lifetime to this subject" (6).

W. Pashkevich quotes Gallesio's "Theorie d. Vegetabilischen Reproduktion" (Wien, 1814) in his book "General Pomology", Moskau, 1930.

More recently, F. Crescini, in his "Genetica Vegetale", Roma, 1952, refers to Gallesio as a precursor of Gregor Mendel.

In his greatest work, "Pomona Italiana", Pisa, 1817–1839, Gallesio describes and defines the biological and horticultural characteristics of 17 species of fruits. In this fine book are illustrated five varieties of apricot, two almond varieties, 29 peaches, 21 figs, 10 plums, 22 pears, 9 cherries, 8 apples, and others. If we consider the greatness of this monumental work, including the excellent colored illustrations, we will have to agree that, even in our time, it is indeed rare for a single man to publish such an outstanding book.

The greatest contribution of Giorgio Gallesio is that he gave Italy a classic work on pomology. But it is only right that he also be recognized as an important precursor of Gregor Mendel.

Literature Cited

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2. De Candolle, A. 1896. Origine des plantes cultivees. Paris: p. 121.
3. Gallesio, G. 1816. Teoria della Riproduzione Vegetale. Pisa: p. 121, 76, 79.
4. Molon, G. 1927. Bibliografia orticola. Milano: p. 129.
5. ————. 1814. Theorie der Vegetabilen Reproduktion oder Untersuchung uber die Natur und die Ursachen der Abarten und Missgebilde. Deutch mit Zusatzen von George Jan. Wien.
6. Darwin, C. 1868. Das Variieren der Tiere und Pflanzen im Zustande der Domestication. Stuttgart. Bd. I & II.

Apples in Guatemala

Our apple problem, of course, is a matter of chilling requirement. So far, our best bet seems to be Winter Banana, which fruits well here at 6000 feet or slightly higher, when many other varieties need 7500 or at least 7000 feet. Red Delicious is coming along well, and in Mexico they are strong for Golden Delicious, but here in Guatemala the market leans strongly toward *red* apples.—*Wilson Popenoe, Antigua, Guatemala.*