



Heritage wheat grown in North America originated in the Fertile Crescent spanning the Mideast into Old Europe. Wheats whisper the journeys of the peoples who carried them, the trading, migrations and conquests that are kneaded into our breads. When peoples immigrated to the New World, they brought landrace wheats from their homelands.



*C. G. Pringle*

It was Cyrus Pringle, a Vermonter who combed Vermont hills to Mexico to assemble the largest botanical collection of his time, who bred wheat well-adapted to New England.

As a seed-saver and farmer-plant breeder, five years I became intrigued by the inspiring work of Cyrus Pringle, a Vermont plant explorer who amassed a vast collection of botanical samples throughout the US and Mexico, and exchanged seeds with scores of Europeans. The Pringle Herbarium at UVM houses over 20,000 samples of Pringle's great collection. More are stored in the Smithsonian and Harvard University, who funded him in the 1800s. Since that time, I have spent many sweet hours pouring over Pringle's eloquent descriptions of how to cross tiny flowers of wheat, the traits of grape plants and the habits of potato flowers.



1884. *Cyrus Guernsey Pringle's self portrait - "Left in the Desert"*<sup>1</sup>

Pringle was an avid plant explorer whose botanical field collections remains unsurpassed to this day. For twenty-six years Pringle collected the flora of Mexico for Asa Gray, Gray Herbarium.



***Buddleja Pringlei, Tuscon, 1883 collected by Pringle***

Photo by Kathryn Mauz from Pringle Herbarium, UVM

<http://cals.arizona.edu/herbarium/assoc/projects/pringle/>

Cyrus Pringle's went on collecting expeditions in the western United States and Mexico in the early 1880s. He brought numerous new species to science and contributed understanding of plant species' geography. Several of his specimens are the only records for species in locations in which they no longer grow today.

In 1863, Pringle's botanical work was interrupted by the Civil War. With an abiding belief in non-violence, Pringle, a Quaker, was imprisoned by the US military for refusing to bear arms in 1863.

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<sup>1</sup>Gray Herbarium Archives

From Diary of A Quaker Conscience  
by Cyrus Pringle

*'Twenty-five or thirty caged lions roam lazily to and fro, hour after hour through the day. On every side without, sentries pace their slow beat, bearing loaded muskets. Men are ranging through the grounds or hanging in synods about the doors of buildings, without purpose. Aimless is military life, except betimes its aim is deadly. The building resounds with petty talk; jokes and laughter, swearing. Some of the caged lions read. Some sleep, and so the weary day goes by. Brattleboro, 26th, 8th month, 1863*

*In the early morning damp and cool we marched down off the heights of Brattleboro to take train for this place. Once in the car the, dashing young cavalry officer, who had us in charge, gave notice he had placed men through the cars, with loaded revolvers with orders to shoot any person attempting to escape, or jump from the window, and that any one would be shot if he even put his head out of the window. 28th, 8th month, 1863*



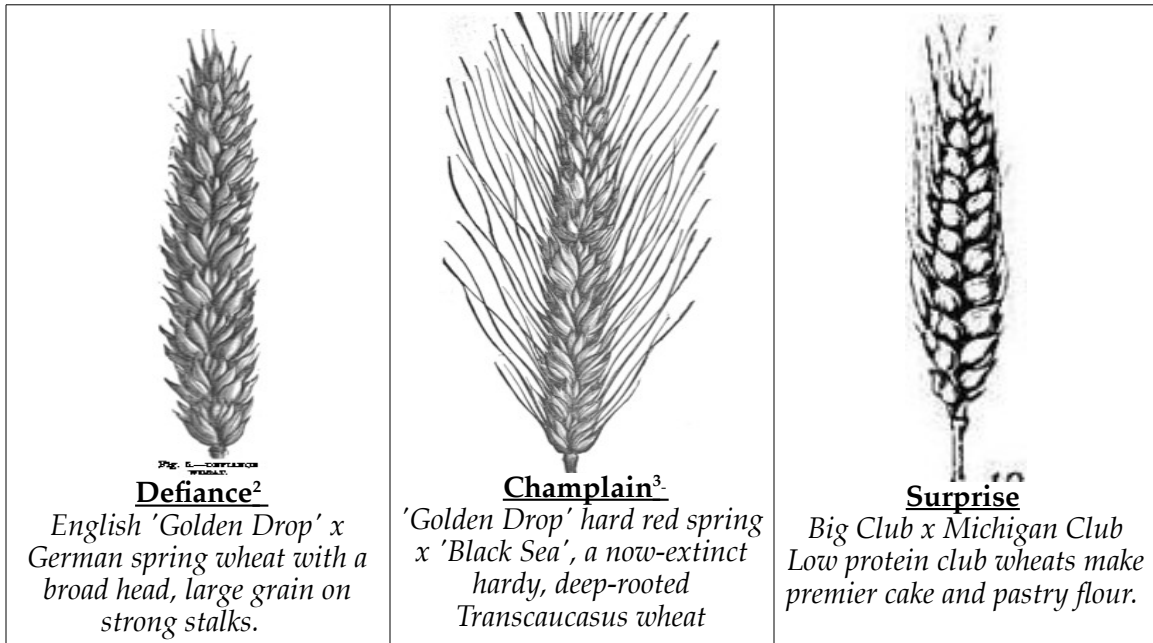
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**Engraving of Civil War Soldiers**

*How beautiful seems the world on this glorious morning here by the seaside! Eastward and toward the sun, fair green isles with outlines of pure beauty are scattered over the blue bay. Though fair be the earth, it has become tainted by him who was meant to be its crowning glory. Behind me on this island are crowded vile and wicked men, the murmur of whose ribaldry riseth like the smoke and fumes of a lower world.' 6<sup>th</sup>, 9th month, 1863 Cyrus Gurnsey Pringle*

President Lincoln later pardoned Pringle and the other two Quakers. After recovering from his ordeal, Pringle returned to breeding plants on his farm and his extensive collecting.

## *Wheats bred by Cyrus Pringle*



**Pringle's Progress**, an oat bred by Pringle, is well-adapted to Vermont climate and soils.

Are these Vermont-bred varieties lost to us today? I searched through the USDA genebank. Eureka! Although the 'snowflake potato' bred by Pringle is yet lost, his grapes, oats and wheat seeds are safely sleeping in cold storage awaiting the hands of more Vermonters to bring them alive. How can we get this precious seed back into the hands of more Vermont farmers and gardeners? Off they were mailed, entrusted to the good hands of Heather Darby and Jack Lazor, to educator Gregg Stevens of the Merck Center, and to Sylvia Davatz, seed-saver extraordinaire in Hartland.

What other Vermont heritage wheat varieties do we know about?

The 1885 farm diary of Arthur Judd<sup>4</sup>, a farmer from South Stafford, Vermont, who lived and farmed with his father Luman Judd on their 200 acres farm. Arthur describes his fields of 'Hungarian wheat', a renowned landrace wheat known as 'Bankuti' in Hungary and as 'Hungarian wheat' in Russia. We received samples of this seed from the

<sup>2</sup> Engravings of Defiance and Champlain from 'Wheat Culture' by D.S. Curtis, Orange Judd Publishers. NY. 1888

<sup>3</sup> *ibid*

<sup>4</sup> Text sent to me by Roberta Parker, Judd's great grand-daughter.

Hungarian Cereal Genebank and planted it in our winter wheat trials for the past two years. We are pleased to report that Hungarian yielded amongst the highest in our trials last year, with robust stalks and sturdy stands of fat, golden seed. It is beloved in Hungary for high baking quality.

### **Vermont Winter – Soft Wheat from the 1800s**

A delicious soft wheat hybrid of the Canadian heritage varieties 'Bearded Fife' x 'Early Arcadian' was released in the late 1895 by G.A. Read from Charlotte. The exemplary winter wheat hybrid described in Pringle's papers, sent to him by Charles Arnold of Paris, Ontario, may be one and the same, since there is no mention of Read's breeding work in Pringle's papers. Anyone with information please step forth!



***Vermont Winter Soft Wheat - Seed from 1898***

*'The peck of seed received from Mr. Arnold was sown the middle of September last on good wheat soil, which has been prepared in the usual way. The plants showed great vigor during the Fall, and passed the sever winter without loss or injury. At harvest which occurred very early, the stand was very thick and beautiful. Though the seed was sown thinly and the crop is not yet threshed so I cannot report the yield. But it is estimated to be a superior one. The kernels are plump, thick and white. I esteem this variety highly from one season's trial of it, and anticipate the highest food to the country from Mr. Arnold's untiring labors in cross-breeding wheat.'*

This robust soft Vermont winter wheat, well described above, yielded amongst the best in our trials last year.

In a call for sustainability in his day, Pringle's profound insights are as relevant today as 100 years ago:

*“Sluggishness and dullness are clogs upon our agriculture. The farming of our fathers was exceedingly simple, content to draw from a virgin soil the supplies of simple wants, instead of aiming itself for their increase. With the impoverishment of the soil, with the forests almost swept off the face of the country and the consequent climate change, with the multiplied wants of society and development of so many new industries, the highest intelligence and energies are required to remodel our system of agriculture so that it may fully meet the demands made upon it.”*

We invite Vermont farmers, gardeners and educators to help restoring Cyrus Pringle's wheat, oat and grape varieties, to teach his legacy of Quaker war resistance, and to study Pringle's work on plant breeding that the state-of-the art to this day.

Contact Eli Rogosa for Pringle seeds, curriculum resources and to share ideas to celebrate Cyrus Pringle's legacy.

**Contact: Eli Rogosa: [growseed@yahoo.com](mailto:growseed@yahoo.com)**

***To learn more:***

1. <http://www.uvm.edu/~plantbio/pringle/pringlebio.html>
2. Davis, Helen Burns. 1936. Life and Work of Cyrus Guernsey Pringle. UVM Burlington
3. [http://en.wikipedia.org/wiki/Cyrus\\_Pringle](http://en.wikipedia.org/wiki/Cyrus_Pringle)

