

## Phenology

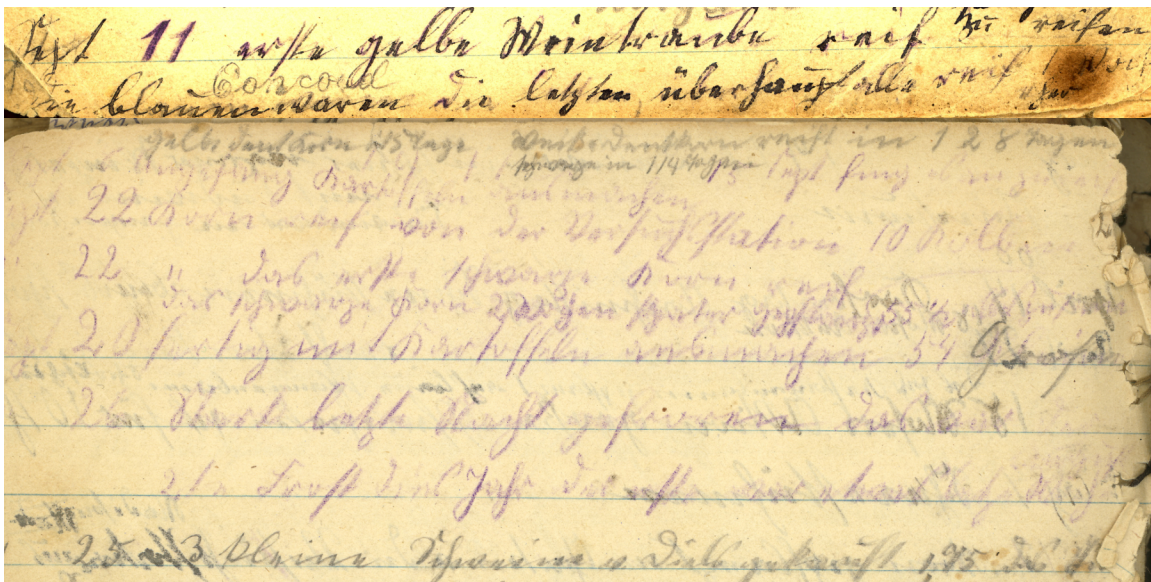
### Why did early settlers keep records related to weather, crops, and animals?

Settlers depended on being able to raise enough of their own plants and animals for food. Records of when crops were planted and harvested helped them know what to do in following years.

Eleonore Bolz Kuse kept a diary in the German language. It was written in German script. Some parts have faded and become hard to read.

The diary is now kept in the Kuse Museum in a special acid free box to keep it from deteriorating.

### Diary of Eleonore Bolz Kuse Written in September 1911



Sept 11 erste gelbe Niagara Weintraube reif Niagara fangen an zu reifen  
Die Concord blauen waren die letzten überhaupt alle reif 1 Woche eher  
Gelbe Dent Korn 115 Tage Weiß Dent Korn reift in 128 Tagen  
Schwarze in 114 Tagen 15 Sept feng es an zu reifen  
Anfang Kartoffeln ausmachen  
Sept 22 Korn reif von der Versuchstation 10 Kolben  
Sept 22 Korn erste schwarzes Korn reif  
Das schwarze Korn 2 Wochen später gepflanzt 55 1/2 selbst zu \_\_\_\_  
Sept 20 fertig im Kartoffeln ausmachen 59 Grose  
Sept 26 Stark letzte Nacht gefroren das ist der zweite Frost des Jahr der erste war  
etwas leicht  
Sept 25 3 kleine Schweine v. Diels gekauft 1.75 das Stück

### Translation of German Diary

Sept 11 First yellow Niagara grapes have started to ripen. The blue Concord grapes were ripe one week earlier.

Yellow Dent Corn 115 days. White Dent Korn ripe in 128 days.  
Black in 114 days.

15 Sept. it started to ripen.

Started to dig potatoes.

Sept. 22 The corn from the experimental station is ripe. 10 cobs

Sept. 22 First black corn ripe

The black corn was planted two weeks later. 55 1/2 self ----

Sept. 20 Finished digging potatoes 59 big ones

Sept. 26 Hard frost last night that is the second frost this year. The first was somewhat light.

Sept. 25 Bought three little pigs from Diels. Paid \$1.75 for each one.

Hildegard and Loretta Kuse kept a similar record. The following information was taken from the diary they wrote in September 2011. That was 100 years after Eleonore Bolz Kuse wrote hers.

Many people keep such records and use them to compare information and make decisions. The study of cycles of natural phenomena related to climate, plants and animals is called "phenology".

### **Keep Your Own Record of Events**

- Keep a record of what happens on each day in September this year.
- Compare the record to the ones done in 1911 and 2011.
- How is the weather like or different from those years?
- What events related to plants or animals have you observed?
- Look for examples of phenology on the Internet and compare them to your record.

### **September 2011 – Phenology**

#### **September 1**

##### **Weather**

Very hot and sticky. Some places over 90 but we got into the 80's.

##### **Animals**

A baby chipmunk was on the steps and a mom and little one were together near the machine shed.

We cared for Eastern Black swallowtail caterpillars.

#### **September 2**

##### **Weather**

It is cloudy and raining.

#### **September 3**

##### **Weather**

It rained heavily several times during the day. There were strong thunderstorms. A neighbor had 1 1/4 inches of rain in his gauge.

##### **Animals**

The Pileated Woodpecker calls and comes through.

We cared for Eastern Black swallowtail caterpillars.

#### **September 4**

##### **Weather**

It was about eleven degrees cooler today.

##### **Animals**

We cared for Eastern Black swallowtail caterpillars.

##### **Plants**

Found Hen-of-the-woods mushrooms.

#### **September 5**

**Weather**

The weather here was sunny and pleasant.

**Animals**

Found a stinkbug sucking the life out of a Milkweed Tussock Moth caterpillar. Collected more monarch caterpillars.

**Plants**

Planted lettuce seeds in the garden for an early spring crop.

**Animals**

The male Pileated Woodpecker found something good on the Black Cherry Tree and hammered loudly on it.

**September 6**

**Weather**

It was a nice sunny day. The weather is a bit cooler and you have to wear a jacket some times.

**Plants**

Watered plants using water from the rain barrel.

Mowed the south trail. It had been quite wet in some places and we were unable to mow it. There is no trace of the Indian Pipe plants that earlier were near Bench L. Something must have eaten them. Various mushrooms are on the trail. There are some Witches Butter mushrooms on benches.

**Animals**

The Pileated Woodpecker keeps calling.

**September 7**

**Weather**

It was a beautiful sunny, comfortable day.

**House Work**

Picked the Hen-of-the-woods mushroom.

Processed tomatoes from the garden.

**Animals**

One female Monarch eclosed. Saw another new one in the yard.

The Pileated Woodpecker keeps coming to the Black Cherry tree.

**Plants**

Yellow Sulfur Shelf Mushroom on the oak branch.

**September 8**

**Weather**

Beautiful, sunny and warm

**September 9**

**Weather**

It was a beautiful day.

**Plants**

Picked tomatoes, zucchini squash, beans, apples and cucumbers. Processed produce including corn.

**September 10**

**Weather**

It is a beautiful sunny day. They expect frost by the end of next week.

**House Work**

Processed more tomatoes. Have used dehydrator to process beans and corn.

**Yard Work**

Mowed lawn and picked up apples.

**Wildlife and Pets**

There was a Canada Goose on the pond.

**September 11**

**Weather**

It was a beautiful day.

**Museum and Nature Preserve Work**

Cleaned the aquariums for the Luna cocoons. Fed Eastern Black Swallowtail caterpillars.

**Wildlife and Pets**

Two Pileated Woodpeckers flitted around the Bitternut tree.

**September 12**

**September 13**

**Weather**

It was cool but nice day.

Processed more tomatoes, beans, dill and cucumbers. Picked apples.

## Wildlife and Pets

Deer and rabbits abound.

### September 14

#### Weather

It was sunny and cool. In the evening there were a few sprinkles of rain.

#### House Work

Processed beans and cucumbers. Dried zucchini and cucumbers.

#### Museum and Nature Preserve Work

Children from the grade school took a color walk on the trail.

#### Animals

When we went to cover things in the garden there were three young fawn and a doe that stood very close and watched us. There were also other deer.

We saw a mouse in the kitchen early in the day. In cold weather they begin to move indoors. In the evening we caught it in a trap.

### September 15

#### Weather

It was sunny and cool.

### September 18

#### Weather

It was dreary and it rained all day

#### Animals

Cared for Eastern Black Swallowtail caterpillars.

The big flock of turkeys moved through the yard again. We wonder if they are harvesting our grapes in addition to apples etc.

### September 19

#### Weather

It was cool today.

### September 20

#### Weather

It was cloudy and it rained.

#### Yard Work

It was too wet to work outside.

### September 22

#### Weather

It was cool and cloudy.

#### Museum and Nature Preserve Work

Shared information about insects with about 100 second graders.

#### Animals

During the night a Monarch had emerged. It was a male. Later another Monarch eclosed. The last Black Swallowtail caterpillar is hanging in its belt ready to form a chrysalis. Deer came to eat apples in the orchard.

### September 23

#### Weather

It was cold and rained during part of the day. In the evening there was a nice rainbow.

#### Plants

Dug potatoes, picked beans, a zucchini, a few tomatoes, some dill and apples.

The deer have been in the orchard often and eaten many of the apples that fell to the ground.

#### Animals

Turkeys and deer came through. In the morning a Pileated Woodpecker flew into the Bitternut tree. A hawk was chasing it. Loretta went out and tried to chase away the hawk but it would not go. Eventually the woodpecker flew into the maple tree. Then it flew high into the sky and called a lot. Perhaps it was calling for help.

### September 24

#### Weather

The weather was cool and cloudy.

#### Plants

Got a bit of produce from the garden.

**September 25****Weather**

It is cloudy and it rained.

**Animals**

Released three Monarch butterflies from the inside cage. Two were males. She put two of them on the butterfly bush. One flew away before it got to the bush.

**September 26****Weather**

Rainy and cold throughout the day. The river is very brown.

**September 27****Weather**

It rained most of the day.

**September 28****Weather**

Cold and cloudy

**Plants**

Picked apples

**September 29****Weather**

Very windy. Branches came down from the maple tree and leaves are falling. It rained in the afternoon and is cold.

**Animals**

Five or six monarchs emerged today. It is too cold for them to fly. They are on the butterfly bush plant on the workroom entry.

The rooster is molting and has lost his tail feathers.

**September 30****Weather**

Sunny during the day but it is supposed to freeze tonight so we covered in the garden and Hildegard covered flowers near the house and garage

**Plants**

Pulled geraniums. Put them into paper bags to store over winter,

**Animals**

Deer were under the apple trees and barely moved when we tried to whoosh them. Later they were lying in the grass near the mound and watched us as we covered in the garden.