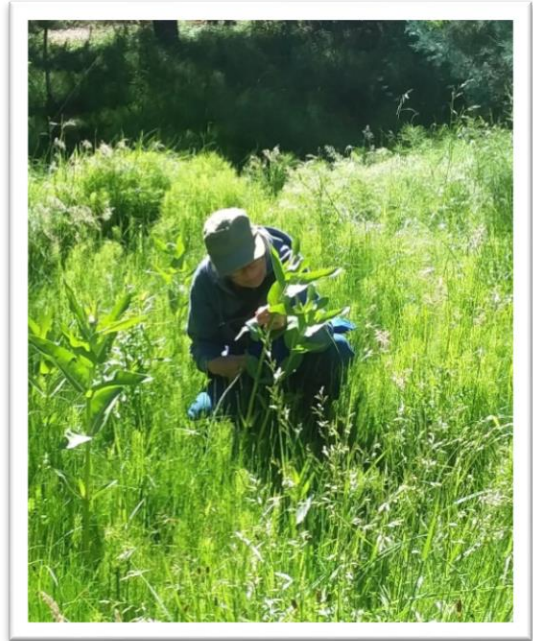




PARKS AND  
RECREATION

## Boise Parks and Recreation 2018 Monarch Report

With eye catching orange and black wings, and the ability to fly hundreds of miles during migration, it's no wonder that the monarch butterfly was chosen as Idaho's state insect. Unfortunately, the future of this iconic species is uncertain. Significant declines in monarch populations have motivated many organizations to find ways in which they can support monarchs.



In 2016, Boise Parks and Recreation launched the Parks, Monarchs & Milkweeds program which engages volunteers in monitoring butterfly populations in Boise parks and protecting and enhancing monarch habitat. The 2018 monitoring season began with a training in Kathryn Albertson Park to familiarize volunteers with monarch biology and monitoring techniques. During the training, volunteers learned how to identify the stages of milkweed growth, learned how to identify monarch eggs, practiced using data collection protocols, and received their monitoring assignments.

Milkweed patches were monitored from early June through the first part of September. Volunteers committed over eighty hours of time documenting the status of milkweed and recording sightings of monarch adults, eggs and larvae. A total of eighteen sights were monitored, with 155 observation reports submitted by 13 individual volunteers. The collected data has been compiled for inclusion in a national database managed by the [Xerces Society](#), an international nonprofit organization that works to protect invertebrates and their habitats.

In total, volunteers recorded 49 eggs, with the most eggs being found along the Bethine Church River Trail. The overall number of eggs documented this season is significantly lower than last year's total of 273. This decrease in documented eggs may be due to a variety of factors including low numbers of overwintering monarchs in California, fewer volunteers, climate fluctuations or changes in habitat. According to a Xerces report, only 144,812 butterflies were documented at the overwintering sites in California last winter. Approximately 300,000 monarchs were observed the previous year (Zuckerman, 2017).

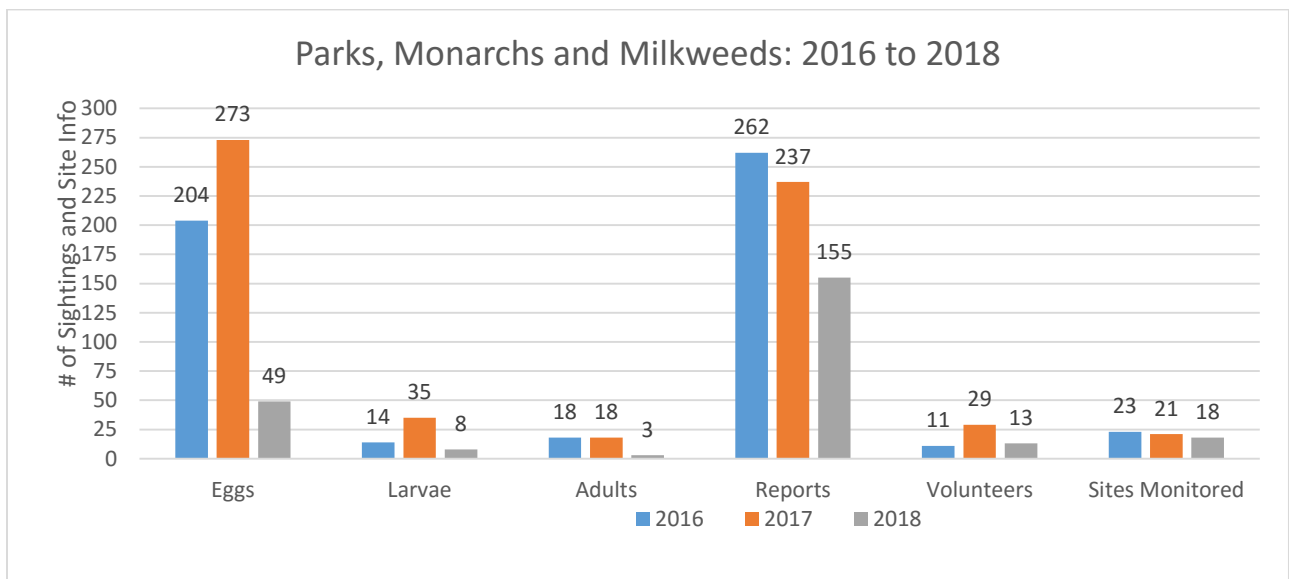


Figure 1

### Kathryn Albertson Park

Volunteers monitored eight milkweed sites in Kathryn Albertson Park this season. Site 8 was unfortunately damaged by mowing early in the season, so data were only collected through mid-June. Twelve eggs were observed in Kathryn Albertson Park. The site with the most eggs was site 3, with 5 observations, followed by site 6 with 4 documented eggs. Sites 15 and 10 also documented 2 and 1 egg respectively. Most of the observations of eggs occurred throughout June and early July. Site 10 documented the only recorded observation of an adult monarch in the park. No larvae were observed in Kathryn Albertson Park this monitoring season.

### **Ann Morrison Park**

Two sites were monitored this year in Ann Morrison Park. One egg, three larvae and one adult monarch were observed at site #2. One adult monarch was observed visiting site #3.

### **Park Center**

Volunteers monitored two sites at Parkcenter Pond. One egg and one larvae were recorded at site #2. No monarch activity was observed at site #1

### **Bethine Church**

Volunteers monitored five, tenth of a mile sites along the Bethine Church Trail. Monitoring areas ranged from mile 2.7 to mile 3.9 along the trail. The most productive site was mile 3.3 – 3.4 where thirty-five eggs were recorded. Observations of eggs occurred throughout the entire monitoring season. Additionally, three larvae were observed along this stretch of trail. One larva was observed between miles 2.7 and 2.8. No monarch activity was documented in any of the other Bethine Church monitoring sites.

### **Conclusion**

Overall it appears that the monarch population in Boise parks this year declined from the previous two years. Milkweed plants were abundant, yet few eggs, larva or adults were observed. One highlight of the season was the successful rearing and release of a female monarch by Parks and Recreation staff. The egg was collected from a site in Kathryn Albertson Park and the female butterfly was released near the collection site. The images to the right show the reared monarch as a larva and an adult.



## References

Zuckerman, Laura. (2018, February 2). Count marks sharp drop in monarch butterflies wintering in California. *Reuters*. Retrieved from <https://www.reuters.com/article/us-california-butterflies/count-marks-sharp-drop-in-monarch-butterflies-wintering-in-california-idUSKBN1FN06N>



**Boise Parks and Recreation  
2018 Monarch Observation Data**

LOCATION	LATITUDE	LONGITUDE	OBSERVER	DATE	FEMALE MONARCHS	MALE MONARCHS	TOTAL MONARCHS	MONARCH BEHAVIOR	EGGS	LARVAE	PUPAE	COMMENTS
Ann Morrison Park #2	43.614526	-116.222991	Gledhill, N.	6/10/2018	0	0	0	None Present	0	0	0	100% vegetative, lady beetles
Ann Morrison Park #2	43.614526	-116.222991	Gledhill, N.	6/22/2018	0	0	0	None Present	0	0	0	10% vegetative, 90% flowering, 2 swallowtails nectaring, lots of rodent damage
Ann Morrison Park #2	43.614526	-116.222991	Gledhill, N.	6/29/2018	0	1	1	Nectaring	0	2	0	10% vegetative, 90% flowering
Ann Morrison Park #2	43.614526	-116.222991	Gledhill, N.	7/1/2018	0	0	0	None Present	0	1	0	10% vegetative, 80% flowering, 10% pods; cobalt beetles and longhorn beetles; strong sewage smell; marked plant with blue string
Ann Morrison Park #2	43.614526	-116.222991	Gledhill, N.	7/6/2018	0	0	0	None Present	1	0	0	50% vegetative, 25% flowering, 25% with pods, longhorn beetles present.
Ann Morrison Park #2	43.614526	-116.222991	Gledhill, N.	7/15/2018	0	0	0	None Present	0	0	0	50% with pods, 40% vegetative, 10% flowering; no chewed leaves except beetle damage; longhorn and cobalt beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	6/5/2018	0	0	0	None Present	0	0	0	
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	6/8/2018	0	0	0	None Present	0	0	0	lots of honeybees and swallowtails
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	6/11/2018	0	0	0	None Present	0	0	0	lots of honeybees, windy
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	6/17/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	6/21/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	6/28/2018	0	0	0	None Present	0	0	0	Longhorn beetles present, lots of swallowtails
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	6/29/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	7/2/2018	0	0	0	None Present	0	0	0	Longhorn and cobalt beetles present; 80% flowering 20% flowering/pods
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	7/6/2018	0	0	1	Flying (Through)	0	0	0	50% flowering, 50% with pods, longhorn and cobalt beetles
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	7/9/2018	0	0	0	None Present	0	0	0	Longhorn and cobalt beetles
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	7/14/2018	0	0	0	None Present	0	0	0	100% with pods; longhorn beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	7/17/2018	0	0	0	None Present	0	0	0	100% with pods; longhorn and cobalt beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	7/23/2018	0	0	0	None Present	0	0	0	100% with pods; longhorn beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	7/25/2018	0	0	0	None Present	0	0	0	100% with pods; longhorn and cobalt beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	7/30/2018	0	0	0	None Present	0	0	0	100% with pods; longhorn and cobalt beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	8/1/2018	0	0	0	None Present	0	0	0	100% with pods; longhorn beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	8/5/2018	0	0	0	None Present	0	0	0	100% with pods; longhorn beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	8/10/2018	0	0	0	None Present	0	0	0	100% with pods; longhorn beetles present
Ann Morrison Park #3	43.614222	-116.223434	Watts, C.	8/25/2018	0	0	0	None Present	0	0	0	100% pods splitting open; longhorn beetles present
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	6/8/2018	0	0	0	None Present	0	0	0	Box elder bugs
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	6/15/2018	0	0	0	None Present	2	0	0	Lots of tiny red insects on underside of leaves
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	6/22/2018	0	0	0	None Present	2	0	0	Longhorn beetles present

LOCATION	LATITUDE	LONGITUDE	OBSERVER	DATE	FEMALE MONARCHS	MALE MONARCHS	TOTAL MONARCHS	MONARCH BEHAVIOR	EGGS	LARVAE	PUPAE	COMMENTS
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	7/1/2018	0	0	0	None Present	1	0	0	Longhorn beetles present
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	7/6/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	7/13/2018	0	0	0	None Present	0	0	0	Longhorn beetles present; 10% with pods
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	7/20/2018	0	0	0	None Present	0	0	0	Longhorn beetles present: 10% with pods
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	7/27/2018	0	0	0	None Present	0	0	0	Longhorn beetles present: 20% with pods
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	8/3/2018	0	0	0	None Present	0	0	0	Longhorn beetles present; 40% with pods
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	8/12/2018	0	0	0	None Present	0	0	0	Longhorn beetles present; 70% with pods
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	8/19/2018	0	0	0	None Present	0	0	0	Longhorn beetles present; 75% with pods
Kathryn Albertson Park #3	43.615331	-116.224707	Baker, L.	8/26/2018	0	0	0	None Present	0	0	0	70% with pods
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	6/20/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	6/24/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	6/28/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	7/1/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	7/8/2018	0	0	0	None Present	0	0	0	30 football shaped very tiny eggs but green and hanging from short thread on milkweed leaf
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	7/15/2018	0	0	0	None Present	0	0	0	No sign of caterpillars eating milkweed
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	7/19/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	7/26/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	7/31/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	8/8/2018	0	0	0	None Present	0	0	0	90% vegetative; 10% with pods
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	8/17/2018	0	0	0	None Present	0	0	0	90% vegetative; 10% with pods
Kathryn Albertson Park #4	43.615758	-116.227820	Solberg, J.	9/3/2018	0	0	0	None Present	0	0	0	90% vegetative; 10% with pods
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	8/8/2017	0	0	0	None Present	0	0	0	100% vegetative
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	6/20/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	6/24/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	6/28/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	7/1/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	7/8/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	7/15/2018	0	0	0	None Present	0	0	0	Two possible signs of milkweed leaves being eaten by monarch larvae
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	7/19/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	7/26/2018	0	0	0	None Present	0	0	0	

LOCATION	LATITUDE	LONGITUDE	OBSERVER	DATE	FEMALE MONARCHS	MALE MONARCHS	TOTAL MONARCHS	MONARCH BEHAVIOR	EGGS	LARVAE	PUPAE	COMMENTS
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	7/31/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	8/17/2018	0	0	0	None Present	0	0	0	90% vegetative; 10% with pods
Kathryn Albertson Park #5	43.615774	-116.228472	Solberg, J.	9/3/2018	0	0	0	None Present	0	0	0	100% vegetative
Kathryn Albertson Park #6	43.615656	-116.228636	Bingelli, T.	6/9/2018	0	0	0	None Present	2	0	0	
Kathryn Albertson Park #6	43.615656	-116.228636	Bingelli, T.	6/17/2018	0	0	0	None Present	1	0	0	
Kathryn Albertson Park #6	43.615656	-116.228636	Bingelli, T.	6/24/2018	0	0	0	None Present	1	0	0	
Kathryn Albertson Park #6	43.615656	-116.228636	Bingelli, T.	6/30/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #6	43.615656	-116.228636	Bingelli, T.	7/14/2018	0	0	0	None Present	0	0	0	No flowers yet on this group
Kathryn Albertson Park #6	43.615656	-116.228636	Bingelli, T.	7/21/2018	0	0	0	None Present	0	0	0	two small round eggs, but no stripes. Lots of seedling sized milkweeds
Kathryn Albertson Park #6	43.615656	-116.228636	Bingelli, T.	8/3/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #6	4.615656	-116.228636	Bingelli, T.	8/12/2018	0	0	0	None Present	0	0	0	Roughly half the plants are still seedlings
Kathryn Albertson Park #6	43.615656	-116.228636	Bingelli, T.	8/17/2018	0	0	0	None Present	0	0	0	All plants in good condition, many still seedling size
Kathryn Albertson Park #6	43.615656	-116.228636	Bingelli, T.	8/24/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #7	43.615760	-116.229032	Eller, L.	6/23/2018	0	0	0	None Present	0	0	0	85% flowering, 15% with pods, longhorn beetles present
Kathryn Albertson Park #7	43.615760	-116.229032	Eller, L.	7/2/2018	0	0	0	None Present	0	0	0	100% with pods, longhorn beetles present
Kathryn Albertson Park #7	43.615760	-116.229032	Eller, L.	7/9/2018	0	0	0	None Present	0	0	0	100% with pods
Kathryn Albertson Park #7	43.615760	-116.229032	Eller, L.	7/15/2018	0	0	0	None Present	0	0	0	100% with pods, longhorn beetles present
Kathryn Albertson Park #7	43.615760	-116.229032	Eller, L.	8/5/2018	0	0	0	None Present	0	0	0	100% with pods
Kathryn Albertson Park #7	43.615760	-116.229032	Eller, J.	8/12/2018	0	0	0	None Present	0	0	0	100% with pods
Kathryn Albertson Park #7	43.615760	-116.229032	Eller, L.	8/20/2018	0	0	0	None Present	0	0	0	50% with pods
Kathryn Albertson Park #8	43.614737	-116.228376	Solberg, J.	6/2/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #8	43.614737	-116.228376	Solberg, J.	6/6/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #8	43.614737	-116.228376	Solberg, J.	6/10/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #8	43.614737	-116.228376	Solberg, J.	6/13/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #8	43.614737	-116.228376	Solberg, J.	6/18/2018	0	0	0	None Present	0	0	0	Returned on 6/20 and all milkweed at KA - 8 had been cut
Kathryn Albertson Park #10	43.612658	-116.226886	Bisang, N.	6/7/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #10	43.612658	-116.227546	Bisang, N.	6/15/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #10	43.612658	-116.226886	Bisang, N.	6/23/2018	0	0	0	None Present	0	0	0	

LOCATION	LATITUDE	LONGITUDE	OBSERVER	DATE	FEMALE MONARCHS	MALE MONARCHS	TOTAL MONARCHS	MONARCH BEHAVIOR	EGGS	LARVAE	PUPAE	COMMENTS
Kathryn Albertson Park #10	43.612658	-116.226886	Bisang, N.	7/1/2018	0	0	1		0	0	0	Longhorn beetles present
Kathryn Albertson Park #10	43.612658	-116.226886	Bisang, N.	7/14/2018	0	0	0	None Present	2	0	0	
Kathryn Albertson Park #10	43.612658	-116.226886	Bisang, N.	7/22/2018	0	0	0	None Present	0	0	0	50% vegetative, 10% flowering, 40% with pods
Kathryn Albertson Park #10	43.612658	-116.226886	Bisang, N.	7/31/2018	0	0	0	None Present	0	0	0	69% vegetative, 01% flowering, 30% with pods
Kathryn Albertson Park #10	43.612658	-116.226886	Bisang, N.	8/5/2018	0	0	0	None Present	0	0	0	60% vegetative, 40% with pods
Kathryn Albertson Park #10	43.612658	-116.226886	Bisang, N.	8/12/2018	0	0	0	None Present	0	0	0	50% vegetative, 40% with pods
Kathryn Albertson Park #10	43.612658	-116.226886	Bisang, N.	8/21/2018	0	0	0	None Present	0	0	0	70% vegetative, 30% with pods
Kathryn Albertson Park #10	43.612658	-116.226886	Bisang, N.	8/26/2018	0	0	0	None Present	0	0	0	70% vegetative, 30% with pods
Kathryn Albertson Park #11	43.613073	-116.225925	Miller, K.	6/20/2017	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #11	43.613073	-116.225925	Miller, K.	7/13/2017	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #11	43.613073	-116.225925	Miller, K.	7/29/2017	1	1	2	Mating	0	0	0	
Kathryn Albertson Park #11	43.613073	-116.225925	Miller, K.	8/9/2017	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #11	43.613073	-116.225925	Miller, K.	8/26/2017	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #12	43.613787	-116.225733	Eller, L.	6/2/2018	0	0	0	None Present	0	0	0	80% vegetative, 20% flowering. Longhorn beetles present.
Kathryn Albertson Park #12	43.613787	-116.225733	Eller, J.	6/17/2018	0	0	0	None Present	0	0	0	100% flowering, longhorn beetles present
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	6/2/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	6/9/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	6/17/2018	0	0	0	None Present	1	0	0	
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	6/24/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	6/30/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	7/14/2018	0	0	0	None Present	0	0	0	Flowers gone, but no pods yet. Two egg like objects, but they were round with brown flecks.
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	7/21/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	8/3/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	8/12/2018	0	0	0	None Present	0	0	0	
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	8/17/2018	0	0	0	None Present	0	0	0	Roughly half the plants are dried out and dying
Kathryn Albertson Park #15	43.616151	-116.229567	Bingelli, T.	8/24/2018	0	0	0	None Present	0	0	0	
Parkcenter Park #1	43.598482	-116.182673	Gregor, P.	6/18/2018	0	0	0	None Present	0	0	0	Longhorn beetles present, 1 tiger swallowtail, lacewing eggs, aphid nurseries, flies, bees
Parkcenter Park #1	43.598482	-116.182673	Gregor, P.	7/1/2018	0	0	0	None Present	0	0	0	breezy, ladybugs



LOCATION	LATITUDE	LONGITUDE	OBSERVER	DATE	FEMALE MONARCHS	MALE MONARCHS	TOTAL MONARCHS	MONARCH BEHAVIOR	EGGS	LARVAE	PUPAE	COMMENTS
Parkcenter Park #1	43.598482	-116.182673	Gregor, P.	7/12/2018	0	0	0	None Present	0	0	0	lots of ladybugs and new milkweed
Parkcenter Park #1	43.598482	-116.182673	Gregor, P.	7/18/2018	0	0	0	None Present	0	0	0	lots of ladybugs
Parkcenter Park #1	43.598482	-116.182673	Gregor, P.	6/25/2018	0	0	0	None Present	0	0	0	longhorn and cobalt beetles present
Parkcenter Park #1	43.598482	-116.182673	Gregor, P.	8/6/2018	0	0	0	None Present	0	0	0	60% vegetative, 40% with pods; Nearly every leaf was infested with aphids, new plants are growing around the mature plants
Parkcenter Park #1	43.598482	-116.182673	Gregor, P.	8/27/2018	0	0	0	None Present	0	0	0	80% with pods, 20% vegetative
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	6/9/2018	0	0	0	None Present	0	0	0	
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	6/2/2018	0	0	0	None Present	0	0	0	
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	6/15/2018	0	0	0	None Present	1	0	0	Black spots on some of the leaves
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	6/22/2018	0	0	0	None Present	0	0	0	
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	6/29/2018	0	0	0	None Present	0	1	0	
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	7/6/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	7/13/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	8/3/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	7/20/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	8/10/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Parkcenter Park #2	43.568243	-116.180704	Eldridge, D.	8/17/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	8/24/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Parkcenter Park #2	43.598243	-116.180704	Eldridge, D.	8/31/2018	0	0	0	None Present	0	0	0	Longhorn beetles present
Bethine Church 2.7-2.8	43.58983	-116.16881	Thomson, A.	6/25/2018	0	0	0	None Present	0	1	0	50% veg, 50% flowering; Longhorn beetles present
Bethine Church 2.7-2.8	43.58983	-116.16881	Thomson, A.	7/3/2018	0	0	0	None Present	0	0	0	60% veg, 40% flowering. Longhorn beetles and ants present
Bethine Church 2.7-2.8	43.58983	-116.16881	Thomson, A.	7/11/2018	0	0	0	None Present	0	0	0	75% veg, 15 % flowering, 5% pods. Longhorn and cobalt beetles present.
Bethine Church 2.7-2.8	43.58983	-116.16881	Thomson, A.	7/24/2018	0	0	0	None Present	0	0	0	80% veg., 10% flowering, 10% with pods; longhorn and cobalt beetles present; abundant poison ivy
Bethine Church 2.7-2.8	43.58983	-116.16881	Thomson, A.	8/6/2018	0	0	0	None Present	0	0	0	75% veg., 15% flowering, 10% pods. Longhorn beetles present; some plants wilting in the heat
Bethine Church 3.1 - 3.2	43.587242	-116.162313	Thomson, A.	6/28/2018	0	0	0	None Present	0	0	0	66% veg., 34% flowering; Longhorn beetles present
Bethine Church 3.1 - 3.2	43.587242	-116.162313	Thomson, A.	7/6/2018	0	0	0	None Present	0	0	0	75% veg, 21% flowering. Longhorn beetles present.
Bethine Church 3.1 - 3.2	43.587242	-116.162313	Thomson, A.	7/13/2018	0	0	0	None Present	0	0	0	75% veg., 15% flowering, 5% pods. Longhorn beetles present.
Bethine Church 3.1 - 3.2	43.587242	-116.162313	Thomson, A.	7/27/2018	0	0	0	None Present	0	0	0	75% veg., 15% flowering, 10% pods. Longhorn beetles present.
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	6/16/2018	0	0	0	None Present	1	0	0	

LOCATION	LATITUDE	LONGITUDE	OBSERVER	DATE	FEMALE MONARCHS	MALE MONARCHS	TOTAL MONARCHS	MONARCH BEHAVIOR	EGGS	LARVAE	PUPAE	COMMENTS
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	6/22/2018	0	0	0	None Present	2	0	0	Swallowtail butterflies present
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	6/29/2018	0	0	0	None Present	2	1	0	Lots of orange aphids.
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	7/6/2018	0	0	0	None Present	0	0	0	75% vegetative, 10% flowering
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	7/12/2018	0	0	0	None Present	3	0	0	75% vegetative, 10% clusters, 10% with pods, 5% buds
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	7/20/2018	0	0	0	None Present	7	0	0	75% vegetative, 10% buds, 10% clusters, 10% with pods
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	7/27/2018	0	0	0	None Present	4	1	0	75% vegetative, 10% flowering, 10% with pods; poison ivy growing near patch
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	8/3/2018	0	0	0	None Present	3	1	0	75% vegetative, 10% flowering, 10% with pods; powdery white substance covering many leaves. Lots of ants on leaves.
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	8/10/2018	0	0	0	None Present	3	0	0	75% vegetative, 10% flowering, 10% with pods; longhorn beetles present
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	8/17/2018	0	0	0	None Present	8	0	0	75% vegetative, 10% flowering, 10% with pods
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	8/24/2018	0	0	0	None Present	0	0	0	75% vegetative, 10% flowering, 10% with pods; lots of ants and aphids
Bethine Church 3.3 - 3.4	43.58486	-116.16062	Lindsey, M.	8/31/2018	0	0	0	None Present	2	0	0	75% vegetative, 10% flowering, 10% with pods
Bethine Church 3.7 - 3.8	43.58097	-116.1558	Stuart, S.	6/11/2018	0	0	0	None Present	0	0	0	67% veg, 33% with pods
Bethine Church 3.7 - 3.8	43.58097	-116.1558	Stuart, S.	6/20/2018	0	0	0	None Present	0	0	0	70% veg, 5% flowering, 30% pods. Milkweed keeps popping up. Aphids on west end of patch.
Bethine Church 3.7 - 3.8	43.58097	-116.1558	Stuart, S.	6/30/2018	0	0	0	None Present	0	0	0	95% vegetative, 4% flowering, 1% with pods. Aphids at west end, longhorn beetles and cobalt beetles present.
Bethine Church 3.7 - 3.8	43.58097	-116.1558	Stuart, S.	7/6/2018	0	0	0	None Present	0	0	0	25% vegetative, 75% flowering. Lots of cobalt beetles
Bethine Church 3.7 - 3.8	43.58097	-116.1558	Stuart, S.	7/18/2018	0	0	0	None Present	0	0	0	50% vegetative, 50% with pods; cobalt beetles present. Center part of patch covered in aphids. 1 plant has a few leaves with holes.
Bethine Church 3.7 - 3.8	43.58097	-116.1558	Stuart, S.	7/25/2018	0	0	0	None Present	0	0	0	10% vegetative; 90% with pods; fewer cobalt beetles
Bethine Church 3.7 - 3.8	43.58097	-116.1558	Stuart, S.	8/7/2018	0	0	0	None Present	0	0	0	75% vegetative; 25% with pods; longhorn and cobalt beetles present; some leaves show evidence of being eaten
Bethine Church 3.7 - 3.8	43.58097	-116.1558	Stuart, S.	8/18/2018	0	0	0	None Present	0	0	0	100% vegetative; plants looking droopy
Bethine Church 3.8 - 3.9	43.5804	-116.15645	Stuart, S.	6/11/2018	0	0	0	None Present	0	0	0	50% veg, 50% pods
Bethine Church 3.8 - 3.9	43.5804	-116.15645	Stuart, S.	6/20/2018	0	0	0	None Present	0	0	0	No milkweed found at this site
Bethine Church 3.8 - 3.9	43.5804	-116.15645	Stuart, S.	6/30/2018	0	0	0	None Present	0	0	0	Aphids, longhorn beetles and cobalt beetles
Bethine Church 3.8 - 3.9	43.5804	-116.15645	Stuart, S.	7/6/2018	0	0	0	None Present	0	0	0	75% veg, 25% flowering. Found 10 more milkweed plants 100 ft west of 1st patch.
Bethine Church 3.8 - 3.9	43.5804	-116.15645	Stuart, S.	7/18/2018	0	0	0	None Present	0	0	0	90% vegetative; 10% with pods
Bethine Church 3.8 - 3.9	43.5804	-116.15645	Stuart, S.	7/25/2018	0	0	0	None Present	0	0	0	25% vegetative, 75% with pods
Bethine Church 3.8 - 3.9	43.5804	-116.15645	Stuart, S.	8/7/2018	0	0	0	None Present	0	0	0	75% vegetative, 25% with pods
Bethine Church 3.8 - 3.9	43.5804	-116.15645	Stuart, S.	8/18/2018	0	0	0	None Present	0	0	0	80% vegetative, 20% with pods
Bethine Church 3.8 - 3.9	43.5804	-116.15645	Stuart, S.	8/25/2018	0	0	0	None Present	0	0	0	100% vegetative