

What's Happening

Birds

By Jamie Freedman

Birds in the blue sky
Flying very gracefully
Making themselves seen

Land Trust

By Brenna Smith and Jamie Freedman

What is the Inland Northwest Land Trust? My partner Brenna Smith and I, Jamie Freedman, had the pleasure of interviewing Heather Bateman from this non-profit organization.

Brenna/Jamie: What is the Inland Northwest Land Trust?

Land Trust: It is a non-profit organization that works with private landowners to keep records of animal and plant sightings in the Glenrose area and to help preserve the ecosystem. We also help in protecting the land.

Brenna/Jamie: How was the data from Chase Middle School used by the Land trust?

Land Trust: The data from your school is used for the conservation project in the Glenrose area; it also gave us an idea of what types of animals are in this area.

Brenna/Jamie: What will our data help you with in the future and will it help preserve the habitat?

Land Trust: We are including your data in the many projects that we are doing in the Glenrose area. Your data will help us in protecting the land and wildlife for the landowners.

Brenna/Jamie: What are you trying to do in the Glenrose area?

Land Trust: We are trying to preserve its scenic value and its wildlife values so that the Glenrose area will stay the same for years to come.

Brenna/Jamie: What can people in the Glenrose area do to help?

Land Trust: If anybody knows of landowners that want to save and protect their land they should tell the landowners to give the Land Trust a call at 328-2939.

Although we only asked Heather a few questions we still got a lot of information from her. If you want more information about this organization and the conservation project in the Glenrose area you can go to the National Land Trust Association website at www.lta.org.

Wildlife Habitat

by Miranda Gouin and Chase Langlais

How can you make your backyard a better habitat for wildlife?

- Plant native shrubs for shelter and food
 - o Golden Currant
 - o Serviceberry
 - o Chokecherry
 - o Ocean Spray
 - o Snow Berry
- Add water to your yard
- Keeping the predators away
 - o Keep cats inside

For more information on birds' habitat and on how to build a birdhouse visit

www.birdsource.org/ OR <http://pbs.org/birdwatch/> OR www.ornith.cornell.edu



Pygmy Nuthatch by Lauren Benson

Future of Birds

by Blake Dick-son

There aren't any birds a flyin',
Because there all a dyin',
This is our future...
Do you like what you see?
What will the world be?
With out the birds over head,
Dropin' poo on your head,
Save our future...
Plant a tree,
And the world will be better...
For you and me.

Q&A With Sally Reynolds

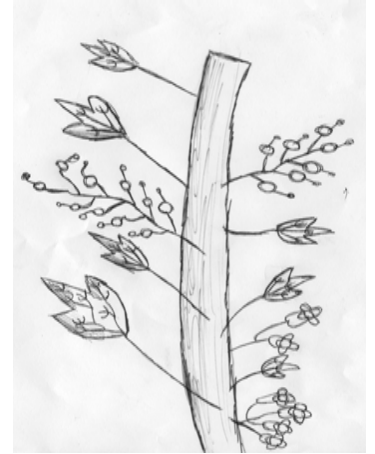
By Lauren Benson and Katie Bray

Sally Reynolds came to Spokane in 1972, and found the community preparing for the famous Expo '74. Sally and her family decided that they wanted a semi rural, community oriented area and found Glenrose. It was just what they wanted. However, when Mrs. Reynolds moved in, she didn't know that in the future she would have to fight for everything that her community stood for. She has spent countless hours talking to neighbors, attending meetings, and fighting for the aspects that brought her into the area originally.

Lately, in an interview with Mrs. Reynolds, we discussed the vernal (seasonal) pond on 29th and Havana. This pond has played an important role in our science Nature Mapping program as well as providing students with hours of educational enjoyment. Throughout the year it came to our attention that, in the future, having access to this pond might be difficult or even impossible. Mrs. Reynolds informed us on the latest she knew about the pond property. This 52 acre land area is broken up into two tax parcels, which the owner is interested in selling. The land could possibly sell for between \$10,000 and \$15,000 an acre. In addition to this particular vernal pond, the area also has several others and a cattail marsh. These are very important ecosystems and unique to the area. The pond sits on shallow soil, which lies directly above the basalt flow that covers the South Hill. Neighbors in the surrounding area are interested in preserving this important wildlife habitat for generations to come.

Due to past logging in the area, no development can begin in the next couple of years. However, a contractor could buy the property and develop the area and fit a small community on the property in the too near future.

A possible way to save this habitat could include a purchase, through Spokane's Conservation Futures Program. This program will be on the ballot for renewal in the next few years.



Golden Currant by Robbie Wilson

Plants That Help Wildlife

by Robbie Wilson

The following plants help the wildlife because of the food they grow and the shelter they make. Also, they are beautiful plants and attract the wildlife.

The Snowberry, also known as waxberry, forms a bushy thicket. It has clumps of waxy white berries from late summer throughout winter.

Ocean Spray is found in dry, open forests. This bush is covered with lots of loose, creamy plumes from May to July. In Spokane it is part of the Ponderosa pine ecosystem.

Golden Currant is a shrub with clusters of bright yellow flowers and smooth berries yellow to reddish black. The plant is common in Spokane in brushy, damp places or in bunch grass ecosystems on rocky hillsides.

Serviceberry is in the rose family. You see them blooming on the Glenrose hills in the spring. The flower is white and followed by seedy red to black berries. Birds love to eat them.

So in conclusion, these plants are helpful to the wildlife.

Build A Bird House

By Jessica Loomis & Sarah Haupt

Mrs. Cassidy's class went outside to the Glenrose habitat. We noticed that there were not very many nesting spots for the birds to lay their eggs. So we think it would be a great idea to help the birds by building birdhouses in the Glenrose area, and even in your backyard.

A great way to improve the habitat is to build birdhouses. To make a house the right way we must do the following: Make sure that the roof is leak-proof so that when it rains it won't go into the entrance hole or through the roof and it must be able to open easily from one of the sides for periodic cleaning.

Making a nest takes a lot of energy and hard work on the part of the bird. You can help them out by placing some nesting materials near the site.

Include things such as small twigs, dried Spanish moss, animal hair or fur, pieces of string, yarn or cloth. Some birds like Robins use mud to cement together the nest. Help the birds by keeping a mud puddle moist. You can also encourage some species like bluebirds to select a box by placing mealworms on a post or an up turned pail below the house.

Those are only a few things that you need. There are many more, so if you need more ideas, buy a copy of "The Complete book of Birdhouse Construction for Woodworkers," by Scott D. Campbell.

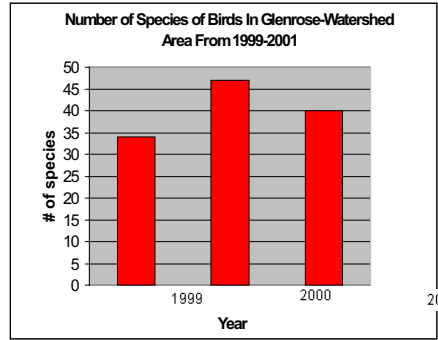
Website- http://www.pbs.org/birdwatch/info_house.html
http://birds.cornell.edu/birdhouse/bhbasics_index.html

Nature Mapping Data

by Josh Houchins and Chris McLachlan

We created this graph using Microsoft Excel. We used the Nature Mapping data that we collected this year along with the data that was collected in the previous two years. The data we used was the number of different species that were seen at the vernal pond and at Chase, totaled together. We then compared the number of species of birds seen each year using a bar graph. As you can see from the graph, thirty-four different species of birds were seen in 1999, forty-seven were observed in 2000, and forty in 2001. The seven birds that last year's class observed that we didn't were the House Wren, the Red-naped Sapsucker, Solitary Vireo, the Brown-headed Cowbird, the Vaux's Swift, the American Kestrel, and the Barn Swallow.

We offer a few reasons as to why the number of species has changed each year. First of all, the actual number of species may not have actually decreased or increased. We may have



just not observed a certain species because of how many times we went outside a certain year to look. The number of times each class went out each year varied, therefore a certain species may not have been seen, but was still there. For example, the class this year went to the pond only twice. That number may have been different last year, or the year before.

If the actual number of species did change from year to year, there are reasons for that, too. For example, this year we are having a drought. This, along with other weather patterns, change from year to year and could have effected the birds. Causes such as habitat loss and human interference are not as likely, because in 2000 the number of species seen went up, and then back down in 2001. It's not very likely that a bird's habitat improved in one year and was destroyed the next.

What Our



Comparing Birds at Chase and the Pond

by Rachel Rubens and Matt Richardson

Mrs. Cassidy's 4th period class has gone out to the pond and school areas and counted the birds seen. We recorded the different species of birds and then counted them and grouped them by area. They were further divided into migrant and non-migrant groups. Migrant birds travel to the area to nest and breed by the water and the creatures that live there. Non-migrant birds are the birds that stay in the area year round.

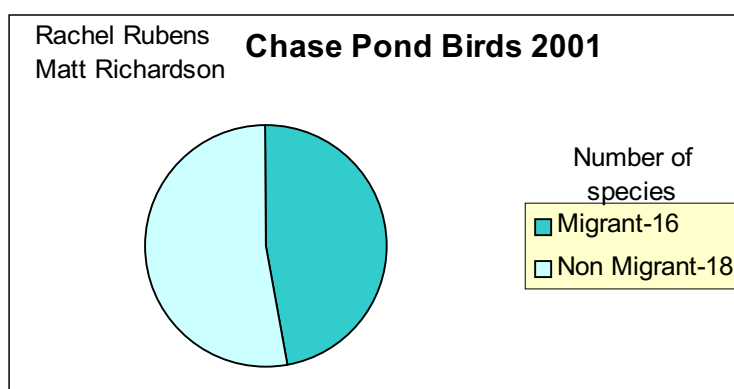
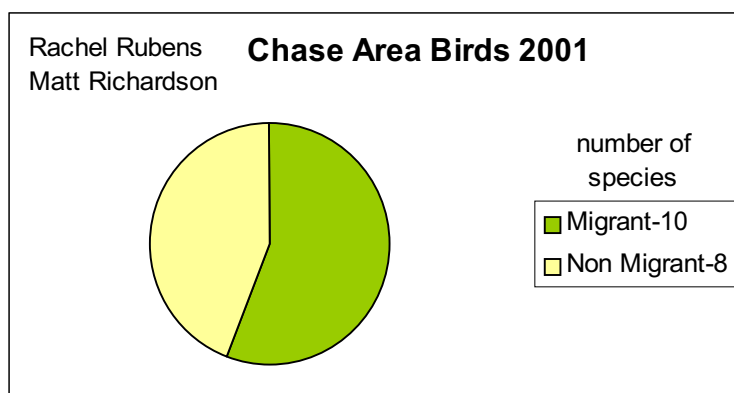
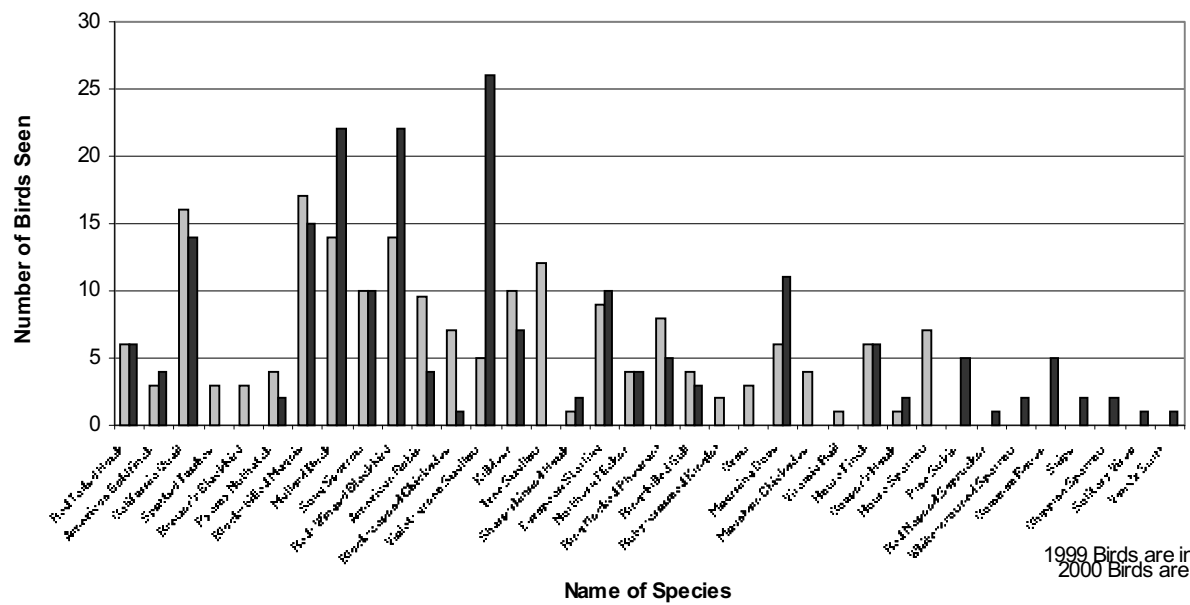
There is little variety of bird species on the Chase grounds. There is a much larger variety of birds in the pond area even though the Chase grounds and the pond area are of similar size. Based on our study, there is a larger bird population in the pond because they require a larger amount of food that is only found at the pond. The more limited supply of food to be found on school grounds means that only a smaller bird population can be supported.

Our study recorded sixteen birds that migrate to the pond area during the year. This number is almost equal to the school ground's bird population of migrant and non-migrant birds combined at its peak. The Chase grounds number of migrant to non-migrant birds has a higher percent of migrants than the pond area. This information means that the Chase school grounds bird population is more affected by birds that migrate to the area.

Bird Populations 1999 and 2000

Birds at the Vernal Pond on 29th and Havana

By Cara Ballinger and Tara Falkner

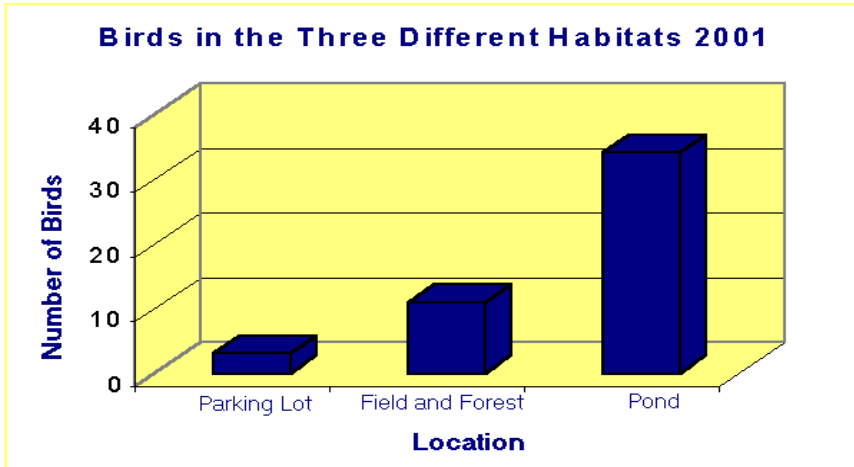


By Cara Ballinger and Tara Falkner

We created our graph by finding the average number of species of birds seen each year. We found out that there was a total of 36 species of birds combined for those two years. There were a lot of the same species of birds seen each year, but including the ones we see every year we got some new ones. In 2000 we saw a Vaux's Swift, a Solitary Vireo, a Chipping Sparrow, a Snipe, and a Common Raven, which we hadn't seen the year before. There were three birds that we saw in 1999 that we didn't spot in 2000. They were a Virginia Rail, House Sparrow, and a Mountain Chickadee.

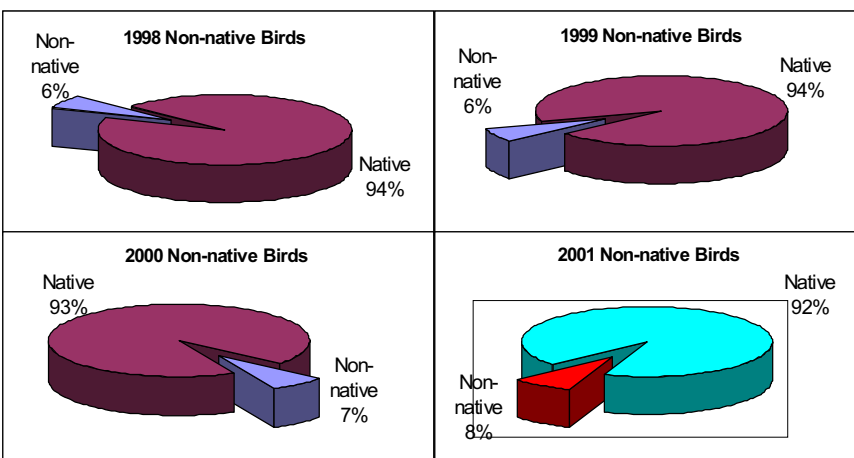
If we protect our pond then we might be able to see even more new species of birds. If we keep destroying that habitat then we won't be seeing some of the birds that we see today...including Mallards. So we should all protect this pond because it is essential to these birds' survival.

Research Tells Us



By Katie Greer and Ben Poffenroth

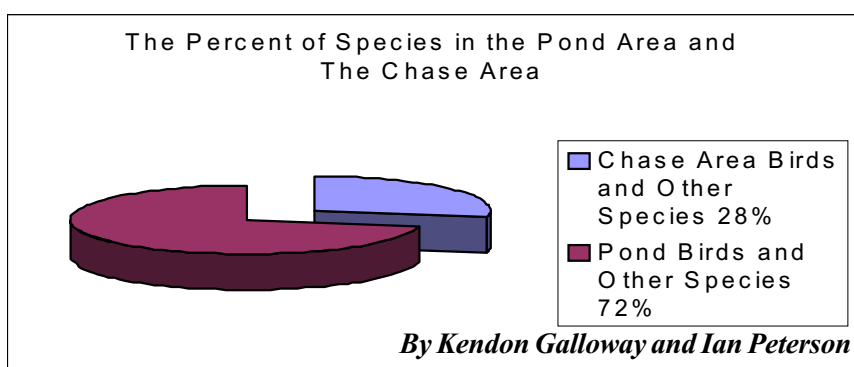
This graph was made in Microsoft Excel by analyzing the information that Chase Middle School students recorded during their Nature Mapping Project. Each class took time out of their class period to go outside and observe the birds and habitats that surround the school. This graph shows the number of different bird species that were found in the different habitats. The three habitats were the parking lot, the field and forest, and the pond. The highest number of bird species was seen in the pond area. This is because the pond had the most diverse habitat. There are more plants and creatures around the pond than in the parking lot, so more birds would want to live there. The field and the forest also are home to many birds that we saw because it has a diverse ecosystem. This graph shows that birds like to live where there are many different plants and animals.



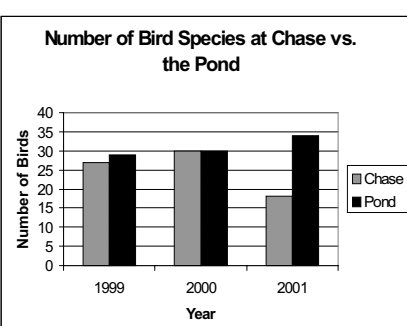
Non-Native Birds

by Eric Burke and Kyle Yonago

As you can see by our graphs, the percentage of non-native birds has increased over the last four years. We got these percentages by taking the total number of species sighted by Chase students in the Chase area. We then found the total number of non-native birds, and divided the non-native birds by the total number of species sighted. The three non-native birds were the European Starling, House Sparrow, and the Ring-necked Pheasant. The increase in number of non-native birds is not good for our environment. They are competing with native birds by moving into their land. The increase in non-native birds is caused by the human changes in the habitat. Non-native birds are adapting to new habitat and taking over native bird's habitats.

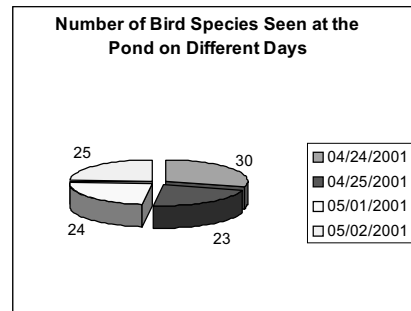


By Kendon Galloway and Ian Peterson



By Amber Wagner & Stephanie Segrest & Cyrielle Criscione

This graph represents the number of different species of birds found at Chase Middle School vs. the seasonal pond. In the year 1999 there were 27 species found at Chase while there were 29 found at the pond. In the year 2000 there were 30 species found at Chase and the same amount at the pond. In the year 2001 the amount of species that were found in Chase decreased by 13 species since the 2000. There were 34 species found at the pond this year



Graphing Our Data

By Justin Kretz and Sean Bemis

This pie graph shows how many bird species were sighted on different days. The numbers may vary because some of the groups were noisy, or maybe it was just a windy day and the birds were hiding. Part of it also could have been the time of day it was, or what kind of day it was.

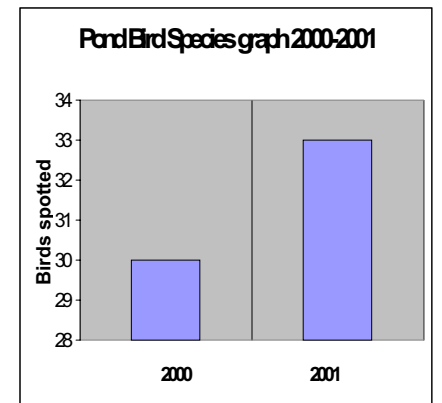
Drought Year

By Justin Shipowick, Troy Fuller

We went out to the pond as a class to see and identify birds. We noticed when we got there that the water level at the pond was a lot lower than the year before. Now we are trying to see if there was a difference in precipitation in the last three years and if that affected the bird population.

In 1998, there were not as many birds as most years even though it had more precipitation in May. That's because students only looked around Chase in 1998, but every year since, kids have gone to the pond and around Chase. In 2000 there were the most birds in all of the four years. We think there were more because there was lots of rain and it was consistent. There were 39 birds in 2001 just like in 1999. Both times there was water but not too much. We got the information about the precipitation from the Internet and the bird population came from the Chase student's records of bird populations in the last 3 years.

The precipitation did have an affect on the bird population around Chase. This seems right since most animals need water to live. Now we know just how much water affects the bird population around Chase.



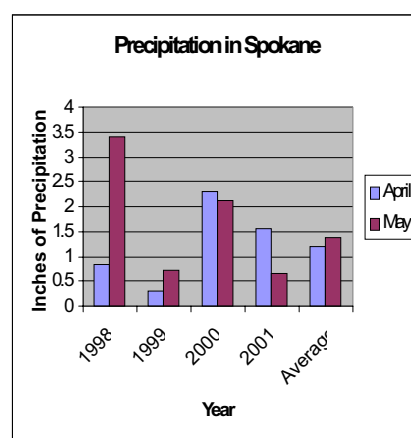
Changes

By Brian Viramontes and Mike Beil

The Glenrose watershed is a vernal pond that has always been alive with biodiversity. The pond is considerably smaller due to the lack of snow pack, spring rain and the increasing temperatures.

The first day we visited the pond, the condition was really poor, but after a heavy downpour of rain over the weekend the pond's condition improved. When we visited it the second time, after the rain, we received better samples and observations. The life variety was higher in the pond area and we saw more birds and insects.

Comparing to the information from last year to this year, noting that Brian was in this same class last year as a seventh grader, the life has increased in the area in a small amount. This year, according to the information that we collected, we learned that there are many more species of birds in the Glenrose Watershed area than last year. For example, this year we saw the species Sora. The Sora is a bird that the classes did not see last year. To show the differences from last year and this year we have constructed this graph.



Jan Reynolds on Birds

By: Danielle Olney & Amanda Snodgrass

On May 23, 2001 Danielle Olney and Amanda Snodgrass from Mrs. Cassidy's sixth period science class had the privilege of interviewing Jan Reynolds. Our main topic was changes in birds we've seen in the last two years. We asked Jan some questions about some of the changes we observed.

Danielle/Amanda- "Why do you think we saw the House Sparrow this year at the pond but not last year?"

Jan Reynolds- "House Sparrows tend to live where people live. They are increasing in suburban areas because housing developments are intruding."

Danielle/Amanda- "Why do you think we saw the Nashville Warbler this year and not last year?"

Jan Reynolds- "It was probably just migrating through."

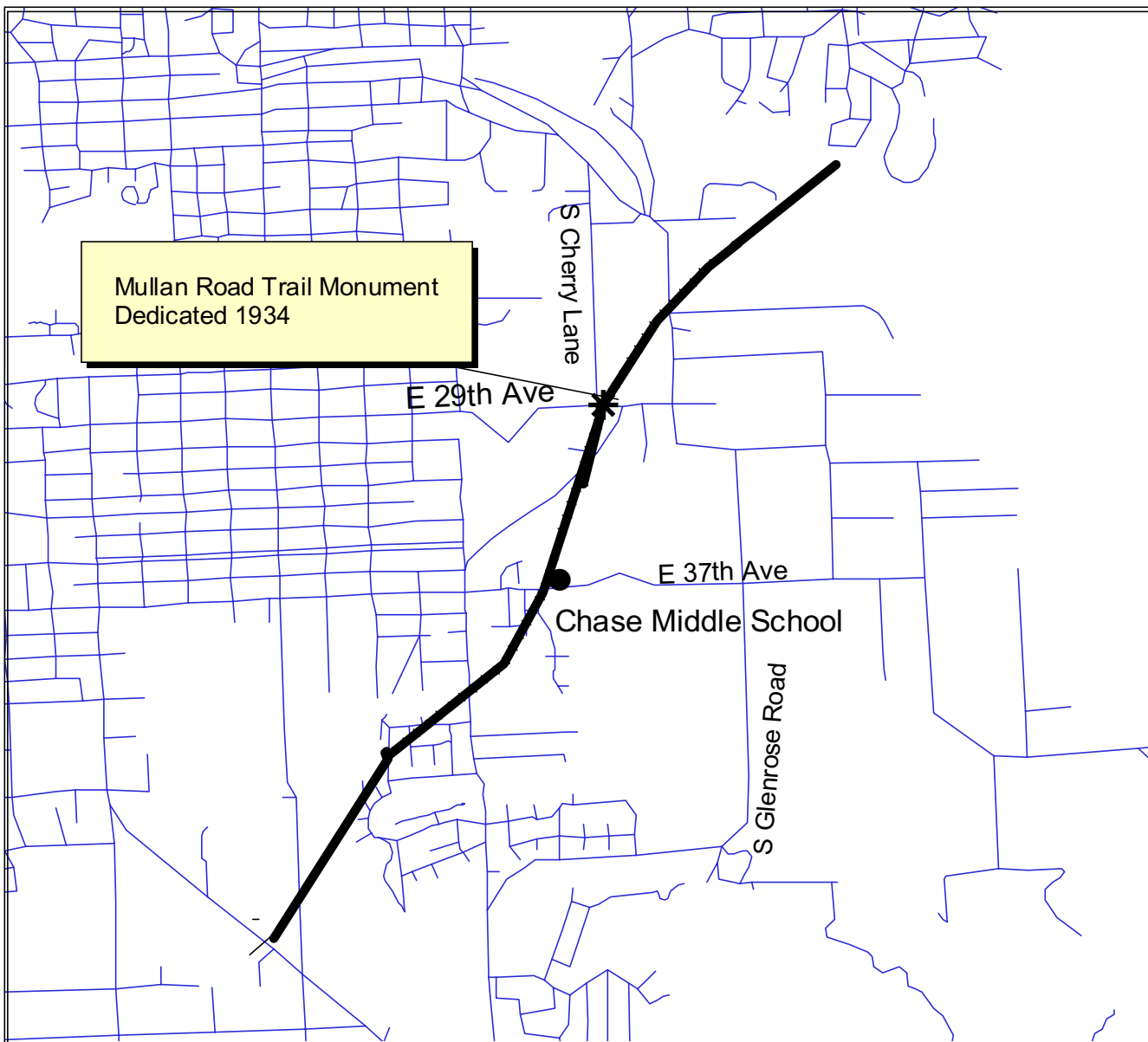
In conclusion, we have discovered that we have seen more bird species this year than we did last year.

Glenrose History

By Andy Oliver

The Mullan Road Trail, which passed through the Glenrose Watershed, plays a major part in the history of the Spokane area. In 1853, the war department ordered the exploration and survey of a route to link the Missouri River to the Columbia River, or Fort Benton to Fort Walla Walla. The 625 mile route would simplify the travel across the Northwestern part of the United States. Part of it runs behind Chase Middle School to this day. In fact, it is still visible where they had constructed a bridge for the train tracks. Located on 29th, by Glenrose road, is a plaque in memory of John Mullan and tells how he created this trail. This is a major part of Northwest History and should be preserved. It is also the habitat for birds, deer, squirrels, etc.

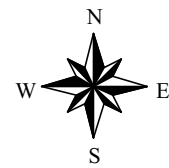
Near the trail are some old greenhouses that have been there since the 1940's. Bernard Bernson had owned the green house at the time. He was known as the "Orchid man." This nursery is now called "The Glenrose Nursery". It is another part of the history surrounding the trail. He started growing orchids there and it has been a successful greenhouse to this day. So, check this place out, remember the history, and see the wild life.



The Mullan Road

The Mullan Road Trail greatly affected the Glenrose area. It opened the way for immigrants to reach the prairie. It also blazed the trail for the construction of the Transcontinental Railroad. (To learn more read "The Mullan Road Trail" by Ryan Kirby).

By Ryan Kirby and Dillon Wetmore



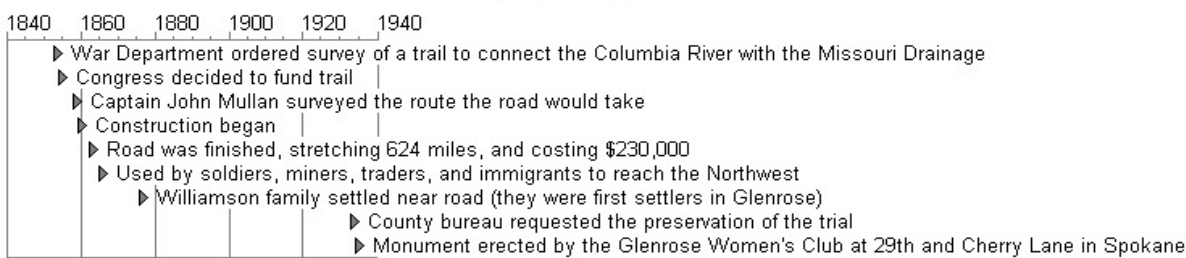
The Mullan Road Trail

By Ryan Kirby

The Mullan Road Trail was designed to link Walla Walla in Washington to Fort Benton near the Missouri River in Montana. It wound from Montana, across the Idaho Panhandle, through Spokane Valley, across Glenrose Prairie, on its way to Walla Walla. It greatly affected the Northwest because it aided the completion of the Transcontinental railroad. It also allowed traders and immigrants to reach and expand the area helping it to grow rapidly. Since the road was not well made, it began to fall apart after the completion of the railroad. The Glenrose area was deserted at the time of the construction of the trail. The Williamson family was first to settle when they arrived in August 1876. Their homestead covered 160 acres. They moved into a small cabin without a floor or a roof.

The Mullan Road Trail

By Ryan Kirby



Credits

The eighth grade students in Mrs. Cassidy's science classes would like to thank the following individuals and organizations for their valuable contributions to our project.

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- ITSC Help Desk – Spokane School District 81
- Janice Thorson – classroom volunteer
- Vern Bucholtz –ESL tutor, Chase Middle School
- Carol Kaplan –guest teacher and classroom volunteer
- Sally Reynolds – Glenrose Community Association
- Marge Benander – Glenrose resident and wildlife observer
- Zita Myers – Glenrose resident and wildlife observer
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by Yan Derkach

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