

# Glenrose Watershed Gazette

Brought To You By

## Chase Middle School Nature Mapping Students

Spring 2001

Special Edition

Volume 4, Number 1

### A Trip To the Pond

By Shannon Camp

On nature mapping mornings, both cold and hot,  
Jan Reynolds arrives and is ready to spot.

With binoculars and field guides ready on hand,  
The students wait patiently for Mrs. Cassidy's command.

"What habitat will we visit today?  
Wind speed? Direction?" the students say.

"Off to the pond!" their teacher replies.  
"To look for plants and birds in the sky."

The group is off now to the pond far away,  
to record all the wildlife that they spot today.

The trail is long and the kids start to tire.  
But wait, their first sighting on the

telephone wire.

The bird is black with the same colored beak,  
And on its wing is a blinding red streak.

The name of the critter is still unheard  
Until one of the kids yells "Red-winged blackbird!"

The recorders write down in perfect handwriting  
The details they know of their first bird sighting.

On to the pond, everyone's eyes are alert.  
Their ears quite the same straining to hear a faint chirp.

Oh wait, what is that way up in the sky?  
Its black and white, its surely a magpie.

A killdeer. A mallard. A California quail.  
All added to the list on the sightings from the trail.

The group reaches the pond and there is wildlife waiting,  
Several birds and insects are in the water wading.

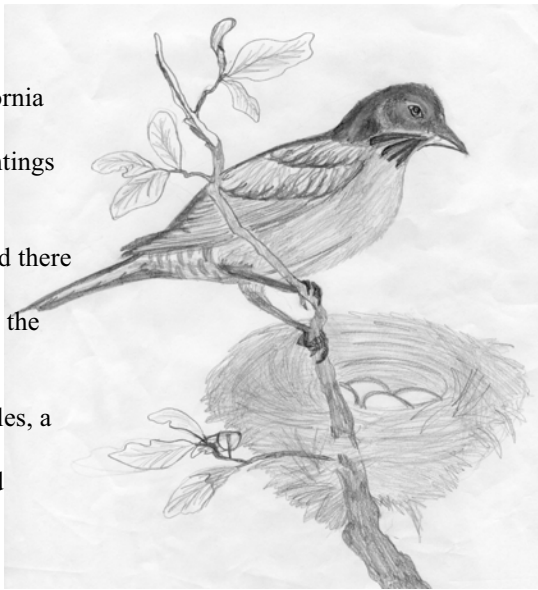
There are water mites and beetles, a backswimmer too  
And overhead there is one loud "Cuckoo!"

The recorders continue to track these great creatures,  
Then they hear a disappointing message come from our teacher.

"Time to head back kids, our trip here is done.  
We'll come back again and have some more fun!"

*American Robin by Yelena Korovina*

Their naturemapping experience has been successful indeed.  
The kids will always remember the wildlife they've seen.

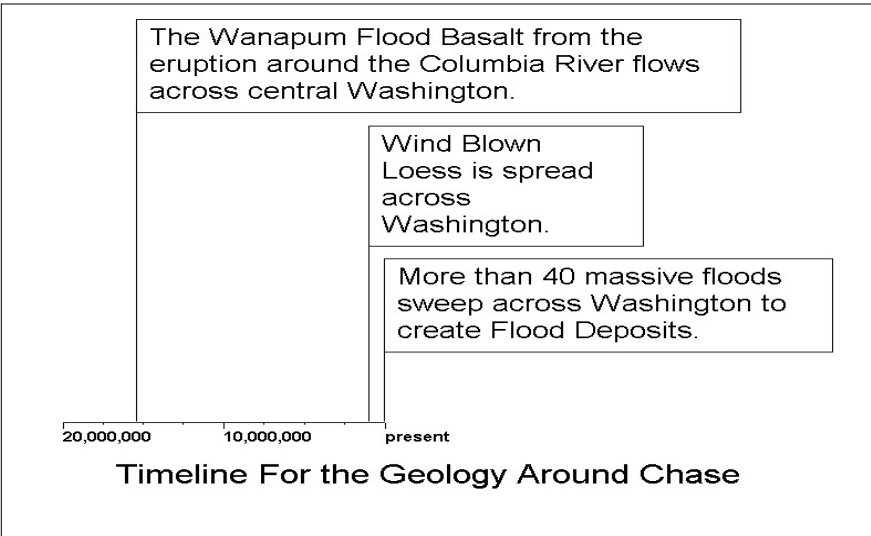


### Does Geology Affect Ecosystems?

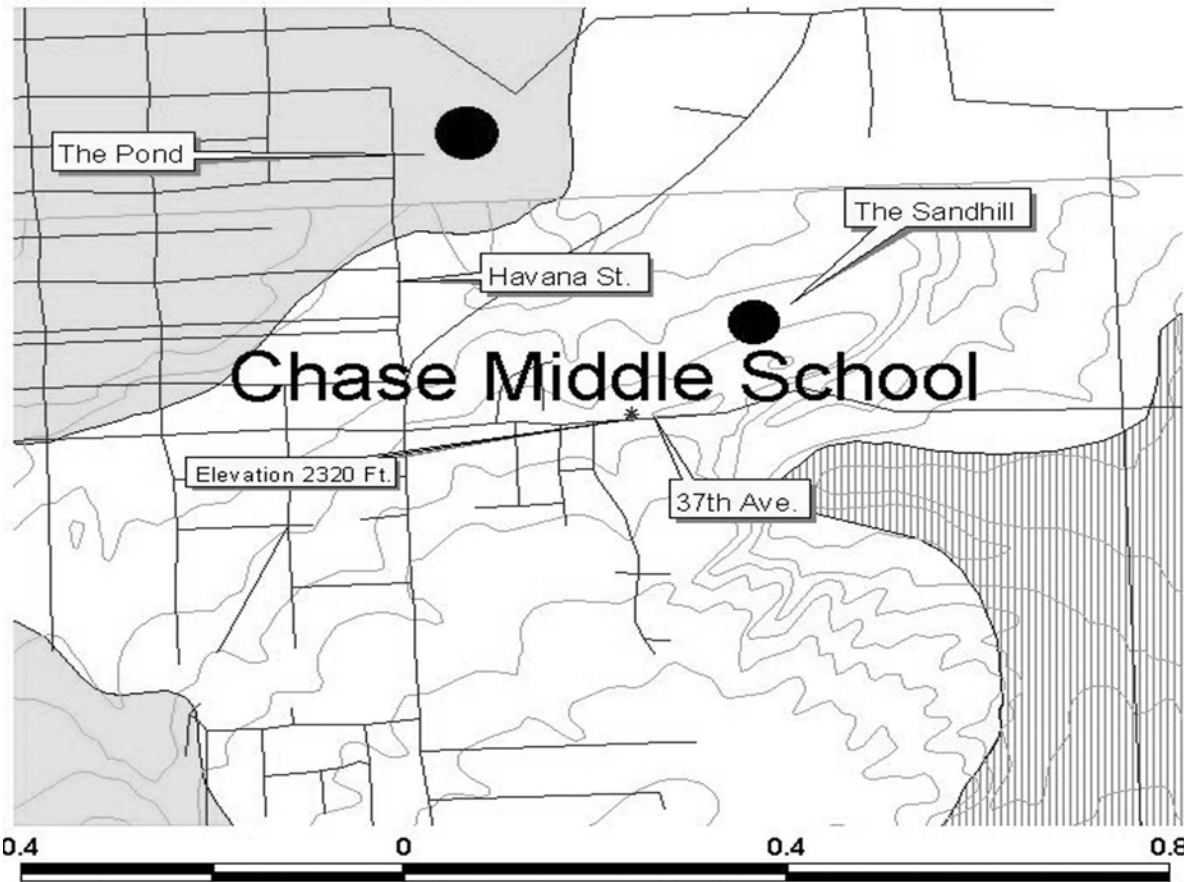
By Chris Burgraff and Camron Miller

In most cases, geology affects ecosystems. As shown on our map, the basalt northwest of Chase Middle School catches rainfall and makes small bodies of water which provide habitat for many species. The pond our class visits is a "perched wetland" on basalt. On the other hand, the flood deposits from the Ice Age, found south

and east of Chase, are sandy and permeable. This allows water to seep through, providing another type of habitat for wildlife. The loess, or windblown dust, came from the Columbia Plateau and makes good farmland and good habitat for deer. The timeline shows when these geological layers were deposited.



### Geology of Chase Middle School



By; Chris Burggraaf and Camron Miller

- Roads
- Elevation (contours)
- Schools
- Geology
  - Eolian Loess
  - Flood Deposits
  - Wanapum Basalt



## Bird Mapping

By Alexis Lewis, Amanda Heagy, and Mary Villanueva

The students at Chase Middle School in Mrs. Cassidy's class were extraordinarily lucky to have Jan Reynolds come to our class and help us NatureMap. We did many activities to help us improve our knowledge about birds and why it is important to save wildlife habitat.

First of all, we walked around the Chase Middle School area and identified many different species of birds. The equipment we used to identify birds were binoculars, to scope out the many different types of birds, and field guides to determine what type of birds we had found. The specific types of birds we found near Chase Middle School include, Black-Billed Magpies, Killdeer, Red Crossbills, Ring-Billed Gulls, Northern Flickers, American Robins, Red-Tailed Hawks, California Quails, European Starlings, Violet-Green Swallows, Sharp Shinned Hawks, Brewers Blackbirds, Osprey, Western Bluebirds, House Sparrows, Ring-necked Pheasants, Mourning Doves, and Pygmy Nuthatches.

Next, Jan walked us over to the vernal pond on 29<sup>th</sup> and Havana. We discovered numerous new bird species that we hadn't seen at Chase. With the help of Jan Reynolds, we saw Downy Woodpeckers, Red-Winged Blackbirds, Mallards, and Soras. We noticed these species of birds at the vernal pond, but not around Chase because of the two different habitats. The birds we listed reside at the pond because it's a body of water, which many birds need for nesting and hunting for their prey.

We interviewed two students from Mrs. Cassidy's third period class to determine their opinion about Nature Mapping. "It was great and a wonderful experience," exclaimed Amber Wagner.

"I loved NatureMapping, it helped me understand more about the birds that are in our community," reported Jeremy Walmsley.

Other students have learned that birds are very important and are needed in the world today. Students also believe that birds are important for many different reasons including their ability to keep insects under control. Finally, birds are important to the structure of our ecosystem.



By Megan Harnetiaux, Erin Swagel

As students of Chase Middle School in Mrs. Cassidy's class, we are studying which birds have migrated and nested in our area. We have created a GIS map that shows where we saw birds. The vernal pond at 29<sup>th</sup> and Havana is an important habitat where birds migrate and can make their nests. Our GIS map shows aquatic and terrestrial creatures as well as birds. Our GIS map also tells where certain animals and birds have been sighted. We think that this is a good way to keep track of the birds and animals.

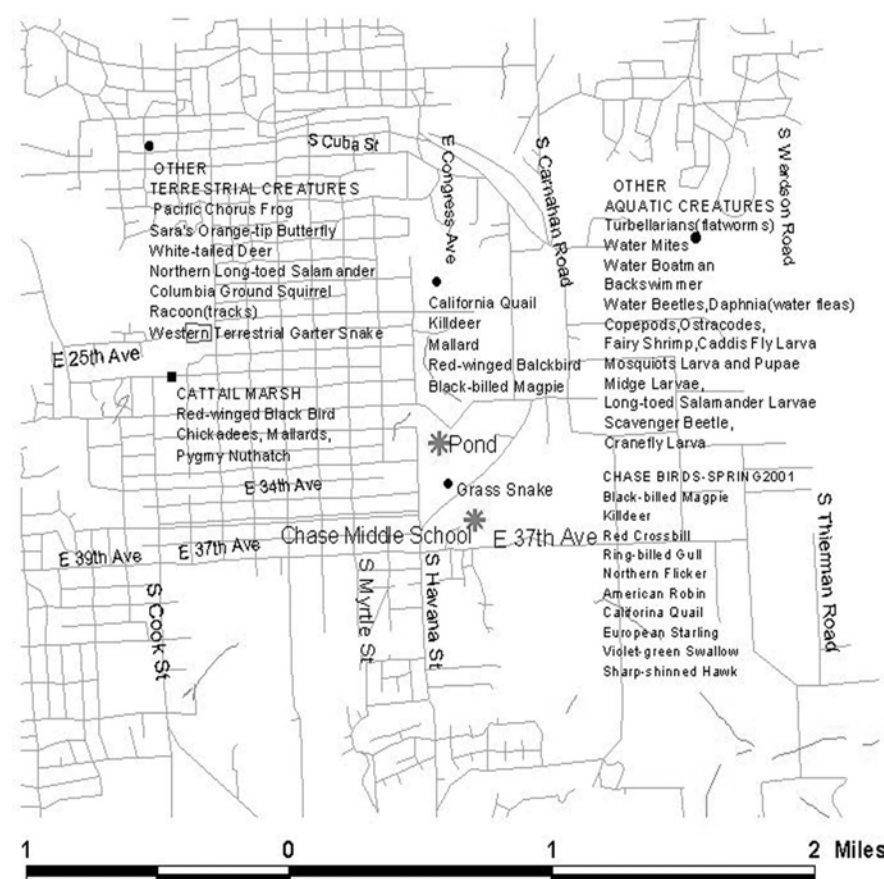
Our GIS map was made by exploring the vernal pond as well as finding out where certain types of bird are. When we found a bird or any other animal, we would write down where we found it and how many we saw. Our GIS map explains where birds were found and how many there were.

As bird watchers we admire birds. Birds are a wonderful part of nature. The two birds we enjoy most are the European Starling and Violet-green Swallow. These two birds have been seen numerous times in our area.

We think that they are both small and delicate. They are beautiful and both come from unique families.

In conclusion, we would like to encourage people to use our map to find certain birds as well as be aware of the creatures in certain areas. We think that this GIS map will help you understand places to find these birds and animals.

## Pond, Bird, Aquatic and Terrestrial Creatures



GIS Map  
By:  
Megan Harnetiaux  
Erin Swagel

Wetlands  
Roads  
More roads  
Hydrology



## Soot Trays- The Experience

By Andrew Hoy

On April 9, Karen Dvornich and Dan Hannafious from the NatureMapping Program at the University of Washington took students from Ms. Cassidy's classes who wanted to stay after school outside. We made soot trays and collected tracks that certain kinds of animals left behind. We wanted to see what kinds of animals would be in the area around Chase Middle School.

We took some rectangular aluminum pans, filled them with bits of cotton and pieces of old T-shirts, soaked them with kerosene and started them on fire. Then we put another half-cut aluminum pan over the pan to catch the soot.

Once the pans were completely covered with soot, we took them to different locations where we thought animals would seek shelter. These areas

included under trees and away from the high winds. We put cookies and trail mix on the pans as bait, took them to the shelters away from the winds, and left them there for the night.

The next morning, we came back to see if we had tracks on any of the pans. One tray looked like it was visited by a coyote because it had a tongue print and a paw print with claw marks out in front of the toes. The tray that I prepared was visited by a mouse because it was in a low area on the ground. It had little tracks all over it, and it had one more thing, yes, you guessed it, MY TRAY HAD ANIMAL DROPPINGS ON IT!

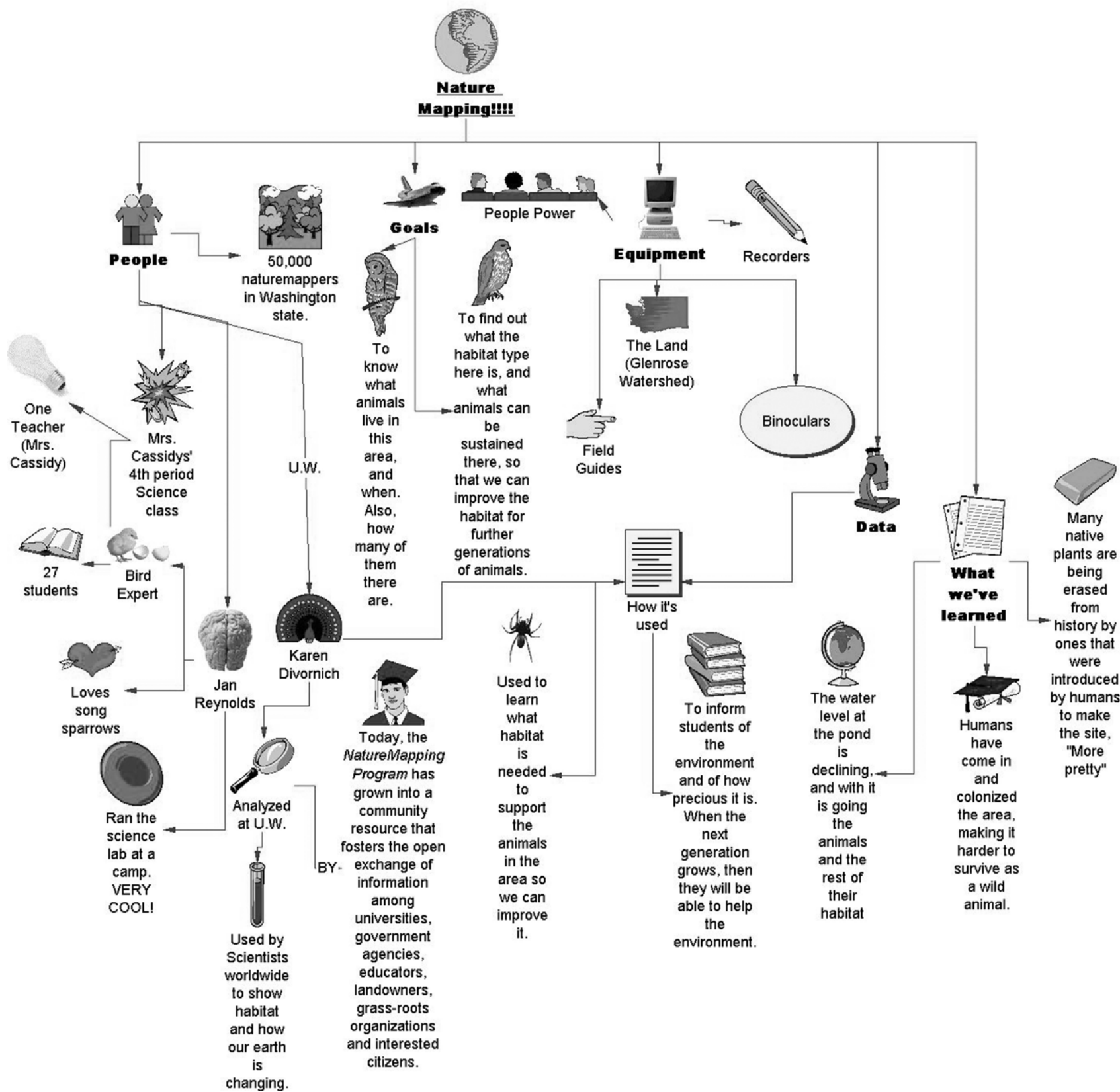
I enjoyed this activity and I think this is the best experience that I have done all year. I liked going outside and learning more about animals.

Osprey by Amanda Heagy.

Nature Mapping Website: [www.fish.washington.edu/naturemapping/](http://www.fish.washington.edu/naturemapping/)

# Nature Mapping of the Glenrose Watershed

By Cody Waldroup and Justin Burnett



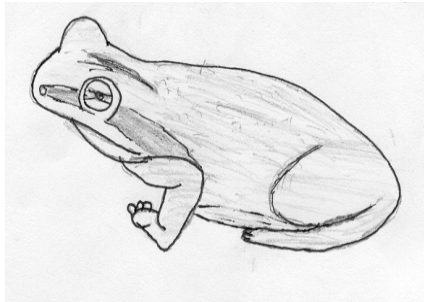
## Graph Analysis

By Kiril Barrett & Derek Whitbeck

This graph shows the population of selected birds from the Glenrose Watershed/Chase area. We gathered our information from the data collected by Mrs. Cassidy's classes from 1998-2001. To get our numbers we took the highest number of sightings for each species that was seen at least four times or more.

Analysis: Some of these birds, with the highest populations, were able to adapt to more than one habitat so they flourished better than other birds that can only adapt to one habitat. For example, the European Starling was introduced from Europe and had to adapt to the different conditions of the Glenrose Watershed area. This bird population increased greatly because it could excel in different habitats. Another type of bird that flourished in this area was the Red-winged Blackbird. One of the reasons this bird can do well is because we have a cattail marsh

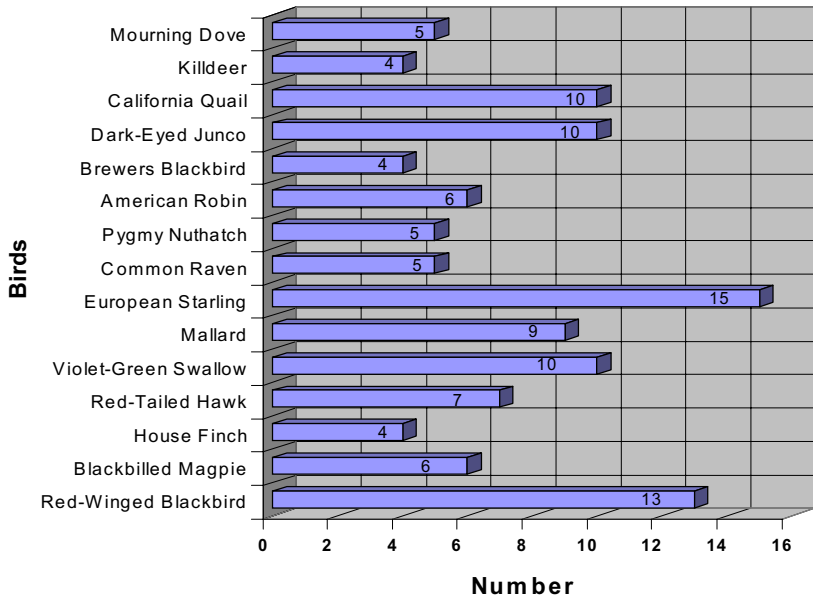
habitat for nesting and breeding. The other three of the top five most frequently seen birds were the California quail, Dark-eyed Junco, and the Violet-green Swallow. The reason why the population of these three birds is high is because they need a wooded to semi-wooded area as their habitat. There is quite a large amount of this type of habitat in the Chase/Glenrose Watershed Area. The birds with four to five sightings obviously had specific needs for their habitats so they did not increase greatly in population.



Pacific Chorus Frog by Angie Kent

### Populations of the Most Frequently Seen Birds from 1998-2001 in the Chase/Glenrose Watershed Area

By: Kiril Barrett & Derek Whitbeck





# Western Bluebirds in Glenrose Watershed

By Ben Galloway and Ian Bray

We observed a pair of Western Bluebirds that had been nesting in a bird box near Chase on May 16<sup>th</sup>, May 18<sup>th</sup>, and May 23<sup>rd</sup>. We have witnessed a series of changes among the bluebirds in the area.

The first day of observation, both the male and the female showed up (the female is much less colorful than the male). At first, the male was a little wary of all the people, but the female was comfortable enough to stick around long enough for us to take a few pictures. Later, she went into the nesting box to feed her chicks a caterpillar that she had previously caught.

While the female was feeding her babies, the male had other jobs to do. An intruding House Sparrow (an introduced species) wanted to use the box as her nest site. The male Bluebird

was busy chasing her away and defending the nest. Several times he was required to chase off the intruding Sparrow.

Finally, the Bluebirds were forced to give in to the pressures of the Sparrow. The Bluebirds experienced much competition as the introduced Sparrows fought off the Bluebirds for the nest. Introduced species cause many problems all over the world, not just here in Spokane. These species are not meant to be here and they can severely impact the food chain. On May 18<sup>th</sup>, we observed the house sparrow entering and leaving the same bird box that the bluebirds had been using the last few days. The most logical explanation for this change is that the Sparrow took over the nest site.

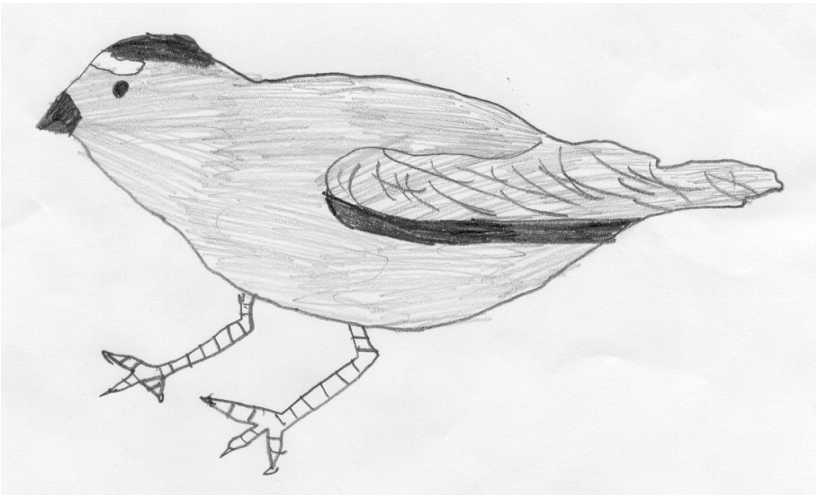
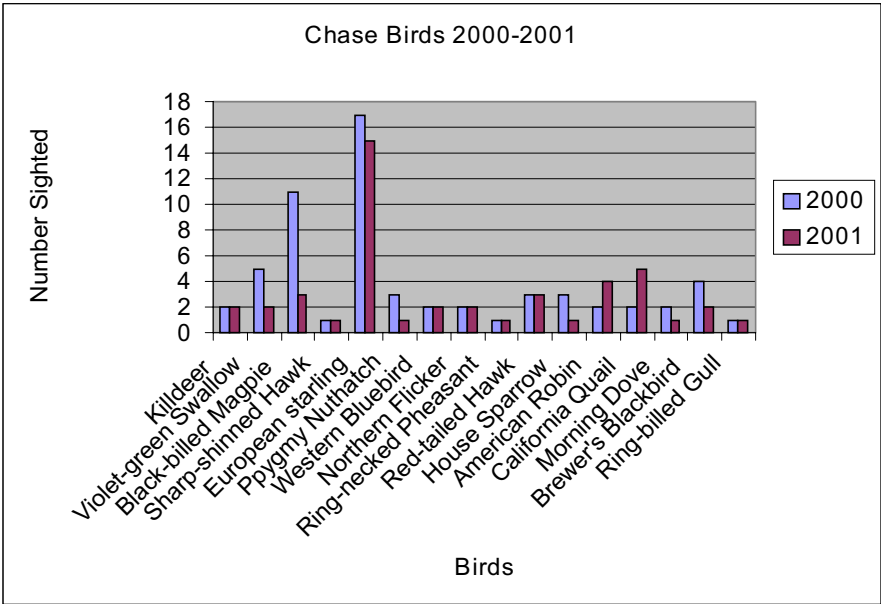
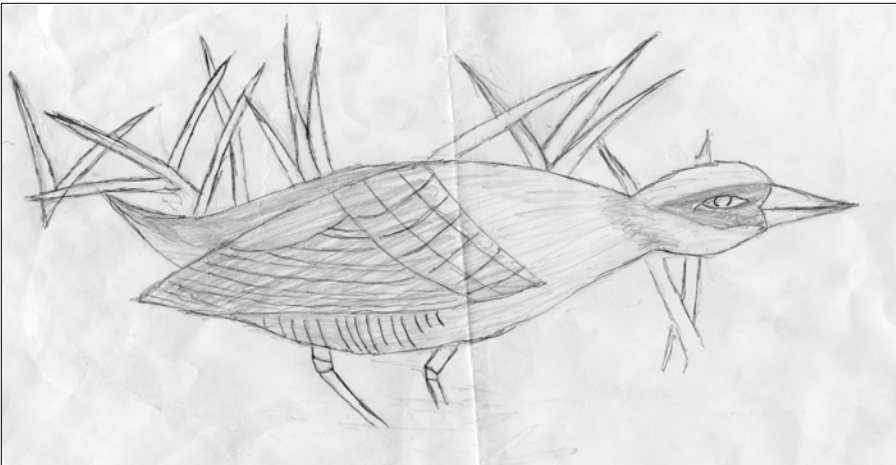


Illustration of an Evening Grosbeak by Dustin Dougherty



By Kalyn Coombs, Teddy Thompson, Carrie Randall

This graph shows that certain birds in the Chase area appear to be declining. We took this information from the data the class collected for the past two years. Every day a class went outside nature mapping and they wrote down all the birds they had seen that day. We took the highest number of each bird seen that year and constructed this graph. For example, in 2000 there were more Black-billed Magpies. This may be because the habitat is decreasing.



Sora by David Olson

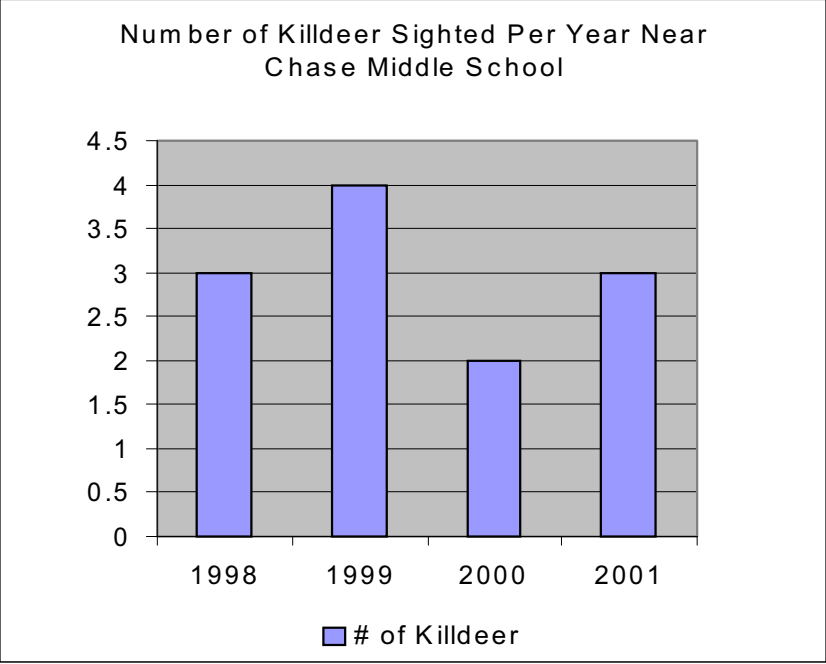
# Birds Killdeer

By Dima Zheltkov & Josh Howell

Did you know that killdeer live right outside of our school? Well, if you didn't we'll tell you about it. As one of our classmates said, "The killdeer lives in no-man's land." In case you're wondering where that is, it's the field outside Chase Middle School's fence. Mrs. Cassidy's 1<sup>st</sup> period class had an encounter with a Killdeer up close. As we got closer to the mother defending her nest, she started chirping an angry chirp that sounded like, *kill dee kill dee*. When we got closer, it puffed its wings out. The Killdeer fakes injury by dragging a wing to draw predators away from its nest. The Killdeer that we saw lived by our school, and by the pond. They feed on insects. Killdeer lay 4

eggs at a time and nest on the ground. The Killdeer is a very interesting bird because of what it does to save its babies.

The number of Killdeer fluctuated between 1998 and 2001. The graph we had went like this; 1998=3, 1999=4, 2000=2, 2001=3. We think that the class saw the most Killdeer in 1999 because the Killdeer were getting ready to migrate for the 1999 ice storm in groups. We saw the least in 2000 because the Killdeer had not returned from their migration. The number between 1998 and 2001 was the same because there was no ice storm to interrupt the Killdeer in their migration.



Graph by Dima Zheltkov and Josh Howell

# Food Webs

