Welcome to the first issue of the Junior Observer, a publication created by PRBO Conservation Science for the teachers and students working with STRAW program.

The next few pages are filled with student artwork, poems, questions, and stories about birds. We would like to thank all the students for the work they put into their pieces. Stay tuned for our Spring edition, which will include more of your incredible work!

Poetry

Birds
by Sarah A.
Wade Thomas Schoo, Mrs. Wildman’s 5th Grade

I tweet happily, calling out to friends, laughing, playing, suddenly I run into a net! Some stranger comes and lifts me out with gentle, loving hands and drops me into a soft, yellow cloth bag. Finally I get lifted out. I get poked and pinched and pulled but I guess it’s for the sake of me. They hold me tight then they go outside, then slowly they take their hands away….and suddenly I’m free!

Pelican Joke
by Gabe, Manor School, Laura Honda’s 4th Grade

Why did the white pelican get a tan?

To turn into a brown pelican!

Artwork by Angelica N.
Manor School, Laura Honda’s 4th Grade
Poetry & Art

Poems about the Arroyo Hondo creek at PRBO.
*Wade Thomas School, Mr. Brandt’s 4th grade*

**Creek**
By Shayna L.

The creek is a waterfall, with rocks surrounding it
It smells like bay leaves in the night.
It sounds like children splashing rocks in the water.
Moss everywhere you would imagine.
The branches on trees swaying back and forth.
Patches of grass in some imaginable places.
The creek starts wide and ends thin.
Poison oak… I’d hate to get it.
Bugs flying around and around you.
That’s how I explain the creek.

**Morning Creek**
By Anita G.

It was a fresh, cool mid morning day
when I was down by the creek.
The sound of the water
trickling down the creek of tenderness.

Piter-Pater Titer-tater
was the remarkable creek.
The plop, the wonderful sound of the rocks
of wonder
in the mid morning creek.

All the rocks were piled up like boulders
And the fresh Autumn air fell upon me.
Like a cold winter kiss upon my cheek.

All the green and reddish brown ferns
were hanging over all the many rocks
with moss of grace.

**The Bird Observatory**
by Alex D. and Jason R.,
*Wade Thomas School, Mrs. Wildman’s 5th Grade*

B is for… Beautiful surroundings
I is for… Incredible aerodynamics
R is for… Rare robins in the forest
D is for… Delicate wings on the small birds
S is for… Staying high in the air
Brainfood

On October 3, 2002, students from Loma Verde Elementary joined PRBO for a bird field trip to the Novato wetland. Lybe Crumpton’s 5th grade students started thinking about some cool stuff . . .

How do birds fly so high?
The main limit to how high birds can fly is the lack of oxygen at high altitudes (if you’ve ever climbed a high mountain, you might have noticed how hard it is to breathe). Birds have remarkably strong lungs that allow them to send a lot more oxygen to their blood than other animals. This feature allows them both to fly (which requires a tremendous amount of energy and oxygen) and fly very high. The highest a bird has been recorded was a Ruppell's Griffon Vulture that collided with an airplane off the Ivory Coast in 1973 at 37,000 feet (11,278 meters). Awesome!

Where do birds migrate?
Around the world, birds migrate to lots of places, but two common forms of migration are latitudinal migration and altitudinal migration.

Latitudinal Migration
Latitudinal migration is the well-known north-south migration. Birds in the northern hemisphere, move north in the spring to nest and raise young, and move south in the fall to spend the winter months. Migrating north allows them to take advantage of food (like insects and bugs) during spring and summer months. During the cold, northern fall and winter months when food is scarce, migratory birds take advantage of warmer climates in the south where food is more abundant.

Altitudinal Migration
Altitudinal migrants migrate for similar reasons, but instead of moving north and south, move up and down in elevation. They spend the summer (nesting and raising young) at high altitudes, and return to lower altitudes for fall and winter months when weather at high altitudes is extreme.

Migratory Superheroes
In North America, most migrating birds head to warmer areas in Mexico, Central America, South America, and the Caribbean. Interestingly, scientists have found that the farther north a bird spends its summer, the farther south it will spend its winter. Many shorebirds that nest in northern Canada and Alaska migrate all the way to southern South America. These birds are truly migratory superheroes.

Do birds breathe underwater?
No, all swimming birds must return to the surface to breath. Diving birds, like many ducks and seabirds, have the ability to store large amounts of oxygen in their blood and have various cavities in which to store air, which helps them remain underwater for a long time. The Emperor Penguin is the most accomplished of all diving birds, and can dive as deep as 1,772 feet (540 m) and stay under water for almost 20 minutes.

What kind of birds live in wetlands?
Lots of birds rely on wetlands to survive. Birds use wetland habitat for nesting, to spend winters, or as a migration stop over. Some of the most common examples of birds that live in wetlands are herons, egrets, coots, cranes, rails, ducks, grebes, and shorebirds. Predatory birds depend on wetlands to find their prey—sometimes other birds, like ducks, songbirds and shorebirds.

Are we allowed to visit the wetland with our families?
YES!! Please go and visit the wetlands anytime – just make sure you ask an adult whether it’s O.K.! Show your friends and families how cool wetlands are!

How many different kinds of birds are there in the world?
We have a challenge for you: send us your best guess and we will announce the answer in our spring issue!
Educational Resources

Here’s a list of kits and resources that you can check out to use in your classroom, in addition to the STRAW bird curriculum. To check them out, contact Ruth Hicks at The Bay Institute, (415) 506-0150, or email hicks@bay.org.

Shorebird Sister School Program (SSSP) Trunk:
- Contains activities, puppets, and videos focusing on shorebirds and wetland habitats.
- Learn how to contact classes in Mexico, and Central and South America through SSSP pen pals!

Songbird Blues Kit:
- Contains activities, puppets, and videos on songbirds.

“Wake-up Call - Saving Our Songbirds”:
- 14 min. video on the decline of migratory songbirds.

PRBO Educational Opportunities

Field Trips with PRBO (call to schedule)

Hands-on Classroom Activities

Restoration Day Activities

Bird Field Trips

Here’s what you can expect when visiting PRBO . . .

My trip to the Point Reyes Bird Observatory (PRBO).
by Sofia H.
Wade Thomas Elementary, Mr. Brandt’s 4th Grade

When we first got there we got to see the birds get banded. Then we went to the creek and wrote poems. After that we went on the net walk. We found 6 birds in the nets. When we got back to the building we got to see them band the birds. The birds were very cute. It was fun!