

Deep Bhari
0445189

4/8/2004

11

Questions for Grades in Biology.
Dauphin Island, AL Trip.

1. What four rivers does the delta in Alabama drain through?

Ans. The four rivers draining through the Alabama delta are Mobile, Tensaw, Blakeley And Apalachee.

2. What non-native bivalve threatens the possible elimination of threatened species?

Ans. Zebra Mussels.

3. Why is this non-native species so successful?

Ans. For, it doesn't have any known species in the region to prey it.

4. What does SMZ stands for?

Ans. SMZ stands for the streamside management zone.

5. Name three ecological aspects of SMZ?

Ans. The SMZ practice helps filter surface and sub-surface water before entering the gulf; prevent water temperature from rising to stabilize the aquatic habitat for various species and also helps check down the deposition of nutrient down in the stream to prevent eutrophication.

6. What are the major rivers that drain into Mobile Bay?

Ans. The major two are Mobile and Tensaw.

7. What is a jubilee?

Ans. In the coastal region, due to some kind of unusual interaction between the high and the low tides, a lack of oxygen takes place in the coastal water along with the water currents carried down to the coast from off-shores. This lack of oxygen results into the crawling or flopping around of many sea organisms like crabs, flounders and other invertebrates and fish species. This spectacular event is termed as jubilee.

8. How are sand dunes formed on the barrier islands?

Ans. Sand dunes were formed as the piles of sand carried down by the wind was stabilized by the plants and trees growing in the island.

9. Name five species of (scientific names) of plants characteristic of sand dunes.

Ans. i. *Portulaca pilosa*
 ii. *Centrosema virginianum*
 iii. *Panicum amarum*
 iv. *Odontonychia corymbosa*
 v. *Oputina spp.*

10. How are swamps and marshes similar?

Ans. Both hold together a body of water and woodlands creating a habitat for many living organisms.

11. What characteristics allow plants, such as *Batis*, to tolerate high salt concentrations in the soil?

Ans. The *Batis* plant tolerates high salt concentrations in the soil by sequestering them in the cell vacuoles and also by shedding their leaves.

12. How do savannas differ from the Midwestern prairies?

Ans. Savannas fall in the order between the forest and the prairies, in savannas we can find a lot many kinds of trees growing, but in prairies the trees are rare. The savannas are managed by frequent and regulated wildfires where as prairies are not. In Midwestern prairies we find many tall grass species like cat-tails but in savanna we don't have tall grasses.

13. Name 5 herbaceous plants common to both the gulf coastal region and Kansas.

Ans. The five different plants are i. Milk Weed
 ii. Wood Sorrel
 iii. Mint
 iv. Sage
 v. Blueberry.

14. Why are estuaries important to humans?

Ans. They act as natural barriers to help prevent erosion in the coastal areas. They provide habitats for many different species. They are important for the breeding of many different kinds of fish.

15. Name 8 woody plants that are characteristic of both the coastal region and Kansas.

Ans. They are Poplar, Cottonwood, Pine, and Red oak, Honeysuckle, Hazelnut, Cedar and Elm.

16. Name 5 birds characteristic of the gulf shoreline.

Ans. Cattle egret, Mallard, Belted Kingfisher, Fish Crow and Turkey Vulture.

17. Name 5 invertebrates (specific common names) characteristic of the gulf region.

Ans. Hermit Crab, Millipede, Oysters, Mussels and clams.

18. Explain in detail why marshes may smell like rotten eggs.

Ans. The marshes smell like rotten eggs because of the decomposition of the dead plant and other organic materials covering the soil of the marshy areas. When such dead organic materials start rotting or decomposing, they produce the ammonia gas (NH_3) and Methane (CH_4), which gives a pungent smell.

19. Name 8 animals, mammals or birds, common to both the gulf coastal region and Kansas.

Ans. Deer, Rock Dove, Raccoon, Mallard, Bobcat, Woodpecker, Quail and Crow.

20. What are the adverse effects of Bulkheads?

Ans. Bulkheads are a preventive measure in the coastal regions but since the bulkheads reflects the wave energy back, it creates a deep shorelines and also increases the rate of removal of plants and sediments in the places adjacent to it and hence increases the chance of erosion in those places. Bulkheads also prevent the natural way of forming shallow water line.

Deep Bhari
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BIOL *533*01
Wed: 6.00-9.00 p.m.

*Deep, It is evident you get
more than it appeared*

Dauphin Island, AL Excursion: Spring Break 2004 (3/20/04--- 3/27/04).

The Dauphin Island, AL field trip was conducted by the Biology department, under the captainship of Dr. James Triplet, the chairperson of the biology department. The trip was primarily focused on the study and understanding of different types of marine and fresh water fish species that are found in the Gulf of Mexico surrounding the Dauphin Island and the Mobile bay area. The crew consisted of 22 heads including 8 students from BIOL*533*01 Ichthyology class. My day to day group and personal activities has been summarized in the following journals in a daily basis.

Day 1. (03/20/04)

7.45 a.m: Arrival in front of the Heckert-wells hall. All the group members were ready to leave the town. Had some trouble finding enough space in the trailer for my luggage and camping gears.

8.30 a.m: We leave Pittsburg finally; we are already 30 minutes behind our schedule. We crossed the plains of Kansas and Missouri in a cloudy day. At 11 a.m we stopped in a little rest area somewhere in Missouri for a short break.

12.00 p.m: We stopped by in the mammoth spring state park for our lunch break. The state park was interesting with an antique hydropower station as a main attraction. There was also a small hatchery with a wide variety of species from carps to catfish.

While stopping for lunch, I had some time to collect some wild flowers growing in the park ground. Spring break was just a beginning for the wild flower to blossom.

We left the state park at around 1 p.m. After a short while our caravan was busy climbing the winding highway in the Arkansas hills.

2.00 p.m: As we were driving through the Arkansas hills, more wild flowers variety was seen and there was also a sudden change in vegetation. Pine cedar and oaks were the common species of the hills.

After passing through small hill towns like Hardy and Hoxie we were finally rolling down in the Mississippi river flood plain. We saw a large egret, waiting for its prey in a Mississippi farm.

6.00 p.m: We are still driving along the sub-urban Memphis; TN. Cloudburst keeps on following our convoy.

7.30 p.m: We stopped by a town somewhere in Mississippi, to stop for our dinner. We were given choice of having quickly either in Taco Bell or McDonalds.

9.00 p.m: Finally after a long day of driving we find a small and crowded campsite in the Holmes County State Park, Mississippi. Unloaded our trailer. Was a rush among us to fix our tent, well I was not in a good luck that night, as I couldn't erect my tent properly for a while. With Mark and Travis I was able to set my tent in a hard terrain. Tucked inside my new sleeping bag in a tired mood.

Day 2. (03/21/04)

7 a.m: Breakfast was set in the camp table. There was a sense of urgency in everyone's face as we were still far away from our destination. We leave behind the lovely camp site about 7.30 a.m.

The free ways in Mississippi were both picketed with the lush green pine trees unlike in the Midwest. Pine seems to be the dominant tree member in this part of country. Saw some marshy vegetation, bamboos and wild flowers on our way.

11 a.m: We stopped in a gas station for a short break, somewhere in Mississippi plains and also tried to fix our quick lunch in front of a Wal-Mart parking lot.

11.30 a.m: We start ahead in a full speed towards our destination; Mississippi State seems to be poor because of its geography. Farms and agro business are not as common as in Mid-western plains.

We saw some cattle ranches. As we run down south, I'm very excited to see the wild magnolia blossoming in a full swing. Magnolia, the state representative of Alabama.

The day is pretty sunny and warm.

2.00 p.m: We stopped by an Alabama visitors centre for a quick stop. The centre was a nice descent facility and I took some photographs.

After a brief stop, we again march in a full swing down to the gulf coastal region, as we move down to the south, we see more diverse type of vegetation, we see a lot bamboo plants and also some banana, I was pretty excited to see the palm trees.

3.15 p.m: We finally managed to be in our camp site off the coast of Alabama with a tired soul. We began unloading our stuffs and finally started finding a campsite and quickly fixed our tents.

We walked down to the seashore just across the sand dune. In between our campsite and the west shore we have a small block of forest with pine and oaks and also a nice sand dune, which acted as a natural barrier from the seemingly nonstop sea breeze.

6.15 p.m: We get our campsite supper. Tacos and burritos, feeling good after all to get warm food and rest.

7.00 p.m: It's windy outside and the trees are screaming in a low pitch. We a group of 14-15 people head out with our flash light to seine in the dock that was across the street from our campsite.

We catch some species like anchovy, worm-eels and drum. Then when we return from the docks, we see some fish types in a nearby roadside drain. Then some guy's jumps into the drain to seine some more fish, we get mosquito fish and some other kinds.

8.30: We are back to our camp, tired and dirty; I take a quick shower and snuggle in my dusty bedding inside the tent.

Day 3. (03/22/04)

I wake up early; we get our break fast at around 7.10 a.m. I'm excited to be a cook crew for today.

8.15 a.m: We the students from the ichthyology group, we also get some knowledge about keying the fish in the field.

10.00 a.m: We all gather in the campground and we head toward the mobile bay sea lab estuariam. It is so nice to be in this place. We gather a lot of practical information and knowledge about the marine biology and marine animals.

The sea lab estuariam is small but well managed. I saw interesting fishes like Moray eel, hammerhead shark and octopus. I also spend sometime in the souvenir shop to buy some souvenirs.

12.00 pm: We walk back to our camp, we wait for Dr. Triplet. Rumors had run that, our much awaited plan of taking a ferry for collecting fish species has been cancelled due to the rough sea condition, and when we knew that from Dr. Triplet, everybody felt bad for a while.

We make our lunch and then rest for a while.

3.00 p.m: We went seining in the beach, it was pretty exciting, got 5-6 new species, and the most exciting event was to catch an Atlantic sting ray. It was big and pretty, we key it out and then set it free in the water.

5.00 p.m: We got back to our camp, it was our teams turn to prepare the supper, and we made spaghetti with meat sauce and toasted bread. I made the bread. Ours was a good supper made.

7.00 p.m: Had good supper, finished cleaning the dirty dishes. Then again back to the meeting room for keying out the fish.

I got back to my tent at around 9.15 p.m, I'm exhausted today.

Day 4. (04/23/04)

8.30 a.m: I woke up late today, probably I was tired from yesterday's errands, well I missed my breakfast too and also the early morning keying of fishes. I was relieved a lot after a good night's sleep.

9.00 a.m: The day is perfect for sight seeing and outdoor activities. The sea is still a little rough and windy. I took a shower and walked in the Audubon bird watching trail. I saw a saltwater alligator swimming in the lake. I am very excited and I took some snaps of it. The gator was mid sized and calm.

10.00 a.m: I walk up to the west side beach nearby the fort Gaines. I saw a bunch of high school students walking in the shore for scavenger hunt. They were accompanied by their teachers. I think they are also here for the learning purposes as we do.

12.00 p.m: We got back to our camp and had some good sun tanning, sitting in the camp table. We talked about our today's boat trip in the gulf waters.

1.00 p.m: We had a lunch and as soon as we were done, we packed our stuffs and headed to the dock. Where the crew from the research vessel Verille, waiting in the dock for us. After a few emergency situation instructions, we boarded the vessel. It was a small vessel manufactured in the 60's.

As we were shrimping in the gulf waters, we saw a school of dolphins following our shrimp nets and above our head were the flocks of hungry and desperate sea gulls and some other sea birds following our boat, for a possible chance of grabbing our catch.

1.45 p.m: As we pulled our nets onboard for our first catch we find a big black drum (around 30 lbs). And a bunch of spotted hake, shrimps, young squids and gulf butterfish.

The black drum was released back to water after a brief study of it. While shrimping we were heading toward the Fort Morgan Island. The deepest part of this gulf measures 45 feet below the water level.

2.15 p.m: Our second catch got us some blue catfish and other small fishes but still a lot of squids. We were so happy to feed the seagulls the by catches, also got a striped anchovy (*Anchoa hepsetus*).

The third catch was also not so fruitful and exciting. We got same old species but some new ones too. We had sea robin in our collection from the third catch.

Later the crew members explained us that the cold water in the gulf due to some heavy rainfall, prior to our arrival and the flooding of the seashores were the main reason why we were unlucky to catch as many shrimps as we counted on before.

4.10 p.m: we off board the vessel, after some instruction we follow our guide to visit the Dauphin island Sea lab premises. There were some very exciting new species like the shark and the whale suckers, the giant shrimps, eels and some exotic species of fish. I was so glad to tour around the sea lab.

6.00 p.m: After a brief rest. We had our dinner, the main course of chicken alfredo and bread.

7.00 p.m: We key our fish till 9.30 p.m. It was fun to key fish tonight sitting close to the fireplace.

10.00 p.m: Some people went for seining again in the docks, but I didn't because the water was still cold and I just had a shower.

10.30 p.m: I feel a little homesick, bed time now.

Day 5. (04/24/04)

7.00 a.m: Breakfast time, had a big breakfast, I liked the bagel with cream cheese and also had a cup of milk. Then we set out for our early morning walk in the Audubon trail. We saw some song birds and migratory birds, but couldn't see any marsh alligator today.

9.30 a.m: We came back to the camp and got shore and then I walked to the beach south from our camp.

10.00 a.m: I went to the docks for fishing, but I had no luck, not a single catch. We were free till 12.00 noon. So I just went inside my tent for a brief nap.

12.00 p.m: It's lunch time with the same old things. We gathered around the campground kitchen and then got ourselves into the vans. We drove up to the Alabama Marine Research lab. The interesting part was to know how to count the age of a fish by counting the perennial rings in the otoliths found a fish's head.

A gentleman and a lady from the lab gave us a guided tour of the shell mounts, the ancient burial place of the Indians. The Shell mounts site was pretty interesting. We all from our group gathered around by an ancient and probably the oldest tree in the nation and took some photographs of us.

1.40 p.m: Then we all drove by the airport marsh. Marsh lands are very vital for the gulf regions, because they filter all the inland water that drains into the gulf waters. The marsh had the pungent smell like that of a rotten egg. But we didn't stop jumping in the marsh and seined as far as possible. We found a lot of blue shelled crabs. But not a lot

new species. We also spent a little time seining the beach next to the marsh. We got some new species of flounders.

4.30 p.m: After seining in the airport marsh, we headed to the public beach to seine. We got nothing new in the beach but we had a wonderful time swimming and trying to ride over the high waves in the beach.

6.00 p.m: Returned back to the campground, had dinner of taco stew at 6.30 p.m. Was very good to eat warm supper after a long wet day.

7.00 p.m: We are back to the meeting room for keying out all those new species of fishes we caught today. We get to know a lot about keying out fish in not so unfriendly circumstances.

11.00 p.m: We were finally dismissed

Day 6. (04/25/04)

6.30 a.m: I woke in a great shape today, its going to be our last day in this pretty and peaceful place. And I have kind of mixed reactions to it, kind of glad we are going back tomorrow, but sad to leave this place without fully enjoying its serene beauty and peace, which we miss so much back home in Kansas.

7.00 a.m: Breakfast with little to eat, not in a mood for a heavy meal.

7.30 a.m: We are keying fish again, and I am getting simply allergic to key out fish anymore.

9.00 a.m: We went to seine in the creek that merges in the airport marsh. Then with a great luck we were invited by the Marine Research Institute to join them in their trawler to experiment the catch of their newly introduced shrimping nets.

We were all pretty excited about that. But since there was not enough space for all of us to onboard the trawler at the same time, me, Dr. Triplet and Scott, we waited for our turn in the institute's office, until the first group of our peers were back.

Then after waiting for an hour and a half, we were onboard the trawler boat, the boat then jets off in the coastal water in a speed of about 55-60 miles per hour and its pretty enthralling and brought a rush in my adrenaline.

Well our first catch in the trawler yielded nothing much but a bunch of sea-lettuce. In our second catch we got some new species like Atlantic cutlass and least puffer, it was a great achievement to get those new species.

Our third catch got some catfish, drum and a big white shrimp.

1.15 p.m: We are back in the campsite, we grab our lunch and head toward the mobile bay side and stop by a private beach, where we seine for a while. We get nothing of big importance; however we found a new kind of flounder.

2.30 p.m: We keep on seining in many different places to find any new species, but had no luck until we stopped by a private fishing peer. This peer runs about 150 feet in the water and we could see many enthusiastic peoples trying to hook a fish or two.

We keep on asking almost everybody to see if they have caught anything interesting, we find nothing but at the last a teenage girl hooked up a mid-size shrimp eel (*Ophictus gomesi*). With that ladies kind heart, we were able to keep that interesting eel with us as a new specimen.

6.15 p.m: We load up in our van and head towards our campground. Tomorrow we will be leaving this beautiful camp ground and a wonderful biome.

While the cook crew was preparing our supper, I found a little time to get myself lost in a quiet beach.

7.00 p.m: After our supper it's again the time to key out the fish, we are interested to key out fish tonight as we found some interesting species today.

9.45 p.m: We dismiss and head towards our tent; I am excited because we were told we will be stopping by New Orleans, LA the cultural capitol of the south for lunch break.

10.00 p.m: It is bed time now and probably the last entry on my journal in this place, tomorrow at this time we will be driving somewhere in the vast plains of Midwest.

Day 7 (03/26/04).

6.30 a.m: I wake up early as I need to clean and pack all my belongings and also to find a space in our already crowded trailer.

7.15 a.m: We have our light breakfast and we help pack the belongings. I am sad that we are leaving this adorable and peaceful place; don't know when I am coming back.

8.30 a.m: We finally leave the place behind us; I am excited that we will be stopping in New Orleans for our lunch. I had a dream of visiting New Orleans for a long time.

10.30 a.m: We stop by Louisiana visitors centre for a short break. We grab a free cup of delicious coffee from the centre. What a wonderful Louisiana hospitality.

12.30 p.m: We finally reach our destination, New Orleans. We have a hard time finding the proper parking space for our long trailers. We see French Quarters, Jackson Street and Bourbon Street from inside our van.

1.15 p.m: Finally we find a parking space in the heart of the downtown. We were then briefed by Dr. Triplet about this city, and then we disperse in groups of at least 2 people in search of a good but cheap eating place.

But me and buddy Jason ended up in one of the best restaurant of the town Bubba Bump, for our lunch. I had Louisiana shrimp and jasmine rice. It was a wonderful gastrointestinal treat.

2.20 p.m: After our delicious lunch, we stroll in the downtown New Orleans; it is really a wonderful place to be. The rich French cultural heritage and a widespread diversity make New Orleans a perfect place for leisure activities.

We were fascinated by the bands playing in the streets, the hawkers and the hustlers trying to make living by luring the visitors and the city's old architecture.

3.15 p.m: We are back in our parking space. We wait for the other group members. We finally leave New Orleans around 3.30.

Then begins the most uncomfortable part of our journey, we will be driving over night, until we get back to Pittsburg.

7.15 p.m: We stop in the same taco bell for dinner, where we first came a week before. There was nothing interesting to mention that we saw in while in our way back, except the long causeway that joins Louisiana with the Mississippi state.

Day 8 (03/27/04)

7.10 p.m: We are back in Pittsburg State University; we unload in front of Heckert-Wells building and help unload stuffs. Then we disperse for our home, both tired and sleepless.

The End.