Research in the Ann Arbor Parks—Part I by Jason Tallant

Throughout the years, the Ann Arbor parks have enjoyed a rewarding relationship with the academic and research community, including the University of Michigan (UM), Eastern Michigan University (EMU), and Michigan State University (MSU). Ann Arbor parks and natural areas provide excellent opportunities for researchers and practitioners to examine the social and ecological impacts of urbanization. Continued fostering of relationships with research communities not only helps us better understand ecological processes, it also adds to the value that urban ecosystems have to our community.

In the late sixties, Paul Thompson of the Cranbrook Institute published documentation of the Gallup wet prairie (A Wet Prairie Community in Ann Arbor, The Michigan Academician). Thompson finds the wet prairie (mesic prairie & sedge meadow) along the Huron River, based on its description in an earlier article by Butler (1947) documenting prairies in SE Michigan. Thompson’s article maps plant populations of concern (native and non-native), including a detailed botanical inventory of the site, circa 1967. The paper identifies the Gallup wet prairie as a significant remnant site and advocates for the Ann Arbor Department of Parks and Recreation to continue its maintenance (which included prescribed fire). Thirty years later we find that again the Gallup sedge meadow is under intense observation. In the mid-nineties, Dave Warners (NAP Botanist 1994-1997) who now teaches at the university level, looked at the impact of prescribed fire on sedge meadow wetland communities (Plant Diversity in Sedge Meadows: Effects of Groundwater and Fire). Two of his research sites were in the Ann Arbor parks system, Gallup sedge meadow and Barton oxbow sedge meadow. Warners found that the occurrence of fire in the Gallup sedge meadow did not impact floral diversity, but increased the flora species density of the site—perhaps attributing to longer-term stability of the community.

Other researchers have also been interested in the impact of NAP’s sexy management strategy, prescribed fire. Mary Beth Dechant, graduate student in the School of Natural Resources and Environment (SNRE) at UM, is looking at the impacts of vegetation management on the distribution and abundance of salamander populations in urban environments. Using Black Pond Woods as her experimental site, the 2005 field season was spent surveying salamander populations at Black Pond, as well as documenting the significant microhabitat characteristics of the site. The 2006 field season will include additional surveys to assess the impact of a prescribed fire conducted in November 2005. The goal of Dechant’s research is to address the gaps in our knowledge regarding prescribed fire effects on salamanders and help management organizations (such as NAP) make better-informed decisions and assessments of their management practices.

Another aspect of research currently underway in the Ann Arbor parks is the assessment of nuisance insects with high profile social and environmental implications. David Cappaert, a research scientist for the Department of Entomology at MSU (and NAP Entomologist 1997-1998), is looking at the life cycle and potential impacts of emerald ash borer (Agrilus planipennis) on forest communities across the state. In numerous sites across Ann Arbor, Cappaert is...
Coordinator’s Corner

Increasing Capacity

The biggest buzz around the NAP drinking fountain this spring is the creation of our second “burn truck.” This means, simply, that we’ve equipped another one of our trucks with a 210-gallon water tank, a high-pressure water pump, 1000-feet of fire hose with a hose reel, and an assortment of various fire-related hand tools. I realize that, to many of you, that may not sound like much to get excited about. So let me tell you a little more about the significance of this new creation.

The most significant outcome of this will be that NAP can now outfit and execute simultaneous prescribed burns at two different locations across the City. Long-time readers will grasp the benefit of this new development. Our entire prescribed burn program is very dependent on good weather. We hurry to get all the preparations made in advance of those few good burn days. Then we hustle to get as much burning done as quickly as possible before that window of opportunity closes. But by the end of spring, there are inevitably still burn sites left that we have not gotten to. And whenever we’ve brainstormed what we could do to increase the amount of burning we’re able to get done, the best proposed option has always been to outfit a second burn crew. (That’s always won out over the proposal of “changing the weather.”)

Of course, there’s more to having a second burn crew than just outfitting a second truck. There’s also the issue of having qualified personnel available to run the burns. For the twelve years that NAP has been conducting prescribed burns, I have been the only “Burn Boss” on virtually all of those. You need to have a few years of burn experience under your belt, and more than a few levels of training, before we feel comfortable calling someone a Burn Boss. That’s been hard to accomplish with temporary staff in the past, although many experienced burners have come through NAP over the years. But, as I explained in the last issue of NAP News, now that we have some additional permanent staff positions at NAP, it’s time to train some additional Burn Bosses.

Finally, we now have the additional equipment and Burn Boss, we also need additional burn volunteers. That’s where you come in! NAP has trained hundreds of volunteers at our annual burn training (scheduled for March 8 this year). Now, I realize that not everyone gets excited about the idea of loading 50 pounds of water on your back and trudging up and down hills through thick brush for three hours. But there are SO MANY other ways to help out on the burn crew. You could be an “igniter” and operate the drip torch. Or you could stay in the parking lot and help us monitor the weather and our smoke. We also need people to take pictures and help monitor fire behavior. And if you aren’t available in the afternoon, when our burns occur, you could join us on a burn morning and help “prep” the site with a rake or a leaf blower. In other words, we’ve got lots of opportunities that we could match with your interests and abilities. So come out and join us for a burn this spring. Those who have joined us in the past have found it a very rewarding way to usher in the spring.

- David Borneman, NAP Manager, and NAP’s 1st Burn Boss

If you miss our March 8 burn training, there may still be opportunities to get you involved in the burn program this spring. Call the office for more details.
Coyotes by Lara Treemore Spears

Springtime brings thoughts of wildflowers, fresh green leaves, the calls of songbirds and, of course, coyotes. Now hold on a minute, you may be saying, coyotes aren’t what I think of in springtime, particularly not in the Ann Arbor parks! However, those who live near Miller Nature Area can attest to the increased evidence of coyotes from February through May. Park Steward, Howard Krausse—who lives adjacent to Miller—recalls the coyotes’ “spooky” nighttime mating calls in February 2004, and the subsequent appearance of pups several months later. As the pups matured, the nightly serenades progressed from high-pitched yips to coarse, rough-sounding barks until they were indistinguishable from the adults.

By mid-summer, when pups are old enough to spend time away from the den, the parents may take them to forage for food elsewhere. Although parks like Miller typically provide plenty of mice, voles, rabbits, and woodchucks, the prey population can be depleted while the parents are forced to stay close to the den. This constraint on the parents’ ability to forage widely may also drive them to take less desirable prey items such as garbage, pet food, and even small pets. No wonder coyotes have historically been discouraged by humans from inhabiting nearby areas!

While conflicts with coyotes are relatively uncommon in Ann Arbor people can take steps to minimize them by securing trashcans, leashing dogs, keeping cats indoors, and not leaving food outside. Although coyotes sometimes “play” with domestic dogs, their behavior is unpredictable and dogs should be prevented from coming into contact with coyotes due to risk of injury and disease (the entrails remaining after a coyote dines have been known to transmit tapeworms). Keep in mind that your pet may become excited and hard to control in the presence of a wild animal, so extra measures may be necessary. Coyotes can typically be frightened away if you make loud noises such as clapping and yelling while maintaining eye contact and moving toward an area of activity such as a road or building.

In Ann Arbor, the advantages of having coyotes in the parks outweigh the disadvantages for most people. An overpopulation of prey animals such as rabbits munch native wildflowers and shrubs to the detriment of native plant biodiversity. Without predators like coyotes to keep their population in check, omnivores like raccoons and opossums can raid turtle and bird eggs with devastating effects. Even the willingness of coyotes to eat carrion may help keep parks (and the local roadsides) more tidy than they would otherwise be. Although coyotes may also consume eggs, birds, and plants, they appear so far to prefer Ann Arbor natural areas with an ample woodchuck and rabbit population. The absence of coyotes from Miller in 2005 may reflect a reduction in prey, which may have been caused by over-predation by coyotes or foxes, or other natural population changes. In any event, NAP looks forward to hearing your news if you are fortunate enough to see (or hear!) one of these elusive furry neighbors this spring.

Groundwater Services YOU Can Use!

The Michigan Groundwater Stewardship Program (MGSP) provides FREE educational programs and materials on a variety of water quality topics. Here are a few:

Home Assessments
Anyone who owns or rents a home can benefit from a free one-on-one home assessment, called Home*A*Syst, that evaluates your home and property for pollution and health risks. Your Groundwater Educator, Lisa Perschke, will use the Home*A*Syst booklet to cover topics like managing household trash, yard and garden care, and septic system or drinking water well maintenance. A home assessment can take as little as an hour—contact Lisa to schedule an appointment.

Group Presentations
Your Groundwater Educator is available to give free presentations on a variety of water quality topics, which could even include the use of an electric groundwater flow model. Neighborhood and lake associations, scout or youth groups, and garden clubs are just a few of the types of organizations that have taken advantage of a water quality presentation or activity.

Lisa Perschke, Groundwater Educator
734.761.6721 Ext. 101
lisa.perschke@mi.nacdnet.net
March 2, Thursday
Prescribed Ecological Burn Program
Public Meeting
7:30 to 9:00 pm
Leslie Science Center Nature House
1831 Traver Road, Ann Arbor
Fire is used as a restoration tool in some of Ann Arbor's natural areas. This meeting will provide information and an opportunity for discussion about the Prescribed Ecological Burn Program conducted by Natural Area Preservation. Burns will be conducted in City Parks throughout the spring and fall.

March 8, Wednesday
Prescribed Burn Crew Training
12:00 noon to 5:00 pm
This is the required yearly training session for all volunteers interested in assisting with the prescribed burns to be held this spring and fall. Burns take place Monday through Friday sometime between 12:00 am and 5:00 pm. Pre-registration is required by March 3, as enrollment is limited. Please call the NAP office at 734-996-3266 to register or for more information.

March 14, Tuesday
Huron Arbor Cluster Stewards' Circle
Bruegger's Bagels on North University Avenue, Ann Arbor
7:30 to 8:30 am
Prescribed Ecological Fire. What are the reasons we need fire? How do we use it safely? What invasives does it, and doesn't it, help control? What preparations are necessary to have a controlled burn?

March 25, Saturday
Dolph Stewardship Workday
10:00 am to 1:00 pm
Join us for our annual face-lift at one of Ann Arbor's most important migratory bird spots. We will be trimming trails to prepare for birding season. We'll also be scouting for signs of spring! Meet at the parking lot off Wagner Road.

April 1, Tuesday
Huron Arbor Cluster Stewards' Circle
Bruegger's Bagels on North University Avenue, Ann Arbor
7:30 to 8:30 am
New Invaders. What are the new invasive plants that we should be on the lookout for? What control methods are known? Where have these been found in our area? Are they not here yet, but creeping in from other places?

April 4 & 7
Woodcock Week
Barton Nature Area
7:30 PM to 8:30 PM
Watch the dance of the Woodcock with NAP Ornithologist Dea Armstrong. Woodcock numbers in the state have been decreasing due to limited habitat. Barton Nature Area is one of a few breeding areas in Ann Arbor for these ground-nesting birds. Meet on the bridge closest to the Barton Dam parking lot off Huron River Drive. Dress warmly! For more information call NAP.

April 8, Saturday
Marshall Stewardship Workday
9:00 am to 12:00 noon
Let's kick off the garlic mustard season at one of our most beautiful parks! Help us keep this fragrant invader back by volunteering your time to pull, pull, pull. Early spring garlic mustard is tender and tasty in salads or cooked in lasagna. Take some home! We can provide recipes. Meet us at the parking lot off Dixboro at 9:00 am for a nature hike, or at 9:30 am to start working.

April 12, Wednesday
Breeding Bird Survey Kick-Off
7:30 to 9:00 pm
Leslie Science Center House
This is the night to sign up for your favorite park and pick up materials. NAP Ornithologist, Dea Armstrong, will also report on the 2005 data and survey highlights. Please register by April 5 by calling the NAP office.

April 15, Saturday
Huron River Cleanup by Canoe
9:00 am to 2:00 pm
Help the Huron River by removing trash while canoeing. Please register...

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NAP is located at the Leslie Science Center (1831 Traver Road, Ann Arbor, 48105), 734.996.3266. Workday orientations start promptly at listed times. Please wear pants and closed-toe shoes. Minors must either be accompanied by a guardian or contact NAP in advance to obtain a release form. Contact NAP if a group you are involved with is interested in planning a volunteer stewardship event. Our website is www.a2gov.org/nap
with the coordinator of this event, David Fanslow, at 734-741-2353 or dave.fanslow@noaa.gov as participation is limited. Canoe usage for this cleanup is FREE!

April 22, Saturday
EARTH DAY!!!
Furstenberg Native Plant Garden
9:00 am to 12:00 noon
Park Steward and Master Gardener, Aunita Erskine, will lead a wonderful cleanup workday and botanical walk. Join her in improving the demonstration garden. Meet in the Furstenberg parking lot off Fuller Road, across from Huron High School.

April 22, Saturday
Forest Nature Area Workday
1:00 to 4:00 pm
This event is co-sponsored with Washtenaw County Parks—government cooperation, how fun! Come be a part of this amazing occurrence. Meet us in the Parker Mill parking lot, off of Geddes Road, ½ mile east of Dixboro Road. Afterwards, join us for a short nature walk to look at some of the native plants we’re helping.

May

May 6, Saturday
Greenview Stewardship Workday
9:00 am to 12:00 noon
Help maintain this beautiful neighborhood park. This year we will be chipping the trails and planting flowers. Park neighbors bring your wheelbarrows! Snacks and tools provided. Meet at the Greenview Park sign, on Greenview Road, across from Barnard Road.

May 6, Saturday
8th Annual
Garlic Mustard Weed-Out Day
10:00 am to 1:00 pm
This year followed by a BBQ!
Join NAP as we combat invasive garlic mustard in our natural areas citywide! Young garlic mustard has a root system that is easy to pull so this can be a great activity for any age. We’ve pulled over a ton of garlic mustard in previous years, so let’s see if we can top that this year! Each park will keep track of the number of bags pulled; afterward we’ll see which park’s volunteers pulled the most—at the barbecue! Snacks provided!

Choose from these locations to pull garlic mustard:
Arno Park – Meet in the parking lot north of the Argo Canoe Livery, off Longshore Drive,
Bird Hills Nature Area – Meet at the park entrance on Bird Road, west of Huron River Drive.
Cedar Bend Nature Area – Meet at the Island Park parking lot at the end of Island Drive.

Garlic Mustard Weed-Out Day BBQ
1:30 to 5:00 pm
Island Lake Park Pavilion
NAP will fire up the grills and bring some burgers, buns, condiments, and juice. Please bring a dish to pass, plates, flatware, a dish to pass, and anything you would like to have grilled. All NAP volunteers, friends, and family invited! Wish you had volunteered with NAP? Hope to? You’re invited too!

May 9, Tuesday
Huron Arbor Cluster Stewards’ Circle
Bruegger’s Bagels on North University Avenue, Ann Arbor
7:30 to 8:30 am
Borders/Edges. Are there different issues in managing the borders of our natural areas? How can we manage the creep of invasives that come from the edges? Are there creative strategies to make buffers around these special places? What types of education and acquisition strategies have worked?

May 11, Thursday
Dolph Nature Area Bird Walk
7:30 to 9:30 am
Join City Ornithologist Dea Armstrong as she leads a walk to look for birds in the morning around First and Second Sister Lakes. Bring binoculars if you have them. A great walk for all levels of birders! Meet at the parking lot off of Wagner Road, between Jackson and Liberty Roads at 7:20 am.

May 13, Saturday
Miller Park Stewardship Workday
9:00 am to 12:00 noon
Help us remove invasives in this lovely park. We’ll be pulling garlic mustard ‘til the cows come home…or until 11:30 am. At the end of the workday we will go for a short nature walk to see all the great work that has been accomplished. Join us at the Arborview Boulevard entrance, just east of Wildwood Avenue.

May 13, Saturday
Hannah Stewardship Workday
1:00 to 4:00 pm
This neighborhood park needs your help. Let’s get together and clean up yard waste and get rid of some invasives. You can make a difference! We will provide snacks and tools. Meet at the end of Bath Street, west of 7th (between Miller and Huron).

May 19, Friday
Evening Bird Walk
6:00 to 8:00 pm
Join City Ornithologist, Dea Armstrong, as she leads an evening walk to look for birds in Gallup Park and Furstenberg Nature Area. All ages encouraged! Bring binoculars if you have them, but they’re not necessary. Meet at the Gallup Livery docks.

May 20, Saturday
Eberwhite Woods Workday
9:00 am to 12:00 noon
Join the wonderful neighbors of this gorgeous woods, while removing garlic mustard. This cooperative effort between neighbors, the Ann Arbor Public Schools, and NAP promises to be a great event. Let’s meet at the Eberwhite Elementary School parking lot, off of Soule Boulevard, just south of Liberty Street. Bring your family and friends!

May 20, Saturday
Redbud Stewardship Workday
1:00 to 4:00 pm
Join us in this great park for some friendly conversation, fresh air, and good-deed-doer work. We’ll be pulling invasives and planting natives. Meet near the park entrance at the intersection of Parkwood Avenue and Jeanne Street.
assessing the impact and effectiveness of different control methods on the ash borer and the potential for host-switching by the ash borer. Mike Reiskind, graduate student in the Department of Ecology and Evolutionary Biology at UM, conducted his doctoral research (*Oviposition Behavior of Culex spp. Mosquitoes in Response to Changes in Larval Habitat Availability and Quality*) in many of the city and county parks and natural areas. Reiskind’s research focused on mosquito egg-laying preference and larval survivability—ultimately addressing how we think about and control mosquito populations to avoid the associated public health issues (like West Nile virus). Reiskind’s study looked specifically at the different habitat types in which mosquitoes laid their eggs and counted egg masses as a measure of mosquito breeding success. Due to the pertinence of both Cappaert and Reiskind’s work, they are both published widely and the results of their research are easily found on the web.

Two recent projects dealing with multiple trophic level interaction in urban areas are utilizing Ann Arbor natural areas. Huiling Niu, graduate student in SNRE at UM, under the direction of Dr. Foufopoulos is looking at the effects of forest fragmentation on the health and ecophysiology of Wood Thrush (*Hylocichla mustelina*) in SE Michigan. Their research addresses forest fragmentation and the likelihood of making Wood Thrushes more susceptible to disease, resulting in population decreases. The 2005 field season was spent documenting populations and catching a subset of the population for disease sampling in fragmented (Ann Arbor natural areas) and unfragmented (Waterloo/Pickney Recreation Area) forests. Additional field observation and sampling of the Wood Thrush population will continue in 2006, as these researchers fully develop their study. The second multi-trophic level study is being conducted by Sue McMahon, graduate student in Biology from EMU, who is looking at populations of Wild Indigo Duskywing (*Erynnis baptisiae*) a rare indigenous butterfly in Michigan (found at Olson Park) that has switch from its native host plant, yellow wild indigo (*Baptisia tinctoria*), to crown vetch (*Coronilla varia*) a non-native invasive, due to yellow indigo’s rarity. McMahon’s research looks at the potential differences between populations of Wild Indigo Duskywing using the native v. non-native invasive plant species. Initial findings show that *E. baptisiae* has greater larval weights when feeding on their locally rare native host plant, compared to when they feed on the abundant non-native. McMahon’s study will include an additional field season in 2006 where she will study feeding preferences of *E. baptisiae* with an experiment at the Mattheii Botanical Gardens.

Next year we will have a second installment of this article, but if you know of research conducted in the Ann Arbor parks that is not included in this account, please let us know so we can have a more complete inventory of projects. A complete inventory not only allows NAP to more successfully manage Ann Arbor’s natural areas, it also allows us to facilitate the exploration of projects that add to the knowledge base of the academic and management communities.

### NAP Photo Contest

NAP is having a photo contest this year! We’d love to see some pix of the amazing things you’ve seen in Ann Arbor natural areas. Contact us for submission information. Winners will receive something cool and NAP-oriented, though we haven’t been given clearance to release the information as of yet. In addition, your photo would be used in all sorts of fun NAP publications!

#### A Little Help

Let us know if you’re interested!

1) NAP’s PowerPoint presentations need to be a bit more slick and have a continuous theme.

2) We’re always looking for some help from folks who have a high level of knowledge about databases, GIS, or imaging to make sure we stay current with the industry.
Thank you...
~Sally and Bob Neill for their donation in honor of Mary and Art Coscia
~Stan and Robin Mendenhall for their generous donation towards Cedar Bend
~UM Circle K for their help removing invasive shrubbery at Scarlet Mitchell

WAM!
The 2006 Michigan Wildflower Conference, “Nature’s Puzzle—Putting the Pieces Together” will include an Educators’ Workshop on Sunday, March 5; and concurrent sessions presented by The Stewardship Network on Monday, March 6. The conference sessions (on topics such as Using Prescribed Fire to Restore Michigan’s Natural Areas; The Plight of Urban Ecosystems and One Unlikely Success Story; Butterflies, Skippers, and Their Host Plants), with educational exhibits, nature-related arts and crafts, and hard-to-find books will be located in the Big Ten Wing of the Kellogg Hotel and Conference Center on the MSU campus. For more information and to register go to www.wildflowersmich.org.

Ash Replacement
The City is in the process of removing and replacing the dead and dying ash trees on city road right-of-ways and in city parks (not natural areas). City Forester, Kay Sicheneder, and Adopt-A-Park Coordinator, Jason Frenzel, will be looking for volunteers to help replant our urban forest. Neighborhood groups and Ann Arbor Tree Teams will be needed to ensure that the replanting will occur in a timely manner. For more information visit www.a2gov.org/trees.

Ann Arbor Environmental Action Plan
At the request of the Environmental Commission, city staff is currently creating the City’s first Environmental Action Plan. NAP is participating in this effort, which is being led by Systems Planning staff. The City of Ann Arbor takes many steps to make sure that our activities benefit the environment. This plans assists in 1) highlighting staff actions that are underway, 2) developing clear environmental goals and objectives, and 3) setting priorities given limited resources. City staff anticipate completion of the plan in early summer.

Staff Updates

farewell...

Barb Barton
Should there be one thing I remember from my time with NAP, it would be the incredible people I have worked with. Full of youthful enthusiasm, dedication to protecting our natural places, and colorful hair and metaphors, these folks have taught me many things. For instance, “that's so not bunk”. Whatever that means. My volunteers have been great and I hope they continue to learn the butterflies and keep tabs on our park’s most beautiful beings. I’ve just finished up my Master’s degree and will continue my work with endangered species (now at Michigan Natural Features Inventory). And of course my music. Thanks to all for making my four years at NAP some of the best ever!

“The Wilderness holds answers to more questions than we have yet learned to ask.”
- Nancy Newhall

changes...

Shelley Gladwin
I am excited to begin the current NAP season with a new part time role as Outreach Assistant! After more than a year on the crew I am happy to now have more opportunities to share my love of restoration with a wider audience. But I still get to play outside in the parks too! Yippee! See you out there.

Dana Wright
A lot of you have probably seen me out at workdays in the past couple seasons. I rejoined NAP part time in the fall of 2004 as a weekend crewmember. Since then I have spent more time doing volunteer related work, and am now happy to be hired on as ½ time Outreach Assistant. My daughter, Lily, is now old enough to attend preschool, which leaves me a few more hours a week to dedicate to my favorite “NAPpers”, the volunteers! I look forward to seeing all of you out there thick in the garlic mustard this spring!
Snapping Turtles: Cool and Critical! by David Mifsud

The Common Snapping Turtle is Michigan’s largest turtle, reaching over 18 inches in length, weighing up to 45 pounds, and living up to 40 years. They find homes in ponds, marshes, lakes, slow rivers, and most other aquatic habitats. Between early May and mid-June females will excavate a hole, and lay a clutch as large as 80 eggs (this often takes hours to complete)! The eggs hatch between late summer and early autumn.

Snappers are an important part of the food web, providing food (as eggs and hatchlings) to many predators, including herons, hawks, large fish, raccoons, foxes, bull frogs, and larger turtles. Once snapping turtles become adults they have few predators—they will eat just about anything from aquatic plants to snails to goslings. They will also eat dead animals and play a critical role in maintaining healthy aquatic ecosystems.

The biggest threat to this species in Ann Arbor is being hit by cars when searching for new ponds or nesting sites. Snapping Turtles are characterized as having delayed sexual maturity, high juvenile mortality, and difficulty in moving between locations. Thus they are highly vulnerable to isolation, small population size, and loss of genetic variation. It is important for us to help them out when we can. When you see a Snapping Turtle (or any turtle) trying to cross the road please help them across, provided it is safe to do so. Also, do not harass a female turtle while she is laying her eggs. Together we can make sure this often misunderstood turtle can continue to flourish for many more years to come.

Last summer NAP staffer Ricardo Aguirre spent some time protecting two Snapping Turtles, while they laid their eggs. NAP received phone calls from concerned folks who saw the turtles close to a busy road. Apparently the traffic didn’t bother them!