



# THE NATURALIST

*The monthly newsletter of the Historic Rivers Chapter*

*Virginia Master Naturalist Program*

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## President's Message

by Judy Jones

When I learned that one of the jobs of the president of the HRC VMN was to write the President's Message for the newsletter, I was dismayed. What in the world could the message be besides platitudes and such. So, I wrote platitudes and such for two months....but enough is enough! We are a great group, the best in the state, and we know it. I don't have to keep telling you.

But what I discovered is that, as a group, we've grown larger and larger and we don't often get to know each other well. So I'm going to use this platform to introduce the general membership to some of the members of the Executive Board. I don't have enough months to introduce everyone but it's a start, right? Old Guard, meet new. New folks, get to know a little about the Old Guard.

So here is my first "Meet the Members" article. Renee Dallman, Cohort X, serves on the Executive Board as the Membership Chair. Her learning curve has been huge, as she's only just graduated from training (with her full 40/8 hour certification, no less) but has already made a mark for her skill, insights, and just plain 'nice-ness'. So, without further ado, please meet our friend and fellow Master Naturalist, **Renee Dallman!**

### Notes from the Board

All meetings of the Board of Directors are open to members.

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# HISTORIC RIVERS CHAPTER

## **Renee, I want folks to get to know you. Can you fill in a little background info please.....**

I was born in Wichita, Kansas. We moved to Manassas, Virginia when I was 14 and I was the third generation in my family to graduate from the



same high school. I completed my degree in Sociology at George Mason University and moved to Williamsburg for graduate work at William & Mary.

While at W&M, I was offered a work study position with James City County. Twenty-four years later, I am still working at the County as a senior communications specialist. (I write news releases, work with the media, coordinate our social media team, etc.)

## **Fill in a little about yourself now....**

My husband (Tony) and I dated through high school and college and married soon after graduation. Tony is a major with the County's Police Department. We have two sons, Grant – a rising junior at George Mason University, and Ben – a rising junior at Lafayette High School. Both boys have kept us very busy with football and wrestling and work at Busch Gardens.

We have two dogs, two cats and we are slowly accumulating quite the collection of birds at our feeders.

## **Tell us one thing about yourself that is funny, quirky, unique, or really rather bizarre....**

Show and Tell was my favorite part of school. One time in first grade, my show and tell was a baby food jar that we had filled with fish roe after a

family fishing trip. I guess I forgot it in my desk for several days. I cannot imagine what the classroom smelled like on Monday morning. I was asked to not bring in anything like that again.

Fortunately, that did not stop my desire to share nature with others. You should have seen me at work the Monday after our geology field trip in December.

## **Why did you choose to become a Master Naturalist?**

Several years ago after having to save a bug in the office from certain death, I told a co-worker that I should have become an Entomologist because I loved bugs. She told me that another co-worker (Paul Cuomo) had recently completed a program that sounded like it would be perfect for me.

Since the boys were getting older, our free time had changed from camping at Shenandoah National Park to spending time in football stadiums and gymnasiums, so I had to wait. Once we got down to one at home with activities, our schedules opened up and I was able to apply for Cohort X.

## **Final Question....which activity or activities in VMN have brought you joy?**

If you would have told me six months ago that I would travel and spend my weekends peering up into trees trying to get a glimpse of a bird, I would have laughed. I like bugs, remember? But then I met a Brown Thrasher and a Tufted Titmouse and saw my first Wood Duck.

I had no idea that I would ever fall in love with birding like I have. I love reading books about birds, watching movies about birds, shopping for bird food and feeders, you name it. I love all birds, but especially Osprey and Great Blue Herons. They are just magnificent.

I have also really enjoyed getting to meet this incredible group of volunteers who share my love for all things nature. I am truly amazed by all of it. I am very proud to call myself a Virginia Master Naturalist.

## Wildflower of the Month – May 2016

John Clayton Chapter of the Virginia Native Plant Society

### POISON IVY

*Toxicodendron radicans*

“Leaflets 3, let it be!” Few plants carry 3-parted compound leaves, and this is an easy way to recognize a very irritating plant. Some bean vines have 3-parted leaves, but poison ivy is woody, and attaches with aerial roots. Not related to invasive English ivy, poison ivy can grow as an erect shrub or climber. Leaves are variable – they may be stiff and leathery or thin, hairy or not, shiny or dull, toothed or not. The red or yellow fall foliage is especially conspicuous.



Twigs are brown with short aerial rootlets; old stems, covered with fibrous roots, look hairy. Small yellowish flowers blooming in May-July produce small clusters of round white fruits in August-November.

Poison ivy is found in every county in Virginia, and widely distributed throughout the eastern and central United States. A close relative with lobed leaflets of 3, poison oak (*Toxicodendron pubescens*), does not extend into the northern states nor Canada, but is found in several coastal plain counties and across Virginia. Unlike poison ivy, poison oak never vines – it is always an upright shrub and it tends to occur in drier, sandier habitats than does poison ivy.

Human sensitivity to the irritating oil urushiol is variable, and 15-25% of the population is not at all allergic to poison-ivy and will never develop a reaction. Some people require prolonged or repeated exposure to the plant to develop a rash, but about half of all people will break out with a single contact, some requiring hospitalization. Without the leaves, poison ivy vines are difficult to identify in the winter, and for persons with high sensitivity, touching a stem or the roots will cause an allergic reaction.

Despite poisonous effects of the plant on humans, the fruits are relished by over 60 species of birds. Many seeds are passed undamaged through their digestive systems, allowing wide distribution of this noxious vine.

By Helen Hamilton, Past-president of the John Clayton Chapter, VNPS

**Photo:** Poison ivy (*Toxicodendron radicans*) taken by Jan Newton

## HRC Members Participate in US-Wide Bioblitz by Les Lawrence

Members of the Historic Rivers Chapter participated in a bioblitz directed by the National Geographic Society, on April 23. The purpose was to take a snapshot of the health of animal and plant-life across the country. Every state participated and, in Virginia, nine sites were selected by the Virginia Geographic Alliance, including York River State Park, a site many of our members consider “home turf” since we do wildlife mapping there almost every Monday. Because of our close ties to YRSP, Park Manager Jon Tustin and Wildlife Specialist John Gresham called upon our Chapter to take the lead in the bioblitz.

Typically, a bioblitz is held over a 24-hour period with teams lead by experts blanketing a designated area within a specified time to determine all living species within the area. While some Virginia sites did the full in-depth exploration, most – like YRSP - were abbreviated in duration. But HRC’s enthusiasm for this citizen science project was amazing, and the results surely rivaled those of the more extended efforts.

Twenty-three of our fellow Master Naturalists leapt at the opportunity to lend their skills in locating and identifying all species of animals and plants within the park. We established three teams, one to hike the up-and-down terrains of the Taskinas Trail, led by Nancy Barnhart; one to cover the Main Park areas in proximity to the Visitor’s Center and the Beaver Pond, led by Shirley Devan; and a third one for the outer park reaches off the Backbone and Woodlands Bluebird trails, led by Les Lawrence.

The three teams spotted and identified (along with taking many photos) 52 bird species, 11 species of butterflies (including the first northern duskywing of the season), 9 different kinds of amphibians, 6 reptiles, and 4 different mammals (mainly by scat and tracks). And, thanks mainly to Gary Driscole and Jeff Honig, our lists included 60 different varieties of plants. That’s a good day by anybody’s standards. Not only did we have some great spotters and photographers, Sonny Bowers produced an excellent video of the day’s activities.



Participants pictured left include: Nancy Barnhart, Portia Belden, Felice Bond, Ginny Broome, Linda Cole, Renee Dallman, Shirley Devan, Gary Driscole, Adrienne Frank, Shan Gill, Nancy Gore, Hart Haynes, Thad Hecht, Jeff Honig, Judy Jones, Les Lawrence, Fred Matthies, Sue Mutell, Lisa Nickel, Allister Perkinson, Catherine Short, Brenda Uekert, Karen Wilson. Not in photo: George Reiske.

**It's an Addiction: Virginia's Breeding Bird Atlas  
by Shirley Devan**

Everybody I talk to hears about Virginia's Breeding Bird Atlas – from me! Lunched last week with a friend who is not a “birder” but who watches the birds from her sunroom window. She lives in my “Priority Block” and I asked her to be on the lookout for breeding behavior in her backyard birds: bird nests in shrubbery, adults feeding newly fledged birds around the yard, newly fledged birds at her feeder, etc.

Sure enough, I heard from her this morning: “Female downy woodpecker feeding a youngster at our suet feeder. Little one can barely fly.” That's confirmed evidence of Downy Woodpeckers breeding in my Priority Block! Yea!

Last week at our neighborhood Kentucky Derby party in our neighbor's driveway, I noticed Chipping Sparrows trying to enter the 5' tall leland cypress tree at the corner of their garage. However, they were spooked by too many celebrants drinking Mint Juleps to actually go into the shrub. I noticed their hovering and looked in the shrub to find a perfect little nest with three eggs. Confirmed breeding by Chipping Sparrows in my neighborhood block! Yea!

Did I mention that this breeding bird atlas is addictive? Whenever I see

Canada Geese and their young on the roadside, my first reaction is – “confirmed breeding behavior!” And I record it in eBird.

If you see evidence of breeding behavior in your yard or neighborhood, let me know. I just need the date and your address and I'll enter it into eBird. If you can grab a photo, that would be great too. After all, everybody lives in a “block” that needs to be surveyed.

You can also do it yourself. All you need is an eBird account. If you participated in Project Feederwatch this past winter, then you have an account with Cornell Lab of Ornithology and you can go to eBird to submit your observations: <http://ebird.org/ebird/atlasva/submit>

I'll be glad to help you find your way in eBird!

This Breeding Bird Atlas is so important! We need everyone's eyes, ears, and observations.

By the end of 4 ½ years of atlasing, I'll probably need therapy!

[If you missed my note introducing the Atlas in the April newsletter, let me know and I'll send you a copy.]



Blue-gray Gnatcatcher at nest May 12, 2016



American Robin on nest May 12, 2016

### Hampton Roads Sanitation District York River Treatment Plant Tour by Stephanie Schmuck

We had a gorgeous day to visit the waste water treatment plant in Seaford. This 144 acre facility went online in 1983 and has expanded several times to accommodate increasing waste water volumes and regulations. There are only 25 staff members to run the facility 24 hours a day, 7 days a week and the plant processes an average of 15 million gallons of water a day. The entire process takes between 8 and 10 hours to complete. This facility only processes household and industrial waste water. Some areas, such as Washington D.C. process all wastewater, but all of the storm water in our area flows directly into our waterways.

Before 1940 all of the wastewater from our homes and industries flowed untreated directly into the waterways. This caused severe pollution problems in our river systems and mostly due to the petitioning of the shellfish industry in the 1930's new wastewater management practices were put in place. This was still very basic treatment, but better than nothing. Most of what they do today uses bacterial systems that would naturally occur in nature. They just magnify those systems to cope with the waste load.

When waste water leaves your house it flows by gravity to a collecting area at a pumping station. At the pump stations there are often grinders that break down debris to reduce clogging of the pipes. The pump stations lift the water and pump it into bigger lines. By the time it comes to the plant it is flowing in 48 inch pipes. This is where we began our tour.

On our way to this end of the facility, being a bunch of master naturalists, we immediately noticed what looked like a dead deer lying in the grass. It was a coyote decoy that had fallen over. This is a brilliant way to deter the flocks of geese that would otherwise enjoy the lush grass that grows around the processing plant and make an awful mess with their waste.

There was a surprising lack of foul odor except for when we arrived at the start of the process. As the water arrives the volume is measured and it flows through ½ inch metal screens to filter out the large debris. It then flows into grit removal tanks as the gravel and sand can be very abrasive on the equipment. After degritting, the water is aerated and treated to remove the foul smelling hydrogen sulphide. The toilet paper, debris, and grit are collected and sent to the landfill. From here the water is transferred to one of 3 circular primary clarifiers.

Each of the primary clarifiers can hold up to 600,000 gallons and it takes 1-2 hours in this stage. The water slows down to allow solids to settle out of the water and for floating debris, fats and grease to be skimmed off the top. A large raking system at the bottom of the tank routes the settled solids to gravity thickeners while the floating scum is sent to the landfill. The water at the end of this still contained a lot of bacteria, suspended particles, chemicals and dissolved nutrients and looked very black, but until the 1970's this is what was treated with chlorine and

pumped back into the rivers as treated water. In the 1970s the Clean Water Act prompted facilities to further treat their water and there have been several other regulations put in place since.

From the primary clarifiers the water is now transferred to one of six aeration tanks where multi-stage centrifugal blowers pump air into fine-bubble diffusers. This helps to circulate the water and provide optimal conditions for bacteria to digest the organic material in the water. At this stage the water has changed from black to a light brown. The bacteria are naturally occurring but they frequently sample and will occasionally add bacteria that are better at digesting the organic waste. After 3-4 hours in these digestion tanks the water goes to 3 circular secondary clarifier tanks that can each hold up to 1 million gallons.

The water in these tanks was much clearer but the growth of algae around the sides of the tanks showed that there were still a lot of dissolved nutrients. The sludge that is removed from these tanks is full of the beneficial bacteria so it is removed and sent back to the head of the aeration tanks to be mixed with the water coming from the primary clarifiers. From here the water used to be chlorinated to kill any remaining bacteria and pumped into the river. In 2008 due to new regulations the denitrification portion of their process was added. So now the water leaves the secondary clarifiers after 1-2 hours and is pumped into nine filters. Each filter consists of a 6ft bed of substrate similar to pea gravel that provides an anoxic zone for specialized microorganisms to convert oxidized nitrogen

compounds into nitrogen gas. They feed these microbes methanol and clean the filters every couple of days. Periodically the substrate is bumped to help release the nitrogen gas into the atmosphere. We were able to see this happening and there was a lot of gas bubbling up out of the tank. The water only stays in these filters for about an hour. The water from here was very clear and we even saw a small rainbow at the spillway of the tank.

From here the water circulates for about half an hour through a disinfection tank where they add sodium hypochlorite in a 12.5% bleach solution to the water. The water looks as clean as what comes out of your own faucet. They then add sodium bisulphite to dechlorinate the water before pumping it out to the cooling canal of Virginia Power where it is discharged into the York River. A new line is being installed that will take the water out 3,500 ft into the river where the end of the pipe will be buried and a diffuser will come up out of the sediment to release the water.

We did not see the processing of the solids, but they are basically dewatered, thickened, digested by microorganisms to reduce volatile solids and decrease the volume of the biosolids and dewatered again. The methane that is produced in this process is partially used to heat boilers, but most of it is flared off. The remaining biosolids are sent to a contract composting facility in Waverly where they process it and sell it on. HRSD used to compost it themselves and sold it as Nutri-Green but it is no longer financially feasible for their facility.



## HISTORIC RIVERS CHAPTER

Here are some other bits of information we learned. The Williamsburg plant was put in place mostly due to the waste water output of the Busch beer industry. There are a lot of mechanical things that can go wrong, so they try to avoid shutdowns by frequent preventative maintenance. When we visited they had 1/3 of the facility closed for maintenance. It costs about \$50,000 per month in electricity alone to run their facility. Increases in rates will be due mostly to pipe maintenance and repair within the community. Most of our drinking water comes from the Potomac aquifer and there is talk of using the processed wastewater to recharge the aquifer. They use iron salts to tie up phosphates and sodium hydroxide for pH balance. Pharmaceuticals and other chemicals are not filtered out. Fats and grease cause the most

trouble and we were encouraged to dispose of these in the trash rather than pouring them down the drain.

We were shown a short video on the process that you can view by visiting <https://www.youtube.com/watch?v=A2FmNrEmowE&feature=youtu.be>

Here is one specific to the HRSD Atlantic Plant in Virginia Beach

<https://www.youtube.com/watch?v=i9L45sC20qk>

It was very enjoyable, educational and interesting. Thanks to Bill Vanzetta for organizing this and to Plant Manager, Andy Nelson, for being such a knowledgeable and accommodating guide.



## Nature Sleuthing by Cheryl Jacobson

Have you ever had the desire to become a Sleuth? Well, how about a Nature Sleuth? The children at James River Elementary have been honing their nature sleuthing skills every week in the After School Nature Sleuthing Club. After School clubs at James River Elementary run twice a year for twelve weeks. This is the second year that the club has been offered by Cheryl Jacobson with the assistance of other Master Naturalists.

The goals of the club as explained to the children and their parents are: to learn to use a magnifying glass just like a real detective; to learn the skills of a detective to seek out, find, and identify living things in the school yard and adjoining woods; to learn about the needs of living creatures and what you can do to assure their survival for all to enjoy now and in the future; to come eye to eye with frogs, toads, insects, etc. ; to use mug shots

(field guides) to learn to identify the name of birds, butterflies, and trees; to learn to use all the senses of a good detective (hearing, seeing, touching, smelling etc.); and to earn a Reward for finding the Most Wanted (State Bird, State Insect, State Fossil, State Tree). But most of all the goal is to just enjoy being outdoors in Nature.

Without the help of other Master Naturalists, (Sherry Brubaker, Catherine Short, and Joni Carlson), the club would not be as successful. Photo left below shows Joni Carlson and I when she presented about Monarchs. Photo right below was taken on the same day by one of the student photo club members for their school paper and shared with me. It shows us enjoying the sunny afternoon when Joanie, the "Nature Detectives", and I released just hatched preying mantis at the school yard.





Come and learn about local butterflies from HRC member **Adrienne Frank** on **Thursday June 2nd 7:00 - Kitzinger Room - James City County Library!** Did you know that more than 80 different species have been spotted in the Williamsburg area? Learn how to identify these beautiful creatures and understand their behavior. The presentation will also cover choosing the best plants to attract butterflies to your yard.

### Butterfly Festival to Return in August by Judy Jones

It is with great excitement that the Williamsburg Botanical Garden will once again offer to our community a Butterfly Festival at the Williamsburg Botanical Gardens at Freedom Park on August 6<sup>th</sup> and 7<sup>th</sup>. This festival has several parts, but the main and most exciting focus will be two butterfly tents with a total of over 500 butterflies enjoying those hot August days. We will also offer craft activities for children as well as a costumed butterfly volunteer wandering around looking cute. We will have educational programs for families, children, and adults throughout the two days. In order to make this happen, we need to enlist volunteers. These folks fit into four categories....

- Docents – these folks stand inside the tent and help folks to hold butterflies, take photos, ‘dust’ the folks who are exiting, and hand out nectar sticks as folks enter.
- Educational Specialists – these folks are willing to help with the programs and also stand inside the tent and answer question.
- Set-up/take-down volunteers – these folks help out with the set up at 10:00 Friday morning and take down Sunday afternoon after the butterfly release at 4:30. We especially want strong, tall folks who can lift things up high!!!
- Butterfly-costumed volunteers to wander around and look darling!



I'll ask for volunteers as the dates draw closer but for now please put these dates on your calendar to save them. And then begin to spread the word around the region....the Butterfly Festival is back!!!



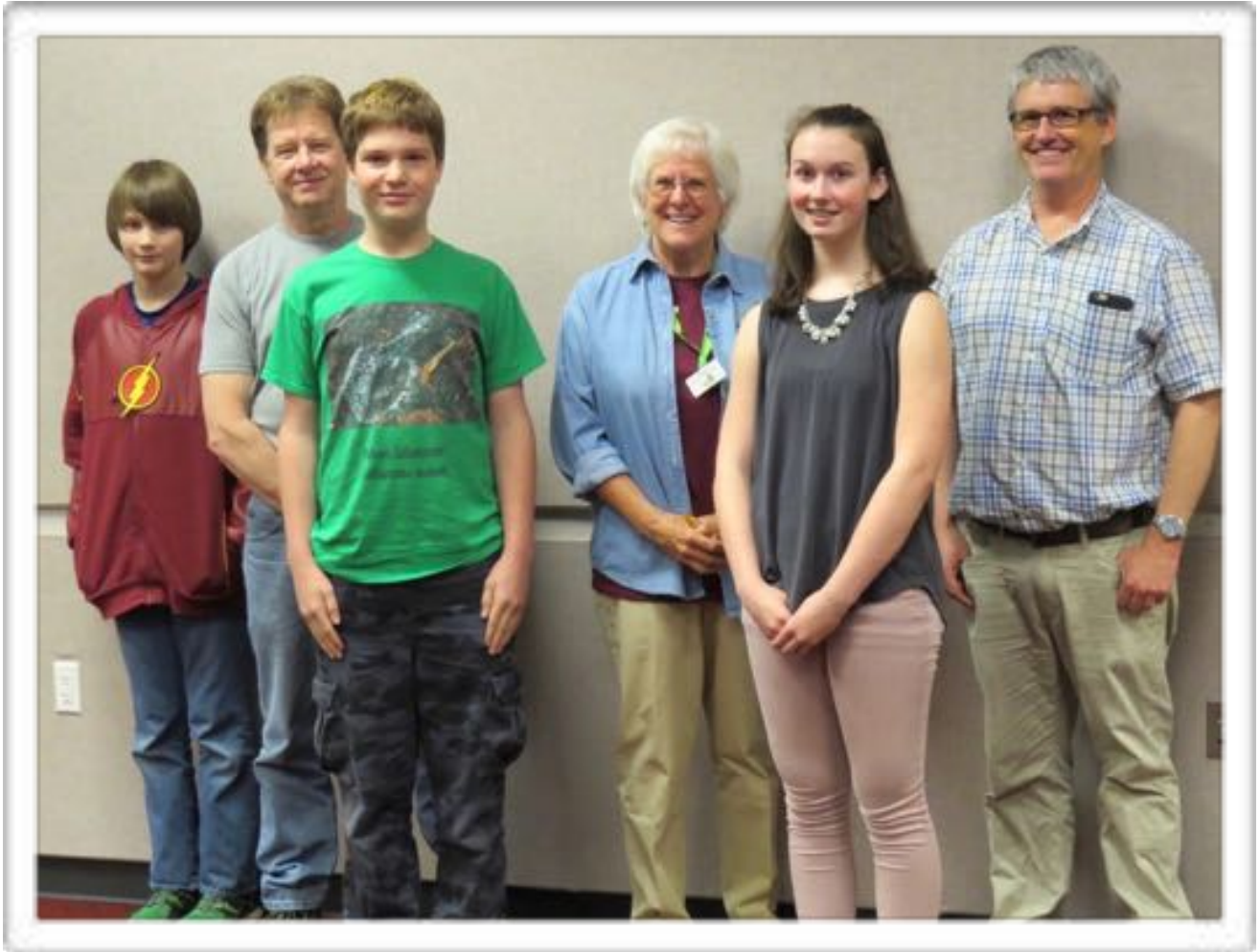
**THANKS IN ADVANCE FOR HELPING US MAKE THIS WORK....**

Trivia Challenge

What are male, female, and baby rabbits called?

Answer on page 19

**Nancy Norton Scholarship Winners Introduced  
by Judy Jones**



The 2016 HRC Nancy Norton Scholarship winners for this summer's Nature Camp were introduced at the HRC General Meeting on May 11. The winners, in the front row, are Ned Rose and Zoe Averett. Behind Ned is his father Robert and brother, standing in the center is Chapter President Judy Jones, and behind and to the right of Zoe is her father Todd.

## Mastodon Update by Kathy Cross

Work continues on the Mastodon bones at Dr. Jerre Johnson's house. So far various bones have been painstakingly put together by matching fragments and sections together. One of the volunteers brought his grandson (pictured with Jere below) to show him what the bones looked like. Dr. Jerre brought the group downstairs where the two tusks are. Still wrapped in plaster of paris, burlap and foil, Jerre carefully cut into the material to reveal a portion of the tusk. It still looked just like it had when we carried it out of the pit last September. The next step will be to unwrap the entire tusk in order to continue the preservation process. Thanks, once more to the VMN volunteers and their friends for all your patience and help.



*Editor's note: The following is an article about a naturalist experience Roger Gosden enjoyed on a trip to New Zealand. He suggested such articles might be interesting occasional inputs to the newsletter. Other members are encouraged to provide similar articles and after a few are published we can gauge the membership's reaction to them. Thanks Roger for the suggestion and first article.*

### Ghost of the Moa on Sanctuary Mountain by Roger Gosden

We have been tramping up a gently sloping meadow and stopped to gaze through the gloaming at the fuzzy forest border fifty yards ahead. Looking back to the west, afternoon thunder-heads are dispersing into ribbon clouds braided with gold from a sun that has already rolled over the world's edge. The sky has broken open for the first stars to twinkle and a half-moon to peep out. Lines of hills below look like furling gray waves into the distance, with a dark form lying in one valley like a sleeping giant. Middle Earth is going to sleep as the evening wears on, apart from a few lighted homesteads in the direction of Hobbiton.

The scene wrenches memory back to boyhood days. I would take off after supper with a camera around my neck for flash photography of badgers and foxes emerging from their dens in the twilight. Then, I was headed for a twenty acre "forest" where the orange glow from London never went out at night; now, we stride towards a forested mountain which is disappearing into a primal darkness. Then, it was the North Star I traced from pointers on the Plough (Big Dipper); here, it is the Southern Cross that guides navigators. Then, I used to peer into a village pond for frogs and newts before reaching my destination; now, as I look at the murky giant I remember how it was Lake Karapiro a few hours ago, sparkling in sunshine and from the splash of practicing Olympic rowers.

My son and I have come for the wildlife of the New Zealand night, and specifically for kiwis. We came for prejudice sake, favoring native feather and beak over foreign fur and fang. The closer to

the forest the further behind we leave familiar creatures introduced from other lands that have created havoc in the countryside—deer, rabbits, hedgehogs, stoats, ferrets, possums, feral dogs and cats. But when we enter the "Maunga" we will tread the forest lightly, respectfully, even reverentially, as the sole aliens.

Maungatautari (<http://www.maungatrust.org>) became "Sanctuary Mountain" some sixteen years ago when it was encircled by a 47 km pest-proof fence, the longest of its kind in the world. Foreign predators and browsers were eliminated inside the preserve along with as many invasive plants as could be found so that native species could be reintroduced and flourish. For millions of years before humans discovered New Zealand this was an Eden for wildlife and an evolutionary laboratory where strange forms evolved, yet never a serpent. It was an unnecessary luxury for some birds to keep the powers of flight, and gigantism evolved in the absence of large predators except for the Haast Eagle. But the helpless waddlers and megafauna were under a pressure they could not resist when human migrants started arriving some 800 years ago bringing with them (accidentally or deliberately) a menagerie that drove the moas and other amazing creatures to extinction. Many other endemic species barely hang on today, mostly where predators cannot reach them and their natural habitat survives in the relative safety of offshore islands.

The Maunga was never completely logged, and a good many native trees survive in inaccessible places or by luck. Thankfully there

there have been beneficent landlords since the days it was owned by a Maori queen, yet the native fauna never fared as well as the flora. At last it is safe to reintroduce some “originals”, such as kiwi, kaka, kokako, takahe, hi-hi, kakariki and giant crickets. I have seen some of them in daylight, but the shier ones only rouse after dark.

Tom is leading me towards a pinpoint of red light in the blackness at the northern entrance to the preserve. He feels for a button he knows will open the security gate so we can step inside a large wire cage and exit into the forest through another gate.

Once inside, we turn on our LED headlamps to look around. The fence is made of wire mesh about 8 feet tall, and there is a thin wire on top suspended by insulators for shocking possums and other agile invaders. To foil the most determined burrower, the fence is buried deep in the ground. I tilt my head to shine light on an information board that explains why and how the Maunga became the first large onshore preserve. It is a story of vision and volunteers to remember when I get home to Virginia.

I am now following the ellipse of light cast by Tom’s lamp on the narrow track. We wind between stands of tree ferns whose fronds lean on long stout stems like enormous fans, and walk under the boughs of unidentified trees (I wonder if any is the famed kauri). None of the trees in this part of the preserve is enormous, perhaps because it was clear-cut years ago and is still regenerating. Elsewhere I have seen some giants, including the rimu which provides nutrient-rich fruit in mast years for kakapo chicks to gorge on. This giant, flightless parrot survives in tiny numbers offshore, but one day this may become its first onshore sanctuary.

The bush grows densely on the rich volcanic soil in an ideal climate, though not as luxuriantly as a tropical forest. We keep to the track and won’t risk getting lost by plunging inside. There

are numerous lianas dangling from the taller trees like hawsers dragging from ships in a harbor, and lots of other epiphytes clinging to boles and boughs. As I lean back to throw my light on the underside of graceful fronds of silver ferns I understand why this pteridophyte is a national emblem. It took the darkness for me to appreciate its full beauty, a silver umbrella that could shelter the throne of a South Pacific queen, though New Zealanders rejected it from the design of a new national flag in a referendum this year.

The forest is silent apart from the rattling stream that runs close to the track and an occasional cry as we startle a roosting bird. We stop and turn off our lamps. Although only fifteen feet apart, Tom is suddenly invisible, but I know from experience in woods at night that if we wait for half-an-hour we will be fully dark-adjusted and able to see each other’s ghostly outline and the way ahead, however faintly. But suddenly Tom breaks the silence, exclaiming, “Hey, look!” His night sight is better than mine, but I soon see the amazing spectacle of hundreds of beads of blue-green lights in the bank alongside the track. The word *awesome* is too hackneyed to express the emotion of being surprised by a joyful sight that was never intended for our pleasure but given abundantly all the same. I feel as if I have parachuted into a movie set where elves have strung fairy lights to guide walkers to a mysterious destination. Perhaps if we hurry we will catch sight of Frodo.

The lights remind me of glowworms I saw while floating through the Waitomo caves. They are not worms, not even beetles, but the larvae of a kind of gnat (*Arachnocampa luminosa*) that use their lights to attract unwary prey to sticky threads dangling from cave roofs, and like “wreckers” of yore along the English coast. When I turn my lamp on and bring it very close to one of them it fades instantly, and a brown grub comes into view and crawls away.



We have tramped nearly a mile into the preserve without seeing or hearing a kiwi. Tom is confident that they are here but has stopped beside a tall tree to examine a box over a foot long and screwed to its bole at shoulder height. "It's a weta refuge," he explains as he twists the outer cover to reveal a narrow passage under the acrylic inner lining. "No one at home," he sighs. The Giant Weta (*Deinacrida* spp.) is a cricket 4 inches in length and heavier than a sparrow. I am sorry to miss the largest insect in the world, but he has already switched my attention by crouching to peer into the hollow base of the tree. "That's huge!" He points from a safe distance at a black tunnelweb spider (*Porrhothele antipodiana*), and I watch it scuttle out of sight.

If the unexpected is sometimes the most memorable part of a journey, grasping the most anticipated is often the sweetest. We came for brown kiwis which breed here after a century of absence, but there is still no sign of them. I imagine one shuffling towards us like a shaggy specter, too short-sighted to see us and too distracted to bother looking up as it probes for insects and worms with nostrils at the end of its ridiculous beak. There is still a chance of hearing them when females emerge from their burrows or a hollow log after darkness to call their chick to go hunting, but we won't hear males whistling this long after the courtship season is over.

Brownies are the only kiwis on the mountain, and the commonest of the five species, but nowhere are they abundant (<http://www.kiwifoundation.org.nz>). I guess that to encounter one is to feel flung back to an epoch when their cousins roamed here as the avian equivalents of herbivorous dinosaurs, and it makes me sad to think we missed the moas by the blink of a few centuries. Kiwis are the smallest of the ratites, and small is beautiful because it helped them to evade the fate of their giant relatives, which now only live in the imagination or stiffly in museums.

*The skeleton of the great moa on iron crutches,*

*Broods over no great waste ...*

*Not I, some child born in a marvelous year,*

*Will learn the trick of standing upright here.*

From *The Skeleton of the Great Moa in the Canterbury Museum, Christchurch* by Allen Curnow (1943)

The return of kiwis to the bush is both a triumph and a dilemma for conservation because unless fresh blood is introduced here from other communities their health and reproductive success will suffer from inbreeding. A ranger comes during the breeding season with a muzzled dog whose nose is trained to find their nests. Some eggs laid in the preserve are taken away to incubate in a crèche where young birds are raised for transfer to other havens.

The chances of hearing a kiwi tonight are fading and we will soon turn back. We strain our ears now even harder for night sounds and hear a distant, drawn-out "ee-wee" which reminds me of a recording of a weka (a kind of rail). Could we be so lucky to stumble on a rare bird not listed here? Maybe it is only a frog or toad because "Hope is the thing with feathers." Something is now flying back and forth above us although we only hear it calling "*quor-quor*," and because it "comes with gossamer softness" I assume it is the owl morpork.

Peace will reign here again after our last footstep and click of the gate latch. To walk in the woods in darkness is to be a stranger in the domain of secretive creatures that eke out their existence largely unknown and unwatched. Nocturnal visitors never come for hunting or logging, but for watching. And to sit quietly is a far deeper experience than tramping for, as light yields to night, you can feel a progressive absorption with the trees and undergrowth, and a primitive imagination tricks you into thinking you have become invisible, all-seeing, all-hearing.

Perhaps even now a kiwi is close-by in the bush, watching and making fools of us. Next time I will try my luck by watching the path with my back against a tree, just as I did long ago in the badger wood. But wait ... I hear something yet, although certainly not a musical voice! A more apt description would be *guttural* because it sounds like someone is having a painful episode of retching. It is coming again and again, almost monotonously, and further off we can hear another—perhaps calling to the first. Tom is pulling out his mobile phone to check for a 3g signal—it is strong even here. He has found a

website with recordings of kiwis (<http://www.kiwisforkiwi.org>) and holds the phone between us as we wait for the mp3 to download. Yes, yes, that's it!

I can now add the kiwi to my list of species encountered in the wild, what birders call a life bird. It doesn't matter that we won't see it strutting through the forest as its strange ancestors have done for eons, because its spirit will live in my memory thanks to the Maunga.

*Drafted in New Zealand and posted at <http://rogergosden.com>*



## Future Master Naturalists by Kathy Cross

Pictured below are William and Mary students, along with Rob Till at the Grove Community garden. Rob started the garden several years ago to bring people together while enjoying a "common ground". Each section of the garden is cared for by an individual creating their own mini plot. Rob teaches his gardening friends about soil, plants, beneficial insects and enjoying the harvest! The students from William and Mary volunteer to help Rob weed, cultivate and plant the mini plots while gaining an education on horticulture.

Kathy Cross introduced everyone to the Virginia Master Naturalist program and answered questions they had. Some of the students will be graduating this summer, others will go off on vacation to return in the fall. All looked forward to their future and incorporating what they learned from Rob and Kathy today.



Trivia Challenge

Answer: Male a buck, female a doe, baby a kit or kitten. The act of giving birth is called kindling

## Continuing Education Opportunities

Please check the Chapter website for more information (<http://www.historicroivers.org>). Workshop registration may be required ahead of time.

**[CE] VIMS Science Under Sail: Oysters - Fee - May 18, 2016** from 2:00 pm to 4:00 pm. Embarks at Yorktown Waterfront

**[CE] WBC Monthly Meeting - Bob Schamerhorn, Photographer - May 18, 2016** from 7:00-9:00 pm at Integrative Science Center, Room 1127 at the W & Mary Campus

**[CE] New Quarter Park - Bird Walk - May 21, 2016** from 7:00 am to 10:00 am at New Quarter Park, meet at the parking lot near the office.

**[CE] VIMS Marine Science Day - May 21, 2016** from 10:00 am to 3:00 pm at VIMS - Watermen's Hall, Watermen's Visitor Center 1375 Greate Road Gloucester Point, VA

**[CE] VIMS Science Under Sail: Fishes big and small - Fee - May 25, 2016** from 2:00 pm to 4:00 pm. Embarks at Yorktown Waterfront

**[CE] WBC Bird Walk - May 28, 2016** from 7:00 am to 9:00 am at New Quarter Park, 1000 Lakeshead Dr., Williamsburg

**[CE] Hampton Roads Bird Club - Bird Walk - May 29, 2016** from 7:00-9:00 am at Newport News Park, parking lot near Ranger Station

**[CE] JCC Library - Butterfly Williamsburg - June 2, 2016** from 7:00 pm to 8:00 pm at James City County Library, 7770 Croaker Rd, Williamsburg, VA 23188

**[CE] HRBC Bird Walk - June 5, 2016** from 7:00-10:00 am at Newport News City Park

**[CE] HRC Monthly meeting - June 8, 2016** from 6:00 pm to 9:00 pm at JCC Library, 7770 Croaker Rd., Williamsburg

**[CE] WBC Bird Walk - June 11, 2016** from 7:00 am to 9:00 am at New Quarter Park, 1000 Lakeshead Dr., Williamsburg

**[CE] WBC - GROWING AND USING HERBS FOR WELLNESS - June 18, 2016** from 10:00 am to 11:00 am at Williamsburg Botanical Garden

**[CE] HRBC Bird Walk - June 19, 2016** from 7:00-10:00 am at Newport News Park