On June 18, 2012 an all day workshop on moths had been planned at The Arboretum, but due to insufficient registrations the workshop was cancelled. Instead Arboretum staff were treated to a fantastic half-day workshop on everything you wanted to know about moths. The instructor was Andalyne Tofflemire… who is currently the Naturalist at Cambridge Butterfly Conservatory.

Insects are the most successful creatures on earth… there are many orders of insects… but the top four are moths/ butterflies, flies, beetles and bees/wasps/ants. Of the order Lepidoptera … 90% are moths and 10% are butterflies. They are characterized by scaly wings… with colouring being derived from their tiny scales. These scales assist in keeping them warm. Their mouth is like a curly straw… allowing them to drink nectar. They are closely related to the order Trichoptera… a caddisfly… however these insects have hairy wings and no curly straw for a mouth.

And how does one differentiate between a butterfly and a moth? Simply look at the antennae… if the tip has a small ball or club it’s a butterfly. Moth’s antennae can be slightly different… they could be feathery, but they are always straight.

Moths complete a full metamorphosis… from egg to larvae to pupa and then the adult. Do you remember that insects have 6 legs? And caterpillars have 6 legs and up to 10 false legs, or crochets, which act like Velcro in allowing the caterpillar to move safely along a leaf, twig or other medium. If the caterpillar has more than 5 pairs of false legs

(World of Moths continued on page 4)
Coordinator's Corner

If you would like to contact me, you can do it in two recommended ways.
Please call 519 824 4120 ext. 53615
or email me at bparke@uoguelph.ca

Once again, our annual Arboretum Auxiliary Plant Sale has passed... but this time mother nature decided to provide a cool rain for our herbaceous plants, woodies, and customers and volunteers alike. All the plants and woodies were in great shape this year... thanks to the caring attention of volunteers throughout the growing season. Customers were lined-up and huddled under a makeshift tent first thing in the morning... waiting to get items from their wish list. It was great to see a great turnout of volunteers and staff too... the rain didn’t damper their spirits either.

Financial results of the Plant Sale will be forwarded in a separate e-mail, once available... but initial tallying of the cash register receipts indicates a ‘gross revenue’ of $22,079.04.

Thanks for everyone’s effort for another great sale. See you again next year.

A picture of a white-marked tussock moth caterpillar submitted by Arboretum volunteer, Donald McCarthy. Donald discovered this caterpillar in the Rose garden and Chris Earley identified it for him.

Bryna Belisle, summer Interpretive Naturalist aiding a snapping turtle across the road!

Winter 2012/2013 Issue of Arb Aux Issue #16
Planned Publication Date: mid to late January 2013
Submission deadline for articles and pictures: December 19, 2012

Volunteer Information Session #11
Date: Fall 2012, Wednesday October 17, 2012
Time: 3:30 – 4:30 pm.
Location: Board Room Arboretum Centre
Agenda will be forwarded in a separate e-mail to all Auxiliary members
Most of us have “bucket-lists” and mine included a trip to Alberta’s badlands, at Drumheller, Alberta, 150 km northeast of Calgary. While I’ve been to western Canada and in particular Alberta numerous times over the years, I’ve always been in too much of a hurry to see what has to be one of the most interesting areas on earth… Canada’s very own “Grand Canyon”. The valley is in stark comparison to the rolling, verdant prairie into which it has been carved.

Although the secrets contained in the valley go back over 72 million years to the time of the dinosaurs, the spectacular canyons carved out of the soft rock strata by the Red Deer River are very recent and are a result of glacial melt waters at the end of the last glaciation. In fact, they are only around 14,000 years old. Erosion still occurs at the rapid rate of 5mm/year. In parts of the valley, a protective cap of more resilient sandstone has allowed hoodoos to form. These monolithic, banded, geological formations rise from the valley floor and have an ethereal quality to them.

The badlands are so-called because they were originally thought to be little more than impediments to travel for the early settlers and not fit for agriculture. In reality, they are incredibly beautiful “painted deserts” with multi-coloured bands of red, grey, black and white rock, coral and clay, each representing millions of years of geology.

Each layer tells a story. For instance, several were formed from corals and other marine deposits from the time when this area was under a warm tropical sea; later, a sub-tropical wetland with giant redwoods, tree ferns and other flora resulted in layers of sedimentary rock and coal. The red sandstones are the result of river deposits and the thick grey mudstones and coal beds have resulted from swamps. Thick, white volcanic ash deposits are
the result of long periods of violent volcanic activity. The extensive coal and petroleum deposits in the area are the result of long buried pre-historic swamps and coral reefs.

Despite their name, the badlands are teeming with life. The area itself is described as semi-arid and the steep valleys contain desert plants and animals including four species of sage brush, three species of cactus, and other interesting species of plants and animals. Richardson ground squirrels abound.

The Drumheller badlands are considered one of the richest dinosaur hunting areas of the world. 35 different species of dinosaurs have been unearthed including hadrosaurs (duck-billed dinosaurs), horned ceratopsians, armoured ankylosaurs, dome-headed pachycephalasaurus, bird-mimic ornithomimids, swift dromaesaurus and most famously, Albertosaurus, a large carnivore. New specimens (and species) continue to be discovered as the valleys continue to erode. The Tyrell Museum, while relatively small when compared to other museums is excellent with hundreds of dinosaur and other pre-historic specimens preserved and on display… a must if you are in the area.

Much of Drumheller’s reputation for dinosaurs can be credited to Dr. Joseph Tyrell, a geologist on assignment to the Geological survey of Canada. While on an expedition in 1884 to map out coal deposits (which were abundant in the area), Tyrell made the first discovery of the Albertosaurus (which he named). While most of the area’s coal has long since been depleted and all of mines are now closed, fossils and tourism fill the void. Several local coal mines have been turned into museums and tours can be taken. If you like cold, foul-smelling, damp, dark, confined spaces deep inside the earth, this is for you.

then it is not a moth or butterfly caterpillar.

Moths are a master of camouflage… they could look like bark or even lichen on a tree. Some species actually look like scary insects… perhaps wasp like. Moths must be on the look-out for many predators… spiders, wasps, parasites and bats.

There are over 3000 variety of moths in Ontario alone… most are classified as micro-moths and many others as macro-moths. Before we were presented with pictures of many of these various moths we had a field trip outside… all armed with nets, trying to capture some of the day flying moths Many moths are night flying but not all. A black light and sheet had also been set up at the far side of the Nature Centre… gees, what an interesting array of moths which had collected on the sheet… all sizes, all colours.

Some moths have wonderful and bright coloured under wings. But before I give away all the secrets about moths… why don’t you consider signing up for the next moth workshop. Andalyne is so knowledgeable and with our half-day workshop we were given a sneak preview of what would be enjoyed on a full day workshop. This workshop will be offered again next year… so why not come out and enjoy an enthusiastic group who want to learn and marvel about the ‘Mysterious World of Moths’.
Trail Walks In and Around Guelph
Marg Gillies

Shortly after I moved to Guelph fourteen years ago, I signed up with a walking group through the continuing education program. At that time we were introduced to a number of walking trails in and around Guelph. Unfortunately as time passed and my life became busy with other activities these walks did not continue. However, this past spring and summer I was pleased to rediscover some of these trails with a small group of women. The trails that we enjoyed walking include those that form The Royal City Trail System (info on the internet) along with a number of trails in the nearby Guelph area that are connected to The Grand River Conservation Authority. Having walked a different trail each week, we discovered that each is different with its own unique attributes.

In late April and early May not only did we enjoy seeing the wild flowers along the Arboretum trails, but we were pleasantly surprised by the variety of wild flowers that we encountered along the Marden Nature Conservatory Trail a short distance north of Woodlawn Road. What a delight it was when in June we encountered a myriads of Canada anemones. These were found along the Eramosa River Trail off Victoria Road, especially near the old arched bridge on Stone Road as well as the Guelph Dam trail that begins further north from Victoria Road.

One of my favourite walks took place in late June just off Niska Road on a trail that threaded its way through old growth forest, open meadows and glades of hip-high ferns. As we followed the trail along the west side of the Speed River, there were several picture post card views of the gently flowing river water while various birds tunes could be heard from the trees beyond. The open meadows were a profusion of summer colours created by plants such as Queen Anne lace, swamp milkweed, motherwort along with huge masses of blue forget-me-not interspersed with the yellow of buttercups. What a special sight it was to watch a caterpillar feeding on a milkweed leaf!

Walks along both the Radial Line Trail off Watson Road and the Starkey Trail off Arkell Road led to walking up somewhat gentle inclines that ended with surprising views of expansive greenery in the surrounding countryside. In the quiet of the morning, it was a treat to enjoy these peaceful views with not a human structure in sight. In one sense, these quiet views seemed so far from the city but in reality so close. Having walked and enjoyed more than a dozen trails during the spring and summer, one cannot but help appreciate the efforts of those connected with the city’s park’s system or with rural conservation authorities in preserving this green space that is so easily accessible to anyone who enjoys nature and all that it offers each season. Our city is truly enriched by these special trails. No doubt these same trails will offer further surprises during the autumn and winter seasons.
Plants for sale were beautiful and healthy.

Keen customers waiting in the Rain

Go for it.
Monica Bibby, Volunteer and Ligita Taurins, Horticultural Technician—Gardener

Ben and Norma Fear—faithful Volunteers
Monthly Docent meetings at the Arboretum begin with ‘show and tell’. A criterion is something interesting we saw since the last meeting. Lots of scope for our diverse group.

Travels by members of the docent group often result in showing exotic and unusual items (surely not just to stump Chris Early, our fearless leader and hard to do!). But lots of observations are made very close to home if not in the Arboretum!

I live in a rural neighbourhood, where people share a lot of things, just like show and tell. In August my neighbour brought me the coolest gift. Casual glance, I thought it was a horned tomato worm. But a closer look showed the vision of blue. It was the caterpillar stage of the Cecropia moth, Ontario’s largest and most impressive moth.

This was the first time I had seen this large (close to 6”) green beauty. From it’s lovely red tubercles with black dots to the yellow ones like little Christmas decorations. And the blue, both tubercles and around its feet like little perfect sandals. The runways of Paris have nothing on this guy.

I put it in a Cherry tree. Hopefully it found a great place to build a cozy cocoon for the winter and I will see the impressive moth in the spring.