



# The Prairie Arborist

*The Official Publication of the ISA Prairie Chapter Issue 4 2016*



Picture submitted by Mike Allen  
American elm in Assiniboine Park, Winnipeg



Kevin Cassells

Well like they say, “time flies like an arrow, fruit flies like a banana”.

As 2016 wraps up I would like to thank all our volunteers, sponsors and supporters for helping to make this year one of the most

successful years in our Chapter’s history.

Two TRAQ workshops, both sold out. Our annual conference in Red Deer had the highest attendance in Chapter history. Our financial position is healthy going into 2017.

Registration is now open for a TRAQ workshop in Medicine Hat in February and another being planned for Edmonton for April.

Our Tree Climbing Competition will be in Saskatoon in the late summer.

The annual conference will be held in Moose Jaw Saskatchewan where Saskatchewan’s first commercial nursery existed in the early 1900’s. It was no small enterprise with over 250,000 cottonwoods, 100,000 Manitoba Maples and ash trees, and 100,000 cabbage plants .

Well, I wish you all a safe and successful 2017 and look forward to seeing you at our upcoming Chapter events.



## 2017 North American Tree Climbing Championship

October 20, 2017 - October 22, 2017  
Liberty Park,  
Salt Lake City, UT,

## TRAQ is BACK in 2017 and its in Medicine Hat

For details and upcoming workshops check out [TRAQ events](#)

[Tree Risk Assessment Candidate Handbook](#)  
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## For Immediate Release ISA Announces Upcoming Retirement of Executive Director Jim Skiera

CHAMPAIGN, III (Oct. 25, 2016) – After more than 22 years of service, James Skiera has announced his retirement as executive director of the International Society of Arboriculture (ISA) effective by the end of 2017.

Skiera began his career at ISA as associate executive director in 1994. His primary responsibilities were public relations and product and program development. He became executive director of the organization in 2004. Under Skiera’s leadership, ISA has grown to become the leading voice for arboriculture and professional tree care worldwide, serving more than 37,000 members and credential holders.

Skiera states, “It has been an honor to serve ISA for much of my professional life. To be part of its growth has truly been an enriching experience. It was a difficult decision to leave, but the timing is right. I have been working on a succession plan with ISA staff and the Board of Directors for several years. The Society is stronger today than it has ever been, and there is a foundation of talent in both staff and volunteer leadership, so I will leave with confidence that the organization will continue to thrive into the future.

The future is bright and I am certain ISA will continue to make the world a better place one tree at a time.” “Jim’s contributions to the success of ISA have been invaluable”, said ISA Board President Michelle Mitchell. “His passion and dedication to the profession of arboriculture is widely recognized and appreciated. The ISA Board of Directors expects to find a new executive director who will build upon Jim’s work within the organization.”

As per the established Succession Plan Policy, the ISA Board of Directors has appointed an Executive Director Transition Committee to manage the search process. This committee will be conducting a search to identify the next executive director.

Details of the search process will be posted at a later date on the ISA web-site.

Inquiries about the position can be sent to: [execsearch@isa-arbor.com](mailto:execsearch@isa-arbor.com)



## Save the Date

### The 2017 Prairie Chapter Conference and Tradeshow

will be in Moose Jaw, Saskatchewan  
At the October 23, 24

home of

### Mac the 32' Moose and the Tunnels of Moose Jaw

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Details will be at:  
<http://www.isaprairie.com> as they become available

## Save the Date

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Check the website for details  
Olds College. Olds, Alberta

October 22, Moose Jaw Saskatchewan  
At the conference

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### 2016 Conference



Thank you

## Next TRAQ Workshop will be in

Medicine Hat Alberta  
February 27, 28 and March 1  
Register [here](#).

Plans are in the works for a second  
TRAQ workshop in Edmonton during  
the week of April 24

Call Keith at the Prairie Chapter  
office to find out how you can host a  
TRAQ Workshop  
Phone 866-550-7464

## The 10th Edition of the Tree Appraisal Guide is getting closer to publication.

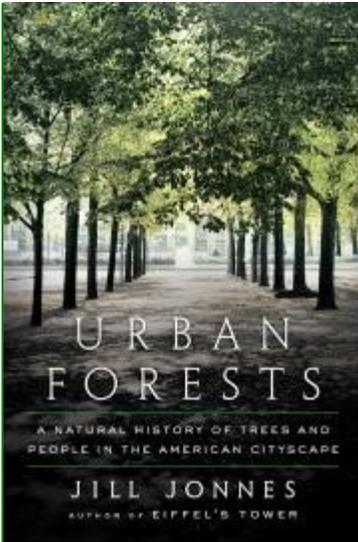
Draft release - Jan 2017

Comments received April 2017  
CTLA meets to review comments and finalize

May 2017 Manuscript sent to ISA

June 2017 Publication

Available for purchase December  
2017



It's a bit of a no-brainer that the trees gracing our sidewalks, parks and other urban spaces are pleasing to the eye, providing soothing shade in the harsh, barren concrete landscape. In city parks, trees provide a place for citizens to relax and birds and squirrels to reside. What's not to like about them?

But not many of us realize how much havoc our settlements have wreaked on

forests that predate our cities by millions of years, how our unwitting introduction of invasive insects has wiped out billions of our finest native trees and driven some arboreal species to the brink of extinction. And all this occurred without appreciation for the immense eco-

system services trees render in carbon storage, energy savings and flood mitigation — services that will only be more urgently required as our planet warms.

As humans continue to urbanize — more than half of us now live in cities — it becomes critically important to restore and conserve urban trees in harmonious coexistence with nature. Many “smart” cities have been doing this for years, of course, and some of the results have been impressive.

Much of this discussion and the overarching history and legacy of city trees is covered by author and historian **Jill Jonnes** in her recently published **Urban Forests: A Natural History of Trees and People in the American Cityscape** (Viking).

Urban Forests: What city trees do for us, and what we should do for them Posted by David Maxwell Braun of National Geographic Society on November 2, 2016

Full article can be found at: <http://voices.nationalgeographic.com/2016/11/02/urban-forests-what-city-trees-do-for-us-and-what-we-should-do-for-them/>

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Green spaces don't just look good. They may deter criminals, too.

Can a tree help prevent crime? It just might. Two new studies, led by U.S. Forest Service researchers, took a closer look at urban green space in Philadelphia, Baltimore and Youngstown, Ohio. In each of these cities, adding green space to crime-ridden areas helped reduce crime rates, the researchers found.

In 2000, Philadelphia launched a program to plant vegetation along roadways to help soak up rainwater. Researchers looked at 52 of these vegetation plots and compared them with control plots that didn't receive the greenery upgrade. After tracking 14 types of crime in nearby areas, researchers found that narcotics possession in those areas decreased by 18 to 27 percent, even as the rate for the rest of the city rose by 65 percent.

Michelle Kondo, a social scientist and lead researcher with the forest service, speculated the increased presence of city trucks and vans in the landscaped areas — for planting and maintenance — was enough to deter illicit activity.

A similar effect was noted in Youngstown, Ohio — a depressed Midwestern town known for its high rates of crime and unemployment. From 2010 to 2014, city officials em-

barked on a project to reclaim some of the city's empty lots and derelict buildings by converting them into green space. In 2011, they added another initiative that gave local communities funding to plant green space in vacant lots in whatever method they chose — lawns, community gardens, playgrounds and more.

When Kondo and her team compared crime around these vegetation plots with undeveloped plots in nearby areas, they found the areas around new green spaces had lower crime rates than elsewhere in the city. Interestingly, the crime reduction was different depending upon the type of green space that was developed. For example, lots that were planted with grass and maintained by contractors saw a reduction in property crimes such as theft and burglary, whereas community-maintained plots saw a sharp reduction in violent crime. This suggests that different types of green space could be developed to deter certain types of crime.

### A tidy yard is another line of defense

Kondo's study collaborates another forest service study conducted by researcher Morgan Grove on the link between [lawn care and crime in downtown Baltimore](#). Grove's study

looked at the level of lawn maintenance in 1,000 residential yards throughout Baltimore County. His team looked at everything from tree cover to litter to the presence of garden hoses. Not surprisingly, Grove found that well-maintained lawns were linked to lower crime rates than lawns that were given less care.

It's tempting to use income as the connection. After all, if you have the time and money to water your lawn, you probably live in a neighborhood that sees less crime. But Grove argued that the greenery itself helped to deter crime, by announcing to would-be criminals that there are "eyes on the street" that care for their neighborhood and would be more likely to report a crime.

The takeaway from these two studies is that urban green space may help to deter crime and could be a useful tool in city-wide crime prevention policies. We already know greenery is beautiful to look at and can help improve [mood and health](#) while reducing pollution. Now we can add crime-fighting to the list of vegetation's many benefits.

Need a better reason to plant a tree?

By [Jenn Savedge](#) posted on [MNN the Mother Nature Network](#)  
April 15, 2016

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Submitted by Kali Alcorn

Two years ago I was fortunate enough to attend the Canadian Urban Forest Conference in Victoria, BC. The conference was exceptional; bridging many of the concepts I studied in post secondary such as sustainable landscapes, biodiversity and green infrastructure with that of my most recent learning endeavours: Arboriculture. I was so impressed by this conference, what was learned and the networks gained, that I vowed I would attend the next one slated to occur in Laval in 2016. Anything is possible.

As planning was underway, one of the biggest decisions was to drive or fly? Flying is cheap and quick but what about all the possible stops along the way?

**Southwestern Ontario** was a must; its home and it had been two years since I was last there. Bless my family and friends for understanding my selfish yearning for knowledge and experience. **Winnipeg and Saskatoon**, because they are far enough away to not be an easy weekend trip from central Alberta but logical to squeeze in on the drive east. Also because I love those cities and the people in them. **Montreal (Laval)** is merely a 7 hour drive from my rural home base. The copious amount of

visiting and the fact that I wanted to bring my climbing gear along was enough to justify the drive. Regardless of the expense, the adventure would be worth it.

During the months prior to competing at the 2016 International Tree Climbing Championship in San Antonio while searching through the ISA websites to find information, I discovered the North American Tree Climbing Championship was the weekend following the conference in Laval. It was a feasible drive with enough time in between for the commute. It was fate.

While I was in San Antonio, I was able to make the acquaintance of two amazing and inspiring women by the names of Marilou Dussault (Quebec and North American Female Champion) and Krista Strating (Ontario Female Champion). Among our discussion, we realized that the Ontario and Quebec Tree Climbing Championships were around the same time.

Upon further research, it was in fact, three consecutive weekends of tree climbing championships with the conference in between. I could not ask for a more effortless sequence of events to come together and proposed to the ladies that we do a marathon of Climbing Competitions. They may have thought I was kidding, but no. After crunching numbers and dates, planning routes and contacting people I decided that five weeks was what was needed to make it happen. An incredible opportunity to learn, broaden my skills and knowledge plus the adventure and time with my loved ones was enough to commit to this epic journey.

The entire drive east was spectacular: the fascinating landscape of the Canadian badlands, the big sky, the antelope and interesting talk radio of the prairies, the transition into the Canadian Shield and eventually the hardwood forests. Winnipeg was an

absolute joy to spend a few days in over Labour Day weekend. I was able to spend time with some great tree folks, organized a recreational tree climb to which both the 2016 Prairie Chapter Climbing Champions attended and included some other inspiring climbers, and later, explored the city while spending quality time with my older sister.

Crossing Georgian Bay on a ferry I had always dreamed of taking as a child and arriving in rural south western Ontario was heart warming. So many welcomed sights, smells, and sounds from the natural realm of one's home soothe the soul like nothing else.

As my skills in Arboriculture have grown, so has my passion for it in and out of work. Therefore, this homecoming was unlike any other, seeing that part of the world with fresh eyes lusting for that impressive



My first ever ginkgo climb.  
The treasures you find in your  
friends backyards

canopy structure or a unique specimen tree. It was a whole new world and although I had grown up amongst these living masterpieces, I did not appreciate them like I did this time.

It was devastating to see the effects of the Emerald Ash Borer wreaking havoc in Ontario and Quebec and Dutch Elm Disease in Winnipeg; a sobering reality and something I have only read about came to life.

Having my climbing gear was great; I was able to do some fun climbs in amazing trees, teach some of my friends and family the basics of climbing and even did a little pruning.

**The first** of marathon of industry



events was the Ontario Tree Climbing Championship in St. Thomas. I was honored with the volunteer assignment of judging the work climb event, which is my favourite event. Set-up was a great experience; I worked with some really knowledgeable and talented humans, one being the one-and-only Wenda Li.

What an absolute pleasure to participate in an event with so many phenomenal climbers and industry people. It was a whirlwind of a day because they merge the preliminary day with the Masters challenge and they have a full slate of climbers both male and female.

Needless to say it was a hectic day but I learnt crucial lessons while judging and also from participating in set-up. The Work Climb event was hosted in a magnificent Red Oak, with a tricky limb walk and a section where rope angle was compromised while enroute to the pole station. It was really intriguing to observe the climbers as they danced around the obstacles and applied their critical thinking skills to work out difficult situations like those encountered in the field. One such situation which arose was the fact that it rained all day and the tree was unbelievably slippery.

**Second**, the Championnat Des Elagueurs du Quebec organized by the Societe Internaionale D'Arboriculture Quebec (SIAQ) at Le Centre de la Nature de Laval, which also has a world renowned horticulture/ arboriculture post secondary education facility. My intention here was to be a spectator. Fat chance! I was thrown into the competition at the last minute.

Although I had diligently been practising French with Audio CDs and an application I downloaded, I did not understand a thing when I arrived. It wouldn't be the first time I've been in

a situation where I didn't understand the language however perseverance and willingness pays off. I was able to recite the Aerial Rescue in English and use English audible warnings thankfully.

The people of SIAQ were so kind, welcoming and helpful which made for a very pleasant experience. I performed well and was able to communicate better with people by the end of it. I feel privileged to have been part of this group even for just one weekend.

**Third** was the Canadian Urban Forest Conference (CUFC) in Laval, QC. Presentations touched on innovative green infrastructure implementations and ideas, urban forest plans of cities and their trials and successes, urban forest significance in relation to population health and wellness, habitat corridors and wildlife movement through urban forests and so much more. I urge you, if given the



Practicing SRT on a rope wrench and installing a swing for my Aunt.

opportunity to attend this conference, take it in. The 2018 CUFC will be held in Vancouver and there is a rumour they will amalgamate with the ISA Pacific Northwest Chapter Conference and a few other industry events. This will be a tree-mendous opportunity to gain some knowledge and build some memories.

The **fourth and final** event of the trip was the North American Tree Climbing Championship which was at The Niagara Parks School of Horticulture Botanical Garden.

This event was extra special because it's the first time the North Americans have been held in Canada and also, the Diploma I have as a Landscape Technician, was attained from Niagara College and we did a huge portion of our plant field studies at this garden. It was a homecoming of sorts.

I chose to volunteer at this Championship and was really lucky to be assigned to the Belayed Speed Climb event (which is my favourite preliminary event!) What a fabulous experience! Not only the climb, which was a meandering route spiraling through several lower laterals exploding into the open leaders with some tricky reaches to get that bell in a gnarly old Norway Maple, but the team was so great! With Taylor Hammel as head judge and a fantastic group of worker bees all doing their part to make things run smooth while helping each other and encouraging the competitors.

Due to weather, there was a surprise element to this Championship. They decided to do the Secured Footlock and Belayed Speed Climb on the Friday, which originally was supposed to be gear check only, to avoid some of the challenges posed by the wet conditions forecasted for the following day. The competitors performed well and were in good spirits despite the surprise events and unfavourable weather.

The Prairie Chapter's Jesse Antonation took home first overall for Mens in the Preliminaries and had an outstanding climb in the Masters. It was Quebec that dominated in the Masters though and won first in Mens and Womens!

This trip was the most influential and important learning experience in my career as an Arborist. The new skills and techniques learned, the relationships built and the memories made are priceless.

One of the great lessons I have learned while traveling is appreciation, and I must say, out of this experience regardless of how wonderful all these other places are, there is something about the Prairie Chapter that will always be home to me. You all have been some of the kindest, most supportive and encouraging group of people I have been involved with and I am proud to represent this beautiful part of our country and the world no matter where I go in life.



Recreation Climb in a gorgeous Elm in St. Vital park, Carla Antonation and Kali Alcorn monkeying around!

We already know that urban trees can help deter crime and prompt us to smile a bit more. We know that they mitigate stormwater runoff, sequester carbon and provide vital habitats to city-dwelling critters while lending invaluable visual appeal to otherwise foliage-starved concrete jungles. No argument here; urban trees are pretty much the best.

We also know that the health benefits attached to urban trees extend well beyond their uncanny mood-improving abilities. Urban trees are air scrubbers nonpareil, dutifully sucking up the pollutants that city dwellers release. This, in turn, helps the denizens of major cities breathe a bit easier — or, in more stark terms, breathe at all.

A comprehensive new study recently released by the Nature Conservancy titled “Planting Healthy Air” takes an eye-opening deep dive into the relationship between

urban trees — or lack thereof — and public health, particularly potentially fatal respiratory diseases linked to dirty city air. The takeaway of the study — at 136 pages, there’s a lot to digest — is this: the planting of trees in cities cannot and should not be underestimated as it serves as one of the most cost-effective methods of curbing urban air pollution levels and combating the urban heat island effect. We’ve all taken refuge under the shady canopy of a tree to escape from the sweltering heat at one time or another, looked up and thought to ourselves phew, what a lifesaver. As the Nature Conservancy details, this is one hell of an understatement.

The lead authors of “Planting Healthy Air” conclude that by investing just \$4 per capita in tree-planting efforts, cities could have a lasting impact on the respiratory health of residents. Additional trees planted in cities

*(Continued on page 10)*



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(Continued from page 9)

could potentially help reverse a truly troubling reality: more than 3 million people across the globe perish each year from air pollution-related illnesses brought on by the inhalation of fine particulate matter released by human activities that involve the burning of fossil fuels. Transportation-borne particulate matter – that is, the deadly air pollution released when firing up the engine of a car – is a biggie here. Trees can remove particulate matter released within their immediate vicinity by as much as a quarter.

What’s more, tens of thousands of city dwellers die each year from dev-

astating heat waves. Given that canopies do a bang-up job of effectively cooling urban environments, their role in preventing heatwave-related deaths is also critical.

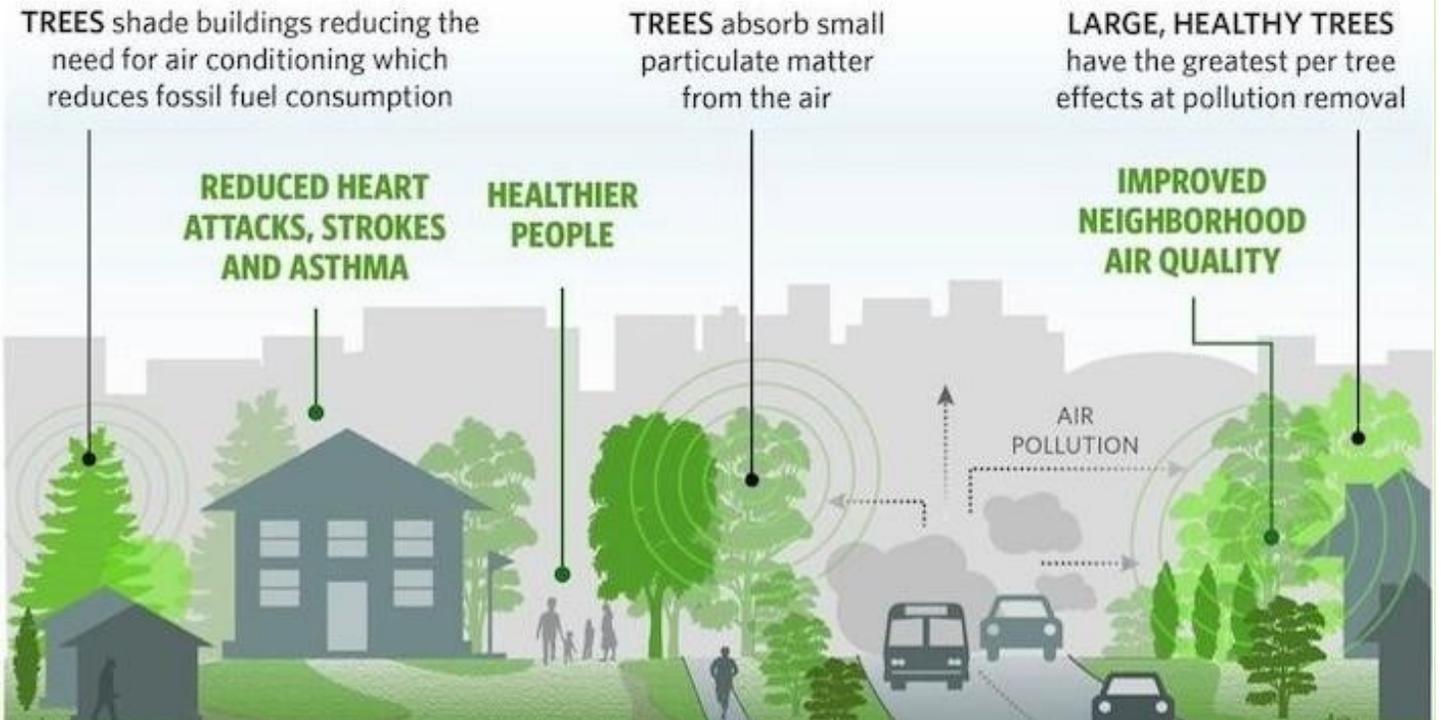
“Trees can have a significant local impact on pollution levels and temperatures,” notes Rob McDonald, the study’s primary author and a scientist for global cities at The Nature Conservancy, in a press statement.

“Urban trees can save lives and are just as cost-effective as more traditional solutions like putting scrubbers on smokestacks or painting roofs white.”

Globally, a “conservative” investment

of \$10 million in urban tree planting activities could help 68 million people breathe cleaner, less deadly air and provide 77 million urbanites with the peace of mind that the next heat wave won’t be their last. As the study’s authors point out, trees are the only solution that can do both: cool and clean air. Of course, certain cities would benefit more from per capita tree-planting efforts than others. Looking at 245 of the world’s largest cities, the study identifies which urban areas would reap the greatest return on investment (ROI) from more trees – and a lot of them.

Obviously, densely populated cities that suffer from both high levels of



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air pollution and are often struck with deadly heat waves top the list.

A majority of the cities found to have the greatest ROI in terms of both cleaner air and cooling are (somewhat predictably) big, crowded, hot and located in South Asia: Delhi and Mumbai, India; Dhaka, Bangladesh; Karachi, Pakistan; Kathmandu, Nepal, and on. The African cities of Cairo, Dakar and Freetown, Sierra Leone, also make the study's top-ROI list as does the Haitian capital of Port-au-Prince.

While the study doesn't provide case studies for all 245 cities taken into consideration, 15 cities across the globe with a desperate and not-so-desperate need for major tree-planting investments are further examined.

Atlanta, for example, was found to have a low ROI thanks in part to one of the [densest urban canopies](#) in North America. With trees covering 47.9 percent of the sprawling south-

eastern metropolis (the national average for U.S. cities in 27 percent), Atlanta's "city in the forest" nickname is more than well deserved. However, the study does point out that Atlanta's densely populated — and only getting denser — downtown neighborhoods could benefit from additional street-side trees, particularly with regard to heat mitigation.

Denver, touted as being a success story in combating rampant air pollution that once held the city in a sooty grip, is also noted as having an all-around low ROI that's largely due to extensive sustainability efforts and a low population density. However, like Atlanta, Denver's increasingly crowded downtown neighborhoods sport a high ROI.

And there's Los Angeles. While drought-ravaged, car-dependent L.A.'s citywide ROI is moderate when compared to other major global cities, localized tree-planting action is suggested in denser neighborhoods

of central L.A. along with the cities of Santa Monica and Long Beach. The study concludes that an annual investment of \$6.4 million in new trees in targeted neighborhoods could bring temperature-decreasing relief (a 2.7-degree Fahrenheit drop) to more than 400,000 Los Angelenos during Southern California's sweltering summers.

Click [here](#) to view "Planting Healthy Air" in full and to see how your city stacks up on the tree-planting ROI scale compared to other cities around the globe. While most North American cities do rank on the extreme low end of the ROI scale compared to let's say, Ho Chi Minh City, there is of course, always room for improvement. After all, a few more trees never hurt anyone.

**From "Don't underestimate the life-saving power of urban trees"**

*Major new study details the pollution-scrubbing, temperature-lowering qualities of the urban canopy.*

*By Matt Hickman or MNN -The Mother Nature Network November 3, 2016*



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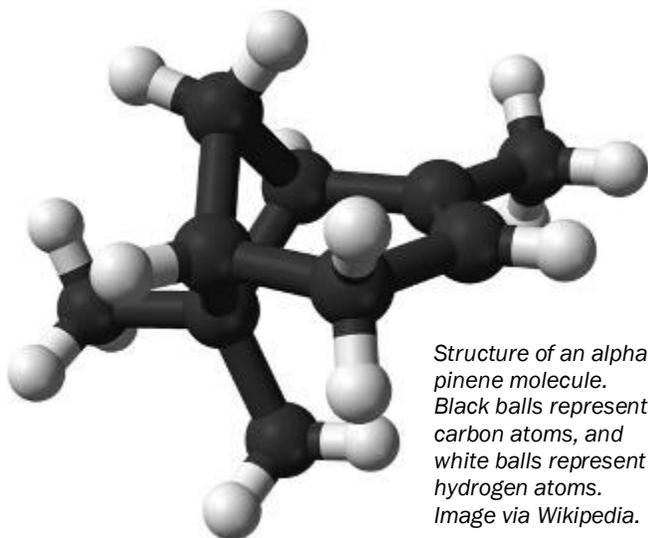
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By [Deanna Conners](#) in *Earth* December 22, 2016

Pine, spruce, and fir trees – Christmas tree favorites – produce chemicals called terpenes, which give them their special, distinctive scent.

I have never met a person that did not enjoy the smell of a pine, spruce, or fir tree. Be it the Christmas tree in your home or a grove of conifer trees in the forest, they smell sharp,



sweet, and refreshing. What gives conifer trees their scent? Well, most of that piney odor is due to chemical compounds called terpenes.

Terpenes are composed of carbon (C) and hydrogen (H) atoms, and they are built from different numbers of isoprene molecules, which have a chemical formula of  $C_5H_8$ . Small terpenes, known as monoterpenes, contain two isoprene units and have a chemical formula of  $C_{10}H_{16}$ . Pinene, which has a piney odor, is a monoterpene. Limonene, which has citrusy odor, is also a monoterpene. These two molecules,

among others, give conifer trees their distinctive scent.

Larger terpenes are known as diterpenes, triterpenes, and so forth, and they can take the shape of long chains or rings. Many diverse types of organisms produce terpenes besides conifers, including insects, marine algae, and sea slugs. Terpenes are abundant in conifer resin, and when a tree's bark is damaged, the resin flows out, hardens, and [protects the tree](#).



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The terpenes in this resin act as deterrents to herbivores, such as bark beetles who might otherwise feed on the tree, and as fungal growth inhibitors. Terpenes are also [released to the atmosphere](#) over conifer forests on hot summer days, where they can play a role in cloud seeding. Some scientists think that the resulting clouds that form may help to block sunlight and cool the forest.

Several consumer products are produced from terpenes. Perhaps one of the most widely known products is turpentine, which is used as a solvent to thin out oil-based paints. Terpenes are also used as fragrances in cleaning products and in medicines such as anti-malarial and anti-cancer drugs.

Recently, scientists have begun to explore the use of terpenes as [replacements for petroleum-based chemicals](#) for the production of things such as plastics and fuels. Terpenes are hydrocarbons much like petroleum products, but unlike petroleum they could be a potentially renewable resource.

Unfortunately, conifers do not produce great quantities of terpenes and so it may not be economically feasible to do this. However, in the future, scientists may be able to genetically engineer microorganisms to produce large quantities of terpenes. This is currently an active area of research. Just something to think about as you gaze at your Christmas tree.

Bottom line: Pine, spruce, and fir trees – favored trees for decorating during Christmas – produce terpenes, which give them a distinctive and refreshing scent. The terpenes present in the conifer sap help defend the trees from herbivores like bark beetles and fungal pathogens.

*Deanna Connors is an Environmental Scientist who holds a Ph.D. in Toxicology and an M.S. in Environmental Studies. Her interest in toxicology stems from having grown up near the Love Canal Superfund Site in New York.*

*Her current work is to provide high-quality scientific information to the public and decision-makers and to help build cross-disciplinary partnerships that help solve environmental problems. She writes about Earth science and nature conservation for EarthSky.*



Source: Pinterest



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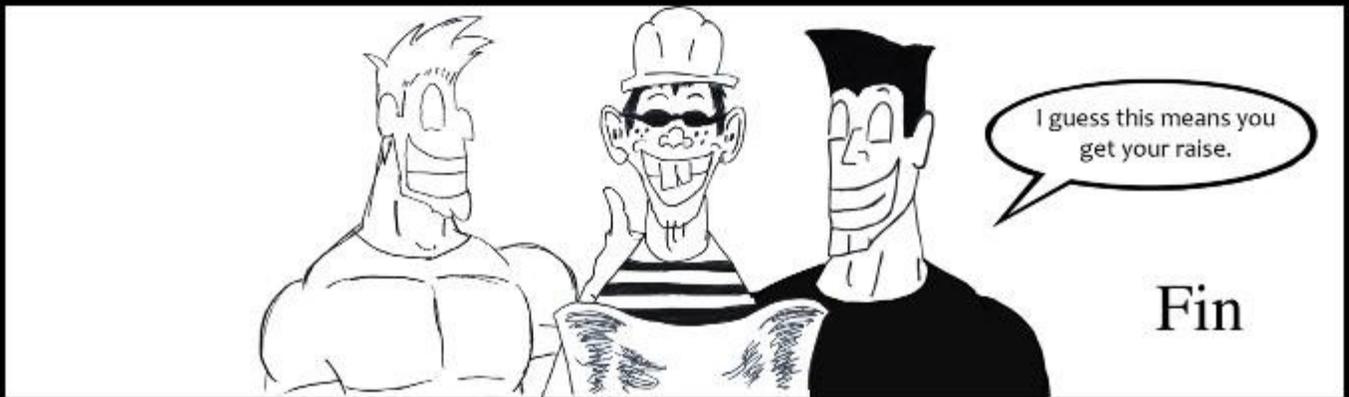
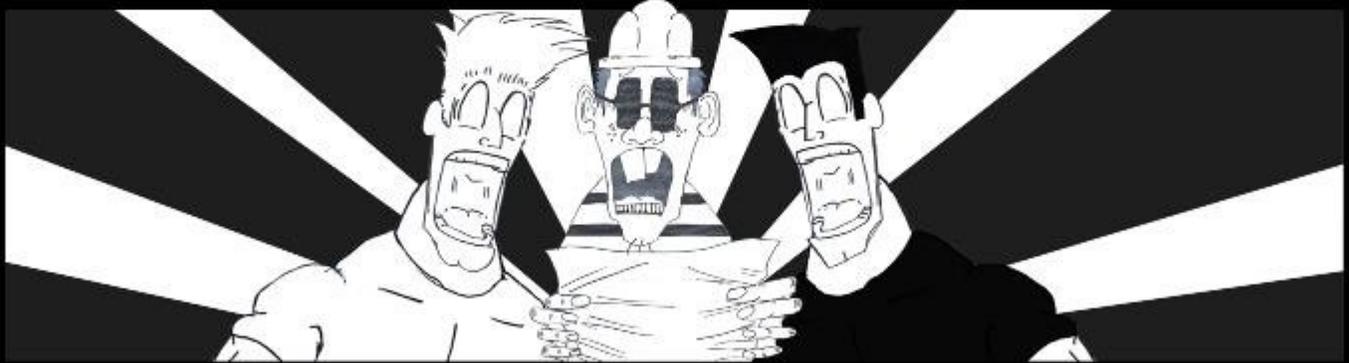
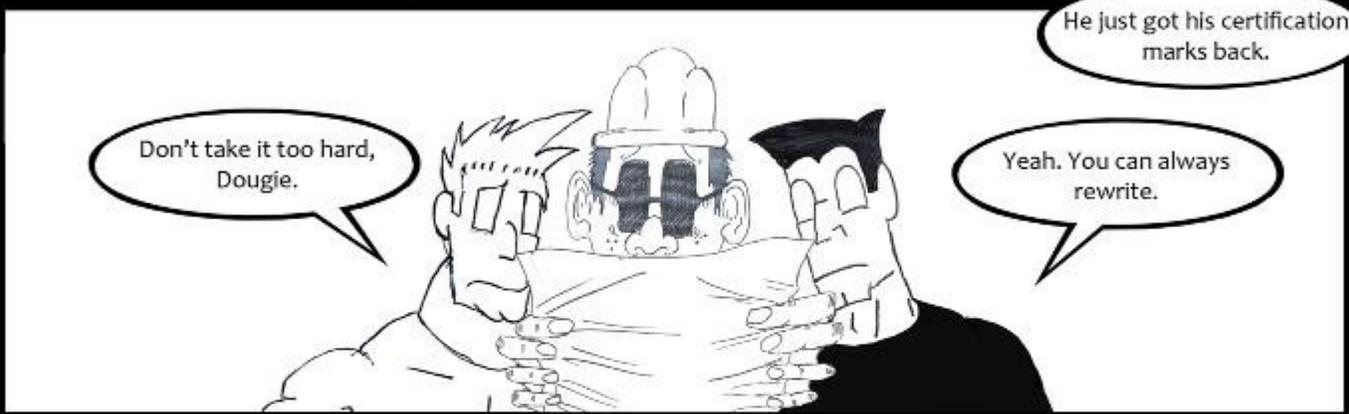
**The Big Wood Workshop**  
Victoria B.C. January 31st - February 2nd

**Spring 2017**

**Chainsaw Safety & Cutting Techniques**  
Edmonton, AB May 8th & Calgary May 12th

**Tree Pruning**  
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October	September 15
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Submit articles, ads, letters and written requests to:

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# QUALITY AT WORK

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- The lightweight of these pants will reduce fatigue and increase your manoeuvrability and comfort
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- Chain saw protection comes up to waistband



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