



Commonly Asked Questions

Why do so many spruce trees in Eastern Ontario seem to have been defoliating/dying the last few seasons?

This has been a question frequently asked by both our residential and commercial clients. From what we can gather a lot of this concern has resulted from spruce trees having heavy cone crops over the last few years. A local newspaper article discussing the fact that the presence of cones can indicate that a tree is in distress has also added to this distress (that felt by our clients that is!). While it is true that the production of cone crops can indicate a tree is in distress, regular crops are also a normal occurrence (trees need to reproduce themselves after all). The production of a 'distress crop' of cones results from a tree being under intense stress, usually as a result of the later stages of a disease infection. Near the end of the battle, the tree responds to the stress by attempting to 'move' itself via the seeds contained in its cones. However, the recent cone crops on local spruce is nothing more than the normal occurrence of reproductive cone crops. Such cone crops are cyclical and are triggered by tree species, age and seasonal weather patterns (esp. precipitation). Obviously, with the varied reasons why

they are induced, the presence of cone crops should be heeded and regular inspections scheduled to ensure the optimum health of your spruce trees.

Aside from cones crops, in 2006 numerous reports also came in regarding a widespread occurrence of spruce tree defoliation. This has taken the form of both full tree defoliation and other trees displaying the loss of needles from isolated portions of their crowns. From our investigations it appears two main culprits are responsible for these occurrences: Needle blight (*Rhizosphaera kalkhoffii*) and bark beetles (insect family *Scolytidae*).

Needle blight, a fungus, is responsible for causing full tree defoliation while the bark beetles usually cause the upper portions of an infested tree to discolour and drop its needles. In the first year of infection, the blight fungus usually progresses from the bottom of the tree upward and from the base of the branches outward. During the second year, the foliage turns yellow during the summer, becoming brown in the late summer or fall. These needles are often shed at this time. Only young trees have been known to be killed by needle blight. Optimizing the health of older trees should be the first line of defence against infection. For important individual trees fungicides can be used effectively but early detection of the disease is



important. The picture above shows the typical symptoms of needle blight.

Bark beetles feed and breed between the bark and wood of a host tree (see picture below). Since they often breed in trees initially stressed by other factors, they are considered a secondary pest. As such, little can be done to stop the damage by the time symptoms appear. Because they are opportunistic and generally attack trees already under stress from other factors, the importance of optimizing tree health cannot be overstated. Watering, deep-root fertilization, mulching, vertical mulching and any other treatments deemed helpful should be considered. Once positively identified, culling of infested trees will help reduce the spread to other nearby trees.



Did you know... The largest tree ever moved was 17.5m in height and weighed approximately 416,500kg? (source: Guinness Book of Records, 2006)



Integrated Forestree Services Inc. is a full-service

*forestry firm offering consulting and contracting services in urban forestry and forest management. **Integrated Forestree Services Inc. is fully Canadian owned and operated.***

Integrated Forestree Services Inc. is the only tree care firm in Ottawa with access to the services of a degreed (B.Sc.F.) Registered Professional Forester. Also, we guarantee that all of our working arborists are graduates of college-level arboricultural and/or forestry programs.

Integrated Forestree Services Inc.: About Our Services

Trees on residential and commercial properties, together with those on public lands, make up the City of Ottawa's urban forest. Just as with trees in forests, those in our urban forest provide many benefits including producing the oxygen we breath. However, because of their proximity to buildings, roads, sidewalks and the property of others, trees in urban areas need to be carefully maintained to ensure that they don't cause conflicts, or worse, catastrophes. This is where **Integrated Forestree Services Inc.** can help. We provide complete tree maintenance and management ser-

vices for both residential and commercial properties.

Tree Maintenance Services

- ✓ Tree and stump removal
- ✓ Tree pruning
- ✓ Cabling, bracing and propping (including storm damage repairs)
- ✓ Deep-root fertilizing
- ✓ Installation of root barriers
- ✓ Disease and insect control
- ✓ Systemic injections and organic spraying
- ✓ Vertical mulching
- ✓ Tree planting
- ✓ Delivery of composted woodchip mulch

Tree Management Programs

- ✓ Tree evaluation and hazard assessment (including use of a Resistograph Decay Detector)
- ✓ Assessment of treescapes
- ✓ Soil testing (for macro and micro nutrients, pH, texture, etc.)
- ✓ Disease and insect diagnostic services
- ✓ Tree valuation to International Society of Arboriculture Standards
- ✓ Species-to-site compatibility (prior to tree planting)
- ✓ Tree surveys - soil subsidence, etc.

How to Contact Us:

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We are members of the following associations:



New for 2007...

Perhaps the heading of this column should read improved for 2007! In order to improve our ability to remove stumps more efficiently and quickly, we've recently increased the horse power of our small, back-yard model stump grinder. While still able to fit through openings as narrow as 90cm, the increased power of this unit will allow us to tackle

larger stumps from trees either previously removed or those that we've removed from our clients' properties. As in the past, this service can be performed with the grindings left on site for use by our clients as mulch or with all grindings removed and the hole resulting from stump removal reinstated with topsoil and grass seed.