

Columbo on Conifers or, Why'd it Die?

I. We all lose plants

A. Good gardeners joke about it:

- ...not killing plants, you're not growing as a gardener. J.C. Raulston
- Been there, killed that. Bob Stewart
- You don't know the plant 'til you've killed it. Steven & Janet

B. Great gardeners learn *why*, and grow

Death is a great learning opportunity. If a plant blooms, or leans, or sheds leaves we can *guess* whether it's normal and growing well enough. When it dies it tells us a very definite story: Whatever you did or didn't do this time, that was *not* good.

C. TV detective Columbo will help show the way

- A bit sloppy but very effective
- Very observant of the living as well as of the dead
- Curious. Always "One more question."
- Always got his man. (Maybe we can't match that record but we can try.)

II. 'Why it died' starts while it's alive

A. Observe it in life, frequently and with focus.

- Shake hands with your plant.
- Learn about/ find a healthy plant of this type. Then compare:
 - Color of needle, twig, bark, root
 - Growth rate and habit
 - Normal cycle of growth, flowering/ fruiting, dormancy

B. Understand the fit between plant needs/ local environment.

- How does its native situation compare to what it has now for light, moisture, soil type, nutrient levels, exposure, urban influences, etc.
- Stress opens the door to _____ (Learn this plant's common afflictions)
 - Internet search
 - species name + symptom description, then choose .edu
 - Insects that Feed on Trees and Shrubs*, W. Johnson, H. Lyon
 - Diseases of Trees and Shrubs*, W. Sinclair, H. Lyon, W. Johnson
 - Diseases and Pests of Ornamental Plants*, P. Pirone
- View development of a common problem as an *indicator* of stress

C. Recognize early warning signals and some common causes:

- Pale new growth
 - May mean root tip problem
 - Nutrient deficiency (can be uptake/ root system failure)
 - Pesticide (pre-emergent herbicide - micronutrient deficiency)
- Scorched foliage may mean
 - Drought or root problem occurred as those cells grew

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- Tip dieback
 - Brown, die, then drop: Drought, root loss, pesticide
 - Wilt, yellow, hang on: Disconnect in cambium between shoot & root
- Growth slows or stops (post-establishment, 1 year for each 1" of trunk)
 - Girdling; limb, trunk or root
 - Excessive mulch or deep planting
- No root growth (Yes, you can/should check root growth!)
 - Inadequate light
 - Girdling/Potbound
- Notice incriminating details
 - Damage is spatially localized
 - Damage is coincidental, such as occurring only in spring, or it's concurrent with _____ (some other event)

D. Given multiple culprits, identify the worst

E. Make changes for the better, then *observe and rate impact of specific change*.

III. Notable cases involving the usual suspects

A. Water issues

- Drought
- Water logged/No air/Gas leak: Poor drainage is a serial killer!

B. Poor or unfortunate placement

- Shaded, weak, secondary problem did 'em in
- Excessive competition above or below
- Hardiness issue, winter losses outpace growth

D. Improper planting or other human folly

E. Girdling

F. Soil compaction/construction damage

G. Insects and diseases

IV. The dead speak; now you're ready to listen

A. Victim: Hemlock. Killer: _____

B. Victim: Japanese white pine. Killer: _____

C. Victim: Eastern white pine. Killer: _____

D. Victim: Hybrid yew. Killer: _____

More at GardenAtoZ.com Key words: Conifer college; unlock problems; needle retention; girdling; hemlock handicaps

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