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According to UK Extension Plant Pathologist Nicole Ward-Gauthier, Rhizosphaera needle cast is the most common disease of spruce in Kentucky. It causes needle drop in lower branches, resulting in a distinct thinned appearance. The fungal pathogen primarily infects spruce, but can also affect some pine species. White pines will lose some needles this time of the year, but it is a natural thinning and not a disease.

Needle Cast Of Spruce

Symptoms of Rhizosphaera needle cast are often noticed during summer when needles on lower branches turn purplish or brown. Within a few weeks, needles fall and lower limbs are left bare. Small, dark fruiting bodies called pycnidia form in stomata (pores of the needles) and can be used to confirm diagnoses. Pycnidia can easily be recognized with a hand lens or with the naked eye.

The life cycle of the fungus extends over a 15-month period. Infection takes place as spores (conidia) within these pycnidia are rain splashed from needle debris onto foliage. This infection process occurs primarily during spring but it can continue as long as conditions are rainy, such as this past summer. During the winter or following spring, pycnidia develop in infected needles, plugging stomata. Needle discoloration and needle drop occur during summer of the second season, resulting in thinning of lower canopies. If

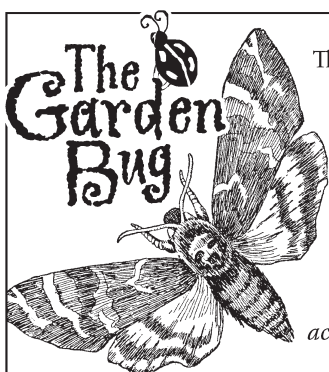
defoliation occurs 3 to 4 consecutive years, branch death is likely. Stressed trees are more susceptible to infection by *R. kalkhoffii* than healthy plants.

Disease management should consist of good cultural practices such as improved vigor and reduced plant stress, proper spacing to improve air circulation, and most importantly, good sanitation habits. During rainy seasons or in plantings with a history of disease, fungicides may be applied 2 consecutive years during

spring when fungi are most active. Fungicides that include chlorothalonil, copper, or mancozeb are effective when applied during needle emergence (mid-April) and again four weeks later.

For more information on needle cast diseases of conifers, contact the Estill County Extension Service at 723-4557 and ask for UK Extension Publication ID-85.

Educational programs of the Cooperative Extension Service serve all people regardless of race, color, age, sex, religion, disability or national origin.



Death's-head hawkmoth

This insect's skull-like markings on its back are unsettling, and when it is disturbed, it squeaks loudly, hops about and shrugs its wings up and down. It has long been superstitiously regarded as a harbinger of war, pestilence, hunger and death. Entomologists drew from mythology to name it: *acherontia* from the river of pain in the underworld, and *atropis*, the Fate who cuts the thread of life.

- Brenda Weaver

Source: www.nhm.ac.uk

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Wishing Well®

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 6 | 7 | 6 | 8 | 6 | 4 | 2 | 8 | 4 | 8 | 5 | 6 | 4 |
| B | A | E | C | T | D | B | A | A | R | H | O | R |
| 8 | 4 | 5 | 2 | 8 | 7 | 8 | 2 | 4 | 2 | 6 | 7 | 5 |
| E | I | A | E | F | F | O | L | N | I | L | A | S |
| 3 | 4 | 8 | 4 | 2 | 3 | 5 | 7 | 5 | 2 | 5 | 8 | 2 |
| B | G | R | T | E | O | T | S | E | V | N | Y | E |
| 3 | 8 | 3 | 2 | 4 | 6 | 4 | 2 | 5 | 6 | 2 | 7 | 8 |
| S | O | S | I | H | E | O | N | D | R | Y | T | U |
| 2 | 8 | 7 | 5 | 7 | 8 | 3 | 8 | 5 | 4 | 7 | 8 | 5 |
| O | R | S | E | T | S | S | E | C | U | A | L | I |
| 3 | 4 | 3 | 7 | 4 | 2 | 4 | 2 | 5 | 7 | 2 | 5 | 2 |
| A | G | Y | R | H | U | T | R | S | T | S | I | E |
| 8 | 6 | 2 | 5 | 6 | 3 | 5 | 3 | 5 | 3 | 6 | 2 | 3 |
| F | A | L | O | N | S | N | Y | S | E | T | F | S |

HERE IS A PLEASANT LITTLE GAME that will give you a message every day. It's a numerical puzzle designed to spell out your fortune. Count the letters in your first name. If the number of letters is 6 or more, subtract 4. If the number is less than 6, add 3. The result is your key number. Start at the upper left-hand corner and check one of your key numbers, left to right. Then read the message the letters under the checked figures give you.

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CryptoQuote

AXYDLBAAXR
is **LONGFELLOW**

One letter stands for another. In this sample, **A** is used for the three L's, **X** for the two O's, etc. Single letters, apostrophes, the length and formation of the words are all hints. Each week the code letters are different.

LNR ZQJPZ ZINMQ NFNPN

QXZINQ ZIXR ZINMQ NXQP;

ZIN QCXE GF OQNYNOZ MP

KCRW XRE ZNEMCJP, GF

NHXLOKN PICQZ XRE

NSSNYZJXK. — PNRNYX

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CryptoQuip

This is a simple substitution cipher in which each letter used stands for another. If you think that X equals O, it will equal O throughout the puzzle. Solution is accomplished by trial and error.

Clue: **A** equals **Z**

YMQMAXIJ BJMVOFXIQ AXIQXIQ

FJDUNIDJD BFNY OI DMVXDBXJC

UFNCOPV ODJFD:

"PNIDOYJF FJVNFVD."

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Extension Farm Field Day: Jason Smith (third from left) discussed how soybeans yield and variety trial plots at Extension Farm Field Day. Jason is the farm operator and was gracious to host the farm tour.



LEFT: Extension Farm Field Day: UK Extension Forester Doug McLeron talked about firewood types and heating with wood. He also talked about the spread of emerald ash borers by firewood movement.



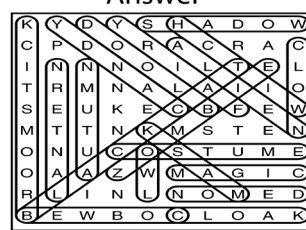
RIGHT: Extension Farm Field Day: Estill Co. Conservation District Representative Fred Brown II and Harold Alcorn demonstrated the use of a wood chipper and a log splitter at Extension Farm Field Day October 2nd. The equipment can be leased from the Conservation District.

Puzzle Answers

October 9, 2013

Puzzles4Kids

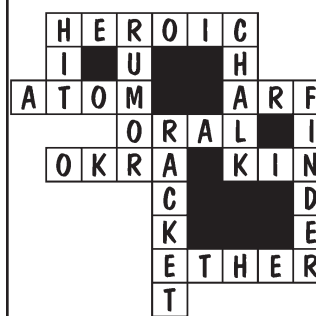
Answer



Riddle Answer: Frankenstein.

FEAR KN&T

answer

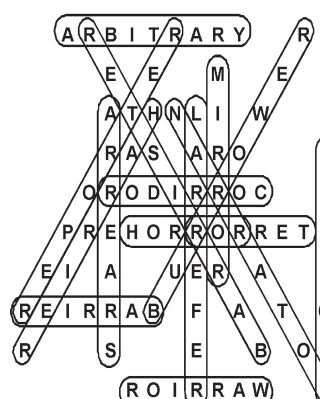


Letter Box

Solution

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| I | E | H | U | A | O | T | R | Z |
| T | R | U | Z | H | I | O | E | A |
| Z | O | A | R | E | T | H | I | U |
| U | T | E | O | Z | H | R | A | I |
| R | H | I | A | T | E | Z | U | O |
| O | A | Z | I | R | U | E | T | H |
| E | I | O | T | U | Z | A | H | R |
| H | Z | R | E | I | A | U | O | T |
| A | U | T | H | O | R | I | Z | E |

THE THREE R's



Even Exchange

answers

1. Delour, Devour
2. Shelf, Shell
3. Locket, Rocket
4. Tamer, Timer
5. Couch, Coach
6. Barber, Barter
7. Ample, Apple
8. Limbs, Limbo
9. Whole, Whale
10. London, Landon

Weekly SUDOKU

Answer

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7 | 3 | 9 | 8 | 6 | 1 | 2 | 5 | 4 |
| 2 | 8 | 6 | 5 | 3 | 4 | 7 | 1 | 9 |
| 5 | 1 | 4 | 2 | 7 | 9 | 8 | 3 | 6 |
| 1 | 5 | 3 | 9 | 4 | 2 | 6 | 8 | 7 |
| 9 | 6 | 8 | 1 | 5 | 7 | 3 | 4 | 2 |
| 4 | 2 | 7 | 3 | 8 | 6 | 5 | 9 | 1 |
| 6 | 9 | 5 | 7 | 1 | 8 | 4 | 2 | 3 |
| 3 | 4 | 1 | 6 | 2 | 5 | 9 | 7 | 8 |
| 8 | 7 | 2 | 4 | 9 | 3 | 1 | 6 | 5 |

King Crossword

Answers

Solution time: 21 mins.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| R | A | N | D | A | B | A | E | L | A | N |
| O | R | E | O | S | O | D | M | E | M | O |
| T | E | A | R | S | N | O | W | C | A | P |
| C | A | P | S | T | A | N | H | E | S | S |
| A | N | Y | W | E | E | | | | | |
| S | T | I | L | T | A | N | D | O | O | R |
| A | I | D | T | U | X | A | W | E | | |
| D | O | O | R | M | A | T | F | A | R | E |
| A | U | G | L | I | D | | | | | |
| F | R | A | N | C | M | A | T | L | O | C |
| L | O | C | K | H | E | E | D | I | S | L |
| A | B | E | L | R | O | E | B | L | O | G |
| W | E | R | E | A | N | N | S | O | T | S |

UK COOPERATIVE EXTENSION SERVICE

University of Kentucky - College of Agriculture



Estill County
4-H Youth Development

Isaac L. Hollon
Estill County Extension Office

Estill County 4-H News

State Fair

Estill County youth did an outstanding job at the Kentucky State Fair participating in Cloverville, Avian Bowl, Country Ham, and Livestock show. This year twenty-two 4-Hers entered contests. There was a total of 1 Class Champion ribbon, 19 Blue ribbons, 22 Red ribbons, 8 White ribbons and 1 Green ribbon. Congratulations to our 4-Hers who participated in the Kentucky State Fair this year.

Horse Club

On behalf of Estill County 4-H, I would like to extend a special thank-you to the Estill County Saddle Club for their donation to the Estill County 4-H Horse program. Contributions such as this help to provide quality educational events for the youth of our county. Currently, we are not a leader for our horse program. If anyone is interested in helping with this or any other program, please call the Extension Office at 606-723-4557.

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Stickelers Answer

1. bag **PIPE** line
2. sheep **SKIN** tight
3. floor **BOARD** walk
4. arch **ANGEL** fish
5. day **DREAM** boat

Employment

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Flooring/Carpet Tech
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Bible Trivia Answers

Casey's trivia book "Know It? ... or Not?" is available from BearManorMedia.com

ANSWERS: (1) Old; (2) Moses; (3) Ruth; (4) Eyes; (5) Blessings; (6) Hearing