





#### Environment

# Replanting in the Southern Pine Beetle's Path of Destruction

May 7, 2018 Beth Young 0 Comments



A recently-felled pine beetle-infested tree in Hubbard County Park.

The southern pine beetle, an invading species with a love for pitch pines, has made itself at home in Long Island's Pine Barrens, after first showing up on our island in 2014. But that doesn't mean that forest managers here are giving up.

A consortium of state and local agencies, led by Molly Hassett of the New York State Department of Environmental Conservation, has been on the ground and in the air over the Central Pine Barrens since the beetle first arrived, pinpointing infestations and quickly cutting down infested trees to help stop the beetles' spread.



John Pavacic of the Central Pine BarrensJoint Planning and Policy Commission and Molly Hassett of the DEC plant saplings at Hubbard County Park May 3.

In the fall of 2016, with the help of the Long Island Native Plant Initiative, the agencies began collecting seeds from local pitch pine cones here, germinating them in a DEC nursery in Saratoga Springs.

Now, four years into the infestation, the agencies have brought the saplings back to Long Island to replant areas where infested trees had been felled.

Representatives from the Central Pine Barrens Joint Planning and Policy Commission, Suffolk County Parks, the DEC and many local municipalities gathered at Hubbard County Park in Flanders on the afternoon of May 3 to talk about the progress of their work.



DEC Forrester Nate Hudson searches for southern pine beetles in an infested tree he had just felled.

Suffolk County Parks Environmental Analyist Nick Gibbons said the 4,000 acre county park, at the epicenter of much of the pine beetle damage on the East End, is also one of the most environmentally sensitive — four creeks within the property wend their way to the Peconic Bay. It was the first county park to be hit by the beetle back in 2014.

He said 10,000 trees have since been infested with the bugs in Hubbard County Park and nearby Sears Bellows and Munn's Pond county parks in Hampton Bays.

Forest managers stop the spread of the beetle by cutting down infested trees, depriving the beetles of their food source — the cambium layer of the trees that contain its circulatory system, the xylem and phloem that carry water and nutrients throughout the tree. The managers also cut down trees surrounding the infestation, depriving the beetles of the pheromone trails they would otherwise follow to find new, healthy trees.

The coordinated agencies also work together to do aerial surveys of vast swaths of the Central Pine Barrens, looking for the telltale orange to red to brown progression of needle color that points to a beetle infestation. Ms. Hassett said that process, from needle-color change to the death of a tree, can happen in as little as four to six weeks.

"Work on such a large scale is very expensive, and very labor-intensive, and they're spreading east," said Mr. Gibbons.



"Galleries" in the cork cambium on the back side of the bark of a tree, a sure sign of southern pine beetle infestation.

The DEC recently awarded \$275,000 in grants to five communities in Nassau and Suffolk counties, including \$64,000 for pine beetle management in East Hampton's open spaces, mostly in the Northwest Woods, and \$28,050 for Southampton Town to remove hazardous trees at Good Ground Park and Foster Avenue Park in Hampton Bays.

Ms. Hassett, who serves as the incident commander for the consortium of agencies fighting the beetle, said it was unlikely new trees would germinate after the cutting, because, in nature, pitch pines are dependent on the heat of a fire to open the pine cones and allow them to drop their seeds, and are also dependent on the bare ground caused by a fire to germinate, hence the necessity of growing seedlings in a nursery for replanting in the absence of fire.



A newly planted sapling.

"We're putting them back in the ground to make the Pine Barrens whole again," said Mr. Gibbons. "This is a prime example of how agencies can work together," said John Pavacic, the executive director of the Central Pine Barrens Joint Planning and Policy Commission.

But the pine beetle, he said, isn't going to give up without a fight, at least not in our lifetimes. "It's here to stay," he said.

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# May 3, 2018 Southern Pine Beetle Press Event Articles, Video, Information Links

### **Riverhead News:**

http://riverheadnewsreview.timesreview.com/2018/05/87012/across-long-island-a-race-to-keep-up-with-the-southern-pine-beetle/

Long Island Pine Barrens Society Post:

https://www.pinebarrens.org/across-long-island-a-race-to-keep-up-with-the-southern-pine-beetle/

NPR News:

http://www.wshu.org/post/pine-beetle-eradication-plan-will-restore-devastated-li-parks#stream/0

East End Beacon :

https://www.eastendbeacon.com/replanting-in-the-southern-pine-beetles-path-of-destruction/

Newsday:

https://www.newsday.com/long-island/towns/southern-pine-beetle-1.18378169

Long Island News 12:

http://longisland.news12.com/story/38109038/200k-allotted-to-combat-southern-pine-beetle-in-pine-barrens

Central Pine Barrens Commission:

https://pb.state.ny.us/

SC Parks Facebook :

https://www.facebook.com/search/top/?q=SC%20Parks%20southern%20pine%20beetle

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# LONG ISLAND/SUFFOLK Suffolk officials cut down pine tress to save others from beetle

Cutting down trees infested with the southern pine beetle is the best tool for containing the destructive, invasive insect's spread, officials say



State Department of Environmental Conservation forester Nathan Hudson explains the natural defense used by pine trees to protect themselves from the southern pine beetle. (Credit: Newsday / Vera Chinese)

# **By Vera Chinese**

vera.chinese@newsday.com **Y** @VeraChinese Updated May 3, 2018 5:14 PM

With a chain saw and a call of "clear," representatives from the state, county and the Central Pine Barrens Commission demonstrated their readiness to suppress southern pine beetle infestations this summer.

#### 9/17/2018

The southern pine beetle, native to the U.S. South and first detected on Long Island in 2014, can kill a mature pitch pine in two to four months. They enter the bark to lay eggs in a process that disrupts the nutrient flow and starves the tree.

Cutting down infested trees, a labor-intensive and expensive undertaking, remains the best tool in containing the insect's spread, commission director John Pavacic said at a news conference Thursday in Hubbard County Park in Flanders. A state Department of Environmental Conservation official at the event cut down an infested tree with a chain saw, and other officials planted pitch pine seedlings nearby.

The Suffolk County Parks Department is using three \$75,000 state DEC grants to pay for chain-saw training, equipment and hiring outside contractors to take down infested trees on county parkland, Suffolk parks commissioner Philip Berdolt said.

"We don't have enough employees to do what we need to do," he said.

The county has felled 10,000 trees in Sears Bellows County Park in Hampton Bays, Hubbard park in Flanders and Munn's Ponds park in East Quogue, 6,000 trees in Southaven County Park in Yaphank as well as every pine tree in Lakeland County Park in Islandia, Berdolt said.

"It is arguably our most sensitive ecological property within our inventory, if not of all publicly owned parcels in Suffolk County," county environmental analyst Nick Gibbons said of the three parks along the Route 24 corridor.

DEC officials, as well as county and CPBC workers, are to again cut down trees after Memorial Day in hopes of disrupting pheromone movement and exposing the beetles to heat.

Officials said they expect newly planted seedlings to restore the habitat.

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Suffolk officials cut down pine tress to save others from beetle | Newsday

# By Vera Chinese

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Vera Chinese joined Newsday in 2017 and covers the towns of Southampton, East Hampton and Shelter Island. A Long Island native, she has reported on East End issues for 10 years.

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# Pine Beetle Eradication Plan Will Restore Devastated LI Parks

By VINNY BALL • MAY 3, 2018 TweetShareGoogle+Email



A forester with the New York Department of Environmental Conservation points out a tiny southern pine beetle at the tip of his finger on the bark of a tree in the Rocky Point Natural Resources Management Area in Rocky Point, N.Y. FRANK ELTMAN / AP

Suffolk County officials have unveiled their updated plan to limit the spread of southern pine beetles and to restore areas they've devastated.

Executive Director of the Central Pine Barrens Commission, John Pavacic, says that cutting down infested trees is one of the only effective ways to reduce the pine beetles' spread.

"There's no pesticide available that's safe to use that could eradicate them. So, the trees are going to die anyway. So those trees are cut while the beetles are still in there." The invasive pine beetle can kill a single tree in two to four months.

"Adult beetles burrow into the bark of the tree to lay eggs, and the larvae basically chew through the living tissue of the tree and girdle the tree, killing the tree," Pavacic says.

Using \$225,000 in recovery grants, Suffolk County Parks will plant native pitch pine seeds throughout impacted areas, beginning with Hubbard County Park in Hampton Bays.

Since it was first spotted on Long Island in 2014, over 5,000 acres have been impacted.

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**MEDIA ADVISORY** FOR IMMEDIATE RELEASE May 2, 2018

# To Battle Devastating Southern Pine Beetle, County Officials to Unveil Plans For Cutting and Forest Restoration

# Event at Hubbard County Park Will Feature Pitch Pine Restoration

Suffolk County officials will unveil plans to battle the beetle that has devastated pitch pine forests on Suffolk County parkland with \$225,000 in New York State Southern Pine Beetle Community Recovery Grants, at an event to be held at Hubbard County Park in Flanders on Thursday, May 3.

The southern pine beetle was detected on Long Island in 2014 and has since resulted in the mortality of thousands of pitch pine trees in Hubbard, Sears Bellows, Munn's Pond, Southaven, and Lakeland County Park. Most recently, infestations have spread into East Hampton including on Suffolk County parkland, bringing the total area impacted across Long Island to more than 5,000 acres.

To help suppress population expansion and limit impacts, Suffolk County Parks continues to partner with the New York State Department of Environmental Conservation (NYSDEC) and the Central Pine Barrens Joint Planning and Policy Commission (CPBC) to survey and suppress southern pine beetle populations on county land.

In addition to unveiling management strategies to address the outbreak, officials from Suffolk County Parks Department, NYSDEC and CPBC will plant pitch seedlings to restore a section of forest that have been devastated by southern pine beetle infestation.

- What: Unveiling of Southern Pine Beetle Management Strategy
- Where: Hubbard County Park, Black Duck Lodge, Red Creek Road, Flanders
- When:Thursday, May 3 at 1:00 p.m.\*Great Photo/Video Opportunities of SPB Impact, Suppression and Planting\*



### **Environment**

Across Long Island, a race to keep up with the southern pine beetle

by <u>Rachel Siford</u> | 05/04/2018 8:25 AM

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The southern pine beetle has ripped across Long Island and is now a major threat to the Pine Barrens.

The Suffolk County Parks Department received three grants totaling \$225,000 to tackle the problem in January 2017, but the threat continues to spread, officials said during a press conference at Hubbard County Park in Flanders. More than 20,000 trees have died as a result of the beetle across the county, officials said.

Suffolk County Parks partnered with the New York State Department of Environmental Conservation, Central Pine Barrens Joint Planning and Policy Commission and the Long Island Pine Barren Society to try to stop the hazardous beetles from spreading. "The beetle has quickly spread through the county and is really killing all of our parklands and pine trees," said Philip Berdolt, commissioner of Suffolk County Parks.

The southern pine beetle has caused mortality of thousands of pitch pine trees in Hubbard, Sears Bellows, Munn's Pond, Southaven, and Lakeland County Parks since they were first introduced to Suffolk County in 2014. The first infestation was discovered in Hubbard County Park.

Officials stood before hundreds of fallen trees near Black Duck Lodge Thursday afternoon, demonstrating the full extent of the beetle's plague.

"Within Hubbard, Sears Bellows and Munn's County Park alone, over 10,000 trees have been infected and felled," Mr. Berdolt said. "In Southaven County park, 6,000 trees [were felled] and in Lakeland County Park in Islandia, every single pine tree there is gone."

Mr. Berdolt said he has about eight staff members working on the problem, among other responsibilities, since it became a focal point in 2014.

"It's tough trying to get ahead of them, so the grant is really helpful," he added.

Losing pine trees poses threats of forest fires because the parks department can't remove all the trees.



An area of the park that has been decimated by the southern pine beetle. (Credit: Rachel Siford)

"The pine barrens also provide many human and ecosystem services like natural filtration for Long Island's aquifer, protection for homes against winds and storms, and habitat for endangered species," said Molly Hassett, Southern Pine Beetle Incident Commander for the DEC.

The beetles enter the pitch pines to get to the sap and lay eggs. Efforts to stop the spread of the beetle include cutting down infected trees to cut off their food supply and stop the larvae from maturing, consequently preventing them from moving deeper into the barrens.

The grant pays for labor, chainsaw training, equipment and hiring outside contractors to help with the immense workload.

Pine cones from felled trees were brought to the Saratoga Tree Nursery to harvest seeds and produce young pine trees to replant where others have died. There were 350 saplings were planted Thursday, with plans of thousands more across the county in efforts to keep pitch pines on Long Island.

"The best thing is just to try to suppress the area as much as we can," Mr. Berdolt said. "We're not going to eradicate it completely."

Top photo caption: The inside of a tree bark that had been infected with the southern pine beetle. (Credit: Rachel Siford) rsiford@timesreview.com

# What does this mean for our parks?

Loss of pines due to SPB infestations within Suffolk County Parks threatens our valuable forest ecosystems, and the quality of recreational amenities that they provide. The SPB has infested and killed thousands of trees since its discovery on Long Island in 2014. There are no current methods to eradicate the beetle, however infestations can be suppressed. In an effort to save additional trees from becoming infested within our parks, "cut and leave suppression" is being conducted. In addition, pine cones have been collected from felled trees, to propagate seedlings for ongoing restoration activities.

While visiting our parks, you may notice areas where the pines have already been cut down. You may also see flagged standing pines that are marked for cutting. Because SPB spreads so rapidly, some trees die before they are able to be identified and cut down. NYSDEC grants have been awarded to assist Suffolk County Parks with these SPB monitoring and suppression activities.

As a reminder when utilizing the parks, you as a park patron should always be aware of your surroundings for your safety, and remain on designated trails.



# For more information on Southern Pine Beetle

#### NYS Department of Environmental Conservation

http://www.dec.ny.gov/animals/99331.html

http://www.dec.ny.gov/docs/lands\_forests\_pdf/spbccearticle2.pdf

http://www.dec.ny.gov/docs/lands\_forests\_pdf/spbplan2016.pdf

USDA

https://www.fs.usda.gov/Internet/FSE\_DOCUMENTS/fsbdev2\_042 840.pdf

### Suffolk County Parks

Administration Office: 631-854-4949 Park Rangers: 631-854-1422

For more information about our parks:



www.suffolkcountyny.gov/parks

# Southern Pine Beetle





Steven Bellone County Executive Philip A. Berdolt Commissioner

# **Natural History**

The southern pine beetle (SPB) is a small destructive bark beetle that has become a threat to Long Island's pine forests and suburban landscapes. Though all pines are susceptible, pitch pines have been the most affected in our parks. The SPB is native to the southern United States but has recently expanded its range into New York. The adult beetles attack trees in large numbers. They enter the trees

by boring through the bark and create S-shaped tunnels to lay their eggs. The beetles also introduce a "wood-staining fungi" into the tree which clogs



the trees' water-conducting tissues. These factors disrupt the flow of nutrients and can cause the death of a tree within 2-4 months. SPB will overwinter in a tree during the cold weather, and become active as temperatures increase. SPB is most active in the spring and summer. Multiple hatches can occur within one season, increasing the rate of spread and rapidly killing large numbers of trees.



# **Signs and Symptoms**

The infestation of pines by the SPB is categorized into the following three stages.

#### Stage 1 (Fresh Attack):

- The canopy is green.
- White to red popcorn sized pitch tubes are typically found 5ft from the tree base, all the way up the trunk into the canopy.

#### Stage 2 (Infestation):

- The entire canopy changes color to various shades of orange and yellow.
- SPB create S-shaped tunnels in the cambium under the bark of the tree.

#### Stage 3 (Vacated):

- The tree canopy has lost most, if not all, of its needles and is considered dead.
- Numerous pin-sized holes are found on the bark from where the SPB exited the tree.



The turpentine beetle (TB) is often mistaken for the southern pine beetle (SPB), as they both display similar signs and symptoms. However, the TB pitch tubes and boring holes are much larger and are only found towards the base of a tree. While the TB may kill a tree, it is less destructive to the forest than the SPB, as it does not rapidly kill trees in large numbers.

## What is being done?

Cooperative efforts are being conducted by Suffolk County Parks, New York State Department of Environmental Conservation (NYSDEC) and the Central Pine Barrens Commission, including:

**Monitoring:** Aerial surveys are conducted over Suffolk County Parks to identify potential SPB infested areas. SPB infestations are then confirmed and delineated on the ground by trained staff. Areas are prioritized to determine

the order in which they are suppressed.

Suppression: Once the infested areas are delineated and prioritized, sawyer crews cut the infested trees as well as nearby trees in an effort to stop the spread.



### Why are the trees being cut?

Due to the extent of infestation across Long Island, eradication of this destructive beetle is unlikely. However, suppression cutting can minimize its spread and future impact by reducing population size and disrupting the movement of SPB. Cutting affected trees reduces the number of active beetles by disrupting pheromone movements and exposing the larvae to the natural elements (extreme cold and heat). Without suppression, the SPB can spread through a forest like wildfire.









# SOUTHERN PINE BEETLE QUARTERLY UPDATE APRIL-JUNE 2018



Crews from New York State's Department of Environmental Conservation (DEC) Division of Lands and Forests and partner agencies continue to monitor for and battle the southern pine beetle (SPB) to help save pine trees on Long Island. For background information on SPB, please visit: http://www.dec.ny.gov/animals/99331.html.

# Pitch Pines Planted at Hubbard County Park

- DEC Lands and Forests; Central Pine Barrens Joint Planning & Policy Commission; Suffolk County Parks, Recreation, and Conservation; and Pine Barrens Society staff planted 350 pitch pine seedlings to help restore pines at the heavily impacted park.
  - The seedlings were grown at the DEC Saratoga Tree Nursery using seed collected near the park several years earlier.

# Pitch Pine Cones Collected for Restoration Efforts

- DEC Lands and Forests and Town of East Hampton staff collected 8 bushels of pitch pine cones from trees cut during suppression work in Edwards Hole Nature Preserve. Since these trees were on the ground, the cones were easily reachable for collection.
  - Seeds from these cones will be planted at the DEC Tree Nursery in Saratoga for future replanting on Long Island.

## SPB Infestations Mapped During Aerial Surveys

- DEC Lands and Forests staff Molly Hassett, John Wernet, Brent Kinal, and Nate Hudson completed aerial surveys on May 8 and June 11 over Suffolk County.
  - More than 800,000 acres were surveyed.
  - More than 4,000 acres of damaged pitch pine were mapped.
- Additional aerial surveys are scheduled for August.

## SPB Survey and Monitoring Traps Were Deployed

- DEC Lands and Forests staff worked with New York State Office of Parks, Recreation and Historic Preservation; New York-New Jersey Trail Conference; and Albany Pine Bush Preserve Commission staff to deploy early detection traps north of Long Island.
  - Traps will be checked periodically through the summer to determine if SPB is present in additional areas within the Albany Pine Bush Preserve and along the Hudson Valley.
- The Central Pine Barrens Joint Planning & Policy Commission deployed and is checking monitoring traps on Long Island to help track SPB population levels.



Central Pine Barrens Joint Planning & Policy Commission staff plant seedlings during a press event in May.



Lands and Forests Tom Schmeelk checks an SPB trap deployed in Bear Mountain State Park.

# Ground Surveys Used to Identify Areas for Suppression

- DEC Lands and Forests staff marked 2,081 infested trees that will be cut during the summer to reduce SPB populations.
  - Ground surveys were focused in Robert Cushman Murphy County Park and Southaven County Park.

# Suppression Management Conducted to Slow SPB

- DEC Lands and Forests crews cut 324 infested and un-infested buffer trees in Robert Cushman Murphy County Park. The un-infested trees were cut to help breakup actively growing infestations.
- With assistance from the National Park Service, DEC staff also cut 76 infested and un-infested buffer trees in Southaven County Park.

# Research Conducted to Evaluate Management Activities

- DEC Lands and Forests worked with Albany Pine Bush Preserve Commission and USDA Forest Service staff to deploy and monitor *Ips* beetle traps in the Albany Pine Bush and Rocky Point Demonstration Forest.
  - Ips beetles usually attack weakened or recently dead trees, such as those attacked by SPB, but can attack healthy trees if their population reaches high enough numbers.
  - Results of the trap monitoring will be compared and help staff determine if SPB infestations on Long Island are creating the additional problem of increasing *Ips* beetle populations and attacks.



Lands and Forests James Rittenhouse examines a tree for signs of SPB during ground surveys.

#### CONTACT INFORMATION

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