

Brutal cold in the US helping to destroy tree-eating forest pests

Emerald ash borer succumbs to freezing temperatures

THE record cold temperatures in the US may have a silver lining – killing off tree-eating forest pests that have spread dangerously as the general climate warms up, scientists say.

The deep freeze that shattered decades-old records in recent weeks – causing fatalities and snarling air, road and rail traffic – could adversely affect pests such as the emerald ash borer, which is responsible for killing more than 10 million trees, according to Robert Venette, a research biologist with the US Forest Service in Minnesota.

More than 80% of emerald ash bore may have been destroyed where temperatures fell to -22 to -26 Fahrenheit (-30 to -32 Celsius), Dr Venette said. "That's when they really start to freeze and die. And we've been seeing those kinds of temperatures here in Minnesota, particularly in the Twin Cities and points north."

The emerald ash borer has spread to more than 20 states from Colorado to Georgia and has extended into Canada. They are now in a larval state under the bark of infected trees. Natural Resources Canada said the emerald ash borer was first detected in Windsor, Ontario, in 2002. It spread across the province and into Quebec. The bug, which burrows under the bark of ash trees, has few natural enemies, which has allowed it to thrive. Within six years of



Record cold temperatures silver lining for US forest industry.

arriving in a woodlot, nearly all the trees in that area will be destroyed. Also affected by the cold spell will be gypsy moths, which have recently moved into northern Minnesota and eat the leaves of more than 300 species of trees, shrubs and plants. The moths die at -17 F (-27 C). "This cold weather should really have done in a number on those populations," Dr Venette said. "Less severe cold for a prolonged period also can stress pests and kill them." The cold connected with the polar air mass that enveloped North America over the last several days has begun to ease up. The National Weather Service said temperatures is starting to moderate across the eastern two-



Bug buggered .. emerald ash borer gets cold shoulder from Mother Nature.

thirds of the US, but will still be 15 to 25 deg. below normal in the Midwest. John Barnwell, director of forest policy with the Society of American Foresters, said the cold had not been severe or prolonged enough to kill the woolly adelgid, which has devastated hemlock forests in eastern US. A negative side effect of severe cold is that it can damage forests by splitting or cracking limbs and

stems, leaving them vulnerable to insects and other threats. The cold spell may not last long enough to affect most mountain pine beetles, which have devastated millions of hectares of forest in the US and Canada. The Colorado State University extension service says in a fact sheet on the pest that mid-winter temperatures of at least -30 F (-34 C) must be sustained for at least five days to kill larvae. One of the nation's lowest temperature was -33 F (-36 C) recorded at Crane Lake, Minnesota. But the freeze may be a blessing for the Great Lakes as well, said Brenda Ekwurzel, a senior climate scientist at the Union of Concerned Scientists. More ice cover could limit evaporation and help the lakes, which have seen shipping affected as their levels fall because of drought and other factors.

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