bizcommunity

Google Street View helps identify alien species

PARIS, FRANCE: Google Street View can be a useful tool in the costly and time-consuming figh against invasive species, French biologists said on Thursday (10 October).

A team at France's French National Agency for Agricultural Research (INRA) used the online tool, which provides 360-degree images of streets filmed by specially-fitted cars, to gauge the spread of a tree-killing insect.

The pine processionary moth Thaumetopoea pityocampa is a foliage-munching insect native to balmy par of southern Europe but is heading northwards to higher altitudes as temperatures rise.

Its preferred food is an evergreen tree called the Austrian pine, which is extensively used in Europe's managed forests and ornamental gardens.

In autumn, larvae of the moth build a nest in which to hunker down for the winte,r a highly visible home mac from white, shiny silk that hangs at the end of branches like a hairy lightbulb.

Accurate identification

Using this as a sign, the researchers "drove" around a large area with Google Street View to map districts that had been invaded by the moth.

The area of 47,000km^2 was divided up into a grid of 183 large-scale "cells", each comprising 16kms^2. If a nest was spotted, the "cell" was marked as infected.

The results from Google Street View were 90% as accurate as a test conducted on the ground by a team who drove around the area in a car.

However, cyber-spotting was less successful in a different test that was carried out on a smaller scale.

A test area of 121km^2 was marked out in smaller "cells", but Google Street View performed less well, parl because of a lack of roads in some places.

Google Street View can be performed "in silico sampling of species occurrences", the scientists said, in a Latin quip about the use of computers as a substitute for boots-on-the-ground.

"Our results show that it has some promise for the future, at least with species easily observed by road sampling such as the pine processionary moth," the researchers said.

Earlier this year, a similar pilot study by Spanish biologists mapped cliff sites in north-western Spain that could be a potential habitat for two species of vulture, proving the usefulness of Google Street View for endangered as well as invasive species.

Both studies appear in the public-access journal PLoS One.

Source: AFP via I-Net Bridge