



Monterey Pine Engraver (*Pseudips mexicanus*)

Frequently asked questions update 02-02-2024.

What is the beetle concerned?

Pseudips mexicanus, known as the Monterey pine engraver is a non-European bark beetle. Its native range is from Alaska, USA to Guatemala in Central America.

What tree species are impacted?

Pine (*Pinus*) trees are the host of the Monterey pine engraver.

What has been found?

The Department of Agriculture, Food and the Marine announced on the 12th December 2023, the first findings in Ireland of *Pseudips mexicanus* known as the Monterey Pine Engraver. As part of the Department's ongoing national surveys, a total of 93 individuals of *Pseudips mexicanus* have been found in six traps in forest locations in a confined area in Co. Clare.

The beetles were found only in bark beetle Theysohn traps, which have been used for many years here in our annual bark beetle surveys. No findings have been made in trees. The Department has found no breeding population to date nor detected any evidence of damage by *P. mexicanus*.

Since these findings intensive surveys within the 10km demarcated Area have continued resulting in one further finding of a *Pseudips mexicanus* beetle in a dead windblown pine tree in very close proximity to one of the traps. This is the first finding of the beetle which was not made from a trap.

How was it found?

In response to the 2022 findings of the large larch bark beetle, *Ips cembrae* in the Scottish pest-free area, Forest Health inspectors established additional *Ips cembrae* specific bark beetle traps at a number of risk points around the country. A trap was set up in a larch plantation, near Cratloe, Co. Clare for its proximity to Limerick Port. When this trap was checked in late August, the four unusual beetle specimens were present.

When was it found?

The identity of the beetles was confirmed on December 1st 2023. Although the first beetles were caught at the end of August 2023 the unusual specimens were very difficult to identify to species level. In order to identify the species the Department's Plant Health Laboratory availed of diagnostic input from the relevant EU Reference Laboratories in France and Austria and ultimately an expert on the *Pseudips* genus in USA.

Where does it come from?

The Monterey Pine Engraver is naturally found in a range from Alaska to Central America and is found exclusively in pine (*Pinus*) species. Molecular diagnostic work has indicated that the beetles found in Co. Clare are most likely of Mexican lineage.

How did it get into Ireland?

The Monterey Pine Engraver has previously been intercepted in Europe associated with wood packaging material but it is not known to occur in Europe or anywhere else outside of its native range. The pathway of introduction into Ireland is under investigation. Molecular diagnostic work has indicated that the beetles found in Co. Clare are most likely of Mexican lineage.

The beetle may have been introduced with trade, possibly wood packaging material from somewhere in its native range with the diagnostic work pointing to Mexico. There is no direct trade in pine wood commodities from the suspected country of origin (Mexico).

The findings are approximately 10km east of Shannon Airport and Shannon Free Zone, 20km east of Foynes Port and 10km west of Limerick Port. The area is also quite close to Limerick City, a large urban area.

What checks are carried out on imported wood packaging material?

All regulated third country wood products are subject to inspection at the point of entry into Ireland and the EU. All wood packaging material – wooden pallets, crates, boxes, dunnage etc. associated with imports into the EU, including Ireland must be treated and marked in accordance with the international standard [ISPM No.15](#) for Regulation of Wood Packaging in International Trade. Due to the high volume of wood packaging that is associated with imports of all kinds, checks on wood packaging are carried out on a risk basis focussing on commodities and countries of origin with the highest perceived risk. Currently there is an EU wide wood packaging monitoring programme focussing on heavy goods such as stone from China, India and Belarus.

Will Monterey Pine Engraver cause damage in Ireland?

No damage from the Monterey pine engraver has been observed in Ireland. To date findings have been in traps only and no infested trees have been found. No breeding population has been found.

Scientific literature on the Monterey pine engraver is limited. The beetle has a long native range from Alaska, USA to Guatemala in Central America. In its northern range it is not considered an economic pest and where the beetle is associated with damage it is in conjunction with other bark beetles and on stressed trees. Towards the southerly end of the native range where the climate is warmer, and there is potential for more generations per year, there are indications that the beetle could be more damaging. In the beetle's current distribution, impacts are mostly observed in combination with other pests, often more damaging species, and other host tree stresses. Reports of damage with *P. mexicanus* as the primary cause are much rarer. There is insufficient evidence to suggest that *P. mexicanus* is capable of mass attacking, producing large annual increases in populations and overcoming the defences of healthy trees.

In Ireland, stressed *Pinus* trees predisposed to pest attack are most likely to be at risk. Such trees tend also to be targeted by and hosting, native Irish bark beetles. Given *P. mexicanus* is commonly associated with other, often more damaging, bark beetle species in North/Central America (species not found in Ireland), it is challenging to assess the potential impact *P. mexicanus* may have in Ireland— either independently or in combination with other Irish species.

The potential *P. mexicanus* has in vectoring plant pathogenic fungi may also present risks, since this bark beetle has demonstrated that ability with several fungi in studies and in its current distribution. However, the uncertainty is high in relation to the fungal symbionts of *P. mexicanus* and the resulting impact of these fungal associations.

Is the Monterey pine engraver regulated?

Although Monterey Pine Engraver is not specifically named in legislation, all non-European *Scolytinae* (bark beetles) are treated as Union Quarantine Pests (UQP) under the Plant Health Regulation 2016/2031 [Implementing Regulation 2019/2072](#) in Annex II Part A, regardless of the level of threat associated with a particular species. Member States must follow certain procedures set out in the [Plant Health Regulation 2016/2031](#) on the confirmation of a UQP including the establishment of a demarcated area. Accordingly, the Department has established the Monterey Pine Engraver Demarcated Area, with a radius of 10km from the traps where beetles were captured.

What action has the Department taken?

The Department's Generic Plant Health Contingency Plan has been activated. The Department has established the Monterey Pine Engraver Demarcated Area, with a radius of 10km from the traps where beetles were captured, which will carry restrictions on the felling and movement of pine (*Pinus*) species from this area. This is to ensure that untreated wood and wood products of *Pinus* can only leave the demarcated area under the control of the Department for treatment, not directly for trade to other parts of the island or for export.

Intensive surveillance is also being carried out in the demarcated area. While the initial diagnostics were progressing, trapping and surveillance in the area were intensified. An increased network of 13 traps was set up and was checked on a weekly basis while weather conditions may still have been favourable for flight of the beetles. Further findings were made in a total of six traps in a localised area around the first trap. Normally adult bark beetles emerge and fly in the warmer months and traps are most likely to capture the bark beetles between May and October. No bark beetles have been found in any traps since 11th October. However new information received on the beetle's behaviour in Central America suggests that *Pseudips* trapping may be worthwhile in the colder months of the year and further additional traps have been placed and monitoring will continue through the winter.

A Forest Health aerial survey was carried out in the area in mid-September with the assistance of the Irish Air Corps and no unusual symptoms were observed from the air. Ground surveys initially concentrated on stressed host trees in the vicinity of the traps where beetles were found. These trees were found to have lots of the usual Irish bark beetles (indicating their suitability as hosts) but none of the new *Pseudips*. Ireland has a long-standing national bark beetle surveillance programme and network of bark beetle traps throughout the country as part of the maintenance of our Protected Zone which includes six European coniferous bark beetle species.

Further investigations by the Department are underway, following the finding from the dead tree supported by continuing wider surveys. It remains the case that the Department has found no evidence of any breeding insects nor detected any evidence of damage by *P. mexicanus*.

What are the implications for the owners of pine in this area?

The Department has established the Monterey Pine Engraver Demarcated Area, which will carry restrictions on the felling and movement of *Pinus* species from this area. This is to ensure that untreated wood and wood products of *Pinus* can only leave the demarcated area under the control of the Department for treatment and not for direct trade to other parts of the island or for export. Affected forest owners in the demarcated area have been contacted directly by the Department with further information.

What are the implications for the exporters to GB of coniferous wood and wood products?

For exporters of wood, other than pine (*Pinus*) to GB there will be no change to the landing requirements. However when making an application for a Phytosanitary Certificate, exporters must specify the species of wood being exported, *Picea* for example in the case of spruce. The order taxon "*Pinopsida*" is no longer appropriate for use on Phytosanitary Certificates. The species of wood must be provided.

For exporters of wood including species of pine (*Pinus*) to GB there is a change to the landing requirements. Untreated pine wood originating in the Monterey Pine Engraver Demarcated Area must not be exported. When making an application for a Phytosanitary Certificate, exporters must specify the origin of the pine wood and this must be traced and verified by the Department. An Additional Declaration will be included on the Phytosanitary Certificate to attest to the following; This pine wood originates outside the Monterey Pine Engraver Demarcated Area.

Alternatively, the pine wood may be exported if it is bark free or if it has been kiln dried to below 20% moisture content and is marked "KD".

What are the implications for the movement to Northern Ireland and to other EU Member States of coniferous wood and wood products?

For movement of wood, other than pine (*Pinus*) to Northern Ireland and to other EU Member States there will be no change to movement requirements.

For movement of pine wood to Northern Ireland and to other EU Member States there is a change to movement requirements. Untreated pine wood originating in the Monterey Pine Engraver Demarcated Area must not be traded to Northern Ireland and to other EU Member States. Pine wood originating outside the demarcated area may be moved as previously with a plant passport.

Alternatively, pine wood may be moved to Northern Ireland or to other Member States if it is bark free or if it has been kiln-dried to below 20% moisture content and is marked "KD".

What are the implications for Ireland?

We will carry out ongoing surveillance for the Monterey pine engraver. Movement of host material from the demarcated area will be restricted. If infested trees are found, an infested zone and buffer zone will be defined within the demarcated area. Appropriate eradication measures will need to be taken within the infested zone. There may also be implications for export certification of host material (see above).

What should forest owners and managers do?

Forest owners in the demarcated area have been contacted directly by the Department. A [Circular to the forestry trade](#) (Circular 26 of 2023) has also issued.

As always forest owners and forestry professionals are asked to be vigilant for signs of ill health in their forests and report anything unusual to the Department: forestprotection@agriculture.gov.ie

Can you provide information on the national surveys that the Department undertakes, how often surveys take place and details on the surveys?

The Department of Agriculture, Food and the Marine implements the EU Plant Health Regulation 2016/2031 and the related EU Official Controls Regulation 2017/625 which includes monitoring and control programmes for harmful forestry pests. Monitoring for bark beetles is only one component of this forest health monitoring programme.

Details of the annual surveys completed by the Department are presented within the report [Annual Forest Sector Statistics](#), listing the pests of concern, number of surveys, and the number of findings per survey. This report provides an annual compilation of statistics on the forests, the environment and the forestry sector in Ireland.

The bark beetle monitoring consists of a network of observation points, pheromone traps, bait logs and sampling points distributed around the country in public and private forests and forest nurseries. The Forestry Inspectorate also deals with queries and reports from the industry and general public in relation to forest and tree health issues including reports submitted via the web-based Tree Check App. This may involve site visits and taking of samples for laboratory analysis.

The 2022 bark beetle monitoring programme consisted of a national network of observation points, which combined systematic and risk-based monitoring points. The map below illustrates the 2022 network:

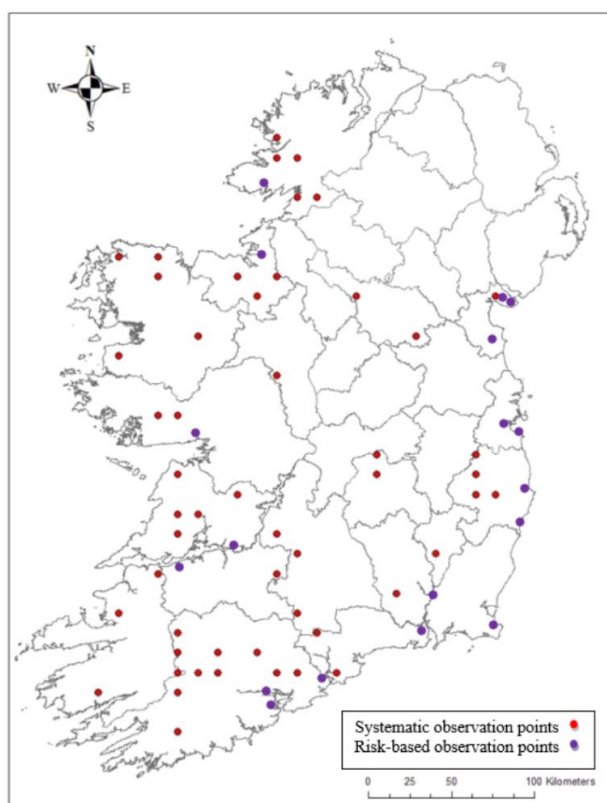


Fig: Indicative map of systematic and risk-based bark beetle Fixed Observation Point locations

Are the results of the national survey published?

A summary of the annual surveys completed by the Department are presented within the [Annual Forest Sector Statistics](#) report annually, listing the pests of concern, number of surveys, and the number of findings per survey. In line with the requirements of the Plant Health Regulation, annual survey results are compiled and reported by 30th April each year for the preceding calendar year's surveys. The 2023 survey programme built on the existing bark beetle surveys and introduced an additional layer of risk-based trapping for *Ips cembrae*.

The results for 2022, as published in *Forest Statistics Ireland 2023* are as follows:

Pest by category		Number of surveys	Number of findings
EU Priority Pests			
<i>Agrilus anxius</i>	Bronze birch borer	33	0
<i>Agrilus planipennis</i>	Emerald ash borer	32	0
<i>Bursaphelenchus xylophilus</i>	Pinewood nematode	53	0
<i>Dendrolimus sibiricus</i>	Siberian silk moth	195	0
<i>Anoplophora chinensis</i>	Citrus longhorn beetle	32	0
<i>Anoplophora glabripennis</i>	Asian longhorn beetle	32	0
<i>Aromia bungii</i>	Red necked longhorn beetle	12	0
Union Quarantine Pests			
<i>Phytophthora ramorum</i> (non-EU isolates)		22	0
<i>Monochamus</i> spp. (non-European)		62	0
<i>Pissodes strobi</i>	Sitka spruce weevil	81	0
<i>Fusarium circinatum</i>	Pitch pine canker	113	0
<i>Scolytidae</i> spp. (non-European)		67	0
<i>Pissodes fasciatus</i>	Douglas fir weevil	22	0
<i>Pissodes cibriani</i>		24	0
<i>Pissodes nemorensis</i>	Northern pine weevil	24	0
<i>Pissodes nitidus</i>	Yellow spotted pine weevil	24	0
<i>Pissodes punctatus</i>		24	0
<i>Pissodes terminalis</i>	Lodgepole pine terminal weevil	24	0
<i>Pissodes yunnanensis</i>	Yunnan pine weevil	24	0
<i>Pissodes zitacuarensis</i>		24	0
<i>Cronartium</i> spp.	Pine blister rust	98	0
Protected Zone pests			
<i>Ips amitinus</i> *	Small spruce bark beetle	67	0
<i>Ips cembrae</i> *	Large larch bark beetle	67	0
<i>Ips duplicatus</i> *	Northern bark beetle	67	0
<i>Ips sexdentatus</i> *	Six-toothed bark beetle	67	0
<i>Ips typographus</i> *	Eight-toothed spruce bark beetle	67	0
<i>Dendroctonus micans</i> *	Great spruce bark beetle	67	0
<i>Cephalcia lariciphila</i>	Larch sawfly	26	0
<i>Cryphonectria parasitica</i>	Chestnut blight	18	0
<i>Dryocosmus kuriphilus</i>	Oriental chestnut gall wasp	18	0
<i>Entoleuca mammata</i>	Poplar canker	14	0
<i>Gilpinia hercyniae</i>	Spruce sawfly	88	0
<i>Gremmeniella abietina</i>	Brunchorstia disease of pine	98	0
<i>Thaumetopoea pityocampa</i>	Pine processionary moth	32	0
<i>Thaumetopoea processionea</i>	Oak processionary moth	24	0
Emerging Pests			
<i>Phytophthora pluvialis</i>		53	0
<i>Lambdina fuscicollis</i>	Hemlock looper	81	0
<i>Pityogenes chalcographus</i> *	Spruce wood engraver	67	0
<i>Litylenchus crenatae maccannii</i>	Beech leaf disease	11	0
<i>Corythucha arcuata</i>	Oak lace bug	24	0
<i>Toumeyella parvicornis</i>	Pine tortoise scale	98	0

* Coniferous bark beetle species

What is the next step and the contingency plan for same?

The Department has developed *Pest Specific Plant Health Contingency Plans* for EU [priority pests](#). There are twenty EU priority pests and these are the pests whose potential economic, environmental or social impact is the most severe for the Union territory. The Monterey pine engraver is not an EU priority pest but is regarded as a Union quarantine pest as it falls into the category of non-European bark beetles (*Scolytinae*) (Annex II, Part A of [Implementing Regulation](#)

[2019/2072](#)). All non-European bark beetles are regulated regardless of the threat individual species may pose.

Member States must follow certain procedures set out in the Plant Health Regulation 2016/2031 on the confirmation of a Union quarantine pest including the establishment of a demarcated area. Accordingly, the Department has established the Monterey Pine Engraver Demarcated Area, with a radius of 10km from the traps where beetles were captured (See map: [link](#)). In the case of the Monterey Pine Engraver which is not an EU priority pest, the Department's *Generic Plant Health Contingency Plan* has also been activated. Measures in the demarcated area include:

- Intensive surveys to determine if the beetle is present in trees.
- Restrictions on the felling and movement of *Pinus* species. This is to ensure that untreated wood and wood products of *Pinus* can only leave the demarcated area under the control of the Department for treatment and not for direct trade to other parts of the island or for export. The Department is working to facilitate the movement of pine wood that is not bark-free out of the demarcated under controlled circumstances.

Forest owners with pine in the demarcated area are being contacted directly by the Department with further information.

The Department requests any land owners / forestry practitioners to engage with the Department's Forest Health Inspectors should they make contact.

Any queries on the Monterey Pine Engraver, the Demarcated Area, and the movement of pine wood and wood products can be made to the designated email address: pseudips@agriculture.gov.ie

Further information can be found here: [Pseudips mexicanus Factsheet](#)