

Actual and potential threats to forests throughout Ireland

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COVID-19 (coronavirus)

COVID-19 is a new illness that can affect your lungs and airways. It's caused by a virus called coronavirus.



Stay safe. Protect each other. [Download the COVID Tracker app today.](#)



Coronavirus
Self checker

Exotic disease

Turnaround time

Disease spread

Disinfect

Test and trace

Restrict movement

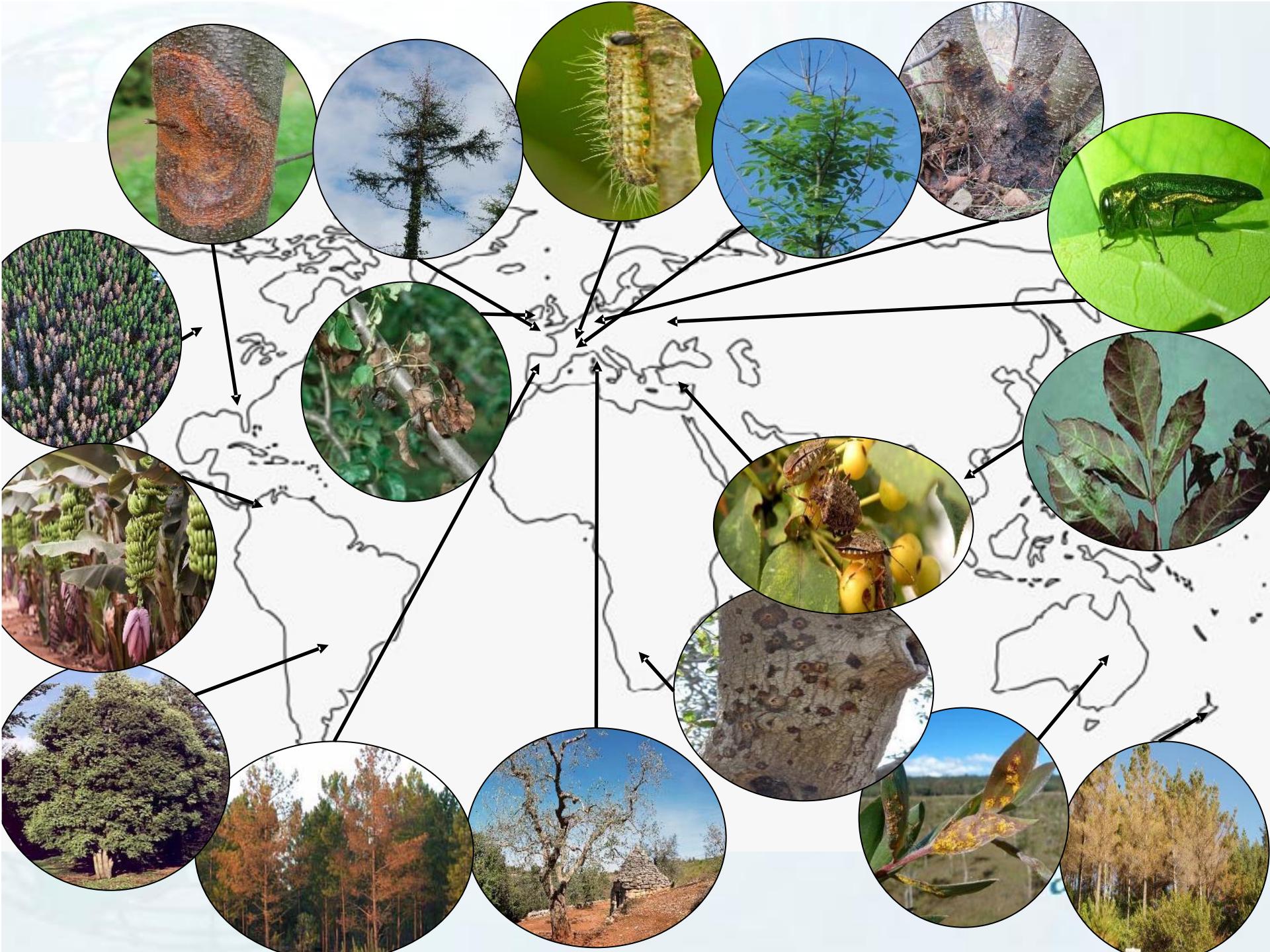
Quarantine

Epidemiology

Protect health

Testing

Feedback



Fighting the SOD that kills our native tree

Farming Independent

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Living with Ash Dieback: Scientists concede eradication of disease

IRISH FARMERS JOURNAL

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Invasive oak pest traced to imported trees from Belgium

The oak processionary moth (OPM) is found on oak trees and plants and is not native to Ireland.

2016 survey (D. Burgess AFBI)

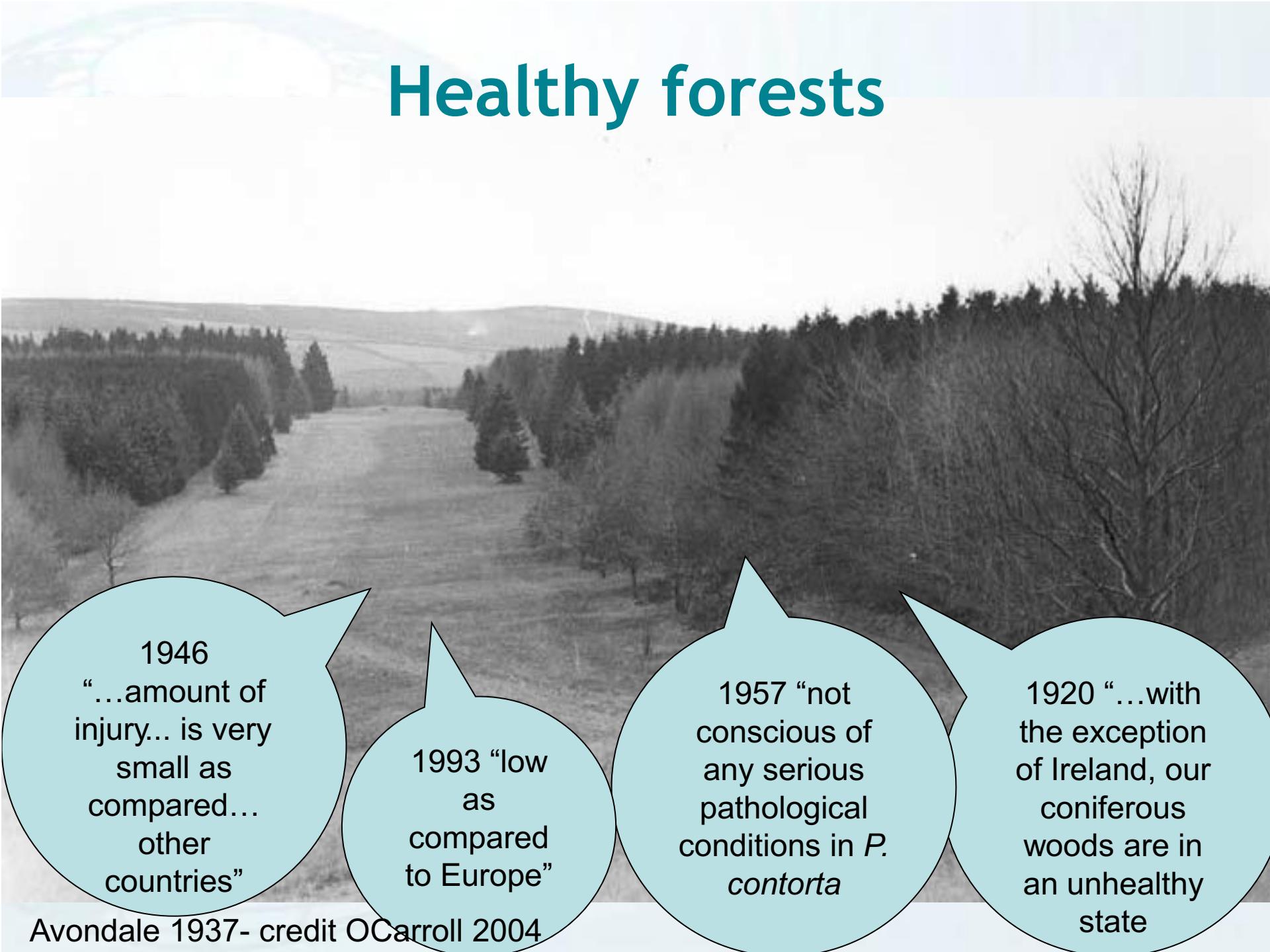
81% (n=914) had not heard of a plant disease

70% do not regularly clean footwear

Tree Check (<1% familiar)



Healthy forests



1946
“...amount of injury... is very small as compared... other countries”

1993 “low as compared to Europe”

1957 “not conscious of any serious pathological conditions in *P. contorta*”

1920 “...with the exception of Ireland, our coniferous woods are in an unhealthy state”

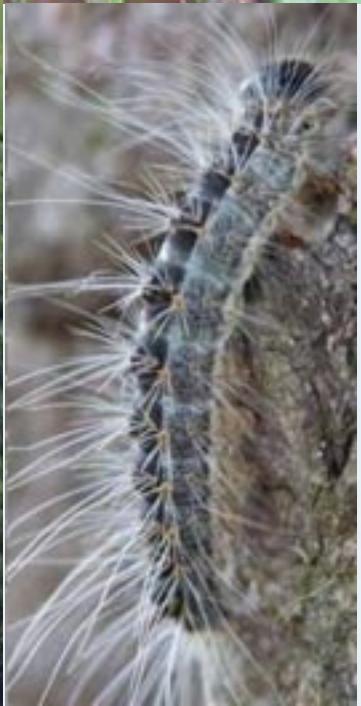
The usual suspects

- Large pine weevil (*Hylobius abietis*)
- Pine shoot beetle (*Tomicus piniperda*)
- Honey fungus (*Armillaria mellea*)
- Annosus root rot (*Heterobadision annosum*)
- *Fomitopsis pinicola*

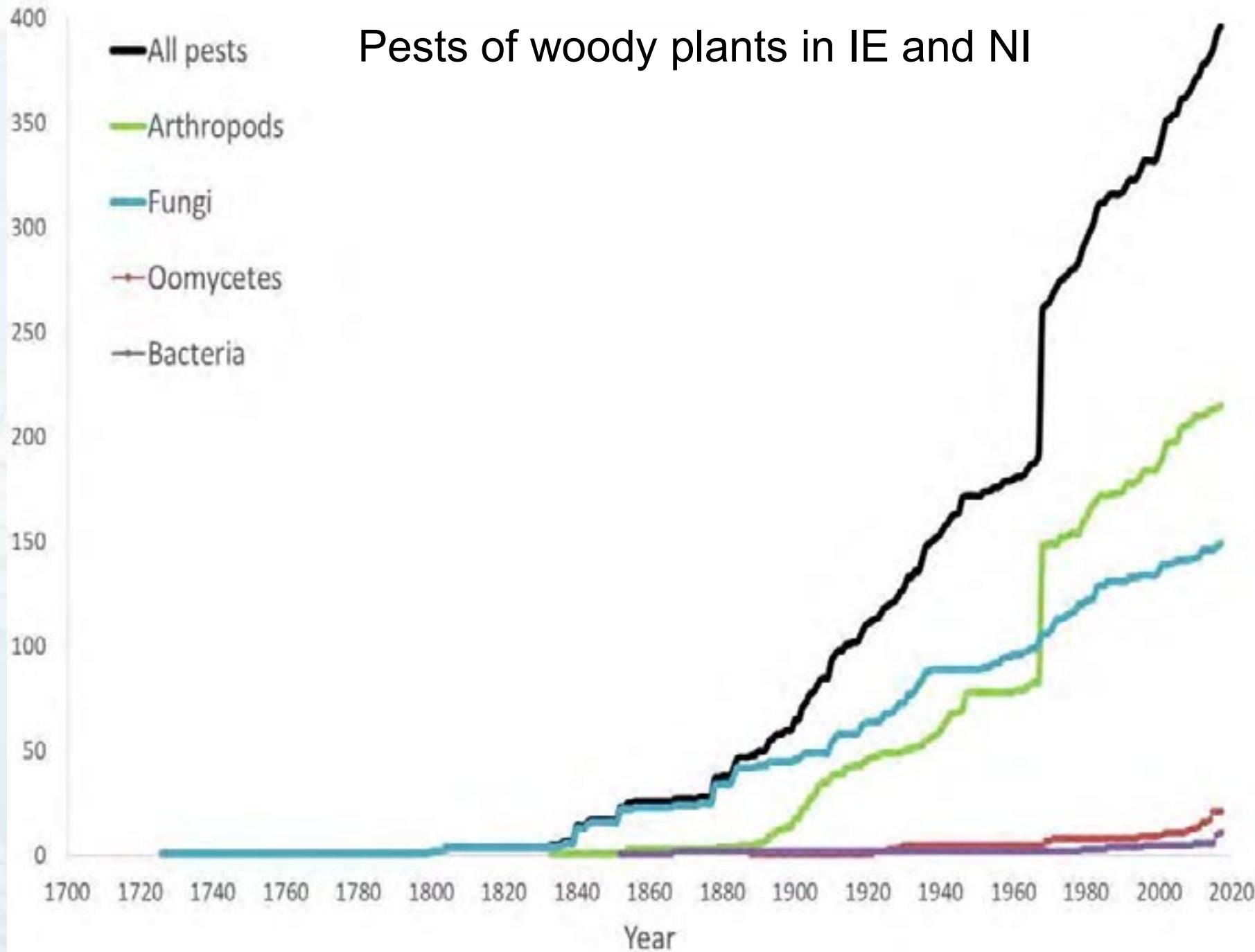


The recent arrivals

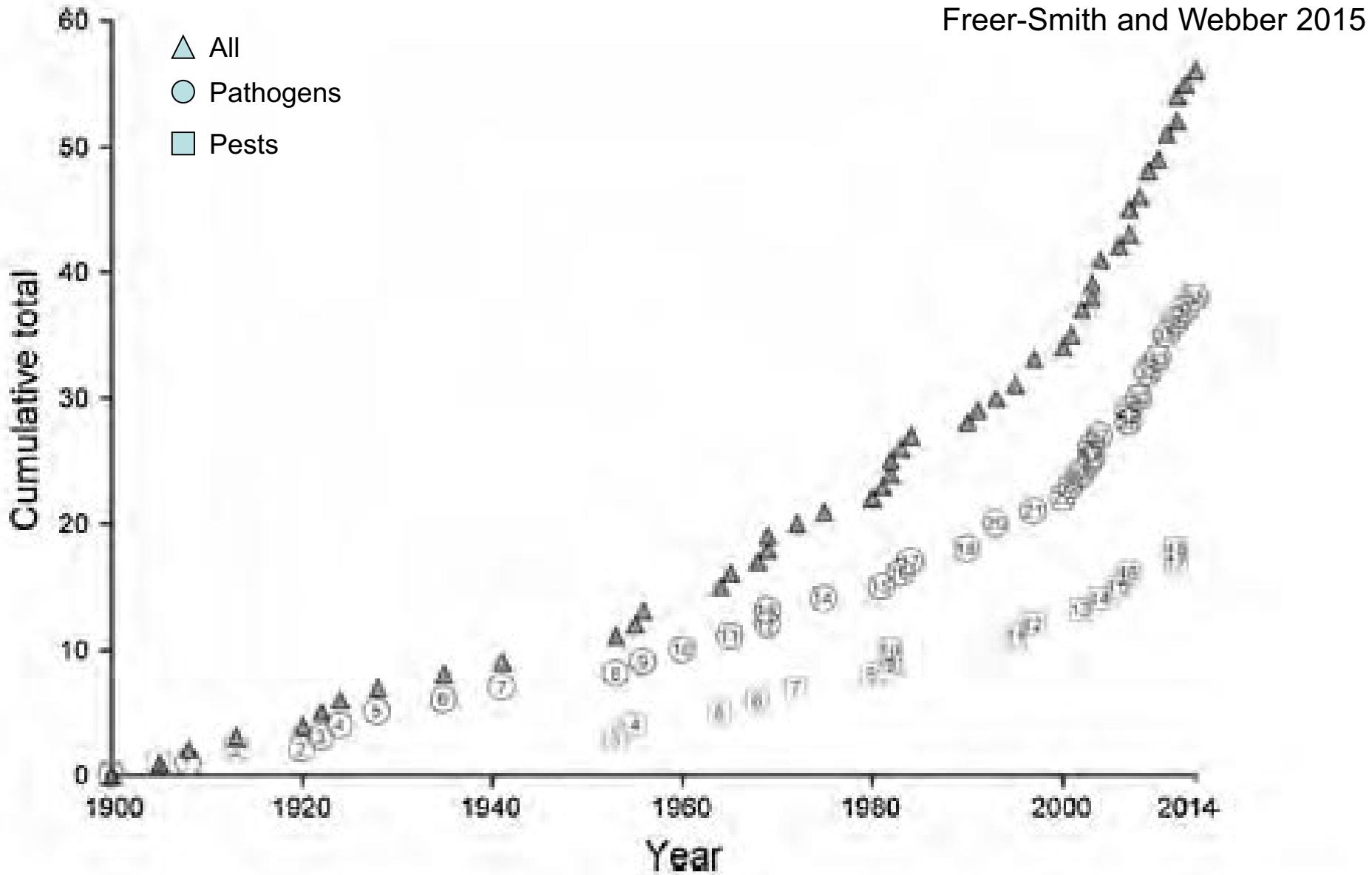
- 1977 - Dutch elm disease
- 1986 - Fireblight
- 2002 - *P. ramorum*
- 2012 - Ash dieback
- 2020 - OPM



Pests of woody plants in IE and NI



New pests invasions in Britain



Globalisation

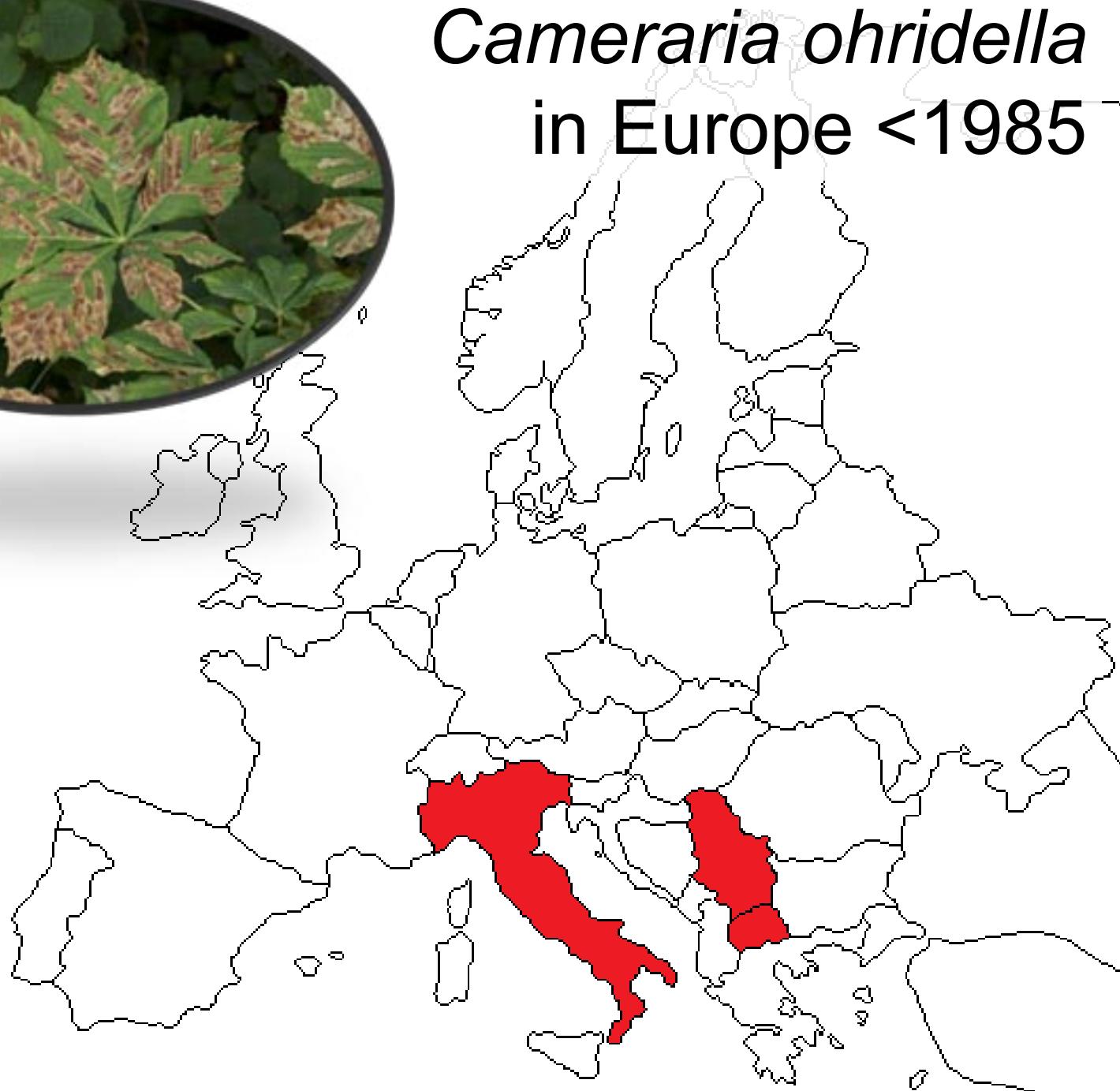
Breakfast Muesli – A global supply chain



Climate change



Cameraria ohridella in Europe <1985

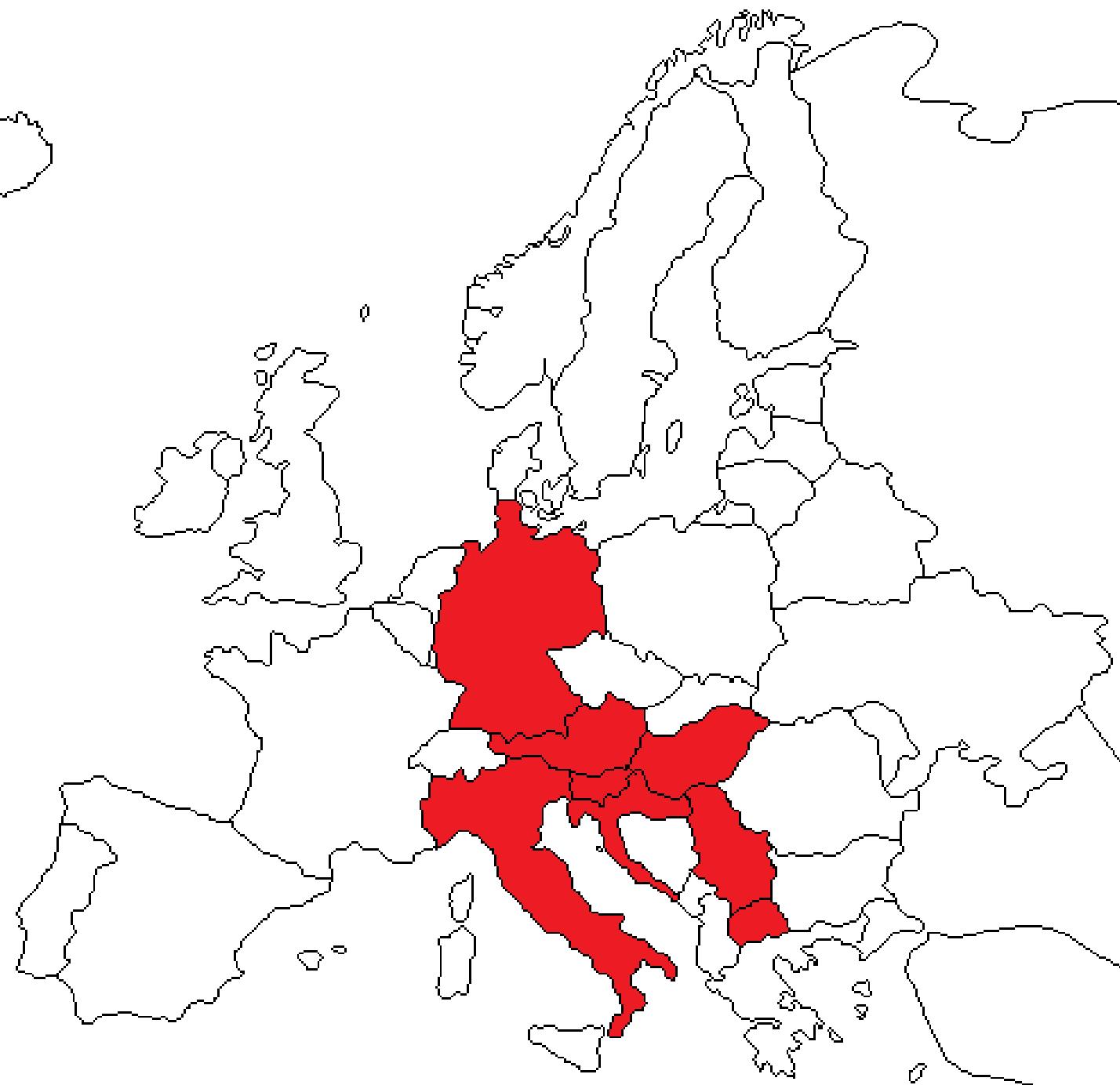


1982- IT

<1990



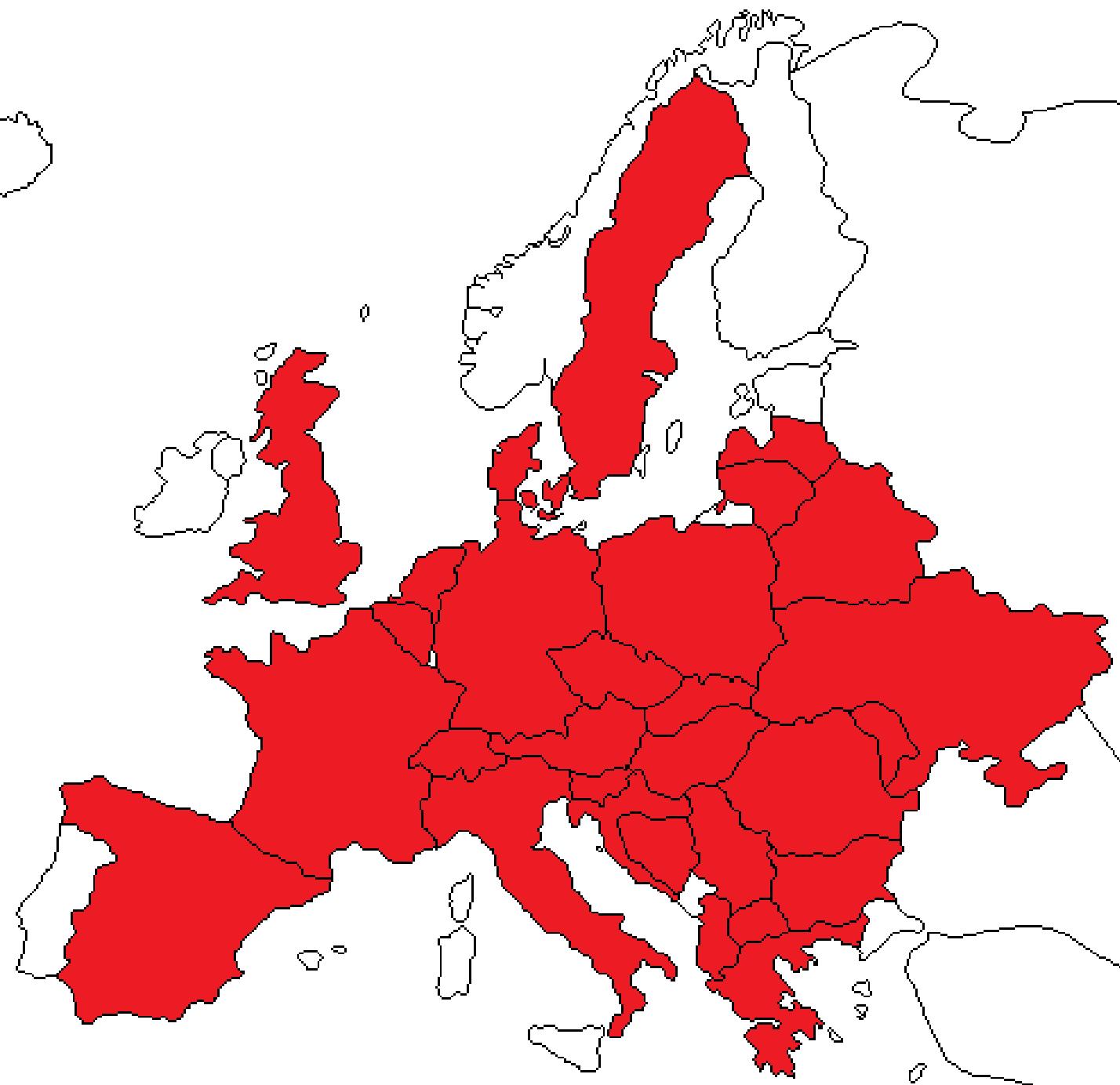
<1995



<2000



<2005



<2018



*Average delay <9 years (n=34) since 1970

Pest		Britain	Ireland
<i>Cameraria ohridella</i>		2002	2013
<i>Cylindrocladium buxicola</i>		2000	2009
<i>Dryocoetes affaber</i>		1991	1991
<i>Hymenoscyphus fraxineus</i>		2012	2012
<i>Leptoglossus occidentalis</i>		2008	2010
<i>Phytophthora × alni</i>		1993	2001
<i>Phytophthora kernoviae</i>		2003	2008
<i>Phytophthora laterails</i>		2010	2011
<i>Phytophthora ramorum</i>		2002	2002
<i>Pseudomonas syringae</i> var. <i>aesculi</i>		2004	2010
<i>Thaumetopoea processioneae</i>		2006	2020
<i>Xanthomonas populi</i>		1980	1996

Incoming threats

*Average delay <9 years (n=34) since 1970

Pest	Britain
Acute oak decline	2011
<i>Anoplophora glabripennis</i> (Agrilus)	2012
<i>Aproceros leucopoda</i>	2017
<i>Cryphonectria parasitica</i>	2011
<i>Dendroctonus micans</i>	1980
<i>Ips typographus</i>	2018
<i>Phytophthora austrocedri</i>	2010



Future threats

Pest	Nearest location
<i>Agrilus bilineatus</i>	Turkey
<i>Agrilus planipennis</i>	Ukraine
<i>Bretziella fagacearum</i>	USA
<i>Ceratocystis platani</i>	EU
<i>Corythucha arcuata</i>	EU
<i>Xylella fastidiosa</i>	EU



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A strategy to fight back

- Horizon scanning
 - Identify threats
 - Increase forest resilience
- Surveillance
 - Official monitoring (statistical surveys)
 - Citizen science (communication/education)
- Science
 - Characterise risks
 - Study biology of pests
 - Biosecurity



Key Principles

1. Source plants with care
2. Keep it clean
3. Plant now for future challenges
4. Embed plant health in policies and practices
5. Promote understanding/awareness of Plant health

Useful references

- Observatree symptom sheets
- NI Plant Health Risk Register
- DAERA plant health website
- DAFM plant health website

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Field Guide for the
Identification of Damage
on Woody Sentinel Plants

Edited by Alan Burrows, Maynard Cleary,
Tanya Morrison and René Scherer

