

Mini data sheet on *Phytophthora pluvialis*

Added to the EPPO Alert List in 2022 - Deleted in 2026

Reasons for deletion:

Phytophthora pluvialis has been included in EPPO Alert List for more than 3 years and during this period a risk assessment was conducted in the United Kingdom and concluded that this pest did not meet the criteria to be a Quarantine pest for Great Britain. In 2026, the Working Party on Phytosanitary Regulations agreed that it could be deleted, considering that sufficient alert has been given.

Why: *Phytophthora pluvialis* was discovered in several woodlands in the United Kingdom at the end of 2021, affecting mature western hemlock (*Tsuga heterophylla*) and Douglas-fir (*Pseudotsuga menziesii*) trees. This was the first report of this pathogen in the EPPO region. In autumn 2023, *P. pluvialis* was also found in Belgium. The Panel on Phytosanitary Measures suggested that it is added to the EPPO Alert List to raise awareness of other EPPO countries.

Where: The species is considered as probably native from North-Western USA.

EPPO region: Belgium, Ireland, United Kingdom (England, Scotland, Wales).

North America: United States of America (California, Oregon, Washington).

Oceania: New Zealand.

On which plants: In the USA, *P. pluvialis* was first observed on *Pseudotsuga menziesii* and *Notholithocarpus densiflorus*. In New Zealand, it was recorded on *Pinus radiata*, *P. patula*, *P. pinea* and *P. strobus*. In the United Kingdom, it is causing cankers on *Tsuga heterophylla*, *P. menziesii* and *Larix kaempferi*. As *P. pluvialis* has expended its host range when introduced to new areas, some authors consider that this pathogen has the potential to infect a broader range of hosts than is currently recognized.

Damage: *P. pluvialis* is known to cause needle cast, shoot dieback, and lesions on the stem, branches, and roots of host plants. In the USA and New Zealand, *P. pluvialis* is mainly a needle pathogen. It causes red needle cast disease on *Pinus* species: symptoms start as discrete olive-coloured lesions on the needles, then turning yellow to red brown. This eventually can lead to premature defoliation of the lower crown and occasionally of the entire tree. In the United Kingdom, in addition to symptoms on needles, branch and stem cankers have been observed and resulted in severe tree decline.

A guide of symptoms observed in the United Kingdom is available on Forest Research website, and photos are available in EPPO Global Database:

<https://gd.eppo.int/taxon/PHYTUV/photos>

Dissemination: *P. pluvialis* has been isolated from soil, water, and tree foliage and stems. Like other Clade 3 *Phytophthora* spp., *P. pluvialis* disperses aerially over relatively short distances, via rain splash and wind-driven rain. Like other *Phytophthora* spp., it could probably be transported on footwear and vehicles from infested areas. In trade it can be transported on infested plant material. Analysis demonstrated that the epidemics in New Zealand was linked to a single introduction from Oregon. In New Zealand, the first symptoms were observed in 2008 in one area, and in 2018 its presence was recorded in both North and South Islands.

Pathways: plants for planting, wood, cut branches, needles, mulch?, soil.

Possible risks: *Pinus*, *Tsuga*, *Pseudotsuga* and *Larix* are widespread in the EPPO region, both in forest and in urban areas. *P. pluvialis* has already been introduced in the last decade in New Zealand and the United Kingdom, and could therefore also be introduced in other EPPO countries. *P. pluvialis* causes defoliation and severe decline on its hosts. Its host range has expanded when introduced to new areas. Climatic requirements of this pathogen are not yet fully known but it is established in cool wet climate of the Pacific Northwest USA as well as in warmer areas in New Zealand. Therefore, at least the western part of the EPPO region is at risk. In 2026, the risk for the United Kingdom was reconsidered and concluded that *P. pluvialis* poses a low environmental and economic risk. Official measures in the UK are therefore lifted.

Sources

- Brar S, Tabima JF, McDougal RL, Dupont PY, Feau N, Hamelin RC, Panda P, LeBoldus JM, Grünwald NJ, Hansen EM, Bradshaw RE (2018) Genetic diversity of *Phytophthora pluvialis*, a pathogen of conifers, in New Zealand and the west coast of the United States of America. *Plant Pathology* 67(5), 1131-1139. <https://doi.org/10.1111/ppa.12812>
- Defra (2026) Rapid risk Analysis for *Phytophthora pluvialis* (updated March 2026). <https://pra.eppo.int/pr/9bf446a3-733a-43e6-88b9-3a8741340126>
- Hansen EM, Reeser PW, Sutton W, Gardner J, Williams N (2015) First report of *Phytophthora pluvialis* causing needle loss and shoot dieback on Douglas-fir in Oregon and New Zealand. *Plant Disease* 99(5), 727. <https://doi.org/10.1094/PDIS-09-14-0943-PDN>
- INTERNET
- Forest Research (2022) *Phytophthora pluvialis* - Symptoms on western hemlock and Douglas-fir. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1057343/Symptom_guide_P_pluvialis_v2_Feb_2022.pdf
 - GOV.UK. Guidance *Phytophthora pluvialis*. England: <https://www.gov.uk/guidance/phytophthora-pluvialis>
- Tree disease restrictions lifted across seven counties: <https://www.gov.uk/government/news/tree-disease-restrictions-lifted-across-seven-counties>
- Scottish Forestry. *Phytophthora pluvialis* in Scotland. <https://forestry.gov.scot/sustainable-forestry/tree-health/tree-pests-and-diseases/phytophthora-pluvialis>
 - Welsh Government. Guidance *Phytophthora pluvialis*. <https://www.gov.wales/phytophthora-pluvialis>
- McLay E, Rogan B, Dobbie K (2023) First report of *Phytophthora pluvialis* causing needle lesions on *Pinus pinea* in New Zealand. *New Disease Reports* 47(1), e12150. <https://doi.org/10.1002/ndr2.12150>
- NPPO of Belgium (2024-02, 2025-09).
- NPPO of Ireland (2026-03).
- Pérez-Sierra A, Chitty R, Eacock A, Jones B, Biddle M, Crampton M, Lewis A, Olivieri L, Webber JF (2022) First report of *Phytophthora pluvialis* in Europe causing resinous cankers on western hemlock. *New Disease Reports* 45(1), e12064. <https://doi.org/10.1002/ndr2.12064>
- Pérez-Sierra A, Chitty R, Eacock A, Wylder B, Biddle M, Quick C, Olivieri L, Crampton M (2024) First report of *Phytophthora pluvialis* causing cankers on Japanese larch in the United Kingdom. *New Disease Reports* 49, 12246. <https://doi.org/10.1002/ndr2.12246>
- Pirronitto S, Paquet F, Gaucet V, Chandelier A (2024) First report of *Phytophthora pluvialis* in Douglas fir plantations in Belgium. *New Disease Reports* 49(1), e12244. <https://doi.org/10.1002/ndr2.12244>
- Reeser P, Sutton W, Hansen E (2013) *Phytophthora pluvialis*, a new species from mixed tanoak-Douglas-fir forests of western Oregon, U.S.A. *North American Fungi* 8(7), 1-8. <https://doi.org/10.2509/naf2013.008.007>
- Tabima JF, Gonen L, Gómez-Gallego M, Panda P, Grünwald NJ, Hansen EM, McDougal R, LeBoldus JM, Williams NM (2021) Molecular phylogenomics and population structure of *Phytophthora pluvialis*. *Phytopathology* 111(1), 108-115.
- EPPO RS 2021/227, 2022/06, 2022/061, 2023/031, 2024/039, 2024/040, 2025/219, 2026/076, 2026/097