

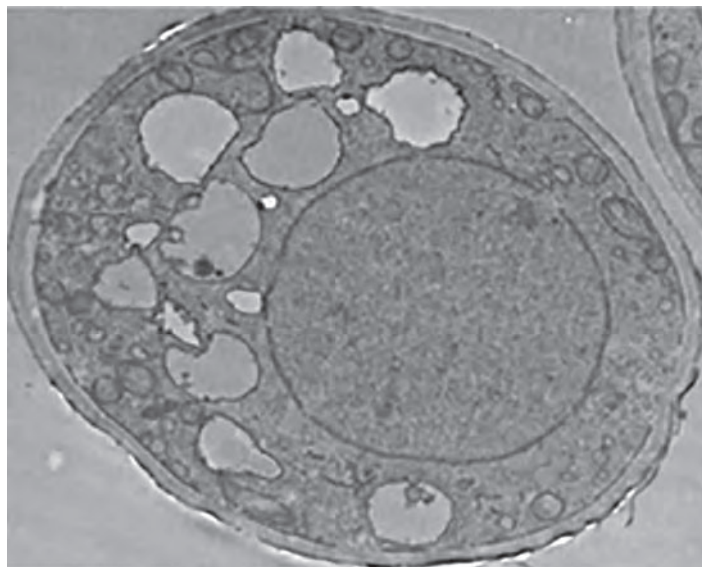
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7 *Hymenoscyphus fraxineus* (*H. fraxineus*) is the fungus that causes ash dieback. This disease usually kills all the ash trees that it infects.

(a) The electron micrograph shows a section through a fungal cell.



Magnification $\times 1000$

To which group do fungi belong?

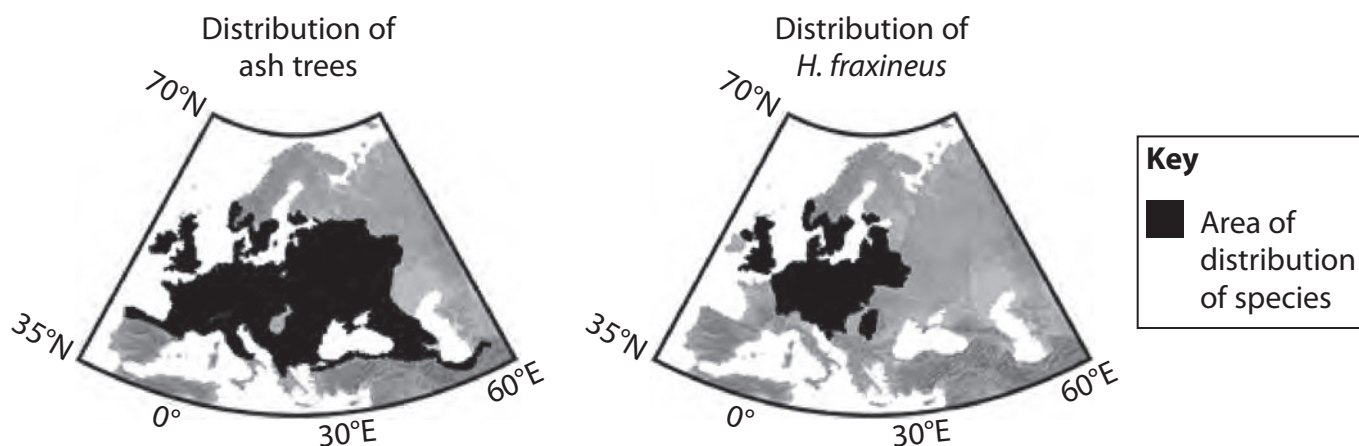
(1)

- A Archaea
- B Eukaryota
- C Prokaryota
- D Viruses



P 5 2 2 8 8 A 0 2 1 3 6

(b) The diagrams show the distribution of ash trees and *H. fraxineus* in 2007.



In 2007 the mean atmospheric carbon dioxide concentration was 398 ppm.

Models have been used to predict the effect of increasing atmospheric carbon dioxide concentration on the distribution of ash trees and *H. fraxineus*.

The table shows these predictions.

Concentration CO ₂ / ppm	Predicted region suitable for ash trees	Predicted region suitable for <i>H. fraxineus</i>	Predicted distribution of ash trees
430			
1080			

(i) Which of the following is an abiotic factor that should be considered in the model? (1)

- A ash tree resistance to *H. fraxineus*
- B *H. fraxineus* pathogens
- C humidity
- D ocean pH



