

IIC International Training Centre for Conservation

12 Nov – 21 Nov 2019 | The Palace Museum, Beijing

Scientific Approaches to
Ceramics & Glass Conservation



Preventive Conservation for Ceramics and Glass Collections

12 November 2019

Sarah Staniforth



INTERNATIONAL INSTITUTE
FOR CONSERVATION OF
HISTORIC AND ARTISTIC WORKS



Scientific Approaches to Ceramics & Glass Conservation



- 9.00 Introduction and agents of deterioration quiz
- 9.30 Group work – preventive conservation issues for your collections and feedback
- 10.15 Lecture
- 10.45 Break
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Ten agents of deterioration

- Physical forces
 - Thieves and vandals
 - Fire
 - Water
 - Biological
 - Chemical
 - Radiation
 - Incorrect relative humidity
 - Incorrect temperature
- PLUS ONE:
- Disassociation

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保 护 文 物

HELP PROTECT THE CULTURAL RELICS

爱 护 栏 杆

HELP PROTECT THE RAILINGS



中国人寿 捐赠
CHINA LIFE



L'Aquila earthquake : 6 April 2009







Wallington, Northumberland

Floor protection using Eyemats



Wallington, Northumberland

Floor protection using Eyemats



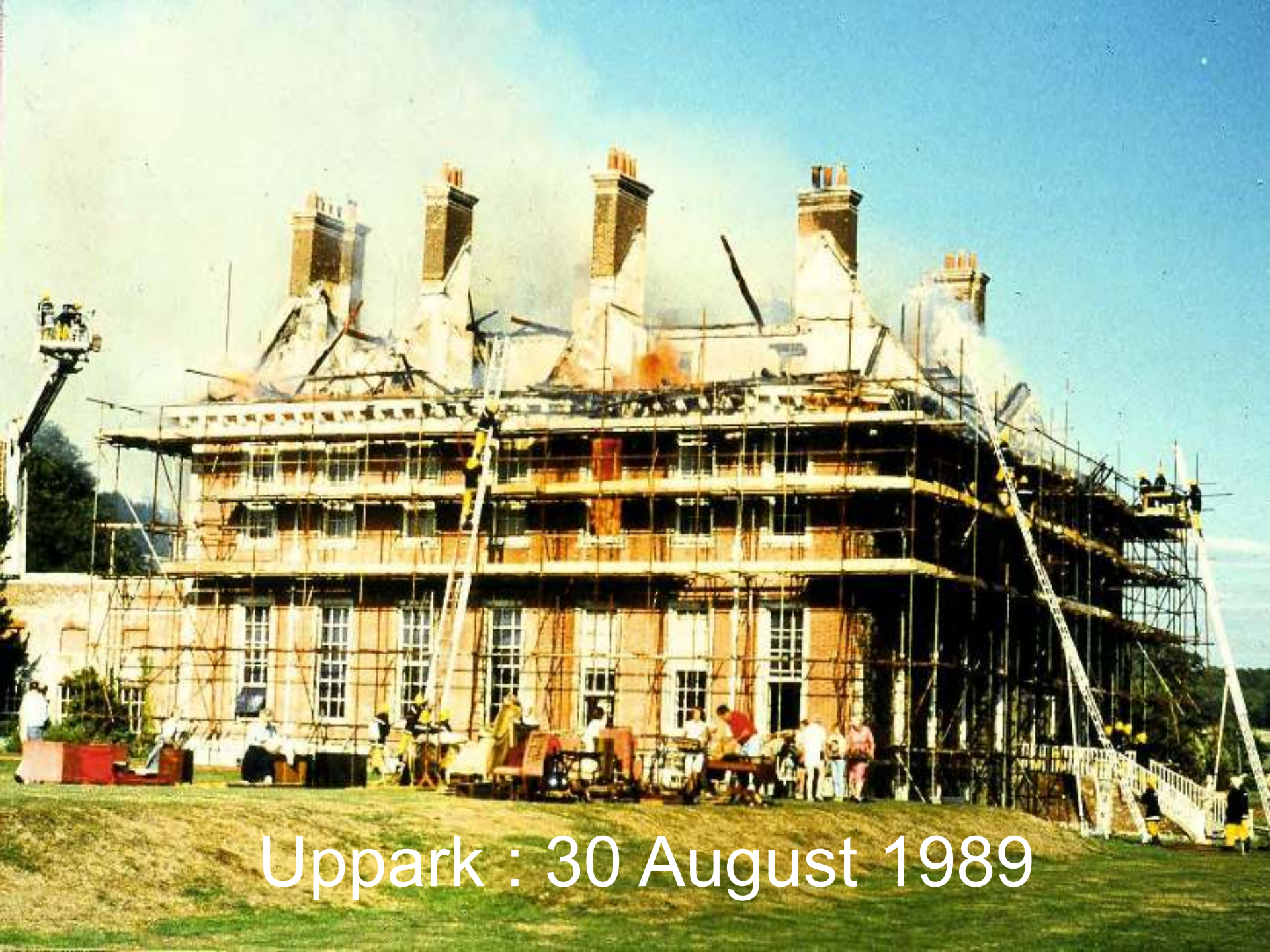
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Uppark : 30 August 1989



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Clandon: 29 April 2015



Clandon: 29 April 2015

Ten agents of deterioration

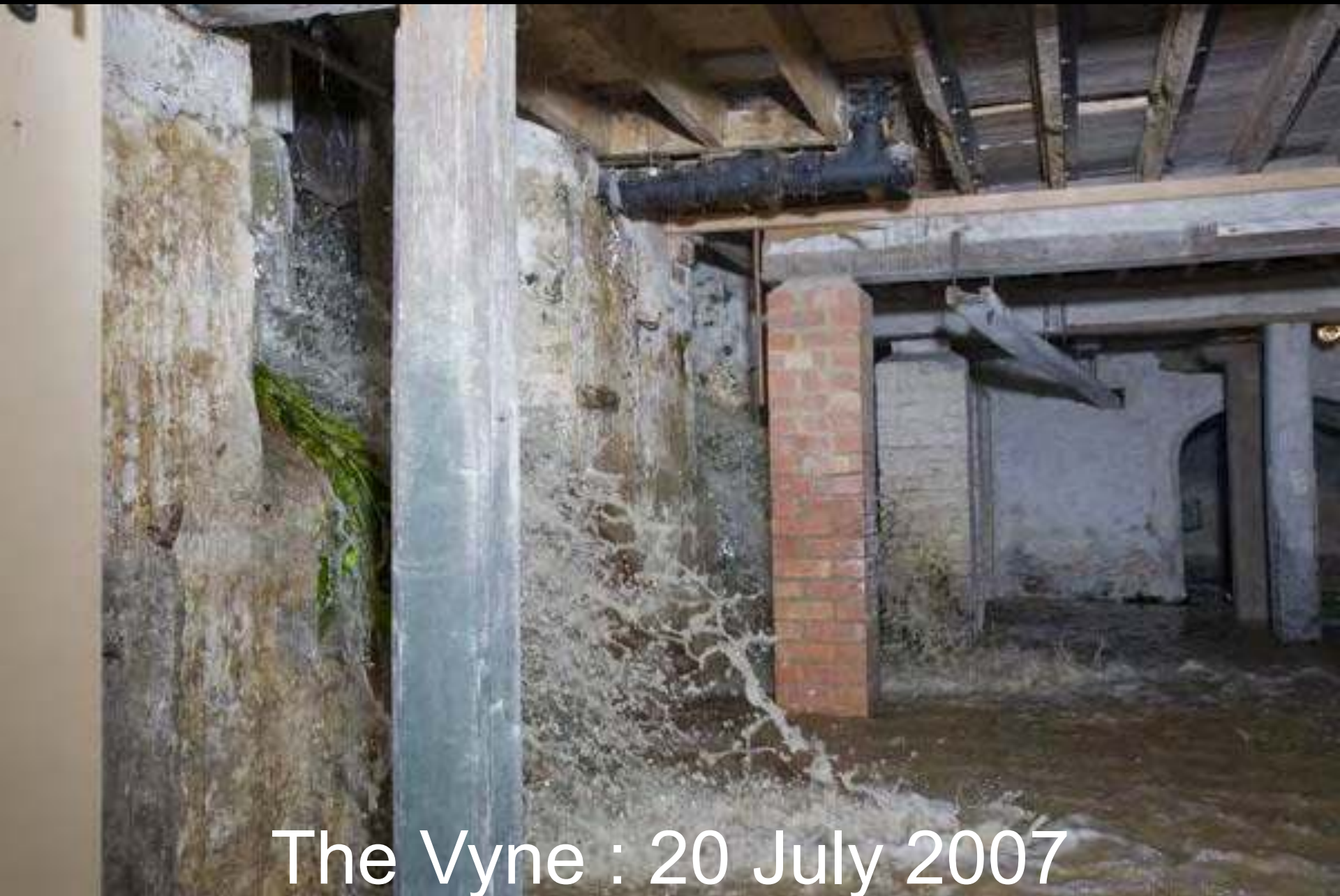
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The Vyne : 20 July 2007



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Wordsworth House: 19 November 2009

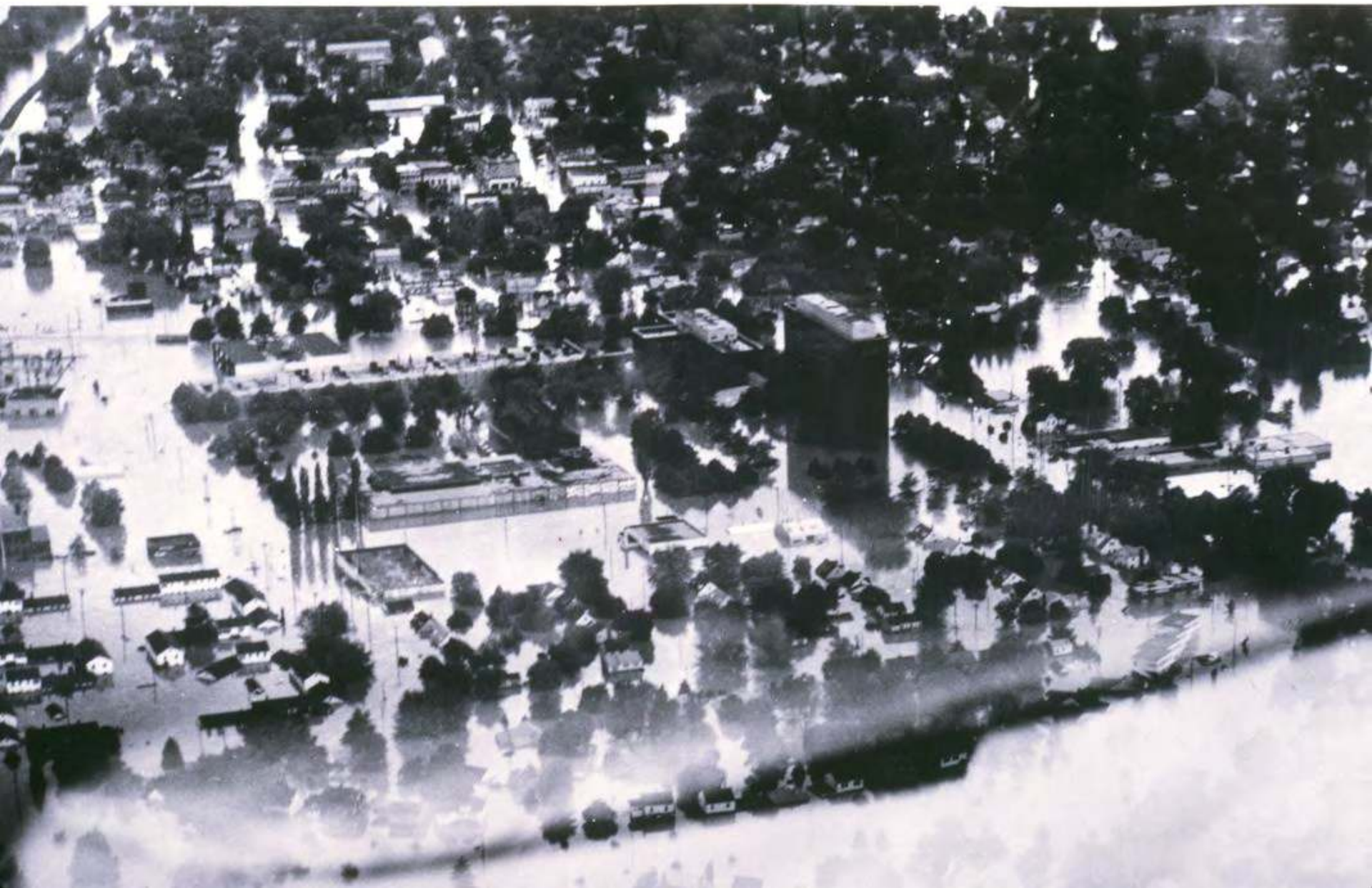


Wordsworth House: 19 November 2009

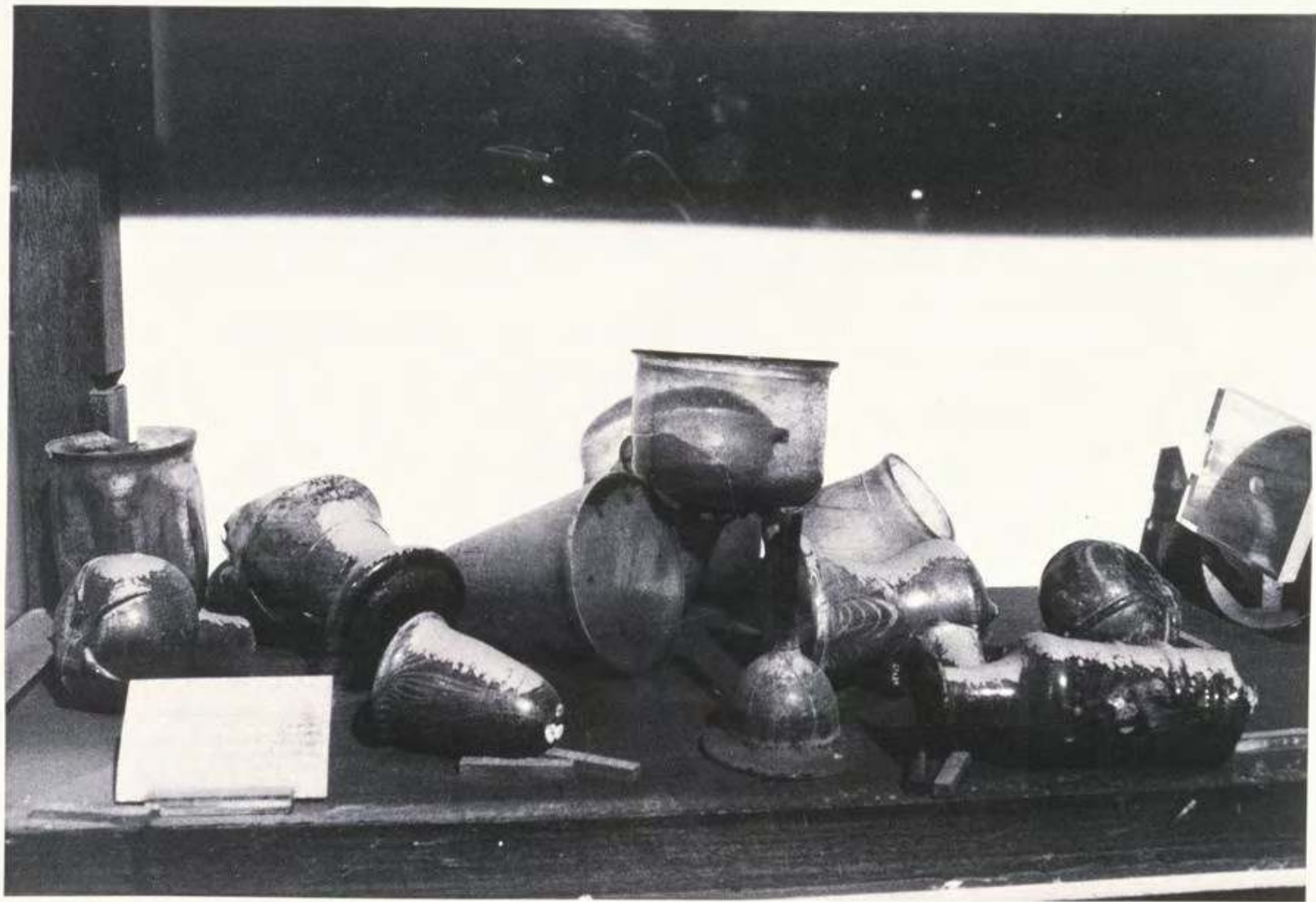
Corning Museum Flood



June 23, 1972











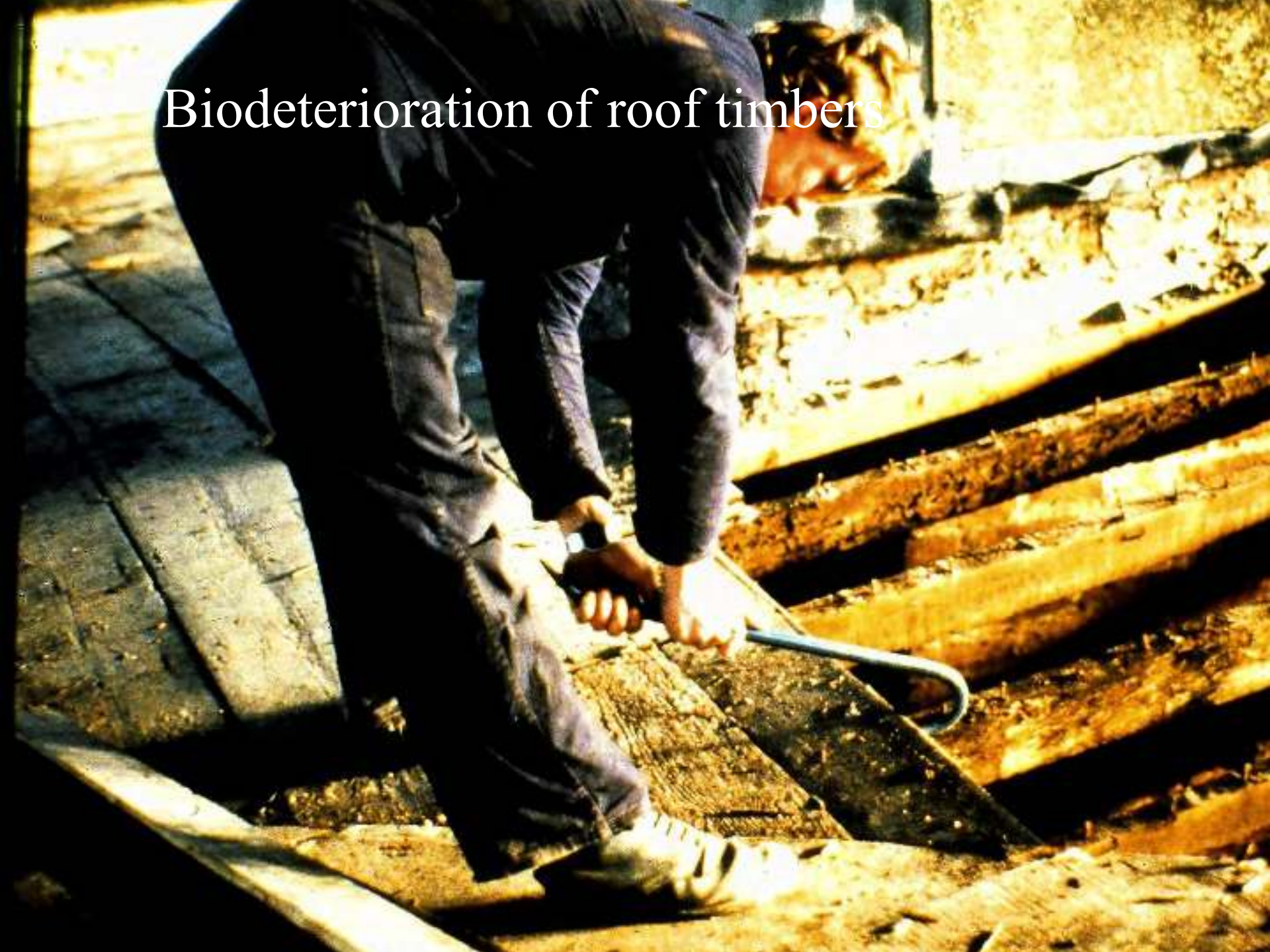
Importance of building maintenance

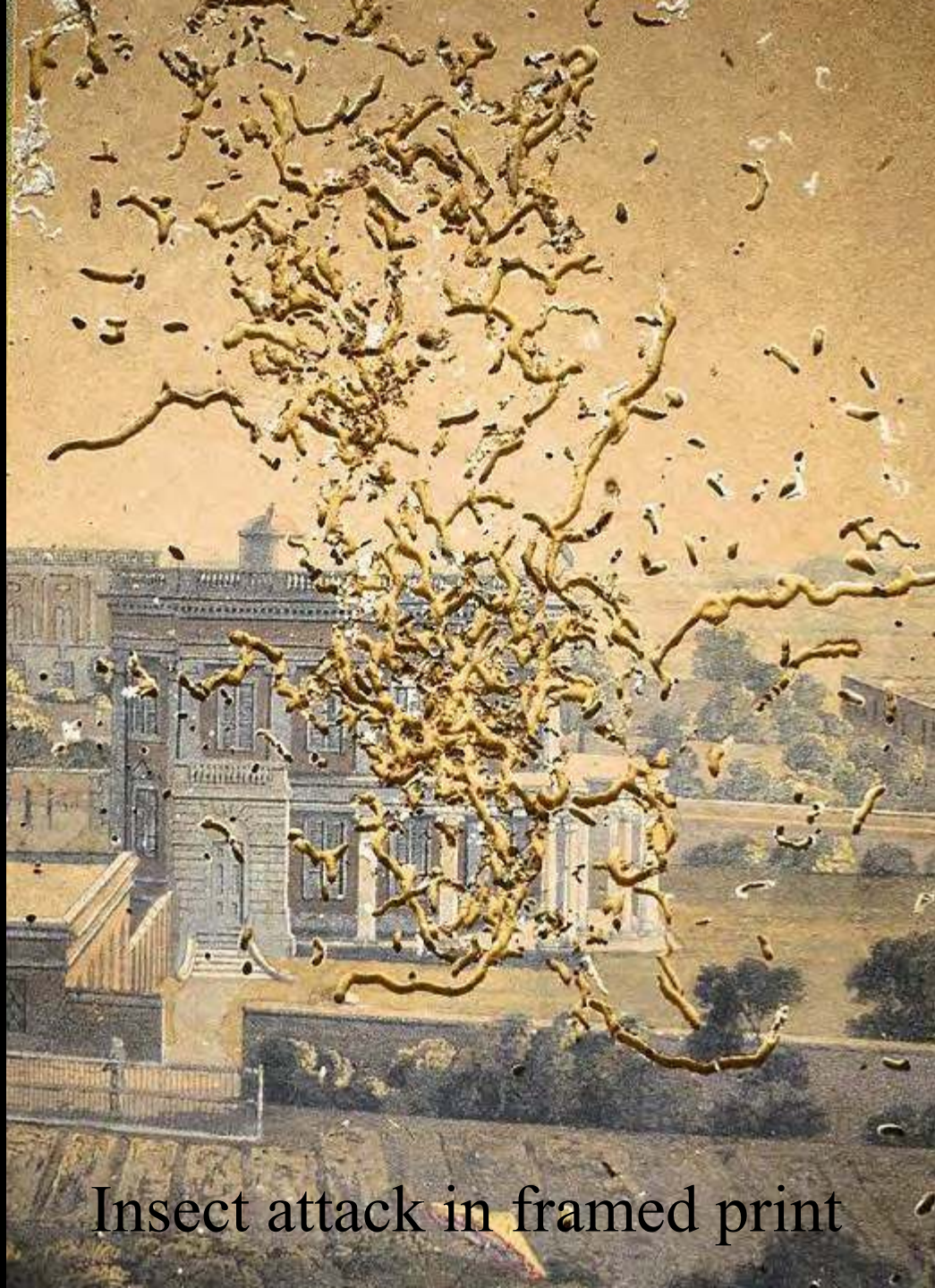


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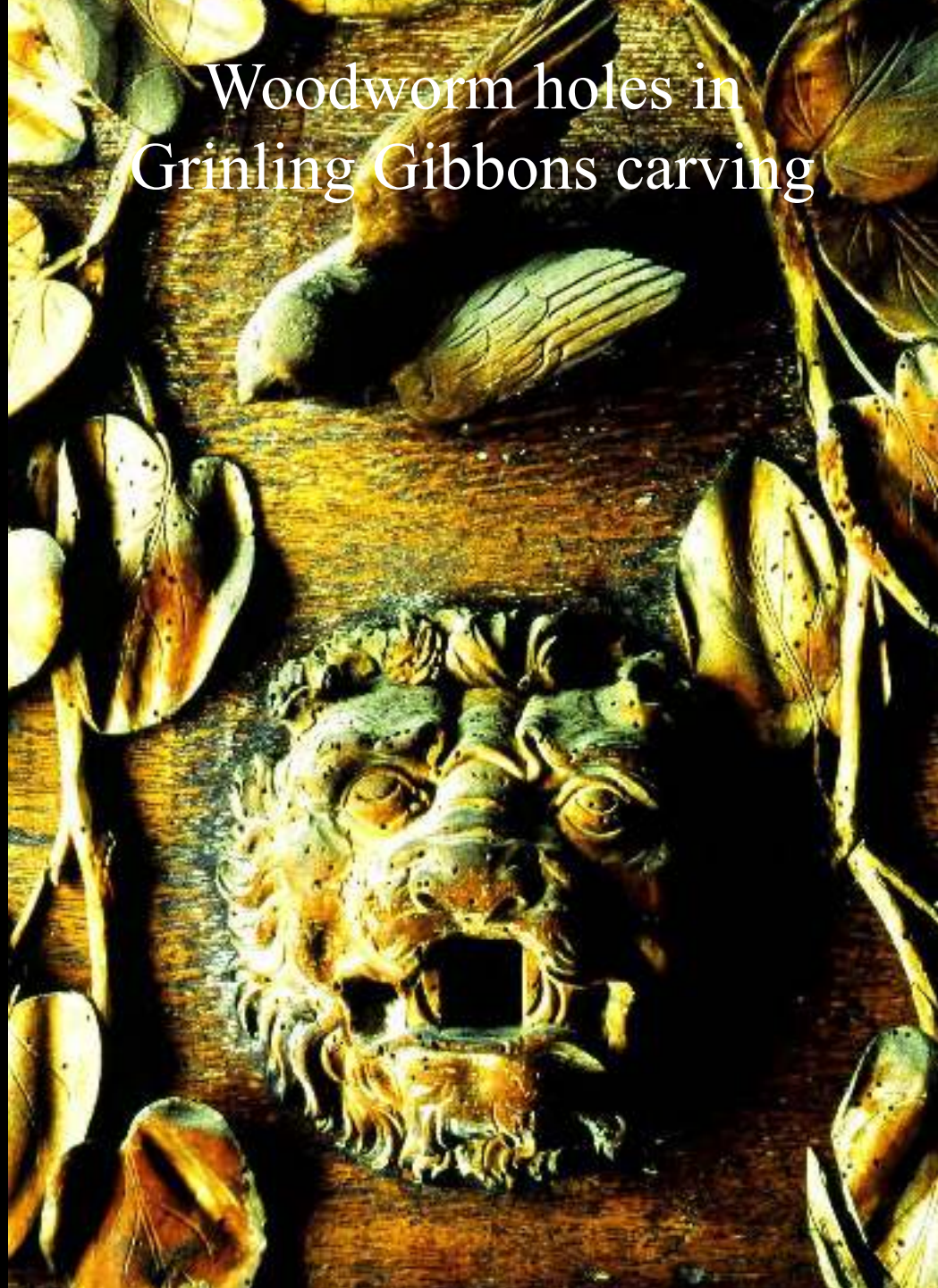
Biodeterioration of roof timbers





Insect attack in framed print

Woodworm holes in
Grinling Gibbons carving



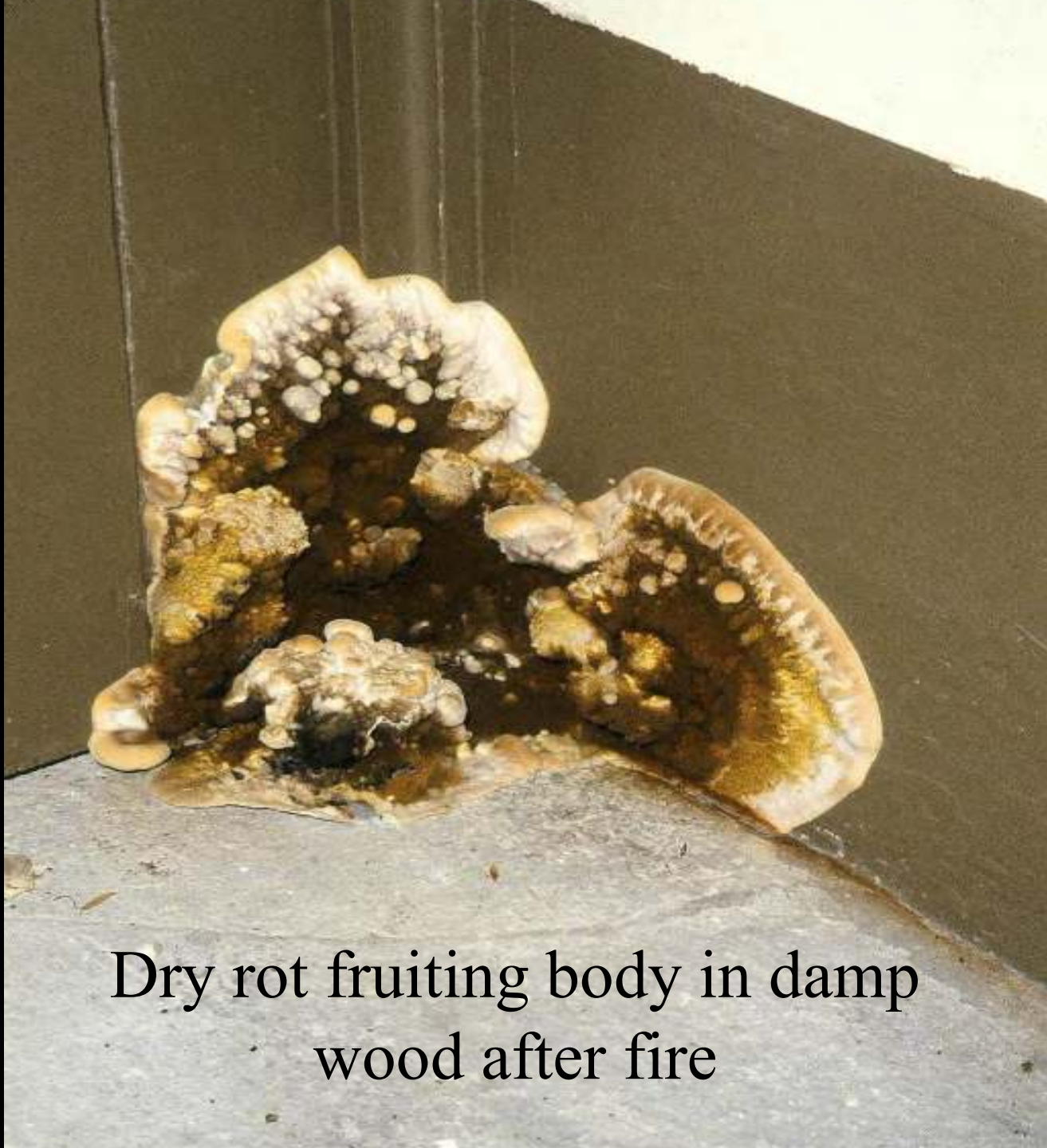
Carpet beetle





Rodent damage

The following text is mirrored and illegible due to the damage and bleed-through from the reverse side of the page. It appears to be a technical or scientific report.



Dry rot fruiting body in damp wood after fire

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Gaseous air pollution



Dust



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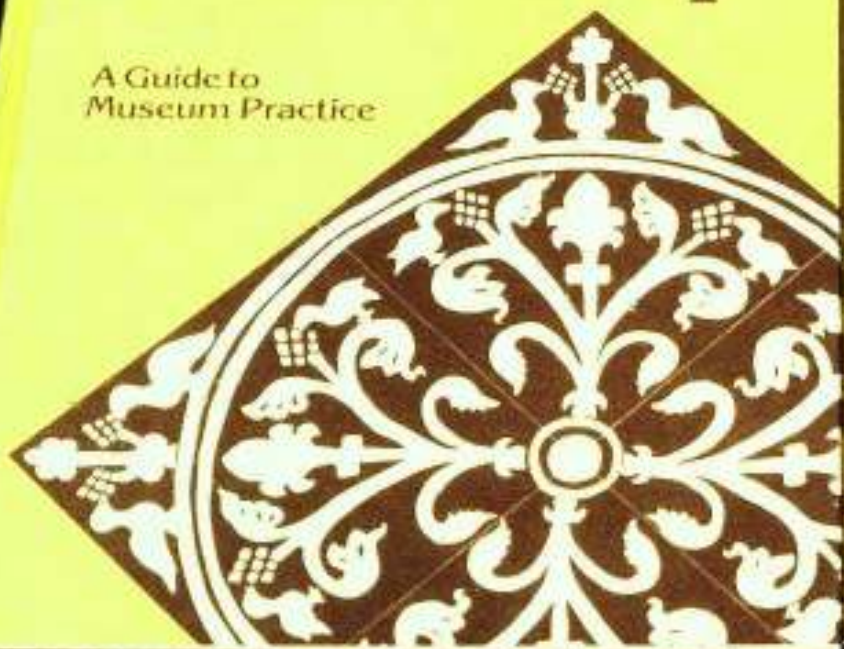




Edited by John M. A. Thompson

Manual of Curatorship

A Guide to
Museum Practice



Butterworths

The Museums Association

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Reducing damage by light

- Eliminate ultraviolet radiation
- Reduce time of exposure
- Reduce visible light levels
 - No direct sunlight
 - Make most of low light levels















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Reducing damage by incorrect RH

- Avoid high RH
- Avoid low RH
- Avoid fluctuating RH

















IIC/ICOM-CC

Environmental Guidelines (2014)

- Sustainability and management
 - Care of collections should be achieved in a way that does not assume air conditioning (HVAC). Passive methods, simple technology that is easy to maintain, air circulation and lower energy solutions should be considered.
 - Risk management should be embedded in museum management processes.
- Museum Environment
 - Guidelines for environmental conditions for permanent display and storage should be achievable for the local climate.
- Loans



Bizot Green Protocol (2015)

Loans

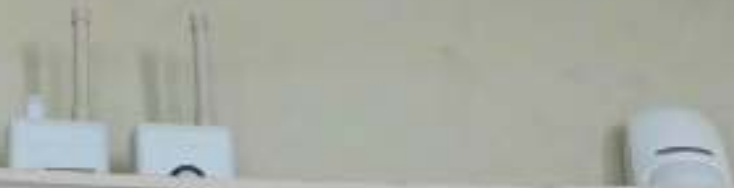
For many classes of object containing hygroscopic material (such as canvas paintings, textiles, ethnographic objects or animal glue) a stable relative humidity (RH) is required in the range of 40 - 60% and a stable temperature in the range 16-25° C with fluctuations of no more than $\pm 10\%$ RH per 24 hours within this range.

More sensitive objects will require specific and tighter RH control, depending on the materials, condition, and history of the work of art. A conservators evaluation is essential in establishing the appropriate environmental conditions for works of art requested for loan.

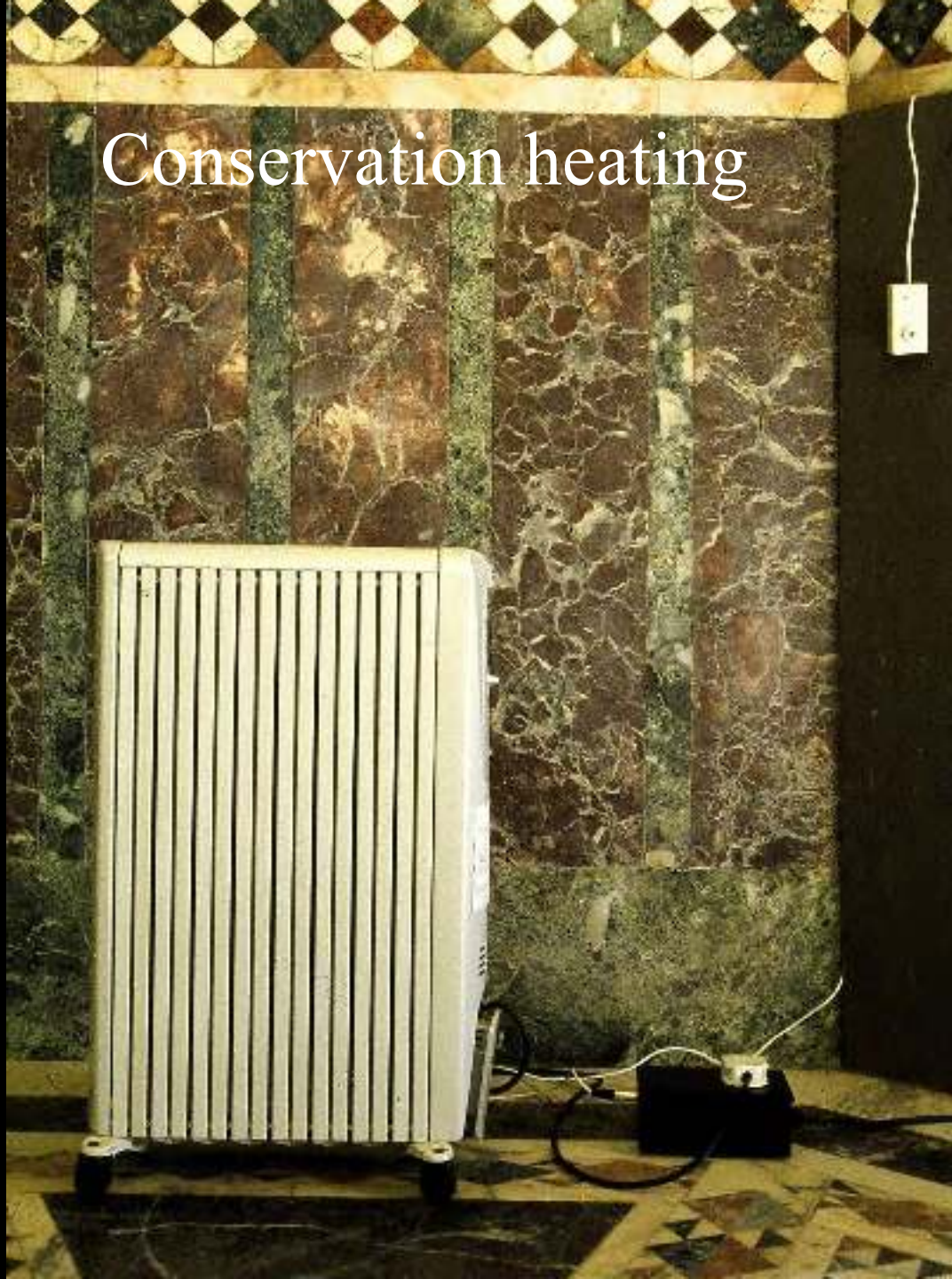








Conservation heating



Knole, Kent



Knole, Kent



Knole, Kent



Knole, Kent





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Nine agents of deterioration

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