

Phytophthora palmivora can readily infect healthy pods through wounds; hence there is a possibility that some pod infection may be associated with insect damage. Most of the pod damage by insects in Nigeria is ascribed to *Helopeltis* sp., but casual observations indicate that it is only exceptionally that black-pod infection is associated with such insect punctures.

Black-pod disease studies are continuing and detailed results will be published elsewhere. I am greatly indebted to Dr. P. H. Gregory, Rothamsted Experimental Station, for his advice and suggestions adopted in the preparation of this communication, which is published with the permission of Mr. A. G. Beattie, Inspector-General of Agriculture, Nigeria.

C. A. THOROLD

Department of Agriculture,
Moor Plantation,
Ibadan, Nigeria.
April 16.

- ¹ Bowman, G. F., Report of Cocoa Conference, 1951, p. 49 (Cocoa, Chocolate and Confectionery Alliance Ltd., London).
² Salazar, M., thesis in library of I.A.I.A.S., Turrialba (not seen); abstract in *Cacao Inform. Bull.*, 1, No. 18 (1949).
³ Gregory, P. H., *Trans. Brit. Myc. Soc.*, 28, 26 (1945).
⁴ Van der Plank, J. E., *Emp. J. Exp. Agric.*, 17, 18 (1949).
⁵ Ashby, S. F., *Trans. Brit. Myc. Soc.*, 14, 34 (1929).
⁶ Gregory, P. H., *Ann. App. Biol.*, 38, 357 (1951).
⁷ Anonymous, "Weather on the West Coast of Tropical Africa", M.O. 492 (H.M. Stationery Office, 1949).
⁸ Van der Plank, J. E., *Trans. Roy. Soc. S. Africa*, 31, 269 (1944).
⁹ Gregory, P. H., *Ann. App. Biol.*, 35, 412 (1948).

Gilbert of Colchester and Wingfield House

DR. WILLIAM GILBERT, who wrote the celebrated treatise, "De Magnete", and who was physician to Queen Elizabeth I and president of the College of Physicians, lived and worked in London in a "capital messuage or mansion" called Wingfield House. There, in a bachelor establishment, he gathered about himself a group of students of the new learning and developed the scientific method of inductive reasoning, his "new sort of philosophising", which he applied to experiments on magnetism and static electricity.

Wingfield House was in St. Peter's Hill, in the parish of St. Peter, Paul's Wharf. So much is apparent from published records and has already been noticed in accounts of Gilbert's life. It seems worth while to identify this interesting site more closely, however, for it was in Wingfield House that the seed of modern science in England germinated and bore its first fruit.

The earliest known reference to Wingfield House is in an indenture executed in 1519¹. It is not clear how or when the house came into Gilbert's possession, though the fact that his stepmother was a Wingfield provides a clue. However, the successive ownership of the property after Gilbert's death in 1603 can be traced through his will² and through various deeds of conveyance^{3,4} until the time of the Great Fire of 1666, when the house was destroyed. Collation of entries in the manuscript survey of building sites in London after the Great Fire⁵ with Ogilby and Morgan's map of London published in 1677 shows that Wingfield House stood opposite the northern end of the College of Arms, almost exactly in the middle of the east side of the remnant of St. Peter's Hill that runs between Knighttrider Street and Queen Victoria Street.

It appears from the deeds that the front of the house was 36 ft. wide, and that the site extended back about 100 ft. Some years after Gilbert died, part of Wingfield House was sold to "the Master, Wardens and Cominalty of the Mystery or Art of Upholders"—that is, the livery company of Upholders or Upholsterers. The indenture⁴ that defines the partition of the property describes the house at some length. There was a paved yard near the middle of the site between a fore part and a rear part of the building, the two parts being connected by the kitchen, which presumably flanked the yard. There was probably also another yard or garden at the back.

The eastern side of St. Peter's Hill was devastated again during the Second World War. The remains of a wall that can be seen running east from the street may well mark the northern boundary of the site of Wingfield House.

C. F. GAINSBOROUGH

13 Avenue Gardens,
Teddington,
Middlesex.

- ¹ Hastings Roll, 238 (91).
² Prerogative Court of Canterbury, Bolein 109.
³ Hastings Rolls, 342 (20) and 349 (52).
⁴ Close Roll, C54/3341, mem. 1.
⁵ Survey by Mills, P., and Oliver, J., Vol. 1, fol. 35 (b); Vol. 2, fol. 19 (a); Vol. 4, fol. 131 (a).

Cooling Bath for Cytological Investigations

THE disadvantage of liquid air¹ as a cooling bath for the rapid quenching necessary in freezing and drying for cytological purposes was recognized by Hoerr² as the formation of a vapour coat of low thermal conductivity around the specimen. He introduced isopentane for this purpose as a liquid of high boiling point which did not vaporize around the piece of tissue. Isopentane cannot be cooled below its melting point, -160°C ., and near this temperature is a thick liquid which cannot be stirred efficiently. In a search for a better bath liquid it has been found that propane has several advantages. It can be cooled to -190°C . and is still very fluid near its melting point. It is easily obtainable as 'Propagas' (B.O.C.)³. Both isopentane and propane have to be cooled with liquid nitrogen, because of the fire and explosion hazard with liquid air or oxygen.

With the increasing use of freezing and drying by histologists and cytologists, it is of interest to report that a non-inflammable and non-toxic cooling bath can be made by condensing dichloro-difluoromethane in a tube cooled by liquid air. This material is easily obtained as 'Arcton 6' (I.C.I.) and has a melting point of -158°C . It is denser than either of the hydrocarbons, and the pieces of tissue float on the surface after quenching, allowing easy recovery from the bath. The possible use of such a bath was discussed at the Bristol meeting of the cytochemistry commission of the International Society of Cell Biology in July 1951.

L. G. E. BELL

Zoology Dept.,
King's College
(University of London),
Strand, W.C.2.
June 27.

- ¹ Gersh, I., *Anat. Rec. (U.S.A.)*, 53, 309 (1932).
² Hoerr, N. L., *Anat. Rec. (U.S.A.)*, 63, 293 (1936).
³ Bell, L. G. E., "Int. Rev. Cytology", 1 (New York); "Freezing and Drying" (Inst. of Biology, London).