sium will be subdivided into four discussion modules. Further details about these and about the Symposium generally may be obtained from the organizing committee c/o *Department of Geography, University of Strathclyde, Livingstone Tower, 26 Richmond Street, Glasgow, G1 1XH.*

Rye and ergot in the Scottish later Bronze Age

PLATE XIII*b*

Gordon J. Barclay and Alan D. Fairweather provide some pointers to the recognition of ergot by excavators carrying out flotation of soil samples on their sites. Gordon Barclay is a Field Archaeologist of the Central Excavation Unit of the Scottish Development Department (Ancient Monuments), Edinburgh. Alan Fairweather is a palaeobotanist working from time to time on post excavation work for the Scottish Development Department.

The flotation of a soil sample from a layer of occupation debris at the recently excavated settlement at Myrehead (Falkirk District, Central Region, NGR NS 969 775, Barclay, 1983), dated to the early first millennium be produced carbonised plant and fungal material. Grains of rye (*Secale cereale*) were found amongst the more numerous grains of wheat and barley. From the same sample a carbonised sclerotium of the fungus ergot (*Claviceps purpurea*) was recovered (Webster 1970). The occurrence of rye at this early date must be considered as reflecting an intrusive weed element rather than an indication of serious cultivation (Godwin 1975). The sclerotium of ergot is also of interest. Dr Roy Watling of the Royal Botanic Gardens (Edinburgh) has confirmed the identification made by AF and Dr Habeshaw of the East of Scotland College of Agriculture of the sclerotium as having grown on a cereal, though the species of cereal cannot yet be determined. *C. purpurea* is a parasite of the Gramineae; of the cereals, rye is its favoured host. Consumption of ergot, as, for example, a contaminant of rye bread, can have grave consequences, ranging from hallucinations to a variety of unpleasant deaths—occurrences of ergotism are well documented (Barger, 1931). The consumption of ergot infected grasses, by humans where the grasses are harvested with cereals, and by grazing cattle has similar effects (Ainsworth & Austwick, 1959). The effects of one form of ergotism, the 'gangrenous', may leave traces in the archaeological bone record; the loss of extremities, limbs or portions of limbs (in both humans and other animals) caused by the constriction of the blood supply by the toxins contained in the ergot, should be clearly visible in well preserved bone assemblages. There is also evidence, though not in NW Europe, of the deliberate use of ergot for its hallucinogenic effects (Wasson *et al.*, 1978); Scott (1977) has discussed the possibility of the use of fungi in this way in Beaker contexts. It is not impossible that the medicinal uses of ergot, discovered in western Europe in the eighteenth century (after sporadic use in later medieval times; Barger, 1931) and in the Himalayas before the nineteenth century (Royle, 1839), were known in prehistoric times.

It is possible that sclerotia of ergot, not only of rye, may have been overlooked in large deposits of cereal remains from archaeological excavations, as the shape is not one that readily triggers a response to a 'specific search image' when observed by most palaeobotanists, who do not have experience in agriculture (PL. XIII*b*). It is hoped that the publication of this occurrence will lead to the recognition of further examples.

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Ghanaian and Coptic brass lamps

The authors of this note argue that the 5th–7th century AD *date given by Arkell for Gold Coast copies of Coptic bronze lamps is wrong; that they are of brass and date from the nineteenth century. But this in no way invalidates the pre-European contact date for the beginning of copper alloy casting in West*