2-1-1980 3126

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REPORT OF THE STUDY CARRIED OUT ON THE ANIMAL HAIRS FOUND ATTACHED TO METAL 'LEAVES' FROM THE MEDIEVAL LEVELS, TRIG LANE (TL74).

Sample: Context 368
Museum Accession Number 1098
Laboratory Number 6933

Description of hair sample: This thread has been dyed purple.

Two distinct groups of fibres present:-

Fibres A: A tangled mass of coarse animal fibres

Fibres B: Twisted (spun) wool fibres forming what appears to be a 'thread'

Both fibres A & B are of similar pale, yellow/brown colour.* This is not natural colouration, and probably is due to staining whilst the hairs were buried. (* almost 'ginger')

Viewed under the light microscope.

There are no traces of preserved skin tissue in the sample.

Method of examination:

(1) Whole mounts of fibres A & B were viewed under an ordinary light microscope at low power (magnification X 100).

(2) Details of the size, shape and arrangement of the cuticular scales of fibres A were obtained by means of a scanning electron microscope. 3 fibres whose ends had been cut through with a razor blade were suspended over a wire frame stuck onto a metal stub. By rotating the stub through 70° in the chamber beneath the 'gun' of the microscope, it proved possible to obtain a reasonable picture of the end of each fibre and so ascertain the shape of the cross-section.

Classification & description of the fibres:2

FIBRES A

medulla types recorded were: simple, interupted, and simple with spindle-shaped air spaces

cuticular patterns: 1. Towards the tip --- smooth & rippled/crenate near/distant irregular wave

2. Base/mid-shaft --- smooth distant regular wave

cross-sections: eye-shaped, oblong, circular

(all of these with medium sized medullae)

A few of the fibres still have intact roots.

FIBRES B

non-medullated wool fibres

as far as I can tell, there are no natural pigmentation granules in these fibres. The wool must therefore have come from a white fleece

Identification:

FIBRES A

compares favourably with medium and coarse fibres of domestic ox

FIBRES B

fine & medium wool fibres

Interpretation:

FIBRES A

As the fibres were clearly attached to the metal 'leaves' there is no question of their originating from the surrounding matrix in which the 'leaves' were found (ie they do not represent contamination from a decomposing hide). This observation is supported by the absence of any skin tissues.

Pulled cow body hairs are today used in the manufacture of felt, a low-grade textile material [2]. It may be, therefore, that the sample from TL74 is all that remains of a felt blanket adorned with metal (tin plated) 'leaves'.

I understand from Ms Kay Staniland, Museum of London, that similar metal ornaments are known from Scandinavian horse trappings (medieval). Could the TL74 sample therefore represent a horse blanket ???

FIBRES B 'Thread' sewn into the felt material

NOTES:

1. I am indebted to Ms Sharon Fairman, BM(NH) for help with the electron microscopy

2. Classification & description follows that of

Brunner, H. & Coman, B. (1974). The Identification of Mammalian Hair. Melbourne: Inkata Press Proprietary Ltd., 5-11.

3. Wildman, A.B. (1954). The Microscopy of Animal Textile Fibres. Leeds: Wool Industries Research Association, 135.