

Report on the Inlaid Anglo-Saxon Knife Blade From Wicken Bonhunt, Essex.
A.M. No. 727544.

Description. The object consists of an iron knife blade decorated on both sides with a complex pattern of shaped metal inlays. The designs, although of the same basic style, are different in detail on the two sides of ^{the} blade. They are composed of three main geometrical elements, isosceles triangles, trapezia, and rectangles, together with composite twisted wire inlays. The inlays have three different, quite distinctive colours, coppery-red, gold and silver. The Milliprobe analyses described below were undertaken to qualitatively identify the constituents of these inlays, (see photograph).

Milliprobe Analyses. Due to a slight curvature of the blade and the exacting requirement of the Milliprobe for a flat target area, only one side could be analysed.

Run I35, on a gold coloured triangular inlay, gave strong signals for the elements Iron (from the blade itself), copper and zinc. Gold, silver, mercury and lead were not detected; note the comments below on the detection of tin.

Run I36, on a coppery-red inlay of trapezoidal shape, gave only signals due to copper. The elements iron, zinc, lead, silver, gold and mercury were not detected, while tin could not have been detected under the conditions used in this and the other analyses.

Run I37, on a silver-coloured trapezoidal inlay, gave strong signals for copper, silver and lead; a weak signal for iron was also detected. The elements gold, mercury and zinc were not detected.

Finally, an analysis was performed on a composite wire inlay, apparently consisting of two wires twisted together, one copper-red in colour, the other golden; (run I38). The elements copper, zinc and iron (the latter probably in the blade itself) were detected; in addition, weak signals due to lead were also received. Silver, gold and mercury were not detected. The presence of a signal due to zinc and the absence of any due to gold in the observed X-ray spectrum, suggests that the fine gold-coloured wire used in this composite inlay consists of a zinc-rich copper alloy, rather than the gold rich alloy originally suspected.

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