THE SLAGS FROM ARDALE SCHOOL, ESSEX

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The material examined (AML 814930) comprised a number of pieces of fayalite slag and some pieces of ferruginous stone.

The slags were most likely to have been associated with iron working. While copper smelting can give rise to fayalite (iron silicate) slags, there was no suggestion here that non-ferrous metals were involved; in any case it would not be expected in an area so far removed from any copper ore sources.

The main question is what stage or stages in the iron-working process gave rise to the slags. Apart from one piece (in 2090 b), the slags form a fairly homogeneous group though a variety of textures were observed. The largest piece of slag (from 1902 d) was in many ways the most interesting. It was the major part of an approximately plano-convex "bun", originally roughly oval in plan (12 cm by over 14 cm) and with a maximum thickness of about 7 cm. The lower part of the bun was fairly dense while the upper part was far more porous and contained both imprints and fragments of ferrified wood and/or charcoal. Most of the rest of the slag was comparable to the more porous parts of this piece though some bits, eg in 2090 b, contained little or no wood.

The large size of the slag buns, the slightly unusual texture of the slag and the size and frequency of the included wood and/or charcoal all point to the slag not being the product of an ordinary small scale smithing operation. Instead I would suggest small scale smelting but without a conventional slag tapping facility. An early Saxon date would not be unexpected but a pre-Roman iron age one would probably be equally acceptable.

The "odd men out" in this collection of slag are those from 2090 b. They are one large piece of tap slag and three pieces of fairly ordinary looking smithing slag. The tap slag is very unlikely to be early Saxon; a Roman or later mediaeval date is likely.

The possible ore samples are all similar limonitic ironstones with much adhering, iron-cemented sand. They could have been broken up and used as ore but apart from the small lump in 2090 a which appears to have been roasted (it is haematitic rather than limonitic) there is nothing to suggest any industrial use. Their association with the slag could be just coincidence.

List of slag examined

1902a	Ferruginous stone
1902b	Iron slag with "wood" and adhering grey-fired clay
1902c	Slag bun with large "wood" imprints. Surviving size 11 x 10 x 8 cms. The slag is porous and a trace of grey-fired clay adheres.
1902d	Both pieces are parts of large buns with dense bottoms and porous upper parts with wood impressions. The larger piece was originally 12 x over 14 x 7 cms.
1905a	Ferruginous stone
2068	Oval slag bun; surviving size 13 x 10 x 6 cms
2069	Porous iron slag with "wood" impression
2090a	2 pieces of ferruginous stone, the small one ?roasted
2090b	One piece tap slag and 3 pieces ?smithing slag.