

leading to the Isle of Whithorn.<sup>9</sup> This example has previously been held to be unique and is dated to the 7th century on epigraphic evidence.<sup>10</sup> Although there is another Rho attached to an arciform cross patée at Iona<sup>11</sup> and two more at Raasay House, Skye,<sup>12</sup> none of these occurs within a circle and all are significantly different from those at Maughold and Whithorn.

There is one probable Irish example from the important site on the island of Inishkea North, Co. Mayo.<sup>13</sup> This, however, has an elaborately voluted and crossed stem, and an added arc joining the vertical arcs forming the upper arm of the cross, while the intersecting arcs which form the cross continue beyond the inner circle to join the outer circle in each instance — features not found at Maughold or Whithorn.

This new example of a Rho attached to an expanded-arm cross from Maughold is concrete evidence which lends further credibility to the view that there were close links during the late 6th and 7th centuries between what appear to have been similar types of monastic site at Maughold and Whithorn. This idea should not be surprising as the Isle of Man and Isle of Whithorn are only 32 km apart and the respective monasteries no more than 39 km as the crow flies.

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#### NOTES

<sup>1</sup> B. R. S. Megaw, 'The Monastery of Saint Maughold', *Proc. of the Isle of Man Nat. Hist. and Antiq. Soc.*, 5, part II (1950), 169–80.

<sup>2</sup> P. M. C. Kermodé, *Manx Crosses* (1907), 109.

<sup>3</sup> P. M. C. Kermodé, 'Early Christian Monuments at Kirk Maughold Isle of Man', *Reliquary and Illustrated Archaeologist* (July 1902), 184–85.

<sup>4</sup> Kermodé, *op. cit.* note 2.

<sup>5</sup> Using the measurements given in Kermodé, *op. cit.* note 2.

<sup>6</sup> Cf. 42(25)\*, *ibid.* 110–11; 46(26), *ibid.* 111; 164(—), *Jnl. of the Manx Museum*, 4, no. 61 (1939), pl. 176; 169(—) B. A. M. Cubbon, 'Cross-Slabs and Related Inscriptions found since 1939', *Jnl. of the Manx Museum*, 7, no. 82 (1966), 26 — not illustrated.

\* Where crosses are quoted by number, the first element is the number in the Manx Museum *Register* and that within the brackets is the number used by Kermodé.

<sup>7</sup> Compare the stone from Kirkmadrine, Rhinns of Galloway, C. A. R. Radford and G. Donaldson, *Whithorn and Kirkmadrine* (1953), 43, K1. and pl. 8, and V. E. Nash Williams, *The Early Christian Monuments of Wales* (1950); 207, no. 376; 208, no. 380; 210–11, no. 382; 215, no. 392. Compare also C. Nordenfalk, *Celtic and Anglo Saxon Painting* (1977), 57 and plate 14 for an illuminated example in the Durham Gospel fragment II fol. 38v.

<sup>8</sup> R. Allen and J. Anderson, *Early Christian Monuments of Scotland*, vol. 3 (1903), 496–97 and Radford and Donaldson, *op. cit.* note 7, 36 and fig. 7.

<sup>9</sup> Allen and Anderson, *op. cit.* note 8, 496. The road to Isle of Whithorn would have been the way taken for embarkation in medieval times for the Isle of Man.

<sup>10</sup> Radford and Donaldson, *op. cit.* note 7.

<sup>11</sup> K. Steer, 'Two Unrecorded Early Christian Stones', *Proc. Soc. Antiq. Scotland*, 101 (1971), 129 and pl. 9b.

<sup>12</sup> J. J. Galbraith, 'The Chi-Rho Crosses on Raasay', *Proc. Soc. Antiq. Scotland*, 67 (1933), 63–64 and 318–20.

<sup>13</sup> F. Henry, 'Early Christian Slabs and Pillar Stones in the West of Ireland', *Jnl. Royal Soc. Antiq. Ireland*, 67 (1937), 379 and pl. 33; F. Henry, 'Remains of the Early Christian Period on Inishkea North, Co. Mayo', *Jnl. Royal Soc. Antiq. Ireland*, 75 (1945), 137 and pl. 28; F. Henry, *Irish Art in the Early Christian Period* (1965), 121, fig. 14b.

## A PRE-CONQUEST MOULD OF ANTLER FROM MEDIEVAL SOUTHAMPTON (Fig. 1; Pl. XI, B, C)

Included in the published catalogue of small finds from medieval Southampton is an object described as an 'unfinished bone artifact, probably a gaming-piece', for which a 12th-century date is suggested.<sup>14</sup> It was recovered from an excavation by Mr J. Wachter (site E) between Brewhouse Lane and St John's Lane, in the SW. quarter of the medieval town.<sup>15</sup> The object was found in a late, disturbed context, associated with the demolition of a 13th-century wall, although accompanying 12th-century rim sherds (131, 170) supported the earlier date given to the piece in the catalogue. It is suggested here that the

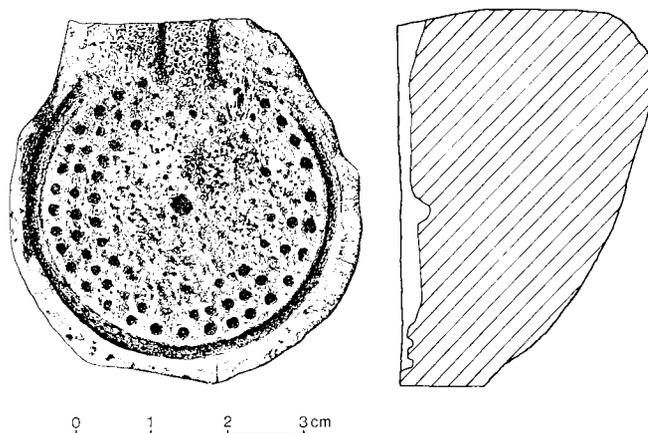


FIG. 1  
Antler brooch mould from Southampton. Scale 1:1

object is in fact a mould used in the production of discoid ornaments and that a 10th- or early 11th-century date would be more appropriate for it.

The Southampton mould (Fig. 1; Pl. xi, B) is cut from the base of a shed antler, almost certainly from a red deer. It has been sawn obliquely, close to the burr, where the spongy tissue which permeates most of the antler core is least in evidence. Part of the corona surrounding the burr has been removed and the naturally rough surface of the antler beam has been shaved into a series of parallel-sided facets, probably with a draw-knife; the brow tine has been sawn off, leaving an expansion on this part of the face. A discoid depression has been sunk into the cross-sectional surface, its symmetrical outlines indicating that it was cut with a centre-bit or similar implement. Within its circumference are three concentric rows of drilled indentations with shallow, tapering cross-sections, a similar indentation marking the centre point. The decorated surface is partly eroded. There is also some damage to the periphery at the junction of the brow tine, but there are traces here of what appears to be an ingate (see below).

Several related objects are known from excavations at Hedeby,<sup>16</sup> of which one in particular (Pl. xi, c) closely resembles that from Southampton: it has been cut in a similar manner from a reindeer antler burr and subsequently incised with a decorative motif comparable with that already described. The general dating limits set by the period of occupation of the Hedeby settlement are from its foundation in the late 8th or early 9th century until the end of the first quarter of the 11th century.<sup>17</sup> In considering the function of the Hedeby pieces, several authors have concluded that they were used as moulds in the production of ornaments. In a discussion of one pre-war find, Jankuhn<sup>18</sup> suggested that models or patterns had been formed by pressing softened wax into the antler matrix, subsequently to be invested with clay and used to produce series of *cire perdue* castings. The idea that they were used to produce wax models was also favoured by Capelle,<sup>19</sup> on the grounds that direct casting of molten metal in these moulds would have damaged the carefully-prepared antler. The low melting point of the wax, posing no danger of damage to the mould, meant that the moulds could be used to mass-produce large numbers of models.

More recently, however, Drescher<sup>20</sup> has carried out practical experiments using reproduction moulds, the results of which shed new light on the potential of these antler matrices. Drescher encountered no difficulty in making repeated castings of lead and tin ornaments in antler moulds of this type: in one instance, fifty castings were made from a single mould which suffered no damage beyond some discoloration from the heat. In these experiments the second valve of the mould was reconstructed in wood. In the case of a

replica based on the Hedeby mould shown here in Pl. XI, c, the wooden element was made to include an ingate; more recently, however, Graham-Campbell has identified an opening on the rim of the Hedeby piece as an ingate, with the remains of an iron registration pin opposite.<sup>21</sup> The Southampton mould has a more clearly marked ingate incorporated in the brow tine expansion.

The ornaments produced from the Southampton mould would have taken the form of flat discs decorated on the obverse with a raised rim and with concentric rings of raised dots. Some idea of their appearance can be gained from a plated copper alloy ornament found at Ødsted, Denmark, and dated to the first half of the 9th century,<sup>22</sup> and from a lead alloy brooch with a slightly bossed centre found at Winetavern Street, Dublin.<sup>23</sup>

In addition to the re-identification suggested for the Southampton piece, therefore, an origin some two or three centuries earlier than the 12th-century date previously claimed may be postulated; several discoveries of pre-Conquest material have been made in recent years in the vicinity of Brewhouse Lane and St John's Lane,<sup>24</sup> providing a background for this important find. Finally, it introduces a new technique to the repertoire of casting methods established for the British Isles at this time.<sup>25</sup>

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#### NOTES

<sup>14</sup> C. Platt and R. Coleman-Smith, *Excavations in Medieval Southampton 1953-1969* (Leicester, 1975), 271, fig. 247, 1915.

<sup>15</sup> *Ibid.*, 161-64.

<sup>16</sup> T. Capelle, 'Metallschmuck und Gussformen aus Haithabu (Ausgrabung 1963-1964)', *Ber. über die Ausgrabungen in Haithabu*, 4, ed. K. Schietzel (Neumünster, 1970), 9-23; T. Capelle and H. Vierck, 'Modeln der Merowinger- und Wikingerzeit', *Frühmittelalterliche Studien*, 5 (1971), 42-100; I. Ulbricht, *Die Geweihverarbeitung in Haithabu* (Die Ausgrabungen in Haithabu 7) (Neumünster, 1978), 75-76, taf. 36, 4-9, taf. 37, 3.

<sup>17</sup> D. Eckstein and K. Schietzel, 'Zur dendrochronologischen Gliederung und Datierung der Baubefunde von Haithabu', *Ber. über die Ausgrabungen in Haithabu*, 11, ed. K. Schietzel (Neumünster, 1977), 157.

<sup>18</sup> H. Jankuhn, 'Die Bedeutung der Gussformen von Haithabu', *Das Ahnenerbe* (Ber. über die Kieler Tagung 1939) (Berlin, 1944), 227, Abb. 2.

<sup>19</sup> Capelle, *op. cit.* note 16, 19. Capelle suggests that the wax models were cast, rather than impressed, in the moulds.

<sup>20</sup> H. Drescher, 'Untersuchungen und Versuche zum Blei- und Zinn-guss in formen aus Stein, Lehm, Geweih und Metall', *Frühmittelalterliche Studien*, 12 (1978), 84-115.

<sup>21</sup> J. Graham-Campbell, *Viking Artefacts: a Select Catalogue* (London, 1980), 130.

<sup>22</sup> J. Brønsted, 'Danish inhumation graves of the Viking Age', *Acta Archaeologica*, 7 (1936), 81-228.

<sup>23</sup> B. O Ríordáin, 'The High Street excavations', *Proc. Seventh Viking Congress*, eds. B. Almqvist and D. Greene (Dublin, 1976), 135-40.

<sup>24</sup> Information from Mr R. G. Thomson.

<sup>25</sup> For a broadly contemporary trefoil brooch mould of clay see A. MacGregor, 'Industry and commerce in Anglo-Scandinavian York', *Viking Age York and the North*, ed. R. A. Hall (C.B.A. Research Report 27, London, 1978), 37-57, fig. 24, 8.

#### A GROUP OF EARLY MEDIEVAL SPADES (Figs. 2-4)

In the last volume of *Medieval Archaeology*, Mr M. O. H. Carver published a report on the excavations in Saddler St, Durham. In the section dealing with the wooden small finds he included an object which was identified as an oak roof-shingle.<sup>26</sup> The object is in fact a sub-triangular spade-blade with a rounded blade-edge, a tapering, truncated apex, and both a peg-hole and a now battered rectangular slot below the peg-hole. The spade-blade would have had a separate shaft.