Blunt's original argument was that there were too many sun-and-rose obverse dies for angels to be compatible with the minimal amount of gold minted in May and June 1483. The theme was developed by Stubbs, who suggested that the numbers of obverse dies with this mark and with boar's head for both angels and groats corresponded remarkably to the proportions of gold and silver bullion minted respectively in February–April and May–June 1483.[11] Borrowing from Blunt and Whitton's list, Stubbs compared the figures for groat obverse dies, six with sun-and-rose only and five with both sun-and-rose and boar's head, with silver bullion of 573 lb. in the former period and 434 lb. in the latter. Since the five dies that were altered produced some groats with their original mark, more than six-elevenths of the output of the eleven dies would probably have had the sun-and-rose mark (an inference supported by the fact that boar's-head Edward groats are substantially rarer than those with sun-and-rose). This thought seems to underly the observation by Stubbs that not all the unaltered sun-and-rose coins necessarily belonged to the reign of Edward IV. The point is reinforced if the proportion of altered groat dies is reduced to one-third (three out of nine). Assuming that the introduction of the sun-and-rose mark is correctly dated to February 1483, the bullion figures would then suggest that a good deal of the May–June coinage may have been struck from unaltered sun-and-rose dies. The total number of sun-and-rose obverse dies needs to be rechecked before any more precise estimate could be attempted and, in order to protect against the effects of unequal die-output where so few are involved, the actual numbers of surviving specimens with each of the two marks ought also to be counted. But such information seems unlikely to disturb the conclusion that, while the bulk of the sun-and-rose coinage must be attributed to Edward IV, the dies were not altered immediately when minting was resumed for Edward V. Perhaps that happened a little later when Richard as Protector had tightened his hold.

I am most grateful to Mr Blunt for many helpful comments on the foregoing.

IAN STEWART

CROWNED LEOPARD'S HEAD WITH COLLAR[1]

IN his work entitled 'The Coinage of Edward VI in His Own Name',[2] Potter deals with the last secondary mark on the 6 oz. shillings. Owing to the great rarity of this particular mark, Potter tentatively describes it as 'pelt', or martin's skin outstretched. The mark is only found on the 6 oz. issues (6 oz. silver, 6 oz. alloy) and all known specimens are dated MDL. Of the four examples that I have examined two are muled with 'martlet' on the obverse from the same dies. The other two, which are die-duplicates, are the same as the Potter coin with 'pelt' on both sides.

Comparison of weights is as follows:

1. Mule, 80.7 grains. British Museum.
2. Mule, 83.2 grains. R. Lax.
3. Pelt? *Obv.* and *Rev.* 61.9 grains. British Museum.
4. Pelt? *Obv.* and *Rev.* 77.8 grains. J. Bispham.

Although the coins vary in weight it seems that they were an attempt at the 80-grain issues. Coin no. 4 which was auctioned by Glendining & Co. on 22 November 1979, lot 247, will, I hope, solve the question of this mark. The obverse (Pl. X, 1) has much wear, as do most examples of the mark, but the reverse mark (Pl. X, 2) is well struck up so enabling a positive identification to be made. The mark was made with three punches and four blows of the hammer and is, I believe, crowned leopard's head with collar. As the enlarged photograph of the mark (Pl. X, 3) shows, the last blow, putting in the second V to make up the collar, was struck on the side. This had the effect of pulling down one side of the V punch and causing a burr to occur at the side of the W mark. Miss Marion Archibald of the British Museum consulted Dr Swan, York Herald, about the mark at the base of the leopard's head with the aid of the photographs, but it was his opinion that the mark was numismatic rather than heraldic. He went on to suggest that the mark could be the erased throat of the leopard although this was usually shown clean cut at the base of the head in heraldry.

I was at first of the opinion that the mark below

[11] F. M. Stubbs, 'Edward Coins with Obverse Mint-Mark Sun and Rose Dimidiated', *BNJ* xxx (1960–1), 193–5.

[1] I would like to acknowledge help given by Dr C. E. Challis and Mr R. Lax.

[2] W. J. W. Potter, 'The Coinage of Edward VI in His own Name', *BNJ* xxxi (1962), 125–37.

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the leopard's head was the initial-mark of the under-treasurer at whose mint the coin was struck, but no such official had a name beginning in W. The only person it could have applied to was Warwick who headed a commission with Sir William Herbert and Sir Walter Mildmay in 1550,[3] the year when the shillings were minted, to examine the accounts of the principal mint officials who were responsible for producing the debased coin. But Warwick's crest, a bear with a ragged staff, was nothing like the mint-mark under consideration here and, in any case, as far as we know coins were marked by the heads of the mints and no one else.

At this point it would be beneficial to discuss the martlet issues to see whether they can throw light on this intriguing mark. The martlet has on occasion been attributed to Thomas Fleetwood because of his position as under-treasurer during Elizabeth I's reign. However, although he had undoubtedly attained high office under Edward VI, as assaymaster and comptroller, he had not by then become head of a mint and, for the reason just given in connection with Warwick, was thus unlikely to have had any say as to the choice of martlet at this time.

Because coins with martlet mark have long been known, the mark must be connected with one of the four London mints issuing debased coin during Edward's reign; Tower I, Tower II, Southwark, and Durham House. The heads of these mints and the marks usually attributed to them in so far as the debased issues are concerned are as follows:[4]

	Under-treasurer	*Mark*
Tower I	Sir Martin Bowes 25 March 1544–29 September 1550	Arrow, Pheon, Swan
	Sir John Yorke 29 September 1551–25 March 1552	Y
Tower II	Stephen Vaughan February 1548–25 December 1549	Grapple
	Nicholas Throckmorton 25 December 1549–25 March 1552	?
Southwark	Sir John York 25 March 1545–29 September 1551	Y
Durham House	John Bowes 2 December 1548–October 1549	Bow

As may be seen, hitherto numismatists have been able to assign specific marks to each of the under-treasurers with the exception of Sir Nicholas Throckmorton, and it would be my contention that we should now go one step further and assign the martlet mark to him. As the fourth son of Sir George Throckmorton of Coughton, Warwickshire, he would have been entitled to use the mark as a mark of cadency. The use of the martlet to denote the position of the fourth son was standardized in the early part of the sixteenth century.

If this attribution be correct, then the mark with which it is muled must also be attributed to the same mint. In my view, therefore, the mint-mark which Potter termed 'pelt', but which I prefer to call 'crowned leopard's head with collar' came from Tower II in 1550 when it was headed by Sir Nicholas Throckmorton.

J. BISPHAM

MORE ON THE TOWER SHILLINGS OF CHARLES I

SINCE my paper on this series,[1] three further pieces have come to light which warrant recording. The first, an exciting discovery which appeared in auction,[2] is a mule of a Group B5 obverse with a Group C5 reverse (Pl. XI, 1). It is the first mule between groups to be recorded and is a further reflection of the somewhat complicated transition between Groups B and C.

The other two coins are both of Group F and provide previously unrecorded instances of mint-mark for type. One is a coin of type F2/1 and the other of type F5/1. The former (Pl. XI, 2) has mint-mark anchor, flukes to right, over tun on the obverse and anchor, flukes to left, on the reverse. Assuming the overmark indicates this to have been a late tun obverse, the presence of the large mark of value would seem to provide final confirmation that this followed the use of the smaller mark of value with this obverse type, hitherto known only with the tun mark. The F5/1 coin (Pl. XI, 3) has the anchor mark with flukes to right on the obverse and vertical anchor on the reverse. The vertical anchor is commonly encountered on F3 coins but is so far unrecorded on an F5 obverse. It seems reasonable, therefore, to conclude that a reverse die used with the earlier F3 obverse was subsequently reused with this F5 obverse. This coin was said to have come from the Messing hoard (1975).

M. B. SHARP

[3] H. Symonds, 'The English Coinages of Edward VI', *BNJ* xi (1915), 143.

[4] C. E. Challis, 'Mint Officials and Moneyers of the Tudor Period', *BNJ* xlv (1975), 51–76.

[1] 'The Tower Shillings of Charles I and their Influence on the Aberystwyth Issue', *BNJ* xlvii (1977), 102–13.

[2] Spink Coin Auctions no. 11, 8–9 October 1980, lot 200.