## What happened to gold coinage in the 3rd c. A.D.? Roger Bland

It has long been known that Roman gold coins of the 3rd c. A.D. are very scarce both as single finds and in hoards. As a result, it is normally assumed that very few gold coins were struck during this period. However, a new die-study of the coinage of Philip I and family (A.D. 244-249)¹ shows that in that reign the production of dies was at a similar level to that in the 2nd c., when finds are very much more numerous, while existing die-studies of other issues of the 3rd c. show higher levels of production than under Philip. This paper seeks to explore the marked change in the use and loss of gold coinage during the 3rd c.

## Die-studies and coin production

In this paper I will compare the results of die-studies of *aurei*, estimating the total number of dies used in the coinage, following the methods developed by W. Esty (2006 and 2011). I am not seeking to establish the absolute quantity of coins struck at any particular period but to examine fluctuations in the scale of production over the first three centuries A.D. I therefore make the assumption that the numbers of dies used during reigns of more than one year (die estimates for very short reigns are not likely to provide a reliable figure for annual outputs because most rulers struck large accession issues) may be taken to reflect, in a broad sense, the volume of coins struck. This is, of course, still controversial: see Buttrey 1993; Buttrey and Cooper 1994; de Callataÿ 1995; Estiot 1999b, 368-70 (for a general discussion of the problems of quantifying Roman coinage see van Heesch 2011). However, I believe that this is reasonable when we are dealing, as here, with several large samples. New dies for striking gold coins are unlikely to be cut until the former set of dies show signs of wear, and there is no reason for believing that there would be a significant difference in the average life of *aureus* dies throughout the first three centuries A.D.

My case, therefore, is that the obverse dies of Trajan, Hadrian or Antoninus Pius are likely to have struck, on average, a similar number of coins of the 3rd-c. rulers for whom we have die-studies.<sup>2</sup> It is possible that the mint may have commissioned a set number of dies at the start of an issue, and I believe that this is particularly likely in the case of very short reigns such as those of Pertinax, Quintillus, Tacitus, Florian, Laelian and Marius. Those rulers survived long enough to strike substantial accession issues before being killed; as a result they appear to use an above-average number of dies *per annum*. The pattern appears to be that the regular production of coins generally settles down at a lower rate once a new emperor has struck an initial accession issue. Because those short-lived rulers died sudden deaths, it is also likely that the dies engraved in their names would not have been used to the end of their natural lives; thus the life of their dies should not be taken as typical.

## The finds: single finds

In 1990, J.-P. Callu and X. Loriot published a corpus of 1934 finds of single gold coins from the issues of Julius Caesar (46 B.C.) to the end of the empire in the West (A.D. 476) from Gaul and Germany; in 2010 Loriot added a further 215 finds.<sup>3</sup> This data-set can be further

<sup>1</sup> Bland forthcoming.

The die-statistics for Claudius I need to be treated with greater caution because the same dies were used to strike both gold *aurei* and silver *denarii*, unlike the 2nd- and 3rd-c. rulers.

<sup>3</sup> Bland and Loriot 2010, 340-56.