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Roman Imperial Portraits Dataset (RIPD)

Archaeology

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Abstract

Portraits of the Roman emperors have been a focal point in the study of the ancient world. However, questions on how this medium developed over time and/or how perceptions of the emperor changed over more than four centuries of imperial rule, are constrained by the availability and accessibility of the material. This article introduces the Roman Imperial Portraits Dataset (RIPD) to allow researchers to study the portraiture of Roman emperors through a more quantitative approach (Heijnen & Hekster, 2021). The dataset has systematically brought together more than 2,100 extant (i.e. published) portraits of the Roman emperors into a single dataset that can be used for further study. The article also introduces a web application with the aim to allow researchers and interested parties to work with the data(set) in an user-friendly manner.

Keywords

Roman imperial portraiture – Roman emperors – ancient history and archaeology – sculpture

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– Related data set "Roman Imperial Portraits Dataset (RIPD)" with DOI www.doi.org/10.17026/dans-2ca-hxmd in repository "DANS"
– See the showcase of the data: https://imperialportraits.rich.ru.nl

1 Introduction and Aims

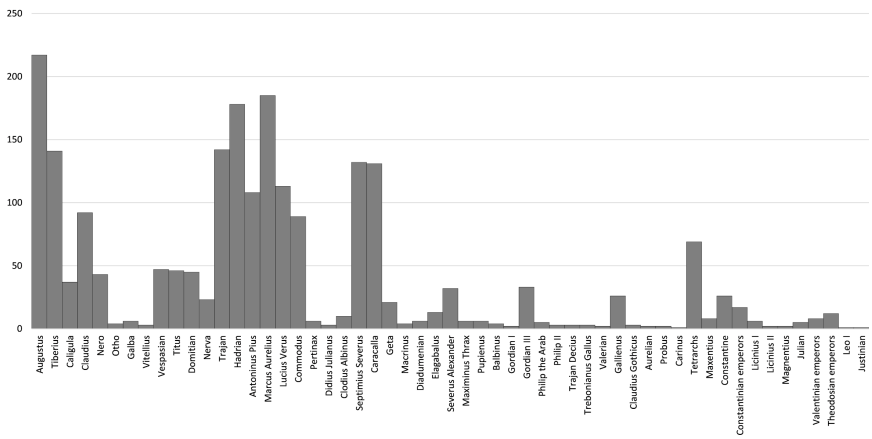
> You know how in all money-changer's bureaus, booths, bookstalls, eaves, porches, windows, anywhere and everywhere there are likenesses of you exposed to view, badly enough painted most of them to be sure, and modelled or carved in a plain, not to say sorry, style of art, yet at the same time your likeness, however much a caricature, never when I go out meets my eyes without making me part my lips for a smile and dream of you.
>
> FRONTO, ca. 160s C.E./1919, *Ep.* 4.12.4, p. 207

The Roman Empire was one of the largest empires the world has ever witnessed. For a long period of history, one man stood at the head of this enormous political entity: the Roman emperor. Such a central figure needed to be instantly recognizable. To this end, imperial portraits, carved from marble or cast in bronze, were set up throughout the Roman Empire in sculptural displays. These imperial portraits were made as part of a statue or bust, which were presented on a base accompanied by the emperor's name and titles (often in abbreviated format). Since the majority of the inhabitants of the Roman Empire would never get to see the emperor in person, these statues and busts played a crucial role as proxies in visualizing the emperor's leadership. They were nearly omnipresent in Roman society, as is clearly mentioned in the above-cited letter to the Roman emperor Marcus Aurelius written by the Roman rhetorician Marcus Cornelius Fronto. It has been estimated that during the reign of the emperor Augustus (27 B.C.E. – 14 C.E.) alone, circa 25,000–50,000 portraits of the emperor would have been produced (Pfanner, 1989, p. 178).

For centuries, the portraits of the Roman emperors have been a focal point in the study of the ancient world. They are treated as unique artifacts that show how the emperors of Rome wished to be perceived by their subjects. The physical features and hairstyle of the portraits of individual emperors were

surprisingly consistent throughout the Roman Empire. The reason for this was that the vast majority of portraits were replicas or adaptations of a common prototype developed at the imperial center. Of course not all portraits were equally similar to that prototype. The distribution mechanisms of these portraits allowed sculptors to add their own unique twists to the art works, as critically commented on by Fronto in the above-cited letter. They were thus an important means of communication between the imperial center and local communities, and have been rightly treated as such over the last few decades (Ando, 2000, pp. 228–253; Hekster, 2015, pp. 25–29 and 33–34). However, questions on how this medium developed over time and/or how perceptions of the emperor changed over more than four centuries of imperial rule, are constrained by the availability and accessibility of the material.

Most of the imperial portraits are assembled in the collections of mainly European and North-American museums and depots. From the early nineteenth century onwards, scholars have tried to publish these collections, so as to make them available to a larger audience. The first systematic attempt to do so was conducted by the Italian antiquarian Visconti (1817) in the early nineteenth century, followed by Bernoulli (1882–1894). The positivist spirit of Visconti and Bernoulli continued in the works of Wegner (1939), one of the founders of the *Das römische Herrscherbild* (DRH) book series. The first volume of the (still incomplete) DRH appeared in 1939, and the series as a whole has since aimed to bring up to date and to complete Bernoulli's catalogue. In the meantime, each year new or revised finds are published in archaeological

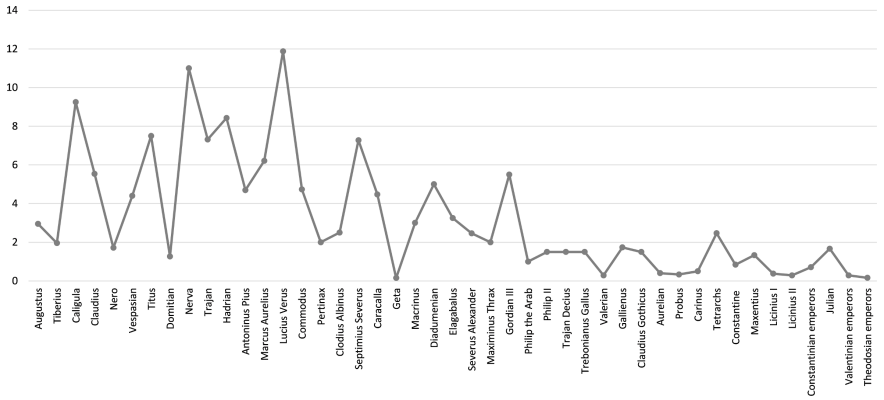


Note: Total number of imperial portraits, per emperor (N = 2,135), excluding imperial portraits of unknown emperors. This number was generated by using the data of the RIPD (www.doi.org/10.5281/zenodo.6534518). See also the Appendix for the list of emperors included in the RIPD.

FIGURE 1 Total number of imperial portraits

reports, museum catalogues, and/or online databases. Our ideas on the physical characteristics of the Roman emperors too are changing as portraits that radically differ from the standardized image are re-examined, and new methods to recognize and identify images of Roman emperors such as facial recognition are now being tested (Pollini, 2020; Ramesh et al., 2022). The field of Roman portrait studies is thus constantly in motion.

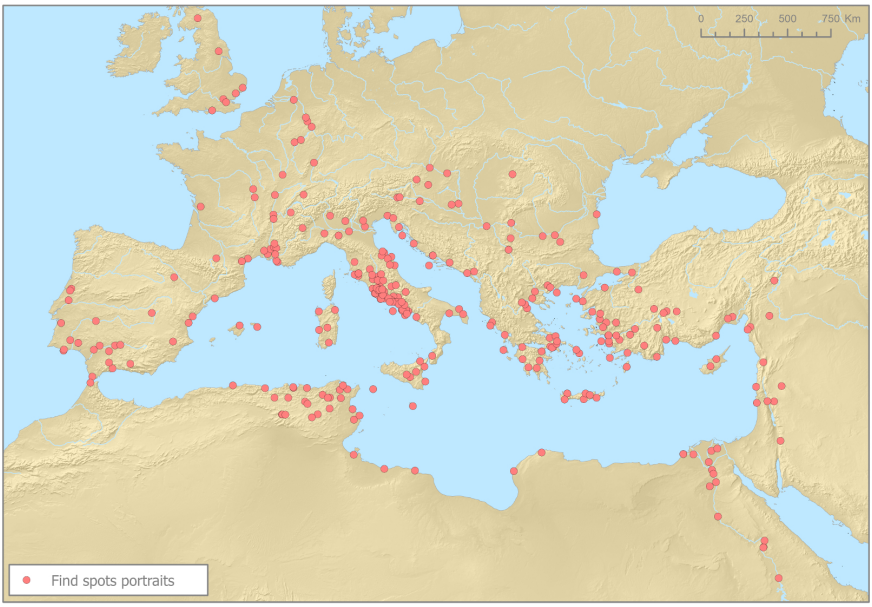
In order to further advance our knowledge on the functioning of imperial portraits and to gain an overview of the sources currently available, the Roman Imperial Portraits Dataset (RIPD) project has systematically brought together extant (i.e. published) portraits of the Roman emperors into a single dataset that can be used for further study (www.doi.org/10.17026/dans-2ca-hxmd).[1] To do so, Sam Heijnen has collected the relevant data. He has done this by extracting and cross-referencing published portraits of the Roman emperors from the available record, including the above-mentioned literature as well as (online) catalogues and recent archaeological reports. The aim of the project is not so much to provide alternative readings of the available data; instead, it offers researchers the possibility to introduce quantitative questions to the study of imperial portraiture, including questions relating to chronological (e.g., Figures 1 and 2) and geographical developments (e.g., Figure 3). It is worth stressing that the dataset introduced here should not be considered as a 'complete' overview. As mentioned above, new portraits are unearthed each



Note: Number of imperial portraits (average), per year of reign (N = 1,625), excluding emperors that ruled less than a year and imperial portraits that circulated prior to the emperor's accession. The number was generated by using the data of the RIPD (www.doi.org/10.5281/zenodo.6563952).

FIGURE 2 Number of imperial portraits per year of reign

1 The dataset can alternatively be accessed in the form of a catalogue, see Heijnen, 2022b; www.doi.org/10.5281/zenodo.6516919.



Note: Map generated by using the data of the RIPD (www.doi.org/10.5281/zenodo.6563964).
FIGURE 3 Map of the Mediterranean region showing the find spots of imperial portraits

year and the identities of existing portraits are constantly reconsidered on the basis of discussions in the field of ancient history and archaeology.

2 Description of the Data

- **Roman Imperial Portraits Database (RIPD) deposited at DANS – DOI:**www.doi.org/10.17026/dans-2ca-hxmd
- **Web application**
  - Homepage – URL:https://imperialportraits.rich.ru.nl
- **Figures**
  - Figure 1 – DOI:www.doi.org/10.5281/zenodo.6534518
  - Figure 2 – DOI:www.doi.org/10.5281/zenodo.6563952
  - Figure 3 – DOI:www.doi.org/10.5281/zenodo.6563964
- **Temporal coverage:** 27 B.C.E.-565 C.E.

Objects that adhere to the following definition have been included in the dataset: three-dimensional images of the Roman emperor that were created (before, during, or after his reign) as the result of the physical manipulation of a plastic medium, particularly through stone carving or mold casting. In effect,

we are dealing with portraits that belong (or once belonged) to imperial statues or busts. Excluded from the dataset are bodies of statues or busts that are no longer attached to or cannot be otherwise linked to their original portrait heads. The main reason to do so is that, without an accompanying portrait head or base (inscribed with the name of the emperor), there are no conclusive criteria to link the body of a statue or bust to a particular emperor. The dataset follows accepted theories from the published record on the identification and dates of individual portrait heads. In case the identity of the emperor represented is disputed in modern literature, this is indicated in the RIPD by the column Identity_disputed, which should urge the reader to consult the bibliographic references (column Reference). Imperial portraits that have come to light over the course of 2017–2021 have been included in the RIPD only if they have been subjected to formal analyses.

The dataset has been compiled over the period 2017–2021. The data was collected using a standardized form in Microsoft Access and the dataset was subsequently saved as a comma-separated values file (.csv) including a total of 2,152 imperial portraits which are described by using 49 variables (columns), ranging from the name of the emperor portrayed to the object's formal (such as material and height) and iconographic features (such as costume and headgear). As a rule, the emperor was represented in the toga, the cuirass, or the heroic nude. Each of these costumes represented the emperor in one of his traditional roles that is: as citizen, priest, military commander, or as (semi) divine being (Heijnen 2022a, pp. 107–212). Additional attributes such as the *paludamentum* (military cloak), sword belt, or various types of headgear (including the laureate, civic, or radiate crown) were meant to further strengthen these roles or to provide additional information to the ancient viewer. Each of these costumes and attributes are recorded in the RIPD by using corresponding columns with a false or positive value for each entry. Details about the objects' provenance are likewise recorded by using numerous columns, including Place, Province, Coordinates, and Context. As such, the dataset offers researchers the possibility to introduce questions on the geographical distribution of imperial portraits.

A readme.txt file is attached to the dataset describing all 49 variables taking into account the specific terminology used in the field of Roman history and archaeology. Each entry in the dataset is accompanied by abbreviated cross-references to publications that mention the portrait in question, thereby using the following guideline: author(s), (year), page(s) and/or catalogue number(s). A references.txt file is attached to the dataset which includes the full citations mentioned in the dataset in alphabetical order. Each entry is furthermore matched (if possible) to its counterpart in the iDAI.objects Arachne Database (https://arachne.dainst.org) of the German Archaeological Institute and the

Archaeological Institute of the University of Cologne, and the Last Statues of Antiquity Database (http://laststatues.classics.ox.ac.uk) of the University of Oxford. The Arachne database includes a collection of objects of the ancient world and is continuously updated in order to preserve object data. The LSA database is a finished research outcome from the Last Statues of Antiquity project (on which, see Smith & Ward-Perkins, 2016) and includes published evidence for statuary and inscribed statue bases set up after 284 C.E. By linking the entries of the RIPD dataset to corresponding entries in Arachne and LSA, the possibility for linked open data is enhanced; thereby allowing researchers to pose new questions to the source material.

3 Trends

From the dataset follows that a total of 2,152 imperial portraits that were made between the beginning of the reign of Augustus (27 B.C.E.) and the end of that of Justinian (565 C.E.) have withstood the test of time.[2] What becomes apparent from a first glance at the surviving evidence is that most of the portraits were carved from marble (91,6 percent). Notwithstanding the wide use of marble in the ancient world, the percentage of bronze images (4,4 percent) and that of images that included other costly materials such as gold (0,2 percent), silver (0,4 percent), or ivory (0,1 percent) must have been much higher at the time. These materials are scarcely represented in the dataset because they were often melted down or otherwise reused for their financial worth.

The vast majority of the entries in the RIPD consists of portrait heads that are no longer attached to their original bust or statue (75 percent). After circa 1,500–2,000 years, the head, body, and base of a dedication are rarely found together in their original composition. This is mainly due to process inherent to the production of imperial portraits, namely that the portrait head was often separately carved. It was subsequently inserted into the sculpted body and fixed through a metal pin. Over the course of history, parts of the marble statues and their accompanying bases were also regularly reused as building materials, thereby further hindering the chances of survival of complete dedications. In antiquity itself, the process of reusing imperial statues already started. Statue bodies and bases were periodically refurbished into new dedications after the death of a Roman emperor who had brought discredit to the *res publica*, a process often referred to as *damnatio memoriae* (Varner, 2004).

2 2.135 imperial portraits, when excluding unknown emperors (cf. Figure 1).

Noteworthy about the distribution of imperial portraits over the six centuries of the Roman Empire's existence is the low number of imperial portraits from the last three centuries, not just in absolute numbers (Figure 1), but also in relative numbers (Figure 2). The low number of portraits of the so-called 'soldier emperors' (roughly the period between the emperor Severus Alexander and the Tetrarchs) can possibly be explained by the fact that the durations of their reigns were significantly shorter than those of the emperors that came before and after them. There may simply have been too little time for portraits to be replicated on a large scale. This notion is also apparent from statue bases, which demonstrate a similar delay in dedication (Spranger, 2014, pp. 57, 79, and 94–103). Indeed, the number of surviving portraits is larger during the reigns of Gordian III and Gallienus, who were both able to hold the imperial office for a longer period of time (six and fifteen years respectively). Further reasons as to why the number of imperial portraits drops in the later Roman Empire are laid out in a series of monographs and articles published the past decades (e.g., Smith & Ward-Perkins, 2016). Political and economic instability, administrative reforms, ideological and religious beliefs, and acts of violence all seem to have played a part in the decline of artistic production.

4 Database and Web Application

As mentioned above, during the collection phase of the project, the portraits were stored in a Microsoft Access database. The reason to use Access was that it offers the possibility to create custom made forms to enable a structured and efficient data entry process. The data were saved in one table, thereby ensuring that the data could be added and corrected rather quickly. During this phase, it was not necessary to split up the database into different tables since this would complicate the data entry and correction process without any benefits.

After the first phase of data entry and correction, the Access table was exported to an Excel file to facilitate the import of the data in the database of a web application developed by the Humanities Lab of the Faculty of Arts of Radboud University (https://imperialportraits.rich.ru.nl). The aim of this web application is to allow researchers and interested parties to work with the data in an user-friendly manner. The Humanities Lab uses the Django framework for the development of all web applications that it develops for research projects of the Faculty of Arts. The Django framework is an open-source web framework based on the programming language Python. It is designed to simplify the creation of complex database-driven websites and supports commonly used relational databases such as MySQL, PostgreSQL, MariaDB, Oracle and,

the default choice, SQLite. The web application was developed using Microsoft Visual Studio and GitHub, where the source code can be found (www.github.com/ThijsRU/Roman_Imperial_Portraits).

A fundamental part of the development of the Roman Imperial Portraits web application is the design of the database (Figure 4). The ultimate goal of the design is that users will be able to query all the information related to the Roman Imperial Portraits while ensuring that the database is flexible and durable enough for possible future developments. The result was one central table (Portraits) with (one to many / many to many) relationships with 16 other tables. Nine extra tables were necessary to handle the many to many relationships.

After the SQLite database was created, a Python script was written to import the dataset into the database. The script 'read' the spreadsheet version of the Access table and iterated over every row and every cell in the temporary imported table and placed each new bit of information in a new cell in the corresponding table, while creating the one to many and the many to many relationships between the central Portraits table and the related tables.

All unique data (name, reference, height, etc.) and the Boolean fields (True/Yes and False/No) related to each imperial portrait are stored in the Portraits table. The data with a one to many relationship with each record in the Portraits table are stored in the Emperor, Context, Location, Province, Arachne, Path and Photographer tables. The rest of the data are stored in nine tables (Material, Type, Alternative, Subtype, Together, Recarved, Attributes, Iconography and Wreathcrown) that are linked to the ID of the Portraits in the central Portraits table via nine relationship tables that form the link between the ID's of the nine tables and those of the Portrait table.

The Roman Imperial Portraits web application offers the users two ways to access the information on the portraits stored in the SQLite database and the corresponding images (when available). One can browse through the 2,152 portraits or one can query the database using a filtering process. The filtering options have been grouped thematically: buttons above the screen enable the selection of the following eight themes: Identity, Material, Recarved, Date, Provenance, Costume, Headgear and References. By clicking (one of) these button(s), the user can type or select specific characteristics to query the portraits in the database. The results are presented in a list under the opened filtering options with a small selection of information (database ID, current location, name of the emperor, material, references and ancient city [findspot]). If photos of the portrait are available, a thumbnail image is also shown. When a specific record in the list is clicked, a detailed view of the selected portrait is presented to the user. In this view only the information that is known for the portrait is presented, accompanied by the available photographs.

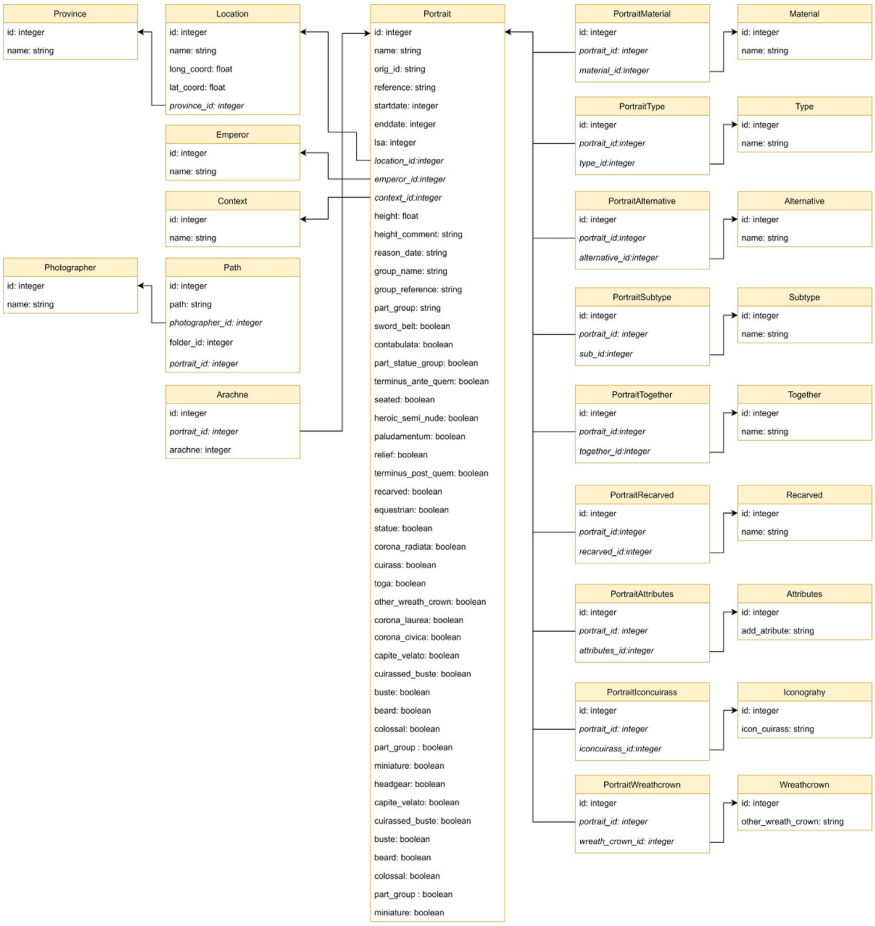


FIGURE 4 Diagram of the RIPD database underpinning the web application

5 Conclusion

The RIPD was set up to allow researchers to study the portraiture of Roman emperors through a more quantitative approach. The creation of an accessible overview of surviving portraiture greatly facilitates analysis of geographical or chronological patterns. Through the thematic filter options, researchers can now look at distribution of portraiture, or query developments within the genre of imperial portraiture, such as changing fashions in costume or headgear. The number of surviving Roman imperial portraits is limited, certainly taking the probable original numbers into account, and heavily biased towards marble portraiture. These are limits which researchers using RIPD need to be aware of. Yet the dataset adds a new dimension to the study of Roman imperial

portraiture, allowing scholarly debate to move beyond discussion of portraits as unique artifacts.

Acknowledgements

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Appendix

TABLE A1 List of emperors included in the RIPD, their total number of portraits, and their years of rule

Emperor	Portraits	Years of rule (C.E., unless indicated otherwise)
Augustus	217	27 B.C.E.–14
Tiberius	141	14–37
Caligula	37	37–41
Claudius	92	41–54
Nero	43	54–68
Otho	4	69
Galba	6	68–69
Vitellius	3	69
Vespasian	47	69–79
Titus	46	79–81
Domitian	45	81–96
Nerva	23	96–98
Trajan	142	98–117
Hadrian	178	117–138
Antoninus Pius	108	138–161
Marcus Aurelius	185	161–180
Lucius Verus	113	161–169
Commodus	89	176–192
Pertinax	6	193
Didius Julianus	3	193
Clodius Albinus	10	193–197
Septimius Severus	132	193–211
Caracalla	131	198–217
Geta	21	209–211
Macrinus	4	217–218
Diadumenian	6	218
Elagabalus	13	218–222
Severus Alexander	32	222–235
Maximinus Thrax	6	235–238
Pupienus	6	238
Balbinus	4	238

TABLE A1 List of emperors included in the RIPD, their total number of portraits, and their years of rule (*cont.*)

Emperor	Portraits	Years of rule (C.E., unless indicated otherwise)
Gordian I	2	238
Gordian III	33	238–244
Philip the Arab	5	244–249
Philip II	3	247–249
Trajan Decius	3	249–251
Trebonianus Gallus	3	251–253
Valerian	2	253–260
Gallienus	26	253–268
Claudius Gothicus	3	268–270
Aurelian	2	270–275
Probus	2	276–282
Carinus	1	283–285
Tetrarchy	69	293–311
Maxentius	8	306–312
Constantine	26	306–337
Sons of Constantine	17	337–361
Licinius I	6	308–324
Licinius II	2	317–324
Magnentius	2	350–353
Julian	5	355–363
Valentinian emperors	8	364–392
Theodosian emperors	12	379–457
Leo I	1	457–474
Justinian	1	527–565
Total	**2,135**	