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Architectural terracottas from Akragas : investigating monumental roofs from the Archaic and Classical period

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ARCHITECTURAL TERRACOTTAS FROM AKRAGAS

INVESTIGATING MONUMENTAL ROOFS FROM THE ARCHAIC AND CLASSICAL PERIOD

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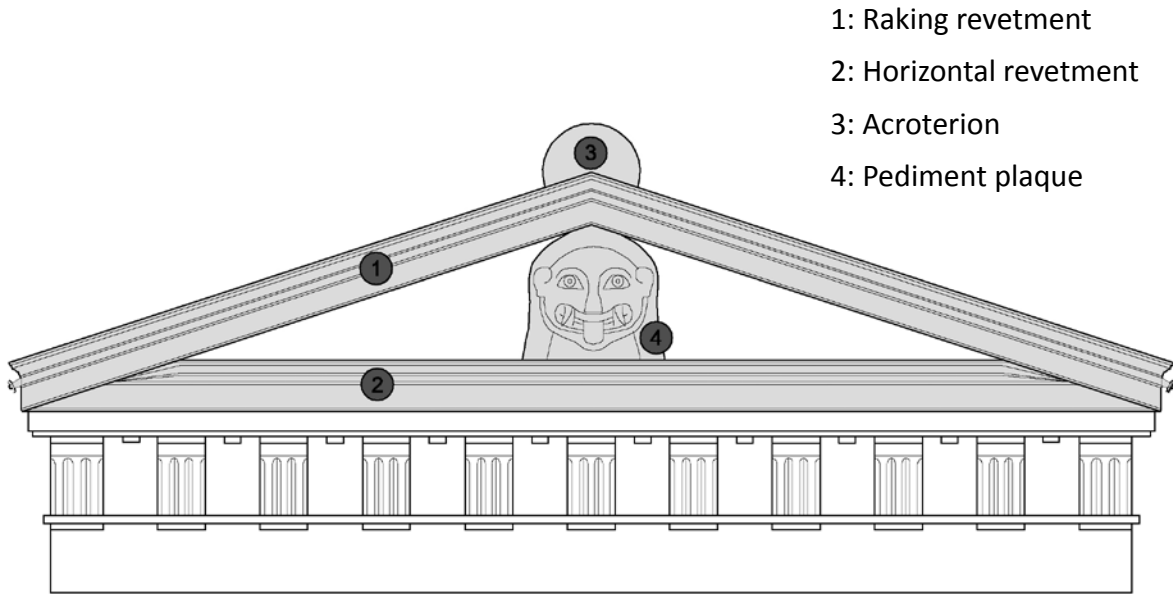
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SUMMARY

Terracotta roofs of the late Archaic and Classical period were an integral part of the architecture of monumental buildings. These objects provide unique insights into the built environment of Greek colonies in terms of their appearance and construction, as well as their associated stylistic and technical influences. The architectural terracottas from Akragas have not been investigated comprehensively since the 1965 article written by Ernesto De Miro, which was based on a limited number of objects. Furthermore, the ways in which architectural terracottas are viewed and the research approaches have changed significantly in the decades since that publication. These objects are no longer seen as merely decorative roof edges but are now recognized as complex architectural components: their final form is shaped by such factors as the production method used, the properties of its raw materials, and the functional aspects of the roof. By focusing on these new areas of investigation, it is possible to gain valuable new insights into the built environment as well as into the nature of local production at the Greek colony of Akragas in Sicily.

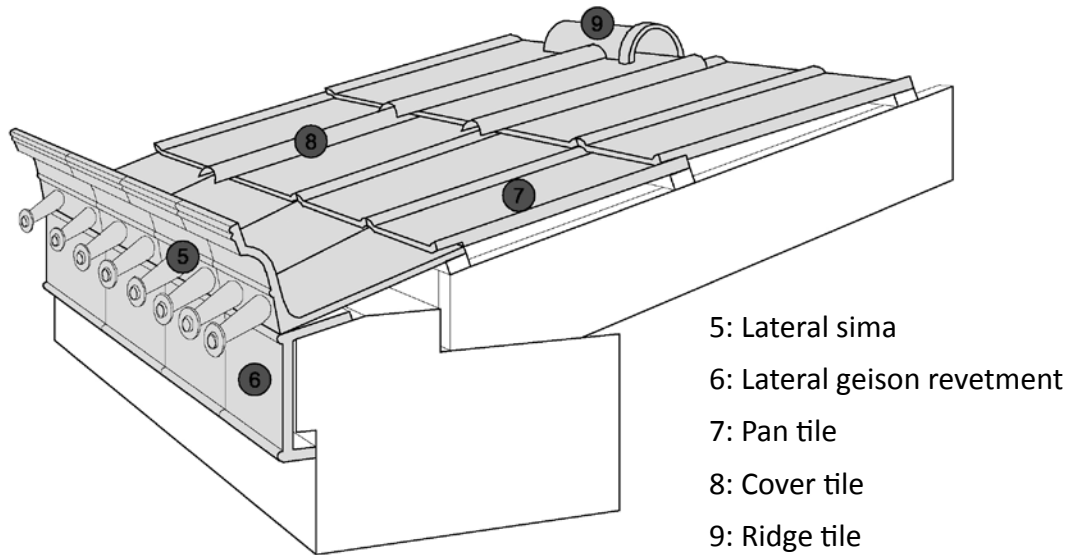
The work presented in this study is based on first hand observation, analysis, and documentation of over two hundred and fifty objects housed in the regional archaeological museums of Agrigento and Palermo as well as newly excavated objects from the extra-urban sanctuary of S. Anna, and the architectural remains of structures within the urban sanctuaries. Based on the analysis of profile, decoration, fabric, *chaîne opératoire*, material composition, and architectural context this study formulates a revised typology of the canonical Sicilian sima, anthemion sima, antefix, and Corinthian roofs. This process required a multi-disciplinary approach that draws on the theories and methods associated with the art-historical analysis of style, ceramic studies, archaeometry and architecture.

The results of this study provide a holistic view of architectural terracottas from Akragas. Changes in stylistic influences, production techniques, and material sources allowed this study to identify different generations of roofs and a technical style associated with local production. While the architectural terracottas from Akragas draw from an established regional oeuvre for their style, production techniques, and architectural solutions, there is evidence that these were adapted to local conditions. By taking into account this adaptation and the means by which the technical knowledge of pre-existing regional solutions was transferred to Akragas, it is possible to identify traces of the operation of local workshops. While the sanctuaries of Akragas are known for their impressive monumental structures from the Classical period, the architectural terracottas indicate that the built environment during the Archaic period extend beyond what is already known, and that the buildings themselves were of modest size compared to contemporaries in other cities.



- 1: Raking revetment
- 2: Horizontal revetment
- 3: Acroterion
- 4: Pediment plaque

Figure 1: The location of architectural terracotta on the front of an archetypal archaic doric temple in Sicily based on temple C at Selinus (after Mertens 2006, fig. 204), temple H at Naxos (after Lentini & Pakkanen 2011, fig. 23-24) and temple B at Gela (after Brea 1952, fig. 9). Architectural terracotta objects are indicated in grey.¹



- 5: Lateral sima
- 6: Lateral geson revetment
- 7: Pan tile
- 8: Cover tile
- 9: Ridge tile

Figure 2: The various components of the canonical Sicilian roof based on frieze A and C from Gela (after Brea 1952, fig. 14, 36-7, plate 2-3), roof 8 from Selinus (after Conti 2012, fig 77) and the Apollo temple from Syracuse (after Wikander 1986, fig. 1; Mertens 2006, fig. 165-66, 169). The architectural terracottas are indicated in grey. The support structures in white are hypothetical.

¹ Unless stated otherwise, the drawings in this thesis were created by the author based on observation of the archaeological material. Additional sources of information are credited within the caption for each figure.

The study of architectural terracottas have developed a number of specialized terms for the various elements of the roof. The exact definition of various elements varies considerably between different languages as well as the diverse styles of architectural terracotta. The most important terms associated with Sicilian roofs will be described below using the definitions as used by Winter and Wikander.² Reference is also made to the terminology used by Ciurcina, Lentini, Danner and Lang.³

Acroterion	A decorative element placed at the corners of a roof or along the ridge. An acroterion can be a statue, palmette or disk shaped element (figure 1:3).
Antefix	The cover tile at the lower edge of the roof which consists of a cover tile and a vertical plaque. The vertical plaque closes the gap between the cover tile and the pan tiles which would otherwise be exposed at the eaves.
Anthemion	A continuous pattern chain consisting of alternating palmette and lotus motives.
Anthemion Sima	A lateral sima consisting of an anthemion pattern in relief. Perforations within the pattern allow for the discharge of water from the roof. Wikander uses the term 'Selinus system', Winter uses 'Selinus type' while Lang uses 'Anthemiensima'. Simas of this type are not restricted to Selinus and it is therefore more appropriate to use the term 'anthemion sima'.
Canonical Sicilian Sima	The canonical Sicilian sima is characterized by a high cavetto which sits on a low fascia. On the lateral sides this lower fascia is interspersed with tubular waterspouts (figure 1). This roof is considered to be a truly Sicilian type and as such is called either the 'Sicilian System' by Wikander or the 'Geloan sima' by Winter since the roof of the geloan treasury in Olympia is seen as one of the best examples of this type. Lang terms this type the 'Kanonisches siziliches Dach' which is perhaps the most appropriate term to use.
Cavetto	A concave moulding. Both Wikander and Winter uses the Italian term, cavetto. In German it is referred to as the Kehle.
Cover tile	Long, narrow tile with a curved or polygonal profile placed over the slight gap between two adjacent pan tiles (figure 2:8).
Eaves	The bottom edge of a sloping roof.
Eaves tile	The pan tile at the bottom edge of a sloping roof which forms the visible edge of the roof (Italian: tegola "de rive").
Fascia	The flat, vertical part of a moulded profile which forms a horizontal band on the roof edge. In the description of canonical sima profiles Wikander distinguishes between the top fascia (Italian: listello superiore. German: Stirn) and the lower fascia (Italian: listello di base, zoccolo. German: Plattenborte, Sockel). For the geison profile Wikander only uses the term plain vertical (Italian: Piastra frontale, faccia). For this study the term fascia will also be used to refer to the plain vertical section of the geison profile.

² Wikander 1986, p. 31; Winter 1993, pp. 5-6.

³ Ciurcina 2006; Conti 2012; Danner 1996; Lang 2010; Lentini & Pakkanen 2011.

Geison revetment	A cladding element consisting of an oblique plaque, a vertical profile and sometimes a smaller horizontal soffit plaque at the bottom. The revetment is located directly below the roof eaves or sima tile and provides protection to underlying wooden or stone structural elements (Italian: cassetta, German: GeisonVerkleidung)
Grog	Ground pieces of fired clay used as a temper in the production of terracotta and ceramic objects. Also referred to as chamotte.
Guilloche	A cable pattern formed by braided or interlocking bands.
Hawksbeak	A concave profile reminiscent of the beak of a hawk, also referred to as a Doric Kyma.
Horizontal revetment	The revetment of the horizontal geison on the short sides of a rectilinear building, below the pediment. In the canonical Sicilian system this consists of both a horizontal sima (Italian: sima frontonale orizzontale. German: Horizontalsima) and horizontal geison revetment (Italian: cassetta orizzontale) (figure 1:2).
Horizontal plaque	The section of a profile that is roughly perpendicular to the main profile (sima or geison). On the sima this section functions as a pan tile (It: Tegola di appoggio, piano/staffa di sostegno, piano di posa; German: Auflagerplatte). On the geison there can be both an upper plaque (Italian: Tegola, piano superior) and in some cases a lower plaque (Italian: Taglio inferiore, risvolto inferior; German: Bodenplatte).
Lateral revetment	The revetment pieces placed at the eaves. In the canonical Sicilian system this can consists of both a lateral sima (Italian: sima laterale; German: Traufsima) and lateral geison revetment.
Levigated clay	Fine grained, purified clay created by suspending clay in water and then removing coarse and organic material.
Pan tile	The main roof cladding element. The canonical Sicilian pan tile consists of a flat rectangular plate with raised borders on the long sides (figure 2:7).
Plaque	A vertical tablet attached to a wall or other structural element. The term is also used to refer to the vertical profile attached to a cover tile to form an antefix.
Raking revetment	The revetment of the raking geison, located on the sloping edges of a roof, above the pediment. In the canonical Sicilian roof this consists of the raking sima (Italian: Sima rampante; German: Giebelsima) and the raking geison (Italian: Cassetta rampante) (figure 1:1).
Revetment	In classical architecture the term usually refers to external cladding panels. In terms of architectural terracotta Winter uses the term only in regards to the geison, but both Wikander and Lentini uses the term to refer to the decorated edge of terracotta roofs formed by both the sima and geison.
Ridge palmette	An upright plaque decorated with a palmette, attached to the ridge tile.

Ridge tile	A larger cover tile placed along the ridge line in order to cover the gap created where two roof slopes meet (Italian: coppo di colmo, kalypter) (figure 2:9).
Ridge tile antefix	The ridge tile at the pediment which consists of a ridge tile and a vertical plaque. The vertical plaque closes the gap between the ridge tile and underlying roof tiles which would otherwise be exposed. In some instances the vertical plaque is in the form of a large disk, in which case Winter refers to this element as a disk acroterion. In German the term Firstantefix, as seen in the publication by Danner, is perhaps more appropriate to the objects described in this thesis.
Roll	A convex moulding that forms a semi-circle. Winter also uses the term torus to describe this type of moulding. This study will follow the precedent set by Wikander (Italian: tondino; German: Rundstab)
Sima	The last row of pan tiles at the roof edges terminate in a vertical element which prevents the uncontrolled discharge of water from the roof. The same term is used in Italian, German and English literature.
Slip	A thin layer of purified clay applied to the surface of objects in a very liquid form before firing.
Soffit	The under-side of an architectural element.
Taenia	The front edge of a pan tile placed on the eaves of a roof.
Waterspout	An opening in the lateral sima through which water is funnelled away from the building (Italian: tubo, canale di gronda; German: Wasserspeier).