

Titelberg

A Celtic Hillfort in Luxembourg

RALPH M. ROWLETT

In southwestern Luxembourg, near the border where Luxembourg, Belgium, and France come together, the site called Titelberg sits astride a hill that dominates the surrounding countryside (Fig. 1). Earthen ramparts standing in some places to a height of 9 m represent

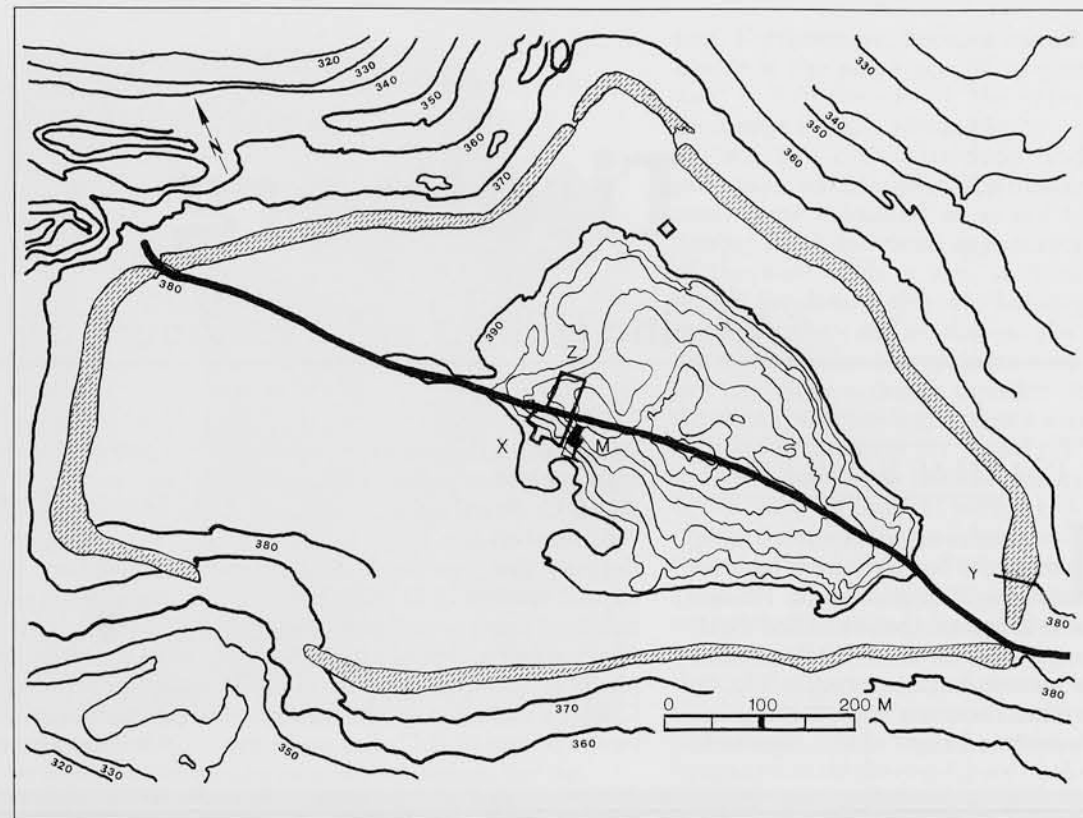
one phase of the occupation—a late Iron Age hillfort built by Celts around 200 B.C. Stratified above the Iron Age remains is a Gallo-Roman settlement that continued to be occupied until ca. A.D. 400. This continuity of occupation during a period when major political changes took place in the region, most notably Caesar's conquest of the Gauls between 58 and 51 B.C., has made the

Titelberg a well-known and significant site.

Also unusual is its good state of preservation: unlike almost all other similar Iron Age sites, Titelberg escaped the considerable damage inflicted by extensive, usually poorly documented excavations carried out in the mid-19th century, when archaeology was still embryonic. While the absence of earlier excava-



1 The Titelberg hillfort extends across the flat top of a 100-m-high hill. The modern farm road essentially overlies the much straighter main thoroughfare of Iron Age and Gallo-Roman times, leading through the two main gateways of the settlement.



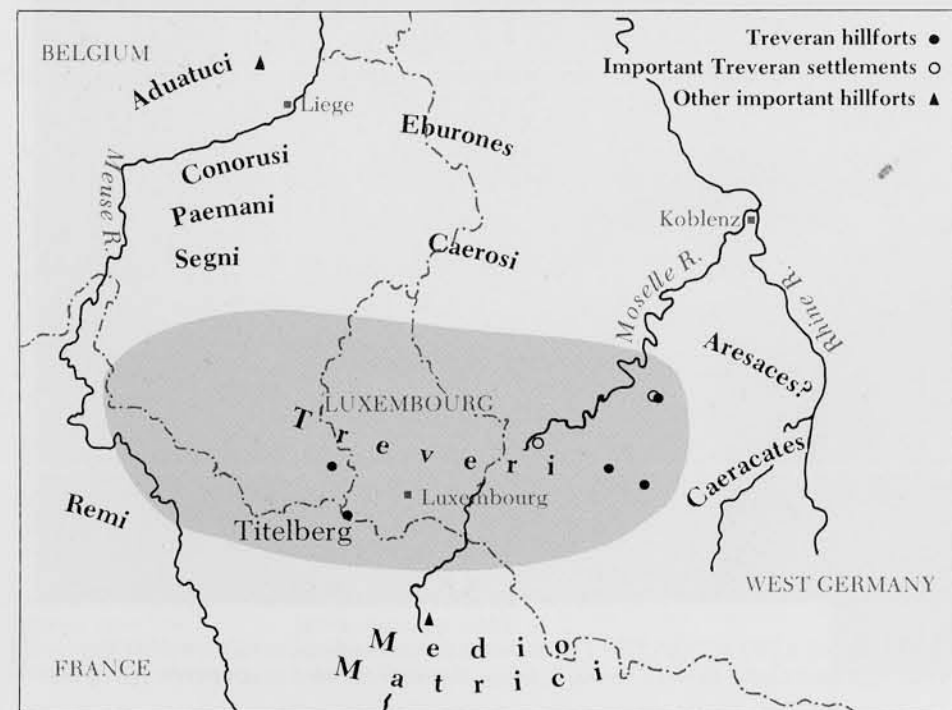
2
Plan of the Titelberg showing the location of excavations carried out by the Luxembourg State Museum (X-Z) and the University of Missouri (M).

tion preserved the Titelberg for investigation by 20th century methods, it also meant that there was very little evidence as to the sequence of occupation on the site, and when it was first occupied. There were, however, collections of finds made by local Luxembourgers, who had well-established customs

of surface prospecting on the Titelberg. These artifacts were used by Dr. Gerald Thill, the Curator-Director of the Luxembourg State Museums, to suggest that the site had been occupied in the Neolithic and Iron Age periods, as well as in the times of the Roman Empire (Thill 1966).

Having begun a modern campaign

of continuous archaeological research on the Titelberg during the late 1950s, Thill then invited the University of Missouri-Columbia to help investigate the early levels of the site. As a result, multi-disciplinary teams of archaeologists specializing in prehistoric periods (led by Ralph M. and Elsebet



3
Map showing the location of the Titelberg and Celtic tribal groups, and Treveran political boundaries in ca. 60 B.C., before the Roman takeover.

Oppida

The term *oppidum*, transmitted to us by Latin writers, was used to describe fairly large urban or proto-urban settlements of the Gauls and other Celts, who also inhabited villages and farmsteads. Almost all of the oppida were fortified with one or more ramparts of stone or stone and earth, often reinforced with a timber framework, and usually topped with a wooden palisade.

Most oppida were sited on the top of hills, and so are referred to as "hillforts"; however, many hillforts show little evidence of permanent or continuous habitation, so not all hillforts are *oppida*. Hillforts are especially common in Europe toward the end of the Iron Age, when nearly every Celtic tribe had one or more within its territory.

At the time of the Roman conquest or within a few decades thereafter, the inhabitants of most Celtic *oppida*

were moved out of their homes. While not unique in having a continuing occupation throughout this period, the Titelberg remains highly unusual in that its population and its manufacturing activities seem to have *increased* after the establishment of Roman rule. At present, the best explanation for this phenomenon seems to be a Roman demand for iron. Numerous rich iron ore deposits lie within the Titelberg itself, and the excavations of the Luxembourg State Museum have revealed the emplacements for an iron smithy and iron bloomery dating to the Gallo-Roman period.

In addition to metal working, other industries have also been documented archaeologically on the Titelberg. Excavations have uncovered a glass factory and a small potter's workshop. The potter's workshop is of special interest. It contained a potter's wheel, and a kiln for firing pottery that looks like a

miniature version of the furnaces (hypocausts) used for heating Roman houses (Fig. 6). Its primary product was an ugly, poorly fired, shell-tempered ware that was widely distributed within the region and was apparently a specialty product of the Titelberg (Fig. 7; Metzler and Weiler 1977).

These pots must have been fairly expensive, since the shells ground to make the temper came from the sea and had to be imported. The reason for the popularity of such vessels—despite their appearance—probably lay in their durability. Shell tempering serves to reduce cracking and breakage when vessels are subjected to thermal shock, as they would be if used in cooking. A study of the location of shell-tempered pots within the Titelberg has shown that they were found primarily in association with fireplaces, confirming the hypothesis that they were used as cooking vessels.

Rowlett) and Provincial Roman remains (led by Homer L. Thomas) worked on the Titelberg from 1972 to 1982.

The Missouri Excavations

The landform on which the Titelberg was built is properly called a "cuesta"—a hill that drops off sharply on one side and slopes gradually on the other. The most visible remains on the hill are those of a typical late Iron Age settlement of the type that archaeologists call a "hillfort," and contemporary Roman writers called an *oppidum* (see box). Built in Middle La Tene times, ca. 200 B.C., the ramparts of this fort enclose an area of 125 acres or 50 hectares. There are two clearly defined entrance ways at each end of the long axis of the ham-shaped site, with the principal gateway at the southeast end (Fig. 2).

The first location chosen for excavation by the Missouri team was a low area lying amid Gallo-Roman houses that had been cleared by the Luxembourg State Museum. The Museum's archaeologists had also

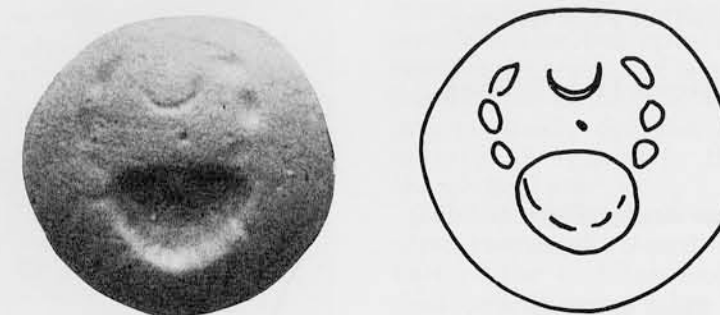
found traces of three wood and thatch houses of the late La Tene Iron Age, dating to about the time of the Roman conquest in 57 B.C. (Metzler and Weiler 1977:28-33). Although the low area did have several strata laid down in later Roman times, almost all of the structures that were found by the American excavations date from the time of the early Roman Empire under the Emperor Augustus or even earlier—extending back through the Iron Age into the Late Neolithic period (Fig. 3).

The focus of this paper is on the strata laid down in the early Roman and Iron Age periods, distinguished

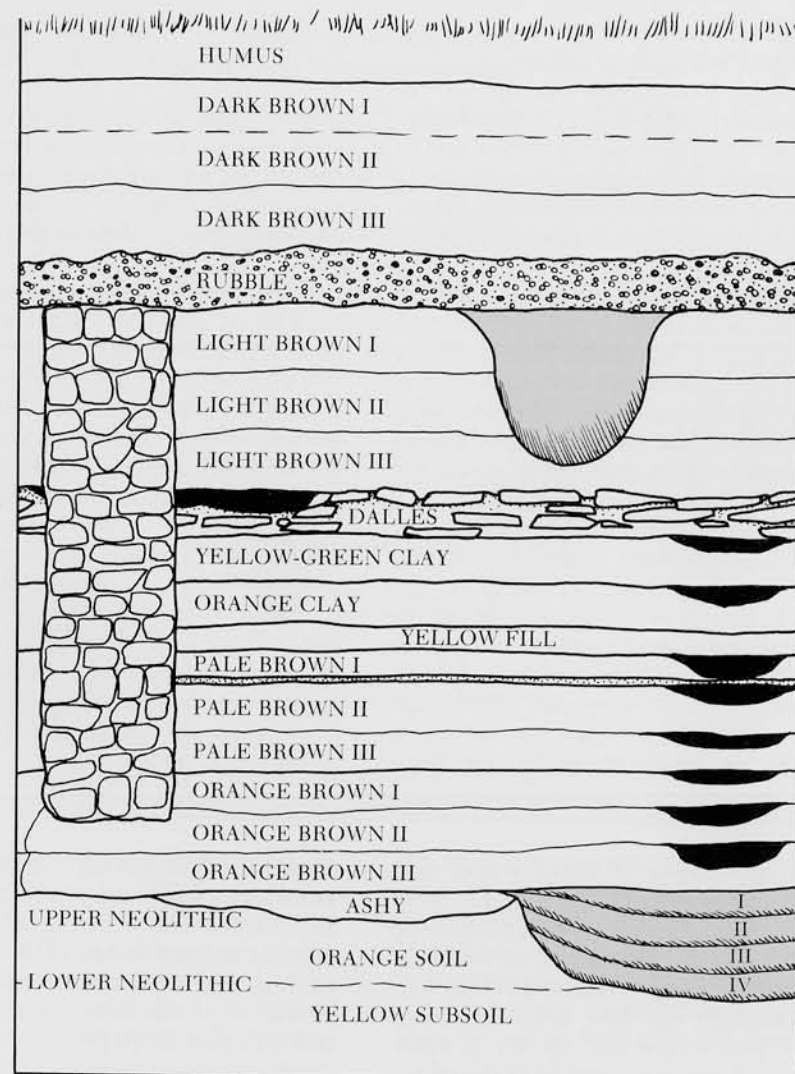
from one another on the basis of color as well as composition. Seventeen floor levels were found, representing at least seven different superimposed buildings that covered a period of nearly four centuries, ca. 300 B.C. to A.D. 70 (Fig. 5, Table 1).

The Buildings and Their Contents

On the paving gravels of a street within the Gallo-Roman settlement we found a glass intaglio bezel for a ring that depicts three astrological signs—a crab (Cancer), the moon,



4
Amber colored glass ring bezel with intaglio astrological signs, 1st century A.D. (Diam. 20 mm)



5
Schematic drawing of floor stratigraphy at the Titelberg mint foundry locale. (Drawing by Denise Hoffman)

Table 1
Relationship of Mint Foundry Floors to Superstructures

Superstructures	Floors	Date
Foundation Building	Light Brown Interior I	ca. A.D. 1-70
	Light Brown Interior II	
	Light Brown Interior III	
Dalles Floor Building	Dalles Floor	30 B.C.-A.D. 1
Yellow Green Clay Floor Building	Yellow Green Clay Floor	pre 55 B.C.-30 B.C.
Orange Clay Floor Building	Orange Clay Floor	
	Bright Yellow sub-flooring	
Pale Brown Floor Building	Pale Brown I	first half 1st c. B.C.
	Pale Brown Ia gravel floor	
	Pale Brown II	
	Pale Brown III	
Orange Brown Floor Building	Orange Brown I	2nd c. B.C.
	Orange Brown II	
	Orange Brown III	
Ashy Floor Building	Ashy I	ca. 300 B.C.
	Ashy II	
	Ashy III	
	Ashy IV	

and a star (Fig. 4). While the exact prognostication for someone born under these signs would depend upon the precise relationships of the celestial bodies at the moment of birth, the 4th century Roman astrologer Maternus gives us a general prediction. Such a person would travel far, make a lot of money, and in the end lose everything. We cannot know if the ring wearer had actually traveled up to the Titelberg from Italy, but he was certainly close to a significant source of money when the ring was lost: the street ran in front of the Titelberg mint!

Most of the structures excavated by the University of Missouri team had been used as mints or mint foundries, for the production of gold, silver, and bronze coins, and of other bronze objects similar to coins in form. The evidence for bronze artifact and coin manufacture is abundant. Found in and around the buildings were ceramic coin molds and unstruck coins, as well as weights, counter disks, a few possible coin dies, large quantities of



6
Base of the kiln used to make shell-tempered pottery during the Gallo-Roman period. The fire for baking the pottery was stoked at the bottom level of the stone pillars in the stone-lined fire pit. Northeast of the kiln in a small building was the potter's wheel; the building eventually caught fire and burned.



7
Shell-tempered pottery from the Titelberg, probably used as cooking pots.

scrap bronze, smelting ovens, chisels, hammers, and other iron tools.

More than 1000 coin mold fragments were recovered and their locations plotted in three dimensions. The molds take the form of flat

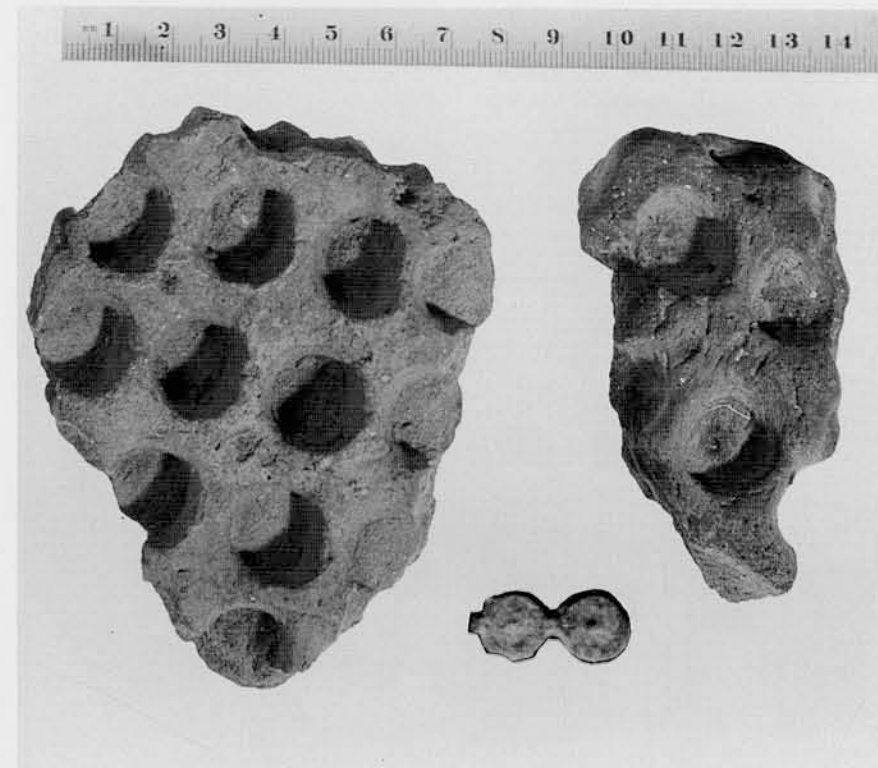
bricks. Although their fragmentary condition makes it difficult to determine their exact size, they were about 2 cm thick and 18 cm per side. Cylindrical depressions, made by the intrusion of dowels of appropriate size, provided the forms

for casting the coin blanks or "flans" (Fig. 8). Domestic activities were also carried out within the mint-foundry buildings, since some rooms contained the bones of food animals, egg shells, burnt grains and vegetables, spindle whorls, pot-decorating tools, and other household implements.

The Foundation House

The last and most recent mint foundry building, the Foundation House (Figs. 9, 10), was constructed about the time of Christ and was razed about the time of the Emperor Vespasian (A.D. 69-79). These dates are based on coins and sherds of red *terra sigillata* pottery found within a 39-cm-thick floor level, which had built up rapidly as a result of the practice of laying fern frond carpets on the floor. Such carpets eventually decayed, leaving masses of spores in the archaeological soil.

The Foundation House consisted of two rooms with a central corridor. Part of the building had been destroyed, dug away in late Roman times, but if one assumes a symmetrical plan, the building was surrounded by a colonnade. These



8
Coin mold fragments and an unseparated, unstruck series of cast coin blanks or "flans."

columns must have been made of wood initially, since they sat in post holes. Early in the 1st century A.D. they were replaced with proper stone columns, the broken drums of which have been recovered. The South Room contained a majority of the coin molds, a work bench constructed of broken roofing tiles, and a bronze head that may represent a household deity (Fig. 11). The North Room was also used for industrial activities. A truncated "cone" of stacked rocks bears chisel marks on the top stone, indicating that it was used as a kind of anvil to separate coins cast in a series. Discards from the casting operation show that small coin-sized objects shaped like wheels (*rouelles*) were among the last products of this workshop (Fig. 12).



9
Air view of the foundations of the most recent mint foundry, the Foundation House.

The Dalles Floor Building

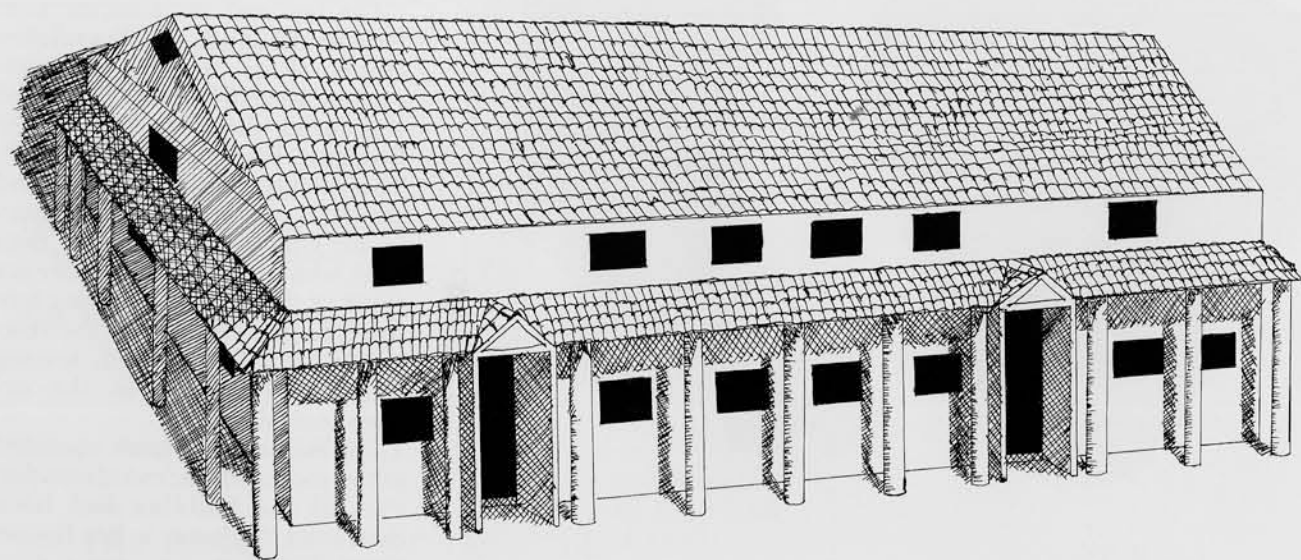
The greatest coin production took place during the use of the Dalles Floor Building, dated between 30 B.C. and A.D. 1 (Fig. 13). This structure, somewhat smaller than the Foundation House, gets its name from floors paved with flagstones or "dalles"; the sides and floor of a cellar at the south end of the house were also flagstone lined. A well just

outside what may be a doorway to the Dalles building provided a handy source of water, as well as an accidental repository for discarded coin mold fragments.

A furnace for melting bronze ingots was also located in front of the Dalles House. Later, when this building was about to be replaced by the Foundation House, the furnace pit was rather hastily filled up, so that pieces of a single ceramic vessel

were found scattered from the bottom to the top of the pit. Also deposited within the pit were the skeleton of a baby less than one year old, and useful or valuable items such as a knives, fibulae, and finger rings (Fig. 14).

Underlying the Dalles Floor, but still connected to the cellar, was a 4-cm-thick floor that was very neatly made of yellow-green clay (Fig. 15). The upper or ground floor of this mint

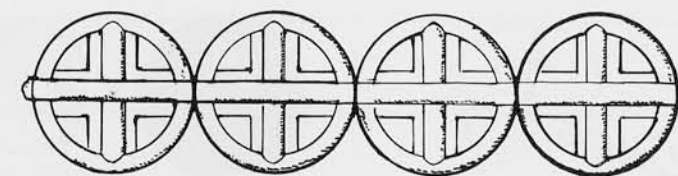


10
Artist's reconstruction of the Foundation House mint foundry. A stone walkway leads from the side street to the east door of the mint. The position of the smoke outlet is known from stone models of houses.



11
Bronze head of a deity found in the Foundation House. (H. 2.6 cm)

foundry, furnished only with a small fireplace, was kept cleanly swept. As a result, only a few coin molds were associated with this floor, which also contained Roman shoe

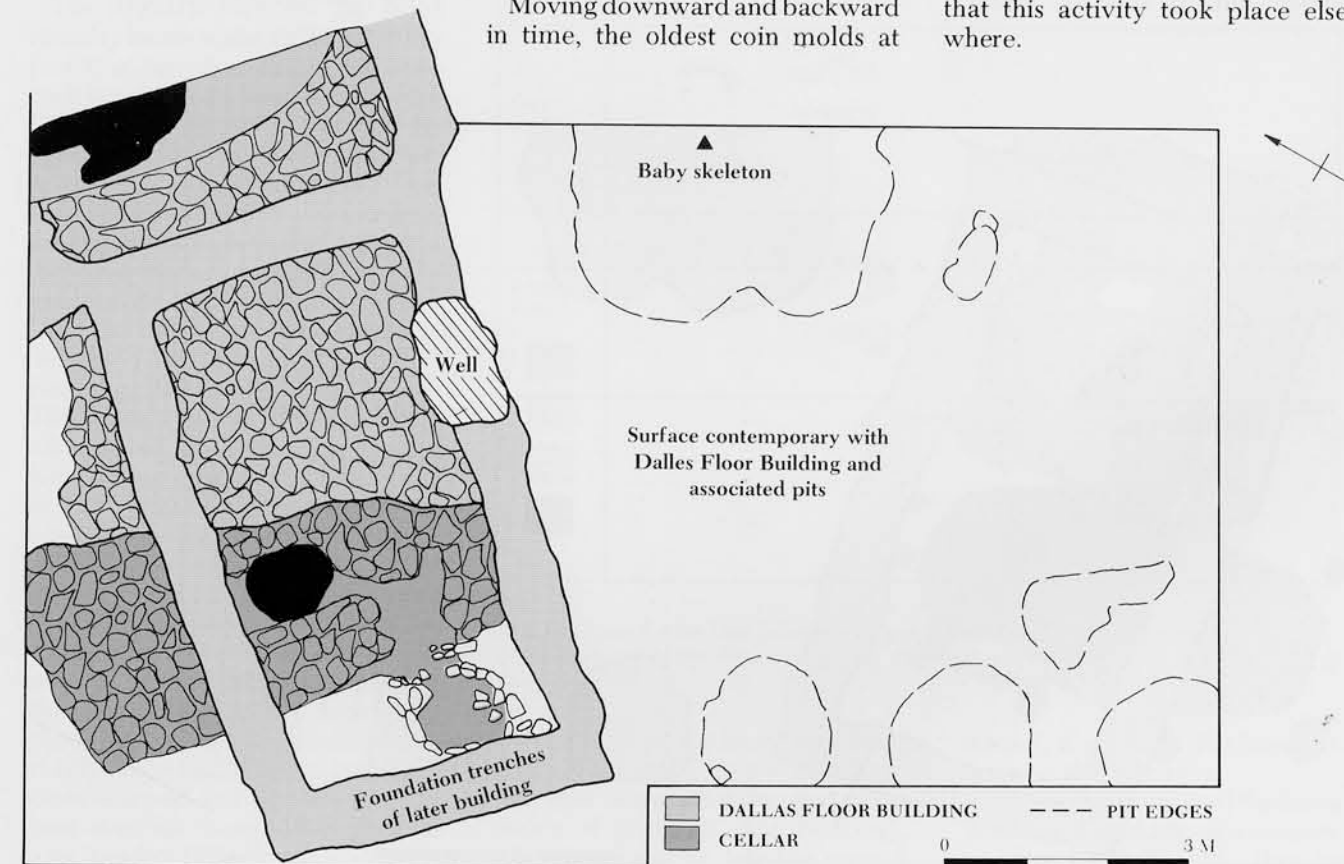


12
Examples of *rouelles* found in the Foundation House North Room. These bronzes were cast in series and occur in some graves in long sets. Archaeologists debate whether they were ornaments or money (or both), but their manufacture in a mint suggests some use as coins. Scale 1:1.

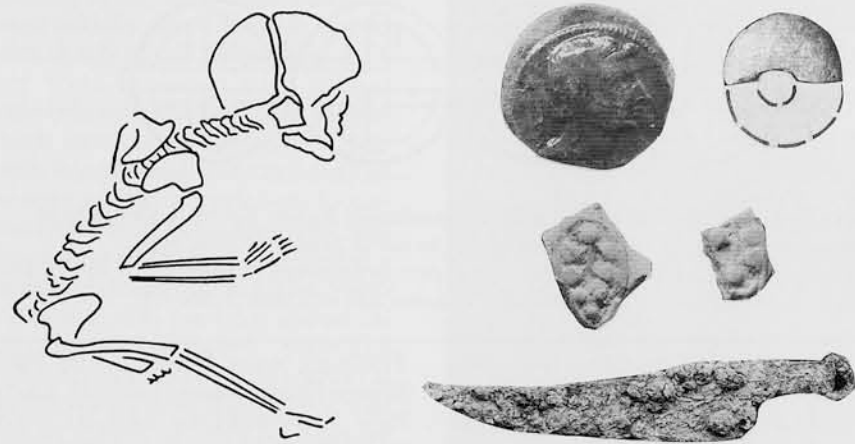
nails embedded head down—in the position expected if they had accidentally pulled out of a shoe. Most of the household activities associated with the Yellow Green Clay Floor Building may have taken place in the cellar, where we found a collection of artifacts used in textile production (a purple stone spindle, whorls, shears, a weaving batten), and a large fireplace with many animal bones (including those of fish), egg shells, and carbonized remains of root vegetables, such as turnips and radishes. This building goes back to about the time of the Roman Conquest and may have been the mint standing at the time of Julius Caesar.

Moving downward and backward in time, the oldest coin molds at

Titelberg were found in the Pale Brown Floor House (Table 1). Each Pale Brown Floor had its own fireplace and from one of them was recovered a rusty iron object that might be a weight, or perhaps a coin die used to impress a coin mold (Rowlett and Robbins 1982). Seven stratified floors underlay this building, but none of them produced molds, flans, or dies, and therefore cannot be considered as having been the locations for mints. The Orange-Brown Floors did, however, produce coins—the earliest recovered within our excavations. Numismatists therefore suggest that the tribe which inhabited the Titelberg was in fact producing coins, but that this activity took place elsewhere.



13
Plan of Dalles Floor Building and associated features. (Drawing by Denise Hoffman)



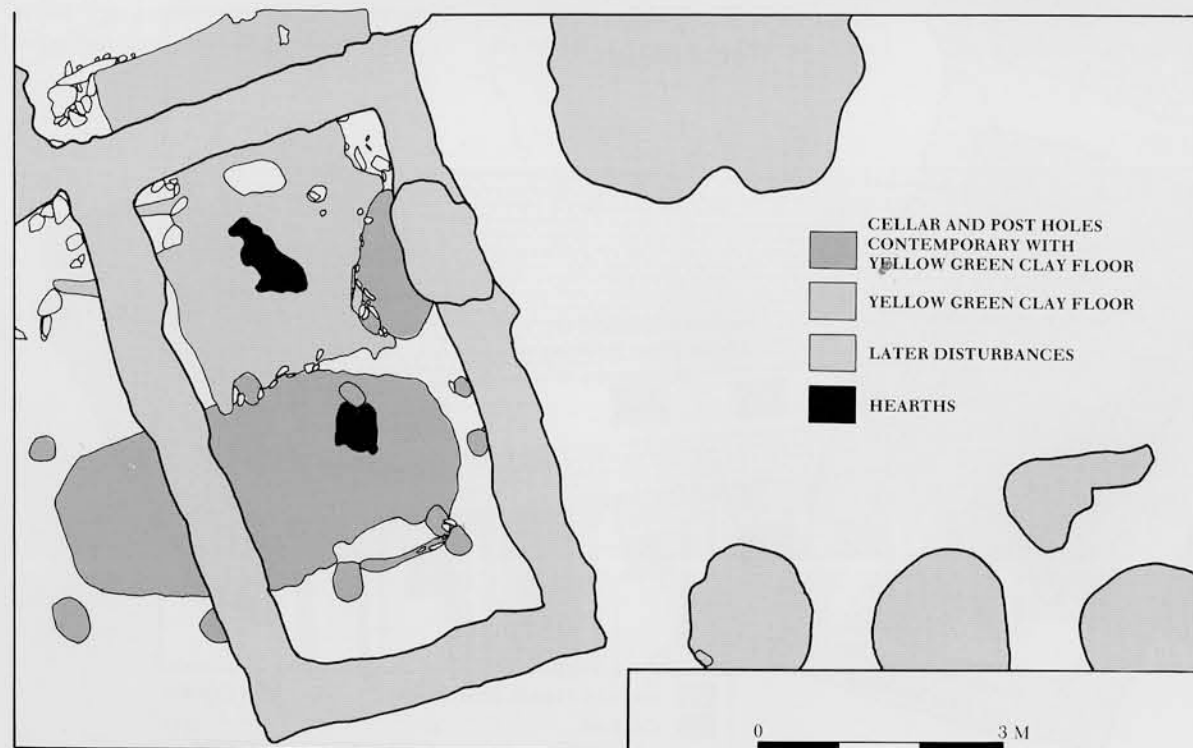
14 Infant burial and artifacts found in the fill of the South Smelter, associated with the Dalles House. The artifacts are: a) a coin of Germanus Indutillus, a Treveran moneyer of ca. 10 B.C. who must have cooperated with the Romans (Diam. of coin: 16.5 mm); amber bead (Diam. 3.8 cm); gold-washed potsherd representing "white" grapes (intact cluster M. 2.5 cm); and iron knife (L. 27.8 cm).

The evidence from the mints and the Orange-Brown Floors is significant within the sphere of economic history, since it indicates that the Gallic inhabitants of this oppidum were striking their own coinage before the period of Roman domination, and well before commercial contacts with the Roman

world intensified so markedly in the latter part of the 1st century B.C. Moreover, the evidence for gold, silver, and bronze coins—that is, for coins of high as well as low denominations—indicates that the native economy was based on money rather than barter at this time.

Beneath the Orange-Brown Clay Floors were 4 floors composed of mud heavily mixed with ash, a Celtic formula for earth-floor houses that survived in Gaul until the 20th century (Helias 1975:49). These ashy floors hardly leave a clear outline due to numerous disruptions from the 13 floors superimposed above. They appear, however, to have been rectangular with rounded corners in plan, and therefore different from the more rectilinear floor above.

The fireplaces associated with these floors were pits nearly 50 cm deep, a characteristic feature of earlier La Tene times in northeastern Gaul. A fibula and a twisted baldric sword chain found in these levels (Fig. 16) confirm that these floors were laid down in Middle La Tene times, around 200 B.C. or earlier. At present, the Ashy Floor Buildings are the oldest known Iron Age structures on the Titelberg. One other aspect of these buildings deserves attention: concentrations of horse bones were found at the top of each fireplace, as if there had been a last ritual meal eaten immediately prior to the renovation of the floor.



15 Plan of the Yellow-Green Clay Floor and associated features. (Drawing by Denise Hoffman)

A Special Location?

The repeated repair and rebuilding of the mint foundry buildings was apparently intended to maintain them in good condition. This stress on appearance can be interpreted as a reflection of the importance of these structures and their contents within the community. A further indication that this locality within the Titelberg was a special one comes from artifacts found in close proximity to the mint buildings. Two remarkable silver fibulae were found on the site surface just to the east of the mint foundries by Luxembourg amateur archaeologists. One of these brooches shows a horseman, and the other portrays a human head with two dolphins (Fig. 17). Based on stylistic criteria, the fibulae date to the late La Tene Iron Age, and were therefore contemporary with several of the mint buildings. In each case, the image portrayed closely matches in form a figure on the Gundestrup cauldron, the famous ritual vessel found in a bog in Denmark (Rowlett and Rowlett 1985).

The significance of the mint foundry locale is also reflected in the fact that no other structures were built here after the demolition of the Foundation House in the mid-1st century A.D. The space was left open despite the fact that it lay close to the center of the oppidum, near an area with intense building activity in the Gallo-Roman period. The only exception to this lack of construction activities is a feature (the "Northern Smelter") that cuts into the North Room of the Foundation House. This feature was used as a furnace wherein all kinds of bronze scrap were melted down for bullion. Much of this scrap consisted of obsolescent and out-of-circulation bronze coins. In places where some of the bronze coins escaped the notice of the bullion makers, the coins lay draped over the stones of the furnace as if they had been painted there by Salvador Dali. Indeed, of the 218 recognizable coins found in this furnace, 192 (88 per cent) had been warped and distorted by the heat of an oak charcoal fire (Thomas and Rowlett 1979).

Based on the presence of coins dated to A.D. 335, and of pottery

Dark Brown Ia	
Dark Brown Ib	
Dark Brown II	
Dark Brown III	
Rubble	
Light Brown Floors	
Dalles Floor	
Clay Floors	
Earth Floors	
Ash Floors	

16 Fibulae found stratified immediately upon and within floor levels of the University of Missouri excavations. Shaded artifacts are of iron, unshaded of bronze.

characteristic of the later 4th century (roller-stamped *terra sigillata*, Mayener ware pitchers, and fragments of Frankish claw beakers), this feature can be dated to around A.D. 400, or perhaps a little later. Together with some 4th century

houses, it is one of the latest structures on the Titelberg.

Whoever constructed the furnace, whether Frankish newcomers or resident Gallo-Romans, they seem to have essentially observed the old prohibitions about building in this



17

Silver fibulae found on the surface of the Titelberg. The face between the dolphins (right), which measures 30 mm from nose to nose, matches closely the goddess face of Plate B of the Gundestrup cauldron, where many different kinds of animals surround the goddess. The horseman fibula, 23 mm from chest to rump, matches almost perfectly the spearless horseman on Gundestrup cauldron Plate E, of which the tool marks show it was made by a different craftsman than was Plate B.

area. It seems as if it was considered permissible to build over the old mint foundry locale—out of use for some 300 years—if the new structure was also related to coins. Indeed, the memory of the mint on the Titelberg was kept alive in the folklore of the neighboring villages of Rollingen, Rodange, and Petange into the 19th

century. Well before archaeologists had found the mints or coin molds, folktales told of gnomes who had made coins atop the Titelberg by throwing bars of silver into bonfires (Collette In press). The spot indicated for these magical manufactures was near where the mint foundries were actually uncovered.

We suspect that one reason why the place was so important is that the mint was under the protection of the chief of the Titelberg. Traces of house floors were found just north of the mint foundries by the Luxembourg State Museum, but so far they remain unexcavated, a challenge for the future. 2

Bibliography

Collette, Joseph

In press
Folklore of the Titelberg.
Columbia, MO: Museum
of Anthropology,
University of Missouri.

Allen, Derek

1971
"The Early Coins of the
Treveri." *Germania*
49:91-110.

Helias, Pierre

1975
The Horse of Pride. New
Haven, CT: Yale
University Press.

Klindt-Jensen, Ole

1961
Gundestrup Kedelen.
Copenhagen:
Nationalmuseet.

Metzler, Jeannot, and

Raymond Weiller

1977
"Beitrag zur
Archäologie und
Numismatik des
Titelberges."
Luxembourg 41:15-187.
Publication de la section
Historique.

Rowlett, Elsebet S.-J.,
and Ralph M. Rowlett
1985

"Gundestrup and

Titelberg." *Hikuin*
10:145-156.

Rowlett, Ralph M., and
Michael C. Robbins
1982

"Estimating Original
Assemblage Content to
Adjust for
Post-Depositional
Vertical Artifact
Movement." *World*
Archaeology 14:73-83.

Rowlett, Ralph M.,
Homer L. Thomas, and
Elsebet S.-J. Rowlett
1982

"Stratified Iron Age
House Floors on the
Titelberg, Luxembourg." *Journal of Field*
Archaeology 9:301-311.

Thill, Gerard

1965
Titelberg: Site
Archéologique.
Luxembourg: Musées de
l'Etat.

1966
"Fouilles du Musée sur
le Titelberg en 1959." *Hemecht* 18:483-491.

Thomas, Homer L.,
Ralph M. Rowlett, and
Elsebet S.-J. Rowlett
1975

"The Titelberg: A Hill
Fort of Celtic and

Roman Times."

Archaeology 3:241-259.

Acknowledgments

The American team,
from the University of
Missouri at Columbia,
has as Principal
Investigator Homer L.
Thomas, Department of
Art History and
Archaeology;
Co-investigator and
Field Director Ralph M.
Rowlett, Department of
Anthropology; and
Laboratory Director
Elsebet
Sander-Jorgensen
Rowlett, Museum of
Anthropology. The
Missouri excavations
were supported by
grants from the
University of Missouri,
Columbia (1970,
1972-73, 1980), a NATO
Postdoctoral Fellowship
(1973), U.S. National
Science Foundation
Grants (GS39835,
1973-75; BNS7600011,
1976-77; AO1,
1978-79), and a
Missouri Weldon
Springs Grant (1982-89).
Gerard Thill,
Conservateur-Directeur
of the Musées de l'Etat,

served as the
Luxembourg supervisor.
Raymond Weiller,
Conservateur of the
Cabinet de Medailles,
provided coin
identifications, while Dr.
Jeannot Metzler and Dr.
Jean Krier, Service
Archéologique, identified
the *terra sigillata* and
amphorae. Helpful
suggestions about the
latter topics have also
come from Johnny
Zimmer, Norbert Theis,
and Joseph Collette.

Ralph M. Rowlett is
Professor of
Anthropology at the
University of
Missouri-Columbia,
where he has taught
since 1965. His studies
in prehistoric
archaeology were
undertaken at the
London Institute of
Archaeology and at
Harvard University,
where his Ph.D. was
awarded. A
postdoctorate was held
at Ghent University,
Belgium. He is currently
working on the reports of
the 1972-1982 Titelberg



excavations. *Neolithic Levels on the Titelberg*, Luxembourg has already been published, and a volume on the Iron Age levels is forthcoming. Rowlett was awarded the Luxembourg State Museum's Wenceslas Medallion and made a Chevalier of the Legion de Merit as well as a Kentucky Colonel for his work on the Titelberg investigations. In addition to leading earlier European excavations, he has also conducted rescue excavations on Archaic sites in central Missouri, and in 1986 and 1988 excavated alongside Lake Neuchâtel in Switzerland.