

The astrolabe for female use

(Reconstruction, expanded in order to make easier today its many uses)

from Italian Chiavari's necropolis VIII-VI Sec. b.C

**Traces of a civilization
in Tigullio gulf 3000 years ago**

by Enrico Campagnoli

Edizioni Tigulliana

*My wife Adriana
and my son Giovanni for preparation software*

On the cover:

Reconstruction of a circular plaque of woman's tombs in the Chiavari's necropolis of VI-VIII Sec. BC: the astrolabe has been integrated with dates, moon phases, lines indicating angles of 30 °, etc. to be used more easily today by a woman or a man to tell the time at day and night, to know and to predict the position of the moon, to give info on fertility, parturition, etc. It was personal for the woman who owned it. It placed her at the center of the universe.

On the back cover:

A hypothesis of the *Templum*, of everything that was visible from the city center, the *mundus Cereris*, split at the horizon into sixteen equal oriented parts, dedicated to various deities. The division into sixteen parts of *Templum* there is also in the astrolabe, which could stand for a small *Mundus Cereris*, and represents, besides astronomical knowledge of the highest level, the understanding of the unity of the person, the city, the surrounding environment, the sky, the earth and the afterlife.

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Chapter I

What features of this North Italian, Ligurian civilization are suggested by the traces

Traces of a fascinating civilization of 3,000 years ago in Tigullio gulf, on Ligurian sea, in front to Portofino, struck curious observers.

From a predominantly female necropolis of the eighth-sixth century. B.C., in today Chiavari, at an ancient sea port, signs emerge of a unitary concept of the person, the city, the surrounding environment, the sky, the earth, the afterlife; a way of planning the city and its surroundings, organic and rational, based on religious presuppositions. A society profoundly theocratic, that gave a central role to women, to connect the earthly with the celestial. A knowledge of celestial motions that few today know emerges. The circular plaques found in female graves in the necropolis of Chiavari, who are still considered by most only decorative plaques, are a first sign of a very advanced

civilization and seem to demonstrate knowledge and application capabilities that are still far from common.

The plaque of the female graves, at least from the only that is substantially preserved because made by silver, seems to be a very personal object to the owner.

The position of the planets and of the sun at the time of birth of the owner was actually on the plate and, according to their beliefs, it characterized her astrologically and then allowed to know the owner's character even many years after his death; for this reason probably the plaques was buried in the tombs with the dead, as we do today by placing a photograph at the tomb. The plate could serve her in every day life for “hourly” astrological predictions, that even today some practice, by relating the position of the planets that currently occurs in the sky, that you identify using the plate as the astrolabe with their location marked on the plate at the time of birth of the owner. Plaque obviously allowed its holder to make astrological predictions also for other people replacing what is now a publication that

indicates the position of the stars in subsequent moments.

However, this tool was used for many other practical reasons in his everyday life, personal, work and public. Certainly for her the capacity to use the plaque determined a position of great prestige against those who had not such knowledge.

The plaque puts her in a position to know when she or other women were presumably fertile; if a woman was pregnant, she could know when it was expected childbirth and in the other side, when it was known the date of birth, she could to go back to when probably was the conception.

This knowledge to a community of mostly women, who lived above a sea port, were not insignificant.

The plaque was also a star calendar.

Being able also to predict with mathematical certainty the rising and setting of the sun and the moon, being able to read tell the local solar time of day with the sun and at night with the moon, being able to read the day, month, to

predict the equinoxes, solstices and even eclipses, these women were certainly in a position of great social prestige, especially against the sailors, as the plaque allows to find the North without the visibility of the Polar star, but of the even partial visibility of Zodiac belt. Some of these their knowledge could seem magical.

The life of a community of women at a seaport would suggest an obvious professionalism very old, but this knowledge, associate with these women an aura of magic and sacredness, that is not compatible with this professionalism, at least in its mercenary aspect.

But - as we shall see - there are other traces of this advanced civilization in the place where they lived. They planned the city and its surroundings in an organic and rational way, based on religious presuppositions; they founded, built, lived city in a coherent and homogeneous way with respect to culture expressed by plaque and they organized the surrounding environment with an human intervention that seems limited to the religious, defense and life needs.

This reality seems to emerge.

Everything that could be seen from a center, the *mundus Cereris*, in heaven and on earth, the *templum*, was divided at the horizon into 16 equal and oriented wedges, each of them dedicated to different deities. Plaque reports itself, as we will see later, the division in 16 parts of *templum* and it seems to resemble to coverage of the *Mundus*, as if itself were a small cover of the *Mundus*.

The city seems even founded, planned, constructed to be functional the use of circular plaques.

Three buildings on the tip of three promontories, now three churches, are aligned north-south just in the segment dedicated to the Sun god, right where there was the necropolis and the Castle of Maxellasca. This alignment , as we will see, was strongly facilitating the use of plaque as astrolabe.

The city seems to have the center of the *Mundus*, in some cultures, including the ancient Etruscan-Roman, it was an underground space, with an opening closed by a removable square stone, the stone was moveable and was the

“ara”, the altar, and it was surrounded by a circle; in short, something that resembled the circular plaque but obviously larger. The moveable stone was removed during few days a year. Opening the hole, the dead could return to the world of the living. This happened three times a year. During these days believed that the dead could communicate with the living. During this periods, among others, they could not do war, nor conceive children.

Curiously, the plate has a central hole, as if to indicate a possibility of personal or magician priestess contact with the afterlife.

Many of the rays, that divide at horizon the *templum* in sixteen equal and oriented wedges, have close to the center, to the *Mundus*, a well.

Dividing at in 16 parts the horizon, in a clearly visible and easily identifiable position there are natural points as the tops of a mountain or hill or points made by man, as building, maybe once a temple, often a church today.

The woman was an interpreter of the gods and the city, the surrounding nature, the universe were designed jointly and the motion of the Sun and the Moon and the stars, along with natural

phenomena, the flight of birds or lightning were regulating the life of man.

It seems also that Moon's observations defined special moments of lunar cycle. Two cycles of the lunar cycle, each of 18 years and six months, were determining roughly the average life of a man at that time. There is some doubt the fact that these traces of a highly advanced civilization are not representing the reality. To the circular plates it has been given an improper meaning due to random plaque's corrosion also on the only partially intact plaque because made by silver. The use as astrolabe, while possible, may not be known. We just suppose they used. The rays oriented that from a central point of the city, to the wells to "remarkable" points on the horizon, like natural peaks of mountains, hills or like human constructions could be just by coincidence on these oriented rays. Other alignments which would indicate to the sunrise at the start of celebrations would be equally a coincidence.

Therefore we are only presenting traces.

For a better examination of the traces: the use QRCode

Unusually for a publication of this type, it is used the Quick Response Code (QRCode), are used these squares filled with dots like that shown below, because it is possible to scan it with any smart phone with any QR Code Reader application installed.

In particular QRC will allow to view the informal research on which this publication is based, in particular the first one made in 2000, "Chiavari: the woman guardian of the sky."

The QRCode allows the reader to better examine the traces and to form his own idea, accessing high-resolution photos, other than a number of documents. The possibility to download and to try to use himself two experimental software, both in beta version, one that simulates the response of plaque in correlating the position of the sun and the moon, on different days of the lunar month and the second software that may facilitate you to find a *Mundus* in other ancient city founded on the basis of the same or similar religious beliefs.

For example, the QRC below shows the results of the application of this software applied to the ancient city of Chiavari's necropolis on the regional technical Ligurian map with a definition that was not easy to have on a book:



**Why these traces
are brought today
to the attention of the reader**

The research, conducted by a group of friends since the late nineties, *de facto* stopped on 2007 for personal reasons and for the death of one of the main promoters, Francesco Casaretto, just days after he found that the wells in S. Pier di Canne around the center, the possible *Mundus*

Cereris.

The wells were found to be on the rays that divide the surrounding space into sixteen equal and oriented parts. It has been noted that the *Mundus* was a few meters after entering the Campodonico river in Rupinaro river, few meters before its entrance in the lagoon that extended itself in time ancient to S. Pier di Canne.

This coincidence of the presence of new founded wells on the oriented rays, decreased dramatically the possible coincidence of the alignments already found among the *Mundus* and significant natural and human constructions at the horizon.

The interruption of the research on 2007 had not given the chance to take due account of this new fact.

Two years ago the same group, expanded with new friends, started to meet again. It has been decided to resume, check, revise and update the search, including, among others, consideration of wells around the *Mundus* found by Francesco Casaretto. It was been decided to leave to a subsequent search the verification of the

alignments of lunar cycle. Due to the complexity of the motion of the Moon, these will be subject of further investigation and therefore should not be considered, if present, in the documents edited in the past.

It has been also decided to develop a software to facilitate and to try to make objective, as possible, the research of the existence, if any, of a *mundus* in ancient cities founded on the basis of a similar ritual.

The software, that you can download from a QRCode of this book, facilitates and objective as possible, with many millions of operations, the search in a detailed map of a possible *Mundus*.

For the verification of the ancient city of Chiavari's necropolis obviously has been inserted the map of the area of hydrological basin of Rupinaro river.

By placing at will a number of significant nature and man's work points that could be on the horizon from the plain, with many millions of operations the software search the point from which the horizon has more points on the sixteen oriented rays, facilitating and

objectifying , as far as possible the search.

The software, applied to hydrological basin of Rupinaro river, could be applied anywhere else where there is an ancient city, changing the map on which it operates.

It was noted that in many cities it is known where is the *Mundus*, but it has not been found or has not been search, however, the sixteen points that from the *Mundus* divide on the horizon the *Templum*.

In Rome, for example, researchers identified two *Mundus*, but they did not agree in the real one. It would be interesting to see if the software could be useful for giving better credit the one or the other.

The result of this application on the Rupinaro's basin substantially confirmed and gave a more precise definition on a map virtually approximately of six meters by six meters where each point representing little more than a square meter, where could be the *Mundus*.

After entering natural and man-made relevant points, program indicated the existence of a point, from where, while not covering totality

all oriented sixteen rays, dividing the horizon, the rays cover most of them. The result does not change by inserting additional points.

This fact it seems to confirm the existence of traces of this fascinating ancient civilization, making unlike the possibility of coincidences.

Chapter II - From the research on ancient Castle of Chiavari emerges a previous one....

It all started by accident in the early 90s during an historical research for the recovery of the ruins of the Castle of Chiavari, which was built around 1146, thanks to money collection in a broad basis – it seems among men of Leivi and “Clavari” - , when the city of “Clavari” was not yet existing, to strengthen the position of Genoa after that the Emperor had appointed a “Fieschi” as Sir of Liguria. A painting of Our Lady of the Olive Bacezza was placed – it is told - under the foundation stone of the castle " to be bearer of peace."







The virtual visit to Chiavari's Castle
is always possible:
<http://castellodichiavari.ilsasso.it/>



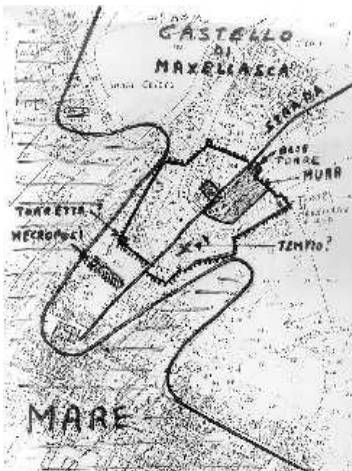
This picture was taken by Edoardo Migone.

The time and day of the rising of the Moon behind the castle was predicted a few days before using the circular plate on the cover.

While the search was going on Chiavari's Castle with particular regard to its beginnings and to

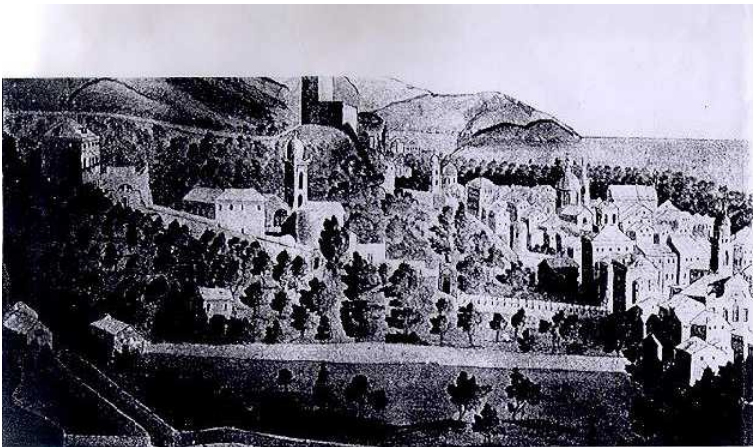


the role played by the Emperor, Frederick I, the Red Beard, in the construction *Oppidum Clavarensis*, the research on Chiavari's Castle was suspended because the group was attracted by the existence of a previous Castle: Castle of Maxellasca; the necropolis was just right out of its walls. The meetings went on and are going on also now in Chiavari's Castle, where there is great part of the material of this research.



Castle of Maxellasca: the tombs of the necropolis are just outside its walls

The fact that it was found in the immediate vicinity of the Castle of Chiavari an earlier castle, the Castle of Maxellasca, and just outside its walls there was the necropolis of the VI-VIII Sec. b. C, suggested that there was a relationship between this castle and the tombs. The tombs always for hygienic reasons are outside the walls of a castle, in the immediate vicinity to facilitate the transport of the dead and to be near to beloved.



If there were the dead, there were the living. Who were they? Where were they?

It began a wide-ranging research.

From an examination of the materials of the necropolis at the Archaeological Museum of Chiavari we obtained important information about the culture, the religious beliefs of this population. We tried to understand what had happened in that period, the reason for which the city disappeared, as the city was built, what were the possible traces still existing, etc.

We tried to understand also how it was probably at that time the shape of the land, where he could be the city and so on.

It was found that there was probably a lagoon, where at least four headlands were stretching inside and that maybe at the entrance there was a small island.

In 2000 we collected all these considerations in a first informal written for internal use: "Chiavari: the Guardians of the Sky". These considerations were then gradually deepened and revisited, but they provide the foundation

on which it has developed this research and the traces of this ancient culture that are mentioned this book: from those considerations they have their earliest origins.

As mentioned it is recommended to read them downloading this first research from :



Chapter III

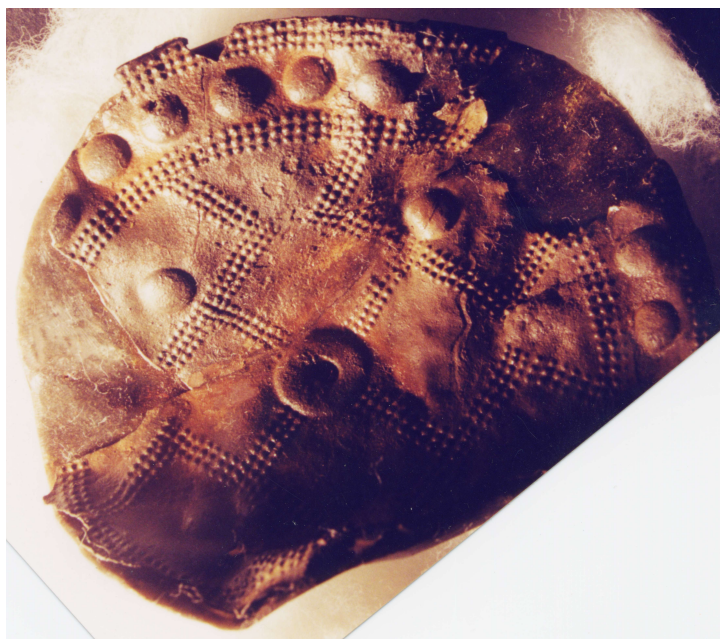
Traces from the plaque of female tumbs

The research focused on circular plaques; from these emerged traces of this civilization that guided us in search of the oriented city. All the circular plaque have been photographed. A single, being in silver, was readable, the others in bronze were not readable.



Through the following QRcodes you can access a number of high-resolution photographs of the circular plaque of the tomb T46.





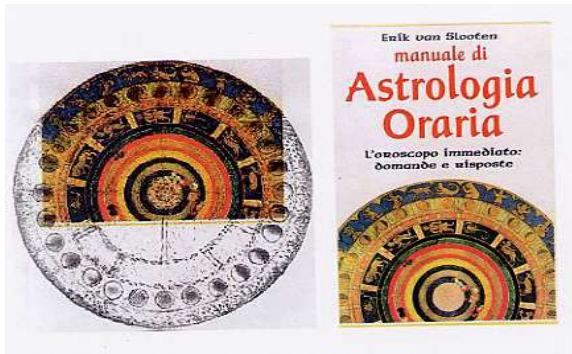
We were groping in the dark when



We were groping in the dark when we found that the reproduction of the plaque was very similar to an image of a 1583 a. C. book of Logman, "The end flowers of histories", located in the Turkish-Islamic Istanbul archives, which represents the astrological birth chart of the city of Baghdad. It was possible to superimpose the plaque to this image, where there are moons

around, the Zodiac, the seven orbits of the asters, that interest astrological predictions.

It was suspected that the plaque was representing the astrological birth chart of the deceased as this image was representing the astrological birth chart of Baghdad. The image also appeared on an hourly astrology book that could explain a particular use of the plaque by the deceased.

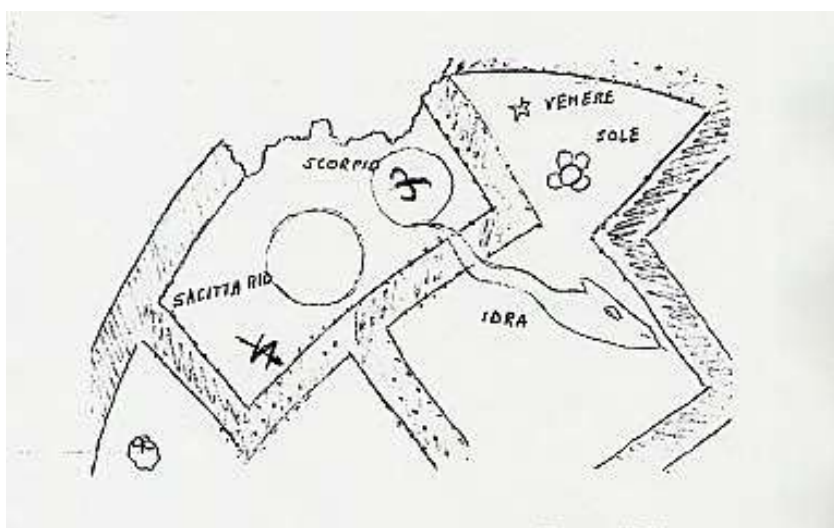
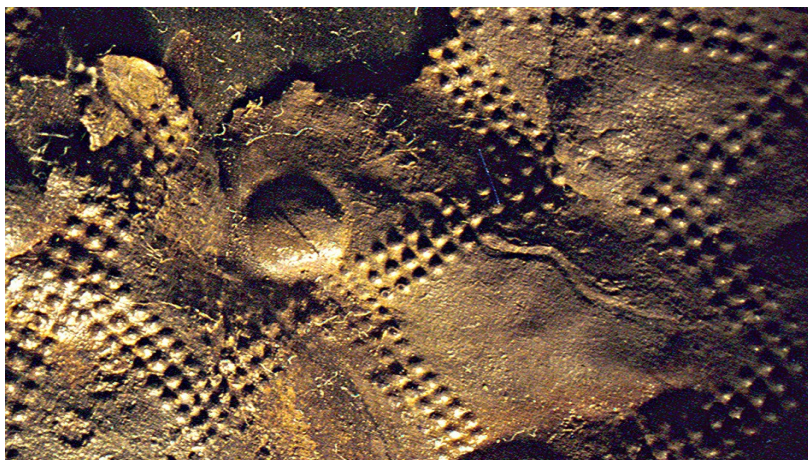


We therefore search Zodiac signs and the seven asters in circular rings below. The result was positive, despite the condition of the plate. It was found the sign of Scorpio and after thirty degrees the sign of Sagittarius discreetly visible and after thirty degrees even barely visible a sign that could represent Aquarius. It was found, among others, Mars, Jupiter, Venus, the Sun and the Hydra, a meaning constellation.

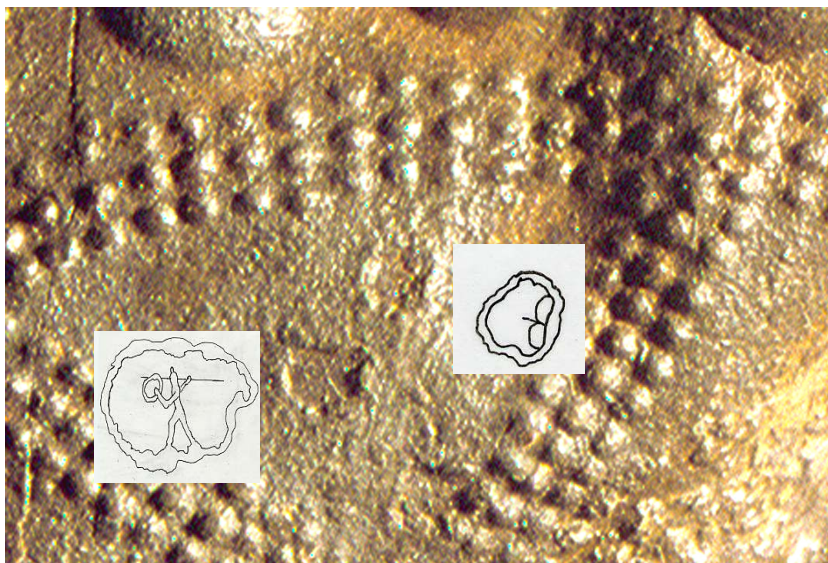
The more ancient Horoscope in the World?

**Zodiac signs:
Scorpion and Sagittarius**



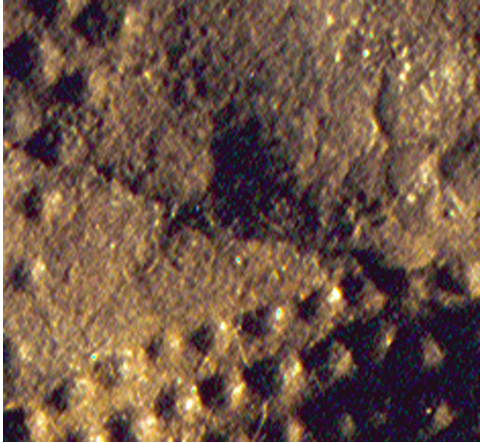


The planets Mars and Jupiter

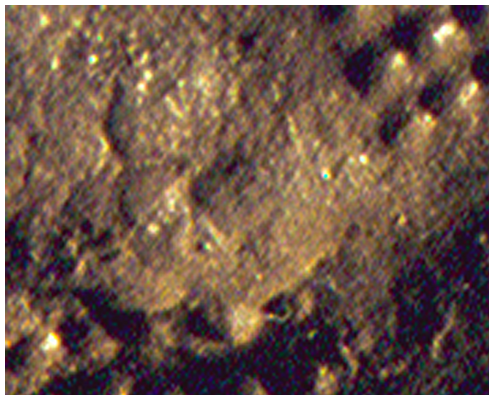


The asters:

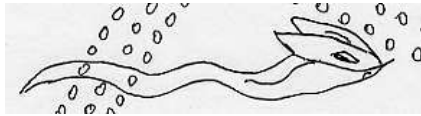
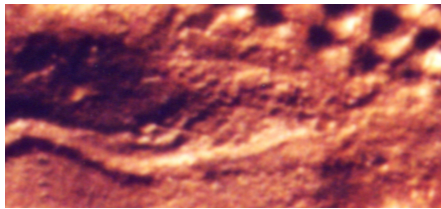
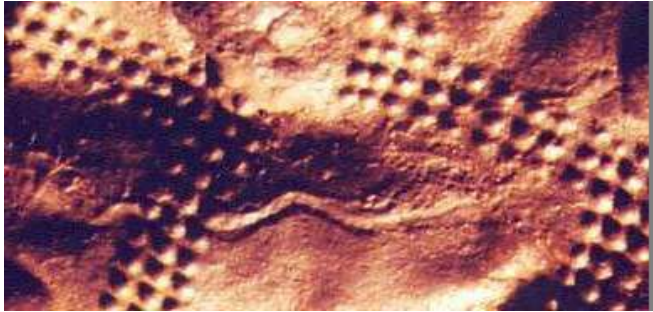
Venus



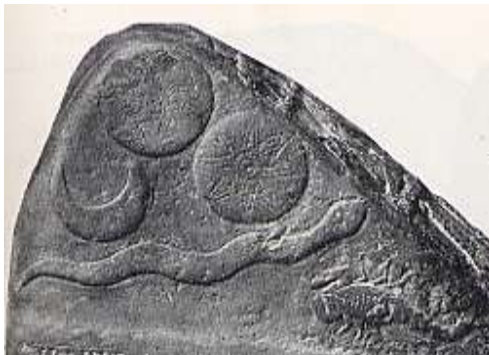
and Sun.



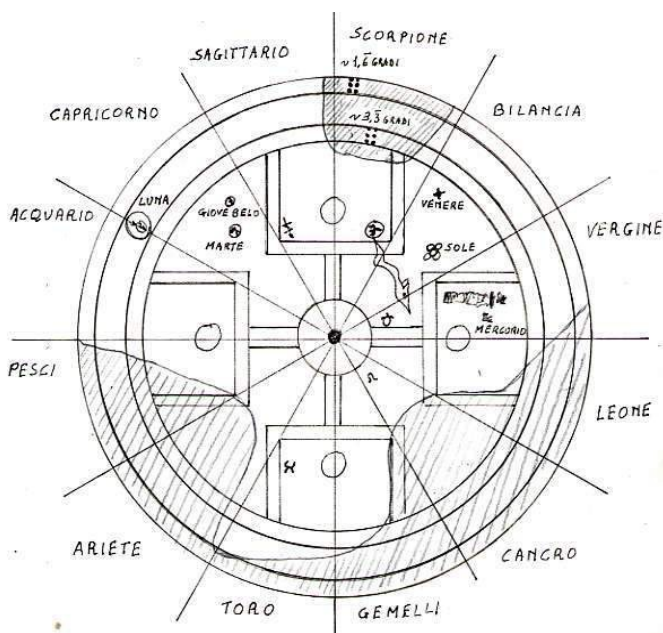
The Hydra



A 1100 bC Mesopotamian stone suggested the interpretation of signs.



**Assuming the same structure
the astrological birth chart of Baghdad
it has been made the first reconstruction.**



The position of the asters on the plaque, according calculations made by Alberto Bauda', indicate a date, October 13, 887 BC , fully compatible with the beginnings of the necropolis. The plaque shows, for those who believe in astrology, the character of the woman born on that day.

It could be the oldest known horoscope.

CULTURA & SPETTACOLI

IL SECOLO XIX
1987-1988

UN VERDI AL GIORNO



Per le cronache degli anni in questi giorni, Verdi è un personaggio di primo piano. La sua figura è stata celebrata in varie occasioni: da Verdi a Verdi, da Verdi a Verdi, da Verdi a Verdi. La sua figura è stata celebrata in varie occasioni: da Verdi a Verdi, da Verdi a Verdi, da Verdi a Verdi.

A CHIAVARI UNO "SCOOP" ARCHEOLOGICO

Ecco l'oroscopo più antico del mondo

Le ingegneri e gli storici dell'archeologia hanno decifrato un oroscopo che fa risalire al 410 avanti Cristo l'interpretazione degli astri, attraverso dunque il quadrante anti le prime memorie scritte sul legno del tempo e dei loro effetti. Il decifro è stato un "scoop" messo alla stampa di "L'Espresso".

ALL'ORIGINE
Fino a pochi anni fa, l'oroscopo era considerato un semplice gioco di prestigio. Ma ora, grazie alle scoperte archeologiche, si è scoperto che era un vero e proprio strumento di calcolo. Gli antichi usavano un oroscopo per prevedere il futuro. Gli antichi usavano un oroscopo per prevedere il futuro. Gli antichi usavano un oroscopo per prevedere il futuro.



Il vero oroscopo. In un oroscopo, l'oroscopo è un oroscopo.



La rappresentazione grafica del quadrante zodiacale di Dione.



La stessa ingente conchiglia nel Museo etrusco di Chivari e accanto alla sua riproduzione.

La rivoluzione dell'ASTROLOGIA Il punto di riferimento era finora il 410 avanti Cristo

Il punto di riferimento era finora il 410 avanti Cristo. Il punto di riferimento era finora il 410 avanti Cristo. Il punto di riferimento era finora il 410 avanti Cristo. Il punto di riferimento era finora il 410 avanti Cristo.



La stessa ingente conchiglia nel Museo etrusco di Chivari e accanto alla sua riproduzione.

Poster
ALFRED HENRI
via Etrusca 111 - Livorno
tel. 0586/211111

IL SECOLO XIX

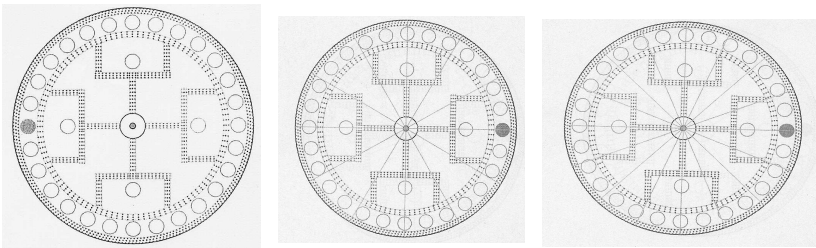
Fondato nel 1886

La Casa
via Etrusca 111 - Livorno
tel. 0586/211111

via Etrusca 111 - Livorno
tel. 0586/211111

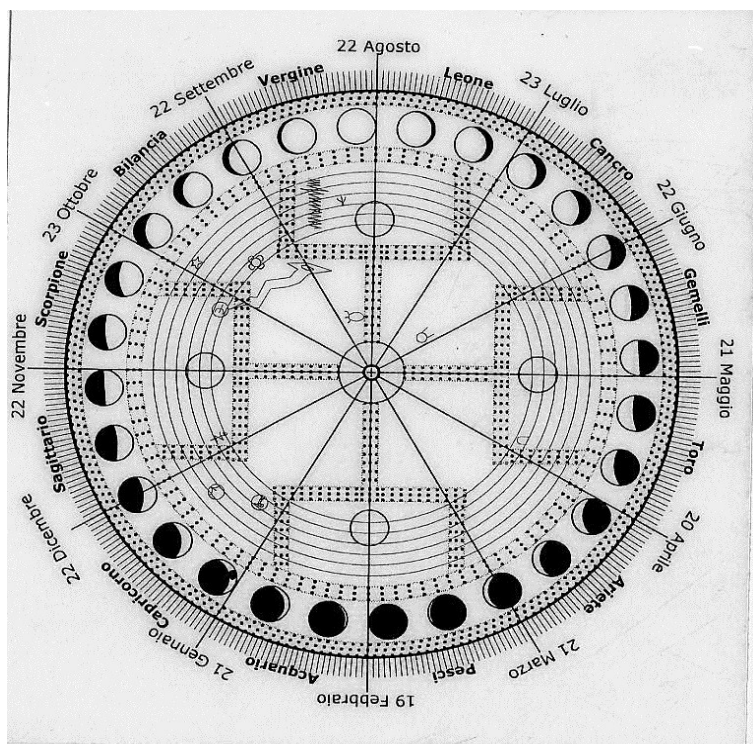
For what is it possible to use the plaque other than for astrological purposes?

The reconstruction of the plaque without astrological birth chart was useful to understand its possible use as an astrolabe: as we see, it divides the circle and the space into 12 and 16 equal parts. The division in twelve is useful to identify the constellations of the Zodiac and to read the hours. Between two rays they are 30 degrees, the angle covered by apparent movement of sun in two hours; the reading of the hours is from 1 to 24 and not from 1 to 12 as in a modern clock.



In the plaque there is also the division of space into 16 parts, the division of *Templum* and the city. This division allowed to do divination, to know which god was sending signs, birds, lightning, etc.

The circular plaque was also an astrolabe for female use



The reconstruction of the circular plaque has been integrated with the days corresponding to the Zodiac signs, the Moon's phases, the division into thirty degrees and other details. These integrations make more easy today by a

woman or a man to use the plaque.

The plaque allowed a woman to know when she was fecund.

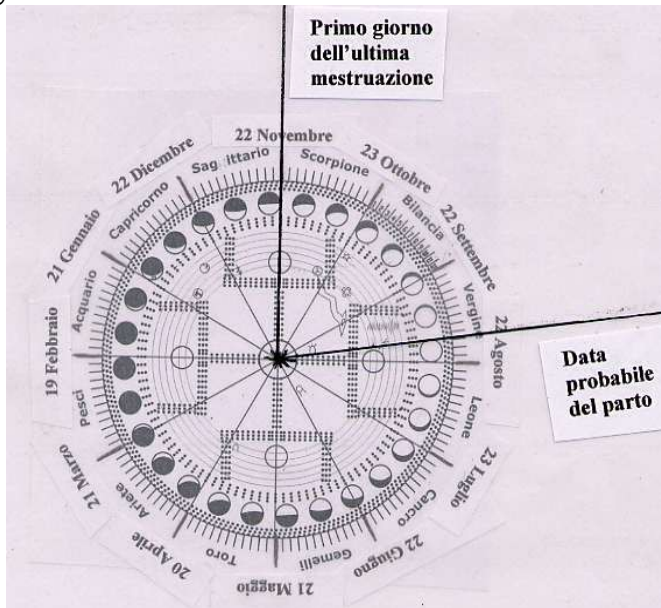
The plaque allowed a woman to know when she was fecund, with the same approximation of the method Ogino Knauss. Relying on the regularity of the menstrual cycle of 28 days, equal to the number of moons (better to 27 moons and a hole), statistically it could, for example, be expected not to be fecund for the first seven days (moons) from the beginning of menstruation, to be fecund in the next fourteen days (moons) and not be fecund in the next seven days (moons).

The phases of the moon in the plaque and on the sky could serve as a simple and effective reminder.

The method "of rhythmic contraception" has been described many years later by a physician at the court of Byzantium of the sixth century a.D., Ezio from Amida, a city of high Tigers, of the same zone where maybe has been designed the plaque.

The plaque allows a pregnant woman to know when it will be probably the childbirth

The figure below is self-explanatory: since the first day of the last menstrual period she has to wait for nine Zodiacal signs and the days corresponding to a moon on the plaque, approx. 9 days.



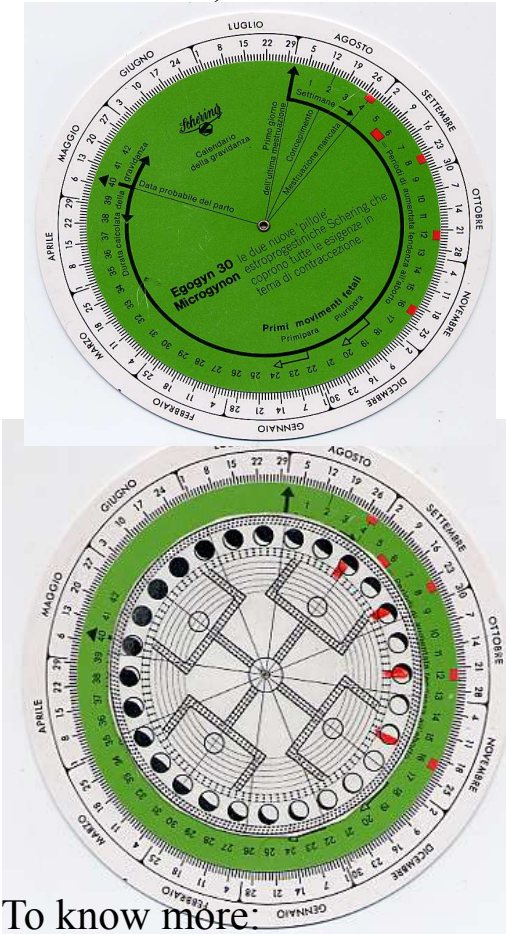
Plaque in fact, as we see below, overlaps perfectly with today's pregnancy calendar and the time from the first day of the last menstrual period to childbirth is indicated with a similar

accuracy.



Needless to say, if it is known the date of delivery, the plague shows with good approximation when probably conception occurred, taking into account the period of infertility after the start of last menstrual period. The analogy with today's pregnancy calendar goes further: even the time considered at risk for the loss of the child, as it can be seen from these following images, are corresponding; these periods, indicated in red in the pregnancy

calendar, correspond in the plaque to half-moon (or to the radius of the moon or to the space intervening between a moon and the other, that are the same)



To know more:



For a community of women who lived by the sea, on a port, that knowledge had to be really appropriate.

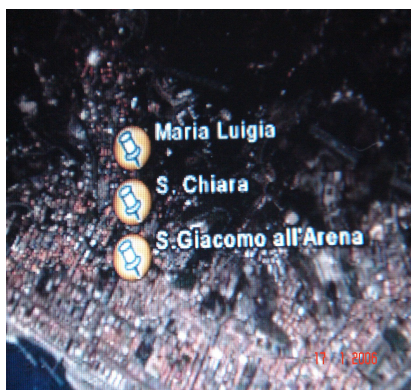
An astrolabe represents the firmament

Plaque is an astrolabe, but quite different from spherical ones that stand at Rockefeller Center in New York or at the United Nations in Geneva. This is a small plane astrolabe. It seems that Hypatia of Alessandria wrote around 400 a.D. a booklet on the small plane astrolabe, *De parvo astrolabio plano*, but it was lost. It has an amazing variety of functions.

The plaque must be "oriented" to be used as astrolabe

To be used as the astrolabe plaque must be "oriented"; it must be placed in the plane of the

solar ecliptic, i.e in the plane in which during the day the Sun appears to rotate around the earth and at night in the plane of the constellations of the Zodiac. For its daytime use it is very convenient to have the North-South direction, because, with the presence of the sun, is immediate the placement of the plaque in the plane of the solar ecliptic, simply by placing it perpendicular to the North-South direction and turning up to align the sun. At night the Zodiac belt is the solar ecliptic. And it is enough to align two zodiac signs; having the North-South direction is enough one Zodiac sign.



The necropolis, as we shall see, is in the sector of the ancient city dedicated to the Sun god. Just to the side of the necropolis, in the same sector

there is the Maxellasca's Castle and there are three churches aligned North-South, at the ends of ancient headlands in the lagoon. This alignment was able to greatly facilitate the use of the plaque.

To synchronize at night the “oriented” plaque with the firmament it needs to rotate itself in order to align a constellation of the Zodiac with the same constellation of the Zodiac you have on the plaque; during the day, to synchronize the plaque with the firmament, you must know in which constellation is the sun and rotate the plaque to align the sun with that Zodiac constellation you have on the plaque.

At this point if you rotate the “oriented” and aligned plaque slowly, 15 degrees a hour , following the chosen Zodiac constellations at night and the Sun at day, the plaque represents on a microscopic scale and, in a very, very simplified way, the firmament.

What was and is the possible use?

Many uses were and are possible, far beyond the astrological predictions.

To use it today the integrated version on the

cover, just it needs to remember:

- the plaque has to be “oriented”
- the moon, where there is not marked the moon phase, the new moon, in yellow on the reconstruction on the cover, is also the position of the Sun.
- that, for reading the hours, as in its apparent motion the Sun employs an hour to travel 15 degrees, it employs two hours to travel the 30 degrees between two rays of the plaque on the cover.

The astrolabe was positioning the user in the time and in the space.

The astrolabe was positioning the person in time because it was a astral clock and calendar.

It allowed to read the time, day and month of the year, and also the year, but that it was better to define the year using the lunar cycle.

Time. You can read almost like a modern clock the local solar time during the day, just on the oriented plaque, aligning the position of the Sun, (or of the new moon, the yellow one in the

cover reconstruction) and count the rays marked every 30 degrees on the plaque, knowing that each one worth two hours, counting how many and part of them are missing from the the noon (the South). While today you read the hours on a clock from 1 to 12, here you read them from 1 to 24. To avoid disappointment, we must then take into account that the local solar time is different from National solar time, for example Italian solar time is by convention the solar local time of Berlin and that the solar local time of Chiavari is delayed by about 17 minutes from Solar Berlin and Italian Time.

The day and the month. At dawn the last star of the Zodiac belt disappearing horizon was saying the day and month of the year. Considering precessional variations occurred in these last three thousand years also now it can tell the day and the month.

Year. The year could be roughly indicated taking into account the precession. Lunar cycles for this purpose could give much more precise elements.

**It allows to predict
the rise and fall of the sun.**

Knowing in what zodiacal constellation is the

sun, by construction, the astrolabe indicates exactly the time left at sunrise and the day time left to its setting.

Forecast of the equinoxes and solstices

Reading the day of the month of the year you read the missing days at the equinoxes and solstices.

Prediction of eclipses.

The predictions of the eclipse could be done with the same methods used to predict them at Stonehenge, being on the plaque 56 points if you consider spaces and moons, just as among the stones of Stonehenge.

To know more:



It placed the person in space:

It gives orientation North-South

Three non-collinear points determine a plane. Aligning at night the astrolabe on two zodiacal constellations, you put the astrolabe on the solar ecliptic plan; the top and bottom of the plate

circle indicate the South-North direction. During the day aligning the astrolabe with two positions of the Sun (for example, one at sunrise or sunset of the previous day and the other at the position in which the Sun is located at that moment), you put the astrolabe arises in the Sun ecliptic plane and the top and bottom of the plaque indicates, as at night, the North South direction.

You realize as having aligned South-North three artifacts nearby, now three churches, they could “orient” the astrolabe with absolute immediacy.

It gives the latitude

At the equinoxes the inclination of the oriented plaque gives the latitude and generally, knowing the month and day of the year, by the inclination of the ecliptic plane was possible to extract the latitude.

**The peculiarity of Chiavari's astrolabe
is to connect the motion of the Sun with
the Moon's motion:
the results seem magical.**

This particular feature gives some interest to a today woman and man to use this astrolabe. Plaque solves geometrically a mathematical problem. The position of the Sun, the Moon and the day of the lunar month (or the phase of the moon), are linked by a mathematical relationship.

A beta version software gives mathematically the same result that plaque gives geometrically.



Nothing magical: by introducing two variables, both in mathematical relationship, as in the plaque, you get the third variable.

There is a fact that simplifies the use of the plaque in certain situations.

If you use to observe the sky when you see the moon in the sky you can recognize even the phase of the moon, i.e. the day of the lunar month, also if the lunar phase is not represented in the plaque.

In the reconstruction of the plaque on the cover are marked the phases of the moon to make in an easy way usable the plaque even by those who do not usually observe the sky.

Some of the practical applications are still cool.

The local solar time at night seeing the moon

For example, seeing the moon in the sky and of course his phase, if you orient the plaque, i.e. you place the plaque in the ecliptic solar plan, and align the moon you see in the sky with the moon with the same phase marked on the plaque, you can read immediately at night to the local solar time

Other application seem still almost magical.

You can “predict” at what day and what time the Moon will be in a certain part of the sky.

The plaque allows you to book a table for dinner, knowing that the Moon will appear at

that time and in that day in a certain space of sky visible from that restaurant.

It is better to test before, to avoid to have dinner without the Moon.

How to do?

Personally I tell you my similar experience.

I went few days in advance at the evening in a place, knowing the day of the lunar month, i.e. how many days have passed since the new Moon, and knowing where was the South.

I oriented the plaque and aligned the plaque at the Sun (i.e. the yellow moon on the plaque). I saw on the plaque where was in tha moment the Moon counting clockwise on the plaque's moons the days passed since the new Moon. I counted the plaque's moons to arrive to have at the same time of the day the Moon in the desired position in the sky.

This number gives you the number of days you have to wait to have the Moon in the position of the sky you desire at the same time.

I asked to a photographer, Edoardo Migone, to go in that place in that “predicted” day and time to take the photo of the Moon.

The Moon at the “predicted” day and time was

in that part of the sky and it has been photographed and this is the photo.



Three thousand years ago, these predictive capabilities could easily be considered magical.

The connection of the motion of the Sun and the Moon brings far away in ancient cultures.

Chapter IV

To the traces of the oriented city, the *templum*, the *mundus*. Who were the living?

We do not know. What was expressed by the necropolis seems to be a predominantly a female community with highly advanced knowledge, not a brothel. As there is not a rate between males and females to support a natural community of families, with a few men and a non-significant presence of children, it may be it could be possible to believe that it was a community of priestesses or female magician. Certainly living by the sea, on a natural port that sailors met easily by sailing north from Corsica, on a frequented route, it is reasonable to assume this community had relationship with these sailors. The plaques do not lead to think that it was a house of pleasure; plaques might lead one to think at religious and magic activities, that, if ever were also connected to sexual practices, these were similar to those in use in Sumerian world in favor of the gods or perhaps similar to those indicated by Herodotus to the Etruscan

women.

What it seems to be sure is that women had these circular plaque; they were carriers of a “circle”, which they then are carried into the grave. It is likely that this fact at the time to have characterized them.

It induces even in very specific suggestions. In Greek κίρκος means hawk, but as the hawk flies around in circles in the sky, it means also the circle. In Greek Κίρκη, the female of circle, is the sorceress Circe. The name suggests that she, the daughter of the Sun and for some authors Ligurian, was also characterized in some way by a circle. Many reasons exclude that Circe has inhabited this area. There are centuries of temporal distance between her and the time of the necropolis.

Of course it is not inconceivable that this community had in the past some connection in the past with her world.

The probable route of access to *templum*

The probable route of access to the templum and to the city from the hinterland was coming from San Colombano, where you see that, in a map of 1816, there was a bridge and was starting the road that was bringing in the valley of Rupinaro, through a pass located in a place called to Solaria.



As we shall see, the prominence above that pass place will be found exactly at North in respect to hypothetical *Mundus*.

The knowledge of the places of Pippo Solari has been fundamental.



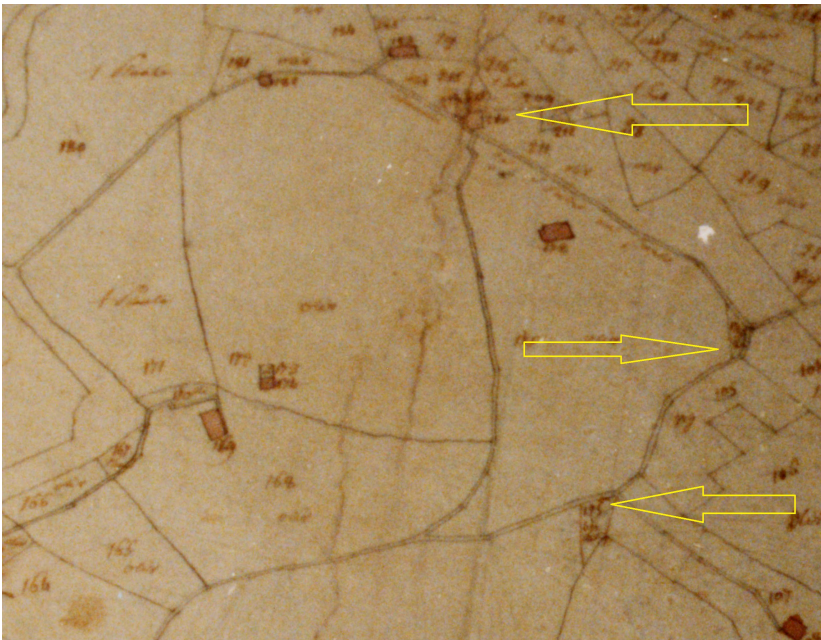
The Napoleonic map suggested a central point.



It has been noted that in the Napoleonic map there are constructions aligned at distance step almost constant on two straight lines and these straight lines converge at a point. These lines have the characteristics to have between them an angle of one-sixteenth of full circle and to be oriented; it means that the first line makes also a corner of one-sixteenth of full circle with the East. Further the pass in which the road coming from the hinterland was entering in Rupinaro's valley is right at the North .

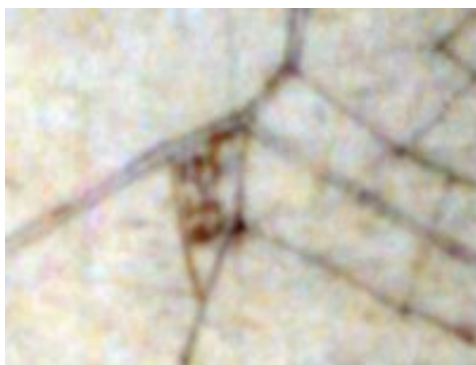
Three towers at the entrance of the city

There are in the Napoleonic map also three towers at the entrance of the city and also they in respect to the suggested central point divide the horizon in sixteenth part of a full circle.



The road, La Rissa, which arrives in the city from the pass, met on a first hill (arrow in the middle) with a round building, probably a tower, then branched off to the North and to the South and came to two other neighboring hills on

which there were other buildings round, probably also towers, by analogy with the graphic representation on the same Napoleonic map of the towers still existing close to Castle of Chiavari. On the way to the South tower to the truth it seems to double.



The three towers at the entrance of the city confirm the alignment with a central point with other rays, oriented and also mutually separated by angles of one-sixteenth of a round angle. Therefore, since one of the three towers is also on one of the two straight lines that suggested the center point, there are four consecutive rays and three oriented sectors each of a sixteenth of a round angle.

The three towers and the emblem of Chiavari.

It is interesting to observe in passing that the view of the three towers at the entrance of the city, seen from the central suggested point, could have somehow influenced in determining the symbol of the present city of Chiavari where the three towers appear. At the East there was the central tower; the other two, right and left, were at the side, in symmetrical way, separated by a sixteenth of a round angle, with respect to the central suggested point, the possible *mundus*.



Chapter V

It was existing a *mundus* and a *templum* divided ritually and wanted?

Our curiosity brought us to verify if from that central point there were other points on the horizon, natural or man-made, that could complete the division of all what could be seen from that central point in sixteen equal parts and oriented. De facto our curiosity brought us to verify if that central point could be the Mundus Cereris, of mother earth, having all around at the horizon, the *templum*, divided in equal parts and oriented, dedicated to different gods, according to the division of *templum* of an eminent etruscologist, Massimo Pallottino, but not excluding different cultures with similar rituals. A publication of Romulo Formentini, "The" Mundus "Etruscan-Roman", is particularly useful for understanding the possible culture underlying to a city of this kind:



A recent interesting research at the Sorbonne in Paris and the University of Rome, by different authors, further illuminates religion Etruscan and Roman antiquity, and the role woman in this culture:

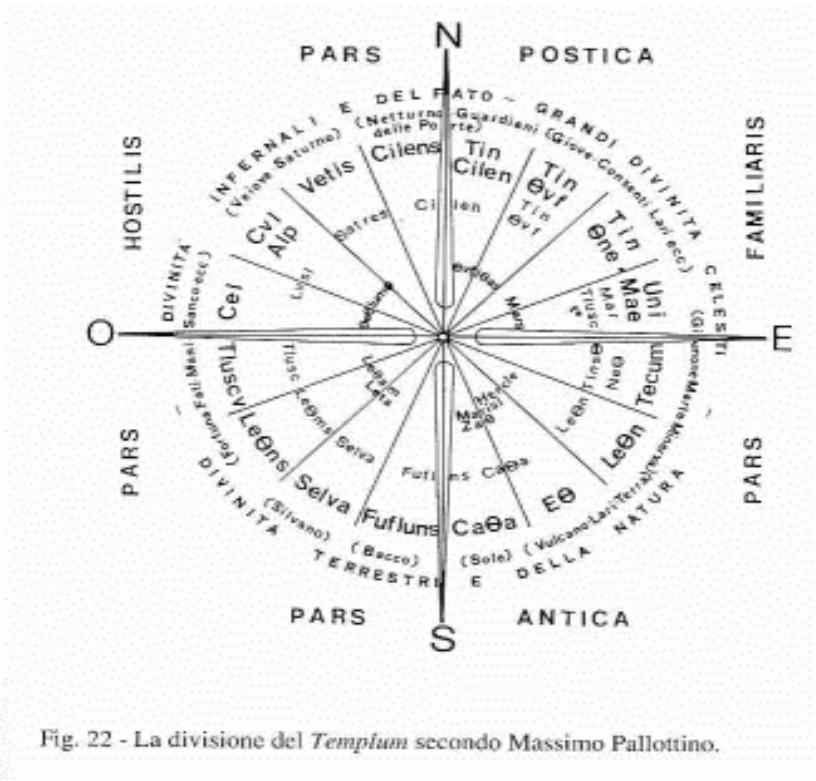


Fig. 22 - La divisione del *Templum* secondo Massimo Pallottino.

Traces of the oriented city: three rays with three churches well apart.



Soon it was found that three churches very far apart that completed three more rays, always with the center this point very near the Church of San Pier di Canne, which then is represented in the picture just for that reason. It is reasonable to believe that these three churches have taken the place of religious buildings built to complete the division of *templum* into 16 parts: San Bertolomeo Leivi and Our Lady of the Olive Bacezza to complete two rays and a third ray perpendicular to the line among the first two churches just at central point is

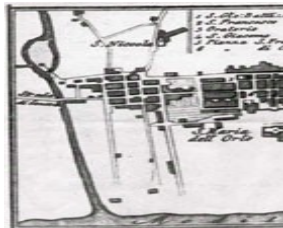
determined from the church of San Bernardo.

Other four rays add:

- a prominence over the *Mundus* under the church of Maxena,
- the top of Mount Castle,
- a prominence over the *Mundus* today on the motorway tunnel,
- the top of Mount Bacezza in a characteristic point,
- a top of the mountain on the first ridge of the mountain Curlo that you do not know the name.

Then there are some rays that are uncertain.

One, symmetrical at Our Lady of the Olive, perhaps a tower of the Corte del Podestà, where three points on a municipal map appear, which could indicate the presence of remains of a ruin. The point in the South, which is given as uncertain, although the presence of an island in Rupinaro also appears in the nineteenth-century maps.



The points dividing the horizon from the *mundus* into sixteen equal and oriented parts the *templum*

Highlighting in green natural points that probably determined the choice of the *Mundus* by the priest, in red the points built by man to complete the division into sixteen parts of the horizon, in yellow uncertain points and summarizing then the significant points around the *mundus* from North counterclockwise, with step one-sixteenth of a round angle, they are:

From North

A- Prominence close to the pass of the ancient road that connected the hinterland.

B- A prominence over the *Mundus* under the church of Maxena

C- The top of Mount Castle

D- San Bernardo

From the West

E- A prominence over the *Mundus* today above the tunnel of

F- Top Mount Bacezza, a characteristic point

G- Undetermined: territory much changed. Among other things, the immediate vicinity of the Church of S. Pietro di Canne blocks the

view, so that it was considered also the hypothesis that the edge East of this church could be the point.

H- Church of Our Lady of the Olive of Bacezza
From the South

I- It is suspected that a point was on the island that probably closed the lagoon.

L- It is suspected that the point was where on the municipal map there is a sign that could indicate remains of a ruin, probably of the Corte del Podestà

M- Alignment on Napoleonic Map and end of the ridge with the tower of Villa Irene.

N- A prominence over the *Mundus*, where in the Napoleonic map you can see two towers, the road; access to the South part of the city.

From the East

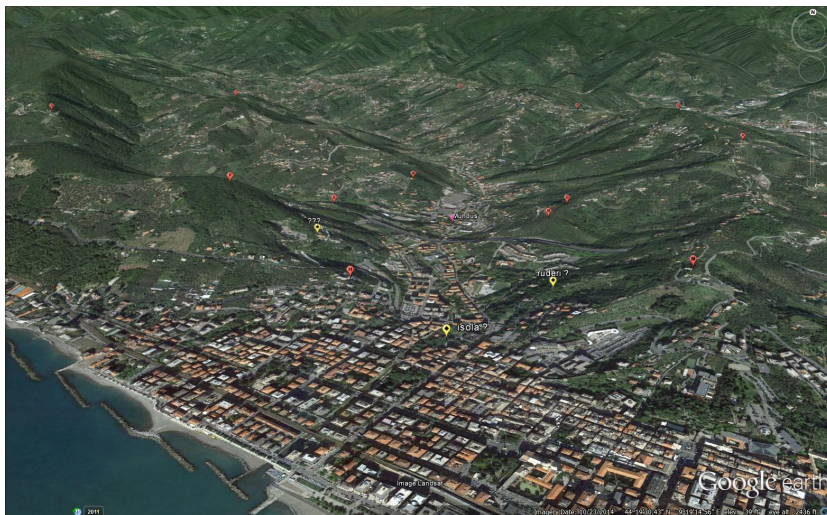
O- A prominence over the *Mundus*, where on the Napoleonic map you can see a tower, the road and the likely main access to the city

P- A prominence over the *Mundus*, with over a tower in the Napoleonic map

Q- A top of the mountain on the first ridge of the mountain Curlo of which I do not know the name.

R- San Bartolomeo di Leivi

Here points are located on territory's map.



Here the division of the *templum*, according to Pallottino, overlaps the map of territory.

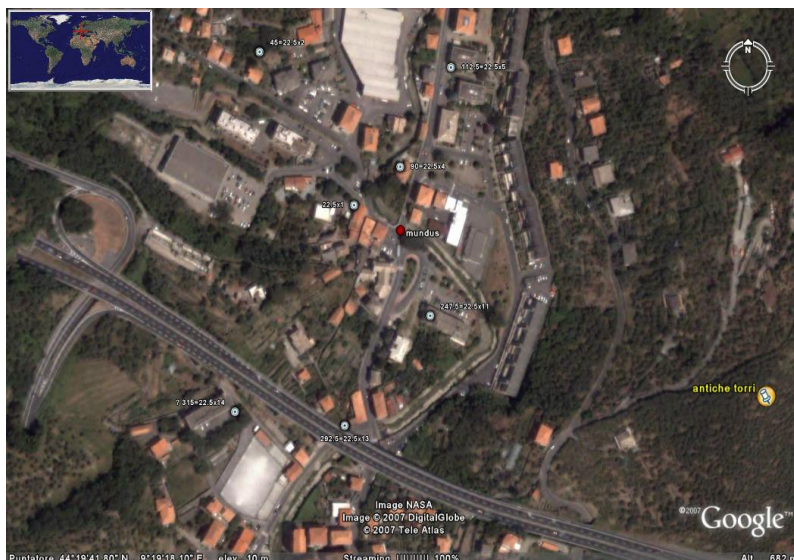


Here you can see the division of the *templum*, according to Pallottino, superimposed on the territory's map, indicating the deity to whom the various segments are dedicated. The points are highlighted, as it has already been said, in green natural points that probably have determined the choice of the *mundus* by the priest.

Eight wells around Mundus.

Eight wells have been found around the. They too are on the rays that divide the sectors.

The probably to “stork wells”, as it was customary in ancient times in this area, with their wood's structures could make easy the recognition of the single ray.





Seven wells have been shown around the *Mundus* by Francesco Casaretto in 2007, shortly before his death; they were never really considered in the research because *de facto* research was stopped. The fact that the existing wells in the area are on the rays dividing the sectors made drastically unlikely the casual coincidence of the division into sixteen parts of *templum*. Because this new supposed coincidence has to be joined to the coincidence of the points dividing the sectors at the horizon; since the wells were all made by man's work, it

is highly unlikely that they were built for coincidence just on the rays dividing the *templum*. Further some wells are on some rays, that in the analysis of the points on the horizon remained uncertain or not defined, suggesting the existence of a corresponding point on the horizon, which has not yet been defined.

There is not a well only at the point uncertain at South (I), where, however, there was probably the lagoon and then the water in the lagoon probably took the place of the well.

Another well, the eighth, has been recently found by Cesare Dotti and not reported here. It is aligned to the beam M and is a further confirmation of the non-randomness of their positioning.

Summarizing the position of the eight wells found around the *mundus* is the following:

From North

A- Present

B-It has not been found

C- Present

D- Present

From the West

E- It has not been found

F- It has not been found

G- Present and complete a range where the correspondent horizon point has not been found.

H- Present

From the South

I- It has not been found. The point on the horizon maybe was on the island. Probably there is not the well because where should be the well there was the lagoon.

L- Present and complete a ray where the point at horizon has not been found found.

M- Present, found by Caesar Dotti and the recent discovery of a second person, is a further evidence of an unlikely coincidence.

N- It has not been found

From the West

O- It has not been found

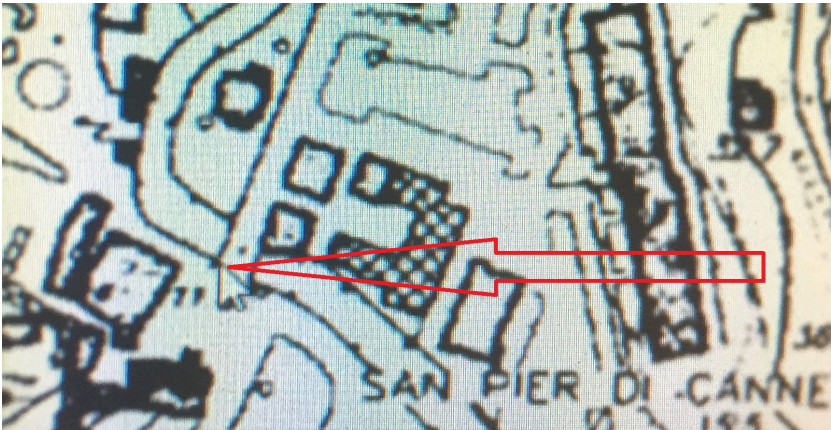
P- It has not been found

Q- It has not been found

R- Present

Chapter VI - Where the likely Mundus Cereris?

The software uses a regional technical map of the area of the Rupinaro river, leading it to be of a virtual size of about 6 meters by 6 meters with each pixel covering just over one meter. It has identified as most likely the point indicated by the arrow and the pointer on the map here below.

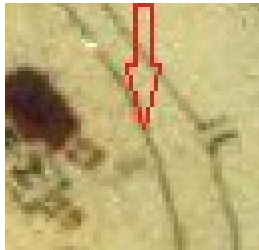


On the shore of Rupinaro, at the left of the bridge that from San Pier di Canne leads to Leivi. It 's difficult that there is still something in the place, due to the excavations, to bridge constructions, to needed road works for the consolidation of the subsoil. The point is located

on the shore of Rupinaro river few meters after that Campodonico river joined its waters. The location seems very reasonable, since it is the point where the fresh water necessary also for ritual reasons, fails less often and could be retained and made available before it joined brackish water of the lagoon. The Napoleonic map does not include the bridge in current position: it was on the Campodonico river where it is now covered.



The works of greater transformation of the place probably occurred from the early nineteenth century onwards. In the map you can see on Napoleon map that still something was existing about where it could be the *Mundus*



Chapter VII

Traces of an urban plan?

It is interesting to note that after three thousand years, despite a context and an environment totally distorted by highway, bridges, roads, thousands of new construction and much more, some faint traces of the urban plan still could be . If a person intends to go to see what there is today, where it is assumed there was the *Mundus*, in the first place he should get a life insurance policy, because it would, if he was not careful, be crushed; secondly he could believe

he was teased because you do not see anything;
there are many construction, roads, bridges,
houses overlooking the site.

This is the depressing sight of *Mundus*.



This is the depressing view from East-West of
Mundus:



This is the depressing view from East-North of
Mundus:



However they are only visible - as we said - two of the three hills where the Napoleonic map shows there were three towers: one on the East and one on one-sixteenth of round angle to the South East; the positions of the towers have been indicated by two arrows in the picture in the upper left; the one on one-sixteenth of full circle in the North East, which completed the trio, is now covered by a house. For not being depressed, it is advisable to take a walk looking at the division of the *Templum* according to Pallottino because it seemsthat there is still some faint trace of the urban plan. You can begin to start to the cemetery of San Pier di Canne, which is right in the segment dedicated to *Mani*, to the dead. In the segment dedicated to the Sun god, where there is what remains of the Castle of Maxellasca, where probably the community os priestesses lived and where, outside its walls, it was found the necropolis, there are - as we have seen - three churches aligned North-South. In the segment dedicated to the Lari and to the Earth there was probably the Corte del Podestà, that was ruling the city. In the segment dedicated to the god volcano, many meters below the ground level were found

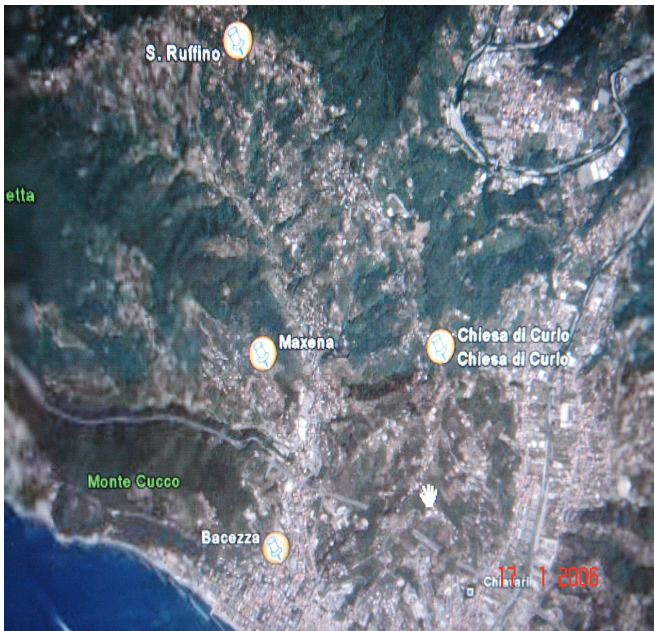
in a recent drill traces of burnt wood and perhaps could be the place where they were forged metals.



In the segments dedicated to the god Mars and Minerva there are traces in Napoleonic map of those alignments that probably had walls to protect the city and the *pomerium*, to have to eat in case of enemy attack.

Chapter VIII - Other traces: alignments perhaps for a party in honor of Ceres, the Mother Earth, or for the *Bacchanalia* in honor of Dionysus.

An other special alignment aligns three other churches, the Our Lady of the Olive, the Church of Maxena and the Church of San Rufino, on a line about seven degrees North West; perpendicular to this line and to Church of Maxena there is the Church of Curlo.



It is reasonable to assume that this alignment was related to some great religious feasts opened with the sunrise behind the Church of Curlo, from the people who were in the building that was at that time in place of the Church of Maxena.

The Sun to move seven degrees after the equinox, or after March 21, takes roughly twenty days. Etruscan Roman religious feasts that took place around April 10 were mainly two. *varied*. *Cerealia*, which were lasting several days, dedicated to Ceres, the Earth Mother, the goddess of the harvest. To the same god is dedicated the Mundus, that was just below Maxena Church and was called precisely *Mundus Cereris*, i.e. in Latin *Mundus* of *Ceres*. Other feasts approximately in the same period were the *Bacchanalia*, dedicated to Dionysus, from April 12 to 19. Since the cult of Dionysus was active, judging by the contents of the tombs, this can be an other option.

The motivation of these alignments could also different: for example, to give recognition for special reasons the appearance at sunset or at the sunrise of a particular star. What is not unlikely

if still in the foundation of the US capital, Washington, had been - as it seems - considered the appearance of Sirius.

Chapter IX

Confirmation

from the application

of the software

The software facilitates the search in any ancient city, supposedly founded with the same rituals, of the *Mundus*, entering into an appropriate cartography the significant points, natural or man-made in a not known ancient time. This software applied to the city of necropolis of Chiavari, confirmed and precised better the likely position of the *mundus*. This application also made in some way more objective the research because adding other significant points, it seems that the result do not change. The program suggests the search of the sixteen points of the horizon *Mundus* in other ancient cities. For those interested in the details is shown above the QRCode allowing to consider the methodology used, to download the

beta version of the software and to see the details of its application to the city of Chiavari's necropolis.



The result on the regional technical map of the area of Rupinaro river - as it has been told before - is as follows:



Chapter X - Conclusions?

This publication is making the point on the status of the research. It would be a shame to miss the collection of these traces, that do not lead to conclusions, but stimulate the curiosity and further studies.

In the last 200 years, our territory has changed much more than it has been changed in 2800 years before. The visibility of these traces would be reduced in the near future. These traces do not lead to conclusions; probably they open a debate from different perspectives. However, they suggest a consideration.

The need to distinguish the facts from the interpretation of the facts.

The facts have to be always verified.

But if the alignments are a reality, the probability that they are due to coincidences it seems objectively very low and these traces of a highly developed civilization existed in Tigullio 3000 years ago would seem to be quite solid.

The interpretation of the facts, or the characteristics of this civilization and its relation to this or that culture, is a different element and it is left to the different opinions,

the experts of the sector, but also to the knowledge, the sensibility of the reader who wants to know more about and to form its own opinion about it.

Given that the reconstruction of the plaque itself is to be verified, granted and not allowed the possibility that the astrological signs are all due to a fouling deterioration caused occasionally by the time, the structure of the plaque that would allow its usability as astrolabe for such a broad spectrum of uses, it is difficult that is itself a coincidence and could be an important element to interpret the facts.

Better to conclude in a playfully way reading two ancient tombstones of the Cathedral of San Lorenzo in Genoa. The first dated 1307, the other in 1312, which enhance the foundation of Genoa, which is after the founding of the city of Chiavari's necropolis.

In the first it is written:

"JANUS
PRIMUS REX ITALIE
DE SEED GIGANTUM,
HERE FUNDAVIT IANUAM
TEMPORE AB RAME "

or about 1800 BC

The second says: "

JANUS PRINCEPS TROIANUS,
ASTROLOGY PERITUS,
SAILING TO HABITANDUM LOCUM
QUERENS, SANUM DOMINABILEM ET
SECURUM JANUAM IAM A FUNDATAM
IANO REGE YTALIE PRONEPOTE NOE,
VENIT ET EAM CERNES MARE ET
MONTIBUS TUTISSIMAM
AMPLIAVIT NOMINE ET POSSE "

Before Janus, an other migrant arrived in
Tigullio?