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MEDICINE AND MAGIC IN THE LAPIDARIO  
DEL REY DON ALFONSO X

by  
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- I. Plan and Historical Development of the Lapidario
- II. Research on the Nature of Stones in the Lapidario
- III. General Pathology of the Middle Ages and Its Relationship to the Lapidario
- IV. Rational and Magical Powers of Filtered Stones in the Lapidario
- V. Conclusion

## INTRODUCTION

The glittering sight of a precious stone has always attracted the human eye, an attraction which is more profound than the stone's color and obvious beauty, an attraction which lies in the durability of the stone itself. As long as man lives and quickly gets older, man will have the same desire for the brilliant quality of a precious stone. The desire for a brilliant stone will continue to be as strong as the desire for a brilliant stone.

## C O N T E N T S

### INTRODUCTION, Outline of the Study

- I. Plan and Historical Origin of the Lapidario
- II. Research on the Number of Stones in the Lapidario
- III. Humoral Pathology of the Middle Ages and Its Relationship to the Lapidario
- IV. Medicinal and Magical Powers of Fifteen Stones in the Lapidario
- V. Conclusion

The edition used for this study is a facsimile of the original which was translated from the Latin by order of Alfonso I in the thirteenth century.<sup>1</sup> The original manuscript is now in the library of the Real Academia de Ciencias Exactas, Físicas y Naturales, Madrid, (Spain), v. 1.

In this attempt, in such a brief study, to give from the Lapidario all references to the variety of subjects of interest to the student of medicine, history, and natural science, the author has had to be extremely selective and beyond the scope of his investigation. Therefore, I have focused my attention on the

<sup>1</sup> Lapidario, Enciclopedia universal ilustrada, Madrid: Espasa-Calpe S. A., 1922, III, 172.

<sup>2</sup> Lapidario del Rey Don Alfonso I. Códice Original, Madrid: Imprenta de la Iberia, a cargo de J. Masco, 1851, prólogo iv. Further references to information taken from the Lapidario will be indicated in this paper by page number only.

## INTRODUCTION

The glittering sight of a precious stone has always attracted the human eye, an attraction which is more profound than the stone's color and obvious beauty, an attraction which lies in the durability of the stone itself. Spring storms come and quickly go; summer suns rise, then fade into night; yet the brilliant quality of a precious stone has endured in ages past and will continue to do so. It is the realization of this durability and permanence amidst changeability that lends charm to the stone.

The Enciclopedia universal ilustrada says that a lapidary was a name given in the Middle Ages to the book that treated of the virtues of precious stones.<sup>1</sup> It is the purpose of this study to investigate some of the peculiar virtues attributed to the precious stones as found in the Lapidario del Rey Don Alfonso X, Códice Original. The edition used for this study is a facsimile of the original codex which was translated from the Arabic by order of Alfonso X in the thirteenth century.<sup>2</sup> The original manuscript is now in the library of El Escorial near Madrid.<sup>3</sup> (prólogo, v.)

Any attempt, in such a brief study, to glean from the Lapidario all references to the variety of subjects it includes—astrological, metalurgical, mineralogical, geographical, magical, and medicinal among others—would be extremely hazardous and beyond the scope of my investigation. Therefore, I have focused my attention on the

<sup>1</sup> "Lapidario," Enciclopedia universal ilustrada.  
Madrid: Espasa-Calpe S. A., tomo xxix, 772.

<sup>2</sup> Lapidario del Rey Don Alfonso X, Códice Original.  
Madrid: Imprenta de la Iberia, a cargo de J. Blasco, 1881,  
prologo iv. Further references to information taken from  
the Lapidario will be indicated in this paper by page  
number only.

general history and plan of the Lapidario, research on the number of stones in the manuscript, and on the medicinal and magical aspects of the codex. This in itself is a broad subject and has required a finer focusing through a process of elimination.

The chapter on research on the number of stones in the Lapidario has been incorporated into this study as a means of eliminating those stones about which little or nothing is known today. Of the total number of stones, forty-three are unnamed and forty-five are Chaldean. My research has revealed no information about the Chaldean stones which are characteristically described as being "en caldeo." The identification of these Chaldean stones presents the scholar with an interesting task.

Through this process of elimination, I have been able to select more thoughtfully the fifteen stones whose medicinal and magical virtues are discussed in the last chapter of the paper. Therefore, this study may be outlined as follows:

- I. Plan and historical origin of the Lapidario
  - A. Division of the Lapidario into four parts
  - B. Date of translation of the Lapidario from Arabic to Spanish - controversy concerning the date
  - C. Source names mentioned in the Lapidario
    1. Aristotle
    2. Ptolemy
    3. Ceherit el Sabio
    4. Abolays (Ibn Washiya)
    5. Yhuda Mosca el menor
    6. Garci-Perez
  - D. Biographical sketch of Alfonso X
  - E. History of the Lapidario from the time of Alfonso X to Felipe II
- II. Research on the number of stones in the Lapidario
  - A. Correction of the number of stones in the

manuscript

- B. The Chaldean stones
  - 1. Name
  - 2. Zodiacal sign under which each stone appears
  - 3. Descriptive color of each stone
- III. Humoral Pathology of the Middle Ages
  - A. Hippocratic doctrine of the four humors
    - 1. Hot and cold complex
    - 2. Theory as applied to medicine
    - 3. Cure of disease based on this theory
  - B. Relationship of humoral pathology to the Lapidario
- IV. Medicinal and magical powers of fifteen stones in the Lapidario
  - A. Symbolism of color
  - B. Name of each stone and its virtues
    - 1. Additional virtues attributed to each stone in the Middle Ages
    - 2. Modern therapeutic uses, if any
    - 3. Modern-day beliefs in the magical powers of the stones
- V. Conclusion

This study of the Lapidario del Rey Don Alfonso X was greatly facilitated by the valuable help of many people. I wish to express my gratitude to Mr. Michael J. Dunn of the Classical Civilization Department for his help in confirming the names of the stones given in the manuscript in Latin and Greek, and to Dr. Ruth M. Collings for her assistance in verifying the information concerning modern medicinal uses of the fifteen stones as discussed in the paper.

Finally, I express my profound appreciation and gratitude to Dr. Virginia C. Farinholt, my director, without whose encouragement and assistance, this paper might never have been finished.

## I. Plan and Historical Origin of the Lapidario

The material presented in the Lapidario lends itself to a division into four different parts. The first consists of a short prologue under each of the zodiacal signs. The second division gives the location and the description of the stones. The third tells of the individual virtues, and the fourth division is that of the phenomena of the astral influences on these stones.

According to the prologue to the Lapidario used for this study, this carefully-planned manuscript was translated into Castilian in 1276 at the order of Don Alfonso, "amador de ciencias et de saberes." (prólogo, iv.) The writer of the prologue contends that the exact date of the translation is revealed in the Tabla (prológó, iv.) to the lapidary which forms a separate codex and is an index revealing a proposed eleven parts which were either never written or have as yet not been discovered. (prólogo, v.) The writer quotes from that Index saying "et fue comenzado este libro el anno XXV de su regno. . . Et la del nuestro sennor ihesu-xpo, en mil et dozientos et septaenta et seys annos." (prólogo, iv.)

However, later authorities, in spite of the evidence mentioned, maintain that Alfonso had the lapidary translated from the Arabic by the rabbi Jehudah-Moscaha-qaton (Yhuda Mosca el menor) and Garci-Perez between the years 1241 and 1250.<sup>3</sup> This last statement seems

<sup>3</sup> Cejador y Frauca, D. Julio. Historia de la lengua y literatura castellana, I, 193. Madrid: Tip. de la "Rev. de Arch., Bibl. y Museos," 1915.

more correct in view of the reference in the Lapidario on page one which says that the work of translation was completed in the second year after Don Fernando III, Alfonso's father, captured Sevilla: "Et fue acabado de trasladar el segundo anno que el noble rey Don Fernando su padre gano la cibda de Sevilla." The capture of Sevilla by Fernando III took place in 1248<sup>4</sup> which would put the date of completed translation in 1250. In face of the existing controversy the safest position seems to be that of saying that the Lapidario was translated from Arabic into Castilian in the thirteenth century.

One may well ask, "Who, then, was responsible for the Arabic version?" This is a dangerous question which leads us toward a discovery of the source names mentioned in the Lapidario.

An approach to the problem of sources may perhaps be handled best through an investigation of the names as actually stated in the manuscript. It is certain that the Lapidario was composed from a number of different treatises on stones because of the statement in the Tabla "Aqui comienza el libro de las formas et de las ymagenes que son en los cielos, et de las virtudes, et de las obras que salen dellas en los cuerpos que son dyuso del cielo de la luna, que mando componer de los libros de los filosofos antiguos el much alto et onrrado Don Alfonso...."(prólogo, iv.) The lapidary itself contains six clues as to potential sources indicated by the author's name. These are Aristotle, Ptolemy, Ceherit el Sabio, Abolays, and the two trans-

<sup>4</sup>Enciclopedia universal ilustrada, tomo 23, 852.

lators, Yhuda Mosca el menor and Garci-Perez. Further clues to the lapidary's sources are the expressions: "el que este libro compuso," (p. 15.) and "et dijo asi," (p. 15.) indefinite statements which give little help to the problem.

The first word in the Lapidario is the name of Aristotle—"Aristotil que fue mas complido de los otros filosofos et el que mas naturalmiente mostro todas las cosas por razon verdadera....," (p. 1.) and in the same paragraph his name is repeated "mas los que escribieron de las piedras, asi como Aristotle, que fizo un libro en que nombro sietecientas de ellas, dijo de cada una, de que color era, et de que grandeza, et que virtud habie, et en que loga la fallaban." (p. 1.) This statement indicates the possibility that Aristotle himself was the author of a book on stones.

Nunemaker<sup>5</sup> contends, however, that the treatise entitled De Lapidibus which was translated into Hebrew, Arabic, and Latin and which has been attributed to Aristotle is not yet a proven fact. Sarton refers to this work as the "so-called Lapidary of Aristotle" probably of Persian and Syriac origin and dated around the ninth century.<sup>6</sup> At any rate the question of the authorship of De Lapidibus is still disputable leaving inconclusive any worthwhile efforts to relate this work and its supposed author, Aristotle, with the Lapidario of Alfonso X.

<sup>5</sup>Nunemaker, J. Horace. "In Pursuit of the Sources of Alfonsine Lapidaries." Speculum, vol.14, 486, (October, 1939). Mass., Cambridge: The Medieval Academy of America, 1939.

<sup>6</sup>Sarton, George. Introduction to the History of Science, I, 572. Baltimore: The Williams & Wilkins Company, 1927.

Also in the Lapidario appears the name of Ptolemy: "Et ha este hombre, por que segund dice Ptholomeo nas- cen en aquella tierra. . . ." (p. 12.) He is accredited with having written a manuscript on stones now in existence.<sup>7</sup> Rico y Sinobas<sup>8</sup> states that Alfonso frequently resorted to Ptolemy as a source for various works. Fitzmaurice-Kelly also supports this idea of Alfonso's connection with Ptolemy, when he points out that the Tablas Alfonsinas and the Libros de astrología, works of the king's court, are filled with detailed corrections of Ptolemy, whom Alfonso apparently suspected of error.<sup>9</sup> Such association of Alfonso with Ptolemy indicates, though not conclusively, the possibility of a transference of material from Ptolemy's manuscript into the Lapidario.

The name of Ceherit el Sabio is mentioned in the discussion of the stone called "leguya." (p. 42.) "Et fallanla en armenia la mayor cerca de la villa a que llaman cequid, et las sus mineras son encima dun monte much alto, et en aquel monte fallan muchas maneras de yerbas et de arboles de que fablo Ceherit el Sabio en el agricultura caldea. . . ." (p. 42.) Nunemaker identifies Ceherit with Thabit Ibn Qurra (born c. 826-901) the founder of a school of translators and considered as "one of the greatest trans-

<sup>7</sup>Nunemaker, Op. cit., p. 484. Also see Sarton, op. cit., p. 272.

<sup>8</sup>Nunemaker, op. cit., p. 485.

<sup>9</sup>Fitzmaurice-Kelly, Jaime. Spanish Literature, 64. New York: D. Appleton, & Company, 1898.

lators from Greek and Syriac into Arabic."<sup>10</sup> As yet, however, Nunemaker hasn't substantiated his theory.<sup>11</sup>

One wonders if there is a possible connection between the name Ceherit el Sabio and the next and perhaps most important source name to appear in the Lapidario, that of Abolais (Abolays). "Et entre los sabios que se mas de esto trabayaron fue uno que hobo nombre Abolais." (p. 1.)

Abolais lived at approximately the same time as Thabit Ibn Qurra.<sup>12</sup> Around 904 he had written the Nabataean Agriculture<sup>13</sup> which contained valuable agricultural information intermingled with legends, superstitions, and forged translations from ancient Semitic and Babylonian sources.<sup>14</sup> The statement from the Lapidario that Ceherit el Sabio spoke of the trees "en el agricultura caldea" (p. 42.) recalls an interesting, although faint echo of the subject matter of the book written by Abolais, namely on Chaldean agriculture. This is an unsubstantiated theory, but nevertheless, an interesting one to consider.

Abolais deserves a closer scrutiny since he is the translator of the Lapidario from Chaldean to Arabic. We learn a great deal about him from the Lapidario itself. First of all we know that Abolais "era hombre que amaba mucho los gentiles et sennaladamiente los de tierra de Caldea; por que de alli fueron sus abuelos." (p. 1.) Sarton has verified this Chaldean

<sup>10</sup>Nunemaker, op. cit., p. 488. Also see Sarton, op. cit., p. 599.

<sup>11</sup>Nunemaker, Ibid.

<sup>12</sup>Sarton, op. cit., p. 634.

<sup>13</sup>Ibid.

<sup>14</sup>Arnold, Sir Thomas and Guillaume, Alfred. The Legacy of Islam, p. 321. Oxford: Oxford Univ. Press, 1931.

ancestry. He states that Abolais was born in Iraq and that his family (Nabatean) was descended from ancient Chaldean and Babylonian people.<sup>15</sup>

Next, the manuscript reveals that Abolais "sabie fablan aquel lenguaje et leie la su letra." (p. 1.) Therefore we know that he not only spoke Chaldean, but also read its literature. The Lapidario further states that Abolais spent a great deal of time looking for books on stones and studying them. Also according to the manuscript, Abolais had a friend, who is not named in the Lapidario, who looked for such books on stones and found them. "Et entre aquellos quel busco, fallo este que fabla de trescientas et sesaenta piedras." (p. 1.) Among these books, was the Lapidario itself.

Abolais, on coming into possession of this book that deals with the virtues of three hundred sixty stones, read it, understood it, then translated it from Chaldean into Arabic: "Et desque hobo por el mucho leido et entendio es que en el era, trasladolo de lenguaje caldeo en arabigo." (p. 1.)

Whether Abolais added some of his own information or subtracted information which he did not consider correct in the Lapidario is not known. The Lapidario tells us only that he tried to prove that the material he found in the manuscript was true: "Et en su vida punno de probar aquellas cosas que en el yacien et fallolas ciertas et verdaderas." (p. 1.) He was wise in the knowledge of the art of astronomy and of the nature of the knowledge of stones. When Abolais died, so died the Lapidario (prologo, vii.) until it came into the hands of "el noble rey Don

<sup>15</sup>Sarton, op. cit., p. 634.

Alfonso fiyo del muy noble rey Don Fernando et de la reyna donna Beatriz. . . ." (p. 1.)

At the command of Alfonso, the Lapidario was translated into Castilian by Yhuda Mosca el menor and Garci-Perez. (p. 1.) Little is known about these men and the best clues to their identity are in the Lapidario. Yhuda Mosca el menor (Jehuda-Mosca-ha-Qaton), a Spanish Jew, had a knowledge of Arabic, Latin, and astronomy. His helper in the translation was Garci-Perez who also had a knowledge of astronomy, although nothing is mentioned about whether or not he knew Arabic. These two men, then, under the auspices of Alfonso translated the Lapidario "in order that men might understand it and profit from it." (p. 1.) The names of these two translators complete the list of source names in the Lapidario. Yet no study of the Lapidario could be complete without some mention of Alfonso X who was responsible for its translation.

Alfonso X was born in Burgos, November 23, 1221, and died in Sevilla, April 4, 1284. From an early age his father Fernando III saw that his son received a good education, scientific and literary, as well as military.<sup>16</sup>

The political activities of Alfonso are pertinent to this study only in order to define the spirit that surrounded his reign. He was unsuccessful in his attempts to become Emperor, a desire which was in keeping with the universality of his literary works. He fought against Popes, noblemen, and even his own son

<sup>16</sup>Enciclopedia universal ilustrada, 11, 592.

Sancho IV.<sup>17</sup>

Even before becoming king in 1252 Alfonso had laid the basis for what was later to be nothing less than a tremendous literary center under his direction. The foundation was established when he had a collection of oriental fables translated into Castilian as the Libro del Calila e Dimma in 1251.<sup>18</sup>

He was successful in gathering around him men of great intellect-poets, musicians, scientists, Moslems, Christians, or Jews. Together they worked on tremendous volumes of translations and compilations and many times with Alfonso's personal collaboration, "fueron dando forma a un numero considerable de libros."<sup>19</sup>

This considerable number of books, mostly works of prose, may be grouped accordingly. We have an example of each:<sup>20</sup>

1. jurídicas - Las siete partidas - codification of Castilian law.
2. históricas - Grande e general estoria - a general history of the world beginning with Adam.
3. Científicas - Lapidario del Rey Don Alfonso - which treats of 360 stones.

Alfonso stands out not only as a collaborator on these many works of prose but as the author of the Cantigas de Santa María, a book of four hundred thirty poems written in Galician extolling the miracles performed by the Virgin.<sup>21</sup>

<sup>17</sup>del Río, Ángel. Desde los orígenes hasta 1700, I, p. 55. New York: Dryden Press, Inc., 1948.

<sup>18</sup>Ibid.

<sup>19</sup>Ibid., p. 56.

<sup>20</sup>See Enciclopedia universal ilustrada, II, 598; for classification of works.

<sup>21</sup>Ángel del Río, op. cit., p. 60.

Whatever may be the historian's judgment of Alfonso's political character, in view of his many accomplishments in the literary field nothing can rob him of his right to be considered "the father of Castilian verse, and as a center of all Spanish intellectual life."<sup>22</sup>

Thus upon his death in 1284, Alfonso left behind immense works of poetry and prose among them being the Lapidario, one of the great literary monuments of early Spanish writings and the one that most concerns us now.

Little is known of the whereabouts of the Lapidario after Alfonso's death. It seems to have found a place of respect in the royal courts of the fourteenth and fifteenth centuries. (prólogo, viii.) Finally in the sixteenth century the valuable manuscript is found among the books in the vast library of Don Diego Hurtado de Mendoza (1503-1575). (prólogo, viii. )

Politician, soldier, writer, Hurtado de Mendoza was one of the few Spaniards of his time who was a learned scholar of Arabic.<sup>23</sup> His chief pastime seemed to be that of ransacking old monasteries for ancient or Arabic manuscripts particularly to go into his already distinguished library. At his death in 1575 his entire library, in which the Lapidario was included, was given at his request to King Felipe II to be placed in the national library near Madrid, the Biblioteca de San Lorenzo del Escorial where it may be found today. (prólogo, v.)

<sup>22</sup>Fitzmaurice-Kelly, op. cit., p. 64.

<sup>23</sup>Ibid., p. 150.

## II. Research on the Number of Stones in the Lapidario

The Lapidario speaks of the virtues of three hundred sixty stones of which forty-five are Chaldean. However, the statement from the Lapidario "este que fabla de trescientas et sesaenta piedras" (p. 1.) deserves closer attention. This writer's research has revealed that there are at least four hundred three stones in the manuscript of which twenty-nine are varieties of other stones and forty-three are nameless. Even if the number of stones as stated in the manuscript intended to include each stone and its variety as one, the total number would still not be reduced to three hundred sixty.

In trying to determine the total number of stones, it has been necessary to work under the assumption that a stone when it is named more than once will either have both names given as in the case of alfeyru or feynac, (p. 52.) or else the stone will be given as one which has been mentioned previously as in the case of esmeralda. (p. 62.) All varieties of a single stone have been treated as individual stones since each variety often reveals virtues quite different from the original.

Such an error in the number of stones is not surprising in view of the fact that most of the stones were influenced by more than one of the heavenly bodies. Thus, the coral which appears first under the sign of Taurus was also dominated by Venus. (p. 61.) The carnelian belonged both to Capricorn (p. 49.) and to Venus, (p. 66.) while the diamond received virtue from Taurus (p. 8.) as well as Saturn. (p. 60.)

The number of Chaldean stones comes to a total of forty-five. This is not to say that these are the only Chaldean stones in the manuscript, but that these forty-five stones are the ones stated as being "en caldeo." One stone alfeyru is mentioned twice, its other name being given as feynac. (p. 60.) Without any attempt to identify or define them, the names of the forty-five Chaldean stones, and their other names if given, the zodiacal sign and number of the sign under which they appear, and their descriptive colors are submitted below without comment.

- aguquiriaz (Tauro, 12) - et su color es blanca et ha  
en ella gotas o linnas negras  
o si es toda negra ha en ella  
gotas
- alfeyru, feynac (Capricornio, 24) - et de color blanca  
que tira a pardo
- aluzahne (Libra, 6) - verde es de color
- annora (Aries, 19) - none
- articam (Tauro, 25) - et de color amariella
- aslagoniz (Escorpion, 12) - et de color entre blanco et  
amariello, asi como cera de  
ejambre de abeyas nuevas
- barcaduniticaz (Gemini, 3) - de color es amariella que  
tira ya quanto a pardo
- batocita (Gemini, 27) - es de color verde como la esme-  
ralda
- bezaquid (Libra, 12) - et la su color es de cenisa go-  
tada de gotas blancas
- bezebekaury (Capricornio, 17) - et fallanla siempre de  
dos colores que son verde  
et bermeyo, et cada una  
dellas es muy clara et  
lucia et de grand res-  
plandor

- camorica (Tauro, 3) - et de color bermeya, et aspera  
de tiento
- catu (Escorpion, 24) - de color de yuyuba
- ceduluquindat (Cancro, 35) - et blanca de color
- ceminez (Escorpion, 19) - en la color semeya al sa-  
fir mas no en al
- delmenica (Aquario, 23) - et de color dalmagra
- elbehta (Libra, 8) - et la su color semeya a la mar-  
casita dorada; pero es esta mas  
clara et mas lucia
- fardicanir (Virgo, 5) - piedra es muy negra de color,  
et fallan en ella gotas blancas
- fartinicen (Escorpion) - de color is negra gotada de  
gotas amariellas
- gacora (Libra, 3) - De color es parda mazclada con ya  
cuanto de cardeno.
- gagatz (Aries, 3) - a esta piedra non pasa el visco,  
ca es de color de greda turbia
- gebraquifez (Escorpion, 22) - et ha color duro afinado  
que tira un poco a ber-  
mejor
- guifirquizti (Capricornio, 19) - esta piedra semeya en  
forma et en color a la  
bellota
- guyrunion (Libra, 5) - none
- leylerizech (Sagitario, 28) - et de color parda que tira  
a bermeyo
- litarne (Virgo, 9) - de color es amariella
- lotarican (Tauro, 28) - et su color es mezclada entre  
bermeyo et amariello
- magnitat (Aries, 1) - et esta piedra es negra en su color  
pero tira un poco a bermeyada
- margul (Gemini, 5) - et su color es asi como yema de  
huevo

- mecelucan (Gemini, 24) - de color es verde et tira ya  
cuanto a amariello
- mecienua (Aquario, 20) - de color es parda et ha en ella  
linnas amariellas como que se  
travan unas con otras
- mechinecia (Escorpion, 28) - estas es piedra muy blanca
- melizlumen (Capricornio, 23) - none
- meymenez (Libra, 20) - et de color verde et clara
- mezarigez (Aquario, 4) - et es de color verde que tira  
a cardena
- miliztiz (Aries, 4) - esta es de color cardena que  
semeya azul
- nificer, darnificer (Escorpion, 29) - de color es  
amariella gotada de gotas muy  
negras
- raconic (Tauro, 6) - de color es parda, et ha en ella  
linnas de color azul mucho as-  
condidas, de guisa que non pu-  
recen si no muy poco, et esto  
cuando fuere el aire bien claro
- rofolez (Tauro, 22) - et son muy verdes de color
- seralicen (Aquario, 26) - et esta semeya en forma  
et en color bazo de homme
- taccie (Escorpion, 2) - et de color blancas, asi  
como aqua conhielada
- tarmicon (Gemini, 21) - et de color bermeya de fla-  
ca bermeyura, asi como el  
agua que sale de la carne  
cuando echan y sal
- tarmizes (Capricornio, 20) - et de color verde
- zarbenic (Aquario, 14) - et en la color semeya a la  
escoria del fierro

zarmiquirez (Escorpion, 30) - la color desta es verde  
 como de la esmeralda, pero  
 mas tinta que ella et mas  
 lucia et de mayor resplan-  
 dor  
 zinderch (Sagitario, 12) - es de color bermeya

"Del signo primero es el de Aries, que quiere  
 tanto decir como figura de carnero; et es una de  
 las et de las del sol, et segund la complexion  
 que el muestra es toda sus obras se colieren, et  
 sus." (p. 2.)

In the above sentence which begins the dis-  
 cussion on the stone magnet, (p. 2.) is the phrase,  
 giving the complexion of the stone as "bermeya et  
 seco," hot and dry. The belief that natural diseases  
 such as stones and complexion as well as all other  
 signs, foods, diseases, and virtues, was derived  
 originally from Greek and Roman medicine.<sup>24</sup> It was  
 embodied in the Hippocratic doctrine of humoral  
 pathology which served as the basis of medieval  
 medical theory.<sup>25</sup>

Refusing to believe that diseases were caused  
 by supernatural forces, Hippocrates regarded the hu-  
 man body as being composed of four elements, earth,  
 air, fire, and water. In the body the elements  
 took the form of four vital fluids, blood, phlegm,  
 bile, and black bile.<sup>26</sup>

<sup>24</sup>Madson, William, "The Significance of the  
 Verse of San Francisco," *Journal of American Folklore*,  
*Journal of American Folklore*, vol. 20 (April-  
 June, 1955), 121.

<sup>25</sup>Poster, George M., "The Significance of Spanish  
 and Spanish-American Folk Medicine," *Journal of American  
 Folklore*, vol. 66 (Aug., 1952), 205.  
<sup>26</sup>*Ibid.*

III. Humoral Pathology of the Middle Ages  
and its Relationship to the Lapidario

Before entering into a discussion of the medicinal and magical powers of fifteen specific stones in the Lapidario, an investigation into the doctrine of humoral pathology is pertinent to the study.

"Del signo primero es el de Aries, que quiere tanto decir como figura de carnero; et es casa de Mars et exaltacion del sol, et segund la complision que el muestra en todas sus obras es caliente, et seco." (p. 2.)

In the above sentence which begins the discussion on the stone magnetat, (p. 2.) is the phrase, giving the complexion of the stone as "caliente et seco," hot and dry. The belief that natural objects such as stones had complexions as well as did medicines, foods, diseases, and people, was derived originally from Greek and Roman medicine.<sup>24</sup> It was embodied in the Hippocratic doctrine of humoral pathology which served as the basis of medieval medical theory.<sup>25</sup>

Refusing to believe that disease was caused by supernatural forces, Hippocrates regarded the human body as being composed of four elements: earth, air, fire, and water. In the body the elements took the form of four body fluids known as humors. These were blood, phlegm, black bile, and yellow bile.<sup>26</sup>

<sup>24</sup>Madsen, William, "Hot and Cold in the Universe of San Francisco Tecospa, Valley of Mexico." Journal of American Folklore, vol. 68, no. 268 (April-June, 1955), 123.

<sup>25</sup>Foster, George M; "Relationships between Spanish and Spanish-American Folk Medicine." Journal of Amer. Folklore, vol. 66 (Aug., 1953), 201.

<sup>26</sup>Ibid.

Just as the elements possessed the special qualities of coldness, dryness, heat, and moisture, so did each humor have its own peculiar quality or complexion.<sup>27</sup> Blood was considered hot and wet. Phlegm was cold and wet. Black bile was cold and dry; and yellow bile was hot and dry.<sup>28</sup> One can readily see that these complexions were opposed, cold being the opposite of hot; wet, the opposite of dry.

In applying the theory to medicine one may say that "a healthy body was in a state of equilibrium in terms of each of these. . . oppositions; in sickness, the balance was lost and the body became too cold or too hot, too wet or too dry."<sup>29</sup> In case of illness it was the physician's task to restore the body fluids to their harmonious proportions, "to understand the natural complexion of the patient, and to determine the complexion of the illness."<sup>30</sup>

Cures were effected by administration of a medicine to which was attributed the opposite quality to that predominant in the disease. For example, if a person were suffering from a fever, it was believed that his body had too much heat. In order to restore the body fluids to their former equilibrium, a medicine would be administered which possessed the opposite quality of coldness. For a patient suffering from epilepsy, believed to be caused by excesses of black bile which was of a

<sup>27</sup>Madsen, op. cit., 123.

<sup>28</sup>Foster, op. cit., 201.

<sup>29</sup>Madsen, op. cit., 123.

<sup>30</sup>Foster, op. cit., 203.

cold and dry complexion, chick pea broth was a possible remedy.<sup>31</sup> The broth was supposed to be hot and wet, therefore opposed to the cold and dry quality of the black bile.

These qualities of coldness, dryness, heat, and moisture were abstract and did not necessarily have to do with the heat or dampness of the object or person.<sup>32</sup> For example, a hot broth made from an herb which possessed the quality of coldness would be considered cold, and therefore a possible remedy for a disease characterized by excesses of heat.

Most of the stones in the Lapidario have "complexions." An investigation of two of these stones and the values attributed to them reveals the expected relationship between their recommended medicinal use and their hot and cold complexes. For example, the coral was invested with the power of stopping hemorrhage from people who were spitting blood: "Et si la destempraren molida con vino, o con alguna cosa, et la dieren a beber a los que escupen sangre pres-tales mucho." (p. 10.) Its complexion was "fria et seca." In accordance with the theory of opposition the coral would be effective when opposed to the blood whose complexion was hot and wet.

Another example of this relationship is demonstrated in the prescribed uses of the stone which comes from the stomach of the female swallow. This stone was hot and humid by nature and had a very involved manner of application for the cure of mental disorders. If two of these stones were put into the horn of a stag or a calf and tied by a red silken

<sup>31</sup>Ibid.

<sup>32</sup>Crawford, Medical Leaders from Hippocrates to Osler, p. 18. New York: Macmillan Company, 1947.

string to the neck of the patient, he would be cured. (p. 10.)

Since it was believed that the brain, from which came the disease of the "demonias," was in itself wet and cold,<sup>33</sup> the hot and humid complexion of the stones from the female swallow was considered an effective remedy.

Numerous other examples could be given from the Lapidario which bear out this relationship between an individual stone's complexion and its prescribed medicinal use. However, only a brief knowledge of this subject is needed here, and further relationships between humoral pathology and the information given in the Lapidario will be discussed in chapter four when necessary.

<sup>33</sup>Castiglioni, Arturo, A History of Medicine, p. 162. Translated by E. B. Krumbhaar. N. Y. 1941.

IV. Medicinal and Magical Powers of Fifteen  
Stones in the Lapidario

The medicinal and magical uses of precious stones date from very early times. Evidence points to Egypt as the earliest transmitter of these uses into Europe.<sup>34</sup> Another source of early employment of gems for curative powers may be traced back to India,<sup>35</sup> the country from which many of the stones in the Lapidario were derived.

It does not seem strange that primitive societies should have attributed so much power to precious stones. Aside from their obvious beauty, the hardness and density of the stones must have indicated that they were formed by mighty forces. Gradually certain concepts were built up in the minds of ancient peoples regarding the therapeutic uses of precious stones. The symbolism of color intermingled with the superstitions surrounding the virtues attributed to each stone. Furthermore, a stone's properties were considered to be greatly enhanced "by engraving on them the image of some god, or of some object symbolizing certain of the activities of nature."<sup>36</sup> There was a slow blending of these symbolisms and superstitions with the development of astronomy and the increased importance placed on the belief in the astral influences on precious stones.<sup>37</sup> Regardless, however, of how much people through the ages must have added their own beliefs to those already ascribed to certain stones, it

<sup>34</sup>Kunz, George F., Curious Lore of Precious Stones, p. 242. Philadelphia and London: J. B. Lippincott Company, 1913.

<sup>35</sup>Ibid.

<sup>36</sup>Ibid., p. 243.

<sup>37</sup>See Sir E.A. Wallis Budge, Amulets and Superstitions, chap. XXIV. London: 1930.

seems likely that "either the color or the constitution of the stone originally indicated its use for this or that disease."<sup>38</sup>

Many problems confront the person who is looking for the string to guide him through the labyrinth of medicinal and magical virtues of the precious stones in the Lapidario. The major one is that in early science the virtues of one stone would be attributed to another until finally one stone would possess the virtues of any number of other stones.<sup>39</sup> This might have been due to the fact that early dealers, in order to sell their products, would amaze the prospective buyer by extolling the great powers of the gem to be sold.<sup>40</sup> In this way they assured themselves of a sale and bestowed confusion on the modern reader of lapidaries.

In view of this obvious confusion surrounding the virtues of precious stones, the fifteen stones discussed here have been chosen chiefly because of their uniqueness in the qualities attributed to them as well as their possession of qualities which makes them typical of the other stones in the Lapidario.

The study of these stones will be undertaken in the following manner. Each stone will be considered independently. Generally, the name of the stone and its number under the zodiacal sign will be given first followed by its color, complexion, properties, and virtues. Wherever possible, a few examples of modern medicinal uses and present-day beliefs in the magical powers of these stones will be indicated.

<sup>38</sup>Kunz, op. cit., p. 244.

<sup>39</sup>Ibid.

<sup>40</sup>Ibid., p. 371.

Some of the stones in the Lapidario are prescribed for uses as amulets as distinguished from mineral dusts. This simply means that amulets were externally applied and mineral dusts were taken internally with wine or some other prescribed liquid. Therefore, in the discussion of the virtues of fifteen specific stones these two uses will be treated together, since both lead toward the same end, a cure for the disease.

Also in the information on the stones it will become evident that color was an important factor in determining which stone should be used for a certain disease. This idea of the effects of color is not without scientific basis. For example, the value of infra-red rays is commonly known today.

The symbolism of color was carried even further. A relationship was thought to exist between the color of the stone and the disease to be cured.<sup>41</sup> Therefore a red stone might be good for use in checking hemorrhage. A green stone would be employed in the case of eye fatigue, whereas a yellow stone might be beneficial in the treatment of jaundice. Whenever possible, this relationship of color to cure will be shown.

Following is the discussion of the fifteen stones.

#### Izf (Aries, 20)

This stone also has the name of yaspio. Positive identification of this stone as jasper is not certain. The modern Spanish word for jasper is jaspe. The Hebrew word is yashpneh, and the Assyrian name is

<sup>41</sup>Kunz, op. cit., p. 371.

yashpu.<sup>42</sup> "Es de color de Prasme verde" (p. 5.) indicating that it has the green color of the jasper. Its varieties, tuminon and astarnuz, (p. 6.) have some of the same virtues ascribed to them as are attributed to the positively identified jasper, namely as an amulet for the heart and for driving away evil spirits. This is a use dating back to the fourth century when jasper also had the power to protect those who wore it from the bites of poisonous snakes.<sup>43</sup>

In the Lapidario the complexion of Izf or yaspio is hot and dry. When worn around the neck it cures infirmities of the throat and stomach. Its other virtue is that if a man tastes it every morning, he will feel happier. In the thirteenth century the power to cure fever was added to its virtues.<sup>44</sup>

Jasper today is used among other things as a decorative stone, but lacks any known medicinal value.

#### Diamant (Tauro, 1)

This stone is none other than the king of gems itself, the diamond. In Arabic it is known as mez and its complexion is cold and dry. The manuscript further states that some diamonds have a color similar to polished iron, others have rays of purple or violet in them, while still others are yellow. The best diamonds, however, are those which have the color similar to glass. According to the Lapidario, some men even make imitation diamonds out of glass.

<sup>42</sup>Kunz, op. cit., p. 27.

<sup>43</sup>Ibid., P. 133.

<sup>44</sup>Ibid., p. 8.

The deceit is easily exposed when both stones are placed in fire. The glass will be damaged, but the diamond will not. Its hardness is attested to when the manuscript states that special type of lead is the only other stone which can break the diamond.

The lapidary further says that this stone is found in land where no men live because of the wild beasts and the serpents "que matan solamente de la vista." (p. 8.) The only way these stones can be gathered is by taking them out of the muddy ditches dug downstream by the river when it overflows. This is a logical place for their deposition, since diamonds are often found in the mud or sand left by rivers.

A warning is given concerning the virtues of the diamond. It is considered a poison. The venomous serpents, which inhabit the land where it is found, by crawling over the sharp edges of these stones, have pricked themselves spilling poison on the diamonds: "et por que estas piedras son siempre cuadradas et agudas rascanse aquellas animalias a ellas, et reciben dellas ponzon." (p. 8.) Therefore, any man who puts one of these stones in his mouth will surely have his teeth fall out.

This precious stone is considered a deadly poison when consumed in a mixture of lead. Yet coupled with this medieval idea is the belief that it is an antidote.<sup>45</sup>

Perhaps the diamond's most attractive virtue is its ability to bring good luck to the wearer, endowing him with strength and daring: "el que la trae consigo ensannase aina et muevese a barayar et a facer toda otra cosa que sea de atrevimiento et

<sup>45</sup>Kunz, op. cit., p. 79.

de esfuerzo." (p. 8.) A rabbi of the fourteenth century goes so far as to say that the wearer of a diamond is invincible.<sup>46</sup> This belief in the good luck powers of this stone is common in India, where today it is used as a jewel on the forehead.<sup>47</sup>

#### Coral (Tauro, 11)

Bright red in color, the coral is cold and dry by nature. It has the power to constipate temporarily, and when mixed with wine or another liquid, it stops hemorrhaging in those who are spitting blood. This latter remedy implies the use of the symbolism of color-red acting on a disease characterized by the red quality of blood - and the use of humoral pathology - the cold and dry qualities of coral being opposed to the hot and humid complexion of blood.

Other medieval properties not attributed to coral in the Lapidario are: use as an amulet to cure madness, give wisdom, and check blood flow in a wound.<sup>48</sup>

Today in Italy women often are seen wearing coral as an amulet against evil spells. Only such pieces as have not been broken and are washed ashore are useful.<sup>49</sup>

Coral also finds a use as an amulet in Spain today against the "ojo malo" or "evil eye," which is a type of spell usually believed cast on a small child by a mere look.<sup>50</sup> The coral amulet usually takes the

<sup>46</sup>Kunz, op. cit., p. 72.

<sup>47</sup>Ibid., p. 76.

<sup>48</sup>Ibid., p. 10.

<sup>49</sup>Ibid., p. 68.

<sup>50</sup>Thomen, August A., Don't Believe It! Says the Doctor, p. 257. New York: Vail-Ballou Press, Inc., 1935.

form of a carved fist with the thumb sticking through the middle and index fingers.<sup>51</sup>

Fierro (Tauro, 24)

This "stone" is iron. Its color is between brown and black, but more black than brown. It is further characterized by its cold and dry complexion. The manuscript says that if a man has ulcers in the intestines, abscesses in the spleen, or weaknesses in the stomach, he should take melted iron poured in water or wine.

Other powers, more psychological than physical, are attributed to iron as "a precious stone of reconciliation and of love. "For if a woman be away from her housebond, or trespasseth against him: by virtue of this stone, she is the sooner reconciled to have grace of her husband."<sup>52</sup>

Although no apparent magical value, as distinguished from internal medicinal use, is placed upon iron in the manuscript, rings made from iron were worn in the Middle Ages as amulets against colic and rheumatism.<sup>53</sup>

Many modern medicinal uses of iron are commonly known. Perhaps the widest-known use is in the treatment of anemia. Patients suffering from iron deficiency anemia are generally treated by administration of iron compounds, such as reduced iron, Basham's mixture, and ferrous carbonate mass, and by use of

<sup>51</sup>Foster, George, op. cit., p. 208.

<sup>52</sup>Anglicus, Bartholomew, Mediaeval Lore from Bartholomew Anglicus, p. 37. Edited by Robert Steele. London: Chatto and Winders, 1924.

<sup>53</sup>Thomen, op. cit., p. 276.

a diet high in iron content.<sup>54</sup> Among other things iron is useful as a metallic stringent and a metallic styptic in the form of ferric chloride.<sup>55</sup>

While the beneficial effects of the consumption of melted iron in a liquid are doubtful, the basic idea of aid seems to be present in the lapidary's use, whether consciously or otherwise. The symptom of "weakness in the stomach" is a vague one, but it is characteristic in terms of the weakness of the anemic person.

Oro (Gemini, 2)

"Et es de los metales el mas noble, . . . de color es amariella." Gold, hot and moist, is considered the most noble of metals because of the great virtue which it receives from the sun. It is believed that gold filings consumed in water will relieve heart tremors. This mixture may also be given to a person suffering from melancholy.

Gold is accredited with so many virtues that the list would be limitless. According to the Lapidario, when a man sees gold it gives him great joy in his heart. Oddly enough many may experience a similar feeling at the sight of gold today. The manuscript suggests the use of gold as an amulet. The person who wears a ring of gold on the mid-finger of his right hand will be defended and guarded from all evil and will be feared by all including kings.

The uses of gold as a medicinal cure are not

<sup>54</sup>Wright, Harold N. and Montag, Mildred: A Textbook of Pharmacology and Therapeutics, pp. 321-322. Philadelphia: W. B. Saunders Company, 1959.

<sup>55</sup>Solomon, Charles, and Gill, Elizabeth, Pharmacology and Therapeutics, p.113. Philadelphia: J. B. Lippincott Company, 1956.

greatly extolled in the Lapidario. Instead, its qualities in relationship to its use in alchemy are explained.

However, medieval beliefs do accredit the wearing of a gold ring for the prevention of rheumatism and the cure of cramps.<sup>56</sup> Coincidentally, gold compounds are used today in the treatment of rheumatoid arthritis.<sup>57</sup> Other present-day medical uses of gold include the uses of radioactive gold for the control of fluids from lungs diseased with cancer, and for the treatment of cancer of the prostate gland.<sup>58</sup>

Argent vivo (Cancro, 26)

The color of "living" silver is not given in the manuscript. It has the characteristics of silver, being cold and moist by nature. This type of silver has the ability to kill lice and to kill men, too, if it is consumed without being burned first. Breathing the fumes of burning silver causes paralysis and loss of hearing. Reptiles that smell its vile fumes quickly flee from its odor.

"Living" silver is not active on the list of "stones" prized for their medicinal value; but like most precious gems, it takes its place as an amulet for various protections. This seems irrational in view of the fact that the stone itself was the possessor of so many evil qualities.

Nevertheless, modern medicine has found a variety of uses for silver and its compounds. Silver

<sup>56</sup>Thomen, op. cit., p. 276.

<sup>57</sup>Wright and Montag, op. cit., p. 122.

<sup>58</sup>Fishbein, Morris, Medical Progress, p181.  
New York: McGraw-Hill Book Comp., Inc., 1955.

nitrate, for example, is often employed as an anti-septic. Argyrol, an aqueous solution, is also used in this manner.<sup>59</sup> When silver preparations are taken internally over extended periods of time, however, the result can be a toxic effect causing discoloration of the body.<sup>60</sup>

#### Plomo (Cancro, 13)

The color of lead is indicated only by its similarity to silver, which is described as white. By nature it is cold and moist.

Lead is a suggested remedy for eye diseases characterized by sores and excesses of moisture. When the lead is burned and put on or into the eyes, it dries up the moisture and heals the sores. This works equally well for animals and men.

In ancient times lead was used more as a container for amuletic texts than as an individual amulet itself.<sup>61</sup> For example, tiny metal cases made from sheets of lead would be used, on which would be inscribed some prayer or spell.

Today, lead finds many uses in industry, and every year millions of workers are exposed to its toxic compounds.<sup>62</sup>

#### La piedra de la sangre (Libra, 18)

The greatest quality of the bloodstone is its ability to clot the blood. The Lapidario also states that when carried on the person, men will hate the wearer, say evil things about him, and even wish to kill him.

<sup>59</sup>Solomon and Gill, op. cit., p. 127.

<sup>60</sup>Wright and Montag, op. cit., p. 97.

<sup>61</sup>Budge, op. cit., p. 34.

<sup>62</sup>Wright and Montag, op. cit., p. 141.

Yet in spite of these unfortunate qualities with which the bloodstone is imbued in the Lapidario, other and better powers were bestowed on it in the Middle Ages. The manuscript speaks of its ability to prevent hemorrhage, an illness over which the bloodstone held sovereign power. Its red color, in keeping with the color symbolism of the time, had much to do with making it a suitable remedy.

Inflammatory diseases as well came under its power, and it was thought to have a calming influence on anger.<sup>63</sup> In powder form the dust of the bloodstone was used to cure snake bites, blood-shot eyes, bleeding from the lungs, and to relieve urinary troubles.<sup>64</sup>

The Indians of New Spain wore bloodstones cut in heart shapes,<sup>65</sup> an appropriate form for a stone which was supposed to stop bleeding. When dipped in cold water and then held in the right hand, recovery was certain.<sup>66</sup> As would be expected, the coldness of the stone or any other object, when applied to the area of hemorrhage, would cause the blood to congeal.

Bernardino de Sahagún, who served among the Mexican Indians as a missionary after the Spanish conquest, claimed he saved many from bleeding to death by having the patients grasp a bloodstone in their hands.<sup>67</sup>

#### Cristal (Escorpion, 5)

The crystal, a white stone of cold and moist

<sup>63</sup>Kunz, op. cit., p. 370.

<sup>64</sup>Budge, op. cit., p. 314.

<sup>65</sup>Kunz, op. cit., p. 370.

<sup>66</sup>Ibid.

<sup>67</sup>Ibid., p. 390.

nature, is described in the Lapidario as "agua conhielada." This is in keeping with the ancient belief that crystal was petrified ice.<sup>68</sup>

Although no medical affinities are attributed to the crystal in the manuscript, it has an interesting repertoire of powers and uses, dating from early times to more modern times. Good for toothache, heart disease, and intestinal pains, it was regarded as a symbol of the Immaculate Conception by early Christians, and later carried by Scotch tribesmen as crystal "victory" balls.<sup>69</sup>

The belief in the magical powers of the crystal ball has persisted to our day. As late as the early 1900's in Ireland, a famous crystal ball was still loaned out to those in the near-by villages.<sup>70</sup>

#### Cobre (Sagitario, 3)

Of a hot and dry complexion, the mineral copper is of the best grade when its color is a clear vermillion. He who eats or drinks copper will become ill with such diseases as elephantiasis, in which the legs swell up, or with cancer, or with a disease of the liver or spleen. Yet if the dust of copper are used, it will reduce swelling around the eyes and also dry up any sores on the eyes.

In spite of copper's uniqueness among the stones of the Lapidario for its supposed cause of elephantiasis and cancer, there is no scientific basis for this belief.

Among the many uses of this mineral today are

<sup>68</sup>Budge, op. cit., p. 311.

<sup>69</sup>Ibid.

<sup>70</sup>Kunz, op. cit., p. 223.

the employment of copper as styptic pencils, as an emetic, and as an antidote for the toxic effects of molybdenum.<sup>71</sup>

Cornelina (Capricornio, 6)

The carnelian is of a translucent red color with specks of yellow in it. By nature it is cold and dry, and it has three special virtues. By wearing the stone, a timid person will be able to speak without fear, an effect which seems satisfactory considering the usual association of animation with the color red.

The second virtue consists of the power to check the flow of blood, particularly in women, indicating superfluous menstruation. The final virtue recommends the dust of the carnelian for use as a tooth powder. The rubbing action caused by the friction of the dust itself would serve to help clean the teeth.

Throughout the Middle Ages carnelian was believed to protect men from illusions, and even today amulets of carnelian are worn by people on the Mediterranean.<sup>72</sup>

Zamorat o esmeralda (Tauro, 16)

This stone is none other than the beautiful green emerald. By nature it is cold and dry. Its virtues are many as stated in the Lapidario. It is an antidote for deadly poisons, poisonous wounds, and the poisonous bites of animals. When one dragma of emerald dust is taken with water or wine, a

<sup>71</sup>Fishbein, op. cit., p. 165.

<sup>72</sup>Budge, op. cit., p. 310.

poisoned man will not die and neither will his hair fall out.

According to the Lapidario, the emerald also provides a defense against possession of demons. Children in the land where the emerald is found wear these stones about their necks as a protection against this disease. If a person has had the illness before, he is advised to wear the emerald either tied to his wrist or to his leg.

Among the stone's numerous powers through the ages is the ability to confer riches, to foreshadow future events, to sharpen the wits, and to protect the wearer against all varieties of enchantments.<sup>73</sup>

In the thirteenth century the emerald had the power to cure dysentery when worn over the liver of the sick person and when worn on the stomach, to cure stomach disturbances.<sup>74</sup> Hindu physicians of this same century considered the emerald a good laxative.<sup>75</sup>

By the sixteenth century dysentery was thought to be cured when the stone was suspended over the stomach and another emerald was placed in the mouth.

The use of the emerald was also thought to be beneficial in the treatment of eye diseases and eye fatigue.<sup>76</sup> One can readily see the relationship between the color of the stone and the disease to be cured. The green color of the emerald probably represented the green of the meadows, a sight on which tired eyes longed to rest. Even today

<sup>73</sup>Kunz, op. cit., p. 79.

<sup>74</sup>Ibid., p. 380.

<sup>75</sup>Ibid.

<sup>76</sup>Ibid., p. 370.

some beneficial effect is held to be derived from the color green. For example, the use of green-tinted writing paper and green blackboards is advocated as restful to the eyes. Also the surgeon finds a use for the color green in the green cap and gown he wears in the modern operating room.

Magnetat o aimant (Aries, 2)

By nature the magnet or loadstone is hot and dry, and its color is black. The word magnetis was first applied, according to Plato, by Euripides.<sup>77</sup> According to Pliny, a young shepherd boy discovered the mineral one day when it stuck to the nails in his boots.<sup>78</sup>

The virtues of attraction of this mineral are greatly expounded on in the Lapidario. Even in earlier times this peculiar attraction held men in fascination. It was supposed to have the power to attract a man to a woman so that she might lead him wherever she wished.<sup>79</sup>

An interesting relationship is seen between the Spanish word for magnet, aimant, and the French present participle, aimant, loving. In view of the earlier connotation of attraction, this participle may well express some of the same idea.

Calcedonia (Venus, 45)

Coming under the sign of the planet of love, it is not surprising that the only virtues of Chalcedony praised in the Lapidario are those connected with love. For example, when in the possession of a man, chalcedony will make him loved by woman,

<sup>77</sup>Kunz, op. cit., p.93.

<sup>78</sup>Ibid.

<sup>79</sup>Ibid., p. 95.

and when in her ownership, she will be loved by men. The powers of this stone were enhanced by carving on it the figure of a woman seated with a man standing behind her.

Other uses of this stone prevalent at the time, but not mentioned in the Lapidario, were as a protection against the evil eye, to ward off fevers, and to make the passage of gall stones easy.<sup>80</sup>

As late as the eighteenth century chalcedony was thought to drive away night visions. This was attributed to the stone's alkaline quality (which it does not have) which removed the evil humors from the eye, the initial cause of the visions in the first place.<sup>81</sup>

La piedra que dicen Negra (Sol, 18)

This ominous stone is the onyx; black, but changeable of color. The Lapidario attributes one amazing virtue to the onyx; namely, that it makes the wearer invisible if he has written on the stone the words indicating its powers in the manuscript.

The onyx is usually considered an unlucky stone, and many people today believe that it causes bad dreams and premature children.<sup>82</sup> Those who consider it not so unlucky believe in its ability to reduce labor pains.<sup>83</sup>

<sup>80</sup>Budge, op. cit., p. 311.

<sup>81</sup>Kunz, op. cit., p. 65.

<sup>82</sup>Budge, op. cit., p. 320.

<sup>83</sup>Ibid.

## V. Conclusion

The Lapidario del Rey Don Alfonso X has been in existence since the thirteenth century. Today, seven hundred years later, many unsolved problems still confront the modern reader of this ancient manuscript. Where did the Lapidario originally come from? Who was the author of this work? What actual knowledge did these ancient people have of the true medicinal values of minerals?

The answers to these questions yield a flood of unsubstantiated theories, many of which have been presented in the paper. The volume is sufficient to set the true scholar on the path to a lifetime of research.

Perhaps the most significant conclusion drawn from this study, aside from the obvious fact of the untouched fields of research already mentioned, is that the struggle between magic and science still goes on today in the folk medicine of people of all nations. The struggle persists because they find a psychological relief from anxiety and worry (which modern psychologists connect closely with pain) in the belief of the powers imputed by their ancestors to the therapeutic virtues of precious stones.

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