

NATURE REFERENCES AND SCIENTIFIC INTEREST IN THE WORKS OF

FRAY LUIS DE LEON

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Preface

The purpose of this study has been to discover through reading the works of Fray Luis de León, a Spanish author of the sixteenth century, the references to nature contained in his writings and, where possible, to correlate these references with their sources found in previous literature and in the scientific thought of the times.

In making this study, the plan of work has been as follows:

1. The reading of the prose and poetical works of Fray Luis de León to discover the types and extent of nature themes. In carrying this out, 487 pages of León's work in Spanish, as published in the Biblioteca de Autores Españoles, XXXVII, have been studied. With the exception of letters and legal documents, these comprise the bulk of his writings in Spanish.¹ In addition to this, 1143 pages of critical editions of these works and 132 pages of these works in English translation have been read.

¹ Other works of León consist of a few short religious poems found in Biblioteca de Autores Españoles, XXXV, pp. 44, 49, 307, 308, and an unfinished account of Santa Teresa. (Cf. A. F. G. Bell, Luis de Leon, a Study of the Spanish Renaissance, Oxford, University Press, 1925, p. 203, and George Ticknor, History of Spanish Literature, 4th American edition, Boston, Houghton Mifflin Co., 1891, II, p. 101.)

León's Latin works, not considered in this study, include lectures given at Salamanca on Biblical topics and commentaries on various books of the Bible. (Cf. A. F. G. Bell, op. cit., pp. 174, 175, and Alice Philena Hubbard, Biographical Introduction to translation of The Perfect Wife, Denton, Texas, Texas State College for Women Press, 1943, p. xxxii.)

2. The reading of literary criticisms of León and of histories of literature concerning his period.¹
3. The tracing of León's sources of nature references from previous literature by consulting English translations of Horace and Virgil and the original Spanish of Carcilaso.²
4. The correlating of León's ideas of nature with the scientific knowledge of his day.³

The editions of León's prose works forming the basis of this study have been those found in Biblioteca de Autores Españoles, volume XXXVII, which includes Exposición del Libro de Job, Libro de los Cantares, La Perfecta Casada, and De los Nombres de Cristo. Of these last three works, other editions also have been read. El Cantar de los Cantares has been used in the Colección Austral edition. The Perfect Wife, a critical translation into English by Alice Philena Hubbard, based on the Elizabeth Wallace edition of La Perfecta Casada (Chicago, 1903) has been read. De los Nombres de Cristo has been studied in the critical edition by Federico de Onís. This edition is based on León's 3rd edition of 1587 which, having been corrected and supplemented, is by far the superior version of this work. It differs considerably from the edition in Biblioteca de Autores Españoles which, according to Onís, lacks value.⁴

Of León's poetry the principal edition used has been his Poesías, Libros Primero, Segundo, Tertero, found in Biblioteca de Autores

1, 2, 3 Pages consulted are noted in the bibliography appended.

⁴Federico de Onís, Introduction to De los Nombres de Cristo, in series Clásicos Castellanos, 28, Madrid, Ediciones de "La Lectura," 1914-1921, I, p. xxxi.

Españoles, volume XXXVII. Three other editions of these poems have been used. These are:

Poesías Originales, edited by Federico de Onís.

Las Cien Mejores Poesías de la Lengua Castellana, edited by Marcelino Menéndez y Pelayo.

Oxford Book of Spanish Verse, edited by James Fitzmaurice-Kelly and J. B. Trend.

Two main English translations have been used for comparison with the original Spanish. These are the few representative poems translated by A. F. G. Bell in Luis de Leon and by Thomas Walsh in Hispanic Anthology.

Other editions which should have been consulted but were not available are as follows:

La Perfecta Casada, edited by Elizabeth Wallace, Chicago, 1903.

Obras, edited by P. Antolín Merino, Madrid, 1804-1816, 6 vols., reprinted with preface by C. Muiños Sáenz, Madrid, 1885, 6 vols. (Not listed by the Library of Congress Catalogue)

Lyrics of Luis de Leon, edited by A. F. G. Bell, London, 1928.

Poems from the Spanish of Fra Luis Ponce de León, translated by Henry Phillips, Jr., Philadelphia, 1883, (privately printed edition of 100 copies.)

In making this study, literary criticism by the leading authorities on León has been read. These critics are A. F. G. Bell, Marcelino Menéndez y Pelayo, and Federico de Onís.

Quotations in the following study are taken from several editions. In citing passages from Libro de Cantares, Exposicion del Libro de Job, and La Perfecta Casada, the source used has been Biblioteca de Autores

Españoles, volume XXXVII. However, in quoting from De los Nombres de Cristo the critical edition by Onís has been used. Because of its general availability to anyone interested in looking up the references quoted and because of the reliability of the edition, the Oxford Book of Spanish Verse has been cited in the case of León's poems contained therein. For those not found here but included in León's Poesías Originales, the critical edition by Onís, this source has been cited. Only as a last resort for a quotation of poetry not found in either of the two preceding collections have references been cited from Biblioteca de Autores Españoles, volume XXXVII.

INTRODUCTION

Biographical Sketch

Of the details of Luis de León's life comparatively much is known. He was a native of Belmonte de la Mancha, in the province of Cuenca. His birth date may have been 1527 or 1528, depending on the interpretation of the inscription on his tombstone that he was sixty-four when he died.¹ Whether or not he had a small amount of Jewish blood is open to question.² Also uncertain is the fact that his full name may have been Luis Ponce de León. Méndez³ thinks it was; Ford⁴ thinks it was not.

However open to speculation the preceding points are, the events of his life are well established. In early adolescence he began to study law with his uncle in Salamanca. Soon he abandoned this course to enter the Augustinian Convent where at the age of fourteen he took the monk's habit. His term as a novitiate was followed by nine years of theological studies at the University of Salamanca, then one of the four great universities of Europe. In his late twenties he began to teach in the Augustinian Order. Having both lectured and studied at the University of Alcalá, in 1558 he took his Bachelor's degree at the University of Toledo. His Licentiate and Master of Theology he received from Salamanca two years later at the age of thirty-three.

¹James Fitzmaurice-Kelly, Fray Luis de León, a Biographical Fragment, Oxford, University Press, 1921, p. 7.

²Ibid., pp. 5, 6.

³P. Méndez, mentioned in Fitzmaurice-Kelly, ibid., p. 5.

⁴J. D. M. Ford, "Luis de León, the Spanish Poet, Humanist, and Mystic," Publications of the Modern Language Society of America, XIV, 1899, p. 269.

As lecturer in theology at his alma mater he was extremely popular among his students; as a successful contestant for coveted chairs in theology and as a brilliant young professor who dared to rely on his own scholarship when he believed it to be superior to that of accepted authorities, he was not long in antagonizing his colleagues. His intellectual integrity greater than his tact, he gained two bitter enemies in Bartolomé de Medina, his superior in the School of Theology, and León de Castro, professor of Greek and Latin. Petty jealousies mounted. Unfortunately, both León and Castro were appointed to a committee for the revision of the Vatable Bible. The two disagreed on points of translation and impulsively León questioned Castro's linguistic knowledge. By way of retaliation for this and for preceding insults, Castro and Medina reported to the Spanish Inquisition that all was not well at Salamanca. Ostensibly on the accusation of having questioned the correctness of translation of certain parts of the Vulgate, as well as having translated into Spanish the Song of Solomon,¹ León was hastened away into the secret prison of the Inquisition at Valladolid in 1572.

In prison León remained for five years. Always rather sickly, he suffered greatly from physical deprivations during this time. While his trial dragged on and on, he wrote frequently and fruitlessly asking for a companion to care for him; for medicine; for a few editions of the Bible, Horace, and Virgil from his beloved library. Broken in health but at last declared innocent, he was released from prison. Salamanca welcomed him triumphantly. Legend has it that on resuming his

¹ This translation León had made some eleven years previously for his cousin, Isabel Osorio, a nun who knew no Latin. Never intended for the public eye, the manuscript had been pirated from León's desk drawer and published without his knowledge.

professorship he opened his first lecture with, "As we were saying yesterday....."

León's last years at Salamanca were busy and comparatively happy. Of his former enemies, one had died, the other had resigned. First in the Chair of Moral Philosophy, then in the Chair of Sacred Scripture, he busied himself with his favorite studies. Serving on committees for the university and aiding in convocations of his religious order, he traveled frequently. During his last few months illness prevented his lecturing more than occasionally at the university with which his life had been so intimately connected. The high honor in the Augustinian Order of being elected Provincial of Castile came to him in 1591, but it came too late. Nine days afterwards, the sickly body which for sixty-four years had been dominated by a stern spirit which would not stoop to intellectual compromise was released from its prison. In his own words,

".....dichoso el humilde estado
del sabio que se retira¹
de aqueste mundo malvado....."

Humanism

During the Middle Ages, man had centered his thoughts around the hope of life after death. He had mortified the life of the physical body, disregarding as much as possible his present existence. With the coming of the Renaissance this center of interest shifted. Man discovered that he himself was of value in his present form; that there was enjoyment to be had in his life on earth; that this enjoyment had been known by ancient pagans but had been needlessly stifled by Christian ascetics. With

¹"Al Salir de la carcel," Oxford Book of Spanish Verse, 2nd edition, Oxford, Clarendon Press, 1945, p. 122.

enthusiasm mankind set about to rediscover this "abundant living." In so doing, interest turned back to classic Greek and Roman literature which contained a full measure of the "joy of living." This recapturing of the lost satisfaction in human life is known as humanism.

Luis de León represents well the humanistic trend back to classical literature and languages. As a scholar he was familiar with Hebrew, Greek, and Latin writings in their original language. Not content to let these works rest in dust-laden glory, León translated some and captured in his original works the spirit of others. León's use of these ancient classics was not an attempted regression to the cultures which produced them but rather a modernization of them to fit sixteenth-century Spanish humanism. Bell says that

"Luis de Leon is pre-eminently the representative humanist of the Spanish Renaissance. In him all the various currents meet and mingle, and although he may not have been so profound a Hebrew scholar as Arias Montano, and had not so many apt Greek and Latin quotations at the tip of his pen as the amazing Brocense, and was certainly not so polished a Ciceronian Latinist as Sepúlveda, his supreme poetical genius made his scholarship a more living thing."¹

Although a theologian with the ultimate aim of reaching a life beyond this one, León was never so preoccupied with theological speculation that he forgot to relish this earthly life. His works reveal a very human enjoyment of the here-and-now. He finds wonder in commonplace occurrences and beauty in the temporal world. However, these earthly pleasures he does not regard as an end in themselves. For him they are pleasant experiences enriching man's stay on earth and leading to a greater and more complete life.

¹A. F. G. Bell, Luis de Leon, p. 252.

Mysticism

With the opening of the sixteenth century began what Peers calls the "great age of Spanish mysticism."¹ Given impetus by the reconquest of Spain for Christianity² and influenced by the recurrence of popularity of Ramón Lull,³ a scientist-mystic who had lived some three hundred years previously, mysticism became current in Spanish thought and literature.

Mysticism may be defined as a psychological state in which man contemplates divine things in order to merge himself with them. The soul is constantly seeking union with its Creator. "To know and to be one with God"⁴ is the mystics' ideal. In literary form mysticism frequently appears using the Biblical parallel drawn from Song of Solomon, in which the beloved in seeking out the lover represents the search of the soul for God. This theme is well illustrated in the works of San Juan de la Cruz.

Fray Luis de León, however, exhibits mysticism in another manner. His writings show the unity with God to be achieved through nature. In life close to nature,⁵ in nightly contemplation of the stars,⁶ in longing to find the true cause of earthly phenomena⁷ León is led closer to his

¹ E. Allison Peers, Spanish Mysticism, London, Methuen and Co., Ltd., 1924, p. 7.

² Ibid., pp. 4, 5.

³ Bell, Luis de Leon, p. 258.

⁴ Peers, op. cit., p. 42.

⁵ "Vida Retirada," Oxford Book of Spanish Verse, pp. 105-107.

⁶ "Noche Serena," ibid., pp. 114-117.

⁷ "A Felipe Ruiz de la Torre y Mota," ibid., pp. 109-111.

goal of union with God.

Although a mystic, León is by no means a religious fanatic. His mysticism never extends into a wholly abstract realm of divine rapture. He may feel himself immersed in transfiguring music,¹ yet he is well aware that this music is being created by a human hand. His flights of ecstasy are not extravagant; he keeps in close touch with the concrete, physical world. As Ford says, in León is found "mysticism tempered by common sense."²

León's mysticism and its component idea of nature as the medium through which to unite with God is summed by Bell as follows:

"The created world, with all its variety of excellence, is but a shadow of the divine perfection, although a shadow of sufficient beauty to testify to the existence of God and to His presence in Nature as the connecting link in Nature. God exists in each man as in all Nature, but true union will come only after death, when the soul will see and understand God in various degrees of sight and understanding....."³

Scientific spirit

For science the Renaissance was

".....a period of restless seeking and collecting, yielding results which the succeeding age utilized for the purpose of making a complete reevaluation of the whole conception of nature common to the people of antiquity and the Middle Ages."⁴

The inductive method had been popularized. The earth was being known

¹"Oda a Francisco Salinas," Oxford Book of Spanish Verse, pp. 108, 109.

²J. D. M. Ford, "Luis de León," p. 275.

³Bell, Luis de Leon, pp. 254, 255.

⁴Erik Nordenskiöld, History of Biology, New York, Alfred A. Knopf, 1946, p. 83.

as a whole for the first time. Columbus, Magellan, Balboa, Pizarro, and that host of navigators and explorers were bringing back to Spain information of geographic discoveries. In astronomy Copernicus and Galileo were at work. Gesner, Aldrovandi, and Belon were contributing to zoological fields; Cesalpino was furthering the science of botany. Medical science was being advanced by Vesalius, Fallopio, Eustacchi, and Servet. Francis Bacon was attempting to reorganize all human knowledge. Thus it was that Europe was thinking scientifically.

Surrounded by such a company, León caught the scientific spirit of the time. Bell says of him,

"Luis de Leon was born a generation after the discovery of America, and the whole world seemed new to him, a world of myriad facets, bathed in celestial beauty, filled with new problems challenging the mind to endless speculations."¹

Although astronomy was probably his favorite of the sciences, his avid mind reached out to all the fast-growing sciences of the day. Meteorology seems to have been an absorbing interest of his. With ores and minerals he seems to have been well acquainted. Animal life and plant life came under his keen observation. He was familiar, too, with the medical science of the day.

León had a full measure of scientific spirit. Always he is searching to truth, striving for accuracy. Not content with observed facts, he seeks the underlying principles which cause them, the "principio propio y escondido."² Over and over, reaching the limit of human knowledge, he is forced to admit that ".....no sabemos la razon....."

¹A. F. G. Bell, Luis de Leon, p. 239.

²"A Felipe Ruiz de la Torre y Mota," Oxford Book of Spanish Verse, p. 109.

no sabemos la causa.....no sabemos por qué....."¹ He shows even in his lyric poems a scientific spirit of questioning, of searching for truth. He longs to be free of this earthly body in order to see from the perspective of eternity the knowledge of the universe, clearly and distinctly, unhindered by mortal limitations. With scientific passion he asks

"Quando será que pueda
libre de esta prision volar al cielo.....
contemplar la verdad pura sin velo?.....
Alli.....
veré distinto y junto
lo que es, y lo que ha sido....."²

With an open mind León gleans information from traveling merchants as readily as from Dioscorides. Even his greatest failure as a scientist--that of too much dependence on ancient authority--is but an overly-developed scientific tendency to collect known facts.

León searches for a correlation between observed phenomena--between thunder and lightning, between weather conditions and plant growth, between the positions of stars and life on the earth.

Bell considers that León's "attitude is.....more scientific than that of Bacon"³ and that "La misma curiosidad científico.....constituye

¹Exposicion del Libro de Job, B. A. E., p. 460.

²"A Felipe Ruiz de la Torre y Mota," Oxford Book of Spanish Verse, p. 109.

Note the possible Biblical influence of Paul's similar longing for complete knowledge in the King James Version of I Corinthians 13: 9, 10, 12, "For we know in part.....but when that which is perfect is come, then that which is in part shall be done away.....For now we see through a glass, darkly; but then face to face; now I know in part; but then shall I know even as also I am known." Paul's writings were familiar to León, since in the Chair of Sacred Scripture at Salamanca León lectured on Paul's letters to the Galatians and his first and second letters to the Thessalonians. See Bell, Luis de Leon, p. 175 and The Perfect Wife, Biographical Introduction to translation by Hubbard, p. xxxii.

³A. F. G. Bell, Luis de Leon, p. 247.

el fondo de gran parte de la poesía de Fray Luis de León."¹

Literary influences on León

Horace

During the Middle Ages, Spain did not relish the works of Horace.² With the coming of the fifteenth century, however, Spanish literature began to show traces of Horatian themes and style.³ Stimulated by the humanism of the Spanish Renaissance, the Horatian trend grew in momentum. It was not translations but imitations which first became popular. The appearance in the early fifteenth century of Santillana's imitation of Horace's Beatus ille touched off a chain reaction of similar lyrics. Having paraphrased a number of the Odes, Garcilaso incorporated in his 'Egloga Segunda an imitation⁴ of the Beatus ille, whose imprint together with that of Horace's original can be seen in succeeding versions. Through imitations Horace became established in Renaissance culture in Spain.

After imitation had brought the Latin spirit into Spanish literature, efforts were turned toward making actual translations. Based on the Landino edition⁵ of 1483, the first correct edition of Horace that

¹A. F. G. Bell, El Renacimiento Español, translated by Eduardo Julia Martínez, Zaragoza, Editorial Ebro, S. L., 1944, p. 253.

²Marcelino Menéndez y Pelayo, Horacio en España, 3rd edition, Madrid, Lib. y Casa Editorial Hernando (S. A.), 1926, I, p. 56.

³Grant Showerman, Horace and His Influences, Boston, Marshall Jones, 1922, p. 118.

⁴Garcilaso, Obras, in series Clásicos Castellanos, 3, Madrid, Ediciones de "La Lectura," 1924, pp. 29, 30.

⁵Menéndez y Pelayo, op. cit., II, p. 12.

Europe had known, these translations were far from being linguistic misfits. Rather

"the Horatian lyric seemed especially congenial to the Spanish spirit and language."¹

Not restricting themselves to literal accuracy,

"the sixteenth century translators were distinguished in general by facility and grace, the freshness and abandon of youth, and a considerable degree of freedom, or even license."²

Chief among these translators was Fray Luis de León. In his Libro Segundo he includes translations of twenty-four odes of Horace.³ Among these, characteristically enough, appears the Epode II, Beatus ille.

In speaking of these translations, Showerman says,

"Fray Luis de León,.....the most inspired of all the Spanish lovers of Horace, was an example of the poet translating the poet where both were great men."⁴

That León was "the Spanish Horace" both Onís⁵ and Menéndez y Pelayo⁶ agree. Not only did León translate Horace but his own original works bear unmistakably the stamp of the Latin poet. Some of León's poetry

¹Showerman, loc. cit.

²Showerman, ibid., p. 121.

³P. Antolín Merino includes in his edition of León's works the translations of seven other Horatian odes. Menéndez y Pelayo, however, considers these translations as works not of León but of other poets of the Salamancan school. See Menéndez y Pelayo, op. cit., I. pp. 70, 71.

⁴Showerman, ibid., p. 119.

⁵Federico de Onís, Introduction to De los Nombres de Cristo, series Clásicos Castellanos, 33, Madrid, Ediciones de "La Lectura," 1914-1921, p. viii.

⁶Menéndez y Pelayo, op. cit., I, p. 71.

may be linked directly with Horatian predecessors.¹ Especially is this true of the "Vida Retirada," which is modeled after the Beatus ille and after previous versions of it in Spanish literature, and of "Profecía del Tajo," which is strikingly similar to Horace's Ode XV, the Pastor cum traheret. In other works of León it is not so easy to attach a definite Horatian source; but the same spirit prevails in both the Roman and the Spaniard. Menéndez y Pelayo² considers that León is more Horatian in his imitation than in his actual translation. To quote Onís,

"Horacio es de entre todos los poetas clásicos el que ha dejado una impresión más profunda, no sólo en la poesía de fray Luis, sino a través de toda su obra."³

León had caught the true Horatian spirit.

There are, however, differences in viewpoint between León and his predecessor. Their idea of nature, which is the phase here concerned, differs somewhat. A pagan, Horace regards country life as a means of escape from the hoi polloi; a Christian, León regards it as an escape from worldly vanity. Horace finds in nature a means of cultured enjoyment; León finds in it a means of communion and prayer and self-understanding.⁴ With León's pen the cultured Roman becomes less refined,

¹Bell says, "Leon was not content to imitate Horace through Garci Lasso; he went to the original, and Garci Lasso's softness was corrected and invigorated by the terse felicity of the Latin poet."

A. F. G. Bell, Luis de Leon, p. 229.

²Menéndez y Pelayo, op. cit., p. 71.

³Onís, op. cit., II, pp. xi, xii,

⁴Cf. G. T. Northup, Introduction to Spanish Literature, Chicago, University Press, 1925, p. 139.

more rustic. A proponent of plain living, León brings Horace closer to nature than he originally is. Horace makes frequent use of the commonplace, but in León's interpretation he does so to a greater extent. Both Horace and León are alike, however, in their simplicity and in their innate love for nature.

Perhaps it was with a prophetic spirit that Horace in speaking of his future fame wrote,

"I shall be the study of the scholarly Spaniard."¹

Virgil

Not dependent on a Renaissance upswEEP in popularity, Virgil had been found in Spanish libraries with frequency during the Middle Ages.² Already a perennial favorite, he became even more widely read during the time of the humanistic trend. In literature prior to León's day his mark was felt in the Eglogas of Juan del Encina.

In Virgil León found a kindred spirit. The Bucolics and the Georgics portrayed a life close to nature which appealed to him; these works he translated into Spanish, of the Bucolics all ten, of the Georgics only Books I and II. In León's writings recur suggestions of these translations. Many of his references to stars and weather conditions are similar to those in Book I of the Georgics; and his comments on horticulture may well have been inspired by the Georgics, Book II.³

¹Horace, Book II, Ode XX, translated by E. C. Wickham in Horace for English Readers, London, Oxford University Press, 1930, p. 78.

²Showerman, op. cit., p. 118.

³See Chapter II, section on Stars, Literary; and Chapter III, section on Plants. Scientific.

However, Virgil, of whom León translated more, seems not to have influenced his original writings so much as did Horace, of whom he translated less.¹ Whereas from Virgil León gathered principally reference material, from Horace he gained literary style of expressing his outlook on nature.

Although León drew freely on his Latin predecessors, in him their works appear not as museum pieces of Roman culture but as integral parts of Castilian literature. Beyond the translation of mere words, León has translated the spirit of the Latin poets into the spirit of the sixteenth-century Spaniards. León is

".....trabajando con manos cristianas el mármol gentilicio...."²

That León has taken Latin sentiment and assimilated it into works purely his own is discussed by Menéndez y Pelayo.

".....aunque descubramos la fuente de cada uno de los versos de Fr. Luis de León, y digamos que la tempestad de la oda a Felipe Ruiz se copió de las Geórgicas, y que La vida del campo y La profecía del Tajo son relieves de la mesa de Horacio, siempre nos quedará una esencia purísima.....y es que el poeta ha vuelto a sentir y a vivir todo lo que imita de sus modelos y con sentirlo lo hace propio....."³

Other Classic Poets

In translating from other poets, León again has selected for interpretation poets who, while they may not be outstanding for their nature

¹"Desde Menéndez y Pelayo especialmente, suele estar incluido fray Luis en el grupo horaciano, pero no se insiste en su virgilianismo."
Ángel Valbuena Prat, Historia de la Literatura Española, 2nd edition, Barcelona, Editorial Gustavo Gili, S. A., 1946, I, p. 583.

²Menéndez y Pelayo, Horacio en España, I, p. 64.

³Menéndez y Pelayo, Estudios y Discursos de Crítica Histórica y Literaria, Santander, Aldus, S. A. de Artes Gráficas, 1941, II, p. 94.

themes, at least include something of nature in their works. Thus he translates fragments of Euripides, of Tibullus, and of Pindar; and he imitates Petrarch and Bembo.

The Bible

"As a translator of sacred Hebrew poetry he stands supreme," says Bell² of León. Both in his translations and in his original works León shows that he has drunk deeply of Biblical literature. It is known³ that in his personal library there were copies of the Vulgate, the Vatable Bible of 1545, a Hebrew Bible, a Chaldean Bible, Robert Estienne's Greek New Testament, and Francis Titleman's commentaries on Job and the Psalms. Since he himself was a Biblical scholar, a linguist, and a theologian, it is natural that his works should bear scriptural influence.

¹Euripides is represented in León's works by two selections from the *Andromaca*, (B. A. E., pp. 35, 36); Tibullus, by Elegy III, Book II (B. A. E., pp. 37, 38); and Pindar, by Ode I (B. A. E., pp. 36, 37). Petrarch and Bembo are not translated but imitated (B. A. E., pp. 38, 39). The "Imitacion del Petrarca" is based almost entirely on nature allusions.

²A. F. G. Bell, Luis de Leon, p. 243.

³Bell, ibid., pp. 125, 126.

It is probable that he knew also the following works:

Cisneros' Polygot Bible, 1522.

Francisco de Enzinas, Spanish New Testament, 1530.

Biblia en lengua española, Ferrera, 1553.

Juan Pérez, El Testamento Nuevo, Spanish translation, Venice, 1556.

_____, Los Psalmos de David, Spanish translation, Venice, 1557.

Comienzan los proverbios de Salomon, translation by Arias Montano,

Cuenca, 1558. (Arias Montano was a personal friend of León; León is almost certain to have known this work.)

Miguel de Palacios, In Esaiam, Salamanca, 1572.

Biblia Sacra, Arias Montano's edition of the Polygot Bible, Antwerp, 1573.

Jerónimo Almonacid, Commentaria in Cantica Canticorum Salomonis, 1588.

León's Poesías Libro Tercero is devoted exclusively to translations of Biblical poetry from Psalms, Proverbs, and Job. His abundant enthusiasm is shown by the fact that of Psalm XLIV he made not merely one translation but two. All of these scriptural translations fit into the Spanish language as well as if they had originated in it. Bell¹ considers that León's fame as a poet would have been established had he written nothing but the superb translation of Psalm CIII.

Not content with translation only, León as a Biblical scholar wrote commentaries on his own translations of the Song of Solomon (Libro de Cantares) and of Job. His Traduccion Literal y Declaracion del Libro de los Cantares he wrote first in Latin before translating it into Spanish. In explaining both this work and Job, León takes the books verse by verse and develops the idea contained therein, adding his own information. It is these commentaries on his translations which are here considered.

Not translation but a development of Proverbs 31: 10-31 is La Perfecta Casada, León's treatise on the attributes of a virtuous and efficient wife and homemaker. With Old Testament severity León sets forth his ideas that "the woman's place is in the home."

Another work of scriptural inspiration² is De los Nombres de Cristo, a platonic dialogue in which three theologians discuss the names by which Christ is known in the Bible—among them Shepherd, Lamb, King, Prince of Peace, and Son of God.

¹A. F. G. Bell, Luis de Leon, p. 243.

²Here León shows both Biblical and classical influence.

León's style of writing shows a marked influence of the Bible. In his simplicity of expression, his penetrating intensity, and his sublimity of thought he proves that the Scripture has been, as he says, his inspiration.

".....llevando siempre, como estrella de guía, puestos los ojos en la luz de la Escritura Sagrada."¹

Mixture of the pagan, the Jewish, and the Christian

León's work is, then, a combination of pagan, Jewish, and Christian aspects. An eclectic, León chooses elements of all three and combines them until, to quote Onís,²

".....no es fácil decidir a qué espíritu se acerca mas, si al de Horacio or al del autor de los salmos."

Throughout his commentary on Job are to be found Biblical ideas explained in the terms of pagan poets.³ Certainly it is a general mixture to be found in the "Oda a Santiago," in which the boat carrying the body of the apostle James is surrounded by nereids, tritons, and satyrs!

In this combination throughout his works León integrates three philosophies,⁴ thereby bringing a background of pagan, Jewish, and

¹De los Nombres de Cristo, I, edited by Federico de Onís in series Clásicos Castellanos, 28, Madrid, Ediciones de "La Lectura," 1914-1921, p. 195.

²Onís, introduction to De los Nombres de Cristo, II, p. xii.

³For purposes of illustration León interpolates in his Exposicion de Job quotations from Horace and Virgil as follows:

Horace - B. A. E., pp. 338, 463, 474.

Virgil - B. A. E., pp. 341, 367, 380, 402, 461, 463, 474, 479.

⁴"Así, fray Luis de León ha quedado como ejemplo de un noble espíritu en que se fundían e integraban la sed de justicia hebraica, la serenidad pagana ante los embates exteriores, la caridad cristiana que no resiste al mal sino con el perdón, el generoso anhelo de incorporarse á las corrientes nuevas de la cultura propias del siglo tormentoso en que vivió." Onís, ibid., I, p. ~~ix~~

Christian philosophies to apply to his ideas of nature.

Literary influences as sources of nature references

From all the foregoing literary influences León derives ideas of nature. In his translations appear many references to nature which, of course, are not original with León; but the fact that he chose to translate works rich in nature allusions indicates his personal interest in them.

As used by León, Horace and Virgil appear chiefly as nature poets. From Horace come the "back-to-nature" theme and the refined appreciation of rural life. From Virgil come references to storms, stars, and horticulture.

The greatest source of León's nature allusions is the Bible. In the Psalms can be seen the prototypes of León's idea of God in nature, his contemplation of the universe and its wonders, and his "starry night" theme. Both Libro de Cantares and Job contain numerous nature allusions on which León comments, giving examples of nature lore out of his own observations, out of previous literature, and out of the scientific knowledge of his day. It is these references in his commentaries which form a large part of the nature allusions considered by this study.

NATURE REFERENCES AND SCIENTIFIC INTEREST IN THE
WORKS OF FRAY LUIS DE LEON

Classification of León's Nature References

In studying the nature references in representative works of Fray Luis de León, it is found that these references are of two general types--those in which nature is treated from a literary standpoint and those in which nature is regarded scientifically.

The references here classified as literary are those which have as their purpose the advancement of a piece of writing by the use of nature allusions, chiefly as comparisons, in which the furthering of the literary idea is of greater importance than is the accuracy of the nature allusion itself; and those which show that the ideas of nature contained therein are taken from previous general literature rather than from previous scientific literature or from actual observation.

Similarly, the references here classified as scientific are those in which the correctness of the nature allusion is in itself considered important. For purposes of this classification, it does not matter whether the statements are scientifically accurate, since to a large extent the limitations of the scientific knowledge of the sixteenth century or even of the twentieth would prevent actual scientific accurateness. The determining factor is that the statements show a scientific viewpoint, a refuting of unfounded legends, and a search for truth both by critical observation and by reference to what has been written on the subject by authorities.

This distinction between the types of references may be illustrated by two of León's references to the rose. In one lyric he pictures the

Good Shepherd leading his happy flock to graze in a pasture "with immortal roses."¹ Clearly these ever-blossoming roses have **no** botanical foundation. Rather they grow from the conventional Renaissance literary idea of a rose. In contrast, León shows a scientific interest in a rose referred to in a metaphor in Libro de Cantares and carefully explains that it is "not just any rose but a species of them, black in color, but very beautiful and of exquisite odor."² Thus León may treat one nature allusion from two different viewpoints. The subjects of both types of references are therefore principally the same. The distinction in their classification lies in León's method of treatment.

This classification of nature references is in itself an artificial grouping. León in his writing evidently was not conscious of dividing his references into these two main categories. Indiscriminately he flavored his nature allusions with his Renaissance gusto both for the rich literature of previous centuries and for the developing sciences. There are, therefore, some references in which it is difficult if not impossible to distinguish whether León's interest is literary or scientific.

León's references to nature may be classified arbitrarily into four principal groups--a "back-to-nature" theme, references to the physical universe, references to plant life, and references to animal life. Of these four, the first is an **entire** theme in itself. The following three

¹".....Con inmortales rosas,
con flor que siempre nace....."
"Morada del cielo," Oxford Book of Spanish Verse, p. 119.

²"No es cualquier rosa sino una especie de ellas, en la color negra, pero muy hermosa y de gentil color."
Comento sobre Libro de Cantares, in Biblioteca de Autores Españoles, Madrid, Librería y Casa Editorial Hernando, S. A., 1925, XXXVII, p. 256.

In subsequent footnotes, this volume will be given as B. A. E.

are merely convenient groupings of themes and of references, some of which are not sufficiently emphasized in themselves to be regarded as separate themes but which recur frequently enough and in large enough quantity to comprise collectively the previously-mentioned three themes.

In order that the viewpoint may be more easily noted in each case in which León regards one theme in two different manners, a discussion of the literary treatment of the theme is given first, followed by a discussion of the scientific treatment of the same theme.

CHAPTER I

"BACK-TO-NATURE" THEME

"The love of nature.....is implicit in much of Spanish literature. The communion between man and Nature may not be less powerfully present because it is felt rather than manifested. It springs from the medieval view of man as an integral part of Nature..... This close communion is found among the Spanish people."¹

Certainly this love of nature is found in the writings of Luis de León. As a poet, he sees in nature a realm of beauty; as a theologian and mystic he finds in it a unity with the universal Power; as a scientist he discovers an endless source of wonder.

León's "back-to-nature" theme may well be the first theme considered in this study, since it is indicative of the nature allusions to be found throughout his writing. This theme is generalized, showing León's interest not in particular phases of nature but rather in nature as a whole. Some aspects of this theme are clearly of literary inspiration; others are linked with León's ideas of religion and of mysticism.

The classic example of this theme as León uses it in the literary phase is to be found in what is perhaps his best-known poem, the "Vida Retirada." A spiritual predecessor of Thoreau, León feels the need of withdrawing from the hubbub and vanity of worldly existence and finding inner contentment in the contemplation of nature. With a sigh of

¹A. F. G. Bell, Castilian Literature, Oxford, Clarendon Press, 1938, pp. 177, 178.

relief León turns his back on the scurrying throngs and exclaims:

"Que descansada vida
la del que huye el mundanal ruido,
y sigue la escondida
senda....."¹

He wants to have done with worldliness, with fame, with wealth. He longs for a "retired life" in which he can think undisturbed, live within himself, and enjoy communion with nature. As proved by his periods of rest at the Augustinian country retreat at La Flecha,² for him

"El campo ha llegado a ser un retiro y un refugio."³

León's idea of life close to nature is one of classic oversimplification. His day would begin with the songs of birds; he would leisurely care for an orchard; he would stroll along wooded paths among classic bowers; he would eat simple, wholesome fare. Apart from the rest of the proud world, he would be finding in his communion with nature an inner tranquility.

"Vivir quiero conmigo,
gozar quiero del bien que debo al cielo a solas...."⁴

León's longing for the simple life close to nature is clearly not that of a rustic farmer who in reality seeks the soil. Rather it is that of a scholar who has admired in his literary predecessors the bucolic theme and is himself imitating it. In the midst of his harassed life at the university León must have had ample cause to want to "get away

¹"Vida Retirada," Oxford Book of Spanish Verse, p. 105.

²A. F. G. Bell, El Renacimiento Español, p. 190.

³Ibid., p. 187.

⁴"Vida Retirada," Oxford Book of Spanish Verse, p. 106.

from it all" and live in rural simplicity. Being of a Horatian turn of mind, León naturally let his trend of thought fall into the conventionalized literary pattern set by his predecessor.

Horace had said,

"How happy in his low degree,
How rich in humble poverty is he
Who leads a quiet country life...."¹

Echoing this thought, Garcilaso had put into the words of a shepherd in his Égloga Segunda a strikingly similar passage.

"¡ Cuan bienaventurado
aquel puede llamarse
que con la dulce soledad se abraza,
y vive descuidado..!"²

In using this theme for his "Vida Retirada," León was proving himself to be a product of his literary environment. As Bell explains,

"El clásico tema 'Cuán bienaventurado' corre al traves de toda la literatura española de la Edad de Oro. Con ansia de reposo, un simple modo de vivir en la áurea 'mediócritas'; una tendencia alimentada por el estudio de Horacio, pero innata, congénita al bien equilibrado espíritu castellano..."³

León uses not only the trend of thought set by Horace and Garcilaso but also phraseologies which are almost identical with theirs. This, to cite Bell again, is the usual habit in the use of this "back-to-nature" theme.

"Las palabras con las cuales los escritores ambicionan este retiro y 'la descansada vida,' son casi siempre idénticas, mostrando su clásica fuente común."⁴

¹Horace, Epode II, Beatus ille, translated by John Dryden in Complete Works of Horace, edited by Casper J. Kraemer, Jr., Random House, 1936, p. 89.

²Garcilaso, Égloga Segunda in his Obras, series Clásicos Castellanos, 3, p. 29.

³A. F. G. Bell, El Renacimiento Español, pp. 189, 190.

⁴Loc. cit.

In this use of the "back-to-nature" theme, León is pouring his thoughts into another's mold.

This theme, however, has other aspects than that of mere literary imitation. It forms an integral part of León's concept of religion and of mysticism.

"It was a happy day for the Salamancan friar when he learned to realise that 'Christ dwells in the fields.' And thenceforward he found Him in the woods and gardens where he walked, in the placid river.....in the songs of birds, in the sunshine and the starlight..."¹

It is not nature that León worships; it is the God whom he finds revealed therein. As a mystic, León seeks the union of the soul with its Creator. The common ground on which these two meet is the realm of nature. Nature is for him not an end in itself but a means whereby the glory of God is revealed. In the country León feels himself surrounded by God's presence.

".....en el campo deleytoso,
con solo Dios se compasa...."²

Ford compares León to St. Francis in their similar concepts of finding God mirrored in the natural world.³ For him "the beauties and grandeurs of nature suggested the superior beauties and grandeurs of the moral law."⁴ Through quietness and contemplation León finds in nature a kinship with the Power behind the universe.

Indicative of León's spiritual love for nature is the fact that

¹E. Allison Peers, Spanish Mysticism, London, Methuen and Co., Ltd., 1924, p. 37.

²"Al salir de la carcel," Oxford Book of Spanish Verse, p. 122.

³J. D. M. Ford, "Luis de León, the Spanish Poet, Humanist, and Mystic," p. 276.

⁴G. T. Northup, op. cit., p. 139.

heaven itself he describes in terms of his beloved countryside.

"O campos verdaderos!
o prados con verdad frescos y amenos!
riquísimos mineros!
O deleitosos senos!
repuestos valles de mil bienes llenos!"¹

From the religious viewpoint, then, León regards the return to nature as a means of returning to God.

Although he was a man of religion, León was by no means an ascetic. He rejoices in the rich beauties to be found in nature. He finds sensual delight in the fragrance of cedar wood, the sprightliness of fawns, the flush of ripening pomegranates, the coolness of rain. Especially in Libro de Cantares does he display his alertness to surrounding beauties. Bell says that León had almost a "Latin love of Nature, of gardens and country life and pleasant prospects, 'la hermosura del campo'...."²

León himself gives an excellent example of this:

"Demás de estos gustos y pasatiempos que tendríamos en gozar del campo y andar viendo, cómo florecen los arboles, no nos faltarán buenos mantenimientos y dulces y sabrosas frutas, así de las frescas y recién cogidas, como de las de guarda, que son riquezas de que suele abundar la vida rústica."³

León's sphere of nature is not, however, a static realm of golden lushness such as is found in the still-life of a pastoral. Just as he himself finds inner calmness in the midst of a harried life, so his realm of nature is tranquil through dynamic equilibrium. His writings portray "una visión rápida y sintética de toda la naturaleza en dinamismo; el soplar del viento, el polvo que asciende al cielo; la

¹"Noche serena," Oxford Book of Spanish Verse, p. 117.

²A. F. G. Bell, Luis de Leon, p. 233.

³Libro de Cantares, B. A. E., p. 278.

imagen bíblico-pindárico de Dios que entre las nubes hace mover su carro; el rayo, el trueno, la lluvia....."¹

Of León's viewpoint in regard to nature poetry it has been said;

"Love of nature was not dead in the Middle Ages.....; but this ecstasy and its expression were new. Luis de Leon brought to Spanish poetry a personal subjective note and a more intimate love of Nature....."²

León, then, in his writings reveals two types of "back-to-nature" theme. One is the literary model of the Beatus ille; the other is his own personal feeling of closeness to nature as a means of finding God and as a means of enjoying also the beauties of earthly life.

¹Angel Valbuena Prat, op. cit., p. 588.

²A. F. G. Bell, Luis de Leon, p. 232.

CHAPTER II

REFERENCES TO THE PHYSICAL UNIVERSE

Geography. Scientific

León appears to have only scientific interest in his geographical references. In his century and the one preceding it, too many actual geographic discoveries had taken place not to outweigh possible literary references to classic lands.

León speaks of the increased knowledge of geography which has come in his day. Led on by the phrase, "the refuge of the south wind,"¹ León reveals his geographical ideas. He explains that due to the earth's being spherical, the southern part of the world is hidden from the northern part in which he lives and has been unknown and hitherto regarded as inaccessible until the present age of Spanish discovery.

".....En la figura de esfera que tenemos los que en esta parte del mundo vivimos, siempre se nos descubre el oriente y septentrion y poniente, la parte austral y de mediodía se encubre. Demás de que aquellas tierras australes que están debajo y de la otra parte de la equinocial, han sido tierras encubiertas y no sabidas, y tenidas por inaccesibles hasta la edad de nuestros agüelos, en que las naves de España las descubrieron."²

¹"Retraimientos del Ábrego." Job, B. A. E., p. 341.

²Job, B. A. E., p. 341.

Actually the nautical exploration of Africa began some 200 years before León's observation on the recent explorations to the south. In 1339 a Portuguese expedition sailed down the African coast. In 1346 Jaime Ferrer traveled as far down as Río de Oro, and in 1364 a French expedition sailed down as far as Guinea. However, the extent of the continent's reach into the southern hemisphere was unknown until 1486, when Bartolomé Díaz rounded the Cape of Good Hope.

Julio Rey Pastor, La Ciencia y la Técnica en el Descubrimiento de América, 2nd edition, Buenos Aires, Espasa-Calpe Argentina, S. A., 1945, pp. 51, 52, 55.

León's knowledge of geographic discoveries in the New World is amazingly accurate. He speaks of the San Potosí mines of Peru, giving data concerning them beginning with the year 1545.

"Como se sabe por cuenta cierta de las minas de solo un cerro, que llaman de Potosí, en el Pirú, hasta el año de 85 desde el de 45, que son cuarenta años escasos, ha valido su quinto ciento y once millones de pesos, de á trece reales cada uno."¹

Of the earth itself, León mentions that it is hung in air with the sky stretched out above it.

"...á la tierra pesadísima sostiene como colgada en el aire, sin apoyo y sin arrimo ninguno, y al cielo tiene extendido, no en otro sugeto alguno, sino en el mismo vacío."²

Whether or not this concept was strictly scientific, León was firmly convinced of the roundness of the earth, as proved by his references to stars to be seen only from the northern or southern hemispheres. Even in his lyric poetry he mentions the roundness of the world.³

León notes that from his position on the globe the stars of the tropics and of the southern hemisphere can never be seen,

".....la parte del mediodía y las estrellas de su norte nunca se levantan sobre nuestro horizonte."⁴

thus reinforcing his concept of the earth's shape. Another reference

¹Job, B. A. E., p. 416.

León's account begins with the year 1545. Peru had been conquered by Pizarro barely a decade prior to this date.

²Job, B. A. E., p. 409.

³".....la redondez del mundo"....."Oda XIX, A Todos los Santos," Poesías Originales, edited by Federico de Onís, San José de Costa Rica, García Monge y Cía., 1920, p. 85.

⁴Job, B. A. E., p. 399.

proving his idea is his mention of having a part of the sky over his head and a part under his feet.

".....ni en la parte [del cielo] que se levanta sobre nuestras cabezas, ni en la que tenemos debajo de los piés."¹

It is possible that León might have used some of the following books:²

Martin Fernandez de Figueroa, Conquista de las Indias de Portugal, Salamanca, 1512.

Martín Fernandez de Enciso, Suma de Geographia, Sevilla, 1519.

Sir John Mandeville, Libro de las marauillas del mundo, Spanish translation, Valencia, 1521.

Francisco de Jerez, Verdadera relacion de la conquista del Peru, Sevilla, 1534.

Pedro Nuñez, Tratado da Sphera, 1537.

Alexo Vanegas, Primera parte de las diferencias d ay en el universo, Toledo, 1540.

Pedro de Cieza de Leon, La Chronica del Peru, Sevilla, 1553.

Agustín de Zárate, Historia del discvbrimiento y conqvista del Perv, Antwerp, 1555.

Alvarez, Historia de las cosas de Ethiopia, Spanish translation, 1557.

Diego de Fuentes, Conqvista de Africa, Antwerp, 1570.

Diego Fernandez, Primera y segvnda parte de la Historia del Perv, Sevilla, 1571.

¹ Job, B. A. E., p. 399.

² This list of books is selected from a chronological table of sixteenth-century literature which Bell says may have interested León. Cf. Bell, Luis de Leon, Appendix C, pp. 328-378. The accent marks are those used by Bell.

Ocean. Literary

If the twentieth century is air-minded, the sixteenth century was certainly ocean-minded. Spain, having once tasted the wine of geographical discovery and exploration,¹ thought in terms of sea and ships, of new trade routes by water, of storms at sea which were an ever-present danger for her frail ships. It was natural that this thought trend should be portrayed in the literature of the day. León made good use of this navigation theme, weaving it in as a classic figure of speech and as a comment on the current geographical discoveries and travel of the time.

¹Discoveries and conquests immediately preceding and during the early part of León's lifetime may be summarized as follows:

- 1492 - Columbus discovers the West Indies.
- 1500 - Corte Real discovers Labrador; Pedro Álvarez Cabral discovers Brazil.
- 1502 - Columbus discovers Honduras.
- 1512 - Juan Ponce de León discovers Florida.
- 1513 - Balboa discovers the Pacific.
- 1519 - Magellan and El Cano leave Seville on voyage around world; Espinosa founds Panama.
- 1519-21 - Cortés conquers Mexico.
- 1520 - Magellan discovers Straits of Magellan and reaches Pacific.
- 1521 - Gil González discovers Nicaragua.
- 1522 - El Cano returns after first circumnavigation of globe.
- 1524 - Alvarado conquers Guatemala.
- 1526 - Pizarro discovers coast of Ecuador.
- 1527 - Spanish begin to colonize Venezuela; Cabeza de Vaca sails for Florida.
- 1531-36 - Pizarro conquers Peru.
- 1533 - Eight Augustinian missionaries leave Spain.
- 1535 - Pizarro founds city of Lima, Peru; Pedro de Mendoza founds Buenos Aires.
- 1538 - Hernando de Soto goes to Florida.
- 1541 - Francis Xavier goes to India.
- 1542-43 - Spaniards explore coast of California.
- 1542 - Portuguese discover Japan.
- 1545 - Silver mines of Potosí, Peru, discovered.

León's interest in the ocean thus can be termed both literary and scientific.

As a phase of his "back-to-nature" theme, León employs the much-used classical metaphor of the ship tossed and almost wrecked on the stormy sea, fleeing to a peaceful port.

"Roto casi el navio
a vuestro almo reposo
huyo de aqueste mar tempestuoso."¹

In this use, the tempestuous ocean represents the confusion and useless noise in the world of man's affairs; man himself is the ship caught in the storm and seeking the calmness of quiet waters, which, León points out, is to be found in the "retired life" close to nature.

León uses the turbulent sea also as a figure of speech to represent the stormy life through which Christ points out the true north to guide to port the boat which represents his people.

"Aqueste mar turbado
quien le pondrá ya freno?.....
estando tu encubierto,
que norte guiará la nave al puerto."²

León uses repeatedly the idea that life is like a stormy sea. Both his odes and his sonnets have their share of this theme.

".....sin vela y guía,
Navego por un mar amargo y fiero,"³

he cries. This threatening sea is lighted for him by the grace of the

¹"Vida Retirada," Oxford Book of Spanish Verse, p. 105.

Since a similar figure is prevalent in the writings of Lucretius, it would be of interest in further study to discover whether León could have been influenced by Lucretius' De rerum natura.

²"En la Ascension," ibid., p. 121.

³"Soneta V, Despues que no descubren su lucero," Poesías Originales, p. 113.

Virgin, to whom he refers as

"Clarísimo lucero
En esta mar turbada....."¹

and whom he addresses similarly as

"Virgen, lucero amado,
En mar tempestuoso clara guía....."²

That León's thoughts were keyed to things related to the ocean is shown by his interest in translated passages from the Bible in which such things are mentioned and by his readiness to develop and comment on these passages. The best example of this is found in the commentary on Job.³ Job in his suffering asks metaphorically if he is a sea or a whale that the Lord should constrain him.

" 'Si mar yo, si culebro, ¿qué pones sobre mi carcelería?'....
Quéjase comparandose con la mar y con la ballena, diciendo que le
trate Dios como á ellos....."⁴

With this slight Biblical reference to the ocean as a basis, León launches into a long comment, developing the figure of speech. He shows Job as being imprisoned and held within the boundaries of his sufferings as the sea is held within its limits;

".....le encarcela á él como tiene encarcelada la mar, ó que
así como está sujeta la mar á tormentas,..... así le hace á él
como sugeto propio de dolores y de miserias."⁵

¹"Oda XIX, A Todos los Santos," Poesías Originales, p. 84.

²"Oda XXI, A Nuestra Senora," ibid., p. 94.

³Job, B. A. E., p. 332.

⁴Loc. cit.

⁵Loc. cit.

he shows Job as an ocean troubled with tempests and beat upon by the violent waves and winds of his torments;

".....es como el propio lugar de los tempestades, y donde las olas combaten y los vientos ejecutan su violencia y rigor."¹

he shows Job's character, like the ocean, as being more powerful than the storms of his disaster and thereby being able to calm the turbulent waves on the smooth shore of his serenity.

".....Si mueven guerra los vientos al mar, es al fin poderoso el mar para avenirse con ellos, y si se levantan tempestades en él, es tan grande, que las lleva y las sufre, y si le encierra Dios y pone límite y le quebranta en la arena, quédale suficiente lugar adonde descanse y repose."²

León further develops this figure of speech by adding that Job in his misery is held firmly by God so that he should not be an ocean spilling over its limits to wipe out the land or to cover the earth with whales and sea serpents, which presumably represent his troubles.

".....¿Qué me cercas y tienes ansí preso y rodeado de males...., como si corriese peligro el mundo en mi libertad? Que á la mar tiénela encarcelada Dios con firmeza, porque si fuese libre anegaría la tierra, y ni mas ni menos la ballena y las serpientes del mar asolarían el mundo si pudiesen salir de su cárcel."³

A slight reference to the ocean in a translated passage has brought from León an extended metaphor in terms pertaining to the ocean.

Influenced by classical mythology, León speaks of the millions of Nereids in the sea watching a boat cut through the waves.

"Por los tendidos mares
La rica navecilla va cortando,
Nereidas á millares
Del agua el pecho alzando,
Turbadas entre sí, la van mirando."⁴

¹Job, B. A. E., p. 332.

²Loc. cit.

³Loc. cit.

⁴"A Santiago," Poesías Originales, p. 78.

He mentions the Aegian Sea, Ionia, and Corsica,

"Ya pasa del Egeo,
Vuela por el Ionio....
De Corcega se aleja."¹

but these references seem to present classical literary interest rather than geographical interest.

León extends the metaphor of the ocean and uses it to represent the soul as a ship navigating a "sea of sweetness" which is the transfiguring music of his organist friend, Salinas.

"Aquí la alma Navega
por un mar de dulzura."²

In this usage León has wandered far into the literary inland from the shore of the actual geographical ocean.

¹"A Santiago," Poesías Originales, p. 78.

²"Oda a Francisco Salinas," Oxford Book of Spanish Verse, p. 109.

Ocean. Scientific

"Era natural que, cuando España estaba a la cabeza de Europa y era la nación a que más hondamente interesaban los progresos en el arte de navegación, prestaran gran atención a éste y otros problemas científicos los escritores españoles."

—A. F. G. Bell¹

León, aware of the fast-growing knowledge of the ocean and of navigation during his day, exhibits his own interest in these subjects in references showing his alertness to their scientific aspects.

In one lyric alone he expresses his insatiable desire to know why the waves swell,

"Quando será que pueda.....
contemplar la verdad purasin velo?.....
porque las hondas mares se enbravecen....."²

what causes the ebb and flow of the tide,

".....porque crecen
las aguas del océano y descrecen."³

why certain constellations never dip below the horizon into the ocean,

".....porque están las dos osas,
de bañarse en el mar siempre medrosas."⁴

how a turbulent sea is held within its boundaries,

".....con que a la mar ayrada
la providencia tiene aprisionada."⁵

and even on what immortal foundation the earth itself is set!

"Veré las inmortales
columnas do la tierra está fundada."⁶

¹Bell, El Renacimiento Español, p. 252.

²"A Felipe Ruiz de la Torre y Mota," Oxford Book of Spanish Verse, pp. 109, 110.

³Loc. cit., p. 110.

⁴Ibid., p. 111.

⁵Ibid., p. 110.

⁶Loc. cit.

Surely this longing to know the true causes of processes of nature reveals a scientific interest.

The fear and uncertainty of ocean voyages which was felt in the sixteenth century, due to long voyages undertaken on uncharted waters by ships too frail to withstand the dangers of the trip, can be seen in another lyric where León pities the one who must entrust his life to the waves.

".....con lástima los ojos inclinando,
contemplaré el aprieto
del miserable bando,
que las saladas olas va cortando."¹

Covered rocks,

".....la cubierta
peña rompe la nave....."²

sandbanks,

".....en las baxas sirtes hace asiento."³

doldrums,

".....calma el viento."⁴

and rain storms,

".....roba el claro dia, y el corazon el aguacero."⁵

are mentioned as natural dangers to be encountered, often unsuccessfully.

It is no wonder that the safe harbor was so greatly to be desired!

¹"Al Apartamiento," ibid., p. 118.

²Loc. cit.

³Loc. cit.

⁴Loc. cit.

For ships depending on wind power, this was serious.

⁵Ibid., p. 119.

"Ay! otra vez y ciento otras, seguro puerto deseado!"¹

This theme of the storm-tossed ship appearing frequently in literature was well-grounded in actual fact and readily understood by León's sea-minded contemporaries.

León, however, was evidently an armchair navigator. Although it is known that he traveled in Spain, there is no record that he ever made an ocean voyage. Likewise his scientific references to the ocean and to ships are free from mention of nautical instruments, such as the astrolabe and the compass, and problems such as those of nautical cartography and of the determination of longitude, all of which doubtless would have captivated his interest and been mentioned somewhere in his writings, had he been personally familiar with them.² Therefore one may conclude that although León had a scientific interest in the ocean, as shown by his writings, he did not have personal experience with it.

It is possible that León in gaining information about the ocean may have drawn on the following sources:³

Pedro Alonso, Navegacion, 1532.

Francisco Faleiro, Tratado del Esphera y del arte de marear, Sevilla, 1535.

Pedro de Medina, Arte de navegar, Valladolid, 1545.

Martín Cortés, Breue compendio de la Sphera y de la Arte de Navegar, Sevilla, 1551.

Juan Pérez de Moya, Arte de navegar, 1564.

¹"Al Apartamiento," Oxford Book of Spanish Verse, p. 118.

²Various hispanic navigational methods in use in the fifteenth century are discussed by Julio Rey Pastor in La Ciencia y la Técnica en el Descubrimiento de América, pp. 93-100.

³See page 12, footnote 2.

Weather

León shows great interest in weather conditions and phenomena. His interest includes climate, winds, clouds, rain, and storms with their accompanying lightning and thunder. It is difficult to classify León's treatment of weather references as definitely literary or scientific. The reason for this is that while in almost all cases León's allusions and explanations show his own scientific interest in meteorological phenomena, he uses these allusions to further some literary metaphor which bears upon the passage on which he is commenting.

León with true scientific humility admits that he does not know the causes behind such natural phenomena as rain, clouds, lightning, and thunder.

".....no sabemos.....como cubre á tiempos con nubes el cielo,.... y no sabemos la causa ni de la serenidad ni nublado, y como truena unas veces y lanza rayos....."¹

He can only observe them and wonder at the reasons behind them. He remarks that none of man's attempted answers are satisfactory.

"....¿qué viento, cuanto sopla, hace huir las nubes y apura el cielo.....? ó ¿qué viento da calor a la tierra? Y no pregunta tanto cuáles vientos sean, ó cómo se nombran los serenos ó calurosos,.... ó qué fuerza y virtud es la que da al cierzo que serene y al solano que produzca calor. Porque.....ninguna razon de las que los sábios dan satisface, porque la verdadera y propia sábelo aquel que los hizo."²

He states that because of the movement of the sun³ the earth is divided into hot, cold, and temperate zones, and that the sun is the

¹Job, B. A. E., p. 460.

²Ibid., p. 473.

³See footnote 2, page 36.

cause of the weather and the seasons of the earth, bringing about green, fruitful seasons and times of droughts.

".....es declarar el movimiento que hace el sol, fuente de luz, entre los trópicos, acostándose unas veces al norte encubierto, y otras veces al nuestro; de que nacen las diferencias de tiempos, frios, calurosos, templados, y con ellas las de la tierra, que unas veces está verde, otras seca, otras llena de frutos, otras yerma y agostada."¹

León mentions the almost unbearable summer heat in Spain, speaking of the oppressive humidity and terrible heat which converts the land into an oven. Even to breathe is like breathing fire.

".....en el verano ó estío se espesa y escurece el aire con vapores gruesos, que con el calor encendidos, se convierten en horno, de manera que respiran los hombres fuego y padecen increíble tormento."²

León is interested in winds--in the directions from which they blow and in the effects which they produce.

".....esta diversidad de vientos, y la diferencia de los efectos contrarios que hacen....."³

He mentions the cold northerly wind, which calms the air, and the east and west winds, which bring heat.

".....los vientos, que ó serenán el aire, como el cierzo hace, ó le calientan como el solano y el abrego."⁴

Of the north wind he remarks that

".....el cierzo, que nace de aquella region (el norte) es frio y agudo viento."⁵

¹ Job, B. A. E., p. 471.

² Ibid., p. 303.

³ Ibid., p. 464.

⁴ Ibid., p. 473.

⁵ Ibid., p. 464.

The north wind may bring storms but usually, he says, it brings calm weather.

".....algunas veces llueve bien con el cierzo, al cual llama aqui serenidad, porque de ordinario sucede, cuando sopla, causarla."¹

This calmness is somewhat difficult to reconcile with his further statement that

".....con el viento cierzo soplando, helaba y apretaba las aguas... tambien algunas veces llueve abundantemente con cierzo."²

In speaking of the south wind, León backs his statements by quoting Pliny. The same south wind which brings storms and fogs to Spain brings, according to Pliny, calm weather to Africa and other tropical regions.

".....segun dice Plinio, el viento ábrego, que es tempestuoso en nuestras regiones y causador de nublados, en Africa y en las tierras mas adelante della y mas vecinas al mediodía, serena el cielo y destierra las nubes."³

León goes into a detailed explanation to refute popular fallacies concerning winds. He mentions that learned men regard the factors which cause winds to be cold or hot, dry or damp, to be conditions of the air itself.

"Porque sin duda, si se apuran las razones que los sábios dan para que unos vientos sean frios y otros calientes, unos sequen y otros humedezcan, constará ser razones de aire....."⁴

This León considers not to be based on fact.

"Tienen mas de imaginacion y sospecha que de razon y causa verdadera."⁵

¹Job, B. A. E., p. 465.

²Loc. cit.

³Ibid., p. 466.

⁴Loc. cit.

⁵Loc. cit.

León remarks that through experience one may see that the south wind brings heat; but the conclusion that it must therefore have blown from the torrid zone is, he says, false.

"El ábrego calienta, como por la experiencia se ve; y se dijere alguno por causa de su calor, venir del mediodía, que es para caliente y que tiene el sol siempre vecino, parecerá que dice algo, y apretado y llegado al cabo, ni es verdadero ni verisímil."¹

The south wind, he explains, may well have originated not at the equator, but only a few miles to the south of the place where it is felt.

".....el ábrego que viene del mediodía no siempre nace debajo de la zona tórrida ó de la equinoccial, ni llega soplando desde aquella region á la nuestra, sino nace de ordinario no muchas leguas de donde le sentimos soplar."²

Showing a surprisingly accurate concept, he says that in reality the north wind originates closer to the path of the sun.³ than does the warm wind of the torrid zone.

"Y si miramos á sus nacimientos de ambos [el ábrego y el cierzo], está mas cerca del camino del sol el que enfria á los meridionales que el que calienta á nosotros....."⁴

León concludes that therefore it is not, as popularly supposed, the temperature of the air at the equator or at the north pole which affects the temperature of the wind from that direction.

León notices types of clouds characteristic of certain seasons. He records that during the heat of midsummer the clouds often close in to

¹Job, B. A. E., p. 466.

²Loc. cit.

³León here shows his Aristotelian idea that the sun moves around the earth. See footnote 2, page 36.

⁴Job, B. A. E., p. 466.

form a heavy dark canopy and bring with them storms; he notes that in winter the clouds are generally calm and peaceful.

".....los nublados muy cerrados y negros, cuales suelen ser en los días de calor y de estío, que uno es el nublado de invierno (sic), sosegado y igual, y otro el del estío, turbado y tempestuoso y oscuro."¹

He explains that clouds may form or disappear suddenly.

"Porque 'sendas de nubes' son los caminos que hacen, el venir sin saber en qué manera, y desaparecer cuando menos de piensa...."²

From a small cloud in an otherwise clear sky may in a short time form a covering of clouds over the whole sky.

"De una pequeña nube, estando el cielo sereno, en brevísimo tiempo cúbrese todo de nubes...."³

He mentions that according to weather conditions clouds may send forth rain or snow, in small or large quantities.

".....á sus tiempos ordenados y propios envien de las nubes el agua, unas veces hecha nieve, y otras deshecha en gotas menudas de lluvia, unas mansa y otras recia y copiosa....."⁴

León seems particularly interested in the mysterious balance in the atmosphere which keeps clouds suspended in air. The cause of this is, to him, unknown.

".....en el aire las [nubes] tiene suspensas y como en una cierta balanza, que no las consiente ni alzarse mas altas ni caer descendiendo.....sus causas propias y verdaderas son muy ocultas...; y no las entiende sino quien mucho sabe y es perfecto en la ciencia."⁵

¹Job, B. A. E., p. 460.

²Ibid., p. 465.

³Ibid., p. 465, 466.

⁴Ibid., p. 463.

⁵Ibid., p. 466.

He mentions that sunlight draws water up into the clouds,

".....la luz que levanta los vapores que lluevan...."¹

and that these clouds are composed of thin vapor.

".....la niebla misma.....es vapor húmedo, esto es, agua en vapor vuelta y adelgazada."²

He concludes that even though water is heavier than air, because it is in the form of a finely-divided vapor it can be upheld.

"Y pareciendo no ser posible que el agua, mas pesada que el aire, se pudiese sobre él, halló Dios forma como adelgazarla y alivianarla en vapores...."³

León distinguishes between two kinds of rain—the soft, gentle rains of winter and the strong, driving cloudbursts of summer.

".....dice.....de las lluvias del invierno y verano.....que á sus tiempos ordenados y propios envien de las nubes el agua, unas veces hecha nieve, y otras deshecha en gotas menudas de lluvia, unas mansa y otras recia y copiosa.....La primera es mollezná ó agua mansa, como de invierno, y la segunda recia y de avenida, como son los turbiones en verano....."⁴

He explains the falling of rain from clouds as a phenomenon due to change in temperature. His explanation is that as long as a cloud remains in a warm part of the atmosphere it holds water in the form of vapor, but when the cloud enters a cold region the water is converted back to its original form and, being heavier than air, it falls as rain.

"Y porque adelgazada el agua así, pudiera subir tan alto, que no fuera despues de provecho, templó y compuso el aire en tal forma, que llegada á cierta parte dél se detuviese, y con el frio de aquel

¹Job, B. A. E., p. 461.

²Ibid., p. 474.

³Ibid., p. 409.

⁴Ibid., p. 463.

lugar se espesase la que iba hecha humo con el calor, y espesándose cobrase cuerpo, y vuelta á su primera forma y peso cayese."1

León speaks of storms at night brought on by a violent east wind.

".....el aire solano.....es violento y furioso; y dice de los torbellinos, porque, como nacen de concurso de vientos, suelen tener mayor fuerza....de las aguas y de la tempestad y turbien nocturno, dice bien en consecuencia de aquello, del viento y del torbellino, que todo suele andar junto.....la lluvia los cerca, y la noche y la tempestad los espanta, y el viento los arrebatá, y el torbellino los arranca de su lugar....."2

He describes realistically a summer storm in Spain, with foreboding clouds which bring night-like blackness in the daytime and are accompanied by hot, oppressive fogs.

".....á unos dias los hace tristes el ser nublados, á otros ser tempestuosos con torbellinos, en otros suceden tempestades negras como la noche, y cerradas, y que son como una sombra de muerte; y los buchornos y las calinas otras veces, no solo turban el cielo, mas hacen amargá y incomportable la vida."3

León speculates about the relationship between the thunder and lightning but arrives at the erroneous conclusion that in nature thunder precedes lightning. His explanation is that the sound of thunder is caused by lightning tearing the cloud; and since the cloud must be torn before the lightning can be released from it, thunder must of necessity precede lightning.

"En la naturaleza, y segun lo que pasa en el hecho de la verdad, primero es el trueno y despues el relámpago, porque el relámpago para salir rasga la nube, que rasgándose hace aquel estampido; y como es primero rasgarla que salir fuera della, así es primero el tronar que el relámpago."4

¹Job, B. A. E., p. 409.

²Ibid., p. 414.

³Ibid., p. 303.

⁴Job, B. A. E., p. 462.

Since León was evidently interested in the thunder-lightning phenomenon from a scientific standpoint, and since he must have observed it thoughtfully in order to reach even this conclusion, one wonders why he should reverse the natural order.

Ice and hail are mentioned various times in León's works. He marvels that a substance as soft as water is so quickly hardened into stone-like ice and spends some time in declaring that water and ice are the same thing in different forms.

".....el hielo es agua dura como piedra. Y no es poca maravilla ver en cosa tan blanda como el agua es, tanta y tan presta dureza.... á la verdad el hielo es agua y no le parece.....cuando el hielo vence, el agua.....corria pura."¹

In developing the Biblical phrase of the "treasure of snow and hail,"² León presents the idea that God has stored up a supply of snow and hail, ready to be used quickly when needed.

"Pues preguntale se ha entrado en los tesoros de la nieve ó granizo; porque habla de estas cosas como de algunas ricas alhajas repuestas y guardadas en sus almacenes para á su tiempo usar dellas, é imagínalas como provisiones hechas y allegadas y amontonadas en grandísima copia, y mucho antes del menester, para cuando la ocasion se ofreciere."³

This idea recurs in an original poem in which León speaks of the treasures of snow which God has laid away.

".....do los tesoros tiene
de nieve Dios....."⁴

One cannot help wondering at the curious ideas which León holds in almost child-like belief along with his scientific viewpoint.

¹Job, B. A. E., p. 473.

²Job 38:22.

³Ibid., p. 472.

⁴"A Felipe Ruiz de la Torre y Mota," Oxford Book of Spanish Verse, p. 110.

Stars. Literary

León's scope of interest includes the lights of the universe. Frequently in his lyric poetry these lights are found as a diffused glow, perhaps linked with his ideas of mysticism. Thus he discovers truth "converted into resplendent light."

".....la verdad
.....en luz resplandeciente convertido....."¹

He asks to pass his life "in uncorrupted light."

"traspasaré la vida
.....in luz no corrumida."²

Heaven he considers as an "alma region luciente."³ On finding contentment in raising his eyes to the stars and his thoughts to the heavens beyond, he discovers

".....clarísima luz pura,
que jamás anochece....."⁴

As this diffused light is focused, ~~it~~ becomes the "starry night" theme⁵ so prevalent in León's writings. León uses the stars as a means of lifting his thoughts, of inspiring awe, of leading him into contemplation and meditation. He comments that

".....nadie alza los ojos en una noche serena, y ve el cielo estrellado, que no alabe luego a Dios, ó con la boca ú dentro de sí con el espíritu."⁶

¹"A Felipe Ruiz de la Torre y Mota," Oxford Book of Spanish Verse, p. 109.

²"Al Apartamiento," ibid., p. 118.

³"Morada del cielo," ibid., p. 119.

⁴"Noche serena," ibid., p. 117.

⁵"El tema de la noche estrellada.....es un tema dilecto de fray Luis." Federico de Onís, footnote in De Los Nombres de Cristo, II, Clásicos Castellanos, p. 134.

⁶Job, B. A. E., p. 454.

León regards stars not only as inspirers of noble thinking but also as confidants of these thoughts. He speaks of talking "in the ears of the stars"¹ (a most unusual figure of speech!), imparting to them almost every night his cares and longings.

Thinking of one such starry night, León wrote one of his greatest lyrics, the "Noche serena."

"Quando contemplo el cielo
de innumerables luces adornado....."²

he begins and after philosophizing to himself about the sublime life which man could lead he exhorts,

"Ay! levantad los ojos
a aquesta celestial eterna esfera....."³

Although this poem⁴ is his longest sustained piece of writing on the noche estrellada theme, he repeats this theme frequently throughout his works.

The noche estrellada theme finds its source in Biblical literature, particularly in that of the Psalms. The Spanish monk whose wont it was to spend time each evening at his window in meditation and whose knowledge of Hebrew poetry was intimate found a kindred spirit in the Israelite shepherd who spent his nightly watches in contemplation of the heavens. Besides his adoption of this theme from the Psalmist, León reinforces a

¹".....hablar en los oydos de las estrellas, con las cuales comunico mis cuydados y mis ansias la más de las noches."

De los Nombres de Cristo, II, Clásicos Castellanos, 33, p. 68.

²"Noche serena," Oxford Book of Spanish Verse, p. 114.

³Ibid., p. 115.

⁴Cf. commentary by Azorín on León's "Noche serena" found in Poesías Originales, pp. 14-19.

noche estrellada passage in a prose work with a direct quotation from Psalm 19.

"En el psalmo se dize; Que el cielo pregona la gloria de Dios, y sus obras las anuncia el cielo estrellado."¹

From the standpoint of mythology, León knew well the stars. In referring to the planets, he attaches to them a human quality as if he were speaking of the mythological characters for whom they are named. Thus he mentions "el sanguinoso Marte ayrado," "el Jupiter benino," and "Saturno, padre de los siglos de oro."²

The sprinkling of names of constellations throughout his prose and poetry suggests the influence of Virgil's Georgics Book I, which León translated in full and quotes in part³ in his Exposicion del Libro de Job. As an example of this influence of Virgil on Exposicion del Libro de Job may be cited León's mention of the constellations of "the two bears, always fearful of bathing themselves in the sea."⁴ This an almost word-for-word use of Virgil's passage, "the two Bears--the Bears who ever shrink from the touch of the ocean's waters."⁵

¹De los Nombres de Cristo, II, Clásicos Castellanos, 33, p. 68.

²"Noche serena," Oxford Book of Spanish Verse, p. 116.

This apparently literary reference to the planets has also a scientific aspect, since here "Fray Luis has given the planets in the order of their distance from the earth, according to the astronomy of the time." Walter T. Pattison, Representative Spanish Authors, New York, Oxford University Press, 1942, I, footnote on p. 57.

³Job, B. A. E., p. 341.

⁴"Las dos osas, de bañarse en el mar siempre medrosas." "A Felipe Ruiz de la Torre y Mota." Oxford Book of Spanish Verse, p. 111.

⁵Virgil, Georgics Book I, in Works of Virgil, translated by John Conington, Philadelphia, David McKay, Publishers, undated, p. 49.

León himself translated these lines thus:

".....las dos osas.....
Las osas, que en la mar nunca el pié frío
Lanzaron....."¹

The sun, moon, and stars serve as standards for comparison in León's writing. He compares St. Anthony to the moon shining among stars.

"El claro Anton parece
Luna que en las estrellas resplandece."²

Similarly, he speaks of the Virgin as being dressed with the sun, standing on the moon, crowned with eternal lights.

"Virgen del sol vestida,
De luces eternas coronada,
Que huellas con divinos piés la luna....."³

He refers to her also as

"Virgen que el sol mas pura,
Gloria de los mortales, luz del cielo."⁴

He mentions

".....las dos luces de vida....."⁵

presumably the sun and moon. Obviously literary are his figures of speech "the gracious star of love"⁶ and "the moon moves as a silvery wheel."⁷

¹Poesías, Libro Segundo, B. A. E., p. 42.

²"Oda XIX, A Todos los Santos," Poesías Originales, p. 85.

³"Oda XXI, A Nuestra Senora," ibid., p. 92.

⁴Loc. cit.

⁵"Oda XXIV, Imitacion de Diversos," ibid., p. 99.

⁶".....la graciosa estrella de amor....."

"Noche serena," Oxford Book of Spanish Verse, p. 116.

⁷"La luna como mueve
la plateada rueda....."
Loc. cit.

In summary, León derives his literary themes of stars and other heavenly bodies from the Psalms and from Virgil's Georgics. Out of all the themes which León uses, that of the noche estrellada is perhaps his best-known and most characteristic.

Stars. Scientific

For León, stars were not merely heavenly lights to be used in a purely literary manner. They were also a matter of great scientific interest. With characteristic zeal for expanding knowledge, León shows keen interest in astronomy and astrology. Bell comments, "That he had not merely gazed at the heavens but studied astrology is evident. 'He was a great astrologer,' says Pacheco....."¹

León's commentary on Job is especially rich in references displaying León's observations of heavenly bodies. He notes the seasonal swing of the rising and setting sun from the northern to the southern horizon;² he observes that the path of the sun is toward the south at noon;³ he speaks of midnight as the time when the sun is in the lowest part of the sky;⁴ he comments that from his position on the globe can never be seen the "southern stars of the other pole";⁵ he even mentions an

¹A. F. G. Bell, Luis de Leon, p. 248.

²".....el movimiento que hace el sol, fuente de luz, entre los trópicos, acostándose unas veces al norte encubierto, y otras veces al nuestro..." Job, B. A. E., p. 471.

³".....llama.....derecha la [parte] que está al mediodía.....porque el movimiento y camino del sol va por aquella parte continuo....."

Ibid., p. 399.

⁴".....la media noche.....cuando el sol está.....en lo mas bajo del cielo..."

Ibid., p. 474.

⁵".....aquellas tierras australes.....han sido tierras encubiertas.....y así, llama bien retrete y apartamiento.....a las estrellas australes del otro polo....."

Ibid., p. 341.

eclipse in which the sun casts the earth's shadow against the moon.¹

From these references it is apparent that León's interest in astronomy is more than merely literary.

Ever alert to some phase of meteorology, León looks for a relation between the weather and positions of stars. He notices weather typical of a certain season of the year and links to it as a possible cause the constellations seen at that season. He notes that certain constellations-- Orion, for example--on rising or setting bring with them storms.

".....son constelaciones revoltosas, y que al nacer ó al ponerse, alterando el aire, suelen mover y despertar tempestades."²

For support in this idea, León relies on literary sources. He quotes from Horace a passage concerning Orion's storm--bringing powers.

"Yet see! Orion sinks and reels with tempest,"³

Horace said. León quotes from his own Spanish translation of Horace,

"Mas mira cómo lleno
El Orion de furia va al poniente....."⁴

Of the effect of the Pleiades on the weather, León again finds support in Horace, who mentions being

".....Driven by southern gales, when high
Mad Capra's star [the Pleiades] ascends the sky."⁵

¹".....como en algunas noches con la sombra de la tierra, que llega al primer cielo enviada del sol, se eclipsa la luna....."

Ibid., p. 305.

²Job, B. A. E., pp. 473,474.

³Horace, Book III, Ode 27, translated by William Sinclair Marris, Complete Works of Horace, Modern Library Edition, New York, Random House, 1936, p. 264.

⁴Job, B. A. E., p. 474.

⁵Horace, Book III, Ode 7, translated by Theodore Martin, Complete Works of Horace, p. 233.

Here again, León quotes from his own version of Horace in the vernacular.¹

León mentions various stars and constellations by name, among them the Pleiades, Arcturus, Orion, Virgo, and the Great Bear and Little Bear. It is to be noted as probably more than coincidental that these same constellations are mentioned in references scattered throughout Virgil's Book I of the Georgics.

Another phase of this study of the skies in which León shows by his references that he is interested is the movements of the stars.² In lyric poems as well as in prose selections, León makes frequent mention of this. His "Noche serena" carries a reference to the certain movement,³ unequal yet proportional, of heavenly bodies.

In León's day astrology was still a reputable science.⁴ With scientific bases, León looks for the relation between positions of stars and happenings in the life of man. He speaks with scientific interest of the twelve signs of the Zodiac, "los doce signos del cielo....."⁵

¹Job, B. A. E., p. 474.

²Although generally abreast of his times in scientific thought, León still clung to the Aristotelian concept of the solar system, in which the earth was regarded as the fixed center of the universe around which everything else revolved. He did not accept the new theory of Copernicus (1473-1543), whose concept gave the sun the central position. Bell (El Renacimiento Español, p. 253) comments on this backwardness in León's idea of the universe.

³"Noche serena," Oxford Book of Spanish Verse, p. 116.

⁴Bell reminds us that "astrology then embraced astronomy as well as what we should now consider the false science of astrology. Salamanca University possessed a Chair of Astrology."

A. F. G. Bell, Luis de Leon, p. 248.

⁵Job, B. A. E., p. 473.

He raises his eyes to see celestial movements, and like primitive peoples, to see signs in them.

"Veré los movimientos celestiales,
 así el arrebatado
 como los naturales
 las causas de los hados, las señales."¹

León states that by means of the stars and their positions one may understand about death and life and their causes, which are the constellations and celestial signs.

"Por la luz y las tinieblas y por las moradas de ambos se entiende tambien lo de la muerte y la vida, y juntamente sus causas, que son las constelaciones y aspectos celestes."²

Because in his day astrology was not regarded as a pseudo-science and because his Renaissance appetite for learning was great enough to include this idea in with the rest of his knowledge of heavenly bodies, this concept in León's writings may be considered not as superstition but as a part of León's scientific ideas. This belief in the power of stars over men's lives may at first glance appear to be pagan, but a closer study reveals that it is not. Good Christian that he is, León reconciles his astrological and religious beliefs by explaining that God governs a person's life but reveals his plan for that life in the positions of the stars.

"Si tuviera [Job] perfecta ciencia de las estrellas, ó verdaderamente de las causas todas de la muerte y de la vida, pudiera saber algo Job del principio de la suya y de sus pocos ó muchos años; mas, como no sabia lo primero, así ignoraba lo segundo; porque Dios es solo el autor verdadero y el sabidor cierto de ambas cosas, las cuales gobierna con su providencia....."³

¹"A Felipe Ruiz," Oxford Book of Spanish Verse, p. 111.

²Job. B. A. E., p. 472.

³Loc. cit.

In one lyric passage, León links his literary and scientific references to stars and lights. He speaks of observing the celestial movements of stars; then through the heavens into a higher sphere he looks and finds, above the physical forces of motion, the light of blessed spirits.

".....Veré los movimientos celestiales.....
 Quien rige las estrellas
 veré.....
 Veré este fuego eterno
 fuente de vida y luz.....
 Veré sin movimiento
 en la mas alta esfera las moradas.....
 de oro y luz labradas,
 de espíritus dichosos habitadas."¹

¹"A Felipe Ruiz de la Torre y Mota," Oxford Book of Spanish Verse,
 p. 111.

CHAPTER III

REFERENCES TO PLANT LIFE

Plants. Literary

León makes frequent use both in prose and poetry of references to plant life from a purely literary viewpoint.

Because much of his writing is based on the Bible and because botanical figures of speech recur frequently throughout the Psalms, Job, and the Song of Solomon, León employs in his own works these themes. If there is one comparison which is most often used by León, it is that of the righteous man who is like a flowering and fruiting tree enjoying the best conditions of water supply and sunlight, and the wicked man who is like a withered and seared plant. This comparison, best known in Psalm I, also recurs with variations throughout the book of Job. Being both a translator of Psalms and a commentator on Job, León receives ample contact with this comparison to assimilate it for his own use. Each time this comparison is found in Job, León elaborates on it anew, thus showing his continued interest in it. It is noteworthy that in treating this idea León continues to regard it from the literary viewpoint, never attaching to this much-used tree any botanical identity nor subjecting it to the weather conditions of Spain. Although this tree, under the stimulation of Biblical references, flourished surprisingly throughout León's comment on Job,¹ it apparently has not been transplanted into any of his original lyrics.

¹Job, B. A. E., pp. 378, 380, 381, 471.

Another frequent Biblical literary use of plant life is the comparison of the life of man with that of a flower, both being fleeting and soon withered.¹ On this idea likewise León never seems tired of elaborating. This readiness to develop time after time the same theme, each time varying his comments, is indicative of the author's sustained interest in this botanical allusion.

Not dependent on Biblical references awaiting development, León uses also original botanical metaphors in his commentaries. He speaks of Job as a fallen leaf.

".....siendo él una hoja caída y una astilla seca....."²

Using a more extensive comparison he says that Job is the flower of weakness, the fruit of misery; and that from such roots can grow only suffering.

"..... es ser.....como la flor de lo flaco.....; y quien esto es, en serlo es miserable, y en los frutos que dello coge muy mas miserable. Porque de tales raíces no pueden nacer sino culpas, y.... las penas dellas....."³

From other than Biblical sources come León's literary references to plants. Petrarch is the pattern for an illustration of transitory pleasures in which León speaks of finding himself in a flower-filled meadow only to discover the next moment that the blossoms had suddenly withered.

".....me hallé de un verde prado
De flores mil sembrado,
Obra do se extremó la naturaleza....."

¹Job, B. A. E., pp. 360, 385, 388.

²Ibid., p. 358.

³Ibid., p. 359.

Ay triste! que al momento
La flor quedó marchita,
Y mi gozo tornó en pena infinita."¹

Using the "Carpe diem" theme, León says that while a lovely flower lasts, not to enjoy it is to lose it.

".....mientras dura
Esa flor graciosa y pura,
Que el no gozalla es perdella."²

In his original poetry León employs botanical allusions. He refers to a new-born baby as a tender, growing plant.

"Illustre y tierna planta,
Gozo del claro tronco y generoso....."³

His friend Portocarrero he speaks of as a shoot or sprout.

"Bien eres generoso
Pimpollo....."⁴

The growing glory of St. Francis he compares to a growing tree.

"Cual árbol con los años
La gloria de Francisco sube y crece....."⁵

In describing degeneration, he says that where formerly grew the lily, the carnation, and the red wheat, there now grow oats, madder, and thistles.

"Adonde la azucena
Lucia y el clavel, do el rojo trigo,
Reina agora la avena,
La granza, el enemigo
Cardo....."⁶

¹"Oda XX, Imitacion del Petrarca," Poesías Originales, p. 102.

²"Oda XXIV, Imitacion de Diversos," ibid., p. 100.

³"Oda VI, En el Nacimiento de Doña Tomasina," ibid., p. 45.

⁴"Oda III, Al Mismo (Portocarrero)," ibid., p.3.

⁵"Oda XIX, A Todos los Santos," ibid., p. 85.

⁶Ibid., p. 86.

In this edition by Onís the word granza, madder, is used. In the version in B. A. E., p. 11, this word appears as grama, grama grass.

León uses as a background for several of his works a garden or surrounding countryside rich in plant life. One such botanical setting is that of De los Nombres de Cristo, in which the midsummer vegetation of the countryside along the River Tormes is an ever-ready source of literary comparison, supplying sturdy trees, leafy bowers, carpets of grass, and a lush growth of herbs for that purpose. León's "Vida Retirada" likewise shows a well-planted countryside redolent with blossoming orchards and scattered flowers, shaded with bushes and trees.

True humanist that he is, León leaves us with a picture of himself lying blissfully in the shade wearing a classical crown of eternal ivy and laurel.

"A la sombra tendido
de yedra y lauro eterno coronado....."¹

These plants, clearly used only to convey a traditional idea and not to display León's botanical observations, are perhaps the best examples of León's literary interest in plant life.

¹"Vida Retirada," Oxford Book of Spanish Verse, p. 106.

Plants. Scientific

León's dream of an ideal life included the satisfaction of planting and caring for an orchard.¹ This desire is indicative of a very real and scientific interest in plant life exhibited in his writings. León discusses with facility agriculture, growth and life processes of plants, the effect of weather on plants, ecology, the medicinal use of plants, and--most characteristically for a linguistic scholar--the accurate translation of botanical names from one language to another.

León speaks of snow covering sown fields, pressing into the ground the seeds and creating for them heat which causes seedling germination and root development.

".....en la tierra las nieves sobre los sembrados caidas, apretando el suelo y recogiendo el calor hacia el centro, hacen que se encape el grano y que eche raíces....."²

In the raising of wheat crops, wet weather is necessary not only for germination, he says, but also for the growth of young seedlings, especially during April and May.

"No solamente la sementera pide nubes y lluvia, mas tambien las desea el trigo ya nacido y crecido, como en los meses de mayo y abril."³

León's idea is that with the increasing growth of the plant an increasing amount of rain is necessary so that when in fruit the wheat plant needs a greater water supply than when merely growing vegetatively.

¹"Por mi mano plantado tengo un huerto." "Vida Retirada," Oxford Book of Spanish Verse, p. 106.

²Job, B. A. E., p. 463.

³Ibid., p. 464.

".....los [trigos] que están en su muerte y los que están en yerba, ni desean así [la lluvia] como los espigados, ni tanto las hojas como los granos y el fruto."¹

Plants can, however, be drowned in flooded fields.

".....dejará cubiertas y ahogadas sus plantas....."²

If the orchard whose praises León sings were a reality he surely knew from experience the sidelights he gives on pruning trees. He mentions that a tree when pruned may for a time seem dead, but on being watered it becomes green again and sprouts new branches, having more leaves and flowers than before.

"Unos árboles cortados se renuevan, y otros que parecen estar secos y muertos por falta de agua, en tornando á ser regados, tornan y reverdecen.....En tocándole el agua reflorcerá.....estos es, brotará por mil partes y se rodeará de ramos y hojas....."³

León warns, however, that if the main branch is cut back too severely, the root will dry out and die, and conversely that a serious injury to the root will cause the branches to wither.

".....como el árbol que sin esperanza se seca, queda seco en la raíz y en los ramos.....los corta de manera en lo alto, que pierda el jugo y la vida la raíz,.....danandose la raíz en un árbol, vienen á secarse las ramas....."⁴

Always interested in meteorology, León mentions weather conditions in relation to plants. He comments that grapevines and olives which begin to flower in early warm weather are likely to be killed by a sudden cold spell with wind and hail.

¹Job, B. A. E., p. 465.

²Ibid., p. 363.

³Ibid., p. 361.

⁴Ibid., p. 378.

".....de la viña que comienza á florecer, y.....de la oliva que está en flor.....suele acontecer muchas veces que, comenzando el día sereno, y estando ellas como alegres, desplegando al sol puro sus hojas y flores, de improviso se levanta un violento aire, y turba el cielo y envía una muchedumbre de piedra y granizo, que les derrueca al suelo toda aquella hermosura, quedando en un punto perdidas....."¹

Extremes of weather are serious for young shoots, which, he says, are easily burned by sharp, cold winds or wilted and dried by scorching temperatures.

".....las plantas nuevas se pierden, ó quemadas de algun aire frio y agudo, ó abochornadas del tiempo encendido, que las seca y marchita."²

León's foregoing remarks concerning horticulture may have been influenced by Virgil's Georgics, Book II, which León translated. Word-for-word likeness is not traceable here, but the subjects are similar.

Showing the pharmacological viewpoint, which up until the Renaissance had been the impelling force behind botanical study, León mentions that doctors prescribe for skin diseases a salve made from figs.

".....la medicina con que él le sanó, que fué masa de higos, es medicina que se aplica á las postemas y secas, como lo enseñan los médicos."³

He relies on Dioscorides, Pliny and Galen for information that spikenard root was used as a drug plant.

¹Job. B. Al E. p. 368.

²Ibid., p. 367.

³Ibid., p. 300.

"Nardo es una raíz muy olorosa.....de la cual escribe (sic) Plinio y Dioscorides que es conocida y usada en las boticas.... Galeno hace mencion de ella....."¹

León with surprisingly scientific observation extends his botanical interest into the field of ecology. He speaks of vines unable to support themselves and therefore climbing on the support of a palm.

"Hase de entender de alguna vid ó parra cercada á la palma y abrazada con ella, ó que trepa por el tronco arriba, dando vueltas y encaramándose con sus sarmientos;.....los tales racimos cuelgan y están asidos á la palma....."²

Although he notes that plant associations may be harmful to some of the associates as in the case of the wheat and barley being choked out by thorns and weeds,

" 'Por trigo me nazcan abrojos, y por cebada espinas,'.....es que frutifique la tierra al revés de lo que se le confía.....ansí crecen en ellas las espinas y malas yerbas."³

he explains that in general a plant grows better when in association with other plants than it does alone.

"Muchas veces se ve que una yerba buena crece mas cercada de espinas ú otras yerbas que se estuviese sola....."⁴

He remarks that smaller plants at the foot of larger ones form shade and conserve moisture; thus sun-loving plants and shade-loving plants are of mutual benefit in a plant community.

¹Traducción del Libro de Cantares, B. A. E., p. 254. Dioscorides, a Greek physician and natural philosopher of the first or second century, A.D., wrote on the medicinal uses of plants. Pliny, a Roman natural philosopher of the first century A. D., in his Natural History likewise mentioned plants chiefly for their medicinal value.

²Ibid., p. 276.

³Job. B. A. E., pp. 432, 433.

⁴Libro de Cantares, B. A. E., p. 256.

"Y la razon de esto es por natural apetito que las plantas tienen de gozar del sol; y lo otro, que las yerbas circunstantes la hacen sombra al pié y la conservan en frescura y humedad, y de aqui viene á ser mayor su crecimiento."¹

Scholar and linguist that he is, León is precise in his mention of specific plants. Carefully he traces down the exact translation of the plant name; with equally great care he gathers facts about the plant itself so that his comment on it may be accurate.² This precision is well illustrated in León's treatment of the Song of Solomon, where references to eastern Asiatic plants abound. A commentator less interested in scientific accuracy could well have passed over these references or dismissed them with only a brief comment. León, however, lingers over them and searches out scientific information concerning them.

In explaining a reference to the lily of the valley, León hastens to state that this may not at all be the flower intended by the original writer, since the Hebrew word means merely a flower of six petals. It could, he adds, be any such flower and suggests several kinds of lilies as possibilities.³

In commenting on the sandalwood, León explains that it is a fragrant tree and not, as some had translated, the aloe, which he describes as a small plant with thick leaves, stem, and roots.⁴ Myrrh he mentions several times. On Pliny's authority he explains that myrrh is a small

¹ Loc. cit.

² León's interest in correct translation of botanical names seems to be a combination of his botanical interest in the plant and his philological interest in its name.

³ Libro de Cantares, B. A. E., p. 256.

⁴ Ibid., p. 265.

tree, averaging five cubits in height, that it is pinelike, that its flowers and leaves are fragrant, and that during certain seasons when the bark is cut a liquid exudes which hardens into the myrrh used as incense. The myrrh tree's range, he says, is Arabia, Egypt, and Judea.¹

León mentions spikenard as a fragrant plant of which there are several kinds. One of these kinds, León cites Dioscorides as reporting, grows well in Syria and Palestine. Evidently from his own observation, León adds that another kind of this same plant grows in Spain and has the common name of water-plantain or spikenard.² Showing his linguistic interest in plant names, León gives the name of the spikenard in Greek and in Hebrew.³

In regard to cinnamon, León is again careful to explain various possible translations of the word. The plant cinamomo, León cites Galen as saying, has an inexplicable sweet, delicate odor. It is, León adds, more costly than the similar plant canela. Both the cinamomo and the canela are brought to Spain from the Portuguese Indies.⁴

¹Libro de Cantares, B. A. E., pp. 255, 265, 268.

²Ibid., p. 265.

In this passage León shows that he realizes what many of the herbalists of his day did not recognize--the fact that the western European species of plants with which they were familiar frequently differed from the eastern European and western Asiatic plants described by Dioscorides and other botanical authorities.

³Libro de Cantares, B. A. E., p. 254.

⁴"The Spaniards.....made their special contribution to botany.....as travellers, who recorded the plants of distant lands to which their spirit of adventure carried them."

Agnes Arber, Herbals, Their Origin and Evolution, Cambridge, University Press, 1938, p. 104.

Still a third plant, the calamus aromaticus,¹ may be intended. On the authority of Dioscorides and Pliny, León informs that this calamus, found in Syria, is somewhat like a fragrant rush and that on being broken over, the stem is not snapped off but rather left with splinters protruding.²

León gives a surprisingly scientific account of the cipro. He explains that this name is given to two different plants,³ one of which he dismisses as having a root similar to the ginger plant and having been brought to Spain from the East Indies. The other cipro, which he regards as the one meant in the Biblical passage, he explains as a kind of fragrant rush two cubits in height, with a square or triangular stem, long, slender leaves, and a spike of minute flowers. Its habitat is, he says, a lake shore or other damp places, and its geographical distribution is Syria and Cilicia in Asia Minor. For this cipro León gives two other common names in Spanish and one in Latin.⁴

León's diligence in tracing down the correct plant represented by a common name is shown again by his interest in the meaning of cofer. He gives among the possibilities the cipro rush and a species of palm; he finishes by saying, however, that it is probably an aromatic tree which grows in the region of the Dead Sea and has been mentioned by his ever-present standbys, Dioscorides and Pliny.⁵

¹It is to be noted that León, in attempting to avoid confusion of plants due to various translations of their names, realized some 200 years before Linnaeus the need for a standardized system of botanical nomenclature. León even goes so far as to use a binomial system in his mention of calamus aromaticus, Quinamon quane, and juncus odoratus.

²Libro de Cantares, B. A. E., p. 265.

³Again León must have rued the confusion caused by the use of common names.

⁴Libro de Cantares, B. A. E., p. 265.

⁵Ibid., p. 255.

It is seen, then, that the chief sources of León's scientific references to plant life are the Bible, the Georgics of Virgil, and the works of Dioscorides, Pliny, and Galen. The Bible, principally Job and Song of Solomon, merely provides nature allusions which give León an opportunity to comment and to set down his own ideas, some of which he may have gleaned from Virgil. In supplementing his knowledge with authoritative information, he has consulted the scientific treatises relied on in his day. It is characteristic of León as a humanist that he has gone for information to writers of classical antiquity.

It is not known whether León was familiar with the works of botanists of his century. He never quotes them, but the reason may have been that he did not consider their authority firmly enough established to place beside that of the venerable ancients. It seems logical to assume that as a well-read person and especially as a person who **did** research reading to gain botanical information, León may have consulted Otto Brunfels, Herbarum vivae eicones;¹ Leonard Fuchs, Historia Stirpium;² and Andrea Cesalpino, De Plantis.³ Certainly Brunfels' method of listing a plant name in various languages, recounting what ancients authorities said of the plant, and finally adding his own observations is the same method used by León in his comments on plants mentioned in Song of Solomon.

¹Brunfels, (1488?-1534) was a German botanist whom Linnaeus called "the father of botany."

²Fuchs (1501-1566) was a German botanist who initiated botanical terminology.

³Cesalpino (1519-1603) was an Italian botanist and pharmacologist.

Other books to which León probably had access and in which he would have been interested are:¹

Gabriel Alonso de Herrera, Obra de Agricultura, Alcalá, 1513.

Juan Bautista Monardes, Verdadera Descripcion de todas las yerbas que hay in España, 1536.

Amato Lusitano, Index Dioscoridis, Antwerp, 1536.

Andrés de Laguna, Annotaciones in Dioscoridem, Lyon, 1554.

Juan Fragoso, Discurso de las cosas aromáticas de la India Oriental, Madrid, 1572.

Cristobal Acosta, Tractado de las drogas y medicinas de las Indias Orientales, Burgos, 1578.

Not directly influencing León but indicative of the growing scientific spirit in his environment is the trend from the general to the specific in botanical art of the Renaissance. This trend can be shown by a comparison of plants as portrayed in illuminated borders of Spanish manuscripts, showing fanciful flowers entwined among illogical, never-ending vines,² with plants as portrayed by Botticelli, in whose painting Primavera can be distinguished thirty species of plants painted with scientific accuracy.

¹See page 12, footnote 2.

²Jesús Domínguez Bordona, Spanish Illumination, N. Y. Harcourt, Brace, and Co., 1930, II, pp. 67 ff.

CHAPTER IV

REFERENCES TO ANIMAL LIFE AND MEDICAL SCIENCE

Animals. Literary

In mentioning animal life León again uses his customary two types of references. However, judging from the number and quality of his zoological allusions, León's scientific interest in animals far outweighs his literary interest. This fact may be seen by comparing the literary allusions here given with the scientific allusions in the following section.

The lion finds its way into León's lyric poetry. For purposes of simile, it is used to portray the Spaniards chasing the Moors in battle;

"Como leon hambriento
Sigue, teñida en sangre espada y mano,
.....Al moro que huye en vano."¹

and similar use is made of it elsewhere.² It appears again in the phrase, "with the force and cunning of the lion and the bear."

".....con fuerza y mana del oso y del león."³

Clearly this lion is not regarded as an actual living animal but as a literary idea to convey pursuit by some strong and terrible force.

Another instance in which one animal is used as the summation of an

¹"Oda XVIII, "A Santiago," Poesías Originales, p. 81.

²"Oda III, Al Mismo," ibid., p. 35.

³"Oda XIX, A Todos los Santos," ibid., p. 83.

idea occurs in León's commentary on Job.¹ León interprets the Biblical passage as using the behemoth (elephant) and the leviathan (whale) to represent collectively all land animals and all water animals. Taken together they portray the great and wonderful creations of God and inspire awe in the heart of man.²

One whole chapter³ of the Book of Job is devoted to a description of the whale in all its mightiness. The Biblical description is itself not a scientific account of the whale; rather it portrays the fearsomeness of this great animal by means of a number of literary figures of speech, surrounding the animal with awe and legend. In keeping with the Biblical account, León's comment likewise is not a scientific treatise on the whale. He retains the spirit of the scripture in commenting on such figures as the fortress of its skin,

".....la fortaleza y dureza de su cuero....."⁴

and the doorway of its mouth.

"Y llama.....puertas tambien, por mostrar su desmesurada grandeza, mas semejante á puerta que á boca."⁵

León's interest evidently does not extend to worms. Although in one instance he dutifully comments on a Biblical reference in which worms are used in a figurative manner,

¹Job, XL, B. E. A. E., p. 480.

²Job, B. A. E., pp. 482, 483.

³Job, XLI, B. A. E., p. 484; León's comment pp. 484-486.

⁴Job, B. A. E., p. 485.

⁵Loc. cit.

".....acordarle al hombre que se convierte en gusanos y que nació de padres gusanos, es decir que de nacimiento es pecador el hombre."¹

in another instance in which the Book of Job specifically mentions worms, León's comment is singularly free from any allusion to them whatsoever.²

¹Job, B. A. E., p. 408.

²" 'Y yacerán á una en el polvo, y los cubijarán los gusanos;' conviene á saber, igualmente y por una misma manera, habiendo sido en los sucesos de la vida tan diferentes. Y no por eso es injusto Dios ni parcial en el repartir de la dicha, que por los fines que él sabe, y no puede nuestra bajeza alcanzar, á vida dichosa y á vida amarga puede rematar de una misma manera."

Job, B. A. E., p. 391.

Animals. Scientific

León seems to be concerned with animals not so much from the viewpoint of the literary concepts which they may represent as from the viewpoint of the actual zoological animals themselves. His range of interest covers domestic animals and wild animals, feeding habits and hibernation, geographical distribution and economic importance, and even extends to the possibilities of sea monsters.

Of domestic animals, León speaks of cattle, lambs, goats, and horses. He mentions that oxen are useful as weather prophets.

".....antes que llueva, los bueyes sienten luego la mudanza del aire, y lo dan a entender alzando en alto la nariz y abriendola, y atrayendo el aliento para sí con mas fuerza."¹

This statement he supports by quoting from his own translation of Virgil.

"Porque ó la grulla luego alzando el vuelo,
Como el vapor del valle se levanta,
Le huye, ó la becerra, vuelta al cielo,
Atrae el aire á sí....."²

Thus even in his scientific references León seeks the support of well-established literary authorities.

León speaks of the breeding of cattle and of the multiplication of flocks.

¹Job, B. A. E., p. 461.

²Virgil, Georgics, I, ll. 375, 376, translated by Luis de León, quoted in Job, B. A. E., p. 461, given in full in Poesías, Libro Segundo, B. A. E., p. 44.

Conington translates this passage:

"Never man was surprised by rain unaware. He might.....have seen..... the heifer turning its face to heaven and sniffing up the air with its broad nostrils."

Virgil, Georgics, Book I, translated by John Conington, p. 53.

".....la naturaleza, que por el encuentro ó flaqueza de las causas segundas hace yerros muchas veces con otros, en sus casas destos no yerra, sino que la vaca les pare siempre, y el ganado se les multiplica por extraordinaria manera."¹

He seems to delight in mentioning frisking lambs and young goats expressing by means of gamboling their health and exuberance.

"Andan á manadas como ganados;.....sigue la misma semejanza del ganado en los corderos y cabritos pequeños, que retozan saltando, y quiere decir que viven sanos y alegres y en contino placer."²

The horse León praises as being an animal of strength and marked spirit, nobility, and valor.

".....ansí dice ahora de él (el caballo), por ser su natural maravilloso en extremo, así en el ánimo que tiene, como en la gallardía de cuerpo, como en el brio y ligereza y afición á las armas.Es animal de fuerza y ánimo señalado....que demuestra su brio a gallardía, y su corazon no nada cobarde."³

León seems greatly interested in African and Asiatic animals, some of which he has seen in captivity, others of which he knows through reading. The rhinoceros, he says, is known in Spain because of several imported individuals;

".....por ser notorio ya en estas partes, por algunos que de la India oriental han venido....."⁴

It is, he comments, a fierce creature of great strength which cannot be domesticated.

¹Job, B. A. E., p. 389.

²Ibid., p. 390.

³Ibid., p. 479.

⁴Ibid., p. 478.

Popular knowledge of the rhinoceros was also doubtless partly due to the account of it in Konrad Gesner's Historia Animalium, which contained a picture of the rhinoceros which Gesner claimed was painted by Albrecht Dürer.

Erik Nordenskiöld, History of Biology, p. 94.

".....el rinocerote....., animal ferocísimo, así en braveza de ánimo como en grandeza de fuerzas, como en el talle y com- postura de cuerpo.....De este le pregunta.....si se atreverá á hacelle doméstico."¹

Picking up a scriptural reference to the zebra, León refers to Pliny for information that this animal is a wild ass and, according to Pliny, quite ferocious.

"Cebro es el asno salvaje, animal, como Plinio dice, feroz...."²

It has nocturnal feeding habits.

".....los cebros.....se desvelan en su obra y madrugan a la presa de su sustento."³

The lion's habits of stalking prey are also mentioned.

"De los leones.....se escribe que para cazar se absconden, y así la caza sin sentirlos se les llega y es de ellos presa...."⁴

The wild ass is spoken of as a proud and solitary animal.

"El 'asno salvaje' es animal libre y soberbio, y amigo mucho de la soledad....."⁵

He refers to the harnesses worn by African and Asiatic camels when they are used as beasts of burden.

"El freno de los camellos y de otros animales grandes, de que los africanos y los asiáticos se sirven....."⁶

Of the elephant León speaks in great detail. Asiatic elephants, he says, are used in war to carry supplies and men.

¹Job, B. A. E., p. 478.

²Ibid., p. 402.

³Loc. cit.

⁴Job, B. A. E., p. 476.

⁵Loc. cit.

⁶Job, B. A. E., p. 483.

".....los de Asia, que usaban de elefantes en la guerra, armaban encima de ellos grandes castillos de madera, en que iba mucho numero de gente....."¹

León speaks of the great quantities of food and water which one elephant requires. In regard to the elephant's habitat, León says,

"Son amigos de lugares húmedos los elefantes, según Plinio...."²

He mentions that the mating of deer occurs only when a certain star rises.

".....no conciben hasta que comienza a nacer cierta estrella."³

Relying on Aristotle's authority, he speaks of their birth, explaining that for deer parturition is quite difficult and that the hind eats a certain powerful herb to facilitate the birth.

"El parto y preñez de las ciervas, de quien escribe Aristóteles y otros autores que paren con muy grande dificultad, y de manera que no parece cosa posible, y así se encorvan y braman mucho al tiempo del parto, y como guiadas por Dios, preñadas comen cierta yerba poderosa para hacerse fácil."⁴

León explains that young fawns are early taught to flee from danger and soon leave their mothers, capable of fending for themselves.

"Toman en breve fuerza los cervatillos, y las madres los enseñan luego á huir y correr, con que á poco tiempo las dejan, apartan, y buscan por sí su mantenimiento y su vida."⁵

He speaks of various habits of animals. Of hibernation he says,

".....vencidas de él [el frío], y no pudiendo sufrir su rigor las alimañas, todas se van á sus cuevas, y en el abrigo de ellas metidas, en cuanto el rigor dura, pasan su vida."⁶

¹Job, B. A. E., p. 482.

²Ibid., p. 483.

³Ibid., p. 476.

⁴Loc. cit.

⁵Loc. cit.

⁶Job, B. A. E., p. 464.

Regarding feeding habits, he says that domestic animals are herbivorous and wild animals carnivorous.

".....en los animales.....unos se mantienen de yerba, y estos son mas domésticos, y otros de carne, y estos son fieros y crueles....."¹

All animals, he comments, no matter how fierce, are gentle in caring for their young.

"Todos los animales, aunque en sí sean fieros, son blandos y amorosos para sus crias....."²

Insects are mentioned several times. The leaping of the locust

".....que saltase presto y ligero como si fuese langosta....."³

and the insidious chewing of the clothes moth

"La casa que la polilla en el madero ó la vestidura hace, haciéndola la destruye....."⁴

are noted.

Evidently León has no great interest in snakes. Although the Scripture gives him an excellent opportunity to discuss snakes at length, he dismisses the allusion with a mere paraphrase of the Biblical verse, simply mentioning that the snake wriggles as it flees.

".....la culebra que entre ellos se tuerce y da vueltas, en la forma que hace las veces que huye."⁵

This time with a scientific interest, León discusses whales of the northern waters.

¹Job, B. A. E., p. 432.

²Ibid., p. 478.

³Ibid., p. 479.

⁴Ibid., p. 413.

⁵Ibid., p. 410.

".....las ballenas.....que crían los mares que están mas sujetos al norte....."¹

Other animals of the sea, unnamed and fearsome, León mentions.

"Mas en la mar hay otros géneros de monstros fierísimos y grandísimos, de que hacen memoria muchos.....autores....."²

The known sources of León's scientific references to animal life are Virgil, who lent him literary moral support, and Aristotle and Galen, who lent him scientific information. It is possible that León was acquainted with the work by the Swiss zoologist Konrad Gesner (1516-1565), Historia Animalium, which, although greatly influenced by León's frequently consulted Aristotle and Pliny, surpasses both. This work, popularized by its profuse illustration with woodcuts by eminent artists, is the most important zoological work of the Renaissance. It seems likely that it may have been the source of a part of the zoological knowledge of León.

¹Job, B. A. E., p. 483.

²Ibid., p. 486.

The idea of the possibility of sea monsters was given impetus by the discovery of the New World. Confronted by an unexplored hemisphere, the European imagination conceived of numerous biological monstrosities which it might contain. Even as late as 1598, Konrad Gesner's Historia Animalium contained a drawing of a tremendous dragon-like sea serpent enveloping a ship.

Julio Rey Pastor, La Ciencia y la Técnica en el Descubrimiento de América, pp. 33-35; drawing from Gesner reproduced on p. 38.

Birds. Literary

Because birds seem to appear throughout the writings of León with greater frequency than does any other one group of the animal kingdom, they are here treated in a separate section.

In "Vida Retirada," León's reference to birds shows not a scientific but literary interest.

"Despiértente las aves
con su cantar suave no aprendido....."¹

A lie-abed who wants to be awakened gently by the sweet, instinctive songs of birds clearly is not thinking of birds in terms of pre-dawn field trips. These matinal carolers of León's are fledglings of the birds in Garcilaso's imitation of Horace's Beatus ille, as shown by the fact that these

".....aves sin dueño
son canto no aprendido
hinchén el aire de dulce armonía."²

Both of these references are strikingly similar to the prototype of the passage in Horace, whose

".....hidden birds with native lays
The golden sleep prolong."³

By means of the thought content of the reference and by means of its literary heredity, it may be seen that this allusion to birds is purely literary.

León in other passages extolls the singing of birds at dawn. Perhaps

¹"Vida Retirada," Oxford Book of Spanish Verse, p. 106.

²Garcilaso, "Égloga Segunda," Obras de Garcilaso in series Clásicos Castellanos, 3, p. 30.

³Horace, "Epode II, Beatus ille," translation by John Dryden, in Complete Works of Horace, p. 90.

as an added enticement to early rising, he mentions that undoubtedly the singing of birds sounds more sweetly at sunup.

"Pues el cantar de las aves, ¿qué duda hay sino que suena entonces mas dulcemente....?"¹

Music-lover that he is, he adds that

".....á los oidos las aves hacen agradable armonía....."²

Other literary ornithological references appear throughout his poetry. He speaks figuratively of a captive bird struggling to free itself but in its strugglings becoming more entangled.

"Cuanto desenlazarse mas pretende
El pájaro captive, mas se enliga."³

When he is disillusioned, for him the nightingale no longer sings so well.

"....Ni canta el ruiseñor lo que antes era."⁴

In the manner of Petrarch, León speaks of love as a dove of white and rose and gold, coming gently but with its beak piercing one's heart and, transformed into an eagle, flying away.⁵

¹La Perfecta Casada, B. A. E., p. 224.

²Loc. cit.

³"Oda XXII, Esperanzas Burladas," Poesías Originales, p. 96.

⁴Loc. cit.

⁵"De blanco y colorado
Una paloma y de oro matizada,
La mas bello y mas blanco que se vido,
Me vino mansa al lado.....
Ay! Yo, de amor vencido,
En el seno la puse, que al instante
En mi pecho lanzo el pico tajante,
Y me robó, cruel, el alma y vida;
Y luego convertida
En águila, alzó el vuelo;
Quedé merced pidiendo yo en el suelo."

"Oda XXV, Imitacion del Petrarca," ibid., pp. 103-104.

Birds also appear in León's writings as a means of comparison, as for example,

".....mas ligero
Que el ave huye."¹

It is seen, then, that León's literary use of birds is influenced by Horace, Petrarch, and Garcilaso.

In connection with León's literary references to birds, it is interesting to note the concept of birds as represented in the art of his day. Birds appearing in the illuminated borders of sixteenth-century Spanish manuscripts² are obviously not drawn from nature but rather from the conventional Renaissance idea of a bird as a lovely, lilted creature for man's enjoyment. Perched amid purely artistic vines, these birds are products of colorful imagination. It is interesting to note that these birds appear most frequently in side view, painted in stiff, conventional poses. Had they been based on scientific observation, these birds might have had a more natural and realistic aspect. These birds from illuminated manuscripts may be considered, then, the artistic counterparts of León's literarily-inspired dawn carolers.

¹"Otra" ("Elisa, ya elpreciado"), B. A. E., p. 5.

²Jesús Domínguez Bordona, Spanish Illumination, II, pp. 67 ff.

Birds. Scientific

However much León may have regarded birds as sweet harbingers of dawn, he evidently was a keen observer of birds and knew well their characteristics. He speaks smilingly of noisy little birds chattering, beating their wings, darting playfully through the air, and enjoying their leafy surroundings.

"Las parleruelas aves
Una acordaba música hacian
De voces tan suaves,
que al alma enternecian.....
Y con gentil donaire
Plegando y desplegando sus alillas,
Jugaban por el aire
Las simples avecillas.....
Y en forma de torneo
Las unas con las otras se encontraban,
Con ligero meneo
Despues revoleaban,
Y entre la verde yerba gorjeaban."¹

Aside from his personal observations, another indication of León's scientific interest in birds is the fact that he mentions them not only generally as aves or pájaros but also specifically as paloma, águila, ruiseñor, buitre, avestruz, and gavilán.

The flight of birds seemed to interest León. He speaks out of observation concerning wing positions of birds in flight and at rest.

".....el ave cuando.....se cansa, en ninguna cosa lo muestra mas que en el ala, que caida de su natural al suelo, se le viene á los piés.....Las aves de ordinario al caer del dia...salen de sus nidos a volar por el aire.....con las alas cogidas y puestas cubren y como escurecen su cuerpo....."²

¹"A la Vida Religiosa," B. A. E., p. 8.

²Job, B. A. E., p. 351.

He speaks of

".....las aves, que peregrinan y pasan con facilidad de unas tierras á otras...."¹

thus intimating an interest in their migrations. He comments that the vulture by means of rapid flight is able to cover much territory in a short time.

".....los buitres.....sienten muy de lejos y vuelan en breve tiempo por diversas regiones....."²

The flightless ostrich's prowess in running is mentioned.

"Siendo animal tan pesado, que aunque tiene alas no puede volar, en correr es ligerísimo, porque ayuda con las alas los pies.....No hay caballo.....que así corra como el avestruz corre."³

The nesting habits of birds are mentioned. León notes that birds nest around houses deserted by man.

".....en muriendo sus dueños, morarán allí las aves....."⁴

The eagle, he says, characteristically nests among high peaks.

"Es propio de las águilas hacer nido en las cumbres mas altas..... son de agudísima vista las águilas, y así, aunque aniden en alto, descubren bien de allí la presa se abaten á ella, y allí ceban á sus hijos, que son aves que comen carne."⁵

León observes that young crows receive little parental care.

".....'los pollos de los cuervos'.....en aquellos primeros dias pian por comer, y los padres aunque los oyen los dejan....."⁶

¹Job, B. A. E., p. 416.

²Loc. cit.

³Job, B. A. E., pp. 478, 479.

⁴Ibid., p. 367.

⁵Ibid., p. 479.

⁶Ibid., p. 476.

The young ostrich receives even less, being abandoned in the nest before hatching.

".....del avestruz.....se lee que pone en la arena sus huevos, y olvidado de ellos, los deja."¹

In regard to plumage, León mentions the ostrich,

".....parece ser el avestruz en la pluma,"²

the hawk, the sparrow hawk, the crane,

".....en la pluma y en las alas.....puede ser tenido por una de ellas, como el azor ó como el gavilan, ó.....como otra cigüeña."³

and the peacock.

".....los pavones, cuya pluma es hermosa y pintada, y por eso alegre a la vista."⁴

Other birds to which León refers are the crane, the sparrow hawk, and the rooster. León notes that with the coming of autumn, the crane again stalks through the swamp lands.

"Ya el ave vengadora
Del Ibico navega los nublados,
Y con voz ronca llora....."⁵

He speaks of birds of prey, using as an example the sparrow hawk, explaining their habit of remaining watchfully at their perch until the moment to swoop down with great lightness and strength on their prey.

¹Job, B. A. E., p. 478.

²Loc. cit.

³Loc. cit.

⁴Loc. cit.

⁵"Oda X, Recoge ya en el seno," Poesías Originales, p. 54.

"Entiende las aves de rapina todas por el gavilan, que es una especie de ellas; á las cuales es proprio el estar en muda á sus tiempos, y renovar los cuchillos para volar despues con mayor ligereza y esfuerzo."¹

He discusses at length the rooster, which has the ability to observe the movement of the skies and to know thereby at precisely what moment to crow out his noon and midnight signal.

".....el gallo contará la órden, esto es, los movimientos del cielo y sus puntos y horas, para puntualmente dar señal con la voz del mediodía y de la media noche, para decir cantando, cuándo el sol esta en lo mas alto ó en lo mas bajo del cielo...."²

León is thinking from a scientific standpoint when he talks of the doves of Palestine. In order to explain a literary reference in Libro de Cantares in which the husband compares his beloved's beautiful eyes with those of a dove, León has to have scientific information about this particular kind of dove. Since the doves found in Spain have eyes not especially distinguished for their beauty, the comparison is not fully appreciated until León, relying on knowledge gleaned from merchants who have traveled in Palestine, explains that Palestinian doves are noted for their large, brilliant eyes whose strange color seems like live fire.³

¹Job, B. A. E., p. 479.

²Ibid., p. 474. One wonders if Spanish roosters do not also crow at dawn!

³".....dice de sus ojos que son como de paloma. Las que vemos por acá no los tienen muy hermosos; pero sonlo de hermosísimos las de la tierra de Palestina; que, como se sabe por relaciones de mercaderes, y por unas que traen de levante, que llaman tripolinas, son muy diferentes de las nuestras, señaladamente en los ojos, porque los tienen grandes y llenos de resplandor, y de un movimiento bellissimo, y de un color extraño que parece fuego vivo."

Ibid., p. 255.

Since León exhibits a genuinely scientific interest in birds, it is entirely possible that he may have been acquainted with the ornithological works of two of his contemporaries, the Italian Ulisse Aldrovandi (1522-1605) and the Frenchman Pierre Belon (1517-1564). The groupings of birds used by Aldrovandi in his four volumes-----birds of prey, fowl, song birds, and water birds-----are all represented in León's above-mentioned references to birds, thus showing that León's scientific interest extended to all groups of birds then recognized. León may also have been acquainted with Belon's Histoire des oyseaux, a monumental work in the science of ornithology.

It is of interest to note that the birds as represented in León's writings and in the two books previously mentioned are more realistically portrayed than they are in the supposedly scientific drawings of the day, if the birds illustrated in the herbal Ortus sanitatis (1497?) are representative.¹ The crude sketches show curious birds with tufted ears and human faces. The "scientists" who made these drawings were in their ornithological concepts far behind the writings of León.

¹Cf. Illustration from Ortus sanitatis shown in Arber, Herbals, their Origin and Evolution, p. 200.

Medicine and Anatomy. Scientific

As may be expected of one so interested in zoology, León comments not infrequently on medicine and anatomy. In his references, all of which appear to be scientific in viewpoint, may be noted the prevalent ideas of the day concerning these subjects.

Prompted by Job's plight, León goes at length to describe various types of skin diseases--among them boils, abscesses, and tumors.

".....sechin es enfermedad de landres y secas.....Estas de Job fueron dolorosísimas y pestilencialísimas secas.....secas malignas y muy enconadas."¹

He explains how a boil comes to a head and how it is opened, accompanied by fever, nausea, and often incredible pain.

".....cuando despues se abren y rompen las llagas, hacen asco, y la materia suciedad y hedor; y si cuando unas maduran, otras comienzan á reverdecer....."²

Loss of appetite and difficulty in breathing may result.

".....aborrecia el comer, y de falta de aliento y estrechez en el respirar y apretamiento de la garganta....."³

León comments on another of Job's diseases, that of having insatiable hunger and not being able to eat because of great pain afterwards.

".....una de las enfermedades de Job fué hambre insaciable por una parte, y por otra no poder sufrir la comida."⁴

León says that this illness Galen and others ascribe to inordinate heat

¹Job, B. A. E., p. 300.

²Loc. cit.

³Loc. cit.

⁴Job, B. A. E., p. 307.

in an extremely weak stomach.

".....es enfermedad á quien Galeno, Tralliano, y Paulo Egineta llaman que paxe de calor destemplado del estómago y de flaqueza del mismo."¹

Speaking further of the stomach and viscera, he says, relying on information supplied by Aristotle and Galen,

".....entiendo el vientre que Aristóteles y Galeno llaman inferior, que es así redondo; la parte mas alta....toca en el estómago y se avecina del pecho....Suben del vientre á los pechos, viniendo por su órden en la fábrica del cuerpo....."²

An idea recurring frequently in León's writing is that of the humors of the body. These he mentions in passing, remarking that

".....como es una la salud,.....los humores son unos....."³

and

á él."⁴.....con purificar y sanar el mal humor....le damos la salud

He also mentions them in more detail. Job's suffering he considers to be a result of the humor melancholy.

".....su enfermedad [la de Job].....era.....de humor melancólico."⁵

He adds that illnesses caused by black melancholy are marked by symptoms of sadness and fearfulness.

".....por una parte las apostemas doliendo, y por otra la melancolia negra y corrompida asiendo del corazon y espantándole,

¹Job, B. A. E., p. 307.

²Libro de Cantares, B. A. E., p. 275.

³La Perfecta Casada, B. A. E., p. 242.

⁴Loc. cit.

⁵Job, B. A. E., p. 323.

hacian guerra al varon santo.....En las enfermedades que son deste humor son increíbles las tristezas y los recelos y las imágenes de temor que se ofrecen á los ojos del que padece."¹

These illnesses become worse at night, he says, filling the body with pains like black flames.

".....las enfermedades de humor melancólico.....toman fuerza con las tinieblas, que son la hora propia cuando la melancolía hierve y humea; de manera que se se vela, arde en negras llamas...."²

This black humor disturbs the mind and causes terrifying dreams.

".....el humor negro, movido con el sueño, turba en la imaginacion las especies, y tiñelas de su mala color; de que resultan espantables figuras....."³

A most interesting idea is the one that blood and the other humors of the body if overheated may infect the heart.

".....la sangre y los demás humores del cuerpo, con el calor del día y del sueño encendidos demasadamente y dañados, no solamente corrompen la salud, mas tambien aficionan é inficionan el corazon....."⁴

Fever he regards as being caused by a poor quality of humor.

".....por la mala cualidad del humor enciende fiebres ardientes....."⁵

In regard to body temperature, León remarks that the larger and fiercer an animal is, the higher is its temperature, since on this heat depends life itself.

¹Job, B. A. E., p. 323.

²Job, B. A. E., p. 333.

³Loc. cit.

⁴La Perfecta Casada, B. A. E., p. 224.

⁵Job, B. A. E., p. 300.

".....como la vida de los animales está en el calor, los mayores y mas fieros y fuertes tienen calor mas sobrado....."¹

In this manner León explains the fiery breath of large animals, as for example that of the whale.

".....así, su aliento es muy mas encendido."²

In the light of anatomical knowledge of the day, it is of interest to note León's ideas of the heart and of circulation. The heart, he says, is an oven which contains the heat necessary for life.

".....es el corazon la hornaza que contiene y conserva en sí el calor de la vida....."³

By means of this heat the heart converts blood into "spirits" which, flowing through the arteries, animate the body.

".....es el corazon.....el lugar adonde por medio de este calor la sangre se convierte en espíritus que, derramándose por las arterias, alientan el cuerpo....."⁴

Since the heart must hold in heat, the flesh in the region of the heart, León says, is hard and firm.

".....cuanto el calor es mayor, tanto conviene que sea mas macizo y duro el hogar donde arde, para que no se pierda y derrame."⁵

¹Job, B. A. E., p. 485.

²Loc. cit.

³Loc. cit.

⁴Job, B. A. E., pp. 485, 486.

Although in the sixteenth century the word alentar was used chiefly in the sense of to animate or to encourage, León apparently has used it here in the sense of to breathe, an additional meaning which has become prevalent since his day. It is certain that he has used the word as to breathe in referring to the whale (Job, B. A. E., p. 485), since in close connection he speaks also of its sneeze.

⁵Ibid., p. 486.

Fresumable León is speaking of the thick muscular walls of the heart, the center of much anatomical speculation in his day. Disproving Galen's idea that the wall between the right and left ventricles is porous and permits the passage of blood, Servet demonstrated that this wall is solid.

Thus León exhibits his interest in the subject of the most important anatomical research of his period—that on the heart and the circulation of blood. His idea of "spirits" flowing from the heart to the arteries is in accordance with Aristotle's and Galen's concept of an air-like life principle contained in the circulatory system. Although León died thirty-seven years before Harvey published his proof of the circulation of the blood, he lived during a period in which other biologists anticipated Harvey's work.

It is extremely likely that León knew of the work of his fellow-countryman, Miguel Servet y Reves (1509 or 1511 - 1553), whose theological mysticism led him from the contemplation of man's spirit to the study of the body which contained it. The discoverer of pulmonary circulation, Servet maintained that "in the heart dwells first of all the spirit communicated by God."¹ This idea of the "spiritus vitalis" contained in the heart and arteries is strikingly similar to that shown in the foregoing quotations from León.² It has been claimed that prior to Harvey, Servet discovered the circulation of the blood,³ and Bell says that

"Algunos críticos toman unos versos de Garcilaso para probar que tuvo conocimiento o intuición del hecho (la circulación de la sangre) descubierto por Harvey."⁴

¹Erik Nordenskiöld, History of Biology, p. 111.

²León had much in common with his contemporary, Miguel Servet. Both were theologians and mystics; both ran afoul the Inquisition for expressing their views and criticisms; both had astrological and biological interests.

³N. B. Adams, Heritage of Spain, New York, Henry Holt Co., 1943, p. 135.

⁴A. F. G. Bell, El Renacimiento Español, p. 254.

However this may be, it is certain that the research being done on the heart and the circulation of the blood at this time was reflected in the thought of the day.

León might well have felt the influence of Vesalius (1514 or 1515 - 1564), who came to the court of Spain in 1544 as physician to Carlos V and later to Felipe II. It was during this time that Vesalius published his transcendent book on human anatomy, De Humani Corporis Fabrica,¹ whose woodcuts by Calcar are masterpieces of humanistic art as well as of biological science. Due largely to these plates, this work became known popularly. Even more important, however, in spreading interest in anatomical study in Spain was Juan de Valverde's Historia de la Composición del Cuerpo Humano,² a plagiarized and inferior version of Vesalius' Fabrica.³ It would have been strange indeed if León had not been familiar with these two great anatomical works.

León may well have derived some of his anatomical knowledge from his colleagues at Salamanca. Ball says that

"In 1550 an ordinance was published [in Spain] directing that, in all the schools where medicine was taught, anatomy should form part of the curriculum and should be illustrated by dissections."⁴

At Salamanca University, dissection was introduced in 1568,⁵ during the time that León occupied the Durando Chair and held the vice-rectorship

¹First edition, 1543; revised edition, 1555.

²Rome and Salamanca, 1556.

³Schuman's Medical Miscellany List "M", New York, Henry Schuman, Inc., undated, pp. 44, 45.

⁴Ball, quoted in A. W. Meyer and Sheldon K. Wirt, "The Amuscan Illustrations," Bulletin of the History of Medicine, XIV, December, 1943, p. 682. Since Vesalius advocated consulting not ancient authorities but the human body itself, one may speculate that this ordinance could have come about through his influence at the court.

⁵Bell, Luis de Leon, p. 359.

of the university. He therefore had opportunity to observe firsthand the anatomical studies of his associates.

León lived during a pivotal period in the history of medicine and anatomy. His scientific interest led him to capture current ideas on these topics and to preserve them in his writings. Through his references may be seen not only his own personal interest but also the general interest of the Renaissance period.

CONCLUSIONS

From the foregoing study, the following conclusions may be reached:

1. That Luis de León's writings show the author's interest in nature.

In addition to being a Biblical scholar, a linguist, a humanist, and a mystic, León was also a nature writer. As such he brought to Spanish Renaissance literature an element of closeness to nature. Both León's prose and poetry are filled with nature allusions. He mentions frequently the physical universe in which he lives, noting the shape of the earth, the movements of the stars, and the ebb of the ocean. Plant life also interests him; he speaks not only of such common crops as wheat but also of exotic plants of the East. Animal life figures frequently in his writings. The feeding habits of lions, the nesting sites of various birds, the habitat of the elephant all come within his scope of interest. As a humanist he assimilates into the contemporary culture the classic ideas of enjoyment to be found in life close to nature. As a mystic he writes of communion with the Creator to be found in the contemplation of nature.

2. That this interest in nature was both literary and scientific.

As a man of letters, León was well versed in literary concepts of nature. As a man of scientific interest, he knew much about the world of nature from an observational viewpoint. It was natural, therefore, that in his writings he should draw on both phases of his knowledge for his perspective on nature references. His two types of references seem

to be indiscriminately scattered throughout his writings. Since this study has not attempted to determine the frequency with which each type of reference appears, it is impossible without further research to conclude which viewpoint is the more prevalent in León's writings. It would seem, however, that whether or not León's scientific interests were actually the greater, he at least took much pride in his store of scientific knowledge.

3. That León used literary sources through which to express his interest in nature.

For translations León selected material teeming with nature allusions--works of the Latin poets, chiefly Horace and Virgil, and of the Hebrew poets of the Bible. The fact that he chose works of this type to translate indicates his interest in nature themes in literature. He used his own Biblical translations as points of departure for commentaries in which he included many short discussions of varied nature topics from both the literary and the scientific standpoint. His original works, too, bear the stamp of nature themes gleaned from previous literary sources, such as the "back-to-nature" theme from Horace by way of Garcilaso, and the "starry night" theme from the Psalms.

4. That León's works reflect science in transition during the Renaissance.

León lived in a period in which science, influenced by the humanistic trend, relied on ancient classical authorities. León illustrates this trend in his writing by placing complete confidence in the word of these men of the past--Aristotle for zoological information, Dioscorides and Pliny for botanical knowledge, and Galen for anatomical and medical material.

At the same time, science began to make new discoveries, to gather at random entirely new ideas, and, what is more important, to gain a self-confidence in the validity of these new observations. This aspect of science León embodies by an avid interest in New World explorations, by consulting travelers who have brought back to Spain their information first-hand, and by his own spirit of reliance on his own observations of nature.

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