Lucretius
De Rerum Natura V
Angus Mitchell
Holder-Horne Reini 1931-32
Edinburgh University

35 Garnder Park Road,
Edinburgh.
TITI LUCRETI CARI

DE RERUM NATURA

LIBER V.
T. LUCRETI CARI

DE RERUM NATURA

LIBER QUINTUS

EDITED
WITH INTRODUCTION AND NOTES

BY

J. D. DUFF, M.A.
FELLOW OF TRINITY COLLEGE, CAMBRIDGE.

CAMBRIDGE:
AT THE UNIVERSITY PRESS.
1930

Reprinted 1890, 1903, 1909, 1918, 1924,
1929, 1930

PRINTED IN GREAT BRITAIN
## CONTENTS

<table>
<thead>
<tr>
<th>PART</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>PREFACE</td>
<td>vii</td>
</tr>
<tr>
<td>INTRODUCTION</td>
<td>ix</td>
</tr>
<tr>
<td>ANALYSIS</td>
<td>xxix</td>
</tr>
<tr>
<td>TEXT</td>
<td>1</td>
</tr>
<tr>
<td>NOTES</td>
<td>47</td>
</tr>
<tr>
<td>INDEX</td>
<td>116</td>
</tr>
</tbody>
</table>
PREFACE.

The fifth book of Lucretius contains some of his finest work and also, being less technical and dry than any of the other books, is best suited to serve as an introduction to the study of the De Rerum Natura. This edition has been prepared with that object in view: it aims both at explaining this one book in detail for beginners and at smoothing the way to the comprehension of other and more difficult parts of the poem.

My obligations are very great, in all parts of my book, to Munro's famous edition. In the Introduction, I have also made considerable use of Professor Sellar's sympathetic and felicitous criticism in his two volumes on the Roman poets; and much of my fourth section is abridged from Zeller. For the astronomical section I have to thank the dexterity and kindness of Mr H. L. Callendar, Fellow of Trinity College. It may be worth saying here that the astronomical theories of Lucretius are simple enough, so long as they are purely fanciful, and difficult only when they approximate to the truth. Consequently the information here given is only a simplification of what may be found in the ordinary astronomical text-books.
PREFACE.

The text is in the main that of Munro's last edition; but I have admitted a few conjectures of Madvig and more recent writers. All such deviations from Munro's text are indicated.

In writing the notes I have constantly consulted Munro's commentary, and I have also kept before me the editions of Professor Kelsey (Boston 1884) and of MM. Benoist and Lantoine (Paris 1884), both of which are based on Munro but contain some original matter. But, owing to the class of students whom I had in view, it was impossible for me to follow any of these closely; and the notes are for the most part of my own writing. Finally I have to thank Dr J. P. Postgate, Fellow of Trinity College, who most kindly offered to read over the notes and made many suggestive criticisms.

J. D. DUFF.

Trinity College, Cambridge,
December, 1888.
INTRODUCTION.

I. LIFE OF LUCRETIUS.

*Nec vixit male qui natus moriensque seellit.*
Horace Ep. i 17 10.

The chronicle of Hieronymus or St Jerome, compiled about 400 A.D., has a record to the following effect: 'the poet Titus Lucretius Carus was born in 94 B.C.; he lost his reason in consequence of drinking a love-philtre and died by his own hand in his forty-fourth year, after composing in his lucid intervals several books which Cicero afterwards corrected.' The date of his death would thus be 50 B.C. But Donatus, who is more generally followed, in his life of Virgil mentions as a remarkable coincidence that Lucretius died (nothing is said of madness or suicide) on October 15th, 55 B.C., the day on which Virgil, being just fifteen, assumed the *toga virilis*.

We may then assume with fair probability that Lucretius was born in 99 B.C., and died in the autumn of 55. The other statements made by St Jerome are even more doubtful than his chronology. For first, with regard to the alleged madness and suicide, it is very strange that such a tragical ending of a great genius is nowhere mentioned by any subsequent Latin writer. And on the other hand the story was just such a pious fiction as was likely to be invented by a posterity shocked by the heterodoxy of Lucretius. It is worth noticing that a similar end was invented for Lucian, another Epicurean heretic: he is said by Suidas to have been torn to pieces by dogs. Again it seems highly improbable that the poem was written in the lucid intervals of a madman: the argument is severely logical, the arrangement masterly, in those parts of the poem which are not
obviously unfinished. The last statement of the chronicle, that Cicero corrected the books, implies one fact which is certainly true, that Lucretius left his poem unfinished and that it was given to the world after his death by some other hand. But we do not know what kind or amount of 'correction' the editor supplied, or even which Cicero was the editor, Marcus Tullius or his brother Quintus. Lucretius is mentioned once by the orator in a letter written from Rome to his brother Quintus, in January, 54 B.C., four months after the poet's death; but unfortunately the text of the passage is corrupt and throws no light on either of these questions; it is impossible even to gather how far the writer admired the poem, and on what grounds.

These scanty and unsatisfactory details are all we are told by the writers of antiquity about the personal history of Lucretius. He is mentioned occasionally by both poets and prose-writers, sometimes quoted and sometimes criticised; but no particulars of his life or death are anywhere else recorded. It is possible to add a very little to this meagre account from the internal evidence of his poem, though some of his editors have pushed conjecture far beyond reasonable limits.

In the first place it is tolerably certain that he was a Roman of good family and fortune. His gentile name is that of a very old patrician house; and the terms of absolute equality in which he addresses Memmius, a very distinguished figure at Rome in those days, point to the same conclusion. A modern writer has called Lucretius 'the aristocrat with a mission'; and it is true that the whole tone of his poem is that of a man in easy circumstances and familiar with the luxury of which he disapproves.

It is still more certain that his life was that of a recluse. Political activity was always distasteful to the Epicureans; and at Rome just at this time civil war was impending, and the political outlook was very dark. Lucretius is never more inspired than when he is denouncing ambition. Nor again could the immense literary activity of the time bring him into

contact with other men, as the literature he loved belonged entirely to the past. He was before all things a student. Much of his time must have been spent in study of the Greek philosophers and poets: he tells us himself that the absorbing pursuit of his life, which he carried on through 'the clear nights' and which haunted him even in sleep\(^1\), was the study of the philosophers and the exposition in his poem of their 'glorious discoveries.' According to tradition, his master Epicurus himself left three hundred rolls, 'golden words,' says Lucretius, 'on which I feed like a bee among the flowers\(^2\).'

And besides Epicurus there are many other abstruse and voluminous writers whose authority he acknowledges or whose dogmas he refutes; Empedocles and Democritus are conspicuous among the first, Heraclitus and Anaxagoras among the second. He also translates from or imitates the following Greek authors: Homer, Hesiod, Euripides, Thucydides, Hippocrates, and perhaps Aristophanes and Plato. Among Latin writers, we can trace imitation of Ennius and his nephew Pacuvius, the chief epic poet and the chief tragedian of early Latin literature.

Finally, from the truth and evident pleasure with which he describes all manner of natural objects and illustrates his arguments by them, we may infer that his life was spent for the most part in the country. We may think of Lucretius in some quiet place, away from 'the smoke and wealth and noise of Rome'; we may fancy him watching the clouds on the hills or the waves on the shore with the delight of a poet and the keen interest of a philosopher, or poring over the scrolls of Epicurus, and studying how he might best transfer their precious contents to his own immortal poem.

II. Poem of Lucretius.

*Docti furor arduus Lucreti.*

Statius Silv. ii 776.

The *De Rerum Natura* is a didactic poem: it professes to expound systematically a particular subject. The Works and

\(^1\) i 142; iv 969.

\(^2\) iii 9—13.
Days of Hesiod, the Georgics of Virgil, the Essay on Man of Pope, all belong to this class of poetry. The subject which the poem of Lucretius is intended to explain is the philosophical system of Epicurus or part of it. A short account is given below of such Epicurean doctrines as are explained or alluded to in the fifth book of Lucretius.

The form and title of the poem are derived from Empedocles of Agrigentum, who lived in the fifth century B.C. and wrote a famous treatise in hexameter verse, "περὶ φύσεως," of which some fragments are extant. The poem is dedicated to Gaius Memmius, prominent as an orator and statesman of the senatorial party, but a worthless and unprincipled man; why Lucretius thought him worthy of this distinction, we cannot tell. No other contemporary is mentioned in the poem, though some editors have thought they could trace allusions to Clodius and to Caesar.

The first two books are devoted to a very full account of atoms and void, these being, according to Democritus and Epicurus, the two great factors of the universe; here too the rival systems of other philosophers are stated and refuted. There is less evidence of incompleteness in these books than in the others. The third book is mainly taken up in proving that the soul is a material part of man, made up of atoms as the body is, and dying with the body. This theory is of the highest importance in the eyes of Lucretius and is therefore proved at great length. The fourth book explains the Epicurean theory of sight and the other senses; the fifth gives an account of the origin of the world, of life, and of human society; of this book a fuller analysis is given below. The last book is miscellaneous in its contents. It begins by discussing the nature of thunder and lightning and other celestial phenomena; it then deals with various natural curiosities, such as magnetic attraction, and ends with a description, taken from Thucydides, of the plague of Athens. It is obviously more confused and less complete than any of the other books.

Thus it will be seen that Lucretius begins by laying down the first principles of the atomic philosophy, and then discusses
in his last four books some special applications of that doctrine, which formed part of the system of Epicurus. The aim of the poet throughout is not so much purely scientific as practical and moral. His main object, as he tells us again and again, is to free men's minds from the yoke of superstitious fears by displaying to them the aspect and the laws of nature; and this is why he argues with such passionate earnestness against the immortality of the soul and the interference of the gods in human affairs. Thus the purpose of the fifth book is to show that the world and all that it contains were not created by divine power, and that all progress is the result of natural experience, not of divine guidance. And on the whole it appears that Lucretius lived long enough to complete in outline the whole task he had set before himself, though the latter part of the poem is far from complete in artistic finish and arrangement of materials.

With regard to the diction and metre of the poem, Lucretius deliberately adopted a style which must have seemed archaic to his contemporaries. This may be seen by comparing the De Rerum Natura with the Peleus and Thetis of Catullus, which was certainly written at nearly the same time. Just as Greek epic verse continued to the end to imitate the forms and vocabulary of Homer, so Lucretius thought fit to take for his model the Annales of Ennius, the only great epic which the language possessed, though two centuries had passed since it was written. At the beginning of his own poem he makes honourable mention of Ennius¹, and constantly imitates even the few hundred lines of fragments which we possess. It is probable too that his archaism was intended as a protest against the tendency of contemporary Latin literature. For just at this time there was great literary activity among the Romans. Any educated man could, as Mommsen says, turn off his five hundred hexameters at a sitting; Quintus Cicero wrote four tragedies in a fortnight to beguile the dulness of winter-quarters in Gaul. But all these poems were worthless imitations of bad models,—of Callimachus and the other learned poets of Alex-

¹ i 117.
andria. The pure taste of Lucretius revolted from the predominant fashion and attached itself to Ennius, and, through Ennius, to the classical Greek literature. Thus his philosophical creed and his literary taste alike led him to discard all such antiquarian and mythological lore as we see in the Coma Berenices of Catullus, translated from Callimachus. The mythology he resolutely refused to believe, and the only learning he valued was that which had power to purify the hearts of men and make their lives happy.

His archaism is seen both in the language and in the style. He uses many old words and forms, from which Virgil selects with discrimination; and he also coins many new words which no writer used after him. He prefers to use a significant Greek word in place of a feeble or obscure Latin equivalent. He is fond of the artifices of alliteration and assonance, which seem so congenial to early Latin and occur so constantly in Ennius and still more in Plautus; here again Virgil decidedly restricts the practice of his predecessors. His sentences are often excessively long and loosely constructed; he is indifferent to ambiguities which his Augustan successors would not have tolerated; and his order of words is often perplexing to those who are not familiar with his style. Again his metre, though more refined than that of Ennius, itself is wanting in harmony and especially in variety, when compared with the perfect rhythm of Virgil.

The difficulty of Lucretius, which even the ancients felt, is partly due to his fondness for archaism, but also to the inadequacy of the language as an instrument for expressing abstruse thought. Ennius had been able with rude vigour to depict the early history of Rome, to lay down a model of heroic verse for his successors, and to bequeath them a considerable vocabulary. But the language was still, as Lucretius thrice over complains, a very imperfect vehicle for the discussion of political, moral, and metaphysical ideas. The great measure of success which he attains must have been the result of immense labour.

1 Quintil. Inst. x 187. 2 i 136, i 830, iii 258.
Many have thought that Lucretius was singularly unfortunate in his choice of a subject. A great poet has said that poetry should be simple, sensuous, impassioned; and it would be difficult for any poem, consisting mainly of the exposition of a philosophical system, to satisfy these conditions. This is especially true of the Epicurean philosophy, which, at least on its metaphysical side, is of all systems the least lofty and the least profound.

Yet, in spite of his unattractive subject, his archaism, and his monotonous verse, the poem of Lucretius is immortal. The greatness is in the man rather than in the theme. In the doctrine of atoms there is much that is wonderful and striking to the imagination; but after all it is the personality and poetic power of Lucretius that make his work a possession for ever—his noble enthusiasm, his profound pathos, his intellectual seriousness, and his descriptive genius. In our own age his poem excites peculiar interest, because of its scientific spirit, and because it discusses the very same problems of religion, science, and anthropology which we are engaged in discussing over again. To his great qualities there is no lack of testimony. Few have known ancient and modern literature as Macaulay did; and he says of Lucretius: 'In energy, perspicuity, variety of illustration, knowledge of life and manners, talent for description, sense of the beauty of the external world, and elevation and dignity of moral feeling, Lucretius had hardly ever an equal.' Munro too, as competent a judge as any man who ever lived, sums up his opinion thus: 'It would hardly perhaps do violence to the taste of the present age to call Lucretius the greatest of extant Latin poets. Like the rest of his countrymen, he is not a great creative genius; we find in him many echoes even of the scanty fragments which we yet possess of the old tragic and epic poets, Accius, Pacuvius, and, above all, Ennius. He owes still more to the Greeks, especially Empedocles, so far as regards the form of his poem....From the splendid eulogies which in his first book he passes on Ennius and Empedocles, we may feel sure that he did not wish to conceal his obligations,'

1 Life, vol. 1 p. 468.
but, like other Latin poets, thought he had a right to make what use he pleased of his Greek and Roman predecessors. And he has merits of his own unsurpassed in the whole compass of Latin poetry. It has often struck me that his genius is akin to that of Milton. He displays a wonderful depth and fervour of thought, expressed in language of singular force and beauty; an admirable faculty of clear and vigorous and well-sustained philosophical reasoning; and a style equal in its purity and correctness to that of Terence, Caesar or Cicero, and superior to that of any writer of the Augustan age 1.

III. Lucretius and Virgil.

Non verba autem sola sed versus prope totos et locos quoque 
Lucreti plurimos sectatum esse Vergilium videmus.

Aulus Gellius i. 21. 7.

When the poem of Lucretius was published, [Virgil was fifteen years of age. 'At such an age therefore the style and manner of Lucretius were able to impress themselves fully on the younger poet's susceptible mind; and perhaps the highest eulogy which has ever been passed on the former is that constant imitation of his language and thought which pervades Virgil's works from one end to the other 2.' It may be added that this influence was at its height at the time when the Georgics, and especially the second, were written. Virgil never mentions Lucretius directly; but this is not surprising when we remember that he does not mention Theocritus once in the Eclogues, nor Hesiod by name in the Georgics, nor Homer at all in the Aeneid. There is however one passage which is unmistakably intended to carry an allusion to Lucretius. The lines are as follows:

Felix, qui potuit rerum cognoscere causas,
Atque metus omnes et inexorabile fatum
Subiecit pedibus strepitumque Acherontis avari.

1 Journal of Sacred and Classical Philology i. p. 21.
2 Munro, ii. p. 19.
INTRODUCTION.

Fortunatus et ille, deos qui novit agrestes,
Panaque Silvanumque senem Nymphasque sorores.

It is evident that in these and the preceding lines Virgil is instituting a comparison, to his own disadvantage, between Lucretius, who had ventured to explain the laws of nature, and himself, who was content with loving and describing her external aspects. We may compare the similar contrast drawn by Matthew Arnold between Goethe and Wordsworth, in which Virgil's words are thus applied to Goethe:

And he was happy, if to know
Causes of things, and far below
His feet to see the lurid flow
Of terror, and insane distress,
And headlong fate, be happiness.

Virgil was a most modest man and no doubt sincerely believed that Lucretius was a greater genius than himself. But if he did so, he stood almost alone among his countrymen. The Arma virumque, as the Roman poets love to call the Aeneid, entirely eclipsed the Aeneadum genetrix with the Roman public, if indeed the latter ever had any vogue at all; and even the few, who ventured to disparage Virgil, do not seem to have set up Lucretius as a rival object of admiration. It was reserved for our own century to extol the earlier poet at the expense of the later. Johnson maintained with accustomed vigour against Burke the superiority of Homer to Virgil; but if any rash member of the Club had substituted Lucretius for Homer, it is probable that Johnson and Burke would have made common cause against so novel a paradox. During the present century, however, the comparison has often been made; and the verdict of the learned has gone, on the whole, in favour of Lucretius. This is not the place to enter on a discussion of such wide range and doubtful value; but, if it be admitted that a nation is competent to judge its own literature, it should also be remembered

1 Georg. ii 490—494.
2 Ov. Trist. ii 534; Mart. viii 56 19.
3 Ov. Remed. 367; Suet. Gaius 34.
INTRODUCTION.

that the Romans were practically unanimous in ranking Virgil as the peer of Homer and far above all other Latin poets. It is very improbable that they would have allowed even the proximi honores to Lucretius. We are not entitled to settle such a question absolutely, by our own standards and our own preferences; how should we feel ourselves, if a highly educated Hindoo asked us to take his word for it, that Marlowe was a greater poet than Shakespeare, or Wordsworth than Milton?

It is interesting to notice that the relation between the two poets is by no means one of unmixed sympathy. When we consider the religious and almost mystical temperament of Virgil, his respect for tradition, and the difference of his political and social surroundings, we cannot wonder that he is repelled as well as attracted by the genius for which he expresses an almost despairing admiration. 'Virgil is no mere disciple of Lucretius, either as regards his philosophy or his art. Though his imagination pays homage to that of the older poet; though he acknowledges his contemplative elevation; though he has a strong affinity with the deep humanity of his nature; yet in his profoundest convictions and aspirations he proclaims his revolt from him.'

It will be observed that in many of the passages of Virgil where we find an echo of Lucretius, the sense is quite different though the words are like or even identical. This is most easily accounted for, by supposing that his mind was so saturated with the writings of his predecessor, that he reproduced the cadences and even words without being conscious of it. An example may be taken from another pair of Latin poets. Every reader of Martial is struck by the number of allusions to Catullus and imitations of him. But there are also resemblances of a subtler kind. For instance, Catullus in one of his poems reproaches Calvus for sending him a present of some bad poetry, and vows to take revenge by sending him a similar present in return:

1 Quintil. Inst. xi 85. 2 Sellar, Virgil p. 197.
INTRODUCTION.

nam, si luxerit, ad librariorum
currarum scrinia......

Now Martial, addressing his fourth book, advises it to gain
the approval of Apollinaris, and tells it, if condemned, to be
off to the trunk-makers':

si damnaverit, ad salariorum
curras scrinia protinus licebit.

The words are almost exactly those of Catullus; the mean-
ing is entirely different. There can be no stronger proof of
ingrained familiarity than such unconscious imitation.

The following is a list of the passages in the Eclogues and
Georgics which are most obviously imitated from the fifth book
of Lucretius.

| Lucr. v 8 | deity ille fuit, deus, inclyte Memmi. |
| Ecl. v 64 | deity, deus ille, Menalca. |
| Lucr. v 30 | equi spirantes naribus ignem. |
| Georg. ii 140 | tauri spirantes naribus ignem. |
| Lucr. v 33 | asper, acerba tuens. |
| Georg. iii 149 | asper, acerba sonans. |
| Lucr. v 97 | nec me animi fallit quam res nova miraque
menti accidat...
et quam difficile id mihi sit pervincere
dictis. |
| Georg. iii 289 | nec sum animi dubius, verbis ea vincere
magnum quam sit... |
| Lucr. v 202 | possedere, tenent rupes vastaeque paludes. |
| Georg. ii 144 | implevere, tenent oleae armentaque laeta. |
| Lucr. v 207 | ni vis humana resistat,
vitae causa valido consueta bidenti |

1 xiv 17. 2 iv 86 9.
INGEMERE, et Terram pressis proscindere aratris.

ni vis humana quotannis...
depresso incipiat iam tum mihi taurus aratro
ingemere.
validis terram proscinde iuvencis.
pulveris exhalat nebulam nubesque volantes.
tenuem exhalat nebulam fumosque volantes.
camposque natantes.
campique natantes.
solis item quoque defectus lunaeque latebras.
defectus solis varios lunaeque labores.
novo fetu quid primum in luminis oras
tollere et incertis crerint committere ventis.
sponte sua quae se tollunt in luminis oras.
inque novos soles audent se gramina tuto credere.
arboribusque datumst variis exinde per auras
crescendi magnum inmissis certamen habenis.
dum se laetus ad auras
palmes agit laxis per purum inmissus habenis.
orba pedum partim.
trunca pedum primo.
genus acre leonum.
genus acre luporum.
INTRODUCTION.

Lucr. v 925 at genus humanum multo fuit illud in agris
durius, ut decuit, tellus quod dura creasset.

Georg. i 62 Deucalion vacuum lapides iactavit in or-
bem,
unde homines nati, durum genus.

Lucr. v 937 quod sol atque imbres dederant, quod terra crearat
sponte sua, satis id placabat pectora do-
num.

Georg. ii 500 quos rami fructus, quos ipsa volentia rura
sponte tulere sua, carpisit.

Lucr. v 944 miseris mortalibus.
Georg. iii 66 miseris mortalibus.

Lucr. v 1250 nam fovea atque igni prius est venarier
ortum
quam saepire plagis saltum canibusque
ciere.

Georg. i 139 tum laqueis captare feras et fallere visco
inventum, et magnos canibus circumdare
saltus.

Lucr. v 1255 manabat venis ferventibus in loca terrae
concava conveniens argenti rivus et auri.

Georg. ii 165 haec eadem argenti rivos aerisque metalla
ostendit venis atque auro plurima fluxit.

Lucr. v 1368 fructusque feros mansuescere terram
cernebant indulgendo blandequ colendo.

Georg. ii 36 fructusque feros mollite colendo.

Lucr. v 1387 per loca pastorum deserta atque otia dia.

Georg. iii 476 desertaque regna
pastorum, et longe saltus lateque vacantes.

Lucr. v 1393 propter aquae rivum.

Ecl. viii 87 propter aquae rivum.
INTRODUCTION.

Lucr. v 1395 praesertim cum tempestas ridebat...
Georg. ii 310 praesertim si tempestas a vertice silvis incubuit.

IV. SOME DOCTRINES OF EPICURUS. 342-270 B.C.

Philosophus nobilis, a quo non solum Graecia et Italia sed etiam omnis barbaria commota est.
Cicero De Fin. ii 49.

Epicurus was born at Samos in 342 B.C. He went to Athens when he was thirty-five years old and there founded a school of his own, in which he taught until his death in 270 B.C. He was almost worshipped by his disciples and was by all accounts a most amiable and excellent man, and not at all an Epicurean in our sense of the term. Before 200 B.C. his system had found many supporters at Rome, though it was not so congenial to the gravitas of the Roman character as the rival system of the Stoics. The doctrines of Epicurus, which are explained or mentioned by Lucretius in his fifth book, must be briefly noticed here. These are,

1. the theory of atoms and void;
2. the nature of the soul;
3. the nature of knowledge;
4. the existence and nature of the gods;
5. the theory of celestial phenomena.

1. ATOMS AND VOID. Epicurus adopted in its entirety the atomic theory of Democritus, born in 460 B.C. According to this theory the whole universe consists of two things, body (σῶμα, corpus), and void (τὸ κενόν, ingne). The existence of body or matter is proved by the evidence of our senses, the existence of void partly by the possibility of motion, as bodies could not move if there were no void or empty space for them to move in, and partly by the unequal weight of bodies equal in bulk: a ball of lead is heavier than a ball of wool only because it contains less void. All body, which we may call matter, is composed of atoms, to which Lucretius gives the names principia, primordia rerum, corpora materiae. These atoms differ
INTRODUCTION.

in size, shape, and weight, and are unlimited in number. They have existed from everlasting and can never be split up or destroyed in any way, because they are solid and indivisible, containing no void. They are in constant motion, being impelled downwards by their own weight and sideways by the blows of other atoms; they are so small that our sight cannot perceive them. Void also is unlimited in extent; and so the universe, which is made up of these two constituents, is also unlimited. A finite world such as ours, including earth, sea, and sky, is formed whenever a concourse of atoms, after many fruitless experiments, have assumed positions which enable them to move for a time without separating from one another. But a world so formed, as it had a beginning, will also have an end; and the liberated atoms will then continue their race through void and take part in future combinations. All these operations are the result of chance, not of design.

It was certainly a happy intuition that induced Epicurus, indifferent as he was to science in general, to adopt this scientific theory. His contemporaries thought it ridiculous, but modern science has accepted it as true in the main. 'The propositions in which Lucretius has stated his atomic theory anticipate some recent discoveries in both chemistry and physics in a most marvellous way. Science has now proved that his propositions as to the constitution of matter are either certainly true, or else foreshadow the truth.'

(2) THE SOUL. The psychology of Epicurus is strictly materialistic, and admits no difference between mind and matter. Just as the body is made up of atoms, so is the soul or vital principle (ψυχή, anima), and the mind or rational principle (λόγος, animus). The only difference is that the soul and mind consist of the smallest and lightest atoms; this is proved by the speed of thought and by the fact that the body, when life has ceased, is not diminished in size and weight. The vital principle is diffused over the whole body; the rational principle has its seat in the breast. The soul, under which both anima and animus may be included, cannot exist apart

from the body; it was born together with it and will die with it. Death therefore is nothing to us, as sensation cannot survive for a moment the separation of body and soul.

Lucretius brings forward no less than twenty-seven arguments against the immortality of the soul. He is anxious to leave no doubt on the point, as he believes that the unhappiness of men is mainly due to their fear of punishment in a future life.

(3) Perceptions and Conceptions. All knowledge, according to Epicurus, depends on the senses. Their evidence is unimpeachable: when we get a wrong impression of some object we see, the blame rests, not with our sensation, but with our judgment of the sensation, i.e. with the mind, not with the eyes. By a repetition of the same perception there arises a conception or notion (πρόληψις), which is called by Lucretius notitia, and more accurately by Cicero anticipatio. This notion is a general picture, retained in the mind, of what has been perceived. The origin of perceptions is explained in the following way. Exceedingly fine films (εἴδωλα, simulacra) are constantly being discharged from the surface of all bodies, bearing the exact likeness of the body itself. These films move with infinite speed through void and are conveyed to the soul by the various organs of sense. When we see a horse, an image has come from the horse and passed through our eyes into the soul. Taste, hearing, and smell are explained in just the same way; only the atoms of smells travel slower than the atoms of sounds, and the atoms of sounds slower than the atoms of visible things. Thought also is excited entirely by material images; if we think of a Centaur, our thought is due to an image of a horse which has got mixed up with the image of a man. Lucretius goes so far as to say that when we dream of dead friends, our dream is due to a material image of them; but it seems impossible to explain how anything that no longer exists can discharge an image. Finally to images is ascribed the origin of belief in the gods; but here too there is some inconsistency.

1 See note to l. 1170.
(4) **The Gods.** Epicurus taught that the gods are immortal and perfectly happy. But this happiness would be perturbed if they sympathised with the sorrows of men. Therefore he held that they were absolutely regardless of human affairs and indifferent to our merits or demerits. Their body consists of atoms so fine as to be invisible to our senses; they live in spaces between worlds (μετακόσμα, intermundia), where no storms ever come. It is certain from the evil in the world that the gods had no hand in making it.

This theory is beset with difficulties, which might perhaps have been removed if Lucretius had fulfilled his intention of explaining it at large. But in fact the gods are quite out of place in the system of Epicurus. Their place is occupied by Nature, which is conceived, at all events by Lucretius, as an omnipotent and omnipresent force, governing the universe by fixed laws. If the Epicurean gods are included in the universe and are formed of atoms, as we are told, how can they escape the general law that all combinations of atoms had a beginning and must have an end? To give a satisfactory answer, Epicurus must have sacrificed the unity of his system.

(5) **The Heavenly Bodies.** His theory of knowledge led Epicurus to strange conclusions in his astronomy. Everything, he said, which can be tested by the senses and is confirmed by them, is true; again, opinions which cannot be brought to this test and at the same time are not contradicted by it, are all equally true. Thus it is a certain truth that the sun is really about the same size as it appears to us to be, because a fire on earth, so long as it is visible, does not diminish in size. But to say that the stars and the sun must move from some one controlling cause, or that eclipses admit of only one explanation, is a vain unphilosophical assumption. For these things are beyond our powers of observation, and there are many ways of explaining them, none of which is contradicted by the evidence of the senses, and each of which must be true, if not for our world, for some one of the countless worlds contained in the universe.

1 See n. before l. 564.
INTRODUCTION.

It will be noticed that Lucretius often gives the right explanation together with a variety of wrong ones, in dealing with these matters. The astronomers of his time did not understand the nature of attraction; and as they believed that the sun revolved round the earth, they therefore took his apparent motions to be real; but they had some idea of the size of the heavenly bodies, and they explained correctly the motion of the moon round the earth and the cause of eclipses.

V. THE CELESTIAL SPHERE.

Nec, si rationem siderum ignores, poetas intellegas.

Quintilian Inst. Or. i. 4.

The common celestial globe is a device for mapping the apparent place of the stars in the sky, just as places on the earth are shown on the terrestrial globe; with this difference, that to see the constellations as they actually appear, the observer must
imagine himself at the centre O of the sphere. In the accompanying figure, which represents the celestial sphere as seen in latitude 60° N., the places of the stars are not shown, but only some imaginary circles to which their positions are referred.

The observer’s Horizon is represented by the circle NESW. The half, NLP’S, below the horizon, is of course invisible to the observer.

The Axis, POP’, is the direction of the earth’s axis of rotation, round which, in consequence of the earth’s rotation, the starry sphere appears to turn. The ancients believed that the earth was really at rest in the centre of the universe and that the stars were fixed to an invisible frame-work which revolved round the earth.

The Poles P, P’, are the points in which the axis meets the sphere; they are called the North and South Poles respectively.

The Equator EQWR is an imaginary circle midway between the poles. It meets the horizon in the East and West points, E and W.

The sun has two apparent motions, which are both really due to motions of the earth. The rotation of the earth on its axis makes him appear to rise and set every day; while the revolution of the earth in its orbit round the sun makes him appear to travel round the sky once a year.

The Ecliptic, ECWL, is the apparent annual path of the sun among the stars. The celestial sphere appears to turn from East to West; but the sun, in his annual path, appears to travel in the contrary direction.

The Zodiac, so named from the animals (ζώδεια) by which the constellations are represented, is a narrow belt of sky on either side of the ecliptic. It is divided into twelve equal portions called the Signs of the Zodiac, which are named after the constellations they contain.

The Nodes or Equinoxes are the points in which the ecliptic cuts the equator. The sun in his course along the ecliptic from West to East crosses the equator from South to North at the time of the vernal equinox (March 21st) in the sign of the Ram (see l. 687). His daily course in the sky then coincides exactly
INTRODUCTION.

with the equator EQWR, exactly half of which is above the horizon, so that the lengths of day and night are equal. In the figure the node or point of intersection is for convenience represented as just setting at W; the ecliptic is shown in the position which it would occupy at 6 p.m. on March 21st. The sun crosses the equator again from North to South at the time of the autumnal equinox, in the sign of the Scales; rising at E at 6 a.m. on Sept. 23rd.

The Solstices are the points C and L of the sun’s annual path at which he is furthest from the equator. The sun is at C and due south at noon on June 22nd. On that day his daily course is the circle CG, the greater half of which is above the horizon, so that the day is longer than the night. The sun is at L at midnight on Dec. 21st; the greater half of his daily course LK, is then below the horizon (see ll. 682—686).

These points are called Solstices because the sun, after moving away from the equator, appears to stop and turn back. They are also called Tropics, i.e. turning points. The summer solstice C is in the sign of Cancer (the Crab), the winter solstice L in that of Capricorn (the Goat); see ll. 615—617.

Eclipses. The moon completes the circuit of the Zodiac once a month. Her orbit is slightly inclined to the ecliptic; if it coincided with the ecliptic, it is evident that the moon would pass between the earth and the sun every month, causing an eclipse. As it is, eclipses can only occur when the moon happens to be near one of the nodes of her orbit, i.e. those points where her orbit intersects the ecliptic. An eclipse of the sun can only occur at new moon, when the moon is between the sun and the earth; an eclipse of the moon, at full moon, when the moon is on the side of the earth opposite to the sun, and passes through the cone of the earth’s shadow (see l. 764).
ANALYSIS.

The fifth book of Lucretius is a kind of philosophical epic with man for a hero, and describes the origin of the world, of life, and of human society. This description is not irrelevant to the main purpose of the work; on the contrary, the exposition would be incomplete, if it were not shown that the world and its inhabitants came into being and continue to exist from purely natural causes. The book falls into two main divisions of nearly equal length, the first of which relates the creation of the world, the second the history of man.

After a panegyric on Epicurus (1—54), the subjects to be treated of are enumerated. These are:

i. The mortal nature of the world.
ii. The formation of the world.
iii. The kinds of animals which sprang from the earth.
iv. The origin of speech.
v. The origin of religion.
vi. The movements of the heavenly bodies.

The first subject is then begun, 91—109; but here a long digression is inserted in which it is proved that the world is not divine, and that the gods had nothing to do with the making of it. The argument is resumed at 235 and ended at 415. The formation of the world is next described, 416—563; but here too there is a digression, 509—533, about the motion of the stars. The rest of the first half of the book, 564—770, is taken up by a very full discussion of the sun and moon, their size, motions, and eclipses.

The second half begins with an account of the growth of vegetation first and then of animals and men, 770—836. It is next pointed out that in the struggle for existence many kinds of animals became extinct; but no such animals as a Centaur or Scylla can at any time have existed, 837—924.

The rest of the book describes the development of man in civilisation, and may be divided as follows:
ANALYSIS.

1. The condition of primitive man. 925—1010
2. The beginnings of civilisation. 1011—1027
3. The origin of speech. 1028—1090
4. The discovery of fire. 1091—1104
5. The beginnings of political life. 1105—1160
6. The origin of religion. 1161—1240
7. The discovery of the metals. 1241—1280
8. The methods of early warfare. 1281—1349
9. The invention of weaving. 1350—1360
10. The beginnings of agriculture. 1361—1378
11. The invention of music. 1379—1435
12. Complete civilisation. 1436—1457

Thus Lucretius discusses all the subjects he had promised to discuss, and others as well; but not in their original order. So the account of the sun and moon, instead of coming last, is given immediately after the account of the world's formation. It is also clear that certain paragraphs did not form part of the original sketch but were added subsequently. Thus at 1091 the first discovery of fire is related, but, at 1011, it was already in general use. These inconsistent paragraphs are indicated in the notes, as they occur.
Quis potis est dignum pollenti pectore carmen
Condere pro rerum maiestate hisque repertis?
Quisve valet verbis tantum qui fingere laudes
Pro meritis eius possit qui talia nobis
Pectore parta suo quaesitaque praemia liquit?
Nemo, ut opinor, erit mortali corpore cretus.
Nam si, ut ipsa petit maiestas cognita rerum,
Dicendum est, deus ille fuit, deus, inclyte Memmi,
Qui princeps vitae rationem invenit eam quae
Nunc appellatur sapientia, quique per artem
Fluctibus e tantis vitam tantisque tenebris
In tam tranquillo et tam clara luce locavit.
Confer enim divina aliörum antiqua reperta;
Namque Ceres fertur fruges Liberque liquoris
Vitigeni laticem mortalibus instituisse;
Cum tamen his posset sine rebus vita manere,
Ut fama est aliquas etiam nunc vivere gentes.
At bene non poterat sine puro pectore vivi;
Quo magis hic merito nobis deus esse videtur,
Ex quo nunc etiam per magnas didita gentes
DE RERUM NATURA

Dulcia permulcent animos solacia vitae.
Herculis'antistare autem si facta putabis,
Longius a vera mucho ratione ferere.
Quid Nemeaeus enim nobis nunc magnus hiatus
Ille leonis obesset et horrens Arcadius sus?
Denique quid Cretae taurus Lernaeaque pestis
Hydra venenatis posset vallata colubris?
Quidve tripectora tergemini vis Geryonai,
Quid volucres pennis aeratis invia stagna
Tanto opere officerent nobis Stymphala colentes,
Et Diomedis equi spirantes naribus ignem
Thracis Bistoniaisque plagas atque Ismara propter?
Aureaque Hesperidum servans fulgentia mala,
Asper, acerba tuens, immani corpore serpens
Arboris amplexus stirpem quid denique obesset
Propter Atlanteum litus pelageque sonora,
Quo neque noster adit quisquam nec barbarus audet?
Cetera de genere hoc quae sunt portenta perempta,
Si non victa forent, quid tandem viva nocerent?
Nil, ut opinor: ita ad satiatem terra ferarum
Nunc etiam scatit et trepido terre repleta est
Per nemora ac montes magnos silvasque profundas;
Quae loca vitandi plerumque est nostra potestas.
At nisi purgatumst pectus, quae proelia nobis
Atque pericula tumst ingratis insinuandum!
Quantae tum scindunt hominem cuppedinis acres
Sollicitum curae quantique perinde timores!
Quidve superbia spircitia ac petulantia? quantas
Efficiunt clades! quid luxus desidiaque?
Haec igitur qui cuncta subegerit ex animoque
Expulerit dictis, non armis, nonne decebit
Hunc hominem numero divom dignarier esse?
Cum bene praesertim multa ac divinitus ipsis
Immortalibus de diversis dare dicta suerit
Atque omnem rerum naturam pandere dictis.
Cuius ego ingressus vestigia dum rationes resonant.
Persequor ac doceo dictis, quo quaeque creatum
Foedere sint, in eo quam sit durare necessum
Nec validas valeant aevi rescindere leges.
Quo genere in primis animi natura reperta est
Nativo primum consistere corpore creta
Nec posse incolmis magnum durare per aevum,
Sed simulacra solere in somnis fallere mentem,
Cernere cum videamur eum quem vita reliquit.
Quod superest, nunc huc rationis detulit ordo,
Ut mihi mortali consistere corpore mundum
Nativumque simul ratio reddunda sit esse;
Et quibus ille modis congressus materiae
Fundarit terram caelum mare sidera solem
Lunaiique globum; tum quae tellure animantes
Extiterint, et quae nullo sint tempore natae;
Quo modo genus humanum variante loquela
Coeperit inter se vesci per nomina rerum;
Et quibus ille modis divum metus insinuariit
Pectora, terrarum qui in orbi sancta tueretur
Fana lacus lucos aras simulacraque divom.
Praeterea solis cursus lunaeque meatus
Expediam qua vi flectat natura gubernans;
Ne forte haec inter caelum terramque reamur
Libera sponte sua cursus lustrare perennes
Morigera ad fruges augendos atque animantes,
Neve aliqua divum volvi ratione putemus.
Nam bene qui didicere deos securum agere aevom,
Si tamen interea mirantur qua ratione
Quaeque geri possint, praesertim rebus in illis
Quae supera caput aetheriiis cernuntur in oris.
Rursus in antiquas referuntur religiones
Et dominos acres adsciscunt, omnia posse
Quos miseris credunt, ignari quid queat esse,
Quid nequeat, finita potestas denique cuique
Quanam sit ratione atque alte terminus haerens.

Quod superest, ne te in promissis plura moremur,
Principio maria ac terras caelumque tuere;
Quorum naturam triplicem, tria corpora, Memmi,
Tres species tam dissimiles, tria talia texta,
Una dies dabat exitio, multosque per annos
Sustentata ruet moles et machina mundi.

Nec me animi fallit quam res nova miraque menti
Accidat exitium caeli terraeque futurum,
Et quam difficile id mihi sit pervincere dictis;
Ut fit ubi insolitam rem adportes auribus ante
Nec tamen hanc possis oculorum subjicere visu
Nec iacere indu manus, via qua munita fidei
Proxima fert humanum in pectus templaque mentis.

Sed tamen effabor. Dictis dabat ipsa fidem res
Forsitan et graviter terrarum motibus ortis
Omnia conquassari in parvo tempore cernes.

Quod procul a nobis flectat fortuna gubernans,
Et ratio potius quam res persuadeat ipsa
Succidere horrisono posse omnia victa fragore.
Qua prius adgrediar quam de re fundere fata
Sanctius et multo certa ratione magis quam
Pythia quae tripode a Phoebi lauroque profatur,
Multa tibi expediam doctis solacia dictis;
Religione refrenatus ne forte rearis
Terras et solem et caelum, mare sidera lunam,
Corpore divino debere aeterna manere,
Proptereaque putes ritu par esse Gigantum
Pendere eos poenae inmani pro scelere omnes
Qui ratione sua disturbent moenia mundi
Praeclarumque velint caeli restinguere solem,
Inmortalia mortali sermone notantes;
Quae procul usque adeo divino a numine distant,
Inque deum numero quae sint indigna videntur,
Noticiam potius praebere ut posse putentur
Quid sit vitali motu sensuque remotum.
Quippe etenim non est, cum quovis corpore ut esse
Posse animi natura putetur consiliumque;
Sicut in aethere non arbor, non aequore salso
Nubes esse queunt neque pisces vivere in arvis
Nec esse in lignis neque saxis sucus inesse.
Certum ac dispositumst ubi quicquid crescat et insit.
Sic animi natura nequitt sine corpore oriri
Sola neque a nervis et sanguine longiter esse.
Quod si (posset enim multo prius) ipsa animi vis
In capite aut umeris aut imis calcibus esse
Posset et innasci quavis in parte, soleret
Tandem in eodem homine atque in eodem vase manere.
Quod quoniam nostro quoque constat corpore certum
Dispositumque videtur ubi esse et crescere possit
Seorsum anima atque animus, tanto magis insitandum
Totum posse extra corpus formamque animalem
Putribus in glebis terrarum aut solis in igni
Aut in aqua durare aut altis aetheris ois.
Haud igitur constant divino praedita sensu,
Quandoquidem nequunt vitaliter esse animata.
Illud item non est ut possis credere, sedes
Esse deum sanctas in mundi partibus ullis.
Tenuis enim natura deum longeque remota
Sensibus ab nostris animi vix mente videtur;
Quae quoniam manuum tactum suffugit et ictum,
Tactile nil nobis quod sit contingere debet.

N.B. 1. A much more likely supposition.
2. It must touch nothing which is tangible for us.
Tangere enim non quit quod tangi non licet ipsum.
Quare etiam sedes quoque nostris sedibus esse
Dissimiles debent, tenues de corpore eorum;
Quae tibi posterius largo sermone probabo.
Dicere porro hominum causa voluisse parare
Praeclaram mundi naturam proptereaque
Adlaudabile opus divom laudare decere
Aeternumque putare atque inmortale futurum,
Nec fas esse, deum quod sit ratione vetusta.
Gentibus humanis fundatum perpetuo aevo,
Sollicitare suis ulla vi ex sedibus umquam
Nec verbis vexare et ab imo evertere summa,
Cetera de genere hoc adefingere et addere, Memmi,
Desiperest. Quid enim inmortalibus atque beatis
Gratia nostra queat largirier emolumenti,
Ut nostra quicquam causa gerere adgrediantur?
Quidve novitatis amor accendere tali?
At, credo, in tenebris vita ac maerore iacebat,
Donec diluxit rerum genitalis origo.
Quidve mali fuerat nobis non esse creatis?
Natus enim debet quicumque est velle manere
In vita, donec retinebit blanda voluptas.
Qui numquam vero vitae gustavit amoram
Nec fuit in numero, quid obest non esse creatum?
Exemplum porro gignundis rebus et ipsa
Notities divis hominum unde est inisita primum,
Quid vellent facere ut scirent animoque viderent?
Quove modest umquam vis cognita principiorum
Quidque inter sese permutato ordine possent, 185
Si non ipsa dedit specimen natura creandi?
Namque ita multa modis multis primordia rerum
Ex infinito iam tempore percita plagis
Ponderibusque suis consuerunt concita ferri
Omnimodisque coire atque omnia pertemptare,
Quaecumque inter se possent, congressa creare,
Ut non sit mirum si in tales disposituras
Deciderunt quoque et in tales venere meratus,
Quae si quidem geritur nunc summa novando.
Qualibus haec rerum geritur nunc summa novando.

Hoc tamen ex ipsi caeli rationibus ausim
Confirmare alisque ex rebus dedere multis,
Nequaquam nobis divinitus esse paratam
Naturam rerum; tanta stat praedita culpa.
Principio quantum caeli tegit impetus ingens,
Inde avidi partem montes silvaeque ferarum
Possedere, tenet rupes vastaeque paludes
Et mare quod late terrarum distinet oras.
Inde duas prope partes servidus ardor
Adsiduusque geli casus mortalibus auffert.
Quod superest arvi, tamen id natura sua vi
Sentibus obducat, ni vis humana resistat
Vitai causa valido consueta bidenti
Ingemere et terram pressis prorscum aratri.
Si non fecundas vertentes vomere glebas
Terraquique solum subigentes simus ad ortus,
Sponte sua nequeant liquidas existere in auras,
Et tamen interdum magno quaesita labore
Cum iam per terras frondent atque omnia florent,
Aut nimiis torret fervoribus aetherius sol
Aut subiti peremunt imbres gelidaeque pruinae,
Flabraque ventorum violento turbine vexant.

And what they could effect by a change in their mutual arrangements.
And thoroughly test every kind of production possible by their mutual combinations.
Praeterea genus horriferum natura ferarum
Humanae genti infestum terraque marique
Cur alit atque auget? cur anni tempora morbos
Adportant? quare mors inmatura vagatur?
Tum porro puer, ut saevis projecus ab undis
Navita, nudus humi iacet, insanis, indigus omni
Vitali auxilio, cum primum in luminis oras
Nixibus ex alvo matris natura profudit,
Vagituque locum lugubri complet, ut aequumst
Cui tantum in vita restet transire malorum.
At variae crescent pecudes armenta feraeque
Nec crepitacillis opus est nec cuquam adhibendast
Almae nutricis blanda atque infracta loquella
Nec varias quauerunt vestes pro tempore caeli,
Denique non armis opus est, non moenibus altis,
Qui sua tutentur, quando omnibus omnia large
Tellus ipsa parit naturaque daedala rerum.
Principio quoniam terrai corpus et umor
Aurarumque leves animae calidique vaporem,
E quibus haec rerum consistere summa videtur,
Omnia nativo ac mortali corpore constant,
Debet eodem omnis mundi natura putari.
Quippe etenim quorum partes et membra videmus
Corpore nativo ac mortalibus esse figuris,
Haec eadem ferme mortalia cernimus esse
Et nativa simul. Quapropter maxima mundi
Cum videam membra ac partes consumpta regni,
Scire licet caeli quoque item terraeque fuisse
Principiale aliquod tempus clademque futuram.
Illud in his rebus ne corripuisse rearis
Me mihi, quod terram atque ignem mortalia sumpsi
Esse neque umorem dubitavi aurasque perire
Atque eadem gigni fursusque augescere dixi,
Principio pars terrai nonnulla, perusta
Solibus adsiduis, multa pulsata pedum vi,
Pulveris exhalat nebulam *nubesque volantes
Quas validi toto dispergunt aere venti.
Pars etiam glebarum ad *diluviem revocatur
Imbribus et ripas radentia flumina rodunt.
Praeterea pro parte sua, quodcumque alid auget,
Redditur; et quoniam dubio procul esse videtur
Omniparens eadem rerum commune sepulcrum,
Ergo terra tibi libatur et aucta recrescit.
Quod superest, umore novo mare flumina fontes
Semper abundare et latices manare perennes
Nil opus est verbis: magnus decursus aquarium
Undique declarat. Sed primum quicquid aquai
Tollitur in summaque fit ut nil umor abundet,
Partim quod validi verrentes aequora venti
Diminuunt radiisque retexens aetherius sol,
Partim quod subter per terras diditur omnes.
Percolatur enim *virus retroque remanat
Materies umoris et ad caput amnibus omnis
Convenit, inde super terras fluit agmine dulci
Qua *via secta semel liquido pede detulit undas.
Aera nunc igitur dicam qui corpore toto
Innumerable priyas mutatur in horas.
Semper enim, quodcumque fluit de rebus, id omne
Aeris in magnum fertur mare; qui nisi contra
Corpora retribuat rebus recreetque *fluentes,
Omnia iam resoluta forent et in aera versa.
Haud igitur cessat gigni *de rebus et in res
Reccidere, adsidue quoniam *fluere omnia constat.
Largus item liquidi fons luminis, aetherius sol,
Inrigat adsidue caelum candore recenti
Suppeditatque novo *confestim lumine lumen.
DE RERUM NATURA

Nam primum quicquid fulgoris disperit ei,
Quocumque accidit. Id licet hinc cognoscere possis, 285
Quod simul ac primum nubes succedere soli
Coepere et radios inter quasi rumpere lucis,
Extemplo inferior pars horum disperit omnis
Terraque inumbatur qua nimbi cumque feruntur;
Ut noscas splendore novo res semper egere sequae. 290

Et primum iactum fulgoris quemque perire
Nec ratione alia res posse in sole videri,
Perpetuo ni suppeditet lucis caput ipsum.
Quin etiam nocturna tibi, terrestria quae sunt,
Lumina, pendentes lychini claraeque coruscis
Fulguribus pingues multa caligine taedae
Consimili properant ratione, ardore ministro,
Suppeditare novum lumen, tremere ignibus instant,
Instant, nec loca lux inter quasi rupta relinquit.
Usque adeo properanter ab omnibus ignibus ei
Exitium celeri celatur origine flammae.
Sic igitur solem lunam stellasque putandumst
Ex alio atque alio lucem iactare subortu

Et primum quicquid flammarm perdere semper;
Inviolabilia haec ne credas forte vigere.

Denique non lapides quoque vincis ab aevo,
Non altas turres ruere et putrescere saxa,
Non delubra deum simulacraque fessa fatisci,
Nec sanctum numen fati protollere fines
Posse neque adversus naturae foedera niti?

Denique non monimenta virum dilapsa videmus,
Aeraque proporro solidumque senescere ferrum,
Non ruere avolsos silices a montibus altis
Nec validas ævi vires perferre patique
Finiti? neque enim caderent avolsa repente,
Ex infinito quae tempore pertolerassent

1. For every previous emission of brightness is quite lost to it.
   WHEREAS, IT FAILS. (For what declines do part of the brightness is lost to it)
2. And that all the preceding emissions of light are lost.
   (That each previous shaft of brightness).
Omnia tormenta aetatis privata fragore.

Denique iam tuere hoc, circum supraque quod omnem
Continet amplexu terram: si procreat ex se
Omnia, quod quidam memorant, recipitque perempta, 320
Totum nativum mortali corpore constat.
Nam quodcumque alias ex se res auget alitque,
Deminui debet, recreari, cum recipit res.
Praeterea si nulla fuit genitalis origo
Terrarum et caeli semperque acterna fuere,
Cur supera bellum Thebanum et funera Troiae
Non alias alii quoque res cecinere poetae?
Quo tot facta virum totiens cecidere neque usquam
Aeternis famae monimentis insita florent?
Verum, ut opinor, habet novitatem summa recensque 330
Naturast mundi neque pridem exordia cepit.
Quare etiam quaedam nunc artes expoliantur,
Nunc etiam auge scunt; nunc addita navigiis sunt
Multa, modo organici melico peperere sonores.
Denique haec rerum ratioque repertast
Nuper, et hanc cum primis ipse repertus
Nunc ego sum in patrias qui possim vertere voces.
Quod si forte fuisse antehac eadem omnia credis,
Sed perisse hominum torrenti saecla vapore,
Aut cecidisse urbes magnae vixamine mundi,
Aut ex imbris adsiduis exisse rapaces
Per terras amnes atque oppida cooperuisse,
Tanto quique magis victus fateare necessit
Exitium quoque terrarum caeliqtue futurum.
Nam cum res tantis morbis tantisque periclis
Temptarentur, 45 si tristior incubuisset
Causa, darent late cladem magnasque ruinas.
Nec ratione alia mortales esse videmur
Inter nos, nisi quod morbis aegrescimus isdem
Atque illi quos a vita natura removit.

Praeterea quaecumque manent aeterna necessumst
Aut, quia sunt solido cum corpore, respuere ictus
Nec penetrare pati sibi quicquam quod queat artas
Dissociare intus partes, ut materiae
Corpora sunt quorum naturam ostendimus ante,
Aut ideo durare aetatem posse per omnem,
Plagarum quia sunt expertia, sicut inane est
Quod manet intactum neque ab ictu fungitur hilum,
Aut etiam quia nulla loci fit copia circum,
Quo quasi res possint discedere dissoluique,
Sicut summarum summa est aeterna neque extra
Qui locus est quo dissiliant neque corpora sunt quae
Possint incidere et valida dissolvere plaga.
At neque, uti docui, solido cum corpore mundi
Naturast, quoniam admixtumst in rebus inane;
Nec tamen est ut inane, neque autem corpora desunt,
Ex infinito quae possint forte coorta
Corruere hanc rerum violento turbine summam
Aut aliam quamvis idadem inportare pericli;
Nec porro natura loci spatiumque profundi
Deficit, exspargi quo possint moenia mundi;
Aut alia quavis possunt vi pulsa perire.
Haud igitur leti praeclosa est Ianua caelo
Nec soli terraeque neque altis aequoris undis,
Sed patet immane et vasto respectat hiatu.

Quare etiam nativa necessumst confiteare
Haec eadem; neque enim, mortali corpore quae sunt,
Ex infinito iam tempore adhuc potuisissent
Inmensis validas aevi contendere vires.

Denique tantopere inter se cum maxima mundi
Pugnent membra, pio nequaquam concita bello,
Nonne vides aliquam longi certaminis ollis
Liber Quintus.

Posse dari finem? vel cum sol et vapor omnis
Omnibus epotis umoribus exsuperarint:
Quod facere intendunt, neque adhibit conata patrurunt: 385
Tantum suppediant amnes ultraque minantur
Omnia diluviare ex alto gurgite ponti;
Nequiquam, quoniam verentes aequora venti
Deminuunt radiisque retexens aetherius sol,
Et siccare prius confidunt omnia posse
Quam liquor incepti possit contingere finem.
Tantum spirantes aequo certamine bellum
Magni inter se de rebus cernere certant,
Cum semel interea fuerit superantior ignis
Et semel, ut fama est, umor regnarit in arvis.
Ignis enim superat et lambens multa perussit,
Avia cum Phaethonta rapax vis solis equorum
Aethere raptavit toto terrasque per omnes.
At pater omnipotens ira tum percitus acri
Magnanimum Phaethonta repenti fulminis ictu
Deturbavit equis in terram, solque cadenti
Obvius aeternam succipit lampada mundi
Disiectosque reddidit equos iunctisque trementes,
Inde suum per iter recreavit cuncta gubernans,
Scilicet ut veteres Graium cecinere poetae.
Quod procul a vera nimis est ratione repulsum.
Ignis enim superare potest ubi materiai
Ex infinito sunt corpora plura coorta;
Inde cadunt vires aliqua ratione revictae,
Aut percunt res existae torrentibus auris.
Umor item quondam coepit superare coortus,
Ut fama est, hominum multas quando obruit urbes.
Inde ubi vis aliqua ratione aversa recessit,
Ex infinito fuerat quaecumque coorta,
Constiterunt imbres et flumina vim minuerunt.

1. but as yet are unable to accomplish their endeavors.
Sed quibus ille modis conjectus materiali
Fundarit terram et caelum pontique profunda,
Solis lunai cursus, ex ordine ponam.
Nam certe neque consilio primordia rerum
Ordine se suo quaeque sagaci mente locarunt
Nec quos quaeque darent motus pepigere profecto,
Sed quia multa modis multis primordia rerum
Ex infinito iam tempore percita plagis
Ponderibusque suis consuerunt concita ferri
Omnimodosque coire atque omnia pertemptare,
Quaecumque inter se possent congressa creare,
Propterea fit uti magnum volgata per aevom
Omne genus coetus et motus experiendo
Tandem convenient ea quae convecta repente
Magnarum rerum fiunt exordia saepe,
Terrai maris et caeli generisque animantum.
Hic neque tum solis rota cerni lumine largo
Altivolans poterat nec magni sidera mundi
Nec mare nec caelum nec denique terra neque aer
Nec similis nostris rebus res ulla videri.
Sed nova tempestas quaedam molesque coorta
Omne genus de principiis, discordia quorum
Intervalla vias conexus pondera plagas
Concursus motus turbabat proelia miscens,
Propter dissimiles formas variasque figuras
Quod non omnia sic poterant coniuncta manere
Nec motus inter sese dare convenientes,
Diffugere inde loci partes coepere paresque
Cum paribus iungi res et discludere mundum
Membraque dividere et magnas disponere partes,
Hoc est, a terris altum secernere caelum,
Et sorsum mare uti secreto umore pateret,
Seorsus item puri secretique aetheris ignes.

1. But only a strange stormy crisis and medley.
2. unmix
3. Spread itself out
4. Thoroughly to test every kind of production.
Quippe etenim primum terrai corpora quaeque, 
Propterea quod erant gravia et perplexa, coibant 450
In medio atque imas capiebant omnia sedes;
Quae quanto magis inter se perplexa coibant,
Tam magis expressere ea quae mare sidera solem
Lunamque efficerent et magni moenia mundi.
Omnia enim magis haec et levibus atque rotundis
Seminibus multoque minoribus sunt elementis
Quam tellus. Ideo, per rara foramina, terrae
Partibus erumpens primus se sustulit aether
Ignifer et multos secum levis abstulit ignes;
Non alia longe ratione ac saepe videmus,
Aurea cum primum gemmantes rore per herbas
Matutina rubent radiati lumina solis
Exhalantque lacus nebulam fluviique perennes,
Ipsaque ut interdum tellus fumare videtur;
Omnia quae sursum cum conciUantur, in alto
Corporre concreto subtexunt nubila caelum.
Sic igitur tum se levis ac diffusis aether
Corporre concreto circumdatus undique flexit
Et late diffusus in omnes undique partes
Omnia sic avido complexu cetera saepsit. 460
Hunc exordia sunt solis lunaeque secuta,
Interutrasque globi quorum vertuntur in auris;
Quae neque terra sibi adscivit nec maximus aether,
Quod neque tam fuerunt gravia ut depressa sederent,
Nec levia ut possent per summas labier oras,
Et tamen interutrasque ita sunt ut corpora viva
Versent et partes ut mundi totius extent;
Quod genus in nobis quaedam licet in statione
Membra manere, tamen cum sint ea quae moveantur.
His igitur rebus retractis terra repente, 475
Maxuma qua nunc se ponti plaga caerulea tendit,
DE RERUM NATURA

Succidit et salso suffudit gurgite fossas.
Inque dies quanto circum magis aetheris aëstus
Et radii solis cogebant undique terram
Verberibus crebris extrema ad limina in artum,
In medio ut propulsa suo condensa coiret,
Tam magis expressus salsus de corpore sudor
Augebat mare manando camposque natantes,
Et tanto magis illa foras clapsa volabant
Corpora multa vaporis et aeris altaque caeli
Densebant procul a terris fulgentia templā.
Sidebant campi, crescebant montibus altis
Ascensus; neque enim poterant subsidere saxa
Nec pariter tantundem omnes succumbere partes.
   Sic igitur terrae concreto corpore pondus
Constitit atque omnis mundi quasi limus in imum
Confluxit graveis et subsedit funditus ut faex;
Inde mare inde aer inde aether ignifer ipse
Corporibus liquidis sunt omnia pura relicta,
Et leviora aliis alia, et liquidissimus aether
Atque levissimus aerias super influit auras,
Nec liquidum corpus turbantibus aeris auris
Commiscet; sinit haec violentis omnia verti
Turbinibus, sinit incertis turbare procellis,
Ipse suos ignes certo fert impete labens.
Nam modice fluere atque uno posse aethera nisu
Significat Pontos, mare certo quod fluit aëstu
Unum labendi conservans usque tenorem.
   Motibus astrorum nunc quae sit causa canamus.
Principio magnus caeli si vertitur orbis,
Ex utraque polum parti premere aera nobis
Dicendum est extraque tenere et claudere utrimque;
Inde alium supra fluere atque intendere eodem
Quo volvenda micant aeterni sidera mundi;
Aut alium subter, contra qui subvehat orbem,
Ut fluvios versare rotas atque haustra videmus.
Est etiam quoque uti possit caelum omne manere
In statione tamen cum lucida signa ferantur;
Sive quod inclusi rapidi sunt aetheris aetus
Quaerentesque viam circum versantur et ignes
Passim per caeli volvunt Summania templaque;
Sive aliunde fluens aliiunde extrinsecus aer
Versat agens ignes; sive ipsi serpere possunt
Quo cuiusque cibus vocat atque invitat euntes,
Flammea per caelum pascentes corpora passim.

Nam quid in hoc mundo sit eorum ponere certum
Difficile est; sed quid possit fiatque per omne
In variis mundis varia ratione creatis,
Id doceo pluresque sequor; disponere causas,
Motibus astrorum quae possint esse per omne;
E quibus una tamen sit in hoc quoque causa necesset
Quae vegeat motum signis; sed quae sit earum
Praecipere haudquaquamst pedememptim progradentis.

Terraque ut in media mundi regione quiescat,
Evanescere paulatim et decrescere pondus
Convenit, atque aliam naturam subter habere
Ex ineunte aevum coniunctam atque uniter aptam
Partibus aeris mundi quibus insita vivit.
Propterea non est oneri neque depremit auras;
Ut sua cuique homini nullo sunt pondere membra
Nec caput est oneri collo nec denique totum
Corporis in pedibus pondus sentimus inesse;
At quaecumque foris veniunt imposaquare nobis
Pondera sunt laedunt, permulto saepe minora.

Usque adeo magni refert quid quaeque obeat res.
Sic igitur tellus non est aliena repente
Allata atque auris aliunde obiecta alienis,
Sed pariter prima concepta ab origine mundi
Certaque pars eius, quasi nobis membra videntur.
Praetera grandi tonitru concussa repente
Terra supra quae se sunt concutit omnia motu;
Quod facere haua ulla posset ratione, nisi esset
Partibus aeris mundi caeloque revincta.
Nam communibus inter se radicibus haerent
Ex ineunte aevo coniuncta atque uniter apta.
Nonne vides etiam quam magno pondere nobis
Sustineat corpus tenuissima vis animali
Propterea quia tam coniuncta atque uniter apta est?
Denique iam saltu pernici tollere corpus
Quid potis est nisi vis animi quae membra gubernat?
Iamne vides quantum tenuis natura valere
Possit, ubi est coniuncta gravi cum corpore, ut aer
Coniunctus terris et nobis est animi vis?
Nec nimio solis maior rota nec minor ardor
Esse potest, nostris quam sensibus esse videtur.
Nam quibus e'spatiis cumque ignes lumina possunt
Adicere et calidum membris adflare vaporem,
Nil illa his intervallis de corpore libant
Flammarum, nihil ad speciem est contractior ignis.
Proinde, calor quoniam solis lumenque profusum
Perveniunt nostros ad sensus et loca mulcent,
Forma quoque hinc solis debet filumque videri,
Nil adeo ut possis plus aut minus addere, vere.
Lunaque sive notho fertur loca lumine lustrans
Sive suam proprio iactat de corpore lucem,
Quidquid id est, nilo furtur maiore figura
Quam, nostris oculis qua cernimus, esse videtur.
Nam prius omnia, quae longe semota tuemur
Aera per multum, specie confusa videntur
Quam minui filum. Quapropter luna necesse est,
Quandoquidem claram speciem certamque figuram
Praebet, ut est oris extremis cumque notata
Quantaque quantast hinc nobis videatur in alto.
Postremo quoscumque vides hinc aetheris ignes; 585
Quandoquidem quoscumque in terris cernimus ignes,
Dum tremor est clarus, dum cernitur ardur eorum,
Perparyum quiddam interdum mutare videtur
Alteram utram in partem filum, quo longius absunt;
Scire licet perquam pauxillo posse minores
Esse vel exigua maiores parte brevique.

Illud item non est mirandum, qua ratione
Tantulus ille queat tantum sol mittere lumen,
Quod maria ac terras omnes caelumque rigando
Compleat et calido perfundat cuncta vapore.
Nam licet hinc mundi patefactum totius unum
Largifluum fontem scatere atque erumpere lumen,
Ex omni mundo quia sic elementa vaporis
Undique conveniunt et sic coniectus eorum
Confluit, ex uno capite hic ut profuat ardur.
Nonne vides etiam quam late parvus aquai
Prata riget fons interdum campisque redundant?
Est etiam quoque uti non magno solis ab igni
Aera percipient calidis fervoribus ardur,
Opportunus ita est si forte et idoneus aer,
Ut queat accendi parvis ardoribus ictus;
Quod genus interdum segetes stipulamque videmus
Accidere ex una scintilla incendia passim.
Forsitan et rosea sol alte lampade lucens
Possideat multum caecis fervoribus ignem
Circum se, nullo qui sit fulgore notatur,
Aestifer ut tantum radiorum exaugeat ictum.

Nec ratio solis simplex et certa patescit,
Quo pacto aestivis e partibus aegocerotis
DE RERUM NATURA

Brumales adeat flexus atque inde revertens
Cancri se ut vertat metas ad solstitiales,
Lunaque mensibus id spatium videatur obire,
Annua sol in quo consumit tempora cursu.
Non, inquam, simplex his rebus reddit causast.
Nam fieri vel cum primis id posse videtur,
Democriti quod sancta viri sententia ponit,
Quanto quaeque magis sint terram sidera propter,
Tanto posse minus cum caeli turbine ferri.
Evanescere enim rapidas illius et acres
Imminui subter vires, ideoque relinqui
Paulatim solem cum posterioribu' signis,
Inferior multo quod sit quam fervida signa.
Et magis hoc lunam: quanto demissior eius
Cursus abest procul a caelo terrisque propinquat,
Tanto posse minus cum signis tendere cursum.
Flaccidio e tenim quanto iam turbine fertur
Inferior quam sol, tanto magis omnia signa.
Hanc adipiscuntur circumpraeterque feruntur.
Propterea fit ut haec ad signum quodque reverti
Mobilius videatur, ad hanc quia signa revisunt.
Fit quoque ut e mundi transversis partibus aer
Alternis certo fluere alter tempore possit,
Qui queat aestivis solem detrudere signis
Brumales usque ad flexus gelidumque rigorem,
Et qui reiciat gelidis a frigoris umbre
Aestiferas usque in partes et fervida signa.
Et ratione pari lunam stellasque putandumst,
Quae volvunt magnos in magnis oribus annos,
Aeribus posse alternis e partibus ire.
Nonne vides etiam diversis nubila ventis
Diversas ire in partes inferna supernis?
Qui minus illa queant per magnos aetheris orbes
Aestibus inter se diversis sidera ferri?
At nox obruit ingenti caligine terras,
Aut ubi de longo cursu sol ultima caeli
Impulit atque suos esflavit languidus ignes
Concussos itere et labefactos aere multo,
Aut quia sub terras cursum convertere cogit
Vis eadem, supra quae terras pertulit orbem.
Tempore item certo roseam Matuta per oras
Aetheris auroram differt et lumina pandit,
Aut quia sol idem, sub terras ille reverterens,
Anticipat caelum radiis accendere temptans,
Aut quia conveniunt ignes et semina multa
Confluere ardoris consuerunt tempore certo,
Quae faciunt solis nova semper lumina gigni;
Quod genus Idaeis fama est e montibus altis
Dispersos ignes orienti lumine cerni,
Inde coire globum quasi in unum et conficere orbem.
Nec tamen illud in his rebus mirabile debet
Esse, quod haec ignis tam certo tempore possunt
Semina confluere et solis reparare nitorem.
Multa videmus enim, certo quae tempore fiunt
Omnibus in rebus. Florescunt tempore certo
Arbusta et certo dimittunt tempore florem.
Nec minus in certo dentes cadere imperat aetas
Tempore et impubem molli pubescere veste
Et pariter mollem malis demittere barbam.
Fulmina postremo nix imbres nubila venti
Non nimis incertis fiunt in partibus anni.
Namque ubi sic fuerunt causarum exordia prima,
Atque ita res mundi cecidere ab origine prima,
Consequè quoque iam redeunt ex ordine certo.
Crescere itemque dies licet et tabescere noctes,
Et minui lúces cum sumant augmina noctes,
Aut quia sol idem sub terras atque superne Imparibus currens amfractibus aetheris oras Partit et in partes non aequas dividit orbem, Et quod ab alterutra detraxit parte, reponit Eius in adversa tanto plus parte relatus, Donec ad id signum caeli pervenit, ubi anni Nodus nocturnas exaequat lucibus umbras.
Nam, medio cursu status aquatic et australi, Distinet aequato caelum discrimine metas Propter signiferi positorum totius orbis, Annua sol in quo concludit tempora serpens, Obliqua terras et caelum lumine lustrans, Ut ratio declarat eorum qui loca caeli Omnia dispositis signis ornata notarunt. Aut quia crassior est certis in partibus aer, Sub terris ideo tremulum iubar haesitat ignis Nec penetrare potest facile atque emergere ad ortus. Propterea noctes hiberno tempore longae Cessant, dum veniat radiatum insigne diei. Aut etiam, quia sic alternis partibus anni Tardius et citius consuerunt confluere ignes Qui faciunt solem certa desurgere parte, Propterea fit uti videantur dicere verum Qui faciunt solis semper nova lumina gigni. Luna potest solis radiis percussa nitere Inque dies magis id lumen convertere nobis Ad speciem, quantum solis secedit ab orbi, Donique eum contra pleno bene lumine fulsit Atque oriens obitus eius super edita vidit; Inde minutatim retro quasi condere lumen Debet item, quanto propius iam solis ad ignem Labitur ex alia signorum parte per orbem; Ut faciunt, lunam qui singunt esse pilae
Consimilem cursusque viam sub sole tenere.
Est etiam quare proprio cum lumine possit
Volvier et varias splendoris reddere formas.
Corpus enim licet esse alius quod fertur et una
Labitur omnimodis occursans officiensque
Nec potis est cerni, quia cassum lumine fertur.
Versarique potest, globus ut, si forte, pilai
Dimidia ex parti candenti lumine tinctus,
Versandoque globum variantes edere formas,
Donique eam paritem, quaecumque est ignibus aucta,
Ad speciem vertit nobis oculosque patentes;
Inde minutatim retro contorquet et aufert
Luciferam paritem glomeraminis atque pilai;
Ut Babylonica Chaldaeum doctrina refutans
Astrologorum artem contra convincere tendit,
Proinde quasi id fieri nequeat quod pugnat uterque
Aut minus hoc illo sit cur amplectier ausis.
Denique cur nequeat semper nova luna creari
Ordine formarum certo certisque figuris
Inque dies privos aborisci quaeque creata
Atque alia illius reparari in parte locoque,
Difficilest ratione docere et vincere verbis,
Ordine cum possint tam certo multa creari.
It ver et Venus, et Veneris praenuntius ante
Pennatus graditur, zephyri vestigia propter
Flora quibus mater praespartens ante viai
Cuncta coloribus egregiis et odoribus opplet.
Inde loci sequitur calor aridus et comes una
Pulverulenta Ceres et etesia flabra aquilonum.
Inde autumnus adit, graditur simul Euhius Euan.
Inde aliae tempestates ventique sequuntur,
Altitonans Volturnus et auster fulmine pollens.
Tandem bruma nives adfert pigrumque rigorem
Reddit: hiemps sequitur crepitans hanc dentibus algu.
Quo minus est mirum si certo tempore luna
Gignitur et certo deletur tempore rusus,
Cum fieri possint tam certo tempore multa.
Solis item quoque defectus lunaeque latebras
Pluribus e causis fieri tibi posse putandum st.
Nam cur luna queat terram secludere solis
Lumine et a terris altum caput obstruere ei,
Obiciens caecum radiis ardentibus orbem;
Tempore eodem aliud facere id non posse putetur
Corpus quod cassum labatur lumine semper?
Solque suos etiam dimittere languidus ignes
Tempore cur certo nequeat recreareque lumen,
Cum loca praeteriit flammis infesta per auras,
Quae faciunt ignes interstingui atque perire?
Et cur terra queat lunam spoliare vicissim
Lumine et oppressum solem super ipsa tenere,
Menstrua dum rigidas coni perlabitur umbras;
Tempore eodem aliud nequeat succurrere lunae
Corpus vel supra solis perlabier orbem,
Quod radios interrupat lumenque profusum?
Et tamen ipsa suo si fulget luna nitore,
Cur nequeat certa mundi languescere parte,
Dum loca luminibus propriis inimica per exit?
Quod superest, quoniam magni per caerula mundi
Qua fieri quicquid posset ratione resolv i,
Solis uti varios cursus lunaeque meatus
Noscere possemus quae vis et causa cieret,
Quove modo possent effecto lumine obire
Et neque opinantes tenebris obducere terras,
Cum quasi conivent et aperto lumine rursum
Omnia convisunt clara loca candida luce;
Nunc redeo ad mundi novitatem et mollia terrae
Arva, novo fetu quid primum in luminis oras
Tollere et incertis crerint committere ventis.

Principio genus herbarum viridemque nitorem
Terra dedit circum colles camposque per omnes;
Florida fulserunt viridanti prata colore,

Arboribusque datumst variis exinde per auras
Crescendi magnum inmissis certamen habenis.

Ut pluma atque pili primum saetaeque creantur
Quadripedum membris et corpore pennipotentum,

Sic nova tum tellus herbas virgultaque primum
Sustulit, inde loci mortalia saecla creavit

Multa modis multis varia ratione coorta.

Nam neque de caelo cecidisse animalia possunt
Nec terrestria de salsis exisse lacunis.

Linquitur ut merito maternum nomen adepta
Terra sit, e terra quoniam sunt cuncta creata.

Multaque nunc etiam existunt animalia terris
Imbribus et calido solis concreta vapore;

Quo minus est mirum si tum sunt plura coorta
Et maiora, nova tellure atque aethere adulta.

Principio genus alituum variaeque volucres
Ova relinquebant exclusae tempore verno,

Folliculos ut nunc teretes aestate cicadae
Linquent sponte sua victum vitamque petentes.

Tum tibi terra dedit primum mortalia saecla.

Multus enim calor atque umor superabat in arvis.

Hoc ubi quaeque loci regio opportuna dabatur,

Crescebant uteri terram radicibus apti;

Quos ubi tempore maturo patefecerat aestus
Infantum fugiens umorem aurasque petessens,

Convertebat ibi natura foramina terrae

Et sucum venis cogebat fundere apertis

Consimilem lactis, sicut nunc femina quaeque
Cum peperit, dulci repletur lacte, quod omnis
Impetus in mammas convertitur ille alimenti. 815
Terra cibum pueris, vestem vapor, herba cubile
Praebebat multa et molli lanugine abundans.
At novitas mundi nec frigora dura ciebat
Nec nimios aestus nec magnis viribus auras.
Omnia enim pariter crescunt et robora sumunt.
Quare etiam etiam maternum nomen adepta
Terra tenet merito, quoniam genus ipsa creavit
Humanum atque animal prope certo tempore fudit
Omne quod in magnis bacchatur montibu' passim,
Aeriasque simul volucres variantibu' formis. 820
Sed quia finem aliquam pariendi debet habere,
Destitit, ut mulier spatio defessa vetusto.
Mutat enim mundi naturam totius aetas,
Ex alioque alius status excipere omnia debet,
Nec manet ulla sui similis res: omnia migrant,
Omnia commutat natura et vertere cogit.
Namque aliud putrescit et aevo debile languet,
Porro aliud clarescit et e contemptibus exit.
Sic igitur mundi naturam totius aetas
Mutat et ex alio terram status excipit alter:
Quod potuit nequit, ut possit quod non tulit ante.
Multaque tum tellus etiam portenta creare
Conatast mira facie membrisque coorta,
Androgynum, interutrasque nec utrum, utrimque remotum,
Orba pedum partim, manuum viduata vicissim, 830
Muta sine ore etiam, sine voltu caeca reperta,
Vinctaque membrorum per totum corpus adhaesu,
Nec facere ut possent quicquam nec cedere quoquam
Nec vitare malum nec sumere quod foret usus.
Cetera de genere hoc monstra ac portenta creabat; 840
Nequiquam, quoniam natura absterruit auctum
Nec potuere cupitum aetatis tangere florem
Nec reperire cibum nec iungi per Veneris res.
Multa videmus enim rebus concurrere debere,
Ut propagandopossint procudere saecla. 850
Multaque tum interiisse animantium saecla necessest 855
Nec potuisse propagando procudere prolem.
Nam quaecumque vides vestivitalibus auris,
Aut dolus aut virtus aut denique mobilitas est
Ex ineunte aevo genus id tutata reservans.
Multaque sunt, nobis ex utilitate sua quae 860
Commendata manent, tutelae tradita nostrae.
Principio genus acre leonum saevaque saecla
Tutatast virtus, volpes dolus et fuga cervos.
At levisomna canum fido cum pectore corda
Et genus omne quod est veterino semine partum 865
Lanigeraequemulpecudes et bucera saecla
Omnia sunt hominum tutelae tradita, Memmi.
Nam cupide fugere feras pacemque secuta
Sunt et larga suo sine pabula parta labore,
Quae damus utilitatis eorum praemia causa. 870
At quis nil horum tribuit natura, nec ipsa
Sponte sua possent ut vivere nec dare nobis
 Utilitatem aliquam quare pateremur eorum
 Praesidio nostro pasci genus esseque tutum,
 Scilicet haec aliis praedae lucroque iacebant 875
 Indupedita suis fatalibus omnia vinclis,
 Donec ad interitum genus id natura redegit.
Sed neque Centauri fuerunt, nec tempore inullo
Esse queunt duplici natura et corpore bino
Ex alienigenis membris compacta, potestas 880
Hinc illinc visque ut non sat par esse potissit.
Id licet hinc quamvis hebeti cognoscere corde.
Principio circum tribus actis impigerannis
Floret equus, puer haudquaquam; nam saepe etiam nunc
Ubera mammarum in somnis lactantia quaeret. 885
Post ubi equum validae vires aetate senecta
Membraque deficiunt fugienti languida vita,
Tum demum puero illi aevo florente iuventas
Occipit et molli vestit lanugine malas.
Ne forte ex homine et veterino semine equorum 890
Confieri credas Centauros posse neque esse,
Aut rabidis canibus succinctas semimarinas
Corporibus Scyllas et cetera de genere horum,
Inter se quorum discordia membra videmus;
Quae neque florescunt pariter nec robora sumunt 895
Corporibus neque proiciunt aetate senecta
Nec simili Venere ardescunt nec moribus unis
Conveniunt, neque sunt eadem iucunda per artus.
Quippe videre licet pinguescere saepe cicuta
Barbigeras pecudes, homini quae est acre venenum. 900
Flamma quidem vero cum corpora fulva leonum
Tam soleat torrere atque urere quam genus omne
Visceris in terris quodcumque et sanguinis extet,
Qui fieri potuit, triplex cum corpore ut una,
Prima leo, postrema draco, media ipsa, Chimaera 905
Ore foras acrem flaret de corpore flammam?
Quare etiam tellure nova caeloque recenti
Talia qui fingit potuisse animalia gigni,
Nixus in hoc uno novitatis nomine inani,
Multa licet simili ratione effutiat ore, 910
 Aurea tum dicat per terras flumina vulgo
Fluxisse et gemmis florere arbusta suêsse
Aut hominem tanto membrorum esse impete natum,
Trans maria alta pedum nisus ut ponere posset
Et manibus totum circum se vertere caelum. 915
Nam quod multa fuere in terris semina rerum
Tempore quo primum tellus animalia fudit,
Nil tamen est signi mixtas potuisse creari
Inter se pecudes compactaque membra animantum,
Propterea quia quae de terris nunc quoque abundant
Herbarum genera ac fruges arbustaque laeta
Non tamen inter se possunt complexa creari,
Sed res quaeque suo ritu procedit et omnes
Foedere naturae certo discrimina servant.

At genus humanum multo fuit illud in arvis
Durius, ut decuit, tellus quod dura creasset,
Et maioribus et solidis magis ossibus intus
Fundatum, validis aptum per visceras nervis,
Nec facile ex aestu nec frigore quod caperetur
Nec novitate cibi nec labi corporis ulla.

Multaque per caelum solis volventia lustra
Volgivago vitam tractabant more ferarum.
Nec robustus erat curvi moderator aratri
Quisquam, nec scibat ferro molirier arva
Nec nova defodere in terram virgulta neque altis
Arboribus veteres decidere falcibus ramos.
Quod sol atque imbres dederant, quod terra crearat
Sponte sua, satis id placabat pectora donum.
Glandifieras inter curabant corpora quercus
Plurumque; et quae nunc hiberno tempore cernis
Arbita puniceo fieri matura colore,
Plurima tunc tellus etiam maiora ferebat.

Multa praefera novitas tum floridam mundi
Pabila dura tulit, miseris mortalibus ampla.
At sedare sitim fluvii fontesque vocabant,
Ut nunc montibus e magnis decursus aquai
Claru citat late sitientia saecula ferarum.
Denique notae vagi silvestria templaque tenebant
Nympharum, quibus e scibant umori fluenta.
Lubrica proluvie larga lavere umida saxa,
Umida saxa, super viridi stillantia musco,
Et partim plano scatere atque erumpere campo.
Necdum res igni scibant tractare neque uti
Pellibus et spoliis corpus vestire ferarum,
Sed nemora atque cavos montes silvasque colebant
Et frutices inter condebant squalida membra
Verbera ventorum vitare imbresque coacti.
Nec commune bonum poterant spectare neque ullis
Moribus inter se scibant nec legibus uti.
Quod cuique obtulerat praedae fortuna, ferebat
Sponte sua sibi quisque valere et vivere doctus.
Et Venus in silvis iungebat corpora amantum;
Conciliabat enim vel mutua quamque cupido
Vel pretium glandes atque arbital vel pira lecta.
Et manuum mira virtute pedumque
Consectabantur silvestria saccla ferarum
Missilibus saxis et magno pondere clavae;
Multaque vincebant, vitabant paуча latebris;
Saetigerisque pares subu sic silvestria membra
Nuda dabant terrae nocturno tempore capti,
Circum se foliis ac frondibus involventes.
Nec plangore diem magno solemque per agros
Quaerebant pavid palantes noxmis in umbris,
Sed taciti respectabant somnoque sepolti,
Dum rosea face sol inferret lumina caelo.
A parvis quod enim consuerant cernere semper
Alterno tenebras et lucem tempore gigni,
Non erat ut fieri posset mirarier umquam
Nec diffidere ne terras aeterna teneret
Nox in perpetuum detracto lumine solis.
Sed magis illud erat curae, quod saccla ferarum
Infestam miseris faciebant saepe quietem.

β sic = silent erant 'just as they were.'
Eiectique domo fugiebant saxea tecta
Spumigeri suis adventu validique leonis
Atque interpesta cedebant nocte paventes
Hospitibus saevis instrata cubilia fronde.

Nec nimio tum plus quam nunc mortalia saecla
Dulcia linquebant labentis lumina vitae.
Unus enim tum quisque magis deprensus eorum
Pabula viva feris praebebat, dentibus haustus,
Et nemora ac montes gemitu silvasque replebat
Viva videns vivo sepeliri viscera busto.
At quos effugium servarat corpore adeso,
Posterius tremulas super ulcera taetra tenentes
Palmas horriferis accibant vocibus Orcum,
Donique eos vita privarant vermina saeva
Expertes opis, ignaros quid volnera vellent.
At non multa virum sub signis milia ducta
Una dies dabat exitio nec turbida ponti
Aequora fliegebant naves ad saxa virosque.

Hic temere incassum frustra mare saepe coortum
Saevibat leviterque minas ponebat inanes,
Nec poterat quemquam placidi pellacia ponti
Subdola pellicere in fraudem ridentibus undis,
Improb:a naucleri ratio cum caeca iacebat.
Tum penuria deinde cibi languentia leto
Membra dabat, contra nunc rerum copia mersat.
Illi imprudentes ipsi sibi saepe venenum
Vergebant, medici nunc dant sollertius usi.

Inde casas postquam ac pelles ignemque pararunt,
Et mulier coniuncta viro concessit in unum
Hospitium, ac lecti socialia iura duobus
Cognita sunt, prolemque ex se videre creatam,
Tum genus humanum primum mollescere coepit.

Ignis enim curavit ut alia corpora frigus.

D.
Non ita iam possent caeli sub tegmine ferre, Et Venus inminuit vires puerique parentum Blanditiis facile ingenium fregere superum. Tunc et amicitiam coeperunt iungere audentes Finitimi inter se nec laedere nec violari, Et pueros commendarunt muliebreque saeculum, Vocibus et gestu cum balbe significarent Imbecillorum esse aequum misererier omnes. Nec tamen omnimodis poterat concordia gigni, Sed bona magna pars servabat foedera castae; Aut genus humanum iam tum foret omne peremptum Nec potuisset adhuc perducere saecula propago. At varios linguae sonitus natura subegit Mittere et utilitas expressit nomina rerum, Non alia longe ratione atque ipsa videtur Protrahere ad gestum pueros infantia linguae. Cum facit ut digito quae sint præsentia monstrent. Sentit enim vim quisque suam quod possit abut. Cornua nata prius vitulo quam frontibus extent, Illis iratus petit atque infestus injirget. At catuli pantherarum scymnique leonum Unguiibus ac pedibus iam tum morsuque repugnant, Vix etiam cum sunt dentes unguisque creati. Alituum porro genus alis omne videmus Fidere et a pinnis tremulum petere auxiliatum. Proinde putare aliquem tum nomina distribuisse Rebus et inde homines didicisse vocabula prima, Desiperest. Nam cur hic possit cuncta notare Vocibus et varios sonitus emittere linguae, Tempore eodem alii facere id non quisse putentur? Praeterea si non alii quoque vocibus usi Inter se fuerant, unde insita notientes est Utilitatis et unde data est huic prima potestas,
Quid vellet facere ut sciret animoque videret?
Cogere item plures unus victosque domare
Non poterat, rerum ut perdiscere nomina vellent.
Nec ratione docere ulla suadereque surdis,
Quid sit opus facto, facilest; neque enim paterentur
Nec ratione ulla sibi ferre amplius aures
Vocis inauditos sonitus obtundere frustra.
Postremo quid in hac mirabile tantoperest re,
Si genus humanum cui vox et lingua vigeret,
Pro vario sensu varia res voce notaret?
Cum pecudes mutae, cum denique saecla ferarum
Dissimiles soleant voces variasque ciere,
Cum metus aut dolor est et cum iam gaudia gliscunt.
Quippe etenim licet id rebus cognoscere apertis,
Inritata canum cum primum magna Molossum
Mollia ricta fremunt duro nudantia dentes,
Longe alio sono rabie restricta minantur,
Et cum iam latrant et vocibus omnia complent.
Et catulos blande cum lingua lambere temptant
Aut ubi eos iactant pedibus, morsuque petentes
Suspensis teneros imitantur dentibus haustus,
Longe alio pacto; gannitu vocis adulant,
Et cum deserti baubantur in aedibus aut cum
Plorantes fugiunt summisso corpore plagas.
Denique non hinnitus item differre videtur,
Inter equas ubi equus florenti aetate iuvencus
Pinnigeri sæavit calcaribus ictus amoris,
Et fremitum patulis ubi naribus edit ad arma,
Et cum sic alias concussis artibus hinnit?
Postremo genus alituum variaque volucres,
Accipitres atque ossifragae mergique marinis
Fluctibus in salso victum vitamque petentes,
Longe alias alio iaciunt in tempore voces,
DE RERUM NATURA

Et quom de victu certant praedaeque repugnant.
Et partim mutant cum tempestatibus una
Raucisonos cantus, cornicum ut saecla-vetusta
Corvorumque greges ubi aquam dicuntur et imbres
Poscere et interdum ventos aurasque vocare.
Ergo si vari sensus animalia cogunt,
Muta tamen cum sint, varias emittere voces,
Quanto mortales magis aequumst tum potuisse
Dissimiles alia atque alia res voce notare!

Illud in his rebus tacitus ne forte requiras,
Fulmen detulit in terram mortalibus ignem
Primitus, inde omnis flammarum diditur ardor.
Multa videmus enim caelestibus inlita flammis
Fulgere, cum caeli donavit plaga vapore.

Et ramosa tamen cum ventis pulsa vacillator
Aestuat in ramos incumbens arboris arbor,
Exprimitur validis extritus viribus ignis
Et micat interdum flammae fervidus ardor,
Mutua dum inter se rami stirpesque teruntur.

Quorum utrumque dedisse potest mortalibus ignem.
Inde cibum coquere ac flammae mollire vapore
Sol docuit, quoniam mitescere multa videbant
Verberibus radiorum atque aestu victa per agros.

Inque dies magis hi victum vitamque priorem
Commutat novis monstrabat rebus benigni,
Ingenio qui praestabant et corde vigebant.
Condere coeperunt urbes arcemque locare
Praesidium reges ipsi sibi perfugiumque,

Et pecus atque agros divisere atque dedere
Pro facie cuinque et viribus ingenioque;
Nam facies multum valuit viresque vigentes.

Posterius res inventast aurumque repertum,

Quad facile et validis et pulchris dempsit honorem;
Divitioris enim sectam plerumque sequuntur
Quam lubet et fortes et pulchro corpore creti,
Quod si quis vera vitam ratione gubernet,
Divitiae grandi homini sunt vivere parce
Aequo animo; neque enim est umquam penuria parvi.
At claros homines voluerunt se atque potentes,
Ut fundamento stabili fortuna maneret
Et placidam possent opulentis degere vitam;
Nequiquam, quoniam ad summum succedere honorem
Certantes iter infestum fecerint
Et tamen e summo, quasi fulmen, deicit ictos
Invidia interdum contemptim in Tartara taetra;
Invidia quoniam, ceu fulmine, summa vaporant
Plerumque et quae sunt aliis magis edita cumque;
Ut satius multo iam sit parere quietum
Quam regere imperio res velle et regna tenere.
Proinde sine incassum defessi sanguine sudent,
Angustum per iter luctantes ambitionis;
Quandoquidem sapiunt alieno ex ore petuntque
Res ex auditis potius quam sensibus ipsis,
Nec magis id nunc est neque erit mox quam fuit ante.
Ergo regibus occisis subversa iacebat
Pristina maiestas soliorum et sceptra superba,
Et capitis summi praeclarum insigne cruentum
Sub pedibus vulgi magnum lugebat honorem;
Nam cupide conculcatur nimis ante metutum.
Res itaque ad summam faecem turbasque redibat,
Imperium sibi cum ac summatum quisque petebat.
Inde magistratum partim docuere creare
Iuraque constituere, ut vellent legibus uti.
Nam genus humanum, defessum vi colere aevum,
Ex inimiciis lancebat; quo magis ipsum
Sponte sua ceccidit sub leges artaque iura.
AEtrius ex ira quod enim se quisque parabat
Ulcisci quam nunc concessumst legibus aequis,
Hanc ob rem est homines pertaesum vi colere aevom. 1150 vicar.
Inde metus maculat poenarum praemia vitae.
Circumretit enim vis atque iniuria quemque
Atque, unde exortast, ad eum plerumque revertit,
Nec facilest placidam ac pacatam degere vitam
Qui violat factis communia foedera pacis.
Etsi fallit enim divoni genus humanumque,
Perpetuo tamen id fore clam diffidere debet;
Quippe ubi se multi per somnia saeppe loquentes
Aut morbo delirantes prostraxe ferantur
Et celata mala in medium et peccata dedisse.
Nunc quae causa deum per magnas numina gentes
Pervulgarit et ararum compleverit urbes
Suscipiendaque curarit sollemnia sacra,
Quae nunc in magnis florent sacra rebu locisque,
Unde etiam nunc est mortalibus insitus horror
Qui delubra deum nova toto suscitat orbii
Terrarum et festis cogit celebrare diebus,
Non ita difficilest rationem reddere verbis.
Quippe etenim iam tum divum mortalia saecla
Egregias animo facies vigilante videbant
Et magis in somnis mirando corporis auctu.
His igitur sensum tribuebant propterea quod
Membra movere videbant vocesque superbas
Mittere pro facie praeclara et viribus amplis.
Aeternamque dabant vitam, quia semper eorum
Suppeditabatur facies et forma manebat,
Et tamen omnino quod tantis viribus auctos
Non temere ulla vi convinci posse putabant.
Fortunisque ideo longe praestare putabant,
Quod mortis timor haud quemquam vexaret eorum, 1180
Et simul in somnis quia multa et mira videbant
Efficere et nullum capere ipsos inde laborem.
Praeterea caeli rationes ordine certo
Et varia annorum cernebant tempora verti
Nec poterant quibus id fieret cognoscere causis.
Ergo perfugium sibi habebant omnia divis
Tradere et illorum nutu facere omnia lecti.
In caeloque deum sedes et templum locarunt,
Per caelum volvi quia nox et luna visidetur,
Luna dies et nox et noctis signa severa.
Noctivagaque faces caeli flammaeque volantes,
Nubila sol imbræ nix venti fulmina grando
Et rapidi fremitus et murmura magna minarum.
O genus infelix humanum, talia divis
Cum tribuit facta atque iras adjunxit acerbas!
Quantos tum gemitus ipsi sibi, quantaque nobis
Volnera, quas lacrimas peperere minoribus nostris!
Nec pietas ullast velatum saepe videri
Vertier ad lapidem atque omnes accedere ad aras
Nec procumbere humi prostratum et pandere palmas
Ante deum delubra nec aras sanguine multo
Spargere quadrupedum nec votis nectere vota,
Sed mage pacata posse omnia mente tueri.
Nam cum suspicimus magni caelestia mundi
Templa, super stellisque micantibus aethera fixum,
Et venit in mentem solis lunaeque viarum,
Tunc aliis oppressa malis in pectora cura
Illa quoque expegefactum caput erigere iniit,
Nequae forte deum nobis inmensa potestas
Sit, vario motu quae candida sidera verset.
Temptat enim dubiam mentem rationis egestas,
Ecquae nam fuerit mundi genitalis origo,
Et simul ecquae sit finis, quoad moenia mundi

// Text contains Latin script //

LIBER QUINTUS.
Solliciti motus hunc possint ferre laborem,
An divinitus aeterna donata salute
Perpetuo possint aevi labentia tractu
Inmensi validas aevi contemnere vires.
Praeterea cui non animus formidine divum
Contrahitur, cui non correpunt membra pavore,
Fulminis horribili cum plaga torrida tellus
Contremis et magnum percurrunt murmura caelum?
Non populi gentesque tremunt, regesque superbi
Corripiunt divum percussi membra timore,
Nequid ob admissum foede dictumve superbe
Poenarum grave sit solvendi tempus adultum?
Summa etiam cum vis violenti per mare venti
Induperatorem classis super aequora verrit
Cum validis pariter legionibus atque elephantis,
Non divum pacem votis adit ac prece quaesit
Ventorum pavidus animasque secundas?
Nequiquam, quoniam violento turbine saepe
Corruptus nilo fertur minus ad vada leti.
Usque adeo res humanas vis abdita quaedam
Obterit et pulchros fasces saevasque secures
Proculcare ac ludibrio sibi habere videtur.
Denique sub pedibus tellus cum tota vacillat
Concussaeque cadunt urbes dubiaeque minantur,
Quid mirum si se temnunt mortalia saecla
Atque potestates magnas mirasque relinquunt
In rebus vires divum, quae cuncta gubernent?
Quod superest, aequo atque aurum ferrumque repertum est
Et simul argenti pondus plumbique potestas,
Ignis ubi ingentes silvas ardore cremarat
Montibus in magnis, seu caeli fulmine misso,
Sive quod inter se bellum silvestre gerentes
Hostibus intulerant ignem formidinis ergo,
Sive quod inducti terrae bonitate volebant
Pandere agros pingues et pascua reddere rura,
Sive feras interficere et ditescre praedae.

Nam fovea atque igni prius est venarier ortum
Quam saepere plagiem saltum canibusque cire.

Quidquid id est, quacumque e causa flammeus arlor
Horribili sonitu silvas exederat altis
Ab radicibus et terram percoxerat igni,
Manabat venis ferventibus in loca terrae
Concava conveniens argenti rivus et auri,
Aeris item et plumbi. Quae cum concreta videbant
Posterior claro in terra splendere colore,
Tollebant nitido capti levique tepore,
Et similis formata videbant esse figura.
Atque lacunarum fuerant vestigia cuique.

Tum penetrabat eos posse haec liquefacta calore
Quamlibet in formam et faciem decurrere rerum cast.
Et prorsum quamvis in acuta ac tenuia posse
Mucronum duci fastigia procundo,
Ut sibi tela darent, silvasque ut caedere possent Materiemque dolare et levia radere tigna
Et terebrare etiam ac pertundere perque forare.
Nec minus argento facere haec auroque parabant
Quam validi primum violentis viribus aeris; coppe
Nequi quam, quoniam cedebat victa potestas
Nec poterat pariter durum sufferre laborem.

Tum fuit in pretio magis aes aurumque iacebat
Propter inutilitatem hebeti mucrone retsum.
Nunc iacet aes, aurum in summum successit honorem.
Sic volvenda aetas commutat tempora rerum.
Quod fuit in pretio, fit nullo denique honore;
Porro allud succedit et e contemptibus exit

Inque dies magis adpetitur floretque repertum

cessed

and might lay hammering on the brought to tapering points
gamy degree of sharpness and fineness.

falls at length into utter disrespect.
Laudibus et miro est mortales inter honore. 1280

Nunc tibi quo pacto ferri natura reperta
Sit facilest ipsi per te cognoscere, Memmi.
Arma antiqua manus unques dentesque fuerunt
Et lapides et item silvarum fragmina rami,
Et flamma atque ignes, postquam sunt cognita primum. 1285
Posterius ferri vis est aerisque reperta.
Et prior aeris erat quam ferri cognitus usus,
Quo facilis magis est natura et copia maior.
Aere solum terrae tractabant, aereque bellí
Miscebant fluctus et vulnera vasta serebant 1290
Et pecus atque agros adimebant; nam facile ollis
Omnia cedebant armatis nuda et inera.
Inde minutatim processit ferreus ensís
Versaque in opprobrium species est falcís ænae,
Et ferro coepere solum prosíndere terrae
Exaequataque sunt creperi certamina bellí.
Et prius est armatum in equí conscendere costas
Et moderári hunc frenís dextraque vigere
Quam biíugo currú bellí temptare perícìa.
Et biíugos prius est quam bis coniungere bínos
Et quam falcíferos armatum escende re currús.
Inde bóves Lucas turritó corpóre, taétiras,
Anguimanus, bellí docuerunt volnéra Poení
Sufferre et magnás Martír turbare catervas.
Sic alíd ex alío peperit discordia trístís,
Horribíle humanís quod gentibus esset in armís,
Inque díes bellí terroríbus addídit augmen.
Temptarunt etiam tauros in munere bellí
Expertique sues saevos sunt mittere in hostes.
Et validos partim prae se misere leones
Cum doctoribus armatis saevísque magístris 1300
Qui moderári his possent vincisque tenere;
Nequiquam, quoniam permixta caede calentes
Turbabant saevi nullo discrimine turmas,
Terricas capitum quatientes undique cristas,
Nec poterant equites fremitu perterrita equorum
Pectora mulcere et frenis convertere in hostes.
Inritata leae iaciebant corpora saltu
Undique et adversum venientibus ora petebant
Et nec opinantes a tergo deripiebant
Deplexaeque dabant in terram volnere victos,
Morsibus adfixae validis atque unguibus uncis.
Iactabantque suos tauri pedibusque terebant
Et latera ac ventres hauribant subter equorum
Cornibus et terram mimitanti fronte ruabant.
Et validis socios caedebant dentibus apri
Tela infracta suo tinguentes sanguine saevi,
In se fracta suo tinguentes sanguine tela,
Permixtasque dabant equitum peditumque ruinas.
Nam transversa feros exibant denatis adactus
Jumenta aut pedibus ventos erecta petebant;
Nequiquam, quoniam ab nervis succisa videres
Concidere atque gravi terram consternere casu.
Siquos ante domi domitos satis esse putabant,
Effervescere cernebant in rebus agundis
Volneribus clamore fuga terrore tumultu,
Nec poterant ullam partem reducere eorum;
Diffugiebat enim varium genus omne ferarum;
Ut nunc saepe boves Lucae ferro male mactae
Diffugiunt, fera facta suis cum multa dedere.
Sed facere id non tam vincendi spe voluerunt,
Quam dare quod gemerent hostes, ipsique perire,
Qui numero diffidebant armisque vacabant.
Nexilis ante fuit vestis quam textile tegmen.
Textile post ferrumst, quia ferro tela paratur,
Nec ratione alia possunt tam levia gigni
Insilia ac fusi, radii scapique sonantes.
Et facere ante viros lanam natura coeget
Quam muliebre genus; nam longe praestat in arte
Et sollertius est multo genus omne virile.
Agricolae donec vitio vertere severt
Ut muliebribus id manibus concedere vellent
Atque ipsi pariter durum sufferre laborem
Atque opere in duro durarent membra manusque.

At specimen sationis et insitionis origo
Ipsa fuit rerum primum natura creatrix,
Arboribus quoniam bacae glandesque caducae
Tempestiva dabant pullorum examina subter;
Unde etiam libitum stipes committere ramis
Et nova defodere in terram virgulta per agros.
Inde aliam atque aliam culturam dulcis agelli
Temptabant fructusque feros mansuescere terram
Cernebant indulgendo blandique colendo.
Inde dies magis in montem succedere silvas
Cogebant infraque locum concedere cultis,
Prata lacus rivos segetes vinetaque laeta
Collibus et campis ut haberent, atque olearum
Caerula distinguens inter plaga currere posset
Per tumulos et convalles camposque profusa;
Ut nunc esse vides variis distincta lepore
Omnia, quae pomis intersita dulcis ornat
Arbustisque tenent felicibus obsita circum.

At liquidas avium voces imitarier ore
Ante fuit multo quam levia carmina cantu
Concelebrare homines possent auresque iuvere.
Et zephyri, cava per calamorum, sibila primum
Agrestes docuere cavas inflare cicitas.
Inde minutatim dulces didicere querellas,
LIBER QUINTUS

Tibia quas fundit digitis pulsata canentum,
Avia per nemora ac silvas saltusque reperta,
Per loca pastorum deserta atque otia dia.

Haec animos ollis mulcebat atque iuvabat
Cum satiate cibi; nam tum haec sunt omnia cordi.

Saepe itaque inter se prostrati in gramine molli
Propert aquae rivum sub ramis arboris altae
Non magnis opibus iucunde corpora habebant,
Praesertim cum tempestas ridebat et anni
Tempora pingebant viridantes floribus herbas.

Tum ioca, tum sermo, tum dulces esse cachinni
Consuerant. Agrestis enim tum musa vigebat;
Tum caput atque umeros plexis redimire coronis
Floribus et foliis lascivia laeta monebat,
Atque extra numerum procedere membra moventes
Duriter et duro terram pede pellere matrem;
Unde oriebantur risus dulcesque cachinni,
Omnia quod nova tum magis haec et mira vigebant.

Et vigilantibus hinc aderant solacia somni
Ducere multimodis voces et flectere cantus
Et supera calamos unco percurrire labro;
Unde etiam vigiles nunc haec accepta tuentur.

Et numerum servare recens didicere, neque hilo
Maiorem interea capiunt dulcedini fructum
Quam silvestre genus capiebat terrigenarum.
Nam quod adest praesto, nisi quid cognovimus ante

Suavius, in primis placet et pollere videtur,
Posteriorque fere melior res illa reperta
Perdit et immutat sensus ad pristina quaeque.

Sic odium coepit glandis, sic illa relicta
Strata cubilia sunt herbis et frondibus aucta.
Pellis item ceedit vestis contempta ferinae;
Quam reor invidia tali tunc esse repertam,
Ut letum insidiis qui gessit primus obiret,
Et tamen inter eos distractam sanguine multo
Disperiiisse neque in fructum convertere quisse.
Tunc igitur pelles, nunc aurum et purpura curis
Exercent hominum vitam belloque fatigant;
Quo magis in nobis, ut opinor, culpa resedit.
Frigus enim nudos sine pellibus excru ci bat
Terrigenas; at nos nil laedit veste carere
Purpurea atque auro signisque ingentibus apta,
Dum plebeia tamen sit quae defendere possit.
Ergo hominum genus incassum frustraque laborat
Semper et in curis consumit inanibus aevum,
Nimirum quia non cognovit quae sit habendi
Finis et omnino quod crescat vera voluptas.
Idque minutatim vitam provexit in altum
Et belli magnos commovit funditus aestus.
At vigiles mundi magnum ac versatile templum
Sol et luna suo lustrantes lumine circum
Perdociure homines annorum tempora verti
Et certa ratione geri rem atque ordine certo.
Iam validis saepti degebant turribus aevum
Et divisa colebatur discretaque tellus,
Iam mare velvolis florebat puppibus; urbes
Auxilia ac socios iam pacto foedere habebant,
Carminibus cum res gestas coeptere poetae
Tradere; nec multo prius sunt elementa reperta.
Properterea quid sit prius actum respicere aetas
Nostra nequit, nisi qua ratio vestigia monstrat.
Navigia atque agri culturas moenia leges
Arma vias vetes et cetera de genere horum,
Praemia, delicias quoque vitae funditus omnes,
Carmina picturas, et daedala signa polire,
Usus et impigrae simul experientia mentis
Paulatim docuit pedetemptim progredientes.
Sic unumquinquid paulatim protrahit aetas
In medium ratioque in luminis erigit oras.
Namque alid ex alio clarescere et ordine debet
Artibus, ad summum donec venere cacumen.
NOTES.

1—54. No one can worthily praise Epicurus, the founder of this philosophy. The benefits he conferred on men are greater than those conferred by gods, such as Ceres and Bacchus, or by demigods, such as Hercules; because peace of mind is more important than external comfort or safety.

1. *potis* is an indeclinable adj.; *quid potis est*, l. 560; *pote*, which also occurs, is not the neuter, but a weakened form, as *mage* is of *magis*, *amabere* of *amaberis*.

*dignum...pro*: the simple abl. is more usual after *dignus*; but comp. Hor. Ep. i 7 24 *dignum pro laude*.

*pectore*, "genius"; again in l. 5 *pectus* is the seat of intellect, in ll. 18 and 43 that of moral qualities.

2. *repertis*, "discoveries"; often used as a noun by Lucr.

4. *eius*, i.e. *Epicuri*; see Introduction p. xiv; Lucr. reverences his master so much that he generally avoids mentioning his name; it only occurs once in the whole poem, iii 1042.

*possit*: consec. subj., as *qui—ut* is.

5. *quaesita*, "acquired" rather than "sought"; see l. 213.

*praemia*, "prizes", "valuable things". *liquit*, "bequeathed".

6. *cretus* is the perf. partic. of *cresco*, used as if *cresco* were deponent; comp. *adultus* from *adolesco*. Similar phrases occur in ll. 60, 1116; also in Ovid and Virgil.

7. *si, ut ipsa*: *si* is not elided (this is called *hiatus*) and the syllable is shortened; so l. 74 *qui in orbi*. This hiatus is very common in Plautus and Terence and is even found in Horace (*si me amas inquit*) and Virgil (*te amice nequivi*). *petit* is intransitive.

8. Virg. Ecl. v 64 *deus, deus ille*, Menalca.

9. Memmi: Gaius Memmius, a Roman aristocrat to whom the whole poem of Lucr. is addressed. It seems probable that he was unworthy.
of such an honour: Catullus, who was a member of his staff, when he was propractor in Bithynia, always speaks of him with contempt and dislike. His name occurs five times in this book.

9. princeps = prīmus; again, i 94.
rationem, 'plan': a word often used by Lucr., and with different meanings, such as 'reason', 'reasoning', 'system', 'law', 'opinion'.

10. sapientia, 'wisdom' or 'philosophy'. Lucr. will not allow this name to any system previous to that of Epicurus.

12. tranquillo: neut. adj. used as noun. Human life is compared to a ship at sea. Notice the alliteration in this beautiful line.

13. enim is argumentative, 'if you doubt it', used like ἐπειδ' with imperative, for which see Aristoph. Wasps 73, 519, Soph. El. 352.

divina...antiqua: such double epithets without copula are constantly used by Lucr.: e.g. l. 24 Nemeæus magnus.

14. namque, 'for instance'. Ceres corresponds to the Greek Demeter; Liber to Bacchus.

15. instituere, 'to have revealed'; κατὰ ἐκεῖ is the same meaning.
Though the Augustan poets generally end a hexameter with a word of two or three syllables, Lucr. often has words of one, four, and five in this position.

18. poterat is impersonal. bene vivi, 'happiness'; in prose, beata vita; comp. Hor. Ep. i 112 navibus atque quadrigis petimus bene vivere. purum pectore: comp. our phrase, 'to make a clean breast of it'.

19. merito goes with videtur.
20. ex quo = ex quo orta.
magnas: conventional epithet of gentes; again l. 1161.

21. vitae: possessive gen.

22. Hercules was the ancient type of strength and valour and won a place in heaven by these qualities.

23. ratione, 'opinion'.

24. Nemeaen: constr. as if it were Nemeae agreeing with leonis, and comp. Virgil's Tyrreniusque tubae clangor. The argument is: even if Hercules had not killed all these wild beasts, we should not be worse off now. Eight of the twelve labours of Hercules are here mentioned.

25. obesset: the protasis, si viveret, is understood.
NOTES.

26. _denique_, 'besides' rather than 'lastly', as often in Lucr.
27. _posset_ = _valeret_.
28. Geryon was the three-headed king of Hesperia whom Hercules conquered; Martial (v 65 11) calls him _pastor Hiberus_.

The line in italics was written by Munro to fill the place of a lost line of the original.

_Hesperides_ are the Harpies which ate human flesh and used their brazen feathers as arrows, as it was once believed that the porcupine used its quills. They lived near lake Stymphalus in Arcadia and are therefore sometimes called Stymphalides.

29. _tanto opere_, 'so much', is usually written as one word; see l. 1056.
30. Virg. Georg. ii 140 _tauri spirantes naribus ignem_.
31. _Thracis_: epithet of Diomedes king of Thrace, to distinguish him from his namesake, the son of Tydeus who fought against Troy. Ismara, or Ismarus, is a mountain on the coast of Thrace; the Bistones were a Thracian people, and the Roman poets often use their name as _Thracian_.

_propter_ with this meaning often comes after the word it governs; see ll. 623, 738; but, ll. 35, 1393, it comes before it.
32. _aurea...fulgentia_: see n. to l. 13. *double of their wilton Vulpula._

The Hesperides were fabulous women who guarded the golden apples somewhere in the west; hence their name.

33. _acerba_: adverbial use of adj. common in all Latin poets; Virg. Aen. ix 794 _asper, acerba tuens_; the sing. adj. is commoner than the plur.
34. _quid denique_, 'what possible harm', like _quid tandem_ in l. 38; comp. Hor. Sat. i 4 80 _quis denique?_
35. _Atlanteum_: in these western parts the giant Atlas was believed to stand, supporting the burden of the sky on his shoulders.

_pelage_: Greek form of plural; so Lucr. also uses _mele_, 'songs'.
36. _nostrer_ would be _nostras, -atis_, in prose. _barbarus_ is used by Lucr. as = _peregrinus_, but by Plautus, translating from Greek originals, as = _Romanus_; so, Mostell. 618, _multifarum barbarus_ is 'a porridge-eating Roman', _puls_ being the old national food.
37. _cetera de genere hoc_ is found in Horace, Sat. i 1 13.
38. *viva_ contains a second protasis, *si viverent*.
39. _ita_, 'for', qualifies the whole sentence, as very often in Plautus. _satietatem_ is used because _satietatem_ cannot be got into the verse.

40. _scatit_: from _scatire_, a less common form than _scatère_; so Lucr
uses fervère and fulgere. It here takes a gen., instead of the usual abl., as if senta were = piena est.
terrore: in this sense Martial twice calls the Nemean lion terror Nemeus.

42. est nostra potestas: lit. 'there is power belonging to us', i.e. 'we have the power'.

43. purgatumus: the enclitic est is common in Lucr. and earlier writers; so tumus just below.

† quae profita etc.: 'what battles and dangers must then find their way into us'. Here, as often, Lucr. uses the 'active gerund instead of the passive gerundive; for insinuare is here an active verb. Comp. i 111 aeternas quomam poenas in morte timendumus; this construction was dropped by later writers, though it was always kept in Greek, ὑφελητέον τὴν πόλιν being as good as ὑφελητέα ἡ πόλις..

44. ingratis is contracted from ingratiss and used adverbially.

45. cuppedinis = cupiditatis; an archaic word.

47. superbis spurtitias: the a is short before sp; see l. 79; the Augustan poets avoid placing a short vowel before sp, sc, st.

48. 'desidia, 'different forms of sloth'. 'all sorts of sloth!'

49. subegerit is perf. subj., qui being = cum is; comp. cum suerit just below.

51. dignavir, the archaic form of dignari, is here passive, and followed by the inf. esse.

53. immortalibus: in pre-Augustan poets the finals is often ignored in short syllables. suerit is contracted from sueretit. Epicurus wrote a book περὶ θεῶν.

54. The 'nature of things' is here what we call 'natural science'; it can have a wider meaning; see l. 199.

55—90. Following Epicurus I point out the absolute reign of law in the natural world; and, as I have already proved that the mind of man is mortal, so I will now prove that the world too must some day come to an end. I will also describe the birth-time of the world, and above all the motions of the heavenly bodies, as it is mainly owing to our ignorance of these that superstition has so strong a hold upon us.

55—75. This long sentence may be split up into three, in translating, of four, five, and twelve lines. In this case dum must not be translated.
NOTES.

55. rationes, 'reasonings'.

56. The order is: doceo quam sit necessum quaque durare in eo foedere quo creata sint.

57. duvare, 'to remain'; but, l. 1360, 'to harden'.

58. nec, i.e. quamque non, still after doceo.

59. quo genere etc.: 'herein it has been found above all that the nature of the mind'. in primis...primum is very emphatic. In Lucr. animus always is the mind or reason (άγος), anima the soul or life (ψυχή). He is referring to his third book where he has proved this point at great length. See Introd. p. xxiii. animi natura is merely a periphrasis for animus, like mundi natura for mundus; both occur frequently; see ll. 127, 132, 157, 239, 331, 365, 370, 834.

N 560. nativo, 'that had birth'. Lucr. uses nativus as = mortalis and opposed to aeternus; so γενητος is often opposed to διδος.

corpo creta: see n. to cretus, l. 6. Per. fut. gen. cretae et iste creo vecare.

60. solere: the acc. and inf. as if reperta in l. 59 were repertum.

He means to say that appearances of dead men in our dreams are mere delusions and do nothing to prove the immortality of the soul.

61. videamur: the subj. here and in l. 681 seems to denote frequency, though regularly quoties hoc sit = οταν τοθε γενηται; probably the subj. is due to the semblance of oratio obliqua.

62. quod superest, lit. 'as to what remains', i.e. 'to continue'; a common formula of transition.

rationis, 'of my plan'. detulit, sc. me.

63. congressus materiæ, 'union of matter', formed by the ceaseless strife and collision of atoms described in the second book.

64. fundarit: indirect question after ratio reddunda sit; so also extiterint, sint natae, cooperit, insinuatril below.

65. lunai: Lucr. uses this archaic form and that in -ae (see l. 70) indifferently as suits his verse. Tellure, 'from the earth'.

animantes = animalia: see n. to l. 823.

70. Part of his plan is to disprove the existence of such fabulous creatures as Centaurs and Chimeras; see ll. 878 foll.

71. sive: sive is for quae, as the origin of speech is not an alternative but an additional topic: also l. 776. Munro thinks this licence may be due to the ambiguity of quoque which might be a part of quisque.

vesci = uti: rather different in l. 857. per, 'in', 'in the way of'; so per iocum.
73. *ille* is often used by Lucr. to express vividly admiration or, as here, contempt.

*divum metus, deis dux, terrae, ...* is the main cause of human misery, according to Lucr.; and to banish it is the sole aim of the study of nature. 

74. *scriptum* is here intrans., though not in l. 44; the *in* of the verb governs *pecora*.

75. *qui in*: for the hiatus see n. to l. 7. *orbi* is the archaic abl.; again, l. 707. Lucr. uses also *igni, luci, parti, labi*, in this book.

76. *sanctus* and *tuetur* are to be taken together.

77. *nature gubernans*: "piloting nature"; another metaphor from a ship. Comp. l. 107, from which it appears that *nature* and *fortuna* are identical.

79. *liberat*: see n. to l. 47. *cursus*: internal acc. after *lusitare*.

80. *morigera*: 'obliging enough'; sarcastic. *animantes*: see n. to l. 823.

81. *rationes*: 'forethought', *προσωπα*.

82. *qui*: 'even those who'. Part of the l. is quoted by Horace, Sat. i 5. 101 *deos dili ci secum agere aevum*.

83. *interea*: 'notwithstanding'; again l. 394. Lucr. often uses *eodem tempore* in the same sense: see ll. 756, 765. *ratione = modo*.

85. *aetheris in oris*: 'in the regions of aether'. In Lucr. aether is always the higher, unclouded sky, *aer* the lower abode of storms and clouds: see ll. 500—504. *ora luminis*, 'the regions of light', i.e. the world, is a favourite phrase of Lucr.

87. *dominos acres*, i.e. the gods; they are called *domini superbi*, ii 1091.

89. *finita* etc.: 'in short on what principle each thing has its power defined and its deep-set boundary mark'. With *terminus*, sc. *finitus sit*. The metaphor is from a land-mark dividing two properties; here the *terminus* divides for each thing the possible from the impossible.

90. *sit* belongs to *finita* above; Lucr. likes to keep separate the parts of these compound tenses; see ll. 177, 546, 583, 858, 1225, 1416.

91—109. To proceed to the demonstration I have promised, it is certain, however astonishing it may sound, that the whole world will one day be destroyed. You yourself may live to see it.
NOTES.

91. quod superest: see n. to l. 64. *plura*: adverbial use of adjective; so *acerb* l. 33. *damnatus*.

93. Memmi: see n. to l. 8. Here the personal appeal invites special attention.

94. *species = άδύν, 'things so unlike in appearance'; l. 569, *species = 'our sight'.

95. Ovid (Am. i 15 23) quotes from this line to pay a fine compliment to its author:

earmina sublimis tunc sunt peritura Lucreti,
exitio terras cum dabiti una dies.

96. *ruet, 'will go to ruin'; *ruere is also transitive sometimes in Lucr., e.g. l. 1325. *mole et machina, 'mass and fabric'; mole suggests size, machina complexity.*

97. *animi, 'in my mind', a locative like humi, ruri, domi; common also with adjectives like dubius, aeger. fallit is impersonal.*

res nova miraque: constr. as if it were novum mirumque; exitium futurum is the subject to accidat.

99. *id is object to pervincere.*

100. *sit = solet fieri. ubi rem adportes = ubi res adportatur; but the Latin idiom requires the subj. in the second person, e.g. bonus seignior sit ubi neglegas (Sallust). We say 'when one brings'. ante is an adverb and goes with insolitum.*

101. *visu is contracted from visi.*

102. *indu and endo are archaic forms of the prep. in; the d survives in indiceo, compound of ego. Lucr. uses indugredi, indupedire, indupedator, the last for metrical reasons, though the verbs can be separated by *mesis from their prepositions, e.g. inque pedire.*

N.B. *via qua etc.: 'where a beaten path of conviction leads most directly'. The meaning is: anything which appeals to sight or touch is readily believed; just so Horace, A. P. 180 segnius iritant animos demissa per aurem, quam quae sunt oculis subjecta fidelibus; Tennyson, Enoch Arden, 'things seen are mightier than things heard'.

103. *templa mentis, 'quarters of the mind'; so Lucr., iv 624, speaks of the mouth as linguai templu, Plautus, Mil. Glor. 412, of the sea as Neptunia templu, templu being = loca in old Latin.*

104. *dabit fidem: in prose faciet fidem.*

106. *in, 'in the course of'.

107. *Comp. l. 77. Fortuna sublimans, gilding nature.*
54

LUCRETIUS. BOOK V.

108. ratio, 'reasoning'; res, 'the reality'.

109. succidere...victa: translate by two coordinate verbs. fragor is defined by Seneca (Nat. Quaest. ii 27 3) as a sound subitus et vehementes.

110—234. The editors point out that these lines interrupt the argument, which is to prove the precarious existence of the world, and are out of place here. There are many such passages, especially in the last two books; they are rough drafts which Lucr. did not live long enough to fit properly into his text. A number of the verses are copied from his earlier books.

110—145. You must not think it profane to deny the divinity and permanence of the external world. The mind cannot exist outside the body; indeed it can exist only in one special part of the body itself. Therefore earth, fire, water, and air cannot have life and consequently are not divine.

110. qua prius adgreiar quam de re sed prius quam adgreiar de hac re. *fata*; 'decrees of fate'.

114. ne — rearis: ne with the 2nd pers. of the pres. subj. makes a final clause, not a prohibition, always in Lucr. and generally in writers of the best period; in Greek the same rule is invariable. But Horace at least once (Sat. ii 3 88) and very early and late poets (e.g. Plautus and Martial) use ne facias as = ne feceris or noli facere.

116. corpore divino: abl. of description. 'with divine body'.

117. putes: subj. after ne l. 114. Gigantum: they were punished for their impious attack on heaven by being struck by thunderbolts or imprisoned under mountains; Hor. Od. iii 4 73 injecta monstris Terra dolet suis.

119. disturbent moenia mundi; 'displace the walls of the world', i.e. by saying it must perish. disturbent and velint below are subj., because they are in dependent clauses of oratio obliqua.

121. notantes; 'blaming'; used technically of the censors.

122. quae refers back to l. 116, the last 5 ll. being parenthetical, and includes the things enumerated in l. 115. The MSS. have distant here and videri, not videntur, below; this construction is so harsh that I have admitted the conjecture of Madvig.

123. The order is: et videntur indigna quae sint. With indigna, sc. usque adeo again.

124. notitiam; 'a notable instance'. putentur = putari possint.
NOTES.

125. quid sit = quale sit illud quod est.
126. quippe etenim recurs ll. 240, 449, 1062, 1169; the expression is pleonastic, as both quippe and etenim mean ‘for’.

Non est ut putetur = non potest putari. *esse* ‘to exist’.

127. *consilium*, ‘judgment’; animi goes with consil. as well as with natura; for animi natura see n. to l. 59.

131. quiecquid = quidque, as often in Lucr.: see ll. 264, 284, 304.

133. *quod* si, ‘but if’: *quod* is the conjunction, not the relative, and is thus used also before nisi, contra, quoniam (l. 138).

134. *quod* sit, ‘but if’: *quod* is the conjunction, not the relative, and is thus used also before nisi, contra, quoniam (l. 138).

135. *posset enim multo prius*, ‘a much more likely supposition’.

137. *tandem*, ‘after all’; a rare meaning; Plaut. Mil. Glor. 1053

138. *quod*: see n. to l. 134. *constat = est*; again, l. 144. *quoque*, ‘even’.

139. *videtur*, ‘is seen’; *videri* often requires, and usually can bear, this meaning in Lucr.

140. *sorsum*: two syllables by synizesis.

141. *animalm*: fem. adj. agreeing with *formam*.

142. *igni*: see n. to orbi, l. 74.

143. As subject to *durare*, sc. *animam atque animum*; Lucr. denies both these to the material elements of the world, differing from the Stoics who maintained that the world had a soul.

144. As subject to *constant (= sunt)*, sc. the things enumerated in l. 115. *divino sensu* is equivalent to *divino corpore* of l. 116.

145. They have not even life; much less are they divine.

146—194. The gods do not dwell in abodes which we can see: their abodes are, like themselves, too subtle to be perceived by our senses. Nor did the gods create the world for our sakes. They could have no motive for doing so, as their life never admitted of any increase of happiness; nor would they have known how to do so, before nature showed them the way; atoms, of themselves, after countless experiments, fell at last into the positions necessary to make the world as we see it.

146. *non est ut possis = non potes*; comp. l. 126.

147. Epicurus taught that the gods dwelt in *metakbσμα*, ‘spaces
between worlds’, the universe (omne) being made up of countless worlds such as ours. See Introduct. p. xxv.

148. tenuis, ‘fine’, ‘subtle’, ‘impalpable’: it is two syllables, the u being consonantal. deum is gen. plur.

149. animi mente, ‘the reasoning of the mind’. videtur is passive, as often; θεωρεῖν λόγος is the Greek equivalent of mente videtur.

150. sufficit: the perf. should be noticed where the context requires the pres.; fugio and its compounds are so used elsewhere, e.g. Virg. Aen. ii. 12 horret luctuque refugit.

151. The order is: debet contingere nil quod nobis tactile sit. sit because quod = tale ut. contingere = tangere.

The nature of the gods can touch nothing we can touch; therefore they do not live in habitations visible to us.

153. etiam quoque is pleonastic, like quippe etenim l. 126.

154. de corpore eorum, ‘after the fashion of their bodies’; the full phrase is de exemplo corporis eorum.

155. This promise is nowhere fulfilled, one of many signs that the poem is unfinished.

156. dicere is the subject to desiperest, l. 165. voluisse, decere l. 158, fas esse l. 160, are all governed by dicere. As subject to voluisse, sc. deos.

157. mundi naturam: see n. to animi natura, l. 59.

159. putare is governed by decere.

160. sit: subj. of dependent clause in oratio obliqua.

ratione: see n. to l. 81.

161. fundatum perpetuo aevō, lit. ‘founded on unending time’, i.e. ‘founded to last for ever’; comp. ossibus fundatum, l. 927.

163. ab imo summa is a compressed phrase for tota ab imo usque ad summa.

164. adfingere et addere take up again the original subject dicere, l. 156, the predicate being desipere below.

166. largiēr: archaic form of largīri, like dignāri l. 51.

emolumenti is partitive gen. after quid; comp. signi, l. 918.

167. tardae dantisur, ‘should take in hand’, ὡστε ἐπιχειρεῖν; the metaphor both in Greek and English preferring the hand to the foot.

168. novi: partitive gen. after quid, like emolumenti above. tanto post goes with cuperent, ante (= antea) with quietos.

172. antēacto: three syllables by synizesis.

174. credo shows that the sentence is ironical. vita, sc. deorum.
NOTES.

175. *genitatis orico,* "the first birth-time."

176—180 form a digression. Lucr. has been saying that the gods could gain nothing by the creation of men; he now goes on to say that men could have no quarrel with the gods, if they had never been created.

creatis: the acc. could stand here as well as the dat.; see creatum, l. 180.

177. The order of the words is at first sight strange as the metre would allow debet enim natus quicunque est; but natus gains emphasis thus, and the separation of natus and est is quite in the manner of Lucr.; see n. to l. 90.

178. *donec:* as long as.

179. *in numero, sc. viventium, 'included among the living*.
obest, sc. ei.

181. gignundis is archaic for gignendis, like reddunda, l. 66.

182. nupties is intended to represent the technical Epicurean term προσεπιστημή, 'preconception' of mankind, i.e. idea of what men were like. See l. 1047 and Introduc. p. xxiv. If no men existed, there could be no images (απεικόνισις) of them, and consequently no conception (προσεπιστημή) of what they were like.

183. Comp. l. 1049. *ut* is consecutive; facere goes with vellent.

184. principiorum: these principia (ἀρχαὶ), or primordia rerum (στοιχεῖα), are the atoms of Epicurus, the ultimate and indivisible elements of all matter; see Introduc. p. xxii. N.B. teatum has now been expunged.

Lucr. uses principiorum as the gen. of primordia, just as he uses arbusta for the plur. of arbor, to suit the requirements of his metre: see n. to l. 671.

185. quidque...possent: an indirect question, which is in fact a second subject to cognita est.

186. *natura: in the Epicurean philosophy nature and chance are identified; comp. l. 77 with l. 107.

187. ita is followed by ut, l. 192.

188. plagae are the blows inflicted by atoms on each other.

189. concita goes with ponderibus.

190. omnimodis (= omnibus modis) seems to be formed by false analogy from multimodis (= multis modis).

191. congressa: nom.

192. deciderunt, sc. primordia. quoque goes with tales in l. 192.

193. meatus, 'courses'.
58

**LUcretIUS. BOOK V.**

194. *qualibus* = *quales sunt ii quibus.*

- *haec rerum summa,* "this sum of matter," i.e. our world; the summa summarum, "sum of sums" (l. 361), includes all worlds.

- *novando,* "by constant renewing"; the gerund is used actively to supply oblique cases of the infinitive; see n. to *procudendo* l. 1265. The number of atoms in any world is constant, but their combinations are constantly changing.

195—234. In any case the world is so far from perfect that it is impossible to attribute to it a divine origin. A great part of it is uninhabitable; the inhabitable part is cultivated with great labour, and often without result. Think too of the wild beasts, the diseases, the early deaths, and of the helpless condition of the human infant compared with the offspring of other animals.

This paragraph is in the poet's noblest style.

195. *si iam,* 'even if it were the case that'; *si iam* (and *ut iam*) are used with the pres. subj. to state a hypothesis provisionally, for the sake of argument. Here the *iam* suggests that Lucr. is not really ignorant. *el ἄρα* is often used in this sense; Thuc. iii 56 el ἄρα ἡμάρπηται.

- *quae sint:* indirect question.

196. *rationibus,* "arrangements." *ausim,* archaic for *audeam.*

197. *reddere* is short for *rationem reddere;* see l. 66.

198. *divinitus,* "by the gods." *δειον* "by divine power.*

199. *stat = constat = est.* *praedita* is more commonly used of good or neutral qualities. *culpa* "faultiness." *défectis.*

200. *quantum...inde = a tanto quantum.*

201. *impetus,* "whirling expanse;" it seems to denote both size and motion; for the revolution of the sky, see l. 510.

202. *silvae ferarum:* so we speak of "a den of lions".


204. *inde porro* (ἔπειτα), "next," answers to *principio* (πρῶτον *μέν*), l. 200; it is different from *inde* in l. 201.

- *duas partes,* ῥὰ δῶ κλίρον, "two thirds."*

205. *casus,* "falling."*

206. *arruri,* "consisting of land fit to cultivate."*

NOTES.

211. cumus: from cire, ciere being the common form. As object to
cumus and subject to nequeant below, some word like fruges must be
supplied.

212. nequeant: an irregular form of condition, the rule in Latin
requiring the same mood, as well as tense, in protasis and apodosis.

213. "et tamen," and after all; see n. to l. 1096.

217. Note the repetition of v and t; comp. l. 12.

219. terra marique: the local abl. without in is found in this
phrase even in prose.

220. anni temproa: the autumn was particularly dreaded by the
Romans as a time of fevers.

222. tum porro is pleonastic, either word being sufficient; comp.
inde porro, l. 204.

223. humi is locative; see n. to l. 97. infans has here its original
meaning of nⅳnos: comp. infantia, l. 1031.

224. "vitali," for life. in luminis oras: see n. to l. 85.

226. ut aequamst, sc. eum facere.

227. cui=quod ei and therefore takes the subj. tantum malorum
is object to transire, and restet is impersonal.

228. variae, "of different kinds".

229. crepitacillos: Martial, xiv 54, has this distich on the crepita-
cillum:

si quis plorator collo tibi vernula pendet,
haec quietet tenera garrula sistra manu.

230. almae, "fostering", the word being derived from alere; Lucr.
speaks of alma Venus in the second line of his poem, and of liquor almus
aquarium, ii 390.

infracta loquella, "the broken speech" addressed by nurses to the
human baby.

233. qui=quo, "wherewith"; the antecedent is plur. as often;
comp. Plaut. Aul. 498 vehicula qui vehar "carriages for me to drive
in"; qui, not quo, is the original abl., as quis is plainly of the third
decension, not the second.

234. daedala rerum, "cunning in works". This form of δαίδαλεος
is used by Lucr. (1) in a passive sense, as an epithet of tellus, carmina,
signa, (2) with a genit., as here and in the phrase verborum daedala
lingua.

* diversified in works.
235—246. If the parts of anything are mortal, the whole must be so too. But it is plain that the elements of the world are mortal; therefore the earth and sky must some day perish.

In sense this follows directly after l. 109, the digression being concluded.

236. *animae, lit. ‘breathings’; *vapores, ‘heats’: this is the only meaning of vapor in Luc.

237. *haec rerum summa: see n. to l. 194. *videtur is passive.

238. *nativo ac mortali, ‘that was born and must die’; see n. to l. 60.

239. *eodem sc. corpore constare. mundi natura: see n. to l. 59.

240. *ferme, as a rule: *fere is identical in meaning.


242. *quoque item is pleonastic, as either word would have sufficed: comp. etiam quoque l. 153, inde porro l. 204, tum porro l. 222.


244—260. But if I must prove that the elements are mortal, look first at earth and consider how it is blown away in dust by the winds and eaten away by the rivers; it is in turn replenished, as it is the tomb of all things.

247. *in his rebus, ‘herein’. corripuisse illud me mihi, lit. ‘that I have snatched this for myself’, i.e. ‘that I have assumed without proof’; *arripere is used by Cicero in this sense.

248. *perire: the common constr. after *non dubitare, ‘not to doubt’, is *quin and the subj., the inf. being used after *non dubitare, ‘not to hesitate’.

250. *rursus goes with *gigni as well as with *augescere.

251. *principio is taken up by *quod superest, ‘next’, l. 261.

252. *multa pedum vi = vi multorum pedum. Comp. Hor. Sat. i 4

141 *multa poetarum veniet manus.


254. *ad diluviem revocatur, lit. ‘is reduced to washing away’, i.e. ‘is washed away’; the phrase recurs, vi 292. With this use of *revocatur comp. *redibat, l. 1141. *diluviis is the same word as our ‘deluge’.

255. *radentia rodunt: see n. to l. 109.

256. *pro parte sua, ‘in its turn’, *ευ μέσον. *αλίδ is archaic for *αλίδ; see n. to l. 1305.
NOTES.

258. redditor, 'has restitution made to it'; a strange use of the
word. dubio procul is an adverb. videtur is passive.

259. omniparrens, used as a noun, is the subj.; eadem is not an
epithet, but part of the predicate.

260. sibi: ethical dat., of the person interested in a statement: 'so
you see that the earth' etc.; see II. 294, 805, 1209.

261—272. So water is constantly welling up from springs, and pouring
from rivers into the sea; but much is constantly carried off by the
sun and wind, and much sinks into the earth, where it deposits its
salt before finding its way back into the rivers.

261. quod superest: see n. to I. 64.

262. latetis: either internal acc. after, or subject to, manare.

263. nil opus est verbis, sc. declarare from declarat below. 'It needs no words'

264. undique goes with decursus.

265 nil: acc. of nihil used adverbially; comp. hilum I. 358.

266. retexens, lit. 'undoing its fabric', i.e. decomposing it. The
metaphor is from weaving.

267. virus, 'the salt' of the sea-water.

So Seneca (Nat. Quaest. iii 5) says of the sea-water, occulto itinere
subit terras colaturque in transitu mare.

271. dulci, i.e. not salt.

272. pede, 'course': we speak of a stream running, but we can
hardly speak of its 'foot', though Jeremy Taylor could.

273—280. The air too is constantly changing. It is continually
increased by emanations from material objects; and it must give
back as much as it receives, or else all objects would have become
air by this time.

273. corpore: abl. of part concerned.

274. praevis = singulare: so in dies privos, I. 733.

275. In order to account for sensation, Epicurus taught that exces-
sively fine films or images (simulacra) are constantly being thrown off
from the surface of bodies and conveyed to the mind by the medium of
the senses. See Introd. p. xxiv.

277. retribuat...forent: an irregular condition, the rule in Latin
requiring the same tense, as well as mood, in protasis and apodosis;
retribueret is what the sense naturally requires. For a different irregularity see l. 212.

278. *iam, *by this time*.
279. cessit, sc. aer.

**N.B.**
280. *futere, *to ebb*, is said both of the images and of the bodies which throw them off.

281–305. The same is true of fire. The sun is constantly sending out new light to supply the place of what is cut off by clouds. Lamps also and torches keep up their brightness by a constant succession of light, and the case is the same with the moon and stars.

282. *inrigat, *floods*; the metaphor of *fons luminis* being kept up. *candor* is properly the white heat of glowing metal.


  *ei, i.e. soli; for the dat. comp. *tali, l. 173. *ei is always a spondee in Lucr., and either a spondee or one long syllable in such genitives as *rei, *diei.

285. *licet cognoscere possis: *pleonastic, as either *licet cognoscas or *potes cognoscere would suffice.

**N.B.**
286. *succeedere, *to pass beneath*; the original meaning of the word.
287. *inter quasi rumperae = quasi interrumpere. This separation of the verb and the preposition (which is called *imesis) is universal in early language; examples may be found on any page of Homer.
289. qua and cumque make up one word.
290. ut noscas, i.e. inde noscis.
294. *isti, you see*: *ethical dat.; see n. to l. 260.
295. *lychini* is the Greek *λυξιν* with a vowel inserted, as in *Alcumena, mina*, to make the word easier to Roman mouths.
297. *ardore ministro*: abl. of means. In two lines Lucr. has four ablatives with a characteristic indifference to ambiguity.
299. *instant*: this rhetorical figure (*epanalepsis), by which the
same word ends one line and begins the next, recurs l. 950. rupta is
nom. sing.
300. The order is: usque adeo properanter exitium ei (luci) celatur
celeri flammae origine ab omnibus ignibus.
303. subst. 'fresh supply'.
304. primum quiquid: see n. to l. 131. *the first flame that appears is
305. ne credas; final sentence; see n. to l. 114.

306—317. The power of time prevails against the strongest things
such as stones, rocks, and metals. When we see these decay before
our eyes, we must infer that they have not existed from infinite time
past.
306. ab aevō: time is personified; hence the preposition.
308. fessa goes closely with fatiscī. i. e. 'we must with. seeing
309. numen, 'sacredness'; so numen habère, 'to be sacred'.
fati protollere fines, 'to move forward the bounds set by fate'.
310. posse: inf. after cernis, l. 306.
311. virum: contracted gen. plur.: so Chaldaeum, l. 727.
312. The text is uncertain; I give the reading of Munro's first
edition.
313. non, sc. videmus? silices; 'masses of basalt'; silice sternere,
'to pave', the Romans using the stone for this purpose.
315. neque, not non, is regularly used before enim. The sense is:
'finite time, I say; for if they had been there from everlasting, they
would remain fixed for ever, and not fall down as we see them do'; see
n. to l. 376.
316. quae = sita, the sentence being a protasis.
317. tormenta aetatis: just so Shakespeare (Sonnet 65) speaks of
'the wreckful siege of battering days'.
privata fragore = sine frag.; Lucr. often uses privatus in the sense
of expers; comp. viuātā, l. 840, and Thuc. iii 63 χάρις αἰωχύνης
ἀπηλλαγμένη.

318—323. If it be true that the all-embracing ether begets all things and
takes them back into itself, then ether must be subject to change and
therefore mortal.
318. tuēre, but tuēre, l. 92: in Lucr. tui is always 'to see', tueri
either 'to see' or 'to maintain'. hoc is the ether.
320. quidam: particularly the Stoics.
321. \textit{constat = est}, as in l. 144.
323. Compressed for: deminiui debet alendo et augendo, recreari debet cum recipit res.

324—350. Again if the world has existed from everlasting, why does not history go further back? We see too that improvements are constantly being made in the arts and sciences, which seems to prove them to be of recent origin. But if you hold that civilisation has advanced as far before and then been swallowed up by some convulsion of nature, then you must allow that a world, which is liable to such convulsions, is liable also to complete destruction.

324. genitalis origo: see n. to l. 175.
326. bellum Thebanum: the expedition of Adrastus, king of Argos, against Thebes, in order to restore to his throne Polynices, the exiled son of Oedipus. This was the subject of the \textit{Thebais}, a lost epic poem which the ancients ranked next to the \textit{Iliad} and \textit{Odyssey}.

328. funera Troiae: 'the destruction of Troy', as told in the Homeric poems.

329. 'have vanished'; comp. ii 1165 suspirat arator...
incassum manuum cecidisse labores, Hor. Ep. ii 1 51 leviter curare videtur quo promissa cadat.

330. summa = haec rerum summa, i.e. our world. See n. to l. 194.
331. natura mundi: see n. to animi natura l. 59.
exordia cepit: the metaphor is from beginning a web.
332. etiam...nunc go together, as in l. 177. expoliuntur, 'are reaching perfection'; a strict pres.

333. nunc etiam: the reverse order, as just above, is commoner; but comp. l. 20. augescunt, sc. quaedam.

334. organici melicos: so Plautus constantly uses Greek adverbs, e.g. musice, basilice, more (foolishly), graphice (cleverly). melicos sonores, 'musical tunes', \footnote{\textit{melodic}.}

335. ratio, 'system'. natura rerum ratioque is a hendiadys.

336. nuper: Epicurus was born in Samos in 342 B.C., three hundred years before Lucr. wrote.

337. possim is consecutive subj., qui being = talis ut.
338. antehac: two syllables by synizesis: in the same way the first two syllables of cooperaisse (l. 342) coalesce.

339. \textit{hominum saecula}, 'the generations of men'; saeculum is seldom 'age' in Lucr., generally 'race'.

\footnote{\textit{f}act.}
NOTES.

341. *ex, *after*.
342. *tanto quique, *by so much, however much*, i.e. *by just that amount*. *quique* is the abl. of *quisque*. Comp. Livy iii 40 extr. *dilectum primo quique tempore haberi*, ‘at the first opportunity, whatever it be’, i.e. ‘at the first possible opportunity’.
343. *victus fatere*: see n. to l. 109. *necesse*
344. *exitum*, *utter destruction*.
346. *dare*: we should expect *deissunt*. *Lucr.* commonly uses *dare* with *ruinas*, *sonitum*, *erepitum*, *fragorem*, where a prose writer would use *facere*.
347. *inter nos*, lit. ‘among ourselves’, i.e. we men, as distinguished from inanimate things.
348. *atque*, *as*, after *isdem*.

351—379. Anything that is eternal must satisfy one of three conditions. Either it must be impenetrable to blows, as atoms are; or it must be untouched by them, as void is; or there must be no room outside of it, into which it can pass, as is the case with the universe as a whole. But our world does not satisfy any one of these conditions and must therefore perish. You must also admit that a world which must some day perish cannot have existed from infinite time past.

351. *necessum* governs *responde* l. 352, *pati* l. 353, and *posse* l. 356. *solido cum corpore*: *cum* is superfluous, as there is an epithet; comp. ll. 364, 864.
353. *quaeat* is subjunctive, because *quod= tale ut*.
354. *intus* is properly used of *rest* within a place, *intro* of motion; so *intro ire*, but *intus esse*.
355. *corpora materialia*, ‘bodies of matter’, i.e. atoms: the first two books are mainly devoted to a systematic explanation of the properties of atoms and void, the two great constituents of the universe. *See Introduct.* p. xiv.
356. *durare*: see n. to l. 57.
357. *inane*, *to kepov*, ‘void’; *vacuum*, *locus*, *spatium*, are other terms for the same. Void is exempt from blows because it is too impalpable to be affected by them.

fungiturus, 'is acted upon'; Lucr. commonly translates the technical terms *πᾶσεως* by *fungi, pocēw* by *facere.*

hilum is used adverbially like its negative *nihil* l. 265; the abl. *hilo* occurs l. 1409.

359. nulla...circum, 'there is no extent of space around'.

360. quo=ut in eum. quasi apologises for the oddness of the idea.

361. summarum summa: see n. to l. 194.

362. *qui=aliqui*: we should rather expect *ullus.*

dissiliant, sc. res. 'thing is springing ununder'

364. The existence of void was proved in the first book, chiefly by two considerations: first, but for void, all motion would be impossible; second, the presence of void is necessary to explain difference in weight between bodies equal in bulk.

366. *est ut inane,* 'is it like void'.

368. *corruere:* active, a rare use; *ruere* is active in l. 1325.

*hanc rerum summam:* our world or *mundus,* opposed to the *omne* or *summarum summa,* see n. to l. 194.


370. *natura loci=locus,* a periphrasis common in Lucr.; see n. to l. 59. *spatium,* χώρα, is another name for *inane,* implying the motion of bodies through it.

372. *pulsa perire:* see n. to l. 109.

375. *immane:* acc. neut. of the adj. used adverbially. 'respectat, looks towards them'.

376. The same argument as ll. 315—317: if these things are to be destroyed at some future time, they cannot have existed from infinite time past; in the language of Lucr., if they are *mortalia,* they must also be *nativa.*

377. *neque enim:* see n. to l. 315.

380—415. You might guess the final destruction of the world when you note the perpetual warfare between fire and water, each striving to gain the mastery and destroy the earth. Legends tell that each prevailed once, fire, when Phaethon was run away with by the horses of the sun, water, at the time of a great deluge. And science agrees with legend though it assigns different causes.
381. *membra:* i.e. fire and water.

382. *collis* is archaic for *illis;* it is found in Virgil.

383. *vel cum* should be answered by *vel cum umor,* but there is a change of construction at l. 386.

384. *exsuperavint* is fut. perf. of *superavere.*

385. *neque adhuc = sed nondum.* *Patrarunt* is a probable correction of the MS. reading *patrarunt.*

386. *tantum,* 'so much'; *ultra,* 'besides,' not content with keeping the fire down; *ultro* is very common in this sense in Tacitus.


388, 389. See II. 266, 267.

N.B. 390. *prius quam* possit: it seems that *prius quam* and *ante quam* in Lucr. take the subj., unless *quam* comes before *prius* or *ante;* I. N.B.

392. Note the assonance of *certamine,* *cernere,* *certant.*

393. *vernere:* archaic for *decernere;* with a different sense, l. 782.

394. *interea,* 'nevertheless,' like *eodem tempore;* see n. to l. 83, 'in the way.'

N.B. 396. *superavit* is a contracted form of *superavit,* as the context requires and the quantity proves; there are two similar forms in Lucr., *invitat* i 70, *disturbat* vi 587; in all three cases the *-at* is followed by a vowel.

397. *avias,* like *obvius* in l. 402, must not be translated as a mere epithet. *Phaethon induced his father Helios to let him drive the chariot of the sun for one day, and nearly set the world on fire.*

398. *adehcre:* abl. of place where, *not* of place whence; so *toto acre l. 254,* *toto orbi l. 1166,* *per,* 'over.'

400. *magnanimum,* 'aspiring;' perhaps sarcastic.

N.B. *repenti:* this adj. (to be distinguished from *repens,* 'crawling') is very rare; the adv. *repente* is common; but *repentinus* is the usual form of the adj.

401. *deturbavit:* so (Plaut. Mil. Glor. 160) Pericleomenes tells his slaves, 'if you see anyone on our roof,' *huc deturbatote in viam.*

402. *aesternam:* as Lucr. is engaged proving the sun among other things not to be eternal, this epithet can only be justified on poetical grounds, unless he is actually translating from a Greek poet.
404. **swum iter.** 'their right path'; **swum** = **proprium** and does not refer to **sol**, the subject of the sentence, by a licence common to all the poets.

*NB.* **405. scilicet,** forsooth'; contemptuous.

**Graium:** gen. plur. *hence Elea.*

**NB.** **408. plura,** i.e. more than usual.

**409. victae,** 'conquered in turn'; comp. Hor. Od. iv 4 23 **victrices** catervae consiliis iuvenis revictae.

410. *aut,* 'or else', el ò è μη.

411. **quondam,** i.e. in the time of Deucalion, the Noah of Greek mythology. *superare coortus:* see n. to l. 109.

413. *ratione = modo.* *aversa recessit:* see n. to l. 109.

416—431. I will now describe the formation of the earth, sky, and sea, and the motions of the heavenly bodies. The world was not purposely formed by conscious atoms; it is the chance result, after endless experiments, of their blind motions and clashings.

416. **ille conjectus,** 'yon concourse'; vivid. Comp. l. 67.

417. **fundarit:** indirect question after **ponam.** *descendit.*

418. **ex ordine,** 'next in order', ἐφεξῆς; ordine often = 'from beginning to end'.

*NB.* **419. consilio,** 'by design'. *primordia rerum:* see n. to l. 184.

420. *suo* is one syllable, being pronounced *suo.*

421. **darent:** the direct question is *quos demus motus?* where *demus* is deliberative; so *darent* is doubly subjunctive. For *dare* with *motus* and similar words, see n. to l. 347.

424. *concita* goes with *ponderibus.*

425. **omnia modis:** see n. to l. 190, from which passage ll. 422—426 are repeated.

427. *volupta,* 'spread abroad'.

428. *omne genus* is **acc.** used adverbially as in l. 437; 'of every kind'; comp. *homo istue aetatis,* a common Plautine phrase. *coetus* and *motus* are both **acc.** plur.

429. *ea:* the subject, which has previously been atoms generally, is suddenly restricted to a particular conourse of them.

430. *saepe:* worlds such as ours are innumerable, and the creation of one such often happens.
In the original chaos there were no separate objects, no sun or moon, no earth, sky, or sea, only a medley of warring atoms: gradually the parts of the world began to separate.

hic, 'then'; again, l. 1002; it seems not to differ from tum.

mundi = caeli, as often.

nostris rebus, 'the things we see'. videri is passive.

but only a strange stormy crisis and medley; so Ovid (Met. i 7) calls chaos rudis indigestaque moles.

omne genus is adverbial, going with principiis; id genus and quod genus also are so used; see n. to l. 428. 'D. cadat fremol'.
quorum goes with discordia, and out of it eorum is to be supplied with all the accusatives governed by turbabat.

sic, 'straight off', 'at once', ovraol; comp. the use of sic, l. 970.

motus dare: see n. to l. 347. 'mutually harmonious'.

inde loci lit. 'thence of place', i.e. 'in the next place'.

Notice how all the prepositions, with which the verbs are here compounded, imply separation, dis- being used four times and se- five times; the former denotes the separation of several, the latter of two things.

patre: the construction suddenly changes, the infin. giving place to a consec. subjunctive; see n. to efficerent l. 454.

aetheris ignes are the heavenly bodies.

The heavy atoms met together in the middle of chaos and by their close union squeezed out the smaller and lighter atoms. These rose up and formed the ether, which walls in the world, and the heavenly bodies, whose atoms are lighter than those of earth, heavier than those of ether. When these had withdrawn, the hollows which the sea now fills, were flooded with salt water; and as condensation of the earth constantly went on owing to the heat of ether and the sun, therefore more light atoms of ether and salt atoms of sea-water were constantly squeezed out.

quippe etenim: see n. to l. 126.

perplexa, sc. inter se. 'clearly intolerable'.

perplexa coibant: see n. to l. 109.

tam, for tanto; also l. 487; quanto is often followed by tam in Lucr., instead of tanto.
efficere\text{nt}: conse\text{c. subj.} Luca\text{r. will not admit anything like design in the formation of the world; consequently the final subj. is inappropriate here. ‘The walls of the great world’ are the ether, mundus being used as in l. 433.

456. minori\text{bu}: see n. to l. 53.

456. rari\text{a}, ‘porous’, not ‘scattered’.

456. l\text{evi\text{s}}: transl. by the adverb for convenience, and notice the meaning different from l\text{evi\text{bus} above.}

460. ‘much in the same way as’; again, l. 1030. The construction is a little irregular: videmus should be followed by an acc. and inf., but at l. 465 the sentence takes a different turn.

461. aurea...matutina: see n. to l. 13.

464. ut, ‘as’; ut ‘when’, is probably not Luca\text{rian.}

465. quae, the mist from the water and smoke from the ground.

in alto, ‘on high’; again, l. 584.

466. corpore concreto: because clouds are substantial compared to mist and smoke.

\text{sub\text{tex\text{unt}} etc.}: ‘as clouds they weave a covering beneath the sky’; nubila is in apposition. Comp. vi 482 aestus...sub\text{texit} caerulea nimbis.

468. cir\text{um\text{datus}, ‘sweeping round’.

469. partes, ‘directions’.

470. avido: comp. \text{avidi montes} l. 201.

471. exordia, ‘rudiments’; see n. to l. 331.

472. inter\text{ustrasque, ‘in the middle’, i.e. between earth and ether; an adverb formed like for\text{as, alias; comp. inter\text{ea.}}

475. Before levia repeat tam. \text{labier: archaic for labi.}

476. \text{ita sunt ut, ‘though they are..., yet they...’; the limitative use of ita ut.}

viva, like a\text{eternam l. 402, is a merely poetical epithet}; for comp. ll. 122–125.

477. mundi totius includes earth, sky, and sea.

\text{extent = sint.}

478. quod genus is adverbial, like omne genus, l. 428. \text{lust\text{as, ‘heats’.

479. sintea quae mov., \text{eftun \& kwe\text{ita}, ‘some are in motion’.

480. retr\text{actis}, ‘withdrawn’.

482. fossas: kollos r\text{t}\text{pos} in the original (see Plut. de plac. phil. i 4) which Luca\text{r. seems to be translating.

483. circum: adverb, \text{aestus, ‘heats’.
485. *verberibus...limina,* 'by constant blows on its outer surface'.
in *artum* goes with *cogebant.*
486. *condensa* is for *condensata* which is never used.
487. *corpore,* sc. *terrae.*

488. *illa,* 'of which I spoke'.
489. *vaporis:* see n. to l. 236.

490. *condensa* is for *condensata* which is never used.

491. *densebant:* each reinforcement of particles squeezed out from
the earth made ether more substantial. *templa:* see n. to l. 103.

493. *neque enim:* see n. to l. 315. The level was unequal because
rocks could not sink at all and other things sank an unequal amount.

494. *pariter tantundem* is pleonastic.

495—508. So the earth sank to the bottom, separate from the sea and
other lighter parts of the world. Of all parts the ether is the
lightest and soars above the rest, untroubled by the storms which go
on beneath it.

495. *terrae pondus,* 'the heavy earth'; so *argenti pondus,* l. 1242.
496. *constitit,* 'became solid'. *mundi,* in the same sense as in l. 433.

497. *gravis,* 'by its weight'.
498. For the distinction between *aether* and *aer,* see n. to l. 85.
499. *liquidis:* see n. to l. 281.
500. *alis alia,* sc. *sunt.*
502. *turbantibus,* 'troubled'; here and l. 504 the verb has a
neuter sense; so l. 831 *vertere=verti,* l. 1422 *converte=converti.*
503. *haec omnia,* 'all before our eyes', i.e. the troubled air below
ether.

505. *impetu,* 'motion', archaic for *impetu*; see n. to l. 200.
506. *uno nisu* is co-ordinate with *modice.*
507. *Pontos* is the Pontus Euxinus or Black Sea; comp. Seneca
Nat. Quaest. iv 2 29 *ob hoc Pontus in infernum mare adsidue fluit ra-
pidus...in unam partem semper pronus et torrens;* Juv. iv 43 *torrentis
ad ostia Ponti.* There is a constant current from the smaller sea into
the Mediterranean.

508. This smooth gliding line well expresses the sense.

509—533. Next as to the motion of the stars; if the sky revolves, the
axis of its sphere must be kept steady by an air blowing on each pole,
and the motion of the stars is due to a third air, which blows, either above the sphere in the direction in which the stars move, or below the sphere in the contrary direction. If the sky does not revolve, the motion of the stars is due either to heats inside themselves, or to an air from without, or to their own volition. It is impossible to say which of these causes operates in our world; but one of these mentioned it must be.

This paragraph interrupts the narrative, and there is no place in the book where it fits in naturally, though it ought properly to come in with the description of sun and moon. It appears to have been a subsequent addition which was never properly connected with the rest.

509. There is no special mention of the planets here or elsewhere in the book.

510. Lucr. regards this as an open question though he speaks, l. 1436, of mundi versatile templum.

511. ex utraque parti, 'at each pole'. polum is the axis, not the pole, of the sphere of heaven. aera is the subject to premere.

512. utrimumque, 'at both ends'. The two airs serve to keep the axis of the sphere steady; a third is required to put the sphere in motion. It is important to realise that the stars are included in the sphere; comp. l. 1205.

513. alium, sc. aera.

514. quo volvenda micant=quo volvuntur micantia. volvenda =volventia of l. 931, the gerundive being used as pres. particip.; so secundus, 'following', from sequor. This use of volvendus recurs l. 1276, and twice in Virgil (Aen. i. 269, ix. 7).

aeterni: see nn. to ll. 402, 476.

515. alium, sc. aera fluere. subvehat: final.

516. The wheel here spoken of, still common in the East, is intended for irrigation; it is made to revolve by the current, and draws water out of the river by means of the *hastra*, 'scoops', attached to it. These scoops are mentioned here only because they are fastened to the wheel as the stars are to the sphere of heaven. fluviios is the subject to versare.

517. est uti possit =potest; pleonastic; comp. l. 146.

519. inclusi, sc. in signis. rapidi: nom.

520. viam, 'a way out'. ignes, sc. signorum.
NOTES.

521. Summanus was an obscure deity (quisquis is est, says Ovid) who caused night-thunder; hence Summania temp/a are the nightly sky; for temp/a see n. to l. 103.

522. *aliunde alicun/de* = ἀλλοθέν ποθεν, 'from some other place'; i.e., the air is not, like the heats, shut up in the stars themselves.

523. *versat agens*, 'drives and whirls'. Here again Lucr. seems inconsistent in attributing volition to the stars; we may account for it as we have already accounted for such epithets as aeternus and vivus (ll. 402, 476).

524. *euntes* is nom. plur.

525. pascentes: the food of the stars is fire. Comp. i 231 unde aether sidera pascit? Seneca (Nat. Quaest. vii 21 2) accounts thus for the motion of a comet: ignium modo alimentum suum sequitur.

526. *quid sit eorum*, 'which of these (explanations) holds'; an indirect question after ponere certum.

527. *possit = potis sit*, 'is possible'. omne, τὸ πᾶν, is the summa summarum, the entire universe.

529. *sequor disponere*, 'I go on to distinguish'; a rare use of sequor = pergo.

531. hoc = hac rerum summa, our world.

532. vestat: an active verb. signis: dat. commodi. earum, sc. causarum.

533. progredientis: the adjectival or attributive genitive; rash assertion is not the attribute of one who etc.

534—563. The earth remains at rest in the middle of the world because the weight of its lower parts is less than that of the upper. Indeed its substance beneath is different and more akin to air. From its long connexion with the air, the weight of the earth is not felt any more than a man feels the weight of his own limbs. The air sustains the earth without effort just as the soul sustains the body.

535. pondus, sc. terrae.

536. convenit is impersonal. *naturam*, 'substance', is object to habere, terram being supplied as subject. This substance of which the earth is composed below must be lighter than earth itself in order to account for the earth resting in the middle of the world. Apparently Lucr. conceived the earth to be a more or less flat surface both above and below.
The stability of the earth was a great problem to the ancients, owing to their ignorance of the nature of attraction; some believed that the earth was constantly falling through space (Seneca Nat. Quaest. vii 14 4) though the motion was imperceptible.

537. uniter: so longiter l. 133, duriter l. 1402; but the gen. and dat. sing. of unus make this form less strange. aptam: particip. of archaic verb apère, 'to fit', the only part used; to be distinguished from aptus particip. of apisci (see n. to l. 808).

538. vivit: see nn. to vivit l. 476, aeternam l. 402.

539. non est oneri, sc. auris terrā. oneri, lit. 'for a burden', is a predicative dat.

540. ponderē: abl. of description.

543. imposta = imposita; so we say imposition but impostor, both derived from imponere.

545. magnī: locative of price: reflert and interest take also a gen. of the person concerned, e.g. magni reflert Ciceronis; but instead of the gen. of the personal pronouns, the abl. sing. fem. of the possessive adj. is used, e.g. meā (not mei) reflert.

546. est belongs to allata below; see n. to l. 90. aliena is part of the predicate; 'the earth is not an alien body suddenly brought in' etc.

548. pariter, sc. cum auris. 'together with'.

549. eius, i.e. mundi. videntur, sc. esse certae partes nostri.

551. The 'things above the earth' are the air.

554. As subject to haerent, sc. terra et aer.

555. uniter apta, 'framed into one': see nn. to l. 537.

556. magnō ponderē: abl. of description, going with corpus; 'how heavy our body is, which' etc.

557. tenuissima: see n. to l. 148. animai, 'of the soul'; see n. to l. 59.

559. iam, 'actually', goes with saltu pernici; see n. to l. 1066.

560. poitis is neuter, as in l. 719; see n. to l. 1. animi, 'of the mind'; see n. to l. 59.

561. quantum valere possit: pleonastic for quantum valeat.

563. nobis, i.e. corporibus nostris.

564—591. The disc of the sun cannot be much larger nor his heat much less than they appear to our senses; for we observe that the size of fires on earth does not diminish to our view so long as we can see
NOTES.

their light at all and feel their heat. The same is true, for the same reason, of the moon and stars.

The argument seems to us false and the conclusion ludicrous. This belief was peculiar to the Epicureans. Seneca, a Stoic, writes thus (Nat. Quaest. i 310): 

solem, quem toto terrarum orbe maiores probat ratio, acies nostra sic contract in ut sapientes viri pedalem (a foot long) esse contendunt. And Cicero, who was a contemporary of Lucre., ridicules the theory in almost the same words (Acad. ii 82): 


564. *nimio=multo; common in Plautus in this sense.
566. quibus and cumque make up one word. ignes: nom.
567. adicere: iacio when compounded (-iicio) loses its initial i, though the preposition (in this case ad) remains long; comp. obiciens l. 755. vaporem: see n. to l. 236.
568. illa, sc. spatia. intervallis: abl. of cause.
569. nil: see n. to l. 265. ad speciem, ‘to the eye’; here species = φυΐ, in l. 94 it =eidos.
571. loca, sc. corporum nostrorum.
574. *nil adeo,‘nothing whatever’; adeo often emphasises the word it follows, but with negatives it is rare; nil adeo recurs vi 1170; nec adeo, Virg. Ecl. ii 25, Aen. iv 96.
*vere,‘in their real dimensions’, goes with videri.
577. *quidquid id est,‘however that be’; again, l. 1252.
*nilo, ‘by nothing’; abl. of amount of difference.
578. The whole sentence is: quam ea figura, qua cernimus lunam ferri, esse videtur.
579. prius: join with quam in l. 581.
580. *specie confusa,‘blurred in appearance’; a different sense of species from l. 569.
581. minuit, sc. videatur. necesse est commonly is followed by the subj. (here videatur, l. 584) without ut.
583, 584. X‘must be seen in the sky by us on earth exactly as it is defined by its outlines and of the size it actually is’. XThe meaning would be clearer if we had necesse sit notata utcumque nosis videtur. ut and cumque make up one word. est belongs to notata; see n. to l. 90.
584. quanta quanta=quantacunque, just as quisquis=quicunque.
585. *quoscumque*: the antecedent is *eos* to be supplied as subject to *posse*, l. 590.
587. *tremor, sc. corum*. *cernitur*, *is perceived*.
589. *alteram utram*: commonly written as one word, *alterutram*. *filium*, *size*, is subject to *videtur*.
591. *parte*: abl. of amount of difference, as *quo* and *pauxillo* are above.

592—613. *It is possible to explain the great heat of so small a body as the sun in any of three ways. Either all the heat of the world streams to that one spot; or perhaps the heat is due to the air when fired by the sun; or perhaps there is round the sun a great deal of heat which emits no light.*

593. *ille sol*, ‘yon sun’; so *ille coniectus*, l. 416.
594. *quod* (the relative) = *tantum ut* and is therefore followed by the consec. subj. *compleat*. *rigando*, ‘by flooding them’; comp. *inrigat* l. 282.
596 is omitted in the text as it is only l. 584 repeated by mistake.
597. *hinc*, i.e. *e sola*. *unum*, = τὸν μονὸν, not τίνα.
598. *scatere*: see n. to l. 40. *lumen* is object to *crumpere*, which is usually intransitive. Comp. l. 952.
600. *coniectus corum*, ‘the mass of them thrown together’.
601. *capite*, ‘fountain head’. *hic* is the pronoun, not an adv.
603. *campis*: local ablative.
605. *percipiat*, ‘may take possession of’; a rare meaning of the word. Comp. iii 28 *me... voluptas percipit atque horror*, for which Cicero would have said, *percipio voluptatem*.
606. *ita*: to be taken with *ut* below.
608. *quod genus*: see n. to l. 428. *segetes stipulamque*: acc. after *accidere*, though *accidere* usually is followed by *in* or *ad* with acc.
611. *servoribus*: abl. of description.
613. *tantum*, ‘merely’, qualifies *aestifer*; the *ignis* gives no light.

614—649. *There are two ways in which it is possible to account for the annual course of the sun in heaven and for the fact that he performs*
in a year the same journey which the moon performs in a month. Either, as Democritus held, the heavenly bodies nearest the earth go slowest, because they are least affected by the revolution of the sky, so that the stars move faster than the sun, and the sun than the moon. Or the motions of all the heavenly bodies may be due to currents of air, blowing first in one direction, then in another.

For an explanation of the technical terms used in this paragraph, see plan of the celestial sphere on p. xxvi.

614. "ratio," "explanation". There are several possible explanations of the sun’s annual motion as there are of his heat.

615. "partitus," "positions". "capricoris" (Greek for capricorn) goes with flexus below.

616. "flexus," "turning-point", = metas below; the metaphor is from a race where the chariots turned at the meta for the return journey.

617. solstitiales: there are two solstices in the year, when the sun is furthest from the equator in winter, and again in summer; see p. xxviii; but Latin writers often confine the term to the latter, as here, using bruma or hiems as the opposite to solstitium; comp. Virg. Georg. i 100 humida solstitia atque hiemes orate serenas.

618. lunaque: i.e. et quo pacto luna etc.

619. in quo cursu may be transl. 'in traversing which'.

621. "vel cum primis", lit. ‘even with the first’, i.e. ‘very probably’.

622. ‘the revered judgment of the sage, Democritus’.

Democritus, the ‘laughing philosopher’, was born at Abdera in Thrace about 460 B.C. His learning was astonishing for his time, especially in physics. Lucr. refers to him again in the same respectful terms, iii 371.

623. sint: subj., because oratio obliqua has been introduced by ponit. propter: for position, see n. to L. 31.

624. caeli turbine: see n. to L. 510.

625. evanesceere, sc. ponit Democritus. illius, i.e. turbinis caeli.

626. imminui after evanesceere is a hysteron proteron, i.e. we should expect the order of the verbs to be reversed; comp. L. 535.

627. posteriora signa are those signs of the zodiac which at any given time have not yet passed the sun, though they will shortly do so.

628. servida signa are the signs of the zodiac generally, which are nearer the revolving sphere of heaven and therefore move faster than the sun.

629. et magis hoc lunam, sc. relinquui docet. hoc, i.e. sole.
630. *abest...propinquat* indicative in spite of the *oratio obliqua*; Lucr. is anticipating the *oratio recta* into which he passes at l. 632.

631. *posse, sc. lunam. *tendere cursum, 'to keep up'.

634. *circum* is the adverb.

635. The moon, owing to her nearness to the earth, goes so slowly and the signs of the zodiac so fast, that they all pass her very rapidly; but to our eyes it seems as if she were passing them in the contrary direction.

636. *reviso* more commonly takes a simple acc.

637. *fit...ut possit potest*; pleonastic. *mundi caeli.*

638. *alteris* adverb.

639. *qui* = *talis ut.*

640. *flexus* see n. to l. 616, 'turning point'.

641. *et qui* as antecedent to *qui*, sc. alter.

643. *ratione pari,* 'in like manner'.

644. *volvunt = volvendo faciunt.* *orbibus,* 'orbits'.

645. *aeribus* causal abl. alternis agrees with partibus.

647. *supernis* is dat. governed by diversas; the words may be expanded thus: *in partes contrarias eis partibus in quas superna eunt.*

648. *qui* is the ablative; see n. to l. 233. *qui minus,* lit. 'how the less', i.e. 'why not as well'.

650—655. *Night comes on, either because the sun's fires are exhausted by their long journey, or because the same force as made him rise now makes him set beneath the earth.*

651. *de* 'after': Plaut. Mostell. 697 non bonust somnus de prandio. *ultima caelit* see n. to viai cuncta l. 739. 'the utmost parts of heaven'.

652. *impulit,* 'has struck'. *effluavit* comp. the phrase *efflare animam,* 'to die'.

653. *itere for itinere*; Lucr. once (vi 339) has *itinier* for the nom., exactly the reverse of later usage, which has *iter, itineris*.

655. *orbem,* 'orb', but 'orbit', l. 648; in each case the context must determine the meaning.

656—679. *The regular recurrence of dawn may be accounted for in two ways. Either the same sun, returning below the earth, sends his light before him; or a new sun is born every day by the streaming*
together of fires at a fixed time every day. If the latter explanation be the true one, there is no reason to wonder at the regularity of sun-rise: for there are many instances in nature of a regular recurrence of phenomena.

656. Matuta, or Mater Matuta, the goddess of dawn, identified by some Latin writers with Juno, by others with Ino Leucothea, a marine goddess. oras aetheris: see n. to l. 85.

657. 'pandit,' 'opens up.'

658. sub terras: acc., because the sun is in motion. cf. 654.
ille is in apposition with the subject sol, and serves to give it emphasis; a favourite idiom of Cicero.

659. anticipat governs caelum, which is understood as object to accendere.

661. consuerunt: three syllables by synizesis; see n. to suo, l. 420.

662. semper, i.e. every day.

663. quod genus: see n. to l. 428. Idaeis: a range of mountains in Phrygia. Other ancient writers mention this strange legend.

664. orienti is a participle, not an epithet.

665. inde: temporal.

666. *in his rebus: see n. to l. 247.

671. arbusta is used by Lucr. for arbore which his verse will not admit, but not arbustis for arboribus; see l. 786; so he uses principiorum as the gen. of primordia, l. 184.

672. cadere imperat: imperare commonly takes ut and subj., iubere the simple inf.

673. *infubem, 'the boy'.

674. pariter (going with malleis) = pari parte, 'in equal length'; comp. i 87 insula...ex utraque pari malarum parte profusast, 'the fillet fell down in equal lengths from each cheek'.

678. mundi: after origine. *cecidere, 'have fallen out'.

679.*consequé, 'in due sequence'. quoque is here used like kai in apodosis, e.g. ós δ' ἑδοξεν αὑτῷ, καὶ ἐποίησε. redunt, sc. res.

680—704. There are also several ways of explaining why days are long and nights short in summer, while the reverse is true in winter. First we may suppose that the sun's daily path is divided into two parts, viz. the part below the earth and the part above; and that these two are never equal, except at the equinoxes. This will explain why a long day must be followed by a short night, and vice versa; for
however much be subtracted from the sun's path beneath the earth, viz. the night, just as much must be added to his path above it, viz. the day, the whole length of his path being constant. All this you may see in a map of the heavens. Again, the long nights of winter may be due to a thickness of the air in certain regions which prevents the sun from rising. Lastly, if we assume that a new sun is born every day, alternate slowness and quickness in the streaming together of fires will account for the alternate length and shortness of the days.

See plan on p. xvi.

681. *luces, 'days'; soles is used in the same sense.
sumant: see n. to l. 63; it seems that Lucr. uses the subjunctive here because he is discussing a hypothetical case.
682. sol idem: opposed to the daily created sun of another theory.
683. *imparibus, 'of unequal length'; aetheris oras includes the ether below the earth.
684. partes, 'two parts': δίχα τέμνει ἄνωτα τρήματα τὴν ὄδόν.
685. *reponit, 'adds in compensation'.
686. eius, i.e. orbis. tanto plus; tantundem would be more accurate. *relatus, 'when he comes round', i.e. from beneath the earth or above it.
687. signum caeli, i.e. sign of the zodiac, the sign being the Ram at the vernal equinox, and the Scales at the autumnal.
688. nodus anni, 'the node of the year', is the intersection of the ecliptic (the sun's apparent annual path in the heavens) and the equator, at the equinoxes; see plan on p. xvi.
689. medio cursu is abl. absol.; with cursu, sc. solis; medio governs fiatus. The meaning is: when the sun's daily course is due east and west.
690. 'heaven keeps his two goals apart at an equal distance'; i.e. the distance between his rising and setting is exactly equal to that between his setting and rising, and consequently the day is exactly equal in length to the night. metae here are the points where the sun rises and sets, not, as in l. 617, the solstices.
691. *signifert orbis,*'the starry circle', i.e. the zodiac, so called from the animals (τέφρα) after which the constellations are named.
692. *obliquo lumine,*'with slanting light'.
693. *ratio,* 'science'.
NOTES.

695. *notarunt, 'have mapped out'.
697. sub terris: abl., because the sun is stopped; comp. acc. in l. 658.

700. dum veniat: dum expressing (as here and l. 976) expectation generally takes pres. or imperf. subj.; dum expressing purpose always takes subj.; dum, 'whilst', takes pres. ind.

*latatum, 'with rays shooting from it', not merely 'beaming'.
*insigne, 'ensign', 'badge'; used as a noun: again, l. 1138.

701. sic, i.e. for the reason just mentioned, thickness of air.

703. certa, a 'particular' but not a fixed quarter.

*arte is governed by de of the verb.

704. The line in italics was written by Munro to supply a lost line of the original.

705—750. The phases of the moon may be explained in various ways. She may derive her light from the sun, so that she is at the full when she is right opposite him, but gradually loses her light as she approaches him, and is quite dark when between the earth and the sun. Or her light may be her own, and the phases may be due to an opaque satellite of her own which is constantly getting in her way and shutting out her light from us. Or it may be true, as the Chaldaeans teach, that she is a sphere of which only one half is bright; the revolution of such a sphere would bring about the phases we see. Or, lastly, a fresh moon may be born every day, each with a different phase, in regular succession; we see many things come round in regular succession, as for instance the four seasons.

The account Lucr. gives first is the true one; see p. xxviii; it is quite incompatible with his own views as to the size of the sun and moon.

707. ad speciem: see n. to l. 569.

708. donique=donec; donicum is another old form, common in Plautus. contra: preposition. pleno bene, 'right full'; comp. vi 507 bene muta.

709. super and edita form one word. It is the case that the moon, when full, rises about sunset.

710. retro quasi condere lumen, 'reversing as it were her course, to hide her light'; the expression is exceedingly condensed.

711. debet, 'she must', i.e. on this theory.

712. The moon, like the sun, travels through the zodiac but not in the same orbit. signorum orbis=signifer orbis of l. 691.

713. faciunt, 'make her do'; as subj. to faciunt, supply ii.
714. *cursus viam*, 'the path of her orbit'; comp. *iter viai*, l. 1124.
715. *est quare possit* means no more than *potest*.
716. *volvier* = *volvi*; comp. *dignarier*, l. 51.

 formas, 'phases'.
718. *omnimodis*: see n. to l. 190.
719. *potis est*: see n. to l. 560.
720. A third explanation. *potest*, sc. *luna*. si *forte* = *fortasse*, 'possibly'. *globus pilai*, 'a round ball'.
721. *parti*: archaic abl.; see n. to *orbi* l. 74.
723. *donique*: see n. to 708. *partem*, 'half'.

ignibus aucta, 'illuminated'; comp. the phrase *augeri filio* (Cic. ad Att. i 2 1; Tac. Agr. vi 3).
724. *ad speciem*: see n. to l. 569.
725. *retro* goes with *contorquet*.
726. *glom. atque pilai* = *globi pilai* of l. 720; it is a *hendiadys*.
727. *Chaldæum*: gen. plur. The Chaldæi (vulgarily called *mathematici*) were the successors of Berosus, a priest of Belus in Babylon about 250 B.C.; they were soothsayers and astrologers, and therefore disliked by the scientific astronomers, the *astrologi* of l. 728.
728. *artem*, 'the system'. The astrologi gave the right explanation of the moon's phases, which Lucr. puts first (ll. 705—714), though he will not allow it greater probability. *contra*, 'in opposition', adverb; it often = 'in exchange'.
729. *pugnat*, 'fights for'.
730. The order is: *aut* (quasi) *sit cur hoc minus illo ausis amplectier*.
731. *cur nequeat* is an indirect question, depending on *docere* l. 735.

semper, 'every day'.
732. This does not mean that each separate moon goes through all the phases, but that each moon represents one phase.
733. *privos*: see n. to l. 274.
734. *parte* is strangely used in the sense of *loco*.
735. *vincere* = *convincere*; comp. Virg. Georg. iii 289 *verbis ea vincere*, Hor. Sat. i 3 115 *ne nec vincet ratio hoc*.

737—747 describe a kind of masque or pageant of the seasons, which are used as an example of the regularity of natural phenomena.
737. *it*, 'goes on its way'.
738. The 'winged harbinger of Venus' is Cupid.

*propter* governs *vestigia*; for its position see n. to l. 31.
739. *quibus*, i.e. *Veneri et Veneris praemuntio*. *ante*, 'in front of
NOTES.

83

them'. With 

viæ cuncta, comp. ultima caeli l. 651, caerula mundi l. 771.

The order is: first the West Wind, then Flora his wife, then Cupid, and last Venus and Spring. The Latin name of Zephyrus is Favonius; Pliny and Columella say that this wind always began to blow on Feb. 7th and marked the beginning of spring.

740. Notice the assonance in this fine line which has somewhat of the effect of rhyme. Lucr. is thinking especially of the beauty and fragrance of the rose which was the spring flower of the Romans; comp. i 174 

vere rosam, frumenta calore, vites autumno fundi suadente videmus.

741. inde loci: see n. to l. 443. unā: adverb.

742. Harvest being in summer, Virgil (Georg. i 66) speaks of 
aestas pulverulenta.

743. autunnus: the season of fruit and especially of the grape; Martial uses the word as = 'fruit', and also = 'wine'. Euhius Euan: both words (which may be retained in translating) are Greek names of Bacchus, and are derived from εὔος, the cry of the Bacchanals; comp. Eur. Bacch. 157 ἐδώ ἐδών ἀγαλλήμεναι θεόν.

744. tempestates, 'seasons'; so l. 1395.

745. altitonans, 'loud-roaring'. Volturnus is the Greek Eurus and blew from the quarter where the winter sun rose, according to Seneca, Nat. Quaest. v 16 4.

746. bruna is contracted from brevima (= brevissima), 'the shortest day'. pigrum, 'numbing'; the word is used of stagnant water, and of a sullen expression.

747. hanc is governed by sequitur.

748. certo tempore, i.e. every day.

749. rusus = rursus.

751—770. Eclipses of the sun may be explained by supposing that the moon shuts off his light from us; or else it may be some invisible body which gets between; or lastly the sun's rays may be quenched by passing through air that is hostile to them. And you have a similar choice of explanations to account for eclipses of the moon.

751. item quoque: comp. etiam quoque, l. 604.

latebras, 'obscurations'.

754. a terris, 'on the earthward side', viz. of the sun; comp. ab nervis l. 1332.
84  **LUCRETIUS. BOOK V.**

caput is the moon's own head.  _ei_, i.e. _soli._

755.  _caecum,_ 'dark', 'opaque', not 'sightless'.

756.  _tempore eodem = tamen_; so _interea_, ll. 83, 394.

_alivud corpus_ is subject to _putetur_, _id_ is object to _facere._

_putetur_ is after _cur_, l. 753; for the construction, see n. to l. 1045.

758.  _languidus_ must be taken as part of the predicate, as if the text were _languescere et dimittere._

759.  _recreareque_: the Augustan poets do not attach _que_ to a short _e._

761.  _interstingui_, 'to be quenched for a time'; so _interquiescere_, 'to rest for a time'.

762.  He proceeds to deal with lunar eclipses, giving first the true explanation and then two alternatives, all which he asserts to be equally probable.  _vicissim_, i.e. as the moon hid the sun's light.

763.  _et oppressum_ etc.: 'and moreover herself to keep the sun suppressed', i.e. to prevent him from lighting up the moon.  _super = insuper._

764.  _menstrua, sc. luna_, 'the moon in her monthly course'.  _rigidas_, 'clearly defined'.  _coni umbras_, 'the conical shadow', viz. of the earth; the gen. serves as an epithet; see nn. to ll. 369, 1193.

Lucr. seems here to say that the moon passes through the earth's shadow every month; this would only be true if the moon's path and the sun's were in the same plane, so that once in each month the three bodies would be in a straight line; see p. xxviii.

765.  _tempore eodem_: see n. to l. 756.  _succurrere_, 'to pass beneath'; usually, 'to help'.

766.  _orbem_, 'orb'.  The sun is supposed to be below the earth, at the time when the moon is eclipsed.

767.  _quod = tale ut_.  _radios, sc. solis._

768.  _et tamen_, 'and after all'; see n. to l. 1096.

770.  _per_ governs _loca_; _inimica_ makes the separation less harsh.  _propriis_, i.e. not derived from the sun.

771—782.  Now that I have explained the motions of the heavenly bodies and their eclipses, I go back to describe the primeval earth and its first products.

771.  _quod superest_: see n. to l. 64.  _caerula mundi_: comp _cuncta viai_ l. 739.

772.  _quicquid_: see n. to l. 131.

773.  _cursus_ is governed by _eiret._
NOTES.

776. quove: see n. to l. 71. offecto: Lucr. elsewhere uses a personal passive of officere, though the verb does not take an acc.

777. neque opinantes: the common form is necopinans, in one word.

778. lumine, 'eye'; keeping up the metaphor of conivent and convisunt.

780. nunc redeo; the digression began at l. 509.

781. Before quid, sc. et doceo. luminis oras: see n. to l. 85.

782. crerint (creverint) = decrerint; in l. 393 cernere = decernere in a rather different sense. Comp. Virg. Aen. xi 560 quae nunc dubiis committitur auris.

783—810. The earth brought forth grass and trees first of all and then living creatures of all kinds. Neither sky nor sea had anything to do with the first creation of men; mother earth herself brought them forth, first birds, and then men who sprang from the earth and were fed by a moisture like milk, issuing from the ground. At that time there was no severe weather to trouble the first-created men.

783. principio, 'in the beginning'.

785. fulserunt: this aorist, and others in the context, seem to imply that all this came to pass very quickly.

786. arboribus: for nom. Lucr. uses arbusta; see n. to l. 671.

787. inmissis habenis, 'with unbridled luxuriance'; the metaphor is imitated by Virgil, Georg. ii 364; comp. δυντέρω χαλινῷ, Soph. Antig. 109.

788. primum, i.e. as soon as beasts and birds are born.

789. pennipotentum, 'of the strong of wing', i.e. birds; this is one of the many Lucretian compounds which Virgil did not care to use.

791. inde loci: see n. to l. 443. mortalia saecla here includes the lower animals as well as men, though it usually = mortales and excludes the mutae pecudes et saecla ferrarum; so ll. 805, 988, 1169, 1238.

794. terrestria is not a mere epithet but = quia terrestria sunt. lacunis, sc. maris.

795. linquitur: impers. Of the four elements one, fire, can have no claim, and Lucr. has dismissed the claim of two others; the only remaining hypothesis is that earth is the general mother.
796. *sit* belongs to *adepta* above; see n. to l. 90.
797. *existunt terris*, 'spring out of the earth'; comp. l. 69.
798. *concreta*: see n. to *crescit* l. 6. *vapore*: see n. to l. 236.

It was long believed that horse-hairs sealed up in a bottle of water became eels, but modern science seems to have exploded this theory.

800. *aethere*, sc. *novo*. *adulta* is neut. plur.
801. *alitum*: said to be a lengthened form of *alitum*, gen. plur. of *alēs*. *variae*, 'of different kinds'; but, Petron. 28, *pica varia*, 'a pied magpie'; I Hor. Sat. i 8 42 *varia colubra*, 'a spotted snake'.
802. *exclusae*: comp. Hamlet 5 i 310 'the female dove, when that her golden couplets are disclosed'. The 'couplets' are the two young pigeons.

*tempore*: temporal abl.; so *aestate* below.
803. *teretes*, 'smooth and round'. Comp. iv 58, where Lucr. writes *tunicas* for *folliculos*.
804. *victum vitamque*, 'a living and life'. The two words are often so joined; see ll. 1080, 1165.
805. *tibi*, 'you must know'; ethical dat.; see nn. to ll. 260, 294.

*mortalia saecla*: see n. to l. 791.
807. *hoc*, 'therefore', lit. 'by this'; so ἄσυ is often used in Homer. *dabatur*, 'offered itself'.
808. *apti*, 'clasping'; particip. of *apisci*, to be distinguished from *aptus*, particip. of *apere*, for which see n. to l. 537; the latter would govern a dative.
809. *aestus* is the heat inside the wombs caused by the growth of the infants.
810. *fugiens* and *petessens* ought strictly to be gen. plur.; the latter is an archaic frequentative from *petere*.
811. *ibi* is used for *ad eum locum*, i.e. *ad uteros*.
815. *impetus ille alimenti*, 'that current of nutriment'; *ille*, i.e. which served to feed the child before it was born.
817. *abundans* is feminine.
818. *ciebat*: here of second conjugation: see n. to l. 211.
819. *viribus*: abl. of description.
820. The children were feeble, but so were the winds and hot and cold weather.
821—836. *Thus mother earth gave birth to men and all kinds of*
animals and birds. But at length she ceased bearing, by the law of
eternal change in all things; or at least the things which she bears
now are no longer the same.

821. etiam atque etiam, 'again and again I say'.
823. animal: the only place where Lucr. uses the sing. of this
substantive; he uses instead animans (fem.) and both animalia and
animantes as plural.
825. variantibus formis = varias, the common epithet of birds; see
n. to l. 801.
826. debet, 'she is bound'.
827. spatia...vetusto: so Aristophanes (Frogs 347) speaks of ἡν
παλαιά.
829. ex alio, 'after another'; comp. ἐκ in such phrases as τῷφῶς
ἐκ δεδορκότος.
830. sui is gen. of the pronoun. migrant, 'change their place'.
831. verbere = verti; so convertere l. 1422, turbare l. 504, mutare
l. 588, volventia l. 931, are all used intransitively.
833. contemptibus, 'its low estate'.
834. mundi naturam: see n. to l. 59.
835. alter is used for alius; comp. autre in French.
836. The full sentence is: quod potuit ferre terra, nunc nequit ferre,
ut possit ferre quod non tuit ante; i.e., the earth ceases to bring forth
certain things that it may be able to bring forth certain others.

837—850. The earth gave birth also in the beginning to all kinds of
monsters; but these were not fitted to exist and nature destroyed
them before they came to maturity.

838. coorta is neut. plur.
839. androgynum: usually hermaphroditum, a compound formed
from the names of the two Greek deities.

interutrasque, i.e. inter marem et feminam; adv.; see n. to l. 472.
nec utrum = non utrum or neutrum; comp. Mart. v 20 11 nunc
vivit necuter sibi. nec is an old form of negative; so necopinans
(see n. to l. 777) = non opinans.

utrimque = ab utroque.
840. partim = nonnulla, 'some of them'; again, ll. 1083, 1143, 1310,
in the same sense.

viduata simply = sine, like privata, l. 317. The gen. manuum in-
stead of the abl. manibus is a Greek construction.
841. *voltu* = *oculis.*
844. *quod foret usus,* 'what they had need of’; *usus* *est* commonly takes abl., sometimes, as here, acc. of reference, 'that in respect of which there was need'; see n. to l. 1053.
847. *cupitum actatis florem:* so in Pindar εὐδαυθέμος φιά and τερπνᾶς καρπὸς ήβας express the same thing.
848. *per Veneris res,* 'in marriage'.
849. This is the only hypermetric line in Lucr.; i.e., its last syllable is cut off before the first of the next line; such lines are less rare in Virgil, but unknown to Homer.
850. *rebus is dat. commodi.*
856. *possint,* sc. *res.* *procedere,* 'to continue'; the metaphor is from forging metal.

855—877. Such wild animals as have not become extinct owe their preservation either to peculiar courage, craft, or speed; the lion, the fox, and the deer are familiar examples. The domestic animals owe their safety to our protection which we give because they are useful to us. All animals, which could not protect themselves and were useless to man, have become extinct.

855. *animantum* = *animalium;* see n. to l. 823.
857. *vesci,* 'feed on'; for a different sense, see l. 72.
858. *aut denique:* comp. Hor. Sat. i 2 133 *ne nummi pereant au.*
859. *tutata* goes with *tutata* below; see n. to l. 90.
861. *manent,* 'continue to exist'.
863. *dolus,* sc. *tutatus est.*
864. *fido cum pectore:* see n. to l. 352. Dogs accompanied the kings in the Odyssey and the Aeneid, and the death of the faithful Argos is one of the most pathetic scenes in Homer (Od. xvii 290—327); Plato finds in the dog the qualities proper for the guardians of his ideal state (Rep. 376); comp. too Martial's epitaph (xi 69) on Dexter's dog, Lydia, *domino fidissima Dextro.*
865. *veterino,* 'burden carrying', connected by the Latin grammarians with *veho;* hence our 'veterinary'. *semine:* abl. of origin.
866. *bucerus* is βουκέρωs with Latin terminations.
NOTES.

869. *pabula parta*: acc., governed by *secuta sunt*.

labore, 'toil', viz. to get food; for we make them undergo other toil.

870. *praemia*, 'as reward'. *causa* (= χάρις) governs *utilitatis*.

871. *quis* is dat. plur. *horum*, 'of these qualities'.

872. *possent* is consec. subj.

873. *quae* = quamobrem.

874. *praeidio nostro*, 'under our protection'.

875. *scilicet*, 'you must know'; the original sense of the word, which is merely *scilicet*, lit. 'know! you are allowed'; comp. *ilicet*, *videlicet*. *praedae lucroque*: predicative datives; see l. 539.

876. The *vincla* are their own natural limitations which made it impossible for them to survive.

This 'survival of the fittest' is one of the central ideas of Darwinism.

878—924. *But there never were and never can be creatures which unite in one form the limbs and natures of two different animals.*

Take for instance the Centaur or man-horse: such a creature can never have existed, as the maturity of the horse coincides with the infancy of man and the maturity of man with the old age of the horse. So too of the Scylla, half-woman, half-fish, and of the Chimaera, a combination of the lion, goat, and dragon. It is true that the early world produced many things, but it never could produce creatures that combine two or more incompatible natures.

879. *bino*, 'twofold'; the distributive *bini* is occasionally used in the singular as an adj. with this meaning. Comp. *unis* l. 897.

880. *compacta*, 'things put together', contains the subject to *queunt*.

881. *hinc illinque*, lit. 'from this, from that', i.e., 'from the two halves'.

*non...potissit*: i.e. *non potis sit satis par esse*, 'cannot be sufficiently alike'. *potissit* is subj. of *potis est*.


883. *circum* is separated from *actis* by tmesis; see n. to l. 287. *impiger* is part of the predicate.


885. *ubera mammarum lactantia*, 'milk of the breast'.

886. *senecta* is an adj.
888. tum denium, τῶν ἤδη, ‘only then’. puero illi, ‘for that boy’, i.e. the boy mentioned above.

890. ne forte...credas: see n. to l. 114. veterino: see n. to l. 865.

892. The Scylla is described by Homer (Od. xii 86—100); but he does not make her desinere in piscem, and all he says of dogs is that her voice was like that of a new-born puppy; but Catullus (60 2), Virgil (Aen. iii 426), and Ovid (Met. xiv 60), agree with the description of Lucr. semimarinis: i.e. the lower part of her body was that of a fish.

894. discordia is an adj.

896. proiciunt, sc. robora. See n. to adicere, l. 567.

897. simili Venere, ‘with like passions’. unus: the plur. of unus is rare, as one might expect, but classical.

898. conveniunt: the impers. constr. is much commoner in this sense, convenit nobis or inter vos, not convenitis. sunt, sc. eis; a co-ordinate clause is substituted for a second relative clause; this is the normal construction in Greek; e.g. οὗτος διὰ εἰδών καὶ εὔκλεως αὐτῶν χαλπεν, ‘whom I saw and to whom I said good-morning’. per artus, ‘throughout their frames’.

901. cum, ‘since’.

902. genus omne, ‘any kind’.

903. visceris, ‘of flesh’; in Lucr. this word, both sing. and plur., does not mean ‘entrails’, but all between the skin and bones; comp. Plaut. Mil. Glor. 30

per corium, per viscera,

perque os (the bone) elephanti transmineret brachium.

904. qui is abl.: see n. to l. 233. una agrees with chimaera, as do prima, postrema and media below.

905. prima leo, ‘in front a lion’. media ipsa, lit. ‘in the middle, itself,’ i.e. a χιμαιρα or goat. The line is translated from Hom. Il. vi 181, πρόθεν λέων ὑπίθεν δὲ δράκων μέσον δὲ χιμαιρα. In the legend Bellerophon, the master of the horse Pegasus, killed this formidable creature.

907. The ablatives absolute go with gigni.

909. novitatis: gen. of definition; so munere belli, l. 1308.

911. dicat, sc. licet, ‘may say’. aurea is part of the predicate, ‘with gold’.

912. arbusta = arbores; see n. to l. 671. suēsse is contracted from suevisse.

913. impete, ‘strength and size’; see n. to l. 200.
914. pedum nisus ponere, 'to tread firmly'.

916. quod, 'the fact that'.

918. signi: partitive gen., or gen. of divided whole; so loci in the phrase inde loci, inde being = ab eo.

919. inter se goes with mixtas. compacta, 'formed into a single frame'.

921. laeta, 'luxuriant'; a constant epithet of fabula and grama. 

922. complexa is here passive, as perplexa always is, from complecto; complecti is commonly deponent.

925—987. Men were much more hardy then than now. They did not know agriculture of any kind, but ate the acorns and berries which the woods supplied and drank the water of the mountain streams. They did not know the use of fire or of clothing, nor had they any idea of acting in concert with one another. They used to hunt wild beasts and sleep naked on beds of leaves. As they had always been accustomed to see night succeed day, they were not frightened by the darkness, but rather by the wild beasts which often drove them from their caves and beds of leaves.

Bagehot, Physics and Politics, p. 15, says 'Perhaps it is the most valuable, as it is clearly the most certain result of prehistoric ethnology, that it has dispelled the dreams of other days as to a primitive high civilisation'. We see that Lucretius did not share those dreams.

926. durius, 'more hardy'. quod is the relative, and takes the subj. (creasset) because it = quippe quod.

927. ossibus, 'upon bones'; so fundatum aevo l. 161.

928. aptum, particip. of apère, agrees with genus.

929. Take quod (= tali ut) as first word in the sentence; facile is adv. modifying caperetur; for the order of words, comp. nec facere ut possent l. 843, and nec ipsa sponte sua possent ut vivere l. 871. This sense of caperetur is seen in such a phrase as oculis captus, 'blind'.

930. labi: see n. to orbi l. 74.

931. volventia = volvenda of l. 514; this particip. is often used as if volvere were intransitive; comp. the verbs quoted in n. to l. 831.

934. scibat is an archaic form for sciebat which the metre will not admit; so accibant, l. 996. Owing to the character of the narrative, there are a very large number of imperfects here; and the form in -ebam very often involves a cretic (- - -).
935. *defedere, 'to dig down', hence 'to plant'. The line is repeated almost exactly, l. 1366.

936. *veteres is opposed to *nova in the line before.

938. *do numer, 'boon'.

939. *curab ant cor bora, 'they would refresh their bodies', i.e. eat. *corporis cura often includes exercise and the cares of the toilet; but these latter must have been unknown to the early men with their naked and squalid limbs. Comp. Hor. Sat. ii 2 80 curata membra.

942. *plurima, 'in great number', is part of the predicate.

946. *decursus aquai: evidently a favourite phrase; comp. l. 263.

947. *clare' is nom. sing. masc.; transl. by adverb.

948. *nota...silvestria: see n. to divina antiqua l. 13.

949. *qui bus e: for the order, comp. inimica per, l. 770.

950. *lubrica agrees with *saxa. Notice the alliteration.

951. *umida saxa: comp. ll. 298, 299; this kind of repetition is common in all poets; see especially M. Arnold's Sohrab and Rustum.

952. *partim, 'some of the water'. *plano is an epithet of campo.

953. *igni is the archaic abl.; see n. to *orbi l. 74.

954. *spoliis, i.e. skins; *exuviae is often used in this sense.

955. Comp. l. 992.

957. There is similar alliteration, l. 217.

958. *commune bonum spectare, 'to consider the common weal', i.e. to take thought for the whole community.

959. *moribus, 'customs'. *inter se goes with *uti.

Comp. Bagehot, Physics and Politics, p. 21 'rigid, definite, concise law is the primary want of early mankind'. The book is an excellent one to read together with this narrative of Lucr.; one is astonished to find how often the ancient poet agrees with modern science.

960. *quad praedae = *id praedae quod; *praedae is gen. of divided whole, or partitive gen.; comp. *signi, l. 918.

961. *sibi valere, 'to be strong for himself', i.e. to use his strength for himself. *doctus: participle.


965. *glandes, arbita, and *pira are in apposition with *pretium.
NOTES.

968. *missilibus saxis,* with showers of stones.

969. magno pondere elvace = elvæ magni ponderis; comp. levisomna canum corda, l. 864.

970. *subu:* dat. of sus, suis. sic = sicut erant, ὧσπερ ἔχον, ‘just as they were’, ‘without any previous preparation’. *silvestria membra,* ‘their savage limbs’; silvestria is the same word as ‘savage’ coming through the Ital. selvaggio; so Milton speaks of a savage, i.e. wooded, hill.

971. *nuda dabant:* the MSS. have nudabant, which must be wrong, as Lucr. has just said that the men wore no clothes.

972. *circum* is the adverb.

973. For this idea, that the first inhabitants of the earth must have feared the sun would never rise a second time, see Blanco White’s fine sonnet which begins:

Mysterious Night! when our first parent knew
Thee from report divine and heard thy name,
Did he not tremble for this lovely frame,
This glorious canopy of light and blue?

975. *respectabant = expectabant*; comp. vi 1233 funera respectans.

976. *dum...inferret:* see n. to dum veniat, l. 700. dum expectans = expectationem

977. *a parvis, ἐκ παλατίων,* from childhood.

979. *non erat ut fieri posset = non poterat fieri;* see l. 126. mira-

980. *diffidere,* ‘misgiving’; followed by acc. and inf., l. 1157.

982. *cura* (sc. eis) is predicative dat., like oneri l. 539.

983. *infectam* is predicate. *quietem,* ‘their time of rest’; per *reposa.*

985. *adventum = propter adventum,* causal abl.

986. *intempestas noctis,* νυκτὸς ἀνέοι, ‘at dead of night’. The

987. *hospitibus saevis:* i.e. the boars and lions.

988—1010. *Men did not die then in much greater numbers than now.*

*It is true that more men were seized and devoured by wild beasts, and those who escaped with wounds did not know how to cure them; but no great armies or fleets perished in a single day.* The sea was
not a source of death as no one ventured upon it. Want may have
collared some, as luxury does now; and some swallowed poisons un-
awares which we now use as medicines.

988. nimio plus, 'more by much'; it commonly means 'too much',
as in Hor. Od. i 33: *ne doleas plus nimio. mortalia saecla: see n. to
l. 791.

989. labentis, 'ebbing'; for the alliteration and also for the matter,
comp. Gray's 'nor cast one longing lingering look behind'.

990. magis, sc. quam nunc.

991. haustus, 'torn', a rather strange but quite common use of
haurire; comp. Il. 1069, 1324.

992. vivo busto, i.e. the animal's maw. visera: see n. to l. 903.
Notice the alliteration, which has a pathetic effect.

993. accibant: see n. to scibat l. 934. Orcus or Dis is the Latin
deity who corresponds to Πλοπτήρος, the god of the lower world.

994. donique: see n. to l. 708; the plpf. after donec is unexampled
in Lucr. verminis, 'gripings'.

995. villent, 'needed', viz. for cure.

996. virum: gen. plur. -sub signis ducta, 'marching beneath their
standards'. milia should always be spelt with one l, the rule being
that when a long vowel is followed by ll, one l is withdrawn where an
i follows, (unless this i be merely the mark of a case, e.g. villa villis);
so mille but milia, villa but vilicus, Messalla but Messalina.

1000. Comp. l. 95.

1001. hic tum; so l. 432. temere incassum frustra, 'without
aim, purpose, or result'; a very pleonastic expression, as all three
words express nearly the same idea.

1002. saevibat: see n. to scibat, l. 934.

1003. in fraudem, 'to his hurt'; this sense of fraudus is common in
old legal formulas where sine fraude esto -ἀθέτησαν εἶναι in Greek laws.
identibus: so Aesch. Prom. 89 ποιεῖν τε κυριάτων ἀνθρώπου γέλασμα.

1004. imprima ratio, 'the reckless art'. cæca, 'hidden'.

1005. tum deinde, 'at that time too'.

1006. contra: adverb. mersat, sc. membra. hinc infra. rein.


1008. nec miseris fallunt aconita legentes.

1009. 'now doctors prescribe and administer it with more skill'.
The reading in the text is that of Professor Palmer for mutant sollertius
NOTES.

ipsi of the MSS. All medicines are poison; and Lucr. is contrasting the skill of doctors, in graduating a dose of what would be fatal in large quantities, with the ignorance which led uncivilised men to poison themselves. dare and uti are both technically used of doctors. From διδώναι, which is used like dare, comes our ‘dose’.

1011—1027. Next they came to use huts, skins, and fire which softened their bodies, while family life and the caresses of children made them less harsh and cruel. The next step was friendship among neighbours, and agreements which, if not in all cases, at least in many, were respected.

1011. ignemque: the discovery of fire is described in detail below (ll. 1091—1104); after finishing his first sketch of the narrative, Lucr. seems to have thought more should be said on so important a subject. Darwin says ‘the discovery of fire, probably the greatest, excepting language, made by man, dates from before the dawn of history’.

1012. The line in italics was written by Munro to supply the place of a lost line of the original.

*lecti socialia iura, ‘the binding ties of wedlock’.

1013. primum is an adverb.

1015. curavit = effectis; often so used by Lucr.

1016. non ita iam, ὄντεκτι ὄμολος, ‘no longer as before’. non iam = otēktē, nonum = ouw.

1018. ingeniun fregere superbum, ‘broke down the haughty temper’.

1020. inter se goes with iungere. Compare the account given in Plato (Rep. 358 e) of the origin of justice: δοκεῖ λυστελεῖν χνυπθόδαι ἀλληλοις μήτ' ἄδικεν μήτ' ἄδικεῖθαι.

1021. commendarunt, sc. homines supplied out of finitimi; ‘men asked protection for’.

1022. balbe, ‘stammeringly’, properly applies only to the pueri; comp. Hor. Ep. ii 126 os tenerum pueri balbumque. significarent, sc. pueri et mulieres.

1023. imbecillorum: misereri takes a genitive, miserari an accusative.

1024. omnimodis, ‘without exception’; for the formation of the word, see n. to l. 190.

1025. bona magna = bene magna; comp. pleno bene, L. 708. caste = intererate.

1028—1090. Language arose from a natural instinct to denote different things by different names. Children try to speak before they are able to do so, just as young animals instinctively exert their peculiar powers. It is not true that some one man invented the names of things and taught everyone else; no single man could have conceived such an idea, nor would others have been willing to learn from him. There is nothing in the origin of language to surprise us, if we reflect that even animals express different emotions in quite different tones; this may be observed in dogs, horses, and birds of many kinds.

This question was much discussed by the ancients, whether the names of things were arbitrarily fixed or arose naturally, whether they were due to ἰθές or φός. The view of Lucretius is shared by Darwin.

1029. *mittere, ilēvi, *to utter*; the inf. after *subegit* is unusual for *vit* and *subi*, though normal after *cogere*. 1030. *utilitas* seems to be used like *χρέα*, in the sense of 'need'. *expressit*, 'wrung out of them'.

1031. *infantia*, 'inability to speak', the original meaning of the word; so *infans*, I. 223.

N.B. 1033. *vin*: the acc. after *utor* and its compounds and such verbs as *fruir, funger, potior*, is an archaism.

*quoad (=quatemus)* is one syllable by *synizesis*.

*abuti = uti*; comp. *ἀποχρῆσθαι*. *abuti* often = καταχρῆσθαι.


1036. *σκύμνοι* is the Greek equivalent of *catuli*.

1037. *iam tum*: as in I. 1026. *thus early*.

1039. *aliquum*: see n. to I. 801.

1040. *tremulum*, 'fluttering'.

1041. *aliquem*, 'some one man'.

1042. *inde = ab eo*, 'from him'.

1045. *tempore* *eodem* = *tamen* and goes with *putentur*, not with *facere*; comp. II. 756, 765, where the construction is exactly the same, being *asynthetic*, i.e. there is no particle (such as *sed*) to connect the two contrasted verbs, *posset* and *putentur*. 
NOTES.

1047. *notitia, 'pre-conception', is a translation, not very accurate, of προδομή: see n. to l. 182.

1049. Comp. l. 183. scire: the last syllable can be lengthened because it is in *apres*, i.e. the emphasis falls on it; in hexameters the *apres* is on the first syllable of each foot; so Virgil ends a line with gravidus autumno, and begins one with liminaque laurusque.

1050. victosque domare: see n. to l. 109. Comp. l. 205. Co-ordinale verss.

1053. quid sit opus facto, lit. 'in respect of what there is need of doing', i.e. 'what is needful to be done'; opus est usually takes the abl. of a noun; but, if the thing needed be an action, the abl. of a perf. particip. is used. For the acc. *quid*, see n. to *quod* foret usus l. 844.

1056. tantoper est: see n. to l. 29. 'too much'.

1057. vigeret is subj., because cui=quippe cui.

1059. cum, 'since'. denique may here be translated 'even'.

1061. est, sc. eis. *gliscunt*, 'are ripe'; comp. iii. 480 iurgia gliscunt, Plaut. Capt. 558 gliscet rabies.

1062. quippe etenim: see n. to l. 126.

1063. magna...mollia: see n. to l. 13. *Molossus*: gen. plur.: the *Molossi* were a tribe in Epirus who possessed a very famous breed of large dogs.

1064. *ricta*, 'open mouths'; rictus, -ūs is the common form of the word. *fremunt*, 'growl'.


1066. et, 'than', is for atque or ac after alio; ac cum would not sound well. *iam*, 'actually', qualifies latran. *omnia*, 'all the place'.

1068. pedibus goes with tactant.

1069. *suspensus*, lit. 'carefully balanced', i.e. *gentile*; comp. suspendo pede, 'on tiptoe'. *imitantur haustus*, 'they pretend to bite'; teneros is part of the predicate, and may be transl. by an adv.

1070. *adulant=salvovest*, *cæsea*.

1071. et is used after alio as in l. 1066, 'other than'.

1072. A graphic description. *plorantes* is nom. plur.

1074. *iuuenesus* is used as an adjective. *iunius*.

1075. *pinnigeri...amoris*: comp. l. 737 Veneris praenuntius pennatus
et: see n. to l. 1066. sic, 'casually'; ovwrwol is similarly used: the sic of l. 970 is rather different. alias is the adverb.

Comp. l. 801, and see nn. there.

salsum is used as a noun; comp. tranquillum, l. 12.

victum vitamque: see n. to l. 804. a living & life.

It seems very probable that a line is lost after voces; 'they utter different cries at different times' is a sentence complete in itself, which cannot be properly connected with the following line. The lost line may have begun with et quom, (which would account for its disappearance), and have described some peaceful cry of sea-birds: e.g. et quom progeniem parvam nidosque revisunt.

tartim: some birds'; see n. to l. 840. tempestatibus. 'the weather'.

sensus, 'feelings'.

tamen is out of place, as it really goes with emittere; δμως is sometimes similarly placed, e.g. Aesch. Theb. 699 πείδου γνωίζων καλπερ οὐ στέργων δμως.

Men may have got fire first from the lightning or from the rubbing of trees against one another; they learned to cook their food by observing the effect of the sun's heat upon things growing in the fields.

It is evident that this paragraph and the two which follow are subsequent additions of the poet: they do not fit in properly here and are inconsistent with what goes before and comes after; see n. to l. 1011.

in his rebus, 'herein'; so l. 247. ne forte requiras: see n. to l. 114.

ignem: see n. to l. 1011.

inde=ab eo, i.e. a fulmine.

fulgere: see n. to scatit, l. 40. caeli plaga must be distinguished from ponti plaga, l. 481. the level of ocean.

et...tamen, 'and all the same', i.e. if we leave the lightning out of account, there is another explanation to our hand; et tamen is thus used, ll. 213, 68, 1125, 1177. cum: conjunction.

mutua is used as an adv., like acerba, l. 33; Virgil (Aen. vii 66) uses per mutua. dum, 'as', is causal, as often with pres. ind.

utrumque, i.e. either lightning or the friction of trees.
1102. *inde, *next*.

1103. Supply mortales as object to docuit, and again as subject to videbant.

1105—1135. Day by day men acquired civilisation by the teaching of the most intelligent among them. Kings built cities and divided property. At first beauty and strength were highly regarded, but these had soon to give way to wealth, though the philosopher despises riches. Men struggled for honour and wealth and often came to ruin in the struggle; let them continue along that dangerous path, as they will not judge things for themselves but are content to accept the estimate of others.

The finest poetry in the book, perhaps in the poem, is contained in this paragraph and the three following.

1105. *hi* is the antecedent of *qui* in l. 1107.

1106. *rebus* is abl., the Latin idiom being, to change one thing with another; the abl. is instrumental. *benigni* may be translated by an adv.

1107. *corde visibant, *were of vigorous understanding*; *cor* is commonly the seat of intellect rather than of affection; see l. 882.

1109. *praesidium* may be a place to rule in', the original meaning from *praesidere*; *perfugium*, 'a place to take refuge in'.

1111. *pro facie cuinisque = cuique pro facie*; *facies,* 'beauty'.

1113. *res, *wealth*. *inventast, *was devised'; *repertum, *was discovered', viz. in the earth.

1115. *sectam sequuntur*, 'follow in the train'.

1116. *cresco*; see n. to l. 6. *cresceo* used as if *cresceo* were plur. by attraction due to the plur. predicate *divitiae*.

1117. *quod* is the conjunction; see n. to l. 134.

1118. *vivere parce* is the subject of the sentence; the verb *sunt* is plur. *parvi* is used as a noun; 'for never is there lack of a little'; i.e. you can always get a little, if you are content with that.

1120. *claros voluerunt se* : comp. Hor. Sat. i 84 *non uxor salum te vult*'. We use this constr. more with a particip. than an adj.: 'I wish myself dead', but 'I wish to be famous'.

1122. *opulentis* 'by their wealth'.

1123. *succedere,* 'to mount up'; in a different sense, l. 286.
After all, i.e. even if they reach it; see n. to l. 1096.

This invidia bears some resemblance to the Nemesis, or envy of the gods, in the old mythology which Lucr. utterly discards; but see n. to l. 1233.

This invidia bears some resemblance to the Nemesis, or envy of the gods, in the old mythology which Lucr. utterly discards; but see n. to l. 1233.

The infernal regions are mentioned to suggest the distance and disastrous nature of the fall.

The verb is usually active.

The verb is usually active.

i. e. to exert oneself excessively.

i. e. the crown; used as a noun, as in l. 700.

cruentum is part of the predicate, 'in blood'.
NOTES.

1139. *honorem,* *prerogative.*

1140. *metuim,* *nom. sing. neut.* of the *rare participle of metuo.*

1141. ‘So things were brought to uttermost degradation and disorder’. *res,* ‘the state of things’; so *avrd* is used by Thucydides. *redibat* is a part of the idiom and does not mean ‘were brought back’; comp. *revocatur,* l. 255, and iii 910 *ad somnum si res redit atque quietem.*

1142. *turbae,* ‘disturbance’, is common in Plautus.

1143. *partim = innuili;* see n. to l. 840.

1144. *constituere* is not infinitive. *vellent:* final subj.

1145. *defessum colere* is a rare constr. for *defessum colendo.*

1146. *artus*; ‘stringent’; the opposite of *artus* is *laxus,* ‘roomy’, ‘large’, ‘indulgent’.

1147. *ex ira,* ‘from rage’.

1150. *colere aevom = vivere,* as in l. 1145.

1151. *inde = ab eo,* i.e. from excessive revenge. *praemia,* ‘prizes’, ‘valuable things’, not ‘rewards’; see ll. 5, 1450.

1152. *quemque,* i.e. all who commit violence and wrong.

1153. *unde = a quo.* Comp. Hesiod Op. 265 *δια τε φιακα τεχανγέραλφ κακά τεχανων,* perhaps the earliest classical equivalent of our proverb that honesty is the best policy.

1154. *degere,* sc. *eum.*

1156. *divom genus:* yet Epicurus and consequently Lucr. taught that the gods take no notice of the good or evil actions of men; see *Introduct.* p. xxv.

1157. *perpetuo* goes with *fore clam,* id is ‘his guilt’; *clam* would be *occultum* in prose; comp. Cic. De Fin. i 50 *quamvis occulte fecerit, numquam tamen id confidet semper occultum fore.*

1158. *quippe ubi,* ‘since’; *quia, quod, cum,* and *quando* are often preceded thus by *quippe* without its seeming to affect the sense.

1159. *protraxe:* contracted from *protraxisse.*

1160. *in medium dedisse,* ‘to have published abroad’.

1161—1193. *It is easy to account for that fear of the gods which has covered the earth with temples and rituals. Men saw, when awake and still more in sleep, beings of wonderful size, beauty, and strength. As these were ever present, and seemed exempt from fear of death, men attributed to them immortality and perfect happiness, and made them to dwell in the sky, not being able otherwise to account*
for the order of the seasons and the other wonders they beheld in the heavens.

1161. deum: gen. plur. magnas gentes: see n. to l. 20.
1162. per vulgarit: the indirect question depends on rationem reddere, l. 1168.
1163. *sacra, sacræ, 'fixed ceremonies'; this is the original meaning of *solanem* which is connected with *annus*; 'solemn' being a secondary meaning.
1164. sacra, but sacer above; so iv 1259 *liquidis et liquida crassis.*
1165. unde = a qua causa; see l. 1161.
1166. *toto orbi, 'over all the earth'; so aethere toto, l. 398.*
1167. cogit, sc. mortales. *celebrare, 'to throng them'; see n. to l. 1381.*
1168. *non ita difficile, 'not very difficult'; so non ita pridem, 'rather lately'. This line may be taken first in translating the sentence.*
1169. *quippe etenim: see n. to l. 126.*
1170. *animus vigilante, 'with waking mind', i.e. when awake. Lucr. seems to be inconsistent here: for he said before (l. 148) that the nature of the gods was *too fine and im* palpable for our senses to perceive it. Comp. also vi 68–78.*
1171. *magis, sc. videbant.*
1172. *For the idea that the gods ought to utter lofty words suitable to their beauty and power, comp. the defence Aeschylus is supposed to make for his long words, Aristoph. Frogs 1060*

1173. *Kallos elkos tois *haimidhs tois *phmasi melzos *xrhstai,
kal gar tois *matios *hamwn xrhntai polu *sempotroisiv.*

1174. *dabant, sc. dei homines.*
1175. *There was no time when these splendid visions ceased to appear; consequently men believed that the beings seen were immortal.*

1176. *et tamen, 'and without that'; i.e. even if the visions had ceased to appear. *omnino, 'on general grounds', repeats the same idea. *viribus auctos: see n. to ignibus aucta, l. 723.*

1177. *convinci = vinci; so Shakespeare, Macbeth 1764 'his chamberlains will I with wine and wassail so convince', i.e. overcome.*
NOTES.

1179. *fortunes, * 'in happiness', the usual meaning of the plur. in Lucr.; comp. i 106; in Cicero *fortuna* often = 'wealth'.

1180. *ve* - *aret* is the subj. of a reported reason; comp. Cic. Off. ii 22 laudat Panaetius Africanum quod tam abstinens fuerit.

1181. multa et mira, *πολλά καὶ θαυμαστά*. *videbant efficere, 'men saw the gods do'.

1182. *ipsos* is rather strangely used to contrast the easy performance of the gods with the difficulty of the tasks. *inde = ab efficiendo*. Compare the address to Iacchus, Aristoph. Frogs 400 δειδών ὡς ἄνευ πόνου πολλὴν δὲν περαλευς.

1183. *caeli rationes, * 'the system of heaven'; in a rather different sense, l. 196.

1184. *perfugium sibi habeabant*, 'they had recourse to', 'they took refuge in'; *perfugium* is acc. in apposition with *tradere* and *facere*, which are both used as nouns and governed by *habebant*.

1185. *deum: gen. plur. *templa, *realms', not 'temples'; see nn. to ll. 103, 948. Epicurus (see n. to l. 147) taught that the gods did not live in the heavens but in spaces between worlds, *μετακόσμος*, which Cicero translates by *intermundia*.

1186. *videtur, 'is seen'.

1187. *serena*, *austere*, denoting the purity and coldness of the starlight; Keats speaks of 'the earnest stars'. The whole line is quoted by Bentley (Phalaris ix) as an example of expression at once simple and sublime.

1188. *spectrae*, 'meteors'.


1190. *murmura minorum*, 'threatening rumblings'; the gen. serves as an epithet; for examples see ll. 369, 764. It is akin to the gen. of definition, for which see l. 909.

1191—1240. Men have made themselves miserable by imagining that the gods rule in heaven and are capable of anger. True piety consists not in superstitious rites but rather in a mind at peace. It is true that when we behold the wonders of the sky, we begin to doubt whether they may not be due to the power of the gods; and the dreadful thunder causes all men and especially the sinner to tremble for fear of punishment. So every captain prays the gods to deliver him from the perils of the sea, and often his prayer is unavailing.
The perils to which greatness is subject, and destructive earthquakes—all these things make it natural that men should think little of their own power and magnify that of the gods.

1194. genus is probably accus.; comp. ii 14 o miseris hominum

1195. adiunxit, 'gave also'; comp. ii 604 adiuv.xere feras.

1197. minores nostri, 'our posterity', just as maires nostri = 'our ancestors'.

1198. velatum: the Romans prayed with the head covered, the Greeks with it bare. videre is passive.

1199. vertier ad lapidem, 'to turn towards a stone', a satirical description of the way in which Romans approached the image of a god: after praying they turned to the right, so as to front the image, and then prostrated themselves; comp. Plautus, Curcul. 69 A. quo me vertam nescio. B. si deos salutas, dextrovorsum censeo; Plutarch, Camill. 5 καθάπερ ἐστι Ρωμαῖοι ἔδωκαν ἐπευξάμενοι καὶ προσκυνήσανεν καὶ δεξία ἐξέλιττεν. Plutarch makes the prostration come before the turn.

lapidem seems a contemptuous word for a statue; or it may refer to the termini (boundary stones) which were worshipped by the Romans.

1202. potis nectere vota, 'to link vow on to vow'; it is probable that nectere is not metaphorical, vota being = votivas tabellas.

1203. mase is a weakened form of magis; see n. to potis, l. 1.

1205. templi: see n. to l. 103, and comp. Aesch. Pers. 367 τεμενος αὐθέντως. The order is: et aethera fixum super micantibus stellis. Lucr. seems here to take the view that the sky does not revolve.

1206. venit in mentem viarum: this imperf. constr. followed by the gen. is found in Cicero, e.g. De Fin. να κατανόησα τοις o h omeneu. Platonis, 'I think of Plato'; this gen. may be compared with that after reminiscor and obliviscor.

1207. oppressa: acc. plur. neut.

1208. caput erigere: so ἀνακόπτεν is often used metaphorically.

1209. nequae depends on cura which = metus.

1210. viset: consec. subj., quae being = talis ut.

1211. rationis egestas, 'the difficulty of explaining'.

1212. equanam: the indirect question depends on rationis.

1213. quod: see n. to l. 1033. (= quattuors) one syllable by squiggles

1214. solliciti agrees with motus. *labore*, 'strain'.

N.B.
1215. *salut* existence; so *salvo Marone*, 'while Virgil lived'.

1217. is identical with l. 379.

1218. *cui* is interrogative.

1219. *contrahitur*, 'shrink into itself'; just the opposite is *animus diffunditur*, 'expands with joy'.

1220. *corruptunt*, 'huddle up'; like *contrahitur*, but stronger. Comp. Seneca Nat. Quaest. vi 2 *quid dementius quam ad tonitura succidere et sub terram correpere fulminum metu?*

1221. murmur, viz. of thunder.


1225. *poenarum solvendi*: we should expect either the gerund, *poenas solvendi*, or the gerundive, *poenarum solvendarum*; but sometimes, as here, the gen. of the gerund is followed by a noun in the gen., apparently to avoid such cumbrous phrases as *agrorum condonandorum*; comp. Plaut. Capt. 852 *nominandi istorum copia*, ibid. 1008 *lucis tuendi copiam.* grave is an epithet; *sae adultum* (see n. to l. 90) is the verb; comp. l. 1416.

1227. *indeferatorem*: see n. to l. 102.

1228. *pariter* should be taken before *cum*.

1229. *divum pacem*, 'the favour of the gods'; comp. *ventorum paces* below, 'propitious winds'.

1230. *animas*: see n. to l. 236. So Jason, when starting on the quest of the golden fleece, *σήνα καὶ ὕκτεροις κυμάσιν πιπάς ἀνέμων τ' ἐκάλει, νύκτας τε καὶ πνύτων κελέθους ἄματα τ' εὐφρονα καὶ φιλαν νόστοι τῶν μοίρων* (Pind. Pyth. iv 194); and the Athenians, when starting against Syracuse, εὐχάς τὰς νομαγμένας πρὸ τῆς ἀναγωγῆς ἐποιεῖντο (Thuc. vi 32). And in the last case the prayers were unheard.

1232. *nil*, abl. of amount of difference, goes with *minus*.

1233. The 'hidden power' is the secret working of nature, the *fortuna* of l. 107, the *invidia* of l. 1126.

1234. The rods and axes were the insignia of the highest offices and are therefore used as 'greatness'.

1235. *ludibrio*, lit. 'for a mockery'; *predicative dat.*

1237. *dubiaeque*: *que* is used in the sense of *se*; *se* was used for *que*, l. 71; *dubiae* may be transl. by an *ady*. Comp. Seneca Nat. Quaest. vi 12 *oppidi pars ruin dubieque stant etiam quae relicta sunt*. He is
speaking of the eruption and earthquake which destroyed Pompeii and Herculaneum in 79 A.D.

minantur, sc. se casuras esse.

1238. mortalia saecla = homines; see n. to l. 791.

1239. *_{felicium} = admit*.

1240. gubernent: consec. subj., quae being = tales ut.

1241—1280. Metals were first discovered when the earth was thoroughly heated by forest fires, which may have been kindled by lightning or by men for various purposes. The heat melted the metals in the ground; and when these had cooled, their glitter attracted attention, and the shapes they had assumed suggested to men that they might smelt metals for their own purposes. Gold and silver did not prove so workable as copper and so were neglected for it. Just the opposite is true now. Everything has its day.

1241. quod superest: see n. to l. 64. *_{indicat} = continue*.

1242. *_argentum pondus_ = heavy silver_; so _terrac pondus_, l. 495.

1244. fulmine: the abl. may be either causal or absolute.

1246. formidinis ergo; for the sake of (i.e. to inspire) terror; an archaic use of _ergo_, found once in Virgil, Aen. vi. 670.

1248. _pandere; to clear_, ψιλον; ψιλη γη, arable land, is opposed to _περιπεικην_, land for olives and vines.

1250. _venari_ (= venari) is used as a noun and is the subj. to _ortum est_.

1251. saepire, sc. ortum est.

1252. *_quidquid id est_; see n. to l. 577. _Revenuerat ut loco_*.

1253. _venis_; abl. of place whence.

1255. *cum videbant = _σποτε_ ἵοιεν_; but later writers imitate Greek usage in these general conditions in past time, as Mart. ii 69 4 _cum cenaret (= _σποτε_ δειπνολν), erat tristior ille, domi._

1259. _lepori; prettiness_.

1260. The order is: _et videbant_ (ea) _formata esse figurā similis atque vestigia lacunarum_ (quae) _cuique (metallo) fuerant._

1261. _igitur_ = _as the outlines of the hollows had been to each_, i.e. _to the outline of the hollow in which each (lump) had been_; _similis is followed by atque, just as _δουοις_ by καὶ._
NOTES.

107

penetrat eos, "it struck them"; a rare use of the word. liquefacta...decurrere: see n. to l. 109.
prosum, "absolutely", qualifies quamvis in acuta.
quamvis in acuta: the whole phrase is: in fastigia tam acuta quam vis. The plur. of quamvis is sometimes used, and also the plur. of other tenses, e.g. in speeches to a jury, quam voletis multos producam testes.

procudendo; "by hammering out"; there is a change of subject, as it is not the metals but men that do the hammering. Comp. l. 1369, and i. 312 anuitus in digito subter tennatur habendo, i.e., "by our wearing". In these constructions the gerund is not passive, as is sometimes said; see n. to novando, l. 194. "by constant hammering".
darent, sc. haec res, the metals. possent, sc. ipsi.
levia is predicate. levias recta: "plane sword"

pertundere: this compound takes the sense of the preposition rather than of the original verb; pertusum vas, "a jar with a hole in it"; pertusa laeava, "a coat in holes". perique forare: a case of tmesis.

argentum: abl. of instrument.

primum goes with parabant above. violentis, "masterful"; the epithet hints at the uses to be made of copper.
potestas, sc. argenti et auri.

pariter, i.e. as well as copper.

iacet, "is neglected", a common sense of the word; iacere is opposed to valere, Cic. Off. iii 46. 
successit: see n. to l. 1123. "mounted up"

volvenda: see n. to l. 514. tempora rerum, "the seasons of things".

Comp. ll. 832, 833.

1281—1307. The first weapons used were the hands, nails, and teeth, sticks, stones, and fire. These gave place to copper which was used for all purposes of war and peace until copper in turn gave place to iron. Next men learnt to mount horses in warfare and then to yoke two and four horses in a chariot. Lastly the Carthaginians taught elephants to take part in battle. Thus gradually the means of fighting have been perfected.

1281. ferri natura, "the substance which is iron", is a mere periphrasis for ferrum; see n. to l. 59.

1284. silvarum fragmina is in apposition with rami.
1285. postquam primum r\x1e\x1a \x1e\x1a \x1e\x1a; quom ex templo is the usual phrase in Plautus. cognita is neuter, according to rule, after the two subjects flamma atque ignes, of which one is masculine and one feminine, both referring to things not persons.

1287. prior: adj. for adv.

1288. tvra, like \& \v, often = 'because', when the sentence contains a comparative. *facilis, 'easy to work'. natura: nom. 

1289. *miscebant; they stirred up. vasta, 'gaping'. servabant, lit. 'they sowed', i.e. 'dealt around'.

1291. ollis: archaic for illis.

1294. *species, el\os, 'the fashion'. est belongs to versa; see n. to l. 90.

1296. Those who first used iron swords had a great advantage over the rest; but when everybody used them, everybody had an equal chance.

1297: armatum conscendere, 'for a man with a sword to mount'; the inf. is used as a noun (and so moderarier, vigere, and temptare below), and is subject to prius est, 'is an earlier invention'. (discovery)

1298. vigere, i.e. to use the sword, the left hand being taken up by holding the bridle.

1300. bis binos, sc. equos; so bis bina quot sunt, 'how much is twice two?'

1302. boves Lucas, 'Lucan kine', i.e. elephants, which the Romans called by this name, because the first elephants they saw were employed by King Pyrrhus in Lucania when he brought an army to conquer Italy, 283 B.C.

1303. anguimanus is acc. plur. fem., the compounds of manus being declined like manus; comp. Cic. De Nat. De. ii 122 manus etiam data elephanto est. An elephant's 'hand' sounds strange; but 'trunk' is really stranger, being a mere corruption of 'trump'; the French word is trompe.

1305. alid = alius; alius ex alio would not scan; so Lucr. uses the archaic form Catullus (66 28) has alis for alius.

1308—1349. Some tried to use wild animals in war; but these attacked their own side just as much as the enemy, as even elephants some-
times do. So only the desperate had recourse to such dangerous expedients.

1308. "minere belli, 'the service of war'; belli is gen. of definition like novitatis nomen l. 909; comp. Ἰνηλα ὑπάρχου.

1309. sunt belongs to experti; see n. to l. 90.

1310. *artim=nonnulli; see n. to l. 840.

1312. moderarier his: here moderari governs the dat., but, l. 1298, the acc.; both constructions are common.

posse: final subj.

1314. nullo discrimine, i.e. making no distinction between friend and foe.

1315. crisiae are not the lions' manes but some head-gear with which they were supplied to make them appear more formidable.

1316. fremitu, sc. leonum.

prterterita equorum pectora, 'the terror of the horses excited by...'.

1317. convertere, sc. equos.

1319. adversum, évvarlov, is an adv.

venientibus ora petebant: though English prefers the gen., it is the idiom of Latin and many other languages to use a dat. of the person when parts of the body are in question; thus caput ei abscessum est, in French, on lui trancha la tête.

1320. et nec opinantes, sc. alios; see n. to l. 777. *other part of their guard!*

1321. *detlexae* twining round them'; a very rare word.

1322. morsibus, 'savage jaws'; just so osculum is used of a mouth which kisses rather than bites, by Lucr. iv 1091, Mart. xi 91 7.

1324. *haurabant*: for the form see n. to l. 934, for the meaning n. to l. 991. *subter*: adv., as almost always in Lucr.

1328. For the repetition (epanalepsis is the technical name) see n. to l. 951.

1329. dabant ruinas: see n. to l. 347. *which the writer would use...*

1330. *transversa exibant*; 'by swerving tried to avoid'.

*adactus* is a noun. *ksh. [m]*

1332. *ab nervis succisa*, 'with their tendons severed', i.e. hamstrung, the regular sense of succidere. With ab nervis (=a parte nervorum) comp. a terris l. 754. videres, 'one might have seen'; see n. to adportes, l. 100.

1334. domi domitos: notice the assonance or play on words, a constant feature in old Latin poetry; see n. to l. 392.

1335. *in rebus agendi*: 'in the heat of action'.

D.
1336. The ablatives are causal.

1337. 

1339. *redire: to rally.

1340. *male macere, cruelly mangled; macere is probably the particip. of an obsolete verb macere, and to be distinguished from the particip. of an obsolete macere, found in the phrase macere virtue, 'well done!'

1341—1346 are found in the Mss. but are omitted in this text. They make no sense here, nor would they anywhere else. They are clearly a collection of tags from other parts of the poem, interpolated here by some ignorant copyist.

1347. The sentence would be more symmetrical if it ran thus: sed id faciendo non tam vincere voluerunt quam dare etc.

1348. generent is consec. subj., quod being = tale quid ut.

1349. "vacant: were without; governing the abl.; this word is extremely common, with the dat., in post-Augustan Latin, especially in two senses, 'to have time for', and 'to devote time to', i.e. to study; both occur together in Mart. xi 1 6 nec musis vacat, aut suis vacaret, 'he has no time for poetry; if he had, he would write poetry of his own'.

1350—1360. There was no weaving before iron was discovered, iron being necessary to make the implements of weaving. At first weaving was done by men until the reproaches of the husbandmen forced them to leave it to women.

1350. *nexilis vestis would be a garment of skins tied on the body.

1352. ratione alia, i.e. without iron.

1353. *insilia: the meaning is uncertain, and the epithet levia does not suit 'treadles' which is given in the lexx.; perhaps *heddles', of which there were two in the ancient loom to separate the threads of the warp or vertical yarns.
the füsus is no part of the tela or loom, but was used along with the cōlus to make the yarn.

radius and scapus are both connected with the loom: the radius was used to press together the threads, the scapus to tie the threads of the warp to, at the bottom of the loom. It should be remembered that the ancient loom was vertical, the weaver standing at his work.

1357. vitio: predicative dat.
1358. ut is consecutive, not final.
1359. pariter, i.e. cum agricoliā.
1360. durarent: for a different sense see l. 57.

1361—1378. Nature herself taught men to sow the fields and to plant and graft young shoots. One kind of tillage after another was tried, and more land daily brought under cultivation.

1364. pullus is more commonly used of the young of animals; so in French, poult is a chicken, poulain a colt; Lucr. uses pullus for both (ii 927, iii 764).

1365. unde = et ab hoc. "libitūnum," they got a desire. N.B.
1366. "defodere: see n. to l. 935. "b planus."
1367. "dulcis agelli, "the plot they loved"; 'sweet' is seldom a useful epithet in English, except of things that can be smelt, tasted, or heard.

1368. fructus is governed by mansuescere. & belter.
1369. indulgendo, sc. terrae, 'by their treating the land well', diā τό εὐεργετεῖν: there is a change of subject; see nn. to novândo l. 194, procudendo l. 1265.

1370. "succuère: see n. to l. 1123. "manum, up, reed.
1373. habere is final subj.
1374. "sæcula, γλαυκεῖ, grey-green."
1377. "omnia, 'all the ground'. intersita ornant: see n. to l.
109. ornant, sc. homines.
1378. "arbustis, 'plantations'; see n. to l. 671.
cārō is an adverb.
1379—1435. The earliest music was an attempt to whistle in imitation of birds. Then the sound of the wind blowing through reeds suggested to men to make the pipe which you may hear shepherds play on the hills. This music, together with dancing and rustic festivities, gave much pleasure when it was new, and served to solace such as could not sleep, though it would not give satisfaction now. The old simplicity of life soon passed away; skins and acorns and beds of leaves fell into contempt, though they had once been so prized. We now prize gold and purple instead, and poison the happiness of our lives by ambition and greed.

1379. imitarier (= imitari) is used as a noun and is the subject to fuit; see l. 1297 for similar examples.

1381. concelebrare, to practise frequently; l. 1167 celebrazare = 'to throng', and so concelebrare is used, i.e., 'with pleasure to the ear'; the phrase may be compared with ipsique perire, l. 1348, as both express a result of the main action, though the result is stated as if co-ordinate, by what is called parataxis.

1382. sephryi: gen. sing. cava calamorum: see n. to viae cuneta l. 739. sibila: sibilus makes this irregular plural; see n. to l. 1397.

1383. agrestes is a noun here.

1385. caementum, 'of the players'; canere is constantly used of playing as well as of singing.

1386. reperta, (fem. sing.), 'met with', not 'invented'.

1387. otia dia = otia sub divo: 'peaceful places beneath the open sky'; so, i 22 dias in luminis oras, dias = aetherias; but, ii 172, dia voluptas = divina voluptas.

1388, 1389 are identical with ll. 1454, 1455, and are omitted in the text, having been inserted here in the MSS. by a blunder.

1390. ollis: see n. to l. 1291. archeia for ilis.

1391. sunt cordi, 'are near; cordi is locative, lit. 'at heart'; a very common phrase in all periods of Latin, usually with another, personal, dat.; Hor. Od. i 17 13 dis pietas mea et musa cordi est.

1392. inter se, 'in groups'.

1393. propitier: see n. to l. 31.

1394. non magno: comp. non magno l. 604. incunde habebant = curabant; see n. to l. 593. corpora evasabant in ambo.

1395. tempestas, 'the weather'; so l. 744. ridebat: for the indic. expressing frequency, see n. to l. 1257.
NOTES.

1397. *ioca,* plur. of *iocus,* so *loca* from *locus,* *sibila* from *sibilus.*

1400. *floribus* is abl. of instrument, after *plexis,* 'plaited with flowers.'

1401. *extra numerum,* 'out of step,' the opposite of *in numerum.*

1402. *duriter,* 'clumsily;' see n. to *uniter,* l. 537. _terram pede pellere:_ comp. Hor. Od. iii 18 15 _gaudet invisam pepulisse fessor ter pede terram._

1405. _hinc = ab hoc,* i.e. from music. _solacia somnii:_ 'consolations for the want of sleep'; so the watchman on the roof of Agamemnon's palace sang to himself as ὑπνοῦ ἀντιμολογίας ἔκος (Aesch. Agam. 16, 17).

1406. _ducere,* _flectere,* and _percurrere_ are used as nouns in the nom. case, in apposition with _solacia._

1407. _multimodis:_ see n. to _omnimodis,* l. 190.

1408. 'and even now watchmen keep the tradition they have received from them'; _unde = a quibus_ and goes with _accepta._ _vigiles_ may be the sentinels in a camp or the watchmen in a town; in imperial Rome there were 7000 _vigiles,_ their chief duty being to extinguish fires.

1409. _recens_ is the adverb. _hilo:_ abl. of amount of difference; the acc. occurs l. 358.

1410. _interea = tamen_; see n. to l. 83. _'dulcedini fructum,'_ 'enjoyment of delight'; the phrase occurs before, ii 971.

1412. _praesto:_ adverb.

1413. _in primis_ is often written as one word.

1414. _illa_ is acc. plur. neut.; _reperta_ is nom. sing. fem., agreeing with _res._ _posterior_ may be translated by an adverb.

1415. _sensus,* 'our feelings.' _ad,* 'in regard to.'

1416. _coepit,* sc. _esse_; comp. Juvenal iii 114 _et quando coepit Graecorum mentio._ _relicta sunt_ is the verb; for the separation of the words, see n. to l. 90.

1417. _strata herbis_ is an epithet of _cubilia._ _frondibus aucta:_ comp._ _ignibus aucta,* l. 723.

1418. _pellis,* gen. sing. _contempta,* 'into contempt.'

1419. _quam = quanvis eam,* _invidia...repertam,* 'was so envied formerly when discovered'; _invidia_ is abl. of attendant circumstances.

1420. _gessit (= ἐφόρησε*), sc. _eam._
1421. *et* tamen,*' and after all', i.e. though they had committed murder to get it; see n. to l. 1096. *sanguine* is causal abl. after dispersisse.

1422. convertere = converti: see n. to vertere, l. 831.

1425. *quo,* 'and in this'. magis goes with in nobis, not with quo.

1428. auro signisque is a hendiadys, meaning 'figures embroidered in gold'. *apta* is the particip. of apere; see n. to l. 537.

1429. *dum,* 'provided that'. plebeia, sc. vestis. tamen is to be taken with defendere; for its position, see n. to l. 1088.

1432. *habendis finis,* 'the right limit of possession', i.e. to what point it is desirable to go on acquiring property.

1433. *omnino,* 'in general'; comp. omnino, l. 1177. *quoad:* see n. to l. 1033. Lucr. means that pleasure pursued beyond a certain point ceases to be pleasant.

1434. *in altum,* 'into the deep sea'; els πέλαγος; comp. the metaphorical use of ἑρτεώπος.

1435. *aestus,* 'billows'.

1436—1439. *The motions of the sun and moon taught men to observe the seasons of the year.*

1436. *vigiles* is perhaps a noun as in l. 1408. *watchful guardians'.

1437. *circum:* adverb.

1439. *ratione,* 'plan'; *rem,* 'the system'.

1440—1447. *At length men began to live in walled cities, to divide up the land, and to sail the sea. States made alliance with one another; letters were invented, and then history began to be written.*

1440. *iam* qualifies the whole sentence, not merely *validis.*

degebant aevum = vivebant; comp. colere aevum, l. 1150.

1441. *divisa colebatur:* see n. to l. 109.

1442. *velipolis,* 'sail-winged'; applied by Virgil to the sea, Aen. i 224; a good instance of the elaborate art with which Virgil refines on the simplicity of Lucr.

1444. *rex gestas,* 'the deeds of heroes', κλέα ἄνδρῶν, such as Achilles sang in his tent to the lyre (II. ix 189): the history of most nations begins with such records; see the Introduction to Macaulay's Lays.
1445. *elementa*; ‘the letters of the alphabet’. N.B.

1446. *prius*, i.e. before the invention of writing.


1448—1457. Thus by degrees practice and experience suggested to men all useful inventions and afterwards all the fine arts and luxuries of life. There has been a gradual but steady progress until perfection in them all has been reached.

1449. *vias*, ‘roads’; an important part and instrument of civilisation which the Romans thoroughly understood.

1450. *praemia*, sc. *vitae*; see n. to l. 1151. *funditus*; ‘without exception’, usually has *omnes* after it in Lucr.; but see ll. 497, 1435.

1451. *daedala signa polire*; ‘the shaping of well-wrought statues’; *polire* is used as a noun in the acc. case. *daedala* is used in its passive signification; see n. to l. 234.


1453. *progredientes*, sc. *hombres*, a second acc. after *docuit*.

1454. *unumquiquid = unusquidque*; see n. to l. 131.

1455. *in medium*, ‘in sight of all men’; so l. 1160.

1456. *alid = alius*; see n. to l. 1305. *ex alio* and *ordine* are treated as co-ordinate adverbs, ‘after another and in due order’.

1457. *artibus* is dat. commodi, but may be translated, ‘in the arts’. *venere*, sc. *artes*.
INDEX TO THE NOTES.

<table>
<thead>
<tr>
<th>Term</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>a parvis</td>
<td>977</td>
</tr>
<tr>
<td>ab 'in consequence of'</td>
<td>358</td>
</tr>
<tr>
<td>ab 'on the side of'</td>
<td>754</td>
</tr>
<tr>
<td>abl. in -i</td>
<td>74</td>
</tr>
<tr>
<td>abl. of amount of difference</td>
<td>1232</td>
</tr>
<tr>
<td>adeo after negative</td>
<td>574</td>
</tr>
<tr>
<td>adverb for adj.</td>
<td>33</td>
</tr>
<tr>
<td>aegocervitis</td>
<td>615</td>
</tr>
<tr>
<td>aer)(aether</td>
<td>85</td>
</tr>
<tr>
<td>alid = altid</td>
<td>1305</td>
</tr>
<tr>
<td>alituum</td>
<td>801</td>
</tr>
<tr>
<td>alicunde</td>
<td>522</td>
</tr>
<tr>
<td>aliquus atque 'other than'</td>
<td>1066</td>
</tr>
<tr>
<td>alliteration</td>
<td>12, 217, 950, 957, 989, 993</td>
</tr>
<tr>
<td>almus</td>
<td>230</td>
</tr>
<tr>
<td>alter ute r</td>
<td>589</td>
</tr>
<tr>
<td>ambiguity</td>
<td>297, 1414, 1416</td>
</tr>
<tr>
<td>anacoluthon</td>
<td>383, 447, 460</td>
</tr>
<tr>
<td>androgynum</td>
<td>839</td>
</tr>
<tr>
<td>anguimanus</td>
<td>1303</td>
</tr>
<tr>
<td>anima 'the soul '</td>
<td>59</td>
</tr>
<tr>
<td>animal</td>
<td>823</td>
</tr>
<tr>
<td>animantes</td>
<td>823</td>
</tr>
<tr>
<td>animi locative</td>
<td>97</td>
</tr>
<tr>
<td>animi natura = animus</td>
<td>59</td>
</tr>
<tr>
<td>animus 'the mind'</td>
<td>59</td>
</tr>
<tr>
<td>ante quam with indic.,</td>
<td>390</td>
</tr>
<tr>
<td>antistare</td>
<td>22</td>
</tr>
<tr>
<td>aptus, two meanings of</td>
<td>537, 808</td>
</tr>
<tr>
<td>arbusa for arbores</td>
<td>671</td>
</tr>
<tr>
<td>artus)(laxus</td>
<td>1147</td>
</tr>
<tr>
<td>assonance</td>
<td>392, 1334</td>
</tr>
<tr>
<td>astrologi)(Chaldaei, 727</td>
<td></td>
</tr>
<tr>
<td>asyndeton</td>
<td>1045</td>
</tr>
<tr>
<td>Atlas</td>
<td>35</td>
</tr>
<tr>
<td>pra e ignibus</td>
<td>723</td>
</tr>
<tr>
<td>autumnus</td>
<td>34</td>
</tr>
<tr>
<td>Bagehot's Physics and Politics, 925, 959</td>
<td></td>
</tr>
<tr>
<td>baldus</td>
<td>1022</td>
</tr>
<tr>
<td>barbarus</td>
<td>36</td>
</tr>
<tr>
<td>bene pleno</td>
<td>708</td>
</tr>
<tr>
<td>bene vivi 'happiness'</td>
<td>18</td>
</tr>
<tr>
<td>bis bini</td>
<td>1300</td>
</tr>
<tr>
<td>boves Lucae</td>
<td>1302</td>
</tr>
<tr>
<td>bruma = brevima</td>
<td>746</td>
</tr>
<tr>
<td>cadere 'to vanish '</td>
<td>328</td>
</tr>
<tr>
<td>candor</td>
<td>282</td>
</tr>
<tr>
<td>cernere = decernere</td>
<td>782</td>
</tr>
<tr>
<td>Chaldaei</td>
<td>727</td>
</tr>
<tr>
<td>Chimaera</td>
<td>905</td>
</tr>
<tr>
<td>cire for ciere</td>
<td>211</td>
</tr>
<tr>
<td>con celebrare</td>
<td>1381</td>
</tr>
<tr>
<td>concord, rule of</td>
<td>1285</td>
</tr>
<tr>
<td>condensa</td>
<td>486</td>
</tr>
<tr>
<td>cons umbras</td>
<td>764</td>
</tr>
<tr>
<td>convenire, constr. of</td>
<td>898</td>
</tr>
<tr>
<td>convertere neuter</td>
<td>1422</td>
</tr>
<tr>
<td>cor 'intelligence'</td>
<td>1107</td>
</tr>
<tr>
<td>cordi esse</td>
<td>1391</td>
</tr>
<tr>
<td>corpora materiai 'atoms '</td>
<td>355</td>
</tr>
<tr>
<td>correptum</td>
<td>1219</td>
</tr>
<tr>
<td>corripere</td>
<td>247</td>
</tr>
<tr>
<td>cre tus</td>
<td>6</td>
</tr>
<tr>
<td>crista of lions</td>
<td>1315</td>
</tr>
<tr>
<td>cum superfluous</td>
<td>352</td>
</tr>
<tr>
<td>cura corporis</td>
<td>939</td>
</tr>
<tr>
<td>Term</td>
<td>Page(s)</td>
</tr>
<tr>
<td>------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>daedalus, two meanings of</td>
<td>234</td>
</tr>
<tr>
<td>dare, of doctors</td>
<td>1010</td>
</tr>
<tr>
<td>dare ruinam, sonitum etc.</td>
<td>347</td>
</tr>
<tr>
<td>dat. after diversus</td>
<td>647</td>
</tr>
<tr>
<td>dat., ethical</td>
<td>260</td>
</tr>
<tr>
<td>dat. of the person</td>
<td>1319</td>
</tr>
<tr>
<td>de 'according to'</td>
<td>154</td>
</tr>
<tr>
<td>de 'after'</td>
<td>651</td>
</tr>
<tr>
<td>Democritus</td>
<td>622</td>
</tr>
<tr>
<td>demonstr. pron. for relat.</td>
<td>898</td>
</tr>
<tr>
<td>deplexae</td>
<td>1322</td>
</tr>
<tr>
<td>deturbare</td>
<td>491</td>
</tr>
<tr>
<td>dienique 'besides'</td>
<td>26</td>
</tr>
<tr>
<td>dice, meanings of</td>
<td>1387</td>
</tr>
<tr>
<td>divinitus</td>
<td>198</td>
</tr>
<tr>
<td>dogs, fidelity of</td>
<td>864</td>
</tr>
<tr>
<td>dounique</td>
<td>708</td>
</tr>
<tr>
<td>double epithets</td>
<td>13</td>
</tr>
<tr>
<td>double subj.</td>
<td>421</td>
</tr>
<tr>
<td>duaæ partes 'two thirds'</td>
<td>204</td>
</tr>
<tr>
<td>dubitare, constr. of</td>
<td>249</td>
</tr>
<tr>
<td>dulcis</td>
<td>1367</td>
</tr>
<tr>
<td>dum, uses of</td>
<td>700</td>
</tr>
<tr>
<td>durare 'to harden'</td>
<td>1360</td>
</tr>
<tr>
<td>durare 'to remain'</td>
<td>57</td>
</tr>
<tr>
<td>eclipses of moon</td>
<td>764</td>
</tr>
<tr>
<td>-ei, quantity of</td>
<td>284</td>
</tr>
<tr>
<td>elementa 'letters'</td>
<td>1445</td>
</tr>
<tr>
<td>elephants</td>
<td>1302</td>
</tr>
<tr>
<td>enclitic est</td>
<td>43</td>
</tr>
<tr>
<td>enim = exel</td>
<td>13</td>
</tr>
<tr>
<td>epanalepsis</td>
<td>299</td>
</tr>
<tr>
<td>Epicurus</td>
<td>4, 336</td>
</tr>
<tr>
<td>equinoxes</td>
<td>690</td>
</tr>
<tr>
<td>ergo 'for the sake of'</td>
<td>1246</td>
</tr>
<tr>
<td>et lamen</td>
<td>1096</td>
</tr>
<tr>
<td>ethical dat.</td>
<td>260</td>
</tr>
<tr>
<td>etiam atque etiam</td>
<td>821</td>
</tr>
<tr>
<td>etiam quoque</td>
<td>153</td>
</tr>
<tr>
<td>Euhius Euhan</td>
<td>743</td>
</tr>
<tr>
<td>exordia</td>
<td>331</td>
</tr>
<tr>
<td>Favonius</td>
<td>739</td>
</tr>
<tr>
<td>fear of eternal night</td>
<td>973</td>
</tr>
<tr>
<td>fevers in autumn</td>
<td>220</td>
</tr>
<tr>
<td>fire, discovery of</td>
<td>1011</td>
</tr>
<tr>
<td>fire is food of stars</td>
<td>525</td>
</tr>
<tr>
<td>floreat puppibus</td>
<td>1442</td>
</tr>
<tr>
<td>fuecre 'to ebb'</td>
<td>280</td>
</tr>
<tr>
<td>fortunae 'happiness'</td>
<td>1179</td>
</tr>
<tr>
<td>fossae</td>
<td>482</td>
</tr>
<tr>
<td>fragor</td>
<td>109</td>
</tr>
<tr>
<td>fraus</td>
<td>1005</td>
</tr>
<tr>
<td>fundatum aevo</td>
<td>161</td>
</tr>
<tr>
<td>funditus</td>
<td>1450</td>
</tr>
<tr>
<td>fung{i}(facere, 358</td>
<td></td>
</tr>
<tr>
<td>gen. as epithet</td>
<td>369, 1193</td>
</tr>
<tr>
<td>gen., attributive</td>
<td>533</td>
</tr>
<tr>
<td>gen. in -ai</td>
<td>69</td>
</tr>
<tr>
<td>gen. of definition</td>
<td>909</td>
</tr>
<tr>
<td>gen., partitive</td>
<td>918</td>
</tr>
<tr>
<td>gerund, gen. of, with gen. of noun</td>
<td>1225</td>
</tr>
<tr>
<td>gerund used actively</td>
<td>43</td>
</tr>
<tr>
<td>gerund used as abl. of inf.</td>
<td>194, 1265, 1369</td>
</tr>
<tr>
<td>gerundive used as particip.</td>
<td>514</td>
</tr>
<tr>
<td>Geryon</td>
<td>28</td>
</tr>
<tr>
<td>Gigantes</td>
<td>117</td>
</tr>
<tr>
<td>gignundis</td>
<td>181</td>
</tr>
<tr>
<td>giscunt</td>
<td>1061</td>
</tr>
<tr>
<td>gods of Epicurus</td>
<td>1156, 1170, 1188</td>
</tr>
<tr>
<td>'golden couplets'</td>
<td>802</td>
</tr>
<tr>
<td>Greek adjectives</td>
<td>334</td>
</tr>
<tr>
<td>Greek plural</td>
<td>35</td>
</tr>
<tr>
<td>haec rerum summa</td>
<td>194</td>
</tr>
<tr>
<td>Harpies</td>
<td>28</td>
</tr>
<tr>
<td>haustra 'scoops'</td>
<td>516</td>
</tr>
<tr>
<td>haustus 'torn'</td>
<td>991</td>
</tr>
<tr>
<td>hendiadys</td>
<td>335, 726, 1428</td>
</tr>
<tr>
<td>Hercules</td>
<td>22</td>
</tr>
<tr>
<td>Hesperides</td>
<td>32</td>
</tr>
<tr>
<td>heteroclitic plurals</td>
<td>1397</td>
</tr>
<tr>
<td>hiatus</td>
<td>7, 74</td>
</tr>
<tr>
<td>hic = tum</td>
<td>432</td>
</tr>
<tr>
<td>hilmum</td>
<td>358</td>
</tr>
<tr>
<td>hoc 'therefore'</td>
<td>807</td>
</tr>
<tr>
<td>humi locative</td>
<td>223</td>
</tr>
<tr>
<td>hypermetric line</td>
<td>849</td>
</tr>
<tr>
<td>hysteron proteron</td>
<td>626</td>
</tr>
</tbody>
</table>
Lucr., Book V.

1. **iacio**, compounds of, 567
2. **Ida**, 663
3. **ille superfluous**, 658
4. **inmortalibus**, 53
5. **impes**, 504
6. **impetus**, 200
7. **inane 'void'**, 357
8. **inconsistency of Lucr.**, 402, 523
9. **inde loci**, 443
10. **indic. expressing frequency**, 1257;
11. **indic. in oratio obliqua**, 630
12. **infans 'speechless'**, 223
13. **infin. pres. for fut.**, 387
14. **infin. used as noun**, 979, 1297
15. **inmissis habenis**, 48
16. **insigne**, 700, 1138
17. **insilia**, 1353
18. **insinuare, constr. of**, 44, 73
19. **intempesta nocte**, 986
20. **interea = tamen**, 83, 394
21. **iterum**, 147
22. **interstingui**, 761
23. **interutrasque adv.**, 472, 839
24. **intus (intro)**, 354
25. **invidia**, 1126
26. **irregular adverbs**, 1402
27. **irregular condition**, 212, 277
28. **ita 'for'**, 39
29. **iter**, 653

---

lacuna suspected, 1081

1. **laetus**, 921
2. **language, origin of**, 1028
3. **limitative use of ita ut**, 476
4. **liquidus**, 281
5. **locative of price**, 545
6. **long syllables in arsis**, 1049
7. **longiter**, 133
8. **luminis orae**, 85
9. **lychini = λυχνος**, 295

---

**mactae 'mangled'**, 1339

1. **manus elephanti**, 1393
2. **masque of the seasons**, 737
3. **Matuta**, 656
4. **metae**, 617, 690
5. **metaphors**, 12, 77, 89, 282, 778, 850
6. **metutum**, 1140
7. **amilia, not millia**, 999
8. **moenia mundi**, 454
9. **Molossi**, 1063
10. **mortalia saecia**, 791
11. **multitude of worlds**, 430
12. **mundus includes sky and stars**, 477
13. **mutua adv.**, 1100

---

nativus), aclerinus, 60

1. **natura**, 77, 107
2. **natura rerum**, 54
3. **ne rearis final clause**, 114
4. **nec ute**, 839
5. **neque enim**, 315
6. **nimio**, 564
7. **nodus anni**, 688
8. **non iam = ovkêti**, 1016
9. **notare 'to blame'**, 121
10. **noticies = πρόληψις**, 182, 1047

---

ollis, 381

1. **omnè = τὸ πᾶν**, 527
2. **omne genus adv.**, 428
3. **omnimodos**, 190
4. **ominino**, 1433
5. **opus est**, constr. of, 1053
6. **Orcus**, 996
7. **order of words**, 90, 177, 929
8. **origins of literature**, 1444
9. **Ovid quotes Lucr.**, 95

paragraphs misplaced, 110, 1011, 1091

1. **parataxis**, 1348, 1381
2. **partim = nonnulli**, 840
3. **pectus**, 1
4. **pennipotentes**, 789
5. **percipere**, 605
6. **perf. of fugio and compounds**, 150
7. **pertundere**, meaning of, 1268
8. **petere intrans.**, 1035
9. **Phaethon**, 397
10. **piger**, 746
11. **plagae of atoms**, 188
13. **polus 'axis'**, 511
14. **pondus terrae**, 495
INDEX TO THE NOTES.

Pontos, 507
pois indeclin., 1
praemia, 5, 1151
praesidium, meaning of, 1109
prayers of sailors, 1230
primordia 'atoms', 184
principia 'atoms', 184
privatus = expres, 317
privus = singulus, 274
proculere, 850
propter 'near', 31
pitllus, 1364
quanta quanta, 584
quantity, difference of, 1163
qui abl., 233
quicquid quidque, 131
quiescem, 983
quippe etenim, 126
quippe ubi, 1158
quod genus adv., 473
quod si, 134
quod superest, 64
radius, 700
radii, 1353
ratio, 9
repens (repens, 400
res gestae, 1444
res redibat, 1141
reflexens, 267
revictae, 409
revocatur, 255
revolution of the sky, 510
ritual of the Romans, 1199
roses in spring, 740
ruere trans., 1325

saeculum, 339
scapi, 1353
sectare, 40
scibat for sciebat, 934
scilect, formation of, 875
sciret, 1049
Scylla, 892
separation of est and particip., 90
sequor = pergo, 528
severa signa, 1190
shape of the earth, 536

si forte = fortasse, 720
si iam = el āpa, 195
sibila, 1382
sic 'casually', 1077
sic 'straight off', 441
signifer orbis, 691
silice sternere, 313
silvestris 'savage', 970
simulacra, 275
size of the sun, 564
solemnus, 1153
solstices, 617
solstitium (hiemps, 617
sound suited to sense, 508
spatium, 370
species = eidos, 94
species = δψις, 569
spontaneous generation, 798
stability of the earth, 536
subj. denoting generation, 63, 681
subj. of reported reason, 1180
subj., pres., 2nd pers., 100
subtextunt, 466
succedere, 286, 1123
succidere, 1332
succurrere, 765
summa summarum, 194, 361
Summanus, 521
suo pronounced swo, 420
superat perf., not pres., 396
survival of the fittest, 876
suspensus, 1069
suus not referring to subject, 404
synizesis, 172

tamen misplaced, 1088
tandem 'after all', 137
tanto quique, 343
Tartara, 1126
tempestas 'season', 744
templa 'quarters', 103
tempeore codem = tamen, 1045
tenuis, 148
teres, 803
termínii, 1199
Theban epic, 326
tmesis, 287
tranquillum, noun, 12
transferred epithet, 24
'trunk', derivation of, 1303
tuère and tuère, 318
turbare neuter, 402

usus est, constr. of, 844, 1053
utor governing acc., 1033

vacare, meanings of, 1349
vapor 'heat', 236
varius, 801
vastus 'waste', 202
ve used for que, 71
vegere active, 532
velivolus, 1442
vertère = verti, 831

vertier ad lapidem, 1199
vesci, 72, 857
veterinus, 865
videri passive, 139
viduata, 840
vigiles, 1408
virus 'salt', 269
viscus 'flesh', 903
Volturnus, 745

water wheels, 516

Zephyrus, 739
zodiac, 691
Andersursch