TO THE MOST HIGH AND MIGHTIE
PRINCE IAMES, BY THE
Grace of God, King of Great Britaine, France
and Ireland, Defender of the
Faith, &c.

My desire to answer (most dread Soveraigne) the care and studie of my parents, to breed mee, as that I might bee made fit for some serviceable imployement in the Common-wealth, and the remembrance of that matter, whereunto mine earthly part must returne, being nothing else but food for worms, hath these 7 yeeres entretained some part of my life, with an earnest or rather burning desire, not only to learn and find out the readieest and most certaine way, how to raise vp, nourish, & feed Silk-worms, most admirable & beautifull creastes of this world: but also the exactest, & best means to prepare andufleine them, with no lesse affection to make good & profitable use of both. Wherunto hauing in some small measure attained, am willing for the publike benefit of so many of my country-men, as shall as thankfully embrace it, as mouingly & freely offer it, to frame my labors as motines & means for the to draw from their proper lads the inestimable treasure of Silke, where til now:
now inclosed & locked vp:) ever since the fift Chas.
And to the end, that these mine endeavours might
purchase the better credit & allowance with your Ma-
settles, have Englished a most worthy & teles\?
treatise of this subject, written in French by D'oiente de Serves
L. of Realdel, with an annexed discourse of my owne
noted proverbs in England & the sufficiency ther-
of, for the yelding of abundant store of pure Silke.
Wishing that after this my publishing of this thing
it may yet further & encrease in such ample measure
and proportion here, as it did there, whoso mine Author
had once brought his to view. Which undoubtedly
will be done, if your Highnes will be graciously pleased
to give life & strengh to this my fonder & weake first-
borne Impe, that thereby it may grow & spread like
the flourishing Cedar-tree of Libanus, to the perpe-
tual, & vnitetial good of all that shall imitate mine
example: & the granting thereof likewise by your Ma-
settles, will not only more earnestly fix the therin, but
also encourage & egg me on to perfect this work by
longer & more continued practice & experience, (if
perhaps my through want of further knowledge) of
the natures of these excellent creatures, have left any
part thereof defective or vapolished. All I aime at is to
do your Highnes, & my Countrey service, wherein I
will perpetually strive with unrefrangible perseverance
to make vitermost, & will ever pray to God for your
Majesties long and most happy raigne, over all your
Kingdomes and Dominions.

Your Majesties most loyall and dutifull subject,
borne and bound to do you service: 

NICH. GEPP.


TO MASTER NICHOLAS GEFFE.

A

E thou dear friend with this industrious hand
Reachest this rich inestimable stone,
So once Columbus offer'd to this land
That from which Spain her power doth come.

And had not she promis'd by his designs,
Tranquil to find what hidden was before,
She'd had her Argos from the Indian mines
Pour'd their full panaches on Siberryan shore.

From small beginnings how brave noble things
Have gathered vigor and themselves have roard
To be the strength and maintenance of Kings
That at the first but frivolous appear'd:

So may thy Silk worms happily increase
From sea to sea to propagate their feed
That plans still, nourish'd by our glorious peace
Whose issue alone, the labouring Worms doth feed.

And may thy trade perpetually advance
Rich when by thee, thy country shall be made

A 3

Naples,
Naples, Granado, Portugale, and France,
All to sit idle, wondring at our trade.

The true accomplishing with the Brittish style
And the true ase unto our people taught
Shall treble ten times recompense the toile
(From foreign parts) of him it kither brough't.

In sight of them would rob thees of sky due,
Yet not deprive us of sky noble skill,
Still let faire vertue to her selfe be true;
Although the times ingratesfull be and ill.

Michael Drayton.
TO MISTER NICHOLAS
Gale, my trusty and dear friend.

Never was yet the subject in this land
Hast brought to light, like hope as thou hast done,
Nor set his braine to work, or mould his hand
More purposely, in what thou hast begun.

Whiles greater heads were pining upon toyes
Thine hast been fraught this land to advance
With studious care, and intermitting joyes
And times expence, (subsequent to perseverance)

Hath made us free men of thy rich found trade,
And freely hath imparted unto all
The art, skill, means, and way hath been laid
For to enrich the great ones and the small.

Spain shall hence forward keep her fitches at home,
And Italy despise her where she may
The merchants shall not need so farre to come,
Since thou hast shewed a short and cheaper way.

By sily worms, which never before
The use to keep with us hath been unknowne.
To drawe that great abundant fleete of flaxe
From them, (by thy diligence and patience)

The silken fleete to England thou hast brought
There to endure till Doomes day, in order close,
And when thy bones shall the worms have ease to naught,
Yet shall the worms thy fame still fresh renewe,
And ere thy name, thy house, thy flocke, thy line,
Be highly honored by this great devise.

Geo: Care.
TO HIS OWN, WORTHY MASTER SEYMOUR.

Let me (of those somny of our Clime,
Who stand to thee (sweet friend) in honor bound,
For thy deare names confound upon the time,
Who hast for us, fame, pleasure, profit, found;
Render that thanks, that cannot make thy praise,
Wishing all congiong honor to thy daies.

Henceforth the greedy prison shall notate
Poor wretches, woful mappes of misery,
Since in thy worke all may some gaine get,
By use of much, or little industri,
Wherein the finenesse their power may straine,
The greater, exercys their bodys paine.

Our populous land is free from foraigne braces,
These is no more but little businesse grie,
Yet now the discontent his head may take,
And leaue a quiet vexatious life to live,
A blessed mede cervice employment is,
Curies suche minds that else would do amisse.

Amongst those lands which singe the memory
Of their deare Children, who with pius care
Haued them ennobled, with th'unity
Of Artes, that late into them hidden were;
Faire Englands breast: thy birth in happy home,
Whose to her garland adorns a flower.

Robert Goodwin.
THE PERFECT USE OF SILK WORMES AND THEIR BENEFIT.

The silk-wormes had been known by the ancient Authors and writers of Agriculture and husbandry; we need not dwell, but the praise of so rich and worthy a creature had been sung by them, as they have done thereof; but by such default, it hath remained without mention, as Virgil doth observe, of the rich secret that the Romans of Antiquity set forth, without mentioning the quality of this and its beneficent laws. For whereas silk is by nature a very precious thing, much desired by the world, and in demand for all sorts of use, the Romans, being the first people that made it, and the first that knew its use, it is meet that from them we have a description of it, and the manner of its growing, the more as they were the first people that knew it. The first notice of silk is in Rome.
more then seaven yeeres after, (for hee lived in the time of Ptolemaus) he then addeth, that in the Ile of Caen, there grew, Cypress trees, Turpentine trees, Ashes, and Oakes, of the leaves of which trees, fallen to the ground in maturity, through humiditie of the same, breed silke-wormes bringing forth silke. That in Assyria the Silke-worme called by the Greekes, and Latines, Lamiody, makes his nest upon the girth, which he falls to the stones, where it hardneth very much; remaining there confirmed all the yeere, that makes webbe after the fashion of Spiders. Aristotle also saith, that in the Ile of Caen, Pamphylia daughter of Lacedem, was the first inventer of spinning and weasing silke, by the which inuicte and fowled-yardes, compared to the pricke of those times, appeareth how farre the ancients were from the true knowledge of the Silke-worme, having not hadasse from whence they came, nor how they are nourished, so by these silence they winne, in holding their place of the egges, and the leaves of the Mulberryes for their food.

Pamphylia was first in the time of the Empyrean Aurelius (three hundred yeeres after Ptolemaus and many) did wastold for the weight of gold, for which she was, but especially for modesty, he would never weare robe all of silke, but mingled with other matteres. Although Heliogabalus his predecessor was most sparing, as saith Lampidius. Like modestie is noted of King Henry the second, which would never weare silke stockings, although that in his time the use of them was then receu'd in France. Many others in divers times, have spoken of the silke as sa-
And of the work of the Rhodesmen, (prophesying) of the future
in the title of the Great Emperor, as is said, the inhabitants,
the Greeks, governed by the great Chief of the Empire, who
the same year brought the gold from the Amur, in longitude
from the land of Tatiky. (The name of which Emperor
known throughout all Europe. So Perseus, has
written this work of this place, where the
inhabitants of the land of Tatiky)

This, in the title of the Great Emperor, as is said, the inhabitants,
the Greeks, governed by the great Chief of the Empire, who
the same year brought the gold from the Amur, in longitude
from the land of Tatiky. (The name of which Emperor
known throughout all Europe. So Perseus, has
written this work of this place, where the
inhabitants of the land of Tatiky)
In what times, and in what Province of this Kingdom.

I will not here reckon the causes and times of their more forward bringing in into this Realm, but in the reign of Charles the 8. in the voyage that this King made to the Kingdom of Naples, the yeere a thousand, four hundred, four score and fourteen, some Gentlemen of his traine, having noted the riches of the figne, at their returne, home did affect to provide their houses of such commoditie. Afterwaries the wares of Italy ending, they sent to Naples, to fetch plats of Mulberries, which they placed in Provence, by reason of the little distance of climates of each coutry, making the enterprise easie. Some say it was in the borders of such a province; and that of Dauphine, where the Mulberries first grew, marking alfo Aix, necer to Montelimar, which was then planted by the means of his Lord, which accompanied the King in his voyage: As the old great white Mulberries yet at this day to be seen, gave some assurance, but be it there, or elsewhere, it is certaine that in divers places of Provence, Languedoc, Dauphine, the principall
vogue and above all the Coutrye of Venetia and
the Archbishoprice of Aquavne, (for the great com-
missed at they haue with the Italianes) the Mulber-
dies and their serveice are at this present verie well
knowe in the handling of the silk appea-
renct in great beautie, where continually increaseth
an earnest desire to plant Mulberries, for the experi-
mente commoditie which comes of them. In
Fynce there the Mulberry is held for then moste affured
penic fallinge in the hurne. At Tours this busines
is already receiued with great profit and applause,
and certaine yeeres since hath begun to manifest it
selfe at Caen in low Normandy, yet unknowne to the
rest of this kingdome, through the carelesse rech-
lesse of the inhabitaunts, and to the great shame
almost of all these provinces, seeing that in them
the Mulberry and Silk-worme may live and profit.
For the affection I heare to the publike, I haue in
the beginning of the yeere a thousand five hundred
eightie nine caufed to bee printed a particular Tre-
ante of this foode and nurture, intituled, The gathe-
ring of the Silke, and addressed it to those of the com-
mon Counsell of the citie of Paris, to the end that
thereby their people might be sufficiencty stirred vp,
to draw from the entrails and bowels of their
landes, the rich treasure of silk therein hidden. By
this meanes, bringing to light the millions of gold
inclofed and locked vp; and by such riches to fi-
nish the honor of their city, with this laft of her or-
naments, abounding above the rest in all sortes of ri-
ches. Amongst the pleasant places of the void fields
of Paris, I haue marked Madril, and Vicentes wood,
royall
royall mansions, and very capable to receive and nourish three hundred thousand Mulberries, for the largenes and qualitie of their grounds, and facility of the aire, the leaves of such trees in their times, may bee happily and profitable employed: The appearance of which is great, to draw from thence abundance of filke, for the publike commodity, and particular profit of the citie of Paris, when by dressing of the filke, it shall nourish infinite numbers of people of her proper inhabitantes, and poore and miserable folkes, which flocke thither from all the Provinces of the Realme.

Where the Vine growth, there also will come the filke, an apparent demonstration, sufficiently verified by reiterated experiences, in divers countries discordant of climates. Nay going farther, where the Mulberry only live, without speaking of the Vine, the Silk wormes will not chuse but profit, as is knowne not long since, within the citie of Leiden in Holland, in the yeers a thousand five hundred ninety three, nine tie foure and ninety five, where the Noble Duchesse of Afoat causd to be nourished Silk-wormes with good success, and of the filke which came of them, was made apparell, which her gentlewomen wore, with great wonder of those which saw it, because of the coldnes of the countrie. Histories record, that in the time of the auncient Gauls, France brought forth no wine: behold now at this day abundantly provided of so exquisite a drinke, by dexterity of those which have opportunely imploied their profitable curiosity. Many beasts and strange plants, content to live amongst vs with requisite care,
(which sometimes hold impossible) the which every one notes almost everywhere, without coming to examples. I will not here reckon up the Orange trees, Lympt trees, Poucicron trees, and other precious trees, which are nourished in all aires and countries, though neuer so cold, seeing that in such curious ennes out great expence.

The care of gathering the silke is not alike, the end of that is profit, not only particular delection. For there is no heede at all to be taken for the Mulberries which as in the open field, it is onely for the little cattle that feares the cold, which would bee preferred from it. And what thing is easier to do then to make cold freezing the countrie bee, seeing the Silk-wormes are lodged in houses, and not abroad, and also in a season not altogether cold but in the spring time, and part of the summer? All the Hindrance that can be here alleged, is, that the gathering the silke will bee more late then in a south country: what importeth that, so one hath abundance of good and fine silke, if one reapes not in the north parts in May and June, as they doe in Languedoc and Provence, if they doe it in July and August: In like manner, we eat not store of good wine in France, though our vintage be not so loone as in hotter countries. The Mulberries have forborne the knowledge of nourishing the Wormes, as the olive, in attending the which, many upon hearthfire, were constrained in vain to nourish Silkwormes; & have discredited such husbandry, effecting this cattle can profit but in places where they have been of long time naturalized, whereby, with impatience
impatience hauing extirped and pul'd vp all Mulberry tress as unprofitable trees; which before, and at the first report of their worth, they had planted with great affection. But those which constantly have attended the seasons, are proved better husbandry and abundantly provided of Mulberry leaves, then when the knowledge to guide and conduct this creature is knowne; an example which is marked at Nîmes; & in many other places of Languedoc, leaving for instruction of those which at this day wil delight in so profitable an husbandry: the which, to their contentment they shall find in these discourses, assembled the Sciecces, both to dress the trees, and nourish the creatures: whereby they shall be delivered from the trouble of a languishing attempt, and the hazard of ill feeding the Wormes.

The King right well knowing these things, by the discourse which he commanded me to make for him on this subject, the yeere a thousand five hundred ninety eight, resolved to have white Mulberry trees brought vp in all the gardens of his houses. And for this effect, in the yeere following that his Maiesty went the voyage of Savoy, set into Franche, Languedoc, and Provence, Monsieur de Brantome, Marquis of Calvados, general Surveyor of the gardens of France, a Lord accomplishe with all rare vintages; and by this fame way the King honored mee to write to me, to employ me for recovery of the forrast plants, to which I gave such diligence, that at the beginning of the yeere 1602, this was brought to Paris to the number betweene fifteen and twenty thousand. The which were placed in divers places
in the gardens of Tuileries, where they are happily sprung vp. And his Maiestie not willing that such treasures should remaine any longer thrust together in certaine corners of his reigne, but that his people should vniuerally relish them, adding to the riches of the peace, which by his means and the celestiall favour, all France most quietly enjoyeth, hath ordained by the Commissioners already deputed by his Maiestie for the generall commerce, should advise for the most easie and dispatches that might bee possible, to furnish his kingdom with Mulberries, to the end to gather filke from them, and in going on to establish the handi worke. Upon which, and following his Maiesties will, after good and mature deliberation, contracts were paffed with the merchants upon this subject, at Paris the fourteenth of October and the third of December a thousand five hundred and two, confirmed authorised, and ratified by Letters Patent of his Maiestie, containyng the furnishing of the said Mulberries in the foure generalities of Paris, Orleans, Toulouse, and Lian. Also of a certaine quantity of leade or graine of the said trees, to be dispersed by the elections of the said Generalities. And for so much more to accelerate and advance the said enterprise, and to make knowne and divulge the facilitie of this worke, his Maiestie caused expressly to be built a great house at the end of his garden of Tuileries at Paris, furnished with all necessaries, as well for feeding the Wormes, as for the first works of the filke: enjoying furthermore, that all the leaves that ought to be found, as well of white, as black Mulberries, already planted in divers places.
The perfec... to the... the... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to... to...
the enterprise to bee profitable, which before con-
demned the counsell of it, builded upon the coldnes
of the country of Germanye.

But seeing that the fylke comes directly from the
Warne, which vomits forth all the fylke, and the
Warne proceeds from the graine, the which is kept
ten moneths of the yere, as a dead thing, taking life
againe in his season. The worne is nourished of
the leafe of the Mulberry, the onely victual of this
creature, which liuing no longer then seue, seven, or
eight weekes, more or lesse, according to the coun-
trey and continuance of the yere (the heate short-
ning his life, and on the contrary the cold lengthen-
ing it) within this little while, by the fylke which he
leaves vs, he paieth largely the expence of his feeding.
As the nations are fundrie which kepe him, so is he
named diversely: The Greeks and Latins haue called
him Bombyx: and at this day in Italy, Camerarii, and
Fratlii; and in Spain, Glauor: in France, Vers a-fez.:
in Languado, Provence and thereabouts, Magnieux.

What earth and what maturyng the Mulberry
requireth, what seede of warmes is to be choisen, what
lodging, and what handling the beast requireth,
which comes of those, what is his bearing and vs,
shall bee shewed hereafter. By which discourses,
shall ecelebrly appear the riches of this foode: and
that the land imploymed to such husbandrie, brings
more money in lesse time, than by other fruits which
may bee planted on it, at least, whereof one may
make any account.

Commonly, a thousand pounds of the leaues of
Mulberries being ten hundred weight, is sufficient
C 2
The perfect use of silkes, wormes, to satifie and feede an ounce of the feorde of silke wormes; and the ouerfe of graine, makes five or sixe pounds of silke, every pound being worth two or three crownes, and more: wherefore ten or twelve crownes come of ten hundred waste of leaes: the which quantitie twentie, or five and twentie trees of a meane sylke will alwaies bring forth; yet a much lesse number will suffice them, if they be old trees and great; as there are in many places, as neces Anagoom, being so ample and abundant in arms and branches, that one tree will furnish with sufficient leaes to feede an ounce of feede. But because such trees so qualified are very rare, there is no certain account to be made. For the cost of the affaire; the fourth of the total is taken: so there remains three parts of liquid renew, which makes seven crownes and a halfe, or nine crownes, that twentie, or five and twentie Mulberries will bring every yeere. I confesse that alwaies an ounce of feede doth not make five or sixe pound of silke; for sometimes it makes almost nothing: when by the infelicite and vnhealthe of the silke the leafe being ill qualified, by vnfruitome nourishment, causeth duers maladies in the wormes, when the pest is rife amongst this cattell; or when their flages are not made very faire where the wormes are lodged, falling upon them are surely killed, or when by other accidents they die. But likewise it is a thing confesse of all those which exercise themselves to this food, that such a yeere happens, when an ounce of feede will arise to make ten pound of silke and more; and that is then when the race of the creature, his lodging,
brought his food, the time, the land of the government, doe accord and agree for the good of this household. And who knowes not that cornes, wine, fruits of trees, and cattell, of times faile by tempests, drouthes, humidities, & other excises of the yeare? And who would defit from tilling and sowing the ground, or who would flue vp his Vines and trees, or cassisier the food of this little beast, for their fuyling in some yeer? There is none to be fould so brainlesse and ill advised. It shall appeare hereafter that by the management of this creature there can be nothing raised without curiosity, diligence, and expense. For the which things many despise this household, as fantastique, painefull, and chargeable. But they deceive themselves, because they consider not, that for moderate hire, one shall finde people that will sufficiently understand the art, which will undergo all that which depends upon it.

And for in particular the expenses, I may say, that an hundred of fixskoic gatherers, whereof three quarters are women, or boys, are sufficient to gather all the leaes necessary to feed ten ounces of the feed of the Wormes, and to bring them into the place of the cattell; the Mulberries being not farre distant from the house as is requir'd. To the payment of which worke for the quality of the persons, artifiith not much mony. For it is in victuals that the most is consumed. But if the feeding of the leaf-gatherers trouble you, for money only you may be supplied with their service by the day, or by the gathe-
The perfect yeare of Sulke Wormes,

gathering, according to the order of the Tables, where in such traffique is vised.

Touching the governor of this nation, his wages are sometyme two or three, or foure crowne a moneth, besides his diet, and all other charge is to govern the Wormes, and to gather them from their Traffique, till their flock be made, that is, to say, to render it sound and full. One only man will govern so many Wormes as you will, provided he be able: the which will be done with the folk of little price, seeing all sorts of persons, men and women are capable of it.

As for the feed of the Wormes, you are not to rec.

ek the pot that which they have cost you, because they will restore you enough every yeere in rente and stock, for the conseruation of the graine. But here will lie such expense in the ransacke of that made in the buying of bords and tables, for the scaffolds, as also for the making of the lodging; these things are to be ordained for the ground-works of this revenue being durable, & without confining, at the least but very little. And although it is requir'd to have every yeere some small quantity of new feed, to continue a good race, as shall be said, yet is there for that no more expense, seeing that of the sale of the feed, which you shall receive, you may buy of another for your purpose.

Upon which discourse, making your calculous, you shall find that much better cheaper you shall keep the Wormes consisting of ten owenres of graine, than five and twenty or thirty sheepes: for the which, yes for less number, you must keep a sheep and all
the pavement, which otherwise hindered these fine cities.
So by that you evidently see how much the expense of one cartell differ from the other: And by this reckoning, which of the two makes more revenue, though that by winnower judgement the selling of thepe is very profitable. And doubt not, but that Caesar in his answeres touching feeding for to become rich, had meant it of the Silke-worme, if he had had the knowledge of it. The feeding of Silke-wormes is likewise very commendable, because they hinder not any workes of the fields; coming in the moneths of April and May, when they have no other occupation to call them from it. Giving forth backwards, a mean for the master easily to find sufficient people to serve this turne: the which in this time having no other business, are very easy to be had, to get their living, and some piece of money, or come forth out of the back season of the grege; whereby the nourishing of this cartell is made more easy, by them only concerned, which know what how much the ells is worth. But for the rest, the gregeste of the cartell, that they derive from it. (without toil of their other husbandrie, but at casuall compasse) affects them continually, to plant new Mulberry trees, with augmentation of the numbers, in like for to augment their revenue.

This Mulberry trees brings the chiefest foundation of this revenue, which shall be the first, whereas you shall need, for to plant so great a quantitie, and soon; that at short time they may give you contentment. The which you cannot hope of a small number while they are young, for the little leaves, age which
which they render, till they are come to a meanie growth. But to attend while the Mulberries have reach their perfect greatness, and not till then to disperse them, to serve in this purpose, would bee to passe your time without calling the sweetnes of this revenue. Wherefore it is necessary to have abundance of these trees, to the end that of many little ones, you may draw as many leaves, as from a few great ones. So without much tarrying after their planting, you shall receive pleasure and profit within a few yeeres. Such a great quantitiie of Mulberries may be limited to two or three thousand trees; a little number, I thinke the matter of the worke ought not to enterprize this business withall; because here is a question of the profit, which cannot grow but of a sufficient number of trees. For the particular nature of the worke, it is necessary here to employ it in a great volume, otherwise the play will not be worthy the candle; that being for women, which for pleasure nourish some few of this creature. Yet the matter of the worke shall not stay here; in so faire a way, but shall augment alwaies his Mulberry yard; therto adding every yeere certaine hundreds of Mulberry trees, for that at the length, plentifully abounding in leaves, he may have wherewith to nourish great quantitiie of Wormes; and the rest also for the succour of his trees, whereof part shall rest, as shall be demonstrated in these discourses following.

Of the order requisite to plant, and bring vp the Mulberries, is not here a question to speak of, else where the science being shewed: but very well to represent the observations necessary for their situation.
and it would be better for us to leave them alone. On the other hand, if we had more time and resources, we could think about planting them with care. The key is to balance the needs of the vines with the needs of the land. If we overwater the vines, they may not do as well. If we underwater them, they may die. It's all about finding the right balance.

Moreover, the soil in this area is very important. It needs to be well-drained, but also rich in nutrients. This will help the vines grow stronger and produce better grapes. We also need to consider the weather and climate. This area has a Mediterranean climate, which is perfect for growing grapes. The warm summers and mild winters are ideal for the vines.

In conclusion, the key to growing good grapes in this area is to understand the needs of the vines and the land. We need to be patient and give them the care they need to thrive. With this approach, we can produce high-quality grapes for our wine.

However, we also need to think about the environment and the impact of our actions. We need to be mindful of the resources we use and try to minimize our impact on the environment.

In summary, the key to growing good grapes in this area is to balance the needs of the vines with the needs of the land and the environment. With this approach, we can produce high-quality grapes for our wine and enjoy them for years to come.
The perfect use of Sulkenwormes,
to his nature, for either he will refuse to eate it, or eate-
ing of it will never doe well. And this his delicate-
nesse, turns to the profit of his master, which im-
ploys his lean grounds in Mulberries, and by con-
sequent occupies not his fertill plow-lands, which
remaine to him frantke, and not charged with
these trees: of which the importunitie is very great
oppressing by the rootes and branches, almost all
forts of leade which can be sowen neere them. But
to thinke also to plant Mulberries in a bare and in-
fertill ground, that shold be a falling into extremitie;
groffely deceiving ones selfe, for the little growth
they will make althoughe they take there; their tar-
ditie giving you cause enoufh to repent you of this
counfell. These shall be then the place where you
shall edifie your Mulberries, which you shall judg
proper for the vine, that is to win, in a soyle of a
meane goodnesse, rather drie then moyst, light
then heasie, sandy then clayie. Such a ground will
bear leaves to your desir, and in a meane quanti-
tie, whereby you shall haue sufficient, by the way
of numbers of trees, amplying them as hath been
laid.

Pró four to foure fashoms, or fró fowe to foue, in al
pathes to the line, you shall plant the Mulberries if
you will make forrests of them: & desiring to dispose
the by ranks at the borders of your plough lands, or
about the sides of other possessions, they may be pla-
ted somewhat neerer together without restraining
the too much: the which cannot be done without
great losse to the trees: one may very well amplifie
the distance, as much as one will, for the Mulberries
cannot
cannot be set too far a sunder, seeing the especiall profit that the aire, the Sun, & the multitude of the grounds, ailes to the growing great of the trees, and goodnest of the leaues. But for that, the onely sides and borders of arable lands, Vineyards & other parts of a demeane moderately large, do not suffice to receive a great number of Mulberries requisit for abundance of food, and that elsewhere, the leaues of the trees which are within the thickets, is not so good as those about, because they neither have sun nor windes at libertie. A means between these two extremes hath been found, conveniently to plant the Mulberries, for the profit of their leaues, and without hindering the tillage of good lands; that is, to plant the Mulberries amongst the lands, in double ranks equally distant two fathomes and a halfe, being of like measure spaced one tree from another, the two ranks making one alley, and to dispose the alleys in length and crosse the field, intersecting one another, leaung great squares plots emptie, every one containing an acre, or more if one wil, thereto sow corne, which will bee reaped without being trowden downe by the gatherers of the leaues: But these will be the allies, which onely will suffer the treading downe, where for their small occupation of ground, the losse of the corne will not be great. It will likewise be necessarie to plant the trees in such fort, that they be not one right against the other, to the end not to enterpreste, rather that he of one ranke be against the empty place of the other, by that they will have aire enough to grow flourishingly by the aile of the Sun, which will re-

D 2 maine
The perfect rife of Silke-wormes.

maine tree...them on the sides of the great squares.

In the which, not onely may bee commodiously sowne come, but also planted vines where they will profit; being not there too much cloyed with the shadow of the trees, yea spread with pastures, having but given to the trees 4 or 5 yeres, for to roote. For by the manner of the parted land, of the allies, well tilled, and sometimes dunged the Mulberries will profit enough. For the hard turfe of the pasture cannot much hurt them, seeing it joyneth but on one side. So shall the Mulberries-yard bee directed, with much profit for the good of the leaues, and without any thing hindring the demeneans; which so furnished with Mulberries will remaine most pleasant to behold, so will they spread and amplify, so much the better, the more often the master shall visit his land, as to that he shall bee fluttered up by the cattie walks in these faire allies, in which, if it seemeth him good, he shall sowe some graines, as oats or field pease, which will alwaies pay for tillage of the ground.

There are two races of Mulberries discerned by these words, blacke and white, discordant in wood, leaf, and fruit: having nevertheless that in common to spring late, the dangers of the coldes being past, and of their leaues to nourish the Silk-worme. One sees but one sort of the blacke Mulberries the woode whereof is solid and strong, the leafe large and rude in the handling, the fruit blacke, great, and good to cate. But of the white, there is manifestly knowne three species, or sorts, distinguished by the onely colour of the fruit, which is white, blacke, and red,
Redd so separately brought forth by divers trees, bearing all notwithstanding the name of white. This fruit is little disagreeable of taste, for his false sweetnes, whereby it is not edible by others then by women which have lost their relish, children, and poor people in time of famine. For the rest they resemble all three one another, discording nothing by themselves, neither in leaues which they bring forth of a meane greatness and a smooth feeling; nor in wood, being yellow within, as that of the blacke Mulberry, and almost as firme, by reason whereof all these Mulberries are proper and fit for Joyner's worke. The leafe comming of the blacke Mulberries, makes the silke grosse, strong, and beauteous: on the contrarie that of the white, fine, weak, and light: so different through diversitie of the nature of the leaues, wherwith the Wormes are nourished, which they yeeld of their worke. For which many desiring to compound these things in hope of profit, feed the Wormes with two sorts of meates, by distinction of times; that is to say at the beginning, with white leaues, to have the silke fine; and in the ende with blacke to fortifie it, and make it weigh. In which alwaies they meete not: sometimes the changing of the meate, as of the delicate into grosse, being not agreeable to the Wormes which are importuned and cloyed with it. Nor shall it be to purpose for the grosse foundering which one would give to the silke, holding a contrarie way, to begin by the blacke leafe and ende by the white. So such mingling of meates is not receiued in the great feedings of the Silke-wormes, but only where the...
The perfect use of Silke-wormes,

the leaf of the white Mulberry is rare, invented for necessity. For the most affluence, it shall be all of one victual, wherewith we will nourish our Wormes, and that of the most profitable, which yeelds to silke; the which how much the more fine it is, so much the more prized, and in the ensuing so much more money it giueth, the end & period of this business. And yet though that the white leaf makes the silke feeble and light, you must not for that set it behind the blacke: seeing the same discords not so much in his qualities from that comming of the blacke leaf, but that there remains force enough for the most exquisite workes, and weight sufficient to bring in reasonable summes. This is in comparison of that silke there, that this is held light and weaker: such being the difference between grosser and subtill things. Neverthelesse one must not be so scrupulous, as vitrely to reject the blacke Mulberries for the silke, but only for the mingling of the food, it being not permitted in the nourishing of them, but by constraint, as I have saide. Touching that which remains, there are countries where they are very profitable for this business: as in divers places of Languedoc, and hitherwards in Anduze, and Aves, and in other places towards the Souens of Languedoc, where great profit is made of the silke which comes of the blacke Mulberries. And although that such sorts of silke for the groffeness, be but of little price, in respect of the other, yet leaueth it not for that, but bring in a good revenue, considering the quantitie. Jointly that for the sale, it is found necessary, though it be coarse, in many works in which it is impoyed. If
If your land be already planted with black Mulberries, keep you there without affecting your selfe, to accompany them with white, for the reason alleged: but being a question to begin the husbandrie, having not any Mulberries, of one sort, nor other, preferring the better before the good; you shall always choose the white for your Mulberry-yard. In which it seems that nature her selfe incites vs by the fore growing, that she hath given to the white Mulberry beyond the blacke: if being an allured thing, that the white Mulberries do more easily take, and grow then the black, advancing more in two yeeres, then the other in fixe. Besides which commodity, the branches which by that speedie shoot they bring forth, is cut at times, as wood, augmenting the revenue of such trees.

Amongst the white Mulberries yet there is choice: By the searching out of some, it hath been found that the leaves coming of the white Mulberry, bearing the blacke berries are better then any other. Of which curiositye making vs, we will furnish our Mulberry-yard, if it be possible, only with the Mulberries of such sort, to the intent that in our nurture, nothing be wanting. Nevertheless as the humors of men are divers, some hold that the leaves of the trees bearing the white Mulberries, are the best: proving their opinion by the pleasant and sweet, which never delite in the fruites of the Mulberry trees bearing red and blacke berries, but through want of others, by that deeming them most delicate. About all be sure to banish from your Mulberry-yard the leaves too much indented, for besides
The perfect use of Silke-wormes,

sides that it is an apparent signe of small substance, it abounds not so much in food, as that which hath leafe nickes. Wherefore the remedy is to inoculate such trees in the budde or scutchion having need of such freedom, whence the profit which comes of it is great for this food, seeing that by this means, the little of the naughty and wretched leaves, may be converted into abundance of substantial and good, with as much advantage, to change in orchards, by like art the savage and wilde fruits, into manured and good, a notable article and point for this husbandrie. This inhauling may be practisfed by your with in Mulberries of all ages, young and old, in those here, on their new floors of the precedent yeere, the trees haung bin then poled (or without so much delaying, to have disheaded them in the moneth of March, & June following to graft them) and in those there upon the smallest trees of the nutterie. To graft these trees in their tender youth is much to be prized, for the advantage to be had in making the Mulberry ground entirely affranchised. For providing that certain hundreds of trees may be grafted, it sufficeth once for all, without constraint to returne backwards, so that the nurserie be alwaies kept full; the which is done by planting the branches coming fro the grafts, of the which so many trees wil grow vp, as there are branches couched in the ground, and of those afterwards others coming forth, are of the same planted infinitely, from which, the trees coming of them for ever are furnish with excellent leaves, sweet and great: and by consequent exempt from all wildnese, exquisite and
and abundant in nourishment. See what places and trees you are to chuse for your Mulberry yarde, to the end to have abundance of good filke.

For the order which one is to hold in gathering the mulberry leaves, for the victuall of these creatures, conffiteth the second article of this work, for to make the trees of a perpetuall service. It is to be noted, that to plucke off the leaves brings great damage to all trees, oftentimes even causing them to dye: but seeing that the Mulberry is destined to that, it naturally supporteth such tempest better than any other plant: yet notwithstanding you must go to it very retentively, for to disarray the Mulberry inconsiderately is the way to scorch them, forever, to cause them miserably to die in languishment. Every one conffeth that to gather the leaves with both hands, leave after leave, without touching the shoot, is the most assured way for conserveration of the trees; but yet the most expensive, because of the great number of necessarie persons for such work.

For to spare cost, the vulgar proceeds in another sort, which is in stripping of the leaves by handfuls, which cannot be done but that often the branches are barked and flued, whereby at the length the trees perish. And also this gathering corrupts and foystles the leaves, to the detriment of the Wormes, when in taking them after the fallition, as they vfe to milke kinde, one crushes them, as though one would make the joyce come forth: and most oftentimes with vaculeane handes, caufing them to have an ill smell and favour.

These losesse may be prevented, if after the vfe of
In cutting them off with sheares.

The perfect use of Stige-wormes.

certaine places in Spaine, the leaues be gathered, by shearing of them from the trees with great taylers sheeters; the which cutting many stalkes at once, and that falling upon sheeter spred under the tree, the expence being moderate, as by being directly caried to the little beafts, without any forting, as necessarilie it behaueth to do before to imploie them, in separatting that which is spoyle, from the good, and the young springes with it, which for their tenderness are hurtfuel to the Wormes, seeing that in vping the sheeteres one spares the toppes of the trees, taking none but the well qualified leaues. Of this inuention one cannot indifferently be furnisht euer where, but only where the situation of the trees favours the worke, fitly to spread the sheeters, receptacles of the leaues, not likewise in windy nor rayny times, the which is committed to the discretion of the worke-master, for to imploie it finding the commoditie. For want of which clipping one may draw the leaues the most gently that one can, and with the smailest detriment of the trees that may be possible, the gatherers of the leaues shal wash their hands before they touch them, and shall repose them in very cleane faches, to the ende they may be preserved from all foyle.

The trees suffer lefte when one clips them, than when the leaues are otherwise: nevertheless although one goes to it very vigilitly, it is alwayes with some losse, whereby at last they perishe, pulling ever yere the value of their leaues unmeasurably, that their vigor decayes. The which is the principall cause that the keeping of the Wormes is not alwayes of
of like yielding the one as others, seeing other then
good leaves cannot successfully nourish these crea-
tures. For that cannot bee good which comes of a
tree ill governed; in taking of the leaves, but only
that tree which having been well handled du-
ing the precedent yeeres, remaineth vigorous. For
so those decepit themselves, which without taking
neere hede to this, sinke themselves in this busines.
From thence proceeds the most frequent defaults
of this foode, and not of the nature of the worke
as scrupulouflic, may superfilitiouflic and fantas-
ically many of the vulgar ignorant hold, that
they cannot meete well two yeeres together for
some hidden imperfection, that they hold to bee
in this creature, that some gieses without any rea-
son, taking for their lodging no hede to the things
aforefaid. To the end therefore to assure this busi-
nes, for one which ought to have preeminence, you
shall advife touching the Mulberries, in placing
and governning them as I have faid. And going
on farther, to have so great a quantitie of these trees,
if it be possible, that the only halfe may suffice for
your foode, which shall bee discaued while the oth-
er will make ready for the next yeere following.
After the imitation of arable fandes, enterchanging
every yeere, the Mulberry-yard diuided in two
parts shall serue, and reft whereby the trees will bee
maintained in perfect state, abundandy to furnish
with good leaves for many generations, as well for
the trees not to be so much tormented in their bran-
ches as by this reffing, there roots will have to bee
tilled without expence, for that the cost of plowing

E2 will
will arise from the corn which one sows in that part of the eating ground (remayingning from the annoyance of the Mulberries) the which one by one shall sow with corn, leaving the other vnlowen the yer of dislaung your Mulberries so much the more easie to gather the leaues of the trees, without laying the corn, as without such order one should doe in treading it downe, by this means drawing the worthye yeelding both of the trees and ground.

Our and besides this notable commoditie there is joyned, that then when by luckie foode the leaues ordained for the Wormes, want, as some times that happens with great displeasure and sorrow to see them perish through famine, the Wormes are happily succoured with the leaues which one takes of the trees that rest here & there, in many trees and in divers places without damaging them in such quantitie as is requisite for the perfection of the enterprise, and also that under the Mulberries all sort of feedes can hardly thrive, for the hinderance of the roots and branches of these trees, as hath been said; yet so it is that the leffe will bee leffe, the leffe the corne being there is rooted downe; as freed from such tempest, it will remaine which there shall be sowne in the manner aforesaid, the yeelding of which, although it be but little, will defray the tillage, whereby in this place you shall do that which you desire, that is, you shall keepe in good temper the roots of your trees.

Of all graines those which most constantly endure the detriment of the Mulberries, are, oates and field pease, although one be constrained to tread them
them down, for the gathering of the leaves, yet cannot one doe them great hurt, by reason that the blades of thefe grains will be then backwards, when the trees shall be diseased, having not yet much grown, which alfo somewhat helps them, having pressed them to the earth; a thing which cannot be done to wheate, rie, nor barley, by reason whereof one cannot fow them conveniently in the Mulberry-yard but by constraint. But to sow nothing at all in the Mulberry-yard, and yet leffe, not to till the ground, for the good of the Mulberries, would be too expensive, which will bee spared by the way aforesaid. To foyle thefe trees is likewise requisite, it is to be understood of those which by the leannes of the ground remain in languishment, the which by fuch handling are helped to continue their service, the want of doing the which will cause them to faile before their time. Experience shewes that the leaves of the old Mulberries are more profitable & healthfull for the Wormes, than those of the young ones; provided that they be not fallen into extreme decay, but retaining their ancient vigour, having yet some remainders of strength, communicating fuch quality with the Vine, which brings better wine, old, then young; and as the Vine begins to beare good wine after the feaon or eight first yeeres of his planting, so likewife the Mulberries in the fame age open the gate to their affured reueneu, fo that from thence euerafter, one shall not faile to draw from them their hoped-for service. Many nevertheless at this day do not tarry till this terme, vifing without delay all sorts of leaves, even of the youngft Mulberries.
The perfect rose of Silke-wormes.

berries, being yet in the nurserie, before their replanting. But it is with more uncertainty of a good issue than of that growing on trees already grown to perfection, according to the more common vfege.

So soone after you shall have bared the trees, of their leaves, you shall cause them to be pruned, in cutting off all that shall bee found broken and writhed with the tempest of dislayening, to the end they may put forthe to shooe aith, the which without that, they will never doe well, but languishing. The last gatherers of the leaves shall bee then followed foote by foote, with a couple of men that shall do dresse the Mulberries, the which shall cut the dead wood, the disbarked branches writhed and shiniere: likewise the tops of all the others, in what part of the tree foruer they be, about, or on the sides, for to constraine the trees to cloath themselves aith, and of this new shooe to bring forth for the next yeere after abundance of leaves, tender and delicate. And whether it be in gathering the leaves, or in pruning the trees, it behoeth you to be carefull to bare them entirely, without leaving them any leaves: for feare to turne back their liberal new spring an observation, that practice hath taught a little while since, against the custome, which was, not to touch the shooe, thinking by that to glue growth to the trees, but the effect is seene cleane contrary. Vsing such order, they will not tarry to spring out moie vigorously, so that they will leave againe in such fort, that within one moneth after, one will say there hath not been a leafe touched, and this shall bee done equally, that they may new appearrell
and their benefit.

...that never agreeing with the old leaves. But with much more efficacy if the grounds be watered in this time then, for tempering the heat of the season with water to releave the trees, and give them new force, whereby it happens, that of their springing againe of leaves, nearer compared to their after crop, one may make a second nourishment of the Wormes with successe, as some fortunately have attempted; the which neverthelesse is not approv'd, not so much for to be very incertaine, such food happening in the greatest heats of the sommer, contrary to this creature; as for the assured losse of the trees, being not able to suffer double dissauing in one season. For besides that our Wormes are never well disposed, fed with leaves growing in a waterish place, as I have relat'd, a distinction shall be made of the times of watering the Mulberries, to the end not to make them drink, but after they are diseased, not before; whereby, without doubt of naughtiness, the leaves will yield themselves well qualified. Under such consideration you shall employ the benefit of the water during sommer, by that causing so much succour to your trees, after their great trauail, as in the drought all sorts of plants finde comfortable the opportune watering, a particular obligation for the South countries, not for others which never almost water.

The raines happening on the course of this food, strangely hinder the Wormes, as they chance towards the end of their life, then when they are in the greatest force of devouring: for that the water leaes do breed them dangerous diseases. The most common
common remedy for that, is to make provision of leaves for two or three days, perceiving the time to be prudent to rain, for it is as well kept good, provided that one dries it in a neat place, fresh ayred, and for to preserve it from getting of heats, oftentimes a day turning it upside downe. And although that the rainne preserves not, yet what faire weather ever be, one ought never to remaine without leaves: not so much for fear of having need, as for the quality of the victual, in so much that it is better being a little kept, or twelve or fifteen hours before it be given to the creature, coming directly from the trees.

If the rainne presseth drues you backe from gathering so many leaves as you neede, make recourse to this short way, which is, to cut the branches of the Mulberries that you define to bee dishead the next yeere; the which with all their boughes, you shall make to be carried into the house, where hanged as raisons under the bearers, planchers or other coueries in an ayrie place, as in barnes and hay-lofts, being then almost emptie, their leaves will dry well and quickly; yea in the one and the other you shall find much more perfection, then by any other way whatsoever. For neither to winnow them with cloathes, nor to drive them at the fire, are not such efficacie as is this means: by the which, besides that it winnes much time, because there needs nothing but certaine strokes with a hatcher, for to take all the leaves of a tree. Do not doubt that that will discourage the Mulberries, but that on the contrary doth rejoice them, so quickly putting them to shooe forth more strongly, whereby they winne time; for
and their benefit.

The ensuing yeere, such hasty cutting causing their great increase of branches. In the which, although it seemeth that the hot season is contrary for such work, yet so it is that experience manifesteth daily the nature of the Mulberries, yea of many other trees, to endure to be cut in the summer. For the which commodity joyned the sauing in this busines, resolve you not to cause to be gathered the leaves of your Mulberries in any other fashion that you shall deliberate to pole the first, keeping them for theraynie days, as hath been said, or the time remaining faire, for the end of the food. The same reason hath place for the trees which you are resolved to prune, the disbranching their superfluous boughs, when you shall see there is need of leaves, the time being raynie or not, as one does to dishead them. A thing which you shall find to come to good purpose, for the great spoyle of leaves that the Wormes make in that time, being then their greatest devouring, attending that with moderate labour, and much facilitie, abundance of victual is furnish'd for them. The winning of time is adjoin'd to this businesse, because that the morning bestowed to this disheading, (otherwise left by reason of the dewes, during the which it is forbidden to touch the leaves,) for that the branches of the Mulberries cut with their boughs, being the afternoon before carried into the house, are disheaded very early the morning following, which one believeth in the worke, and that is done in carrying till that by the Sun, or winde, the dewes be cleared from off the trees.

All the intire that one can do to the Mulberries.

To dishead.

The Mulberries.

In rice.
in disteuing them, is helpen by the cutting off their branches, a remedie feruing almost for all the maladies of the trees, as is said of the fruit trees; that is to be understood, taking from them all unnecesary, pouling them or cutting off their heads, as one does willowers, whereby in small time they renew againe: for their branches grow great and strong, to ferue as afore. Wherefore it is at the end of a certain time, that one lops the Mulberries, which is then when one sees them to consume by too much travaile. The terme is not restraineed to certaine yeeres, the only facultie of the earth ordaining these things, making them to put out, and bring forth againe more wood in one place than in another. Neuertheless one may lasy that almost euery where, from ten to ten, or from twelve to twelue yeeres, that will be reasonable to practice, for the good of this affaire: and by this means, to loppe the Mulberry-yard euery yeere of the tenth, or twelfth part of his trees. In thinning the Mulberries, one shall leave them long frages, over-growing certaine teetes of the forkeedes of the trees, or otherwise, as it shall best accord with their capacitie: feruing themselves in this place with very sharpe instruments, to the ende not to disbarke nor gather the teees, and to make the cut very right, which shall bee a slope to cast off the annoyance of the raine. The time of this busines is euery as the topping of other teees, that is, the winter to be passedd, the sap beginning to enter (not before for the reasons alleedged elsewhere.) In a faire day, not in a winde, mistie, nor rainy, for the Mulberries shooting in like manner as other teees, yea so vigorouslie
as any other plant have commonly the season of falling.

But because in the Mulberries is considerable the lease, the chiefest of their revenue, it is requisite to be vigilant to lose nothing, if it be possible, the which one shall come into in delaying to cut them until May, or in the beginning of June, then when it behoveth to employ the leaves: By this means, one hath service of the leaves the same yeere of the cutting of the trees, the which one cannot doe without this backwardnesse. And although that for the disbranching of them in such season, the trees bring not forth that same yeere to great branches, as if one topped them in the moneths of February or March, the time being a little shortened of their growing, it imports not, seeing there is as much gotten for the yeere after: in the which such branches though they be but little, yet having won the advantage, grow great meruelously, whereby the trees in a small time are ample spread against; yet that against the percepts of are, constrained by necessity, that one cuteth the trees in rainy weather and without regarding the Moone, as is in them, they are of softie and good disposition.

Touching the age of the moone it is handled diversely according to the diversitie of the grounds than generas such actions. By the heavenly influence the Mulberries posseted in the encrease of the moone, brings forth their young shoots, long without spreading branches, and in the same, short with many little branches crossing the principall. For to comprehend the things (having election of the time...
The perfect use of Silkworms.

...time without constraint... we will dishead them. If our Mulberries, being in a lean ground in the new Moone, and in the last quarter, planted in a fat ground, there will be furnished with new shootes, as long as the feebility of the groundes will permit them; and these, by the force of the groundes, will conveniently regaine that, which the purpose they would not cut in the encreas; by reason that their spinie branches being not kept back by the little shoots, will lengthen too much; whereby bending downe they will deforme the trees; those remaining emptie in the midst after the manner of palm trees, that being not to bee feared in the rest by reason of the scantiness of the groundes, which never causeth the to shoot out too abundantly. By this means they will put themselves in wood againe, notwithstanding more than others, according to the goodness of the soil: but not any so followie, but that at the tenth yeere they will begin to begin againe their accustomed service, provided the groundes be tilled as appertaines. For in vaine one should asswage exactly to entertaine the Mulberries by their branches; if one makes not account of their rootes, whereby at the length they fail; as in such error those fail, which to spare the tillage, place their Mulberries in meadowes, where they impair. In which they deceive themselves, because they consider not that the Mulberries left in untilled groundes, cannot bear so many nor so good leaves as those which are tilled. And although there are seen many faire Mulberry trees in meadowes, the answer is, that the earth is fat, & in ensuing if not contrary.
contrary, yet at the leaf, not at all good for the worms: or being leane, the trees will not dure long through lacke of tilling. The affured means is that there is to dreffe a Mulberrie-yard, thick spread with boughes, and to keepe it without expence, vn-
riill a reasonable greatness to serve well, is represented hercafter in the discours of the fruite trees; that is in planting the Mulberries in rankes by line and le-
vell, from foure to foure, or from five to sixe fathams; and in the same rankes to plant Vines amongst them, low, or propped according to the viage of the coun-
trey: the which by labour will bring their fruit without alteration, fifteene, or twentie yeares; when being oppresed vnnder the shadow of the trees, they will fal vnnder the burth, then one shal pull them vp, to leaue the place free for the trees, which will onely occupie it; and so one shal find to have brought them vp for nothing. The which shall be to finish the discours of the victual of our little beast, for to make them their lodging.

It behoveth also to dreffe a lodging for our Wormes with such commoditie, that they may eas-
ily doe their worke, for to yeeld vs abundance of good fylke. The which one shoulde hope in vaine, lodging them in a place vnproper and contrarie to their nature: for as they cannot be deceived in their foode, without manifest losse; no more can they suf-
fer an ill habitation. And as one must not enterprize to plant the vine, if he bee not forthwith provieded of cellers and vessells for the wine: so this would bee to no purpose, if one shoulde plant the Mulberrie-
yard, without afterward, to gue quarter and place to

and their benefit.
The perfect vse of Silke-Wormes,

to the Wormes. All such like habitation desire they, as men, that is, spacious, pleasant, wholesome, far from ill-sents, dampes and humidities, warme in the cold time, and fresh in the hot; neere the foundation, nor under the lathings of the coverings neere the tyles, one must not lodge the Silke-worme, because of the intemperatenes of these two contrary situations, whereby the one may be too moist, & the other too windie: too hot, & too cold, according to the seasons. Nevertheless that is to be borne withall, so that one can erect the lodging of the Wormes on one only stage neere the ground, provided that the plot forme be erected three or foure feete, for to avoid dampes, and over that that there bee boards close joyned, to the end the creatures may be kept aloft from the tyles, the approach and neereneffe of which is always hurtful vnto them, because that the winds and colds pierce through them, & the heat of the Sunne is there insupportable, when it lights upon them in his force. If for the capacity of your house, you can commodiously be fitted for roome to feede them in, it will be great ease to you, and you shall spare the cost to build new lodgings expressly for this: making your account that the Worms coming of ten ounces of seede, will be nourished at ease, within a haule of seuen fadomes in length, three in breadth & two in height, which advice you may ground, for to dispose your house so I say: or being to build it new, you may amplyse your edifice with some members: the which by this means will bee very well represented, and will be no much more convenient, as for the little beasts you shall have more augmented
and their benefits. 39

angemented it: when after having occupied it some
small time, it will remain free to you the rest of the
tears, to entertaine and receive company.

But let it bee within or without the house of the
master, which desirous to nourish these creatures in,
it is very requisite their chambers and haules be to
be opened on both sides, opposite one against anot-
her, of the East to the West, or of the North to the
South: and to the intent that the ayre and winds having
free passage through them, may refresh the Worms,
that then being ready to perfect their worke are up-
on point to rtife, through the like wherein they
are filled, and the great heat of the season. Taking
heed notwithstanding, that the windowes bee so well
plated, or papered, that one may shut them in any oth-
er time, so properly and so well, that the coldes
cannot enter, being as prejudicial to the Wormes
in their beginning, as the heates in their ending.

These creatures also desiring to be in a light place,
willingly not suffering the darke, from which they
creppe away seeking the light, the inner part of their
lodging shall be targetted and entirely whitet, that
the Rats may not escape through the slippery walls,
leaving not there any chinckes, creuesles, nor holes,
for Mice, Rats, Crickets nor other vermine enemies
to our Silk-wormes. The haules or chambers shall be
proportioned with tables necessary to rest on these
creatures, the which one shall make of all sorts of
wood; the best whereof is the most light, for his eas-
ifie handling. Some preferre before boards of any
wood whatsoever, the tables made of reedes or
canes, cleft or whole: not only for the ease of their
light,
The perfect use of Silke-Wormes,

lightnesse, but also for the health of the cattell, which are fed upon these canes, or hurdles made of them, so that there is a certain airc piercing through them, keeping them cheerfully and without offensive heate. Upon which it behoveth to distinguish prudently, such ayre being not always proper to the Wormes, but only to be chosen at the end of their life for refreshing them. To that purpose also the wilde reedes and bulrushes of marish places and pools may serve, yeare straw, which is got for a small price. In like manner, linnen, stretched with little tacks upon light wood, is vied with ease in this steeed. Many pillars of carpenters work, directly squared shall be perpendicularly erected from the ground to the feeling to support the tables, bearers of our Wormes, the which shall bee set upon little joynts crossing the pillers, planted of equall distance on these pillers sixtene or eightene inches one from another. The tables being so ranked in such measure, the Wormes will be fitly served. But the boards shall not bee of equall breadth, but one shall exceed the other four fingers; the lowest next the floor, being the most largest; and the highest approaching the feeling, the most narrowest; whereby the scaffold which shall bee compos'd of all together will bee made in the fashion of a pyramidis, to the great advantage of the wormes, the which by such disposition shall bee preserved from ruine, when wandering by the edges of the tables, from one end of the scaffolds to the other, seeking a fit place to vomit their silke, they fall from above, downd upon the floor, where they squat in peace.
A lattic which one needes not shut, the tables being in such sorte fittted, for each to worke the Wormes, falling from his higher next to it, the which are not offed at all through the little distance of one table to another. The breadth of the most lowest table, shall be limited even to this proportion, that easily of one side a man with his hand may reach to the middle, for to tend the Wormes. As for the others, their diminishing will make easie the ferning them, by measure as one shall goe vp on high, and shall approach near the feeling. Many of such scaffoldes shall be erected in every part, hall or chamber, after his capacitie, and in such manner, that any touch not the walle, for fear of rats: and likewise for to be able of all sides to giue victuals commodiously to the creatures: betweene the which scaffoldes one shall leave way large enough, easily there to passe and repasse. One shall also take carefull heed, to make verie firm the scaffoldes; to the ende that the Wormes growing great do not cause some part to fall, (as heretofore that hath chauned me with lattic,) and that they do not shake by the weight of the ladders which are set against them, going to viste the creatures, but shall remaine assuredly firm unto the end, for that cause sparing neither wood nor Iron. There are divers sorts of ladders which are made for this service according to fancie. Some make boord: about the scaffoldes, upon the which one goes as by galleries, for to tend the Wormes, making them round about: one goes vp to them by little staires, appropriated to this. Others make high formes and long of light wood, so much the more easie to bee
The perfect wife of Silke-wormes,
removed, as need shall require. Others doe make use of any other touching this, but a common ladder. But what ladders, or mountings so that they be, all are good, provided, that they serve to this business, so that without too much paine, by them one may safely goe to feede and visit the creatures.
The end of these provisions is the silke, the which so much the better, and more abundant you shall have, as the feede shall be better chosen. A common consideration with all sorts of sowings for the difference that there is of feede, to feede. For what ought you to expect of bastard grains, but bastard silke, what good leaes sooner that you have, each thing bringing forth his like? With great curiousitty the let vs search the most profitable graine, rejecting that, the worth whereof is suspected; for the proofe confirmeth the most sure knowledge of this feede, though there bee many directions to determine the good, from the ill. Amongst all the seeds of Wormes, whereof we have knowledge, till now, wee have held that of Spaine, for the best, fruitifying very well, through all the provinces of this Realme, where they make a trade of this feeding. That of Calabria, since certaine yeares, hath woon the repute, not so much for the goodness of the silke that he brings forth, as for the abundance that comes of the cod which is great, in respect of that of Spaine. And although they both be hard, an assured signe of abundance of matter, and by such reason one is to bee preferred before the other: the qualitie winning the prize, the seed of Spaine shall be held in the first rancke, in expecting that by reiterated proofes, wee cannot
cannot reasonably set it behind any other. As for the
graine which of long time is naturalized in the pro-
tinces of Languedoc, and those neighbouring parts,
one must make no great account of it, neither for the
finenes nor for the quantity of flke that it makes: for
how exquisit fower the feede of flke Wormes is,
transported from far in to such quarters, it doth not
continue long in goodnesse, but degenerates at the
end of certaine yeeres: the graine which is directlie
brought from Spaine, the first yeere it doth not so
well, as the three or foure yeeres following: the
which being past, it beginneth to decline in his
goodnesse. In the graine it selfe, is also knowne of
the changing by the time, and in his body, and in
his colour. For conning directlie from Spaine, it is
little, of a darke tawny colour; and kept, waxeth
great, and growes bright, till then, that at the terme
of certaine yeeres, it becomes gray, as gray cloth.
The graine of Silk-wormes of they Sceines of Lan-
guedoc is so qualified, the which as well for their pro-
per natures, as for being feed with the leaues of
blacke Mulberries, brings forth cords or bottoms
great, and soft, by consequent naturally furnisheth
with flke, of an orange colour, or gold yellow, man-
ifesting the greatnesse of the flkes from the diffe-
rence of the fine conning of the Spanish feede,
the Wormes of which have been nourished with
the leaues of white Mulberries, and the most part
of bottoms are white, incarnadines, of the co-

colour of flesh. Behold the judgement, that one can
make of the knowledge of the goodnesse of the
feede of Spaine: the best of which will bee the

G 3
The perfect rete of silke wormes,
small and most dace of colour, provided it be ad
like and not cold with cold, the which is proved
on the naile in all seedes of the silke wormes, acc
counting for good, that which breaks in cracking,
calling forth humor and moisture. The littlest of
the graine of Spaine makes the number of
Wormes, the which joyned with the hardnesse of
the bottoms cannot chuse but make abundance of
silke, which for his fineness is of great request. Indif
ferently all seede comming directly from Spaine is
not such as you shall desire, there being countries in
that kingdome better for this, some then others: and
that the more honestly to make it up, there go rather
truly, then deceitfull persons. Of which partic
ularities you shall take heede, to the end so much
the more profitably to end your feeding, as with
more art you shall have begun it. Wherefore this
article is notable, that after the imitation of good
husbandmen, it is necessarie to change the seed e
every foure yeeres, or from other terme to other, ac
cording to the reason of experiences. And for to doe
that with leffe hazarde, it shall bee fitt to have every
yeere, some ounces of new seed of Spaine, the which
for apart, you shall conferue carefully, and so long
as you shall finde, for the pouning, his worth to me
rit. By which resolution your feeding will keepe a
good course, and without confusion, maintained al\wares in good order and estate. You must not furn
ish your selfe with old seede for his infertilitie, that
being of no worth, which passeth one yeere. And
though that the keeping of the seede, of this creature
be difficult, because that naturally of it selfe it hatch-eth
and their benefit.

eth in his seafon, yet for it is, that aurice hath so much gottë, that by deceitful inuenciò certaine impollures forcing nature, conferue the seed a long time without hatching: when they cannot sell it in time they keepe the in little bottels of glasse, in a coole place, as within depe wells, hung downe with cordes neere the water, during the great heates, so keeping them more then a yeere, to the losse of those which by it.

Some before they put to hatch the graine of Silkwormes, deepe them in the most exquiste wine they can get, Malmsey or other, finding by such prooue, that the good, as the moost heavy, goes to the bottome, and the naughtie for his lighe heart doth swimme aboue, by reason whereof it is rejectit. After the good is taken out of the wine, it is let to drif in the sunne, or before the fire, laid upon very cleane paper, covered with white linnen, or smooth paper, to the end that too much heate hurt it not; after it is put to hatch. And not only ferues such steeping to distinguishe the good graine from the naughtie, but also to legitimize and fortifie the good, to make the Wormes come forth free and strong, and so to cause them to hatch almost all at once; according to the practice of hens egges, which for the same cause are plunched in water a little before that one puts them to hatch. A commoditie which one cannot hope for of the light graine, but to hatch late (or not at all) whereby the Wormes continue slow to all their workes, to hatch, to feede, to spin: yea subject to diseases, being not able to suffer any accident; but almost alwayes languishing, not onely dye they by little occasion, but infect the best qualitie
The perfect use of Silke-Wormes,

lifed of their next neighbors. To which danger he exposeth himselfe; that without distinctions mingles together the good seede with the ill.

To hatch this graine vnder the arme-pits, or betweene womens paps, is not a profitable thing; not so much for feare of their flourres as some thinke, as for the shaking it to and fro: which they cannot do withall, carrying the seed about them, but that they tumble and mingle it; happening at every minute that the Wormes willing to come forth of their egges, are misturned by one pate or step of them which carry the seed about them, overwhelming all one upon another, to the losse of the creatures which are slided in the throng, though but with their like.

Setting this article the farthest off, it is most requisite to kepe curiously the seed during all the yeere, preparing in good time, easie to hatch them in the seazon. Having recoveryed them, either of your own, or elsewhere, you shall lodge them within boxes of wood well ioyned, garnished within with paper or the creasts, to the end that through them no seed go out, nor any dust, vermine, nor other offensifue thing enter in the box; but that the graine may remaine there neatly. You shall put these boxes within chests, or elsewhere amongst cloathes, except linen, which because of the mustiness of such matter, is hurtfull to thele, there to remaine vntill the seazon for to imploie them; and to the end that they feel not any molefying dampe, nor cold during such remaining, it is requisite continuing winter, to make fire in the chamber where these chests shall be: for being more hot then cold, the graine is there prepared.
and their benefits

red afore-had, as you desire, which it would not do, if after the order of some, one should keep it within vials of glass, the coldest of which substance makes them to hatch late. These necessary observations have learned us never to expose the feed of these Wormes (no more then the Wormes themselves) to the mercy of the colds: but to reserve it so together as one can from the humidity and frosts. For to do this effectually chancing to lend for it into Spaine, or elsewhere, it shall be done during summer; by this means, shunning the incommodes of Autumn and winter, it will come to you well qualified, and very good if it be brought by land, by sea

the thing being not without hazard, because of the foggy dampes, and other ill qualities that it hath, contrary for such feed, so as the losse of many, (with reason) makes vs to feare such danger. The long keeping of the feed with you, helps to naturalize it in your ayre, whereby it hatcheth better and rather then having not at all abid with you; wherefore it is requisite to furnish yourselfe of feede immediately after the gathering of the silke, if it may bee done, to doe it without any delaying; you must abstaine from visiting too often the graine of Wormes, epecially the spring approaching, for feare that by such curiosity, one treades not a wise to his losse. The time to put to hatch this graine cannot bee directly ascertaind, for that the season being forward or backward, entirely governs the worke, causling the shooting forth, or stay of the Mulberries, the only viual of these creatures. This in what wise shall be then the true point, that then when the Mul-

berries.
The perfect rise of Silke-wormes.

berries begin to budde, not before, to the end the little cattle at their hatching may find meat and no other to live on, and of their own age, (as the child of the milk of his mother) and not to be troubled through want of Mulberrie leaves, fearing to let them die for famine you shall feede them with the buddes of nettles, with young lettuce, or with the leaves of rose, & like druggeries. But being fallen into such necessity, the best that be to ferre them with the leaves of Elme, somewhat edable by the Wormes, by which they receive succour, for some sympathy that it hath with that of the Mulberrie. Foreseeing which trouble aforehand, it shall be requisite to plant a certaine small number of Mulberries in the houseth place of a garden against some sunny bancke, and there by good dressing, dunging, and watering, to hath them to budde quickly, by such artificiall hastening his owne nature. And this shall bee so to shunne the losse of the little beasc when being newly hatched, the leaves of the Mulberries are viuenterially spoyled by frostes or mites happening vna-wares (as that was seene in Languedoc, Provence, and in those bordering places, these yeares past) if one keeps such Mulberrie trees, purposedly to this particular service, sheltered against the pernicious time, after the manner that the prudent gardner keeps his precious plants: the which Mulberrie trees preferred from such tempetes will feede the small cattle, in attending while the others have sprung forth.

And as by too much halting one falls into this danger and in consequence by famine in peril to lose the little beasc in their beginning, likewise to delay

The danger of too hasty of flow hatching the egges.
delay the hatching of the Wormes, puts them to hazard of death in their ending, when by such backwardnesse their climing happens in a very hot time, contrarie to their nativity, because that being then heated, through the filke wherewith they are filled, they desire nothing but refreshing, easily to end their task. Such difficulties are provided for by the means of the hallowed Mulberries, above mentioned, the which furnishing timely leaues you shall in like manner hasten to hatch the Wormes, which they repay at the ende of their life, whereby they will remaine so much more assured, as you shall lese their comming in the time of the great heats. The remaining coldes of the winter being not so vnsatisfable at the beginning of the life of these Wormes, as the heats at the end of the same: for that in the coldes there is some remedy for the succering of the Wormes, which is in keeping them in a very close place and warmed with embers, during the stiller times of cold; but against the heats other is not found than the fineness of the lodging, the one ly means to safegard these creatures from such annoyance.

The course of the moone is also obseruable in this action; the Wormes desire to hatch & spin their filke during the increas of the Moone; for that they find themselves more able than in her waine. But that cannot accord every where nor in every time, for the diversities of regions, and seasons, hotter or colder, some then others, lengthening or abridging the life of these creatures. If you are in a place where the Wormes are eight weekes ere they worke, as
commonly they do in a place more cold then hot, or in a time extraordinary chill, the thing will so fall out, that in like time of the Moone as they hatch, they will also spinne. Wherefore coming at the first quarter, they will be then spinning: but where through the benefit of the climat, their nourishment is more forwarded, as towards Aignan, & throughout all her neighboring partes, being not farther remote then fortie, or fivie and fortie daies: it is impossible to dispose this affaire, for the inequality of the daies. Wherefore leaving the success of the end in the hand of God, their nourishing shall begin in the encrease of the Moone (if nevertheless the leaves of the Mulberries will permit it, which laies the foundation of this busines) for that the Wormes fortified in their beginning, by the influence of such a Planet, forthwith goe cheerfully on in augmenting it, making them to come from the second or third, untill the fift or sixt day of the new Moone, the culling of these creatures according to the last computation will happen towards the beginning of the waine of the Moone, certaine daies after her full, which having then force enough, comminicates sufficiently to the Wormes.

For to hatch the graine at the time named, you must remove them from their first vessel, into boxes of wood, lined within with cotton or with fine tow, pasted to them, after that the said cotton shall be coered with a white paper, to the end to containe the feede warmely and without losse: on the top of the feede one shall put a little bed of tow, and over that a paper thick pierced as a sieue, with little holes, ence
...and their benefit.

rie one capable for a graine of millet onely to passe through. Through the rows, and the pierced paper, the Wormes comming forth of their egges shall goe, afterwards having left the holes under the row, they go to fasten at the leaves of the Mulberry, set to this purpose over the pierced paper, from whence being taken they are transported and lodged else where as shall be demonstrated.

And to the end that that come so to passe as appeareth, it shall behoeue you to helpe the Wormes to hatch in adding to their natural heat this devise of arte. One shall keepe continually the boxes within a bed, the curtains close drawn betweene two featherbeds, moderately heated with a warming pan every two hours, without sparing the night, one shall visit them, for to withdraw the Wormes, by quantitive as they come. Such frequent visiting is necessarie, as well for that sake, as also to renew the heat of the bed, in warming it ofte times, to the end to keepe the feed equally hot, for feare that by sloth fulnes, leaving the there too chill, they should catch cold, to the ruine of the Wormes. From the boxes one shall take the new Wormes, for to tanke them in seques, with paper at the bottoms, or other vessells appropriated to receive them in their beginning, and for feare to hurt the in remouing, asso that their tenderneffe suffeire them, one shall touch nothing but the leafes to which the Wormes being fastened with that they shall be lifted vp & lodged in vessells. There they shall be held during certaine daies, which left which you shall by little and little accustome them to the aire, to the ende the violence of the change...
The perfect use of Silke-Wormes.

change cause them not to perish. As on the contrary they will by too much heat; if one aduises not to temper them by reason, going from degree to degree, keeping them lowe warme one day then another, by measure as they advance in time, without retrograding, that is to say, not to bring them nearer to the heat, having begun to keep them aloofe, for fear to parch or stile them, until that age discharge

They shall first their governor of such paine. The fiefes, great boxes or other receptacles, covered with linnen, garnished at the bottoms with paper, shall be put to rest upon beds, with the curtaines drawne, for to shielde those little creatures from the windes and coldes, till the fourth or five first days of their tender youth, from whence forward they shall be transported into a little chamber, hot and very close, out of the force of the windes, upon perfect clean and neat tables covered with paper, there for to begin to hold their ranke. One shall lodge the very near one to another, to the end that so prefixed with volitie, they may conuerse their natural heat: that which they could not do, being a faire off in their beginning, until that, when they shall grow great, more ample lodging be given them. But it shall be under this necessarie observation, not to mingle confusedly the wormes. It rather behoveth to differenceth them, by the times of their ages, for the importance of this food, touching the sale, and the pricing. For if from the beginning this point hath been provided with curiositie, assembling the Wormes by the days of their coming, without entremingling them together, one shall see them without either to agree together,
during their lines in all their works: in eating, in
sleeping, in spinning, with much pleasure, accompa-
nied with profit, for the abundance of like which
will come of them, the aym of this busines. Through
want of which singularitie there will happen confu-
sion to your foode, the old Wormes never forting
with the young; the one desiring to sleepe while the
other eat, and to eate when it is a question to spin:
but with the aforesaid disposition the worke comes
to a good issue. By such distinction the races are se-
parately preferrd, as is most requisite to furnish ones
selfe with the force of this creature, according to the op-
inion, one shall take of their worth by the effect of
their worke. In need of fuedes and great boxes, the
Spanish Garillas.

A very st. lod-
gleering for the
Wormes in
neitherly by distinct separations, until their fe-
cond or third change, if one will; where they will be
ginning, confirmed warmly, & out of danger of Mice, Rats,
dust and other injuries, with more assurance than any
where else. That is, after the manner of a great
The perfect use of Salke-Wormes,
presse or cubbord made with many flages distant one from another fourteingers, or haife a foote, on which the little cattle shall be put, without any whit bruising them. These flages shall be as it were little planchers, composed either of light fine boards, or of some other proper for this, or of cleft reeds, or long straw, and let to fitly, that one may separately draw them out and in at pleasure, in sliding them as tiles easily to visite & tend the small beasts. And they shall be pasted with oxe dung after the Spanish fashion, if one so desires it; seeing such curiosity hath been found profitable, to the end that nothing bee wanting in the rearing vp of our Wormes. The lodging shall be compassed about with linnen cloath tacket to the doores, as paper windowes opening and shutting of three sides; and before the fomost doore a little window to give vent shall be added; in shutting of it at need to keep them so much the warmer, or in opening of it to give them aye as one will. So with much commoditie the Wormes shall be lodged in their fift time, which is then when they have most need of it, passing in assurance these gliding pastes of their tender age, where many perish through want of good habitation: for being fortified with time, they shall be taken from thence, and removed into more spacious lodging, as shall be shewed.

To cause them to come within few days is necessary.

It is to be desired that the Wormes come forth all within fowre or fite daies distance from the fift hatching untill the lafte, those sooner lightly making good end which tarry longer, but miserable and sluggish end their life in languish oftentimes without profit. Wherefore it is, for that that one provokes the
the feed, warming it with curious diligence, as hath been shewed: vnder which order, little feed remains unhatched. You shall not then make any account of the graine which shall be remaining in the said boxes after the said term, nor of the Wormes likewise that shall be so backward: but rather reiect all that as unproitable. Such hatching of a company is one of the moast notable points of this busines, whereby finally with fauing, the profit issueth according to the proiect, because that these creatures taking life almost in the same day, are more easilly handled than if they were of divers ages. I haue also said that they suffer much by the colds, and by the heats in all their ages: for in their youth, the cold troubles them strangely, having great power over them, being the most weak and delicate cattell which is fed; and in age the heat killes them. When in their greatest force, you finde them bigger and vnwealdy, through the silke wherein they are filled, which confineth them to lecke freish ayre. By contrary remedies one provides for these things: but with lesse difficultie one dresseth the Wormes in the cold, than in the heate, that is, in holding them straitly in the beginning, and largely at the end, by little and little according to their age enlarging them; finally to put them for alltogether at their ease on the shallfolds. In the meane while imploying to purpose according to accidents, the warmings by the ayde of the fire, and the refreshings by opening of the windowes of the house.

The Silk-wormes during their life change foure times their skins, (as Serpentes do once a yeere) which causeth them to divers.
The perfect use of Silke-wormes.

causeth them so many maladies, during which, they cannot at all, but unmoueable they do nothing but sleepe, paffing fo their ill. These diseases, (for these reasons called of the Spaniards Dormilles,) are comparable to thefe of young children, as small pockes, measles, shingles, & other that in necessity they have in their youth, of which they are helped being well looked to. So by good gouerning our Wormes are faued from these necessary mishiefes, shunning the danger of death: neuertheleffe with more difficulty in the latter, then in the fift, through age in being more oppreffed old then young, as it happens to men, which hauing not had in feaon the diseases of youth, being strucken more late, more dangerous is also the illue. Besides these ordinary diseases, the Wormes have accidental diseases coming of the time, the meat, the lodging, and of the government: the which one helps vifing particular remedies, as shall bee shewed. In the care of the ordinary ones there is no point of skill, you must only abstaine from giving them to eate, when they refuse their meat, and to glue them moderately, their appetite being come againe, alwaies to feed them with good leaves, and to keepe them neatlie. The first maladie, (being dinitely called) as a change, a drownding, or a benuminning, happens at the eighth or tenth day of their coming forth: the eight or ten daies following them one after another, more oileffe, according to the climat & quality of the feaon, of which the heat shorteneth the distance of these terms. To which also fentes the goodness of viuets, and diligent care, for so much more as one glueth to these creatures.
creatures of leaves well qualified (if to be they will ease them,) so much more shorter will their life be.

The sickness of these worms is knowne first of all by the head, which swelleth then, when they will change, insomuch that in that part their skinne begins to pelle, but more apparently in their last blemishings then in those that follow, not being able almost in the first to darne what it is for the littleness of the creature. While their drouthiness hath feasted them you must restraine to glue them meat, (for that would bee but losst labour) one only shall cast them some pittance to sustaine those amongst the drowsie ones, which wake; the which by this means discerned shall be separeated from the others, for to be assembled with those which are of equall age. Each disease holds two daies, at the third beginning to get their health againe: the which one knows by their feeding which comes to them with much appetite; then one shall give them victuals againe, but sparingly, to the ende: not to fill them to quickly, augmenting their ordinary day by day as one shall find them affectioned to eat.

Twice a day, morning and evening, at certaine hours one shall feede the Wormes with meat, from their hatching, till their second change or drouthiness, so limiting their repast. From the second to the fourth and last, thrice a day: from that till the end of their life, four, five, or five times a day: (and in some,) so much as you please, and that you shall see the creatures can eate. For then you must spare no foodes, but rather cloying them, to fill and satisfy their appetite, halting them by much, eating to perfect their taske.
The perfect wife of Silke-Wormes.

As the vessill will never run ouer, exceptit be ful to thesse Wormes will never vomit their sile, till theye bodies be satisfied: the which engendring of the leafe of the Mulberrie, all is as soone found ready to be sponne, as the quantity of the leaves depende by nature to such worke. shall be dissolved. By such carefulnes there is no more leaves wakend, then if one distribued the skarfolicke: for that within eight daies, the Wormes will eate neere as much, by little and little, as within foure given them liberally. Then this is without occasion that one should feare the expence, seeing that on the contrarie by such liberality (besides all well compted, it expendes nothing more) comes this sparing, which winning time, the cost of the feeing falleth out lesse. Afterwards one shall mark, how curiously the qualities of the leaes, as an article bearing sway in this foode. For all leaes are not proper for this, though they be produced by Mulberries without fault: happening sometimmes, that by extremity of suete, or moylturue, or mould, or heat droppes, and other intemperatures of the time, all the leaes, or most part of the trees become yellowish, spotted, or specked, a signe of unhallome and pernicious foode. Of such one must make no account, no more then of that growing out of the Sunne, within the the inferior parts of thicke trees, or in shadow valies, nor of that which is wet, by raines or dewes; but rather is behoueth to reiect them, as infected, not ving them atall, for feare of killing the Wormes. The leaes of the second spring, one shall put in the samme predicament, that is to say, those which shooe afterth.
grafft, on the trees already disleaved, which the igno-
norant imply for want of other: but with too much
hazard, because of their maligne substance, contrarie
to the creatures, happening through the inegualiti-
tie of their ages. For there needs but one repaide
tobe given them, to make them all perish of the six,
that such new leanes, will bring them, because that
by their tendernesse the little beasts, eateth them with
so audious and greedy an affection, that they fill
themselves till they burst. Wherefore this shall be
for a maxime, that the Silk-wormes shall be alwaies
a notable fedde with leaes of their owne age, to the end that
by good correspondencie, the leaes be as tender,
and hard, as the creatures shall be feeble, and strong,
according to the time of their ordinarie commings.
The faulte of the wet leaes, is corrected by patience, for one must but tarry till the raines be past
and the dewes dried vp, to gather the leaes, going
to worke after the Sunne shall have shone certaine
hours on the trees, never before. But for the oth-
ers which are ill qualified there is no means to
correct them, from which, as pernicious food, you
shall abstaine. One shall not neede to take care for
the expence of these precious creatures, during the
first three weekes, because of their youth, and little-
tenesse of bodies which makes them bee contented
with a little, & yet that little taken in the loft partes
of the trees, as of the body, of the succers amongst the
good branches, and elsewhere, from whence for the
profit of the trees, also one should cut them. At the
beginning, one must goe to the leaes with hand-
ketchers, afterwards with little baskers, then with

I 2
The perfect use of Silke-wormes,
great ones, and finally else employed for this visitat-
ing both maunds and laces, theresting their food,
by measure as the grow in age.

I have shewed how necessary it is for the leaves
to be handled with clean hands, for the danger of
contamination. If this point the governour of these
magnificent creatures shall beware, for himselfe to
be an example of neatenesse, to all those which he
hath under his charge, to the end that any of them,
approach not otherwise, then appertineth. The go-
nour shall not forget to drinke a little wine eale
in the morning before he goeth to work, for that in
communicating the smell of such liqour to the
Wormes, it preferes them from all offence, specially
from the naughthy breath of folks (more strong be-
ing fasting, then after eating) which these admirable
beasts feare much. Wherefore the enticing of their
lodging is not to be indifferently permitted to all
sorts of persons, by that shunning the harme that too free
frequenting brings to the creatures; which the su-
perstitious vulgar, forthy attribute to the eye, be-
lieving that there are people with their looke
brings ill lucke to the Wormes; but it rather is, nay,
affurdedly, the breathing of the ill breath which cau-
seth them, indispositions. For which considerations,
the lodging shall be swept every day, and to
keep them sweete; you shall often sprinkle the floor
with vinegar, after to strew it with some herbes of
a good smell, as with lavender, spike, rosemary, time,
savorie, pennyroyall, and such like; adding some
times, perfumes, made with frankencense, ben meme,
florae, & other odoriferous droogues, which shall be
burnt.
burnt on coales in the halles and chambers. The tables in like manner, of the Wormes, shall be often made cleane not sufficing the catell to rest long upon the litter, the which one shall take away every third day, or every fourth, after the second change, or benumenge, for to keepe them especially sweet and cleane, then when as the soultic heat approach, whereby they are preterred: vntill that time, being not requisite to goe to it to curiously, for the litter during the coldes, is rather profitable then any waies hurtful to the Wormes, keeping them warme amongst it; foreseeing also, that one deceives not himselfe with such sluggishnes, in leaving there too much.

Vnawares sometimes violent blasts of ater wormes returns against the attempt, and course of the season, very offensive to our Wormes. These accidents are remedied by keeping curiously shut all the open parts of the lodging dores and windowes even to the leath: and in warming it within, with what coales in diverse places. The flouthe of the gouvernor hath laid this taxation on our Wormes, that they are esteemed flincking, wherefore many abhore them: Those are the calling of their skинnes, and their dead carcasses, intermingled with the litter, made with the residue of the leavbes which the Wormes smelle of, from whence proceeds all the flincke which one finds in the chambers: not of these noble creatures, the which of themselfes smelle nothing atall, no not their very dung, no more then sand, having naturally in as great detestation filth & infection, as they louse sweete and good smelles, vning the order afore men-

ioned.
62. The perfect rose of Silk-wormes,

tioned, one shall not only governe these delectable catell with proue, but their habitation made pleasant, and sweete smeleng as the shop of a perfumer shall be found a place agreeable for good conditioned folks. So will it be for Ladies and Gentlemen, for whom these excellent creatures travaile.

That then the gouvernor of our Wormes shre to be diligent in his charge; that he suffer not inconsiderately his catell to bee visited of all comers, with too much libertie, for feare that by fraud, some mischance happen them: that he keepe the lodging clean; that he spare not perfumes, for to beflowe them slyly: that he be scrupulous of the leaves, not to distribute them to the Wormes, but such as bee perfectly good; for this cause that hee giue command to the gatherers never to goe to worke before they have washed their handes, and that he have an eye unto it: that he suffers, rather his little beales to be a hungered, then by impatience, to feede them with leaves ill qualified.

In taking away the litter all at once, the catell is removed from one place to another, to their great contentament. For to do that commodiously, at one end of each skaffold shal be lef an emptie place for to put the Wormes on, that one shall take adjoyning to that; in as much of the breadth of the table, the which by this means being emptie, will receive the Wormes of the neibouring part, and so of those that follow, whereby all the continuance, in the skaffold will be uncouered, and covered againe, course after course by portions; after the manner of drying hay in meades, overturning in the full part filling the
and their benefite. So without carrying the cattell far, they shall be gently put near their lying, and this will be without touching them at all, for fear to offend the, because of their delicatenes; if at the instant that one would change them, from one place to another, one gives them meat, for it behoveth not but to take the leaves, at which to soone as ever the Wormes shall be fastened, so lift them vp, & without refting them in any place, to lodge them all at once where one de-
sireth. It will be needfull to dispose the tables in such a fashion, that without shaking by seperated pieces, one may easely take them all out, and put them on the scaffolds againe, to make them easie cleane. For by this means, pulled out of the scaffolds as draw-
ing tilies one after another, one shall strike them a-
against the floure, to the end to discharge them of
filth: afterwards one shall sweepe and brush them
perfectly well.

In measure that by age the Wormes increase and
grow great, they go fro day to day occupying more
place; wherefore it is necessary to keepe ready fresh
tables, to the end to receive those, which you shall se-
perate from the throng, and to put them all at their
cake, for to fruitiffie very well together. For it is a
thing well experimented, that a few Wormes feaste
at large, makes more filke then a great number at a
strait. You shall cause the tables to be rubbed with
vynegar, or with wine before they be put on, and
with sweet herbes to encourage them. As also they
are delighted with the finefl of leckes, garlick, or
onyns, if you accustome them to it in their youth;
against the opinion of those which hold that these
thong.
The perfect pdf of Silke-wormes,
strong phials hurt, having not well experienced the,
this doubt being sufficiently cleared by proof; and
you shall not only rejoyce your Wormes by agreea-
ble smelles; but you shall succor them in the most
part of their malladies. Touching which wee will
speak of their deieses, and of their remedies.

The extremities of the colds and heats, the too
much or too little feeding; and the feeding them
with naughty leaues, are the principall causes of the
extraordinary malladies of these creatures. If they be
annoyed by reason of cold, one shall succor them by
warmth in shutting the lodging, as before in perfu-
ming it with frankincense and other sweete matters;
to the which perfume some addes lard and saufages
cut in little slices, the smell also of good wine,
stronge vineger, and Aquae-vita confort these crea-
tures having caught cold. If on the contrarie they
are overcharged with heat, you shall recover them
with freth breath in opening the doores and windes,
paling through the chambers and lales, breathing the:
ward parts to the great contentment of the
Wormes, setting them in good liking by this only
and little remedy. The lodging being not so well
dispised as is necessary, the Wormes shall be carried
by tables forth into the ayre, to make them gather
breath, halfe an houre before Sunne rising. The diet
is the true means to heale those, which by too much
feeding are become distempered; one shall give them
nothing for two or three nights, the which being
said, they shall be fed very moderately, and a little at
one: As also little and often it behoeth to give the
meate,
meate, which through famine are become languished, for to restore and satisfix them, without overgorging them. The disease is much more difficult to cure, of those which have been fed with ill leaves, as with yellow, spotted, or too young. For oftentimes of this, as first hath bin said, there happens the drone, and of the latter the plague most afflictingly. Of this disease the Wormes becomes all yellow and spotted with black bruises: which you perceiving never so little, but not to remove them diligently into another chamber and separated tables, for to assay to save them by good handling, or at the least to shun the contagion from the rest of the docke. But hold for This heere indesperate the healing of those which with the marks aforesaid, you shall see to be bathed on the belly, by a certaine humor flowing in that part of their bodies, which you shall take from the rest, as meate for poultry. As perfumes help to cure all the maladies of these creatures, so to remove them from one chamber to another, is generally healthfull for them, by such change being restored to wonted vigor. The Wormes will not fall into any or few of these diseases, if their governour handles them with skill and diligence aforesaid: in which besides the hazard of losing all, is spared the trouble: being much more easy to prevent these maladies by foresight, then to cure them by medicines. At which one shall first be well, to the end that by negligence, one be not deprived of the hoped-for benefit of this food. Carefulness being most requisite in the managing of thefe notable custome, which constraineth them that have them in charge, not only to be near them all
The perfect wife of Silke-wormes.

the day, but to bestow a good part of the night, to succour them at all occasions, the which curiouse one shall endeavour. The Mice, Rats and Cats, doe great spoile to the troope of our Wormes, when they can come by them, eating them with great appetite as most exquisite delicatess. Against such tempers, for a fingular remedie, one keepe lights during the night about the Wormes, whereby the inner part of the lodging being lightned, the rattes and cattes goe not but with feare. And are at the last chased and feared away, by the sound of little bells, which one rings there. Both with the one and the other one shall be fitted; disposing the lampes in the places requisite, in divers partes: also the bells and other engins making noise, put in a place easie to remove them. But all that is but in vaine if often times in the night one goes not round about the cattle; to which purpose the lights will serve, which lighting the roome, will be a meanes to goe and come easly through all. In the mean time, you shall beware that any oyle fall not upon the Wormes.

Thus to oyle touch the Wormes.

For there needes but a drop, to offend them much, through the maladies that the oyle engenders them. Preventing the which, one shall not vse any oyle to watch with, but in lampes fastened against the wailes: and for portable light to tend the creatures, tallow, or waxe candels, or of other substance according to the countries.

By such managing, both of the foode, and hand, within sevene or eighte days following, after the last casting their Skinneres, or dровines, your Wormes will dispose themselves to pay the expence of their diet.
and their benefit.

diet. The which foreseeing in fit time, you shall cause to be prepared necessarie rods, for the climing vp of the Wormes, to vomit their filke, fastening their webs vnto the. To assemble the Wormes (so called in such worke) many things are good, but not any greene bowes, for danger to offend the cattell, they waxing freth, placed in the worke, as they will doe, the time being giuen to raine. The most proper matters, are Rosemary, Knecholme, cuttings of Vines, Broome, shoots of Chestnut trees, of Okes, Osiers, Salowes, Elmes, Athes; & in fumme, of all other trees or flexible thurbis, having not ill smelles. In application of the rods, one goes to work diuertly, according to the sundrie aduises of men. After having curued the foot of the rods or branches, to the end so much the leffe to trouble the place, one shall rank them directlie, as rankes of columnes equally distant a foote and a quarter, little more or leffe, crossing the tables from one side to other. The feet of the twigs shall ioyne to the tables beneath, and the heads shall meet the tables aboue, vnder which, their length shall bee bendt, whereby will be fashioned the arches. By such disposition, the stages will resemble, like galleries made of arches, with many stages surpaesing one another, as Amphitheaters a thing very pleasaunt to behold. The emptie place, betwene the two arches ioyning to the table aboue, shall bee filled with the sprigs of lauender, spike, thyme, and the like sweete smelling shrubbes, according to the commoditie of the country, for to ferue doubly. For in this intermixing of twiggers, the Wormes shall haue choise of place, firmly to fasten their rich matter, as to that

K a they
they are very difficult, going to it fantastickly, and there they are as it were perfumed by the agreeable sent of the shrubbes, whereby they travaile freely in such place to the profit of the worke.

At the seveth or eight day then, that your Wormes shall bee come forth of their last change or daise (such a daise being verie properlie called a chaunge, through the great sicknes they then endure, more vehemently then in any other, oftentimes to die) you shall remove them to the tables, so furnished with twiggs without looking to shift their places or litter any more. There you shall feed them as accustomedly, that is to say, with all abundance, without denibiting them till then, that you shall see the most lustfull Wormes to enter the roods, which is when they take their course to get vp, which perceived by their extraordinarie countenance wandring through the troope, in skattering, without making account of the meane, and a little after you shall see them to clime by the feete of the twiggs, forsaking their food, going to vomit, or rather to spinne their filke. From that time you shall begin to diminish their ordinary, day by day, in the end for to give them nothing at all, when they shall have united and grafted with the twiggs, all the troope will have forsaken the table, or few will faile, none remaining behind but the latter and idle ones. In this time it is knowne those which were long a hatching, by eliming vp the last: being a necessary conicquence, that the first comming forth, are the first spinning. And as there is no great reckoning to bee made of the hatching later, no more behoves it to make
make account of the idle Wormes that clime not. Wherefore at the end of three or foure daies, that the first shall have taken the twiggeres, you shall take away the rest from al the tables, for to assemble them in one, and so to nourish them till their end. So the forward and the backward Wormes will spinne their filke; the which they cannot doe fifthly when without such distinction the latter should call themselves on the worke of the formost, with great losse, and this apparent daunger, that before these had ended their work, the Butterflies of the formost by such longnesse already formed in the codde, should not come forth to the detriment of the enterprise. Two or three dayes the Wormes have to perfect their coddes, bladders, or bottoms, (diverly named according to the places) at the end of which they are utterly finished, as one shall know it curiously approaching neere the with the care, For as these creatures make so little and pleasing noyse in feeding, so likewise doe they make a sound in fashioning their coddes; the which noyse they glue ouer, ending their worke.

Behold the filke made, this is not for all that the end of the labour of the Wormes; for it is by the graine that they end to worke and to live, finishinge their life by their decreed seed which they leaue vs, for to renewe themselves by every yere, and by this means to conferre for vs the possession of the filke as to their heires. Miracle of nature, A Worne to be shut vs in his bottom of filke, is there transformed into a Butterfsie! He employes ten dayes to that, at the end of other ten dayes he comes forth through a hole
hole for this effect piercing the cod, from where disimprisoning himself, he returns to the view of me, but that is in his new figure of a Butterfly: males and females accouple themselves joint together, the female lays her eggs or grains; ending to their labour with their lives. And that which augments the wonder, is the long abstinence of this creature, living twenty three days without taking any sustenance, also being deprived of the light, for the time which he remains within his bladder, as in a close prison.

An admirable exposure.

But to enter into discourses on the qualities of this animal, to the which are manifestly wanting, flesh, blood, bones, veins, arteries, sinews, bowels, teeth, eyes, ears, skales, back bones, prickles, feathers, hairs, except on the feetes a little fine thorn, resembling downe, and other things common almost to every earthly, watere, & aire creature: it would be too much to philosophize, such contemplation ravishing humane understanding, even in this, that this Worme one of the abject creatures of the world is ordained of God to clothe Kings and Princes: in which is found sufficient argument to humble themselves. And this same one particularity is to be marked, that hee yeelds the rich silke all spun, ready to be wounded off, vomiting quite made, the thread; whereof hee componeth her bottom, with extreme care and affectionate labour. The which is not communicated neither to wooll, cotton, hempe, nor flax, wherewith men apparell themselves; but with skill they must prepare them for to bring them to the point to be spunne.
Here it is to purpose to shew the subtill arte that man hath invented, for to replaise the deficiet of graine and seed of Silk-wormes, happening that it should be loft. A thing drawne from the seerets of nature, and found out with great curiousitie, like to the production of Bees, whereof the Auncientes have written (as heretofore I haue said.) In the springtime a young calfe is shut up in a little darke stable, & there fed only with the leaves of Mulberries twenty daies, without drinking at all, or eating any other thing during this time; at the end of which, it is killed, and put in a tub there to rote. Of the corruption of his body comes forth abundance of Silk-wormes, which one takes with the leaves of Mulberries, they fastening two them: the which feed and handled according to arte and common fashion, bring forth in their times, both silke and feed as others do. Some making short the expense and the way of such an invention, haue drawn this here. Of the legge of a sucking calfe, a filce waying sevene or eight pounds, and laid to putrifie in a fresh cellar, within a vessell of wood, amongst the leaves of Mulberries, to which the Silk-wormes comming forth of this filce, take hold on: from whence being taken, they are handled as for-said. I offer you these things under the credit of another, in attending that the proffes glueth me matter to assure you that which it is: Complayning my selfe in this place of our predecessours, with blamy, as he did of his, in this which they said, that a vessell of luy could not containe wine, and not one of them had experienced it. I represent you these things, I say, for that such creation of Silk-wormes happening to be
true, and thereby finding the advantage: we may be freed from the trouble to send to seek the seed in Spaine and elsewhere, yarning the care to provide it every yere. If there be question to discourse thereupon, I shall say that such engendering of Silke-Wormes is not incredible, seeing that all corruption is the beginning of generation. We see daily, that of putrefied things issue divers vermines, according to the divers qualities of the matters. Of the Bull, and, according to writing, of the Lion, is engendered the Bee: of the Horse, Florries: and of humane flesh, the Serpent. The Ancients hold, that two kinds of Wafpes are engendered of the Horse and of the Mule; through the diuersities of these two creatures, as I have said in the precedent chapter, and of Affes, Drones. And whether they be meats, cloathes, houhold stuffes, even vnto woods, every where in the land, in the water, and in the ayre, in moist places and dry, one finds that nature creates little beasts, worms, and gnats, with so much admiration, as the Creator is admirable.

Some few daies before the Wormes begin to time the twiggis, to vomit the silke, they manifest their purpose by the brightnes of their bodies, which becomes shining and translucent, as grapes waxing ripe: by which a little one knows somewhat after the colour of their bodies, the colour of the silke, which they will make. Then one marks the Wormes to be dieruly coloured, neweTHELEFE distinctly, with yellow, orange, carnation, white and green, which are the fine colours of the silke. Likewise one distinguishes the males from the females; the pretended eyes
eyes of the Wormes will satisfy to such curiosity: for the colouring of those of the males, is more apparent to black than that of y females, the which in that part have but very small marks, & fine freakes. As for the colour of their bodies, according to the climes one is to be preferred before another. The most part of the seedle of Spaine brings forth white Wormes: and such grainas being more worthy than any other in these climes, we prize also the whitest more then the blacke, or gray, or any other.

After with the same diligence whereby we have managed our filke; finally we must reape, seeing that this last action cannot suffer delay, without notable loss, no more then any other harvest of the yeare. The refuse filke is the first matter which the Worms vomit, of which they make the foundation of their building. They take it firmly with much art between the roddes, which loden with these rich coddes resemble exquisite trees, garnisht with Apricockes, Pommes Paires, and other precious fruites. There one takes the bottoms in perfect ripenes, which is marked by the directions already given. To tarry longer then seven or eight daies, to pull them from the twiggis, would bee to put them to hazard, to convert the filke into fleau, for the lesure that one should give the Butterfleie to pierce his codde, to the end to go about his feed. Wherefore the most assur'd shall be, to begin within the first day after the climing vp of the Wormes. One shall take them off gently, without crucifying the creature which is within, by that preventing the spots of the bottomes, which happen by their broken bodies,
The perfect state of silk worms,

converting the into sugilen humor, let afterwards
it is impossible to divide and winde off all the sike.

Providing for the time to come, one shall allow
of furnishing himself with seed for the continuation of
the brood, I have shewn the scope of this Worme
and, after having weaned the sike, to goe to lye
himselfe, to perpetuate her selfe amongst vs. For
which it behooves, to limite & bound his natural
affection, for feare that leaving it to do at pleasure,
in
seed of sike, which wee have of this busines, wee
should have nothing but flesh. Because that the
Worme being converted into a Butterflie, to lye
the eggs, as I have said, comes forth of the bottom;
which for such cause he piereth. Being thus bored
the threads of the sike are found broken, by consequent
indeedable, and not to be wonde off, whereby one is constrained to ordere such matter as sould,
 afterwards for to spinne it: which by this means
losing his gloss wherein conflicteth the chiefest
beautie of the sike: wanting the same is turned into
flesh. For to prevent the which losse; and also not
to have need of so much seed, as the nature of the
Wormes would furnish vs withall, of one part of
the coddles or bottoms, we will invent our usses for
graine or seede, leaing the other for the win
ning of the sike, as hereafter shall bee shewn: As
for to have faire come one chusteth the best carres to
low: so we will chuse for seede, the best quallified
coddles, without fearing so much the present losse
of piercing the bottoms, as to deface the ensuing pro
fit. For such cause let vs select, of the coddles or bot
toms, the chiefest, the greatest, the hardest, the
weightiest,
weight: the flax of pointed or yellow

ounce of a
wheat according to this reckoning, and one ounce of
feet, commonly called, from a hundred of the
feet, and one ounce of every foot, or one hundred
and forty-one, to one hundred and forty-one
feet, and to the hundred and forty-first, to one
hundred and forty-second, and so on.

The quantity of a grain, or of an ounce of
feet, and one ounce of every foot, or one hundred
and forty-one, to one hundred and forty-first, to
one hundred and forty-second, and so on.

The quantity of a grain, or of an ounce of
feet, and one ounce of every foot, or one hundred
and forty-first, to one hundred and forty-second,
The perfect fede of Shike wormes,

such bottomes as if it came only of the pointed ones.
The coddes to choffen, shall bee thredded, not in piercing the a crofe, for feare to let them take wind, and consequently to make the unprofitable, but one in passing the needle, through the stift downe, called fleaves, of which shal be made little chains, each composed of so many males as females: One shalzhang them on wooden pinnes, in a chamber, more coole then hot, neuerthelesse drye, for the Butterflies at their ease to come forth of their coddes, to engender together males and females, and there in dying for company, to lay their egges, so ending their lives. It is necessary to helpe a little to the furtherance of these Wormes, being then upon the period of their age, to the end to manage the feede well, otherwise much of it would be lost. By quantitie that one shal lsee the Butterflies come forth of the bottomes, one shall accouple them, male and female, if already they bee not of themselves, to which they shew themselves very diligent, and being j oyned together, they shall for the last time, be set to rest on Walnut leaves, readie spread upon a table under the coddes, there for to end their worke, the female laying her egges or graine, on the leaves of Walnuts: so whence afterwo rdes, although they bee firmly annexed unto them, yet are they easly taken off; for that the leaves being well dried, are easly betweene the handes rubbed to powder, and that blowing away with the wind, the feede remains cleane as one desires. Some with great reason, spread not Walnut leaves upon a table; but make little bundles, which they hang adjoyning to the chains of coddes; fee

ing
ing that the females lay their seeds more easie being
hanged over the males, then lain flat upon a table.
For to make the Butterflies, being their graine upon
paper, according to the usage of some, is not the pro-
fit of the work, because one cannot take off the graine
but in scraping it with a knife, whereby much of it is
broken. But yet also those goe more ill to works,
which put their Butterflies upon linen; for so
much, that the seed fastening it selfe to it very firm-
ly, cannot be taken away, but with losse, which for
to shewe, one is constrained to keep such linen,
till the spring time, & then in warming it to make the
graine to hatch, and from that same to take the
Wormes. By such order one cannot see the proofe
of wine, nor perceive the egges to know what quantity
of Wormes you will charge your selfe with; by
which, confusion may happen in the feeding them.
Neither the leaves of Wal-nut, nor paper, nor lin-
nen, are not so proper to receive the graine com-
ing from the creature, as chamber, or burato, for
that, that upon stuffes, (the graine is assuredly fast-
ning) so is it in like sort taken away without any vi-
olence or losse: for it is only done in rubbing gently
the chamber, or burato, between the hands, by
which means it is easily taken off.

The bottons, which shall have seeded for seeds, stame.
cannot afterwards be vis'd, but in sheen; not be-
cause of the substance which alwaies remains one,
but for the breaking of the thread which hath been
cut by the Worme, in making there a hole, to have
passage out of the prison, as hath been said. Of which
the Speciards taking heed sparing the best qualified
coxcles.
The perfect way of killing worms.

Codders, to be wonde off, employ for feede the double and triple ones, without great loffe of filke; if otherwise they bee of good marke. So cannot they not very well wind them off, because of the multiplicite of creatures; the which spinning their filke in common, make the worke very confus'd, whereby they are put in the ranke of the pierced-ones for fleaze. The being double or triple is not the fault of the Worme, but rather of lusine, and suppleness.

Sometimes also it happens by default of the place, which being too much thronged, confineth these creatures, in vomiting their filke to heape it upon one upon another, confusedly assembling two or three Wormes, and more, in one bottome without distinction of male or female; though that ignorant some say, that a double cod cannot conteine two creatures of a divers sex. The negligence of the houseman causeth oftentimes such disorder, when taking not more heed at the beginning of the climing of the Wormes, he leaves them to wander where they will to which he shall looke to, in guiding the conveniently; and likewise shall relieve them which fall to the ground: he shall put the short and idle ones into little corners or coffines of paper, thereby to facilitate their work, guiding them to perfect their bottom; without which diligent curiosity, many Wormes are lost, bee it in smothing, or in vomiting their filke to ill purpose, amongst their litter. Of every double, or triple bottome, comes forth but one Buterflie, though it have many within, in so much that being not able to bee all ripe at once, the first, which comes forth in piercing the cod by his
his issue, gives vent to the other Butterflies, by which casting cold, they remain imperfect and die, or when that by their meeting together, their common ripeness and issue happens in the same point and moment, the which is not seen but very rarely.

For the abundance and goodness of the filke, it is The winding to be desired, that the bottoms be call into the basin, or to winde them immediately having pulled them from the roddes, without any fray or entanglement. The which one cannot hope for of the bottoms kept some time, because that the gumme wherewith the Worme seethens her threads one against another, being dried doth so harden the bottome, that one cannot winde it but with great difficulty and loose, whereby some portion of the filke rests in the basin, and never remains so faire as that which is newly and easily woned vp. Besides this felicity, it is spared the fear that the Butterflies should spoile the work, there being not given them the leisure to bore the roddes for to come forth. But because that within seven or eight daies, one can very hardly winde off all the filke of a reasonable feeding, for the great number of workers, that for that one should employ, one shall keep both the one and the other of these two ways, that is, in setting themselves a work to winde off the bottoms, to soone as ever one shall perceive to bee a number of perfect ones, calling them directly from the twigs into the basin, having first pilled and bared them of their fleas, without other delay. And
The perfect way of killing Worms,
to kill the Butterflies of the rest which one is constrained to keep, to the intent that the creatures being dead within, the coddées remaine exempt from feare to bee bored, and by consequent returned for good sake, may add the pleasure of the winder. That is done in exposing and laying the coddées in the sunne, the heat of which dries the creature in his proper worke: but you must take a meanere, for feare of burning the filke. Three or sometimes in sundrie daies the coddées shall be set in the sunne, & at each time they shall remaine two hours before noone, and as much after, to the end that the great heat of that part of the day may readily fille the Wormes, before they be metaphorised or changed into Butter- flies: which will come to passe in spreading the bottomes upon fleeters, and oftimes removing them to make them all feel it, without excepting any from the heat of the sunne: neverthelesse to take heed to the charge, that by too rude handling one bruises not the Wormes within the coddées, for feare of rayning the filke with the matter of their bodies; the which (as hath been said) doth so glue together the filke, that it is impossible afterwards to winde it off. Therefore very softly oftimes a day one shall remove them from one side to another, afterwards they shall be heaped warmlyly together, and wrapped vp in the sheets, and so carried into a freshe chamber, not into a danke celler, as to il purpose some do. The sunne failing (as often times it comes to passe, that the skie is clouded) you shall use an oven moderately heated, as it shall be two hours after the drawing of bread: within the which by lackfuls, one shall put
got the coddles, which shall be laid upon boards, for fear that the stones of the ovens bottom should burn them. There they shall remaine an hour, or an hour and a halfe, in reiterating the manner, till that you shall know the creatures to bee certainly dead, by which you shall be resoluted without great loss, in taking one of the most suspectable bottoms, for to see the inner part. In the mean time you shall take heed, not to burne your flisse by too vehement heat, foreseeing which, the most sure way shall bee to heat the oven a little at once, and to returne so much the oftener, then too much, and so lasting lose all the work. This smothering of the Wormes, or Butterflies already formed, is of great import, for going to it either ignorantly, or recklessly, not taking heed whether that the Butterflies should come forth of the coddles, according to their nature, or not being able at all to take the ayre, should remaine in the way, after to be forced to passe further, nibbling the inner part of the coddles: of which little flisse can come afterwards, and that yet not very well qualified. Ill comparable to that of the Rats in this point differing, that the Rats gnaw the exterior of the coddles, for to cut up the creature which is there inclosed: and the Butterflies the interior to free themselves. The bottoms so prepared shall attend the pleasure of the winner. But this shall be no longer then that without delay you may conferre the flisse in his natural beautie and subject, without loss of weight, in the one and in the other, being as much the more defrauded of it, as more longer the coddles shall bee kepts. For that every day the hardnes of the bottoms augmenting,
The perfect use of Silke-Wormes.

...ting, in like manner is augmented the difficultie of winding it off; whereby the filike breaks with diminishing the quantity: and by long keeping, the quality is impaired. To these looses, diligence remedies, so that there be not given too much time to the bottoms to out-harden, the filike will be wonde off well enough: the winding whereof shall be continued, without divering to other vses, until the last bottom. So shall you entirely gather from this food both filikes and fleaves, without any losse.

This done, the bottoms shall be forde, setting apart the pierced and spottet ones, on one side, for to make faire fleave, as being of the most fine substance: and of the other side, the entire, simple, and cleane ones to wind off the most faire and pure filke, of all the which, for a foregoing, one shall draw off all the downe in pulling off the out-side of the bottoms, of which one shall make courte fleave, for that this is the reffuse and skimme, which the creature vomits at the beginning of his worke.

Of the fashion of the furnaces, bafens, wheeles or Rices, named at Paris deuidors, &c. at Tours, winders-up: but how one ought to turne them, if it shall bee by the hand, by the foot, or by the water, for the winding off, there is no need to speake of in this place: the work-men almost never agreeing together, every one hauing his particular practice. Only I will say, that the bafens of lead makes the filike more pure, than those of copper; because of the rust that this metall is subiect into, though water remains in it but a little while, from which the lead is vterely exempt. That the wheeles ought to bee great for the forward-
forwading of the worke, the which shall be made to winde off two skanes at once. That the fire of the furnace be of char coales, or at the leaft of very drie wood, so to the end that the fire bee without smoake, as well for the commodity of the winder, as for the bewty of the filke; the which through his delicatenes is easely blacked in the smoak. So is it in the libertie of the workman, to winde diversifie the filke according to the workes wherein one will vide it. But in so much that the master of the worke principally defines it, for to fell and convert it into money, the best shall be to do it the fairest that one can, having regard to the faculite of the matter, and the desire of the buyers.

Of the bottoms come of Wormes of a good race. The rate of and fed with the leaves of white Mulberries, it shall suffice that the workman winds off a pound and a halfe by day Paris weight, little leffe, for by such limit it will be small enough to be appropriated to all vses, and for that more vendale, than being groffer. This same shall be wonder of the single and best bottoms, according to the sorting aforesaid, referring the double and sotted ones (if one will not mingle the with the pierced ones, for fleas,) to make certaine separated skanes, that the Merchants take at the same price as they do the fine filke, such coarse stuffe being profitable to them in some workes. But this would bee to intermingle all the filke; and by consequent to debaze the price, if without distinction one should wind off all the bottoms together. The which the Merchants fearing, at the sight of the grosse skanes, buy willingly all the filke, by that affuring them.
The perfect use of Silke-wormes,

themselves not to be any intermixed confusion, nor fraudulent mingling, in the winding vp. The double and soyled ones, are very hard to wind vp, and yet howsoever one takes them, they yield but coarse filke: the tufted ones being also in the same predicament, as hath bin said, which by reason of that you may mingle together. The difficulty of their winding vp, shall be assuaged by soap, put in the basin of water with the bottoms; soap also helps to wind off the old coddles, hardened by time, in mollifying the natural gumme, which holds glued together the threads of filke, the which by this remedy are eaten enough to manage. The workman shall make two skeanes of filke by day, or four, if to that his wheelle and his other skill be appropriated; for that the filke shewes fairer in little skeanes, or skarles, than in great ones; as that by bestowing more fastenings than they do breakings of the filke, but in one only skeane: by this means they sell it for as much as the other, seeing that it is the commodity of the Merchants, which put it in worke, being more proper to be given to be wound in little, than in a great volume.

The remainder of the winding which cannot be wound with the skeanes, as the breakings off of the filke, and that which will not be got off, resting in the basin, shall be husbanded for to be wrought in tapetries, for Carpets, Chaires, Beds, and such like movable of the house; intermingling these matters with wooll, hempe, flaxe, cotton &c. As also of good fleas, with fine filke, shall be made cushions, faire and profitable to serue for the use of the house.

This is the manner to gather the filke, unknowne of
of our Aunccestors, through want of enquiring it out: having of long time beleewed, as from the father to the sonne, that this creature could not live elsewher, but in the countries of his originall. But time, the master of Arts, hath shewen how much the reasonable seeking of honest things is worth: frō such curiostie, being grown the tru science to govern this cattel, which at this day are managed with as little hazard, as the grounds are sowed, and Vines plāced, for to have come and wine. So often times it comes to passe, to finde that which one seekes. God blessing the labour and travaile of those which em- plōie their wits, not only for themselves, but also for the publike benefit.

Such is the beginning of the Silk-worme, such his government, such the effect and issue of his feeding, a creature most admirable for many causes, whereby not a little is gien to the conservaion of his race, when with no expence and small care it is kept during the yeare, as a dead thing, in his season for to take againe a new life.
THE PREPARATION OF THE BARKE OF THE WHITE MULBERRIE, FOR TO MAKE LINNEN CLOATH AND OTHER WORKES.

The revenue of the white Mulberrie, consists not only in the leaf for to have silke, but also in the bark, for to make ropes, course cloaths, meane, fine, and thinne, as they will, preparing the barke so, as shall be shewn hereafter, by which commodities the white Mulberrie manifests itselfe to be the richest plant, and of most exquisite vfe, whereof we yet have had knowledge. Of the leaf of the white Mulberrie, of his profit, of his handling, & the manner of gathering the silke, hath been heretofore discoursed at large. Here shall be presented the barke of the branches of such a tree, whereby I will represent you the facultie, since it hath pleased the King to command me to glue to the publique, the invention to convert it into cords and linnen, according to the proofs which I have shewn his Maiestie. And although we be not constrained to beg cloaths of our neighbours, (as till now we have done silke) in having enough for our provision, yet for that the master
and their benefit.

master shall not leave to imploy this benefit, which
God so liberally offers him, the same being in the
Provinces of this kingdom, where Flax & Hemp
are so rare, as if such there is more than of the other,
it will be found so much the more commodious, as
the constraint will be lese to disburse money, for the
buying of so necessary furnishments.

Many exquisite and rare knowledges are come to
light by accident. The Lute an excellent instrument
of Musicke, is come of the curiosity of a Phyitian,
which making the Anatomy of a Tortoise, for to see
the interior, and placing of his parts, handling of it
dried, touched vnawares some sinewes stretched
within it, the which making an agreeable sound, by
means of the hollownes of the shell, resolved by
that occasion to make a new instrument, since called
in Latin Tettide, of the name of the creature. The
almost miraculous science to graft fruit trees, is pro-
ceeded of a shepheard, when letting up his bowre,
the thrueit without thinking of a little line branch
of a tree within the body of another freshly cut
neere the ground, where it taking shewed the admi-
rable marriage of these two divets plants afterwards
so sought for, and refined by new additions. So it
happened to me touching the knowledge of the fa-
cultie of the barke of the white Mulberry. For by
the easie separation fro his wood, being in lappe, in
haung caufed to be made cords (after the imitation
of those of the rinde of Tilles, which they make in
France, even at the Louvre in Paris) and put to die at
the top of my house, were by the windes throwne
into the ditch, afterwards were taken forth of the
muddy
The perfect wife of Silke wormes,
mudge water, having remained there foure daies, and washed in faire water, and then untwisted, and
dried, I saw appeare the downe or thrum, the matter
of linnen, like to sylke or fine flax. I made these barkes
to be beaten with mallers, to separate the shreds,
which going to dust, left the gende and soft sub-
stance remaining: the which bark, hethereld and
combde after the manner of hempe and flaxe, was
made proper to spinne; and in entiling, hath been
woven and reduced into cloath. More then thirtie
years afores I employed the bark of the teeder shoots
of whil Mulberries, to bind graftes in the skutchion,
in stead of hempe, which they commonly use in
such delectable busines.

Behold the first prove of the value of the bark
of the white Mulberry: the which, accident, brought
into art, is not to be doubted, but to draw good jet-
tice from such inuentio, the white Mulberry being
replet with so many commoditie, to the great profit
of his possessor. The bark of Tille besides that it
ferues to make ropes, as hath been said, is somewhat
tractable to be made in clothes: but that is in very
grosse work, as for to ferue in wind-mill Fayles, and
such likenesses. The needle yeelds an exquiste mat-
er, wherof is made fine & delicate clothes: but there
is so little of it that they cannot make other recko-
ning of it then for curiositie. There are also certaine
other herbes and shrubbes yielding thrum or downe,
but some so weake, others in so small a quantitie,
some so grosse, and with so great dificultie to be
drawne off, that it is not possible to use them to any
profit, or to very little. It is not so of the white Mul-
berrie,
and their benefits.

berries, whereby the abundance of branching, the facility of disembarking, the goodness of Thrumme or Downe proceeding from that, makes this business most assured: yea verily with very small expense the matter shall draw infinite commodities from this rich tree. The worth whereof unknowne to our ancestors hath remained interred & buried until now, as by the eyes of understanding it shall be knowne, yet better by experiences. But to the end that they may make this business durable, that is to say, to draw off the bark of the Mulberry, without offending it, this here shall be noted, that for the good of the filke, it is necessarie to prune, to cut, and discourse the Mulberries, immediatly after having gathered the leaves for the food of the Wormes; nevertheless according to requir'd distinction, as I have demonstrated, whence the branches comming of such cuttings, shall serve for our intention: for that, that being then in sap (as in other time you must never put the bille to the trees) they will very easilie disbarke and this shall bee to make profit of a lost thing, for else they should be cast into the fire. Likewise the same cuttings cannot but serve well, if they lose them no better, for the first, to use them in fences of gardens, Vines &c. where such branches are very proper, for their hard shaggis, being drye and of long seruice, through which durableneffe they rote not in a great time; from whence finally taken, for their last profit shall be burnt in the kitchen.

And because that the divers qualities of the branches diversifie the value of their barkes, whence the most fine proceeds from the tender tops of the trees, the grosse ones from the great branches alreadie
hardined, the meane ones from those which are betwenee both. Then when they shall cut the trees, be it in pruning them, disbranching or disheadling them, the branches shall bee forced, setting apart in bundels cvery fort, to the end that without confusion mingle all the barkes may be drawne off, and handled according to their particular properties. Without delay the said rindes shall be separated from the branches vpon the favour of the sap, which passeth quickly, without which they cannot worke in this busines. And having bundled vp the barkes, of all the three forties a bundel, they shall be laide in cleane or foule water, as shall be fit three or foure daies more or lesse according to their qualities and places where they are, the trials whereof shall limite the terme, but in what parte ever they bee, the tender and small would be lesse steeped, than the big and great ones; being taken forth of the water, at the approach of euening they shall bee spread vpon the grasse in a meadow, if conveniently you may, or else where, expos'd to the aire, having vnside their fardels, for to remaine there all the night, to the end to drink vp the dewes of the morning; then before the Sunne lightes vpon them, they shall be heape togethers, till the returne of the euening; then put againe in the dew, and taken from thence at Sun rising, as afore, continuing that ten or twelue daies, after the manner of flaxe, and in sum until then, that you shall know all the flax to be sufficiently watered, by the proofe that you shall make in drying, and beating a handful of each of the three short of the barkes, laying those againe in the dew which shall not be ready enough,
and withdrawing the rest, as you shall find by the eie.

It hath been recited here before, that for to have profit of feeding the Silk-wormes, with leafe from two or three thousand trees, the Mulberrie-yarde ought not to be entered: and that well for to govern them, to the purpose to have long fruice of them, it is requisit, that there be lopped every yeere, the tenth or twelfth part, so by that there may be disheaded, every yeere, from two hundred and fiftie, to three hundred Mulberries, which will always yeeld betweene three or foure hundred burthens of wood & more. To which quantity, adding that which they take off from the trees immediately after their disleafing in pruning & topping them, there will be abundance of branches, and by consequent abundance of barks every yeere, from which will arise much worke of driers for, according to requisit fortis.

But yet the matter of our worke shall not rest here but shall plant woodes of white Mulberries, to cut low the mottie of them every yeere, for such purpose dividing them into two partes, from whence he shall have branches delicat and young, the barks whereof will bee proper to make fine and exquisite linen. And these woodes will not be onely profitable to furnish every yeere, abundance of new barks, but also fagging to burne; and poles for arbors in gardens, and to make hoops for tubbes and barrels, chusing for this the greatest branches. Also to give the leaves for to feede Silk-wormes, gathering them in the best aired and fennest parts of the trees. And for the augmenting of good husbandrie, to feede an infinit number of connies, provided that...
The perfect use of the wood of Worms, that the wood be inclosed for a Warren after the manner before described. So there will be sure notable commodities, which the master shall reap from these woodes: which for the spoyle that the connies may do in discharging the feet of the trees in winter, as they doe all sorts of plants, a few excepted, he shall not leave himselfe vntroued of so profitable a beast. Wherefore somewhat to amend such a fault, helping the connies to meate, it behoveth not but to lowe oates in certaine places and great allies, which for such purpose shall bee left emplac’d in the woods, where the connies may feede during the colder, by so much sparing the Mulberries: for the succoring of which, besides, you shall cause to bee thrownne to the connies, the outcasts of your garden, hay, cuttings of Vines, and other druggeries in winter, then when the snowes contraint those cattle to goe to the trees, for want of other foode. Yet for the fifth commoditie, I will adde here, that the leaves of Mulberries, in what place soever they bee planted, falling of themselves to the ground in the end of summer, put together in some separated loft, taken from thence day by day, and glu’d bayled to wine, keepe them in good state, beginning to put them into flesh: the which comes to them, when in enuting, there falls a good malt, whereby they grow to the superlative degree of fatnesse.

I would couch here for the sixth commoditie the Mulberries fruit of these trees, so much loued of poultries, for their exceeding sweetness, if the gathering of the Mulberry leaf for the wormes, were not the means for vs to make profit: the which...
and their benets:

puld from the trees with the leaues, yet greene, long before their maturitie, remaine nothing worse, whereby no certaine account can be made.

All the which things, bringeth to light the worth of the Mulberry, a tree filled with the blessing of God, which in this only place giveth to all sortes of men, and estates, these excellent matters, for to furnish and apparell the, according to their affections. The joyfull proper for the Mulberry to beare agreeable foode for the Wormes, is that same which the Vine desireth. Wine is healthfull for the Wormes, fortifying, prefuring and curing their diseases. And as the Vine beginnes to bring forth good wine, in his fift or sixt yeere, so in like age the Mulberry beginneth to beare leaues, very good to nourish the creature, an observation hitherto already marked. Having made these two excellent plants here to march in companie, it shall not be to ill purpose in continuing to represent their sympathies, to say, that the spirit of wine, by distillation, is converted into water of life. So the quint-esseence of the Mulberry yeelded in the leaf, is from thence extracted by the Worme, which turns it into filke, the earthly matter remaining in the wood, of the which, yet the most digested part, yeeldes in the bark, from whence it is taken, as hath been seene. But to enter further into the consideration of such secretes of nature, that would bee to surpass the limits of my delibration, which is not to treat in this place but of the barke of the white Mulberry, for to gather the riches which therein is hidden. So my discourses not diting to the Center, shall rest themeselves at the Superficiall.

N. 3.

By.
By this figure is shewed the order, to rank the tablets on the scaffolds, for to lay the leaves on, to feed the Wormes there.
By this figure is shewed the manner to place the rods between the tables, for the Wormes to clime vp and spinne their silke.
To wind off the Silke from the cogs you shall proceed in this fashion, that is, to set a cawtham in a furnace filled with faire water, the neatest & clearest is best, which shall be heated til lurch a degree, that the water becomes bubbled, as though there were small peailles in the middle, calling vp a little white skum, which it wil do when it is ready to seeth, & then you shall cast in your cogs or bottoms, which you shall remove and stir vp and downe with a little broome, or small bushes; & if they will not wind easily, you shall augment your fire, and being begun to wind, if you see that they wind easily, you shall slacken it.

The bottoms winding, the threads will catch hold at the said broome, or bushes, which you shall draw out with your fingers the length of halfe a yard and more, till that all the grosfeness of the cogs be wound off, which you shall cut off & lay aside, holding alwaies with one hand all the threads of your bottoms joined, & united to one thread, & then according to the fike that you desire to make, you shall take of the threads of the bottoms; that is, if you will make organze, you shall take the threads of six bottoms, or if you will make Verone, you shall take twelve or fifteen cogs, & having joined & united them in one thread, you shall put it first of all through a wyer ring, appointed for to rank the threads, which must be fastened against the fore-part of a piece of wood, set directly upon the forme, before the round or circle which wee call a bobbin, for that in the top of that pice of wood in a little space that there is, are fastened two bobbins distant one from another two fingers, from the said ring you shall draw your thread,
and their benefit.

and shall crosse it vpon the said bobbins, which are fastened there, to no other end, but to twist the filke, and from the bobbins you shall put thorough the said thred aboue in a ring, which is fastened in the midst of a staffe, which goes to & fro as the Turne goes, called a lincet, set a crosse beneath the wheele, and from that ring you shall draw and fatten the said thred vpon the wheele, which you shal alwaies turne till your skeane of filke be wonde vp. It is represented in this next figure.

You must note also that according to the number of thredes of bottoms, which you have taken to compose your thred, you shall continue the said quantite of cods for your thred, and shall alwaies furnish the like number, when any one shall be quite wonde off, or their thred broken, which you shall perceive by the moving of the bottoms, when the full number sits not, and you shall continue that un-till your skeane be made.

You shall also be curiosous to cut the knots which will be at your bottoms, or thred, to make your filke more pure and stronge.

In the winding of the filke, some put Gumme Arabick in the water, where they cast the cods to winde off the filke, (which they say) they doe to the end to make it more pure and glossie, but it is for sheer deceit, of purpose to make it weigh.
By this figure is shewed the fashion of the Engine, how to wind off the slake from the casks, with the furnaces and caishternels for that purpose.
By this figure is shewed the portraits of the cotes, and the Butterflies comne forth of them, to engender and lay their eggs upon black Serge, Chamberlet, Tammey or such like stuffs as hath been said.
A DISCOURSE OF HIS OWNE, OF THE MEANES AND SUFFICIENCIE OF ENGLAND, for to have abundance of fine silke, by feeding of Silke-wormes within the same; as by apparent prooffes by him made and continued appeareth. For the generall peace and commonall benefit of all those his Countrie-men which embrace it.

Pro patria pario.