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About the Institute

The Hunt Institute for Botanical Documentation, a research division of Carnegie Mellon University, specializes in the history of botany and all aspects of plant science and serves the international scientific community through research and documentation. To this end, the Institute acquires and maintains authoritative collections of books, plant images, manuscripts, portraits and data files, and provides publications and other modes of information service. The Institute meets the reference needs of botanists, biologists, historians, conservationists, librarians, bibliographers and the public at large, especially those concerned with any aspect of the North American flora.

Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

Guy de la Brosse, May 4, 1913.
Guy de la Brosse - Botany
Doc 1

An 23

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I illustrate this page.

[Hh. 19.16] s: flor front.
2 MSS also

Guy de la Brosse, May 4, 1913.
17th century Botany
DXXI

6

Books by Guy de la Brosse:

Catalogue des Plantes cultivées à présent
au Jardin Royal des Plantes medicinales
Paris 1641. 8°. BM [988. d. 8.]

Description du Jardin Royal des Plantes
medicinales establi par le Roy Louis le
Juste, à Paris, avec le catalogue des plantes
qui y sont de present cultivées. Paris. 1636.
BM [443. e. 35]

L'Ouverture du Jardin Royal de Paris. Paris 1640
BM. [B. 211. 3]

Tracté de la Peste. Paris 1623
BM (1167. e. 11. (6))

De la Nature, Vertu et Medicinè des plantes. Paris
1620. BM. [988. d. 8.]

De la Nature, Vertu, et Usité des Plantes.
 ... par Guy de la Brosse, Conseiler et
 Medecin ordinaire du Roy. A Paris, Chez
 Rollin Baragnes, au second pillier de la
 grand^e Salle du Pallais. M DC. XXVIII.
 avec privilege du

(The last word is missed entirely in the Camb. Univ. Lib.
 copy Hk. 19.16.)
 (This wd be in the reign of Louis XIII 1601-1643)

Before the title page is an ornamental title page
 the sun shining over a garden, with the motto
 "La verité et non l'autorité"
 Portrait of Hippocrates - motto below "des effects
 aux causes"
 Portrait of Dioscorides - motto "de l'esperence la
 connoissance"
 Portrait of Paracelsus - "Chaque chose a son
 Ciel et ses astres"
 Portrait of Theophrastus - "En vain la Medecine
 sans les plantes."

Dedication - called "Epistre"

3.

A Monseigneur le tres-Mestre et le tres-
-reverend Cardinal Monseigneur le Cardinal
de Richelieu.*

(No accents because all capitals)

The author brings his flowers to strewe before
"le temple de vostre vertu incomparable" - "En the
flowers he claims" "Pour ~~estre~~ estre filles de la terre
elles ne sont tant ~~ad~~ abjectes qu'elles ne
meritent de la faveur des Dieux; l'Ambrosie,
le Nectar et la Panacee cheries des immortels
sont de leurs familles, et les Lauriers ont ceint
les fronts des Heros avant que l'or esclatist
sur leurs testes. Les Considerant en leur
pureté, nous percevons et nos sens nous en
assurent, qu'elles s'esmeuvent a la joye, et
fremissent a la douleur"

* From 1624 - 1642 (his death) Cardinal Richelieu was
the unswerving King of France. A busy man in his
diplomatic + despotic career was his patronage of arts
& letters. He founded the French Academy in 1635

To the Reader "Au Liseur"

The idea of composing this book came to the author while he was working on the scheme for the construction of the "Jardin Royal des Plantes Medicinales"

He calls the plants

"ces estoilles de la terre"

He repeats that in this work he has only made a beginning "Le champ est grand et ouvert à ceux qui voudront y faire gerbe, il y en reste plus que l'on n'en a moissonné."

The field is wide & open to those who ^{desire} wish to ~~go~~ further sheaves; ~~more~~ ^{more} remains than has been harvested.

to those who would reproach him ^{and bring him} for ^{beaten back} he replies that it is not novelty which has attracted him "mais une grande apparence du vrai; ^{probatum} que lors que l'on me ~~montrera~~ ^{montrera} une plus belle lumiere, que je la suivray de tout mon possible."

He contends against the opinion of the day that all truth has been discovered. He takes reason for his guide & says that he does not desire to be believed (to be tested):

"aussi je ne desire je pas que l'on me croye, mais que l'on m'exprouve".

5.
"Je n'ay pas dressé ce traité des Plantes
pour suivre les anciens ny pour imiter aucun
qui en aye escript avant moy, mais seulement
pour dire ce que j'en pensois, m'estant fait
croire qu'il est permis à un chacun d'estaler
ses experiences, et ce qu'il peut avoir de connu
des choses qu'il a maniées."

"I have not drawn up this treatise on Plantes in order
to follow the ancients, or to imitate any who
have written before me, but only to say what I have
thought, ~~and~~ ~~it~~ ~~is~~ ~~borne~~ ~~in~~ ~~upon~~ ~~me~~
that it is permitted to each man to set forth
his experiences, & to avouch the same to himself
concerning the things whom he has handled."

"ne croy pas que les sujets recherchez dedans les vieux
chapitres de la description antiquité valent mieux
que les nouveaux"

"Contente against the repetitions of ~~del~~ ^{opinion} ~~opinions~~ in modern books,
says that if they are wanted they should be say in
the original authors"

"To accept an opinion because it is del, or because it has
been received by many people is a "lâcheté" trop grande pour
des hommes de courage et raisonnables."

To those who regard that the author offers an unwelcome
reception because it is new he replies that if it is true
it is ^{therefore} as old as the universe. (^{quod} est verum,
quod est auctorem auctorem que l'univers)

"If the thought of Aristotle (talks with it / experience)
well good, otherwise I shall not fear to say that the
good man was mistaken, that those who follow him
with so much obstinacy have not made trial of his
imaginations, nor judged of his opinion by experience

"The author blames Aristotle for not using enough actual
observation & experiment

But it is necessary to consider these things not in general
but in particular, such would be a very easy ^{way of learning} ~~apparent wisdom~~, but in detail
in order to acquire a perfect knowledge of the objects, & then
one ~~must~~ must not enter there with the arms crossed &
the hands beneath the ~~arms~~ arm pits, both arms to
be employed digging out metals, gathering & drying up
plants & dissecting animals, & then examining the whole
by means of fire, — this is the truly wise procedure."

The author points out that these methods have led to
the discovery of many things unknown to Aristotle, so that
it is no wonder if his ^{methods} ~~discovery~~ do not wish to receive them
to the shame of their master & the confusion of their
apparent wisdom.
"apparent wisdom"
= discipleship

Concerning the Excellence of Plants

The innumerable & diverse beauties which we see in plants may ^{rightly} persuade us ~~with reason~~ ^{by their still} ~~more~~ ^{sublime} ~~than~~ ^{voices} ~~these~~ ^{months} ~~few~~ ^{months} ~~days~~ ^{months} ~~of~~ ^{months} ~~the~~ ^{months} ~~earth~~ ^{months} ~~are~~ ^{months} ~~not~~ ^{months} ~~produced~~ ^{months} ~~by~~ ^{months} ~~the~~ ^{months} ~~vain~~ ^{months} ~~of~~ ^{months} ~~the~~ ^{months} ~~fields~~ ^{months}; & that surpassing in number & excellence the stars of the firmament they have indeed another use. For this beautiful language ^{inscribed} ~~is~~ ^{is} ~~written~~ ^{is} ~~in~~ ^{is} ~~so~~ ^{is} ~~many~~ ^{is} ~~fair~~ ^{is} ~~colours~~ ^{is} ~~,~~ ^{is} ~~tastes~~ ^{is} ~~,~~ ^{is} ~~scents~~ ^{is} ~~,~~ ^{is} ~~forms~~ ^{is} ~~is~~ ^{is} ~~no~~ ^{is} ~~less~~ ^{is} ~~heard~~ ^{is} ~~than~~ ^{is} ~~that~~ ^{is} ~~of~~ ^{is} ~~months~~ ^{is} ~~which~~ ^{is} ~~actually~~ ^{is} ~~speaks~~ ^{is} ~~,~~ ^{is} ~~the~~ ^{is} ~~latter~~ ^{is} ~~may~~ ^{is} ~~be~~ ^{is} ~~deceptive~~ ^{is} ~~,~~ ^{is} ~~the~~ ^{is} ~~former~~ ^{is} ~~can~~ ^{is} ~~then~~ ^{is} ~~hear~~ ^{is} ~~upon~~ ^{is} ~~the~~ ^{is} ~~lips~~ ^{is} ~~compelling~~ ^{is} ~~our~~ ^{is} ~~belief~~ ^{is} ~~.~~ ^{is} ~~The~~ ^{is} ~~favours~~ ^{is} ~~which~~ ^{is} ~~they~~ ^{is} ~~have~~ ^{is} ~~received~~ ^{is} ~~is~~ ^{is} ~~being~~ ^{is} ~~the~~ ^{is} ~~first~~ ^{is} ~~of~~ ^{is} ~~living~~ ^{is} ~~things~~ ^{is} ~~to~~ ^{is} ~~appear~~ ^{is} ~~on~~ ^{is} ~~the~~ ^{is} ~~face~~ ^{is} ~~of~~ ^{is} ~~this~~ ^{is} ~~globe~~ ^{is} ~~,~~ ^{is} ~~even~~ ^{is} ~~before~~ ^{is} ~~the~~ ^{is} ~~stars~~ ^{is} ~~embellish~~ ^{is} ~~the~~ ^{is} ~~sky~~ ^{is} ~~,~~ ^{is} ~~in~~ ^{is} ~~having~~ ^{is} ~~been~~ ^{is} ~~the~~ ^{is} ~~first~~ ^{is} ~~to~~ ^{is} ~~feel~~ ^{is} ~~the~~ ^{is} ~~effect~~ ^{is} ~~of~~ ^{is} ~~the~~ ^{is} ~~Divine~~ ^{is} ~~Benediction~~ ^{is} ~~,~~ ^{is} ~~are~~ ^{is} ~~certain~~ ^{is} ~~proofs~~ ^{is} ~~of~~ ^{is} ~~their~~ ^{is} ~~value~~ ^{is} ~~worth~~ ^{is} ~~.~~ ^{is} ~~These~~ ^{is} ~~advantages~~ ^{is} ~~have~~ ^{is} ~~not~~ ^{is} ~~been~~ ^{is} ~~found~~ ^{is} ~~in~~ ^{is} ~~them~~ ^{is} ~~for~~ ^{is} ~~nothing~~ ^{is} ~~,~~ ^{is} ~~the~~ ^{is} ~~powerful~~ ^{is} ~~hand~~ ^{is} ~~which~~ ^{is} ~~has~~ ^{is} ~~planted~~ ^{is} ~~them~~ ^{is} ~~does~~ ^{is} ~~nothing~~ ^{is} ~~uselessly~~ ^{is} ~~:~~ ^{is} ~~it~~ ^{is} ~~is~~ ^{is} ~~rather~~ ^{is} ~~necessary~~ ^{is} ~~to~~ ^{is} ~~think~~ ^{is} ~~that~~ ^{is} ~~as~~ ^{is} ~~they~~ ^{is} ~~preceded~~ ^{is} ~~in~~ ^{is} ~~their~~ ^{is} ~~existence~~ ^{is} ~~the~~ ^{is} ~~ornaments~~ ^{is} ~~of~~ ^{is} ~~the~~ ^{is} ~~sky~~ ^{is} ~~,~~ ^{is} ~~as~~ ^{is} ~~they~~ ^{is} ~~do~~ ^{is} ~~not~~ ^{is} ~~surpass~~ ^{is} ~~them~~ ^{is} ~~in~~ ^{is} ~~virtues~~ ^{is} ~~:~~ ^{is} ~~one~~ ^{is} ~~can~~ ^{is} ~~alone~~ ^{is} ~~enjoy~~ ^{is} ~~these~~ ^{is} ~~fruits~~ ^{is} ~~of~~ ^{is} ~~nature~~ ^{is} ~~,~~ ^{is} ~~&~~ ^{is} ~~the~~ ^{is} ~~esteem~~ ^{is} ~~in~~ ^{is} ~~which~~ ^{is} ~~their~~ ^{is} ~~influence~~ ^{is} ~~has~~ ^{is} ~~been~~ ^{is} ~~held~~ ^{is} ~~to~~ ^{is} ~~be~~ ^{is} ~~by~~ ^{is}

no means proved beyond doubt: all the senses, on the
other hand, find their objects in plants etc.

Chapter II

^{p10} Empedocles & Anaxagoras (according
to Aristotle) believed that plants like animals
were distinguished by their sexes, full of feeling,
moved by joy & sorrow & having the habit of
waking & sleeping.

In the present century Thomas Campanelle
has attempted to prove this, in opposition to the
denials of Aristotle. "Liber de sensu rerum"
(See to Aristotle plants have no feeling, do not
sleep & wake. Meyer p 98, 102, 132)
^{p11} But, as Brisse points out, this denial of Aristotle's
view has not been generally accepted, is worth
consideration.

^{p11} All philosophers, ancient & modern give to all
plants life, - Brisse affirms that they are as much
alive as animals. p12

Nourishment is necessary for the life of animals & plants. Air
must be counted as food in the case of the chameleon
& the Bird of Paradise. (p12) The Oryza & the Aloes
can live a while & without being up to the ceiling, - but
they must have air, - with air they die.

p. 13
Growth - at least as active in plants as animals, for
in the former it continues up to the time of death. 9.

p. 14
Reproduction - a character shared by plants & animals.
p. 15.

Movement.
Inanimate things such as the wind can move, & so are
animals which have no movement, oysters & barnacles

p. 16
He wishes to show that plants are endowed with movement,
but the examples he gives are not very satisfactory except that
he draws attention to the movement of bulbous plants in the
soil, Alliacum, Tulips etc pointing out that year by
year they change their position, rising or sinking a moving

laterally.
p. 17
Points out the great diversity that exists in the development
of the senses of animals

pp. 16-17
Compares a tulip or an onion bulb kept out of the ground
to a snail during its period of hibernation.

Chapter 18 p. 18 "Les Plantes sont animées"
That plants have souls

"Par ceste assurance que les Plantes sont
animées, se forment 4. questions assez
sensibles et curieuses. 1. Quelle est ceste ame?
2. Si elle est particulière en ~~chaque~~ chaque Plante

* Note in margin of soul.
see to lettre, Principe de Vie

individuelle ou seulement speciale 2.2 Si elle est 10.
divisible, comme ^{quelques-uns} ~~quelques-uns~~ ont penché? 4. Et
puis si elle est incorruptible, ou non?
p21.

"je me tiens, ~~comme~~ ^{comme} en tout ce qui concerne la Foy,
à ce qu'en a déterminé l'Eglise."
pp 26-27

Some attributes to the soul:—

"un esprit artiste en chaque suiet, outrageant
en la maniere qu'il dispose et agencé selon sa
cognoissance et inclination naturelle" & producing
the specific forms & qualities of plants.

Chapter IV
If the soul is particular in each individual
plant, or if it is only specific

p29.
There is a "faculté specificante" which determines
into her form a plant shall develop. "elle a bien la
propriété de faire qu'une Tulipe et un bellier-
se multiplient et suivent leurs especes, mais
non pas que les fleurs, les feuilles, les tiges, et
les semences en varient: il faut que telle depeu-
procede d'une particuliere et individuelle puissance."
The plants are thus in cases such as Poppies &

Julip seeds from the same head produce plants differing
widely from one another. ^{p 30} Some people say that this is
"un jeu de la Nature" but Brossé replies that such
an answer is meaningless

^{p 31}
Some will say that in general plants of the same
species resemble one another perfectly, but he shows
that this is merely lack of observation

^{p 32}
"Que l'on observe ces différences en les Plantes
de même espèce et des plus semblables en
apparence; jamais l'on n'en rencontrera
deux pareilles en tout, non pas deux types de
Majolaine, non plus que deux Chênes, non
seulement en tout, mais encore aux parties.
L'un sera droit, l'autre tortu, celui-cy
^{uniform} l'un, et autre ^{bruy} voicieux, celui-là n'aura qu'une
tige, son voisin sera fourchu, les feuilles
en seront différentes en leurs épaisseurs,
nerveures, dentelures, lineures, et autres
tels accidents, selon la nature et espèce de
l'arbre ou de l'herbe. Les fleurs, les fruits, et
les semences s'en trouveront aussi très variés;
sans qu'il soit possible de découvrir dans un
millier de Pommés deux pareilles, tant au dedans
qu'au dehors.

Chap. V p 34

Si l'Âme des Plantes est divisible

An objection which is raised to the individuality of the soul in plants is that if one or more plants are grafted on to another, the resulting plant would have several souls which is absurd. And secondly, the cuttings can be taken of individual parts which develop into whole plants, so that the soul of the parent-plant has been divided.

" Ces deux objections sont faites par des courageux pareux et couards

p 36

Brose points out that the ^{wild stock} plant on which another plant is grafted merely serves to nourish it, while retaining its own individuality.

Chap. VI p 42

Si l'âme des Plantes est incorruptible.

Brose does not mean that plants have immortal souls in the sense that men have, but that the plant soul is immortal in the sense that it lasts as long as the world endures. This opinion, he says, was held in ancient Egypt.

p 45 " I know by experience that if one extracts the water, the oil & the salt of a plant, then ^{mises} ~~them~~ ^{them} together again & commits them to the earth, the same plants will be born again, much more

beautiful than it was before "

p. 46

Brome concludes that the souls of plants are immortal so long as the world lasts; as soon as they cease to vegetate when they have accomplished the term of their duration: then, after such fatigue they retire into their organs to rest, & to return again to life in course of time.

"Who knows if the souls of plants have not been all created from the commencement of the world?"

Chap. VII p. 47

What are the faculties of the soul of the plant

p. 50

When a plant reproduces, its soul does not give rise to other souls, as a flame will multiply in combustible inflammable material, but rather ~~are~~ ^{are} attracted from chaos ~~to the~~ ^{to the} plant souls which ~~are~~ ^{are} ~~awaiting~~ ^{have} existed since the creation of the world which are awaiting the appearance of their appointed time to appear "à la veüe" du monde." ^{expectant} The plant souls are contained & concealed in earth & water & it is they which unite with the seeds soon in these elements & give them power to germinate. This is why seeds soon

in an unusual place, — water lily in dry land, 14.
pulsatilla in clay, a gentian in sand, — fail
to germinate successfully, because they fail to meet
soils belonging to their own species.

Chap. VIII p 53.

If plants have any senses

Point in the study of Denys, sense organs of plants,
although such have not been discovered, from the
sense organs of animals show such various
grades of development, & some are so difficult to
detect

p 62

Oxalis acetosella (I refer to it, *Altilaga*)
folds its leaves when it feels rain — (tempest night,
but reopens them when the bad weather
is past.

The Carline Mantle is the almanack of the
peasants of Auvergne & Languedoc. They nail
the flower heads to their doors — they open in
good weather & close in bad. ^{also "meuriers" desire}
"Bon Christien" pear tree ^{before company}
they in order to bear ^{good fruit}
growing better in frequent combs than in
orchards. The hazel twig shows where
metal is to be found

Plants have long, and potatoes as animals have, —
e.g. the vine dislikes the cabbage as much as
it loves the young clover.

Chap. 18 p 63.

If plants are moved by jerry screws

When rain falls in summer in plants which
have endured a long dry heat the plants by
the agitation of their branches leaves give
"un agréable murmure de ioye"

^{p 66}
Mimosas after sunset becomes languid &
appears dead — only returning to full or dawn &
being in full vigour at noon.

Chap. X p 67

Plants have times of rest & work, corresponding
to deep wakings in Animals

^{p 68}
Plants work & are fatigued. They work in drawing
nourishing sap from the soil, digesting, transmuting
& distributing it & in excess their feelings &
functions. They are also fatigued by heat &
tempestuous weather & thus have need of
respite sleep.

16.
The ^{Reguette} ^{Reguette} " - the "Treffle aigre" (orati)
fold the air leaves at sunset + unfold them in
dawn.

Plants have a definite winter sleep after the labour
of Spring + summer like the bear, the "glirons"
+ serpents

Chap XI p 72

That plants breathe air

Air is no less necessary for the life + nourishment of
plants than animals + like both die of deprivation
of "this celestial ^{meat} food"

p 73
Trees are not successful unless planted when the air has
free access to them

p 74
Trees of the same age, plants close together, get very tall
+ weak, reaching after the air.

p 75
The dew is of great importance to plants

p 76
"Rosée de May et pluies d'Avenir"
Valent mieux que le Chariot du Roy David"
(checked) (no accents)

Chap XII Of the sex of plants

p 85. Concludes to an- plants - an androgynous, -
pointing of the nature of both male & female.

Chap XIII. Of the parts of plants

p 86

Distinguishes as parts the ^{skin} cortex, wood of stems &
secondly, root, stem, branches, & spines, leaves
flowers, fruits seeds.

Leaves - nerves, fibres, membranes.

Flowers - calyx, leaves, & stamens

p 88.

The cortex (bark & rind) is of 3 parts - a coarse
outer skin exposed to the air, - a soft tender layer
corresponding to the flesh & a ~~soft~~ ^{third} thin
fibrous - adherent to the wood of the root, stem or
branches, approaching the nature of the pericarpium
in animals, up which the sap rises. It is in this
the life of the plant - manifest itself. The cork
(tree can have it: bark removed by a line, but if the
layer is removed it dies)

Chapter XIII Of the manner of life of plants & of their 180

Nourishment

Chap XV Of the Generation of Plants.

p 104

The seed has 3 parts, 2 vessels & 1 umbilic. The first is the body of the seed which we call "mere-germe" (By this is meant the endosperm of cereals & the cotyledons of peas & beans) which germs & converts into milk at the time of germination.

The second is the germ, - the third the umbilic. The germ is located in the first. The germ won't develop separate from the mere germ, - nor if the whole

germ is ground up

p 106

In germination to ripe soil is necessary, & the degree of temperature & humidity

p 107

Barley sown when an East wind is blowing yields a full ear to the rick, "et celum de Sud le Province"

Peas planted when the wind is in the N. or S. cook with great difficulty, while if it is in the S. they soften easily, but they are subject to the attacks of an insect, especially if they are sown when the moon is waxing - sown on small but fertile

p 111
Thrushes eat the fruit of the mistletoe, - the germ is
uninjured by passing through their bodies, & it departs
on some branch of tree, where it takes root.

Chap. XVI p 113
How these plants originate when have no apparent seed

Chap. XVII p 125
If the Sun is the principal agent in the formation of
plants or if it is in themselves
de la Borne shows that the sun is not the actual cause
of the development of plants. The ants destroy the
germ of the grain & then leaving to evaporate
damps with no fear that it will germinate. It is
the germ that is the "centre de vie" & the Sun's
is merely the instrumental cause, "resuscitant"
by its heat - les esprits artistes made dreary
by the cold

Chap. XVIII p 130
Whether the earth does not produce plants in the course
of centuries new Plants, as the Sky does new stars
p 133. Plants are altered by alteration of place, - the
sweat of ^{Flemish} Flannel becomes better here, -
by the quality of the earth. Water from ^{Flemish} becomes Garden Balm

p 155
Since plants can be grafted together, de la Bourse thinks
that seeds also might be made to combine & produce
something new. ^{p 154} He admits that hybridization cannot
take place in a way analogous to that which occurs in
animals, but he suggests that ~~it~~ ^{the effect} might be tried
~~rather~~ by grinding several seeds of different species
& reducing them to powder together & then sowing
them in the earth - p 155 He thinks that something
of the kind may happen in nature & produce new
form

p 156
He suggests that though all the seeds ^{all} ~~of~~ ^{which} were originally
created at once & ~~from~~ committed to the earth, they
may have the capacity of germinating in succession
in the course of ages, centuries, "selon les ages
du monde" & that time may be kind which
have not yet emerged, which our posterity will
know see though they remain unknown to us.
He points out that there is great variety in the
length of time which seeds of various species now
longer take to germinate

Chap XIX p 158

The Excrements of Plants

p 160 Broussais compares the leaves of plants to
animals, feathers, buds & scales of fish

hair 7

He suggests that gum, resin may be the nature of excretions

p. 141 Chap. XX

The Maladies of Plants

All living things are subject to change & alterations, they never remain stationary, but improve from birth to "the Optimum" & from there point descend towards death

p. 142

Cultivated plants are more subject to disease than wild, & domesticated animals

Describes the diseases which plants are subject to & shows that they are comparable with those of animals.

Chap. XXI p. 148

Of the ages of plants & of their death

The life of each species has a natural limit, & some decay to centuries, but ceases to be any more by disease or accident

Chap. XXII p. 155

What is the cause of the decay & death of plants

To the Reader on the Second Book of *Plantes* ^{Open} p. 160 21

Points on that in this book he is going to treat the
subject quite differently from his predecessors. He will
show that - the qualities of plants do not depend on the
elements, - that they cannot be discovered by taste, or by
touch or sight -

He points out that Aristotle's words must not be
accepted as final. "If he had brewed such a
^{resembled Aristotle's} religion towards Plato his words as you wish
me to maintain towards his opinions, you would
not have them now."

Opinions do not become true because of their
length of time they have been held.

Book II
Chapter I. Definition of the Plant p. 161

The plant is an ^{living} animal body, intermediate between
Mineral & Animal, attached to the earth as ^{matrix} ~~matrix~~ ^{matrix}
nurture, without which it would be unable directly
to live or reproduce.

p. 164
If it is objected that Deshayes does not fall
into this definition, Boerhaave points out that this
plant or "pans" is "muddy" or "agnate" water
which as "one subtle term" is present

Chapre II Division of Plants

This Chapre is classifies plants into 7 kinds:—

- Trees, shrubs, herbs, parasites, Mosses, Mushrooms (including Toadstools)
- + Truffles.

p. 174 Refers to "L'Après de Fuschs"
 Delechamps
 p. 177 + 181

Chapre III. Enquiry as to whether the ancients have classified plants well, whether they were well arranged ⁱⁿ their species, & if they have been well named.

p. 180
 Accuses "Pera, Libele, Graues, Leonice, Turnicer, Dodonee, Clinia" authors of having placed plants in one or the same species (genus) because they resembled one another in one point—namely

p. 183
 He groups 14 species being brought together under the name "Scranium" because of their form is like ~~the~~ ^{the} ~~bold~~ crane's bill, — says they ought to be named by their virtues and their resemblances

Chapter III p 185

Whether all Plants are known

Conclude that all plants have not been described & discovered.

Chapter IV

Of the knowledge of Plants, by various "accidents" serving to discern them & divide them by species

p 191

goes into considerable detail about the shapes met with among leaves

Chapter V

Of Plants having virtues & properties & what

p 201

"Reason teaches us that all everything in nature is there for someone, either for the beautiful or for the good, - the former concerns the delectable, the latter, the useful; both are inseparable, because all that is beautiful is good & all that is good is beautiful"

Chapter VII p 203

Whence proceed the virtues of Plants; whether from their shape & its influences

p 203
"Some hold that this great azure ceiling is the
spouse of the earth, that ~~from~~ ^{from} ~~proceed~~
her fertility & her sterility & that all good, all
evil springs from his power."

p 204.
This opinion, though not authorized by persons
than antiquity & our centuries have esteemed as very
wise, does not satisfy ~~me~~ ^{me}, also it is not proved.
He shows had difficulty is to conceive any
method by which the stars can have ~~such an~~
influence upon & direct the virtues of plants

p 207
He by no means denies the influence of the moon.
He says for instance that trees cut at full moon
become worm eaten early whereas this does not
happen if they are cut when the moon is new

p 217
Mars assures us that before they were stars in
the firmament there were plants upon the earth

p 223
Ref to "Severin de Dannemark"

p 224
Ref to Jordan Brun "Gardens Bruno" b. 1570
at the influence of the stars
hardly considered "ce qui nous
parait de plus recevable" with
when he appears disposed to agree
"des accidens & malheurs facheux, et d'ail estranges effets contre la terre"
Gardens Bruno b. 1570
Bruno or. heretic 1600.
lectures in Paris, among other papers
that the stars have a critic
gent power in the
the world to produce
the world to produce

p254

Plants growing in the same habit may have totally different qualities. The *Thymus* whose quality is hot, & the deadly nightshade whose qualities are cold may grow together in the same garden bed.

The "Tombarde" which is cooling grows on wells with the "Vesler jaune".

p258

The least & ~~poor~~ meanest herb has its soul, as well as the great eat, - a ~~drop~~ ^{spring} of Marjoram as well as an Oack.

Chap. XI p 260

If the virtues of Plants can be known by the senses or otherwise

p261

"La plus solide connoissance que nous ayons des choses, vient de l'experience".

Bacon denies that the virtues of plants can be learned in any way but only by experience.

He says "Salen confesses to have learned the power of Fenugreek from the experience of a peasant; if he could know plants by his intellect, why he did he wait to be instructed by a rustic about the fenugreek?" (le sens)

Chap XII p 263

That it is not possible to know the virtues of plants perfectly by the sense of taste

p 271

Bacon connects the legend of Venus rising from the ^{sea} foam with the importance of salt in making the earth fertile, evidenced by the use of seaweed as manure etc

Chap XIV That one ~~can~~ does not know the ^{virtues} ~~of~~ plants by their scent

Chap XIV p 277

How can we arrive at the knowledge of the virtues of plants by their physiognomy, either compared to animals or to parts of animals.

p 278

Refers to Porta's Physiognomice & criticizes his work. He points out that in many of the resemblances seen by Porta there is more imagination than truth. It is like clouds which one can make resemble everything. He gives fancy suggestions, a crane, a frog, a man, an army, other similar words. He points out that it is amusing to find Porta's representations of the signet ring by Alfred Thayer S. Company.

the flower of the monkshood t. e. helmet, & 28.
saying that it denotes its fatal poisonousness.
Purser also shows the weakness of this by pointing
out that a helmet is an article of defence not
a cause of death.

p 280
He points out that many plants which have the signature
of the eye are no more eye diseases, while Euphrasia &
Purser are known to be useful in the connection of eye
are not marked in this way.

Chap XV p 284
Shows if we recognize better the value of
plants by the dissection of their smaller parts than
by taste, smell & sight.

p 287
"I choose rather to please a small number of
honest men than an infinite multitude of pedants".

Argument of the Third Book (this is about
himself)
"I frankly admit that I have no diversion or rather
occupation more agreeable than books, plants &
furnace."

He declares that he does not follow any chemist,
not even Paracelsus, who is reckoned the "Whom one
gives the first place in this excellent art". Having
read over the works of Paracelsus & others he
has perceived that he has very beautiful & very rare
things, but does think they are not always equal

"to the Art as in all other ^{one} ~~is~~ rather
follow truth than authors & their opinions."

Book III. p 289.

p 293

That which exposes to view things hidden
is the art which has been called by the ancients
Juels Pyrotechny, & by the moderns Chemistry

Chap. II. p 294

What Chemistry is

Chemistry is "an Art which dissects compound
natural bodies, by means of fire, its principal
tool"

Its object is to know by resolution ^{its} principles
its elements - the condition of the object which it
handles, - by their ^{purifications} "depravations", reunions
& different compositions to learn whether Art
founded on Nature can surpass it, either in

healy the infirm of their maladies, prolonging life^{30.}
to the healthy, or achieving some new work."

page 5

The fundamental principle is that all bodies
reduce themselves into that of which they are
composed, recognising two methods of resolution;
the one natural & secondary to the order & change
of all things, but unknown, & the other from which
we cannot draw the knowledge of the ^{it shows} ~~substance~~ ^{of}
mixed bodies, the other by fire, which ~~teaches this~~ ^{it shows it},
on which account it is recognised as an air

page 6

All compound natural bodies can be reduced to
5 simpler bodies: spirit, subtil, Mercury, & 2 elements, ~~Earth & water~~ ^(for oil) sulphur
Water & air.

Chap III
The Principles in Chemistry

"The philosophers of this time, sectaries of Aristotle,
more curious in explaining names than things"

Chap III p 312

Why the two elements not unite in the dissolution of bodies
an not principles

Chap IV Why the elements don't include air in the number of their elements
p 320 ^{at the present time} an element because it's not

He points out that air is not a simple substance but
a "mestange de substances delices, subtils
et diaphanes"

Chap VI

Why the form, as we call it, the Artisan of the
Fire, the universal instrument, an not prin and the
rank of Chemical Principles

Chap VIII

Of Law, Chemical Principle

p 347

By ordinary calculation, from 6 dozen vipers he did
not give single grain of Sal Ammoniac but by his
own method he got 2 ounces from 1 dozen - very
subtle penetrating & identical with the "Sel
Theriacal" of the ancients. Between 1619 -
1624 he killed ~~3000~~ 300 dozen vipers

Chapter VIII ~~Of the Properties of Salt~~

Chapter IX Of Sulphur, Second Chemical Principle

Sulphur is identified with oil.

p 572

The oils of different plants eg. Pine, Juniper, Chestnut, Olive differ in kind & in the part of the plant in which they occur

Chap. X p 575 Of Spirit a Mercury, third Chemical Principle

Chap. XI Of the Elements of Earth

^{many characters}
The ~~properties~~ ^{main characters} of the Elements of Earth are

of attracty, preserving & keeping perfectly the Principles of things & their seeds (or causes) until the day when they must germinate

G. Carew (Thomas Carew 1598-1639)

"For in your beauty's oven deep,
The flowers, as in their cause, sleep!"

Chapter XII Of the Element of Water

Chapter XIII p 392

If the knowledge that plants are composed of 3 Principles
& 2 Elements, like all the rest of their mixed things,
teaches their qualities & faculties

"They are ^{p 396} & vitriol & added to water uniting & form
great acidity is refreshing, like that of lemon, -
a glass of this liquid defalcatorum & will refresh &
febricitant more than all the waters of wine.
fever patients

(He shows that all ^{plants} acids have a refreshing quality

Chapter XIII p 408

If the sciences can discover the qualities of plants
proceeding from the principles & the elements.

The senses of taste smell & sight are not capable of
discovering the qualities & properties of plants, - or least
not - the way supposed by the ancients. It is impossible
that the senses should discover whether a plant is good
for a specific complaint - e.g. cholera. It is only in the
most general way that the qualities can be exactly
deduced by the senses. The proper use of plants
can only be learned from "l'experience & l'usage"
judicious experience

p 412 Chapter XV Practise of Chemistry

A degree of Chemistry is the preparation of medicines, as well
for "metanic maladies" as for plants of far account. For

metals, it aims at converting silver into gold, iron into copper, lead into "estain" or copper, - at colouring & changing the metals, - red copper into steel, iron into steel, & rendering them soft, malleable & "filable".
For plants medicines aim at changing their ^{water} ~~water~~ ^{rough} nature into one that shall be gentle & better, to make them flower & fruit abundantly, & advance them seasons, & cure their maladies.

For a man to extend his life, - to cure his diseases, prolong his life, embellish his face, & change his hair from white to black, - black & blond or red to blond or black.

the foundation of Chemistry is to compose the grand universal medicine called the Catholicon, or "Elixir de Hermes".

Chap. XVI The various objects of ~~the~~ Chemistry, & when & whence derived from others.

parc. "Tout ce qui est sensible depuis le concave de la lune jusques au centre de la terre est un objet de resolution ... à la Chimie."
(This original Brose would have been an ^{opportunity} ~~opportunity~~.)

Chap. XVII The Objects of Chemistry

Chap. XVIII The Tools of Chemistry

Chapter XI 8

Has the glass, not the law operation of the fire.

Book LV seems fairly medical

p 467

The stag draws the serpent from his lair & eats him,
drags
in order to grow his horns better

p 469

Poppy seed is not narcotic like its juice. Those
has seen half a pound eaten without any narcotic
effect -

p 487

The seeds of alleneas (semenes esse matas) which transmit themselves from parents & children
or from one person to another.

p 509

Reject the idea that in the vine is any part of the
cabbage & says it is necessary that the vine tendrils have
nothing to take hold of in the case of the cabbage

p571. Which are the best plants, native or foreign, will be
cultivated

Shays holds the view that if food medicine is better
for man to adhere to the plants native to his own land, & trace
the relatively short life & poor health of his forefathers to
imported food medicinal plants
The use of foreign herbs is just due to "trans-disease"
& mind of praising more the things of elsewhere than
those which they possess & which they are
familiar

He admits however that one country may benefit
another in case of necessity, & war not deprive
Plants of the fruit of the vine because it does not
naturally grow there

p575 He makes a point of the best condition is
foreign drugs of the same

p575 The root of peony hung at the neck of a
small child is a preservative against epilepsy, -
but not the flowers ^{seed} leaves, then a salt of the
same plant

Chap VIII Boile 5.

Devotes a chevre & the advantages & health
of vegetables & fruit, & devides them into
more healthful than & carnivals & so

37

p 624

.. les fruits et les semences ont acquis leur
perfection quand ils quittent leur mere, comme
les Oyseaux lorsqu'ils delaisent leur nids et le
secours de leurs nourrisiers

Chap IX

De la cueillette des Plantes.

The different parts of plants should be gathered
when they are at the best stage of their dev. i.e. fruit
& seeds when they are ripe "plus laissons
aux bonnes gens la veille de la S. Jean pour
leur imagination, & aux sorciers pour amasser
la graine de la Fougere."

p 630

p 631 Plants should be gathered in the time of
day when they are "le moins fatigues".
In certain the rose is most fragrant in the morning
& should then be gathered, the Camisbell at
dinner because it is only scarce in the evening

p 638.

Lesons Leonnard & Linnaiser

p 642

Lesons Mizault & Albertus Magnus

p 648
Concludes that the plants do not germinate by the influence of the planets, nor are they ruled by them.

p 649
Ant-iss Thunneiss's elaborate directions for getting plants under certain conjunctions of the stars & planets, shows that the conditions he lays down are very impracticable, and that you may not find the plants ripe at a proper condition at such a time.

p 650
Lambard's foreign days to say they cannot be so fresh
p 651 . Refers to Clusius as the first describer of the Indigo.

Mar 4, 1665. p 295

"My water to Deperford, & there made
made of his Erythra ... He had in me very much
also of his churme, he had been many years
+ now is chere, about Gadinge; which will be
a most noble - pleasant - free. He had no pain
of - being a two of his working, very good, but
noted he cannot swim; leaves bed up in a lock
his Hartes I hope dry, but he cannot swim,
quicker than any body, better than any he
however, a most excellent person with
Herbell. In fine, a little to be
in, & make the skin well to be, being
with persons; but he may well be so, being
you in much state. He had no pain
though with the much sick, some
in his own, & not in his own ...

Mar 6, 1666 p 395

"I made them welcome with wine & cheer
wages, (mine your own since the war, some
like had)

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Diary & annual papers - Vol III
Jan 20: 1864-65 p 118

"Do my booklets and the tree bark home books
take of necessity, and excellent pieces,
if you can very good"

Feb 15, 1864-5 p 116

"Mr. Clarke, who is the most, & promises
the best, your man for ever I am"

Jan 2. 1864-5 p 97

"I have to my booklets & at his
booklets saw that's book of the microscope
which is so pretty - You & presently the microscope"

Oct 5. 1865 p 269

(Mr. Evelyn) "And he has shown me his garden,
and on the variety & richness of life. There is
the great lamp, even seen in my office, all
his seeds of flowers, the variety of trees & the
many having fine specimens of trees & the
modern vegetable"

V.I. p 294
April 24, 1847. mention chocolate. Anko says

"Chocolate was introduced into England about the year
1652. In the 'Pictorial Dictionary' of Macarty, June 16-22
1657, we find the following: 'A Birkbecker there'
Queen's Head Alley, in a Frenchman's house, is an
enormous - Her Indian Gumb cells chocolate is a
solid, when you may have it very far from, & also
unmade or worse than this."

V.I. p 192 "And afterwards I do send for
Sept 25, 1660. cup of tea (a Chinese drink) of which I never had
before."

Anko says
"I do not say
that in England as early as 1635 as the extract says
price of gun £66 17/0 the pound.
August 22, 1663 p 302 V.II
Dear Mr. Neeshome
This day Sir W. Balleau tells me that the
is dead & eating concombres, & that, which, the
say, I read another, I think in the book
Cray's son.
N.B. - from Shickler's 'Hunts from my mother to them
from Spain. The very same is England in the name of
Tuesar (see 'The Hundred Years' from Humbergh
Buckle. Common Place Book VA II pp 377-8

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Dray & Conybeare's 2 several papers, Esq., FRS
... description, with address notes by Rev. Myer
Bright, M.A. London 1875

VII p 45

Feb 13. 1879-80

"At my father's (I read a while, with my mother
somewhat made Bess to Chesapeake for some help
to make water for my mother."

VII p 66

March 7. 1879-80

"I met with Mr. Myer, the surgeon, who presented
me some leaf of the Senecio plant."

VII p 263

Feb 25. 1862-61

"2 W. Symonds whom I found
him ahead, for the, like good boy, with me, then
we did eat some red ~~potatoes~~ porridge, which
was made in purpose riding for some of their camp, I
was very good."

VII p 304

May 23. 1861

"To the Rheims wine house, I then came James Brown,
the mathematician, to us, & there he did by discover make
us fully believe that England & France are one & the same
continent, by very good arguments, ..."

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"In this my fresh-meat year, by my own paper
 steadily, labor + industry, I get the knowledge
 all herbs, trees, + simple, in our any body
 instruction or help, except trace of herbs: so
 that I could know any herb or fruit right."
 Quoted on p. 99 of "A Treatise of Air" (Ed. S. Waterhouse)
 from Abraham de la Pyrene, 1672-1700.
 Diary, published by the Surtees Society 1870
 (He was at St. John's College. This was written in 1690)

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Broussais, Saide de la
 (Nouvelle Biographie Universelle. Paris
 7. III 1853)
 G. Rouen. d. 1641. Juvencourt & Fagon,
 Opera to 2 tom. XII
 Regesta to 2 tom. XIII. H. de la Roche de
 Plancois, which was only noticed in 1626. He was made
 the first "interrogant"
 June 1616 on the shore of the "L'Inde"
 which see 1. 1600 - 1600 - 1600 - 1600
 Est le Ancien de qu'on dit. Indes de l'Atoll.
 M. S. (1727)
 Voy. Indes. Indes de la mediterr.

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6
9

When cactus keep out, but express - lead,
 When all the great air clear - nothing words.
 Fungus many fish - fish; but, kind heart
 Sponges, monnae & levee; mine, the car
 To have them are not based, only they are
 New wave than one, sometimes from shifter
 * Great things more the water; the crocodile
 Great things sleep lying, the elephant - bear
 * This action about the crocodile moving
 upper part, thick - uneven, from the
 Hatched, who partly open - from the
 some. T.E. Australia, Reservoir - N. 100
 some p. 120

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George Herbert
The Flower (The Lover's Anthology p 170)

"as flowers depart
To see their mother rest, when they have flown."
When they together
All the hard water
Died to the world, they have unknown"

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George Herbert
The poem was first published: 1633

"Who kills the water to expose the rose
And cures water both of herb-stones?
Do these an herb for that? O Non-herb care!
Would show a art, these give expressions!

And yet in herb-killing, who have the stars?
A rose, besides his beauty, is a care.
Dunken our flowers stony, pear-rears,
The tree much more than our art is care,

All countries have enough of weeds that need.

Sometimes from best divide the gift to man,
Somehow write. The Indian man alone
As do they, meat & teacher, guide & can,
Does, cattle, soil & needle, all - me.

There - herbs that grow in bushes, or at odds,
All fruit warm hands help against the wind.
The known's just wind can mark it really.
The other I write with both hand.

Bark, J. R. & J. The Hermetique Rector
Boyle. London 1744.

Robert Boyle: "Sceptical Chymist".
part 1661.

that from time to time the few specimens
analyzed & tested, since it has not deposed
from its body the various compounds &
rests the texture. (see also Boyle's
various papers on
the chemical salt & other matters on
the same subject)

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Boyle 1626-1691

Franz Boeckler 1907 p 327

The Jardin des Plantes was founded in 1635
by Louis XIII

by Guy de la Brosse, Huguenot & later
originally with more than 1000 plants
Medicines. Boyle (1627-1691) was called in 1670
Jardin du Roi in a volume of the
Jardin was extended by joining
Bellevue in 1793 & the
Bellevue in 1794 & the
Jardin des Plantes was founded
Boyle's name was given to the
Jardin des Plantes in 1870

Jessen K.F.W. Bank der Gegenwart
 und Verlag in Kulturhistorischer Entwerfung

1864

1866

Die Reformation & Reformen in der 17. century.

1871. Reformation began since then: Reformation
 began in 1517. The first step
 taken was no longer the only engaged, the first step
 was taken began to develop in 1517.
 The Reformation & Reformen in the 17th century
 can still be seen in the history of changes &
 the Reformation & Reformen in the 17th century
 can still be seen in the history of changes &

1561-1618
 Johann Brenner
 1564-1602
 J. J. J.

1571-1630
 J. J. J.

1587-1657
 J. J. J.

1592-1655
 J. J. J.

1596-1650
 J. J. J.

1705
 The Reformation & Reformen in the 17th century
 began in 1517. The first step
 taken was no longer the only engaged, the first step
 was taken began to develop in 1517.
 The Reformation & Reformen in the 17th century
 can still be seen in the history of changes &
 the Reformation & Reformen in the 17th century
 can still be seen in the history of changes &

Botanical Documentation

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