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THE
ELEMENTS
OF
BOTANY:

CONTAINING
The HISTORY of the SCIENCE:

WITH
Accurate Definitions of all the Terms of Art,
exemplified in Eleven COPPER-PLATES;

The THEORY of VEGETABLES;
The scientific Arrangement of Plants,
and NAMES used in Botany;

Rules concerning the general History,
Virtues, and Uses of Plants,

Being a Translation of the *Philosophia Botanica*,
and other Treatises of the celebrated LINNÆUS.

TO WHICH IS ADDED,
AN APPENDIX,

Wherein are described some Plants lately found in
Norfolk and Suffolk, illustrated with three addi-
tional COPPER-PLATES, all taken from the Life.

By HUGH ROSE, APOTHECARY.

L O N D O N:

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LINNÆUS'S PREFACE

TO THE

BOTANIC READER.

SEVERAL years ago I comprized in a few aphorisms or short sentences the theory and institutions of botany under the name of *Fundamenta Botanica*, or the Fundamentals of Botany; the explanation of which aphorisms, by examples, observations, and demonstrations, distinct and accurate definitions of the parts of plants and terms of art, I have intituled Botanic Philosophy (*Philosophia Botanica*), because in them were contained the principles and precepts of the science.

Of this Botanic Philosophy I have some time since published different parts; upon the first part or chapter of the *Fundamenta Botanica*, a book called *Bibliotheca Botanica*, the 3d edition, was published in 1751, containing 220 pages; on the second another called *Classes Plantarum*, the 2d edition, in 1747, contains 656 pages; on the fifth a treatise called *Sponsalia Plantarum*, or the Nuptials of Plants; on the seventh,

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eighth,

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eighth, ninth, and tenth, a book called *Critica Botanica*, or Botanic Criticisms, published in 1737, 270 pages, in 8vo; on the twelfth, a tract under the name of *Vires Plantarum*, or the Virtues of Plants. The remaining chapters, viz. the third, fourth, sixth, and eleventh, I had long resolved to publish, together with those mentioned above, in one work, enlarged with new examples, observations, and demonstrations, under the title of *Botanic Philosophy*, and for this purpose I had made large collections. In the mean time, being frightened with the prospect of what still remained to be said on this subject, I began to be weary of such a laborious undertaking, and had put it off to a more seasonable opportunity; while my time, daily engrossed with cares both public and private, or taken up in the business of my profession, and travels undertaken on account of natural history, slipped so fast away, that I began to despair of the success of such a work.

In the mean time my Bookseller urging the necessity of a new edition of the *Fundamenta Botanica*, all the copies of the former being sold off, my Pupils at the same time earnestly intreating me to add the parts of plants and terms of art properly defined, in the same way I used to deliver them in my lectures; to this their request were added, the exhortations of some of my friends,

eminent

TO THE BOTANIC READER. v

eminent in botany, that I would explain the terms of art, and give definitions of the parts of plants: in order to satisfy both, I began to reduce my collections into an abridgement for publication. But no sooner had I set about this work, than a severe fit of the gout so broke my strength of body and mind, that it was stopped as soon as begun.

Having now in some measure recovered my strength, I here present the reader with an abridgement of the *Botanic Philosophy*. The book, though small at present, as containing only the outlines or rudiments of botany, published for the sake of my pupils, I intend, if health and leisure should permit, shall make its appearance, one time or other, with large additions.

Being now busied in collecting the species of plants, I earnestly beg and intreat all the most eminent botanists in Europe to send me compleat specimens of such scarce plants as they have duplicates of, or of those I have not hitherto mentioned, that I may refer them to their proper *genera*, with their adequate specific differences; and it shall be my care, in return, under every such species in this work, publicly to testify my gratitude to those who have favoured me with such specimens.

Upsal, Sept. 16, 1750.

CHA. LINNÆE.

T H E

TRANSLATOR'S PREFACE.

OUR author's design, in this compendious treatise, is to give us the outlines of botany. The first two chapters contain a brief account of the rise and progress, the fate, changes, and discoveries in botany; the times when, and the places where, cultivated; its improvements, and all the methods used by the moderns in the disposition and distribution of plants. As the whole of practical botany consists in definition, disposition, and denomination, Linnaeus proceeds in the third and fourth chapters to lay down accurate descriptions and definitions of all the parts of plants. In the fifth chapter, where he treats of the sexes and generation of plants, we have almost every thing relating to the theory of vegetables. In the sixth, seventh, and eighth chapters, he treats of the other two parts of practical botany, to wit, disposition and denomination, or the disposing and naming, *i. e.* the arrangement of plants and names used in botany, both classic, generic, and specific. In the four last chapters he treats of the varieties, syno-

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nyms,

nyms, general history, medicinal virtues, and other uses of plants, whether esculent or œconomical.

The compleat history of any plant should contain the following particulars:

1. The class and order of each systematic writer to which it does belong; and also the natural order, tribe, or family. This part of the subject is discussed in Chap. II.

2. The generic name of the plant. This is handled in Chap. VII; and,

3. The etymology or derivation of this name, in Chap. VII.

4. The generic characters, in Chap. VI.

5. The specific difference of this from others of the same *genus*, in Chap. VIII.

6. The synonymous names (in Chap. X.) of all the different writers who have treated on the plant, Chap. I.

7. The several varieties of the plant, in Chap. IX.

8. The description of all its external parts, in Chap. III, IV, V, and XI.

9. An accurate figure of the plant, in Chap. XI.

10. The place of growth, soil, and culture. See Chap. XI.

11. The times of leafing, flowering, fruiting. See also Chap. XI.

12. The medicinal virtues and œconomical uses. See Chap. XII.

In treating of the medicinal virtues, we ought to describe the manner of gathering and curing, or preparing the plant;—the origin of its use;—the inventor or discoverer if known, with the time when, and the place where, first discovered;—select passages of the poets or others may and ought to be illustrated;—historical traditions, pleasant and entertaining, mentioned;—the parts in use;—the marks by which to know its goodness;—the qualities, as far as they are deducible from the fructification, natural order, smell, taste, colour, and place of growth;—experiments on the subject;—its chemical analysis;—its real medicinal virtues, its good and bad effects, in what diseases useful, in what hurtful;—its preparations, what compounds it enters; its doses, and manner of giving; and lastly, its *succedanea*.

In treating of the œconomical uses of any plant, we should also describe the manner and time of gathering or felling, curing or preparing, method of using, origin, inventor, historical traditions, select passages, &c. And thus we see, that every chapter of this treatise is extremely useful, and that all of them together constitute the fundamental parts of botany.

And as the whole of this useful Treatise has not hitherto appeared in an English dress,

dress, the Translator humbly hopes that the present publication, in which he has endeavoured throughout, without taking too great liberties, to give the true sense and meaning of his author, may be of general use to those that are fond of this study or fashionable amusement, and meet with a favourable reception from the public. He also flatters himself that the errors and mistakes, which may be found in the following sheets, are not very great, and therefore begs the candid reader would look upon them with an indulgent eye.

E R R A T A.

Page 3. line 6. for *Differentia* read *Differentiæ*. P. 7. l. 24. for *Antonius* read *Antoninus*. P. 22. l. 7. for *as the mosses* read *as in the mosses*, *ibid.* l. 29. for *fructif.* read *fructification*. P. 24. l. 1. read *imperfect herbs*. P. 25. l. 6. 9. 11. 13. p. 27. l. 19. 21, 22. 24. for *comp. fl.* read *compound flower*. P. 30. l. 29. 32. p. 31. l. 1. for *comp. fl.* read *compound flowers*. *Ibid.* l. 16. 18. 21. for *comp.* read *compound*. P. 41. l. 30. for *cor.* read *corolla*. P. 59. l. 13. for *Indian fl.* read *Indian flowering-reed*. P. 86. l. 22. for *hippopbite* read *hippophæ*. P. 115. l. 6. for *pistilla* read *pistillum*. P. 126. l. 14. for *belictores* read *belicteres*. P. 150. l. 18. for *pulling* read *falling*. P. 279. l. 19. for *calamaræ* read *calamariæ*. P. 293. l. 2. for *tagates* read *tagetes*. P. 295. l. 11. for *filia* read *tilia*. P. 313. l. 10. for *agriolium* read *agrifolium*. P. 348. l. 11. for *eryphille* read *erisyphæ*. P. 359. l. 21. should begin with a rule thus — P. 368. l. 4. for *perfect* read *imperfect*. P. 453. l. 22. for *about a foot* read *about half a foot*. P. 455. l. 10. for *thick* read *slender*.

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THE ELEMENTS
OF
BOTANY.

PART I.

INTRODUCTION.

SECT. I.

ALL things that fall under our notice in this our earth, are the four simple elements, earth, water, air, fire; and natural bodies, which are compounded of the four elements.

SECT. II.

The natural bodies are commonly divided into the three great kingdoms of nature, the fossil; vegetable, and animal. To describe and demonstrate the properties of the four elements, is the business of natural philosophy; and to describe the subjects of the three great kingdoms of nature, is properly the business of natural history.

B

SECT.

2 THE ELEMENTS Part I.

SECT. III.

The subjects of the fossil kingdom (though they are the most simple and inorganic bodies) have notwithstanding a certain sort of growth. The vegetables have not only an increase of growth, but, being besides organized bodies, and having a regular propulsion of fluids through their proper vessels, are also endued with life. Animals, the most perfect in the scale of natural bodies, besides growth and life, are endued with senses.

SECT. IV.

That branch of natural history which teaches the right knowledge of vegetables, and their application to the most beneficial uses, is called botany; of the fundamental principles of which we intend to treat in the same order with Linnæus, who divides his *Philosophia Botanica*, or Rudiments of Botany into the twelve following chapters, viz.

1. *Bibliotheca*. Of the various authors and books written on botany.
2. *Systemata*. The different botanic systems.
3. *Plantæ*. The different parts of plants, and their terms explained.
4. *Fruëtificatio*. The different parts of fructification.

5. *Sexus*.

Chap. I. OF BOTANY. 3

5. *Sexus*. The sexes and generation of plants.
6. *Characteres*. The characters of the genera, classes and orders.
7. *Nomina*. The generic names.
8. *Differentia*. The specific names or differences.
9. *Varietates*. The varieties.
10. *Synonyma*. The synonymous names.
11. *Adumbrationes*. The history or complete description of plants.
12. *Vires*. The virtues and uses of plants.

CHAP. I. The Botanic Library.

SECT. V.

This first chapter contains an account of the various authors, and their books which have been written on the subject of botany.

SECT. VI.

The authors (*phytologi*) who have written on plants, may be called either true botanists (*botanici*), or only lovers of botany (*botanophili*). The chief botanists since the revival of learning (for we shall have occasion under section ninth to speak of the antients) are the following. In the 15th century *Gaza* and *Barbarus*. In the 16th century *Brunfelsius*, *Tragus*, *Cordus*, *Ruellius*, *Gesner*, *Fuschius*, *Matthiolus*,
B 2 *Dodonæus*,