

CLASSICS OF SCIENCE:

Linnæus' Classification Botany

Compare this, the first comprehensive system of botanical classification, with modern schemes. Linnæus was the inventor of the double name for plants, giving genus and species.

PART ONE

A SYSTEM OF VEGETABLES, according to their Classes, Orders, Genera, Species, with their Characters and Differences. In two volumes. Translated from the Thirteenth Edition (as published by Dr. Murray) of the SYSTEMA VEGETABILIIUM of the late Professor Linneus; and from the SUPPLEMENTUM PLANTARUM of the present Professor Linneus. By a Botanical Society at Lichfield, London, MDCC-LXXXIII (1783).

Vegetable Kingdom

1. CREATED NATURE, by successive Seeds, with the assistance of the elements, modifies Earths into *Vegetables*, *Vegetables* into *Animals*, perhaps not contrarywise: she resolves each of them again into *Earths*, in a perennial increasing circle.
2. VEGETABLES have life, without voluntary motion.
3. They are commonly divided into three TRIBES.
 - Those whose seeds have ONE COTYLEDON: Corn: 1, 2, 3.
 - Those with TWO COTYLEDONS: Plants: 4, 5.
 - Those with NO COTYLEDON: the class of Clandestine Marriage: 6, 7, 8, 9.
4. THE NATIONS, which have supplied this conflux of inhabitants are principally
 1. PALMS. PRINCES, Vegetables of India, having a Spathe and a Spadix, eminent for their prodigious height, beautiful for their unvaried simple perennial stem, crowned with an evergreen tuft of leaves, and rich with the choicest treasures of fruit. *These are tributary to the Primates, or first order of animals; in particular to the Prince their cohabitant.*
 2. GRASSES. PLEBIANS. Plants of the field, producing Culms and Glumes, Rustics the most common, the most simple, and the most tenacious of life; constituting the multitude and strength of the vegetable kingdom; and which the more they are taxed and trod upon, the more they multiply. *These are Tributary from their vile hoards to almost all herbivorous animals, and by*



LINNÆUS
Ætatis 25
in his Lapland Dress

*Car. Linnæus
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their Harvest in particular to the Prince their cohabitant.

3. LILIES. PATRICIANS, luxurious inhabitants of groves, Bulbous rooted Plants, displaying their shining festive garments. *They amuse the eye, and adorn the vegetable kingdom with the splendor of courts.*
4. HERBS. NOBLES, Meadow Plants, Annual, of many Forms. *They enrich the kingdom of vegetation by their admirable Structure, variety of Tastes, their fragrant Ordors, and georgeous Colours.*
5. TREES. HIGHNESSES, of the Order of Nobility, Inhabitants of the woods, perennial as to their stock, surrounded with *Servants* at their feet, and supporting destructive *Parasites*. *They erect their heads, resist the Winds, overshadow the stultry, moisten the dry with invisible showers, allure the Birds, and perfect their Fruit like so many Orchards of Nature.*
 - SOLDIERS, Plants armed with Thorns or Prickles from both the last kinds. *They repel the attacks of the Mammalia or first class of animals.*
6. FERNS. NEW-COLONISTS, Plants of obscurity, supported on Stipes, with Seeds on their backs,

poor. *These prepare the Earth for their successors.*

7. MOSSES. SERVANTS, Plants of the winter, Imbricated, Calyptred, Revivescent, hungry, occupying in immense numbers all the places relinquished by the former. *These protect the Roots of other plants; lest they should be injured by the Winter Frosts, by the Summer Heats, the Vicissitudes of Spring, or the Putridity of Autumn; and collect for the benefit of others, the daedal Soil.*
8. FLAGS. (algæ) SLAVES, Plants which love the water, Squalid, revivescent, abstemious, almost naked. *These begin the first Vegetation on uncultivated places.*
9. FUNGUSSES. VAGABONDS, Plants of the Autumn, Barbarous, Naked, putrescent, rapacious, voracious. *These at the Fall of the leaf are supported by the re-crements of other plants.*
5. TEXTURE of vegetables consists of *Fluid-bearing Vessels; Air Vessels, Secretory Reservoirs.*
6. SUBSTANCE of vegetables, which covers their *Pith*, consists of a *Cuticle* externally covering the *Bark*; which *Bark* deposits on its interior side the *Rind*; which is converted annually into rigid *Wood*.
 - 7. The principal PARTS of vegetables are three:
 - Root descending, absorbing moisture, *nourishing.*
 - HERB ascending, breathing the air, *moving.*
 - FRUCTIFICATION expanding, inhaling ether, *producing seeds.*
 - 8. ROOT, inserted into the moist earth, puts forth capillary *Rootlets*, often joining above into a solid *Stock* descending beneath the earth, or even *ascending* above the earth.
 - 9. HERB annual, committed to the air, consists of the *Hybernacle, Trunk, Leaf, Prop*:
 - Hybernacle* a compendium of the whole Plant, scaly.
 - BULB from the bases of the past leaves.
 - BUD from the rudiments of the future leaves.
 - 10. TRUNK, elevating the Herb and the Fructification, (the BRANCHES are Parts of the Trunk) is either *STEM of the Herb*, leafy.
 - CULM of Grass: often knotted with empty joints. (*Turn to next page*)

Linnæus' Classification—Continued

- SCAPE of the Root leaflets, flower-bearing.
- PEDUNCLE, a flower-bearing Branch of the stem.
- PETIOLE, a leaf-bearing branch, proper to the leaf.
- STIPE, not distinct from the Leaf: in *Palms and Ferns*.
11. LEAF expanding its surface to the air, waving, often on a petiole.
- LEAFLET, a part of a compound Leaf.
- FROND, a Leaf made from a stipe: in *Palms and Ferns*.
12. PROP administering to the necessities of Life:
- STIPULE of the Leaves, at their base, leafy.
- BRACTE of the Flowers, at the base of the flowers or peduncles, leafy.
- PUBESCENCE coating with down.
- GLAND separating a liquor.
- THORN terminating with a wooden horn.
- PRICKLE stretched out like a claw inserted only into the bark.
- TENDRILL climbing by a thread.
13. FRUCTIFICATION temporary, at the extremity, expanding naturally by a spontaneous metamorphosis, so that the *Internal* substance appears in the Flower and in the Fruit.
- FLOWER consists of the *Calyx, Corol, Stamens, Pistils*.
- FRUIT consists of the *Pericarp* pregnant with *Seeds*, which are affixed to the *Receptacle*.
14. CALYX the exterior Covering of the Flower derived from the *Bark*, of which are seven kinds:
- VOLVE of a *Fungus*, torn.
- CALYPTRE of *Moss*, cow'd.
- SPATHE of a *Palm*, sheathed.
- GLUME of *Grass*, generally two-valved.
- PERIANTH of a *Plant*, near the corol.
- INVOLUCRE of a *Plant*, remote from the flower, often of an umbel.
- INVOLUCEL or partial Involcre.
- AMENT BUDDY imbricated, common.
15. COROL the interior Covering of the Flower derived from the *Rind*.
- PETAL membranous: with a *Border* or *Folds*.
- PETAL membranous: with a *Tube* or *Claws*.
- NECTARY nectar-bearing proper, producing honey.
16. STAMEN an external Organ, derived from the *Wood*; constitutes the *Male*.
- FILAMENT sustaining the *Anther*.
- ANTHER big with a granulated
- Dust*; and this with the *Fovilla*.
17. PISTIL an interior Organ derived from the *Pith*; constitutes the *Female*.
- GERM, a rudiment of the Fruit, beneath.
- STYLE, elevating the Stigma from the germ, intermediate.
- STIGMA, dewy, pubescent, above.
18. PERICARP, the *Germ* after the fall of the flower seed-bearing:
- CAPSULE, membranous, gaping with *valves* variously in various plants.
- SILIQUE, membranous, *two-valved*, each suture bearing seeds.
- LEGUME, membranous, *two-valved*, one suture bearing seeds.
- FOLLICLE, membranous, *one-valved*, gaping on the side, not attached to the seeds.
- BERRY, pulpy, with separate *Seeds*.
- DRUPE, pulpy, with a bony *Nucleus*.
- POME, pulpy, a *Capsule* including the seeds.
- STROBILE, imbricated, the pericarp of a contracted *Ament*.
19. SEED, an *Egg*, pregnant with the new plant, deciduous, coated.
- HILE, the navel-scar.
- COTYLEDONS, absorbent, constituting the uterine placenta.
- HEART, a compendium of the new plant, connecting the cotyledons: with a pointed *Beak* germinating downwards.
- with an imbricated *Plume* growing upwards.
- PAPPUS sometimes crowns the seed.
- ARIL sometimes includes the seed partially.
20. RECEPTACLE: the *base* connecting all parts of fructification.
- PROPER of one flower.
- COMMON to many sessile *florets*.
- UMBEL, between the calyx and the flower, elongated into equal peduncles.
- UMBELLET, a partial umbel.
- CYME, a compound umbel with alternate branchlets.
- SPADIX, within a *Spathe*, particularly of the *Palm*.
- RACHIS, the receptacle of the Spike of *Grass*, on which the flowers are ingraved.
21. Vegetable MECHANISM consists of two contrary substances:
- The CORPOREAL, external one, including nourishing, descending, adhering to the earth, carefully surrounding the pith, hardish, growing with a very tender point.
- The internal PITH, or MEDULLA, included, vivifying deliquescent at the base, ascending at the point,

infinite in multiplication in divisibility and in termination, enlivened at its creation, secretly and gradually at its beginning extends itself where there is least resistance, to its final exit; where, the more feebly it is confined by the corporeal part, the sooner it breaks its prison, about to undergo its metamorphosis; and escaping joins itself with the corporeal part, that dispersing itself into new lives the circle of vegetation may be perennial.

22. GERMINATION is produced from the *Seeds* being dispersed and absorbing water by the *Hile*; whence the membranes are burst by the bibulous swelling *Cotyledons*; which give nourishment to the *Heart*; till the *Beak* of the foetus puts out Rootlets; by which the *Plume* is elevated, growing into an annual *Herb*, terminating in a super-decomposed *Bud*.

The System of Vegetables will be completed next week with Linneus' explanation of the development and function of each part of the plant, and his characteristic and amusing criteria for distinguishing TRUE BOTANISTS from FALSE BOTANISTS.

Science News-Letter, March 9, 1929

The Uses of Botany

Botany

BERTON BRALEY, in *Sunshine Magazine*:

There should be no monotony
In studying your botany;
It helps to train and spur the brain—
Unless you haven't gotany.

It teaches you—does botany—
To know the plants and spotany,
And learn just why they live and die,
In case you plant, or potany.

You learn from reading botany
Of woolly plants and cottony
That grow on earth, and what they're
worth,
And why some spots have notany.

You sketch the plants, in botany,
You learn to chart and plotany,
Like corn, or oats. You jot down
notes,
If you know how to jotany.

Your time, if you'll allotany,
Will teach you how and whatany
Old plant or tree can do or be,
And that's the use of botany!

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