CAROLUS LINNAEUS (CARL VON LINNÉ)

February 17, Tuesday, 1852: … If you would read books on botany go to the fathers of the science– Read Linnaeus at once, & come down from him as far as you please– I lost much time reading the Florists. It is remarkable how little the mass of those interested in botany are acquainted with Linnaeus. His Philosophia Botanica which Rousseau Sprengel & others praised so highly – I doubt if it has ever been translated into English.– It is simpler more easy to understand & more comprehensive – than any of the hundred manuals to which it has given birth– A few pages of cuts representing the different parts of plants with the botanical names attached – is worth whole volumes of explanation.
According to Linnaeus's classification, I come under the head of the **Miscellaneous** Botanophilists. "Botanophili sunt, qui varia de vegetabilibus tradiderunt, licet ea non proprie ad scientiam Botanicam spectant" – either one of the *Biologi* (Panegyrica plerumque exclamarunt) or *Poetae*.

1684

Dr. François Bernier was the first to replace the prevailing classificatory system for humans, that by continent of origin (European, African, Asian, etc.) with a new classificatory system, that by color of skin. It is not known that the English and the African had come face to face prior to the 16th Century, but initially, when these contacts had been taking place, they had not been taking place in any sort of context in which to be Negro would be equivalent to being enslaved. Black individuals were only different, only perhaps inferior in some respects, rather than categorically inferior to all white individuals. Slaves, in ancient times, had not been readily distinguishable by appearance unless their status was subtly indicated by the sloppiness of their haircut, the raggedness and filthiness of their attire, the condition of their teeth, the appearance of a body twisted by constant rough labor, or unless their status had been more unsubtly marked by a shaven head, by an identification tablet which they were forbidden to remove, by a welded slave collar, by tattooings, or by actual branding. By the late 17th Century, however, skin tone would be becoming the primary organizing principle around which the European natural historian would be classifying categorical human differences.[1]

1702

Dr. Johann Heinrich Burkhard of Wolfenbuttel proposed that the number and arrangement of the stamens and the pistils be used as the basis for an artificial system of classification for plants. (Carl von Linné, still unborn, would never be made aware of this proposal by the German doctor.)

BOTANIZING

1707

May 23, Monday: Carl Linné was born at Råshult in Smaland, Sweden, the son of a pastor (the "von" would be granted retroactively at a later point in his life, and "Carolus Linnaeus" is a Latinization).

1716

At about this point Carl von Linné was being enrolled in the Latin school of Vaxjo, Sweden.

1. Dr. Bernier himself, however, would not accept that his recategorization in accordance with skin albedo necessitated any hierarchical order of being, with lighter superior to darker. There was thus an inherent contradiction in the thought of Bernier, as was present also in the thought of Carl von Linne (Carolus Linnaeus), Georges Louis Leclerc, *comte de* Buffon (1707-1788), and Johann Friedrich Blumenbach. They all accepted whiteness as "the real and natural color of man," as the norm for our species from which all other colors are deviations, while they all yet argued that this normativization did not imply any inherent hierarchialization.

1722

May 23, Saturday: New Orleans became the capital of Louisiana.

Mark Catesby arrived in Charleston. Sherard had arranged for him to return to America in the company departing to create a new colony of Carolina under Governor Colonel Francis Nicholson. In this month they arrived at Charleston. Catesby would introduce the people he met in Charleston to some of the plants he had found in the interior, such as the catalpa and perhaps the spice-bush *Calycanthus floridus*. The plants he would convey to Britain would include *Callicarpa americana*, *Coreopsis lanceolata,* and the American wisteria. (The people who were facilitating this collection journey to the Carolinas also were sending Thomas More to make plant collections in New England. More was probably between 50 and 60 years of age when he arrived in Boston. He would arrange to send some plants back, but also, he would become embroiled in local politics.)

During this month Philip Miller, author of the best-selling DICTIONARY OF GARDENING, was settling in as the Gardener at Chelsea. (Miller would be the first to raise, from seed sent from China to London by d'Incarville, the Tree of Heaven *Ailanthus altissima*. Carl von Linné, when he would visit England, would be able to persuade Miller that he needed to modify his system of plant classification.)

BOTANIZING

1724

Carl von Linné was admitted to secondary school in Vaxjo, Sweden.

1726

After a rather bad spell, from 1726 onwards the Oxford garden was immensely improved by the learning and generosity of an amateur botanist, Dr. William Sherrard. He had persuaded Dillenius to come to England and made him Superintendent of his own garden at Eltham in Kent, where the German made a Hortus Elthamensis for his patron. According to Carl von Linné, Sherrard made Oxford pre-eminent among all the universities of Europe for the study of botany.

BOTANIZING

1727

Carl von Linné enrolled at the University of Lund, Sweden to study medicine — to which botany was during that period considered adjunct.

BOTANIZING

Cadwalader Colden (1688-1776) developed Coldengham, a country seat west of Newburgh, New York. He would become a leading American scientist (not to mention, Lieutenant Governor of New York) and rub shoulders with all the important native scientists of his time.

1728

Carl von Linné enrolled at the University of Uppsala, Sweden, founded in 1477, the oldest university in the Nordic countries, which he considered to be superior to the University of Lund. The medical faculty at Uppsala consisted at this time of Olof Rudbeck the younger, son of the famous rector of the university, and Lars Roberg. Rudbeck had a fine reputation through his studies of native Swedish birds.

Sherrard died, leaving the university money to endow the salary of a Professor of Botany. One condition of the bequest was that the first Sherrardian Professor be Dillenius.

BOTANIZING

1730

By about this point in time *Ginkgo biloba* was in cultivation in the botanical garden at Utrecht.

Carolus Linnaeus's *PRAELUDIA SPONSALIORUM PLANTARUM* (PRELUDE TO THE BETROTHAL OF PLANTS). In this essay Carl von Linné presented the doctrine of the sexuality of plants. The view that the stamens and pistils of plants are specifically sexual organs had been advanced by a few botanists: the Englishman Nehemiah Grew (1641-1711), the German Rudolph Jacob Camerarius (1665-1721), and the Frenchman Sebastien Vaillant (1669-1721), but had received little support. Linné was named lecturer, that is, assistant to the professor of Botany, at the University of Uppsala, quite a bit of recognition for a student who was merely in his 3rd year of studies. He toyed with physico-theology, the attempt to demonstrate through the study of nature the purposeful harmony of creation. He studied Tournefort's system but based his early work on the sexuality of plants on the experimental results of Camerarius. Direct observation was combined with study of the findings of the botanist Nehemiah Grew and the zoologist Reverend John Ray. Convinced that God had chosen him to arrange all of nature, he began at this point the great botanical works *BIBLIOTHECA BOTANICA* (BOTANICAL DICTIONARY), *CLASSES PLANTARUM* (CLASSES OF PLANTS), *CRITICA BOTANICA* (BOTANICAL CRITICISM), and *GENERA PLANTARUM* (GENERA OF PLANTS).

BOTANIZING

1731

At this point Nils Rosen, professor of anatomy, returned to the University of Uppsala from his trip abroad and tension developed between him and Carl von Linné. Rosen wanted to give the botany lectures as well as his lectures in anatomy, but Rudbeck, Linné's sponsor, blocked this. However, some unpleasantry in Rudbeck's household soon resulted in Linné's losing his benefactor's confidence and needing to find himself another place to live.

BOTANIZING

BIOLOGY

BOTANY

Publication of the 1st of the two volumes of Mark Catesby's THE NATURAL HISTORY OF CAROLINA, FLORIDA AND THE BAHAMA ISLANDS: CONTAINING THE FIGURES OF BIRDS, BEASTS, FISHES, SERPENTS, INSECTS AND PLANTS: PARTICULARLY THE FOREST-TREES, SHRUBS, AND OTHER PLANTS, NOT HITHERTO DESCRIBED, OR VERY INCORRECTLY FIGURED BY AUTHORS, the 1st natural history of American flora and fauna.

MARK CATESBY, VOL. I

FLORIDA

This work eventually would include 220 prints (as of 1743 when the other volume would be issued), for the first time systematically illustrating American birds, animals and plants. The work "Printed at the Expence of the Author" was about as much a one-man band as anything of this type could be. Not only did he do his own field research and sketches, in his self-taught style, but since he could not afford a professional engraver, he took etching lessons from Joseph Coupy and did his own etching for all his plates but two. He even supervised the coloring for the 1st edition prints, though for the 2nd edition his good friend George Edwards, an important natural philosopher in his own right, would provide the coloring. (Only about 300 copies were prepared for the 1st and 2nd editions combined.) Besides being the 1st to produce an American natural history, Catesby was the 1st to place his birds and animals in their natural habitats, a style of natural history representation that was later used by such artists as Alexander Wilson and John James Audubon.

He was the first to attempt to establish scientific names based on generic relationships. Carolus Linnaeus, working on his *SYSTEMA NATURAE* at this time, used Catesby's work as the basis of his system of binomial nomenclature for American species. For all these and many other reasons, these are magnificent prints both for their beauty and significance. Elsa G. Allen, in AMERICAN ORNITHOLOGY BEFORE AUDUBON, page 465, has characterized Catesby as the first real naturalist of colonial America:

http://www.philaprintshop.com/catesby1.html

http://www.philaprintshop.com/catesby2.html

American Passenger Pigeon *Ectopistes migratorius*

In about 1852 Henry Thoreau would copy from the 1771 edition of this 1st volume, into his Indian Notebook #6.

1732

The Uppsala Scientific Society packed Carolus Linnaeus off to Swedish Lapland and Finland to conduct a botanical expedition. This would occupy him for five months.

July 12, Saturday: During his tour in Swedish Lapland which would produce *FLORA LAPPONICA* in 1737, Carolus Linnaeus, obviously at the time deprived and terminally horny, selected the poetical name he would assign to the water andromeda plant:

> *Andrómeda polifòlia* was now (June 12) in its highest beauty, decorating the marshy grounds in a most agreeable manner. The flowers are quite blood-red before they expand; but, when full grown, the corolla is of a flesh-color. Scarcely any painter's art can so happily imitate the beauty of a fine female complexion; still less could any artificial color upon the face itself bear a comparison with this lovely blossoom. As I contemplate it, I could not help thinking of Andromeda, as described by the poets; and the more I meditated upon their descriptions, the more applicable they seemed to the little plant before me; so that, if these writers had it in view, they could scarcely have contrived a more apposite fable. Andromeda is represented by them as a virgin of most exquisite and unrivalled charms; but these charms remain in perfection only so long as she retains her virgin purity, which is also applicable to the plant now preparing to celebrate its nuptuals. This plant is always fixed on some little turfy hillock in the midst of the swamps, as Andromeda herself was chained to a rock in the sea, which bathed her feet, as the fresh water does the roots of this plant. Dragons and venomous serpents surrounded her, as toads and other reptiles frequent the abode of her vegetable resembler, and, when they pair in the spring, throw mud and water over its leaves and branches. As the distressed virgin cast down her blushing face through excessive affliction, so does this rosy-colored flower hang its head, growing paler and paler till it withers away.... At length, comes Perseus, in the shape of summer, dries up the surrounding water, and destroys the monsters, rendering the damsel a fruitful mother, who then carries her head (the capsule) erect.

1733

Carolus Linnaeus taught a course in chemical experimentation at the University of Uppsala.

1734

Carl von Linné visited the Darlarna district of Sweden (Dalecarlia). Convincing himself that he needed to tack an M.D. onto his name, he decided to go abroad as the best way to obtain this. Becoming friends with the wealthy municipal doctor of Falun, Dr. Johan Moraeus (Moreau), he asked for the hand of the doctor's eldest daughter.

1735

Carl von Linné gave his sweetie Sara Elisabeth Moreau a ring, and although it was promptly returned to him, nevertheless an engagement did result. Dr. Johan Moraeus (Moreau) agreed to a 3-year absence of his future son-in-law, and his daughter was bound by a written pledge. Whereupon, Linné visited Lubeck, then Hamburg, then Amsterdam. By this point Linné had persuaded the Swedish East India Company to allow periodical free passages for some of his pupils to wherever ships might be trading. The 1st to be sent out would be the Reverend Christopher Ternstroem, who sailed in about this year.

BOTANIZING

June 12, Sunday: Due to the quality and quantity of his research and writings, at Harderwijk Carl von Linné was awarded the M.D. degree he felt he needed. He would remain in Leyden.

September: Dr. Carl von Linné became the personal physician of an Anglo-Dutch merchant banker, George Clifford (*circa* 1685-1760), in Amsterdam and also became overseer of this burgomaster's private botanical and zoological garden in Hartekamp, near Haarlem in Holland, full of specimens which Clifford had been able to obtain courtesy of the Dutch East Indies company. This exotic garden would inspire Linné's *HORTUS CLIFFORTIANUS*.

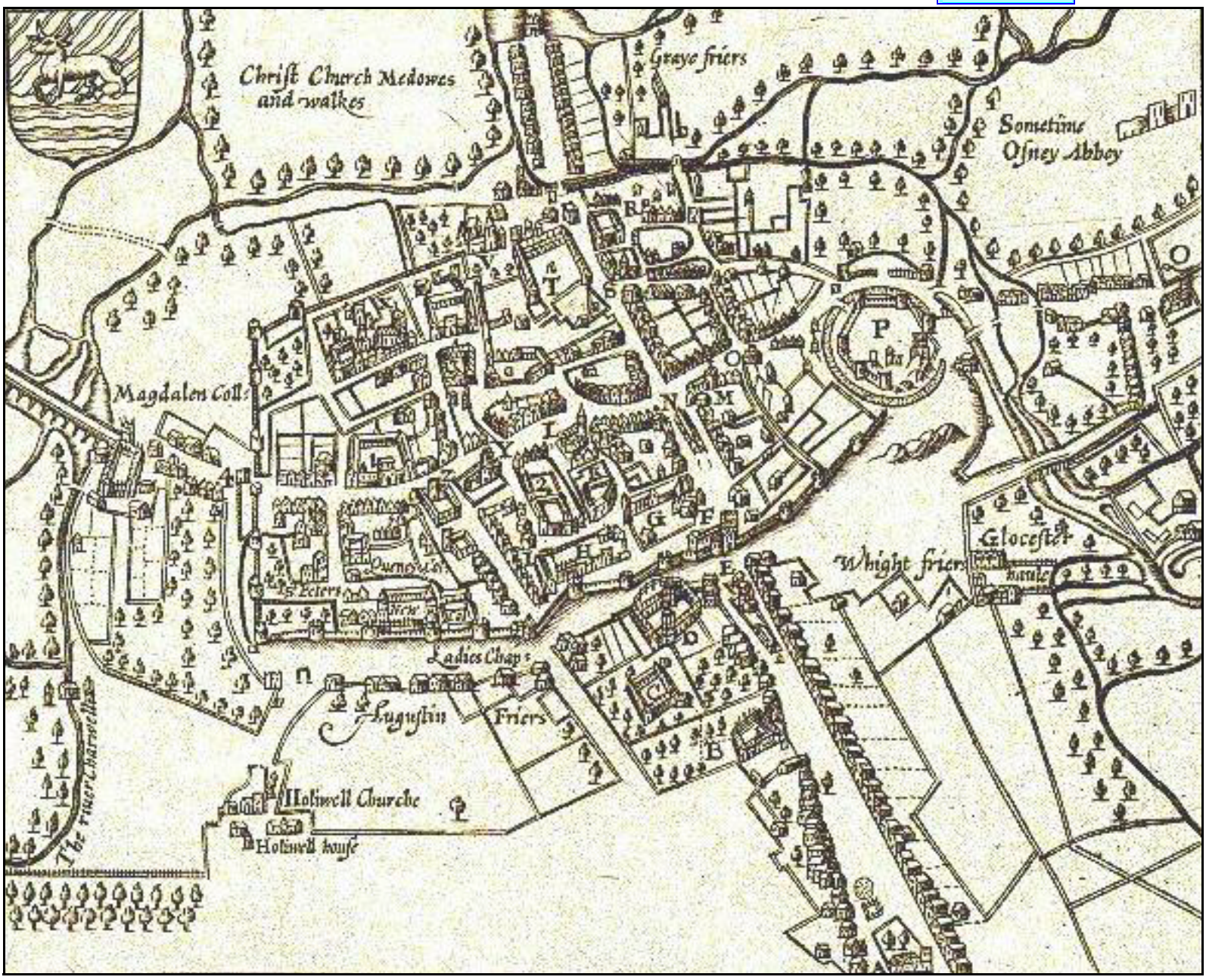
BOTANIZING

1736

Carolus Linnaeus visited England, where he had heard that Dillenius was improving the Oxford Garden. Although Dillenius disagreed with Linné's system, he so admired this young botanist that he offered him half his salary and half his house if only he would remain at Oxford — and burst into tears when the young Swede turned him down. *BIBLIOTHECA BOTANICA* (Amsterdam). *FUNDAMENTA BOTANICA* (FUNDAMENTALS OF BOTANY) (Amsterdam). *MUSA CLIFFORTIANA FLORENS HARETCAMPI* (CLIFFORD'S FLOWERING BANANA AT HARTEKAMP) (Leyden) Johan Friedrich Gronovius, botanist and physician, realizing the importance of his *SYSTEMA NATURAE* (SYSTEM OF NATURE), paid for its Leyden publication. This was Linné's fundamental work in which plants, animals, and minerals were organized into classes, orders, genera, and species. In an important sense, he was working up the idea of the "economy of nature." Because of the simplicity that his binomial naming system brought to the chaotic nomenclatures currently in use, his classifications would be rapidly accepted throughout Europe, England, and North America. The work would grow to 12 editions during his lifetime, the 10th in 1758 and the 12th in 1766 being multivolume compendia. In *GENERA PLANTARUM* and the *SPECIES PLANTARUM* of 1753, which would become the basis for modern systematic botany, Linné was

classifying plants in accordance with their reproductive equipment.

BOTANIZING



1737

Carolus Linnaeus authored *HORTUS CLIFFORTIANUS*, with illustrations provided by Ehret, as a record of plants cultivated by George Clifford in his garden at Hartekamp, Holland. This work would be the forerunner of his *SPECIES PLANTARUM*. The illustrations demonstrate Linnaeus's conviction that botanical drawings needed to be done in the most exact detail and must involve close collaboration between the botanist and the artist. Also, *FLORA LAPPONICA* (*FLORA* OF LAPLAND) (Amsterdam) contained the results of his 1732 expedition through Swedish Lapland. Also, *CRITICA BOTANICA* (Leyden). Also, *GENERA PLANTARUM* (Leyden), in which he attempted to provide a single, correct name for each genus of plants then known in the world. Through his efforts, the majority of the plants in the Torrey Botanical Area of field study came to be known by their current scientific names.

BOTANIZING

October: Carolus Linnaeus left Hartekamp for Amsterdam and then Leyden.

1738

Carolus Linnaeus's *HORTUS CLIFFORTIANUS* (THE CLIFFORD GARDEN) was published in Amsterdam.

BOTANIZING

Early Summer: Dr. Carl von Linné departed from Holland after publishing *CLASSES PLANTARUM*, visited Antwerp, visited Paris, and returned to Sweden by sea to marry Sara Elisabeth Moreau and publish *METHODUS SEXUALIS*.

BOTANIZING

September: Dr. Carl von Linné began practice as a physician in Stockholm.
His *CLASSES PLANTARUM* was printed in Leyden.

BOTANIZING

1739

Carolus Linnaeus helped start the Swedish Academy of Science in Stockholm, and became its first president. He met Carl Gustav Tessin.

May: Dr. Carl von Linné was appointed physician to the Admiralty.

June 26: Carolus Linnaeus and Sara Elisabeth Moreau were wed.

1740

The 2nd edition of Dr. Carolus Linnaeus's *SYSTEMA NATURAE* (SYSTEM OF NATURE) was printed in Stockholm.

1741

Dr. Carolus Linnaeus was appointed professor of theoretical and practical medicine at University of Uppsala and put in charge of a decaying botanical garden on some marshy land next to the river in the center of the town, that had been first laid out in 1653 and had once incorporated more than 1,800 species of plants used in the teaching of students but had been largely destroyed by a fire in 1702 (the oldest plants now growing there are four laurels that would be planted by Linné). He visited Oland and Gotland.

PLANTS

1742

Professor Carl von Linné of practical medicine at the University of Uppsala exchanged departments with Professor Rosen of botany and was put in charge of the Botanical Gardens.

BOTANIZING

1747

Dr. Cadwallader Colden provided a carefully cataloged and described collection of plants and Professor Carolus Linnaeus published it in "Plantae Coldenghamiae" in *ACTA UPSALIENSIS*. In *FLORA ZEYLANICA,* Linné designated a plant the *Coldenia*.

BOTANIZING

1748

Professor Carl von Linné was displaying signs of clinical depression, such as suspecting that the world was conspiring against him. During the last three decades of his life, he would be living in fear of his death and desiring to retreat from everything while undergoing periods of moodiness, nervous restlessness, and irritability. He may have suffered from manic-depression along with his schizoid characteristics. In the last years of his life, his personality would become dominated by the symptoms of progressive hardening of the arteries of the brain.

Michel Adanson, a student of Bernard de Jussieu, arrived in Africa to collect until 1754.

Professor Peter Kalm of London disembarked in Philadelphia, as the locals were coming on board his vessel to inquire if it carried any letters addressed to them. He noted that, strangely, the unclaimed letters from abroad were then dropped off at the local coffee-house — it did not seem to have occurred to these Philadelphians as yet, that such unclaimed correspondence from abroad should be being distributed by the local postoffice. "Kalm, in his travels in this country in 1748-9, writes, 'On my travels through the country of the Iroquois, they offered me, whenever they designed to treat me well, fresh maize bread, baked in an oblong shape, mixed with dried huckleberries, which lay as close in it as the raisins in a plumb pudding.'"Friend John

"HUCKLEBERRIES"

Bartram, tongue in cheek, informed the visiting Swedish botanist that when an American bear catches a cow, it kills the cow by biting a hole in its hide and blowing with full force into the hole, "till the animal swells excessively and dies, for the air expands greatly between the flesh and the hide." (Kalm turned out to be so credulous, that he actually would print this preposterous jape by his "American cousin" as if it were fact.)

CAPE COD: It is generally supposed that they who have long been conversant with the Ocean can foretell, by certain indications, such as its roar and the notes of sea-fowl, when it will change from calm to storm; but probably no such ancient mariner as we dream of exists; they know no more, at least, than the older sailors do about this voyage of life on which we are all embarked. Nevertheless, we love to hear the sayings of old sailors, and their accounts of natural phenomena, which totally ignore, and are ignored by, science; and possibly they have not always looked over the gunwale so long in vain. Kalm repeats a story which was told him in Philadelphia by a Mr. Cock, who was one day sailing to the West Indies in a small yacht, with an old man on board who was well acquainted with those seas. "The old man sounding the depth, called to the mate to tell Mr. Cock to launch the boats immediately, and to put a sufficient number of men into them, in order to tow the yacht during the calm, that they might reach the island before them as soon as possible, as within twenty-four hours there would be a strong hurricane. Mr. Cock asked him what reasons he had to think so; the old man replied, that on sounding, he saw the lead in the water at a distance of many fathoms more than he had seen it before; that therefore the water was become clear all of a sudden, which he looked upon as a certain sign of an impending hurricane in the sea." The sequel of the story is, that by good fortune, and by dint of rowing, they managed to gain a safe harbor before the hurricane had reached its height; but it finally raged with so much violence, that not only many ships were lost and houses unroofed, but even their own vessel in harbor was washed so far on shore that several weeks elapsed before it could be got off.

September 5, Friday, 1851: … It is remarkable that Kalm says in 1748 (being in Philadelphia)– "Coals have not yet been found in Pensylvania; but people pretend to have seen them higher up in the country among the natives. Many people however agree that they are met with in great quantity more to the north,

near Cape Breton" As we grow old we live more coarsely–we relax a little in our disciplines–and cease to obey our finest instincts. We are more careless about our diet & our chastity. But we should be fastidious to the extreme of Sanity. All wisdom is the reward of a discipline conscious or unconscious.[2]

Kalm visited Albany, New York, and discovered the water supply there to be inferior. He would remain, however, in the area, into the next year. Until the year 1751, Kalm would be collecting plant specimens in northeastern North America. His botanical collections would be extensively cited by Professor Carolus Linnaeus in 1753 in *SPECIES PLANTARUM*, and would constitute nomenclatural types for many of our northeastern US and southeastern Canadian species.

1749

Carolus Linnaeus's *MATERIA MEDICA*. He was made rector of the University of Uppsala.

BOTANIZING

April-August: Carl von Linné traveled in Skane.

2. This thought would be put into Henry Thoreau's early lecture "WHAT SHALL IT PROFIT" as:

> [Paragraph 93] As we grow old, we live more coarsely—we relax a little in our disciplines, and to some extent cease to obey our finest instincts. We are more careless about our diet and our chastity. But we should be fastidious to the extreme of sanity. All wisdom is the reward of a discipline conscious or unconscious.

1750

Carolus Linnaeus sent out the Reverend Peter Osbeck.

Johann Tobias Mayer's map of the moon.

Peter Kalm made another northern trip, following the Mohawk River to the country of the Iroquois and visiting Lake Ontario and the Niagara Falls.

BOTANIZING

1751

Peter Kalm sailed for Europe. His herbarium contained about 325 species, many of which Carl von Linné would subsequently describe in *SPECIES PLANTARUM*. During this year, however, Carolus Linnaeus was putting out his *PHILOSOPHIA BOTANICA* (BOTANICAL PHILOSOPHY).

BOTANIZING

Miller planted tree of heaven (*Ailanthus altissima*) seed received from French Jesuit Father, Pierre Nicholas le Cheron d'Incarville, stationed at the mission in Beijing. (Once introduced to North America, this tree would escape and become quite common — even invasive. Its popular fame is as "the tree that grew in Brooklyn.")

First printed record of Chinese cabbage and Chinese mustard in England.

PLANTS

1752

Professor Carolus Linnaeus was made a Knight of the Order of the Polar Star.

1753

Carolus Linnaeus issued *MUSEUM TESSINIANUM*, and in *SPECIES PLANTARUM* he named the plant genus of tobacco, *Nicotiana*, and described two species of this genus, *Nicotiana rustica* and *Nicotiana tabacum*.

SPECIES PLANTARUM would establish a new standard for plant classification as well as nomenclature. This treatise eventually would be recognized as the beginning-point for today's binomial nomenclature.

From 1748 to 1751 Peter Kalm had collected plant specimens in northeastern North America. His botanical collections were at this point extensively accessed by this Swedish botanist Linné as nomenclatural types for many of our northeastern US and southeastern Canadian species.

Linné also classified *cannabis sativa*.

PLANTS

1754

Carolus Linnaeus's *MUSEUM ADOLPHI FRIDERICI* (THE MUSEUM OF ADOLPHUS FREDERICK).

BOTANIZING

1758

In this year Carl von Linné purchased a small country estate at Hammarby near Uppsala, Sweden as a summer refuge for his family.

The Eastern Screech Owl ***Otus asio*** and the Long-Eared Owl ***Asio otus*** were 1st described and classified, in a vastly enlarged 10th edition of Carolus Linnaeus's *SYSTEMA NATURAE* (SYSTEM OF NATURE) which

included a classification of over 4,000 species of such *Animalia*.

WALDEN: Even the sailor on the Atlantic and Pacific is awakened by his voice; but its shrill sound never roused me from my slumbers. I kept neither dog, cat, cow, pig, nor hens, so that you would have said there was a deficiency of domestic sounds; neither the churn, nor the spinning wheel, nor even the singing of the kettle, nor the hissing of the urn, nor children crying, to comfort one. An old-fashioned man would have lost his senses or died of ennui before this. Not even rats in the wall, for they were starved out, or rather were never baited in, –only squirrels on the roof and under the floor, a whippoorwill on the ridge pole, a blue-jay screaming beneath the window, a hare or woodchuck under the house, a screech-owl or a cat-owl behind it, a flock of wild geese or a laughing loon on the pond, and a fox to bark in the night. Not even a lark or an oriole, those mild plantation birds, ever visited my clearing. No cockerels to crow nor hens to cackle in the yard. No yard! but unfenced Nature reaching up to your very sills. A young forest growing up under your windows, and wild sumachs and blackberry vines breaking through into your cellar; sturdy pitch-pines rubbing and creaking against the shingles for want of room, their roots reaching quite under the house. Instead of a scuttle or a blind blown off in the gale, –a pine tree snapped off or torn up by the roots behind your house for fuel. Instead of no path to the front-yard gate in the Great Snow, –no gate, –no front-yard, –and no path to the civilized world!

WALDEN: For sounds in winter nights, and often in winter days, I heard the forlorn but melodious note of a hooting owl indefinitely far; such a sound as the frozen earth would yield if struck with a suitable plectrum, the very *lingua vernacula* of Walden Wood, and quite familiar to me at last, though I never saw the bird while it was making it. I seldom opened my door in a winter evening without hearing it; *Hoo hoo hoo, hoorer hoo*, sounded sonorously, and the first three syllables accented somewhat like *how der do*; or sometimes *hoo hoo* only. One night in the beginning of winter, before the pond froze over, about nine o'clock, I was startled by the loud honking of a goose, and, stepping to the door, heard the sound of their wings like a tempest in the woods as they flew low over my house. They passed over the pond toward Fair Haven, seemingly deterred from settling by my light, their commodore honking all the while with a regular beat. Suddenly an unmistakable cat-owl from very near me, with the most harsh and tremendous voice I ever heard from any inhabitant of the woods responded at regular intervals to the goose, as if determined to expose and disgrace this intruder from Hudson's Bay by exhibiting a greater compass and volume of voice in a native, and *boo-hoo* him out of Concord horizon. What do you mean by alarming the citadel at this time of night consecrated to me? Do you think I am ever caught napping at such an hour, and that I have not got lungs and a larynx as well as yourself? *Boo-hoo, boo-hoo, boo-hoo*! It was one of the most thrilling discords I ever heard. And yet, if you had a discriminating ear, there were in it the elements of a concord such as these plains never saw nor heard.

OVID?

This 10th edition included human beings — which Carolus Linnaeus was the 1st to designate as *Homo sapiens*. Clearly obvious from some of his depictions is the fact that he was uncertain how to differentiate apes from humans. Since he hadn't been able to discover such a differentia, he employed obviously empty conventions such as "day man" versus "night man." He opinioned the following as to the races of his human species:

- **a. Wild** shaggy hair, mute, four-footed.
- **b. American** red, choleric, erect; thick, straight, black hair; distended nostrils; freckled face; beardless chin; obstinate, gay, free. He paints himself with variegated, red lines. He is ruled by custom.
- **c. European** white, sanguine, muscular; long, blond hair; blue eyes; gentle, most intelligent; a discoverer. He covers himself with clothing suitable to the northern climate. He is ruled by religious custom.
- **d. Asiatic** yellow, melancholy, rigid; dark hair; dark eyes; austere, arrogant, greedy. He covers himself with loose clothing. He is ruled by opinion.
- **e. African** black, phlegmatic, lax; black, curly hair; silky skin, apelike nose; swollen lips; the bosoms of the women are distended; their breasts give milk copiously; crafty, slothful, careless. He smears himself with fat. He is ruled by authority.
- **f. Monster** divided into two groups: those so by nature as dwarfs and giants; and those so by custom as eunuchs, and peoples with compressed or elongated heads.

1759

Professor Carl von Linné became rector of the University of Uppsala. The *Vegetabilia* portion of the 10th edition of Carolus Linnaeus's *SYSTEMA NATURAE* (SYSTEM OF NATURE) came through the presses.

BOTANIZING

1761

John Bartram traveled through Pittsburgh and down the Ohio River. He corresponded about his activities with Fothergill in London and with Carl Linné.

BOTANIZING

Having satisfactorily completed his apprenticeship to the Philadelphia merchant James Child, Friend William Bartram chose the Cape Fear region of North Carolina to begin a slave plantation bankrolled by his father. (At this point, at home outside Philadelphia, the disowned Friend John Bartram was constructing a greenhouse with, inscribed on its door lintel, a quote from Alexander Pope:

> Slave to no sect,
> who takes no private road,
> But looks through Nature
> up to Nature's God.

By this year British land grants in New England required that pine trees, most notably white pine, that were suitable as ship masts be conserved — to be cut only under license by the crown. Appointed surveyors marked trees to be protected with the "king's broad arrow," a triangular scar. This decree, among many others, greatly perturbed American colonists. The 1st flag used by Revolutionaries bore the image of a single white pine — representing the colony of Massachusetts, which at that time of course also included the pine forests of Maine.

PLANTS

Knighted by Swedish government, Carl Linné's name was changed to Carl von Linné. This name change was rendered retroactive to the year 1757.

Joseph Kölreuter was the 1st scientist to report making hybrids between plants and the 1st to observe the role of insects in pollination. Having studied the works of Camerarius and others, he was aware of areas requiring more investigation.

1763

Carolus Linnaeus's *GENERA MORBORUM* (KINDS OF DISEASES). He was relieved of his teaching obligations with his son designated as his successor.

1764

Carolus Linnaeus's *MUSEUM LUDOVICAE ULRICAE REGINAE* (MUSEUM OF QUEEN LOUISA ULRICA).

BOTANIZING

1766

Carolus Linnaeus's *CLAVIS MEDICINAE* (KEY TO MEDICINE) and Part I of the 12th edition of his *SYSTEMA NATURAE* (SYSTEM OF NATURE).

Cadwalader Colden died.

Joseph Banks explored Newfoundland and Labrador, charting waters and making collections.

BOTANIZING

1767

Part II of the 12th edition of Carolus Linnaeus's *SYSTEMA NATURAE* (SYSTEM OF NATURE).

BOTANIZING

1768

Dr. Erasmus Darwin constructed a small carriage, which he intended to use both to optimize the power of the horse, and the ease of turning. It consisted of a sort of platform with a seat, upon a very high pair of wheels, which was supported in front by an arch reaching over the hind quarters of the horse. A saddle on the horse had a socket on top, and the arch was attached to this socket by a ring. Although an arrangement similar to this would be given, in America, the name "Equibus," Dr. Darwin's version apparently did not work very well, as he upset in it and broke a knee-cap. Evidently then he ended his experiment with the apparatus. Ever after, he would limp a little.

Completion of publication in this year, with Part III, of the 12th edition of Carolus Linnaeus's *SYSTEMA NATURAE* (SYSTEM OF NATURE), an enormous tome. Dr. Adam Kuhn of Philadelphia, who had studied under Linnaeus, was probably the 1st professor of botany in America — he was chair of botany at the University of Pennsylvania.

BOTANIZING

The Reverend Joseph Priestley's book on politics, AN ESSAY ON THE FIRST PRINCIPLES OF GOVERNMENT AND THE NATURE OF POLITICAL, CIVIL AND RELIGIOUS LIBERTY, argued for the development of a political system that maximized civil liberty. In a statement that was to have an influence on the work of Jeremy Bentham and his ideas on Unitarianism, Priestley wrote: "The good and happiness of the members, that is the majority of the members of the state, is the great standard by which every thing relating to that state must finally be determined."

> In the largest states, if the abuses of government should, at any time be great and manifest; if the servants of the people, forgetting their masters, and their masters' interest, should pursue a separate one of their own; if, instead of considering that they are made for the people, they should consider the people as made for them; if the oppressions and violations of right should be great, flagrant, and universally resented; if the tyrannical governors should have no friends but a few sycophants, who had long preyed upon the vitals of their fellow citizens, and who might be expected to desert a government, whenever their interests should be detached from it: if, in consequence of these circumstances, it should become manifest, that the risk, which would be run in attempting a revolution would be trifling, and the evils which might be apprehended from it, were far less than these which were actually suffered, and which were daily increasing; in the name of God, I ask, what principles are those, which ought to restrain an injured and insulted people from asserting their natural rights, and from changing, or even punishing their governors that is their servants, who had abused their trust; or from altering the whole form of their government, if it appeared to be of a structure so liable to abuse? To say that these forms of government have been long established, and that these oppressions have been long suffered, without any complaint, is to supply the strongest argument for their abolition. Nothing can more justly excite the indignation of an honest and oppressed citizen, than to hear a prelate, who enjoys a considerable benefice, under a corrupt government, pleading for its support by those abominable

perversions of scripture, which have been too common on this occasion; as by urging in its favour that passage of St. Paul, "The powers which be are ordained of God", and others of a similar import. It is a sufficient answer to such an absurd quotation as this, that, for the same reason, the powers which will be will be ordained of God also. It will be said, that it is opening a door to rebellion, to assert that magistrates, abusing their power, may be set aside by the people, who are of course their own judges when that power is abused. May not the people, it is said, abuse their power, as well as their governors? I answer, it is very possible they may abuse their power: it is possible they may imagine themselves oppressed when they are not: it is possible that their animosity may be artfully and unreasonably inflamed, by ambitious and enterprising men, whose views are often best answered by popular tumults and insurrections; and the people may suffer in consequence of their folly and precipitancy. But what man is there, or what body of men (whose right to direct their own conduct was never called in question) but are liable to be imposed upon, and to suffer in consequence of their mistaken apprehensions and precipitate conduct? English history will inform us, that the people of this country have always borne extreme oppression, for a long time before there has appeared any danger of a general insurrection against the government.

1770

April 19, Thursday: Austrian Archduchess Maria Antonia Josepha Johanna got married by proxy with Louis, le Dauphin before the Papal Nuncio in Vienna. Louis was proxied by one of Maria's brothers. Maria would henceforward be known as Marie Antoinette, Dauphine of France.

Leopold and Wolfgang Amadeus Mozart were guests of Prince San Angelo of Naples, in Rome. They met the Scottish Pretender, Charles Edward Stuart.

Australia was "discovered" by the British (though the Dutch had already named the area New Holland and had experienced at least 15 landings since 1606). Captain James Cook had in 1768 set out on the *Endeavor* on a scientific mission, with the young naturalists Joseph Banks and Daniel Charles Solander (a pupil of Carl von Linné), as well as artists. On April 29, 1770, his ship stood into Botany Bay, which Cook originally called Sting Ray Harbor — but the great collection of new botanical materials by Banks and Solander provoked him to change the name.

BOTANIZING

JOURNAL: THURSDAY, 19th. In the P.M. had fresh Gales at South-South-West and Cloudy Squally weather, with a large Southerly Sea; at 6 took in the Topsails, and at 1 A.M. brought too and Sounded, but had no ground with 130 fathoms of line. At 5, set the Topsails close reef'd, and 6, saw land[3] extending from North-

East to West, distance 5 or 6 Leagues, having 80 fathoms, fine sandy bottom. We continued standing to the Westward with the Wind at South-South-West until 8, at which time we got Topgallant Yards a Cross, made all sail, and bore away along shore North-East for the Eastermost land we had in sight, being at this time in the Latitude of 37 degrees 58 minutes South, and Longitude of 210 degrees 39 minutes West. The Southermost point of land we had in sight, which bore from us West 1/4 South, I judged to lay in the Latitude of 38 degrees 0 minutes South and in the Longitude of 211 degrees 7 minutes West from the Meridian of Greenwich. I have named it Point Hicks, because Lieutenant Hicks was the first who discover'd this Land. To the Southward of this point we could see no land, and yet it was clear in that Quarter, and by our Longitude compared with that of Tasman's, the body of Van Diemen's land ought to have bore due South from us, and from the soon falling of the Sea after the wind abated I had reason to think it did; but as we did not see it, and finding the Coast to trend North-East and South-West, or rather more to the Westward, makes me Doubtfull whether they are one land or no.[4] However, every one who compares this Journal with that of Tasman's will be as good a judge as I am; but it is necessary to observe that I do not take the Situation of Vandiemen's from the Printed Charts, but from the extract of Tasman's Journal, published by Dirk Rembrantse. At Noon we were in the Latitude of 37 degrees 50 minutes and Longitude of 210 degrees 29 minutes West. The extreams of the Land extending from North-West to East-North-East, a remarkable point, bore North 20 degrees East, distant 4 Leagues. This point rises to a round hillock very much like the Ramhead going into Plymouth sound, on which account I called it by the same name; Latitude 37 degrees 39 minutes, Longitude 210 degrees 22 minutes West. The Variation by an Azimuth taken this morning was 8 degrees 7 minutes East. What we have as yet seen of this land appears rather low, and not very hilly, the face of the Country green and Woody, but the Sea shore is all a white Sand.

HIS 3 VOYAGES, VOL. I

HIS 3 VOYAGES, VOL. II

3. The south-east coast of Australia. See chart.
4. Had not the gale on the day before forced Cook to run to the northward, he would have made the north end of the Furneaux Group, and probably have discovered Bass Strait, which would have cleared up the doubt, which he evidently felt, as to whether Tasmania was an island or not. The fact was not positively known until Dr. Bass sailed through the Strait in a whale-boat in 1797. Point Hicks was merely a rise in the coast-line, where it dipped below the horizon to the westward, and the name of Point Hicks Hill is now borne by an elevation that seems to agree with the position.

1773

Erik Acharius studied medicine in Uppsala, Sweden, under Professor Carolus Linnaeus.

1774

Carl von Linné suffered a stroke.

1776

Erik Acharius graduated, with his dissertation "*Planta aphyteia*" having been completed under the direction of Professor Carolus Linnaeus.

1778

January 10, Saturday: Carl von Linné died.

Samuel Phillips Prescott Fay was born in Concord, son of Jonathan Fay, Esq.

> SAMUEL PHILLIPS PRESCOTT FAY [of Concord], son of Jonathan Fay, Esq., was born January 10, 1778, graduated [at Harvard College] in 1798; was admitted to the bar in 1803, and settled at Cambridge Port. He was appointed judge of Probate May 1, 1821, and filled the office with distinguished ability.[5]

5. Lemuel Shattuck's 1835 A HISTORY OF THE TOWN OF CONCORD;... Boston: Russell, Odiorne, and Company; Concord MA: John Stacy
(On or about November 11, 1837 Henry Thoreau would indicate a familiarity with the contents of at least pages 2-3 and 6-9 of this historical study.)

1788

Erasmus Darwin's paper "Mechanical expansion of air" appeared in the Philosophical Transactions of the Royal Society.

Georges Louis Leclerc, *comte de* Buffon died. He had been succeeded in his post at the Jardin du Roi by the Count de Lacepede, who did research on electricity and in this year published THE NATURAL HISTORY OF OVIPAROUS QUADRUPEDS AND SERPENTS.

Thomas Walter's *FLORA CAROLINIANA* was published.

BOTANIZING

The Linnaean Society was established in London, its first president being the James Edward Smith (1759-1828) who, with Sir Joseph Banks's (1743-1820) encouragement, had in 1784 purchased Carl von Linné's

library and herbarium.

CAROLUS LINNAEUS

President Smith would champion the Linnaean system for the next half century even after it had outlived its usefulness. Robert Brown (1773-1858) and John Lindley (1799-1865) would lead the opposition to this retro-thinking. In France, the changes in social values brought about by the Revolution of 1789 coincided with the acceptance of a natural system of classification: Antoine Laurent de Jussieu (1748-1836), nephew of Bernard de Jussieu and friend of Linné, in 1789 in his *GENERA PLANTARUM*... (Paris), would arrange the genera of the world's plants into 100 families (*ordines naturales*) based on concepts developed by his uncle Bernard, in a continuation of the ideas proposed a generation before by Michel Adanson (1727-1806) in *FAMILLES DES PLANTES* (2 vols., Paris, 1763[-1764]). As had Pierre Magnol (1638-1715), Sloane's professor, long before him, Adanson believed that plants could be arranged into natural families and genera in a classification scheme free of a priori weighting and metaphysical themes, based solely upon empirical observation of similarities and dissimilarities.

Jean Senebier, in his *EXPÉRIENCES SUR L'ACTION DE LA LUMIÈRE SOLAIRE DANS LA VÉGÉTATION* established the relationship between the presence of carbon dioxide in the atmosphere and the production of oxygen by plants. His studies built on the work of Ingenhousz.

PLANTS

According to Charles Corn's THE SCENTS OF EDEN: A HISTORY OF THE SPICE TRADE (NY: Kodansha America, 1999), pages 243-4:

> [O]n a spring morning in 1788, the one-hundred-ton *Cadet*, built at Pembroke on the North River, glided down Salem's harbor "bound for Madeira and from thence to India and the China Seas: Prosperous be her voyage," according to the Salem Mercury of April 15. The daily newspaper celebrated the small brig's leave-taking as it did that of most ships, because in Salem her being fitted out for parts unknown was the sort of pulsating news upon which the port thrived during the heady days after the Revolution. The *Cadet*, once owned by Derby, now belonged to the same William Vans who had sailed with Ebenezer West to Canton in 1785. Vans was aboard again as supercargo, while the brig was commanded by Vans's brother-in-law Jonathan Carnes, who was thirty years old. A month later the *Cadet* made Madeira, and then

she suddenly disappeared, presumably somewhere in Eastern seas — the Indian Ocean or perhaps beyond. Not one of the other half dozen Salem ships in that part of the world could account for her whereabouts. Then, on May 18, 1790, more than two years later, the Salem Gazette finally reported, "Captain Carnes, absent on an India voyage upwards of two years, was at the Cape of Good Hope, February 14, 1790, and was to sail in a few days for the W. Indies." But where Carnes's voyage had taken him remained a mystery. That he had sailed thirteen thousand miles to unknown Sumatra was this young captain's secret.... There are conflicting stories as to what happened next, for there is no surviving log. Nor are there letters home from crew members, and the Salem papers do not mention the *Cadet*'s return, an unusual omission. With the paucity of records, one can only speculate on the fate of the *Cadet*, which remains largely a mystery. Carnes most certainly left the Cape with a fully laden ship to ride an easterly wind back across the Atlantic toward the Caribbean. A likely explanation, though it is by no means conclusive, is that the brig and her cargo were lost on a reef in the West Indies. We know only that somehow Carnes found his way back to Salem with tales of the strangest race of people he had ever seen. But most important, he returned with a profoundly rich secret: the opening of a new channel of trade in pepper, which, to say the least, was arcane cargo in this brash new nation.

SPICE

1791

Gotthilf Heinrich Muhlenberg, son of Heinrich Melchior Muhlenberg (champion of Lutheranism) published a paper entitled "*Index flora lancastriensis*" in which he accounted for 454 genera and more than a thousand native and cultivated species that grew in the vicinity of his home in Lancaster, Pennsylvania.

Carl Ludwig Willdenow revised Carolus Linnaeus's *SPECIES PLANTARUM* and described several new American species from specimens sent by Muhlenberg.

BOTANIZING

1810

William Bartram began mentoring Thomas Say, his nephew, who would prepare America's first book of entomology.

Pierre Huber's *RECHERCHES SUR LES MOEURS DES FOURMIS INDIGENES*, in Chapter V, provided an account of a battle of the ants. Partly blind from his youth like E.O. Wilson, Huber "witnessed" insect behavior with the

assistance of his wife and his son.

WALDEN: Kirby and Spence tell us that the battles of ants have long been celebrated and the date of them recorded, though they say that Huber is the only modern author who appears to have witnessed them. "Æneas Sylvius," say they, "after giving a very circumstantial account of one contested with great obstinacy by a great and small species on the trunk of a pear tree," adds that "'This action was fought in the pontificate of Eugenius the Fourth, in the presence of Nicholas Pistoriensis, an eminent lawyer, who related the whole history of the battle with the greatest fidelity.' A similar engagement between great and small ants is recorded by Olaus Magnus, in which the small ones, being victorious, are said to have buried the bodies of their own soldiers, but left those of their giant enemies a prey to the birds. This event happened previous to the expulsion of the tyrant Christiern the Second from Sweden." The battle which I witnessed took place in the Presidency of Polk, five years before the passage of Webster's Fugitive-Slave Bill.

KIRBY AND SPENCE

François Huber (1750-1831, the father) had studied bees: *NOUVELLES OBSERVATIONS SUR LES ABEILLES: ADRESSEES A M. CHARLES BONNET*. Geneve: Barde, Manget, 1792; NEW OBSERVATIONS ON THE NATURAL HISTORY OF BEES translated from the original, 1806 (Edinburgh: A. Smellie); 2d ed. Edinburgh, printed for J. Anderson, 1808; 3d ed. Edinburgh, printed for W. & C. Tait and Longman, Hurst, Rees, Orme, and Brown, London, 1821; *NOUVELLES OBSERVATIONS SUR LES ABEILLES*. 2. ed., rev., corr. et considerablement augm. Paris, J.J. Paschoud, 1814; OBSERVATIONS ON THE NATURAL HISTORY OF BEES. A new edition, with a memoir of the author, practical appendix, and analytical index. London, printed for T. Tegg, 1841.

Pierre Huber (1777-1840, the son) studied ants and would be praised by Darwin in ORIGIN OF SPECIES: *RECHERCHES SUR LES MOEURS DES FOURMIS INDIGENES*, 1810; THE NATURAL HISTORY OF ANTS. Tr. from the French, with additional notes, by J.R. Johnson. London, printed for Longman, Hurst, Rees, Orme, and Brown, 1820. The types of ant which Thoreau observed warring most likely were *Camponotus* and *Monomorium*:

- typical carpenter ants of southern New England, often red and having a minor form about $^1/_4$" in length and a major form about $^1/_2$" in length: *Camponotus castaneus*, *Camponotus ferrugineus* or *ferruginus*, *Camponotus herculeanus*, *Camponotus nearcticus*, or *Camponotus novoboracensis* or *noveboracensis*

- typical black ants of southern New England, about $^1/_{16}$" in length: *Monomorium* (*Monomorium*) *pharaonis* (Carolus Linnæus) which would nest only in buildings, or *Monomorium* (*Monomorium*) *viride* or *viridum peninsulatum* if nesting outdoors

WALDEN: I was witness to events of a less peaceful character. One day when I went out to my wood-pile, or rather my pile of stumps, I observed two large ants, the one red, the other much larger, nearly half an inch long, and black, fiercely contending with one another. Having once got hold they never let go, but struggled and wrestled and rolled on the chips incessantly. Looking farther, I was surprised to find that the chips were covered with such combatants, that it was not a *duellum*, but a *bellum*, a war between two races of ants, the red always pitted against the black, and frequently two reds ones to one black. The legions of these Myrmidons covered all the hills and vales in my wood-yard, and the ground was already strewn with the dead and dying, both red and black. It was the only battle which I have ever witnessed, the only battle-field I ever trod while the battle was raging; internecine war; the red republicans on the one hand, and the black imperialists on the other. On every side they were engaged in deadly combat, yet without any noise that I could hear, and human soldiers never fought so resolutely. I watched a couple that were fast locked in each other's embraces, in a little sunny valley amid the chips, now at noon-day prepared to fight till the sun went down, or life went out. The smaller red champion had fastened himself like a vice to his adversary's front, and through all the tumblings on that field never for an instant ceased to gnaw at one of his feelers near the root, having already caused the other to go by the board; while the stronger black one dashed him from side to side, and, as I saw on looking nearer, had already divested him of several of his members. They fought with more pertinacity than bull-dogs. Neither manifested the least disposition to retreat. It was evident that their battle-cry was Conquer or die. In the mean while there came along a single red ant on the hillside of this valley, evidently full of excitement, who either had despatched his foe, or had not yet taken part in the battle; probably the latter, for he had lost none of his limbs; whose mother had charged him to return with his shield or upon it. Or perchance he was some Achilles, who had nourished his wrath apart, and had now come to avenge or rescue his Patroclus. He saw this unequal combat from afar, –for the blacks were nearly twice the size of the red,– he drew near with rapid pace till he stood on his guard within half an inch of the combatants; then, watching his opportunity, he sprang upon the black warrior, and commenced his operations near the root of his right fore-leg, leaving the foe to select among his own members; and so there were three united for life, as if a new kind of attraction had been invented which put all other locks and cements to shame. I should not have wondered by this time to find that they had their respective musical bands stationed on some eminent chip, and playing their national airs the while, to excite the slow and cheer the dying combatants. I was myself excited somewhat even as if they had been men. The more you think of it, the less the difference. And certainly there is not the fight recorded in Concord history, at least, if in the history of America, that will bear a moment's comparison with this, whether for the numbers engaged in it, or for the patriotism and heroism displayed. For numbers and for carnage it was an Austerlitz or Dresden. Concord Fight! Two killed on the patriots' side, and Luther Blanchard wounded! Why here every ant was a Buttrick, –"Fire! for God's sake fire!"– and thousands shared the fate of Davis and Hosmer.

WALDEN: ... There was not one hireling there. I have no doubt that it was a principle they fought for, as much as our ancestors, and not to avoid a three-penny tax on their tea; and the results of this battle will be as important and memorable to those whom it concerns as those of the battle of Bunker Hill, at least.

I took up the chip on which the three I have particularly described were struggling, carried it into my house, and placed it under a tumbler on my window-sill, in order to see the issue. Holding a microscope to the first-mentioned red ant, I saw that, though he was assiduously gnawing at the near foreleg of his enemy, having severed his remaining feeler, his breast was all torn away, exposing what vitals he had there to the jaws of the black warrior, whose breast-plate was apparently too thick for him to pierce; and the dark carbuncles of the sufferer's eyes shone with ferocity such as war only could excite. They struggled half an hour longer under the tumbler, and when I looked again the black soldier had severed the heads of his foes from their bodies, and the still living heads were hanging on either side of him like ghastly trophies at his saddlebow, still apparently as firmly fastened as ever, and he was endeavoring with feeble struggles, being without feelers and with only the remnant of a leg, and I know not how many other wounds, to divest himself of them; which at length, after half an hour more, he accomplished. I raised the glass, and he went off over the window-sill in that crippled state. Whether he finally survived that combat, and spent the remainder of his days in some Hotel des Invalides, I do not know; but I thought that his industry would not be worth much thereafter. I never learned which party was victorious, nor the cause of the war; but I felt for the rest of that day as if I had had my feelings excited and harrowed by witnessing the struggle, the ferocity and carnage, of a human battle before my door.

Kirby and Spence tell us that the battles of ants have long been celebrated and the date of them recorded, though they say that Huber is the only modern author who appears to have witnessed them. "Æneas Sylvius," say they, "after giving a very circumstantial account of one contested with great obstinacy by a great and small species on the trunk of a pear tree," adds that "This action was fought in the pontificate of Eugenius the Fourth, in the presence of Nicholas Pistoriensis, an eminent lawyer, who related the whole history of the battle with the greatest fidelity." A similar engagement between great and small ants is recorded by Olaus Magnus, in which the small ones, being victorious, are said to have buried the bodies of their own soldiers, but left those of their giant enemies a prey to the birds. This event happened previous to the expulsion of the tyrant Christiern the Second from Sweden." The battle which I witnessed took place in the Presidency of Polk, five years before the passage of Webster's Fugitive-Slave Bill.

ANTS

KIRBY AND SPENCE

1829

John Leonard Knapp had been during this decade contributing a series of anonymous articles to Time's Telescope under the heading "The Naturalist's Diary." At this point this series was the basis for publication at London of an anonymous volume entitled THE JOURNAL OF A NATURALIST. This work would see publication in four editions (it would be reprinted in Philadelphia in 1831), and would be made use of by Thoreau. It is an account of the natural history, country life and agriculture along the escarpment from Alveston to Thornbury in Gloucestershire, inspired by the Reverend Gilbert White's THE NATURAL HISTORY OF SELBORNE. J.W. White has described Knapp as "a charming botanist and traveller through the inexhaustible regions of nature." He would spend his last years at Alveston as a churchwarden, occupying himself with the pursuit of natural history and the cultivation of his garden. In honor of Knapp's THE GRAMINA BRITANNICA, the genus of grasses previously named *Milbora* by Adanson would be renamed *Knappia* by Smith.

BOTANIZING

From this year into 1831, Professor William Jackson Hooker and Dr R.K. Greville would be putting out the two volumes of *ICONES FILICUM* (ILLUSTRATIONS OF THE FERNS).

Professor Hooker began his *FLORA BOREALI-AMERICANA*, which would not be completed until 1840 (this work would treat primarily Canadian plants and would make itself the 1st flora of North American plants to follow a natural rather than the Linnaean sexual classification system).

CAROLUS LINNAEUS

1834

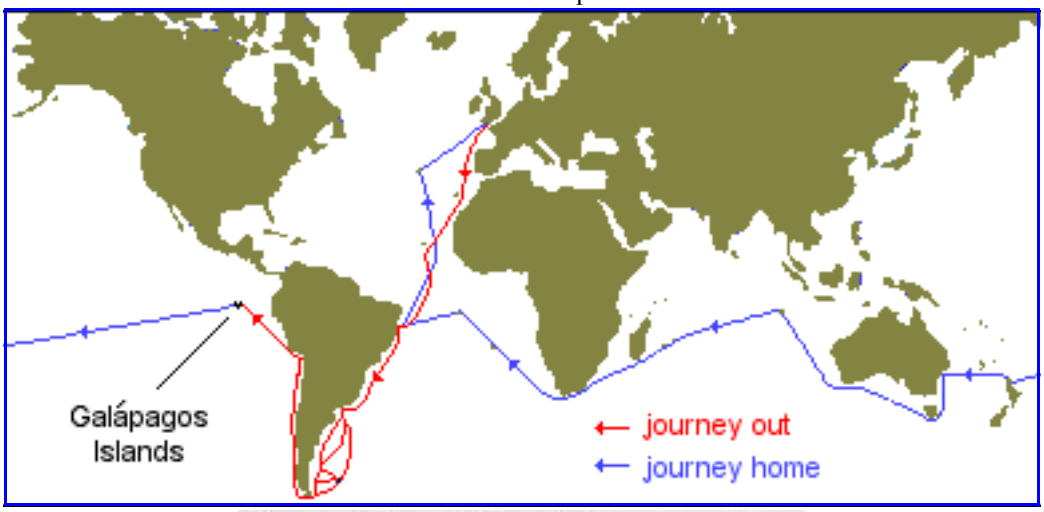
June: William MacGillivray's LIVES OF EMINENT ZOOLOGISTS, FROM ARISTOTLE TO LINNÆUS: WITH INTRODUCTORY REMARKS ON THE STUDY OF NATURAL HISTORY, AND OCCASIONAL OBSERVATIONS ON THE PROGRESS OF ZOOLOGY.

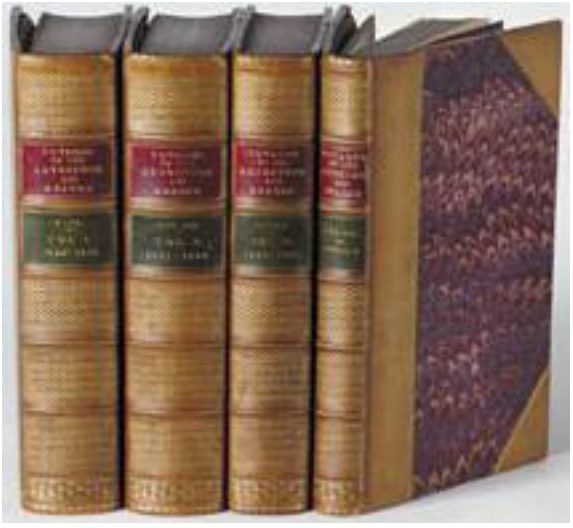
FROM ARISTOTLE TO LINNAEUS

The zoologists considered were Aristotle, Pliny the Elder, Conrad Gesner, Pierre Belon, Hippolito Salviani, Guillaume Rondelet, Ulysses Aldrovandi, John Jonson, John Goedard, Francis Redi, John Swammerdam, the Reverend John Ray, René Antoine Ferchault de Reaumur, and Charles Linné or Carolus Linnæus.

1842

Charles Darwin's THE STRUCTURE AND DISTRIBUTION OF CORAL REEFS, BEING THE FIRST PART OF THE GEOLOGY OF THE VOYAGE OF THE H.M.S. *BEAGLE* was published.





[Bear in mind that these *BEAGLE* volumes carry not only the name of Charles Darwin on their spine, but also Phillip Parker King and Robert FitzRoy.]

Darwin was already two years older than when this portrait had been painted:

During the year Darwin would be composing an abstract of his theory of species evolution. This brief SKETCH of his theory of evolution would not, however, see publication.

By this point six of the seven parts of John Torrey's and Asa Gray's FLORA OF NORTH AMERICA had been distributed. This work covered the vascular plants of North America north of Mexico except Greenland and was based on all readily accessible collections. It was organized according to a natural rather than a Linnaean system. Although Torrey and Gray's work was not completed, Gray would take it up again years later. He would issue subsequent fascicles as part of a new work, the SYNOPTICAL FLORA OF NORTH AMERICA. Only the gamopetalous families were actually completed by Gray. Torrey and Gray's studies were based largely on collections from the many expeditions being made at that time. Relying upon information gathered in the great western expeditions of the preceding decades, Watson and Robinson would publish additional parts of Gray's SYNOPTICAL FLORA OF NORTH AMERICA in 1895.

1852

February 2, Monday: Henry Thoreau returned the Loudon volume ENCYCLOPAEDIA OF PLANTS to the Boston Society of Natural History and checked out, from Harvard Library, Carl von Linné's *CAROLI LINNÆ ... PHILOSOPHIA BOTANICA* (1751).

He also checked out Louis-Armand de Lom d'Arce, Baron de Lahontan's *NOUVEAUX VOYAGES DE MR. LE BARON DE LAHONTAN DANS L'AMÉRIQUE SEPTENTRIONALE, QUI CONTIENNENT UNE RÉLATION DES DIFFÉRENS PEUPLES QUI Y HABITENT; LA NATURE DE LEUR GOUVERNEMENT; LEUR COMMERCE, LEURS COUTUMES, LEUR RELIGION, & LEUR MANIÉRE DE FAIRE LA GUERRE. L'INTÉRÊT DES FRANÇOIS & DES ANGLOIS DANS LE COMMERCE QU'ILS FONT AVEC SES NATIONS; L'AVANTAGE QUE L'ANGLETERRE PEUT RETIRER DANS CE PAÏS, ÉTANT EN GUERRE AVEC LA FRANCE. LE TOUT ENRICHI DE CARTES & DE FIGURES. TOME PREMIER* (A. La Haye, chez les Fréres l'Honoré, Marchands Libraires, 1703)

MEMOIRES ... (VOL. I)

and *MEMOIRES DE L'AMERIQUE SEPTENTRIONNALE, OU LA SUITE DES VOYAGES DE MR. LE BARON DE LA HONTAN. QUI CONTIENNENT LA DEFCRIPTION D'UNE GRANDE ÉTENDUË DE PAÏS DE CE CONTINENT, L'INTÉRÊT DES FRANÇOIS & DES ANGLOIS, LEURS COMMERCES, LEURS NAVIGATIONS, LEURS MŒURS & LES COÛTUMES DES SAUVAGES, &C. AVEC UN PETIT DICTIONAIRE DE LA LANGUE DU PAÏS. LE TOUT ENRICHI DE CARTES & DE FIGURES. TOME SECOND.* (A. La Haye, chez les Fréres l'Honoré, Marchands Libraires, 1703), making his notes in his Indian Notebook #5 and his Fact Book.

MEMOIRES ... (VOL. II)

```
"There is no Frigate like a Book
 To take us Lands away"
                        — Emily Dickinson
```

On this day, as is clear from entries in his Fact Book, he had perused an article in the Boston Daily Evening Traveller, by Benjamin Apthorp Gould the son, headlined "The Progress of Astronomy During the Last Half Century." It is clear also in his journal entry, that he was concurrently reading in the 5th edition of Sir Francis B. Head, Bart.'s THE EMIGRANT (London: John Murray, Albemarle Street, 1847).

THE EMIGRANT

CARL VON LINNÉ CAROLUS LINNAEUS

KEY: existing white settlements in **boldface**, future white settlements in *italics*

February 2, Monday: Sir Francis Head says that in America "the moon looks larger" than in Europe Here then more moonshine is to be expected– Perhaps the sun looks larger also. Such are the advantages of the new World.
The same writer says "the heavens of America appear infinitely higher" – – "the stars are brighter"– These too are encouraging facts – symbolical of the height to which the philosophy & poetry and religion of her inhabitants may one day soar. At length perchance the immaterial heaven will appear as much higher to the American mind – and the intimations that star it will appear as much brighter. For I believe that climate does thus react on man – and that there is something in the Mt air that feeds the spirit – & inspires. We shall be more imaginative– We shall be clearer as our sky – bluer, fresher, broader & more comprehensive in our understanding – like our plains– Our intellect on a grander scale – like our thunder & lightning – our rivers & our lakes – & mts & forests.
Are not these advantages? Will not man grow to greater perfection, intellectually as well as physically under these influences? Or is it unimportant how many foggy days there are in his life?
Sir F. Head thinks that the greater cold –equal to 13 degrees of Lat.– in this country is owing to the extensive forests which prevent the sun & wind from melting the snows –which therefore accumulate on the ground– and creates a cold stratum of air which blown to warmer ones by the N W wind condenses the last into snow– But in Concord woods at any rate the snow – (in the winter) – melts faster – & beside is not so deep as in the fields. Not so toward Spring – on the N sides of hills & in hollows– At any rate I think he has not allowed enough for the warmth of the woods.
The moose (& beaver?) will perchance one day become extinct – but how naturally would a future poet imagine or sculptor carve a fabulous animal with such branching & leafy horns – (when this will in fact exist as a fossil relic) His horns a sort of fucus in bone– –or a lichen. The Elk (moose) may stand with the Gryphon & Dragon & Dodo &c. &c.
The fire-flies & bright plumaged birds! do not they too indicate the peculiarities of the future American
Head "felt that there was something indescribably awful & apalling in all these bestial, birdal, and piscal precautions" at the approach of winter– Going into winter quarters – migrating &c.
Head coming to Canada in the winter to a house in the fields covered with snow did not know that he was surrounded by a lawn & garden – with gravelled walks – flowers & shrubbery – till the spring thawed the snow.
The race that settles & clears the land has got to deal with every tree in the forest in succession– It must be resolute & industrious – and even the stumps must be got out or are– It is a thorough process – this war with the wilderness – breaking nature taming the soil – feeding it on oats
The civilized man regards the pine tree as his enemy. He will fell it & let in the light – grub it up & raise wheat or rye there. It is no better than a fungus to him.
It is natural that we should be enterprising – for we are descended from the enterprising – who sought to better their fortunes in the new world
The Yankee has no leisure to touch his hat to you even if he were so disposed

1851

Professor Sir William Jackson Hooker's VICTORIA *REGIA*.

Henry Thoreau read in Zoölogy and in Botany:

- William Bartram and John Bartram

JOHN BARTRAM'S BOOK

WM. BARTRAM'S BOOK

- Peter Kalm, a disciple of Carolus Linnaeus
- the Baron Cuvier, teacher of Louis Agassiz
- Loudon, apostle of the Linnaean "artificial" system of botanical classification
- Stoever, the biographer of Carolus Linnaeus
- Pultenay, a Linnaean
- Carolus Linnaeus (in February 1852)

- Alphonse Louis Pierre Pyramus de Candolle, apostle of the Linnaean "artificial" system of botanical classification (later)
- Louis Agassiz and Augustus A. Gould's revised edition of their 1848 PRINCIPLES OF ZOÖLOGY: TOUCHING THE STRUCTURE, DEVELOPMENT, DISTRIBUTION AND NATURAL ARRANGEMENT OF THE RACES OF ANIMALS, LIVING AND EXTINCT; WITH NUMEROUS ILLUSTRATIONS. FOR THE USE OF SCHOOLS AND COLLEGES. PT. I. COMPARATIVE PHYSIOLOGY

AGASSIZ & GOULD 1851

CAPE COD: The Greeks would not have called the ocean ἀτρύγετος, or unfruitful, though it does not produce wheat, if they had viewed it by the light of modern science, for naturalists now assert that "the sea, and not the land, is the principal seat of life,"–though not of vegetable life. Darwin affirms that "our most thickly inhabited forests appear almost as deserts when we come to compare them with the corresponding regions of the ocean." Agassiz and Gould tell us that "the sea teems with animals of all classes, far beyond the extreme limit of flowering plants"; but they add, that "experiments of dredging in very deep water have also taught us that the abyss of the ocean is nearly a desert"; –"so that modern investigations," to quote the words of Desor, "merely go to confirm the great idea which was vaguely anticipated by the ancient poets and philosophers, that the Ocean is the origin of all things." Yet marine animals and plants hold a lower rank in the scale of being than land animals and plants. "There is no instance known," says Desor, "of an animal becoming aquatic in its perfect state, after having lived in its lower stage on dry land," but as in the case of the tadpole, "the progress invariably points towards the dry land." In short, the dry land itself came through and out of the water on its way to the heavens, for, "in going back through the geological ages, we come to an epoch when, according to all appearances, the dry land did not exist, and when the surface of our globe was entirely covered with water." We looked on the sea, then, once more, not as ἀτρύγετος,, or unfruitful, but as it has been more truly called, the "laboratory of continents."

PIERRE JEAN ÉDOUARD DESOR
AGASSIZ & GOULD
CHARLES DARWIN

1852

REVISED EDITION of Elijah Hinsdale Burritt's THE GEOGRAPHY OF THE HEAVENS, AND CLASS BOOK OF ASTRONOMY: ACCOMPANIED BY A CELESTIAL ATLAS.... (New York: F.J. Huntington and Mason & Law) by a Methodist minister, the Reverend Hiram Mattison, Professor of Natural Philosophy in the Falley Seminary (February 11, 1811-November 24, 1868).

It has been asserted that 1852 was "Thoreau's *annus mirabilis*, the year his months of living deliberately yielded a magnificent harvest." Waldo Emerson commented in his journal, during this period, with a singular lack of the usual condescension, that:

> Henry Thoreau's idea of the men he meets, is, that they are his old thoughts walking. It is all affectation to make much of them, as if he did not long since know them thoroughly.

In the previous century Jean-Jacques Rousseau had had his *annus mirabilis*, the year his months of living deliberately yielded a magnificent harvest, in the year 1762. So — just what was the relationship of Henry Thoreau the American nature-boy with that Swiss nature-boy of the previous century? We can discover precisely the answer to this one, by considering Thoreau's one reference to Rousseau, a reference which occurred in this year:

February 17, Tuesday: Perhaps the peculiarity of those western vistas was partly owing to the shortness of the days when we naturally look to the heavens & make the most of the little light.– When we live an arctic life. When the woodchopper's axe reminds us of twilight at 3 o'clock. P m. When the morning & the evening literally make the whole day–
When I travelled as it were between the portals of the night–& the path was narrow as well as blocked with snow.
Then too the sun has the last opportunity to fill the air with vapor.
I see on the Walden road that the wind through the wall is cutting **through** the drifts leaving a portion adhering to the stones.
It is hard for the traveller when in a cold & blustering day the sun and wind come from the same side– Today the wind is North W. or W by N & the sun from the S W.
The apothecia of lichens appears to be a fungus.– all fruit.
I saw Patrick Riorden carrying home an armful of faggots from the woods to his shanty on his shoulder. How much more interesting an event is that man's supper who has just been forth in the snow to hunt or perchance to steal the fuel to cook it with. His bread & meat must be sweet. It was something to hear that the women of Waltham used the Parmelia saxatilis? in dying
If you would read books on botany go to the fathers of the science– Read Linnaeus at once, & come down from him as far as you please– I lost much time reading the Florists. It is remarkable how little the mass of those interested in botany are acquainted with Linnaeus. His Philosophia Botanica which Rousseau Sprengel & others praised so highly – I doubt if it has ever been translated into English.– It is simpler more easy to understand & more comprehensive – than any of the hundred manuals to which it has given birth– A few pages of cuts representing the different parts of plants with the botanical names attached – is worth whole volumes of explanation.
According to Linnaeus's classification, I come under the head of the **Miscellaneous** Botanophilists. "Botanophili sunt, qui varia de vegetabilibus tradiderunt, licet ea non proprie ad scientiam Botanicam spectant" – either one of the *Biologi* (Panegyrica plerumque exclamarunt) or *Poetae*.

CAROLUS LINNAEUS

This was the year in which Thoreau originated, in pencil, his parable of the artist of Kouroo, in which he depicts time as an illusion with which we need to make no compromise:

PEOPLE OF WALDEN

WALDEN: There was an artist in the city of Kouroo who was disposed to strive after perfection. One day it came into his mind to make a staff. Having considered that in an imperfect work time is an ingredient, but into a perfect work time does not enter, he said to himself, It shall be perfect in all respects, though I should do nothing else in my life. He proceeded instantly to the forest for wood, being resolved that it should not be made of unsuitable material; and as he searched for and rejected stick after stick, his friends gradually deserted him, for they grew old in their works and died, but he grew not older by a moment. His singleness of purpose and resolution, and his elevated piety, endowed him, without his knowledge, with perennial youth. As he made no compromise with Time, Time kept out of his way, and only sighed at a distance because he could not overcome him. Before he had found a stock in all respects suitable the city of Kouroo was a hoary ruin, and he sat on one of its mounds to peel the stick. Before he had given it the proper shape the dynasty of the Candahars was at an end, and with the point of the stick he wrote the name of the last of that race in the sand, and then resumed his work. By the time he had smoothed and polished the staff Kalpa was no longer the pole-star; and ere he had put on the ferule and the head adorned with precious stones, Brahma had awoke and slumbered many times. But why do I stay to mention these things? When the finishing stroke was put to his work, it suddenly expanded before the eyes of the astonished artist into the fairest of all the creations of Brahma. He had made a new system in making a staff, a world with full and fair proportions; in which, though the old cities and dynasties had passed away, fairer and more glorious ones had taken their places. And now he saw by the heap of shavings still fresh at his feet, that, for him and his work, the former lapse of time had been an illusion, and that no more time had elapsed than is required for a single scintillation from the brain of Brahma to fall on and inflame the tinder of a mortal brain. The material was pure, and his art was pure; how could the result be other than wonderful?

ARTIST OF KOUROO

(One of our unanswered questions about Thoreau's writing is how he came to identify the North Star as named "Kalpa." Was this simply a misunderstanding — or did he have access to some Hindu astronomical text of which we have lost track?)

TIMELINE OF WALDEN

Here are excerpts from Thoreau's journal for this timeframe that Peter Borst has found of particular relevance:

The catnep is now up, with a lustrous purple tinge to the underside of its leaves. There is something in its fragrance as soothing as balm to a sick man. It advances me ever to the autumn and beyond it. How full of reminiscence is any fragrance! (5/7)

 Methinks the scent is a more primitive inquisition than the eye, more oracular and trustworthy. When I criticise my own writing, I go by the scent, as it were. The scent reveals, of course, what is concealed from the other senses. By it I detect earthiness. (5/8)

 The best men I know are not serene, a world in themselves. They dwell in form and study effect, only more finely than the rest. The world to me appears uninhabited. ... Where are the men who dwell in thought? Talk,— that is palaver! at which men hurrah and clap! The manners of a bear are so far good that he does not pay you any compliments. (5/11)

 Nature must be viewed humanly to be viewed at all; that is, her scenes must be associated with humane affections, such as are associated with one's native place, for instance. She is most significant to a lover. A lover of nature is preeminently a lover of man. (6/29)

 Nature is reported not by him who goes forth consciously as an observer, but in the fullness of life. To such a one she rushes to make her report. To the full heart she is all but a figure of speech. This is my year of observation, and I fancy my friends are also more devoted to outward observation than ever before, as if it were an epidemic. (7/2)

 The wood thrush's is no opera music; it is not so much the composition as the strain, the tone,— cool bars of melody from the atmosphere of everlasting morning evening. It is the quality of the song, not the sequence. In the peewee's note there is some sultriness, but in the thrush's, though heard at noon, there is a liquid coolness of things that are drawn from the bottom of springs. The thrush alone declares the immortal wealth and vigor that is in the forest. Here is a bird in whose strain the story is told, though Nature waited for the science of aesthetics to discover it to man. Whenever a man hears it, he is young, and Nature is in her spring. Whenever he hears it, it is a new world and a free country, and the gates of heaven are not shut against him. Most other birds sing from the level of my ordinary cheerful hours — a carol; but this bird never fails to speak to me out of an ether purer than I breathe, of immortal beauty and vigor. He deepens the significance of all things seen in the light of his strain. He sings to make men take higher and truer views of things, He sings to amend their institutions; to relieve the slave on the plantation and the prisoner in his dungeon, the slave in the house of luxury and the prisoner of his own low thoughts. (7/5)

 I only know myself as a human entity, the scene, so to speak, of thoughts and affections, and am sensible of a certain doubleness by which I can stand as remote from myself as from another. However intense my experience, I am conscious of the presence and criticism of a part of me which, as it were, is not a part of me, but spectator, sharing no experience, but taking note of it, and that it is no more I than it is you. When the play — it may be the tragedy of life — is over, the spectator goes his way. It was a kind of fiction, a work of the imagination only, as far as he was concerned. (8/8)

 I must walk more with free senses. It is as bad to "study" stars and clouds as flowers and stones. I must let my senses wander as my thoughts, my eyes see without looking. Carlyle said that how to observe was to look, but I say that it is rather to see, and the more you look the less you will observe. I have the habit of attention to such excess that my senses get no rest, but suffer from a constant strain. Be not preoccupied with looking. Go not to the object; let it come to you. When I have found myself ever looking down and confining my gaze to the flowers, I have thought it might be well to get into the habit of observing the clouds as a corrective; but no! that study would be just as bad. What I need is not to look at all, but a true sauntering of the eye. (9/13)

 Dreamed of purity last night. The thoughts seemed not to originate with me, but I was invested, my thought was tinged, by another's thought. It was not that I originated, but that I *entertained* the thought. (9/23)

 I had a thought in a dream last night which surprised me by its strangeness, as if it were based on an experience in a previous existence, and could not be entertained by my waking self. Both the thought and the language were equally novel to me, but I at once perceived it to be true and to coincide with my experience in

this state. (11/23)

 It is worth the while to apply what wisdom one has to the conduct of his life, surely. I find myself oftenest wise in little things and foolish in great ones. That I may accomplish some particular petty affair well, I may live my whole life coarsely. A broad margin of leisure is as beautiful in a man's life as in a book. Haste makes waste, no less in life than in housekeeping. Keep the time, observe the hours of the universe, not of the cars. What are threescore and ten hurriedly and coarsely lived to moments of divine leisure in which your life is coincident with the life of the universe? We live our lives too coarsely, just as we eat too fast, and do not know the true savor of our food. We consult our will and understanding and the expectation of men, not our genius. I can impose upon myself tasks which will crush me for life and prevent all expansion, and this am but too inclined to do.

That aim in life is highest which requires the highest and finest discipline. How much, what infinite, leisure it requires, as of a lifetime, to appreciate a single phenomenon! You must camp down beside it as for life, having reached your land of promise, and give yourself wholly to it. It must stand for the whole world to you, symbolical of all things. The least partialness is your own defect of sight and cheapens the experience fatally.

 I am somewhat oppressed and saddened by the sameness and apparent poverty of the heavens,— that these irregular and few geometrical figures which the constellations make are no other than those seen by the Chaldean shepherds. ... I pine for a new world in the heavens as well as on the earth, and though it is some consolation to hear of the wilderness of stars and systems invisible to the naked eye, yet the sky does not make that impression of variety and wildness that even the forest does, as it ought. ... I seem to see it pierced with visual rays from a thousand observatories. It is more the domain of science than of poetry. But it is the stars as not known to science that I would know, the stars which the lonely traveller knows.

The Chaldean shepherds saw not the same stars which I see, and if I am elevated in the least toward the heavens, I do not accept their classification of them. I am not to be distracted by the names which they have imposed. The sun which I know is not Apollo, nor is the evening star Venus. The heavens should be as new, at least, as the world is new. ... If they appear fixed, it is because hitherto men have been necessitated to see them. I see not merely old but new testaments in the stars. Do I not stand as near to the stars as the Chaldean shepherds?

A few good anecdotes is our science, with a few imposing statements respecting distance and size, and little or nothing about the stars as they concern man; teaching how he may survey a country or sail a ship, and not how he may steer a life. ... Nobody sees the stars now. They study astronomy at the district school, and learn that it is 95 millions of miles distant, and the like,— a statement which never made any impression on me, because I never walked it, and which I cannot be said to believe. ... Though observatories are multiplied, the heavens receive very little attention. The naked eye may easily see farther than the armed. It depends on who looks through it. No superior telescope to this has been invented. In those big ones the recoil is equal to to the discharge. The poet's eye in fine frenzy rolling ranges from earth to heaven, but this the astronomer's does not often do. It does not see far beyond the dome of the observatory. Compared with the visible phenomena of the heavens, the anecdotes of science affect me as trivial and petty....

As I walk the railroad causeway I am, as the last few months, disturbed by the sound of my steps on the frozen ground. I wish to hear the sound of the silence of the night, for the silence is something positive and to be heard. ... I must stand still and listen with open ears, far from the noises of the village, that the night may make its impression on me. A fertile and eloquent silence. ... Silence alone is worthy to be heard. Silence is of various depth and fertility, like soil. ... The silence rings; it is musical and thrills me. A night in which the silence was audible. I hear the unspeakable. (1/21/53)

January 9: In North Africa, Heinrich Barth viewed Barea and the Deleb Palm.

Although Lajos Kossuth had secured the backing of Daniel Webster for the freedom of Hungary, he had met with nothing but indifference from John C. Calhoun. On this day he sought the advice of Senator Henry Clay of Kentucky on his sickbed and basically what Clay advised him was, that since the USA had no skin in the game it had no reason to need to help: "By the policy to which we have adhered since the days of Washington … we have done more for the cause of liberty in the world than arms could effect; we have shown to other nations the way to greatness and happiness. … Far better is it for ourselves, for Hungary, and the cause of liberty, that, adhering to our pacific system and avoiding the distant wars of Europe, we should keep our lamp burning brightly on this western shore, as a light to all nations, than to hazard its utter extinction amid the ruins of fallen and falling republics in Europe."

January 9, Friday: The sky shut out by snow clouds. It spits a little snow and then holds up– Where a path has been shovelled through drifts in the road–& the cakes of snow piled up, I see little azures –little heavens in the crannies & crevices– the deeper they are & the larger masses they are surrounded by the darker blue they are. Some are a very light blue with a tinge of green. Methinks I oftenest see this when it is snowing– At any rate the atmosphere must be in a peculiar state. Apparently the snow absorbs the other rays & reflects the blue. It has strained the air and only the blue rays have passed through the seive. Is then the blue water of Walden snow water? I see the heaven hiding in nooks & crevices in the snow. Into every track which the teamster makes this elysian empyrean atmosphere rushes– The blue of my eye sympathizes with this blue in the snow.

The great pine woods have a peculiar appearance this afternoon. This rather fine snow has lodged on their limbs and given them a greyish look – but as it lies thicker along the core of the limb, it has the appearance at a distance of dim white lines lying at various angles like a vast network over the woods seen at a distance – or rather like cobwebs seen on the grass in summer mornings. A kind of film over them.

I never saw the pitch pines better snowed up. They look like Chinese pagodas

"The majestic prerogative which Linnæus was possessed of," says Stoever "to confer titles in the vegetable kingdom" did not escape the criticism of Haller who says– "We would reserve all those garlands for those alone who are real and experienced botanists. Nor would we ever assign such a denomination to the mere hopes conceived of men who have not passed the ordeal of merit;"–

CAROLUS LINNAEUS

February 17, Tuesday: Henry Thoreau wrote to Benjamin Marston Watson presumably.

[February 17, 1852]

I have not yet seen Mr. Channing, though I believe he is in town, – having decided to come to Plymouth myself,– but I will let him know that he is expected. Mr. Daniel Foster wishes me to say that he accepts your invitation, and that he would like to come Sunday after next. I will take the Saturday afternoon train. I shall be glad to get a winter view of Plymouth Harbor, and see where your garden lies under the snow.

February 17, Tuesday: Perhaps the peculiarity of those western vistas was partly owing to the shortness of the days when we naturally look to the heavens & make the most of the little light.– When we live an arctic life. When the woodchopper's axe reminds us of twilight at 3 o'clock. P m. When the morning & the evening literally make the whole day–
When I travelled as it were between the portals of the night–& the path was narrow as well as blocked with snow.
Then too the sun has the last opportunity to fill the air with vapor.
I see on the Walden road that the wind through the wall is cutting **through** the drifts leaving a portion adhering to the stones.
It is hard for the traveller when in a cold & blustering day the sun and wind come from the same side– Today the wind is North W. or W by N & the sun from the S W.
The apothecia of lichens appears to be a fungus.– all fruit.
I saw Patrick Riorden carrying home an armful of faggots from the woods to his shanty on his shoulder. How much more interesting an event is that man's supper who has just been forth in the snow to hunt or perchance to steal the fuel to cook it with. His bread & meat must be sweet. It was something to hear that the women of Waltham used the Parmelia saxatilis? in dying
If you would read books on botany go to the fathers of the science– Read Linnaeus at once, & come down from him as far as you please– I lost much time reading the Florists. It is remarkable how little the mass of those interested in botany are acquainted with Linnaeus. His Philosophia Botanica which Rousseau Sprengel & others praised so highly – I doubt if it has ever been translated into English.– It is simpler more easy to understand & more comprehensive – than any of the hundred manuals to which it has given birth– A few pages of cuts representing the different parts of plants with the botanical names attached – is worth whole volumes of explanation.
According to Linnaeus's classification, I come under the head of the **Miscellaneous** Botanophilists. "Botanophili sunt, qui varia de vegetabilibus tradiderunt, licet ea non proprie ad scientiam Botanicam spectant" – either one of the *Biologi* (Panegyrica plerumque exclamarunt) or *Poetae*.

May 24, Monday: Henry Thoreau checked out, from Harvard Library, OBSERVATIONS ON THE RIVER WYE, AND SEVERAL PARTS OF SOUTH WALES, &C. RELATIVE CHIEFLY TO PICTURESQUE BEAUTY: MADE IN THE SUMMER OF THE YEAR 1770. BY WILLIAM GILPIN, ... (London: printed by A. Strahan, for T. Cadell junior and W. Davies, 1800), which had initially appeared in 1782 although subsequently it had gone through numerous editions.

He would copy from this into his Fact Book. He also checked out Gilpin's OBSERVATIONS ON SEVERAL PARTS OF THE COUNTIES OF CAMBRIDGE, NORFOLK, SUFFOLK & ESSEX AND ON SEVERAL PARTS OF NORTH WALES (London, 1809).

He also checked out the 2d of the ten volumes of Carolus Linnaeus (1707-1778)'s *AMOENITATES ACADEMICAE* (1749-1769).

He also checked out, from the Society of Natural History Library in Boston, Part 1 "Mammalia" of James Ellsworth De Kay's ZOOLOGY OF NEW-YORK, OR THE NEW-YORK FAUNA; COMPRISING DETAILED DESCRIPTIONS OF ALL THE ANIMALS HITHERTO OBSERVED WITHIN THE STATE OF NEW-YORK, WITH BRIEF NOTICES OF THOSE OCCASIONALLY FOUND NEAR ITS BORDERS, AND ACCOMPANIED BY APPROPRIATE ILLUSTRATIONS (White & Visscher, 1842).

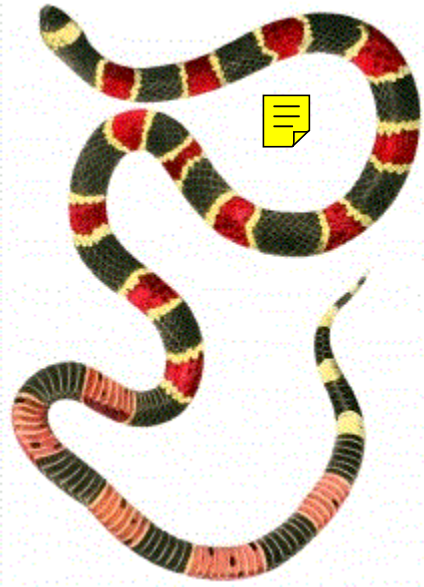
MAMMALIA, VOLUME I

May 24. The cooing of a dove reminded me of an owl this morning. Counted just fifty violets (*pedata*) in a little bunch, three and a half by five inches, and as many buds, there being six plants close together; on the hill where Billington climbed a tree.
A calabash it Pilgrim Hall nearly two feet high, in the form of a jar, showed what these fruits were made for. Nature's jars and vases.
Holbrook says the *Bufo Americanus* is the most common in America and is our representative of the *Bufo communis* of Europe; speaks of its trill; deposits its spawn in pools.

N. A. HERPETOLOGY

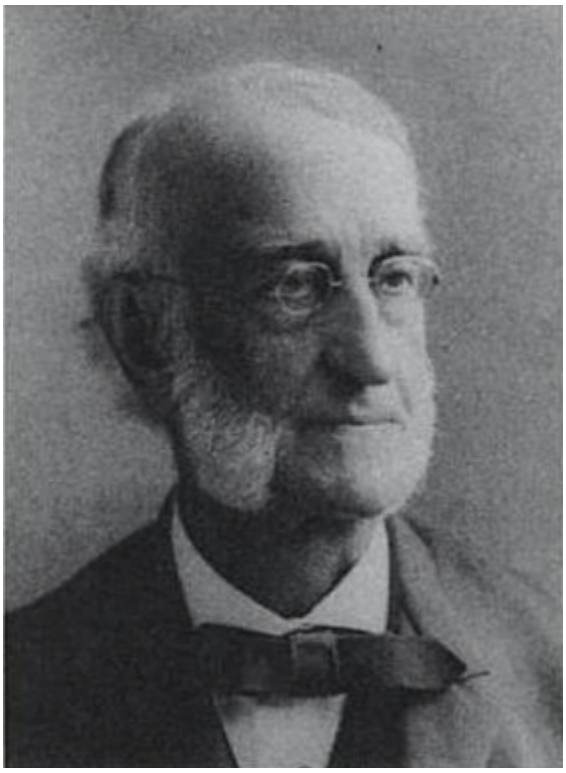
Found in College Yard *Trifolium procumbens*, or Yellow clover.
Concord. Celandine in blossom, and horse-chestnut.

(While at the Society of Natural History in Boston, Henry Thoreau had consulted Volume IV of the 2d edition of Dr. John Edwards Holbrook's NORTH AMERICAN HERPETOLOGY: OR A DESCRIPTION OF THE REPTILES INHABITING THE UNITED STATES.)



1858

July 1, Thursday: Henry Thoreau wrote to H.G.O. Blake.



Galvanized by a letter from Alfred Russel Wallace in the South Pacific, in which Wallace had come to the same conclusions about the development of species as Darwin but had been unable to propose any mechanism that would enable this development, Lyell and Joseph Hooker presented Wallace's essay, along with some unpublished fragments from Charles Darwin's writings on the subject, before the Linnaean Society in London. No attempt was made to contact Wallace until this eminently fair proceeding was completed.

BIOLOGY

"It's all now you see. Yesterday won't be over until tomorrow and tomorrow began ten thousand years ago."

– Remark by character "Garin Stevens" in William Faulkner's INTRUDER IN THE DUST

Prepared: October 9, 2013

CARL VON LINNÉ CAROLUS LINNAEUS

ARRGH AUTOMATED RESEARCH REPORT

GENERATION HOTLINE

This stuff presumably looks to you as if it were generated by a human. Such is not the case. Instead, upon someone's request we have pulled it out of the hat of a pirate that has grown out of the shoulder of our pet parrot "Laura" (depicted above). What these chronological lists are: they are research reports compiled by ARRGH algorithms out of a database of data modules which we term the Kouroo Contexture. This is data mining. To respond to such a request for information, we merely push a button.

Commonly, the first output of the program has obvious deficiencies and so we need to go back into the data modules stored in the contexture and do a minor amount of tweaking, and then we need to punch that button again and do a recompile of the chronology — but there is nothing here that remotely resembles the ordinary "writerly" process which you know and love. As the contents of this originating contexture improve, and as the programming improves, and as funding becomes available (to date no funding whatever has been needed in the creation of this facility, the entire operation being run out of pocket change) we expect a diminished need to do such tweaking and recompiling, and we fully expect to achieve a simulation of a generous and untiring robotic research librarian. Onward and upward in this brave new world.

> First come first serve. There is no charge.
> Place your requests with <Kouroo@kouroo.info>.
> Arrgh.