

eye and in the telescope. As the same causes obscured almost all the stars near it, I had great difficulty in fixing its place on the globe. It appears however, now, evidently, to be moving contrary to the order of the signs, and more considerably northwards, *i. e.* slowly retrograde, with a decreasing south latitude.

Hampstead,
May 6. 1759.

N. M.

XVII. *A Catalogue of the Fifty Plants from Chelsea Garden, presented to the Royal Society by the worshipful Company of Apothecaries, for the Year 1757, pursuant to the Direction of Sir Hans Sloane, Baronet, Med. Reg. & Soc. Reg. nuper Præses, by John Wilmer, M. D. clariss. Societatis Pharmaceut. Lond. Socius, Hort. Chelsean. Præfectus & Prælector Botanic.*

- Read May 3, } 1801 **A** Cinos Syriaca, folio tenuiore,
1759. } capfulis hirsutis. Mor. Hist.
1802 Ægilops Lobelii.
1803 Ambrosia maritima. C. B. 138. Ambrosia
quibusdam. J. B. 3. 190.
1804 Arum Zeylanicum humile latifolium, pistillo
purp. Miller.
1805 Astragalus caulescens erectus pilosus, floribus
spicatis, leguminibus subulatis pilosis, Lin.
Sp. Pl. 756.

1806

- 1806 *Cerastium*, floribus pentandris, petalis integris,
Loefl. Desc. 26.
- 1807 *Chenopodium* foliis lanceolatis carnosis, co-
rymbis dichotamis spinosis, Lin. Sp. Plant.
221.
- 1808 *Chironia frutescens capsulifera*, Lin. Sp. Plant.
190.
- 1809 *Clethra Linnæi Alnifolia Americana ferrata*, flo-
ribus pentapetalis albis, in spicam dispositis,
Pluk. Alm. p. 18. tab. 115. fig. 1. Catesby,
vol. 1. p. 66. tab. 66.
- 1810 *Clinopolum orientale origani folio*, fl. mini-
mo, T. Cor.
- 1811 *Delphinium nectariis dyphillis*, labellis integris,
floribus subsolitariis, foliis compositis line-
ari-multipartitis, Hort. Upsal. *Delphinium*
elatus subincanum perenne, flor. amplis
azureis, Amman. 132.
- 1812 *Doria Americana lato rigido folio*, Boerh. Ind.
Alt. 98. *Virga aurea ex Nova York*, foliis
symphiti majoris hirsutis, Schol. Botan. Par.
- 1813 *Gallium album linifolium*, Barrel. obs. 99.
- 1814 *Galium caule erecto*, foliis quaternis lanceo-
latis trinerviis, Fl. Lap. 60. *Gallium album*
quadrifolium erectum, Cels. Upsal. 22.
- 1815 *Galeopsis*, sive *Urtica iners*, flore luteo, J. B.
- 1816 *Genista ramis ancipitibus articulatis*, foliis ova-
to-lanceolatis, Hort. Cliff. 355.
- 1817 *Geranium Batrachoides Americanum macula-*
tum, floribus obsolete purpureis, Hort. Elt.
158.
- 1818 *Geranium pedunculis subunifloris*, foliis quin-
quepartitis acutis, foliolis pinnatifidis, Lin.
Sp. Pl. 685.

- 1819 *Gladiolus foliis linearibus fulcatis, caule bifloro, tubo longissimo, segmentis æqualibus*, Miller's Dict.
- 1820 *Glycyrrhiza filiquosa, vel Germanica*, C. B. P. 352.
- 1821 *Hydrangea, flor. Virgin.* 50.
- 1822 *Lamium foliis caulem ambientibus*, C. B. 231.
- 1823 *Larix orientalis, fructu rotundiori obtuso*, T. 586. *Cedrus magna five Libani conifera*, J. B. 1. 277.
- 1824 *Lotus maritima lutea filiquosa, folio pingui glabro*, Bot. Monsp.
- 1825 *Lychnis faponaria dicta folio convoluto, Gentiana concava*, Ger. 253.
- 1826 *Mandragora fructu rotundo*, C. B. 169. Off. 300.
- 1827 *Mespilus spinosa, pyri folio*, H. Leyd. *Pyrantha quibusdam*. J. B. 151.
- 1828 *Mespilus foliis lanceolatis serratis, spinis robustioribus, floribus corymbosis*, Miller's Ic.
- 1829 *Mespilus foliis cordato-ovatis, acuminatis, marginibus acute serratis, ramis spinosis*, Miller's Ic.
- 1830 *Mitella scapo nudo*, Hort. Cliff. 167.
- 1831 *Oenothera foliis radicalibus ovatis, caulinis lanceolatis obtusis, capsulis ovatis fulcatis*, Miller's Icons.
- 1832 *Onobrychis major, filiculis echinatis, cristatis, in spica digestis*, Mor. Hist. 2. 131.
Onobrychis foliis viciæ, fructu echinato, major, C. B. 350.
- 1833 *Orobis foliis conjugatis subseffilibus, stipulatis, dentatis*, Hort. Upsal, 220.

- Lathyroides erecta*, folio ovato acuminato, cæruleis viciæ floribus, et filiquis Siberica, Amman. Ruth. 151. T. 7. F. 2.
- 1834 *Padus* foliis oblongo-ovatis semper virentibus eglandulosis, Miller's Icons.
Laurocerasus Lusitanica minor Azarero Lusitanorum, Tourn. Inst. R. H. 628.
- 1835 *Polemonium* foliis pinnatis radicibus reptatricibus, Flor. Virgin. 22.
- 1836 *Pulmonaria* calycibus abbreviatis, foliis lanceolatis obtusiusculis, Lin. Sp. Pl. 135.
Pulmonaria non maculosa foliis glabris, Americana flore patulo cæruleo, Pluk. Phyt. Tab. 227. Fig. 6.
- 1837 *Salicornia*, T. Cor. 51. *Kali geniculatum*, Ger. Em. 535.
- 1838 *Senecio* corollis radiantibus, foliis crenatis, infimis cordatis petiolatis, superioribus pinnatifidis lyratis, Flor. Virgin.
- 1839 *Serratula*, C. B. P. 235. *Jacea nemorensis*, quæ *Serratula* vulgo, T. 444.
- 1840 *Serratula* foliis oblongo-ovatis, obtuse dentatis, caule ramoso patulo, calycibus subrotundis mollibus, Miller's Dict.
- 1841 *Spartium* ramis oppositis angulatis, foliis oppositis subulatis, Lin. Sp. Pl. 708.
- 1842 *Spiræa Africana* odorata, foliis pilosis, Com. rar. 3.
- 1843 *Stramonium Americanum* maximum, flore albo, fructu rotundo spinoso, Tourn.
- 1844 *Tilia* foliis molliter hirsutis, viminibus rubris, fructu tetragono, Ray, Synop. 2. 316.
Tilia hirsuta coryli foliorum æmula, fructu anguloso, Pluk. Mant. 181.

- 1845 *Trillium flore pedunculato cernuo*, Lin. Sp. Pl. 339.
 1846 *Valeriana montana subrotundo folio*, C. B. P. 165.
 1847 *Vicia pedunculis multifloris*, petiolis polyphillis, foliolis lanceolatis glabris, Hort. Upsal, 219.
 1848 *Vicia sylvatica multiflora maxima perennis*, tetro odore, floribus albetibus, lineis cæruleis striatis, Pluk. Alm. 387.
 1849 *Vinca foliis oblongo-ovatis integerrimis*, tubo floris longissimo, caule ramoso fruticoso, Miller's Iconf.
 1850 *Xanthium*, five *Lappa minor*, J. B. 3. 572.
Lappa minor, five *Xanthium* Dioscorid. C. B. P. 198.
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XVIII. *An experimental Enquiry concerning the natural Powers of Water and Wind to turn Mills, and other Machines, depending on a circular Motion. By Mr. J. Smeaton, F. R. S.*

Read May 3, & 10, 1759. **W**HAT I have to communicate on this subject was originally deduced from experiments made on working models, which I look upon as the best means of obtaining the outlines in mechanical enquiries. But in this case it is very necessary to distinguish the circumstances in which a model differs from a machine in large; otherwise a model is more apt to lead us from the truth