LINNAEUS'S ATTITUDE TOWARDS CULTIVATED PLANTS

D.O. Wijnands
Department of Plant Taxonomy
Wageningen Agricultural University
P.O. Box 8010, 6700 ED Wageningen

Abstract

Linnaean concepts and sources on the taxonomy of cultivated plants and their development are outlined. The necessity of a stable nomenclature of cultivated plants is stressed and ways to reach this goal by means of lectotypification are indicated.

Time is a major factor in connection with Linnaeus's taxonomic concepts. Three aspects of time can be discerned:

-Linnaeus's own perception of time.
The one decisive moment in time is that of Creation. The Almighty brought all living creatures into being, the entity of Creation is the species. This species therefore should be the basic entity of taxonomy. The task of the taxonomist is to unravel the plan of Creation. Development after Creation is not excluded by Linnaeus, but such development can only lead to (cultivated) varieties, not to new species.

-Changes in Linnaeus's taxonomic concepts during his lifetime.
Gradually Linnaeus's ideas on the entity of Creation changed from species via genera to orders. This gave room for the raising of cultivated taxa to species level.

-Present-day nomenclature for many (cultivated) taxa refers to Linnaean names from 1753 onwards. Some discrepancy often exists between the taxonomic concept of Linnaeus and that of present-day taxonomy, although these are symbolized by the same scientific plant name.

The following discussion of Linnaeus's attitude towards cultivated plants, presented in the form of 7 assertions, is based partly on an analysis of 100 Linnaean protologues of cultivated plants. These taxa are listed in appendix B with notes on the typification of these names. Discussions on typifications in this paper and in the appendix are not intended as formal typifications.

1. Cultivated plants are developed from wild plants under human influence.

In many cases the wild species is, or was to Linnaeus, unknown. Such species only consist of cultivated plants. An indication of the distribution is therefore lacking in the Linnaean protologue: habitat - - -. This is the case in 13 of the 100 analysed protologues. The diagnostic characters for these domesticates can often be recognised as markers of domestication. The nomen specificum legitimum of 25 species out of a sample of 100 was drafted by Linnaeus anew. Often this indicates that Linnaeus's concept of such a species differs from that in his earlier publications. However, in nearly all cases these new descriptions are mere editorial rewordings to bring earlier diagnoses in line with the format of Species plantarum.

2. Species are created entities, or entities that developed since creation sui generis, as daughters of time.

In some cases Linnaeus indicated his ideas on the origin of a species, e.g. Lactuca sativa: "culturae mangorico forte producta ex proximis" [L. virosa], Thalictrum lucidum: "a T. flavo videtur temporis filia", Calendula graminifolia : "Anne hae posteriores 3. 4. 5. e C. pluviali olim ortae sint?" Also well-known is Linnaeus's remark on Rosa: it seems that nature mixed up several species or playfully formed several from one. Note that created nature did so, not the Creator.

3. Cultivated plants are not created, therefore they are not species.

4. Cultivated plants should be assigned to the species from which they originated. They may be classified as varieties, either named or unnamed.

This principle is clearly stated by Dalibard (1749): "J'ai joint les variètès qui ne sont pour la plupart, au sentiment de M. Linnaeus, que des effects de la culture, aux èspèces ausquelles elles appartiennent".
Linnaeus's taxonomic treatment differs in many cases from our present views, His Aloe perfoliata contains 12 currently recognised species. He had two species in Sesamum, orientale and indicum, differentiated by the leaf shape, a character influenced by daylength. In Trichosanthes he described the wild species cucumerina and the cultivated plant anguina as different species. Westphal (1974: 220-222) showed that Vigna unguiculata was described as 6 species by Linnaeus:

Dolichos unguiculatus L. 1753	cowpea
Dolichos biflorus L. 1753	catjang
Dolichos sinensis L. 1754	cowpea
Phaseolus cylindricus L. 1754	catjang
Phaseolus sphaerospermus L. 1763	cowpea
Dolichos sesquipedalis L. 1763	yard-long bean

Summer and winter wheat were described by Linnaeus as different species, Triticum aestivum and T. hybernum. The commonly used but nomenclaturally incorrect name T. aestivum could only be saved by conservation (see Taxon 32: 492).
Hyacinthus monstrosus, described as a species by Linnaeus, is no more than a cultivar of Muscari comosus, as Linnaeus indicated: "An sequentis sola varietas ?". Another example is Fragaria muricata, which is a cultivar of Fragaria vesca.
In general Linnaeus started his treatment of a species with the wild plant, followed by the cultivated varieties. However, there are exceptions, such as Olea europaea where the cultivated plant, Bauhin's sativa, is listed prior to the unnamed variety b, which is Bauhin's sylvestris. In Phoenix dactylifera the main element is the cultivated plant. In a few cases, there is no differentiation between the wild and the cultivated plant, as in Schorzonera hispanica. In Zea mays Linnaeus confined himself to the remark that there are many varieties, but listed none.
Linnaeus changed his opinion in some cases, so that his treatment in 1753 differs from that in later works. Prunus avium was made a

species in 1755, having been treated as a variety of P. cerasus in 1753. Beta vulgaris included the wild plant in 1753 as the first variety, var. perennis. This element was raised to specific status in 1762, leaving B. vulgaris as a domesticate.
In summary, Linnaeus's philosophy on the taxonomy of cultivated plants is clear, but his actual treatment is far from consistent. As a rule, his treatment of European species recognises fewer species than recognised at present; whereas in extra-European species, many of his species are now reduced into synonymy.

5. The grouping of cultivated forms under species is the task of beginners in botany, a qualified botanist studies species and higher taxonomic levels. (Ordines naturales, 1764).

6. Named varieties of ornamental plants such as tulips, auriculas and carnations concern florists, not botanists; as no sane botanist would enter their domain. (Philosophia Botanica IX.310, "Varietates levissimas non curat Botanicus").
.... "botany has been burdened and overborne by the system of varieties for long enough, especially in the recent period, to such an extent that very few, if any, agree as to what constitutes a species, or what a variety; and so the number of species has been lamentably enlarged! I wish the system of varieties were entirely excluded from Botany and turned over entirely to the Anthophiles, since it causes nothing but ambiguities, errors, dead weight and vanity"....Hortus cliffortianus, preface (translation of Heller 1968).
This bold position of Linnaeus was mitigated later on. Eventually the variety became a respectable taxonomic level with Linnaeus.

7. Linnaeus based his taxonomy of cultivated plants mainly on Caspar Bauhin's Pinax theatri botanici (1623).
An analysis of 100 Linnaean protologues of cultivated plants shows that he cited 65 different sources. For 25 species Linnaeus provided a new descriptive phrase, nomen specificum legitimum, differing from those in his earlier works. The most frequently cited sources are: Hortus cliffortianus (1738), Hortus upsaliensis (1748), Materia medica (1749). Also Van Royen's Prodromus florae leydensis (1740), a work strongly influenced by Linnaeus (Wijnands 1983: 28), is commonly cited.
Bauhin's Pinax is referred to for 73 species and for 88 varieties, it is by far the most important source in Linnaeus's taxonomy of cultivated plants. Behind Linnaeus stood Caspar Bauhin (Savage 1937). For this reason Species plantarum should be used with some caution as a source for data on crop history; it often reflects the crops of ca 1620, not of 1750. For 40 of the 100 analysed protologues vouching specimens are present in the Burser herbarium at Uppsala, 3 of which have been designated as lectotypes. According to Stearn (1957: 117) detailed investigation will probably reveal that the Burser herbarium contains the types of about 300 Linnaean species.

Taxonomy of plants needs a stable nomenclature. This need is even greater in cultivated plants as these names are used mainly by people outside the botanical world, who are not interested in the technicalities and sophisms of nomenclature. A common reason for nomenclatural changes is the finding that Linnaeus had a plant

different from our present interpretation of the name that he gave it. The Linnaean concept of a taxon should determine the interpretation of the name he coined for it. In my opinion, the data presented above point to the conclusion that Linnaeus in many cases did not develop his own concept concerning taxa of cultivated plants. He adopted the concepts of earlier authors, commonly used in everyday life, and moulded them into his system. His main source was Bauhin's Pinax theatri botanici. Stability in nomenclature could benefit from an understanding of this situation. Typification of Linnaean names of cultivated plants should be guided by the present interpretation of these names , not by the recon-struction of a precise Linnaean concept that possibly never existed. The best advice was given by Sprague (1955: 154): ...; "each case has to be settled on its own merits".

Cycas circinalis

An example of the complexities in the typification of Linnaean names is provided by Cycas circinalis L., Sp. pl.: 1188. 1753.
There is a new nomen specificum legitimum for this species: Cycas frondibus circinnalibus: foliolis planis. This does not differ essentially from the diagnosis in Hort.cliff., Fl.zeyl. and Roy.lugdb.: Cycas frondibus pinnatis foliolis lineari-lanceolatis stipibus spinosis. Linnaeus edited his nomina specifica legitima in the Palmae pennatifoliae in the form of a key: Cocos has foliolis replicatis, Phoenix complicatis, Areca plicatis oppositis praemorsis and Elate oppositis.
The reference to Hort.cliff. is vouched by specimen 482.1 in H.S.C., it represents Cycas revoluta Thunb., a species from Japan. The reference to Fl.zeyl. is to Cycas rumphii Miq., based on herb. Hermann vol. 5 t. 349-351 (BM). No specimen is found in L to vouch for Roy.lugdb., but there is every reason to suppose that the plant in Leiden was Cycas revoluta. The references to Ray and Seba might well pertain to Cycas rumphii, Olus calappoides of Rumphius certainly is that species. Kaempfer's Tessio is Cycas revoluta again. Only Reede's Todda-panna is the plant nowadays called Cycas circinalis L. Linnaeus's Cycas circinalis consists of at least three species. Cycas circinalis and C. rumphii were known to Linnaeus only by descriptions and drawings, the living plants he knew from collections in Holland (Leiden and De Hartekamp, Vir.cliff. p.103) were Cycas revoluta. Its presence in Holland is documented from 1679 onwards in the gardens of Hieronymus van Beverningk, Simon van Beaumont, William III and Leiden University (Wijnands & Kuijlen, in prep.). There is a drawing of Todda-panna in the garden at Honselaersdijk of William III, but it shows C. revoluta, not C. circinalis; Commelin remarked in his notes in Reede that the plant was introduced from Japan.
Summing it up, the plant at present named Cycas revoluta was the main element in Linnaeus's Cycas circinalis. To do historical justice to Linnaeus's concept the name should be typified by the specimen in the Clifford herbarium, the more so since specimens are preferred over drawings for the purpose of typification. This would imply changes in the nomenclature of the Cycas species of Japan and Malabar.
Cycas revoluta is, as all members of the genus, protected by the Convention on International Trade in Endangered Species. It is widely grown from seed of cultivated origin; thousands of plants are produced for the commercial market at a few guilders a plant.

For the sake of stability in nomenclature, both in botany and in horticulture, it is therefore preferable not to typify Cycas circinalis L. by the Clifford specimen but by Reede's Todda-panna. Lectotypification can be used as a tool for nomenclatural conservation.

PENNATIFOLIÆ.

CYCAS.

circinalis. 1. CYCAS frondibus pinnatis circinnalibus: foliolis planis.
Cycas frondibus pinnatis, foliolis lineari-lanceolatis, ſtipitibus ſpinoſis. *Hort. cliff.* 482. *Fl. zeyl.* 393. *Roy. lugdb.* 5.
Palma indica, caudice in annulos protuberante diſtincto. *Raj hiſt.* 1360.
Arbor Zagoe amboinenſis. *Seb. thej.* 1. *p.* 39, *t.* 25. *f.* 1.
Teſſio. *Kæmpf. jap.* 897.
Olus calappoides *Rumpf. amb.* 1. *p.* 86. *t.* 22. 23.
Todda-pana ſ. Mouta-panna. *Rheed. mal.* 3. *p.* 9. *t.* 13. -- 21.
Habitat in India.
Foliatio circinalis more Filicum peragitur.

Acknowledgements

Mrs Ir J.M.C. Westphal-Stevels, Dr L.J.G. van der Maesen and Ir E.H. Oost made suggestions for the sample of 100 Linnaean protologues. Dr P. Smit gave me access to his unpublished notes on Linnaean dissertations. Dr C.E. Jarvis checked the data on typifications. Miss M.E. Pott prepared the diagram on sources for Linnaeus's cultivated plants.

Literature

Heller, J.L., 1968. Linnaeus's Hortus cliffortianus. Taxon 17: 663-719.

Linnaeus, C., 1751. Philosophia botanica. Stockholm.

Linnaeus, C., 1764. Ordines naturales in: Genera plantarum ed. 6. Stockholm.

Savage, S., 1937. Caroli Linnaei determinationes in Hortus siccum Joachimi Burseri. London.

Sprague, T.A., 1955. The plan of the species plantarum. Proc. Linn. Soc. London, 165: 151-156.

Stearn, W.T., 1957. An introduction to the Species Plantarum. London.

Westphal., E., 1974. Pulses in Ethiopia, their taxonomy and agricultural significance. Wageningen.

Wijnands, D.O., 1983. The botany of the Commelins. Rotterdam.

Appendix A

Some Linnaean publications relating to cultivated plants

By Linnaeus:
1736 Musa cliffortiana. Leiden.
1737 Viridarium cliffortianum. Amsterdam.
1738 Hortus cliffortianus. Amsterdam.
1745 Olandska och Gothlandska resa. Stockholm/Uppsala.
1745 Flora suecica. Stockholm.
Ed. 2: 1755. Stockholm.
1748 Hortus upsaliensis. Uppsala.
1749 Materia medica. Stockholm.
1751 Skanska resa. Stockholm.

Dissertations under Linnaeus's professorship:
1744 C. Hagardt, Ficus, Uppsala.
Am.ac. 1(2): 23-54. 1749.
22 taxa, reduced to 7 in Species plantarum.
1745 R. Martin, Plantae martino-burserianae. Uppsala.
Am.ac. 1(6): 141-171. 1749.
240 taxa.
1748 E. Aspelin, Flora oeconomica. Uppsala.
Am.ac. 1(17): 509-539.
ca. 300 taxa, arranged according to Flora suecica.
1749 N.L. Hesselgren, Pan suecicus. Uppsala.
Am.ac. 2(25): 225-262. 1751.
Fodder plants for cattle.
1752 J. Hjort, Plantae esculentae patriae. Uppsala.
Am.ac. 3(24): 74-99. 1756.
127 Swedish species.
1752 S. Ziervogel, Rhabarbarum. Uppsala.
Am.ac. 3(40): 211-230. 1756
1753 N. Gahn, Plantae officinales. Uppsala.
Am.ac. 4(51): 1-25. 1759.
1758 D.M. Virgander, Frutetum suecicum. Uppsala.
Am.ac. 5(88): 204-231. 1760.
1759 E. Jorlin, Plantae tinctoriae. Uppsala.
1759 D.D. Pontin, Arboretum suecicum. Uppsala.
Am.ac. 5(87): 174-203. 1760
1759 B. Berzelius, Nomenclatorem botanicum. Stockholm.
Am.ac. 5 (98): 414-441.
Vernacular generic names in Dutch, English, French, German, and Italian, mainly of European and garden taxa.
1763 J. Salberg, Fructus esculenti. Uppsala.
Am.ac. 6(119): 342-364. 1763.
1764 J.C. Tengborg, Hortus culinaris. Stockholm.
Am.ac. 7(126): 18-41. 1769.
1772 S.A. Hedin, Fraga vesca. Uppsala.

By other authors, strongly influenced by Linnaeus:
1740 A. van Royen, Florae leydensis prodromus. Leiden.
1749 F. Dalibard, Florae parisiensis prodromus. Paris [essentially S. Vaillant, Botanicon parisiense (1727), remodelled after Linnaeus's Flora suecica by Francois Dalibard (5-11-1709 Crannes-en-Champagne - 1779 Paris)].

plants. The open bars represent species, the hatched bars represent varieties, named or unnamed.
NNSL: new nomina specifica legitima, not cited from the earlier sources: Hortus cliffortianus 1738, Hortus upsaliensis 1748, Materia medica 1749, Flora suecica 1745, Flora zeylanica 1747. Linn.div.: several Linnaean publications: Musa cliffortiana, Viridarium cliffortianum, Flora lapponica. Syst.div.: several works by contemporary taxonomists, other than Haller. Itin.div.: several works on plants observed during travels (e.g. Rumpf, Reede). Hort.div.:several works on plants cultivated in botanical gardens (e.g. Commelin, Dillenius). -1650.div.: several pre-1650 works other than those of Bauhin. Dodoens and Camerarius.

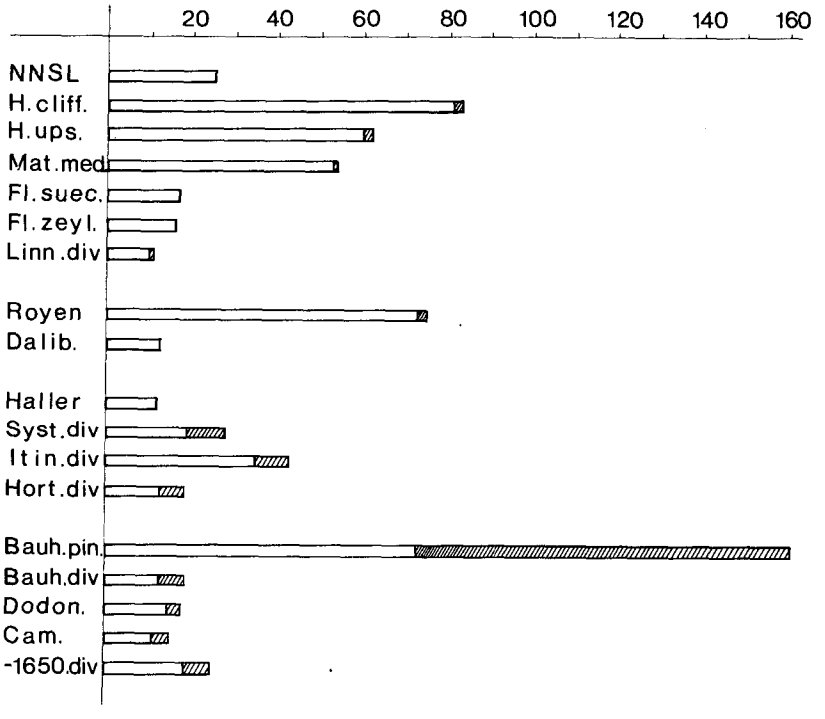

Figure 1 - Sources cited in 100 Linnaean protologues of cultivated

Appendix B. A Condensed analysis of 100 Linnaean protologues of cultivated plants with notes on typification
[A full listing of the data is available on request from the author]

Abelmoschus esculentus (L.) Moench
Hibiscus esculentus L. 1753: 696.
T: LINN 875.31 esculentus 15 Van Borssum Waalkes, Blumea 14: 100. 1966
Allium cepa L. 1753: 300
T: Royen L908105601 de Wilde-Duijfjes, Taxon 22: 84. 1973 [neotype, syntype material probably exists; Jarvis in litt.] A syntype could be Burser III.85 UPS.
Allium porrum L. 1753: 295
T: Dodoens 1616: 688 de Wilde-Duijfjes, Taxon 22: 77. 1973 [Dodoens 1616 cited in HU: 77]
Allium sativum L. 1753: 296
T: Burser III.90 UPS de Wilde-Duijfjes, Taxon 22: 81. 1973
Aloe vera (L.) Burm.f.
Aloe perfoliata L. var. vera L. 1753: 320
T: Reede 11 t. 3 Wijnands, The botany of the Commelins 1983: 127
Amaranthus blitum L. 1753: 990
T: LINN 1117.4 Westphal-Stevels in prep., see Filias et al., Taxon 29: 149-150. 1980
Amaranthus cruentus L. 1759: 1269
T: LINN 1117.25 Sauer, Ann. Missouri Bot. Gard. 54: 122. 1967
Ananas comosus (L.) Merrill
Bromelia comosa L. Herb.amb.1754
T: Rumpf 5: 227 t. 81
Bromelia ananas L. 1753: 285
T: see Wijnands, The botany of the Commelins 1983: 55
Arachis hypogaea L. 1753: 741
T: LINN 909.1 HU Krapovickas & Rigoni 1960, Seegeler, Oil plants in Ethiopia 1983: 17.
[LINN 909.1 is probably not a syntype; Jarvis in litt.]
Asparagus officinalis L. 1753: 313
T: H.S.C. 121 Flora of Turkey [probably not HSC, see Marais & Coode, Fl. Masc. 8 (1978) Jarvis in litt.]
Avena sativa L. 1753: 79
T: H.S.C. 25 see Taxon 28: 579, fig. 1 (1974).
Beta vulgaris L. 1753: 222
T: no specimen in LINN
Brassica juncea (L.) Czern.
Sinapis juncea L. 1753: 668
T: LINN 845.11 juncea 4 Jonsell, Fl. Trop. Afr. 1982: 5
Brassica napus L. 1753: 666
T: LINN 844.10 3 napus Jonsell, Fl. Trop. Afr. 1982: 7
Brassica nigra (L.) Koch
Sinapis nigra L. 1753: 668
T: ?, no specimen in LINN
Brassica oleracea L. 1753: 667
T: neotype to be designated
Brassica rapa L. 1753: 666
T: Camerarius 218 Oost et al. in prep.
Cajanus cajan (L.) Millsp.

Cytisus cajan L. 1753: 739
T: Hermann 1 f. 14 (BM) Stearn 1972; Westphal, Pulses in Ethiopia p.64.1974
Cannabis sativa L. 1753: 1027
T: H.S.C. 457 Stearn in Harv. Univ. Bot. Leafl. 23(9): 33
Capsicum annuum L. 1753: 188
T: Royen L90824400 Jansen, Spices, condiments and medicinal plants in Ethiopia p.38.1981
Carica papaya L. 1753: 1036
T: ?
Carthamus tinctorius L. 1753: 830
T: H.S.C. 394.1a Seegeler, Oil plants in Ethiopia p. 87, 93.1983
Carum carvi L. 1753: 263
T: ? syntype LINN 372.1
Cassia fistula L. 1753: 377
T: herb. Hermann (BM); see Fawcett & Rendle, Fl. Jamaica 4(2): 102
Cicer arietinum L. 1753: 738
T: H.S.C. 370 Verdcourt 1971; Van der Maesen, Cicer L., A monograph of the genus p.31. 1972
Cichorium intybus L. 1753: 813
T: ? syntype LINN 962.1 intybus 1
Citrus aurantium L. 1753: 782
T: ? syntype LINN 937.2 aurantium 2
Citrus medica L. 1753: 782
T: ? syntype LINN 937.1 1
Cocos nucifera L. 1753: 1188
T: Reede 1 f. 1-4, see Taxon 28: 64 (1979)
Corchorus olitorius L. 1753: 529
T: H.S.C. 209 Wild Fl. Zamb. 2: 84.1963
Coffea arabica L. 1753: 172
T: ? syntype LINN 232.1 arabica
Crescentia cujete L. 1753: 626
T: Plukenet t. 171 f. 2 Wijnands, The botany of the Commelins p.50.1983
Cucumis sativus L. 1753: 1012
T: Burser XVII.97 UPS, see Taxon 34: 288-293 (1985)
Cucurbita pepo L. 1753: 1010
T: syntype LINN 1151.2 Pepo 2 [Burser XVII.103 UPS syntype]
Dactylis glomerata L. 1753: 71
T: LINN 90.3 glomerata 2, Burser I.32 & I.79 UPS syntypes?
Daucus carota L. 1753: 242
T: LINN 340.1 1 carota, Burser VII(2).37,39,40 UPS, H.S.C. syntypes ?
Dolichos lablab L. 1753: 725 [Lablab purpureus (L.) Sweet]
T: Burser XIX.55 UPS Westphal, Pulses in Ethiopia p.91.1974
Festuca rubra L. 1753: 74
T: Linnaean specimen in Gothenburg Jarvis in prep. [Burser I.16 & 57 paratypes ?]
Ficus carica L. 1753: 1059
T: LINN 1240.1, syntype ?
Fragaria vesca L. 1753: 494
T: LINN 654.2 '1' Staudt, Canad. J. Bot. 40: 870 fig. 1. 1962
Gomphrena globosa L. 1753: 224
T: H.S.C. 86.1 Townsend 1980: 55, see Wijnands, The botany of the Commelins p.32. 1983

Helianthus annuus L. 1753: 904
T: LINN 1024.1 annuus 1 , Burser XV(2).85 UPS syntypes ?
Helianthus tuberosus L. 1753: 905
T: LINN 1024 tuberosus 3, Burser XV(2).86 & 88 UPS syntypes ?
Hordeum vulgare L. 1753: 84
T: LINN 103.1 vulgare 1 syntype ?
Humulus lupulus L. 1753: 1028
T: H.S.C. 458 see Fl. Turkey 7: 640
Ipomoea batatas (L.) Lam.
Convolvulus batatas L. 1753: 154
T: LINN 218.13 7 patatas syntype ?
Lactuca sativa L. 1753: 795
T: LINN 950.2 sativa 2 (De Vries & Jarvis in prep.)
Note: culturae mangorico forte producta ex proximis.
Lens culinaris Med.
Ervum lens L. 1753: 738
T: LINN 907.1 Westphal, Pulses in Ethiopia p.109.1974
Linum usitatissimum L. 1753: 277
T: LINN 396.1 Kulpa & Danert 1962: 342; Seegeler, Oil plants in Ethiopia p.170.1983 [to be rejected] probably specimen in H.S.C.
Lolium perenne L. 1753: 83
T: LINN 99.1, .2, .5 syntypes ?
Malus sylvestris Mill.
Pyrus malus L. 1753: 479, 1200
T: LINN 647.3 malus 2 syntype ?
Mangifera indica L. 1753: 200
T: ?
Manihot esculenta Crantz
Jatropha manihot L. 1753: 1007
T: LINN 1141.11 manihot 5 syntype ?
Momordica charantia L. 1753: 1009
T: H.S.C. 451.2 Keraudrin-Aymonin Flore de Cambodge, Laos, Vietnam 15: 42(1975)
Moringa oleifera Lam.
Guilandina moringa L. 1753: 381
T: herb. Hermann 2: 24 (BM) see Wijnands 1983: 153
Musa paradisiaca L. 1753: 1043
T: LINN 1207.1 'par' syntype ?
Nicotiana tabacum L. 1753: 180
T: LINN 245.1 Tabacum 1 syntype ?
Olea europaea L. 1753: 8
T: LINN 20.1 europaea 1 syntype ?
Origanum vulgare L. 1753: 590

T: LINN 743.9 Ietswaart, A taxonomic revision of the genus Origanum 1980: 106
Oryza sativa L. 1753: 333
T: LINN 460.1 sativa 1 syntype ?
Papaver somniferum L. 1753: 508
T: LINN 669.8 somniferum 6 syntype ?
Pennisetum americanum (L.)Leek [=P. glaucum (L.) R.Br.]
Panicum americanum L. 1753: 56
T: no specimen in LINN
Petroselinum crispum (Mill.) A.W.Hill
Apium petroselinum L. 1753: 264
T: Burser VII(2).64 UPS , H.S.C. 108 syntypes ?

Phaseolus vulgaris L. 1753: 723
T: LINN 899.1 HU Verdcourt 1971, Westphal, Pulses in Ethiopia p.166. 1974
Note: Burser XIX.54 is [the type of ?] Phaseolus nanus L. Cent. I: 23. 1755.
Phoenix dactylifera L. 1753: 1188
T: Kaempfer fig. see Taxon 28: 64 fig. 6
Piper nigrum L. 1753: 28
T: LINN 41.1 (2?) syntypes ?
Pisum sativum L. 1753: 727
T: LINN 903.1 sativum 1 Westphal, Pulses in Etiopia p. 183.1974
Note: Linnaeus described P. sativum as the cultivated species, P. arvense as its wild relative.
Portulaca oleracea L. 1753: 445
T: ?
Prunus cerasus L. 1753: 474
T: ?
Prunus domestica L. 1753: 475
T: ?
Pyrus communis L. 1753: 479, 1200
T: LINN 647.1 communis 1 [?] , H.S.C. 190 Fl. Turk.
Raphanus sativus L. 1753: 669
T: LINN 846.1 1 sativus Jonsell, Fl. Trop. Afr. 1982: 13
Ribes uva-crispa L. 1753: 201
T: no specimen in LINN
Ricinus communis L. 1753: 1007
T: H.S.C. 450 Seegeler, Oil plants in Ethiopia p.204. 1983
Rubus idaeus L. 1753: 492
T: LINN 653.1 syntype ?
Saccharum officinarum L. 1753: 54
T: LINN 77.2, .3 offic. 1 syntypes ?
Scorzonera hispanica L. 1753: 791
T: LINN 947.3 hispanica 2 syntype ?
Secale cereale L. 1753: 84
T: LINN 102.1 cereale 1 syntype ?
Sesamum indicum L. 1753: 634
T: LINN 802.3 Rechinger Flora Iranica 1978,128: 2
Sinapis alba L. 1753: 668
T: LINN 845.4 alba 2 syntype ?
Sium sisarum L. 1753: 251
T: LINN 355.7 sisarum 3 syntype ?
Solanum lycopersicum L. 1753: 185
T: LINN 248.16 see Taxon 32: 310
Solanum melongena L. 1753: 186
T: LINN 248.28 see D'Arcy, Ann. Missouri Bot. Gard. 61: 852. 1974
Solanum tuberosum L. 1753: 185
T: LINN 248.12 8 S. tuberosum Hawkes, Proc. Linn. Soc. London 166: 106. 1956
Sorghum bicolor (L.) Moench
Holcus sorghum L. 1753: 1047
T: LINN 1212.6 sorghum syntype ?

Spinacia oleracea L. 1753: 1027
T: LINN 1174.1 oleracea 1 syntype ?
Thea sinensis L. 1753: 515
T: LINN 685 syntype ?
Theobroma cacao L. 1753: 782
T: LINN 934.1 not a syntype
Trichosanthes anguina L. 1753: 1008
T: ? syntype LINN 1149.1 anguina HU not a syntype ?
Note: Linnaeus treated the cultivated plant and the wild species, T. cucumerina L., as different species. The cultivated plant is now classified as T. cucumerina L. var. anguina (L.) Haines. The basis of T. cucumerina L. is pada valam Reede 8 t. 15 (Wijnands 1983: 93).
Triticum aestivum L. 1753: 85
T: H.S.C. 24.3 Taxon 32: 492
Triticum hybernum L. 1753: 86
T: H.S.C. 24.2 Taxon 32: 492
Note: Linnaeus described two cultivated forms of the same species as two different taxa.
Vicia faba L. 1753: 737
T: LINN 906.34 Westphal, Pulses in Ethiopia p.208.1974
Vigna unguiculata (L.) Walp.
Dolichos unguiculatus L. 1753: 725
Neotype: Westphal 8682 Westphal l.c. p.213
Dolichos sinensis L., Herb.Amb.: 23. 1754
T: Rumpf 5: 375 t. 134
Phaseolus sphaerospermus L. 1763: 1018
T: ?
Dolichos biflorus L. 1753: 727
T: Royen, L Westphal l.c. p.214
Phaseolus cylindricus L. Herb.amb.: 23. 1754
T: Rumpf 5: 383 t. 139 f. 1
Dolichos sesquipedalis L. 1763: 1019
Neotype: Westphal 8677 Westphal l.c. p.224
Vitis vinifera L. 1753: 202
T: LINN 281.1 vinifera 1 syntype ?
Zea mays L. 1753: 971
T: LINN 1096.1 mays 1 syntype ?

Note: Linnaeus mentioned that many varieties exist, but he did not name any.