SYLVA TELLURIANA

MANTISSA SYNOPTICA.

TREES AND SHRUBS

OF

NORTH AMERICA,

AND OTHER PARTS,

Including about 800 Genera and 1000 species new or rectified, improved and classified,

BY C. S. RAFINESQUE A. M.—Ph. D.

Prof. of Botany, the Natural and Historical Sciences, Member of many learned Societies &c.

PHILADELPHIA

1838.

Price Five Dollars with the Supplement —3 copies for $10—8 copies for $20.
SYLVA TELLURIANA.

MANTIS. SYNOPT.

NEW GENERA AND SPECIES

OF

TREES AND SHRUBS OF NORTH AMERICA,

AND OTHER REGIONS OF THE EARTH,

Omitted or mistaken by the Botanical Authors and Compilers, or not properly classified, now reduced by their natural affinities to the proper natural orders and tribes.

By C. S. Rafinesque, A. M.—Pii. D.

Professor of Botany, the Natural and Historical Sciences, member of many learned Societies in Paris, Bordeaux, Brussels, Bonn, Vienna, Zurich, Naples, &c.—Philadelphia, New York, Lexington, Cincinnatti, &c., author of many works.

BEING A SUPPLEMENT TO THE FLORA TELLURIANA.

(Trees and Shrubs are the Ornaments of the Earth.)

PHILADELPHIA:

PRINTED FOR THE AUTHOR AND PUBLISHER.

1838.
NOTICE.

This Synoptical Mantissa being a Supplement to all the works on Dendrology and Xylogy, as well as to my own: those New G. and Sp. of Trees and Shrubs already described by myself in my various works and Floras, above all my two late Flora Telluriana and Flora of North America, as well as my Medical Flora of the United States, will seldom be noticed or repeated here.

The whole of the New Genera of such Trees; will be duly reduced to their natural orders, and a Table formed of them: so as to present at once a view of the generic additions to these natural groups, and a proper classification of such additional Discoveries or Revisions.

But few Genera of which only the flowers are known and not the fruit, or viceversa, will be introduced; but some may, as did Gaertner and others when they only obtained imperfect materials or figures.
INTRODUCTION.

I promised in my Flora Telluriana 1836 concluded in 4 parts and 1225 articles, to add soon after some others separately; the Trees and Shrubs being the most important and striking vegetable bodies, deserve to be foremost. They are the most valuable also by their fruits, timber, bark, medical productions, &c: yet have often been neglected by the Botanists not able to distinguish objects accurately.

It is a fact that Trees have been the last to be well ascertained and described every where: it is only lately that the Elms, Willows, Oaks and 20 other Genera of Trees have been properly distinguished even in Europe, and in North America our Oaks, Willows, Poplars, Ash trees, Grape Vines and 40 other Genera of Trees or Shrubs have been described only within a few years. Our common fruit trees were not even distinguished till Decandole attempted it, and the Plumb trees, Cherry trees, Wortle berries of N. America are yet in utter confusion with many other fruits.

And still we meet with Botanists who pretend that every thing is known, and that all our vegetable forms are ascertained and described . . !

In tropical climates where these woody forms abound, there remains still more to be achieved or even discovered. The old Botanists Rheede, Rumphius, Piso, Plumier, and many others have figured a crowd of Trees, from the East and West Indies, Polynesia and South America, that are yet deemed doubtful because not so well described as required by modern refinement, and not met by late travellers in their
rapid excursions; but they are often sufficiently designed to be known and classed. When they have been neglected by our scrupulous Compilers, I shall make it a point to restore them, and admit them by proper names, pointing out their affinities and natural analogies.

Within this Century a crowd of travellers or explorers have partly made known the treasures of a luxuriant vegetation in South America, Africa, India, Madagascar, Japan, Polynesia, Australia, &c. but only a part of their discoveries have been published, and even that part is sometimes neglected by the Botanists that do not travel.

Even now there are some Regions of the Earth, of which we know little or nothing, as to their Trees, Shrubs and Plants. Such are for instance Western China, Thibet, Central Tartary, Eastern Africa, North Australia, Papua, Borneo, and in America, Western Brazil, Bolivia, Nicaragua and Guatemala, &c.

Therefore we have yet an ample field before us, in attempting to complete the knowledge of the woody Bodies of our Globe, both as to ascertaining them all and naming, describing, figuring and classifying them properly.

In this little work nothing else will be attempted but to collect and restore the chief Genera omitted or mistaken, adding some new ones, rectifying their names, sometimes their species, classifying those deemed doubtful, and tracing their botanical affinities. I have already done so for many in my former works, and above all in my Flora Telluriana, also New Sylva and Pomona of North America. Here I mean to give additions thereto, and in fact to all the Botanical works, where the labors of Adanson and
Necker, Rumphius and Rheede, with a host of similar worthy authors, are neglected and omitted or not properly fixed.

In doing this, I shall again adopt the desultory order of arrangement, with alphabetical Index, and for the reasons often stated, that I cannot stoop to follow the erroneous sexual system, nor the imperfect serial method of any modern Author. A perfect serial order is yet a desideratum in Botany, none has hit upon it, nor begun it by the Rose as I did. I have given my own view of this Serial Order in first part of Flora Telluriana, and altho' apparently the best or least imperfect, if I was to follow it here, I might certainly be as much blamed as I may be for my Desultory Order; which is however that of Hooker and Lindley in their periodical publications, that of Lamark, Poiret, with many other writers, and the Centuries of Bivona and ten others.

Altho' we have several works on Fruit trees, Forest Trees, Ornamental Shrubs, of some Regions, no work has ever been attempted upon all those of our Globe; and altho' usually introduced in general works, yet they appear there drowned and blended with the whole of vegetation: while they hold such a rank by size and importance, as to deserve to stand alone. We lack thus a complete view of Arborescent and Frutescent forms all over the Earth, and their natural groups.

A very common distinction, but not always accurate is their division into Trees, Palms, Shrubs, Under Shrubs, Thorns, Bushes and Vines. Except Palms all the others are unnatural blending forms of woody Vegetables. The Cactes or Cactoid forms, the Smilax or Shrub-
by climbing Monocotyles, and the Stelmians or Crowned Monocotyles, akin to Palms, are additional and more natural.

For these forms, my remarks on habit, classification and other details, I refer to the first part of my Flora Telluriana, and to the Introduction to my New Sylva of North America for the geographical range of Trees: which I assert to form the principal feature in the botanical regions of the Earth.

To explain this fact would require many illustrations and details, more suitable for a General Sylva Telluriana, (when it shall be undertaken) than a simple Mantissa or Supplement like this. Then it will be easy to show how some peculiar Genera of Trees prevail or are peculiar to each Region, just like the Oaks in North America and Mexico, the Willows and Roses in Northern Regions, the Palms in tropical Regions, &c. It has lately been proposed to distinguish and denominate these Regions by the prevailing Genera of Plants; but I should think the prevailing Trees ought to obtain the preference.

There are woody forms either Generic or Specific in almost all the Natural Orders and Families, and even among the Ferns, Fungi, &c. However the perennial stem of all the Cellular Plants are quite peculiar and not proper wood: those of Monocotyles assume also a peculiar texture and extraordinary forms, as in Ferns, Lycopodes, Equisetides; while the Mosses and Hepatides, are totally herbaceous even when perennial. Lilies, Orchides, Aroides, Grasses, &c., when assuming a frutescent form, have always some peculiar structure, quite different from the real Trees and Shrubs of the Dicotyle Series.
In these by far more numerous on Earth, we find whole families altogether frutescent as the Palms are among Monocotyles. Such are the true Rosaceous, Prunides, Pomides, Magnolides, Annonides, Coniferes, Amentaceous, Cupuliferes, Laurines, Meliaceous, Ericoides, Vaccinides, Jasminides, Sarmentose, and many others: while there are but few families that are totally destitute of the arborescent or frutescent forms.

Among the obsolete and incongruous Genera that Jussieu and others could not reduce to his natural families, because unwilling to see that they were types of new ones, nearly all were frutescent and have since been properly distributed or framed into peculiar families, even when 1 or 2 Genera only may have been the original types. I shall do the same with some others, that have been neglected, because the Botanists were puzzled where to place them.

Lastly the object of this Mantissa is both to correct generic errors and omissions, and to add at least all the Trees and Shrubs already known and described or figured, to our actual mass of botanical improved knowledge, upon the plan proposed and pursued in my Flora Telluriana for many other branches of Botany.

Philadelphia, October, 1838.
SYLVA TELLURIANA.

CENTURIA I.

Article 1. Olea Auct. Many Sp. have been improperly united to this Genus, and many real Sp. blended as varieties, the common Olive is the type, all others must be again examined. The nat. family Oleina of R. Brown of which it is the type, hardly differs from Jasminea except by a monosperm drupe. The real Olea has — Cor. infundib. stigma bifido, stylo elongato — and the real Olea europea has — ramis levis, fol. ovato lance. mucronulatis, margine revoluto, subtus albidis, fructo obl. nigro.—Native of regions around the Mediterranean: it has produced 25 varieties now cultivated, distinguished by slight differences of size, season, value of fruits; but some presumed varieties with different shaped leaves or fruits, are real species, whether primordial or deviated, and many botanists have hinted as much. All seen alive.

2. Olea europea Var. Semperfloreus Raf. O. caietana Petagui, Vitm. deemed a sp. by them, but no essential difference given, it only differs by having flowers and fruits at all seasons; the olives are small ovatoblong blackish, oil good, leaves ovate lanceolate. South Italy.

3. Olea verrucosa Raf. ramis verrucosis, fol. lanceol. planis acutis subtus albidis.—South of Europe, the only variety in Persoon, but a real species probably.

4. Olea bifera Raf. ramis levissimis, fol. major obl. lanceol. subtus argenteis, fruct. pri-
mordialis elongatis acuminatis purpureis, serotinis parvis globosis—South Italy, called *oliva sanctana* near Rome, the foliage is globular not spreading, very remarkable by bearing twice a year and different shaped fruits, the last not larger than peas are like a bladder of excellent oil.

5. *Olea cayana* Raf. ramis levis, fol. ellipticis obtusis subtus pallidis—South of Europe, called, Cayan Olive.


7. *Olea brevifolia* Raf. ramis levis, fol. ovatis brevis—South of Europe. We lack accounts of the olives of Asia.

8. *Enaimon* Raf. (nom. grec.) diff. *Olea*, cal. minutus sub4dent. cor. rotata, 4partita, lobis recurvis. stam. 2 opp. in sin. ovar. globoso, stylo teres, stigma globoso umbilicato—thus totally unlike the real Olive, nearer to Phyllirea only one type, unless *Olea capensis* should also belong thereto.


10. *Pausia* Raf. diff. *Olea*, dioica, cor. tubulosa, 4fida, lobis reflexis, stigma subsessile emarginato, nux striata basi perforata. *Racemis panic. bracteis connatis*—all the real Olives are of the old continent, this is American and a genuine Genus, the type being *Pausia americana* (or *odorata*) *Olea* do L. auct. but as it is stated the leaves vary being lanceolate, elliptic or obovate, it may include also several species,
seen dry. Pausia was an ancient Latin name of the Olive.

11. **Pogendra** Raf. (beard inside) diff. *Olea*, cor, tubulosa teres 4fida, intus barbata, stam. 4!—Probably not even of same family, since 2 stamens are essential thereto, and rather akin to *Mayepea*, with 4 stamens also.


14. **Notelea** Vent. To this G. Smith proposed to unite *Rhizosperma* of Gaertner, and even *Phyllirea!* *Chionanthus*! what an incongruity! while it even includes at least 2 distinct G. the real *Notelea* has—cal. tubul. 5fid. eq. persist. petalis 4, basi pari coalitis cum stam. 2 filif. stylo filif, stig. integro, drupo monosp.—Many types *N. punctata, ovata, ligustrina, microcarpa* &c. Near to *Chionanthus* but different calix, style, petals &c.


All the above Genera are frutescent, for many others akin see my New Flora 706 to 734, where the G. *Chionanthus, Forrestiera, Carpoxis, Nudilus, Fraxinus, Leptalix, Ornanthes, Samarpses* &c are properly designated. Also my N. G. *Faulia* fl. tell. 314, once
blended with Ligustrum; and *Linociera, May-epea* wrongly united to *Chionanthus; Linociera* belongs to *Jasminia* having a berry *2loc.* 4sperm, the petals are as in *Notelea.*

16. **Pattara** Ad. Basal, Rh. Lam. Bosc. cal. *5part.* petalis *5,* stam. *5,* ovar. globoso, stylo brevis, stigma, simplex drupis globosis monosp. *Frut. sempervirens,* *fol. alt. racemis axil,* *flor. odoratis*—put by Adanson among the *Cistides* but akin to *Ximenia* and *Cansi-eria* all probably belonging to my family of *Celtides,* though differing from *Celtis* by petals and single style, 2 types omitted by nearly all Authors.

17. **Pattara basal** Raf. petalis subrotundis. Rheed 6. t. 11.

18. **Pattara acuta** Raf. petalis ovatis acutis Rh. 6. t. 12. Both in Malabar, the fruits are vermifuge.


20. **Bedusia aromatica** Raf. fol. ovatis integris coriaceis fl. fascic.—Malabar, figured by Rheed. 5. t. 50. leaves with aromatic taste and smell, flowers very small scentless.

21. **Mabola** Raf. cal. rotato *4part.* caliculato, cor. urceolata *4fida,* stam. *24* hypogyna non epicorolis, filam. 12 distinctis filiformis apice furcatis biantheriferis, antheris anticis et posticis bilocul. cetera ut *Diospyros*—singular G. by the extraordinary number and position of anthers not lateral to each other, same family as *Diospyros* however.

22. **Mabola edulis** Raf. *Diospyros mabola*
Roxb. bot. reg. 1139. fol. obl. acutis, fl. term. fasciculatis—a fine fruit tree of the Philippines, fruit like a Quince, rosy flesh of fine flavor, flowers yellow odorous; wood like Ebony.


24. **Calsiama malabarica** Raf. foliolis ovatis integris, petalis acutis, drupis viridis—Rheed. 4 t. 32. A tree, the bark is medical, used against spasms, gout, ulcers and dysentery.

25. **Bemsetia** Raf. Rubiacea—cal. adh. 4dent. basi globoso, cor. tubo elongato, limbo 4part. rotato et reflexo, faux barbata, antheris 4 sessilis in sinub. exertis subulatis, stylo clavato bifido. Bacca 2loc. 2sperma—habit of *Ixora* to which it was wrongly united. Monotype.


27. **Claderia** Raf. (wooly twigs) cal. parvus 5fidus, petalis 5lanceol. stam. 10 liberis pet. eq. stylo filif. stig. capit. Baccis globosis monosp. Arbor fol. pinnatis, fl. term. panic.—Another G. of the family Amyrides, not at all a *Melia* as supposed by some.

28. **Claderia parvisflora** Raf. ramis lanatis, foliolis ovatis, paniculis multifloris—fine tree of South India, called *Carabou* by Lam. Bosc, a *Melia* by others. Leaves and flowers with a
strong smell, leaves bitter, flowers small blossoming twice a year, seeds affording an oil.

29. Apama Rh. Raf. (n. ind.) calix trifidus, petalis nullis, stam. plura triadelphus, pist. minut. fruct. theca-siliquosa intus pulposa polysp. Frutex semperv. fol. alt. fl. axil—N. fam. of Hesperides near to Triphasia of Loureiro, also akin to Androseum of Hypericines, but is the fruit unilocular?

30. Apama laurifolia Raf. (Alpan Bosc) fol. oblongis perennis, fl. axil. 2-4 fasciculatis—East Indies, flowering twice a year, medical, juice used with oil for ulcers, and with Calamus against bites of Snakes.

31. Benteca Rh. Ad. cal. 5dent. corolla 5fida, stam. 5, pist. libero, stylo recto, stig. globoso. Baccis siccis obl. 2locul. polysp. Arbor semperv. fol. alt. fl. panicul—put by Adanson next to Styrax, but more akin to Solanum, unless the stamens be opposed to corolla when it may rank in the Sapotides. The seeds are ovoid hard in two rows in each cell, partition membranose.

32. Benteca odorata Raf. fol. perennis ovatis subtus villosis, racemis termin. paniculatis—tall tree of Malabar figured by Rheed 4. t. 30, the flowers are small greenish white, but numerous and fragrant; the leaves are sudorific.

33. Bessia Raf. (n. ind.) Leguminose. cal. 5dent. petalis 5ineq. 4 subrot. uno obl. obt. stam. 10 liberis ineq. 3 multo longior, ovarium conicum, stylo filif. legum. compressis 4-6 spermis. Arbor fol. alt. pari pinnatis, fl. term. racemosis—another G. of the Lomentaceous Leguminose, near Senna, Sophora &c.

34. Bessia sanguinolenta. Raf. (Bessi
Rumph. 3 t. 10. Lam. Bosc.) foliolis 4-6 ovatis integris, racemis terminalibus—large useful tree of Molucas, excellent timber, flowers yellow, pods one foot long; sap red like blood, staining permanently. This and other Indian names above, are certainly as good as *Piper, Cassia, Coffea*, and 50 similar Indian or Arabic names of Linneus. If *Bessia* is not good enough or too near *Bassia! Dendrema* or bloody tree is suggested instead.

35. *Gossypium* L. auct. Cotton is a fine natural G. most of the sp. being frutescent; but they are as yet little understood, and the African and Asiatic kinds not well described. Wildenow, Lamark, Smith and Decandole have but few sp. not well distinguished: Decandole's account of this G. as well as *Vitis* and some others is very imperfect, having neglected the monograph of American Cottons by Rohr and Bosc, which I have chiefly used in my own monograph. Rohr had noticed (but not well named) nearly 40 years ago 34 species and varieties, taking his characters from the seeds rather than the variable leaves and glands. I shall give here a synoptical view of his labor and mine, having reduced them to 26 botanical sp. under 3 subgenera, adding the average produce of Cotton by each tree.


39. *Gossypium* (Karpas) *virgatum* Raf. sp. 1 Rohr, Bosc. ramis virgatis, sem. magna ovata
scabrá nuda—Shrub 9 feet high, worthless producing hardly any cotton, Antilles.

40. *Gossypium* (Karpas) *niveum* Raf. sp. 2  
R. B. sem. apex subfibrosis ad utrinquelatere—Cotton very white, of Antilles, not productive.

41. *Gossypium* (Karpas) *virens* Raf. sp. 3  
R. B. sem. villis viridis coronata et maculata, apex brevis—small Shrub, but fine cotton, produce $\frac{2}{4}$ ounces. Martinico &c.

42. *Gossypium* (Karpas) *decurrens* Raf. sp. 4, 5, 9  
R. B. sem. ovata scabra, corona tomentosa ad angulo decurrents—sorrel cotton, 4 varieties 1. *viridis* producing only 4 ounces of cotton, 2 *rubrum*, with stem, petiols, nerves and calix red, valuable, producing $7\frac{1}{4}$ ounces of fine clean cotton on each Shrub 5 feet high. 3 *floccosum*, seeds with flocoe spots, shrub 6 feet high, producing 4 ounces of cotton. 4 *patulum*, like last, but loftier, much spreading, producing one pound of cotton.

43. *Gossypium* (Karpas) *macrospermum* Raf. sp. 6  
R. B. sem. oblonga scabra longe acuminata, corona tomentosa vix decurrents—Shrub 7 feet high, produce 3 ounces. Antilles.

44. *Gossypium* (Karpas) *herbaceum* L. sp. 7, 8  
R. B. sem. ovata scabra nigra, angulo uncinato barbato—this is the common cotton native of Asia, the black seed *C.*, of North Amer. akin to the green seed *C.* or *G. hirsutum* not mentioned by Rohr: several varieties 1. *barbatum*, end of seed smooth, perennial, 6 feet high, producing 5 ounces of cotton. 2. *megacarpum*, end of seeds hairy crowned, large capsules, annual, very fine cotton. 3 *vulgaris*, end of seeds hairy crowned, smaller capsules, annual, 3 or 4 feet high, producing 7 ounces of coarser cotton.
4. _perenne_, like last but perennial stem. Italy, Sicily, Spain, Persia, &c.

45. _Gossypium_ (Karpas) _guyanense_ Raf. 10, 11 R. B. sem. ovata scabra nigra, 7-11 coalitis in loculis, byssus elongatus—small tree 8 to 12 feet high, producing two crops yearly and each tree 12 to 24 ounces of finest cotton, one of the long staples, native of Guyana and Brazil, 2 var. 1. _verum_, Surinam Cotton, seeds 9 to 11 in each cell forming a narrow pyramid, 2 _brazilienisis_, Brazil Cotton, seeds 7 to 9 forming a broad pyramid.

46. _Gossypium_ (Leiophaium) _convexum_ Raf. 12 R. B. Foliis convexis, sem. levis fusca- ta venosa, postice apice barbata, angulo antice ad apice longior, byssus laxus—in S. Marta, 8 feet high, gives two yearly crops of fine snowy cotton easily plucked.

47. _Gossypium_ (Leiоф.) _tenax_ Raf. 14 R. B. sem. levis fusca- ta venosa, apice coronata penicellata, angulo uncinato, byssus tenax—Antilles, 10 to 12 feet high, producing 4 ounces of fine long cotton, but very difficult to pluck.

48. _Gossypium_ (Leiоф.) _fuscum_ Raf. 13 R. P. sem. levis fusca- ta venosa, apice postice villosa, angulo uncinato, ad apex brevior, byssus fuscatus—tree 12 to 15 feet high, native of Asia, cotton dirty redish brown difficult to pick.

49. _Gossypium_ (Leiоф.) _pallens_ Raf. 16 R. B. sem. levis fusc. venosa, apice tomentosa, angulo uncinato, byssus rubescens—from Asia also, 6 feet high, cotton paler than last, redish, 3 ounces.

50. _Gossypium_ (Leiоф.) _asiaticum_ Raf. 19 R. B. sem. brevis vix ovata levis fusc. venosa, apice barbata villosa, byssus albus—Asiatic, akin to last, same size, leaves, glands, flowers,
but fruits, seeds and cotton different, producing 6 ounces each tree of fine white cotton.

51. *Gossypium* (Leiof.) *amblospermum* Raf. 15 R. B. sem. levis fusc. venosa, angulo obtuso, apex viloso, byssus laxo—Antilles, 10 feet high, producing only 2½ ounces of cotton.

52. *Gossypium* (Leiof.) *trichospermum* R. 17, 18 R. B. sem. levis fusc. ven. angulo acuto, corona villosa et capillaris, byssus elongato—of South America, New Grenada, Peru &c, tree 12 to 20 feet high, the longest known staple 7 or 8 inches long, a var. has a shorter staple, both difficult to spin.

53. *Gossypium* (Lanigerum) *rupestre* Raf. 20 R. B. sem. subglobosa parva subvillosa, pilis adpressis—found wild in Curazao on rocks, capsules and seeds very small, but cotton silky snowy and strong. Leaves variable.

54. *Gossypium* (Lanig.) *divaricatum* Raf. 21 R. B. Ramis patulis, sem. oblonga villosa coronata pilosa, angulo uncinato—Hayli, 7 feet high branches divergent spreading, gives two yearly crops.

55. *Gossypium* (Lanig.) *sarmentosum* Raf. 22 R. B. ramis procumbens sarmentosis, sem. oblonga, villosa, corona pilosa, antice plana, postice gibbosa—very peculiar African sp. branches drooping or prostrate 5 feet long. Leaves like the last says Rohr, cotton very white.

56. *Gossypium* (Lanig.) *teleium* Raf. 23 R. B. sem. fulvo tomentosa, sulcata tuberculata, macula glabra ad basi antice, byssus colorato—native place unknown, very peculiar seeds with several obtuse angles and furrows, cotton fine of a yellowish brown.

57. *Gossypium* (Lanig.) *cinereum* Raf. 24
R. B. sem. cinereo tomentosa teretiuscula, byssus elongato albo—South America, 7 feet high, giving only one yearly crop of 2½ ounces of cotton similar to that of the Guyana Cotton.

58. Gossypium (Lanig.) isabelum Raf. sem. rubrofusca tomentosa,teretiuscula, corona pilosa, byssus flaveolus—Asiatic, cotton very fine of isabella yellow, but not very productive.

59. Gossypium (Lanig.) albescens Raf. 26 R. B. sem. ovata tota tomentosa non apiculata, byssus albescens tenax—several varieties 1. megaespernum, large seeds, cotton of a dirty white, 4 ounces per tree. 2. rubescens, cotton of a redish white color. 3 cayenense small seeds, cotton worthless of a dirty white, very hard to pick, wild at Cayenne.

60. Gossypium (Lanig.) bicolor Raf. sem. tomentosis ovatis nonnulis cinereis, nonnullis viridis, byssus albo tenax—Trinidad, a singular sp. by two kinds of seeds in the same pods, grey and dark green, wrongly deemed a var. of last by Rohr. cotton fine and white.

61. Gossypium (Lanig.) purpureum Raf. 27 R. B. sem. ovatis tomentosis pilosisque apiculatis, fol. calicibusq, purpureis byssus albo tenax—Antilles and S. Amer. 7 feet high, only 1½ ounce of cotton, petiols, nerves and twigs red.

62. Gossypium (Lanig.) speciosum Raf. fol. lobis acutis, uniglandulosis, petalis rubro notatis, sem. globosa tomentosa canescens, bysson tenax—from India, small shrub, but with fine citron flowers with a large red spot at base of petals, capsules small, cotton very short whitish. Is it the G. microcarpon?

63. Gossypium (Lanig.) cambayense Raf. G. religiosus var. 28 Rohr. B. fol. lobis subrotundis, glandula sepe carens, petalis et sem. ut in 62.—
Blended by Rohr. with the last as varieties of G. *religiosum*, which however appears different from both, taller shrub with larger capsules and and seeds than last, but same fine flowers.

64. *Gossypium* (Lanig.) *rohrianum* Raf. 29 Rohr. sem. tomentosa, glomerata, byssus tenax. Portorico, similar to *G. guyanensis* in every respect except the wooly seeds and shorter staple hard to pick.

There are besides many other kinds of cotton slightly indicated by various writers, but not described; two of them deserve to be acquired and studied.


66. *Gossypium nankin* Raf. the fine pale nankin Cotton of China different from all others. The silky Cotton of Asia and America is produced by several sp. of *Bombax*, it has a short brittle down, like that of the Genus *Asclepias*.


68. *Kambala pendula* Raf. (Sonneratia aptala Buch. ic. auct.) Ramis pendulis, ramulis brachiatis, fol. petiol. ovatolanceol. integris carnosis avenis, pedunc. cernuis—fine tree of Ava, with habit of weeping willow. *Sonneratia* differs by cal. urceolate 6fid, 6petals, different style &c.
69. Episteira Raf. (on sterile) monoica, fl. masc. cal. 6part. obl. obt. 3 reflexis alt. cor. o, antheris pluris lin. adnatis ad pistillo sterilis. obl. vel. monadelphis instar. fl. fem. cal. 6part. sub-ul. persistens, ov. magnum orbicul. depres. stylo unico breve, stigma cavum 6dent. caps. sulcata 9-12 locul, 9-12 valvis septiferis, loculis 2-3 sp. sem. serialis centralis. Frutex, fol. alt. stipulatis, fl. axil—quite unlike Agynea with m. fl. 5parted, 8 stam. 3 styles, caps. 3cocos, hardly of same family Euphorbides, type of a tribe with valves septiferous and united stamens, or akin to my Meborides see fl. tel. 1117. Meborea chiefly differs by 3 anthers inserted on 3 styles.


71. Yangapa Raf. (n. ind.) difl. Gardenia, cal. 5gonus, cor. hypocrat. limbo 5-6part. Antheris 5-6 tubo adnata, stylo apice dilatato compresse, stigma adnatum sulcatum. Drupa obl. 5carinata umbilic. nux subbiloc. sem. plura in pulpa nidulans—Gardenia differs by cor. infund. and a berry, stigma bilobe &c. yet both same family.

72. Yangapa flavo Raf. (Gardenia corona-ria Buch. ic. auct.) fol. petiol. ovatis acum. fl. axill. sessilis solit. corollis venosis flavis—Birman Empire, small tree. The G. Gardenia was formed by many anomalous sp. this and the 3 next G. must be separated.

74. Pleimeris Raf. or Thunbergia Mont. 1773, Sonnerat &c, (not of Lin. what date?) diff. Gardenia, cal, limbo 4-6part. lac. unguic. appendic. cuculatis, cor. 7-10sida hypocr. tubo longo, antheris 7-10, stigma obliq. sulcatum. Arbor, fol. vertic. fl. term.

75. Pleimeris cupensis Raf. Thunb., do M. S. Gard. thunbergia L. auct. fol. ovatobl. acum. undul. &c—see authors, how could this fine tree be united to Gardenia! is the Thunbergia of L. anterior or posterior to this?

76. Xeromphis Raf. (dry umber.) diff. Gardenia, cor. hypocr. hirsuta limbo 5part. lac. rotundis. bacea exsuca umbilicata 3locul. sub 3valvis Frutex spinos.—the berry totally unlike Gardenia, yet still of same natural order.

77. Xeromphis retzi Raf. (Gardenia dumetorum Retz. Vitm.) fol. obov. integris. spinis axil. oppos. fl. solit. brevi ped,—East Indies, a small bushy shrub, flowers small and white.


79. Curnilia sarmentosa Raf. (Curinil Rh. 7. 25. Bosc) Fol. petiol. ovatis acutis integris, corymbis ramosis axil—Malabar, flowers yellowish white, drupes green, inside whitish bitterish as well as the white seed in the kernel.

80. Lasipana Raf. (hairy quite) Echinus Lour. non L. diff. Aker, dioic. fl. m. cal. monoph. squamosus villosus ineq. cor. o. stam. 30. fl. fem. cal. vill. ineq. 5-6part. ovar. bilobo, stylis 2 villosis. caps. 1-2 coalitis globosis 1sp. villosis—Arbor fol. sparsis simpl. fl. ped. later—very near Aker and Fothergila, family of Akerides
the name of Loureiro was same as a G. of animals and besides did not apply.

81. Lasipana tricuspis Raf. fol. pet. ovat, acutis integris tricuspidisque subtus villosis, pedunculis ramosis—Anam or Cochinchina.

82. Retama Raf. (n. arab) Lygos Ad. Apartium Necker Leguminosa diff. Spartium cal. bilab. camp. lab. sup. 2fida, inf. 3dent. stam. basi monadelphis ineq. coalitis, antheris eq. obl. petals subeq. vexil. cucul. stig. obt. glabro, leg. subinflatis brevis monosp.—This fine distinct G. has been by turns put in Spartium, Cytisus and Genista! several types.


84. Retama lutea Raf. Spartium spherocarpum L. auct. and perhaps other sp. Necker adds to his Apartium, the Sp. contaminatum, aphylum, scorpius, purgans, sepiarium, junceum &c, belonging to other groups. All these akin Genera are yet in utter confusion, authors blending them, and refering sp. by habit only! without attending to different calix, petals, stamens, stigma, pods, ... according to Adanson his Lygos (sp. spherosp.) has cal. urceol. 5dentate, and seed flat.

85. Lugacion Raf. (Apartium sp. N.) diff. Spartium, cal. tubul. 5dent. vexillum reflexo obcord. stigma villosum, leg. ovatis vel obl. compressis, sepe 2-3sp.—This will include many sp. aphylum, etnense (Sp. trisp. Sm,) umbellatum, angulatum, multiflorum, linifolium, &c, all Spartium of authors. Besides Sp. radiatum
with pods ovate polysperm, and *Sp. ferox* with pods linear falcate polysperm, probably 2 other subgenera.

87. *Nubigena* Raf. diff. *Retama*, cal. lab. sup. truncato, leg. compr. curvo undul. glabro polysp.—nearer to last by pods but type very near *Retama*.

88. *Nubigena tenerifa* Raf. *Spartium* and *Cytisus nubigenus* auct. flowers white and fragrant as in *Retama*, but axillary fasciculate.


90. *Spartium* L. Ad. Necker, &c. cal. camp. ventricoso 2lab. lab. dilat. sup. 2dent. inf. 3dent. vexil. refl. obcord. stam. monad. stig. glabro Leg. planum polysp. sem. planis—this G. is thus reduced for type to *Sp. scoparium* and such others as may be found to agree thereto, *Sp. biflorum* probably &c.

91. *Lygoplis* Raf. (armed spart.) diff. cal. tubulosus membranosus sub. 2lab. vel. subintegro, stig. viloso, Leg. ovato vel obl. compr. 2-4sp.—This perhaps includes many or most of the spinose kinds, altho' there are yet some anomalies, such are *Lyg. spinosum, villosum, horridum, ferox*? They are as akin to *Ulex* as to *Spartium*. 3 others *Sp. contaminatum*, *sepia*rium and *cytisoides* are now forming the G. *Lebeckia*. Some of the spinose *Genistas* may also belong to *Lygoplis*; *Genista* of L. and co-pists hardly differs from their *Spartium* except by oblong narrow incumbent vexillum: their *Cytisus* by diadelphous stamens and pedicellate
pod; but it is not always so, and a crowd of deviating sp. must all be examined.

92. Genista Raf. Corniola Ad. cal. urceol. ineq. 5dent. vex. angust. obl. incumbens. stam. monad. Leg. planum polysp.—Type G. tinctoria, and all the sp. agreeing with it. Decandole in his flora Gallica united all the Spartiums to Genista! even the monosperm kinds.

93. Avornella Raf. Chama-spartium Ad. Genistella Tourn—diff. Genista, cal. bilab. tripart. lab. sup. bifido, inf. 3dent.—This as a G. or subg. must contain many sp. of Genista and Cytisus, such as G. canariensis, candidans, linifolia &c. Adanson adds the Cytisus 6 and 9 of Linneus.

94. Euteline Raf. diff. Genista, vexillum emarg. amplum planum (ut in Spartium) alae ovales, carina dipetala rostrata, Leg. oligosp.—Types Genista germanica, sagittalis, decumbens, with others having such corolla.

95. Laburnum Raf. diff. Cytisus, cal. urceol. vel. camp. subbilab. 5dent. vexil. unguic. marg. reflexis, stam. basi monad. Leg. stipit. compr. polysp.—Type Lab. pendulum Raf. or Cytisus laburnum auct. which has some var. perhaps species, and many other akin agreeing thereto.


97. Diaxulon Raf. diff. Cytisus, cal. viloso tubuloso caliculato, 5sidus, vexil. viloso, stam. monad. Leg. longum compr. polysp.—Types D,
argenteum, prolifer &c Cytisus of authors. My names of Dianlalon, Euteline, Avornela, Lygation, Verzimum, Axiron, were all ancient names of akin shrubs. The real Cytisus of the latins has been proved to be Medicago arborea.

98. CAJANUM Raf. Cajan Ad. cal. urceol. 5dent. vexil. erectum, alae horizont. plana, carina obtusa. stam. diadelpha. Leg. obl. transverse striato oligosp. sem. pisiformis hilo exarata—American and tropical genus totally unlike: Cytisus cajan of L. and Authors, and there are several sp. blended probably; my Caj. thora or Cytisus pseudocajan Jaq. is another and Cyt. violaceus Aubl. is probably a third, altho' the pod is stated to be oval disperme, perhaps a subgenus.


100. MEIEMIANtherA Raf, diff. Cytisus, cal. campan. membr. bilab. trisifo, lab. inf. ovato integro, vexil. obov. amplum, stam. monad. antheris alternis minoribus, Leg. obl. polysp.—Type M. Eolica Raf. (Cytisus do Guss. Lindl. b. reg. 1902) incana pilosa. ramis teretis, foliolis ternis ellipt. racemis term. thyroideis, fl. ternis ebracteatis, leg. glabris—Eolian or Lipari Islands, quite a distinct G. akin to Crotalaria by anthers unequal 5 smaller; whence the name.
CENTURIA II.

101. Acrostema R. (hook stig.) diff. Pavetta, cal. camp. 5dent. cor. hypocrat. limbo 5fido, stam. 5, antheris longis, stylo filif. stigma hama-tum. caps. 2loba 2sp—Quite distinct from the G. Pavetta of Rheede adopted by L. but same family, two types.

102. Acm. longifolium Raf. Pav. barbata Sm. auct.—Fol. obl. glabris pedalis, fl. panic. dichot. tubo corolla brevis intus barbato—Shrub of Polynesia with flowers white very fragrant, leaves one foot long, 2 inches wide.

103. Acm. brevifolia R. Pav. pentandra Sw. auct.—Fol. ellipt. acum. brevis, fl. panic. 3chot. axil. tubo cor. longior imberbis—Shrub of An-tilles called Wild Coffee, flowers as in last. If the capsule is baccate, this with smooth tube might form a G. or subg. Osmax, the real Pa-vettas have a berry, corolla infund. 4fid, 4 sta-mens &c.

104. Rhamnus linnean Genus including many trees and Shrubs totally unlike, forming 20 Genera at least. Zizyphus and Paliurus have been generally adopted, but Frangula and Alaternus of Tournefort and Adanson less so, while the 8 Genera of Necker out of Rhamnus have been neglected or not referred except Berche-mia. The whole requires yet a total revision as to G. and Sp. which I can only attempt here in part, proposing Genera.—The real Rhamnus is dioical, has a 4fid calix, no petals, 4 stamens, 1 style, stigma 4fid. and a berry bilocular 4speme. The types are R. catharticus, in-fectorius, dauricus. oleoides and other similar Species, the American R. catharticus is proba-bly peculiar.
105. *Alaternus* T. Ad. cal. 5fido, petalis 5planis, stam. 5, stylis 3 vel. st. 3fido, Bacca 3ilocul. 3sperma.—There are doubts on this G. as to characters and sp. Linneus and Smith ascribed to *R. alaternus* a single style but 3 stigmas, many sp. have been blended in the type, which I shall now distinguish as they have partly been by Miller, Rozier, Duhamel, Tschou-di &c, all have evergreen leaves and axillary racemes.


107. *Alaternus lanceolatus* Raf. subspinosus, fol. lanceol. serratis.—This appears the real *Rh. alaternus* of L. who ascribes to it geminate deciduous spines, pyramidal small tree of South Europe.

108. *Alaternus integrifolius* Raf. Inermis, fol. ovatolanceol. integris.—Spain, large leaves.


110. *Alat. cordatus* Raf. fol. remotis subcordatis serratis.—Italy, I have seen all these alive. What other Sp. belong here must be ascertained; the *Rh. spherospermus* is stated to have a trifid style, and 1 to 3 seeds in the berry; *Rh. hybridus* is certainly an Alaternus. Also *Rh. glandulosus, pumilus* and *prinoides* auct.


112. *Frangula fragilis* Raf. fl. lud. 320. fol. petiol. obl. cuneatis, acutis integris, fl. fasc. pe-
dunc.—Louisiana, shrub 15 feet high, calix urceolate 5-dent. stigma 3-lobed, pentandrous &c.

112. Girtanneria Raf. Herm. cal. persistens campan. 4-5-lobo, petalis nullis, discus incrassatus cal. coalito, stam. 4-5 cal. alt. ov. 3-lobo, bacca uniloc? 3-sperma—I confine the name of Necker to this Sp. the characters are from L'her. and Hooker; the persistent calix and disk are peculiar, 2 types.


115. Girtan. franguloides Raf. Rh. do Mx. Pursh &c—fol. ovat. acum. sorrulatis, nervis puberis, pedunc. unifl. cal. acutis, baccis turbinatis nigris—Lake Champlain Mx. wrongly united to last by Hooker and others, perhaps not even of this G. deemed dioical by Mx.

106. Cardiolepis Raf. neog. Hermaphr. cal. campan. 5-fidus, lac. 3-gonis intus carinatis, petalis 5 minutis squamif. obcord. cuculatis, stam. 5 involvens, antheris sess. ov. 3-lobo, stylo crasso, stigma 3-lobo. Baccis globosis 3-loca. 3-Sp.—very distinct G. of mine disc. in 1820 published 1825, leaves commonly distichal, fl. axil. fasciculate, several types of North America.

117. Cardiolepis nigra Raf. fol. ellipt. utrinque acutis subintegrulis, subtus glabris, baccis nigris—Kentucky on rocks, minute green flowers.

118. Cardiol. rubra Raf. fol. ellipt. acutis integris subundul. subtus pubescens, baccis rubris—Kentucky, margin of streams, larger shrub. Is it the Rhamn. lanceolatus of Pursh?

119. Cardiol. obtusa Raf. (Rhamnus alnif Pursh. Rh. purshianus Dec. Hook. fl. t. 48) fol
ellipt, obtusis serrulatis subtus pubesc.—Missouri and Oregon: the characters given by Hooker exactly agree with my Genus, he calls the petals bifid and style trifid.

102. Cardiol? spinosa Raf. spinosa, baccis ellipt. rubris—a very doubtful sp. having only seen the berries, in West Kentucky.

121. Perfnonon Raf. (n. grec.) diff. Cardiolepis. cal. lac. acutis planis, petalis integris. ovar. ovatum, stigma subintegrum, obtusum, baccis glob. uniloc. 3sp.—very near to last G. yet with many distinctions, two types.

122 Perfnonon laurifolium Raf. Arboreum, fol. ellipt. acutis subintegris, lucidis glabris, juniorib. subt. pubescens, petalis reniformis, stig. vix emarg.—In Oregon Mts. seen alive in Bartram’s garden, where it forms a tree 20 feet high, the berries form fine clusters and assume 3 colors, being by turns green, red and black when fully ripe.

123. Perfnonon? ferrugineum Raf. Rhamnon do Nut. fol. obl. ellipt. acutis integris, juniorib. calicibusque ferrugineo toment. petalis cuneatis, stigma 3fidum—In Florida, compare Rh. ellipticus, see 144.

124. Sarcomphalus Raf. Hermaphr. cal. 4fid, petalis nullis, disco umbilicato carnoso, stam 4, stylus bifidus, stig. 2 acutis baccas umbilicis. 2 loculi. 2sperma—such are the characters of the type Sarc. retusus Raf. Rhamnus sarcomphalus of authors; but other Sp. are similar altho’ the disk is not so striking, Sarc. carolinianus, prunifolius, mauritianus, levigatus &c (all Rhamn. auct.) besides the two next shrubs.

125. Sarcomph. shortianus Raf. Rhamn. shorti Nut. fol. ovatobl. acum. subserulatis,
nervis puberis, florib. subternis.—Kentucky on rocks small shrub, near to *S. carolinianus*.


127. *Afarca* Raf. (n. gr.) dioica, cal. 5fidus, petalis nullis, stam. 5, stylo trisifo, stig. 3, bacc a 3loc. 3Sp.—akin to Alaternus, perhaps a subg. of it, type.

128. *Afarca parviflora* Raf. Rham. minutifl. Mx. with a very peculiar habit by leaves sub-opposite and flowers spicate, instead of fasciculate as in general.

129. *Atadinus* Raf. (n. gr.) dioicus, cal. 4fid. lac. reflexis, petalis bifidis, stam. 4, bacc a 2loc. 4Sp.—near to Rhamnus, but petals as in Cardiolepis, type *At. cipinus*, Rhamnus do auct.

130. *Oenopia* Raf. Herm. cal. 5partitus coloratus basi persistens, petalis 5 planis amplis, stam. 5, stigma simplex bacc a uniloc. 2sperma ad rudimento cal. insidens—Type *O. lineata* Raf. Rhamnus and Ziziphus do auct, but fruit a true berry, calix quite peculiar.

131. *Blepetalon* Raf. (cil. pet.) diff. Oenopia cal. 5fidus, petalis ciliatis, stylo unico persistens stigma simplex? Bacc a ad cal. circumscisso insidens. *Fol. oppos. distichis, stipulatis, fl. axil. umbellatis*—habit unlike the other Rhamnoides, perhaps not even of this family, type.


134. Endotropis Raf. diff. Cardiolepis, petalis integris, stylus bifidus, bacea 2loc. 2sp.
135. Endot. oleifolia Raf. Rhamn. do Hook. fl. t. 44. fol. semperv. lanc. obl. acutis subt. pubesc—Origon, very different from Rh. oleoides L. see 104.
136. Decorima Raf. (ten pits) Herm. cal. crassus 5partit. ad basis 10 foveolis, pet.-0, stam. 5. stig. 2 crassis, baccis 2sp.?—Two types with different leaves and habit, perhaps subg.
139. Marcorella Neck. Raf. Herm. Cal. 5fidus, pet. 5 planis lanc. stam. 5 ad basis callo- sis, stylo 1, stig. 3, capsula 3loba 3valvis 3sp.—very distinct by capsule like next, types M. col- lubrina and cubensis, Rhamn. do auct. both American.
140. Atulandra Raf. diff. Marcorella, cal. 4fidus, petalis o, stam. 4 non callossis, stylis 3—name meaning unwarty stamens, two types.
143. Diplisca Raf. diff. Marcorella, stylo tri- partito, capsula 3cocca 6valvis—singular G. with capsule and double valves.
144. Diplisca elliptica Raf. Rh. do Ait. &c, Ceanothus reclinatus Lher. Ramis ferrug. toment. fol. ellipt. acut. integris.—Antilles. The stamens are opposed to petals as in all Rham-
nides, but the capsule is very peculiar, almost tricapsular. These 3 capsular G. are near to Colletia and Ceanothus.

145. Lithoplis Raf. Herm. cal. 4fid. petalis o, stam. 4, ov. immerso in disco, stylo 1, stig. 4fidum Drupa! subinsera vel adherens 4sperma!—If as Cramer and Persoon assert this G. has an adherent ovary, it is not even of this family, but nearer to Phylica and Myginda. The name means weapons of the Stones.

146. Lithoplis saxatilis Raf. Frangula do Cramer, Rhamnus do L. and all authors, altho' nearer to Ziziphus by fruit.

147. Forgeruxia Neck. Raf. Dioica, cal. infundib. 5fidus, petalis o, stam. 5 in sinubus, stylo 1, stig. 3, bacca uniloc. oligosp.—near to Alternus and Asfarca, yet distinct from both. Type F. repens Raf. Rhamn. pumilus auct. rupestris Scop. probably 2 sp. blended, since some deem it hermaphr. or with petals, meaning something else.

148. Paliurus aculeatus Jus. Lam. Raf. (australis G. P.) Rhamnus Paliurus L. W. auct. Aspidophorus Necker—very distinct G. now adopted by all; but the Paliurus of Tourn. and Ad. was Ceanothus L.

149. Ziziphus T. Ad. Lam. Dec. Vitm. &c, blended in Girtanneria and Berchemia by Necker, only a subg. in Persoon, containing nearly all the Rhamnus Sp. with a bilocular drupe; but there are yet some G. mixt with it.

150. Saurobroma Raf. (Lizard food) diff. Ziziphus, Monoica, petalis exiguis squamif. drupa uniloc. nux crassa rugosa monosperma—Type S. iguanense R. Rham. and Ziziphus do auct.

not patent, drupe with 2 ovulas but only one perfect kernel. It is a climbing Vine instead of a Shrub, and two sp. appear to be blended in B. *volubilis* of which the synonymy is much confused.

152. **Berch. undulata** Raf. fol. ovatis vel lanceol. integris undul. fl. hermaphr. subumbellatis—Pennsylv. to Virginia, this is the Sp. of L. W. Ait. and Northern States, the *Rhamnus scan-dens* Hill h. k. t. 20.


154. **Hethingeria** Neck. Colletia Scop. non Jus. diff. Ziziphus cal. 5fidus persistens, petalis 0, stylis 2, stigm. 2 bifidis, drupa monosp.—Type doubtful, very near to *Saurobroma* by fruit, and also to *Condalia* of *Cavanilles*, which differs by disk and single style.


156. **Verlangia** Neck. cal. caliculatus, campan. 5part. corolla camp. patens 5part. stam. 10, alternis sterilis, stylo filif. stig, 2-3, Drupa nux 2-3loc. 2-3sp. *spinosa* fol. fascic. fl, *confertis axil.*—United *Rhamnus* and *Eleodendron*, quite distinct from both: two types lately blended as
Eleodendron argan by nearly all botanists, both seen and distinguished by myself, besides a third from India.


158. Verlangia argan Raf. Arborea ramis leviusc. fol. solit et fascic. petiol. lanceol, obtusis integris coriaceis, fl. axil. subsessilis—Mts. Atlas and Marocco, tree 20 feet high, fruits large oval, affording a valuable oil. This is Eleodendron argan of Retz and nearly all authors, but the types of Eleodendron (Schrebera Retz) have a different calix, and no sterile stamens.


Such are the Genera once blended in Rhamnus! to include them all in one G. was preposterous, as no common character could be framed for the whole. But there are yet several sp. which cannot be referred with certainty to these reformed Genera, as the flowers and fruits were not described, and some even are not in Wildenow nor Decandole; they must therefore be examined again: some may not even be of the same family. The Rh. carpinifolius Pallas has been supposed to be an Abelicea or Planera; of the Rh. cuneatus Hooker neither flowers nor fruits were seen, and having opposite leaves with capitate flowers this indicates quite a different Genus. I find in Vitman Rh. mystimus, nummularia, heterogenus of Burman, Rh. su-
tinamensis of Scopoli, Rh. hydriensis of Hacquet, which are not even mentioned in late synonymsies, and that I cannot refer to my Genera.

160. Nirwamia Raf. Nir-wam Th. dioica, fl. fem. cal. globoso pateriforme integrum diaphanum, ovar. lib. ovatum inclusum. styl. 0, stig. 3 —among the doubtful plants of Thunberg fl. jap. deemed akin to Urticidæ, but perhaps rather to Rhamnides and my G. Oenoplia 130, Blepethalon 131 by the calix at least.


162. Sclerocladus Raf. (hard br.) cal. prof. 5fidus, cor. cal brevior, limbo 5part. squamis vel nect. in fauces cor. 5 trifidis, stam. 5 cor. oppos. drupa monosp. nux basi foraminul. 2 septo arcuato distinctis—this G. was united to 3, all of which are akin to the Rhamnides, having similar habit; they belong to Myrsinides, a family merely different by monopetalous corolla, the nectary or scales are perhaps abortive filaments as in Verlangia.


165. Deicateles Raf. (10 perf.) cal. ineq. 5partitus, lac. imbricat. concavis, cor. camp. 5fida, lac. intus appendic. sq. nectarif. serratis, stam. 10 fertilis, stylo 1, stig. capit. bacca 3-5loc.
3-5sp. sem. osseis. *Arborcis spinosis*, *fol. pet*.
*alt. integris fl. fascic. pedunc.*—Two types shuffled into *Sideroxylum* and *Bumelia*, but of another family the *Sapotides* by stamens not isopetal.

South *New Jersey*, discovered by Kalm, seen by few Botanists, by myself without flowers, for additions to the real *G. Bumelia* see my *New Flora* 545 to 548 where I described 4 new Sp. *Bum. undulata*, *arachnoidea*, *denticulata*, *ser- rulata*.

167. *Decateles lycioides* Raf. *Siderox. and Bumelia* do auct. *fol. lanceol. obtusis undulatis*, *spinis axill. brevis*—small tree 8 to 15 feet, not in *Canada* as stated by *L.* from *Carolina* and *Florida*: the synonymy of these 2 trees is much blended and intermixt.

168. *Xantolis* Raf. diff. *Sideroxylum*, *bacca disperma* (*non drupa 5sp.*)—Type *X. tomento- sa* *R. Sider. do Roxb. cor. t. 28. W. &c.* yellow berries size of cherries, thornless tree of *Coromandel*.

169. *ILEXIDES* Raf. the *G. Cordia* *L.* although yet put among the *Borragines* even by Kunth, is quite akin to those above and the *Myrsinites*, differing merely by stamens alternate to corolla, while the styles and fruits are as in the *Rhamnides*, it is therefore the type with *Ilex* &c of my nat. fam. *Ilexides* 1815, quite distinct from *Borragines* by berries or drupes for fruit instead of several akenas as in *Labiates*, it differs therefore from them as the *Verbenides* from the *Labiates*. The akin capsular Genera are also my *N.* fam. *Dichondra-
nia 1815, both in Nat. Order Polymia with many styles or stigmas.

170. Cordia L. auct. only 6 sp. in Lin. 18 in W. Pers. 32 Lam. and Rees Cycl. 26 in Kunth mostly new; thus about 50 sp. are now referred to it at random, in as great confusion as Rhamnus was, united by no common character except style bifid, 2-4 stigmas, since even Varronia and the capsular Patagonula have been thrown into it! This requires therefore a complete revision which I will partly effect, and will be able to form 12 good Genera out of them, some of which already in Necker. I will confine the real Cordia as follows—Cordia Raf. cal. campan. 5 dent. persistens cor. subcamp. 5fida, faux pilosa, stam. 5, ovar. 4 loc. stylus dichot. stig. 4 obtusis drupa 2 loc. 2 Sp. Arbores inermis, fol. alt. petiol. fl. corymb. hermaphr.—Thus fixed and reduced this G. will include but few Sp. and protein those not well known as yet, such as many of Kunth; but the types will be the 4 following Sp. besides C. exaltata, serrata, dentata, levigata, micranthus &c.

171. Cordia myxa L. auct. Vidimaram Rh. 4) t. 37) fol. ovatis supra glabris subtus scabris, subacum. integris, corymbis later. calycib. 10 striatis—East Indies, large tree, fl. yellow, drupes globose acuminate, very different from next. Very akin to Cerdana and Coilanthera by the calix. It must form the subg. Myxos. Cerdana differs by nectary.

172. Cordia Egyptiaca Raf. ramis angul. verrucosis, fol. subrotundis vix acutis, integris supra glabris. subtus puberis, corymbis terminal. subpaniculatis, calycib. levis—I describe this from an Egyptian specimen before me; it was blended with the last by Lin. and all Authors,
although often intimated that the Egyptian tree was different. It is a small tree with small white warts on the branches, leaves not oblique.

173. Cordia officinalis Raf. C. myxa var. offic. Lam. &c, fol. ovatis acutis dentate repandis, subtus scabris, calycib. levis—East Indies and Arabia flowers white. The synonymy of this and the two last is quite perplexing, the real C. myxa of L. has been deemed a riddle by some, but the calyx is peculiar.


175. Coilanthera Raf. diff. Cordia, cal. tubul. 10 striatis, 5-8dent. cor. infundib. plicata 5-8fida, stam. 5-8, filam. subul. basi villosis, antheris obl. concavis. Drupis acum. nux 5striata 2loc. 2sp.—Type Coil. rotundifolia Raf. Cordia do R. P. t. 148 auct, fol. ovatis subrot. crenatis scabris, corymb. dichot.—Peru.

176. Sebestena Ad. Raf. diff. Cordia, cal. tubul. obl. 3fido, cor. infund. 4-6fida, faux glabra, lac. sepe crenul. stam. 4-6, stigma 4 recurvis, drupis obov. fl. paniculatis—this includes many sp. blended in C. sebestena of authors, and difficult to distinguish, besides the section Sebestena of Kunth, and some others.

177. Sebestena scabra Raf.—The American Sp. of Dillen, Catesby 2 tab. 91—fol. cordatis acutis integris scabris, fl. rubris—Antilles, Bahama &c.

178. Sebest. repanda Raf. C. do Jaq. &c fol. ovatis serrato repandis, fl. rubris—South Amer.

179. Sebest. indica R. fol. ovatobl. scabris, florib. flavis—East Indies, the proper linnean Species.

181. Quarena R. (n. ind) diff. Cordia, corolla campanul. 5dent. intus glabra, stigm. acutis. Frutesc. spinos. fl. racemosis axil.—At not a G. at least a peculiar group or subgenus. Types Q. spinescens, indica, sinensis, Raf. all Cordia auct.

182. Ectemis Raf. (out half) diff. Cordia, cal. 4dent. corolla hypocrat. 8fida, stam. 8 basi villosis, drupis 4loc. 4sp. obovatis—very distinct G. by double parts in corolla and fruit.


185. Novella Rumf. Raf. Salimori Ad diff. Cordia, cal. tubul. 3-6dent. cor. infund. plicata 6-7loba, stam. 6-7, antheris versatilis, stylo unico, stigm. 4-5. drup. 4-5loc. 4-5sp. fl. racemosis—striking G. yet blended in C. sebestena by Linnaeus who refers Rumfius figure to it.


187. Firensia Scop. Neck. Raf. (Colococca sp. Br.) diff. Cordia, cal. 5-6dent. cor. infund. 5-6loba, tubus angul. faux villosa, stam. 5-6 exsertis, antheris sagittatis, bacca uniloc. sepe monosp. fol. verticillatis, corymb. axillar.—This
G. and the last deviate widely, and the habit of this is like the Rubiaceae. Necker states the calix to be 5-6 parted, and the corolla hypocrat, perhaps so in one Sp. then a subg. several types.


190. *Firensia lutea* Raf. Cordia 4phyla Aubl. t. 88 &c, fol. petiol. obovatis glabris, fruct. luteo—Guyana, Shrub, calix 5 dent. cor. 5-lobed, fruit like an olive.


194. *Gerascanthus* Raf. diff. Cordia, cal, infundib. 10 striatus, subintegro tomentos, cor. infundib. 4-6 loba, stam. 4-6 drupis turbin. fl. paniculatis, corymbis gemellis.


4lobo, lobis subrot. acutis, cor. hypocrat. 4loba, lobis acutis planis, stam. 4, stylus 1, stig. 2, bacca globosa uniloc. 4pyrena.—Quite distinct G. near to Varronia and Ilex.


200. Varronia which has been wrongly merged in Cordia by Kunth, differs from my Cordia by corolla tubular crenate plicate, fl. spicate, see 115 fl. tellur. my Catonia fl. tel. 116, is akin to Firensia and Toquera. All these G. as well as Ehretia, Cerdana and akin, belong to my Nat. tribe of Ilexides; I had once made a family of Ægiphila (and akin Verbenides) with equal corolla and stamens, which must also be united thereto, forming a subfamily Ægiphilides having single styles and berries instead of drupes. See my revision of Ilex and Prinos. But Patagonula is of another tribe.
CENTURIA III.

201. Paxistima Raf. 1817. diff. Myginda, cal. 4fidus, petalis 4, stam. 4 epidiscus pet. alt. discus cal. ovarisque apice coalescens, ov. lib. sed ad disco concreto, stylus 1, stig. capit. crasso, bilob. caps. 2loc. 4sp.—fol. oppos. ped. axil—very singular G. united to Ilex and Myginda, although quite unlike, nearer to Evonymus and Polycardia, same family of Celastrides different from Rhamnides by alternate stamens. Myginda differs by 4 styles and a monosperm drupe, Rhacoma wrongly united thereto is nearer, but a real Ilexides by corolla 4parted. The singular connection of the calix and ovary at top by the disk, is an anomaly found in some Melastomes and perhaps in Lithopis 145, I cannot well ascertain the fact in my dry specimens; but suspect these 2 G. may indicate a small natural group, to be called Synodiscoids.


204. Traxilum Raf. diff. Ehretia, cal. 5part. stylus dichot. stig. 4, fl. corymb. spicatis.—It is stated that this G. has the stigmas of the Cordias, the flowers of Tournefortia, fruit of Ehretia, and a peculiar calix.

205. Traxilum asperum Raf. Ehr. do W.
Roxb. cor. 55 &c. fol. ovatis scaberimis, fl. secundis—Coromandel.

206. Piloisia Raf. (head hairy) Dasicephala sp. Kunth. diff. Varronia, cal. inflat. cor. infund. lac. emarg. stig. 4 obtusis, fl. capitatis—Kunth has united to Cordia the capitate Varronias forming this G. but they probably contain also several blended G. the Varr. humilis is stated to have a single nut 2locular in the drupe. The types of my G. are Pil. globosa, curassavica, &c. The real type of Varronia should seem to be V. alba, with fl. cymose, limb of corolla campanulate, nut striate &c, with akin cymose species.

207. Topiaris Raf. diff. Varronia, cor. hypocr. tubo longo, limbo plano lato lobato, fl. racemosis.—Thus corolla as in Bourreria, but habit peculiar, put in 2 Genera by authors.


209. Subrisia Com. Raf. diff. Ehretia, cor. campanul. (non tubul) fl. panicul. internodalis—corolla and habit different, G. proposed by Commerson long ago, why not adopted?


211. Desmophyla Raf. diff. Ehretia, stylis 2, stig. 2 capitatis, fol. fasciculatis—Type D. aliena Raf. Ehr. fasciculata Kunth, his E. tomentosa and ternif. appear true Ehretias, altho' the leaves are opposite and corymbbs axillary, having one style &c.
212. Aquifolium T. Ad. Ilex L. auct. name posterior, and of an Oak. The Ilex of the Authors hardly differs from Prinos, the numbers of parts and stigmas not being uniform, but requiring the formation of many G. to be accurate. The rotate and deeply lobed corolla distinguish this group of G. from the group of Cordias. I propose now to revise it, and thus fix the true Aquifolium Raf. cal. rotato 4-5dent. cor. rotata 4-5partita, stam. 4-5 epicorolis alt. stig. 4-5 sessilib. obtusis, drupis baccatis 4-5sp. nucib. 1sp. Arboresc. fol. alt. sepe perennans spinosisque, fl. axil. polyg.—This will include pre-tem as in Rhamnus the sp. that are not well known; but all must be verified: meantime the types will be Aq. crocea, japonica? and other Japanese sp. if with 4 stigmas, with the various sp. blended in Ilex aquifolium of Authors, which are 5 at least, all seen alive.

213. Aquifolium undulatnm Raf. fol. ovatis undulatis, margine sinuatis spinosis, supra nitidis, fl. glomeratis, fr. rubris—Mts. of Europe, the most common sp. becoming a tree and less spinose in old age.

214. Aquif. ferox Miller, Raf. fol. ovatis sub-undul. supra margineque echinatis, fl. fascic. fr. flavis—distinct species remarkable by the very prickly leaves.


216. Aquif. planifolium Raf. fol. ovatis sub-rotundis planis subdentato spinosis—in Spain, very near I. opaca Ait. see 234.

217. Aquif. lanceolatnm Raf. fol. lanceol. subdent. recurvis, vix spinosis, fl. subumbel. fr. albescens—Germany &c. All these were deem-
ed var. by botanists, but sp. by Gardeners; they are real specific deviations.

The flowers of the Asiatic sp. not being described, it is not yet possible to ascertain if they belong to this Genus or the next or to Ageria.

218. *Ilex* Raf. *Cassine* L. auct. et *Ilex* sp. Maurocenia Miller, diff. Aquifolium, stig. 3, drupis 3loc. 3sp. 3umbilicatis, fl. hermaphr. sepe 5andris.—The main distinction is in the ternary numbers of pistil and fruit; but probably this includes several subg. that may be G. when well described. Cassine of L. (a bad name out of *Cassia*) is deemed 5 petalous, but Jussieu states otherwise, my 5 subg. are


220. *Colpunia* R. 4andris, fruct... Evonymus and Cassine colpun of Authors is the type, a doubtful plant.

221. *Maurocenia* Miller, 5andris, fruct. 3gonis, *fol.* opp. alt. *fl.* fasc. ax.—Type *Ilex* (m.) fr. angularis, concava, levigata &c Cassine of Authors.

222. *Osteorax* Raf, 5andris, drupis non bac-catis duris osseis, *fol.* alt. ped. dichot.—Type.

223. *Ilex* (Osteorax) xylocarpa Raf. Cassine do Vent. Pers &c—fol. petiol. ovatis—Antilles, American like the next all the others are African.


used as emetic by the Indians; it cannot be the *Cassine peragua* L. described with opposite elliptic obusé leaves, and as yet a doubtful plant, although now referred to *Ilex cassena*, my Ageria 235.

226. **Ageria** Raf. (this name was used by Adanson for the *G. Prinos* and *Myrsine* united, but I now apply it to a G. medial between *Ilex* and *Prinos* of authors) Macoucoua Aubl. *Ilex* sp. auct—diff. Aquifolium, cal. 4fid persistens, cor. 4loba, stam. 4, stigma unicum sessile simplex. *fl. sepe dioicis.*—It will include nearly all the American sp. of Authors, which have a single stigma; but it varies in shape, and may serve to form subg.


It is not always easy to discriminate between the 2 first, as the sp. are referred to *Ilex* at random, without attending to the flowers. We have no good monograph of the North American sp. whose synonymy is quite perplexing: I shall however give some types.

230. **Ageria** (mac) **acuminata** Raf. *Ilex* do W. macucua Pers &c, mac. guianensis Aubl. Lam.—Arborea fol. ovatis integris, apex acum. emarg. pedunc. cymosis *fl. herm.*—Guyana, large tree, white fl. as in all akin.

231. **Ageria** (mac) **retusa** Raf. frutescens, ramis cinereis, fol. petiol. obovat. crenatis obtusiis retusis, *fl. dioicis, fasc. petiolis eq.*—West Kentucky, in swamps, shrub 3 to 5 feet high,
leaves sometimes subfasciculate, discovered 1818, long deemed a doubtful Ilex.

232. Ageria (mac) uniflora Raf. frut. ramulis cinereis unifl. fol. ovatis oblongisve utrinque acutis petiol. remote serrulatis, subtus et petiolis pubesc. fl. dioicis, cal. ciliolatis—Shrub of Alabama, branchlets terete with 1 to 3 leaves and a terminal flower, berries pisiform, stig. globose depressed, calix almost square.

233. Ageria (mac) mucronata Raf. frutesc. ramis albo punctatis, fol. subfascic. obl. vel elipt. subobliquis integris, basi acutis, apice mucronatis, tenuis glabris, pedunc. axil. 3-7fl. sub verticillatis, pet. longior fl. dioicis—Apalachian Mts. shrub 4 feet.

234. Ageria (mac ?) opaca Raf. Ilex do Ait. auct. This sp. and laxiflora, with the habit of Aquifolium, have the stigma simple, and 4 sterile filaments in the female flowers; wherefore perhaps a peculiar subg. Notolex Raf. Robin was mistaken to state the stamens opposed to corolla, else it would be removed from the family. Corolla 4 parted as in Dahunia, calix not persistent as in Ageria, thus a peculiar G. perhaps.

235. Ageria (Dah) cassena R. Ilex do and Vomitoria auct. This ought to be the type of Dahunia, along with the akin sp. to which Elliot ascribes 2 stigmas, realy one bilobe or bifid, and often only 2 seeds. But I. prinoides, ligustrina, angustif. myrtifolia &c, are so blended and confused, each author appearing to mean a different kind. that I must leave their settlement for a peculiar Monograph.

236. Ageria (Dah) palustris Raf. Ilex dahun Walt, Mx. P. E. II. cassine L—fol. obl. lanceol. coriaceis lucidis semperv. acutis integris, juniorib
spinoso serratis, pedunc. axil. 6-10fl.—Swamps of Carolina, such is at least the sp. of Elliot; but besides this I have 2 others under the name of I. dahun, therefore 3 sp. are blended, that of Mx. had pubescent branches and calix.

237. Ageria (Dah) obovata Raf. (I. dahun Baldw.) Ramulis glabris angulatis, fol. petiol. obovatis brevi acum. integris lucidis; fl. sparsis, ped. 1-5floris—Florida, leaves thinner although evergreen, my specimen is male, stamens erect.

238. Ageria (Dah) heterophyla Raf. Ramulis subteretis glabris, fol. petiol. coriaceis cuneatis vel obl. integris vel apice subserrul. apice acutis obt. retusis, pedunc. sparsis bifloris—Florida & Alabama, leaves very unequal in size and shape, some few obovate retuse almost obcordate, peduncles as in last extraxilary scattered.

239. Ageria (Dah) geminata Raf. Ramulis angulatis glabris, fol. subsess. obl. vel. lanceol. utrinq. acutis serrulato-crenatis, deciduis, pedunc. unifl. geminatis sparsis—Apalachian Mts. leaves thin unequal, fl. small on short peduncles, probably one of the sp. blended in Ag. cassena that has oval obtuse leaves and fl. fasciculate. My specimen is male. In this as in all the Dahuns and Notholex, the corolla is 4parted deeper than in Macucua.


241. Synstima Raf. diff. Aquifolium, stigma unicum sessile capitatum 4 sulcat. lobatum, instar 4-5stig. coalitis, fol. deciduis fl. dioicis—thus as near to it than to Prinos, to which united, the types are the various sp. blended in Prinos ambiguus; all with flowers 4-5androus on the same shrubs or even branches. Hardly
a subg. of Ageria, as the stigma appears formed of several coalescent, each answering to a seed.


243. Synstima rotundifolia Raf. Ramis teretis, fol. subfascic. obov. subrot. utrinq. acutiusc. apice serrul. petiolis et subtus pubesc. pedunc. fascic. pet, longior—Florida. this has the calix and corolla 4 lobed as in Ageria, Macucua, and perhaps it is of that group, although some fl. are 5 androus, stigma not well seen.

244. Synstima caroliniana R. Cassine do Walt. Prinos ambig. Mx. E, Ramis teretis virgatis, fol. subsess. ovali-lanceol, acum. subcrenatis, subtus pubesc. fl. masc. fascic. fem. solit—Carolina, a small shrub like the others, stigma well described by Elliot.

245. Arinemia Raf. (male half) diff. Prinos, fl. masc. 3fidis, 3andris, femineis 6fidis, stigma 3 lobum, fruct. 3sperm—very peculiar by half numbers in male flowers. Monotype.


247. Prinos Raf. dioica vel monoica, cal. ro-tato 5-6fid. cor. rot. 5-6fida, stam. 5-6, stigma unicum sess. globoso vix lobato, baccar uniloc. 6 sperma. fol. deciduis. The type of this G. as now restricted is Pr. verticillatus, and other akin sp. commonly hexandrous. The other sp. will belong to the G. Synstima, Arinemia and Ennépta. From Ageria it chiefly differs by fruit uniloc. rather a berry than a baccate drupe, with more than 4 stamens and seeds: the berry
also is different from *Aquifolium* and *Synstima*. Types.

248. *Prinos reticulatus* Raf. Ramis subangul. purpureis albo punctatis, fol. glabris ellipt. acum. basi acutis, argute serrulatis, subtus reticul. pallidis, axil. 2-3fl. pet. brevier—Shrub of Alabama, leaves 2 or 3 inches long, fl. white small, calix stellate 5-6fid, corolla with 5 or 6 lobes oval obtuse.

249. *Prinos rugosus* Raf. ramis subangul. fol. lato ellipt. utrinque acutis serrulatis, supra rugosis, subtus reticul. nervis pubesc. axilis 1-3fl. pet. brevier baccis globosis—in Kentucky, very near the last perhaps a var. or the female, 3 to 5 feet high, berries globular subsessile.


251. *Prinos verrucosus* Raf. ramis angul. verrucosis, fol. obl. utrinque acutis, mucronato serratis, subtus reticel. nervis pubesc. axilis unifl. petiolo eq. baccis ovalib.—Mts. Alleghany, 3 to 4 feet high, calix colorate, berries red as in all but ovate, warts commonly white on fuscate branches.

252. *Prinos parvifolius* Raf. ramis levis subangul. fol. parvis ovatis obovatisque utrinque acutis, apice serratis, subtus glabris, axilis unifl. pet. brevier, calicib. obtusis—Appalachian Mts. small shrub bipedal, branches whitish, young shoots yellowish, leaves hardly uncial, calix not acute as in the others.

253. *Prinos longipes* Raf. ramis angul. sub-
verruc. fol. obl. acutis, apice remote serratis, subtus glabras, axilis unifl. elongatis pet. longior
—Virginia &c, akin to the Pr. integrifolius of Elliot but with flowers polygamous 6 androus. All the above may have been overlooked or blended with Ilex prinoides, and Prinos ambiguus of Authors.

254. Prinos verticillatus L. differs from all these by flowers umbellate aggregate almost verticillate, and is a larger Shrub. Pr. integrifolia by entire mucronate leaves, long pedicels, flowers 6-7 androus &c.

225. Nemopanthes Raf. 1817. Dec. Hook. &c. This G. of mine one of the few now generally adopted was based on the Ilex canadensis of Mx. but I think it includes 2 sp. the essential character of the G. is in the calix of male fl. very minute entire, corolla 3-5 parted not rotate, stamens 3-5, stig. 3-5 lobed sessile, but the quaternary number chiefly prevails.

256. Nemop. canadensis Raf. Ilex do Mx. t. 49 auct. fol. obl. lancel. utrinque acutis subintegris, fl. masc. geminatis, fruct. sub4gono—Canada, Hudson bay, and boreal regions.

257. Nemop. fascicularis Raf. fol. subfasc. ovalis ellipt. ovatisque integris acutis, vel obtusis, fl. masc. fasciculatis, fruct. subgloboso—Mts. and hills of New England and New York: this was my original sp. of the Catskill Mts. perhaps only a variable deviation; sent me also from the plains of Ohio and near Lake Erie.

258. Braxylis Raf. diff. Aquifolium, 4fidis fl. stam. 4, stylo brevis, stigma unicum obtus. drup. uniloc. 1-2 sperma—Here begins to appear a short style as in next, lacking in all others.

259. Braxylis obcordata Raf. Ilex do Sw.
auct. fol. sparsis obcord. coriaceis avenis, ped. brevis 3fl.—Mts. of Jamaica.

260. Ennepta Raf. (9-7) diff. Prinos, cal. 7-9 fid, corolla 7-9part. stam. 7-9, fl. fem. stam. sterile castratis, stylo brevis crasso, stigma unicum 3-4obo, bacca 6-8 sperma, fol. perennis &c—
This appears to include all the evergreen sp. of Prinos, the style is conspicuous. It has 3 types 1. Ennepta myricoides Raf. Pr. glaber, all are glabrous in this G. 2 E. coriacea, 3 E. atomaria, these 2 last deemed var. by many.

261. Lycium L. &c. This G. although very akin to Ehretia, Cordia &c, has been put into the Solanides tribe! the main distinction was the single stigma and more seeds in the berry, and yet sp. with berries 1 or 2 loc. or a capsule! calix 3 to 10 dentate, cor. 4-10fid, and 4 or 5 stamens are united. The 5 nameless sections of Kunth must certainly be as many Genera, and there are more blended. The real Lycium Raf. has—cal. urceol. ineq. 5fidus, cor. tubulosa limbo 5part. rotato patens, stam. 5 exsertis villosis stylo erecto, stigma bilob. bacca 2loc polysp. spinosis. fol. sepe fascic. fl. sepe gemin. extraxil—This will include L. europaeum, barbatum, chinense, salsum, floribundum, guayaquilense, ruthenicum, caspicum, lanceolatum and others akin thereto. It answers nearly to the first section of Kunth; but he wrongly blends thereto some sp. of Cestrum & Atropa. The 2 next sp. have been omitted by nearly all Authors.


263. Lycium indicum Retz. Vitm. Inerme, fol. oppos. petiol. ovatis utrinque acutis nervosis
—India, erect shrub, stipules spiniform soft, fl. dull purple. Neither of these is in Persoon &c.

264. **Pukanthus Raf.** (n. gr.) **diff. Lycium,** cal. regularis sinuato 5dent. filam. basi barbatis, fl. corysthosis &c.


266. **Opukion Raf.** (armed Lyc.) **diff. Lyc.** cal. camp. 5dent. eq. cor. infund. limbo erecto genit. inclusa fol. fascicul. &c.—Types 2 Afri- can spinose shrubs my Opl. afrum and horri- dum, called Lycium by Authors.

267. **Valteta Raf.** (bot.) **diff. Lyc. cal. urceol.** ineq. 5fidus, cor. tubolosa limbo erecto plicato 5dentato, genit. exertis, fol. sparsis, fl. fascic. —Types 2 American sp. V. fuchiioides and ges- neroides Raf. blended with Lycium by Kunth.

268. **Diplukion Raf.** **diff. Lyc. cor. 10dentata** stam. inclusis—The doubled corolla is very es- sential, 3 American types of Kunth my Dipl. loxense, cornifol, umbrosum. Raf.

269. **Ascleia** Raf. (shut box) **Johnsonia** Necker 1790 non alis, an anterior? **diff. Lyci- um,** cal. persist. 5dent. eq. corolla rotata 5fida, faux barbata, stam. 5, fruct. caps (Lin.) Akena (Neck) clausa ovata 2loc.—Here the fruit is not even a berry, therefore hardly a Solanides, akin to Sesea with bivalve capsule.


271. **Teremits R.** (half cut) **diff. Lycium,** cal. 2-3fidus ineq. lac. bidentatis, stam. 5, filam. de-
flexis supra basin villosa, baccis ellipticis turbinatis.


275. *Trozelia* Raf. (bot.) diff. Lyc. cal. 5gono- nus, stam. glabra, baccas uniloc. fl. umbellatis—Genus totally unlike. If Trozel has already had a Genus, I substitute *Cantalea*.


277. *Pederlea* Raf. 1815, diff. Lycium, cal. camp. cor. urceol. lac. revolutis, stam. glabris, fol. alt. fl. axil—3 Types, but perhaps forming each a subgenus. Pederle was the author of the Forrester manual, if already commemorated I substitute *Triliena* R.


279. *Pederlea arborescens* R. Atropa do L. auct.—fol. obl. lanc. planis glabris fl. fascic—tree of S. America. In this the corolla is revolute, Kunth makes it a Lycium with the next.

280. *Pederlea cestroides* R. Cestrum campanul. Lam. Thus these sp. were thrown in 3 Genera and yet belong to neither!

281. *Opsago* R. (n. lat.) diff. Atropa, cal. 5par
titus toment. cor. toment. camp. lac. revolutis. 

Fruticosis—The G. Atropa or Belladona was another medley, Mandragora and Nicandra have been excluded, the Peruvian sp. will afford many G. of herbaceous plants.

282. Opsago cordata Raf. Atropa frutescens L. auct. cortex rimosa, fol. ovat. cordatis obtusis ped. confertis—Spain and Sicily, seen alive, very different from next although both united by Persoon &c.


The herbaceous Atropas of S. America will be shortly mentioned here for contrast, the real Atropa has cor. campanul. and bilocular berries. See till 288.

284. Diskion R. (n. gr.) Saracha R. P. Pers. non Lin. auct. cor. subrotata, bacca uniloc.—many sp. near Trozelia,

285. Plicula R. (n. lat.) cor. plicata, filam. basi barbatis ut in Lycium—Type Pl. umbellata R. the sp. of Roth not of Ruiz, Persoon has 2 sp. under that name, and 2 as A. biflora! A. procumbens with plicate corolla but smooth stamens is a Dirkion by berry, but Roth calls it 2locular.

286. Kukolis R. (n. ant) cor. tubulosa—Type K. bicolor R.

287. Kokabus R. (n. ant) cor. urceol. melli-fera, stigma capit.—Type K. umbellatus R. the sp. of Ruiz Pavon.

288. Ulticona R. (n. lat.) cor. urceol. infundib. 10fida, lac. 5alt. minorib. stig. 2lobum—3 types U. biflora, aspera, viridiflora, all peruvian Atropas of Authors even Kunth, although so widely different by corolla. Ulticona like
Opsago were old Latin names of the Atropa belladona. Akin to Dioplukion 268.

289. Evoista R. diff. Lycium, cal. eq. 4fid, cor. 4fid, stam. 4.—In this numbers are equalized to cells, as the name implies, which is very essential, 2 types, both shrubs.


291. Evoista caroliniana Raf. Lyc. do Mx. &c, Salsum Bartr. Inermis, fol. obl. spathul. perennans—Florida &c, on Sea Shores, fl. blue, berries scarlet. I doubt if these two shrubs are even congeneric.

292. Cestrum L. This must include all the Sp. with stamens simple, stigma bifid and berry unilocular, such as C. vespertinum, diurnum &c with akin, the corolla is as in Lycium, and the sp. with bilocular berries must probably be united thereto.

293. Wadea R. (bot) diff. Cestrum, stigma capitat. integer &c probably a subgenus, type W. or C. latifolia,

294. Parquis Ad. R. diff. stam. dentata ad fil- lam (non edentula) all the sp. of Cestrum with toothed filaments.


296. Physalis L. Alkekengi Ad. also an arti- ficial G. the real sp. must have calix inflate 5gone 5dentate, corolla rotate &c. But most of the shrubby kinds belong to next.

297. Alicabon R. (n. gr.) diff. cal. non angu- lato sepe venosus inflato, cor. campanul. ut A- tropa. Types A. somnifer, aud other frutes-
cent Physalis with such calix and corolla, also *A. barbadense* &c.


299. *Exodeconus* Raf. diff. cal. tubul. ventricos. 10angul. 5fid. pellucidus—Type *Ex. prostratus* R. the Ph. do Lher. &c, it is an annual, do any shrubby sp. belong to it?

300. *Deprea* Raf. (bot) diff. cal. urceol. 5fidus, cor. infundib. vel. subcampanul.—Types *D. xalapensis* and *Orinocensis* Raf. Physalis do Kunth, corolla very peculiar as in some Ipomeas. If Dépré had a G. let *Orinocoea* be substituted.

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**CENTURIA IV.**

301. *Ficus* L. altho' apparently a natural group of trees and shrubs, it includes many Genera or Subg. see till 317. Linneus had only 17 sp. and now there are 98 in Wild. and Pers. 105 in Smith monograph. Many are little known as yet, and the inside parts difficult to verify have been observed in but few: it is merely surmised they are similar to *Ficus carica*, which was oddly put in Trioecia! No one having thought to revise the Genus, I will do it as to Genera, by habit and outer visible parts, chiefly the outer calicule and ombllic of the perianthe and fruit, called by others receptacle.

302. Subg. *Sucomoreos* periantho turb. vel obov. calicul. minimus sepe tripart. persistens, ombil. squamoso. fol. alternis.—This includes *Ficus carica*, *sycomorus* and many other doubtful sp.

salicifolia, religiosa, infectoria, granatum &c. Sections may be formed by fruit smooth or rough or villose or tuberculate. Leiosuke, Traxisuke, Sukoisia and Tulosuke.


305. Subg. Cottana R. (n. lat.) diff. caliculoto 4fido.—Type F. lutea &c.


308. Gonosuke R. (ang. fig) diff. periantho angulato viloso vel. hirto, calic. nullus, ombil. multisquamato. Fol. oppositis. The habit indicates a G. as in next, probably 3 or 4 types with opposite leaves, Gon. scabra, hispida, demonum &c, Ficus do of authors, blended by Smith in F. oppositifolia of Roxburg.

309. Varinga Rumf. Raf. diff. Sukamoros, per. pyrif. durum, extus scrobiculat. intus fungosum, calic. 3phylus. Scandens, ramis articul. fol. alt.—Type V. repens or F. pumilus L. and probably all the scandent kinds.

310. Necalistis Raf. diff. 302, caliculus nullo, fruct. nudo—Types Nec. turbinata, aspera &c, and probably many other sp. of Ficus.

311. Oluntos Raf. (n. lat.) diff. 302 per. globosis, caliculus inequalis multifidus obliqu. ombilicus non squamoso trigono marginato vel trilobo—Type O. trigono Raf. and probably O. levigata with trilobe orifice, but calicule less unequal.

312. Perula Raf. (n. ind.) diff. 302, caliculus polyphylus magnus ad periantho sepe equalis.—
Types *P. benghalensis, rubiginosa, retusa* &c, perianthe of 2 forms, whence 2 subg.

313. **Rephesis** R. (covering) diff. perianthoduplex, extus caliculans carnosus, deinde calyp-trans vel. dehiscens—certainly a very distinct and singular G. with 2 types *R. ovata*, and calyptrata.

314. **Tremotis** Raf. (hole ear) diff. 302, per turbinato ad apicem umbilicis 5, lateralis 4 pertusis apendice cartilagineo munitis—very curious G probably with many other characters, besides the 4 holes and ears around the central.

315. **Tremotis cordata** Raf. *Ficus auriculata* Lour. M. Sm. fol. cord. subserratis tomentosis, fruct. glomeratis biuncialis rubris.—In Anam or Cochinchina.

316. **Mastosuke** Raf. diff. Perianthomoico tuberc. mamillaris, umbil. 3fido, caliculo 3part. distans, intus fl. masc. stam. 1, anthera stipitata renif. uniloc. fl. fem. ovar. pedicel. stylo lateralis—Genus akin to *Oluntos*, one type.


318. **Eleocarpus** L. another G. blending many, *Dicera* and *Vateria* have been removed, but many others must also. The real types are *E. serrata* and *oblonga* Gaertn. 1, t. 43, which had been blended in *E. monogynus* or *monoceros* of authors: these having 5 multifid petals, anthers equaly bivalve, one hairy style, drupe with rough nut, leaves alternate &c.

319. **Ganitrum** Raf. diff. cal. 4ph. petalis 4 trifidis &c.—Type *G. obtusum* R. Eleoc. integrif. Lam. P. (Rumf. 3. 192) fol. ovatobl. obtusis integris.—Tree of Molucas and Mauritius,
that of Loureiro is different and perhaps a Vateria.

320. **Perinka** Raf. (n. ind.) diff. 316, antheris ineq. bivalvis, valva una aristata.—Types *P. reticulata* and *grandiflora* Raf. or Eleoc. do of Smith monograph.

321. **Misipus** Raf. (n. myth) diff. 316, petalis trilobis non multif. stylis 4, antheris villosis, baccca 4 loc. 8sp. *Fol. oppos.*


323. **Skidanthera** R. (split anth) Dicera Forst. non Lour. nec. aptum—diff. 316, petalis 3lobis non multif. antheris bifidis, stylis 2, capsula bilocul, polysperma *fol. oppos.*—By the capsular fruit not even of Guttiferes family, nearer to the Hypericines. Dicera meaning 2 horns is hardly a fit name.

324. **Skidanth. dentata** R. Dicera do Forst. Eleoc. dentata Vahl. &c.

325. **Gandola** Raf. (n. ind.) cal. colorato caliculate, extus 3squamis, tubo inflato. limbo 6fido, stam. 6, ovar. 4lobo, stylis 4, baccia 4loba 4sperma. Frutex volub. *fol. alt. fl. spicatis*—quite unlike *Basella* to which united although of same family.

326. **Gandola nigra** Raf. Basella do Lour. fol. ovat. subrot. spicis lateralis.—Anam, *G. alba* Rumf. is a second sp. probably and different from *Basella alba* of Linneus.

327. **Silamnus** Raf. (myth) Dioic. fl. fem. caput ut Cephalanthus sed corolla 5fida libera stylo filif. stig. acut. ovar. liber, akena nuda ovata compr. monosp. *fol. alternis*—not a Nastic, not even same family, rather of Verbe- Nides.
328. *Silamnus procumbens* R. Cephalanthus do Lour. auct.—fol. ovato lanceol. petiolatis tomentosis—Shrub of Anam.

329. *Axolus* R. (myth) diff. Cephal. phorantho villosos, cal. subul. villosis, fruct. baccatus, acinis 2 loc. 2 sp. *fol. oppos*.—This is of family **Nauclides**.


331. *Gilipus* R. (Hero) diff. Cephal. Dioic. fl. fem. adherens 4 fidus, cor. nulla, akena compres. subpapposa. *fol. alternis*.—The lacking corolla is strange, but perhaps it exists in male fl. and is staminiferous, by alterne leaves &c. akin to 327.


335. *Croton L. &c.* This G. now vastly increased in sp. Kunth alone having 50 American contains trees, shrubs and plants, quite unlike and not connected by any precise character, of which Adanson made 2 G. and Necker 6, while I must propose over a dozen of them, having nearly the same fruit like **Euphorbiides**, but variable perigone and stamens: my *Croton* and of Necker is monoical and has, cal. teres 5 dent. persistens; corolla decidua 5 petala, stam. 10
basi connexa, stig. 6, caps. 3valv. 3sperma.—Types all the sp. that are such or yet doubtful, and must be revised. Among the trees are Cr. alnifolium, betulinum, gossypif, balsamif.

336. Kurkas Ad. Raf. diff. Croton, stam. plurima 15-30, liberis &c. But the G. of Adanson included nearly all the Crotons: the types now are K. tiglium, congestum, acuminatum, populif. 4setosum, laxiflorum or Aleurites do W. &c, all trees or shrubs.

337. Cinosasum Neck. diff. 335, cal. masc. 8phylus deci duo, stam. sepe 15, cal. fem. multipartitus—Type unknown, akin to Cupamenis


341. Penteca Raf. diff. dioica, cal. masc. campanul. 5dent. petalis nullis, glandulis 5 globosis, stam. 12 liberis. cal. fem. conformis, stylo 15fidio, stig. 15. sem. ovatis.


344. Triplandra Raf. diff. cal. tubulos. 5fidus,
pet. 5 obov. amplis, stam. 15, stig. 3 sessilib. bifidis, capsula ovata tuberculata fol. oppositis.

344. Triplandra lanata Raf. Crot. do Lour. Mart. (non Lam.) Cr. erianthum Sm—Arborea, fol. opp. ovato lanceolatus integris glabris flor. racem. villosis, masc. superis—Large tree of Anam, flowers white, the opposite leaves are singular, being alterne in others.

345. Camirium Gaertn. Solander, diff. Croton, cal. 2-4 lobis ineq. 1 major, petalis 5, stam. 10-15, drupis 2 loc. 2 sp.—Quite a distinct G. by calyx and fruit, hardly of same family, nearer to Aleurites.

246. Camirium cordifolium G. S. Croton molucanum L. auct. omitted by some, shrub of Ceylon and Molucas, nuts affording oil.

347. Seborium Raf. Brunsvia? Neck. diff. Croton, cal. masc. tub. 4-5 dent. stam. 2-5 liberis elongatis, petalis nullis, cal. fem. parvus persist. 3 part. stylis 3 ref. stig. 3 caps. 3 loc. 6 valvis, 3 sp. sem. arillatis semisphericis—very peculiar G. shuffled in many, and very differently described by authors, so as to offer perhaps several sp. the type however is

348. Seborium chinense Raf. Croton and Stillingia sebifera L. auct—a fine useful tree of China, Tallow-tree, now naturalized in America, well described by all, but flowers sadly mistaken, bracts and calix being taken for calyx and corolla. 2 stam. Elliot, 3 to 5 Smith. Brunsvia of Necker has 8 coalescent and calix with corolla 3 parted: do they mean the same tree? Crot. nutans is a second sp.


350. Meialisa Raf. diff. Croton, Dioica, cal,
4partitis, masc. spicatis interruptis, stam. 8, fem. racemosis, fol. oppositis—Type M. australis Raf. Croton 4partitum Lab. Pers. tree of Tasmania.

351. Crozophyla Raf. Codieum, Codebo, Phyllaurea nonnullis auct. nom. pessimum, diff. Croton. cal. masc. 5part. pet. 5squamif. stam. plura. cal. fem. 5fido, pet. 0, stylis 3, stig. 3, capsula tricoca carnosa—very distinct G. all the names given to it are bad, too like Codia, Codon, Phyllaurea is mongrel, mine means colored leaves, peculiarity of many sp.


353. Crozoph. variegata Raf. Croton do L. &c. fol. petiol. lanceol. integris pictis—shrub of India, but 2 other sp. appear to have been blended thereto, the 2 next.


355. Crozoph. elliptica Raf. fol. ellipticis obtusis.—The Phyllaurea of Lour. is one of these.

356. Ditrisynia Raf. neog. 6, diff. Croton and Stillingia—cal. tubul. trifidus, stam. 2-3 coalitis, cal. fem. 3fido apetalo persist. stylo trifido caps. 3loc. 3sp.—This G. and the 3 next were proposed by me since 1825. The type of this is shrubby, my D. ligustrina or Stilingia do auct. Stilingia sylvatica is totally unlike by calix infundib. bilabiate, 2 free stamens; fem. cal. tubular entire fimbriate &c.

357. Drepadenium Raf. neog. 5, diff. Croton, cal. 6fidi. eq. apetalis, stam. 12, glandulis 6 incurvis ad basis, stylis 3, stig. 9-12—Thus nearer
Phyllanthus and Synexemia neog. 10, than Croton, yet the type is Croton maritimum of Walter &c, my Dr. do Raf. and the var. monantho is a 2d sp. my Drep. dichotomum R. both plants.

358. DecariniuM Raf. neog. 4, diff. Croton, cal. tubul. 5fidus petalis 5 lanc. peryginis, stam. 10 eq. liberis, cal. fem. 5part. ineq. lac. 2 major, stylis 3 bifidis, stig. 6. caps. 6valvis—Type Dec. glandulosum Raf. Croton do L. &c, and probably others not shrubby.

359. Heptallon Raf. neog. 3, diff. Croton, cal. masc. 4-6part. pet. 4-6obt. lin. stam. 10-14 liberis ineq. cal. fem. 7partito ineq. persistens folia- ceis crassis spatulatis, petalis 0, stylis 3 dichot. stellatis, stig. 12, caps. toment. 3loc. 3sp.—very distinct G. discovered in 1818 published 1825, based on the next sp. but probably several other herbaceous Crotons may belong thereto.


363. Hept. capitatum Raf. Crot. do Mx. &c, rather doubtful if of this G. like the preceding, this has 6 bifid styles, 12 stigmas.—Illinois and Missouri.

364. Meteorana Raf. (n. lat.) diff. Croton, cal. masc. 5part. pet. 5 undul. stam. 10, alt. 5 brevier,
pistilo abortivo connexa, antheris bilobis dorso glandul. cal. fem. duplex ext. 3part. int. 5part. petalis 5 parvis, pistil. obl. stig. radiata sessilib. 9-12, caps. 3loba hispida—very distinct G. several types chiefly shrubs, Meterana was a latin name of the Chesnut tree.

365. Meterana castanefolia Raf. Croton do L. auct—fol. ovatis lanceol. obt. serratis glabris spicis axil. dimidiatis—shrub of S. Amer. but a great confusion of blended sp. shrubs and plants exist as Croton castanif. to which some add Acalypha australis L. as a synonym.

366. Meterana dimidiata Raf. Acalypha australis L. var ! fol. lanceol. obt. serratis petiol. spicis axil. dimidiatis.—Also a shrub of South Amer. called a plant by Smith, who ascribes to the fem. fl. calix 6lobed uneq. 3 alterne larger, and capsule trilobed. If so another G. or section and probably several sp. blended yet. See bot. mag. 2794.


368. Meterana? arborea Raf. Crot. castanif. Burm. ind. t. 64, non L.—Arborea, fol. ovat. acum. denticul. glabris, spicis term. fl. alternis—Tree of Java, the flowers of this and last must be verified, probably both new Genera also.

369. Crozophora Necker. Turnesolia Ad. Scop. diff. Croton. stam. 8-10 monadelphis, cal. fem. 10fidus, caps. 6valvis—this includes nearly all the herbaceous Crotons, but the types are my Croz. tinctoria, plicata, and other akin sp.

370. Opotalon Raf. diff. Croton, cal. 5-6part. petalis 5-6 utrinque 3-4dent. stam. 5 monadelphis, glandulis 5 alternis—Types Od. tricuspi-
data, lanceolata &c, Croton do Lam. W. &c, plants not shrubs.

371. Cupamenis Raf. non Ad. (n. ind.) diff. Croton, cal. 4fidos, petalis nullis, stam. pluris, cal. fem. 8fido, stylis 3---this includes probably several plants at least 3 the Cr. chamedrif. Lam. Acalypha indica L. Ac. reptans W. blended by L. Smith and others. The Cupameni of Adanson was Acalypha L.---Thus we have seen that a crowd of G. were blended in Croton, and that even sp. of Aleurites, Stilligia, Acalypha &c. were shuffled among them. Such was the accurate discrimination once called perfection of Botany!

372. Leptemon Raf. 1808, Crotonopsis Mx. W. P. &c. This G. was separated from Croton, altho' it differs no more than the above! but the name given was absurd and incorrect. diff. Croton, 5 free stamens, fem. fl. apetalous, 12 stigmas, capsule monosperm, by abortion probably. Type Lept. lineare Raf.

373. Berberis L. a natural G. if Odostemon be excluded, yet greatly enlarged having 30 sp. in Decandole, and there are more, some of which I have seen alive or possess dry; therefore give them here, all prickly shrubs with fasciculate leaves.


376. *Berberis laxa* Raf. vulg. var. iberica? Dec.—Ramis flexuosis angul. tuberculatis, fol. cuneatis spatulatis integris vel subdenticul. reticulatis, racemis erectis laxis, fruct. oblongis—very distinct sp. sent me as *B. canadensis*! spines few trident, leaves as in *B. chinensis* thin and smooth, fl. small on filiform peduncles, with short subulate bracts. Probably from Oregon and Siberia, the *iberica* of Dec. with oblong leaves was from Caucasus.

377. *Berberis canadensis* Ait. Dec. &c. Raf. med. fl. t. 15—Ramis angul. punctatis spinosis, fol. obovatis vel ovatis acutis remote serratis, summis subintegralis, racemis nutans, fr. ovalis nigris acidis—Canada and Mts. Decandole hints that several sp. are blended, which is the fact as in *B. vulgaris*, see the 2 next of N. Amer.

378. *Berberis serrulata* Raf. Ramis angul. levis vix spinosis, fol. obov. proxime serrulatis, vel ciliatis, racemis pedunc. nutanti. fr. obl, nigris acidis—North America, in New England, New Jersey and Carolina, the synonyms much blended with last and next, but this is probably the sp. of Bigelow and Elliot.

379. *Berberis pisifera* Raf. Ramis ang. scabris spinosis, fol. cuneatis remote dentatis, racemis paucifl. nutans, fruct. subrotundus pisiformis rubris—very distinct N. sp. of Apalachian Mts. of Carolina &c, with small round berries, leaves narrow not ciliate, spines tripartite as in all akin species.

380. *Berberis densiflora* Raf. Ramis subteretib. levib. spinis solit. basi dilatatis, fol. petiol. lato obovatis ciliatis, acutis racemis nutantis multifl. pedunc. fl. densis imbricatis—very distinct again, although sent me as *B. vulgaris*, leaves and flowers very large, locality unknown.
probably Sibiria, but totally unlike *B. sibirica*, *chinensis* and *cretica* which I have.

381. **Odostemon** Raf. 1817, Mahonia Nut. 1818. Dec. 1821—This G. was first established by myself; in my Review of Pursh, Nuttall’s name was posterior and dedicated to a mere Gardener, not a Botanist. Some authors deem it only a subg. of Berberis, but habit different.

382. **Dialloesperma** Raf. (2 diff. seeds) diff. Aspalathus, Leg. compersso subtrigono dispermo, sem. I renif. I globosa, *frutex spinos.*—Type *D. spinosa* Raf. united to Aspalathus by all authors.

383. **Fakeloba** Raf. (lent. pod) diff. Aspalathus, Leg. lenticularis monosp., semen lens—Type *F. cretica*, a crowd of sp. blended in Aspalathus, with leaves fascic. or ternate or pinnate require to be revised and better fixed.

384. **Scaligera** Raf. diff. Aspal. Stam. monadelphis—Aspalathus is diadelphous, Scaligera was the name of the whole G. in Adanson. Type. *Sc. orientalis* Raf. and others.


389. **Damapania** Ad. diff. Aspal. cal. 4fidus,
Leg. teres 3-8sp. sem. globosis, fol. pinnatis, fl. spicatis—Adanson gives for type the Manneli Rheed. t. 38, Malabar shrub, my Dam. manneli Raf. This first revision of Aspalathus was effected by me in 1814, like many other reforms of mine, long before Decandole.

390. Bernardia Houst. Brown, Ad. diff. Croton, cal. masc. ineq. trifidus, stam. 20 basi coalitis, cal. fem. 5partit. ineq. stylis 3, stig. 3 dilatatis, caps 6valv. fl. axil.—I am at a loss to reduce this G. to mine, and had omitted it above, nor can I indicate the type, which Adanson says is in Brown Jam. page 261.

391. Besleria L. heterogenous medley in authors, Necker separated 2 G. not even of same family! The real Besleria with berry unilocular polysperm, calix 5parted, corolla tubulose gibbose unequaly 5lobed, &c has been shuffled in many families, I once put it in Gratiolides, but have since formed a peculiar family of those G. with berries, Cyrtandra, Brunsfelsia, Teedia, &c, the Beslerides, differing from Solanides by unequal corolla and stamens.


393. Senkeb. debilis Raf. Besl. bivalvis L. auct. not a shrub as the others, and not even of same family, but of Verbenides.

394. Lophalix Raf. Crantzia Scop. Neck. non alis—diff. Besl. cal. 5part. cristato-serrato cor. limbo integro, fr. capsula carnosa bivalvis. frutex scandens fl. involucratis—also of another family, the Gratiolides, Crantzia has been applied to several other Genera.

395. Lophalix bicolor Raf. Besleria cristata
L. auct. fol. ovatis, ped. axil. inv. 5phylo—Shrub of Antilles, flowers with red calix, yellow corolla.


397. Hematophyla Raf. (bloody leaf) Dahlbergia Tussac non alis' diff. Besl. cal. 5phyl. laciniatus, cor. tubul. gibbosa, subbilab. baccas uniloc. sem. pariete affixa. Herba.—In Besleria the seeds are in the pulp, same family.


399. Fimbrolina Raf. diff. Besleria, cor. ventricosa, 5fida, laciniiis reflexis inequalis fimbriatus.—Perhaps only a subgenus, plant not shrub.

400. Fimbrol. incarnata Raf. Besleria do Aubl. auct. tomentosa, fol. ovat. crenatis petiol. fl. solit. axil.—Guyana. The two sp. of Kunth with corolla campanulate are akin or form another subgenus.

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CENTURIA V.

401. Sterculia L. this G. is now the type of a family Sterculides differing from Malvacea and Bombaxides by no corolla, and pistil on a podogyne. Ventenat, Smith and Lamark have given Monographs of it, increasing it to 20 sp. while Linneus had only 3, but their sp. are a medley of trees without hardly any common character except that of the family. The types must be those having the linnean characters of calix 5part. rotate patent, stamens 15, podog. terete solid concave, ovary 5lobed, one style and stigma capsule formed of 5 polysperm lignose follicles. Such is St. foetida and the next.
402. Sterculia villosa Sm. fol. 5lobis tomentosis cordatis dentatis.—Coromandel.

403. Balanghas Raf. diff. calix urceolatus 5fidus apex connivens, capsul. duris 5lobis intus carnosis, loculis 2spermis.—This has also 2 types blended in St. balanghas L. 1 B. telabo Raf. 2 B. rubiginosa Raf. Sterc. do Vent.

404. Caucanthus of Forsk. diff. Sterc.—cal. 5part. reflexo contorto, ovar. conico, stylo 1, stig. 5lobo, folliculis 2-3sp. reticulatis.—Type F. platanifolia, Sterc. do L. auct. India, Arabia, Egypt, now naturalized in Carolina, flowers fragrant instead of stinking, commonly hermaphrodite, seldom polyg. amous, not monoical as in the others.

405. Ivira Aubl. diff. St. stam. 10, filam. coalitis in cupula pilosa 5fida, antheris 2 ad lac. affixis, stig. 5radiatum. caps. 2-5 polysp. fl. herm. —Type I. pruriens Aubl. or Sterculia ivira and crinita auct. good G. wrongly blended. St. frondosa is perhaps a 2d sp.

406. Kavalama Raf. diff. St. cal. campan, 5fidus, stam. 10, podog. conico, stylo 1, stig. 5lob. —Type K. urens Raf. Sterc. do Roxb. W. &c. Kavalam was a malabar name given to the whole G. by Adanson.

407. Karaka Raf. (n. ind) diff. St. cal. tubul. clavato, podog. exerto filif. antheris 15 confluens stylis 5 recurvis. caps. 5 pendulis reticul. dispermis—Type K. colorata R. St. do Roxb. t. 25. &c. In this G. as in next the 5 styles indicate a great disparity, and perhaps exclusion from the family.

408. Braxipis Raf. (short under) diff. St. cal. subcamp. patens, podog. brevissimo, stylis 5—two types.

410. **Brax. nitida** R. St. do V. &c. Dioica, fol. oblongis acuminatis—East Africa—Is it a Colaria?

411. **Clompanus** Rumf. diff. Sterc. cal. infundib. 5fidus &c.—Type *Cl. molucanus* Raf. Rumf. 3 t. 107.

412. **Southwellia** Salisb. diff. Sterc. cal. camp. lac. introflexis. caps. monosp.—two types

1. *S. nobilis* Sal. par. t. 69. St. monosp. auct. 2

*S. longifolia* Raf. St. do Vt.

413. **Colaria** Raf. diff. St. cal. subrot. 5-6 part. Podog. brevis, ov. 5-6lob. styl. 1, stigma 5-6, caps. 5-6 monosp,—The African name of Cola-nut was known since Bauhin, but the tree only described by Palissot, 2 types.


415. **Colaria heterophyla** Raf. Sterc. do Sm. fol. sepe trilobis dentatis—Africa.


417. **Culhamia** Forsk. Vitm. diff. Sterc. cal. campan. 5fido, lac. reflexis. stam. 15, antheris sessilis ad cal. inserta, vel filam. adnatis. Stylo incurvo, stig. capit. caps 5 basi coalitis 5sp.—united to Sterculia and even deemed St. platanif. by some, although quite different tree.

418. **Culhamia triloba** Raf. fol. cord. trilobis, lobis ovatis repandis, racemis axil. bracteatis—large tree of Arabia, leaves 4 inches long, flowers rusty green.

Add above, my Balanghas has been called
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Ferronia by Correa, a good name previous to mine but not to that of Rheede, Necker changed Ivira into Theodoria, both being good the previous of Aublet must be preferred.

419. Helicteres L. akin to Sterculia, and of same family not Bombaxides, having petals and a podogyne. Containing many blended Genera also, Necker had 3; put by the Linneists into 4 of their classes by turns. If they had chosen to give the true character it ought to have been, petals 5 or 10 or none, stamens 10 or 20 or many, capsules stellate or spiral, evolute or bivalve, such is the absurdity of these medleys. Adanson called the whole G. Isora.

420. Helicteres Raf. calix tubul. tereto bilabiato 2-Lido, petalis 5 equalis, stam. 10 tubo 5pedo extus inserta, podog. filif. incurvo, stylo 5pedo, stig. 5, caps. 5coalitis contortis spiralis univalvis polyspermis—Types several trees of tropics, H. baruensis, angustifolia, &c.

421. Anisora Raf. (not equal) diff. cal. clavato bilabiato, petalis 5 ineq.—Two types blended in Helict. isora.

422. Anisora murri Raf. fol. toment. cordatis serratis, multifl.—Malabar, figured in Rheed 6 t. 30.

423. Anisora angulata Raf. arborea toment. fol. cord. ineq. dentato angulatis—India, the var. c. figured in Plukenet t. 245.

424. Nisoralis Raf. diff. cal. campanul. 5dent. obliquatus, petalis 5 ineq. caps. coalitis in fructo tereto acuminato vix contortis.

425. Nisoralis jamaicensis R. Helict. do W. Lam. ramis glabris, fol. ellipt. subcord. serratis, pedunc. unif.—Jamaica, made a var. of Helict. isora! by L. and others.

427. Camaion Raf. (n. ind.) diff. Helict. cal. tubul. elongato incurvo, caps. 5 stellatis non contortis. 2 types both Helict. of Loureiro.


431. Icosinia Raf. (20 united) diff. 420, cal. 5fidus, stam. 20 monadelphis, capsulis 5 radiatis rectis bivalvis.

432. Icosinia paniculata R. Hel. do Lour. Sm.—fol. ovatis acutis, fl. panicul. laxis rubris—large tree of Anam.

433. Fometica Raf. cal. tereto 4fidus, cor. 0, antheris 4 bilab. sessilis epigynis, ovar. ovat. 4sulc. disco magn. insidens, stylos 4 brevis coadunatis, stig. obt. 4lob. caps. 4 stipitatis orbicul. gibbosis monosp. Arbor polyg. fl. masc. anth. 4 coadunatis supra podogyno centralis, fol. sparsis, fl. panic—fine G. united to Heritiera, but quite different: compare to Meborides.

435. Gnoteris Raf. (n. gr.) Mesospherum Brown, diff. Ballota, cal. 10striatus teres truncato 5arist. Galea ovata fornicata carinata, brevis, labio 4fido, 2 later. erectis magnis, 2 inf. de- flexa, stigma simplex obtusum. sem. 2 ovata. Frutescens, spicis foliosis. Several types all fragrant of American bushes, and perhaps Bal. disticha of India also fragrant is a subgenus of it by calix mutic Noterias Raf. Mesospherum has no true meaning, Gnoteris was a name of Dioscorides. Lheritier wrongly united it to his Bystropogon.


438. Nostelis Raf. (n. gr.) diff. Satureia, cal. 5gonus 10striat. 5fidus. galea bifida, labio trifido, lac. media concava inflixa, stig. simplex acut. sem. 4. Frutescens, fl. axil. bifracteatis—several types of Amer. Shrubs, quite different from Satureia, as much so as my G. Piloblephis 604 New Flora. No Satureia grows in America.


Sw. arborea, ramis laxis, fol. obovatis glabris, fl. ternis—also in Jamaica, deemed a var. by Swartz, although a small tree 12 to 15 feet high.

442. Eriphia Brown, diff. Besleria 391, cal. 5part. basi ventricosus coloratus liquor limpidus exudens, corolla ringens, tubo medio gibboso, lab. sup. incurv. 2part. inf. 3part. ineq. Anthera 4 aglutinata, fil. 5to rudimento, stig. bifidum. bacca uniloc. sem. fundo inserta. fl. axil. confertis.—A very distinct G. to be added to my Beslerides, Swartz thought that the B. cristata, my Lo- phalix 394: was a Columnnea? two types.

443. Eriphia pallida Raf. Besl. lutea Swartz &c—fol. petiolatis ovatis acumin. serratis,—Jamaica &c, shrub of 3 to 4 feet, fl. pale or ochroleucous.

444. Eriphia lutea Raf. Besl. do L. auct.—Arborea, ramis articul. fol. subsess. lanceol. serratis nervosis,—South America, Guyana &c, small tree 6 to 10 feet high, flowers yellow.

445. Leucoxylon Raf. diff. Bignonia, cal. bilab. sup. rotund. integr. inf. bifido, corolla infundib. bilab. 2-3lobis undulatis, stig. dilat. integrum, siliqua, teres. Arbor. fol. digit. fl. termin.—The G. Bignonia was another medley a family rather than G. Tecoma, Gelsemium and Catalpa have been divided, I have proposed Cupulissa 203, Uloma 222 in my Flora Telluriana, and I must establish several others, besides the akin G. Spathodea, Jacaranda, Amphilophium &c. This has 4 types, 2Sp. blended in B. leucoxylon, but perhaps most of the digi- tate Sp. belong to it. B. serratifolia has also the calix bilabiate.

446. Leucoxylon riparia Raf. fol. 5-8natis, lato lanceol. acutis fl. solitaris—fine tree of Ja-
maica on streams, flowers rosate, the B. leucoxy-
ylon of Swartz and others.


450. *Potamoxyylon* Raf. diff. Bign. cor. 4lo-
ba, ineq. lobo sup. major, capsula incurva ventri-
cosa. *Arbor* fol. digit. fl. corymbosis—ano-
other very distinct G. with digitate leaves.

451. *Potamoxyylon alba* Raf. Bign. fluviati-
lis Aubl. t. 267. auct.—fol. 5natis petiol. ovatobl.
acutis—small tree of Guyana growing in streams
fl. white.

Bign. cal. tubul. 5dent. cor. hypocrat. 5loba,
stam. 5, fertiles 2, sterilis 3, siliqua uniloc. sem.
villosis. *Arbor* fol. bipinnatis—G. quite dis-

tinct.

pentandra Lour. foliolis subrot. ovatis cord.
acum—very large tree of India, Anam, Molu-
cas, perhaps 2 or 3 sp. blended, the lignum equi-
num of Rumph 3, t. 46 is one, the Palega of
Rheed 1 t. 43 and 6 t. 45 also.

454. *Pongelia* Raf. diff. Bign. cal. tubul. spa-
thaceo latere dehiscens, cor. hypocrat. limbo
plano 5plicato repando ineq. dent. stam. 4 didyn.
siliq. linear. plana subtorul. sem. alata. *Arbor,
fol. imp. pinnat. fl. axil—akin to Spathodes by same calix, mixt with last by many, perhaps Spath. indica of some, but not all, the real Spathodes are African, real type.


458. Rafinesquia (vel Etorloba) diff. Bign. cor. tubulosa incurva apice inflata, limbus 4lobo, lobis ineq. supero et infero major emarg. stigma capit. siliqua obcordata plana lignosa, sem. alatis. Arbor, fol. imp. bipinnatis, fl. paniculatis—another beautiful G. that I dedicate to myself if the Rafinesquia of New Flora 600 is not deemed good enough, and I add a second name meaning heart pod, if any one cavils at this again.

459. Rafinesquia (vel Etorloba) cerulea R. Bignonia do L. auct. Catesby 1 t. 42—fol. multijugis, foliolis petiol. oblongis acutis, paniculis terminalibus dichotomis laxis—a small tree of the Islands of Bahama and Florida, with small leaves, but handsome flowers pale blue similar to Pentostemon in appearance, fruits brown smooth large emarginate, seen alive.

460. Endoloma Raf. diff. Bign. cal. hypocrat. limbo duplex, ext. 5fido plano. interno
erecto integro angusto... *Frutex scandens* 2-3foliolatis, *fl. racemosis*—singular calix, we lack the exact account of corolla and fruit.


462. *Proterpia* Raf. (nymph) diff. Bign. cal. 4lobus, cor. tubulosa, limbo 4fidus ineq. reflexo... *Arbor fol. alt. simpl. fl. corymbosis*—very distinct by habit, almost all the Bignonias having opposite leaves. How is the fruit?


Although I have now thus ascertained 17 Genera out of Bignonia, many others must be verified, the sp. with echinate fruit *Bign echinata, microphyla* &c may form a subgenus Lobonis. See 660 to 663 for Nereria and Nevrilis.


467. *Dendrosicus saxatilis* Raf. Cresc. cucurbit. L. auct.—fol. ovat. coriaceis glabris pe-
tiol. fl. 2-5 pedic. fruct. ovat. acum.—Antilles. Tree with straight angular branches, fruits size of a Citron, wood white and hard.

468. Crescentia L. auct. This G. differs by calix bipartite cor. incurva, limbo 5fido ineq. bacca cortex dura, fol. confertis, fl. lateralis—many Sp. are blended in Cr. cujete, whereof I shall distinguish 3 at least. All from Antilles and South America.

469. Crescentia arborca Raf. fol. cuneatis subeq. fruct. globoso maximo—very useful tree, branches divergent, fruits often as large as head, medical.

470. Crescentia pumila Raf. humilis, fol. obovatis inequalib. fruct. subovato ovoidis—small shrub, fruit size of hen-eggs.

471. Crescentia latifolia Raf. fol. subrot. fruct. ovatis—perhaps a Dendrosicus?

472. Lantana L. this appeared a natural genus, but the hooked stigma was its main artificial character and it has many anomalies in flowers and habit, forming at least subgenera.


476. Subg. Erpila Raf. cal. 4dent. cor. infund. sub5loba, Frutex repens, ramis annuis fl. subspic. bracteatis—Type L. annua.

477. Batindum Raf. diff. Lantana, cal. 5part. 11
subul. persist. cor. hypocr. 5loba. fol. alt. fl. axil.---Quite different habit, but fruit exactly as in *Lantana*.

478. *Batindum jasmineum* Raf. *Lant. africana* L. auct---ramis scabris, fol. ovat. acum. serrat. hirsutis rigidis---African Shrub 6 feet high, fl. large white odorous similar to *Jessa-*mine, drupes black. This plant is omitted in Wildenow & c, and I dont find where removed. Is *Charachera* Forsk a 2d Sp? or a peculiar G. to be called *Xeralis* Raf?


481. *Lantana* (Erpila) *undulata* Raf. *Lant. annua* fl. lud. 111---repens, caulib. 4gonis hirsutis, fol. ovat. acum. dentatis undulatis subsinuatis, nervis puberis, umbellis deinde spicatis, calix striato hirsuto---in Louisiana, doubtfully reffered once by me to *L. annua* which differs by leaves often ternate cordate rough. Both as well as next appear to be creeping shrubs, sending annual shoots.

482. *Lantana* (Erpila) *reticulata* Raf. re-
pens, caulib. humilis vix angul. pilosis, fol. ova-
toblongis, utrinque acutis, crenatis, basi integris
glabriusculis subtus glaucis reticulatis, spicis pe-
dunculat. umbellatis, bract. oblongis obtusiiculis
---from Florida, found by Baldwin, anonymous
in Collins herbarium, small plant, stems annual
herbaceous, leaves small often less than one inch
long, sometimes quite oblong, flowers few quite
sessile.

483. Lantana (Camara) *rosea* Raf. ramis
inermis vix angul. albescens hirsutis, fol. ovatis
vel subrot, utrinque acutis scabris, lato dentato
serratis, subtus glaucis, fl. capitatis, bracteis ova-
tis brevis---sent me from the Antilles under that
name, which I do not find recorded, leaves
small uncial, flowers rosate.

484. Lantana (Periana) *incarnata* Raf. ra-
is angul. fuscatis glabris aculeatis sparsis bre-
vissimis recurvis, fol. ovatobl. utrinque acum.
crenulatis scabris, capitulis axil. pedunc. invo-
lucris, bracteisque lin. lanceol.---apparently dif-
ferent from *L*. nivea and aculeata or its varie-
ties, flowers incarnate, leaves large 2 or 3 in-
ches, seen alive from Antilles.

485. Glycanthes Raf. (sweet fl.) diff. Colum-
nea, cal. 5part. cor. incurva gibba, bilab. galea.
3part. medio major emarg. lab. inf. lanceol. in-
tegro, anthera 4 connexa quadrata, stig. bifidus,
caps. baccata uniloc. sem. centralis. *Frutex
scandens*, fl. axil. fol. opp.

486. Glycanthes scandens R. Col. do *L*. ceule
angul. carnosus, fol. ovatis, pet. acutis---Antil-
tes, Guyana, perhaps several blended sp. called
*Syrup Vine*, corolla red full of sweet juice, ber-
ries white. Of family Beslerides.

487. Columnnea *L*. the type is *C. longisolia*,
wrongly called Achimenes sesamoides by Vahl,
diff. cor. galea integra, labio trifido, caps. 2locul. sem, centralis. C. ovata appears a second sp. C. hispida has a baccate berry as in Glycanthes. C. hirsuta and rutilans must be verified. C. stellata forms next G.


489. Piper L. from 25 sp. in Linneus, this G. was increased to 105 in Persoon, and now about 150, offering great diversities of habit. Peperomia has been separated by some; but the whole G. requires complete revision, and as in Ficus, the flowers have been described in but few. I shall endeavor to indicate several Genera of it. They will be the types of family Perides wrongly united to Urticidae, to which belong also Misandra, Gnetum, Thoa, Saururus &c. Chiefly Trees, Shrubs and Vines, but some plants.

490. Piperiphorum Neck. bracteis nullis, antheris sessilis 2, stylus unicus stig. 3. fol. alter-nis, fl. spicatis—most of the sp. belong to this.


492. Cubeba Raf. diff... caule articul. fl. racemosis—a subg. at least, flowers similar? type C. officinalis vel P. cubeba.

493. Lepianthes Raf. diff, Lepigonis floralis stam. 2 cum filam. stig. 3 sessilib. reflexis fl. spicatis vel umbellatis, fol. sepe peltatis—Type
Lep. vel P. umbellatum. peltatum, maculosum, granulatum and many others.

494. Troxirum Raf. diff. Lepigonis floralis, stam 2 filamentosa, stigma unicum obliq. villos. fol. verticillatis, fl. spicatis—all the sp. with whorled leaves from 3 to 5, Trox. or P. trifolium, quadrifolium, reflexum, verticillatum, stellatum, pulchellum, filiforme, pereskia, blandum.

495. Gonistum Raf. diff. 490 Lepig. floralis, stam. 4-6, ovar. 4-6 angul. stig, 4-6. drupis 4-6gonis---Type G, unguiculatum Raf. Piper do R. P. t. 57, Peru.

496. Oxodium Raf, (2 warts) diff, 490 spicis echinatis, stam. 4, stylus unicum elong. stig. 2---Type O. callosum Raf. Piper do R. P. Peru.

497. Lacistema Sw. Nematospermum Richard, diff. 490, stam. 1, stig. 3 setacea, Akena monosp---no more different than the others, the berry is often dry in many.


499. Peperomia R. P. Pers. only differ 490, stig. sessile 1-2 punctiformis. 23 sp. in Persoon, perhaps including also anomalies.

500. Carpupica Raf. probably another distinct G. type C. odorata Raf. Piper carpupija R P. tree of Peru with fragrant leaves—Piper methysticum and Churumaya are also probably types of other Genera? to be called Methysticum esculentum Raf. and Churumaya arborea Raf. Is not Piper betel another? to be called Betela mastica Raf.
CENTURIA VI.

501. *Cissus* L. only 6 sp. in Linneus, now over 100 by uniting thereto a medley of plants with totally different habit and even flowers, leaves simple, ternate, digitate, pinnate &c indicating peculiar G. which I shall partly settle; but as the flowers of all are not described, they must be verified. My *Cissus* R. will have cal. 4dent. petalis 4 liberis; disco plano, stam. 4 liberis epidiisco, stylo tereto, stig. obt. bacca globosa monosp. *Scandens, fol. simplicib. alt.*—such are most of the sp. probably.

502. *Irsiola* Brown, Raf. diff. calix planus 4gonus, pet. 4 reflexis epicalix. stam. 4 monadelphis urceol. 4part. antheris in sinub. ovar. 4gon. stylus, stig. acut. drupo monosp. umbilicato. *Frut. scand. fol. simpl. fl, umbel.*—Type *Irs. sicyoides* Raf. C. do L.

503. *Kemoxis* Raf. (sour Ivy) diff. cal. urceol. obt. 4dent. persistens, pet. 4 refl. basi coalitis, disco marginatus. *Fol. trifolialis, fl. umbellatis*—Type *K. acida* R. Ciss. do L.


505. *Ituterion* Raf. (n. gr. Hedera) diff. cal. urceol. 4fidus persistens, pet. 4 revolutis basi coalitis marcescens persistens. *Arbor fol. oppos. simpl. fl. panic.* Is it of same family?

506. *Ituterion arborea* R. Cissus do Forsk, auct.—fol. petiol. obl. crassis integris, fl. sessil—large tree of Arabia with very peculiar habit, berries pisiform yellow or black.

507. *Scelanthus* Forsk, united to *Cissus* by
Vahl. is yet a peculiar G. several sp. rotundif. 4gonus, &c.

508. **RINXOSTYLIS** Raf. (beak st) diff. bacca pyriformis stylo persistens rostrata. *fl. umbel.*—

509. **PEDASTIS** Raf. diff. 501, bacca 4 locul. 4 sperma. fol. pedatis.—Type P. indica Raf. Cissus pedata auct.

510. **CAUSONIA** Raf. med. fl. 1830 diff. 501. petalis 4 erectis cuculatis, disco 4 lobo, stam 4 fertiles, 4 steriles lobis alt. fol. subpinnatis—
Type C. *japonica* Raf. Vitis do Thunb. Cissus do W. P.

511. **QUINARIA** Raf. med. fl. 1830 Psedera Necker, diff. 501. cal. 4-5 lobus, pet. 4-5 cuculatis erectis, stam. 4-5, disco plano, bacca 4-5 loc. 4-5 sperma. fol. digit. fl. panic.—Types nearly all the sp. with digitate leaves, particularly Q. hederacea Raf. or Hedera, Vitis and Cissus folia of Authors! also Q. hirsuta R. of North America often deemed a var. of it, and 3. Q. *japonica* R. the Vitis pentaphyla of Thunberg.

512. **NEKEMIAS** Raf. (not Ivy) diff. 501, cal. marginans, integro undulato, petalis 5 basi coalitis patens pubescens, stam. 5, disco membranoso undulato sub 10 lobus, stylo brevis, stig. obt. bacca 2 locul. 2-4 sperma. *Scandens* fol. bipinn. fl. corymbosis—very peculiar G. wrongly united to 4 others. Several pinnate leaved Cissus may belong to it, but the type is

514. Ampelopsis Mx. This G. must be restricted to A. cordifolia, having really the appearance of a Grape Vine, and only differing by petals not hooded nor coherent, disk cup like lobed persistent.

515. Allosampela Raf. med fl. 1830. cal. 5dent. superus, pet. 5 ovatis conc. acum. stam. monadelphis 5, disco urceol. truncato persistens, bacca uniloc. 2-4sp. cal. et disco coronata. 

Hab. Vitis—Not even of family Sarmentacea; but of Hederacea that differs by ovary inferior and stamens alternate, akin to Araliacea differing by several styles.


517. Pioctonon R. (n. gr.) diff. ad Heliotropium, cal. 5fidus, cor. hypocr. limbo plano 5gono, faux clausa sq. 5 angulis oppos. stig. capit. capsula subrot. disperma vel akenis 2 globosis coalitis—Frutic. fl. spicatis—The G. Heliotropium is yet one of the most anomalous of Borragines, although once deemed a very natural Genus, many G. must be separated from it. This has 3 types at least.


524. **Scorpianthes lineatum** Raf. **Hel. do Vahl &c. Lithosp. heliotropoides Forsk—dichotome shrub of Arabia.**

525. **Peristima** Raf. (around stig.) **diff. Heliotr. cor. faux nuda, limbo plano, stylus medio incrassato, annulo lato circumdatus sub stigma quod bifidus est. sem. baccatis coalitis inter bacc. 4ang. 4sp.—hardly of same family, very near Ehretia.**

526. **Peristima bicolor** Raf. **Heliotr. bacca-tum Forsk. Vitn. caule frutescens prostrato, fol. obl. hispidis—Arabia, small low shrub, flowers tube yellow, limb white.**

527. **Besides these frutescent N. G. there are others herbaceous included in Heliotropium, whereof Tiaridium of Lehman is one including many sp. blended in Hel. indicum or akin there-to, with fruit bifid formed of 2 coalescent seeds, our American sp. is quite distinct even in Genus! see 531.**

528. **Synzistachium** Raf. **diff. Heliotr. cor. tubo clavato longissimo, limbus 5fidus, fruct. 2partibilis 2sp.—akin to Messersmidia, type *S. peruvianum* R. Hel. synzist. R. P. auct.—H. microstachium has the same fruit, but how is corolla? several other Peruvian sp. have very peculiar habit by flowers corymbose and will probably form other Genera. The *H. pinnatum*
is so different from all that it must also be a peculiar Genus. The *Schobera* of Scopoli and Necker was separated also from *Heliotropium* by capsule didyme umbilicate 4 loc. 4 sp. but I dont know which is the type, unless some *Tiaridium* or the next G.

529. *Eliopía* Raf. (n. gr.) diff. *Heliotr.* cal. tubul. 5 dent. cor. hypocr. faux clausa 5 radiata, stig. capit. planum, sem. 4 eq. ovatis—This although based on the *H.* indicum, is very different from *Tiaridium* by calix and seeds, 2 types.

530. *Eliopía serrata* Raf. fol. ovatis subcord. subserratis rugosis hirtis, spicis term. solit. fl. secundis biserialis—Antilles and tropical America, the *Heliotr.* indicum of Swartz &c, *H.* americ. of Sabati &c, fl pale blue.

531. *Eliopía riparia* Raf. fol. ovatis subrepandis rugosis hirtis, spicis term. solit. fl. secundis uniseriālis—banks of streams in N. Amer. the *Heliotr.* indicum of all the N. Amer. botanists. Elliot calls the calix 5 parted and 4 seeds angular.

532. *Rhizaeris* R. (air root) [diff. *Conocarpus*, cal. conc. 5 dent. petalis 5, stam. 10, alt. 5 brevior. ovar. cord. 10 striatum, akenis coronatis obov. sulc. indehisc. apertis. fl. *racemosis. bracteatis*—very diff. from *Conocarpus* with capitate naked fl. cal. 5 parted, no petals, 5 fertile stam. 5 sterile, nuts in cones winged &c. The name derives from the seeds germinating in the air as in *Rhizophora*.


535. *Sphenista* R. (wedged) diff. *Hirtella* fruct drupa (nec bacca) cuneat. incurvat. stylo,


537. *Phyllanthus* L. from 7 linnean sp. increased to over 60 by a strange medley, even Xylophyla, Kirganelia and Conamia being thrown into it; whereby it is become as absurd as Croton! and more difficult to rectify by the few good descriptions of flowers. However I had long ago attempted it and shall now give a sketch of my labor, which must be deemed very imperfect. See till 552, mostly shrubs.

538. *Phyllanthus* Raf. monoic. cal. 6part. pet. nullis. stam. 3 monadelphis, fl. fem. stylis 3, bifidis caps. 3cocca, fol. *floriferis*—most of the species.


540. *Niruris* Raf. diff. cal. 6fido vel 6dent. caps. Glocularis.—Several sp. blended in *Ph. niruri*, some even of different Genera! such as Kirganelia and Mæroris. Type

541. *Niruris indica* Raf. fruticul. pinnulis petiol. fl. axil. solit. pedunc.—India, a 2d sp. is *N. annua*.

542. *Mæroris* Raf. diff. cal. 5phyl. glandulis 5 ad basis, caps. 3loc. 6valv.

stipulis 2 geminatis coloratis, fl. axil. ped. mutantib.—Mts. of Jamaica.

544. **Nellica** Raf. (n. ind.) diff. cal. 5denti. petalis 5, stam. 5 monadelphis—Type *N. made-raspatana* R. Phyl. do L.

545. **Xylophyla** auct. diff. stylis 2, caps. 2 spermis, *fol. simpl. margin* *florifer*—most of the sp. but all must be verified.

546. **Lomanthes** Raf. (marg. fl.) diff. stam. 6 liberis, stylus 3 part. stig. 3, caps 3 loc. 6 valv. 6 sp. *fl. marginalis polyg.*—Type *L. latifolia* Raf. Phyl. and Xyloph. do auct. Genesiphyla of Lher.

547. **Hexadena** Raf. diff. stam. 3 liberis, glandulis 6 ad basis, stylo 3 fido, stig. 6. caps. 3 loc. 6 valv. 6 sp. *fl. marginalis polygamis*—Type *H. angustif.* R. Phyl. and Xyloph. do auct.

548. **Kirganelia** Juss. very good G. wrongly made a subg. by Persoon, type *K. virginea*, blemented in Ph. niruri by L.

549. **Genesiphyla** Lher. diff. 547. stam. 3 monadelphis, glandulis 6, cal. fem. 3 gono 3 d, stig. 9—Type *G. apeciosa* Raf. Phyl. do Sw. P.

550. **Conamia** Aubl. Raf. diff. 538, ovar. 6 striat. stilis 3, stig. 6 villosis, caps. 6 locul. 6 sp. *fol. simpl. fl. axil.*

551. **Conamia brasiliensis** Aubl. R. fol. subrot. acut. ineq. integr. fl. aggregatis—Guyana & Brazil, shrub 6 feet high, fl. greenish.


553. **Bellucia** Neck. 833. cal. superus sim-
plex 3-5fidus coriaceus, petalis 7-9 epicalix unguic, simbriata, stam. 12-18, filam. conniv. antheris liberis, stylo incurvo clavato. bacca pluriloc. polysp.—very different from Blakea with double calix, outer inferior, both 6fid, 6pet. 12 stam. anthers coalescent, caps. 6loc. &c. Both of **Melastomides** family.


**555. Melastoma** L. this beautiful G. has been increased from 15 linncean sp. to 114 in Persoon, and now over 150, Kunth alone has 34 of S. America. As usual in such large groups a medley of G. has been blended, requiring revision. —They are chiefly shrubs and plants seldom trees, which I divide in 38 good Genera types of family **Melastomides**, except those with free ovary that are like Rhedia of family **Lythridia** subfamily **Rhedia**.

**556. Melastoma** Raf. cal. camp. 5dent. pet. 5, stam, 10, stig. obt. vel capit. bacca coronata 5loc. polysp. &c. Subg. may be formed by the shapes of stigma, anthers &c. Most of the sp. belong here, such as **M. aspera**, **strigosa**, **repens**, **trinervis**, **parviflora**, **agrestis**, **grossa**, **granularis**, **nervosa**, **ciliata**, **cymosa**, **rigida** Sm. **cuprea** Sm. and many others.

**557. Danceria** Raf. (bot) diff. 556, cal. 5-6fidus, pilis sanguineis hirtis, lac. ovatis, postice aucta lac. linearib. stylo crasso, stig. concav. pet. 5-6, stam. 10-12, antheris bifidis. Frutex, fol. 5nerv. fl. axil.—Type **D. hirta** Raf. M. do L. Sw. auct. but many blended sp. under that name of other genera?

**558. Sericola** Raf. diff. 556, cal. obl. tubul.
5fid. antheris longissimis falcatis, ovar. obl. stylo longus curvus, stig. clavat. Frutex, fl. racem. —Type S. brachiata Raf. Mel. holosericea L. auct. Brazil shrub, M. amygdalina, Lam. with terete calix is perhaps a 2d sp.


560. Acinodendron L. 1st. ed. since blended in Melastoma, but diff. by calix turbinate, arborescent and probably other characters in anthers and stigma. Probably several blended sp. and types, at least three, and some other trees may belong here.


562. Acinod. laxiflora Raf. fol, lato ellipt. denticul. 5nerv. subt. canis racemis axil. laxis—S. Amer. tree 20 feet high flowers white, the genuine linnean sp.


564. Oxisma Raf. (split claw) diff. 556, petalis basi fissis ut 2 unguic. vel pet. 10, per paria apice coalitis, baca umbilic. Arbor. fl. corymb—Types Ox. arborescens Raf. Melast. do Aubl. large tree of Guyana 60 feet high. fl. white and 2 Ox. flavescens (M. aubl.) another tree 10 feet high.

565. Acinolis R. (scaly berry) diff. 556, cal. turbinato 5-6angul. dentato, 10-12 costato, extus
squamosus, pet. 5-6parvis, stam. 10-12. bacca squamosa. *Frutex, fl. panic.* Type.


570. *Eustegia* Raf. diff. 569. cal. indiviso integro calyptrato deciduo, pet. 5-6, stam. polyandris, bacca non coronata, concreta, 5-6locul—G. near to last, also to *Eucalyptus* and *Calyptranthes*, probably of *Myrtides* family by many stamens like them. Also akin to *Thylacium* of Loureiro but with free berry, 3 types.


575. *Antheryta* Raf. (anth, rug) diff. 556,
cal. 5fidus, pet. 5, stam. 10 ineq. declinatis, filam. supra lanatis, antheris linearibus. Frutex fl. panic.


377. Arthrostema Grah. diff. 556, cal. 4dent, pet. 8. retusis, stam. 8 ineq. antheris porosis biauricul. caps. 4locul—by capsule nearer to Rhexia? is it free?

378. Arthrostema nitida Gr. b. mag. 3142. frutic. pilosa fol. ovat. 5nervis serrul.—Shrub of Buenos Ayres.

379. Alosemis Raf. (half diff.) diff. 556, cal. 4-5dent, pet. 4-5, stam 8-10, ineq. alternis brevior sepe sterilis vel castratis—3 Types 1 Al. zeylanica Raf. Melast. octandra L. auct. 2 Al. grandifiora, Melast. do auct. and next.


382. Lomanthera Raf. diff. 556, cal. 4d. pet. 4 unguic. stam. 8, antheris utrinque latere membrana marginatis, stylus elong. bacca 4loc.—Type L. glandulosa Raf. Melast. do auct.

383. Octella Raf. diff. 556, cal. 4d. pet. 4, stam. 8, filam. abreviatis, antheris curvis, bacca 4loc.—Types, several octandrous sp. but must all be examined again, such are Melast. angus-
tlf. microphylla, capillaris, umbrosa, coccinea, vaccinoides, fascicularis, hispida, axillaris, alpina, verticillata, lateriflora, virgata, glabrata, repens.

584. Antisola Raf. diff. 583 stam. 4. *Frutex fl. racem.*—certainly a very striking G. the stamens being equalised to petals.


586. Lomanodia (Raf. (edge entire) diff 556, calix integro truncato . . 2 types *L. glabra*, and *mucronata* Raf. Melast. do auct.

587. Malabathris Raf. diff. 556, cal. squamis fimbriatis vestitus imbricatis ut in *Cyanus*—this may be only a subg. unless other characters exist, it was the original Melastoma, two types 1 *M. nigra* R. (Mel. malabathrica L) and M. cyanoides Raf. Mel. do Smith, both Indian shrubs, Smith quotes for the last Kadali Rh. 4, t. 43 and Rumf. 4 t. 71.

588. Folomeis Raf. vel Pholomphis (scaly umb) diff. 556, bacca duplce umbilicata, squamis fl. umb. centralis clauso.—Probably other characters also. Type Mel. fragilis, Shrub of Guyana, compare Gynomphis, 597.

589. Zulavia Neck. 791. Raf. emend. diff. 556, petalis 5 ineq. 4 eq. minor, 1 major, antheris bifidis, bacca 3 loc. 6 sp.—3 types *Z. levigata, alata, grandiflora* Raf. all Melastomas do Aublet, Shrubs of Guyana. His *levigata* is different from Synoptera 596. Is his *grandiflora* the same as Alosemis grandiflora?

590. Exodiciulis Raf. (out 2v) diff. 556, petalis ineq. 4 minima, cal. caliculato, bracteis 2 bivalvis, ovar. libero, capsula libera 2-5 valvis, cal. et valvis obsita. *Annuis cinereis, fl. corymb. &c*


592. *JARAVEA* Neck. 792, diff. 566, cal. libero, antheris bifidis, capsula libera 5locul—several sp. of Aublet belong here, and in Necker it included *Exodiclis.*

593. *Benkara* Ad. diff. 556, stam. 5, bacca 4locul. polysp. *Spinosis, spicis axil*—is it of this family? Adanson quotes as type *Benkara* Rh. 5. t. 35. *B. galia* Raf.


595. *Sotularia* R. (n. iud.) Catuadamboe Ad. diff. 556, cal, 5-7fid. pet. 5-7, stam. 5-7, bacca 5-7locul. sem. planis *fl. panicul*—Type *S. malabarica* Raf. Rh. 4 t. 22.

596. *Synoptera* Raf. (union by wings) diff. 556, cal. tubul. 5dent. pet. 5ineq. contortis, stam. 10 ineq. genicul, ovario ad cal. coalito alis 10 membr. stig. concavum—very strange and peculiar union of calix by membranose wings. Type *S. levigata* Raf. Mel. do L. auct. and perhaps other sp. may offer this singularity of structure, compare *Zulatia* 589.

ricea, fol. ov. cord. int. panic. term—plant of Brazil, flowers dark blue.


Such was the medley of Melastomas, united by no characters, except leaves opposite nervose!!! not satisfied with this, the Linnean Botanists and even Kunth have thrown into it the good G. Maieta, Tococa, Topobea of Aublet, and even Tristema of Jussieu! also Tibuchina since put in Rhexia with all the capsular sp. see next Centuria. It appears that all the sp. with inferior berries form this family, to which ought to be united the baccate Epilobiums, such as Fuchsia, Muriria, Cacucia, Dorvallia &c and the Myrtides with definite stamens.
CENTURIA VII.


603. Topoœea Aubl. J. V. Drepanandrum Neck 793, diff. 556, cal. camp. 6cuspid. ad basi calic. involucro 4partito, pet. 6 ineq. stam. 12 incurva connivens, stylum declinatum, stig. capit. 6sulc. bacc. spongiosa 6loc. involucro obvol. cal. deciduo non coronata. Sarment. fl. axil.—Type T. parasitica Aubl. t. 189. Mel. do auct. M. involucrata is perhaps a 2d sp. and all the doubtful dodecandrous sp. may be referred to it till better known, such as M. patens Sw, nivea and setinoda Kunth &c.


605. Rhexia L. this G. has been greatly increased also by throwing into it all the capsular Melastomas and even Osbeckia, Kunth has 27 sp. those of N. America and akin form a natural genus by calix like a bottle 4toothed, 8 stamens &c, all the others must be removed.

607. *Alifana* (Ad) diff. *Rhexia*, cal. campan. ut Melast. 5dent. stam. 10, caps. 5valvis, pet. 5eq.—Types all the decandrous *Rhexias* or *A. canescens*, striata, lutescens, montana Raf. (*Rhex. polypetala* R. P.) &c chiefly shrubs. Very near to *Acisanthera*. All the *G. Rhexia* was called Alifanus by Adanson.


609. *Osbeckia* L. this G. lately deemed doubtful has been well settled by Smith, the main difference from *Rhexia* being the small double alt. teeth of calix, but it has also 8 or 10 stam. and calix of several shapes, which must be subg. at least until increased. Real *Osbeckia*, cal. infund. 8dent. 4 minor, pet. 4, stam. 8—Types *O. chinensis*, *zeylanica*, and perhaps *ornata*, but this called *Rh. inconstans* by others has perhaps ovary free? how is the calix? see 4 next G. or subgenera.

610. *Kadalia* Raf. diff. Osb. cal. 10d. 5 sq. pet. 5, stam. 10.—Types *Osb. antennina*, *rotundif*. Smith, African plants like 3 next. *Kadali* was Osbeckia in Adanson.

611. *Derosiphia* R. (neck tube) diff. Osb. cal. basi ventric. apice tubuloso elongato 10d. pet. 5, stam. 10—Type *Osb. tubulosa* Sm.

612. *Hedusa* Raf. (nymph.) diff. 611. cal. toto tubul. tereto—Type *Osb. grandiflora* Sm.

613. *Dupineta* Raf. (bot.) diff. 611. cal. toto campan. ut in Melastoma sed 10d. &c.—Type *Osb. multiflora* Sm.
614. **Quirina R.** (nymph) diff. Cuphea, caps. 2loc. petalis minutissimis. *Frut. fl. supraxil*—one of the G. blended in Cuphea with caps. uniloc. petals unequal.

615. **Quirina microphyla R.** Cuph. do Kunth, frut. scabra, fol. obl. lanc. acutis, fl. supraxil. secundis albis—Shrub of Mexico.

616. **Bergenia Raf.** diff. Cuphea petalis ineq. —Type C. siphilitica K. plant. Bergenia was Necker’s name for G. Cuphea.


620. **Melvillia speciosa** And. R. Cuphea melville b. reg. 852. fol. ov. lanc. scabris subsess. racemis term—Guyana, red flowers.

621. **Woodfordia Sal.** diff. Grislea and Lythrum, cal. clavato tubul. arcuato 6-12 dent. pet. 6-12 extus glandulis 6-12 oppos. intus basi cal. nectario 6-12 fidus staminif. stam. 6-18, antheris peltatis. *Frut. fol. oppos. fl. term.*—very distinct G. one of the dozen shuffled in Lythrum by Linneus.


623. **Lythrum L.** the herbaceous sp. form many G. such as Decodon, Parsonsia, Pemphis,
Ododeca Raf. Hexarina Raf. and I will add 2 here. The incongruity was glaring. L. salicaria is the type of the Genus.

624. Melfona R. (nymph) diff. cal. tubul. infund. strictus 6-10dent. petalis 6-10, stam. 6-10 ineq. stig. acut. caps. uniloc. oligosp. ad cal. erumpens. fl. alt. axil.—Type M. purpurea Raf. Lythr. melanium L. auct.

625. Editeles R. (is 2 perf.) diff. Lythr. cal. 4dent. basi 2bract. calic. petalis 4, stam. 2. caps 2loc. fol. alt.—Type E. thymifolia Raf. Lythr. do L.


627. Nesaea Jus. diff. Lythr. cal. ventric. 4-6d. pet. 4-6, stam. 8-12, caps. 4loc.—Type N. triflora K. Lythr. do L. and the two next shrubs, but Decodon united by Kunth has caps. 3loc.


630. Beckea Osb. Sm. this G. has also been deformed by forcing N. G. into it, the original G. had cal. 5fd, pet. 5, stam. 8-10 ineq. caps. coronatis 3-4loc. 3-4sp. but the 3 next G. are not such, all are shrubs and belong to the Myrtoides. Types B. chinensis ndn densifolia.

631. Gomphotis R. (club ear) diff. Beckea, cal. 5lobus coloratus, pet. 5, stam. 10 eq. ovar. concretum, stig. capit. caps. 5loc.

632. Gomphotis saxicola R. Beckea do Hook. b. m. 3160, fol. oppos. imbric. obov. acutis. fl. axil. and term.—Australian shrub.

634. *Allostis* Raf. diff. Beckia, stam. 5, caps. 2loc. Type . . . .


636. *Myrtus* L. although apparently a natural G. it has been found also anomalous, and to make the matter worse the G. *Eugenia*, Caryophyllus, *Zizygium*, *Jambolifera* are proposed to increase it and make it absurd; they must all be restored and some G. yet divided like the last: the anatomy of the seeds although so much thought of by some botanists, is here totally inadequate, since variable forms are offered by these Genera. The *M. communis* has also many presumed varieties that are deviated species, I will give 5.

637. *Myrtus italica* Raf. ramis rectis, fol. ovatolanc. acutis sess. baccis ovatis purp. Italy, Spain &c, the var. are *lusitanica, betica, imbricata, laurifolia, nigra, alba, &c.*


641. Myrtus angustifolia, fol. sessilib. lineari-rib. mucronatis—Africa and Asia, small leaves.

642. Pimentus Raf. diff. Myrtus, cal. 4part. caliculatus, petalis 4, bacca 2loc. abortu 1-3sp. dentib. 4 coronata, fol. alt. fl. corymb. polygamis—Type P. vera Raf. M. pimenta L. and several other sp. often blended, perhaps all the alternate leaved Myrtles belong here, such as the 5 next omitted by many; and M. gregia Sw. or Gregia aromatica Gaertn. is a Pimentus by berry 2loc. 2sp. it is a G. if it has 5 petals.


648. Evanesca Raf. diff. Myrtus. fl. dioicis sepe apetalis, paniculatis, how is the fruit?—Type E. crassifolia R. Myrt. dioica L. auct.
649. Emurtia Raf. diff. Pimentus, bacca uniloc. monosp. fol. oppos. In Pimentus the berry is naturally 2loc. 4sp. although often 2sp. and sometimes monosp. by abortion, in true Myrtus it is 3loc. polysperm—Types Myrt. emarg. microcrantha, guayaquilense, punicisfolia of Kunth.

650. Karkandela Ad. diff. Myrtus. cal. 7fidus, pet. 7, stam. 14, bacca monosp. fol. vertic. fl. corymb.—Type K. malabarica Raf. in Rheed 1 t. 13.

651. Amyrsia Raf. diff. Pimentus caps. 2loc. polysp. ut Myrtus—Types Myrtus microphyla, foliosa, discolor, compressa and others of Kunth first section.

652. Opanea Raf. Opa Lour. diff. Myrtus, bacca unilocul. 1-5sp.—Types M. trinervia Sm. and billardiana K.—chiefly Australian Shrubs, with 5 petals and many stamens as in real Myrtus, also the 2d sp. of Opa of Loureiro a tree and shrub. Myrtus disticha by habit and berry 3-4loc. 3-4sp. may be another G. or subg. Distixila or a Burcardia.


654. Psidium cuiavilus Burm. Rumf. 1 t. 49. Vitm. fol. ovato lanceol. lineatis ferrug. tomentosa, ped subbilfl.—Polynesia, omitted by many writers.

655. Cumetea Raf. diff. Eugenia, bacca uniloc. monosp. non angul. sem. arillato vel membrana tecta—Eugenia has a 4gone drupe and hard nut. Types 1 C. alba R. Eug. coumète Aubl. auct.—2 C. tomentosa, 3 mini, 4 microphyla, 5 fragrans, 6 montana, 7 multifl. 8 di-
varicata, 9 angustif. R. all Eugenias of Authors.


663. Nevosmila arborea Raf. Crateva gynandra L. auct.—ramis scabris punct. fol. simpl. & tern. pet. ovat. acutis, racemis term. multifl—
tree of Antilles, 12 feet high, bad smell, burning taste, flowers purple.

664. **Capparis L.** auct. notwithstanding the reform of Decandole in this G. and Cleome, much remains to be revised, and I shall give a sketch of my reform of 1814, chiefly on the frutescent kinds. I have divided the family also, calling *Cleomides* all the G. with a dehiscent capsule, the podogyne exists more or less in all. The real G. *Capparis* with berries includes most of the species having the characters of *C. spinosa*.

665. **Intutis Raf.** (n. gr.) diff. cal. 4fidus persistens, pet. 4 eq. nect. 4 ovata, stam. sepe 8 podog. inserta, stig. sess. capit. clavat. bacca uniloc. oligosperma. *Frutex, fol. oppos. fl. corymbosis*. 2 types.

666. **Intutis ferruginea R.** Cap. do L. octandra Jaq. fol. ovatolanc. subt. cinereis toment. corymbis term—shrub of Guyana and Antilles, branches rusty, flowers white fragrant, taste acrid, whence called mustard shrub.

667. **Intutis amygdalina R.** Cap. do Lam. auct. fol. obl. lanc. venosis, subtus squamosis argenteis, ped. multifl.—S. America.

668. **Triclanthera R.** (3loc. anth) diff. cal. rotato 4part. pet. 4 nervosis unguic. stam. 18-24 antheris *trilocularis*! bacca pedic. 1loc. sem. renif. *Arboreis, fol. ternatis*—2 types.

669. **Triclanthera corymbosa Raf.** *Capparis magna* Lour. &c foliolis 3 lanceol. fl. corymb. albis—tree of Anam.

670. **Tric. falcata R.** Cap. do Lour. &c foliolis 3 ovato lanc. obliquis falcatis, fl. racemosis. —Tree of Anam.

671. **Olofuton Raf.** (n. gr.) diff. Cap. cal. 5phyl. coloratus, pet. 5 obl. bacca ped. ovata polysperma.

672. **Olofuton racemosum Raf.** Cap. can-
toniensis Lour. &c, fol. ovat. acum. rugosis—Shrub of China with white flowers.

673. Pleuteron Raf. (n. gr.) Breynia Plum. diff. Capparis, gland. nect. 4. Stylo filif. stig. clavatum, bacca brevi pedic. Siliqua bivalvis torulosa—family Cleomides. Many types P. breynia, frondosa, baduca, hastata, linearis, siliquosa, comosa, torulosa, tenuis &c, all Capparis L. &c but some may form subg. having short capsules or long silicles. The main type P. breynia, is called Sandrous by Lin. polyandrous by Swartz, see 695 for Breynia of Kunth.

674. Gynophalis Raf. subg. of last? diff. by silicles bivalve but pulpose inside with reniform seeds, types C. obtusa and flexuosa, two trees of S. Am. blended in Cap. cynophalophora.


676. Cleome Dec. on this I must be explicit but concise as most of the sp. are plants, and I reserve my complete revision for another work, my Polanisia has been generaly adopted, and some N. G. have been proposed, Necker had 3 fifty years ago. The real Cleomes have a gynophore bearing 6 stamens, types Cl. 5phyla, 3phyla, 7phyla, &c: the anomalies of the blended sp, are excessive. Peuteron, Peritoma, Stanleya, Stephania, Warea, Riddelia &c, are all Cleomides, which Nuttal wrongly changed to Stanleae, see also till 707.

678. Lagansa Rumf. Raf. cal. camp. 4ph. lanc. pet. 4 subeq. stam. 18-24 disco plano inser-
ta, ovar. sess. stylo brevi, stig. obt. siliqua subul.
sem. renif. Herba, fol. digit. &c.—Type Lag.

679. Arivela Raf. diff. 678, petalis ineq. 2
divaric. stam. 8-15 ineq.—Type A. viscosa R.
Cl. do L. auct.—Is it a subgenus of Polanisia?

3-5ph. petalis 5, stam. polyandris, siliq. filif. sem.
hispida. Herba fol. digit—Type A. chelidoni
R. Cl. do L. auct.

681. Melidiscus Raf. diff. 580, cal. lin. cilia-
tis reflexis, pet. 4 unguic. coalitis latere fissis,
stam. 6 ineq. incurvis disco mellifluo plano inser-
ta, ovar ped. stig. sessile truncat. Frutex, fol.
digit. fl. racem.—Type M. gigantea Raf. Cle-
ome do L. auct. b. mag. 3137. viridiflora Schr.
foliolis 7 cuneatis acutis viscosis. Africa.

682. Thottea Rotb. Bosc. cal. colorato 3lo-
bo, petalis nullis, disco radiato truncato stami-
nif. stam. plura, stig. sess. siliqua 4gona.—This
G. omitted by many, is near Capparis and Cle-
ome, the type was figured by Rotboll in act.
Copen. 2 t. 2.

683. Triplobus Raf. Tri-phaca Lour. Mo-
noic. fl. masc. cal. 5fido colorato, stam. 15 bre-
vis. fl. fem. cal. ut masc. disco stipitato concavo
multisfido, ovar. trilobo, stylo filif. stig. 3lob.
fruct. siliquis leguminif. ternis ventricosis polysp.
—very singular G. certainly not of Leguminose
family, nearer to Cleomides, but the triple fruit
is a great anomaly probably type of a new fam-
ily Triplobides Raf. near Euphorbides and
Sterculides. Loureiro name formed of Phaca is
erroneous, he mistook the calix for corolla, and fruits for true pods.


685. **Scolosperma** Raf. (spin. seed) diff. Cleome, cal. 5phyl. ineq. pet. 4 invol. equalis deflexis, nect. 0, stam. 6 ineq. longiss. Gynophoro longissimo, stig. sess. siliqua bivalvis, plac. 2 linearib. sem. echinata. **Frutic. acul. fol. digitatis**—Types several sp. blended in Cl. arborea, and akin.


687. **Tarenaya** Raf. diff. last. cal. 4ph? petalis ad basi nect. glandula. unguic. stam. subeq. antheris longis 2loc. siliqua teres torulosa. **Herba**—Type T. or Cl. spinosa.


689. **Diorimasperma** Raf. (2 pits seed) cal. 4phyl. coloratus, petalis 4ineq. 2inf. unguic. cord. crenatis, disco 3glandul. stam. 6 declinatis supra disco, gynoph. brevis, siliqua compr. declinata, sem. sepe 12 globosis utrinque latere fossula. **Herba fol. tern**—Type **D. violacea** R. Cl. do L. auct.

690. **Siliquanaria** Forsk. diff. Cleome, cal. 4ph. pet. 4 nectariferis, stam. hypog. 6 basi subcoal. disco plano, gynoph. 0, siliqua compr. gladiata recurva, sem. hirsuta. **Herba fol. tern**—type **S. arabica**.
691. **SERUEL**A Raf. Aleome Neck. diff. last, stam. longissimis, siliquis linearibus. *fol. simpl.*—
—Type **S. viscosa** Raf. Cl. monophyla L.

692. **MOZAMBE** Raf. cal. 4ph. patens, pet. 4 unguic. Gynoph. longiss. ad medio stam. 4. fe-
rens, sepe 2 inf. coalita, siliq. obl. **Frutic. fol. simpl. fl. racem**—very distinct G. type **M. levator**a Raf. Cl. fruticosa L. auct.

293. **OCTANEMA** Raf. diff. Capparis, cal. 4ph. eq. stam. 8—a section of Kunth, akin to Peu-
teron 673, but fruit berry, types **O. angustifolia**, Mexican tree, **O. incana, crotonoides, scab-
rida**, all Capparis of Kunth.

394. **MARSESINA** Raf. diff. Capparis, cal. 4fid. equal—by this akin to Isexima, many sp. in Kunth, all plants.

695. **PERITOMA** . . . G. based on **Cleome lutea** of Hooker, but many anomalous sp. united;
perhaps **Cl. speciosissima** and *candelabrum* may belong to it, they have petals 4 ungu. une-
qual secund, stam. 6 unequal hypogyne, a gyn-
oph and style, leaves digitate, . . . are they another G. **STYLISTA** Raf. akin to next.


698. **DISPARA** Raf. Cristella Nut. cal. 4part. pet. 4. ungu. adsc. ineq. 2 erosis major, 2 laceris,
nct. vagin. truncato, stam. 10-14 declin. gynoph. and stylo persist. fol. tern. racemo folioso.—G. akin to Polanisia, type


700. Warea Nut. cal. 4ph. color. pet. 4 ung. stam. 6 hypog. stig. sess. siliq. stipit. plana 2loc. sem. plana. Herba, fol. simpl. fl. corymb—given here to contrast with last. Types W. amplexif. and cuneif. N. this is Cleome do Mg. P. E. Stanleya gracilis Dec. 2 florida plants.

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CENTURIA VIII.


702. Riddellia antiphyla Raf. n. fl. 557. rami virg. fol. lanc. acutis serratis, petiolis pubesc. pedunc. 1ft. pet eq.—virgate under shrub of Louisiana, fl. yellow, for a longer description see my New Flora.


704. Atalanta Raf. diff. Warea, cal. 5dent. deciduis, pet. 4 sess. nect. 0, stam. 6 basi monadelphis, siliq. stipit. uniloc. 2valvis, stylosa, fol. tern. fl. racem. bracteatis—Type At. serrulata Raf. Cleome do Pursh, Nut. &c Missouri plant.
705. Prisciana Raf. cal. 4phyl. eq. persistens, pet, 4 unguic. stam. 6 subul. hypog. ovar. sessile cordato, stylo brevis, siliq. 2loc. 2valvis, sem. orbicul. planis. fol. simpl.—Type Pr. eapensis Raf. Cleome do L. this like the other bilocular G. may form a Subfamily to be called P. Septilieses Raf. Priscian was a medical writer on the Cleomes.

706. Coalisina Raf. diff. Cleome, cal. eq. pet. 4 ineq. apice coalitis, stam. 6 ineq. 2 superis clavatis sterilis, siliq. longe pedunc.—Type C. angustif. Raf. Cl. do Forsk &c.


710. Pecania Raf. (bot.) diff. Euphorbia Periantho 10fidus, 5 alt. subrot. crenatis, 5 alt. minora turbin. truncata, stam. 8-10, stylis 3 bifidis
stig. 6 acutis. *Frut. fol. oppos. fl. dichot.*


712. *Ditritra* Raf. (2-3-4) diff. Euphorbia, periantho ventricoso, 4dent. et 4 alt. petalif. crassa turbin. trunc. stam. 2-3-4, antheris geminatis, stylis 3 bif. stig. 6 obt. *Herb. annua fol. opp. fl. axil.*—Of this G. Swartz describes 3 sp. under names belonging to other sp. and Genera!


716. *Munchusia* Raf. diff. Hibiscus, cal. ext. 10fidus eq. reflexis, cal. int. ineq. 5fid. 3 longiora nervosa, petalis 5 ineq. 3 erectis, 2 deflexis ex-tus toment. stylo 5fido, stig. 5 capit. akin to my G. *Diplanoma* herb of Florida, the name is borrowed of Heister, meaning unknown.


ad membr. divisis. Arbor. fol. pari pinn. fl. axil—shuffled into 3 G. distinct from all, types probably many of the fruticose Sesbanias, but the main.


723. Flustula Raf. periantho imbric. ovato, sq. adpressis, fl. 12 flosculosis hermaphr. ad radio paulo altior, phorantho nudo, sem. obl. pappo piloso. Frutex. fol. alt. fl. racem.—almost akin to last except in phoranthe and down, yet put in Conyza.


725. Montanoa Llave. per. 5phyl. ineq. rad. 4-5obl. sterilis, flosc. 12-14 filif. 5fidis, paleis hirsutis, sem. ovat. compr. nudis. Frut. fol. opp. fl. panic—One of the good G. of Llave well named after a botanist, akin to Heliopsis, Hellepta &c.

726. Montanoa tomentosa Ll. villosa, fol.
cord. deltoideis, acutis toment. petiolis alatis pinnatif. panic. corymbosis—pretty shrub of Mexico, fl. white fragrant, upper leaves often alt. lanceolate.

727. Zexmenia Ll. Per. 10-12 part. phorantho plano, paleis carinatis, rad. 10-12 ov. emarg. flocsc. pluris 5dent. sem. compr. arista 2-3 et coronula paleacea. Frut. sarm. fol. oppos.—akin to Forbesina (miscalled Verbesina) but habit very unlike; name anagram of Ximenez.

728. Zexm. serrata Ll. fol. lanc. serrat. petiol. fl. corymb. racemos.—Shrubby Vine of Mexico.

729. IsmariA Raf. (bot.) Rosalesia Ll. per. 8-10 part. tereto striatis, caliculus foliosus, phor. nudo, flocsc. tubul. 5d. stig. 2 clavatis, pappus pilosus, sem. teres striata villosa. Frut. fol. opp. fl. corymb.—akin to Cacalia, very bad name of Llave formed of Rosa and Halesia.


733. Strepsilobus Raf. (twisted pod) cal. 5dent. petalis 5, stam. plura 20-24 libera, stylus
filiformis contortus, Leg. maximum longissim. compr. varie contorto et spiralis 2valv. plurisp. sem. orbic. dura. Scandens arborea, fol. conjug. cirrhosis fl. spicatis—one of the many G. blended in Mimosa of L. but with habit quite peculiar.

734. Strepsilobus scandens Raf. Mimosa do Sw. non L. altissime scandens, ramis clavatis striatis, foliol. 4jug. obl. obt. emarg. spicis axil. longiss—very singular Vine of Antilles &c, climbing over 100 feet high, fl. greenish, pods from 6 to 8 feet long!

Many other G. must be established among the Mimosas, the labors of Wildenow and Decandole not being perfect yet, but a complete revision would be arduous, I shall merely indicate about 20 additional Genera very concisely, see till 756.


738. Gumifera Raf. diff. Acakia, leg. compr. monilif. segm. orbic. compr. lsp.—Types A. vera, arabica. nilotica and several other sp.

740. Sensitiva Raf. diff. Mimosa, cal. infund. 3-4dent. petalis nullis, stam. 3-4liberis leg. artic. —many sp. blended in M. pudica, sensitiva &c.


742. Entada Raf. diff. Acakia fl. apetalis decandris fol. cirrhosis, fl. racem.—Type E. cirrhosa R. Mim. entada L.


744. Panthocarpa Raf. neog. 8. cal. ineq. 5d. pet. 5 ineq. stam. plura, leg. tereto recto multiloc. polysp. sem. obl. Acul. fl. capitatis.


746. Sericandra Raf. diff. Acakia, stam. plura 2-300 monadelphis, leg. plano recto corrugato sinuato &c—3 types S. julibrisin, lophantha, pennata Raf. Akakia do W. auct. Julibrisin was a Turkish name meaning silky flower compared to a tassel of silk, owing to the long silky stamens.

747. Neltuma Raf. diff. Akakia, cal. 4-5d. cor. 4-5partita, stam. 8-10 liberis, leg. multiloc. compresso torto sem. septis carnosis divisiss—Type N. juliflora and N. arenosa Raf. but pod only known in the first.

749. **Foliangera** Raf. diff. Ac. corolla 5fida, stam. 10 liberis, antheris cordatis apice foliosis, leg. obl. subcompr.---Type *F. guianensis* R. Mim. do Aubl. Akakia W. &c.


753. **Hecatandra** R. (100 stam.) diff. Akakia cal. 4lob, cor. 4loba, stam. pluris 100 et ultra, leg. ellipt, planum fol. simil. fl. spic.—type *H. suaveolens, oxycedrus* &c. Akakia auct.


755. **Drepaphyla** Raf. diff. Akak. cal. 5lob. cor. 5loba, stam. indefinita, antheris bilobis, stylo obliquo, Leg. sessile obl. *fol. simil. multinervis falcatis fl. capit*—types Dr. lanigera R. Ac. do Cuning. b. m. 2922, and *Dr. multinervis* R. Ac. do Dec.

756. **Anneslia** Salisb. cal. 5fid. cor. 5part.

757. Asacara Raf. neog. 9, diff. Gleditsia, fl. herm. cal. duplex ineq. ext. 3part. int. 3-5part. petalis 0, stam. 6-8. leg. ovat. obliq. compresso monosp. intus non pulposo—Type A. aquatica Raf. Gled. monosperma W. auct.

758. Melilobus Mitch. Raf. diff. Gleditsia, fl. dioicis polygamis; herm. cal. 5-6part. petalis 5-6, stam. 5-6, pistil. viloso, stigma pelt. leg. compressis elongatis intus pulposis polysp. fl. masc. cal. 4part. pet 4, stam. 7-8. Arbor spin. fol. pinn. fl. spicatis amentaceis—I restore the good name of Mitchell for all the Gleditsias, to this G. apparently different, if Robin’s account is correct. The Asiatic sp. perhaps belong to it or form another.

759. Melilobus heterophyla Raf. Gled. do fl. lud 332. Ramulis patulis scabris, aculeis basi fascic. ramosis, fol. pinn. et bipinnatis—Louisiana, large tree 70 feet high, very distinct from Gl. triacanthos by long thorns surrounded with small ones at base, some trees are polyg. by herm. and male fl. others bear only female.

760. Bauhinia L. &c, this G. like Mimosa has been made up pretty much by habit of binate leaves instead of flowers! yet no one has thought to reform it, altho’ some admit of Hy- menea, Phanera and Pauletia. I shall attempt to indicate such a reform and revision, see till 767.—Bauhinia Raf. cal. 5fid. fisso decid. pet. 5 subeq. stam. 10 ineq. liberis fertilis, leg. stipit.
uniloc. 2valv. polysp. *fol. binatis* *fl. rac*—Types most of the sp. mostly trees but all must be verified.


762. **Mandarus** Raf. diff. stam. diadelphis fertiles, petalis camp. Leg. stylosis brevis planis oligospermis—Type M. or B. divaricata, acuminat, pescapra, rotundif. &c, B. utimuta Aubl. has same pod but how are stamens?

763. **Pauletia** Cav. diff. cal. persistens 5fid. pet 5 unguic. stam. 10 basi monadelphis crassis fertiles 5alt. brevior—Type *P. aculeata and inermis* Cav.—Bauhinia do Pers. auct.

764. **Cansenia** Raf. diff. cal. tubul. striato 5 dent pet. subulatis, stam. 5 longior 5brevior leg. longissimis—Type C. or B. angulata, and tomentosa? st. monad.

765. **Telestria** Raf. diff. petalis angustis, stam. monad. 7 steriles, 3 fertiles, leg. longissimo plano—Types T. or B. purpurea and racemosa.

766. **Monoteles** Raf. diff. stam. 9 monad. steriles, una libera fertilia—Type *M. paradoxa* Raf. B. monandra auct.

767. **Phanera** Lour. diff. cal. 4phyl. ineq. pet. 5 ineq. unguic. appendic. stam. 3 libinis, leg. stipit.—Type *Ph. scandens* Lour. Bauh. do L. and perhaps other Vines blended in the G.

768. **Cassia** T. Neck. G. Dec. Cathartocarpus Pers. Bactyrilobium W. En. very distinct G. of trees by terete pulpose multiloc. pods, from which *Senna* T. N. Dec. is now removed by pods membr. compr. 2valv. 2loc. chiefly plants, but offering many anomalies and distinct G. which I will partly describe being seldom shrubs.
see next and 793 to 812. The types of *Cassia* are *C. fistula*, *brasiliensis*, *baccilaris* &c, those of the real *Senna* are *S. officinalis*, *italica*, *angustifolia*, *marilandica* &c. *Bactyrilobium* name applied in 1809 in Wild, enumer. to *C. fistula* may be given to a subgenus: *Cathartocarpus* applies better to it.


772. *Erithalis odorata* Raf. arborea, fol. obov. fl. cymosis pedunc—Antilles, small tree, fl. fragrant. One of the 3 sp. blended in *E. fruticosa*, this is the sp. of Plumier and Jaquin.

773. *Erithalis elliptica* Raf. frutic. erecta, fol. ellipt. fl. term. cymis trichot.—In Jamaica, *E. frutic. of Swartz* not others who says calix 5 gone 10 dentate, stamens 5 to 8, inodore.

774. *Erithalis procumbens* Raf. suffrut. pro-
cumbens, fol. ovatis obovatisque—Caraccas, fl. inodore.

775. Ephaiola Raf. (is brownish) cal. tubul. 4-5fid. cor. subcampanul. apice ventricosa, limbus 4-5fid. revoluto, stam. 4-5 eq. exerta, stylus elong. ut stam. stig. incrass. bacca uniloc? polysp. Frut. fol. alt. fl. sparsis—very distinct G. near to Opsago 281 not same as Pederlea 277.


777. Gonufas Raf. (ang. cup.) diff. Celosia, cal. 5part. eq. stam. 5 monad. antheris inserta inter tubo cyathiforme 5gonus, stig. 5 fido, stig. 3, caps. circums. uniloc. polysp. Frut. fol. alt. fl. racem.—very distinct G. to be added to my same revised G. in fl. telluriana where I joined it to Lophoxera 560.


781. Loranthus Raf. non auct. dioica, cal. integro obsoleto adherens, cor. rotato 6part. segm. staminif. ad apice, bacca 1sp. fol. oppos. racemis term.—Type L. europea and other sp. with such characters; but the linnean G. was
vastly increased being made a medley of chiefly parasitical tropical shrubs, see till 792.

782. *Meiena* Raf. diff. cor. 5fida, stam. 5 ad medio cum. filam. antheris elongatis cor. longior *fol. alt. racemis axil.*—Type *M. axillaris* Raf. Lor. pentandra L. auct. Lor. glaucus K. belongs to this or next G. ff. hermaphr. in all except the true *Loranthus*.

783. *Iticania* Raf. (n. ind.) diff. pet. 5-6 libe-
ris, *fol. opp. fl. capit. involucro 5phylo*—Type I. or L. loniceroides.

784. *Hyphipus* R. (cup under) diff. ovario caliculat. ext. urceolatus, cal. superus margin-
alis, pet. 6 revolutis, stam. medialis, fil. filif.
 bacca cupula inclusa. Types *H. trigona* Raf. Lor. americanus L. auct. 2 *bracteata* R. Lor. cupulifer Kunth.

785. *Allohe mia* Raf. diff. 781, pet. 6 basi fere connata ineq. 3 alt. brevior stam. sterilia ferens, stam. 3 fertilia, *fl. axil*—Types 1 A. *purpurea* Raf. Lor. occidentalis L. auct. 2 A. *uniflora*, 3 A. *pedunculata*, antheris appendi-
culatis.

 stam. 4, *fl. axil.*—Types 1 Sc. *obovata* R. Lor. scurrula L. auct. 2 Sc. *elliptica* R. Lor. tetrape-
talus L. auct. 3 Sc. *umbellata* Raf. Lor. tetran-
dra R. P..

787. *Taguaria* Raf. diff. cor. 7-Spart. stam. 7-8, arboreis *fl. racem. bracteatis*—Types T. *vera* (L. tagua) laurif. nitida, punctata, pura-
ensis, elliptica &c, all *Loranthus* do of Kunth or Ruiz, and Peruvian trees.

788. *Etubila* Raf. diff. cor. tubulosa teres vel clavata, apex 5-6fida—Types *E. longiflora*, brasieliensis, dichotoma &c, Raf. all Lor. do auct.
789. *Antriba* Raf. diff. cal. concavo, cor. tubulosa, tubo curvo, limbo 4fido ineq. stam. 4.—Type *A. budleoides* Raf. Lor. do R P. auct.


791. *Peltomesa* Raf. diff. stigma magno capit. peltato, (in omnib. alia obtuso) *racemis axil*.—Type P. acuminata Raf. Lor. do R P. &c,—Thus at least 12 G. were blended in Loranthus, and perhaps more. The verticillate and articulate sp. may also form peculiar G. or groups, Kunth suspects the last might belong to Viscum, a G. very akin, with 3 or 4 stamens.

792. *Glutago* Com. diff. Loranthus cal. sub 5dent. basi 2bract. cor. tubulosa latere fissa (ut Scevola) ligulata 5fida 5andra—Type *Gl. spicata* Raf. Lor ? spicata auct. For some N. sp. of this family see appendix.

793. *Isandrina* Raf. cal. 5ph. ineq. 3 major fornicata, petalis 5 ineq. unguic. uno superus major difforme, stam. 10 equalis, filam. brevis declin. antheris incurvis eq. omnes fertiles. *Leg. planum 2valv. intus pulposo. Arborea fol. paripinn. racemis axil*—Type I. arborescens Raf. Cassia emarginata L. auct. How different from 768 and 769. The true Senna differs from this by cal. eq. pet. subeq. stam. ineq. 3 inf. steriles, leg. ellipt. planum membran. bialato.


stylo curvo fl. axil—Type H. glandulosa Raf. Cassia do Hooker b. m. 3435 non L. nec Dec. which is next G.—fol. multis. obl. cusp. pet. gland. fl. solit. et gem. S. America.

796. Dialanthera Raf. diff. 794. stam. 6 fertiles, ineq. antheris 2 longissimis—Type D. or C. glandulosa, L. auct.

797. Peiranista Raf. (def. uneq) diff. Senna cal. ineq. pet. subeq. 2 inf. major, stam. anomalous 6, filam. 3 divisis 2 fertilis, 1 sterilis, filam 3 connexis 2 steriles, 1 fertiles, antheris totalis 3 fertiles rostratis major, stig. acut. sessile, leg. falcato. fl. axil.—very singular G. and anomalous stamens forming a good G. in the Cassias—Type St. aversiflora Raf. Cassia do Hook. b. m. 2638. fol. 7jugis obov. ped. 2fl. divaric—Brazil, large yellow flower.

798. Ditremexa Raf. (2 holes 6) diff. Senna petalis ung. ineq. stam. 10 fertilis 6, antheris arcuatis biporosis, sterilis 4 minor, stig. dilatato sulcato, leg. lin. compr. falcatis fl. term—Types D. fetida and caroliniana, blended in Cassia occid L. auct. also C. ligustrina and several others.

799. Xamacrista Raf. diff. Senna, pet. ineq. 2 sup. minora. stam. 10 ineq. fertilis, 3 longior, antheris omnes angul. biporosis. fl. axil—Types X. triflora Raf. Cassia chamaecrista L. auct. and several other herbaceous sp.

800. Emelista R. diff. Cassia, cal. ineq. 2 maj. pet. subeq. stam. 10, sterilia 4 sup. castratis, fertiles 6 ineq. 4 major, 2 inf. deflexa, antheris biporosis, stylus subul. recurvus. Leg. tereto angulat. curvum Herba, fl. axil—Types E. or C, obtusifolia.
CENTURIA IX.

801. Diallobus R. (2 diff. pod) diff. Senna, cal. eq. nervosis, pet. ineq. nervosis emarg. stam. 6-9, omnis fert. ineq. 2-3 brevior antheris 4gonis birostratis biporosis, stylo brevis, Leg. biformis teres and compr. sinuato vel falcato vel recto. fl. axil—singular G. by the change of pods on the same plant, including perhaps several G. I describe the flowers on our American Cassia toroides, the shrubby C. bicapsularis may be different, nay some mention bilocular pods. Types C. thora, and bicapsul, with several sp. blended with them, 3 of which I now give.


803. Diallobus falcatus R. Cas. toroides R. med. fl. Cas. thora of Am. bot. fol. 3 jugis obov. ciliatis, glandula pedic. ped paucifl. leg. falcatis compr.—Carol. Kentucky &c, large annual.

804. Nictitella Raf. diff. Senna, pet. inf. major, stam. 5-9 ineq. 3 major, omnis fertiles, leg. compr. membr. recto non alato—several types N. amena (C. nictitans,) N. aspera, N. mimosoides? &c.

805. Scolodia R. (sp. dent) diff. Senna, cal. 3 phyl. subeq. pet. 5 ineq. 4 ung. minor, 1 infer. major concav. stam. 10 ineq. 3 post. sterilia, 7 fertilia, 6 minora 1 deflexa, antheris rostratis, ovar. stipit. deflex. recurv. styl. brevis, stig. obt. Leg. breve planum 2 valv. uniloc. Frut. scandens, fol. pari pinn. fl. ax. racem.—Type Sc. viminea Raf. Cassia do L. auct.

806. Panisia R. (quite uneq) diff. Cassia, cal. eq. petalis omnis ineq. unguic. stam. 10, sterilis

807. *Adipera* R. (not 2 def.) cal. 4part. ineq. 2 major interna alt. pet. 5 ung. eq. stam. 2 perfecta declinata, cetera effecta sterilia, ovar. uncinat. *fl. axil*—calix quite different from others.


810. *Tagera* R. subg. of Senna, difl. by pod elongate, compressed not winged, such are *T. filiformis* Raf. Cas. tagera L. auct. shrub of India, and also Cas. absus, 4phyla, glauca, and other sp. But there are other subg. to frame, the sp. with terete pods must be subg. *Terelegus*, such are C. corymbosa, crassifolia, linearis &c, the sp. with torulose pods must be *Transversula*, such are C. chinensis, torula &c—while C. ruscifolia with pod rostrate pulpose, must be Rostella.

811. *Diplotax* R. this G. differs from all by long terete slender pods with seeds in a double row, but I lack the other characters—Type *D. arborescens* R. Cas. do and frutescens auct.


814. Thyrsosma Raf. diff. Viburnum, calcampanul. 5lobus, cor. rotata subhypocrat. disco glandulosso conico stigma 3gono ferens. fl. thyrsosideis—a fine distinct G. even if Viburnum should not be divided in Opulus, Lentago and other subgenera proposed by me in 1820, by flowers radiate or uniform, stigma simple or trilobe.


816. Phyllirea, Wildenow had only 3 sp, as Linneus, yet in a subsequent work Enumer. plant, he has ascertained that all the presumed varieties were specific deviations, and called them Ph. virgata, levis, obliqua, pendula, oleifolia, ilicifolia. All shrubs of South Europe.

817. Benthamia Lindl. non Rich. ad Cynoxylon vel Cornus florida differ, drupis concretis, fructus globoso intus carnoso ut Morus? very singular G. uniting the Cornides with Naucides, very near to my subg. Cynoxylon of med. fl. 1828, and Lindley even asks if the type C. florida has not the same fruit, no such thing. The Benthamia of Richard is Herminium of others.


819. Amphione splendens Raf. Ipomea do
Sims b. m. 2628, Letsoma Hortis—fol. ovat. integris subtus argent. ped. axil. multifl.—shrub of East Indies to be added to my G. Amphione fl. tel. 1031 by flowers tubular &c, incarnate.


823. Cistus L. one of the most prolific G. divided in 2 G. 3 subg. and 9 sections in Decandole not always well named; but many good G. are yet hidden in it and Helianthemum! some of which will now be indicated out of a labor of mine on them as early as 1812—the real Cistus Raf. has cal. 5part. subeq. caps. 5 loc. 5v, a style &c, Trees and Shrubs, C. salvif. creticus and akin.

825. Strobon Raf. (n. gr.) diff. Cistus, cal, ineq. vel. duplex, ext. min. 2ph. intern. 3phyl. majus.—Thus calix of Anthelis, but fruit of Cistus, types 1 Str. or C. halimifolium, 2. Str. vaginatum Raf. Cistus do Jaq. vel symphitif. Lam.


827. Anthelis Raf. 1813 Chloris Etnensis. Helianthemum T. J. auct. Psistus Necker, diff. Cistus cal. ineq. caps. uniloc.—many sp. and sections, the C. helianthemum L. is the main type. I have shown since 1813 that this name quite identic with Helianthus! could not be generic.

828. Stegitris Raf. diff. Anthelis, cal. 3phyl. equalis—thus as Libanotis from Cistus, types St. or C. calicinus, algarviense, lasianthus, atriplicif. &c.


830. Xolanthes Raf. 1810, diff. Anthelis, stam. 8-12, stig. sessile trifido vel trilobo, inter-dum ft. apetalis clandestinis,—Types X. guttatus and some other herbaceous sp. besides the next.

831. Xolanthes racemosa Raf. car. p. 74, t. 18 fig. 1. Herb. ann. villosa, fol. sess. lanceol. 3nervis acutis, racemis term. ineq. incurvis. ft. nutantib—Mts. of Sicily, small annual plant, with small petals often abortive and thus apetalous, and calix hardly opening, although perfect stamens and seeds.

832. Horanthes Raf. Lecheoides Dec. diff. Anthelis, stam. 12-20, stig. sessile—see my New Flora 549 for the distinctions of this and Anthel-
lis, it appears to include all the American sp. the other G. being foreign to America; many sp. and I added 2. *H. podanisia* and *arenaria* 550, 551. All these G. have 5 petals, while *Lechea* chiefly differs by having only 3 thus *Hel. tripetala* of Mexico in my *Lechea mexicana*. In first vol. of my New *Flora* I have given a complete Monograph of *Lechea*, all plants, including 21 species, of 3 subgen. *Menandra*, *Lechea*, *Eudiexa*, which see. Bosc says *Lechea* has petals 1 to 3 or none, 3 to 6 stamens &c.

833. *Psistina* Raf. diff. Anthelis, stylus elongato flexuoso, several sp. see Decandole.

834. *Benzoina* Raf. cal. camp. 5dent. cor. campan. 5gona, 5dent. sericea, stam. 10 basi monadelphis, ovar. arist. stig. obt.—Type *B. vera* Raf, Styrax benzoina L. auct. It is said the Terminalia benzoe also produces Benzoin. Styrax differs by cor. 5fid not angular, stam. about 12 free, ovary 3loc. polyg. but ovules abortive except 1 to 3.

835. *Laurus* L. many G. have properly been removed from this, *Persea*, *Sassafras*, *Cryptocarya* &c, but many others require revision, and I will indicate some N. G. *Laurus nobilis* deemed the type has cal. 4-8parted, stam. 8-14, fl. dioical &c, see 861.


thes; fl. polyg. umbel. fil. teres, antheris 4loc. stam. ster. geminatis ad internis affixis &c.—Type Laurus estivalis, diospyros, geniculata.


839. Persea Plum. G. diff. Ozanthes, stam. 18, steriles 9 ut glandulis ped. drupa carnosa, nux rugosa membrana involuta—Type P. edulis or Laurus persea L.

840. Balanopsis Raf. diff. Laurus cal. persistens cupularis integris...fl. paniculatis herm. very distinct G. by fruit like Acorn, fl. not yet well described, several types B. or L. cassia, and cupularis, this includes 2 blended sp. of Guyana.


843. Nectandra Rotb. diff, Laurus. cal. persistens turbin. basi fruct. cingens globato, fl. racemosis—akin to last but different habit, 2 types both of Guyana.


846. Ajoyea Aubl. Raf. diff. Laurus. cal. concav. ineq. 6fid. dent. 3 alt. brevior, lac, 3 alt. petalif. stam. 6fertiles, stigma 6fid. bacca uniloc—yet this very distinct G. was united to Laurus! Type A. guianensis Aubl. t. 120. Laurus hexandra Sw. auct..

vix tecto, stam. fertiles 3—Type *Tr. montana* Raf. Laurus triandra Sw. auct.


852. *Cinnamomum* Raf. diff. Laurus, ft. herm. cal. 6part. alt. ineq. stam. 9 . . . fol. oppos. 3nervis—the Cinnamon Trees are not yet well distinguished, there are 5 at least, the flowers must be better described.


856. *Cinnam. zeylanica* Raf. fol. ovatobl. obtuse acumin. subtus albescens, nervis canis—the real Ceylon kind.

857. *Camphora* Raf. diff. Laurus ft. herm. cal. 6part. stam. 15, sterilia 6, fert. 9, antheris apice 4valvis? fol. alt. trinervis—The Cam-
phor trees are also sadly blended and not distinguished, the flowers are figured in Jaquin, but I have not the work.

858. *Camphora vera* Raf. fol. ovatolanceol. baccis rubris—Sumatra, Borneo &c.


862. *Laurus nobilis* L. &c. fol. latolanceol. undulatis.—Real Bay tree.

863 *Laurus ludoviciana* Raf. fl. lud. 71. arboreus, fol. petiol. obl. subtus glaucis, fl. panicul. baccis nigris—Louisiana, tree 30 to 40 feet high, evergreen. Forming a subg. **Mustax** by fl. white 5parted? perhaps other characters in flowers, and a real Genus.


867. *Tamala carolinensis* Raf. arborea, fol. ovato lanceol. supra lucidis, subtus glaucis glabriusc. coriaceis, drupis ceruleis—Carol. Flori-
da, fifty feet high, flowers pale yellow.

868. *Tamala palustris* Raf. frutesc. fol. lanceol. subtus pallidis pubescens, pedunc. paucifl. fascicul. drupis ceruleis—Shrub 8 to 10 feet high, with the last, but in swamps.

869. *Tamala acuminata* Raf. Arborea, ramulis, ped. pet. et nervis rufis pubescens, fol. longe lanc. basi acutis, apice acum. obt—Louisiana and Texas, tree 30 feet high, leaves 5 to 8 inches, fl. whitish, seen dry.

870. *Lindera* Th. auct. cal. 6part. stam. 6 epigynis! ovar libero, stylo, stig. 2 refl. caps. 2loc. fol. alt. fl. umb.—Altho’ akin to Laurels, this G. belongs to my *Memorides* by stamens and fruit, it is also akin to *Lerchea* L. by pistil, but this has a corolla not staminif. as *Ericoides* and united stamens.


872. *Knema* Lour. dioica, fl. m. cal. col. 3fid. filam. unico, antheris 10-12ferens, fl. fem. cal. trunc. pers. stig. sessile dent. bacca mollis monosp. arillata, fol. alt. fl. panic—probably of *Laurines* family, although akin to some monosperm *Euphorbides*.


875. *Tetrapilus* Lour. cal. camp. 4fid. cor. camp. 4sulc. 4fida lac. concavis, stam. 2 brevis, stig. bif. bacca biloc. polysp. fol. opp. fl. spic. dioicos—akin to last and *Ligustrum*. 18

877. Irenon Burm. Bosc. cal. 5part. pers. petalis 5, stam. 5, antheris gibbosis, stylo tereto, stig. 3fido, caps. 3gona 3loc. 3valv. Fol. subvert. fl. term.—akin to Clethra? habit unlike.

878. Irenon ciliatum Raf. arbusc. fol. subul. ciliatis glandul. fl. term. 3-6—small shrub of South Africa.


881. Nevrilis Raf. Millingtonia L. fil. Sm. non Don Br. diff. Bignonia and Hieranthes, cor. tubul. gracilis bilab. galea bisida, labio 3part. lobis eq. reflexis trinervis. Siliq. recta compressa, sem. alatis. fol. opp. tripinnatis, fl. panic—very near Hierauthes by corolla, perhaps same G. if stamens similar. Millingtonia has been applied since to a G. near Indigo termo.


883. Theaphiyla Raf. 1830. Thea L. auct. lately united to Camelia! Thea meaning Godess in Greek is included in Althea and other G. my name meaning divine leaf was formed since 1815 and published 1830 in med. fl. It differs from Kemelia (wrongly spelt Camelia) by cal.
3-6part. non imbric. petalis 5-9 ineq. basi coalitis, stam. 200 liberis, stylis 2-3fid. caps. 2-3cocco —sp. not yet well settled.


888. *Theaph. cantoniensis* R. Lour. fol. lanceol. fl. term. solit. cal. 5-6p. pet. 7-9—Suchong Tea of South China,

889. *Theaph. anamensis* Raf. fl. term. solit. cal. 3part. pet. 5—Anam, perhaps a subg.

890. *Theaph. oleifera* R. Lour. ped. 3floris, axil. cal. 6part. pet. 6—Oil-tea of South of China, compare with 898. Fruit yellow baccate akin to 900.

891. *Kemelia* Raf. Camelia L. auct. ut Camelia and Camelus! ad bot. Kemel dedic. diff. Theaphyla, cal. 5part. ineq. imbric. petalis pluris imbricatis, stam. plura 50 basi monadelphis, styl. ineq. 5fid—single type. but 3 G. have been blended.

892. *Kemelia japonica* Raf. auct. fol. obl. lan. acum. serratis, fl. solit. cal. ovatis, petalis concavis—Japan, Luzon &c, many floral var. in gardens.

893. *Desmitus* Raf. diff. last, cal. colorato, stam. polyadelphis 4-5fasciculis, ovario sericeo.

894. *Desmitus reticulata* Raf. Camel. do
bot. reg. 1978, b. mag. 2784. fol, obl. acum, reticul. planis, petalis undul. obovatis—China, fine sp. rose flowers.


898. Sasanqua oleifera Abel. b. reg. 942. fol. ellipt. acutis serrat. cal. deciduis, petalis angustis bilobis—China, deviating by the calix not persistent although imbricate.

899. Sasanqua ochroleuca Raf. Cam. axilla. ris Roxb. b. reg. 349. fol. cuneatis serrul. acutis crassis coriaceis, fl. axil. solit. ped. cal. 5-6ph. sericeo, petalis obov. bilobis,—Tree of the Sunda Ids, fl. ochroleucous.

900. Drupifera Raf. diff. Kemelia stylo 4fido, fruct. drupaceo nux 4locul.—How are flowers? Type Dr. oleosa Raf. Camellia drupifera Lour. auct. fol. ovatobl. subcren. fl. term. 2-3—Anam. The 3 Oil Seed Tea Shrubs must be compared.
901. *Citrus* L. this appears a natural G. if *C. trifoliata* be excluded; but the sp. and var. are numerous, not well distinguished and like so many domestic trees in great perplexity, Du-tour, Risso, Buchanan, Loureiro &c have mentioned over 100 varieties, several so striking as to be specific deviations: having seen many alive I mean to indicate some of these real new species.

902. *Citrus heterophyla* Raf. petiolis alatis, fol. biformis, inf. obovatis, superis lanceol. om-nis acutis integris sepe albo marginatis, fruct. levis subrot. dulcis—Native of Tartary, often called Turkish Orange.

903. *Citrus salicifolia* Raf. pet. alatis, fol. omnis angusto lanceolatis acutis—Is it a var. of the last? or of *C. sinensis*?

904. *Citrus myrtifolia* Raf. pet. alatis, fol. imbric. ovatis acutis subserratis—the Myrtle Orange has small bitter fruits and short strong thorns. China.

905. *Citrus rotundifolia* Raf. ramulis albis, pet. alatis, fol. subrot. integris, nonulis undulatis, fr. globoso—called Poncire in French, all Orange trees have green twigs except this, sev-eral var. undulata, violaceo &c.

906. *Citrus cedratus* Raf. pet. vix alatis, fol. lanceol. acutis subdenticulatis, fr. ovoideis verrucosis cortice crassa pulpa insipida.—The Ced-rats (or Citrons) are quite different from Oran-ges, nearer to Shadocks, fruits large with yellow thick rough rind, pulp sweetish without flavor. Several var. inermis, melarosa, syriaca, italic.a.

907. *Citrus bergamota* Raf. pet. subalatis, fol. ellipt. acutis, fr. globosis levis odoratis pulpa
insipida—The Bergamots are quite different from Cedrats yet trees nearly alike, leaves and fruits smaller, these with a thin fragrant rind, several varieties.

908. *Citrus Karna* Raf. pet. lato alatis fol. cuneatasis obovatisque acutis, fruct. pyriformis scaberrimis, utrique acutis, pulpa acida—very peculiar kind of India, called Karna, the acid juice has fine flavor. Buchanan deems it near the Limo taurinus of Rumph.

909. *Citrus costata* Raf. pet. subulatis, fol. ovatis retusis emarg. fruct. turbinatis basi acutis, apice mamillaris, cortice crassa costata, pulpa acida—Kalamba or Kolombok of India, wrongly blended with *C. decumanus*, very thick ribbed rind: and fine acid juice. Authors mention costate Bergamots and Oranges which may be var of this.

910. *Citrus gongra* Raf. pet. alatis, fol. ovatis dentatis, fruct. globosis scabris, pulpa acida—India, fruit like an apple with thin rind, called Gongra in Bengal.

911. *Citrus combara* Raf. pet. dilatato alatis, fol. subrot. crenatis, ad pet. subequalis—singular sp. with strong thorns and petiols nearly similar to leaves in size and shape, called Combara in India.


913. *Citrus fusiformis* Raf. pet. linearis, fol. lanceol. utrique acum. fruct. fusiformis, pulpa acida—this begins the series of Lemons with unwinged petiols. Several var. *parva*, *challi*, *perretta &c.*

obovatis obtusis, fr. subglob. pulpa dulcis—the sweet Lemon, with several varieties.


916. *Citrus lima* Raf. pet. lin. fol. ovat. glabris acum. fruct. subrot. cortice levis tenuis, pulpa acida—the Limes or small round Lemons have many varieties, *undulata, palustris, longifolia, magna &c.* but some striking var. must be examined well and may be sp. such as *undulata, costata, cucurbita, mamillaris &c.* compare the *Pati* of India with fruits like an Apple, but with a nipple like Lemons, also *Kaki* of India with fruit like an egg; but if with winged petiols akin to *C. gongra.*


918. *Citrus madurensis* Lour. frutex, ramis patulis angul, inermis, pet. lin. fol. lanc. fr. glob. pulpa amara—small shrub of China, Anam, Madura, flowers and fruits very small.


921. *Malneura* Ad. Raf. diff. Citrus, cal. 4dent. pet. 4, bacca uniloc. monosp.—Type *M. malabarica* Raf. fig. in Rheed 4 t. 12, habit quite like Citrus.

922. *Zonablephis* Raf. (ring cil) cal. 4part. in eq. variabilis, cor. tubo urceol. intus annulus
l'imhriato stam. ferens, limbo unilab. 5lobo, stam. 4 didyn. arcuatis, antheris connexis, ovario villoso, stylo apice glabro furcato, caps. ut Acanthus? Frutic. fol. opp. fl. spicatis—very unlike Acanthus to which united.

923. Zonablephis polistachya Raf. Acanthus do Del, Cailt. 72 f. 2. Ramulis teretis, fol. sess. ovatolanc. acut. dentato undul. spicis term. imbric. 4gonis, bract. ternis ciliatis, 2 subul, infera 5nervia—shrub of Nubia, leaves 6-12 inches pubescent beneath, fl. rosate, calix very unequal in shape and size of segments. This and the following till 934 are new trees and shrubs discovered with 100 rare plants by Caillaud in Nubia and Central Africa, near the Western Nile, described and figured by Delile, in his travels, but squeezed in akin Genera.


926. Pleuromenes R. (side lun) diff. Acakia, Leg. spongiosis evalvis variabilis, ineq. obl. gibbosis vel strictis, vel arcuatis, vel globosis, vel pyriformis, sem ovoideis lucidis, utrinque latere macula lunulata. Fol. bipin. fl. spicatis—this G. must be added to my Series of Acakia after 756, the flowers must be described, but the pods are quite peculiar and strangely multiform.

928. Elayuna Raf. (n. arab) diff. Bauhinia, leg. obl. evalvis, multiloc. loculis polysp. extus cortice dura nervosa, intus midula fibrosa. fol. bilobis,--very peculiar pod, leaves not binate, flowers undescribed but long account of seeds, certainly not a Bauhinia.


930. Tridermia Raf. (3 skins) dii. Grewia, Drup. basi umbil. apice 4lobo, nucibus transverse 3loc. 3sp. sem. obov. compr. triplice tunicis vestitis—very peculiar fruit, see the long description, but flowers omitted, yet certainly distinct Genus.

931. Tridermia papillosa Raf. Grewia echinulata Del. pl. C. 70. Arboreus, fol. orbic. cord. erosio 5nervis retic. ft. extrax. umbellulatis, drupis glob. depr. papillosis—tree of Nubia, twigs glandular, hairs fasciculate on them, petiols and leaves &c.

932. Xeropetalon Del. cal. duplex persistens ext. 5fid. int. 5part. rotato petaloideus, stam. 20 basi monad. 5filam. longior sterilis, ovar. glob. tom. styl. brevis, stig. 2-3spiralis, caps? 2-3loc. 2-3valvis septiferis 2-6sp. racemis ramosis—G. based on flowers alone, without leaves! akin to last, singular by persistent petals! thus rather internal perigone. Type X. 5setum Del. pl. C.
71. Shrub of Nubia, flowers in racemose umbellules. Hardly of Tiliaceae tribe.

933. **Semarilla** Raf. diff. Celastrus, cal. minimus pers. 5dent. caps. turbin. sub4gona, 2loc. 2valv. septif. 4sp. sem. arillatis, arillo cupularis carnoso sinuoso vestita—apparently a distinct G. also by cells not equalized to calix, probably 5 petals and 5 stamens.


937. **Pentelesia** Raf. diff. Bignonia, stam. 5 fertiles... fruct... *frutex recto, fol. tern. fl. panic*—another G. to be added to the Bignonias, out of Kunth, who has 24 sp. undescribed as to flowers and fruits altho' mostly new and involving many G. or referable to mine: this has a very peculiar habit also.


939. **Aragoa** Kunth. cal. 4-5ph. cor. hypocr. 4fida, stam. 4, stig. glob. caps. 2loc. 4valv. 8sp. *Ramis opp. fol. imbric. 8farris, fl. axil*—united to Sesamides by K. 2 types A. cupressina, abietina.

940. **Jurgensia** Raf. (bot) diff. Spermacoce, cal. infund. 4fido, cor. infundib. 4fida, stam. 4. *Frutic. fl. capit*—Decandole and Kunth have blended Diodia and Spermacoce by promiscuously mixing the sp. with bifid or 4fid calix, cor.
hypocr. camp. or infund. These G. require a new revision; most of those with infund. calix and corolla will belong here.


942. Pleureia Raf. diff. Psychotria, cal. spatheaco cuculato latere fisso. Flor. corymb.—Psychotria and Calicoca contain also a crowd of anomalous sp. requiring revision, with 4 or 5 stamens, various calix, corolla, fruit &c, and to make the matter worse some propose to join thereto Cephaelis, Evea, Patabeia, Tapogamea, Smirus &c.


945. Tapogamea Aubl Vitm. &c diff. cor. faux ventric. limb. patens, disco ovar. bigland. perianth. 5ph. phorantho paleaceo—Aublet had 5 sp. 2 were shrubs T. tomentosa and glabra, 3 plants T. violacea, purpurea, alba. Many more are mixt in Cephaelis.

946. Carapichea Aubl. Vitm. &c diff. cal. turb. cor. infund. 5fid. acuta, stam. exertis, disco supra ovar. styl. bifidus, capsula 2loc. 2partib. 2sp. Perianth. 4ph. 2 major ext—very distinct by fruit: name rather too barbarous, I propose Nettlera instead. Type

947. Carap. or Nettlera guianensis A. V.
R. *Cephaelis? involucrata* auct. shrub of Guyana, flowers white.

948. *Simira* Aubl. Vit. &c diff. 946. cor. tubul. stam. in tubo, bacca biloc. 2sp. *fl. racemosis*—very peculiar G. also, near to *Bertiera*.


951. *Urup. versicolor* Raf. guianensis A. V. fol. pet. ovat acutis—Vine of Guyana, flowers fragrant, white or green or red or yellow or brown on the same stem, a very strange peculiarity.

952. *Ronabea* A. V. diff. cor. tubul. ventric. stig. 2 lamel. drupis uniloc. nucleis 2 conv. plana striatis *fl. axil. sess*—Types 2 shrubs of Guyana *R. latif.* and *erecta*, united to Psychotria by many as *B. axillaris!* some peruvian sp. perhaps belong here, such as *Ps. gracilis* with sulcate seeds, creeping plant, flowers umbellate, thus habit very unlike, perhaps a Genus *Sulcanux* Raf.


955. *Patabea* A. V. cal turb. 4dent. cor. fusif. 4sid. stam. 4, styl. bifidus, stig. 2. *fl. capit. bract, phorantho squam. paleaceo*—Near to *Evea*, which differs by cor. infund. stig. single bilobe, a perianthe &c.


959. *Casearia* auct. 28 sp. in Kunth, who wrongly unites thereto *Anavinga, Chetocrater* &c, requiring revision. The true *Casearia* Raf. has cal. 5fidi. cor. 0, stam. 8-10 basi ladelphis, stig. 1, caps. 3-4valv. septif. uniloc. polysp. sem. baccata. All trees.

960. *Anavinga* Raf. diff. cal. 4fidi. stam. 6 &c.---Types A. ilicif. comocladif. &c all *Casearias* in Kunth.


962. *Fouquiera* Kunth, cal. 5ph. cor. tubul. arcuata 5fida, stam. 10-12 hypog. non epicorollis, styl. 3fidi. *Fl. spic. bract*---wrongly united to *Portulacea* by Kunth, evidently akin to *Clethra* and *Clethrides* subfam. of *Ericoides* with next G.

963. *Fouq. formosa* R. frutex subspin. fol. alt. integris carnosis, spicis term. sess. bracteatis---fine shrub of Mexico with incarnate blossoms.

964. *Bronnia* Kunth, diff. 962, cal. ineq.
caps. 3gona, 3locul. sem. alatis, ft. panic—same family of course.

965. *Bromnia spinosa* R. arborea glabra spinosa, fol. fascic. integris, panic. term.—Tree of Mexico.

966. *Polylepis* R. P. Kunth. cal. turb. 3dent. pet. 0, stam. 5 perigynis, styl. 1. stig. multif. akena monosp. Fol. tern. fl. racem.—This G. with next, Sanguisorba, Cercocarpus and akin, belong to my family *Gonoligia* of 1815. Type.


968. *Quinasis* Raf. diff. 966, cal. 4dent. stam. polyandris.


970. *Spirea* L. auct. this G. became the type of my family *Spiradia* since 1815, now greatly increased since Kagenekia, Quillaja, Vauque-linia, Lindleya &c have been united to this family; but Spirea itself included many G. as I stated and proved again in my New Flora: altho' mostly shrubs yet they include plants also. Without revising the whole family I shall now indicate some of these peculiar G. or subgenera.

971. *Spirea* Raf. cal. camp. 5sidus, pet. 5. stam. multiserialis, inserta ad disco annularis crenato, caps. 5 liberis sub. 9 spermis. Fol. simpl. fl. racemis panic—Types Sp. salicif and blended sp. my Sp. flexuosa, amena, ovata carpinif. heteroph. ciliata see 641 to 647 New Flora of North America, where I gave a monograph of shrubby kinds.

972. *Eleiosina* Raf. (is smooth) diff. stam. 20
unica series, glandulis 10 per paria ad cal. oppos. pist. 5, styl. sepe clavat. stigm. obt. vel capit. caps. 5-8sp. _corymbis panic—Types _Sp. leavigata_ now forming my 3 species bracteata, cuneifolia, altaica 649 to 651, besides my obovata 648, 548, virgata 666, and _Sp. triloba_ &c.

973. _Drimopogon_ Raf. 1815, subg. _Spirea_ cal. reflex. villosis, stam. 20, disco aunlaris integro, stig. sess. truncat. caps. 5 villosis 10sp.—Types the _Sp. tomentosa_ and akin my rosea 636, ferruginea 637, glomerata 638, parvifolia 640, besides _Sp. douglasi_ and _menziesi_ &c.

974. _Xamedryon_ Raf. subg. of _Spirea_ diff. cal. nervosus, stam. 50, pist. 7, caps. 12sp. fl. umbel. vel corymb.—This according to Kunth is the character of _Sp. ulmaria_, but many akin have 5 pistils, compare my _sp. chamedrif. versifolia_, betulif. ostryfol. corymbosa, repens, crenata, denticul. 654 to 663 of my N. Flora.

975. _Awayus_ Raf. diff. _Spirea_ cal. prof. 5fid. petalis emarg. &c. Type _Sp. japonica_ Raf. 664, a subg. also? The _Spirea barbata_ of Wallich and Lindley deemed the _Japonica_ by some is not even a _Spirea_, but a _Blondia_ of Neck of Saxifragides tribe, see fl. tel. 279.


977. _Epicostorus_ Raf. diff. _Spirea_, cal. 5lob. disco annularis, stam. 20 basi monadelphis, pist. 1-2 stylosis, stig. capit. caps. 3sp. _fol. lob. racemis corymb. nudis—Type my _Ep. montanus_ 671.

978. _Schizonotus_ Raf. diff. _Spirea_, cal. rotato,
disul. annul. stam. 20, pist. 5 eq. caps. sess. tom. monosp. *Fol. lob. fl. panic.*—Type *Sch. disco-
lor 673.

979. *Basilima* Raf. diff. Spirea, cal. patens 5part. discus 0, stam. 15-20 ad basi cal. pistilis 4-5 sess. caps. 4-5 ineq. sess 1sp. *fol. pinnatis, fl. panic corymb. bracteatis*—Types my B. sor-
bifolia and pygmea 675, 676.


981. *Gillenia* Mænch &c, diff. pet. angustis, stam. 20, pist, 5, stylos teretis, stig. papilloso, caps. 2sp. *Herbac. fol. trif. stipul. fl. term.*—Types *G. trifoliata* and *stipulacea.*

982. *Aruncus* T. auct diff. dioica, stam. 20, disco annul. integro, pist. 3, caps 3sp. *Herbac. fol. decomp. fl. spicis ramosis filif*—Type *A. vulgaris* and *Americanus.*

983. *Filipendula* T. auct. diff. polyg. cal. 7fid. stam. 50-60, fascicul. 3-4, discus 0, pist. 10-
12 sty. brevis refl. stig. capit. caps. 2 sp. *Herb. fol. pinn. fl. panic*—Type *Sp. filipendula* and akin.

984. *Thecanislia* Raf. *Umaria* T. diff. cal. 4-5fid. refl. discus 0, stam. 12-24 polyadelphis, pist 3-8 stipit. ineq. caps. 1-3sp. *Herb. fol. palm. fl. panic*—Types *Sp. ulmaria* and akin *palmata, lobata, purpurea, angustif.* &c see my new fl. 293 to 296. I have chiefly followed the account of Kunth as to many typical char-
acters; but I apprehend the whole G. requires yet a total revision, and has other anomalies re-
ducible to good G. my *Rhodalix* of 1815 has the calix unequal and foliose as in *Roses.*

985. *Stemotis* Raf. (stam. auric) diff. *Rho-
dodendron, cal. planus 5dent. cor. basi 5gibbosa
Kalmia, ineq. 5loba, stam. 10 ineq. declin. 5 alt. append. stylo declin stig. capit. 10 radiat. caps. 10 locul. 10 valv. Arboreis, fl. capit—beautiful G. very peculiar, several types blended in Rh. arboreum.


987. Stemotis rosea Raf. Rh. arb. var. roseum Lind. b. reg. 1240, fol. obl. cuneatis mucronatis glabris subtus ferrugineis—flowers rose color. a var. with large red flowers is figured b. reg. 1414, b. mag. 3423.

988. Stemotis alba Raf. Rh. album Don, Sweet t. 148. arboreum v. album b. mag. 3290. fol. obl. lanc. acutis supra nitidis, subtus pubesc. ferrug.—large tree of Nipal, flowers white with some purple dots, some lobes emarginate.

989. Guersentia Raf. (bot.) diff. Chrysophyllum, cal. persistens 4-6 part. cor. camp. 4-6 loba, stam. 4-6, stig. subsess. 4-6 lob. drupis olivif. non costatis, nucleis 1-2—3 types at least, called Date-apple, while Chrysophyllum is the Star-apple, all tropical trees with edible fruits. If Guersent had a G. substitute Dactimala R.

990. Guersentia oliviformis Raf. Chr. do Lam. monopyrenum Sw. auct. bot. mag. 3303. Perhaps several sp. blended here, the G. or Chr. microcarpa is certainly peculiar, and G. or Chr. angustif. is a 3d sp. with 2 seeds sometimes.

991. Atuna Raf. cal. 5 sepalis petalif. pet. nullis, stam. pluris, pist. simplex libero. akena dura nucifera monosp.—Type A. racemosa Raf. alt. lanceol. racemis term. tree of Molucas, Atun of Rumf. 1 t, 66, wood hard but brittle, nut spicy
as large as an egg, near Hesperides, see next.

992. Ayparia Raf. cal. 5 sep. petalis 5, stam. pluris, pist. simul. lib. akena nucifera intus nucleus trivalvis monosp.—G. akin to last and to Vateria, perhaps forming a peculiar tribe with the monosperm Hesperides, Ximenia, Eleocarpus, Vateria &c to be called Vaterides.

993. Ayparia crenata Raf. Ayparius Rumf. 3 t. 104. fol. alt. lanceol. crenatis, racemis axillarib—tree of Molucas with annual leaves, flowers small and white, fruit black spotted of white.


995. Curondia axillaris Raf. Curondi Rh. 4 t. 50, fol. sesil. ovatolanc, undulatis crenatis, axillis multifloris—large tree of Malabar, flowers small, greenish yellow, berries round purple, flesh soft safron color, kernel globose, leaves astringent medical.

996. Ledelia Raf. (bot) diff. Pomaderis, cal. adherens 5fidus, pet. nullis, stam. 5 cal. alternans, fil. filif. inflexis, stylo, 3gono stig. 3, caps. infera 3locul. fl. capit. involucratis—very distinct G. since Pomaderis including the Asiatic sp. of Ceanothus, has calix free camp. petals 5 &c; nearer to Guania, and of family Guanidia see fl. tel. 268.


998. Tubanthera Com. R. diff. Ceanothus, petalis 5 basi coxalitis in tubo, stig. 3 subsessil.—Type T. katapa Raf. Rh. 5 t. 47. fol. alt. pedunc. axil. multifl.—Shrub of Malabar.
999. **Marottia** Rh. Bosc. Raf. cal. 5sepalis, pet. 10 in duplicate series, internis major concavis villosis, stam. 5 villosis, pist. simplex. drupis glob. siccis scabris, nux dura intus pulposa polysp. sem. angul. **fol. alt. fl. axil**—family of Berge-
rides including the Guttiferes and Hesperides with definite stamens, such as Chalcas, Bergera, Muraya, Quapoya &c and perhaps type of a subfamily by singular fruit.

1000. **Marottia oleosa** Raf. Rh. 1 t. 58 fol. ovatis dentatis lucidis. axillis multifl.—Tree of Malabar, fl. red outside, seeds affording a sweet Oil.

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**APPENDIX.**

Such is the vast field of botanical researches and reforms, that these series of revised trees and shrubs although amounting to 1000 articles, are but fragments of what might be done and is yet required before the Sylvan forms be properly fixed and named. I have found the subject expanding as I proceeded, and been compelled to leave untouched many perplexing Genera and families. For instance the Palms, Ericoides, Smilaxides, arborescent Grasses and many others, some of which I hope will soon be better settled by Decandole or Endlicher. But unfortunately all the laboring Botanists appear as yet to follow the absurd principle, so well pointed out by Dr. Buchanan of **squeezing** species into **alien** Genera. The whole of this work and my other late works are sufficient comments on this unwarrantable practice, that is the disgrace of Botany, preventing the science from making the needful rapid progress towards accuracy and perfection. The Genera and Species to be revised, recti-
fied or restored, are still numerous, and will ever be until Botanists no longer squeeze them into improper groups, as some would squeeze Men among Monkeys, or make only one Genus as formerly of all the Monkeys, all the Bats, all the Confervas and all the Lichens! some Generic reformers like Lindley, Decandole, Agardh &c, who have done much on some peculiar families, skip over the glaring defects of others, or seek invisible characters of the seeds and embryos, while they overlook the striking floral disparities! not having yet seen Endlicher I cannot tell what he may have begun to do, and how far we may have followed the same paths: if we agree, let it be remembered that my reforms date of 1815. In all the original accounts and figures of plants that I can consult, in late botanical works and travels, I find corrections to make even among the well described trees &c; while there are many more imperfectly designated, or even merely indicated. Much therefore will remain to be observed and well noticed by future writers. It must always be so in progressive natural sciences, and those who endeavor to keep them stationary or impede their progress, are to be reckoned among the foes of human knowledge, particularly if they neglect to avail themselves of the observations and researches, of previous writers, through various pretexts often frivolous or invidious, my practice instead has always been to avail myself of all previous accessible sources of knowledge: many of our plants and our animals must rest yet upon such observations of original discoverers, not always easy to verify nor to obtain the objects, either rare or of remote regions.

As to varieties, most of our species are such,
being natural deviations by seedlings assuming peculiar forms, in the woods and wilds, as it is done constantly in our fields and gardens by the cultivated trees and plants. Those best known afford most of our noticed varieties or specific deviations; but it is only our ignorance or neglect that prevents us from ascertaining in others all consimilar varieties. One of the great aim of accurate Botany is now to fix the typical and prototype species of each Genus; our subgenera are mostly such, when not based on floral dispa-raties. When thus based they become real Genera; whose specific deviations should be traced.

I have detached from this Sylva, 3 parts of it that would have swollen it beyond my limits, and they are printed separately.

1. The revised or new kinds of Oaks, Willows, Poplars, Ashtrees, Hickories, Waxtrees, and other akin or related Genera, chiefly from North America.

2. The Pomona of North America or the native fruit trees and shrubs of the United States, greatly increased and revised, including the Plumbs, Cherries, Vacciniums, Rubus, Ribes, Vitis, and other Genera of esculent fruits. Of Vitis and Morus besides Roses. I have published separate monographs.

3. My Erikon or account and figures of Erics, Andromedas and akin Genera, with the Diosmas, Phylicas and other Ericoid shrubs.

To complete this labor I must now add the corrections and additions that have been suggested in the progress of it, and afterwards 3 important indexes—1. That of other N. G. of trees and shrubs described in my Flora Telluriana and New Flora—2d. The Index of the Natural
Classification of all these trees—3d. The Alphabetical Index—I hereafter propose to give a separate Index of all the trees and shrubs of North America, classed naturally.

**ADDITIONS AND CORRECTIONS.**

1. My *Pukanthus* 264 is the Genus *Gra-buskia* of Schlect, a previous name, it is figured in bot. register 1985.

2. Add to the Oleas 1 to 13. The *Olea emarginata* Lam, a tree of Madagascar 40 feet high forms the *G. Noronhia* of Stadman and Thouars—cor. globosa, stam. 2 brevis in fossulis immer-sis, drupis nux bivalvis 2 sperm.

3. Add after Lomanthes 546—The *G. Hex-acadica* Lour. is near this—cal. 5phyl. stam. 5 liberis, fl. fem. cal. 6part. stig. 6, caps. 6loc. 6valv. 6sp.—Type *Hex. corymbosa*, fol. alt. ovatobl. integris glabris, fl. corymb. albis parvis. Tree of Anam.

4. Add to 528—Schobera alluded to was bas-ed on *Heliotropium angiospermum* of Murray, Vitman &c, the corolla had the tube ventricose and faux villose; type *Schob. hirsuta* Raf. fol. ovat. obt. undul. repandis. spicis geminis secundis. Asiatic plant united to Heliotropium by mere habit, but belonging to Verbenides.

5. Add to Culhamia 417. This G. has been found again by Cailland in Nubia, and has been called *Sterculia setigera* by Delile, who only saw and described the fruits; while the flowers are quite peculiar.

6. Add to Pimentus 642, *Gregia aromatica* is a real Pimentus with 4 petals.

7. Add to Balanopsis 840. Commerson and Thouars pretend that the *Quercus molucanus* of Lin. are not Oaks, but belong to this G. and
several sp. are blended that must be examined.

8. Add to *Scurrula* 786—*Scurrula cinerea* Raf. caule tereto cinereo, ramis 4gonis, fol. petiol. ovatis, antheris adnatis elongatis decurrents—N. sp. of Celebes disc. by Lay.

9. *Strepsimela* Raf. diff. Loranthus, cor. basi globosa melliflua. limbo 5part. lacinis cornutis tortilis, stylo clavato—this also disc. by Lay but not named—Type *Str. coccinea* Raf. fol. ovatis lucidis, racemis axillaris elongatis fascicul. 3-4. fine Sp. of Borneo with long clusters of red flowers.

10. Add to *Etubila* 788, 2 N. sp. also disc, by Lay. *Etubila maculata* Raf. caule. ferrug. macul. fol. ovat. lanceol. cor. apice 5fida reflex. stam. 5 erectis—Id Bontain and Celebes, flowers orange color, berries rose color.


12. *Rubus* L. this G. of Shrubs, brambles and plants has not been well revised by Decandole, although the G. Dalibarda, Comaropsis (bad) and Cylactis have been proposed: it must be divided in many G. or subg. which I will merely indicate now. The types of the real *Rubus* are the blackberries and raspberries, with compound leaves, all those with simple leaves must be examined again. See till 24.

13. *Pancovia* Raf. name of Adanson for Comarum L. must be given to the Comaropsis an improper formed name. The true character of this G. is in calix camp. with interjected segments as in Fragaria.

apetalis vel pet. squamiformis, fruct. lanato non baccato, sem. reticulatis—Types 1. R. apetalus Poir. vel lasiocarpus Sm. 2 rigidus Sm. 3 urtice-fol. Poir.

15. CYLASTIS Raf. 1817 diff. Rubus cal. an-gul. 6-8fidus, pet. 6-8 emarg. acinis paucis—type C, montana Raf. 1817, said to be R. triflorus, saxatilis, parvifl. canadensis &c of various au-thors, but perhaps several blending sp. and R. egopodioides Dec. is a 2d sp! R. arcticus a 3d, with petals 2-3fid.

16. SELNORITION Raf. (n. gr.) diff. Rubus, cal. patens vel reflexus, acinis paucis, sem. magnis rugosis—types several sp. blended and mixt in Rub. obovalis, saxatilis, canadensis, cesius &c.

17. CUMBATA Raf. (n. ind.) diff. Rubus, calix inflato globoso 5fido vel 5dent. petalis unguic. fol. integris palmatis, bract. multif.—two types at least.


20. AMPOMELLE Raf. (n. gr.) diff. Rubus, pet-talis obov. longe unguic. fl. racem.—Perhaps a subg. of Cumbata, but calix as in Rubus.—Type Amp. triphylla Raf. Rub. do Thunb. &c, ramis flexilis gracilis, foliolis 3 rotund. crenat. subtus albis—Japan.

21. AMETRON Raf. (n. gr.) diff. Rubus, cal. ineq. 5part. 2-3acin. lanato, petalis laciniatis, acinis 1-5 stylosis, sem. rugosis—very distinct G. by unequal calix &c.


24. **Manteia** Raf. (n. gr.) diff. Rubus. cal. 6-10fidus basi angul. petalis 6-10 integris, stam. clavatis, acinis depressis, stylis connivens—akin to Cylactis, 2 types M. or **R. stellatus** Sm. ic. 64. and 2 **acaulis** Mx. or pistillatus Sm. ex. t. 86.

25. **Callicarpa** L. to this G. were united the 3 next G. differing by habit and other characters, although probably of same family **Aegiphilides** differing from **Vitexides** by regular corolla and from **Rubiaceae** by free pistil.


29. **Traxilisa** Raf. diff. Calligonum, cal. 5part. cor. 4part. eq. stam. pluris, stylo unic. stig. bipart. bacca 2partibilis uniloc. polysp.—not even of same family Polygonides, but rather akin to my **Ilexides** 169, although the many stamens (perhaps 12 or 16) indicate another family near to **Diospyrides**.

31. Odollamia Ad. Raf. diff. Cerbera, cal. 5part. cor. tubo angul. villoso, stig. ovato bif. drupis 2locul. 2sp.—Types 1 O. manghas Raf. Cerb. do auct. 2. O. moluca Raf. Odollam Rumf. 1 t. 124. 3. O. malabarica R. Odollam Rheed 1 t. 39.—This G. and the 4 next blended in Cerbera are very distinct although of same family Cerberides.

32. Neisosperma R. (not eq. seeds) diff. Cerbera, fruct. ovat. muricato lignoso semibivalv. 2loc. 4sp. sem. compressis ineq.—2 Types also, 1 N. muricata R. Cerb. platisperma Gaertn. &c, 2 N. musculiformis Cerb. do Lam. &c.


34. Add to Thevetia 536, Adanson ascribes to it a bilocular polysperm berry—the real Cerbera or Ahouai of Adanson has stigma bilamelar, drupe monosperm, calix reflexed, corolla undulate. Type C. ahuai.


36. Symplocos Auct. many alien G. have been united to it—Alstonia with petals 10 subcoalescent—Ciponima with 5 petals coalescent campanulate—Hopea 5 free petals &c. They must all be restored, and the type of Symplocos will
be *S. vera* or *octopetala* with 8 free petals. All have many stamens not so the next.


38. **Gordonia** L. the *G. Lasianthus* and *Franklinia* united thereto by many botanists are perfectly distinct although akin) *G. hematoxylon* is the type, with petals unequal, style 5parted capsule with 2 winged seeds in each cell &c. *Lasianthus* has 5 acute stigmas, cells polysperm. seeds angular &c.

39. **Stuartia** (misprinted *Stewartia*) is also distinct from *Malacho-dendron*, wrongly united by some botanists.

40. **Clusia** L. &c, many alien sp. of trees and shrubs have been thrown into this G. which must be divided see till 44. *Clusia rosea* is the type of the G. with—cal. 6part. ineq. imbric. petalis 3, stam. pluris biserialis, stig. 8rad. caps. 8loc. Svalv. intus pulposa.

41. **Birolia** Raf. (bot) differs *Clusia*, cal. 9part. triserialis, petalis 3, stam. 5-8, stig. 5-6d caps. 5-6loc. valv—Type *B. or Cl. alba*.

42. **Icostegia** Raf. (20 cover) diff. *Clusia*, cal. 16 sepalis quadriserialis, petalis 4, stam. plura 4serialis, antheris lobis divis, stig. cupularis 4 auriculis 12radiat, caps. 12locul.—Type *I. or Cl. flava*.

43. **Elwertia** Raf. (bot) diff. *Clusia*, cal. 8sepalis biserialis, petalis 6, stam. plura, antheris simplex, caps. glob. 16-18locul.—Type *E. or Cl. retusa*, Lam. t. 862.

44. **Firkea** Raf. (bot) diff. *Clusia*, cal. 4sepalis biserialis, petalis 4, stam. plura, stig. 5rad. caps. 5loc.—Type *F. or Cl. venosa*, and *F. rosea* Raf. fl. racem. roseis var. of Miller. *Cl.*
sessilis and pedunculata with 4 petals either belong here or to Elwertia, unless with other anomalies. Jussieu deems the caps. uniloc. in all.

45. Coffea L. &c, this G. now greatly increased, includes at least 2 others blended G. Potima Pers. with monosperm berry and the next.

46. Hexepta Raf. (6 or 7) diff, Coffea, cal. 6-7 dent. cor. 6-7 fida, stam. 6-7, baccis sepe angulatis 2sp. vix arillatis—types 2 shrubs of East Africa.


49. Persimon Raf. add to Mabola 21, the Diospyros virginiana is stated to have 16 stamens in two rows, while real Diospyros lotus &c, only 8 in one row, if so which I will soon verify, it must with other American sp. form the G. or subg. Persimon, a very good name nearly Greek in euphony although American.

50. Add to S37, there is a previous G. Evosma, Shrub of Australia and Lysianthides; therefore the Evosmus of Nuttal must be changed, I propose EVELYNA, dedicated to Evelyn the author of a Sylva.

51. Add to Pleuteron 673, some of the Brey-nias with 6 stamens and double calix, were called Hermupoa by Loefling, the type had scarlet flowers, compare my New Genera.

52. Tetracera G. in utter confusion by the medley of G. thrown into it, Delima style 1, Piripea dioical &c, Euryandra 3 styles, Dolio-carpus. Mappia, Calinea, Valbomia &c, which
must all be separated again, besides the 3 next also.

53. **Gynetera** Raf. diff. pistilis et caps. 4 ineq. frutex scandens—type _G._ or _T._ volubilis.

54. **Eleiastis** Raf. diff. cal. 6part. petalis 0, capsulis 4—type _E._ or _T._ levis.

55. **Diploter** Raf. (double div) diff. cal. 4part. petalis 4-5, stam. filam. dilatatis biantheriferis, caps. 4—type _D._ or _T._ alnifolia.

56. Add after 973 and Laurines, Jaquin, Smith and others have united to _Tetranthera_ a _G._ chiefly distinct from Laurus by anthers 4locular (although Sassafras, Camphora &c have similar anthers) many alien _G._ that must all be restored, _Litsea, Tomex, Glabraria, Hexanthus_ &c, 5 plants of various _G._ have even been blended in _Laurus or Tetrac. involucrata._ I must even add 4 new _G._ out of _Tetranthera_, see till 63.

57. **Decapenta** Raf. diff. stam. 15, anth. 4loc.—Type _D._ involucr. _Laurus_ do Retz. _Tetranth_. apetala Smith.

58. **Heckeria** Raf. (bot) diff. cal. corolato urceol. 5lobo, stam. 9—Type _H._ glomerata Raf. _Tetranthera_ monopetala Roxb. 148. Sm. fol. elipt. acutis uninervis, fl. glomeratis. India, _Hexanthus_ differs by cal. 6part.

59. **Bryantea** Raf. (bot) diff. cal. corol. 4part. stam. 6—Type _Br._ dealbata Raf. _Tetranth_. do. _R._ Brown, Sm. &c.

60. **Cubeba** Raf. diff. cal. corol. 6fidoe ineq. stam. 6, stig. sessile, bacca globosa—Type _C._ piperita Raf. _Tetr._ do Sm. _Laurus cubeba_ Lam. fol. lanc. avenis, pedunc. unifl. India.

61. **Litsea** Lam. Pers. diff. dioica, stam. plura 5-9adelphis, villosis, internis sterilis—Type _L._ or _T._ chinensis, probably not of this tribe nor
the next, nearer to the monosperm Hesperides,

62. Tomex Th. W. diff. Litsea, cal. 4part. stam. 100 decadelphis, pistilis 10--Types T. japonica and sebifera.

63. Glabraria L. &c, diff. Litsea, stam. 30 polyadelphis, 6 internis monadelphis--Type Gl. tersa L. or Tetr. glabraria auct.

64. Add after Crescentia 471, the G. Tanac-sium W. is akin to this, but T. pinnatum is totally different by habit &c, forming a new G.--Kigelkea Raf. (n. afr.) diff. cal. tubul. 5fido, stam. 5 fertiles, glandulis 5 basi pist. cingens--Type K. pinnata Raf. Crescentia do Jaq. Tan. do W. P. &c. Tree of East Africa, with pinnate leaves.

65. Myrsine L. &c, some botanists would unite thereto Walleria, Ardisia, Manglilla, Athrynphylum, Roemeria, Rhacoma, Rapanea, Badula, Pyrgus &c which must all be separated, but better described: and I must even add some other G. out of Myrsine, see till 72.


67. Heurlinia Raf. (bot) diff. cor. 4-5fida, stam. 4-5, antheris sessilib. drupis monosp.--Type H. or M. variabilis--near Manglilla, which is Duhamelia of Dombey--it must be verified if these G. and all the akin have stamens opposed to corolla as in Myrsinides, if alternate they will belong to Ilexides, see 169.

68. Badula Juss. diff. Myrsine and Ardisia, cor. limbo rotato 5part. stig. capit. bacca monosp. arillata--several sp. indicated by Jussieu,

69. **Pyrgus** Lour. diff. Ardisia, cal. 5dent. pers. cor. rotata 5part. stam. 5, antheris magnis connivens, stylo subul. stig. acut. bacca monosp. ---Type *P. racemosa*, fol. ovat. lanc. racemis term.—Shrub of Anam.

70. **Milnea** Raf. (bot) diff. Ardisia, 4-5fida, stam. 4-5, stig. 4-5fido, bacca 4-5loc. 4-5sp.---Types several Ardisias, the real *G.* has a monosperm drupe.

71. **Galiziola** Raf. (bot) diff. Ardisia, stig. capit. integro, bacca uniloc. polysp.—some Ardisias have those characters.

72. **Roemeria** Th. the type is *Sideroxylon* or *Mangliilla Melanophlea* of authors.

73. **Messermidia** L. auct. the type is *M.fru-ticosa* with cor. hypocrateriform, and 2 blended sp. or var. latif. and angustif. shrubs of Canary; but 2 other *G.* hardly shrubs have been blended also.

74. **Arguzia** Raf. diff. 73, cor. infundib. faux nuda, limbo plicato, sinub. membranaceis—Type *Arg. repens* Raf. *M. arguzia* L. &c.

75. **Raclathris** Raf. (berry cane) diff. 73, cor. tubul. ad cal. eq. baccis siccis cancellatis dispermis—Type *R. cerinthoides* Raf. Mess. cancellata, Dasso, Sm. *Cerinthe* of Quer—Spain.

**END OF THIS SYLVA.**

Including 1075 articles, nearly 800 Genera, and over 1000 typical species, with many monographs.
APPENDIX.

Natural arrangement and Reference to natural Tribes of the new or revised Genera of this work—with those of the trees and shrubs of my Mantissa, Flora Telluriana 1836,—and some in my New Flora and Sylva of North America 1836.

M. means the Mantissa.
N. means the New Flora.

First Series of Natural orders, families, tribes and groups of Trees and Shrubs—Alphabetical Index.

ANISANTES—Cormophytes, Exogenous, Dicotyle, with perigonal or lepigonal flowers, having the stamens either heterogonal, or when isogonal, alternate to the inner segments or petals if existing, and opposite to the single or outer segments or sepals.

Acanthides—Zonablephis 922, Trixanthera 935.

Achyranthides 520 M—Codivalia 543, E-cloteripa 546 M.—Everiou 779 S.
Akerides—Lasipana 80 S—7 subg. of Aker in N. vol. 1. Lexicon.
Amaranthides M—Cadelaria 539 M.
Amyrides Pattara 16, Calliama 23, Claderia 27, Curnilia 78, all in M.
Asarides—Steirexa 1116 M.
Basellides 571 M—Calostima 731 S. 589 M.
Begonides—Trilomisa 347 M.
Bergerides—Marottia 999.
**APPENDIX.**

Bignonides—Leucoxylon 445 till Odisca 464, Sererea 660, Nevrilis 881, Pentelesea 937 ---Cupulissa 203 M.

**Borrugides**—Pioctonum 517 till Eliopia 531.

**Campanulides**—Benaurea 290 M.

**Capparides**—many G. from Nevosmila 662 to Oligloron 675, Octanema 693.

**Cassythides** M. with 5 G. 1077.

**Celastrides**—Semarilla ? 933.

**Celosides** 559 M—Gonufas 777 S. Deeringia 569 M.

**Cerberides**—Thevetia 536, Odollamia ap. 31 to Cascabella ap. 35.

**Cistides**—many G. 823 to 833, IIoranthes 549 N,

**Cleomides**—many G. Cleome 676 to Mytotylis 707, Riddelia 766 N.

**Clethrides**—Ireon 877, Fouquiera 962, Bronnia 964.

**Coniferous**, Abies 13 sp. in N. Lexicon.

**Cornides**—Benthamia 817.

**Cruciferous**—Acuston 920.

**Daphnides**—many G. Sanamunda 1135 M. till Nestronia 1147 M. and 503 N.

**Diospyroides**—Mabola 21, Benzoina 834, Traxilisa? ap. 29, Persimon ap. 49.

**Echioides** 55 M. many G. Oplexion, Penthysa.

**Emnetrides** 635 N—Coilosperma 564 M.

Corema 594 N. Euleucum, Endamnia.

**Erythroxilides**—Sethia 958.

**Euphorbides**—Croton 335 till Leptemon 372, Bernardla 390, Phylanthus 537 till Synexemia 552, Endoisila 708, Peccana 710, Ditritra 712, Hexacadica ap. 3.—M. Lacanthis 356, Euphorbia 1168 till Cyathophora 1189, &c.

**Ficoides** or **Sycophores**—many G. Ficus 301 till Mastosuke 316.
Flosculos—Fornicaria 721, Flustula 723, Ismarea 729, Keringa 924—M. Brephocon 178, Stahelina 1190 to 1200 &c.

Fraxinides—Nestegis 13, Notolea 14, Postuera 15—M. Nudilus 727 N. till Samarpes 733.
Gonoliges or Aphanides—Zamzela 534, Sphenista 535, Polylepis 966, Quinasis 968.
Gratiolides—Eusynetra 201 M.
Guttiferous—Ganitrum 319, Perinka 320.
Clusia ap. 40 to Firkea ap. 44.

Hederides—Allosampela 515.

Hesperides—Apama 29, Kambala 67 Pocirus 920—Lolanara 106 M.

Hypericoides—Misipus 321, Skidanthera 323—M. Streptima 352, Menetho 353, Episiphis 729, with several G. not fruticose.

Ilexides 169—Cordia 170 till Desmophyla 211, Aquifolium 212 till Enepta 260, Lycium 261 till Huanuca 274, Oskampia 770, Callicarpa ap. 25 to Amictonis 28, Racalhrius ap. 75, Cataobia 116 M. several of these G. with single stigmas belong to subfamily Lycoides or Aegiphilides.

Justicoides—M. Strepsiphus 348, Petalanthera 378, and many G. from Justica 968 till Oplonia 987.

Labiates M. 756—Unilabiate, many G. Turucrum 757 till Monopsis 763 M.—Salvides, several frutescent G. Codanthera 789 M. Enipea 799 M—Bilabiaie, S. Gnoteris 433, Noetelis 438... M. Diodeilis 750 and N. 60 to 693, 5 G. of Origanum 764 M. Piloblephis 604 N. Phlomides 769 till 785.

Laurines—Laurus 835 till Tamala 865, Knema 872, Tetranthera ap. 56 to Glabraria ap. 63.

Leguminosces—1 Papilionides. Retama 82
and many other G. till Meiemianthera 100, Di-
losperma 382 till Damapana 389, Resupinaria
718—2 Lomentides. Bessia 33, G. of Mimos-
as from Strepsileobus 733 to Melilobus 758. Pleu-
romenes 926, G. of Bauhinias from 760 to Pha-
nera 767, Elayuma 928, G. of Cassias 768, 769,
and from Isandrinia 793 to Octelisia 812 .
Zaga 101 M, Delonix 350 M. Dreplia 342 N.
Linides 501 M. Numisaurum 502 M.
Lonicrides—M. Kantemon 523, Distegia
525 &c.
Lurides—Siphaulax 710, Cohiba 715 M.
Lythrides—Quirina 614 till Nesaea 627.
Mairoides—Munchusia 716.
Meborides, Meborea 1117 M—S. Episteira
20, Fometica 433, Lindera 870, Amictonis?
ap. 28.
Melastomides—Bellucia 553 till Synodon 569,
Octonum 574 till Savastana 604.
Morides—Toxylon 577 N. Fusticus 579 N.
Myrtides—Eustegia 570, Beckea 630 till Ma-
idra 659.
Nauclides—Axolus 329, Gilipus 331, Eresi-
mus 333.
Nyssides—Rhizaeris 532.
Oleides or Ligustrides—Enaimon 8, Pausia
10, Pogenda 11, Tetrapilus 875—Faulia 314 M.
Passiflorides, several G. 1120 M.
Piperides—11 G. from Piper 489 to Carpu-
pica 500.
Plumbagides—Molubda 771.
Polygonides—M. Tephis 404 to Spermual-
laxen 416, N. 575. Menophyla 576 M. Pleuros-
tena 573 N.
Pomides—Xeromalon 501 N. Spondolobus
542 N.
Radiate—Montanoida 725, Zexmenia 727—M
Dectis 148, Orestion 171.
Resedines—Tereianthus 703 M.
Rhexides—Arthrostema 577, Exodiclis 590,
Ephynes 606 till Bolina 608.
Rhedorides—Stemotis 985.
Rivinides 630 M.—Gandola 325.
Sarcocides 626 M—Raxamaris 624 M.
Scropholorarides—Dasanthera 396 N.
Senticoses—9 G. Rubus ap. 12 to Manteia ap.
24.
Sesamides—Aragoa 939.
Siphonanthides, 1064 M.
Solanides, including Cestrines with uniloc.
berry—Benteca 31, Trozelia 275, Diskion 284,
Cestrum 292 till 300, besides some Lycioides
261 to Deprea 300.
Sphalides or Rubiaceous—Bemsetia 25,
Yangapa 71, Rothmania, Pleimeris, Xeromphis,
Aemostima 101, Jurgensia 940 till Patabea 955,
Hexepta ap. 46.
Spireades—14 G. from Spirea 971 to Theca-
nisia 984, Tetracera ap. 52 to Diploter ap. 55—
N. Physocarpa 667 till Basilima 674.
Sterculides—20 G. from Sterculia 401 to Ico-
sinia 432.
Symplocoides—Ap. Traxilia 20, Symplocos
36, Neisandra 37.
Tamarinides—Eudiplex 533 M.
Theaphylines or Ternstromides—Theaphyla
833 to Drupifer 900.
Thylaxides—Triplobus 683.
Tilioides—Bedusia 19, Tridesmia 930, Xe-
ropetalon ? 932.
Vaterides—Atuna 991 to Curundia 994.
Verbascoideas 1166 M.—Diamonon 284 M.
Verbenides—Silannus 327, Schobera ap. 4—
M. Kurritis 229. Pilopus 388 till Aloysia 400.  
*Viburnides*—Thyrsosma 814.  
*Vitexides*—Egena 317 M. Lantana 472 to Batindum 477 S.  
N. B.—I have not attempted to put these 85 tribes into their Natural Classes, as none of those proposed are properly natural, except mine which are explained in the first volume of my Flora Telluriana. I have ventured however to separate from this long Series, another series that approximates to the Endogenous Series by the regular position of Isoperial stamens, and must invite the attention of correct botanists, as indicating one or more Natural Classes.

---

**SECOND SERIES of Natural Orders, families or tribes of Trees and Shrubs.**

**ENDANTINES** (inside oppositing) Cormophytes, Exogenous, Dicotyle, with regular perigonal flowers, having the stamens isogonal, either opposed and equal in number to the inner segments or petals when existing, or alternating to those of the outer perigone always present.  
*Berberides*—Odostemon 381.  
*Convolvulides*—M. Kolosonia 1013 till Bucharea 1053, including 6 fruticose G. Rhodoxylon 1033 &c.  
*Gentianides*—M. Roeslinia 495, Ditereia 1052.  
*Guanides* 8 M—Ledelia 996 S.  
*Loranthidces* 269 M—many G. from Loranthus 781 till Glutago 792, Strepsimela ap. 9.  
*Myrsinides*—many G. from Ampeloplis 155 till Xantolis 168, Guersentia 989, Myrsine ap. 65 to Roemenia ap. 72.  
*Rhamnides*—25 G. from Alaternus 105 till

Sarmentose—12 G. from Cissus 501 till Ampelopsis 514.

Pselides 735 N. and Samolides 998 N. are 2 other new tribes of this Series, including some shrubs. The Mangides, Eventipes, Menispermides, Sapotides, Primulides, and many others also belong to it.

---

THIRD SERIES of Natural tribes including Frutescent Genera.

ENODOGENES or Monocotyles.

Aroides—Pleurospa 803 M.

Asparagoides—Euphyleia 827 M. Guenias 864 M.

Orchides—Many of my revised G. in Flora Telluriana, assume frutescent or perennial stems.

Palms—Zelonops 386 M.

As I stated I have not yet revised the frutescent Smilaxides and Grasses.

In my New Sylva of North America, if I had few New G. I had many New Sp. of trees and shrubs, such as Hamamelis 4, Viscum 4, Fagus 7, Castanea 4, Evonymus 8, Ceanothus 15, Bumelia 4, Celtis 14, Ulmus 6, Morus 5 (in my new monograph I will have 25 sp. whereof 7 new,)

Hydrangea 11. Chionanthus 6, Chrysobalanus 4, Chrysophyllum 2, Anthelis 2, Lonicera 516 to 530, Spirea 633 to 676, Forestiera 712 to 727. with one N. sp. each of Celastrus, Amorpha, Sapindus, Diospyros, Cephalanthus &c.

In my work on Oaks &c, I shall have 27 new Quercus. whereof 22 North American,—Fraxinus and akin Genera, a monograph of 52 sp. many new.—Myrica 12 sp.—of Willows or Salix, 22 new Genera or Subgenera, 6 new sp. &c,
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