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.

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BEING A SUPPLEMENT TO THE FLORA TELLURIANA.

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

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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, Wartle 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 Guatimala, &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.
INTRODUCTION.

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.
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 Jasminia except by a monosperm drupe. The real Olea has — Cor. infundib. stigma bifido, stylo elongato — and the real Olea europca 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 europca Var. Semperjlorens Raf. O. caietana Petagni, 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-
5. **Olea cayana** Raf. ramis levis, fol. ellipticis obtusis subtus pallidis—South of Europe, called, Cayan Olive.

6. **Olea angustifolia** Raf. ramis levis, fol. angustis lanceolatis—South of Europe.

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. *Pogenda* 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, stigma integro, drupo monosp.—Many types *N. punctata*, *ovala*, *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*, *Samarpes* &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 Jasminea 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-era 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. (woolly 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 parviflora 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 triadelphis, 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 Androsemum 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 comicum, 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
SYLVA TELLUR.

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 Bose, 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.


37.—Subg. Leiofaium R. (smooth brown) semina levis venosa fuscata, vel viridis.


39. Gossypium (Karpas) virgatum Raf. sp. 1 Rohr, Bosc. ramis virgatis, sem. magna ovata
scabra 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 $2\frac{1}{2}$ ounces. Martinico &c.

42. *Gossypium* (Karpas) *decurrens* Raf. sp. 4, 5, 9 R. B. sem. ovata scabra, corona tomentosa ad angulo decurrens—sorrel cotton, 4 varieties 1. *viridis* producing only 4 ounces of cotton, 2 *rubrum*, with stem, petiols, nerves and calix red, valuable, producing $7\frac{1}{2}$ ounces of fine clean cotton on each Shrub 5 feet high. 3 flocosum, 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 decurrens—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. *pereunc*, like last but perennial stem. Italy, Sicily, Spain, Persia, &c.


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 *braziliensis*, 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* (Leiof.) *tenax* Raf. 14 R. B. sem. levis fuscata 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* (Leiof.) *fuscum* Raf. 13 R. P. sem. levis fuscata venosa, apice postice villosa, angulo uncinato, ad apex brevier, byssus fuscatus—tree 12 to 15 feet high, native of Asia, cotton dirty redish brown difficult to pick.

49. *Gossypium* (Leiof.) *pallens* Raf. 16 R. B. sem. levis fusc. venosa, apice tomentosa, an-gulo uncinato, byssus rubescens—from Asia also, 6 feet high, cotton paler than last, redish, 3 ounces.

50. *Gossypium* (Leiof.) *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.

15 R. B. sem. levis fusc. venosa, angulo obtuso, apex villoso, byssus laxo—Antilles, 10 feet high, producing only $2\frac{1}{2}$ 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.

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.

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.

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 $2\frac{1}{4}$ ounces of cotton similar to that of the Guyana Cotton.

58. *Gossypium* (Lanig.) *isabelum* Raf. sem. rubrofusca tomentosa, teretiuscula, corona pilosa, byssus flavolus—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. *megaspernum*, 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, nonnulis 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 $1\frac{1}{4}$ ounce of cotton, petiols, nerves and twigs red.

62. *Gossypium* (Lanig.) *speciosum* Raf. fol. lobis acutis, uniglandulosis, petalis rubro notatis, sem. globosa tomentosa canescens, bysso 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*?

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 apetalata 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. 0, antheris pluris lin. adnatis ad pistillo sterilis. obl. vel. monadelphis instar. fl. fem. cal. 6part. subul. persistens, ov. magnum orbicul. depres. stylo unico breve, stigma cavum 6dent. caps. sulcata 9-12locul, 9-12 valvis septiferis, loculis 2-3 sp. sem. serialis centralis. *Frutex, fol. alt. stipulatis, fl. axil*—quite unlike *Agyneia* 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 *Meboridae* see fl. tel. 1117. *Meborea* chiefly differs by 3 anthers inserted on 3 styles.

70. *Episteira coccinea* Raf. (*Agyneia* do Buch. ic. auct.) ramulis angulatis, fol. petiol. lanceol. obtusis, stipulis subul. fl. fascic. axil. masc. pedic. fem. sessilis mixtis—Birman empire, singular shrub, fl. yellow, fruits scarlet..

71. *Yangapa* Raf. (n. ind.) diffl. *Gardenia*, cal. 5gonus, cor. hypocrat. limbo 5-6part. Antheris 5-G tubo adnata, stylo apice dilatato compresso, 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 flava* Raf. (*Gardenia coronaria* 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 I.in. what date?) diff. Gardenia, cal. limbo 4-6part. lac. unguic. appendic. cucculatis, cor. 7-10fida hypocr. tubo longo, antheris 7-10, stigma obliq. sulcatum. Arbor, fol. vertic. fl. term.

75. Pleimeris capensis 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 omb.) diff. Gardenia, cor. hypocr. hirsuta limbo 5part. lac. rotundis. bacca exsua 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 Isp. villosis—Arbor fol. sparsis simpl. fl. ped. later—very near Aker and Fothergilla, 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 Neck. Leguminosa diff. Spartium cal. bilab. camp. lab. sup. 2śida, inf. 3dent. stam. basi monadelphis ineq. coalitis, antheris eq. obl. petalis 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 spherocarpón L. auct. and perhaps other sp. Necker adds to his Apartium, the Sp. contaminatum, aphyllum, scorpius, purgans, sepiarium, junceum &c, belonging to other groups. All these akin Genera are yet in utter confusion, authors blending them, and referring 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. Lugaion 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. aphyllum, 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*.


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. subintegr. 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, hordinum, ferox*? They are as akin to *Ulex* as to *Spartium*. 3 others *Sp. contaminatum, sepia-rarium* and *cytisoides* are now forming the G. *Lebeckia*. Some of the spinose *Genistas* may also belong to *Lygoplis*; *Genista* of L. and *copists* 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. Avornela 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, candicans, 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. villoso tubuloso caliculato, 5fidus, vexil. villoso, stam. monad. Leg. longum compr. polysp.—Types D.
argenteum, prolifer &c Cytisus of authors. My names of Diaxulon, Euteline, Avornela, Lygion, Verzinum, 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 Cyt. 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. Melemianthera Raf, diff. Cytisus, cal. campan. membr. bilab. trisfido, lab. inf.-ovato integro, vexil. obov. amplum, stam. monad. antheris alternis minoribus, Leg. obl. polypsp.—Type M. Eolica Raf. (Cytisus do Guss. Lindl. b. reg. 1902) incana pilosa. ramis teretis, foliolis ternis ellipt. racemis term. thyrsoideis, 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. Acmostima R. (hook stig.) diff. Pavetta, cal. camp. 5dent. cor. hypocrat. limbo 5fido, stam. 5, antheris longis, stylo filis. stigma hamatum. 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 Antilles 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 Pavettas have a berry, corolla infund. 4fid, 4 stamens &c.

104. Rhamnus linnean Genus including many trees and Shrubs totally unlike, forming 20 Genera at least. Zizyphus and Palirrurus 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 Berchemia. 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 4sperme. The types are R. catharticus, infectorius, dauricus, oleoides and other similar Species, the American R. catharticus is probably peculiar.
105. Alaternus T. Ad. cal. 5fido, petalis 5planis, stam. 5, stylis 3 vel. st. 3fido, Bacca 3locul. 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.

106. Alaternus ovatus Raf. Inermis; fol. ovatis crenatis. South of Europe; probably the var. latifolius of Persoon &c.

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 5dent. stigma 3lobed, pentandrous &c.

112. Girtanneria Raf. Herm. cal. persistens campan. 4-5lobo, petalis nullis, discus incrassatus cal. coalito, stam. 4-5 cal. alt. ov. 3lobo, bacca uniloc ? 3perma—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 Pursh &c—fol. ovat. acum. serrulatis, nervis puberis, pedunc. unit. cal. acutis, baccis turbinatibus 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. 5fidus, lac. 3gonis intus carinatis, petalis 5 minutis squamif. obcord. cuculatis, stam. 5 involvens, antheris sess, ov. 3lobo, stylo crasso, stigma 3lobo. Baccis globosis 3loc. 3Sp.—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 subintegris, subtus glabris, baccis nigris—Kentucky on rocks, minute green flowers.

118. Cardiolepis 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. Cardiolepis 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. Perfonon Raf. (n. grec.) diff. Cardiolepis. cal. lato. 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 Perfonon laurifolium Raf. Arboreum, fol. ellipt. acutis subintegris, lucidis glabris, juvenilb. 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. Perfonon? ferrugineum Raf. Rhamnon do Nut. fol. obl. ellipt. acutis subintegris, lucidis glabris, juvenilb. calicibusque ferrugineo toment. petalis cuneatis, stigma 3fidum—In Florida, compare Rh. ellipticum, see 144.

124. Sarcomphalus Raf. Hermaphr. cal. 4fid, petalis nullis, disco umbilicato carnoso, stam 4, stylus bifidus, stig. 2 acutis bacca umbilic. 2 locul. 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. ovatoobl. 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 trifido, stig. 3, bacca 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 subopposite and flowers spicate, instead of fasciculate as in general.

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

130. *Oenopia* Raf. Herm. cal. 5paritus coloratus basi persistens, petalis 5 planis amplis, stam. 5, stigma simplex bacca 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. Oenoplia cal. 5fidus, petalis ciliatis, stylo unico persistens stigma simplex? Bacca 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, petals integris, styletus bifidus, baccam 2loc. 2sp.
135. **Endot. olcifolia** 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 crassi, baccis 2sp?—Two types with different leaves and habit, perhaps subg.
138. **Decor. trinervis** R. (Rham. do Cav.) fol. alt. ovatis subt. toment. trinervis, fl. axil.—Luzon.
139. **Marcorella** Neck. Raf. Herm. Cal. 5fidus, pet. 5 planis lanc. stam. 5 ad basis callosis, stylo 1, stig. 3, capsula 3loba 3valvis 3sp.—very distinct by capsule like next, types **M. colubrina** and **cubensis**, Rhamn. do auct. both American.
140. **Atulandra** Raf. diff. Marcorella, cal. 4fidus, petals 0, stam. 4 non callosis, 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 oppposed 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! subinfera 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 Phyllica and Myginda. The name means weapons of the Stonos.

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 sinibus, stylo 1, stig. 3, bacca uniloc. oligosp.—near to Alaternus and Afarca, 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 scandens 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.

155. Ampeloplis Raf. (armed vine) cal. 5fid. corolla 5fida, stam. 5opp. stylo 1, stig. 3, bacca 3isperma. Sarmentosa spinosa, fol. alt. fl. glomeratis spicatis interruptis—not even of Rhamnides family if corolla really monopetalous as stated by L. rather akin to Myrsine and next Genus, habit quite peculiar.—Ampeloplis chinensis Raf. Rhamnus theizans L. auct—Rhamis sarment. divaric. striatis, fol. ovat. serrulatus—China, affording an inferior Tea.

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. fascie. 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.

159. Verlangia indica Raf. Sideroxylon L. auct. Caromelli Rh. 5. t. 39—Frutex, fol. subfasc. subrotundis vel ellipticus, crassis nitidis vix crenatis—Malabar, small shrub, fruits acid by turns green, red and black.

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 Wilde-now 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 Abelia 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. mystinus, nummularia, heterogenus of Burman, Rh. su-
rinamensis of Scopoli, *Rh. hydriensis* of Hacquet, which are not even mentioned in late synonymies, 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 Urticides, but perhaps rather to Rhamnides and my G. *Oenoplia* 130, *Blepetalon* 131 by the calix at least.


162. *Sclerocladus* Raf. (hard br.) cal. prof. 5fidus, cor. cal brevior, limbo 5part. squamis vel nect. in fauci 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 *Myrsinoides*, a family merely different by monopetalous corolla, the nectary or scales are perhaps abortive filaments as in *Verangia*.


165. *Decateles* 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. Arboreis 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.


167. Decateles lycioides Raf. Siderox. and Bumelia do auct. fol. lanceol. obtusis undulatis, spinis axil. 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. tomentosa 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 Ulex &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 Verbénides 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, 2-4stigmas, 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.-5dent. persistens cor. subcamp. 5fida, faux pilosa, stam. 5, ovar. 4loc. stylus dichot. stig. 4 obtusis drupa 2loc. 2Sp. Arboreis inermis, fol. alt. petiol. fl. corymb. hermaphr.—Thus fixed and reduced this G. will include but few Sp. and protom 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. 10striatis—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 obliqual.

173. Cordia officinalis Raf. C. myxa var. offic. Lam. &c, fol. ovatis acutis dentate repandis, subtus scabris, calycis, 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.


176. Sebestena Ad. Raf. diff. Cordia, cal. tubul. obl. 3fid. cor. infund. 4-6fid. sau. glabra, lac. sepe crenis. 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.—If 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 Linneus who refers Rumfius figure to it.

186. Novella nigra Rumf. 2. t. 75. Raf. Cordia subcordata Lam. &c—fol. cordatis integris pubescens—tree of Moluccas called Salamari, flowers spicata incarnate.

187. Firensia Scop. Neck. Raf. (Colococca sp. Br.) diff. Cordia, cal. 5-6dent. cor. infund. 5-6loba, tubus angul. faux villosa, stam. 5-6 ex- ertis, 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 5dent. cor. 5 lobed, fruit like an olive.


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


loba, 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 Synodiscoinds.


203. Bourreria Br. Jaq. Ad. Kunth, &c, diff. Ehretia, cor. hypocrat. tubo elong. limbo plano, lac. dilatatis vel obcord. drupis 4gonis, 4sulcat. nucibus 2 utrinque 2sp. fl. corymbosis.—To this belong. B. baccata (E. bour. L.) and B. exsuca Jaq, perhaps some others, more like some Cordias than Ehretias.

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, se-
cundis—Coromandel.

206. **Pilosisia** 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. **Topiarias** Raf. diff. Varronia, cor. hypocr. tubo longo, limbo plano lato lobato, **fl. racemo-
sis**—Thus corolla as in Bourreria, but habit peculiar, put in 2 Genera by authors.

208. **Topiarias geniculata** Raf. Var. do Pers. mirabiloides Sw. W. Jaq. Vitm. &c Tournesor-
tia serrata L. Lam. &c—fol. ovatis rugosis ser-
ratis, fl. racem. secundis, ped. genic—Hayti.

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?

210. **Subrisia petiolaris** Raf. Ehr. do Lam. Ehr. internodis Lher. Wild. Vitm. Pers.—Ra-
mis reticul. rimosis, fol. ovat. integris glabris, petiolis scabris. panic. laxis extraxillaris—Mau-
ritius, flowers white fragrant.

211. **Desmophyla** Raf. diff. Ehretia, stylis 2, stig. 2 capitatis, **fol. fasciculatis**—Type **D. aliena** Raf. Ehr. fasciculata Kunth, his **E. to-
mentosa** and **ternif.** appear true Ehretias,altho’ the leaves are opposite and corymbs 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 protem 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 niti-dis, fl. glomeratis, fr. rubris—Mts. of Europe, the most common sp. becoming a tree and less spinose in old age.


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, ditt. 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

219. Cassine R. 5andris, fr. globosis, fol. oppos. fl. panic. vel corymb. axil. such are my Ilex (Cassine) capensis, barbara, oleifolia.

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

221. Maurocenia Miller, 5andris, fruct. 3genis, 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.

224. Emetila R. 5andris, stig. 3 reflexis, fol. alt. fl. fasc. deemed 5petalous by Robin.

used as emetic by the Indians; it cannot be the *Cassine peragua* L. described with opposite elliptic obtuse 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 persis-
tens, 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 ran-
dom, without attending to the flowers. We have no good monograph of the North Ameri-
can sp. whose synonymy is quite perplexing: I shall however give some types.


231. Ageria (mac) retusa Raf. frutescens, ramis cinereis, fol. petiol. obovat. crenatis obtu-
sis 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. ramul-is 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 el-lipt. subobliquis integris, bari 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. *Notholex* 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, really 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.

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 sub serrul. apice acutis obt. retusi, 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, decidui, 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 Mucucua.


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.

242. Synstima acuminata Raf. Ramis angul. fol. ellipt. vel lanceol. acumin. basi acutis, mu-
cronato serratis, subtus nervis pubesc. pedunc. multifl. petiolis brevioribus—Apalachian and Wasioto Mts. disc. 1823.

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

244. Synstima caroliniana R. Cassine do
Walt. Prinos ambig. Mx. E, Ramis teretis vir-
gatis, fol. subsess. ovali-lanceol, acum. subcrena-
tis, 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 3lo-
bum, fruct. 3sperm—very peculiar by half num-
bers in male flowers. Monotype.

246. Arinemia lanceolata Raf. Prinos do
Pursh, auct—fol. lanceol. serrul. glabris, fl.
masc. fascic. fem. geminatis—Carolina.

247. Prinos Raf. dioica vel monoica, cal. ro-
tato 5-6fid. cor. rot. 5-6fida, stam. 5-6, stigma
unicum sess. globoso vix lobato, bacca uniloc.
6sperma. 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
Ennepta. 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. brevior—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. axil. 1-3fl. pet. brevior 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 retic. 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. brevior, calicib. obtusis—Apalachian 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 glabris, axilis unifl. elongatis pet. longior —Virginia &c, akin to the Pr. integrifolius of Elliot but with flowers polygamous 6androus. 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 agregate almost verticillate, and is a larger Shrub. Pr. integrifolia by entire mucronate leaves, long pedicels, flowers 6-7androus &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 3-5parted not rotate, stamens 3-5, stig. 3-5lobed sessile, but the quaternary number chiefly prevails.

256. Nemop. canadensis Raf. Ilex do Mx. t. 49 auct. fol. obl. lanceol. 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, drupa uniloc. 1-2sperma—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 3-4lobo, 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. atromaria*, 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.


—India, erect shrub, stipules spiniform-soft, fl. dull purple. Neither of these is in Persoon &c.


266. Oplukion Raf. (armed Lyc.) diff. Lyc. cal. camp. 5dent. eq. cor. infund. limbo erecto genit. inclusa fol. fascicul. &c.—Types 2 African spinose shrubs my Opl. afrum and horridum, called Lycium by Authors.

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

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

269. Ascleia Raf. (shut box) Johnsonia Necker 1790 non aliis, an anterior? diff. Lycium, 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 Sessea with bivalve capsule.


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


275. Trozelia Raf. (bot.) diff. Lyc. cal. 5gonus, stam. glabra, bacea uniloc. fl. umbellatis—Genus totally unlike. If Trozel has already had a Genus, I substitute Cantalca.


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 commemo-rated 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 campa-nul. 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. antic) cor. urceol. melli-fera, stigma capit.—Type K. umbellatus R. the sp. of Ruiz Pavon.

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

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


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

297. Alcabon R. (n. gr.) diff. cal. non angulato 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.

298. Epicateia Raf. diff. calix plano rotato, cor. rotata revoluta, typo Epl. arborescens and other akin Physalis.

299. Exodeconus Raf. diff. cal. tubul. ventricos. 10angul. 5fid, pellucidus—Type Ex. pros-tratus 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 Depré had a G. let Orinocoa be substituted.

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 odly put in Trioeccia! 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 ombilic of the perianthe and fruit, called by others receptacle.

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

303. Subg. Spherosuke Raf. diff. Periantho globoso—many sp. F. americana, tinctoria,

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. caliculo 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, demonomum &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 nullus, fruct. nudo—Types Nec. turbinata, aspera &c, and probably many other sp. of Ficus.

311. Olintos Raf. (n. lat.) diff. 302 per. globosis, caliculus inegalis multisidus obliqu. obliquus non squamoso trigono marginato vel trilobato—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. periantho duplex, extus caliculans carnosus, deinde calyptrans vel. dehiscens—certainly a very distinct and singular G. with 2 types *R. ovata*, and *ca-lyptrata*.

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


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. *Gnitrum* Raf. diff. cal. 4ph. petalis 4 trifidis &c.—Type G. *obtusum* R. Eleoc. integrif. Lam. P. (Rumf. 3. 192) fol. ovatoblot. 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, bacc- ca 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 bilocal, 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 caliculato, extus 3squamis, tubo inflato. limbo 6fido, stam. 6, ovar. 4lobo, stylis 4, bacc a 4loba 4sperma. *Futenex 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 lateralib.—Anam, *G. alba* Rumf. is a second sp. probably and different from Basella alba of Linneus.

328. *Silammus procumbens* R. Cephalanthus do Lour. auct.—fol. ovato lanceol. petiolatis tomentosis—Shrub of Anam.
329. *Axolus* R. (myth) diff Cephal. phorantho villosa, cal. subul. villosis, fruct. baccatus, acinis 2loc. 2sp. *fol. oppos.*—This is of family *Nauclides*.
331. *Gilipus* R. (Hero) diff. Cephal. Dioic. fl. fem. adherens 4fidus, 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 *Euphorbides*, but variable perigone and stamens: my *Croton* and of Necker is monoical and has, cal. teres 5dent. persistens, corolla decidua 5petala, 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*.


337. Cynogasum Necker diff. 335, cal. masc. Sphylus deciduus, 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 15fid, stig. 15. sem. ovatis.


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

344. Triplandra lanata Raf. Crot. do Lour. Mart. (non Lam.) Cr. erianthus Sm—Arbo-
rea, fol. opp. ovato lanc. integris glabris fl. ra-
cem. 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. 2-4lobis ineq. 1 major, petalis 5, stam. 10-
15, drupis 2loc. 2sp.—Quite a distinct G. by
calix and fruit, hardly of same family, nearer
to Aleurites.

346. 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 Cro-
ton, cal. masc. tub. 4-5dent. stam. 2-5 liberis
elongatis, petalis nullis, cal. fem. parvus persist.
3part. stylis 3 refl. stig, 3 caps. 3loc. 6valvis,
3sp. sem. arillatis semisphericis—very peculiar
G. shuffled in many, and very differently de-
scribed by authors, so as to offer perhaps several
sp. the type however is

348. Seborium chinense Raf. Croton and Stil-
lingia 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 calix and co-
rolla. 2 stam. Elliot, 3 to 5 Smith. Brunsvia
of Necker has 8 coalescent and calix with co-
rolla 3parted: do they mean the same tree?
Crot. nutans is a second sp.

349. Semilta Raf. diff. Croton, stam. 5 liberis
&c—Types Sem. althesolia, a shrub, Croton do
Martins.

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

351. Crozophylyla 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 Phylaurea 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 apetalos persist. styl. 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 Stillingia do auct. Stillingia 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. 6fido. 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. Decariniurn 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 foliaceis 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. Meterana Raf. (n. lat.) diff. Croton, cal. masc. 5part. pet. 5 undul. stam. 10, alt. 5 brevior,
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. alterne —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. *Odotalon* 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. 4fidus, 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, Stilllingia, 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 trifid, leaves as in B. chinensis thin and smooth, fl. small on filiform peduncles, with short subulate bracts. Probably from Oregon and Sibiria, 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 subintegris, 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. nutantib. 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. subrotundis 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 nutantib. 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, Nuttal’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. **Diallospemra** Raf. (2 diff. seeds) diff. Aspalathus, Leg. compresso subtrigono dispermo, sem. 1 renif. 1 globosa, *frutex spinos.*—Type *D. spinosa* Raf. united to Aspalathus by all authors.

383. **Fakeloba** Raf. (lent. pod) diff. Aspalathus, Leg. lenticularis monosp., semen lentic—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. **Damapana** Ad. diff. Aspal. cal. 4fidus,
Leg. teres 3-8sp. l'sem. globosis, fol. pinnatis, fl. spicatis—Adanson gives for type the Manneli Rheed. t. 38, Malabar shrub, my Dam. man-nelly 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 coal-itis, 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 lays 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 shuf-fled in many families, I once put it in Gratiolides, but have since formed a peculiar family of those G. with berries, Cyrtandra, Bruns-felsia, 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 Verbénides.

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

395. Lophalix bicolor Raf. Besleria cristata
CENT. IV.

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. bacca uniloc. sem. pariete affixa. _Herba._—In Besleria the seeds are in the pulp, same family.


399. _Fimbrolina_ Raf. diff. Besleria, cor. ventricosa, 5fida, lacinii reflexis inequalis simbriatis.—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.

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 2types 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 hermaphro-dite, 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. fron-dosa 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 confluentes 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.


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.


417. Culhamia Forsk. Vitm. diff. Sterc. cal. campan. 5fidus, 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. planatif. 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
**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, evalve or bivalve, such is the absurdity of these medleys. Adanson called the whole G. Isora.

420. **Helicteres Raf.** calix tubul. tereto bilabiato 2-3fido, petalis 5 equalis, stam. 10 tubo 5fido extus inserta, podog. filif. incurvo, stylo 5fido, 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. unifl.—Jamaica, made a var. of Helict. isora! by L. and others.
426. **Ozoxeta** Raf. (bristles branched) **diff.** Helict. calix setis ramosis vestito, stam. 5, caps. tomentosis—Type **O. ovata** Raf. H. pentandra L. auct. Is the hexandrous H. prunifolia a sub-genus?

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. 5fidos, stam. 20 monadelph, 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 4fido, cor. 0, antheris 4 bilab. sessilis epigynis, ovar. ovat. 4sulc. disco magn. insidens, stylis 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 4fid, 2 later. erectis magnis, 2 inf. deflexa, 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. 6gonus 10striat. 5fidus: galea bifida, labio trifido, lac. media concava inflexa, stig. simplex acut. sem. 4. *Frutescens, fl. axil. bibracteatis*—several types of Amer. Shrubs, quite different from Satureia, as much so as my *G. Pilobilephis* 604 New Flora. No Satureia grows in America.

439. **Nostelis viminea** Raf. Sat. do L. auct. Frutescens, fol. ovatis lanceol. integris, subtus toment. nervosis, supra scabriusculis, fl. gemin. pedic. fol. eq.—Antilles, flowers white in all and autumnal.

440. **Nostelis minor** Raf. Satur. viminea Sw. obs. Frutescens ramis rigidis ferugineis, fol. obl. cuneatis glabris, fl. ternis subsessilib—Jamaica on high Mts. 2 or 3 feet high.

441. **Nostelis arborea** Raf. Sat. vim. var.
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 *Lophalix* 394, was a Columnnea? two types.


445. *Leucoxylon* Raf. diff. Bignonia, cal. bi-lab. 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 Catalpia 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 digitate Sp. belong to it. B. serratifolia has also the calix bilabiata.

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


453. *Hippox. indica* Raf. Bign. do auct. B. pentandra Lour. foliolis subrot. ovatis cord. acum—very large tree of India, Anam, Molucas, perhaps 2 or 3 sp. blended, the lignum equinum of Rumph 3, t. 46 is one, the Palega of Rheed 1 t. 43 and 6 t. 45 also.

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.


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 Sererea 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 arborea* 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 ovisformis—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.


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 Jessamine, 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?

479. Lantana (Camara) antillana Raf. L. camara L. Sw. auct. ramis 4gonis sulcatis hirsutis, fol. longe petiol. ovat. acum. serratis hirsutis. fl. cap. umbel. pcd. ang. bract. ovat. lanceol. concavis—Shrub of Antilles seen alive and compared with the next, character made comparative.

480. Lantana (Camara) floridana Raf. L. p. 148. Ramis 4gonis scabris, fol. brevi petiol. ovato lanceol. rugosis scabris crenato serratis, capitulis congestis, pedic. clavatis, bract. lanc. planis—Florida, discovered by Bartram, mistaken by him and American Botanists for the last, seen alive in Bartram’s garden, flowers versicolor, yellow, orange, red, crimson on same shrub, berries globular blue small.

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 referred 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. ovatooblòngis, utrinque acutis, crenatis, basi integris
labiussculis subitus glaucis reticulatis, spicis pedunculat. umbellatis, bract. oblòngis obtusi culis
---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. albescentes hirsutis, fol. ovatis
vel subrot. utrinque acutis scabris, lato dentato serratis, subitus 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 rosalate.

484. Lantana (Periana) incarnata Raf. ramis angul. fuscatis glabris aculeatis sparsis bre-
vissimis recurvis, fol. ovatoblot. utrinque acum.
crenulatis scabris, capitulis axil. pedunc. invol-
ucris, 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. caule
angul. carnosus, fol. ovatis, pet. acutis---Antil-
les, Guyana, perhaps several blended sp. called
Syrup Vine, corolla red full of sweet juice, ber-
ries white. Of family Beslerides.

487. Columnea L. the type is C. longisfolia,
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 Piperides wrongly united to Urticides, 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.


493. Lepianthes Raf. diff. Lepigonis floralis stam. 2 cum filam. stig. 3 sessilib. reflexis fl. spici-tatis 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 obliqu. villos. **fol. verticillatus, fl. spicatis**—all the sp. with whorled leaves from 3 to 5, Trox. or P. trifolium, quadrisolium, reflexum, verticillatum, stellatum, pulchellum, filiforme, peresia, blandum.

495. **Gonisium** 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 mysticum and Churumaya are also probably types of other Genera? to be called **Mysticum 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 epidiuco, stylo tereto, stig. obt. baccia 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. simplici. fl. umbel.—Type Irs. sicyoides Raf. C. do L.

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

504. Gonoloma Raf. (ang. edge) diff. cal. plano marginans integro 4gono, pet. 4 stylo 4gono. Fol. trifol. fl. umbel.—Type G. alata Raf. Cissus trifoliata L. and probably several other trifoliate sp.

505. Ituterion Raf. (n. gr. Hedera) diff. cal. urceol. 4fidus persistens, pet. 4 revolutis basi coaititis marcescens persistens. Arbor fol. oppos. simpli. 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.


511. Quinaria Raf. med. \textit{fl. 1830} Psedēra Necker, diff. 501. cal. 4-5 lobus, pet. 4-5 cuculatis erectis, stam. 4-5, disco plano, bacca 4-5 loc. 4-5 sperma. \textit{fol. digit. fl. panic}.—Types nearly all the sp. with digitate leaves, particularly \textit{Q. hederacea} Raf. or Hedera, Vitis and Cissus 5 folia of Authors! also \textit{Q. hirsuta} -R. of North America often deemed a var. of it, and 3. \textit{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 sub10 lobus, stylo brevis, stig. obt. bacca 2 locul. 2-4 sperma. \textit{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 513. Nekemias bipinnata Raf. Ampelopsis do Mx! Cissus do Elliot, Vitis arborea L! Hedera do Walt! Cissus stans Pers. Pursh—ramis viminalis subang. fol. bipinn. decomp. foliobis ovato lanceol. dentatis iucisis lobatis, corymbis dichotomis—Carolina to Louisiana, seen alive like the last and next.
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.


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 a 4ang. 4sp.—hardly of same family, very near Ehretia.


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. Elioia Raf. (n. gr.) diff. Heliotr. cal. tubul. 5 dent. cor. hypocer. 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. Elioia serrata Raf. fol. ovatis subcord. sub serratis rugosis hirtis, spicis term. solit. fl. secundis biseriatis—Antilles and tropical America, the Heliotr. indicum of Swartz & c, H. americ. of Sabati &c, fl pale blue.

531. Elioia riparia Raf. fol. ovatis subrepandis rugosis hirtis, spicis term. solit. fl. secundis uniseriatis—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. apteris. fl. racemos. 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,

536. **THEVETIA** Ad. Scop. Neck. diff. ad Cerbera cal. 5phyl. cor. clavata infund. nect. 5dent. stellato. stig. capit. 5gon. emarg. drupa, nux 2loc.—Types *Th. linearis* Raf. Cerb. thevetia L. auct. 2 *Th. ahuai*. and probably some others.

537. **PHYLANTHUS** 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. **PHYLANTHUS** Raf. monoic. cal. 6part. pet. nullis, stam. 3 monadelphis, fl. fem. stylis 3; bifidis caps. 3cocc, *fol. floriferis*—most of the species.


540. **NIRURIS** Raf. diff. cal. 6pdo vel 6dent. caps. 6locularis.—Several sp. blended in *Ph. niruri*, some even of different Genera! such as Kirganelia and *Mœroris*. Type

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

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

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

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

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

546. LOMANTHES Raf. (marg. fl.) diff. stam. 6 liberis, stylus 3part. stig. 3, caps 3loc. 6valv. 6sp. 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 3fido, stig. 6. caps. 3loc. 6valv. 6sp. 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, blended in Ph. niruri by L.

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

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

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

552. SYNEXEMIA Raf. 1825. Mascalanthus Nuttal 1834. See my Neog. 10, Flora Tellur. 1191, New Flora 995—diff. 538, stam. 6 apice liberis, caps. 6valv. 6sp. fol. distichis fl. axil. gemin—Types S. obovata R. Phyl. do and car-rolinianus, 2 S. cuneifolia Raf. n. fl. 995, and other small annual plants of N. America.

553. BELLUCIA Neck. 833. cal. superus sim-
plex 3-5fidus coriaceus, petalis 7-9 epicalix unguic, fimbriata, stam. 12-18, filam. conniv. antheris liberis, stylo incurvo clavato, bacca pluriloc. polyp.—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 linnean 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 Rhexia of family Lythridia subfamily Rhexides.

556. Melastoma Raf. cal. camp. 5dent. pet. 5, stam, 10, stig. obt. vel capit. bacca coronata 5loc. polypsp. &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. Dancera 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.
561. *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. *Acinodendron laxiflorum* Raf. fol. lato ellipt. denticul. 5nerv. subt. canis racemis axil. laxis—S. Amer. tree 20 feet high flowers white, the genuine linnean sp.


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


569. Synodon Raf. diff. 556, cal. 5-6 dent. coalitis calyptrans sepe deciduis vel latere fisso, pet. 5-6. stam. 10-12. ovar. annulo coronata—Types S. calyptrata and montana Raf. Melast do auct.

570. Eustegia Raf. diff. 569. cal. indiviso integro calyptrato deciduo, pet. 5-6, stam. polyandris, bacca non coronata, concreta, 5-6 locul—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, flexuosis rugosis. Frutex fi. panic.


577. 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?

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

579. 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. grandiflora, Melast. do auct. and next.


582. Lomanthere 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.

583. 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 arc Melast. angus-
tif. 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.

485. _Antisola racemosa_ Raf. _Mel._ tetrandra Sw. auct. fol. obl. glabr. integr. 3nervis, racemo erecto term—Shrub of Jamaica &c.

580: _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. _Folomphis_ Raf. vel _Pholomphis_ (scaly umb) diff. 556, bacca duplice umbilicata, squamis fl. umb. centralis clauso.—Probably other characters also. _Type Mel._ _fragilis_, Shrub of Guyana, compare _Gynomphis_, 597.

589. _Zulatia_ Neck. 791. _Raf._ emend. diff. 556, petalis 5 ineq. 4 eq. minor, 1 major, antheris bifidis, bacca 3loc. 6sp.—3 types _Z. levigata_, _alata_, _grandiflora_ Raf. all _Melastomas_ do Ault, Shrubs of Guyana. His _levigata_ is different from _Synoptera_ 596. Is his _grandiflora_ the same as _Alosemis_ _grandiflora_?

590. _Exodictis_ Raf. (out 2v) diff. 556, petalis ineq. 4 minima, cal. caliculato, bracteis 2 bivalvis, ovar. libero, capsula libera 2-5valvis, 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. polyssp. *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.

598. **Abrophaes Raf.** (elegant aspect) Fothergilla Aubl. non alis diff. 556, cal. turb. 5dent. bibract. pet. 5 eq. unguic. antheris incurvis, stylus longus pilosus, stig. capit. planum. bacca ex-sua striata coronata 3locul. **Frut. fl. racem.**


600. **Clastilix Raf.** (broken calix) diff. 556. cal. tubuloso obl. vel ovato inequaliter disrup-tentes—Types **Cl. mexicana, tunicata, Raf. Melast** of Kunth.

Such was the medley of Melastomas, united by no characters, except leaves opposite nerve-sose!!! 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 Epilobdins, such as Fuchsia, Muriria, Cacucia, Dorvallia &c and the Myrtides with definite stamens.
CENTURIA VII.


603. Topobea Aubl. J. V. Drepanandrum Neck 793, diff. 556. cal. camp. 6cuspid. ad basi calic. involucro 4partito, pet. 6 ineq. stam. 12 incurva connivens, stylus declinatus, stig. capit. 6sulc. bacca 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 refered 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. Rhezia, cal. campan. ut Melast. 5dent. stam. 10, caps. 5valvis, pet. 5eq.—Types all the decandrous Rhezias or A. canescens, striata, lutescens, montana Raf. (Rhex. polypetala R. P.) &c chiefly shrubs. Very near to Acisanthera. All the G. Rhezia was called Alifanus by Adanson.


609. Osbeckia L. this G. lately deemed doubtful has been well settled by Smith, the main difference from Rhezia 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.

615; **Quirina microphylla** 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. **Melvilla speciosa** And. R. Cuphea melvilla b. reg. 852. fol. ov. lanc. scabris subsess. racemis term—Guyana, red flowers.

621. **Woodfordia** Sal. diff. Grislea and Lythrum, cal. clavato tubul. arcuato 6-12dent. pet. 6-12 extus glandulis 6-12 oppos. intus basi cal. nectario 6-12fidus staminisf. 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. salicornia is the type of the Genus.

624. Melfona R. (nymph) diff. cal. tubul. infund. strictus 6-10 dent. 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. 4 dent. basi 2 bract. calic. petalis 4, stam. 2 caps 3 loc. fol. alt.—Type E. thymifolia Raf. Lythr. do L.


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


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

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

632. Gomphotis saxicola R. Beckea do Hook. b. m. 3160, fol. oppos. imbric. obov. acutis. fl. axil. and term.—Australian shrub.
633. Triplarina Raf. diff. from last, stamens 15.—Type Tr. camphorata R. Beck. do Hook. b. m. 2694, fol. 4far. imbric. cuneatis punctatis, fl 1-2 axil. albis—Australian shrub, Leptospermum differs by 20 stam. fol. alt.

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

934. Murrinea Raf. diff. B. cal. 4fid. pet 4, stam. 8. caps. 4loc. near next G.

635. Cluacea Raf. (n. lat.) diff. Myrtus, cal. adherens 4part. pet. 4, stam. 8, bacca 2loc. polyp.—Types Cl. vaccinoides and Myrsinoides Raf. Myrtus do Kunth, shrubs of S. America quite different from Myrtles, Plinius called Myrtle Cluacena.

636. Myrtus L. although apparently a natural G. it has been found also anomalous, and to make the matter worse the G. Eugenia, Caryophyllus, Zizygiun, 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 italicca Raf. ramis rectis, fol. ovatolanc. acutis sess. baccis ovatis purp. Italy, Spain &c, the var. are lusitanica, betica, imbricata, laurijolia, nigra, alba, &c.


639. Myrtus latifolia Raf. fol. ovatis petiolatis—Italy var. romana, tarentina &c, smaller shrub.


642. **Pimentus** Raf. diff. Myrtus, cal. 4part. caliculatus, petalis 4, baccas 2loc. abortus 1-3sp. dentibus. 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.


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*.


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. coumte Aubl. auct.—2 *C. tomentosa*, 3 mini, 4 microphylla, 5 fragrans, 6 montana, 7 multifl. 8 di-
varicata, 9 angustif. R. all Eugenias of Authors.


660. SEREREA Raf. diff. Bignonia, cal. urceol. 5 dent. cor. tubul. limbo plano 5 part. lac. obcord. obliquis subeq. stylo clavato, stig. obt. antheris sagittatis lobis divaricatis—G. omitted among my reformcd Bignonias, see 445 to 465, quite distinct.


662. NEVOSMILA Raf. diff. Crateva, cal. cyathif. 4gonus, segm. 4 foliosis ineq. petalis 2-4 superis adscendens unguic. stam. 20-24 podogyno inserta declinata, stig. sess. capit. bacca 2loc. polysp.—certainly peculiar G. name applying to the bad smell. Family CAPPARIDES.

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. corystosis*. 2 types.


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


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.


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?


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 Cleome, the type was figured by Rotboll in act. Copen. 2 t. 2.

683. Triplobus Raf. Tri-phaca Lour. Monoic. fl. masc. cal. 5fido colorato, stam. 15 bre-vis. fl. fem. cal. ut masc. disco stipitato concavo multi-fido, 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 family 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 de-flexis, nect. 0, stam. 6 ineq. longiss. Gyno-phoro longissimo, stig. sess. siliqua bivalvis, placent. 2 lineari. sem. echinata. Frutic. acul. fol. digitatis—Types several sp. blended in Cl. arborea, and akin.


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


689. Diórimasperma 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. Siliquaria 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. **Sieruela** Raf. Aleome Neck. diff. last, stam. longissimis, siliquis lineariis. *fol. simpl.*—Type *S. viscosa* Raf. Cl. monophylula L.


293. **Octanema** Raf. diff. Capparis, cal. 4ph. eq. stam. 8—a section of Kunth, akin to Peuteron 673, but fruit berry, types *O. angustifolia*, Mexican tree, *O. incana*, *crotonoides*, *scabrida*, all Capparis of Kunth.

394. **Marsesina** Raf. diff. Capparis, cal. 4sid. 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. unequal secund, stam. 6 unequal hypogyne, a gynoph 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.
nect. 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.

CENTURIA VIII.


702. Riddellia antiphyla Raf. n. fl. 557. ramis 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. capensis* Raf. Cleome do L. this like the other bilocular *G.* may form a Subfamily to be called *P. Septilides* 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 sterilib, siliq. longe pedunc.—Type *C. augustif.* Raf. Cl. do Forsk &c.


710. **Peccana** Raf. (bot.) diff. Euphorbia Periantho 10fidus, 5 alt. subrot. crenatis, 5 alt. minora turbin. truncata, stam. 8-10, stylis 3 bifidis

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


725. *Montanoa Llave.* per. 5phyl. ineq. rad. 4-5obl. sterilis, flosc. 12-14 filif. 5filis, 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, Helepta* &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.


729. *Ismaria* Raf. (bot.) *Rosalesia* Ll. per. 8-10 part. tereto striatis, caliculus foliosus, phor. nudo, flosc. 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 revisal 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. Isp.—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, sentiliva &c.


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


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 divisi—Type N. juliflora and N. arenosa Raf. but pod only known in the first.
748. **Mitostax** R. (filif. spike) diff. Acakia, petalis 5, spicis filif., fl. oppos.---Type **M. pallida** Raf. A. do W. &c, near Gleditsia.

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


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


755. **Drepaphyla** Raf. diff. Acak. cal. 5lob. cor. 5loba, stam. indefinite, antheris bilobis, stylo obliquo, Leg. sessile obl. fol. simpl. multineris falcatis fl. capit—types Dr. lanigera R. Ac. do Cuning. b. m. 2922, and Dr. multineris 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. auot.

758. Melilobus Mitch. Raf. diff. Gleditsia, fl. dioicus polygamis; herm. cal. 5-6part. petalis 5-6, stam. 5-6, pistil. villoso, 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 bi-nate leaves instead of flowers! yet no one has thought to reform it, altho’ some admit of Hymenea, 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. Mandarux Raf. diff. stam. diadelphis fertiles, petalis camp. Leg. stylosis brevis planis oligospermis—Type M. or B. divaricata, acuminate, pescapra, rotundif. &c, B. utimuta Aubl. has same pod but how are stamens?

763. Pauletia Cav. differ. 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. differ. cal. 4phyl. ineq. pet. 5 ineq. unguic. appendic. stam. 3 liberis, 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, enum. to C. fistula may be given to a subgenus: Cathartocarpus applies better to it.

769. Herpetica Raf. diff. last, petalis conc. inferus fimbriato undul. stam. 10, sterilis 3 parvis, 4 fertilia minora, 2 majoris cum antheris longis recurvis sagittatis, styl. recurvus, leg. 4angul. bialata, alis cuneatis, intus septis membran. inter semina. Frut. racemis term—Type H. alata Raf. Cassia do L. auct. Rumf. 7. t. 18, and perhaps C. sericea, cançã, albida, grandis, javanica, villosa, &c.

770. Oskamia Raf. (bot.) cal. 5part. cor. infund. 5fida, stam. 5. antheris subsess. styl. clavatus, stig. capit. bacca scabra 2loc. 4sp. Frut. scandens, fol. alt. fl. subrac—Types O. scandens and hirsuta Raf. Tournefortia do L. auct. very dist. G. of Vines, berries not biporose.

771. Molubda R. (n. gr.) diff. Plumbago, cal. tubul. basi ventric. 5gon. 5sulc. 5dent. cor. infund. limb. patens 5lobis emarg. nect. 5 ov. cingens subrot. stam. 5filam. subul. stig. 5fidum. sem. ovat. tunicat. Frutex scandens, fl. panic—Type M. scandens Raf. Plumb. do L. auct.

772. Erithalis odorata Raf. arborea, fol. obov. fl. cymosis pedunc—Antilles, small tree, ff. 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 5gone 10dentate, 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, stylus 5fido, 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. fl. hermaphr. in all except the true Loranthus.

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

784. **HYPOPHUS** R. (cup under) diff. ovario caliculat. ext. urceolatus, cal. superus marginalis, 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. **ALLOHEMIA** Raf. diff. 781, pet. 6 basi fere connata ineq. 3 alt. brevior stam. sterilia fersens, stam. 3 fertilia, fl. axil—Types 1 A. purpurea Raf. Lor. occidentalis L. auct. 2 A. uniflora, 3 A. pedunculata, antheris appendiculatis.

786. **SCURRULA** Raf. diff. 781, cor. 4part. stam. 4, fl. axil.—Types 1 Sc. obovata R. Lor. scurrula L. auct. 2 Sc. elliptica R. Lor. tetrapetalus L. auct. 3 Sc. umbellata Raf. Lor. tetrandra R. P..

787. **TAGUARIA** Raf. diff. cor. 7-8part. stam. 7-8, arboreis fl. racem. bracteatis—Types *T. vera* (L. tagua) laurif. nitida, punctata, puraensis, 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, brasiliensis, dichotoma* &c, Raf. all Lor. do 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 Scevolia) 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 diffuse, 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. sterile, leg. ellipt. planum membran. bialato.


795. *Heptaireca* Raf. (abrev. of Heptasteirodeca) diff. Senna pet. 5ineq. vexil. duplo major, stam. 10, steriles 7 brevis, fertiles 3 longis,
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. Peiranisia Raf. (def. uneq) diff. Senna cal. ineq. pet. subeq. 2 inf. major, stam. anoma- lis 6, filam. 3 divisis 2fertilis, Isterilis, filam 3 connexis 2 steriles, 1 fertiles, antheris totalis 3 fertiles rostratis major, stig. acut. sessile, leg. falcato. fl. axil.—very singular G. and anoma- lous 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 ungu. ineq. stam. 10 fertilis 6, antheris arcuatis biporosis, stertilis 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. 10ineq. fertiles, 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. castrati- tis, fertiles 6 ineq. 4 major, 2 inf. deflexa, anthe- ris 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 4 gonis 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. Scolidia R. (sp. dent) diff. Senna, cal. 5 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. scan- dens, 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
3 inf. spatulatis, fertiles 7 ineq. 3 sup. major an- 
theris longis apex mucrone linguiforme, 4 media 
brevior antheris muticum, ovar arcuato, stig. ses-
sile acut. Leg. compr. t alcato multiloc. subartic. 
sem. obliqua renif. *Arborea fl. axil—Type *P. 
1310—S. Amer. tree.

807. *Adiperan* R. (not 2 def.) cal. 4part. ineq. 
2 major interna alt. pet. 5 unga. eq. stam. 2 per-
flecta declinata, cetera effossa sterilis, ovar. un- 
cinat. fl. axil—calix quite different from others.

b. reg. 1422. fol. subbijug. lanc. subt. pubesc. 
ped. multifl. Antilles.

pet. ineq. conc. stam. brevis 5 sterile, 5 fertiles 
quorum 3 major deflexa, anth. lin. stig. villose 
marginatum. Herba, fl. extraxil—Type *O. 
serpens* Raf. Cassia do L. auct.

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

811. *Diplotaxis* 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.

ineq. stam. 8 fert. 4 longior, 2 sterilis brevis, 
leg. falc. compr. racemis axil.

814. *Thyrsosma* Raf. diff. Viburnum, cal. campanul. 5 lobus, cor. rotata subhypocrat. disco glandulosos conico stigma 3 gono ferens. *fl. thyrsoides*—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* differt, drupis concretis, fructus globoso intus carnosos ut *Morus*? very singular G. uniting the Corinides with Nauclides, 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. multif.—shrub of East Indies to be added to my G. Amphiomn 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. Syrobon 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. ragi-natum 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. Stegithris Raf. diff. Anthelis, cal. 3phyl. equalis—thus as Libanotis from Cistus, types St. or C. calicinus, algarviense, lastianthus, atriplicif. & c.


830. Xolanthes Raf. 1810, diff. Anthelis, stam. 8-12, stig. sessile trifido vel trilobo, inter-dum fl. 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, fl. nutantibus—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 *arena-ria* 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, Eulieexa*, 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. polysp. 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 estivatis, 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 Robb. diff, Laurus, cal. persistens turbin. basi fruct. cingens 6lobato, fl. racemosis—aakin to last but different habit, 2 types both of Guyana.


846. Ajovea 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. act.

848. **Dipliathus** Raf. (double cup) diff. Laurus, cal. persistens duplex, cupula ext. 6lob. ineq. cupula interna integra.


850. **Endocarpa** Raf. diff. Laurus, cal. tubul. persistens, 6fidus eq. stam. 12, steriles 3 int. glandulis 3 alt. drupa in cal. tubo baccato inclusu.


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


854. **Cinnam. multiflora** Raf. fol. lato ellipt. panic. fol. longior — the broadleaf Cinnamon of Molucas.


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

857. **Camphora** Raf. diff. Laurus fl. herm. cal. 6part. stam. 15, stertilia 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.


867. *Tamala carolinensis* Raf. arborea, fol. ovato lanceol. supra lucidis, subtus glaucis glabrausc. 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 MEBORIDES 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.

871. *Lindera umbellata* Th. auct. cal. 6part. stam. 6 epigynis! ovar libero, stylo, stig. 2 refl. caps. 2loc. fol. alt. fl. umb.—Shrub of Japan.

872. *Knema* Lour. dioica, fl. m. cal. 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. dioicus—akin to last and Ligustrum.

877. Ireon 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. Ireon 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. dif. Bignonia and Hieranthes, cor. tubul. gracilis bilab. galea bifida, 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 tera.


883. Theaphyla Raf. 1830. Thea L. auct. lately united to Camelia! Thea meaning Goddess 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 coali-
tis, stam. 200 liberis, stylis 2-3fid. caps. 2-3cocca
—sp. not yet well settled.

884. Theaphyla laxa Raf. Thea chinensis
Dec. ramis laxis, fol. ellipt. acutis rugosis serra-
tis, pet. sepe 6—China.

885. Theaphyla lanceolata Raf. bohea L. ra-
mis strictis, fol. lanceol. levis acut. serratis, fl.
axil. 1-2 pet. 6—China.

886. Theaph. viridis R. fol. lato lanceol. levis
ac. subferr petalis 8-9—China, Japan &c.

887. Theaph. euryoudes R. Camelia do bot.
reg. 983. ramis debilis pilosis, fol. ovatolanc.
acum. sub serrat. subtus sericeis, fl. solit. ped.
squam, cal. 5p. pet. 5—China.

888. Theaph. cantoniensis R. Lour. fol. lance-
col. 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 Ca-
melina and Camelus! ad bot. Kemel dedic. diff.
Theaphyla, cal. 5part. ineq. imbric. petalis plu-
ris 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 serratis cal. deciduis, petalis angustis bilobis—China, deviating by the calix not persistent although imbricate.

899. **Sasanqua ochroleuca** Raf. Cam. axillaris 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. ovatobly. subcren. fl. term. 2-3—Anam. The 3 Oil Seed Tea Shrubs must be compared.
CENT. X.

CENTURIA X.

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, Duteur, 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. bifomis, inf. obovatis, superis lanceol. omnis 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 sub serratis—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, several var. undulata, violaceo &c.

906. Citrus cedratus Raf. pet. vix alatis, fol. lanceol. acutis subdenticularis, fr. ovoideis verrucosis cortice crassa pulpa insipida.—The Cedrats (or Citrons) are quite different from Oranges, nearer to Shadocks, fruits large with yellow thick rough rind, pulp sweetish without flavor. Several var. inermis, melarosa, syriaca, italica.

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. cuneatis obovatisque acutis, fruct. pyriformis scaberrimis, utrinque 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. utrinque 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.

915. *Citrus granulata* Raf. pet. lin. fol. ova-

tis granulatis acum. fruct. granulato--granular

Lemon. India like all Lemons.

916. *Citrus ilma* Raf. pet. lin. fol. ovat. gla-

bris acum. fruct. subrot. cortice levis tenuis, pul-

pa acida—the Limes or small round Lemons

have many varieties, *undulata, palustris, longi-
golia, magna &c.* but some striking var. must

be examined well and may be sp. such as *undu-

lata, costata, cucurbita, mamillaris &c.* com-
pare the *Pati* of India with fruits like an Apple,

but with a nipple like Lemons, also *Kaki* of In-
dia with fruit like an egg; but if with winged

petiols akin to C. gongra.

fl. racemosis, fruct. glob. tuberc. dulcis—China,

branches erect thornless, fruits red, rind thick,

efficient fruit.

918. *Citrus madurensis* Lour. frutex, ramis
pulpa amara—small shrub of China, Anam, Ma-
dura, flowers and fruits very small.

919. *Citrus margarita* Lour, frutex, ramis
rectis spinosis, pet. lin. fol. lanceol, fr. ovalis 5lo-
cul. pulpa dulcis—Shrub of China, small fruit,
thin rind orange color.

920. *Poncirus* Raf. diff. *Citrus*, stam. liberis,
fr. 7locul. fol. trifoliatis—Type *P. trifoliata* R.

Citrus do L. auct.

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

in eq. variabilis, cor. tubo urceol. intus annulus
fimbriato stam. ferox, limbo unilab. 5lobo, stam. 4 didyn. arcuatis, antheris connexis, ovariio vil-
loso, stylo apice glabro furcato, caps. ut Acan-
thus? Frutic. fol. opp. fl. spicatis—very unlike Acanthus to which united.

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

924. Keringa Raf. (n. afr.) diff. Vernonia, per. duplex, imbric. ext. brevior, phorancho nudo poroso, akenis 15-20 turb. arcuatis 10nervis, apice apiculatis, pappus 20-30 setis denticulatis Arborea, fol. alt. fl. sub panic—certainly not congeneric to our American herbaceous Vern-

925. Keringa amygdalina Raf. Vernonia do Del. Cail. Ramulis gracilis fol. subpet. lanceol. subintegris, panic dichotomis, perianth. ext. lin-
earib. ext. subrot—tree of Central Africa, called Kering, leaves 5 or 6 inches, flowers white.

926. Pleuromenes R. (side lun) diff. Acakia, Leg. spongiosis evallis variabilis, ineq. obl. gib-
bosis vel strictis, vel arcuatis, vel globosis, vel pyriformis, sem ovoideis lucidis, utrinque laterale
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.


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


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 Tiliacea tribe.

933. *Semarilla* Raf. *diff.* Celastrus, cal. minimus pers. 5dent. caps. turbin. sub4gona, 2loc. 2valv. septif. 4sp. sem. arillatis, arillo cupularis carnosito 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. of 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. Sfaris, 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. spathaceo 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, Patabea, 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.
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Sylvia Tellur.

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. 2lamel. 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 Sulcannux Raf.

953. Palicuria A. V. Smirus Jus. Stephanium Schr. admitted as a subg. by Persoon, a G. by Kunth &c, many sp. 11 in Kunth.


955. Patabea A. V. cal turb. 4dent. cor. fusif. 4fid. 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. 5fid. cor. 0, stam. 8-10 basi ladelphis, stig. 1, caps. 3-4valv. septif. uniloc. polysp, sem. baccata. All trees.

960. *Anavinga* Raf. diff. cal. 4fid. 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 epicorol- lis, styl. 3fidus. *Fl. spic. bract*---wrongly united to Portulacea by Kunth, evidently akin to Cle- thra 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, fl. panic—same family of course.

965. *Bronnia 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.

967. *Polylepis incana* R. P. foliolis 3 crenatis subtus canis, racemis axil, paucifl.—shrub of Popayan.

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, Vauquelinia, 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. 5fidus, 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 cap- pit. caps. 5-8sp. corymbis panic—Types Sp. levigata now forming my 3 species bracteata, cuneifolia, altaica 649 to 651, besides my obo- vata 648, 548, virgata 666, and Sp. triloba &c.

973. Drimopogon Raf. 1815, subg. Spirea, cal. reflex. villosis, stam. 20, disco aunularis integro, stig. sess. truncat. caps. 5 villosis 10sp.—Types the Sp. tomentosa and akin my rosea 636, ferr- ruginea 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. versi- folia, betulif. ostryfol. corymbosa, repens, cre- nata, denticul. 654 to 663 of my N. Flora.

975. Awayrus 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 Necker of Saxifragides tribe, see fl. tel. 279.


978. Schizonotus Raf. diff. Spirea, cal. rotato,
discul. annul. stam. 20, pist. 5 eq. caps. sess. tom. monosp. *Fol. lob. fl. panic.*—Type *Sch. discolor* 673.

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

980. Sericotheca Raf, diff. Spirea, stam. 20 caps. sericeis 2sp.—Type *Sp. argentea* Kunth of S. America.

981. Gillenia Mœnch &c, diff. pet. angustis, stam. 20, pist. 5, stylis teretis, stig. papillosa, 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 styl. brevis refl. stig. capit. caps. 2 sp. *Herb. fol. pinn. fl. panic*—Type *Sp. filipendula* and akin.

984. Thecanisia Raf. Ulmaria 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 characters; but I apprehend the whole *G.* requires yet a total revision, and has other anomalies reducible to good *G.* my *Rhodalix* of 1815 has the calix unequal and foliose as in *Roses.*

ut Kalmia, ineq. 5loba. stam. 10 ineq. declin. 5 5alt. append. stylo declin stig. capit. 10radiat. caps. 10locul. 10valv. Arboreis, fl. capiti—beautiful G. very peculiar, several types blended in Rh. arboreum.


987. Stemotis rosea Raf. Rh. arb. var. ro- seum Lind. b. reg. 1240. fol. obl. cuneatis mu- cronatis 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. Chrysophy- lum, cal. persistens 4-6part. cor. camp. 4-6loba, stam. 4-6, stig. subsess. 4-6lob. drupis olivef. non costatis, nucleis 1-2—3 types at least, called Date-apple, while Chrysophylum is the Star-ap- ple, all tropical trees with edible fruits. If Guer- sent had a G. substitute Dactimala R.

990. Guersentia oliveformis 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 sepaliis 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 20
as large as an egg, near Hesperides, see next.

992. **Ayparia** Raf. cal. 5 sep. petalis 5, stam. pluris, pist. simpl. 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. Ayparthus 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 saffron color, kernel globeose, leaves astringent medical.

996. **Ledelia** Raf. (bot) difl. 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.

997. **Ledelia betulina** Raf. Pomad. do Hook. b. m. 3212, fol. alt. petiol. oblipt. obtus subtus ferrugineo lanatis, bract. ovatis, cal. vilosis—Australian shrub with yellowish flowers.

998. **Tubanthera** Com. R. difl. Ceanothus, petalis 5 basi coalitis 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. 5 sepals, 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 Bergerides 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.

**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 numerus, 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 disparities. 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 Ericas, 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
APPENDIX.

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 *Grabuskia* 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. *Noronha* of Stadman and Thouars—cor. globosa, stam. 2 brevis in fossulis immersis, drupis nux bivalvis 2 sperm.

3. Add after *Lomanthes* 546—The G. *Hexacadica* 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 based 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 a-villaris 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.

11. Etubila ferruginea Raf. ramis teretis punct. fol. ovatis subtus pubescens, cor. clavata; apice 6fida, lac. ovatis concavis valvatis, stam. 6 includens—Celebes, flowers rusty color, called Taburung meaning bird’s dung.

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.

14. Dytisisperma Raf. (ret. sem) diff. Rubus,
apetalis vel pet. squamiformis, fruct. lanato non baccato, sem. reticulatis—Types 1. R. apetalus Poir. vel lasiocarpus Sm. 2 rigidus Sm. 3 urticefol. Poir.

15. Cylastis Raf. 1817 diff. Rubus cal. angul. 6-8fidus, pet. 6-8 emarg. acinis paucis—type C. montana Raf. 1817, said to be R. triflorus, saxatilis, parvifl. canadensis &c of various authors, 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.


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 uninc. 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.


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. ahuaei*.


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.

37. **Neisandra** Raf. diff. Symplicos, pet. 5
liberis, stam. 10—Type *N. indica* Raf. Hopea
decandra Buch. Roxb.

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. pe-
talis 3, stam. pluris biserialis, stig. 8rad. caps.
8loc. 8valv. 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 quadrisserialis, petalis 4, stam. plura
4serialis, antheris lobis divisis, stig. cupularis 4
auriculis 12radiat, caps. 12locul.—Type *I. or
Cl. flavu*.

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. 4se-
palis biserialis, petalis 4, stam. plura, stig. 5rad.
caps. 5loc.—Type *F. or Cl. venosa*, and *F. ro-
sea* Raf. fl. racem. roseis var. of Miller. *Cl.*
sessilis and pedunculata with 4 petals either belong here or to Elvertia, 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. 6-7dent. cor. 6-7fida, 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 837, 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 Breynias with 6 stamens and double calix, were called Hermupoa by Loebling, the type had scarlet flowers, compare my New Genera.

52. Tetracerera G. in utter confusion by the medley of G. thrown into it, Delima style 1, Piripec 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, Glabrina, 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.


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

60. **Cubeba** Raf. diff. cal. corol. 6dio 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. Tanaesium W. is akin to this, but T. pinnatum is totally different by habit &c, forming a new G.—Kigelkeia 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, Mangliilla, Athrephyllum, Roemaria, 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 Mangliilla, 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 *Mangilila Melanophlea* of authors.

73. **Messermidia** L. auct. the type is *M. fruticosa* 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. **Raclatirhis** 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.
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, Trixantha 935.

Achyranthides 520 M—Codivalia 543, Ecloteripa 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, Cladera 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.

Bignonides—Leucoxyon 445 till Odisca 464, Sererea 660, Nevrilis 881, Pentelesia 937
--Cupulissa 203 M.
Borragides—Pioctonum 517 till Eliopia 531.
Campanulides—Benaurea 290 M.
Capparides—many G. from Nevosmila 662
to Oligloron 675, Octanema 693.
Cassidydes M. with 5 G. 1077.
Celastrides—Semarilla ? 933.
Celoside$ 559 M—Gonufas 777 S. Deeringia
569 M.
Cerberides—Thevetia 536, Odollamia ap. 31
to Cascabella ap. 35.
Cistides—many G. 823 to 833, Ikoranthes
549 N.
Cleomides—many G. Cleome 676 to Myto-
stylis 707, Riddelia 766 N.
Clethrides—Ireon 877, Fouquiera 962, Bron-
nia 964.
Coniferous, Abies 13 sp. in N. Lexicon.
Cornides—Benthamia 817.
Cruciferous—Acuston 920.
Daphnides—many G. Sanamunda 1135 M.
till Nestonia 1147 M. and 503 N.
Diospyroides—Mabola 21, Benzoina 834,
Traxilisa? ap. 29, Persimon ap. 49.
Echioides 55 M. many G. Oplexion, Penthysa.
Empetrides 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, Eu-
phoria 1168 till Cyathophora 1189, &c.
Ficoides or Sycophores—many G. Ficus 301
till Mastosuke 316.
22
Flosculoses—Fornicaria 721, Flustula 723, Ismaria 729, Keringa 924—M. Brephocton 178, Stahelina 1190 to 1200 &c.

Fraxinides—Nestegis 13, Notelea 14, Postueria 15—M. Nudilus 727 N. till Samarpses 733.

Gonoliges or Aphanides—Zamzela 534, Sphenista 535, Polypleis 966, Quinasis 968.

Gratiolides—Eusyneta 201 M.

Guttiferous—Ganitriini 319, Perinka 320.

Clusia ap. 40 to Firkea ap. 44.

Hederides—Allosampela 515.

Hesperides—Apama 29, Kambala 67 Poncirus 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, Aquifoliun 212 till Enepta 260, Lycium 261 till Huanuca 274, Oskampia 770, Callicarpa ap. 25 to Amictonis 28, Raclathris ap. 75, Catonia 116 M. several of these G. with single stigmas belong to subfamily Lycioides or Aegiphilides.

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

Labiates M. 756—Unilabiate, many G. Teucrium 757 till Monopsis 763 M.—Salvides, several frutescent G. Codanthera 789 M. Enipea 799 M.—Bilabiate, S. Gnoteris 433, Hostelis 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.

Leguminoses—1 Papilionides. Retama 82
and many other G. till Meiemianthera 100, Dialosperma 382 till Damapana 389, Resupinaria 718—2 Lomentides. Bessia 33, G. of Mimosas from Strepsilobus 733 to Melilobus 758, Pleuroomenes 926, G. of Bauhinias from 760 to Phanera 767, Elayuna 928, G. of Cassias 768, 769, and from Isandrinia 793 to Octelisia 812... Zaga 101 M, Delonix 350 M, Drepilia 342 N.

Linides 501 M, Numisaurum 502 M.

Lonicerides—M. Kantemon 523, Distegia 525 &c.

Lurides—Siphaulax 710, Cohiba 715 M.

Lythrides—Quirina 614 till Nesaea 627.

Malvoides—Munchusia 716.


Melastomides—Bellucia 553 till Synodon 569.

Octonum 574 till Savastana 604.

Morides—Toxylon 577 N, Fusticus 579 N.

Myrtides—Eustegia 570, Beckea 630 till Malidra 659.

Nauclices—Axolus 329, Gilipus 331, Eresimus 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 Carputpica 500.

Plumbagides—Molubda 771.

Polygonoides—M. Tephis 404 to Spermaulaxen 416, N. 575. Menophyla 576 M, Pleurostenia 573 N.

Pomides—Xeromalon 501 N, Spondolobus 542 N.
Radiate—Montanoa 725, Zexmenia 727—M
Dectis 148, Orestion 171.
Resedines—Tereianthus 703 M.
Rhexides—Arthrostema 577, Exodíclis 590,
Ephynes 606 till Bolina 608.
Rhodorides—Stemotis 985.
Rivinides 630 M.—Gandola 325.
Sarcocides 626 M.—Raxamaris 624 M.
Scrophularides—Dasanthera 396 N.
Senticoses—9 G. Rubus ap. 12 to Manteia ap.
24.
Sesamides—Aragoa 939.
Siphonanthides, 1064 M.
Solanides, including Cestrides with uniloc.
berry—Benteca 31, Trozelia 275, Diskion 284,
Cestrum 292 till 300, besides some Lycioides
261 to Deprea 300.
Sphanides or Rubiaceous—Bemsetia 25,
Yangapa 71, Rothmania, Pleimeris, Xeromphis,
Acmostima 101, Jurgensia 940 till Patabea 955,
Hexepta ap. 46.
Spireades—14 G. from Spirea 971 to Theca-
nisia 984, Tetracera ap. 52 to Diplotcr 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.
Tamarixides—Eudiplex 533 M.
Theaphylines or Ternstromides—Theaphyla
833 to Drupifera 900.
Thylaxides—Triplobus 683.
Tilioides—Bedusia 19, Tridesmia 930, Xe-
ropetalon ? 932.
Vaterides—Atuna 991 to Curundia 994.
Verbascoides 1166 M.—Diamonon 284 M.
Verbenoides—Silanous 327, Schobera ap. 4—
APPENDIX.

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. Kolofonia 1013 till Bucharea 1053, including 6 fruticose G. Rhodoxylon 1033 &c.

Gentianides—M. Roeslinia 495, Ditereia 1052.

Guanides 8 M—Ledelia 996 S.

Loranthides 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 Roemeria 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, Evantipes, Menispermides, Sapotides, Primulides, and many others also belong to it.

Third Series of Natural tribes including Frutescent Genera.
ENDOGENES or Monocotyles.
Aroides—Pleurospa 803 M.
Asparagoides—Euphyleia 827 M. Gurenias 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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Correction—For *Pausia* 10 real *Cartrema*  
Raf. meaning perforate nut, having already another *G. Pausia* in flora telluriana 1139.
Rafinesque, Constantine
Samuel
Sylva telluriana
BioMed