weaker than the spreading ones. Branch-leaves rather large, ovate-lanceolate, regularly imbricate, apex truncate and toothed with the margin inrolled; when dry almost without metallic lustre. Hyaline cells on the inner surface towards the lateral margins of the leaf with large round pores; near the apex with small pores in the upper and lower cell-angles; pores on the outer surface, semi-elliptical in rows at the commissures.

Chlorophyllose cells in section isosceles-triangular, inserted between the but little convex hyaline cells on the inner surface of the leaf and here free; on the outer surface generally completely

enclosed by the much swollen hyaline cells.

Distrib. France; North America.

(To be continued.)

BIBLIOGRAPHICAL NOTES.

XXIII .- AN OVERLOOKED PAPER BY RAFINESQUE.

[So much interest attaches to the work of this eccentric but capable botanist that it seems worth while to rescue from obscurity the only paper which he contributed to an English periodical—a paper which appears to have been entirely overlooked. It is not included in Dr. R. E. Call's bibliography printed in his Life and Writings of Rafinesque (1895), and does not appear in the Royal Society's Catalogue of Scientific Papers, the periodical in question not being included among those catalogued in that work. The nineteen volumes of Loudon's Gardener's Magazine (1826–1848) merit more attention than they have received from botanists. They contain much information connected with biography and bibliography, notes bearing upon British botany, and occasionally papers, such as the one here reproduced, of general interest. Rafinesque's contribution appeared in vol. viii. pp. 245–8 (1832).

Another publication imperfectly recorded by Dr. Call may as well be mentioned here. In the bibliography the Herbarium Rafinesquianum, issued as "extra of No. 6" of the Atlantic Journal, is stated to number forty-eight pages, in two parts, and to have been published in 1833. The copies in the Museum and Kew libraries have a third part, which seems to have been issued in two divisions—the first including pp. 49-64, the second pp. 65-80. I am not sure whether the reference to "my supplemental Flora of North America, 1830-35" justifies the conclusion that this third part was issued after the latter date, as the Flora in question does not seem to have been published, and this was therefore merely a supposititious date; but, so far as I can judge from a casual inspection, the part contains many names which are not taken up in the Index Kewensis nor by American authors. In the last number of the Atlantic Journal ("winter of 1833") Rafinesque mentions this Supplemental (or, as he there calls it, "additional") Flora of North America at the end of a "Chronological Index" of his "principal botanical works," but he

separates it from those actually published, and in the course of the

enumeration refers to it as a future publication.

It will be observed that several names in the following paper are not to be found in the *Index Kewensis*—e.g. Negundo fraxineum is cited there as of "Steud. Nom. ed. II. ii. 188," although Steudel quotes it as of Rafinesque; Belendenia is quoted (as Bellendenia) as of "Rafin. ex Endl."; Phialospora is not entered; and so on. I have not, however, attempted to collate the names either with the Kew Index or with American nomenclature.

The additions in square brackets were made by John Denson,

who cooperated with Loudon in much of his work.

JAMES BRITTEN.]

REMARKS ON THE ENCYCLOPÆDIA OF PLANTS OF LOUDON, LINDLEY, AND SOWERBY.

At the request of Dr. Mease, I have read with great attention and pleasure the whole of this work: I consider it very valuable, embodying so much useful and practical information. In such an immense compilation of materials, it is no wonder that some errors have crept in; and, as I am quite familiar with our North American plants, I have been particularly struck with those relating to them, I propose to notice some of them, in order that Mr. Loudon may

correct them in his new editions, supplements, or journals.

This work appears to consist of three parts, by different hands: the botany by Lindley, the figures by Sowerby, and the history by Loudon. Each of these has peculiar excellence and defects. I have been delighted to see botany returning to the good old plan of woodcuts, which I have long desired, and done also in some of my works (Medical Flora, School of Flora, &c.). The given figures are mostly excellent or good, but some indifferent or bad; and, in a few instances, they do not represent the intended species. Mr. Lindley shows himself an acute botanist in his part; but, as is too common among the practical botanists, he appears to be led partly by whim rather than principles, in his nomenclature, genera, and species. If this should be matter of mere taste, it would do; but when justice is required towards the founders or detectors of genera and species, an adherence to priority is needful. If so many new genera or subgenera are needful in Cryptogamia, Orchideæ, Pelargonium, &c., why not in Scabiosa, Narcissus, Erica, &c.? He quotes Willdenow instead of Linnæus; Pursh instead of Michaux and myself, &c. I found only one genus (Adlumia) of mine adopted, and another (Lobadium) quoted. My numerous works appear totally unknown. I am called a writer on botanical matters. I have been writing, indeed, for twenty-five years, and published fifty works or pamphlets, some of which I now present to Messrs. Loudon and Lindley through Dr. Mease, in order that my labours may be a little better known in England.* I have already published or indicated 500 new genera, or subgenera, or species presumed new, of plants, many of which are yearly pilfered by others.

^{* [}These were the Medical Flora, Principes fundamentaux de Somiologie, and Précis des Découvertes Somiologiques.]

Mr. Loudon's history of plants is excellent: I have found in it many novelties and valuable matter. If he had known my Medical Flora of the United States, where 600 genera are mentioned, and even their economical properties indicated, he could have added some other peculiarities.

Without further preamble, I enter upon the course of my

remarks :-

1. The good genus Centranthus of Necker and Decandolle is called Fedia; and the Fedia is called Valerianella. Is it oversight or whim?

2. Tritonia of Ker is inadmissible: there are two genera of that

name already; this is the third. I have called it Belendenia.

3. Oryzopsis Mx. is erroneous: Dilepyrum Raf., 1808. The same with Airopsis, Arundinaria, Portulacaria, Erucaria, Testudinaria, Cucurbitaria, &c.: all these are inadmissible. Arundinaria is Miegia of Persoon.

4. Imperata: the etymon is stated to be unknown. The genus

was dedicated by Cyrillo to Imperati, an Italian botanist.

5. Cissus quinquefolia and Ampelopsis quinquefolia, mentioned twice under these two names: and it is neither, but my Quinaria. See my Monograph on Vines, and my Medical Flora, vol. ii. p. 120-180.

6. Nicotiana. Etymon of Tobacco: it is the name of pipe in Hayti language; and not from Tobago nor Tobacco. See Anglina,

1525; and my Medical Flora, 1830.

7. Ipomæa Quamoclit. False etymon given. Quamoclit is the Mexican name; it grows from Florida to Mexico.

8. Gymnima. "Vaccine ichor," for "milk or vaccine liquor."
9. Beta, a substitute for coffee. Sugar ought to be said instead.

10. Rhus aromaticum I called Turpinia; but I changed it to Lobadium, on finding another genus Turpinia. I did not know it was called Schmaltzia (after me or my mother's name) by Desvaux. It is also Myrica trifoliata of Linneus.

11. Narcissus, "from narke." Ovid and all other authors derive

Narcissus from the name of a man.

12. Drosera filiformis Raf., 1808. Pursh, in 1814, stole this

plant from me.

13. Smilacina. Bad name. It forms my genera Clintonia and Styrandra. The Dracana borealis of Aiton is the type of my beautiful genus Clintonia (dedicated to Governor Clinton, philosopher, naturalist, and statesman), with bilocular berries. I have found six species of it: those cultivated in England are C. multiflora and nutans.

14. Polygonatum, same as Polygonum. My Sigillaria or Axillaria.

15. Virgilia lutea, so called from the yellow wood. You say it has yellow flowers. Michaux's figure has white flowers; and so had the species I saw in bloom. Is a yellow-flowered species cultivated in England? The Virgilias of North America and Mexico form my new genus Cladrastis; very different from the Virgiliæ of Africa.

16. Why is Cydonia adopted, while Sorbus and Malus are united

to Pyrus; nay, also, Aronia united, far more removed?

17. Spiræa corymbosa of Loddiges is mine; published by me in 1814. See Précis des Découvertes, No. 115.

18. Actaa racemosa and Cimicifuga serpentaria, twice mentioned in two places. It is my new genus Botrophis, 1828; Macrotys, 1808.

19. Esimina, stated to have no meaning. Wrong: name of

Indians of Louisiana.

20. Dionæa, Jeffersonia, Podophyllum, &c., stated to be genera with solitary species. Wrong: I have seen and described three species of each, Dionæa corymbosa, sessiliflora, and uniflora; Jeffersonia Bartoni, odorata and lobata; Podophyllum peltatum, montanum and callicarpum. See Medical Flora, &c.

21. Erucaria, same as Eruca. It is my Pachila.

22. Adlumia. A false etymon given. It was dedicated by me to Adlum, an American cultivator and writer on vines, a friend of horticulture and botany; yet living, and making good American wine.

23. Camellia, Camelina, and Camelus among quadrupeds; three genera of the same name, nearly. I have called the tea shrub Theaphylla (meaning divine leaf): a good name, whether a peculiar genus, or Camellia to be united to it.

24. Lupinaster. Horrible name! Lupinus and Aster. My

Dactiphyllum, 1817.

25. Hypericum virginicum, with "yellow flowers." Wrong: always purplish. It is my Triadenum purpurascens, 1808; different from Elodea.

26. Marshallia. Marshall was an American botanist, not an

Englishman.

27. Cacalia. All the American species of this genus are different from the African ones; they form my genus Mesadenia; five florets round a central gland: but Cacalia suaveolens and

reniformis constitute another genus, Synosma Raf.

28. Rudbeckia purpurea. The description and figure different. The fact is, ten species are blended under that name, and form a peculiar genus, which I call Helicroa; others call it Rafinesquia. [Moench has denominated this genus Echinacea, from the hedgehog-like appearance of the paleæ; but whether his genus be earlier or later than those cited by Professor Rafinesque, I must leave to others to determine.—J. D.]

29. Eria. Bad name: root of Erianthus, and ten other genera.

Would not Erioxantha, meaning yellow wool, be better?

30. Microstylis Pursh, 1815. I called it Achroanthus, 1808. The

Liparis of Lindley is my Anistylis, 1825.

31. Aristolochia. This genus is a large tribe of plants: I have established in it the genera or subgenera Glossula, Pistolochia, Endodeca, Siphidia or Niphus, Einomeia, Dictyanthes (A. labiosa), and others. Three or four species are blended under A. serpentaria. Your description and figure are two different plants. The figure has large broad cordate leaves; and very different from our common kind, with oblong leaves. See my Medical Flora.

32. Buxus. We import boxwood into, and do not export it from, America. You mean Armenia, in Asia: misprinted America.

33. Maclura Nuttal, 1818. My Toxylon (bow-wood), 1817: a previous and better name. We have two other genera of Maclura in zoology and mineralogy. The fruit is not esculent. Kunth and

Torrey have committed the absurdity to deem this tree the Morus

tinctoria, which has oblong edible fruits, Ayac, in Louisiana.

34. Cocos. Etymon wrong: comes from Coco, palm trees, in the Haytian language. Introduced by Columbus in 1494: see Acosta. Having restored the Haytian language, by collecting 300 words from early travellers, for my History of American Nations, I have found many etymons; I shall mention a few:—Yam, from Niames; Potatoes, Batatas; Manioc, Juco; Mangrove, Mangle; Ceiba or Cotton tree, Ceiba; Guava, Guayava; Pimento, Pimento; Guiacum, Guayac; Mancenilla, Manzinila; Cassava, Cazabi; Mahogany, Mahy, Cacao, Copal, Mani; and many more.

35. Two genera, Bellis L. and Belis Salisbury. This last my

Jacularia.

36. Abies and Larix. Why Salisbury quoted instead of Tourne-

fort, 1700; or Adanson, 1750; or Jussieu, 1789?

37. Gymnocladus. Our [Kentucky] coffee tree, 80 ft. high in the west, quite straight; seeds used for coffee. This fine tree called a tree, a shrub, and a vine at once.

38. Juniperus virginiana. The figure has large round berries; ours has small ovoid warty berries. The figure of J. bermudiana

more like ours.

39. Veratrum virginicum is Melanthium virginicum, by description

and figure.

40. The asters of North America are a chaos as yet. We have 100 species: you have increased the confusion. Your Erigeron carolinianum is certainly an Aster by figure, with few rays. A. Tradescanti is different from ours. Aster argophyllus, three rays in description; five rays in figure. I have prepared a work on this genus for Decandolle, divided into many subgenera by simple or double rays, entire or toothed, seeds smooth or villose, &c. [Mr. D. Don has already grouped Aster argophyllus and the closely related species into a genus named Haxtonia.—J. D.]

41. Solidago. The species of North America are in the same confusion as those of Aster. The figures of your S. bicolor, odora, mexicana, flexicaulis, do not correspond with the description nor with our species. S. flexicaulis is our S. latifolia. I am preparing also a work on this genus, by seeds smooth or hairy, rays few or

many, &c.

42. Negundium americanum Decandolle is my Negundium (1808) fraxineum. We have a second species in the west.

43. Nyssa. All called shrubs: they are all trees with us.

44. Cucurbitaria, name too like Cucurbita. It is my Phialospora. 45. My genus Phorima, 1814, for Boletus, with irregular cells, omitted; and many other genera of my pamphlet, 1814. [Précis des

Découvertes Somiologiques, &c.]

46. Piper. "None out of tropics." Wrong: a species, P. leptostachyum, found in Florida, lat. 28°, by Mr. Ware; described by Nuttall.

47. I have discovered and described thirty-four species of

Trillium (see my Medical Flora); also

48. 30 species and 100 varieties of native North American



Rafinesque, C. S. 1900. "An overlooked paper by Rafinesque: Remarks on the Encyclopaedia of plants of Loudon, Lindley, and Sowerby." *Journal of botany, British and foreign* 38, 224–229.

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