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UNIVERSITY  
OF MICHIGAN

# NUTTALL'S TRAVELS

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# OLD NORTHWEST

An unpublished 1810 Diary



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sides less. The claws of the petals are thick & fleshy, destitute of that membranaceous decurrent border which gives the lesser petals of the common *blue Iris* the appearance of an interior insertion. The filaments of this *Iris* are nearly linear, the anthers are linear sagittate, & each flower is inclosed within a membranaceous spathe. The flowers seem to lie almost on the earth *Iris* \*\*\*\*\*? for the present (45) *Virginica* the petals when the flower opens appear cordato-oval, but soon become obtuse. There is a species of *Salvia*<sup>167</sup> now in flower in the dry plains, fol. villosis, sess. oblongis, obtusiusculis, parce denticulatis, nervosis *bracteis*, coloris, ovalibus, acuminatis, concavis; caule quadrangulata; verticillis approximatis, conferto floris, coerulescentibus, — *Salvia* \*\*\*\*\*? for distinction. (47) Near the lake I met with *Parnassia palustris*, & *Staphylea trifolia*\*\*.<sup>168</sup> On Huron I met with a large erect species of (46) *Astragalus*<sup>169</sup> pedunc. elongatis multifloris, fl. imbricatis petiolis polyphillis, foliol. oblongis, obtusis, pubescentibus; stip. subulatis- The flower is of a greenish white

Saturday, 23

Left Huron & arrived in Detroit Tuesday 26. The upper part of the Lake is full of small islands<sup>170</sup> whose shores are covered with very white Lime-stone pebbles. Some of the islands are solid cretaceous rocks elevating their majestic hollow cliffs high above the water, in one of the islands is a cavern of considerable dimensions, but containing nothing very curious. The lake is far from being so filled with snakes as has been related; & the story of the *fatal blowing snake*<sup>171</sup> is but a French fiction. At the mouth of the *Detroit* river is the town & fort of *Malden*.<sup>172</sup> There were a

<sup>167</sup>E. L. Moseley's "Sandusky Flora" (1899) lists no *Salvia* for this region. Professor M. L. Fernald suggests that this '*Salvia*' was *Blephilia ciliata* (L.) Benth. which fits the description neatly.

<sup>168</sup>*P. glauca* Raf. and *S. trifolia* L. (Bladder Nut).

<sup>169</sup>*A. canadensis* L. (Canadian Milk Vetch).

<sup>170</sup>It was among these islands about three years later, in September 1813, that Commodore Perry's decisive victory over the British squadron was to free the Great Lakes region from the control which the alerted British had promptly established there at the onset of the War of 1812. This operation was of the utmost importance in securing the Old Northwest Territory for the United States at the Treaty of Ghent.

<sup>171</sup>*Heterodon contortrix contortrix* (L.), the Hog-nosed Snake, known also as the Blow Snake, Hissing Viper, Puff Adder, etc. E. C. Driver in *Name That Animal* (Northampton, Mass., 1942, p. 361) gives a graphic description of its reactions:

One of the most amazing actors among the snakes is the spreading adder, *Heterodon*. When alarmed, it raises the front part of its body into the air and flattens out its neck region much like a cobra. Its evil appearance is then supplemented by a loud hissing and all the preliminaries of an attempt to strike. If one is bold enough to call its bluff and offer it a hand for a target, he will find its strikes are so measured as to fall just short of the apparent goal.

R. L. Ditmars in *The Reptile Book* (1922, pp. 380-382) says, "In some sections the Hog-nosed Snake is thought to be so poisonous that its very hiss is the exhalation of a venomous breath."

<sup>172</sup>Fort Malden at the site of the present Amherstburg, Ontario, was built by the British soon after 1796 when they evacuated Fort Detroit and other

considerable number of Indians encamped here, of the *Otoways* & *Chippeways*. The officers of the garrison are very liberal & indulgent to the aborigines who in return know how to be grateful. The Indians were loaded with silver ornaments. The *Otoways* affect the wreath or turban, & some of the venerable chiefs have all the suavity & graveness of a *Grand Señor*. From Malden to Detroit the river & adjacent country is nearly on the plane in one place the river scarcely possesses a determinate current branching into 3 different channels which have all in their turn been more or less navigable. The soil here & at Detroit is alluvial occasionally interspersed with adventitious masses of primitive rock, as *granite*, *green* & black basalt, but very little pure *Quartz*. Springs are very rare, & there is but one in the neighbourhood of *Detroit* consequently they use the river water exclusively as the spring called the *belle fontaine* lies 3 miles below the city. The river water is very pure, & the stream when not too deep is of a berry green as is all the water of the lakes. A considerable precipitate takes place in this water on the addition of *Nitrate of Silver*, but none takes place with *lime-water*, *muriatic acid of Barytes*, *tincture of galls*, or *oxalate of potash*. Lime-water occasions a considerable precipitation in the water of *Belle fontaine*, a small cloud is also formed by the addition of *nitrate of silver*, a minute precipitation also takes place on the addition of *Oxalate of potash*, *muriatic barytes* & *tincture of galls* from whence it appears the river water contains a little *muriatic acid* possibly combined with *Soda*, the spring-water appears to contain a portion of *Carbonic acid*, but a much less proportion of *muriatic acid* than the river water it also contains a minute portion of *Lime*, *Sulph. acid* & *iron*. *Detroit* is pleasantly situated on the Western bank of *Detroit-river*, & contains about 1500 inhabitants mostly French people & *Catholics*, & in full possession of all the superstitions peculiar to that religion, Their holidays are so frequent & so strictly observed as to rob the community of much useful labour & to involve themselves in poverty; the *Abbé Rishard*<sup>173</sup> their *priest* is a learned & intelligent observer. 3 miles from *Detroit* at *belle fontaine* are several high

military posts on the lakes in accordance with the terms of Jay's Treaty. *Detroit*, founded by the French under *Cadillac* in 1701, was lost to the British in 1760.

<sup>173</sup>Father Gabriel Richard has been called "the apostle of Michigan."

Born in *Saintes* . . . (1761), he was . . . consecrated to the priesthood in *Paris* (1791). A member of the *Sulpician order*, the hostilities of the French Revolution drove him into exile. In 1792 he came to *Baltimore*, and was sent to minister to the French of the *Illinois* . . . In 1798 he was appointed to *Detroit* . . . The following year he took a voyage to *Maackinac*, where he remained for three months, bringing the voyageurs and *Christian Indians* to a remembrance of their religious duties. His vast parish extended from *Detroit* to *Sault Ste. Marie* and *Prairie du Chien*. He does not appear to have visited *Wisconsin* until 1820. Father *Richard* being an American, was during the War of 1812-15 arrested and confined by the British at *Sandwich*. In 1823 he was elected territorial delegate from *Michigan* to the United States House of Representatives, being the first priest to sit therein . . . He was active in educational movements, opening schools in *Detroit* and elsewhere, and aiding in the foundation of the *University of Michigan* . . .

See *Wisc. Hist. Colls.*, XVIII, 502, note 40. A picture of him taken from a painting in *Ste. Anne's Church*, *Detroit*, appears in *F. C. Bald's Detroit's First American Decade* (Univ. of Mich. Press, 1948, facing p. 132).

sand hills, which have been raised by the *Indians* as *tumuli* or *burying-places* & are held in veneration by them. M<sup>r</sup>. *Hervey* of Detroit on digging the foundation of a house on one of these sand hills discovered the implements of an Indian chief, *viz.* a rude *axe* head of *green* basalt, cylindrical & rounded at one end and wedged at the other, & possessed of a considerable polish. The *head* of a *halbert* of *rock-crystal* about  $\frac{1}{2}$  a foot long & 4 inches broad. Several *spear-heads* well formed, of white hornstone together with several arrow-heads of the same substance. The fragment of a fish-spear of bone barbed on 1 one side a *necklace* of human toe or finger joints, & 2 pieces of thin plate copper one in the form of a crescent with 2 small holes in the centre. It is probable the copper is native, & has been beat out & cut by the *Indians*<sup>174</sup>

The disease of *Bronchocele* or *Goitre* is very prevalent in Detroit & its neighbourhood, both amongst whites & *Indians*. The female sex is much more subject to it than the male, & there are few white women who have not experienced more or less of it. It is sometimes tho' rarely accompanied with fatuity I saw one instance of this in an *Indian* man, a poor harmless idiot! It is more distressing to some individuals than others. Many carry about this disease for years without much apparent inconvenience, while others are threatened with suffocation & death.

The situation of Detroit is elevated & airy the soil alluminous, & the surrounding country a stagnant marsh, but the ague is scarcely known.

Different opinions are entertained respecting the origin of this disease; some attributing it to an unknown property in the water of the river; others to drinking snow-water, &c. but this last opinion is in some measure confuted by the observation of the *Abbe Molini*. But they never suppose that the abundant & unhealthy miasmata naturally arising from the swamps near the city, have any influence in causing this disease. The water of the lakes is perhaps as pure & generally wholesome as any body of fresh water in the world, & the inhabitants of their banks generally speaking are as healthy or rather more so than in any other part of America, & by no means peculiarly afflicted with *Goitre*. The opinion of its arising from exposure to the inclemency of a cold climate; "*wad-*

<sup>174</sup>There are several small sketches of the articles described.

In *The Jesuit Relations* (ed. by Thwaites, L., 265) Allouez who crossed Lake Superior in 1665 says:

One often finds at the bottom of the water pieces of pure copper . . . I have several times seen such pieces in the Savages' hands; and, since they are superstitious, they keep them as so many divinities, or as presents which the gods dwelling beneath the water have given them, and on which their welfare is to depend. For this reason they preserve these pieces of copper, wrapped up, among their most precious possessions. Some have kept them for more than fifty years; some have had them in their families from time immemorial, and cherish them as household gods. (L'on trouve souvent au fond de l'eau, des pieces de cuivre tout formé, de la pesanteur de dix & vingt livres: l'en ay veu plusieurs fois entre les mains des Sauvages, & comme ils sont superstitieux, ils les gardent comme autant de diuinités, ou comme des presents que les dieux qui sont au fond de l'eau, leur ont fait, pour estre la cause de leur bonheur: C'est pour cela, qu'ils conseruent ces morceaux de cuivre enuvelopés parmi leurs meubles les plus pretieux; il y en a qui les gardent depuis plus de cinquante ans; d'autres les ont dans leurs familles de temps immemorial, & les cherissent comme des dieux domestiques.)

ing in snow," &c. is not well founded, as women in easy circumstances, are as much if not more liable to it than the poorer ranks, who are necessarily more exposed, & whose constitutions here are full as delicate.

Till the nature of this disease becomes better known, little can be done toward a cure, many inert substances, & even charms have had the credit of curing this disease, which baffles reasonable medicine, however, as it comes without any apparent cause so it frequently subsides gradually without the aid of any remedy. amongst the Different substances said to cure this [—] *desideratum* in medicine [—] are pieces of sponge taken internally — A small woollen bag filled with common salt worn about the neck & frequently wet with vinegar; & fomentations of vinegar, or capillary substances wet with vinegar suspended about the neck, which last has been known to discuss this obstinate tumour in several instances.

The *Huron* or *Wyandot*<sup>175</sup> village which formerly existed in Canada opposite *Detroit* is now no more & a settlement of white people is established on its site There are now but 4 villages of the Hurons,<sup>176</sup> viz. *Upper & Lower Sandusky*; the 1st. at the mouth of *Sandusky* river, & the second between 30 & 40 miles above on the river. A small village about 12 miles below *Detroit* called *Maguaja*, & another village opposite *Malden* called *Brown's-town* from the name of their white chief, who has lived with them from a child having been taken prisoner. They are about 300 men. I am informed it is their opinion that they are descended from the *Iroquois* or 6 confederated nations; be that as it may, their language has an affinity to that of the six nations, it is nearly destitute of labiate sounds, tho' not absolutely so; & extremely full of aspirations, & consequently very laborious to the speaker. Their government is purely elective. They are mild looking Indians, but like the *Iroquois* possessed of that banefull superstition & belief in Witchcraft, to which one of their leading old chiefs lately fell victim.<sup>177</sup> Besides these Indians there are a considerable number of

<sup>175</sup>The Hurons or Wyandots were a branch of the Iroquois whom the French found established southeast of Georgian Bay of Lake Huron. They and the allied tribes of the area were brutally crushed by a series of Iroquois attacks in the mid-seventeenth century; only a small remnant escaped and fled westward. After years of wandering they returned to the environs of Lake Huron. They were always loyal allies of the French and were the most formidable enemies of the British in the Indian uprising under Pontiac, who was an Ottawa. The Ottawas, an Algonquian tribe who lived on the Ottawa River until 1650, suffered the same fate as the Hurons and their history is similar. See the Introduction to Francis Parkman's *The Jesuits in North America*.

<sup>176</sup>Nuttall has interchanged the locations of Upper and Lower Sandusky. The present city of Wyandotte is on the site of Maguaga.

<sup>177</sup>In the papers of Thomas Palmer (in the Burton Historical Collection, Detroit Public Library) a letter of October 13, 1810, from J. Wetherell of Detroit, contains a passage which probably refers to this episode.

. . . the Indians have took a strange whim into their Head, lately, that some of their people are witches or wizards, and in fact have hewed three Indians and one squaw to Death with the Tomahawk in consequence of that suspicion — they say those witches kill other Indians, at any distance they please, by some unaccountable means or other.



*Chippeways*<sup>178</sup> (called *Sotos* by the French) near *Detroit*. The most influential chief among them is *Ogonce* who has 5 wives, & a vast number of children, he is half French<sup>179</sup> they plant but little corn.

There are not many animals in the vicinity of *Detroit* but at no great distance there are Wolves, bears, Wild Cats, black, & ground squirrel, racoon, musquash, Weasel, a species of *Talpa*,<sup>180</sup> nearly the size of a rat, covered with a fine black soft fur the base of the head as broad as the shoulders, so as to appear without neck, & the nose furnished with a radiated process of red fungous flesh ft. 5-toed, tail long, thicker at the base, the tail long thick in the middle covered with short hair. probably *Talpa Longicaudata*. a small species of — *Sorex*<sup>181</sup> hardly as large as a mouse & of a mouse grey. The head somewhat disproportionately large, the feet 5-toed, small, & the toes slender, its concave ears large; it frequents habitations like mice. & is subterraneous The tail small & very short eyes perceptibly none (N. p. 52.) There are wild mice but no rats, the mice are large & active & found wild in the woods in the summer season. they are pale ferruginous on the back, whitish beneath the ears are broad & large, & the beard long, the eyes also are large & prominent, & the tail rather long, probably *Mus sylvatica*.<sup>182</sup> There are no rats in this country, & rarely if ever the *opossum*, Considerable quantities of wild honey are collected in the woods but the bee here is certainly of European origin. The *Salamandra horrida* is sometimes met with in *Detroit* river, & the *gar-fish*, furnished with a long serrated process issuing from the lower jaw *Esox viridis*<sup>183</sup> There are also *cat-fish* *Silurus Felis*, *white & black bass*,<sup>184</sup> *pike* *Esox Lucius*, *sturgeon* &c. I saw no great variety of birds, there are, *Falco columbarius*, *Corvus Corax*, *Corvus cristatus*,<sup>185</sup> *Picus pileatus*, *P. auratus*, *P. erythrocephalus*, *P. villosus*, *Gracula quiscalus*,<sup>186</sup> *Alcedo alcyon*, *Ardea herodias*,

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this seems a little like the old practice in Salem, where they used to hang and drown for Witchcraft — if they would carry the work on to perfection I should have no objection.

<sup>178</sup>The Chippeways (Ojibways), one of the largest Algonquian tribes, roamed over a great tract extending from the shores of the three upper Great Lakes half way to Hudson's Bay.

<sup>179</sup>A treaty by which the Indians sold land on the south shore of Lake Erie to the Connecticut Land Company in 1805 was signed by a number of chiefs including Ogonce for the *Ottawas* and Adam Brown for the Hurons. See Bald, *op. cit.*, p. 234.

<sup>180</sup>Star-nosed Mole, *Condylura cristata* (L.).

<sup>181</sup>This is the same species of Shrew as that seen on May 30 near Erie, which he indicates by his reference to page 52 of the diary. See note 102.

<sup>182</sup>Like many of Nuttall's suggestions this is the name of a European species. The description fits *Peromyscus leucopus* (White-footed Mouse, Deer Mouse) and the form was probably *noveboracensis* (Fischer).

<sup>183</sup>This is the Linnaean name for a pike from Carolina; the gar-pike is *Lepisosteus longirostris* Raf.

<sup>184</sup>The cat-fish was probably *Ictalurus punctatus* (Raf.); the two bass, *Lepibema chrysops* (Raf.) and *Micropterus dolomieu* Lacépède. The editor is indebted to Mr. Henry W. Fowler for the identification of the fishes mentioned in the diary.

<sup>185</sup>*Cyanocitta cristata bromia* Oberholser, Blue Jay.

<sup>186</sup>*Quiscalus quiscula versicolor* Vieillot, Bronzed Grackle.

*Charadrius vociferus*, *Trochilus colubris*,<sup>187</sup> *Tetrao umbellus* *Tetrao Marilandus*,<sup>188</sup> *Columba migratoria*<sup>189</sup> *Turdus migratorius*, *T. Polyglottos*, *T. rufus*<sup>190</sup> *Loxia cardinalis*, *L. Curvirostra*, *Muscicapa Carolinensis*,<sup>191</sup> *Lanius tyrannus*,<sup>192</sup> *Caprimulgus Virginiana*, *Oriolus phoeniceus*, *Ardea cinerea*,<sup>193</sup> *Motacilla Sialis*, *Hirundo purpureo*,<sup>194</sup> *H. rustica*, *Anas Boschas*, *Anas sponsa*,<sup>195</sup> *Emberiza erithrophthalma*.<sup>196</sup> &c. but no extraordinary birds.

The productions of the vegetable kingdom in the neighbourhood of Detroit differ little from the West of *Pensylvania*. Neither the *Persimmon*, nor *Magnolia acuminata* are here. I have not seen this last since I left *Grand river L. Erie*, neither have I seen the *Buckeye*, *Aesculus flava*,<sup>197</sup> since I left *Sandusky Bay*. The principal trees here are, *Quercus nigra*, *Q. rubra*, *Q. tinctoria*, *Q. phellos*, *Q. Castanea*,<sup>198</sup> *Juglans Alba*,<sup>199</sup> *J. Nigra*, *Lyriodendron tulipifera*, *Platanus occidentalis*, *P\*\*\*\*\* grandidentata*<sup>200</sup>, *Populus angulata*<sup>201</sup> (called *Liard* by the French, it has also the trivial

<sup>187</sup>*Archilochus colubris* (L.), Ruby-throated Humming-bird.

<sup>188</sup>*Colinus virginianus virginianus* (L.), Bob-white.

<sup>189</sup>*Ectopistes migratorius* (L.), Passenger Pigeon (extinct).

<sup>190</sup>The first *Turdus* is of course the Robin; the two additional species are now *Mimus polyglottos polyglottos* (L.), Mockingbird, and *Toxostoma rufum* (L.), Brown Thrasher.

<sup>191</sup>*Dumetella carolinensis* (L.), Catbird.

<sup>192</sup>*Tyrannus tyrannus* (L.), Kingbird.

<sup>193</sup>This is the European Great Blue Heron. The only bird of this region of a size and color to be confused with it, aside from our Great Blue Heron which is also recorded and therefore could not be intended, is the Sandhill Crane, *Grus canadensis tabida* (Peters).

<sup>194</sup>*Progne subis subis* (L.), Purple Martin.

<sup>195</sup>These two ducks are *Anas platyrhynchos platyrhynchos* L., Mallard Duck, and *Aix sponsa* (L.), Wood Duck.

<sup>196</sup>*Pipilo erythrophthalmus erythrophthalmus* (L.), Red-eyed Towhee.

<sup>197</sup>*A. flava* Ait., now *A. octandra* Marsh., does not extend as far north as the Lakes. The species which Nuttall had been seeing was *A. glabra* Willd. (Fetid or Ohio Buckeye).

<sup>198</sup>Of the five oaks which Nuttall lists the second, third and fifth present no problem. Their present names in order are *Q. rubra* L. (Red Oak), *Q. velutina* Lam. (Black Oak), and *Q. Muhlenbergii* Engelm. (Yellow or Chestnut Oak).

*Q. nigra* L. (Water Oak) is a small tree of the south with a distinctive leaf. It is futile to speculate what Nuttall intended by it for he has left unnamed at least seven species which are more or less abundant in the region, but it may be that he confused the words *nigra* and *alba* (not the species) in the haste of writing. *Q. phellos* (Willow Oak) is also southern but its leaf form is similar to that of *Q. imbricaria* Michx. (Laurel or Shingle Oak) which occurs in the area.

<sup>199</sup>Some species of Hickory.

<sup>200</sup>It is obvious that this should be *Populus grandidentata* Michx. (Large-toothed Aspen).

<sup>201</sup>Untangling the names which have been given to our two largest poplars has been a confusing problem. The present decision is that *P. balsamifera* L. (*P. Tacamahacca* Mill.) is the correct name for the northern species which extends to Labrador and Alaska (*Rhodora* XLVIII (1946), 103), and *P. deltoides* Marsh. (*P. carolinensis* Muench, *P. monilifera* Ait., *P. angulata* Ait.) for the more southern which reaches Florida and Texas. Their ranges overlap in southern Canada and northern United States. The tree described is *P. deltoides*, but the tree of the Mackenzie River is the Balsam Poplar. In 1801

name of *Cottonwood*, the ament after florescence lengthens out into a pendulous racema of ovate-conic follicles each of which become somewhat larger than a pea, & the seeds have abundance of cottony pappus, from whence originates the above name. This same plant, I believe has also received a new name in the *Botanic Garden of Charleston* from the circumstance of its somewhat moniliform racema of seed-vessels, it is believed to be a distinct new species, but probably further investigation will identify it to be the above. On this rout I 1st saw it on *Detroit* river, how far this tree extends *North McKenzies* journal will shew. Its leaves are cordato-deltoid, acuminate, sinuate or hooked serrate with a cartilaginous border & diverging diffracted nerves the petiole is ancipital with vertical edges. Its habit is principally on the alluvion banks of rivers, & next to the *Platanus* it is the largest tree on the great Western waters. The other trees of this country are, *Fraxinus euptera*, *F. platycarpa*,<sup>202</sup> *Fagus sylvestris*,<sup>203</sup> *Betula papyrifera* which is extensively used by the Indians for constructing canoes about which they display considerable ingenuity & skill. These boats are much used by the fur-traders being very light of carriage across the numerous portages of the N. West & Lake countries & also admirably adapted for navigating the shallowest streams. Here is also *Pyrus coronaria*,<sup>204</sup> *Tilia laxiflora*, *T. Canadensis*,<sup>205</sup> *Prunus Hiemalis*,<sup>206</sup> *Cretaegus crus galli*, *C. punctata*, *C. tomentosa*, *Rubus occidentalis* *R. saxatilis*. of herbaceous & shrubby plants there are *Fragaria Canadensis*<sup>207</sup> *Geum rivale*, *G. Canadense*, *G. geniculatum*,<sup>208</sup> *Agrimonia parviflora* of Ait., *Lythrum*,<sup>209</sup> *Spiraea salicifolia*<sup>210</sup> *Narthecium glutinosum*,<sup>211</sup> *Prosperpinaca* \*\*\*\*\*<sup>212</sup> *Cypripedium Canadense*, *Cymbidium pulchellum*, *Arethusa ophioglossoides*,<sup>213</sup> a new linear leav'd *Lysimachia*,<sup>214</sup>

Alexander Mackenzie published an account of his voyages of 1789 down this river to the Arctic Ocean, and of 1792-3 across the Rockies to the Pacific Ocean.

<sup>202</sup>The first ash is *F. americana* L. (White Ash); the second name belonging to a southern species, Nuttall misapplied. He was evidently trying to use Michaux's limited *Flora* to identify his species and not having much success.

<sup>203</sup>*Fagus grandifolia* Ehrh. (American Beech).

<sup>204</sup>*Pyrus coronaria* L. (American Crab).

<sup>205</sup>*T. americana* L. (Basswood) and its very close relative *T. neglecta* Spach are the only species of *Tilia* growing this far north.

<sup>206</sup>*P. americana* Marsh. (Wild Plum).

<sup>207</sup>*F. virginiana* Duchesne (Wild Strawberry).

<sup>208</sup>The *G. canadense* given in Michaux's *Flora* is that of Murray which is in synonymy with *G. aleppicum* Jacq. var. *strictum* (Ait.) Fern. (Yellow Avens). *G. geniculatum* Michx. carries such a generalized description that its application has remained in doubt; however, a careful comparison of it with herbarium specimens indicates that Nuttall used it for *G. canadense* Jacq. (White Avens).

<sup>209</sup>The only *Lythrum* with proper range is *L. alatum* Pursh (Winged Loosestrife).

<sup>210</sup>*S. alba* DuRoi (Meadow-sweet).

<sup>211</sup>*Tofieldia glutinosa* (Michx.) Pers. (False Asphodel).

<sup>212</sup>*P. palustris* L. var. *crebra* Fern. & Griseb. (Mermaid-weed).

<sup>213</sup>The two newly recorded orchids are *Calopogon pulchellus* (Salisb.) R. Br. (Grass-pink) and *Pogonia ophioglossoides* (L.) Ker.

<sup>214</sup>*Lysimachia quadriflora* Sims (Linear-leaved Loosestrife).



*Lobelia Cardinalis* very sparingly *L. Siphilitica*, *L. Kalmii*, *L. Claytoniana*,<sup>215</sup> *Datura stramonium*, *Hiosciamus nigra*, *Ribes nigra*, *R. cynosbati*, the asperifoliate plant which I met with at *Painville Ohio* & which I take to be the *Batchesia* or *Batcia* of *Michaux* *Galega Virgini*\*\*<sup>216</sup>, *Asclepias tuberosa*, *A. Syriaca*, *A. longifolia* *A. verticillata*, *A. purpur*\*a[scens] *A. amoena*,<sup>216</sup> *Aposcynum cannabinum*; a fine new species of *Rosa*,<sup>217</sup> producing its flowers in corymbs, & is introduced into the gardens of Detroit for the beauty & vast numbers of its flowers. I shall hereafter distinguish it R. \*\*\*\*\*. on the margin of Detroit River grows a fine new *Thlaspi*,<sup>218</sup> with small greenish yellow flowers, succeeded by very large roundish obcordate, flat, & broad margined silicles, which are sinuately emarginate, leaves I think obovate & distantly toothed the whole plant lucid & fleshy, *Thlaspi* \*\*\*\*\*. with it grows *Cakile Aegyptiaca*?<sup>219</sup> fl. violet. of aquatics there are *Pontideria cordata*, *Nymphaea odorata*, *N. alba*,<sup>220</sup> & another with yellow flowers which might be called \*\*\*\*\* as it has but 3 petals & 3 calyx leaves in other respects it scarcely differs from *N. advena*,<sup>221</sup> *Callitriche aquatica*,<sup>222</sup> *Valisneria americana*, scape spiral, *Chara hispida*,<sup>223</sup> *Potamogeton perfoliatum*,<sup>224</sup> & a species with leaves linear lanceolate alternate, sessile, 3 nerved, *Elodea*, &c.

On July 29th, I left Detroit for Michilimakinak in a birch bark canoe accompanied by the surveyor of the territory.<sup>225</sup> On the

<sup>215</sup>*Lobelia spicata* Lam.

<sup>216</sup>*A. purpurascens* L. has not been distinguished from *A. amoena* L., but *A. amoena* Brongn. is in synonymy with *A. incarnata* L. which is common in this area. For *A. longifolia* see note 159.

<sup>217</sup>In his *Genera of North American Plants* Nuttall describes *Rosa rubifolia* as a "very fine flowering species . . . abundant round Detroit, and through all the western states." This species of Robert Brown is now known as *R. setigera* Michx. var. *tomentosa* T. & G. (Prairie Rose).

<sup>218</sup>A sketch of the silicle is drawn in the diary. The drawing and the description (except the color of the flowers) suit *T. arvense* L. (Pennywort) which Nuttall in his *Genera* says is "A common weed around Detroit (Michigan Territory)."

<sup>219</sup>Not an American species. See note 107.

<sup>220</sup>*N. tuberosa* Paine (Magnolia Water Lily).

<sup>221</sup>*Nuphar advena* Ait. (Cow Lily, Yellow Spatterdock) which has six unequal sepals and "petals shorter than the stamens and resembling them" (Gray's *Manual* 7th ed.).

<sup>222</sup>*C. palustris* L. (Water Starwort).

<sup>223</sup>A European Stonewort.

<sup>224</sup>See note 248.

<sup>225</sup>Michigan Territory was established in 1805 and Aaron Greeley (1773-1820) of Hopkinton, N. H., became its surveyor in 1806. His wife was a niece of Major Robert Rogers who received the surrender of Detroit in 1760 and was later commandant at Mackinac. In "Detroit Biographies: Aaron Greeley" M. M. Quaife says:

In the summer of 1810, he journeyed to Mackinac, where he surveyed the town lots and other land holdings of the villagers. For many years this visitation was carried in memory by the people of Mackinac.

We are indebted to Mrs. Elleine H. Stones, Chief, Burton Historical Collection, Detroit Public Library, for the following information:

Aaron Greeley, the surveyor, signed a paper in Detroit on July 27 [1810], arrived at Mackinac on August 12, and returned on the 28. Unfortunately we have no letter from him about the journey.

sandy banks of Detroit River grew a species of *Spermacoce*<sup>226</sup> & Coming out of *Lake Sinclair* [St. Clair] I saw a number of *bank martins*. (*Hirundo riparia*) The country is very flat on this lake, as is also that watered by the River Sinclair which empties itself into the *lake* by numerous channels, forming many islands covered with little else but reeds, the banks of the river are covered with lofty trees all common to alluvion soil. Not far from the outlet of *L. Huron* are numerous impressions & incrustations of organized marine substances, as several species of *Anomiae*, *stylastrum*, *tubipores*, & *madrepores*,<sup>227</sup> &c. We saw & conversed with a number of Chippeway indians, who were very poor & almost destitute of any kind of provision except a little *sturgeon*, and they are likely to remain so, as they have such an aversion to agricultural labour, at the same time that their animal food becomes continually scarcer we saw here a considerable band, yet they had scarcely 2 acres of *Maize*. On asking a very well informed indian the use of the mounds or Indian fortifications<sup>228</sup> as they are called he informed me that their forefathers employed them as means of defense when they yet fought with the *bow & arrow*, the spear & the for by his description they certainly also made use of this means of defense, he informed me that they fastened a stone to one end of a leather thong which they whirl'd at the enemy, while they jerked it back again into the hand by means of the other end which was wound round the hand. From the simplicity of this weapon, which next to hurling stones *alone*, would seem almost primeval with man himself, we may naturally conclude this is no short-liv'd tradition, & more particularly as weapons & warlike achievements, must ever rank first in the oral traditions of savage nations, whose very existence as distinct tribes depends almost solely upon their strength. The Indian fortifications with which *Western*

<sup>226</sup>*Diodia teres* Walt. var. *setifera* Fern. & Grise. (Buttonweed).

<sup>227</sup>Bivalves and different types of corals.

<sup>228</sup>Paul Radin in *The Story of the American Indian* (1937, p. 192) refers to a change of view regarding the identity of the mound-builders.

American scholars are still at loggerheads as to the identity of the people who built this [the Trappist mound near St. Louis mentioned later in the diary] and other numerous mounds scattered so lavishly over the eastern half of the United States. Three generations ago it was the consensus of opinion that they had been built by a wonderful people who had preceded the Indians, and who had come from outside the United States. But then about fifty years ago, a strong reaction set in against this view.

In *Indians Before Columbus* (1947) by P. S. Martin, G. I. Quimby and D. Collier, four chronological stages of culture in eastern North America are recognized. The second phase, dated about 500-900 A. D., was marked by the first building of burial mounds in the Mississippi Valley indicating a change in ideas regarding the dead. The third, about 900-1300, was characterized by the largest burial mounds and earthworks, and perfection of work in copper and polished stone, displaying

... a dignity and formality which was lacking in earlier times or in later stages . . .

One of the most spectacular developments of the fourth stage was the appearance of flat-topped mounds of earth in the Mississippi Valley and its tributaries . . . These mounds usually square or rectangular truncated pyramids but sometimes truncated cones, were used as substructures for temples or chief's houses . . . Toward the latter part of this period some Indians built tremendous mounds sixty to one hundred feet high . . . (pp. 236, 237).

## APPENDIX II

### List of Animals Noted by Nuttall

— Insects —

- Acroneuria* sp. (?) — Stone-fly, 22  
*Chauliodes* sp. — Fish-fly, 47  
*Platysamia cecropia* L. — Cecropia Moth, 48  
*Actias luna* L. var. *rubromarginata* Davis — Luna Moth, 27  
*Synchlora* sp. (?) — Measuring Worm Moth, 40

— Fishes —

- Acipenser fulvescens* Raf. — Lake Sturgeon, 61  
*Lepisosteus longirostris* Raf. — Gar-pike, 61  
*Alosa alabamae* Jordan & Evermann (?) — Shad, 71  
*Ictalurus punctatus* (Raf.) — Channel Cat, 61  
*Esox lucius* L. — Pike, 61  
*Micropterus dolomieu* Lacépède — Small-mouthed Black Bass, 61  
*Lepibema chrysopt* (Raf.) — White Bass, 61

— Salamanders —

- Cryptobranchus alleganiensis* (Daudin) — Hellbender, 27, 61  
*Triturus viridescens viridescens* Raf. — Common Newt, 37

— Lizards —

- Eumeces fasciatus* (L.) — Five-lined Skink, 37, 39, 44

— Snakes —

- Diadophis punctatus edwardsii* (Merrem) — Ring-necked Snake, 46  
*Heterodon contortrix contortrix* (L.) — Hog-nosed Snake, 57  
*Thamnophis sirtalis sirtalis* (L.) — Garter Snake, 46  
*Crotalus horridus horridus* (L.) — Timber Rattlesnake, 46

— Birds —

- Ardea herodias herodias* L. — Great Blue Heron, 61  
*Anas platyrhynchos platyrhynchos* L. — Mallard, 62  
*Aix sponsa* (L.) — Wood Duck, 62  
*Cathartes aura septentrionalis* Wied. — Turkey Buzzard, 21, 70  
*Buteo jamaicensis borealis* (Gmelin) — Red-tailed Hawk, 42  
*Falco columbarius columbarius* L. — Pigeon Hawk, 61  
*Bonasa umbellus umbellus* (L.) — Ruffed Grouse, 24, 62  
*Colinus virginianus virginianus* (L.) — Bob-white, 62  
*Meleagris gallopavo silvestris* Vieillot — Turkey, 41, 42, 51  
*Grus canadensis tabida* (Peters) — Sandhill Crane, 62  
*Charadrius vociferus vociferus* L. — Killdeer, 62  
*Ectopistes migratorius* (L.) — Passenger Pigeon, 21, 62  
*Nyctea scandiaca* (L.) — Snowy Owl, 51  
*Caprimulgus vociferus vociferus* Wilson — Whip-poor-will, 27, 62  
*Archilochus colubris* (L.) — Ruby-throated Hummingbird, 37, 62  
*Megaceryle alcyon alcyon* (L.) — Eastern Belted Kingfisher, 33, 61  
*Colaptes auratus luteus* Bangs — Flicker, 61  
*Hylatomus pileatus abieticola* (Bangs) — Pileated Woodpecker, 61  
*Melanerpes erythrocephalus* (L.) — Red-headed Woodpecker, 61  
*Dendrocopos villosus villosus* (L.) — Hairy Woodpecker, 61  
*Tyrannus tyrannus* (L.) — Eastern Kingbird, 62  
*Riparia riparia riparia* (L.) — Bank Swallow, 65  
*Hirundo erythrogaster* Boddaert — Barn Swallow, 21, 62  
*Fregata subis subis* (L.) — Purple Martin, 62  
*Cyanocitta cristata bromia* Oberholser — Northern Blue Jay, 61  
*Corvus corax principalis* Ridgeway — Northern Raven, 61

- Parus atricapillus atricapillus* L. — Black-capped Chickadee, 39, 40  
*Mimus polyglottos polyglottos* (L.) — Mockingbird, 62  
*Dumetella carolinensis* (L.) — Catbird, 62  
*Toxostoma rufum rufum* (L.) — Brown Thrasher, 21, 62  
*Turdus migratorius migratorius* L. — Robin, 62  
*Sialia sialis sialis* (L.) — Bluebird, 21, 62  
*Dolichonyx oryzivorus* (L.) — Bobolink, 53  
*Sturnella magna magna* (L.) — Meadowlark, 21  
*Agelaius phoeniceus phoeniceus* (L.) — Red-winged Blackbird, 21, 53, 62  
*Quiscalus quiscula versicolor* Vieillot — Bronzed Grackle, 61  
*Richmondia cardinalis cardinalis* (L.) — Cardinal, 37, 62  
*Pheucticus ludovicianus* (L.) — Rose-breasted Grosbeak, 37  
*Loxia curvirostra minor* (Brehm) — Red Crossbill, 62  
*Pipilo erythrophthalmus erythrophthalmus* (L.) — Red-eyed Towhee, 62

## — Mammals —

- Condylura cristata* (L.) — Star-nosed Mole, 61  
*Blarina brevicauda* (Say) — Short-tailed Shrew, 42, 61  
*Tamias striatus* (L.) — Chipmunk, 46  
*Sciurus carolinensis leucotis* (Gapper) — Gray Squirrel, 46  
*Peromyscus leucopus noveboracensis* (Fischer) — Deer Mouse, 61  
*Erethizon dorsatum dorsatum* (L.) — Porcupine, 40, 41