

Climate. — Geology. — Botany. — Ponds. — Rivers. — Brooks. — Fish. — Quadrupeds. — Birds.

IN several of its divisions the *Natural History* of Concord does not essentially differ from that of the surrounding county and state. Situated but sixteen miles from Boston, and nearly in the same latitude, in its climate it does not vary essentially from that city. It was said by Mr. John Josselyn, who visited this country in 1673, that “this place [Concord] is subject to bitter storms”¹ Though it is not easy to see how the remark is particularly applicable to Concord, yet local circumstances have been supposed to have some influence in the changes of its atmosphere. The evaporation from a sluggish river and extensive meadows sometimes produces here, at night, a damp atmosphere; but the waters are pure; and the sun’s rays, reflected from a loose soil, soon dry and purify it. Few places are more healthy or exhibit a higher average term of human life. The extremes of heat and cold are, however, probably greater than in many places, though the average temperature may not be so low. Two instances are recorded, one in 1755,² and the other in July, 1825, when the heat was so great that fish died in the river. Probably others have occurred. At the latter period the thermometer rose to 105 degrees of Fahrenheit in the shade, and continued nearly as high for several days. Snow does not usually fall quite so deep here as in the adjoining towns, and frequently goes off earlier. The cold is, however, sometimes felt in great intensity; and the thermometer often sinks to 8, 10, and sometimes 12 degrees below zero. It stood at this last point on Tuesday, February 1, 1814, noted as *the cold Tuesday*.

GEOLOGY.— The geology of Concord, though it has not been very thoroughly explored, exhibits considerable variety and some peculiarity. The situation is low and the surface generally level, not giving to the streams of water sufficient current to afford many sites for manufacturing purposes. A few small hills only appear to beautify the scene and relieve the eye from a uniform prospect. Among these may be mentioned Ponkawtasset, or Barrett’s, in the northwest; Annursnuck, in the northwest; Nawshawtuct, or Lee’s, near the centre; Fairhaven, in the south; and Rocky Hills, near Walden Pond, partly in Lincoln. There is also a sandy hill, apparently of secondary formation, extending about a mile in length, easterly of the village. The uneven soil at the north and northeastern, and the south and southwestern parts of the town, appears to be of primary formation, and is composed chiefly of a thin, gravelly loam, mixed with various combinations of sand, clay, decayed vegetable matter, and rocks. Though not uniformly well calculated for agricultural purposes, it contains some highly productive farms. A large section, lying on the borders of the rivers, and extending from the southwest to the northeastern parts of the town, and through the centre, appears to be principally either secondary formation or alluvial deposits, and free from stones. The meadows and some part of the upland contain a dark, rich, fruitful soil; and others a loose, sandy one, easily affected by drought and hardly worth cultivation.³

Clay is rare. It is sometimes found in its usual beds, and sometimes in peculiar strata between others of sand. It has been wrought into bricks in several places. Marl is found, though not abundantly. Peat, fibrous and compact, is found in great abundance, composing extensive meadows, and affording an inexhaustible supply of fuel and manure, for which purposes it is used by the inhabitants. It is formed of the vegetables which have grown or been deposited where it exists. In some instances it seems to rest on the surface of water, and when cut in sections for roads or other purposes, the included parts, if heavily loaded, have been known to sink.

Geologists divide all rocks into three classes, — primary, secondary, and trap. The rocks in Concord are principally of the primary class, and varieties of granite, sienite, and mica-slate. Granite, suitable for building material, is not very common in Concord, but is found in abundance in Acton, Carlisle, and Lincoln.

The following minerals, some of which are rare, are found in Concord: Several species of lime-stone in the north part of the town; formerly manufactured into lime. Calcareous Spar, a sub-species of the carbonate of lime, composed of lime and carbonic acid, is common. Garnet

1. Voyages, p. 170.

2. Minott’s Continuation, Vol. I. p. 107

3. The chapter on the Statistical History gives the number of acres of each kind.



in beautiful crystals. Cinnamon-stone, a very rare mineral, is found in the north part of the town. Several varieties of quartz generally distributed. Mica, in large laminæ and in several varieties. The lamellar hornblende, actynolite and pargasite, sub-species and varieties of hornblende, frequent. Feldspar is found in great variety; the cream-colored is the most beautiful. Also, argillite, or clay-slate, novaculite, and scapolite. Sahlite, a variety of augite, or pyroxene of a greenish grey, occurs massive and crystallized.⁴ Sulphate of iron, or copperas, occurs with a vein of sulphuret of iron, or pyrites in green stone. Sulphate of iron is also disseminated in clay-slate. (*Robinson*). Lead ore has been found in various places. Iron ore is found in several places disseminated in rocks and other minerals. Bog iron ore is found in abundance. As early as 1660, it was smelted and wrought in bars for the customary purposes of life, by a company at the present site of the cotton-factory. The works were, however, abandoned after about 50 years, the proprietors having found that a better quality of iron could be imported at less expense. Several tons of the ore have recently been carried in boats from this town to the furnace in Chelmsford, and it is said to produce good castings. I have no doubt that other minerals might be found, if the town were more thoroughly explored.

BOTANY.— Wood grows here with great rapidity; and it is supposed there is as much now as there was twenty years ago. Walden woods at the south, and other lots towards the southwest parts of the town, are the most extensive, covering several hundred acres of light-soil land. Much of the fuel, which is consumed, is, however brought from the neighbouring towns. The most common trees are the oak, pine, maple, elm, white birch, chestnut, walnut, &c., &c. Hemlock and spruce are very rare. The ornamental trees transplanted, in this as in most other towns, do not appear to have been placed with much regularity; but as they are, they contribute much to the comfort and beauty of the town. The elm, buttonwood, horse-chestnut, and fruit trees have very properly taken the place of sickly poplars, in ornamenting the dwellings. The large elm in front of the court-house, —the pride of the common,— is almost unrivalled in beauty. It is about “three score and ten,” but is still growing with youthful vigor and uniform rapidity.

Dr. Jarvis, who is familiar with the botany of Concord, informs me, that “most of the plants found in the middle parts of the state grow here, excepting the alpine flowers. The extensive low lands produce abundantly the natural families of the aroideæ, typhæ, cyperoideæ, gramineæ, junci, corymbiferæ and unbelliferæ. These genera especially abound. There are also found, the *juncus militaris* (bayonet rush), on the borders of Fairhaven pond; *cornus florida*; *lobelia carinalis* (cardinal flower) abundant on the borders of the river; *polygala cruciata*, in the east parts of the town; *nyssa villosa* (swamp hornbeam) at the foot of Fairhaven hill.” The *cicuta Americana* (hemlock) grows abundant on the intervals. Every person should know and shun it for its poisonous qualities.

There are many excellent and well cultivated farms in the town, which produce winter rye, corn, potatoes and the usual productions of the vicinity. Garden seeds have been extensively raised. Teasels and the culture of silk have recently been introduced. Considerable attention has of late been paid to the cultivation of fruit trees, grape vines, and other horticultural productions, and, though a too long neglected branch of agriculture in this town, there is no doubt that nature has done enough for the soil to ensure great success.

PONDS.— *White Pond* lies in the southwest part of the town, and receives its name from the purity of its waters. It has no visible outlet and contains 43 acres.⁵ *Fairhaven Pond* forms a kind of bay in Concord river which passes through it, containing about 73 acres. *Walden Pond* lies in the south part of the town easterly of Fairhaven, and contains 65 acres. This pond also has no visible outlet. It is said no fish were caught in it, till they were transplanted there from other waters. Pickerel and other fish are now plenty there. *Goose Pond*, lying easterly of Walden Pond, is one of a number of small ponds, in a tract of land peculiarly broken into ridges and vales, which in some seasons are nearly dry. Bateman's Pond lies east of Mr. Daniel Wood's, and contains 30.

4. Prof. John W. Webster informs me, that he found all the minerals mentioned above, in this town. The late Samuel Davis, Esq., of Plymouth, conjectured, that Annurnak, the Indian name of one of our hills, has the same meaning as Quunosnuck, signifying *a pestle*, from the circumstance that rocks, out of which the natives made their mortars and pestles, were to be found here. Porphyry, of which the Indians used to make their arrow-heads, is also found there.

5. The estimates of the number of acres in these ponds and the width of the rivers, is from a survey made by Judge Wood in 1794, and returned to the Secretary's office in Boston, agreeably to an order of the General Court.



RIVERS.— *Concord River*⁶ is the largest stream of water. One branch of it rises in the south part of Hopkinton; and another from a pond and a large cedar-swamp in Westborough, and running into Hopkinton, forms the boundary line between that town and Southborough. Thence in a northerly direction it passes through Framingham, and forms the boundary line between Sudbury and East sudbury (where it is sometimes called Sudbury River), and enters Concord at the south part of the town. After passing through it in a diagonal direction, it receives the North River, and, going out at the north east part between Bedford and Carlisle and through Billerica, empties into the Merrimack at Lowell. It is remarkable for the gentleness of its current, which is scarcely perceptible by the eye. At low water mark it is from 4 to 15 feet deep, and from 100 to 300 feet wide. Where it enters Concord it is 200 feet, and where it leaves it 330. At the former place it is 114 feet above low-water mark in Boston.⁷ In times when the river is highest, it overflows its banks, and is in many places more than a mile wide. Great inconvenience has resulted to the town from this circumstance. Commissioners were appointed at various times, for the first hundred years after its settlement, to clear it out and drain the water off; and contributions were made by this and some other towns on the river to pay the expense. At other times grants were made by government. In 1722, Jonas Bond, Francis Fullam, and Francis Bowman were the commissioners, and Samuel Heywood, receiver, who paid £18 13s. for work done by the inhabitants of Concord. As early as 1710, measures were taken to erect mills in Billerica, and remonstrances were sent to the General Court from this town against them; but though they delayed, they did not finally prevent the accomplishment of the project. Boats frequently pass from Boston, through the Middlesex canal and this river, to this town and to Sudbury; and with little expense, it is thought, there might be a profitable inland navigation.

The *North* or *Assabeth River*⁸ has its source in Grafton, and receiving most of the waters of that town, Westborough, Shrewsbury, Northborough, and Bolton, passes through Marlborough, Stow, and a corner of Acton, and unites with the Concord about half a mile northwest of the meeting-house. It is not so large as the Concord, being at the confluence about 130 feet wide. It falls 30 feet from Sherman's mill-pond to its confluence with Concord River, and has some sites for mill privileges, the principal of which is occupied by a cotton factory. In its course through this town it receives several tributary streams, among which are Fort Pond Brook and Spencer Brook.

Fort Pond Brook, or *Law's Brook*, takes its rise in Fort Pond and the vicinity in Littleton, and, after running in a southeasterly direction through Acton, flows into the North River, near Mr. Loring's. This brook receives the tributary stream of *Nashobah Brook*, one branch of which rises in Nagog Pond, and another called Wright's Brook, in Westford, and, passing through Acton in a southeasterly direction, unites with Fort Pond Brook soon after it enters Concord. Near this place a saw mill was erected soon after the town was first settled.

Spencer Brook, or *Fifty Acre Brook*, has its source in Carlisle, and, running southerly, flows into the North River, having Barrett's saw-mill and grist-mill near its mouth.

Mill Brook, arising in Lincoln, flows through the centre of this town, and empties into the Concord river north of the village. The Waters of this brook were used, about 190 years since, to turn the first grist-mill ever built in the town; but since 1826 they have been very properly suffered to flow through their accustomed channel undisturbed.

Saw-Mill Brook, or *Ralph's Brook*, rises in Carlisle, and running a southerly course empties into the Concord river near Bedford line.

Nut-Meadow Brook rises in Nut-Meadow, and enters Concord river below James Miles's.

ZOOLOGY.— The *fish* formerly most abundant in Concord were salmon, shad, alewives, pike or pickerel, dace (*cyprinus leuciscus*, a small fish resembling the roach), and some others. Beside affording to the inhabitants an important article of food, for several years after the town was settled they were used as manure for agricultural purposes. They produced a luxuriant growth for one season, but tended to impoverish the land. Some diminution of their numbers took place when the dams were erected across the river in Billerica in 1712; and unsuccessful petitions were presented to the General Court to have these obstructions removed, on account of the fisheries. They were notwithstanding the source of considerable revenue to the towns

6. Sometimes called *Great River* and *South River*.

7. Canal Report, page 113.

8. This river is sometimes called Elzebeth, Elzebett, Elizabeth, and Asabet — see Worcester Hist. Mag. Vol. II.



from sales which were made to people living in other towns. At certain seasons of the year the fish-officers of Concord went to the dams in Billerica to see that the sluice ways were properly opened to permit the fish to pass. The exclusive right to the fisheries was sold by the town in 1732, for five years, at £5 per year; and the purchaser had the privilege of erecting a *wier* across the river to aid him in taking the fish, a plan which was practiced by the Indians before the town was settled by the English. This right continued to be sold in that manner and for nearly the same amount, till about 1800. There were six principal fishing-places, viz., south of Mr. Dennis's, west of Deacon Hubbard's, nearly opposite Lee's hill in Mr. Merrick's pasture, against the Brown farm, and down the river near Ball's hill. Since the interruption by the Middlesex Canal, and the factories at Lowell, those once welcome visitors in our waters, salmon, shad, and alewives, have taken up their summer residence in waters more easily accessible and have totally deserted these peaceful shores. The principal fish, which no inhabit these waters, are pike, perch, lamprey and common eel, pout, and several other smaller fish.

The principal *quadrupeds* found here, at the first settlement of the town, were the bear, moose, wolf, deer, fox, otter, beaver, muskrat or musquash (*mus zibethicus*), marten, &c. &c. Wolves were many years very troublesome in killing calves and sheep, and rewards were offered for destroying them. The fur-trade here was once very important. As early as 1641, a company was formed in the colony, of which Major Willard of Concord was superintendent, and had the exclusive right to trade with the Indians in furs and other articles; and for this right they were obliged to pay into the public treasury one twentieth of all the furs they obtained.⁹ The right to the fur-trade, in particular districts, was afterwards sold by commissioners of the General Court. Captain Thomas Brooks bought the right in Concord, in 1657, for £5. The solitary ponds, rivers, and meadows in Concord, were peculiarly the favorite resorts of the beaver and other amphibious animals, and now contain remarkable evidence of their former existence. The larger animals have long since emigrated to other regions beyond the extension of civilization, and few only of the smaller ones remain unattacked by the sportsmen.

BIRDS.— The *Birds* have no peculiar locality in this town. Those most troublesome to the inhabitants have been the black bird, which frequent the low meadows in great numbers, the crow, and the jay. Rewards were paid for the heads of the two latter kinds. As late as 1792, the town voted to give for destroying “those pests to cornfields, called crows,” the following rates; “for each old crow 1s., for each young crow 6d., and for each crow's egg, that is found in said town and taken out of the nest, 3d.”

TO CONTINUE READING:

CHAPTER XIII. — TOPOGRAPHICAL HISTORY. — Boundaries. — Roads. — Bridges. — Stages. — Post-Office. — Public Buildings. — Printing Office. — Burying-grounds.

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