GEOGRAPHIC DATA

And Verification Essays for St. Lawrence County and New York State

Taken from:

An Economic Classification of Farm Areas, St. Lawrence County, New York. Cornell Economic Land Classification Leaflet 5, April, 1957. Ithaca, New York. 12 pp. See pp.7, 27-28, this book.

Borst, Roger L., Rocks and Minerals of New York State. Albany: New York State Museum, Educational Leaflet Series, No.10, 1960, passim. See pp. 3-6 this book.

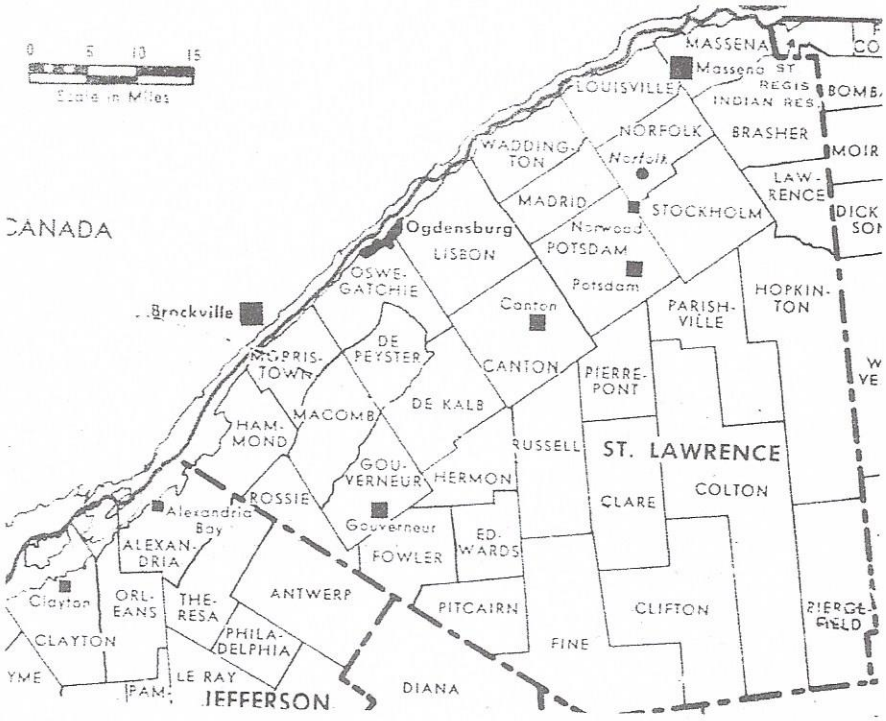
Business Fact Book, Northern Area. Albany: Department of Commerce, 1962. See map p.2 this book.

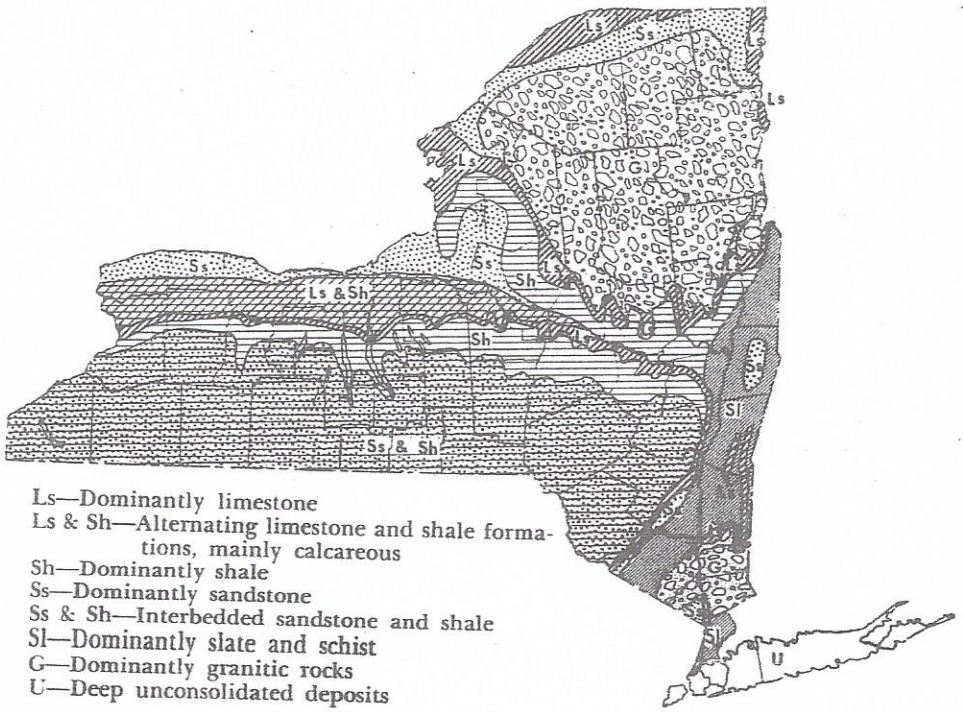
Cline, Marlin G., Soils and Soil Associations of New York. Ithaca: Cornell Extension Bulletin 930, 1955. See map and legend pp. 9, this book.

Cornell Extension Bulletin. Ithaca, New York. See pp.15-16, this book.

Gordon, Thomas F., Gazetteer of the State of New York. Philadelphia: T.F. Gordon, 1836, pp. 660-662. See pp. 23-25 this book.

Mordhoff, R.A., The Climate of New York State. Ithaca: Cornell Extension Bulletin, 764, 1949. 71 pp. See pp. 12-14, 17-22 this book.

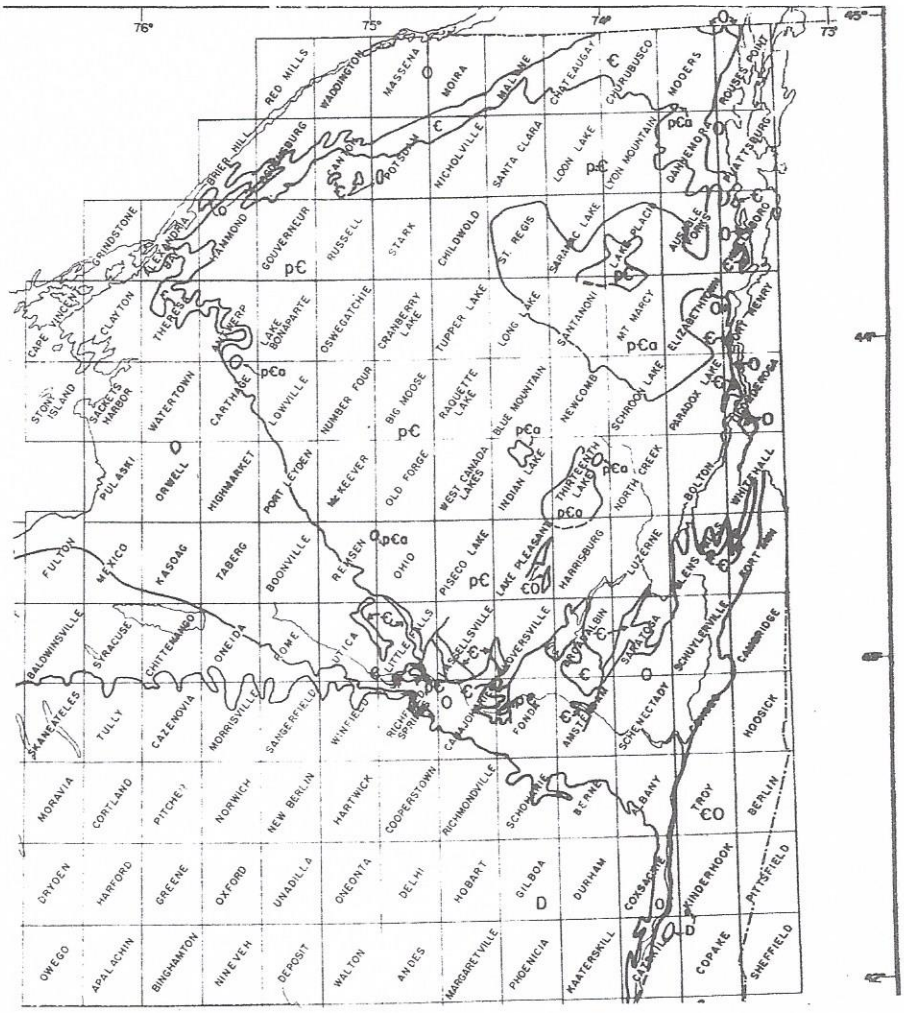




Ls—Dominantly limestone
Ls & Sh—Alternating limestone and shale formations, mainly calcareous
Sh—Dominantly shale
Ss—Dominantly sandstone
Ss & Sh—Interbedded sandstone and shale
Sl—Dominantly slate and schist
G—Dominantly granitic rocks
U—Deep unconsolidated deposits

Important bedrock areas of New York

GEOLOGIC MAP

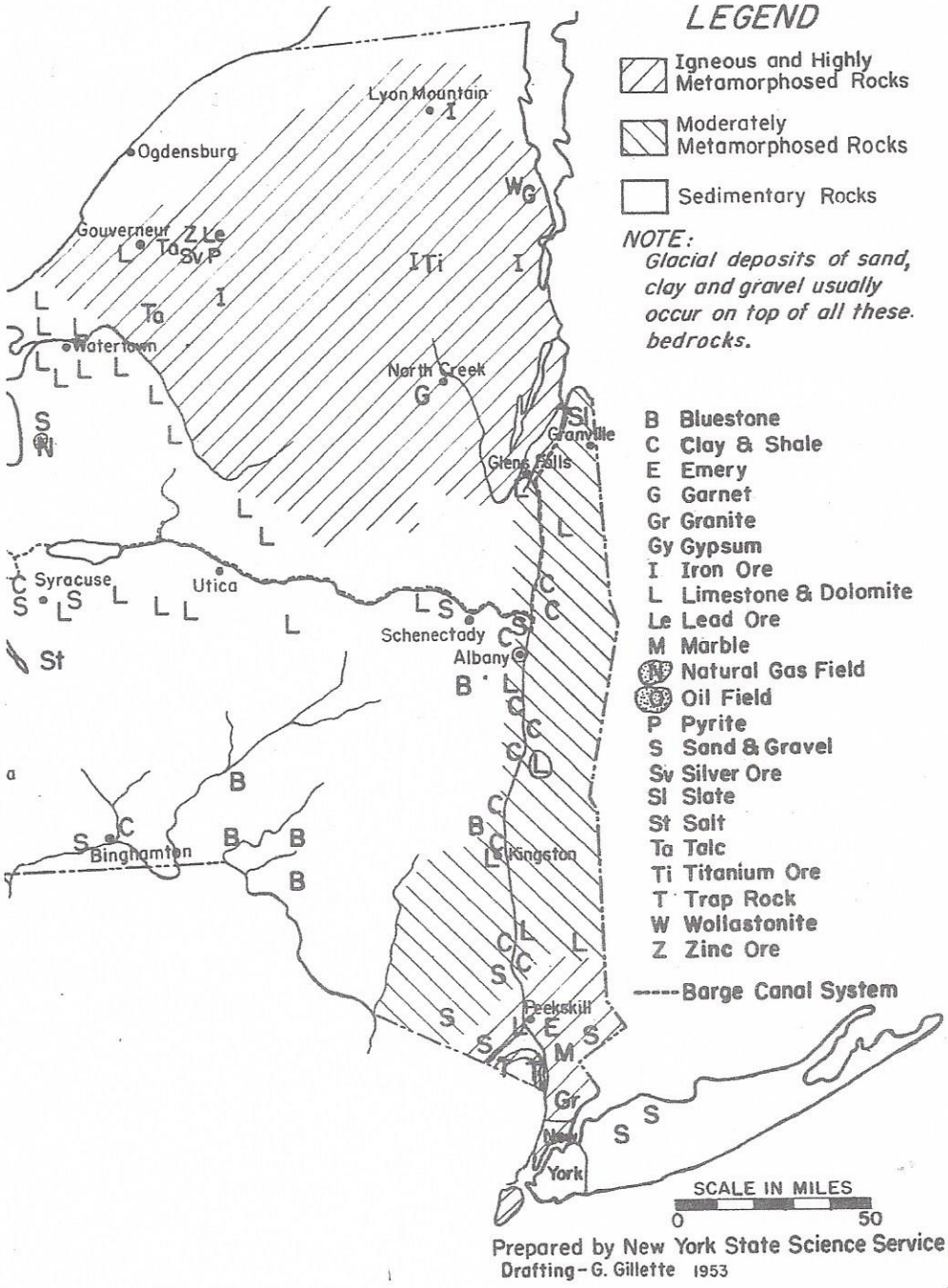


EXPLANATION

K,T,P	CRETACEOUS, TERTIARY, PLEISTOCENE undifferentiated gravels, sands and clays	Dominantly sedimentary rocks
₹	TRIASSIC red sandstones and shales, diabase	
PM	PENNSYLVANIAN and MISSISSIPPIAN conglomerates, sandstones	
D	DEVONIAN	
S	SILURIAN	
O	ORDOVICIAN	limestones, dolomites, shales, sandstones plus salt, gypsum and hematite in SILURIAN
€	CAMBRIAN	
€O	CAMBRIAN and ORDOVICIAN intimately folded and faulted (in Taconic area of eastern New York)	Low grade metamorphic rocks
pS	Age uncertain, but pre-Silurian; New York City Group, metamorphic rocks	High grade metamorphic rocks
p€ pCa	PRECAMBRIAN: gneisses – p€, anorthosite – pCa	

0 10 20 30 40 50
SCALE IN MILES

MINERAL RESOURCES



IGNEOUS ROCKS

19. Gabbro Gabbro is an important rock type in the Adirondack region where it occurs as relatively small masses. It is a coarse-grained rock composed chiefly of calcic plagioclase and pyroxene, with or without olivine. Common accessory minerals (those present in amounts usually less than one percent) are apatite, magnetite, and ilmenite.

20. Anorthosite One may look upon anorthosite as a type of gabbro. Anorthosite comprises a 1,200 square mile region of the Adirondack Mountains, including the area of high peaks in the east-central Adirondacks (Mt. Marcy and Whiteface Mountain). This is the largest mass of nonstratified anorthosite in the United States and only two larger bodies of similar rock occur on this continent. It is an unusual rock in that it is composed almost entirely of one mineral - andesine feldspar. This variety of feldspar is less calcic than the labradorite feldspar of most anorthosite bodies. Both andesine and labradorite are members of the plagioclase series of feldspar which are readily identified by their striations. Labradorite sometimes displays flashes of an iridescent-like color of a single hue which gradually changes as the crystal is moved about in reflected light. Brilliant blues are common; greens, yellows, reds and oranges occur less frequently. Anorthosite was quarried as a building stone between 1880 and 1915. It has been envisioned as a major raw material source for metallurgical grade alumina.

21. Syenite Syenite is a granular rock consisting principally of feldspar and containing one or more dark minerals such as hornblende or biotite. Accessory minerals include sphene, apatite, zircon and magnetite. Syenite differs from granite only in the amount of quartz it contains. If a rock contains less than 10 percent quartz, it is called syenite; with more quartz, it is classed as a granite. Many rocks mapped as syenites in the Adirondacks contain more than ten percent quartz. Syenite is used as an architectural stone, paving blocks and flagging.

22. Diabase Diabase is a dark, fine-grained intrusive rock that has the composition of gabbro. It is characterized by a particular texture in which the interlocking nature of the essential minerals contribute strength and durability to the rock. The most notable occurrence of diabase in New York is the famous Palisades, a spectacular escarpment or rock bounding the west side of the Hudson River from Haverstraw to Staten Island. Relatively small diabase dikes occur elsewhere in the State; one of the largest, about 100 feet wide, can be seen at Little Falls. Diabase tends to form dikes, which are tabular intrusive masses that crosscut the intruded rocks in contrast to sills, which are intruded parallel to the structure of the enclosing rocks. The Palisades diabase appears like a sill at the surface but is believed to become a dike in depth. Because of the great thickness of the Palisades (in places nearly 1,000 feet), cooling of the magma was sufficiently slow so that the texture of the diabase is unusually coarse. Under the commercial name of trap, diabase is sold for road metal and concrete.

SEDIMENTARY ROCKS

23. Conglomerate A conglomerate is a clastic rock composed mainly of rounded pebbles, cobbles or boulders. The distance of transportation and the number of times that the material has been moved results in a variation in size, shape, and degree of roundness. If the fragments are angular rather than rounded, the term breccia may be applied to the rock. A well known New York conglomerate is the Olean conglomerate of Pennsylvanian Age which consists of rounded quartz pebbles that average about 1-2 inches in diameter. Other prominent conglomerates are the Oneida conglomerate (Middle Silurian) of east central New York and the Shawangunk conglomerate of Ulster and Orange Counties of southeastern New York. Material from the Shawangunk conglomerate has been used for the manufacture of large millstones.

24. Sandstone Sandstones consist of beds of cemented or compacted sand grains. They are usually composed predominantly of quartz grains that are more or less rounded. The binding or cementing material may be silica, a carbonate (usually calcite), an iron oxide or clay. The color of the rock often depends upon the type of cement. The Catskill "red beds" which consist of impure sandstones and shales owe their color to hematite which is present as a thin coating on the sand grains and is a constituent of the shales. The clean, red and white Potsdam sandstone (Cambrian) which encircles the Adirondacks on all sides except the southwest is one of the State's best known sandstones. Another major unit is the Whirlpool sandstone (early Silurian) of western New York. It is often called the "white Medina." Quarrymen of Ulster County commonly group Devonian sandstones together for commercial purposes under the name of "bluestone." The name originated from the bluish-gray color of the rocks although green, purple and red varieties are associated with the bluish rock.

25. Shale Shale is a very fine-grained rock which consists primarily of solidified clay. Bedding fissility tends to be present inasmuch as clays are platy minerals that become oriented during compaction. When it is absent and the rock is massive, the term mudstone may be applied. Shales are usually soft and susceptible to erosion. Black and gray shales predominate; other colors are less abundant. There are several black shales of Devonian age in New York; i.e., Geneseo shale, and they are particularly abundant in the middle Ordovician; i.e., Utica shale. Black shales owe their color to the presence of carbon or carbonaceous residues and they are often mistaken for coal deposits. The Vernon red shale (late Silurian) occurs in central New York whereas the Queenston red shale (late Ordovician) extends from Rochester west to the Niagara Gorge. Calcareous shales are usually very fossiliferous. Some examples are the Rochester shale (middle Silurian) and the Hamilton shales (middle Devonian). Shale is used in the manufacture of brick and as a light weight aggregate for concrete.

13. Gypsum Rock Outcrops of gypsum ($CaSO_4 \cdot 2H_2O$) beds in New York grade into anhydrite ($CaSO_4$) beneath the earth's surface. This observation is one piece of geological evidence which indicates that the original material of most gypsum beds was anhydrite. The anhydrite was precipated during the evaporation of sea water. When it was exposed to surface climatic conditions, it formed gypsum by hydration. Other saline minerals (chlorides, nitrates), limestone and shale are commonly associated with gypsum.

14. Rock Salt Thick beds of rock salt (halite) are also formed by the evaporation of sea water. They commonly overlie beds of gypsum and anhydrite because halite follows them in the sequence of precipitation from an evaporating sea. In New York, single beds 40-80 feet thick are known. The gypsum rock and rock salt that occur in New York are late Silurian in age.

26. Chert Chert and flint are very hard rocks composed of silica (SiO_2). Much confusion exists concerning the origin of these terms, their exact meaning, and the difference, if any, between them. In general, chert is favored as a geological term whereas flint should probably be reserved for artifacts. Chert occurs in limestones and dolomites, and in some shales. The most common forms are as hard, dense nodules and as layers interbedded with sedimentary rocks. Arrowheads were often made of chert because it breaks with sharp corners and edges.

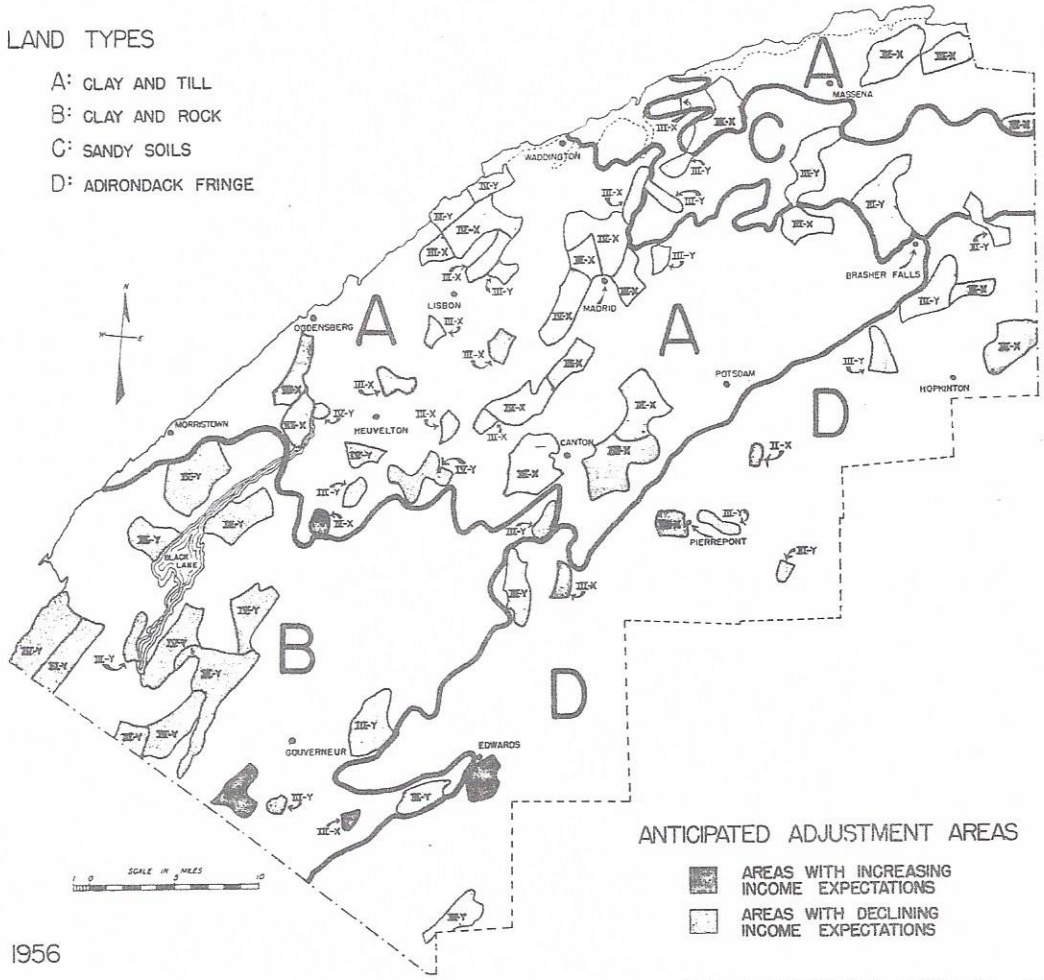
METAMORPHIC ROCKS

27. Slate Slate is familiar to many New York residents as the red and green flagstone that is used for patios and small sidewalks. This use is due to its characteristic ability to split along definite planes (rather than along the bedding) into sheets, a property which was induced during the metamorphism of shale to slate. Slate quarries are common in Washington and Rensselaer Counties, an area unique in the occurrence of commercial red slate. Slate extends into western Connecticut and has a spotty development as far south as Poughkeepsie. Slate has been crushed and used for roofing granules in the past. It is now used for architectural roofs such as those seen in Albany.

28. Marble Marble is a rock composed chiefly of calcite and/or dolomite. It has formed through the metamorphism of relatively pure calcareous rocks. Slight amounts of impurities often impart a wide range of color to the rock. Two of the most important marbles of New York State are the Precambrian Grenville marbles of the Adirondack region, and the Inwood marble of the New York group of that area. The marble known as the "Glens Falls Black" is really a limestone. This error arises because of the quarryman's tendency to designate as marble any commercial carbonate rock capable of taking a polish.

29. Schist Any medium- to coarse-grained metamorphic rock which consists principally of micaceous minerals oriented in a nearly parallel arrangement is called schist. This particular mineral arrangement partially defines a schist and accounts for the lamination or schistosity along which the rock may usually be broken. Schists are usually derived from sedimentary rocks such as shales that contain large amounts of clay minerals. The Manhattan schist is the major rock type underlying Manhattan and Westchester County.

30. Gneiss A gneiss (pronounced "nice") is a coarse-grained rock in which bands rich in light-colored minerals (quartz and feldspar) alternate with bands composed mainly of dark-colored minerals. This banding may be inherited from the original layered sedimentary rock or it may be the result of plastic flow of rock material during metamorphism. Generally gneissic rocks have undergone more intense metamorphism than schistose rocks. Gneisses are the most important rocks of the Hudson Highlands and the Adirondacks.



LAND TYPES AND ANTICIPATED ADJUSTMENT AREAS ST. LAWRENCE COUNTY, N. Y.

Till and Clay Combination

A large belt of this land type occurs in the north-central part of the county. It is enclosed by a line from Morristown to Canton, then northeast to Brasher Falls, then west to Waddington. A second area occurs north of a line from Louisville to Massena, continuing eastward to Franklin County.

This is the most responsive of the four land types. The soils on the ridges are high in lime, well drained but able to hold sufficient moisture, and will produce high yields under short rotations with moderate fertilization. The associated clay or sand-over-clay flats produce good pasture or may be used principally for hay production in a long rotation. Farmers on this land type in the past have farmed the ridges and the flats too nearly the same. In many cases individual fields run from the tops of the ridges out across the flats. The adoption of flat-land and ridge rotations that are distinctly different will increase output and incomes in this area. Careful attention to fertility needs, especially potash and phosphorus, will also increase yields.

Many areas on this land type will move forward in productivity and prosperity in the future (see

adjacent map of "X" and "Y" areas). The pace has already been set in the Lisbon, Canton and Madrid areas. Success will depend in a large measure on attaining the proper balance in land management and adequate sizes of farm business.

Clay and Rock Combination

A large area of this land type occurs in the western and southwestern parts of the county, bounded by a line from near Spragueville northeast to Hermon, then west to the St. Lawrence River near Morristown. In the southern part of this area, heavy, wet, clay soils are found on low-lying flats among ridges of exposed bedrock. In the area lying between Black Lake and the St. Lawrence River the topography is more level with fewer areas of bedrock exposed. The soil mantle, however, is thin, with bedrock appearing at plow-layer depth in many places.

The clays have long been considered the strong soils of the North Country. These soils have a high natural fertility and have been able to produce satisfactory yields of timothy hay and pasture year after year with only limited application of fertilizer. Under an extensive type of farming the limitations of irregularly shaped and widely scattered fields, wet spots and poor soil structure did not severely handicap the area. Farming has prospered wherever enough clay areas could be operated together to maintain a farm unit. It appears likely however that much of this area will be increasingly handicapped as the general move toward intensification gathers momentum within the county. This development of course will not be rapid; it will extend over a generation or more.

The more poorly drained, high-lime clay soils are suited primarily to hay and pasture. Some corn and small grain is grown where artificial surface drainage has been provided. The small areas of better drained clays can be used successfully without artificial drainage for grain and hay crops such as alfalfa and birdsfoot trefoil. On the better drained soils, lime is needed in limited quantities, potash is usually adequate but phosphorus is almost always deficient. On the wetter soils a combination of open ditches and "landing" up and down the slope is necessary to remove excess water early in the spring.

Farms on this land type have generally been developed to the limit of the land resource. Two well-drained areas exist, however, in which greater development appears likely; a small area north of Mud Lake, and a larger area between Spragueville and Gouverneur. Near Gouverneur and Hammond, Land Class V and VI areas now occur on a similar soil resource. Even well-drained clays are somewhat hard to manage, but will support a very efficient agriculture in the hands of skillful operators.

Large portions of the area between Black Lake and the St. Lawrence River are handicapped by shallow soils. Being a heavy clay, the soils are poorly drained during wet periods and show the effects of drought during dry summers. Farming is still firmly established in many of these areas, though some farms have already been abandoned. Topography is favorable and a greater use of alfalfa may keep some of the deeper soil areas at a prosperous farming level. The bulk of the area, however, is likely to suffer as areas elsewhere in the county move ahead.

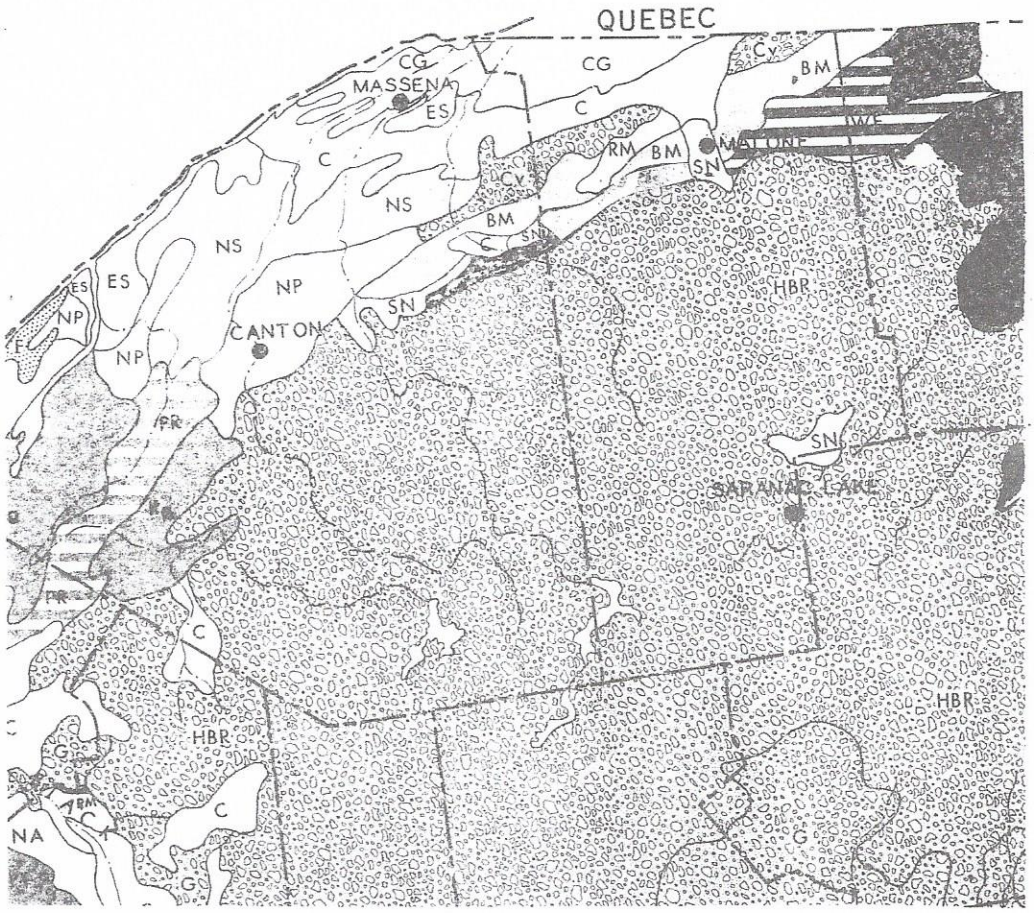
A high percentage of the Class III and IV areas on this land type east of Black Lake are also likely to decline in the future. These areas are serviced by all-weather roads, but due to the rough terrain the farm units are small and awkwardly laid out. In general such farms are not suited to intensification. Heavy machinery is not suited to the small, irregular and often wet fields, nor are the farms favorably located for bulk milk routes. Some farms have been consolidated, but this in general has not proved to be the answer. Although occasional units will continue operating a solid business, the majority of the farms do not have the resources necessary to maintain their present economic status indefinitely. Under the old system of extensive farming, these areas were well developed, but as the general move toward complete mechanization and higher per acre yields materialize, these areas will find themselves at a disadvantage.

Sands

The sandy areas of St. Lawrence County are primarily non-agricultural. A belt of this land type, varying in width from five to ten miles, extends in an easterly direction from near Waddington to the Franklin County line.

SOIL ASSOCIATION

Compiled by M. G. Cline,



Areas Dominated by Medium and Moderately Fine-textured High-lime Soils on Glacial Till or by Their Shallow Associates

Dominantly Shallow Soils

F — Farmington and Nellis associations

Well-drained Soils from Till Interspersed with Wet Soils from Marine Clays

NP — Nellis - Panton association

Well-drained Soils from Till Interspersed with Wet Soils from Sands

NS — Nellis - Swanton ass

Areas Dominated by Moderately Coarse-textured Very Strongly Acid Soils on Glacial Till from Granitic Rocks

Dominantly Very Stony Soils on Rolling to Steep Topography

HBR — Hermon - Becket - Rockland association

SN — Salmon - Nicholville association

Dominantly Somewhat Poorly and Poorly Drained Soils

PV — Panton - Vergennes association

Poorly Drained Clayey Soils Among Bedrock outcrops

PR — Panton - Rockland association

Areas Dominated by Coarse-textured Soils on Gravel and Sand

Dominantly Well- to Excessively Drained Nearly Level Soils

C — Colton and Adams associations

Dominantly Somewhat Poorly Drained Soils

ES — Elmwood - Swanton association

Areas Dominated by Rockland and Very Shallow Soils

Rg — Rockland, nearly level to sloping

Areas Dominated by Medium-textured Acid Soils With Neutral to Slightly Acid Fragipans on Glacial Till

Dominantly Poorly Drained Very Stony Soils

Cv — Coveytown - Cook association

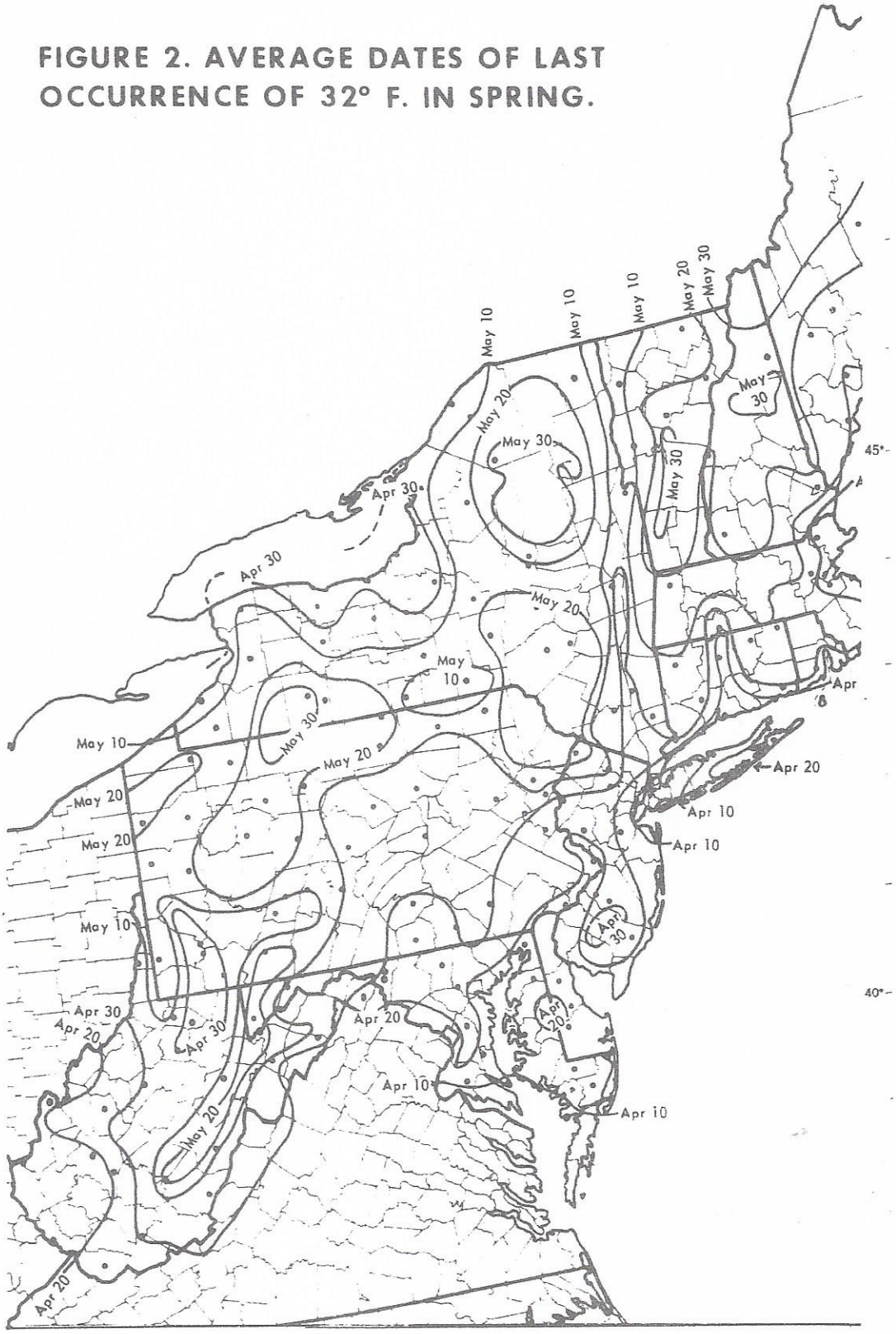
Stations	No. of yrs.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
East Hampton..	16	3.12	2.39	2.53	3.76	3.89	2.96	2.79	3.19	3.13	3.67	3.38	3.10	37.91
Easton.....	19	2.49	2.62	2.84	2.39	3.79	3.65	4.23	4.74	4.00	3.39	2.56	2.78	39.48
Elba.....	19	3.70	3.35	3.19	3.23	3.19	2.89	3.66	2.90	2.57	2.81	2.12	3.11	36.72
Elmira.....	64	1.92	1.71	2.49	2.96	3.70	3.83	3.26	3.51	2.88	2.79	2.04	2.09	33.18
Fairfield.....	17	2.69	2.06	2.36	2.53	3.04	4.29	4.21	3.66	3.08	3.56	2.46	2.74	36.68
Farmingdale....	14	3.00	3.35	4.16	3.52	3.64	4.13	4.12	4.81	3.86	3.93	3.84	3.04	45.40
Fayetteville....	23	2.14	2.09	2.59	2.63	3.39	4.15	3.65	3.61	2.92	3.14	2.39	2.45	35.15
Flatbush.....	46	3.21	3.00	3.31	3.67	3.83	3.97	3.77	4.39	3.16	3.61	3.82	3.48	43.22
Fleming.....	11	1.76	2.09	1.98	1.74	3.66	3.25	3.49	3.29	3.07	2.76	2.66	2.06	31.81
Flushing.....	24	3.49	3.74	4.35	3.29	3.21	3.70	4.51	4.31	3.47	3.16	3.12	3.51	43.86
Fordham.....	12	3.29	3.78	4.41	3.87	4.68	4.68	4.53	4.89	3.27	4.69	3.97	3.47	49.53
Forestport.....	11	2.88	3.12	3.39	3.33	3.16	3.64	3.51	3.15	4.76	4.16	3.51	3.49	42.10
Fort Hamilton..	42	2.98	2.97	3.22	2.94	3.64	3.34	3.79	4.34	3.12	2.85	3.17	3.10	39.46
Fort Niagara...	55	1.97	1.92	1.98	1.96	2.83	2.13	2.81	2.48	2.71	2.36	2.16	2.02	27.33
Frankfort.....	22	2.58	2.14	2.62	3.26	3.29	3.72	4.29	3.69	3.96	3.50	3.12	2.62	38.79
Franklinville...	26	2.82	2.65	2.95	3.17	3.45	3.90	4.16	3.44	3.14	3.43	2.81	2.84	38.76
Fredonia.....	49	2.40	2.04	2.42	2.73	3.26	3.49	3.16	3.20	3.78	3.91	3.33	3.00	36.72
Friendship.....	18	2.88	2.60	2.64	3.19	3.64	4.16	3.17	2.52	2.92	3.18	2.61	2.72	36.23
Fulton.....	15	3.14	2.95	3.68	3.31	3.25	2.82	3.29	2.97	3.04	3.43	3.52	3.80	39.20
Gabriels.....	39	2.70	2.41	2.76	2.26	3.07	3.58	3.93	3.45	3.78	3.39	2.90	2.66	36.89
Geneva.....	54	2.24	2.10	2.49	2.95	3.24	3.63	3.07	3.10	2.66	2.89	2.63	2.42	33.42
Glenham.....	13	3.41	2.64	3.68	3.34	3.52	4.05	4.16	4.15	4.55	3.20	3.69	2.93	43.32
Glens Falls.....	44	2.99	2.86	3.24	3.03	3.12	3.61	3.93	3.63	3.43	3.21	3.21	3.01	39.27
Gloversville....	53	3.40	3.13	3.71	3.32	3.58	4.22	4.26	3.92	3.95	3.39	3.36	3.25	43.49
Gouverneur....	38	2.30	2.11	2.21	2.05	2.53	2.74	2.67	2.23	3.15	3.39	2.66	2.36	30.40
Granville.....	14	2.08	1.50	1.74	2.13	3.47	3.21	3.70	2.97	2.67	2.90	2.88	2.59	31.84
Greene.....	11	2.23	2.48	3.67	3.11	3.56	3.39	3.68	4.22	3.52	3.70	2.89	3.06	39.51
Greenfield Cntr.	47	3.30	2.86	3.27	3.24	3.14	3.70	3.99	3.44	3.84	3.20	3.11	3.03	40.12
Greenwich.....	15	2.57	2.22	3.50	2.31	3.47	2.92	3.14	3.44	3.88	2.96	2.50	2.86	35.77
Griffin Corners.	14	2.51	2.61	3.04	3.41	2.88	3.63	3.70	4.07	3.78	3.79	2.51	3.42	39.35
Hamilton.....	25	2.15	2.59	2.61	2.28	3.09	3.43	3.73	3.24	3.56	3.25	2.58	2.99	35.50
Hammondsport.	13	1.66	1.72	2.80	2.63	3.32	2.76	3.87	2.57	2.42	2.61	1.97	2.00	30.33
Hancock.....	15	2.89	2.37	2.72	3.14	2.60	2.86	3.46	3.59	3.29	2.45	2.82	2.64	34.83
Harkness.....	28	1.36	1.51	1.72	2.00	2.41	3.23	3.02	2.53	2.99	2.56	1.96	1.51	26.80
Hartwick.....	14	2.67	2.15	2.59	3.10	3.35	4.05	4.24	2.91	3.09	3.54	3.20	2.47	37.36
Haskinville.....	49	1.88	1.71	2.48	2.69	3.36	3.56	3.89	3.24	3.01	2.69	2.30	1.98	32.76
Hemlock.....	46	1.74	1.59	2.18	2.65	2.99	3.38	3.40	2.82	2.63	2.61	2.02	1.88	29.89
High Falls.....	18	3.36	2.64	3.86	4.22	3.39	4.88	4.26	4.76	3.91	3.41	4.26	3.17	46.12
Highmarket....	20	4.25	3.81	4.26	3.95	3.78	3.83	4.44	4.57	5.19	5.25	4.93	4.45	52.71
Hinckley.....	27	4.01	2.96	3.67	3.81	3.49	4.10	4.46	3.81	4.68	4.36	4.07	3.68	47.10
Hoffmeister....	39	4.23	3.73	4.30	4.15	4.26	4.63	5.02	4.43	4.95	4.94	4.44	4.24	53.32
Honeymead Brook.....	20	3.26	3.20	3.20	2.64	3.66	3.47	5.59	4.19	3.79	3.34	3.12	3.46	42.92
Honk Falls.....	18	3.23	2.82	3.77	3.77	3.76	4.50	4.13	4.44	3.80	3.63	3.68	2.99	44.52
Hooker.....	11	3.82	3.47	3.88	3.23	4.15	3.10	3.77	3.42	4.76	4.99	4.18	3.54	46.31
Hoosick Falls...	18	2.34	2.32	2.91	2.72	3.04	3.73	4.37	3.73	3.36	3.10	2.57	2.30	36.49
Hope.....	14	3.79	3.05	3.94	3.88	2.99	4.01	4.93	3.52	4.51	3.84	3.66	3.81	45.93
Houseville.....	14	3.50	2.89	3.69	2.87	3.45	2.82	4.75	3.61	4.60	4.37	4.79	3.59	44.93
Hudson.....	29	2.70	2.66	2.66	3.09	3.17	3.90	3.87	3.65	3.14	3.89	2.95	3.18	38.86
Humphrey.....	20	3.12	3.21	2.78	3.02	4.61	4.60	4.61	4.42	4.06	3.35	3.46	3.21	44.45
Hunt.....	23	2.33	2.00	2.63	3.09	3.80	3.19	3.75	3.02	2.54	3.12	1.76	2.36	33.66
Indian Lake....	44	3.03	2.54	3.08	3.00	3.33	3.92	3.90	3.37	3.87	3.66	3.17	3.03	39.90
Ithaca.....	86	2.02	1.85	2.49	2.52	3.35	3.59	3.58	3.22	2.98	2.91	2.35	2.25	33.11
Jacksonburgh...	22	2.54	2.17	2.64	3.09	2.93	3.78	3.71	3.84	3.59	3.14	2.85	2.52	36.80
Jamestown.....	46	3.46	2.99	3.49	3.35	3.43	4.17	4.41	3.52	3.73	3.51	3.77	4.00	43.83
Jeffersonville...	42	2.90	2.67	3.11	3.25	3.22	3.75	4.43	4.57	3.68	3.52	3.00	2.86	40.96
Johnstown.....	17	3.22	3.12	3.53	2.66	3.60	4.17	4.04	2.98	3.09	3.10	3.34	2.93	39.78
Keene Valley...	36	2.97	2.26	2.64	2.34	3.14	3.34	3.60	3.66	3.32	2.99	3.01	2.66	35.93
Kinderhook....	17	2.21	1.53	2.48	2.97	3.41	4.49	4.36	3.23	2.84	3.26	2.69	2.76	36.23
King Ferry.....	18	2.33	1.86	2.43	2.52	2.92	3.26	3.53	3.48	2.78	3.15	2.10	2.22	32.58
Kings Station...	17	3.42	3.64	4.30	2.87	3.86	4.00	4.56	4.67	3.72	3.25	3.14	3.99	45.42
Kingston.....	24	3.70	2.65	3.13	2.51	4.00	3.83	4.21	3.39	2.50	3.31	3.47	3.31	40.01
Lake George....	22	3.09	3.59	3.69	2.90	3.29	4.03	4.06	4.09	3.50	3.62	2.83	3.47	42.16
Lake Placid Club	37	3.25	2.84	3.52	2.81	2.97	3.80	4.06	3.31	3.37	2.95	2.82	3.02	38.72
Lansingburg....	20	2.29	2.07	2.16	2.40	2.79	3.92	3.56	2.62	3.02	3.19	2.82	2.59	33.43
Lawrenceville ..	14	1.77	1.68	2.05	2.92	3.02	3.34	3.22	2.70	3.49	2.91	2.18	2.25	31.53
Le Roy.....	20	3.40	3.38	2.60	3.14	3.26	3.18	3.25	3.01	3.16	2.62	2.51	2.94	36.45
Letchworth Park	31	1.82	1.48	1.92	2.34	3.30	3.10	3.10	2.76	2.79	2.40	2.17	1.64	28.82
Lewiston.....	23	1.48	1.73	1.92	2.05	2.39	2.46	2.39	1.89	2.68	2.44	1.89	1.49	24.81
Liberty.....	49	3.02	3.05	3.30	3.98	3.83	4.83	4.47	4.36	3.91	3.48	3.27	3.53	45.03
Linden.....	26	2.35	2.34	2.76	2.82	2.92	3.51	3.34	2.89	3.17	3.04	2.92	2.51	34.57
Little Falls No. 1	48	2.62	2.34	2.91	2.87	3.29	4.19	4.22	3.72	3.74	3.35	2.88	2.64	38.77
Little Falls No. 2	24	3.23	2.66	3.29	3.67	3.36	4.21	4.35	4.00	3.86	3.70	3.50	3.24	43.07
Locke.....	13	2.12	1.96	3.07	2.95	3.29	3.53	4.27	4.27	3.18	3.26	2.64	2.75	37.29
Lockport.....	59	2.29	2.09	2.23	2.40	2.80	2.90	3.26	2.64	2.79	2.80	2.43	2.28	30.91
Lowville.....	82	2.92	2.68	2.53	2.51	2.97	3.33	3.27	3.17	3.02	3.52	3.37	3.15	36.44

Stations	No. of yrs.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec	Annual
Lyndonville	18	1.66	1.79	1.61	1.98	2.48	2.26	3.51	2.87	2.38	2.27	2.55	2.15	27.51
Lyons	20	2.84	2.48	2.70	2.46	3.06	4.08	3.70	3.49	2.62	3.10	2.88	2.85	36.23
Lyons Falls	28	3.98	3.51	3.23	3.07	3.69	3.70	4.15	3.62	4.14	3.99	4.18	3.99	45.25
Macedon	26	1.97	2.23	2.54	2.91	2.54	3.12	3.10	2.65	2.78	2.87	2.42	2.46	31.59
Malone	13	2.92	3.27	2.91	2.44	2.93	4.11	4.51	4.21	3.51	2.70	2.88	3.09	39.48
Mays Point	26	1.90	2.14	2.81	2.96	3.14	3.18	3.58	2.62	2.80	2.98	2.78	2.43	33.32
McKeever	22	3.83	2.78	3.55	3.85	3.83	3.85	4.59	4.00	4.90	4.78	4.02	3.88	47.86
Mechanicsville	34	2.03	1.79	2.59	3.01	2.81	3.63	3.69	3.22	3.66	3.02	2.92	2.18	34.55
Medford	21	4.13	3.52	3.89	4.13	3.77	3.45	3.93	4.44	2.92	3.69	3.59	4.48	45.94
Mexico	20	2.86	2.70	2.78	2.32	2.90	2.88	3.00	2.75	3.38	3.99	3.47	3.86	36.89
Middlebury	17	1.46	1.77	2.29	2.46	2.63	3.41	3.30	2.81	2.83	2.95	2.56	1.79	30.26
Middletown	18	3.13	4.02	4.12	3.17	4.03	4.06	5.40	4.61	4.19	3.74	3.24	3.48	46.83
Mohonk Lake	49	3.30	3.36	3.97	3.94	3.63	4.05	4.59	4.62	4.29	3.57	3.42	3.62	46.36
Moira	30	3.11	2.96	3.03	2.37	3.08	3.72	3.55	3.31	3.10	3.16	2.87	2.76	37.02
Montgomery	13	2.72	2.23	2.25	2.94	2.79	4.07	3.91	2.87	2.38	3.55	2.87	2.36	34.94
Morrisville	32	2.37	2.57	2.81	3.11	3.27	3.87	3.79	3.83	3.60	3.51	2.86	2.74	38.33
Mount Hope	33	3.63	3.81	4.23	4.24	4.30	4.11	5.26	5.16	3.68	4.24	3.20	4.13	49.99
Mt. McGregor	31	3.37	3.08	3.38	3.21	3.09	4.13	4.62	3.66	3.52	3.30	3.61	3.18	42.15
Mount Morris	16	2.04	2.23	1.81	2.16	3.21	2.82	2.43	3.01	2.34	1.94	1.92	2.23	28.14
Mount Pleasant	12	2.16	1.50	2.55	3.58	3.63	3.14	4.46	4.12	3.05	3.23	2.28	2.45	36.15
Mount Vernon	27	3.79	3.82	3.70	3.60	3.78	4.20	4.53	4.81	4.31	3.12	3.09	3.57	46.32
Newark	25	1.83	1.88	2.31	2.74	2.86	3.21	3.10	2.56	2.62	2.93	2.59	2.20	30.83
Newark Valley	35	2.47	2.12	2.93	2.85	3.87	3.88	4.05	4.20	3.26	3.49	2.32	2.70	38.14
New Berlin	26	2.47	2.39	3.00	2.78	3.56	3.92	3.75	4.00	3.60	3.44	2.68	2.77	38.36
Newburgh	29	2.71	2.52	2.48	2.19	4.36	3.63	3.69	3.48	2.98	3.44	3.16	2.49	37.13
New Lisbon	34	2.56	2.69	3.05	2.60	3.85	3.99	5.08	4.33	3.67	3.30	2.62	2.83	40.57
New London	26	2.63	2.36	3.00	3.34	3.18	3.64	4.03	3.44	3.61	3.81	3.52	2.76	39.32
New York City	119	3.31	3.27	3.50	3.32	3.38	3.38	4.08	4.29	3.50	3.42	3.33	3.23	42.11
N. Hammond	28	2.55	2.27	3.01	2.44	3.18	3.17	3.48	3.55	3.29	3.43	3.03	2.37	35.77
North Lake	43	4.55	3.87	4.43	3.74	4.15	4.57	4.76	3.96	4.57	4.46	4.37	4.25	51.68
North Rose	16	2.84	2.56	2.80	2.83	2.77	3.73	3.88	3.15	2.65	3.27	3.44	3.06	36.98
North Salem	26	2.97	2.37	3.20	3.38	4.37	3.41	4.07	4.11	3.09	4.13	3.14	3.20	41.44
Northville	13	3.17	3.51	3.40	2.75	3.50	3.54	2.99	2.90	3.58	3.42	2.85	3.25	38.86
North Volney	14	3.27	2.69	3.06	2.05	2.53	3.11	3.68	2.40	2.87	3.66	3.58	3.40	36.30
Norwich	38	2.77	2.73	3.26	3.30	3.56	3.64	4.03	3.85	3.62	3.53	3.05	2.84	40.18
Number Four	16	4.66	3.93	3.82	2.70	3.88	4.33	5.56	4.80	4.67	4.09	4.71	4.74	51.89
Ogdensburg	60	2.11	2.09	2.33	2.25	2.81	3.17	3.13	2.82	2.74	2.81	2.46	2.21	30.93
Old Forge	12	4.40	4.58	3.84	3.59	4.20	3.81	3.76	3.69	4.00	3.89	4.26	4.28	48.30
Olean	30	2.70	2.45	2.94	3.70	3.70	3.64	3.90	3.34	3.42	3.53	2.84	2.69	38.85
Oneonta	50	2.47	2.48	3.03	2.75	3.09	3.93	4.20	4.31	3.46	3.26	2.63	2.59	38.20
Onondaga	16	2.52	1.48	1.80	2.02	2.77	3.70	3.42	3.19	2.78	3.29	2.48	1.95	31.40
Oswego	96	2.91	2.58	2.77	2.52	2.95	3.07	3.00	2.67	2.87	3.46	3.28	3.33	35.41
Otto	14	2.28	1.76	2.52	2.72	3.09	3.37	3.77	3.94	2.62	3.68	1.73	1.61	33.09
Oxford	49	3.01	2.69	2.96	2.99	3.95	3.99	4.08	4.04	3.66	3.34	2.93	3.06	40.70
Ovid	13	1.87	2.23	3.20	3.04	2.93	2.93	4.23	3.48	2.60	3.04	2.27	2.35	34.17
Palermo	72	3.23	3.00	2.76	2.38	2.80	3.26	3.20	2.73	3.13	3.35	3.53	3.76	37.13
Penn Yan	89	1.77	1.66	2.10	2.42	2.93	3.34	3.37	2.83	2.48	2.59	2.16	1.85	29.50
Perry City	37	2.81	2.22	2.86	2.90	3.26	3.94	3.98	3.60	2.93	3.68	2.59	2.65	37.42
Philadelphia	34	2.68	2.44	2.74	3.18	3.67	3.16	2.89	3.02	3.31	3.87	3.37	3.15	37.48
Pierrepont Manor	23	2.27	2.08	3.32	2.61	3.16	2.75	3.35	3.15	3.63	4.05	3.58	3.06	36.01
Plattsburg	60	2.00	1.64	2.17	1.97	2.58	3.12	3.54	3.19	3.06	2.81	2.37	1.99	30.44
Pompey	24	1.67	1.66	1.44	2.08	2.91	4.17	4.06	3.39	3.18	3.36	2.17	1.80	31.89
Port Jervis	60	3.10	3.03	3.43	3.39	3.77	4.30	4.85	4.22	3.74	3.50	3.08	3.14	43.55
Potsdam	39	2.15	2.02	1.98	1.96	3.61	3.50	4.10	3.42	3.10	3.17	2.33	2.03	33.37
Poughkeepsie	41	3.03	2.66	3.18	2.78	3.42	3.37	4.06	3.98	3.18	3.16	3.25	2.77	38.84
Raquette Lake	44	3.48	3.03	3.53	3.19	3.68	3.96	4.31	3.49	4.04	3.85	3.81	3.79	44.16
Red Hook	15	2.78	1.94	3.26	3.32	2.94	4.30	4.25	3.81	3.05	3.21	2.45	3.10	38.41
Rhinebeck	10	2.96	2.75	3.50	3.56	3.16	3.67	3.39	3.99	3.96	2.75	3.40	2.99	40.08
Ridgeway	12	2.66	2.43	2.44	2.33	2.47	2.65	4.50	2.99	2.62	2.63	2.75	2.71	32.98
Rifton	23	3.48	2.77	3.47	3.99	3.62	4.65	4.15	4.75	4.07	3.37	4.11	3.04	45.47
Rochester	116	2.54	2.39	2.67	2.50	2.95	3.05	3.04	2.77	2.74	2.82	2.62	2.61	32.70
Rome	20	3.71	3.82	4.04	2.80	4.02	4.68	4.58	4.43	3.94	3.54	3.86	4.03	47.45
Romulus	30	2.08	1.82	2.39	2.48	3.34	3.28	3.10	2.99	2.42	2.85	2.21	2.01	30.97
Roslyn	19	3.63	3.69	3.63	3.73	3.70	3.97	3.81	4.95	3.65	3.22	3.45	3.71	45.39
Roxbury	29	2.87	2.60	3.38	3.44	3.60	3.99	4.19	4.28	3.87	3.59	3.44	2.85	42.10
Sebattis	12	2.65	2.36	2.92	3.01	2.99	3.61	4.06	3.60	4.62	3.55	3.09	3.10	39.56
Sacketts Harbor	49	2.25	2.15	2.36	1.95	2.92	2.42	2.84	2.85	3.11	3.47	3.34	2.80	32.46
Salisbury	48	3.32	2.85	3.51	3.51	4.17	4.75	4.88	4.76	4.39	4.48	3.81	3.51	47.94
Salisbury Mills	15	3.91	3.87	3.36	3.80	3.80	4.27	4.13	4.64	3.78	4.35	2.93	3.70	46.54
Saranac Lake	16	2.46	2.36	2.40	2.16	2.94	4.05	3.9,	3.29	3.45	3.06	2.50	2.50	35.14
Scarsdale	35	3.57	3.12	3.86	3.90	3.62	4.17	4.70	4.85	4.36	3.68	3.45	3.45	46.73
Schenectady	27	2.17	2.06	2.71	3.04	2.63	3.79	3.49	3.33	3.45	2.80	2.85	2.23	34.55
Schuylerville	26	2.97	2.69	3.41	3.63	3.13	4.00	4.39	3.46	3.67	3.10	3.65	2.87	40.97
Scio	13	1.88	1.67	2.91	2.58	3.36	3.61	3.93	3.08	2.90	2.62	2.13	2.36	33.03
Scotia	26	2.16	1.89	2.59	3.07	2.67	3.68	3.73	3.33	3.48	2.82	3.10	2.02	34.54

Stations	No. of yrs.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Setauket	60	3.94	3.69	4.17	3.72	3.38	3.24	3.84	4.17	3.65	3.82	3.77	3.73	45.12
Sharon Springs No. 1	31	3.01	2.75	3.25	3.52	3.42	4.07	4.10	3.76	3.57	3.13	3.21	2.92	40.71
Sharon Springs No. 2	29	2.94	2.67	3.23	3.21	3.18	4.04	3.78	3.80	3.52	3.23	3.26	2.87	39.73
Sherburne	37	2.29	2.17	3.04	3.07	3.48	3.69	3.80	3.56	3.52	3.38	2.70	2.60	37.30
Shortsville	31	1.69	1.55	2.13	2.74	2.73	3.76	3.61	2.78	2.65	2.66	2.07	1.77	30.14
Skaneateles No. 2	50	2.61	2.52	3.32	3.19	3.58	3.76	3.99	3.42	3.58	3.60	3.16	2.97	39.70
Smiths Basin	25	2.71	2.07	2.63	3.63	2.99	4.26	4.55	3.59	3.65	3.25	3.62	2.53	39.48
Sodus	14	2.17	2.32	2.56	2.64	3.14	3.30	2.97	2.44	4.00	3.14	3.14	3.05	34.87
South Canisteo	20	2.94	2.67	3.04	3.39	4.29	4.27	4.37	3.90	3.46	3.62	2.65	2.83	41.43
Southeast Res.	49	3.54	3.37	4.02	3.67	3.79	3.98	4.56	4.60	4.10	3.62	3.52	3.54	46.31
South Edwards	17	2.87	2.37	3.44	3.26	3.54	3.61	3.87	3.44	3.92	4.18	3.83	3.72	42.05
South Hartford	13	2.53	2.66	3.26	2.71	3.73	4.12	3.74	4.62	2.74	4.03	3.86	3.12	41.12
South Kortright	18	2.28	2.32	2.73	2.37	3.66	4.19	4.27	4.59	3.65	3.38	2.54	2.98	38.96
South Trenton No. 1	13	3.51	5.60	4.43	3.62	4.24	4.69	5.21	4.60	3.80	4.33	4.18	3.43	51.64
South Trenton No. 2	11	3.90	5.10	4.95	3.66	4.22	4.69	5.07	4.67	4.29	4.73	4.23	4.05	53.56
South Wales	13	2.89	2.89	3.51	3.27	3.07	3.31	3.22	2.93	3.72	3.13	3.45	3.60	38.99
Sperryville	12	2.29	1.66	2.20	2.70	2.90	3.56	3.56	3.21	3.68	3.70	2.54	2.61	34.61
Spier Falls	43	2.91	2.75	3.28	3.16	3.04	3.74	3.85	3.08	3.40	3.15	2.98	3.11	38.45
Stafford	13	2.41	2.29	2.63	2.89	3.04	2.86	2.84	2.72	2.93	2.24	2.37	2.41	31.63
Stillwater Res.	22	4.14	3.19	4.23	4.05	3.92	4.21	4.82	4.24	4.46	4.76	4.26	4.40	50.68
Straits Corners	10	2.42	1.81	3.40	2.99	2.89	3.94	4.44	4.10	2.70	3.39	2.71	2.77	37.56
Syracuse	46	2.73	2.49	3.13	2.93	2.75	3.61	3.31	3.09	2.84	3.11	2.59	2.85	35.31
Taberg	14	3.94	3.09	3.36	4.03	3.78	4.45	4.09	4.04	4.81	4.81	4.53	3.76	48.69
Tarrytown	12	3.07	3.20	3.84	3.26	4.56	3.80	5.03	5.41	3.69	4.22	4.23	3.27	47.58
Ticonderoga	17	2.37	2.38	2.33	2.04	2.91	3.26	3.25	2.69	2.97	2.73	2.50	2.50	31.93
Trenton Falls	36	3.35	2.90	3.37	3.62	3.92	4.37	4.47	3.88	4.42	4.47	3.87	3.62	46.26
Tribes Hill	40	2.70	2.39	3.00	3.28	3.14	4.00	3.56	3.55	3.74	3.30	3.01	2.81	38.48
Troy	79	2.34	2.19	2.42	2.80	3.14	3.72	3.78	3.35	3.20	3.29	2.90	2.44	35.57
Tupper Lake	33	2.58	2.31	2.87	2.30	3.09	3.82	4.32	3.64	3.58	3.58	2.68	2.48	37.25
Utica	77	3.00	2.75	2.87	2.95	3.52	4.00	4.41	3.75	3.71	3.55	3.60	3.15	41.26
Volusia	22	2.95	2.37	2.59	2.88	3.41	3.22	3.62	3.44	3.60	4.10	3.35	3.00	38.53
Voorheesville	26	2.36	2.35	2.88	3.05	2.75	3.53	3.45	3.36	3.44	2.74	2.91	2.19	35.01
Walden	23	2.98	2.41	3.38	3.84	3.88	4.46	4.59	4.30	4.69	3.34	3.73	2.83	44.43
Walton	18	2.53	2.45	3.02	3.14	3.53	4.24	5.30	4.65	3.42	3.87	2.91	2.87	40.93
Wanakena	34	3.05	2.61	3.33	3.04	3.25	3.48	4.03	3.54	3.87	4.12	3.44	3.00	40.76
Wappingers Falls	55	3.39	3.42	3.62	3.50	4.02	3.92	4.52	4.51	3.82	3.59	3.27	3.35	44.93
Warwick	51	2.77	2.79	2.98	3.20	3.47	3.88	4.32	4.48	3.89	3.52	3.19	3.03	41.52
Waterloo	22	2.06	2.17	2.82	3.15	3.18	3.10	3.59	2.63	2.82	2.90	2.59	2.24	33.25
Watertown	54	3.15	2.64	2.94	2.84	3.40	3.21	3.37	3.18	3.74	3.93	3.67	3.44	39.51
Waverly	34	2.40	2.09	2.63	2.80	3.36	3.50	3.68	3.42	3.08	2.95	2.25	2.45	34.61
Wedgewood	34	2.41	2.24	2.75	3.00	3.68	3.85	3.80	4.04	3.10	3.15	2.40	2.42	36.84
West Berne	32	1.89	2.40	2.56	3.16	3.18	3.74	3.61	3.64	3.12	3.07	2.38	2.09	34.84
Westfield	27	2.69	2.53	2.91	3.01	3.95	3.46	4.15	3.65	3.70	3.95	3.29	3.35	40.64
West Point	92	3.38	3.23	3.67	3.67	3.94	3.52	4.29	4.31	3.75	3.55	3.72	3.38	44.41
West Troy	11	2.27	2.21	2.03	2.85	4.13	3.30	3.57	2.61	3.38	3.06	3.16	2.32	34.89
Whitehall	26	2.80	2.20	2.85	3.31	2.87	3.57	4.21	3.04	3.12	3.09	3.37	2.71	37.14
White Plains	26	5.50	4.68	4.18	4.01	3.41	3.50	4.99	4.58	3.57	3.87	4.28	4.88	51.45
Willets Point	22	3.97	3.56	4.07	3.40	3.50	2.84	5.11	4.82	3.28	3.45	3.94	2.92	44.86
Williamstown	13	3.92	3.60	4.67	3.59	3.55	3.18	3.30	3.91	3.51	4.41	4.49	4.16	46.29
Windham	14	2.51	2.47	2.91	3.62	3.19	4.15	3.20	3.70	3.51	3.47	2.85	2.95	38.53
York	15	1.97	1.64	2.19	2.58	3.01	3.46	3.06	2.77	2.88	2.73	1.93	1.65	29.87

80° 75° 70°

FIGURE 2. AVERAGE DATES OF LAST OCCURRENCE OF 32° F. IN SPRING.



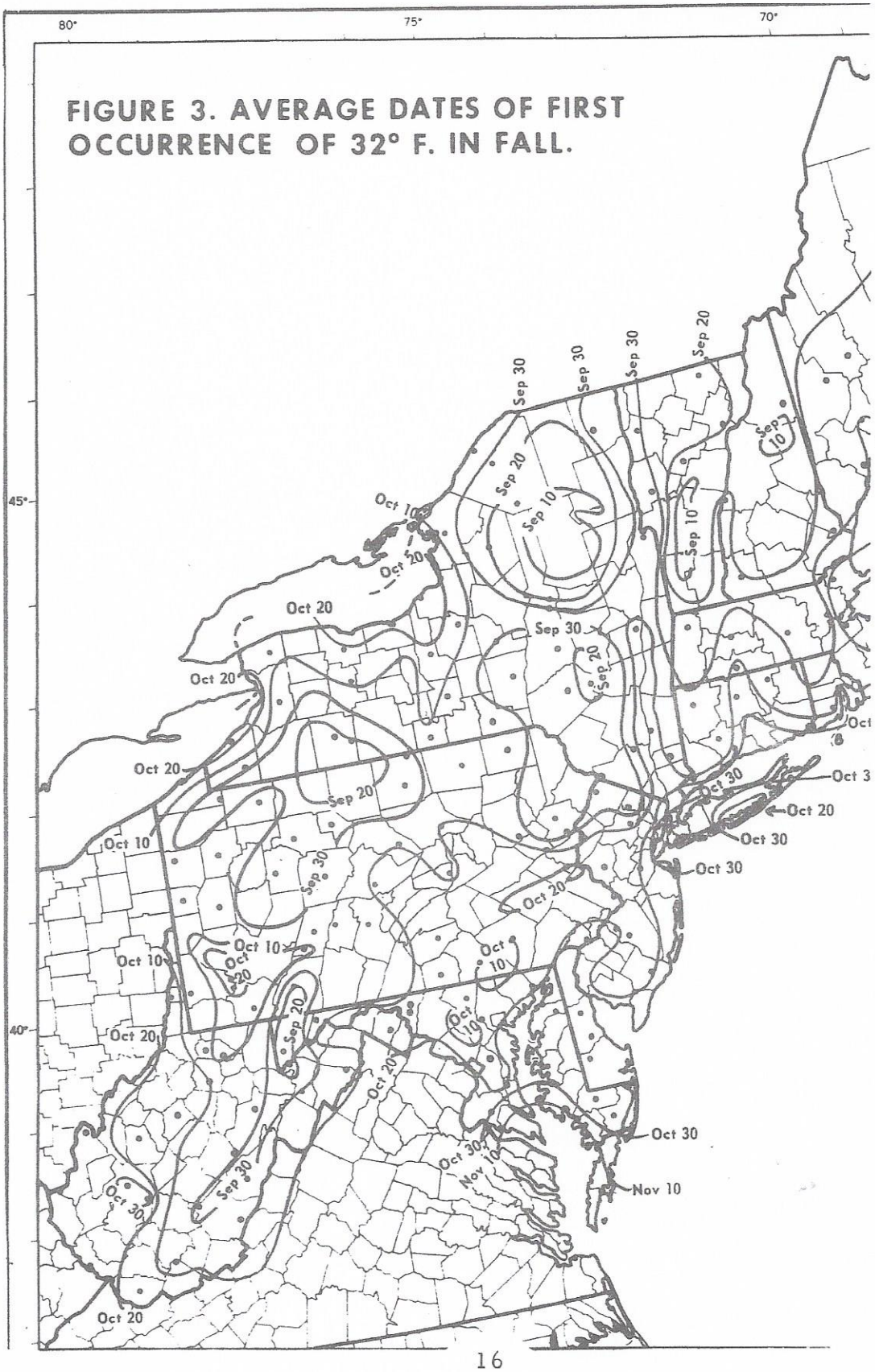
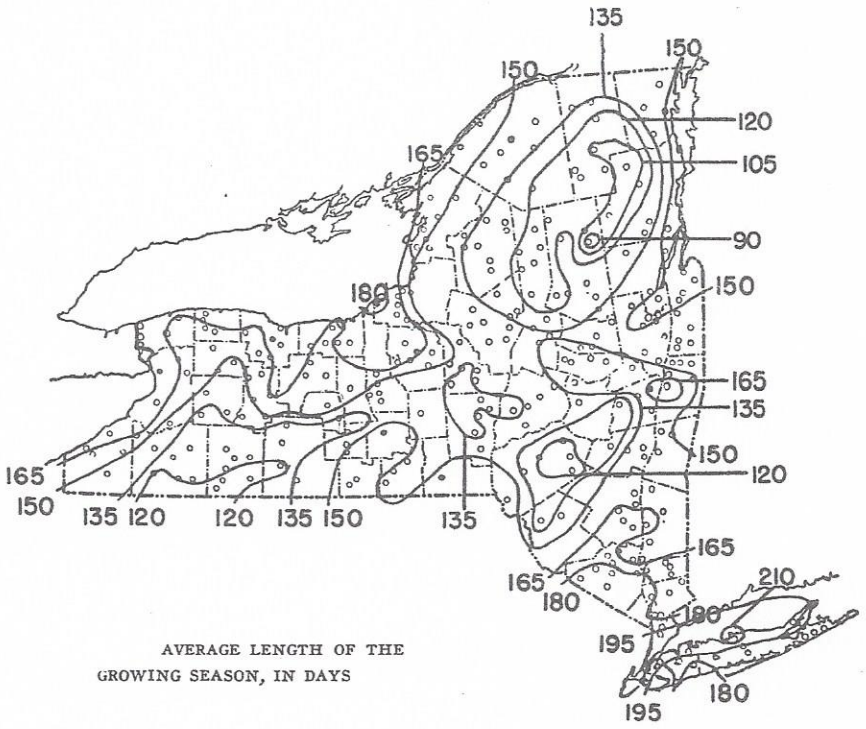
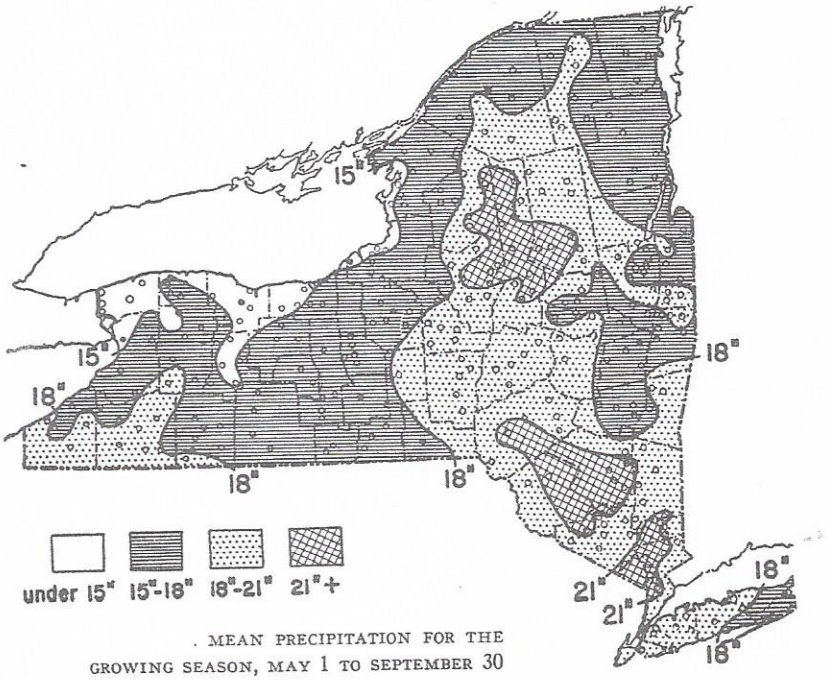


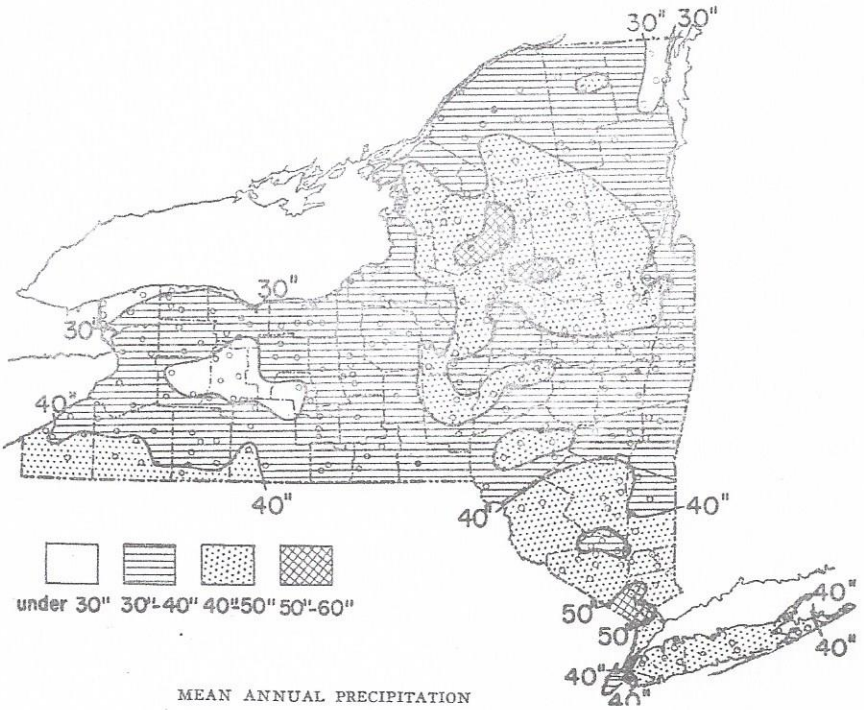
FIGURE 3. AVERAGE DATES OF FIRST OCCURRENCE OF 32° F. IN FALL.



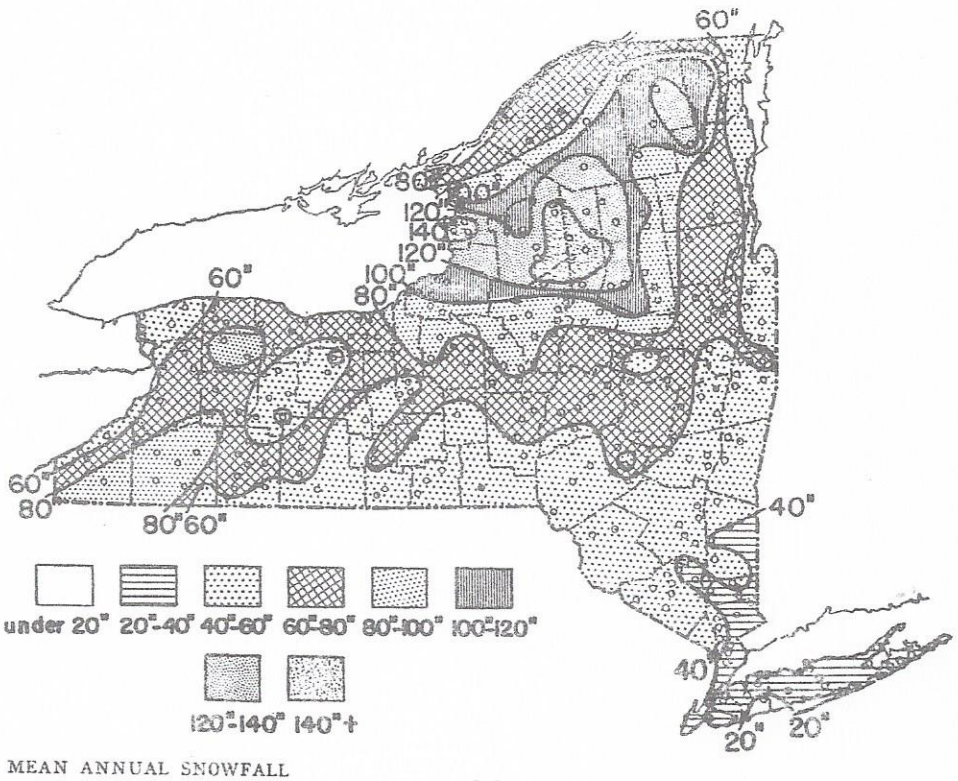
AVERAGE LENGTH OF THE
GROWING SEASON, IN DAYS



. MEAN PRECIPITATION FOR THE
GROWING SEASON, MAY 1 TO SEPTEMBER 30



MEAN ANNUAL PRECIPITATION



MEAN ANNUAL SNOWFALL

LENGTH OF GROWING SEASON

Stations	Period (yrs.)	Length (days)			Proportion less than (per cent)			
		Longest	Average	Shortest	120 days	130 days	140 days	150 days
Adams Center*	19	173	143	93	11	26	42	52
Addison	51	202	142	92	12	26	50	60
Albany	71	213	174	138	0	0	1	4
Alden*	5	183	158	128	0	20	20	40
Alfred	48	181	113	83	24	41	61	78
Allegany*	9	156	127	89	33	44	56	78
Allegany State Park	20	162	113	65	45	80	90	95
Amsterdam*	20	177	152	122	0	10	30	40
Andover	23	162	127	96	30	52	78	91
Angelica	52	172	122	65	41	65	76	90
Appleton*	32	200	165	127	0	6	9	16
Arcade*	15	182	129	92	33	60	80	80
Atlanta*	7	161	130	109	29	43	71	86
Auburn	48	200	167	126	0	2	4	13
Avon	50	184	150	109	4	19	28	45
Baldwinsville*	19	204	167	138	0	0	11	26
Ballston Lake*	25	177	148	110	4	12	32	48
Batavia	13	169	143	117	8	23	46	62
Bedford Hills	50	214	168	126	0	2	9	19
Binghamton	55	193	157	116	2	6	15	35
Bolivar*	27	149	108	42	70	78	93	100
Bouckville*	20	190	139	98	15	30	60	70
Bridgehampton	33	221	188	142	0	0	0	3
Brockport	48	193	163	124	0	0	11	20
Buffalo	54	217	179	142	0	0	0	2
Cairo	20	173	152	128	0	5	20	40
Canton	51	181	149	111	2	14	27	53
Cape Vincent*	16	191	171	150	0	0	0	0
Carmel	49	208	167	138	0	0	2	10
Chasm Falls	12	140	116	84	50	83	92	100
Chatham*	16	177	146	118	13	13	44	50
Chazy	40	174	140	83	6	25	50	69
Cooperstown	55	174	139	63	12	25	42	67
Cortland	52	186	142	83	8	24	47	63
Cutchogue	40	231	196	159	0	0	0	0
Dannemora	39	177	142	109	3	18	47	71
Dansville	22	198	157	122	0	9	27	36
Delhi	21	152	119	64	38	71	90	95
DeRuyter*	22	165	131	83	23	50	68	86
Elba*	18	176	151	111	6	11	22	33
Elmira	50	206	157	92	2	8	16	28
Farmingdale	16	188	174	158	0	0	0	0
Fayetteville*	18	178	153	98	6	6	11	39
Fleming*	9	182	145	118	11	22	56	67
Flushing	23	249	205	181	0	0	0	0
Franklinville	27	172	124	78	35	65	88	88
Fredonia	31	197	173	141	0	0	0	6
Gabriels	37	151	97	39	85	91	97	97
Geneva	37	193	162	116	3	8	19	28
Glenham	13	186	160	140	0	0	0	23
Glens Falls	40	184	152	110	3	8	22	41
Gloversville	53	173	141	107	13	25	48	65
Greenfield Center	47	175	144	98	9	22	37	61
Greenwich*	16	172	147	118	6	19	25	44
Griffin Corners*	10	126	115	97	80	100	100	100
Harkness*	29	178	148	105	3	21	38	48
Hemlock	47	193	162	132	0	0	11	23
Honeymead Brook*	11	191	162	140	0	0	0	18
Hudson*	25	187	163	126	0	4	8	12
Humphrey*	10	155	134	109	20	40	60	70
Hunt*	19	177	146	114	5	26	42	42
Indian Lake	45	119	84	37	100	100	100	100
Ithaca	66	199	157	98	3	9	23	35
Jamestown	38	181	146	105	6	15	35	56
Jeffersonville	42	162	132	105	15	51	73	85
Keene Valley*	19	161	116	83	58	84	89	95
King Ferry*	10	177	143	98	10	20	40	50
Lake George*	18	156	140	101	6	24	53	65
Lake Placid Club	36	144	97	54	86	97	97	100
Lawrenceville	14	169	147	126	0	23	38	46
Le Roy*	14	191	151	129	0	7	29	50
Letchworth Park	32	180	142	93	3	37	50	60
Liberty*	15	194	147	122	0	20	33	53
Little Falls No. 1	48	190	150	121	0	8	29	48
Lockport	53	205	162	120	0	2	6	21

*Old stations where records have been discontinued.

Stations	Period (yrs.)	Length (days)			Proportion less than (per cent)			
		Longest	Average	Shortest	120 days	130 days	140 days	150 day
Lowville	54	173	128	89	26	57	74	91
Lyons*	17	197	175	159	0	0	0	0
McKeever	11	122	94	63	80	100	100	100
Medford*	30	199	172	141	0	0	0	15
Middletown*	18	204	185	153	0	0	0	0
Mohonk Lake	49	208	175	129	0	2	4	6
Moira*	31	174	135	83	16	29	58	77
Morrisville	34	163	126	84	27	61	82	91
Mount Hope*	30	207	177	141	0	0	0	3
Mount McGregor	28	195	164	133	0	0	7	14
Mount Vernon	24	241	207	182	0	0	0	0
New Lisbon*	32	161	122	83	41	63	78	88
New York City	73	249	209	180	0	0	0	0
North Creek*	7	150	134	113	14	43	57	71
North Hammond*	10	174	154	116	10	10	20	30
North Lake	45	148	117	65	50	74	89	100
Norwich	37	168	136	63	14	34	63	74
Number Four*	15	166	123	91	33	60	87	93
Ogdensburg	54	191	152	117	4	10	30	38
Oneonta	51	169	136	91	22	36	54	68
Oswego	74	220	182	135	0	0	1	3
Otto*	10	175	146	111	10	30	30	40
Oxford*	24	161	134	98	17	42	63	75
Palermo*	12	196	149	116	8	17	42	50
Penn Yan	34	199	151	105	6	13	34	47
Perry City*	25	169	131	84	24	40	76	84
Perrysburg*	7	194	171	155	0	0	0	0
Philadelphia	28	172	140	93	11	29	46	71
Plattsburg*	16	179	155	134	0	0	13	31
Port Jervis	55	190	155	118	4	7	20	31
Potsdam*	19	170	143	118	5	11	26	74
Poughkeepsie	17	203	180	154	0	0	0	0
Raquette Lake*	29	166	126	58	31	55	72	83
Rhinebeck*	10	180	155	116	10	20	20	20
Ridgeway*	10	183	167	137	0	0	10	10
Rifton	20	181	157	130	0	0	15	35
Rochester	53	209	179	140	0	0	0	6
Rome*	17	177	143	106	6	24	53	65
Romulus*	25	187	154	113	4	8	16	36
Roslyn*	19	220	192	160	0	0	0	0
Roxbury	29	159	120	64	38	66	83	93
Salisbury	48	162	121	64	40	67	85	95
Saranac Lake*	15	136	115	87	53	87	100	100
Scarsdale	41	225	184	150	0	0	0	0
Setauket	56	247	210	158	0	0	0	0
Sharon Springs No. 1	32	190	153	98	3	7	17	40
Sharon Springs No. 2	30	184	145	105	7	23	40	60
Shortsville	37	181	159	124	0	3	14	22
Sodus	16	182	163	142	0	0	0	14
Southampton*	17	209	187	142	0	0	0	6
South Canisteo*	16	150	119	80	50	63	88	94
South Kortright*	14	139	120	97	50	79	100	100
South Wales	13	170	141	120	0	23	54	69
Spier Falls	43	181	148	98	3	8	30	53
Stafford	13	175	145	128	0	8	46	69
Stillwater Reservoir	18	141	119	97	44	72	94	100
Syracuse	43	209	180	157	0	0	0	0
Ticonderoga	18	188	157	133	0	0	8	15
Troy*	15	216	175	137	0	0	13	13
Tupper Lake	25	144	115	83	56	96	96	100
Utica	17	179	144	126	0	18	47	65
Volusia*	20	176	151	129	0	5	20	30
Voorheesville	25	177	156	128	0	5	14	27
Walden	20	202	160	118	5	10	20	30
Walton*	15	150	120	83	47	67	93	93
Wanakena	35	144	114	64	55	81	94	100
Wappingers Falls	52	204	160	118	4	6	13	29
Watertown	51	190	155	116	2	6	21	38
Waverly*	22	173	146	92	14	18	41	55
Wedgewood*	31	184	152	98	3	10	26	39
West Berne*	29	188	130	92	33	43	70	83
Westfield*	23	192	172	152	0	0	0	0
West Point	47	227	192	148	0	0	0	2
Windham*	14	152	130	93	21	36	71	93
York*	14	186	150	123	0	21	43	50

*Old stations where records have been discontinued.

SUNSHINE
(Percentage of possible sunshine)

Stations	No. of yrs.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual	Growing season
Albany	48	42	51	53	54	58	61	63	62	58	53	39	38	53	60.4
Binghamton	48	30	38	40	44	50	53	54	51	48	40	27	25	42	51.2
Buffalo	54	29	41	48	52	59	66	69	65	60	49	33	25	50	61.8
Canton	38	37	47	50	49	55	62	63	61	53	44	29	30	49	58.8
Ithaca	43	30	39	42	47	54	60	63	60	56	44	30	23	47	58.6
New York City	49	52	59	59	61	62	64	65	63	63	62	55	52	60	63.4
Oswego	29	19	31	43	51	60	65	68	62	56	43	24	18	48	62.2
Rochester	51	31	40	48	53	61	67	70	66	60	49	31	24	50	64.8
Syracuse	34	31	38	45	50	59	65	67	62	56	46	31	25	50	61.8

SUNSHINE
(Average number of hours)

Stations	No. of yrs.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Albany	48	121	152	195	217	262	282	290	265	220	182	113	104	2,403
Binghamton	48	90	113	148	178	225	247	249	218	178	138	81	72	1,937
Buffalo	34	90	121	183	207	272	308	326	279	222	168	97	70	2,343
Canton	38	106	138	185	196	252	288	298	266	200	150	84	82	2,245
Ithaca	43	87	117	156	189	244	274	291	258	209	152	88	66	2,131
New York City	49	154	178	217	243	277	287	297	270	238	216	162	148	2,687
Oswego	29	57	92	159	207	273	295	318	269	208	148	71	51	2,148
Rochester	51	91	121	147	214	275	307	324	284	226	168	91	67	2,315
Syracuse	34	90	115	167	203	270	295	309	267	209	155	89	71	2,240

MEAN RELATIVE HUMIDITY
(1:30 A. M.)

Stations	No. of yrs.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Albany	6	77	75	74	74	75	80	83	84	85	81	77	77	78
Binghamton*	.	..	..	..	..	..	..	..	..	..	..	..	..	..
Buffalo	6	82	85	80	78	82	84	81	83	84	81	78	80	81
Canton	7	91	89	85	80	78	81	82	84	86	82	83	89	84
Ithaca*	.	..	..	..	..	..	..	..	..	..	..	..	..	..
New York*	.	..	..	..	..	..	..	..	..	..	..	..	..	..
Oswego*	.	..	..	..	..	..	..	..	..	..	..	..	..	..
Rochester*	.	..	..	..	..	..	..	..	..	..	..	..	..	..
Syracuse	6	85	85	83	80	82	83	83	84	85	81	81	83	83

*Records not taken at 1:30 a.m.

MEAN RELATIVE HUMIDITY*
(AT 7:30 A. M.)

Stations	No. of yrs.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Annual
Albany	57	80	80	77	72	71	74	76	79	83	82	80	80	78
Binghamton	48	82	83	79	75	76	79	80	85	87	83	79	80	81
Buffalo	57	82	81	79	75	76	76	76	76	78	78	79	81	78
Canton	38	88	88	82	76	72	73	75	78	82	82	84	88	81
Ithaca	41	81	81	78	74	72	74	75	79	81	80	79	81	78
New York	56	72	70	70	68	70	74	76	79	79	76	74	73	72
Oswego	57	83	85	78	74	74	76	76	77	78	77	78	82	78
Rochester	57	78	79	75	70	68	70	72	74	77	77	77	78	75
Syracuse	42	80	81	76	70	69	71	73	76	78	77	77	80	76

*Record taken at 8:00 a.m. prior to January 1, 1937.