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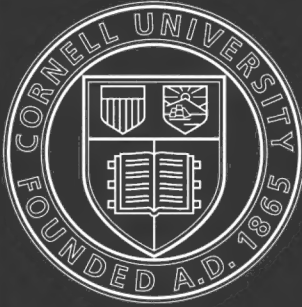
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THE CASE
FOR FOREST RESERVATIONS
NEAR URBAN CENTERS

A Paper prepared in Forestry Course No.23

by

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THE PROPOSITION STATED.

The present day appreciation of the recreational value of forests.

Although the people of the United States as a nation, are by choice and by necessity seekers of the almighty dollar, we are at the same time peculiarly idealistic and readily moved by sentiment. Moreover, we are preeminently prone to make mistakes and to be overwhelmingly sorry for them afterwards. Thus, in the field of forestry, as in the development of most of our natural resources, the United States passed through a long period of increasingly exhausting exploitation until we were brought to face the problem of a rapidly diminishing resource.

Above the clamor of the saw mill was heard the voice of protest which led to the calling of the first conference of governors in Washington by President Roosevelt in 1908. The mistakes having been made, it was time to seek a remedy for the situation brought about by our lack of foresight. It was clearly recognized that Conservation touches the life of the people upon practically every side, but action in the field of forestry was about the first legislative

response to the Conservation agitation.

National Parks

The administration of Presidents Harrison and Cleveland had accomplished the setting aside of some 17,000,000 acres of forest land as an initial step, but under the stimulus of the Conservation movement in President Roosevelt's time, the national reservations were augmented to 150,000,000 acres. From that time on, also an appreciation at least of the recreational value of forests has been increasingly manifested by the public and the state. The national government through the National Park Service and the Forest Service is developing the National Parks and National Forests to the greatest possible extent as recreational centers and is finding that they play an important part in the lives of the people.

State Parks and Reservations.

With similar enthusiasm there has been carried out the creation and organization of State forest reservations. Michigan has its Interlochen Park and numerous others reserves administered under the park and forestry commission law. #

Michigan Act 218 Public Act 1919.

In New York thousands upon thousands of people visit the splendid Forest Preserve in the Adirondack and Catskill Mountains, or spend their vacation time camping and canoeing in such surroundings as the St. Lawrence Reservation. These and a score of other great tracts of the Country's loveliest wild scenery are now preserved and free for the enjoyment of the people. Some twenty-two states now have within their borders forest reservations, scenes of natural beauty and places of historic interest made safe for the common advantage by public ownership in perpetuity.

Smaller woodland areas.

Of lesser extent, and nearer to the city-folk, are such wooded areas as the Palisades Interstate Park in New York, the reservations of the Metropolitan Park system in Massachusetts, and the Cook County Forest Preserve near Chicago. Montreal has the lofty wooded crags of her Mount Royal, Detroit has the open forest of Belle Isle, and Baltimore, the shady glades of Druid Hill.

The growing popularity and use.

Moreover, the growing popularity of all these national, state and smaller reserva-

tions is attested to by the ever increasing throngs who yearly seek recreation in them.

The National Park Service, controlling over 8,000,000 acres, states that the number of visitors to the National Parks and Monuments has increased from 356,000 in 1916 to over 1,000,000 in 1920. The American Scenic and Historic Preservation Association ^{#1} gives the number of visitors to the National Parks as 488,268 in 1917; 451,691 in 1918; and 755,325 in 1919. According to the most recent bulletin issued by the Sierre Club,² one and one-half million people used the National forests of California alone, in 1921, of whom full eighty-five percent carried their camping equipment.

Statistics of 1903, compiled by the ~~then~~ Superintendent of Forests, show that there were hotel accommodations in the Adirondacks for 130,000 people; that during that year 451,000 people were accommodated; that 140,000 of them remained for more than two weeks; and that

#1 Numbers refer to References which are cited in full in the appendix; the numbers in the text run consecutively throughout the paper.

caring for tourists gave employment to 26,400 persons. That use of the New York State Forest Preserve has increased, and that the wealth of the district is immeasurably augmented by this recreational use cannot be doubted. "Everywhere throughout the Forest Preserve region in both Adirondacks and Catskills", states the Conservation Commission³, "the use of this vacation ground is increasing at a tremendous rate, until now the most important business of the whole region is that of caring for vacationists. More money is invested in hotels and their properties, more people are employed, more wages are paid, and the annual turn over is greater than in the entire lumber business which once figured as the most important activity of the mountains". Statistics are very difficult to compile on this subject and figures at best are only approximate. But it seems safe to affirm, backed by such an authority as George D. Pratt, Ex-Commissioner of Conservation³ that the use is very great and the income to the Forest Preserve District of increasing economic importance.

Regarding the number of persons going into the interior of Maine for fishing and hunting, a rather interesting statement was made at the meeting of the Conservation Commission for Canada in 1910.⁴ A census taken in the summer of 1908 showed this number to be 133,885, and according to a conservation railroad count, 250,000 in 1907. One hundred dollars was a very conservative estimate of the amount of money left in the state by each visitor. The question was asked of the meeting if they realized how many sticks of timber it would take to produce that \$25,000,000 net.

Regarding reservations accessible to large cities, their use fully justifies their existence. At the First National Conference on Parks held at Des Moines, Iowa in January 1921,⁵ Major W.A. Welch, General Manager of the Palisades Interstate Park gave the total number of visitors from May to October in 1920 as 2,133,500.

It is estimated that in 1920 more than 3,000,000 people visited the Cook County Forest Preserve of Illinois; probably more in 1921, - at all events the number is equivalent to the total population of Chicago.⁶

The most recent statistics from the

Metropolitan Park System of Massachusetts are not available at the time of this writing, but it is well known that the reserves of that district are very popular and greatly sought as recreation grounds. It is safe to state that in proportion to the area developed, the number of persons annually entering public forest reserves is greatest in the smaller reservations. This more intensive use by those who are shut away from the benefits of outdoor life, shows the real economic value attaching to reservations within easy reach of city people.

Object of this paper.

The object of this paper is to show the recreational value and importance of woodland tracts accessible to towns and crowded districts. Not only is it hoped to point out the purpose, both recreational and healthful that such reservations may serve, but the intent is to justify them in the eye of sound economy and to show how under proper management woodland reservations, by combining the useful, protective and aesthetic purposes of timbered land, may serve as adjuncts to the already well-recognized value of public park development.

THE PURPOSE OF FOREST RESERVATIONS NEAR URBAN CENTERS.

Definition.

In order to avoid any misunderstanding in the meaning of the term "forest reservation" as here taken, it may be well to explain quite clearly the distinction between this and different types of pleasure parks. The latter comprise areas variously treated - The larger naturalistic parks, which might be confused by some with woodland reservations, may be considerably tree-clad, but they are not continuously so. Rather they partake of the more or less finished character of rolling meadows, with artificially created or carefully preserved groups of trees, easy footpaths and sweeping driveways and bordering masses of ornamental shrubbery. Large or small, formal or informal, parks show the handiwork of man. Forest reservations, on the other hand, are stretches of natural woodland, preserved and managed to keep their sylvan charm and the woody flavor of a natural forest.

Uses.

These woodlands reservations, moreover, serve distinct purposes. Generally speaking, the uses to which forests may be put are three-fold;

namely, supply, protection and recreation. Those of the first class consist of areas wholly or partially covered with trees, the principal object in growing the trees being the production of timber and other forest products. Under protection forests come those wooded areas which from their site alone exert climatic influence, or which from the nature of the land they cover, perform such protective functions as binding the soil to check erosion, or to prevent the drifting of sand. Third, there is the recreation forest, intended to add to the beauty and amenity of the district, variously providing for out-door activities such as camping, hunting and fishing, and for purely aesthetic enjoyment.

It does not follow, however, that a forest may serve only one of these purposes. A wooded area managed with a view to the production of timber need not be unlovely; a protection forest may likewise be a source of wood supply, in a word, it remains to be shown how a forest may be managed for a combination of uses, and specifically how the forest reservation used as an extension of a park system may be so managed.

Combination of uses.

Some of the city Forests in Europe serve

splendidly to illustrate this combination of uses. An excellent example is the city forest of Zurich in Switzerland. Altogether the city controls 2,840 acres of land of which 2,560 are covered with timber. The forest is located in the northern foothills of the Alps and stretches along the Sihl River for a distance of nearly five miles. It may be reached from Zurich in about half an hour by rail. The land occupied rises rather steeply from the valley, elevation of 1,600 feet, to the ridge-top which is nearly 3,000 feet, and as it is non-agricultural land would be comparatively unproductive if not devoted to the growing of trees. The first systematic working plan was made in 1696 but management and control by the city of Zurich dates from 1309. The forest has netted the municipality an average income of nearly \$20,000 annually, and the net income from all forest products has averaged as high as eight dollars per year, not to mention the indirect advantages of protection and public enjoyment. Look-out towers serve the double purpose of protection and pleasure and other attractions, such as beer gardens are profitably maintained to cater to tourists.

Forests protecting water reservoirs.

In this country only a beginning has been made in the institution of municipal forestry. But a type of forest property that has already taken hold in some degree, and which is in every way suitable as a reservation extending the city park development, is the forest protecting areas. Although the preponderance of land constituting these tracts surrounding reservoirs and protecting catchment areas is privately owned, and in all too many cases inefficiently managed, if subject to forestry methods at all, there are numerous examples worthy of study.

In England, the Liverpool Corporation carries out a most systematic program of management and afforestation on their catchment areas at Vyrnowy and Revington. On the Vyrnowy tract, the afforestation is proceeding on an extensive scale. In 1897 there were only 170 acres wooded. In 1903 these had been extended by planting, to 660 acres, and by 1918 to 1383 acres. The ultimate aim is a magnificent forest of 5000 acres, to be scientifically managed for sustained yield. The corporation provides the land and plants the seedlings. The government pays in advance the cost of planting and the profits are divided equally by the two parties. This sort of scheme obtains with many of the English and Irish

water supply companies, and variously on the continent.

An example of progressive municipal management in our own country is on the watershed owned by the city of Newark, New Jersey. Their catchment area covers some sixty-four square miles.

Another and perhaps even better American example is the Maltby tract owned by the New Haven, Connecticut Water Company. It is under the administration of the Yale Forest school and serves as an observation and practice laboratory. While serving the dual purposes of protection and supply, and principally managed for profit, the Maltby forests are maintained in an attractive condition for public enjoyment. These examples illustrate the possible combination of uses in municipally owned forests, and it is evident that they might be administered as an extension of the city park system. Certain restrictions would probably have to be placed upon the use of the area immediately surrounding the reservoirs and coniferous growth would be favored to eliminate the taste imparted to water by fallen leaves.

Forests and Industrial Screens.

In some cases there may be reason and opportunity for the development of forests or hitherto most unpromising land. Such are, for example, the afforestation projects in the Black

County in England and in other mining regions of the British Isles, Belgium and other countries.

Augustine Henry in his "Forest, Woods and Trees in Relation to Hygiene" (London 1919)⁷ discusses the planting of pit mounds, spoil heaps and even shale banks with such unfastidious species as the black Italian poplar, gray alder, wych elm, various birches, horn-beam, robinia pseudocacia, sitka spruce, larches, etc.. The remarkable reclamation plantations of Denmark and France have proved the practicability of extensive afforestation even on the most unpromising sites. Hence there would seem to be very scant chance of upholding the argument that districts need remain without forests on account of their present barren state. Those who are familiar with the dreadful condition of treeless desolation in mining regions and the oppressive ugliness where the heavy hand of manufacture and industry has turned the land for miles around into blackened wastes, can understand what a green forest might mean to such a district. An editorial in the Conversationist (Feb. 1920) treats of the fact that industrial establishments are beginning now to support local conservation work because they appreciate the importance of good out-of-door recreation for the welfare of their employees. And merely it is a matter of foresight, and what in the future will be considered good business policy on the part of the municipality, to

reserve under the jurisdiction of the city a belt of woodland separating the industrial section from the residential and business zones from the point of view of these properties on the town side (located it is to be hoped on the windward side) of such an industrial screen, the benefits are too obvious and need no discussion at this point. And regarded by even the most calculating of industrial interests, proximity to a forest tract, in the light of modern business psychology, if located near enough to the industrial plant, the workman might seek its shade during the lunch hour. Such surroundings would mean rest and relaxation promotive of renewed efficiency very different from an hour spent sitting in the suffocating air under the shade of the coal trestles, chemical vats, elevator shafts and the like.

Recreational use stressed.

Because the recreational use is that most stressed in any given reservation, ^{there} is no reason for concluding that the forest may serve this use only. As has been shown above there are examples that conclusively prove the feasibility of management for combined purposes. The fact that such a policy has not been carried out in the past is also no reason to hinder its adoption in the future. Of course in some cases a woodland tract may serve its highest use as a recreation ground pure and simple, and no other use would be so economically profitable.

Such perhaps is the case with even so large a tract as the Palisades Interstate Park, embracing approximately 36,000 acres along the Hudson River, the resort of not less than 1,000,000 persons, each year. It is a great recreational grounds for general camping, with free facilities for boating, canoeing and picnicing, readily accessible to nearly half the entire population of New York City. It becomes a practical school for conservation and supports a vast open-air camping development. It offers a site for vacation outings not only for thousands of tenement children, but for hundreds of tenement children's mothers who also come to these camps, to some the first outing in many years; a welcome escape from the burdens of the household drudgery to the inspiring contact of the out-of-doors. This, camp development of the Palisades Interstate Park, says George W. Perkins, in an article in the Conservationist⁸ "is based on the theory that the large, forest domain can, under proper supervision, be utilized without impairing its natural beauty, and at the same time enhancing the lives of people through health and recreational programs..... And above all and aside from concrete examples of actual contact with forest domains on the part of city dwellers, there is that immeasurable joy which comes to the heart of the child from the city streets, to whom

the mystery of the woods is unravelled under auspices calculated to restore bodily vigor and sow the seeds of spiritual exaltation".

Where forestry and recreation meet.

By way of summary it may serve to repeat that it is in no way unreasonable to expect a forest to serve more than one purpose and in some cases, a woodland reservation may be quite efficiently managed for all three uses of protection, supply and recreation. In an article entitled "Where Forestry and Recreation Meet", C.J. Stahl⁹ explaining how from earliest times, forests have been chosen as pleasure grounds, goes on to say "while the characteristic American habit of profit-making seems now to have become the principal and controlling element in management of both public and private forests, a change in the program is due. Visitors are coming to the National Forests, solely for pleasure and recreation by the millions, and in semi-arid regions every little grove is eagerly sought. Often a very ordinary clump of cotton woods along a stream is a popular picnic ground. With better roads and automobile transportation, the more extensive and attractive timbered lands are now accessible. The influence which forests have upon climate and stream flow is recognized. Why not the influence upon public health, morals and education? The

scout master makes a big point of getting his troop of boys into the forest.... Use without abuse is the ideal condition, safeguarding scenic value and utilizing the mature timber."

Value of Forest Reservations near Urban Centers.

There are reasons why these forest reservations are particularly useful if located near enough to the town or city to function as an extension of the park system. First of all, in order to be of maximum utility, these woodland tracts should be readily accessible by automobile and trolley, if not within walking distance, to the majority of the population most needing fresh air and recreational facilities. The great out-of-doors and scenes of natural beauty are not withheld from the enjoyment of the leisure and moneyed classes because of inaccessibility, but for the poor, the factor of distance, consuming time and expense of transportation should be minimized wherever possible.

A purpose which these woodland reservations serve, distinguishing them from even large natural parks, is the harboring of wild life. Here will be room and to spare for the smaller furry animals, and the birds, enticed by the peace and plenty of the woods will seek the reservation as a sanctuary. Hence it will constitute a laboratory for the naturalist and a place when the school children may be taken for their nature study field trips.

As has been pointed out, statistics prove the growing popularity of the larger recreational forest preserves. In establishing these smaller woodland reservations, would we ~~not~~ be catering merely to the whims of the few? In arguing for the wilderness in the National Forests, Aldo Leopold¹⁰ in an article in the Journal of Forestry, contends that "the majority undoubtedly want all the automobile roads, summer hotels, graded trails and other modern conveniences that we can give them. But a very substantial minority want just the opposite". Sliding down the scale from National Forests to the forest reservations just beyond the city, the argument is still relatively applicable. Undoubtedly, the majority of people in a large modern city prefer the Coney Island type of recreation place, yet there is such a growing minority who crave the open, and largely in response to educational influence, that we cannot well encourage the "back to nature" campaign without preserving a little accessible nature "to get back to".

Certain localities will of course be more favored than others in the existence of spots of natural scenic beauty within easy reach of their urban centers. Where such is the case, nothing should be allowed to prevent their acquisition and administration by the city or municipality for the

enjoyment of all the people. We naturally cite the Metropolitan Park System of Massachusetts as a splendid example of accomplishment in this line .

The Metropolitan District of Boston is a region of marvelously commingled waters, marshes, gravel banks and rocks,¹¹ and scenes of the highest natural beauty lie at its very doors. But, thought was not given to their acquisition and preservation for the public and ~~then~~ they were rapidly becoming absorbed and destroyed by the unguided growth of the suburbs. Through interest on the part of the Appalachian Mountain Club, this unfortunate state of affairs was brought before the public in 1890, when Charles Eliot commenced his exemplary labors in introducing and building up the Preservation Scheme. Through his untiring efforts the subject underwent the proper investigation and plans and recommendations were presented.

Within a surprisingly short period of time this program became a live issue and action was rapidly taken, culminating in the establishment of a system proportionally supported by the thirty-six separate political units of the Metropolitan District of Boston. Within the short space of seven years all this was accomplished and at the death of Charles Eliot in 1897 the system consisted of an outer ring

of woodland reservations [#], at a radius of some eleven miles from Boston Common, - the Lynn Woods, Middlesex Fells, Stony Brook and Blue Hill Reservations and, along the sea front, Quincy Shore reservation, Revere and Nantasket Beaches. These are all more or less linked together by a chain of beautiful parkways. Within this outer circle on the various open spaces of the Park System of the City of Boston; Franklin Park, the Arnold Arboretum, Jamaica Pond and the Charles and Mystic River Reservation. The Metropolitan Park System is worthy of close study and is certainly a great accomplishment of modern civic art, preserving for the people a permanent and increasingly beautiful possession which from its first acquisition brought to the district a new and precious renown.

Another interesting story is that of the Cook County Forest Preserve⁶ created and maintained for the recreation use of the great population of Chicago, Illinois. This forest playground includes about 23,000 acres at the present time, less than six years since judicial approval of the

[#]Report of the Metropolitan Park Commission Boston 1908, pages 20, - the area of reservations given as 9,392,88 acres. The extent of parkways given as some 27.5 miles.

act creating it permitted active Construction work to be begun. The area is divided into a number of scattered tracts of natural woodland, some bordering the north and south branch of the Chicago river. Some portions of the preserves are readily accessible by various of the many avenues of suburban transportation, but in general the crowds reach them by automobile.

"There is a small proportion of excellent timber in the Preserve but it will probably never be a source of lumber. Even such fire wood as is secured in cleaning up the woods is consumed in the internal activities of the organization. It protects no important water sheds, as these streams have been used for sewage and not for water-supply - and the abatement of sewage contamination by linking up the villages to the Sanitary District system has been one of the administrative problems. In a word these forests are useful only for recreation - and their usefulness in that direction is beyond money computation".

In England various of the royal parks and preserves have long been open to the public but the modern town planning movement has brought forward the idea of municipally owned forests. However, about the only town in England to acquire a "Nature Reserve" within recent years is Birmingham, near which city 450 acres of valley and woodland in the Lickey Hill have

been developed as a recreation ground.¹²

Wherever a city is naturally favored by scenes of beauty at its very doors, a failure to incorporate such advantages in the civic scheme is nothing short of poor business and lack of foresight.

To those not trained to see the possibilities of a landscape, many localities may appear to have little attraction. But often these very places under the dictates of civic art, may through a wise development of whatever beginnings of scenic beauty there may be, or a building up of entirely new elements in their composition, be entirely transformed, and that in many cases at relatively small outlay. Due to the modern achievements in reclamation engineering, it frequently becomes altogether practicable for towns to use their marginal land for parks and playgrounds, thus converting into property of high social value what would otherwise have been used only for slums and undrained vacant lots. As has been suggested in referring to reforestation in mining and industrial regions, practically no land (within the limits of the timber line determined by climatic conditions) is incapable of growing some kind of trees. And when scarcity of forest growth prevails, it would be desirable from both the social and economic point of view to undertake planting. Although measures based upon the altruism of future benefits may not appeal to the man in the street, the dictates of wise statesmanship point to

constructive and conservative legislation that will serve the welfare of future generations.

Unless these scenic spots are reserved by the state or municipality scenes of natural beauty unvariably must make way (one by one to be destroyed) for railroads, streets, factories etc., and what escapes demolition will become enclosed for private gain or pleasure. It would indeed be a pity if the constraints of the money system, the barriers to an enjoyment of the more beautiful things on earth, were extended into the country as they are in the city. "If we walk through miles and miles of brick and mortar, or through miles of wooden suburbs, we may be at last rewarded by a glimpse of a woodside or meadow, but it is ten to one that the sign 'No Trespassing' confronts us when we reach the fence" ¹¹? Were the finest spots within the neighborhood publically owned, would not every estate owner, much more the poorer city dweller, be the richer?

A discussion of both the direct and indirect benefits to be derived from the municipal ownership of scenic and forest reservations should answer the question.

Benefits to be derived from Forest Reservations.Increased Value of surrounding property.

First, there should be considered the increased value accruing to property surrounding public reservations. "Public groves, river banks, glens, and hilltops are, when well handled, exceedingly inexpensive in proportion to their yield of pleasure to the native born, their attractiveness to outsiders, and their consequent return of money to the township." 11.

Indirect returns to city and state.

These indirect returns to the city and the state may be clearly pointed out in the case of districts whose chief industry is caring for tourists and a visiting population. "Who wants to visit any resort where the seashore, or such other scenery as there may be in the neighborhood, is owned and occupied by private citizens, who, if they admit you to their lands do so grumblingly, or for a fee?" 11
Indeed, the resort and hotel business is in most cases dependent upon accessible natural beauties and many are the districts whose chief resource is the beauty of the mountains,

wooded glens and waterways. If a town were to take advantage of these attractions, or to develop new ones, there might be a decided economic gain in thus providing outing and summer vacation attractions and there would be less of a dispersal of the population to other sections of the country during the holiday season.

Another point worthy of consideration is the fact that forest and scenic reservations tend to provide an element of permanence in a district and thereby aid in fixing real estate values.

Moreover, "it is everywhere agreed that it is important to the education, health and happiness of crowded populations that they should not be deprived of opportunities of beholding beautiful natural scenery."¹¹

An editorial in the *Conservationist* (1920)¹³ suggests that "with power driven machinery, steam and electric railways, telephones, the telegraph, and the wireless, and finally the aeroplane, all commonplaces of our daily existence, we are prone to forget that our grandparents lived under no such nervous strain as these inventions have brought with them, and that only three or four generations ago the high speed of modern life would have been actually inconceivable. Relaxation from the physical and mental strain of modern industrial life is a vital necessity."

A partial response to the timber depletion question.

Finally, we find that the creation of municipally owned forests is urged by the Forest Service²⁴ as a part of the answer to the timber depletion question. "State laws should encourage the acquisition of forest lands by municipalities, to the end that the public ownership may be extended by any agencies capable of undertaking it. Public forest ownership not only is the most direct attack upon timber depletion, it serves other vital interests, particularly recreation, the protection of water sources, and the conservation of wild life.

Furthermore, publically owned and administered forests widely distributed and setting standards of technical practice, will be of the greatest educational value and stimulus to the general adoption by private owners of methods which will keep lands productive."

ACQUISITION AND FINANCING.

The acquisition and financing of forest reservations is a matter necessitating merely foresight and judgment and the application of sound principles of economy and municipal finance.

Organization and operation under law.

Sentiment in favor of the acquisition

usually exists though it is necessary to arouse enthusiasm to the point of action. For this purpose an energetic organization is helpful and expeditious.

The Metropolitan Park System of Massachusetts.

Suggestions for the executive and financial machinery may be had from the Metropolitan Park System of Massachusetts. Its organization, as established in the time of Charles Eliot, consists of a Commission of five men who serve the community without pay. The Governor of the Commonwealth, acting for the Metropolitan district, appoints one new member every year, the term of service being five years. The Legislature of the Commonwealth, acting for the Metropolitan district, authorizes from time to time the sale of bonds by the State Treasurer, who is directed to collect annually the amount of the interest and the sinking fund charges from the towns and cities of the Metropolitan district in accordance with an apportionment newly made every five years by a special commission appointed by the Supreme Court.¹¹

The Cook County Forest Preserve of Illinois.

The Cook County Forest Preserves of Illinois¹⁴ operate under the Act to "Provide for the Creation and Management of Forest Preserve Districts", whereby upon petition there may be a public consideration of the question of creating

forest preserves, followed by a vote at a special or general election. The affairs of the preserve district are managed by a commission of five, a secretary and treasurer and such other officers and employees as may be necessary, all receiving salaries fixed by ordinance.

In New York State.

In New York State, such forest reservations might be operated under the law of 1912 which relates to the acquisition and development of forest lands in counties, towns and villages#. As provided in this act, the governing board of a county, town or village may acquire by purchase, gift, lease or condemnation tracts of forest land or land suitable for the growth of trees, and appropriate therefore the necessary moneys of the county, town or village. The determination of the governing board to acquire such lands shall be by resolution, news of which must be published for at least two weeks before final adoption of the resolution.

Methods of Acquisition and financing.

Acquisition by gift.

Acquisition by gift is not an unusual method and is particularly expeditious in getting

Laws of New York - Chapter 74 - Mar. 26, 1912.

a quick and successful start, but care should be taken that gifts of this sort are not hampered by unreasonable restrictions. To enable benevolent citizens or bodies of voluntary subscribers to achieve the permanent preservation of scenery and of spots of historic interest, Massachusetts has created a board of trustees known as the Trustees of Public Reservations. They are empowered to hold free of all taxes such lands and money as may be given into their keeping - an institution which ought to be found in every state.¹¹

Of more than state wide scope, is the American Scenic and Historic Preservation Society¹, granted its charter in 1895 by special act of the legislature of the state of New York. The objects of this corporation are the acquisition by purchase, gift, grant, devise, or bequest of historic objects or memorable or picturesque places in the state or elsewhere in the United States, for the free enjoyment of the people. Such property is exempt from taxation in the state of New York. One of the notable reservations held in the custody of this society is Letchworth Park in Wyoming County, New York. It is a tract of about 1,000 acres lying on the Genesee River, and includes various beautiful waterfalls and woodland glens. This area was willed

to the state by its former owner, a wealthy business man of Buffalo, N.Y., who all his life had been keenly interested in charitable institutions and other work of public betterment.

European precedent along this line is interesting. "It is also a rather general custom in Denmark, particularly through the Heath Society, for persons of means to give or bequeath money for the establishment of memorial forests, that shall forever bear the name of the donor. This is a practice that might advantageously be introduced into the United States, especially in the establishment of town or village forests. Certainly no better memorial could be erected than a forest under continuous management that forever keeps green the name of the man who established it. Individual memorial trees are very good in their way but a forest that can be renewed in perpetuity is vastly better." (R.S.Hosmer 1922)¹⁵.

Special Assessments and Excess Condemnation.

There are besides gift, various methods of acquiring reservations. In the case of purchase, appropriations will depend upon the borrowing ability of the city, town, or district. The means of securing funds are various. (Nolen 1917) ¹⁶. The special assessment method is particularly popular in this country, while good results are likewise claimed

for the method of excess condemnation, a means of financing improvements much practised in Europe. This scheme is justified by the fact that the exercise of foresight may earn a most astonishing amount of money. In the early period of a town's development, land is available at a cost far below what it will be within even a decade or a score of years. There is seldom any difficulty in disposing of the whole or a part of the land so acquired, and should this later be recommended, its sale at the advanced price would be a profit to the community rather than money in the pocket of some private individual.

Bond Issues.

The issuance of bonds may also be employed, the bonds to run for forty, or longer, years and to yield about ~~three~~ and one-half percent interest. Such bonds are usually retired by payments from a fund created by annual taxation.

"In the case of outlying parks" - (and this would apply equally to forest reservations) - "we who secure them should pay the minimum. Fifty years hence these parks, now suburban, and now somewhat of a joyous luxury, will be indispensable to these urban neighborhoods. We should be able to issue bonds for such parks with a very small

sinking-fund charge to-day, graded up to a large charge fifty years hence - more: we should make park bonds ~~run~~ seventy-five or one hundred years and make the present amortization charges negligible." (Nolen 1917) ¹⁶.

In any event, recreational forests are ordinarily entirely feasible at moderate first cost and relatively low upkeep, if only foresight and good judgment are exercised from the very beginning in making the plans and carrying out the scheme. Whatever the methods used, two principles are of fundamental importance; first, the acquisition of land at an early date, and secondly, the acquisition of too much rather than too little land.

Maintenance

The matter of maintenance of forest reservations need not necessarily involve heavy expenditures of money. It "need not, for many years at least, exceed the expense of guarding them from forest fires, and the other forms of depredation." ¹¹ If, however, the community should wish to clean the streams, build paths or roads, or do any other proper work within the reservations, funds for such improvements should be provided as outlined in the previous paragraph, and whatever the expense, it is difficult to imagine a more purely beneficent

expenditure for genuine well-being and healthy happiness.

Partial self-support.

In some instances, forest reservations may be so managed that they are partially self-supporting, through the sale of fire wood meeting the interest on long-time bonds issued for the financing of acquisition and upkeep. European countries offer us numerous examples of this sort. In France, private forestry is largely carried on as a paying proposition, woodlands being highly regarded as stable securities. There is actual current revenue from firewood and other forest products and the problem of accrued carrying charges scarcely exists.

The case is similar with community forests in France (Greeley 1920)¹⁷, for these "are important sources of revenue for hundreds of French villages, reducing taxes and affording the means for constructing town halls, roads and other local improvements. The situation in France would be paralleled if every village in New England or in the Lake States owned 500 or 1000 acres of forest, kept continuously in the highest state of production, furnishing timber locally needed, affording a sustained income for community purposes, and providing steady employment for a number of its citizens.

SPECIFIC RECOMMENDATIONS.

Having discussed in the preceeding pages the purpose and value of forest reservations accessible to urban populations, and their acquisition, and financing by public authority, it now remains to offer some specific recommendations for these woodland or forest reserves.

As has already been indicated, there is no lack of successful accomplishment to which to refer for inspiration and practical suggestions. The work of Charles Eliot in the Metropolitan Park Area of Massachusetts is perhaps the most classic example of such achievement in the United States. But we may turn to many other sources for information.

Where landscape and forestry meet.

There is, however, possibility for misunderstanding and misconception in the question as to where landscape art and forestry meet in the recreational development of forest reservations. Particularly when it is claimed for these publically owned woodland tracts, that they may serve one, two or all of the purposes of supply, protection and recreation, does it seem, at first, difficult to understand what form of development they shall be given. To begin with, an understanding regarding this twilight zone between

landscape art and forestry may be attained by giving Allen Chamberlain's words concerning it.¹⁸

"The average forester undoubtedly has as great a love and appreciation of the beauties of nature as anyone - is above the average in this it may be conceded - but when he puts on his professional thinking cap in connection with a forest, he sees visions of thousands of board feet and not landscape. He may admire a "wolf" tree, but he does not love it. Such is his training. Why need he be jealous of the assistance of a man trained in landscape work, especially if a successful handling of the scenic incidents of his forests will tend to produce a more enthusiastic public state of mind toward government forests in general?"

Plan of Management.

Briefly the plan of management should be of such a nature that it will enhance the appearance of the woods. The selection method is about the only silvicultural system applicable, and should be more in the nature of an improvement cutting than a strict selection cutting. The cuttings for the first years should remove the diseased wood, and the dead, defective and poorly formed trees. The forest tract may then be managed with the ultimate aim of securing a sustained periodic yield.

Protection.

Provision for protection against fire must

be made from the very start. No one factor is as potent in the prevention of forest fires as the education of the public, arousing their interest to the realization of their responsibility in the matter. The Conservation Commission of the State of New York has given this problem its uninterrupted attention. A large number of news articles are published in the press and illustrated articles reach the public through magazines and Sunday editions of the newspapers. The Commission published up to December 1921 its own monthly journal, "The Conservationist", and in response to a wide demand by the newspapers and other publications, issues a monthly statement of "Violations of the Conservation Law", which shows just what the commission is accomplishing, besides giving publicity to the names of the law-breakers. Lectures are given in all parts of the state, and in 1919 records showed that 21,570 persons had been reached in this way. In addition, the Commission lends films and slides, and in one week these have been shown in factories where as many as 80,000 persons were employed.

Within New York's Forest Preserve, fire protection work is highly efficient. As a part of it, fire signs, cleverly worded and conspicuously placed, warn the vacationist upon every hand

and the Commission informs him in no uncertain terms of his responsibility to help protect the Preserve. The results are gratifying and are a proof of the efficacy of the methods used in combating the fire danger.

Assistance from the State.

In numerous states, town and county forest preserves may obtain the co-operation and aid in management and protection from the State Forester^{19,20,21} Young trees for planting may be secured free of charge or at very low prices from the state nurseries, and other assistance is easily available. ¶

The advice of a landscape architect in collaboration with the forester in charge is decidedly to be advocated. His recommendations will, by preventing mistakes and planning for the most appropriate development, prove highly economical in the end, and will repay beyond measure any expenditure that his services may entail. His suggestions may be of the simplest kind. For example, in the construction of trails, at many points, by bending the trail to one side or by a little lopping of branches or the removal of a few trees, there may be opened vistas of entrancing beauty, which would otherwise be passed by vacationists without knowledge of their possibilities. The opening of such vistas, may be called a landscape development which does nothing to the landscape itself,

but rather puts the visitor in strategic position for appreciation of the natural beauties of the country. (New York Conservation Commission Report 1919).²²

Justification of forest aesthetics.

Having traced the subject to its conclusion, one may still be confronted with the question of the justification of forest aesthetics. There are many persons who, looking upon the matter purely in the spirit of sentiment, will be critical of the forest owner for his disregard of the scenic beauties to which he claims title. In reply to that criticism, one may simply point out that no matter how desirable may be the consideration of aesthetic values in forestry, divergence from management primarily for revenue involves a certain loss in product, and hence in pecuniary return. The average forest owner naturally, and properly enough, does not see why it is incumbent on him to stand this loss for the good of the general public.

The use of a forest for aesthetic enjoyment is, however, perfectly justifiable and may even, for a given area, be the wisest use to which that particular forest can be put. The important point to be kept clear is that if a forest is to be maintained primarily for aesthetic enjoyment, those who desire this use of it must somehow provide to pay the bill. As far as public forests are concerned, the

social value due to aesthetic development may be worth more to the community than the revenue that might have resulted had the forest been cut rather than left standing.

According to G. Frederick Schwarz²³, " a closer understanding of the economic principles of forestry has spread among the people....professional foresters are beginning here and there to express their ideas about the value of forest beauty and its relation to economic forestry....Then there is a great deal that can be done by intelligently considering the aesthetic values of the forest."

SUMMARY AND CONCLUSION.

In recapitulation then, the case for forest reservations near urban centers seems to be backed by numerous substantial arguments.

First, not only is there a wide spread conservation activity, encouraging every phase of constructive forestry, but the creation of all kinds of public tracts, from the national forest and huge state preserve, to the relatively small county, town, and village forests, is specifically advocated by the federal Forest Service in answer to a part of the timber depletion question. Service in

In the second place, it is the recreational use of forests that has made the greatest appeal to the public, and in the setting aside of forest

reservations to be used as great playgrounds, the state is fostering a public interest in conservative forestry, besides supplying the opportunity for healthful out-door recreation so vital to the welfare of the nation.

Third, use of the forest reservation is becoming more and more general, and statistics point to the fact that the preserves near the great centers of population are proportionally more intensively used. The benefits to be derived from the reservations accessible to urban centers are many. Directly, there is the increased value accruing to surrounding property, the yield of pleasure to those using the reservation and the return that may result from sale of forest supplies and the toll of tourists and visitors. More indirectly, there are such benefits as come from the renown of the district due to its scenery and attractive forest land; the element of permanence provided by the reservations, fixing real estate values; the healthful and educational influence of the forest; and the fact that by maintenance of the reservation, the state and nation is benefitting by just that much additional timber supply.

Examples taken from among the many forests and reservations both in Europe and the United States show their value as well as illustrating methods of acquisition, financing and organization. It has also been pointed out how in localities where scenes of

natural beauty and forest growth do not already exist, developments creating attractions of this sort should be undertaken, at least for the benefit of future generations.

Specific recommendations have been discussed, covering management, protection and development of forest reservations and an explanation of where landscape art and forestry meet in this development, with reasons for the justification of forest aesthetics.

Conclusions.

The conclusions to be drawn from this consideration of the case are irresistably favorable to the promotion of forest reservations near urban centers. The idea is endorsed by those seeking to augment the national timber supply; by authorities concerned with the health and welfare of the nation; and by the astute municipal financier who agrees only with programs that will yield economic wealth to the community. There is much precedent to guide further enterprise in the establishment of forest reservations and many of these examples of past accomplishment show conclusively the value and economy of such work.

Ask any tenement youngster in crowded New York, back from his annual week's outing along the wooded waterside of the Palisades Interstate Park, what he thinks of the forest reservation idea. There will be a gleam of that joy yielded only ^{by} the the fresh out-of-doors, and the entire gladness of trees and sky.

As Thoreau says²⁵, asking "What are the natural features which make a township handsome? A river, with its waterfalls and meadows, a lake, a hill, a cliff or individual rocks, a forest, and ancient trees standing simply. Such things, are beautiful; they have a high use which dollars and cents never represent... A forest is in all mythologies a sacred place; as the oak among the Druids, and the grove of Egeria, and even in more familiar and common life, as "Barnsdale" and "Sherwood". Had Robin Hood no Sherwood to resort to, it would be difficult to invest his story with the charms it has. It is always the tale that is untold, the deeds done, and the life lived in the unexplored scenery of the wood, that charm us and make us children again, to read his ballads and hear of the greenwood tree."

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