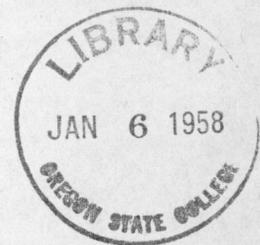


THE POLITICAL DEVELOPMENT
OF FORESTRY
IN THE
UNITED STATES

by

A . G . Lindh



SENIOR THESIS

1931

SCHOOL OF FORESTRY
OREGON STATE COLLEGE
CORVALLIS, OREGON

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INTRODUCTION

There is a close reciprocal relationship between the economic and social forces on the one hand and governmental control on the other hand in the history of any nation. The possession by our government of a vast area of public domain and the pioneer forces pushing westward into it have long been subjects of tremendous interest to the American historian. The actions and needs of the people have influenced the government to act in restraining or furthering free enterprise. The forces of the government are reflected in turn to influence the progress of the nation. Of the forces acting in this interlocking and close knit relation between the people and the government in the United States, our forests hold first place.

The fact that the vast domain was largely covered with forests and that these forests were destroyed in the building of our nation is of tremendous significance. The forests have, from the beginning, influenced our thought and life so that the history of the nation might be said to be in the shadow of the forest. The psycho-

logical forces of evolution have worked from colonial times, and earlier, shaping and changing the thought of the people in regard to forestal affairs. The outcome of this process of evolution is our present forest condition with a fairly well outlined national forest policy. The story of this evolution is the subject which this writing attempts to sketch.

Reading through the epic trend of forest affairs brings out the continuous struggle between the powers of Order and of Adventure. Adventure has pushed the frontier westward to the Pacific where it lingers today. Order has followed Adventure, at first slowly, then with a surge of power that finally established firmly its final superiority over the ruthless powers of Adventure. The proof of its power is expressed in our present national forest policy. These two are the powers whose conflict fundamentally are at the bottom of the story of our national evolution in forest thought. To start at the beginning of this struggle necessitates going back to almost the beginning of the Anglo-Saxon race.

Another term for Order and Adventure might be freedom and control. We see the conflict of these powers at the present working in forest affairs. We see the powers of control, expressed by the extremist, attempting to remove all chances for individual ownership and forest con-

trol by advocating absolute governmental control and ownership of our forest resources. On the other hand we see occasional flurries of the powers of freedom expressed in legislative attempts to remove the national forests from the national control and hand them over to smaller units of government, or, in the extreme, to give the remainder of the national domain to the devastating forces of uncontrolled lumbermen.

The study of the effects of these powers in the future and the ability to know them for their true value will be tremendously worthwhile. The forester of today must be ready to spring to arms in defense of the just use of the woodlot of tomorrow. He must also recognize the fallacy of forgetting the real advantages in having freedom of action. The destruction of our forestal resources has bred a race of people that are peculiar to this nation alone. This race must be cautiously nurtured, to save them from the curse of peasantry. It is the foresters' job to maintain the balance between the two forces today; and this job is of much greater importance today than at any other time in American history.

THE LEGEND OF INEXHAUSTIBILITY

Every school boy knows that England was the mother of our country. The majority of the colonists came from England. The Anglo-Saxon race centered in England at

that time. Before, however, we can trace the background of the race into the dark forests of northern Europe. The race came out of the primitive forests as savages. They conquered the primitive forces of the British Islands. The English nation was born out of the forest dwellers. No other race of the world is so closely related to the forest.

Now as the English nation advanced to the condition which prevailed at the time that the colonists began to move to America, the early forest dwelling Anglo-Saxons had changed materially. The limited forests of England were soon depleted in the building of the country. England had already far surpassed our present condition of forest shortage. The King's Forests were so well established as part of the national life that the people had ceased to question the rights of the country in locking up this resource. Even though they had forgotten the time when the forests were free, there still remained the spirit that had been bred from the freedom of the forests. That spirit expressed itself in the eflux of the nation's adventurers to America. The most adventurous and freedom-loving people were the ones that pulled free from the ties of home and fared forth to a new beginning where not only the forests but all else in creation was as free as any man could wish for.

These adventurers soon discovered that even in perfect freedom there must be government and control if the entity that was civilization was to be maintained. Thus even in the domain of free adventure there began at once to be a semblance of the old influence of Order. Of course the means was different and the control less strict, yet it must be admitted that they themselves began the reign of order in the new land. The power was terribly weak but still it was there.

The beginning of the government in America was not the first part of the struggle between freedom and control. The history of the race, as has been pointed out, has always shown the two forces in a struggle for supremacy. The beginning of American government was just one step forward in the march of events bearing on this story.

The colonial settlers landed on a cold and forbidding coast. Dark forests stretched away everywhere. The first fight was to clear enough land of the timber to enable them to build homes and plant crops for food. The horizon of timber stretched away boundlessly. The first explorer to look beyond the Appalachians looked into a new world of boundless forests. In England the forests had belonged to the King. Here they belonged to no one. They were as free as the air and a hindrance in the es-

tablishment of civilization. The rebound from the rule of control in England was tremendous. Forests were burned and laid waste with deadly ruthlessness.

Every traveler and author that wrote of the new country carried comment of the "inexhaustibility". Let us remember the origin of this by-word. It became strengthened through our history as new dominions of "inexhaustible forests" were discovered. One hundred years later Gray reported from the Pacific Coast that the truly "inexhaustible" forest had been found at last. Is it queer that the free spirits of the adventurous colonists expanded beyond control when placed in such a free and hardy country as this?

With this thought firmly in mind we can go on to the story of utilization during the seventeenth and eighteenth centuries. This story is especially intensified in importance when it is known to what extent this period worked to shape all our future history and even our present forestal condition.

THE BROAD ARROW

The above heading is especially applicable and typical of this period. It typifies the too-weak attempt of government to plaster freedom with restraint when freedom will have none of it. A spirit is shown that laughed at the puny efforts at control of a re-

source that was plainly as inexhaustible as water in the ocean. It also brings out that even here the power of Order is found as a live thing, following Adventure into new countries.

The first sawmill was established in 1623 in Carolina. The Yankee ship "Pied Cowe" brought the second sawmill to this country in 1631. This mill was put up in the New Hampshire pines. Eight Danes were imported to run this mill and establish others. This is significant when it is remembered that all of our later logging history is pretty well sprinkled with a strong force of Scandinavians in the foreground. This is probably due to the fact that woods craft leadership in Scandinavia was rated highly. Such names as "Forest King" and "The Wood Cutter" were given to their bravest warriors. Their history shows that woods work and navigation, closely related, were the occupation of their adventurers. Is it queer that they should be drawn to such a fertile field of endeavor as our lumber frontiers?

Timber was at first almost the only resource of our colonists. Those days of wooden navies made the value of long, slim pine masts very high. Ship building and the transportation of masts to England were our earliest ventures into commerce. Staves and masts were the products from which the colonies gained strength enough to

eventually throw off the English yoke. We did not gain that strength buying tea as our school masters would have us think. It was what we sold that made us strong. We sold the tall, valuable masts of the Atlantic coast, not only to England, but to all other countries that we could find a market in. Herein lay the beginning of the rift with England.

As the source of mast material in Europe became partially limited and difficult to make free use of, England looked to the shores of America for the supplies for her navies. The forests were her forests, were they not? Why shouldn't she protect them for future naval use. What right had the colonists to ravage ruthlessly the properties of the King? England could not get the viewpoint of the colonists and thus forgot justice. The colonists felt that England was a long way away to establish control of such an obviously inexhaustible supply as the forest apparently was.

England's control measure consisted of the appointment of agents to look after the King's interests in the forests of America. The agents were given orders to paint a Broad Arrow on each tree in the forest over the size limit needed for a mast. Can you picture anything as ludicrous as a Royal Broad Arrow agent going through the forests of America painting arrows on trees of mast

size? The colonists laughed. The colonists had a right to laugh. England could not understand that each tree presented a problem of driving the Indians away long enough to allow the painstaking work of hand logging to go on. Those trees were paid for in the life blood of the colonist. After they were logged they were stolen by the pirates that infested the coast, and which the far distant England did not even attempt to control. No wonder they laughed.

Also, in the interim, the colonist had become a really bold exploiter. It was natural that he should. He was either bold or died in the harsh struggle to exist. The lumberers were the hardiest of the lot. They wrung the domain of the wild Indian and the wild beasts for a living. It was a raw business. In truth the broadcast piracy of the time and place made pirates of many that would ordinarily remain honest men. Thus it is apparent that these brawny builders could do naught else but laugh at such a ludicrous attempt at royal control.

The broad arrow scared away the more timid and made the harvest all the better for the bolder ones. Thus it became a progressive influence toward ruthlessness. The bolder the person, the greater the profit. The bolder adventurers even used the broad arrow for their own interests. They painted trees that they wished to con-

serve from the milder element. In this manner was our first American conservation movement met.

Thus also, was born the spirit which eventually cast off the royal yoke and set up the government of the United States. It was not such a superfluous affair as the Boston Tea Party. It was rather the basic spirit built out of forest adventurers. We should remember as significant that the patriots on Bunker Hill bore a flag with a pine tree as their crest. There was no stars and stripes. The pine tree had become symbolic of the spirit of adventure.

THE LIVE OAK ERA

After the Revolutionary War we became a separate national entity. We must needs build up a government to keep it so. Thus it came about that Britain's problems became our problems. Order must restrain Adventure. The first crystallization of forest affairs came not long after the revolution. This, as seen from this modern day, became our first Broad Arrow movement. It will be seen that it was as unsuccessful as England's move previously. It became one more feather in the cap of Adventure.

The problem came out of our national need for a navy. The ships were of wood. There were no preserva-

tives. The ships rotted unless they were built of peculiarly resistant wood. The wood having the requisite qualities of durability was the live oak of the southern Atlantic and Gulf states coast. This wood had long been sought after by the navies of the world for ship building. During our early history the coasts were the scenes of heroic exploiting and piracy to obtain this naval supply. American citizens found great profit in cutting the oak and selling it to the foreign navies. When it became discovered that there was danger of depleting the available supply of it, our nation's statesmen became alarmed. They cried out against this exploiting of the nation's naval resources.

I wonder if the patriots were reminded that they had fought for the right to freely exploit similar resources not so long before. However, the shoe was on the other foot this time. It was their own government that suffered. Thus they set about to "Broad Arrow" enough live oak to insure a sufficient supply for the navy for all time to come.

Legislation before 1800 tried to stop the pilfering of the live oak. In 1799 a tract of 1950 acres of live oak was bought by the government as a feeble attempt at conservation or reservation. John Q. Adams, then president, a great silviculturist, had a planta-

tion started at Penascola, Florida. An act of 1827 providing for the "gradual improvement of the navy" brought about the preservation of live oak areas thought to be sufficient for the needs of the navy. An overseer was appointed. This appointment was tinged with political dirt, which didn't help later on. Agents were appointed to watch over the live oak timber of the government. These men were poorly adapted to the tremendous job confronting them. They were laughed at. If a timber trespass case was brought to court, popular opinion was so inimical that he very seldom was punished. Also the agents were most frequently "bought off", if even so much attention as that were given them. Everyone was making free with the public land and timber so why shouldn't the agents make free with it. It was the popular thing to do.

An act that reached farther than they intended was passed in 1831. This protected all naval reservations and also, incidentally, any other lands of the United States acquired or hereafter to be acquired. This part remained a standing joke until the National Forest movement sustained it nearly 75 years later. The laughter at this law added to the previous contempt toward forest or land control by the government. The naval reservations are all gone but this basic law still stands as the foundation of all our present land and forest control.

THE ERA OF AGENTS

The lack of forest data handicapped action for preservation then as it does now. Almost nothing was known of the forests, either their growth or utilization. In 1830, when Woodbury was Secretary of the Navy, he determined that a total of 4640 acres of live oak under management was all that the navy needed of live oak perpetually. Isn't it peculiarly striking that a great nation like ours could not keep even this small amount of forest land inviolate and under management.

The government purchased live oak land only to have it exploited by thieves and re-sold back to the navy. The ten agents then under appointment could not possibly stop depredations carried on throughout the entire south, with its intricate coastal regions, even if they had been good men and tried ever so hard. People in the very best of standing participated in this popular form of thievery.

Only one agent, Thistle by name, left a mark throughout the fifty or sixty years of live oak agency. He was no respecter of persons and brought offenders into court that he had better, for his own good, left alone. The furor he stirred up started a relapse against any sort of control and the agents became more than ever mere puppets of the lumber thieves. Still this brave agent is to *be*

commended for his brave spirit and the rankling feeling of conflict that he left behind. His overthrow was another club for Order to use in the later battle. The thievery which he attempted to stop became apparent from the vantage point of progress.

It should be emphasized here that this first battle between Order and Adventure only served to strengthen the grip of the pioneers. The agents were laughed at. Governmental control of their own resources was laughed at. From one standpoint, perhaps, this is a good thing. It left the pioneer spirit free to expand, push westward and build, with no restraint placed upon them. Perhaps this would have been too early, for our own good, for the power of Order to overcome the free spirits of the ruthless nation builders.

After about 1888 the naval reserves were gradually returned to the people. Their time was past. Live oak had been replaced with the steel that made the Monitor famous in our history. Every one was firmly convinced that after all, as proved by the new "West", the forests were really inexhaustible. The total land reserved up to that time was 264,449 acres. About 3,000 acres of this retained the reserve status until about 1923 in Louisiana. The agents remained but they were useless.

THE ERA OF PLUNDERING

Up to about 1850 the natural growth of the timber kept up with the loss through cutting. There was little transportation of timber. Inaccessibility locked it up much more efficiently than could all the efforts of the government. During the first part of this century, however, the first symptoms of the great transportation later to come became manifest. The Erie Canal unlocked the Lake Timber in 1825. The first mill was installed on the Puget Sound in 1845. Railroads began to make their influence felt soon after.

The real beginning of huge scale development began in about 1870. This was the beginning of the present machine age. Railroads and canals placed previously inaccessible bodies of timber within reach of utilization. Also at this time the tide of civilization began the westward surge that did not stop until the Pacific was reached.

During the short half century (1850-1900) the vast forests of the South, the North, and the West, passed from public to private ownership. This was the glowing age of the pioneer--Adventure saw its last goal--the Pacific Ocean. Before this time nature had whipped man as often as man had conquered nature. After 1850 the mastery of man was complete. The forest spirit of Paul Bunyan flourished.

The pre-emption and homestead laws gave license to destroy millions of acres of forest. The flimsy laws were used to cover fraud. "Rubber" forties became a by-word--forties cutting twenty million board feet. Timber culture and desert land laws also gave easy ownership and cover for exploitation. The free timber act and the stone act were other laws of the time that aided the process of wrecking the public domain. One company got direct from the government, through the connivance of an agent, a tract of over 100,000 acres. This was only one of many similar. The swamp land act required that the survey be made in a boat. The result was that boats were hauled over deserts in wagons, the surveyor riding peacefully therein. Much land was given the states and to the railroad companies. Much of this gravitated to private ownership rapidly.

Nearly all the land belonged to the government in 1850. Now over 80% of it belongs to the private people. One-half of all the timber belongs to 250 owners. A large portion of this was affected by fraud and dishonesty. All of it resulted in a lack of restraint on the adventurous pioneers.

We must keep in sight that only three centuries have turned America from a wilderness to the richest and greatest nation the world has ever seen. Without this magnificent plundering this could not be. The advance was bound

to be ruthless. With the strong breed's fearless virtues there must exist strong unbridled vices. Of these vices was the mangling, wasting, plundering, squandering, and burning of America's forests in a short fifty years, and the popular thought regarded it with complacency if not with applause. For was not the forest inexhaustible? Did we have any resource that wasn't inexhaustible? Thus we magnificently built from the results of devastation. Perhaps this was the only way.

A statesman said in 1832, "The forest falls before the steady stroke of the axe and every day, every hour, adds to the productive domain of the Republic. Scarcely have the trees been felled when schools and colleges and churches and villages and towns and even cities spring up before the stumps are withered." No wonder the people cheered such tremendous exploitation. Henry Clay was rebuked for counselling conservation. They said, "He calls upon the fathers of the old states to shackle the energies of their bold, adventurous sons who come to seek their fortunes in the West." Thus we see how, during this period, the voice of Adventure was far too strong to hear the weak voice of law and Order in the east. The voice of Order cried, "The day will come when the nation will suffer for a piece of wood to hang the kettle over." The voice of Order, thus early, was too weak.

The heyday of the Lake States exploitation was the next chapter in the forest history. Attempts at control and protection of the government forests were centered in a small group of political agents, just as had been done in the live oak days in the south. Control of these agents had been handed down from the Secretary of the Navy to the Secretary of the Interior. He handed the job on down to the Commissioner of the Land Office, where it remained until the present Forest Service took over the National Forests. Control of public domain still remains to a certain extent with the Commissioner.

Of the early efforts of the agents, only one need be remembered as noteworthy of interest. For the most part it was a time of fraud and will only result in disgust upon examination. The one agent of note was a man by the name of Ike Willard. He was a brave son of the frontier that endeavored to justify the nation's trust in him as an agent. During 1853 he reconnoitered his entire territory centering on Lake Michigan. He localized his efforts around Manistee on the east shore of the lake. Here thievery and plundering was at its very height. Mr. Willard proceeded to warn the lumbermen to stop the stealing of government stumpage. This was fruitless. He next proceeded to seize the contraband lumber and tried to auc-

tion it off under the rules of the government. No one would bid. The lumber was repeatedly stolen from him. The issue squarely up to him, he had to make good or quit. He proceeded to get warrants for the arrest of the most flagrant violators. One of his deputies was murdered. Three others lost their lives under suspicious circumstances. As fast as he arrested a man the mob rescued him. It became plain that the country would have none of it. Willard looked around for help. The U.S.S. Michigan was near at hand. He received permission from the navy to use her. This he did, using the navy as his jailer, and a navy barge to haul prisoners in. He repeatedly went ashore and came off with the offenders. Some fifty were arrested. Others fled to the timber.

The outcome of this was a tremendous political furor raised by the adventurous constituents from all parts of the country. Willard had cleaned out Manistee but it wouldn't stay cleaned out. The Commissioner of the Public Lands was thrown out of office. Ike Willard, the martyr, was fired. Adventure was patted on the back and told to go to it. The agents, charged with the care of the public lands, learned a lesson. This lesson was that the people and the politicians wanted to make free use of the public domain. The wise thing to do was to keep hands off. This they proceeded to do.

The special agents were withdrawn and all the work of caring for the public lands was given to the already overloaded field officers of the Land Office with no added pay. These officers soon realized that it was foolish for subordinates to rush in where the superiors feared to tread. This was the last thing needed to insure free devastation to progress onward in the rush westward.

THE BEGINNING OF ORDER

Order was always present, even through the periods already discussed. Even in the colonial days the power of Order was felt. Always, however, Order was subordinate to Adventure. As the civilized country grew broader Order had more power in relation to Adventure. Adventure ruled firmly until the pioneer advance had gone over the Rockies. From then on Order was always the stronger despite the occasional flurries of power arising out of the west.

The Civil War was finally the thing that insured the power of Order--especially as a national force. I believe the Civil War was well worth while, apart from freeing the slaves, in its national welding effect. It was not until about 1870 that the power of Order began to be felt in forest affairs. During all this time,

however, it was growing as rapidly as the horizon of civilization pushed westward.

In 1873 the first definite beginning was made in the trend that was to make forest history. This was the appropriation of \$10,000 to protect public timber lands in general. This was the first such law and the first direct forest appropriation, and is significant.

Secretary of the Interior, Carl Schurz (1877) was the first definite power in the forest movement. He used every dollar available to protect the nation's timber. He predicted a timber famine in twenty years. We know now that that was faulty, as have been other estimates, but it was at least a beginning of national apprehension. Before passing on we should understand that neither the Civil War nor Carl Schurz alone is responsible for the beginning of order in forest affairs. It was a natural movement and would come in spite of anything.

Nine states between 1868 and 1873 passed laws encouraging the planting of trees by giving bounties and aiding in other ways. The Arbor Day movement started in 1872 in Nebraska. It was a period when the song "Woodsman Spare That Tree" became famous. This was the rebound from the results of devastation beginning to be apparent in many states. It was rank idealism with no

practical value but it is significant because it was the beginning of public interest in forestry. Without this interest no progress is possible. It was the beginning of the end of the legend of inexhaustibility. It was the beginning of the legend that it was "morally wrong to utilize the forest." This sentiment prevails among many today.

Also, at about the same time, America discovered European Forestry. They visualized a slightly modified European system applied to America. Congress sent a commission to Europe to study and report on the European science of forestry. This Commission was not a body of foresters as we think of them. One was a doctor, the others were just politicians.

The Commission did, however, bring back a report on the "science" of forestry. The Timber Culture Act was an outcome of this movement. It attempted to encourage forestry on the western lands.

Also in 1873 the American Association of the Advancement of Science met and through a paper by Dr. Franklin Hough memorialized Congress with the need of governmental protection and cultivation of timber. The outcome of this move was the establishment of a Commission of Forestry in the Department of Agriculture. Dr. Hough was appointed and at once set to work with a

desk in an office and nothing else. His work and his successor's was along statistical lines. They did a very amazing work in the accumulation of forest facts and figures. The Commissioner began to get agents to help him in 1881. Hough's successor was Eggleston, who began work where Hough left off in 1883. The appropriations during the first decade were for a total of \$60,000. The appointment of several agents in 1883 was an aggressive move to disseminate knowledge as well as gather it.

The first American Forestry Congress met in 1882. The most noteworthy work of the decade was the Report on the Forests of North America by Professor Sargent of Harvard. This was done for the tenth census. Factors outside of governmental effort are especially important in considering the influences giving the forestry thought power enough to progress as it did.

The American Forestry Congress of 1882 was notable because it started the American Society of Foresters of today. Also, and of immediate interest, Fernow first came into the limelight there. He became the Commissioner of Forestry, succeeding Eggleston, in 1886. He was the first trained forester. He was educated in European forestry. Fernow had tact, horse sense, and the qualities of leadership that made him the psychologically

right man to appear in American Forestry at this important time. Too much cannot be said in commending the work of Fernow.

Fernow set out to prove the work of the Forestry Division by actually making it useful. During his time "Forest Nomenclature" came out. Sudworth was the author. The "Check List" finally evolved from it. During Fernow's eleven years the appropriations mounted to a total of \$230,000. This was a material increase over the former decade.

During Fernow's time in office, he started the first technical forestry training in America. This was at the Massachusetts Agricultural College. He afterwards accomplished much other work in the establishment of forestry schools in other parts of the country.

Fernow tried, as other foresters since then, to have a complete forest resource survey made. This was not done. Fernow was chiefly noticeable for his legislative measures. He had great success in furthering the national forest interests in congressional action. Two of the most important acts in forest history were passed while he was forester and also president of the American Forestry Congress. The first of these (1891) definitely established the power which made it possible

for the president to set aside at will any of the public domain as a national forest. The second act (in 1897) provided for their protection and administration.

In 1891 the timber culture and pre-emption laws were abolished; the homestead and desert land acts were made fraud-proof; the act established the permit cutting system; and, most important of all, Section 24 was included at the 11th hour which provided for the setting aside of national forests by the president at will. The credit for this shrewd political work must be given to the American Forestry Association. Dr. Fernow was the American Forestry Association.

In 1892 President Harrison set aside 2,437,120 acres under this act. By September 1893 over 17 1/2 million acres had been set aside. These reserved forests were no better off than they were before except that the government retained title even though the timber was exploited. Cleveland set aside 20 million acres more in 1896. This stirred up the western hornets nest in the last stronghold of Adventure. The west refused to recognize national rights of ownership in western forests, without putting up a howl about it.

In 1897 a bill to administer and protect the forests finally passed -- this bill was also a sort of tail to kite affair. The act really was a sundry appropria-

tion act and its forest sections were provisos appended to an appropriation for the surveying of the new resources by the Geological Survey. The bad features were: 1. It withheld the legality of President Cleveland's reserving the last 20 million acres for a period of nine months. This gave time for land grabbing, as it was called. 2. It provided for "lieu lands", or trading a piece surrounded by reserve for any of the unreserved lands at any place desired. It was not until 1898 that an appropriation was made to carry out the act permitting administration and protection of the reserved lands.

We should again remind ourselves that the Division of Forestry, having the only trained foresters, had had no forests to administer. The Department of the Interior, on the other hand, had no money nor foresters to administer the forests they had been given control of.

The gaining of the legislation above described was the last important work of Fernow while he was Chief of the Division of Forestry. He was the moving spirit behind all the forest legislation of the period. He resigned in 1898 and started teaching in forest schools. Fernow first taught at Cornell, then at Yale, then at Pennsylvania State College. He afterward established the first Forest School in Canada at Toronto. He died there in 1923.

THE ERA OF NATIONAL PROGRESS

Gifford Pinchot, "Fernow's first American student of forestry", took over control of the Forestry Division in 1898. His work falls into two units: The first seven years without forests and the remainder of the time after the Division had control of the National Forests.

As soon as the Department of the Interior had appropriations available the secretary divided the reserved areas into eleven districts, each under a superintendent with subordinates. They were not foresters. The Commissioner in charge soon began to borrow Pinchot's foresters to carry out the technical problems met in beginning administration of the forests.

The Department of the Interior soon created a Division of Forestry and got a technical forester to take charge of it. This man, Gilbert Roth, was a forester and would have made progress in the work if it had not been for the interference of the Land Office. The Commissioner of Lands objected to interference in the handling of the lands still partially under their control. As a result the technical personnel all resigned in 1903.

Pinchot's program was announced at about this time. It still furnishes the code of action in the Forest Service. This program was:

1. Education of private owners in management.
2. Assist the western farmers to plant better trees in better ways.
3. To reduce the loss from forest fires.
4. To educate citizens to forest opportunities in Alaska, Cuba, and Porto Rico.

Pinchot was wise in this. He saw that eventually he would have the National Forests on his hands so he proposed to be ready to handle them by building up an organization sufficient to the problem. Secondly, he saw the need for private forestry since most of the forests were in private ownership.

Along in 1902 the scandal connected with the "lieu lands" broke in Oregon. This helped to establish forestry more solidly. People were beginning to object to the free plundering in a fraudulent manner of the nation's resources. The airing of the scandal put "The fear of God" into many a larcenously minded lumberman. Owners were trading worthless lands within reserves for lands outside that were of high value. Frauds of this kind made sensational reading for the public for the next decade. All this helped to establish conservation principles in the minds of the people more firmly than all the preaching of the politicians.

Early in 1905 Pinchot's personnel numbered 821,

of which 153 were trained foresters. The situation was favorable to them. Roosevelt, father of the "cult of the out-of-doors," was a staunch friend of forestry. The report of the Commission investigating the frauds advised eliminating the division of the forestry groups among the several departments and uniting them under one head. The Department of Agriculture was regarded as the logical place for it; the Division of Forestry under Pinchot was ready to handle the forests and Pinchot's guidance had kept them free from the Political slime. The result was that on January 13, 1905 the National Forests were all placed under the control of the Bureau of Forestry.

It should be noted here that the most noteworthy collection of foresters ever assembled up to that time convened in Washington, D. C. just 10 days before the bill passed. The association adopted resolutions to repeal the Timber and Stone Act, amend the Forest Lieu Act, create forest reserves in Eastern Watersheds, and unify all the work under the Bureau of Forestry in the Department of Agriculture. The bill passed adopting all these resolutions. Thus the American Forestry Association again played a masterly part in national forest history.

In 1905, under Roosevelt, the National Forests again expanded 20 million acres more. This made a total of eighty-five million acres. During 1906 the Forestry Bureau became the Forest Service. The area increased to one hundred and six million acres. This first year the revenue jumped from \$60,000 to \$767,000. This increase was mostly due to grazing fees being charged. By 1908 the income was \$1,842,000. This first law gave 10% of the revenues to the states of origin. In 1908 this was increased to 25% of gross incomes. This was given directly to the county of origin.

In 1907 the Forest Reserves became National Forests. This same act repealed the act that allowed the president to set aside reserves. Henceforth reserves could only be created by an act of congress. Before this blow could fall President Roosevelt interposed by creating, two days before the act could become effective, a total of 21 new forests with a total of 40 million acres. This made a total of approximately 160 million acres. This has decreased some since then by re-classification of the land.

The act of 1908 provided for the management of Indian Lands by the Forest Service but the Department of the Interior objected. Thus the lack of cooperative

feeling between the two departments caused the Office of Indian Affairs to be set up in 1909.

The Act of June 11, 1906, allowing homesteading of agricultural land in National Forests is important. Under it two and a half million acres have been opened up to homestead entry, within the National Forests.

In December 1908 Pinchot created by Administrative act six practically independent district (now regional) offices, each in charge of a district forester. This was an act of great importance. It allowed efficient response to problems, it allowed local adaptation, and it strengthened field control. It also had the advantage of bringing the service closer to the people rather than leaving the feeling that the Forest Service was in Washington, D. C. The district foresters were given practically full control and told to get results or get out.

The following year a supply depot was established at Ogden, Utah which was to furnish supplies and materials to all the forests of the west.

Also in 1908, of great importance, the district experiment stations were established. These were to work to determine the best silvicultural systems for each region and other problems of technical management were to be solved.

Secretary Wilson prophesied in 1905 that the forests would pay their own way and also return a substantial income. The failure to do this became the cause of sarcastic criticism. The Forest Service maintained that they could make money if they had maintained the policy of money making. The policy was changed to produce the largest profit in the long run, not in the immediate future. Also, the Forest Service brought out, the grazing fees charged were less than outside private fees, recreational values were not included, free use was not considered, and the immediate cost of survey, construction, etc., precluded the chance of showing a profit immediately if the future good were to be considered.

Mr. Pinchot was dismissed from the Service by President Taft for disobeying the President's orders against the advice of his immediate superior--Secretary Wilson. The justice of the act must be determined after more thorough studies are made. Mr. Pinchot had served the country well and had probably performed the greatest service he was capable of in so firmly establishing the Service that very few changes have been made since.

LATER DEVELOPMENTS

Pinchot was succeeded by Henry Solon Graves as Chief Forester of the Forest Service. When he started he was faced by a most unfortunate and disagreeable national state of mind in forestry affairs. It was just at the climax of the conservational trend when the sentiment of "Woodman Spare that Tree" had led the politicians and the nation as a whole to unprecedented action in saving the forests from complete despoilation. The howling of the "timber thief" in the west was loud and ferocious. One purple-faced westerner expressed himself thus: "Future generations be damned; we want it now." Other westerners remarked that East was trying to reduce the West to the state of a "blankety-blanked" Indian reservation. Thus we see the backwash of the tide of Adventure reflecting in this cry the spirit that had despoiled the resources throughout our history without restraint. The conservation and the freedom school were in the throes of a conflict. The result was a very difficult situation for the new forester to handle at the very outset.

Three notable pieces of legislation mark the "Graves era". They are: The establishment of the Forest Products Laboratory at Madison, Wisconsin; the

enactment of the Week's Act; and the definite beginning of a move to establish a national forest policy.

The Madison laboratory matches any other single move in American forestry in importance. The practical outcome in the advance of wood science is tremendous. It brought the first knowledge of scientific wood technology. Its very great value during the world war will never be fully appreciated. Its entire personnel of 458 trained men during the war worked on nothing but war problems in woods use. A conservative estimate places the annual saving to American Industries by the work of the Madison laboratory at fifteen millions of dollars. The operating cost to the present time has only been two million dollars. The laboratory has become a model for nearly every other wood growing country in the world.

During 1908 a controversy as to the value of forests in the protection of watersheds arose. Forest enthusiasts had long claimed that the forests would stop floods, or at least prevent them, and regulate the climate. This viewpoint focalized in the political action needed to enact the Week's Law. The Supreme Court had previously ruled that it was unconstitutional for the government to buy land to grow forests unless it could be done under the plea of protection. The

result of this was that the foresters, to get legislative permission to buy forest land, must needs prove that the forests were needed to protect the navigability of navigable streams and thus indirectly influence the effectiveness of the navy in national protection.

A commission of army and navy engineers were instructed to determine the benefits of forest protection in regulating stream flow and run-off. The result of this report was mainly given in the report of Colonel Chittendon to Congress in 1909. The thesis of this report was, "Forests should be protected but it is injuring a good cause to attempt to bring to its support the false and mistaken conclusions of enthusiasts, no matter how well meaning they may be or how devoted to a high and lofty purpose."

This controversy is not definitely settled yet despite the continuation of the forester's faith in the value of forests and the engineer's disbelief in them. This should point out the lesson that foresters should control their enthusiasm and rely only on clearly established facts.

Chittendon's opinion was steam-rollered when the Weeks Act was passed in 1911. The Weeks Act had for its purpose to enable any state to cooperate with any other state or states, or with the United States, for

the protection of watersheds of navigable streams, and to appoint a commission for the acquisition of lands for the purpose of conserving the navigability of navigable rivers.

It will be seen from this that the good coming out of the Week's Law had its foundation in legislative juggling. However, we are going ahead under the provisions of this act making rapid strides in the establishment of forestry practice on the denuded headwaters of many eastern rivers, chiefly on the Ohio, Cumberland, Mississippi, Missouri, and Red Rivers. The establishment of forestry in these areas is certainly justified without the navigability argument so why should we worry about the truth or untruth of the legislative arguments. The fact does remain, however, that foresters will some day find themselves faced with the necessity of producing greater proof of the validity of the argument than has hitherto been presented for consideration.

The enactment of the Week's Law opened the way for the establishment of Eastern National Forests, by buying land. These forests are worth while for several reasons, the chief of which follow: One, as strategic points in forest fire prevention; two, as demonstration areas in scientific forest management, reforestation, etc.; three, as great national game preserves and recreational areas; four, as an anchor to windward with re-

gard to our national stock of hardwoods; fifth, because they marked the passing of forestry from the tentative to the fixed and definite.

During 1911 trouble arose out of the fact that the Forest Service was running the Department of Agriculture. The result was that administrative orders directed that the legal work of the Forest Service be directly under the supervision of the Solicitor of the Department of Agriculture. This meant that control was much closer knit.

The Forest Service, through over-exercise of zeal and idealism had adopted the habit of pretty much running the affairs of the Office of Lands in all parts bearing on the National Forests. Forest Officers classified the lands as agricultural or forest principally, under the June 11, 1906 Act. Through their zealous ardor they had ceased classifying and recommending lands as agriculture, no matter how good the lands were. When a settler tried to have a piece reclassified the Forest Service reported adversely to the Office of Lands. This practice made it nearly impossible to obtain National Forest lands under the June 11 act. The handing of the legal supervision of the Service over to the Solicitor changed this so that a better balance of power obtained.

By 1912 the Forest Service had reached the form and size it possesses today. The main office in Washington had six administrative branches: Operation; grazing; lands; Appalachian work; products; and silviculture. Since then Public Relations and Fire Control have been added. This entire work was under the general supervision of the Forester and an assistant. Practically a duplicate of this organization was set up in each of the District Offices with the work under the general administration of the district forester in each district.

This organization administered over one hundred and sixty-eight million acres with a personnel of two hundred and sixty-six. The appropriation to perform the work was \$5,594,900.

A survey of the forests submitted in 1913 showed 45 years supply of timber; four-fifths owned by private individuals and concentrated private ownership. Of this four-fifths, 10% belonged to three holders, 50% to some 200 holders. This report was not claimed to be final in accuracy. They repeated previous requests of the same kind asking for a thorough forest census.

During 1912 a suit started in Oregon against the O. and C. Lands in Oregon. The suit was finally compromised in the following manner: All land was forfeited

to the government and then under a compromise re-sold to the holders at \$2.50 per acre. This involved about two and a half million acres of Oregon land.

At the outbreak of the war the Forest Service went into action to raise the Tenth Regiment of Forest Engineers. The Service must be commended on the spectacular manner in which they raised and put into action the first unit of its kind ever assembled. It is well to note here that the logging industry did as well in raising the Twentieth Regiment. The combined work of these two regiments anticipated the annual growth of the French Forests by many years and created a disastrous condition in the French forests. The psychological effect of the work performed by these two regiments has been felt in forestry and logging since the war. The returning warriors have infused a new spirit and new methods and viewpoints into their old organizations. Their work during the war was a spectacular adjunct to Allied success in the conflict.

FINAL DEVELOPMENTS

The evolution from the organization as discussed under conditions in 1912 to the present has been spectacular and persistent. Many minor skirmishes between the inimical force and the foresters have usually result-

ed in establishing precedents of strength for later building the national policy to greater scope.

During the war the personnel situation was critical. Men stayed with the Service out of idealism and not for money. The situation was improved gradually by reclassification and salary increases. This has been continued to the present.

A series of water power problems arising out of National Forest use caused the Federal Water Power Commission to be established in 1920. The three members are the Secretaries of War, Interior, and Agriculture. The practical result is that the Forest Service has had more water power work than ever. The Service inspects and supervises operations, administers permits and transmission line easements. Part of the water power income thus remains a revenue to the Forest Service.

Up to June 30, 1927 nearly three million acres had been purchased under the Weeks Law. Only part of this has been put under intensive management as yet. Fire protection and a survey of the problems have occupied most of the efforts on these forests.

The history of fire protection is a very fair summary of the general development in forestry. Executive and management experts agree that fire is 75%

of our forest problem. (Note: This large per cent is a good indication of the correct subject to choose for specialization in Forestry.)

Six of the thirty-nine timber states have no fire protection worthy of the name. Until about 1926 the public lands surrounding the forests had practically no protection. This will indicate the need for unified and national action in a fire protection policy.

Since 1908 fire appropriations have been made under the general agricultural appropriations bill under the head of general expense. The records show terrible fluctuations in amount spent annually. They bring out especially the fact that there are good fire years and bad fire years. This fluctuation led to the enactment of a bill in 1915 which makes all the appropriations available to the Forest Service available to fire protection. This was a big step forward. Since 1915 the Service can virtually "kick the bottom out of the treasury" when the need arises. Gradually there have been more and more moves to cooperate with the Forest Service and the states in fire protection by private companies, individuals, and associations.

The Service started a ^{Fire} Forest Prevention Week in 1920. This and other moves to establish public contact

has been of great help in bringing about a national forest fire policy of cooperation. The Service alone is not to be thanked for the great advances since 1910. The public has been gradually brought to it by necessity and experience. Such organizations as the Western Forestry and Conservation Association and the Oregon Forest Fire Association are likewise responsible for much of the development. Cooperation now throughout the Northwest between the nation, the states, and the private owners is far more complete than in any other part of the country.

The annual Forest Service Fire protection bill is usually around \$700,000. This is handled by the deficiency method of appropriation. Only about \$250,000 annually is under direct appropriation usually. The Forest Service claims that if all the money were available by direct appropriation the loss would be reduced to almost nothing. The Service estimates that by placing an average of one man to each ten thousand acres the prompt action would reduce to nothing the number of fires that get away. At present there is only about one man to each fifty thousand acres. Under this system about 25% of the fires get away, or get such a start, that a considerable cost and loss is incurred.

About $1/3$ of 1% of the total acreage of the National Forests burns each year. Recent advances in fire protection include limited appropriations for the extension of fire lanes and the clearing of snags from dangerous areas. Besides this of course tremendous strides are being made in extending the trails, telephone lines, roads, etc. This is aiding progress tremendously.

Other forest protection work has come under the Bureaus of Entomology and Pathology. Their efforts to control forest insects and fungous diseases are becoming of greater importance as our forest values and number of pests increase.

The "motor age" has brought into prominence the building of roads. It would be hard to picture the National Forests maintaining their present administrative status without the motors and roads. It is a large country and needs rapid transportation to facilitate administration. The Bureau of Public Roads builds much of the National Forest mileage due to their strategic situation as regards personnel and their easy adaptability to the larger and more costly jobs. The Forest Service administers only those roads costing less than \$5,000 per mile. It is proper that they should build these since they are primarily for protection purposes. Incidentally,

the crews building the roads form a strong part of the protection organization.

To aid the systematizing of the road policy the Federal government has passed laws aiding the states and counties in the construction of forest roads. The Forest Highway act in 1921 appropriated fifteen million dollars for forest highways and forest development. Altogether there has been expended \$67,602,539 for permanent improvements on the National Forests since 1912.

The grazing fee problem has been a serious one ever since the beginning. Stockmen were in the habit of grazing adjacent public land at no cost before the Forest Service went into action. The first fees were three to four cents per head for cattle per month and one and a quarter to one cent for sheep. The stockmen howled. The fees were raised in 1915-1916. The stockmen howled again. The rates were again raised in 1917-1919 and again cries arose from belligerent stockmen. The constitutionality of charging for grazing was upheld by the supreme court and still they howled. The rates have remained stationery since 1919. They are eleven cents per month for cattle and three cents a month for sheep. This pays roughly three times the cost of administration. Studies of grazing bring out that the grazing is worth double the present price. Private range renters pay

more than double and then state that the Forest Service permittees are getting an unfair advantage over them. They claim the Forest Service is subsidizing part of the stock industry.

Senator Stanfield tried to put through a bill which would have put grazing under almost absolute control of the stockmen. This bill was defeated, but it did cause a relaxation by the Service in their program of raising the grazing fees on a graduated scale. The fees will not be raised until 1934 when a new rate will apply. The trend is upward. Eventually the grazing will return full value. This factor should work to put the Forest Service on a profit paying basis.

The Alaskan Forests have attracted considerable political and forestal attention during recent years. Alaskans, being in a raw country, desire to exploit the timber as all other new countries have. The plan of the Service in regard to Alaskan Forests seems to me to be an exceptionally good one. They forecast the evolution of Alaska into a second pulp producing country equal to the Scandinavian Peninsula. The sales of timber in Alaska are principally pulp timber sales and require the installation of pulp mills as a part of the sale contract. Alaskan forests are situated so the pulp mills can be installed on the water front with sea transportation cheaply

available to all parts of the world. If Greeley's plan is not interfered with by the politicians this should work out to be a wonderful advantage to Alaska.

It is brought out that grazing is subsidized on the National Forests. It should also be brought out that the lumbermen are not treated in a like manner. Many of them have pointed out this discrepancy. The Forest Service sells stumpage under a competitive bidding plan that insures getting the highest possible price out of the timber. Lumbermen have remarked that the Forest Service is the shrewdest timber dealer in the market. Timber sales are made on the basis of local industrial needs figured perpetually. All contracts carry strict cutting provisions, administrative plans prescribed, and full fire protection demands are outlined. All in all, the Forest Service business methods are drawing favorable attention from all concerned.

Three districts have been added to the original six, making a total of nine. The districts in the east were made up from purchased land and the Alaskan district was created to allow closer adaptation to local needs. President Harding's trip to Alaska resulted in the governmental approval of the National Forest policy in the administration of the Alaskan Forests.

THE NATIONAL FOREST POLICY

From very early times there have been working the influences which finally brought about the national forest policy which we now have. Even in Colonial days certain of the conservatives entertained opinions on conservation and the saving of a "bit of wood to hang the kettle over". The first definite showing of these influences came out in the attempt to protect and propagate the naval live oaks in the south. Then, as later, this influence was too weak. It should be noticed that the forces for restraint came from the east. As the frontier pushed westward the dominion of "Order" also pushed westward behind it. The power of Order was not strong enough to control the adventurous woodsmen of the Lake States era but it was growing. As the frontier pushed on westward and passed over the Rocky Mountains the situation changed.

The changes were several. First, the lumbermen of the Lake States were for the most part the same group that had still earlier devastated the forests of the east. During the Lake States era they still persisted in the belief that the forests were inexhaustible. Under this belief the Lake States country was left a denuded land with rotting cities in the wake of the lumbermen.

Now as these lumbermen began to see the end of the Lake States timber supply the far-sighted ones began to look into the last wilderness on the Pacific Coast. They bought or acquired through thievery vast areas of this last virgin forest. Many of them did this-- not just a few. When they and their helpers moved into the west they came with a slightly different attitude than they had had on entering the Lake States region. They still believed pretty much in the legend of inexhaustible forests as a whole, but they could also see that the choice pickings would soon be gone. Wild stumpage speculation and high timber values resulted.

The other settlers in the west were more or less cognizant of the same facts. The legend of inexhaustibility was pretty well shattered. Also, they had learned somewhat from the sad experiences in the east.

By far the greatest power, helping the establishment of Order, came from the eastern United States. Nearly all the country east of the Rocky Mountains and north of the southern pine region was well aware of the value of forests. They were also aware of the speed with which even a large area of timber could disappear under the axe of the lumberman. This power in the east would alone have been sufficient to control the situation in the west. They alone did practically bring about the first steps in

saving a few of the forests from passing into private hands. The west, as has been brought out, was a more willing patient than the west of the Lake States era.

We have noticed the actions of Order in various ways previously in this paper. After the Colonial and live oak days we can pass on to the period after the Civil War. This was a period when they attempted to strengthen the land laws. For the most part, Order accomplished nothing. The first definite acknowledgement of forestry came with the establishment of the Division of Forestry in 1873-1875 under Dr. Hough. After the beginning, Dr. Fernow's influence is the first really important event. A very great deal of our forestry progress had its inception in that period. The time was ripe, the tools were at hand, and Fernow was the right man to use them. From 1886 until 1898 he hewed mightily in the formation of our national policy. His work was chiefly expressed in the establishment of the national forests, the obtaining of power and money to administer them, and perhaps most notably in his great work, in beginning the science of forestry as an American subject of study. Not only through the Forestry Colleges started through his influence, but also through his work in public education, did he advance the sum total of forest knowledge.

Gifford Pinchot, another right man for the right time, began shaping the raw materials gained by Fernow into the mold of the present national policy. It might rightly be said that Pinchot was the father of our present national policy.

It has already been pointed out that various other moves were under way during this period that were fundamental in shaping our national policy. American Forestry Association, various state and industrial associations, and general public education and appreciation all joined with the active foresters, the result being the legislative power that Pinchot led along the route of action, which definitely shaped our present national forest policy.

Our country is slow in accepting any new encroachments upon their personal or state liberty. We have come to be suspicious of anyone who may manifest a desire to regulate our national problems. This suspicion attaches to the foresters of this country just as it does to the regulators of our commerce or tariff. The Forest Service has been fortunate in having a fairly clean record. Idealists with plenty of practical sense have come to typify the Service. This aspect gives promise of paying continuous dividends in public trust.

The growth of a national forest policy takes in the influences pointed out, and probably climaxes and becomes clarified in the enactment of the Weeks Law in 1911. The Weeks Law definitely established the national status of the timber problem. It advanced national power to the buying of land and the establishment of forests. It provided the first definite beginning of national and state cooperation.

The second high-light in the establishment of a national forest policy was the enactment of the Clarke-McNary act in 1924. It probably merits the remark that it is the greatest single step forward. Its clauses designed to foster forest production and protection by the farmers, and land owners. It provided for the inclusion in the National Forests those parts of the public domain chiefly valuable for forest use that were in or adjacent to a National Forest. The law also provided for a study of the tax problem with a view to state revision. The law extended governmental power to buy lands for the establishment of new national forests. In doing this it got away from the hypocrisy of the Weeks Law and frankly admitted that the purpose was to practice forestry in the watersheds of navigable streams and did not hide under the cover of being for the protection of navigability.

The Clarke-McNary act goes beyond these practical results. It gives the nation the real beginning of a genuine forest policy, national in scope and basic in breadth. Other acts since then have continued to extend the forest policy into still greater power for the national government and the opportunity for still more cooperation with the states and people.

Every historical move of consequence has molded the people into a stronger national unit. The Civil War was a great step in adding to the solidity of the nation. The machine age and rapid transportation resulting from it has shortened distances to knit the union still closer. We are a nation, not a group of states. There may continue to be mutterings of states rights and the encroachment of the national government, but those cries will be desultory.

The world war brought us into the international limelight as a great nation. It gave us the knowledge of our potential power. We came home more solidly welded than ever. Whether we rise or fall, we rise or fall as a nation. We have been bred from the nation-builders. Practicality, handiness, adaptability, resourcefulness, and initiative have been bred into America as into no other nation of history. This came chiefly from one thing--the irreverence for the impossible. Are we not the people

that hewed a nation from the wilderness in three hundred years?

We are at the end of the pioneering days. "Order" is established. We have had plenty of power to build; now what will we do with what we have built? Are we going to revert to stolid peasantry? Or, are we, somehow, going to devise a plan that will control the "Adventure" without killing the spirit bred into us? That is a problem we must meet. Individual enterprise must be kept without destroying our resources. In forestry we must meet the problem face to face. How to keep the nation in wood without losing the spirit of unstifled enterprise?

FUTURE PROBLEMS

One phase of the problem of individualism versus nationalism is coming to the fore continually. It is the recurring cry of "Adventure" that our states are robbed of their rightful income through the encroachment of the National Forests. State's Rights politicians are continually at work to have the National Forests returned to the states. Some would keep the forests much as they are at present, except that the administration would be state controlled. The second plan, advanced by continually fewer, would have the states sell the forests into private ownership and unrestricted devastation.

Of the first principle there is little to say, except that local politicians could get their "finger in the pie". On the whole, the situation of the forests preclude state management if the optimum benefits are to be derived. The problems, for the most part, are not state problems to be solved by localized and heterogeneous methods of management. Throughout this writing there appear many ways in which the national agencies excel in experimental, educational, and technical strategy.

To the second school of politicians we should pay little attention, except to keep them suppressed. Order has reached too wide a scope nationally to allow the ruthless adventurists to again gain the upper hand. The national welfare must be always of paramount importance.

It should be pointed out that the states, while they might derive greater immediate income from the sale of lands, would suffer in the long run just as Michigan and Wisconsin are suffering from the effects of devastation.

CONCLUSIONS

One very large factor is usually overlooked by even the States Rights school. That is the fact that the National Forests are coming more and more to be profitable concerns. The act of 1908 raised the counties' portion of the gross National Forest income to twenty-five per cent. This becomes a very respectable income to most of the counties whose boundaries include National Forest land.

Many of these counties obtain a larger income from the land under National Forest management than they could under any other means. To point out specific instances is not difficult. One county which I have observed in Washington has almost 90% of its area in National Forest. This mountainous country is principally rough, old burn type. The cost of protection and suppression for fire is very high. The few bodies of timber would be burned if the Forest Service had not remained active in protecting them.

The old burns are bringing in a good revenue from grazing. Several creeks and lakes are developed into summer home sites and special use areas. These bring in substantial revenues. Also, they furnish cheap recreation to the local settlers. The timber remaining is under regulation and returns stumpage revenue as it is cut.

If the state or county owned the land the grazing would be valueless. I am assuming this because similar land in private and state ownership adjacent to it is valueless. The continued recurrence of fires and the lack of control would soon make the recreational values almost nothing. Under state fire protection in its present status, the timber would already be all or partly burned. Any chance remainder, if sold by the state, would return revenue only once. Then, without forest management, to which the state seems inadequate under such adverse conditions, the land would remain idle and return absolutely no revenue. This picture can be reproduced in many parts of the old burn country in other parts of Washington. It is not an uncommon situation.

The picture presented through National Forest use of the same area is entirely different. The few residents of the county are relieved of heavy taxes by federal revenue return. They have good schools and roads. The Service maintains ideal recreational conditions for them. The stockmen concerned are well satisfied, and the community as a whole has an alert, satisfied air. Individual effort within reasonable bounds, is not hindered; the greatest number of people perpetually possible are getting the benefits of the forest; and the Service, through its fire protection efficiency, has brought about a coopera-

tion from the people that in itself is a very favorable condition of life.

We, as foresters, must beware of the political moves started by Adventure and local selfishness. On the other hand, we must beware the forest enthusiast, who can do as serious damage by curtailing that individual enterprise spirit, which is the mainspring of our nation. We must face the issues squarely in our part of developing a national forest policy. Meet local problems with local solutions; but, always keep the national policy in first place in the solution of any forestal problem. We must remember that the history of those that settled America began in the dark forests of northern Europe; that the forests have worked to shape our history ever since those primitive days; and that the forests of our country will have a full measure of influence on our progress nationally in the future.

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Note: Cameron quotes numerous authorities in his book. I have not attempted to note the requotations, neither have I noted the direct quotations from Cameron. These are very few in number. This writing is in the form of a personal review of the subject covered by Cameron. Throughout the entire review I have attempted to present the material from my individual viewpoint. I freely acknowledge that my opinions are almost exactly the opinions of Cameron. He covers the subject in an interesting and comprehensive style. I have attempted to go further than Cameron in the interpretation of present trends in their effect on the future.

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