

AMERICAN FORESTRY

VOL. XXIV

FEBRUARY, 1918

NO. 290

WAR MATERIALS FROM FRENCH FORESTS

FRENCH forests yielding the growth of years for the strengthening of the Allied armies; American foresters working under military control and with the precision and efficiency of a Yankee industrial enterprise; scientific forestry applied to tree cutting with a view to perpetuating the forests of war-stricken France; timbers produced where, when and as needed for the success of the military operations of the armies of France, England and the United States.

In broad terms this is a composite of the impressions brought from the French war zone by Lieutenant-Colonel Henry S. Graves, National Army, who returned early in February to his office in Washington to resume his duties as United States Forester. Blended therewith is the picture of an international war machine working in harmonious efficiency with the armies of the allied nations employing every effort and resource in the world war for the perpetuation of Democratic institutions. In gaining these impressions Colonel Graves has had the exceptional opportunity given only to the man who was early on the ground and who has had an active part in the general scheme of things. His duties have kept him in close touch with foreign operations throughout a broad field; he has seen these activities from the close range

of the man in charge of a line of work of great importance in the military enterprise; and his observations have been made through travel afoot and by motor. Thus favored, Colonel Graves has brought back to America a vision of the great war unusually comprehensive and of intense interest. Colonel Graves reached France when the United States had been at war but a few weeks. His arrival in Paris was within ten days

of the arrival of General Pershing. Since that time he has seen the American military program rapidly expand and spread out to its present magnitude. He has seen his own immediate branch of the work grow in proportion to the general expansion. The original plan for forest and lumber work with the American Expeditionary Forces contemplated a single regiment of 1,200 men. These men went forward last summer in the Tenth Engineers (Forest). Commissioned as a major, Forester Graves went across in advance to prepare the way and

to map out the work of the American foresters and lumbermen. Early in the autumn he was made a lieutenant colonel.

"When I reached France," said Colonel Graves to AMERICAN FORESTRY, "I found that the program for American military operations was developing on a much larger scale than had been foreseen and that this had developed a greater problem of forestry in connection with supplying the Expeditionary Forces with timber for military needs. The engineering feature of modern warfare is of great importance. The need for materials is tremendous, not merely for trench building and other construction at the front, but for transportation lines, for road building and for the erection of the various buildings required by an army,

to be used as barracks, hospitals, warehouses and for other purposes. The use of wood for fuel is also an item of immense importance.

"The lumber and forest regiments had to be enlarged to meet the expansion of the Expeditionary Forces. For this reason the Twentieth Regiment was organized on a large scale. It was made the largest regiment in the world, because forest conditions necessitate the scatter-

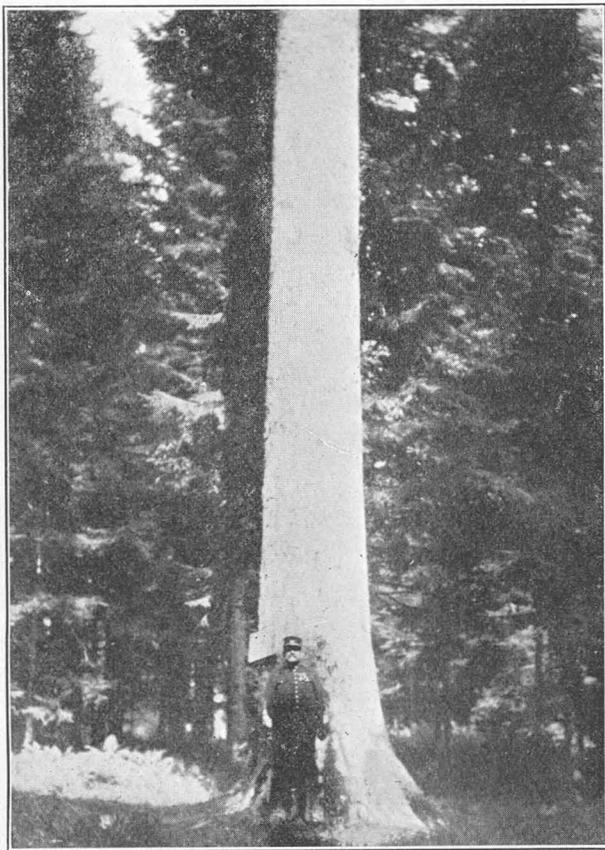


AMERICA'S BEST-KNOWN FORESTER SOLDIER.

Lieutenant-Colonel Henry S. Graves, as he appeared on shipboard after several months of service in charge of Forestry operations in France for the American Expeditionary Forces.

ing of troops over a wide territory and adapting them to the requirements of forest operations. The men are engaged in industrial work rather than in military activity and on this account they do not require the same measure of military supervision which goes with ordinary military work.

"My first work was to look the ground over thoroughly and make recommendations as to the forces and



A MONARCH OF THE FRENCH WOODS

This picture, brought across by Lieutenant-Colonel Graves, gives an idea of the size to which the silver fir grows in France. This type of tree attains a diameter of two to three feet and frequently grows to a height of 125 feet or more. This one is of exceptional size and of course will not be cut even for military use.

equipment which would be needed to keep pace with military development and to prepare for the reception of the forces. Soon after my arrival I was placed in charge of the section of forestry in the engineer corps. The first problem, of course, was to secure the forests in which the work was to be done. I furnished a general idea of what we needed in this respect and a line of procedure was worked out with the French authorities as to the cession of private forests and the granting of cutting rights on those publicly owned. This was done in co-ordination with the allied armies and I found splendid co-operation at the hands of the French authorities and others concerned.

"When the Tenth Regiment reached France its men were placed immediately and sent to their respective locations, where the sawmills were to be placed and where they will stay for some time. The same thing was done with the early arrivals of the Twentieth. These sawmill units are necessarily somewhat scattered and the military organization has been worked out and adapted to the need for specialized men for work of the character

of that to which they are assigned. It has proved possible to take the military organization and adapt it very effectively to the industrial undertaking in which these men are engaged and the men are working effectively. The health of the regiments is exceedingly good. In some cases there was slight illness on reaching France, due to the sea voyage, the necessity for keeping everything clamped down through the submarine zone and the rainy weather encountered in France; but the men soon came out of this in splendid shape and we are all very proud of their condition. They are in good camps and their spirits are high and their enthusiasm unbounded.

"The timber to be cut in our work is marked for our men by French foresters and the cutting is being done on forestry principles, to bring about the best possible results in silviculture. The reports brought to me through French officials were extremely gratifying, as showing that they were much pleased with the results of the work done by the American regiments."

For all those connected with the Forest regiments Colonel Graves voiced appreciation of the work being done by the Welfare Committee for Lumbermen and Foresters



A STAND OF SILVER FIR IN FRANCE

This is one type of forest in which the American Forest and Lumber Regiments are at work. The quality of the silver fir is more like our *abies amabilis* or Pacific Coast white fir than any other American tree. It grows in the mountains of Eastern France. The two trees in the center were trimmed to promote the growth of the younger trees.

in War Service and other agencies interested in the welfare of the men. "In France," said Colonel Graves, "the feeling is that of the keenest appreciation, not merely for the sentiment behind the work, but for the exceedingly useful materials provided for the health and comfort of

the men. The arrival of the shipments is looked forward to with great eagerness and if the contributors could see the men as they leave the place of distribution with their packages under their arms they would feel fully rewarded.

"The most useful articles, of course, are in the form of wearing apparel, such as sweaters, socks, helmets, mittens and the knitted wristlets. A man who is driving in the cold finds the wristlets as useful as anything he could have, as they furnish protection that prevents much suffering with cold hands. Tobacco, too, is deeply appreciated. At times it is extremely difficult for the men to buy tobacco in the neighboring stores and in addition to this they naturally prefer the American tobacco to which they have been accustomed. The work is highly important and everybody who has been helpful in it has earned real gratitude from the men who receive the benefits."

Colonel Graves has returned to

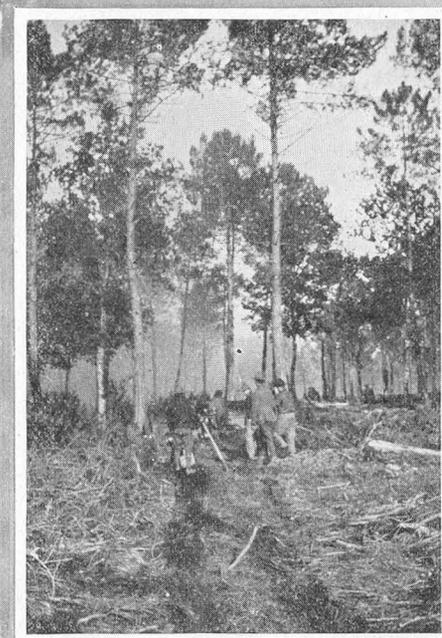
and resulted in his return as soon as the authorities on the other side felt that he could be spared. Major William B. Greeley, on leave from his duties as Assistant United States Forester, has taken Colonel Graves' place in charge of the technical forestry work in France. Colonel J. A. Woodruff is in military command of the Forestry troops.

At the camp of the Twentieth Engineers (Forest) at American University, in the District of Columbia, rapid progress is being made in the organization and equipment of additional battalions for the regiment. The first, second, third and fourth battalions have been in France for some time. The fifth and sixth battalions were completed in January and Colonel W. A. Mitchell and his staff are busily engaged in organizing the seventh and eighth. Work was also under way on the forty-first battalion of



LUMBERING FOR THE ARMY

This group of pictures gives an idea of the surroundings and operations of the Tenth and Twentieth Engineers (Forest) sent to France by the United States War Department. The men pictured tell eloquently of the health and spirits of the workers in the war zone.



the Forest Service at the request of the Secretary of Agriculture. In going to France the Forester's original plan was to be there no longer than was necessary to establish the work of the American forest and lumber forces, to work out the procedure for acquiring forests and to build up the organization necessary to carrying on the work. This has all been accomplished and Secretary Houston was anxious to have Forester Graves resume his work at the head of the Forest Service. Interchange of cablegrams took place

road and bridge builders. The various units will continue to go across to the French forests as rapidly as possible.

Letters from the war zone tell of some of the experiences and impressions of American foresters in the war zone. One of the most recent letters was from Captain R. C. Hall, of the United States Forest Service, now assigned to timber reconnoissance in France with the American Expeditionary Forces. Captain Hall writes: "I had the good fortune to see the Tenth Engineers

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(Forest) before they split up, as I had to conduct one of the officers to a forest I had examined. They seem to be a fine body of men.

"Sometimes I think the French are a wonderful people, other times I can't see how they have managed to resist the methodical Germans at all. They are extraordinary in the way they save and make use of material resources, but very wasteful on the whole of human effort. Of course, their practical geniuses must be largely at work near the front, and before the war evidently labor did not count for much. They are practically all excellent cooks, and there seems to be plenty of meat of good quality for all except perhaps the extremely poor. In this respect, however, conditions may be worse in the later years of the war.

"So far, our long fight with the Boche 'subs' the last day of the trip across is the only active warfare I have seen. Have had occasion to see some practice work with hand grenades, etc., from model trenches at a French training school. On my next work, however, I should at least see some air-fighting, but don't suppose I will get in range of shells and gas.

"I am getting along fairly well with the language, although I can not follow an ordinary rapid-fire French conversation. When they slow down a little I can get about everything now, and can express my own ideas with much bad grammar. Can now order baked apples without being afraid they will bring me fried potatoes. I manage fairly well on the French "petit dejeuner," usually taking chocolate which is nearly always good, but wouldn't want to do much mountain climbing without something more. The other meals are very hearty. I am falling in with most French customs, but draw the line at breakfast in my bedroom when there is any other decent place. I also occasionally insist on a glass of plain water, much to the astonishment of all present. Have never seen a Frenchman drink water except in mixture.

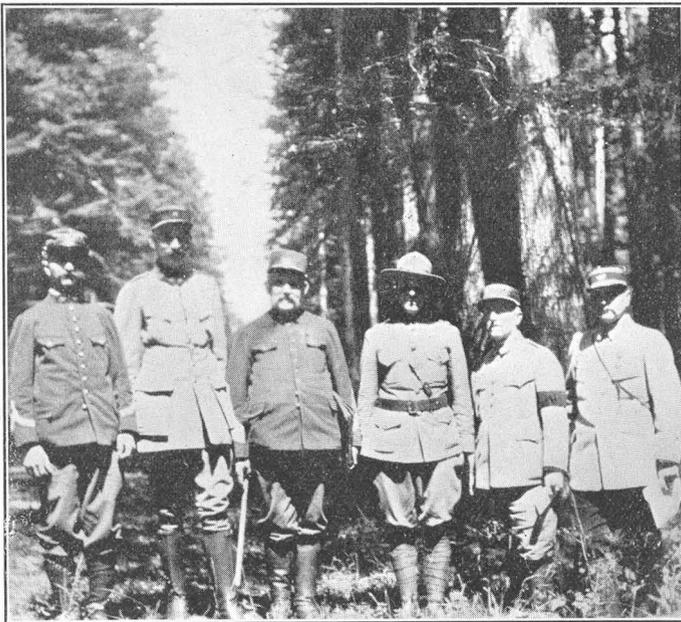
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"Am now chasing around in the Army Zone with auto and chauffeur provided—wouldn't be such a bad job but for the cold and difficulty of getting meals in the small towns just back of the front. Got pretty close on my last trip—could hear cannonading all the time and saw much airplane activity. The Boche dropped a few bombs the other night on a town near where I was staying. I went by there the next day and saw the damages

—several houses smashed to splinters and a big hole back of a cafe. Met a medical officer hunting a new billet—luckily he had been out of his room when it got smashed up."

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Frank S. McNally, of the selling staff of the A. Sherman Lumber Company, chronicles some of the doings of the Tenth. The regiment arrived in Scotland early in October after an uneventful trip of approximately three weeks on the Atlantic. Arriving there they moved immediately across country to an English Channel port, where they remained at rest camp for several days before making the channel trip. From the French port a rail journey of two nights and a day brought the regiment to its station, where after a couple of weeks, the regiment spread over the country. Mr. McNally's detachment, the first, under Lieutenant E. L. Lindsey, immediately set to work laying out a side track for the mill, and at the time the letter was written woods operating had been going on for some time, while getting out poles was the principal item of interest pending the arrival of the mill.



FORESTER SOLDIERS OF TWO FLAGS

Forester Graves, in his United States uniform, is here shown with three French officers at one side and two at the other. The picture was taken in one of the Forests where lumber operations are being conducted by the American regiments.

The boys are quartered under canvas with a few old buildings for headquarters. In a barn nearby a clubhouse has been set up where the boys manage to knock out a pretty good time. Mr. McNally likens the operations in France to those in the Adirondacks. They are cutting practically all softwoods, Scotch pine and Norway spruce mostly, the latter, he says, being similar to our short-leaf. The boys are all in good health, well fed and on the job from sunrise to sunset. Mr. McNally pays his respects to the officers and men in the regiment who, he says are fine soldiers, first-class lumbermen and naturally good fellows.

Another recent letter is from Herman Work, formerly deputy Forest supervisor on the Caribou Forest, and now with the Tenth Engineers in France. He writes: "I wish you could see our layout. It's the best camp I ever saw. After the war I hope to be able to describe it to you, with diagrams, but of course that would never do now—some friendly Boche might intercept the letter. The timber is better than anything I know of in District 4 from a logging standpoint. I doubt if the darkness of these forests has been bettered very much anywhere. Big trees and very dense stands—walk a hundred yards into the woods and you are in all over without much chance of seeing out, for they have planted younger shrubs all along the edges.

"My particular job is putting out the raw material and it would be a lot too much for me if I didn't have a fine lot of men with all kinds of experience and who know the game. As it is, we are putting out the stuff. Dunbar, by the way, is making very good as a sergeant, handling the general office business and discipline. Miller Benedict is summary court officer for Company D and I have the same job for Company F. Wish you could drop in to look us over. You would enjoy showing us how to save time and effort and we would give you plenty of bully beef and beans, together with about everything else needed. Great lot of officers and men in this outfit."

According to a letter from Captain E. W. Kelley, Company F, Tenth Engineers, his Company had the honor of manufacturing the first board made by American troops in France. A section of the board is on its way to the San Francisco office to be preserved as a relic.

Floyd A. Colby, of the Sierra National Forest, writes: "The French have a novel system of logging,—at least it is new to me. First, they go out into the woods, pick out the trees they want to fell, then one man climbs to the top and trims off the limbs. They do this to avoid knocking down the smaller trees, or of even breaking the limbs off. When they get ready to fell the trees, they side-notch it, no matter how small it is. That is something I cannot account for in small timber. They use oak wedges, about two or three, and a common timber saw about five or six feet long, and it has no drags on it. The teeth are just like those of a hand-saw. When they get the tree down they peel it to full length, that is, to where the tree is about three inches in diameter. They do not saw it into cuts in the woods, but haul it full length.

"The trucks are what I would call a common four-horse wagon, only they are a narrower gauge than our narrow gauge wagons. They use about two oxen to a truck and it takes about half a day for them to load, which is done with a logging jack of the ratchet variety. They come in with those trees full length—about 150 feet long, and have two or more on the wagon. One is loaded on the bunk and one under the axle. They uncouple their wagons and set the wheels 80 to 100 feet apart, and when they come to a turn they unfasten the

reach of the rear truck and steer with it around the corner. The brake is on the front wheels and is made on a crank with threads on the straight part of it. So, to put on the brake, the driver grabs the crank and starts winding. The oxen have their yokes (I guess that is what they call them) fastened to their horns. The yoke is only a little light piece of wood and is nearly straight, and there is a pad just behind the horns for the yoke to

rest on. There is a hole in the front of the yoke through which they poke the wagon tongue. A wooden pin holds it in place. When they want to back up, they turn the team around and put the tongue in the other way, so they push on the end of it. Of course methods here are all new to us, and we are getting new ideas every day. We lose a lot of things we never dreamed of; but I suppose the French would be just as surprised at some of our customs.

"The French forests are all clean—no windfalls and no burnt butts on the trees. The trees are tall, straight and round, and hold their size pretty well. They are thick and often in rows.

"It would make you laugh to hear some of the arguments that are pulled off here. There is some kind of an argument going on all the time. The sub-

jects are of all kinds—on all phases of life, labor, war, religion, and I might include the Bible. We had a discussion of saw-handles the other day. All the men from the Middle West and Eastern States claimed a straight handle was the best for all work—bucking and felling. They said it was better than our standard handle, especially for felling—"the handle set on the top of the saw," they said. You can imagine what a man used to our saws would say if you gave him one of those. There isn't a thing to prevent you from getting your fingers pinched, especially in sawing large trees. For my part, I wouldn't use one of those for any purpose. They claimed they threw our kind of handles on the scrap heap years ago.

"The weather here has been bad for a few days,—rain and snow and quite cold. Of course the temperature is not so low, but it is that damp, disagreeable kind of cold—cloudy and foggy nearly all the time. I judge from the 'water moss' on the trees and on the ground all through the woods that it rains almost incessantly here. This moss never grows in a dry climate.



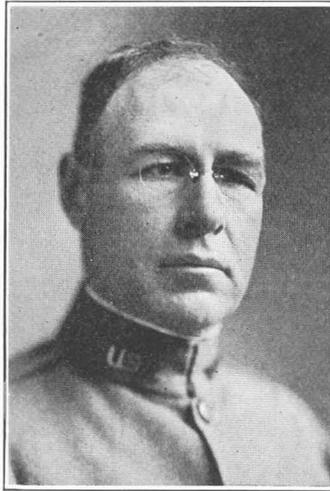
FORESTER GRAVES IN FRENCH FOREST

The United States Forester is here shown in one of the pieces of woodland in which the American Forest Regiments are employed. The tree by which he stands is a maritime pine, the turpentine pine of France. It is not quite as large as our yellow pine, but produces some exceedingly good timber.

"I would like to be at home for Thanksgiving or Christmas but there is absolutely no chance, as I couldn't make it if I started tonight, which I am not going to do. I hope to be home by the Fourth of July, but there is no telling. The Bible says, in the thirteenth chapter of Revelations, "The world's war would extend through a period of 42 months," and that time is up next February—but there's no telling whether that will come true or not.

"We get the Paris edition of the *New York Herald*, and there is not much of interest in it to us—all the papers from the States are so old when we get them that the news seems stale. I get the *National Bulletin*, though it takes a month for it to come, and is quite irregular. The last one I got was printed October 4, so you see it is quite old. I am so glad I have my kodak with me, as I can make up quite a collection of pictures to bring home with me. We can buy films at our Canteen. The Canteen is our general merchandise store. I never heard of a store called a canteen until I joined the army. The English and French have the same name for it. They gave us some magazines today that were anywhere from one month to four months old, but good reading after all."

C. W. H. Douglass, formerly with *AMERICAN FORESTRY*, is now a member of the Aviation Corps of the American Forces. From England he writes: "Many things have happened to me since leaving Mineola, the main one being that I'm here in England instead of Italy as I expected. It seems that the English Government agreed to train a



MAJOR B. F. WADE

In command of a headquarters detachment of the Twentieth Engineers (Forest) Regiment, and the last soldier to leave the sinking *Tuscania*, torpedoed on February 5, near the Irish Coast.

THE tragedy of war was brought closely home to the members of the American Forestry Association by the sinking of the American transport *Tuscania* early in February. Among the military passengers on board the torpedoed ship were Companies D, E and F of the Sixth Battalion, Twentieth Engineers (Forest), numbering about 800 officers and men and a headquarters detachment of the regiment under command of Major Benjamin F. Wade. Major Wade is one of those known to have been saved. The Twentieth is a regiment of lumbermen and foresters and is known as the largest regiment in the world. It has been in process of organization for several months at American University Camp in the District of Columbia. Detachments have been sent across from time to time, as fast as organized and equipped. It is for the benefit of the men of the Twentieth and those of the Tenth Engineers (Forest) that the Lumber and Forest Regiments' Relief Fund has been established at the headquarters of the American Forestry Association.

ABOUT 200 board feet of wood is used in the actual construction of the average airplane. To obtain this material it is ordinarily necessary to work over about 1,500 feet of select lumber, which often represents all that can be used for airplanes of 15,000 board feet.

which wisps of smoke curl about and disappear, make the towns and fields look like squares on a checker board. It's really very pretty. In bumpy weather you don't have much attention to waste on the landscape though."

AN instance of speeding up on war contracts is shown recently by the shipment of five 30-foot Oregon timbers from Eugene, Oregon, to Redding, California, by express. The timbers were so long that the loading and unloading had to be done through the end door of the car.

certain number and we just happened to arrive at the strategic moment. Later detachments went to Italy. The climate here is hardly likable—damp, cold with fog, etc.—but aside from a cold or two and a touch of influenza, I've been feeling fine; am getting round and fat, and most of the other boys the same.

"To get back to chronological order. We spent six weeks (about) in an English ground school, repeating the work we had done at home, and then after a fortnight in machine gunnery schools we were scattered in small groups among the flying schools all over England.

"I've completed my preliminary training on a staid and dignified old buss that we used to call an "animated lawn mower" and am now at an advanced school for work in the faster machines. Expect to fly scouts, the wasp-like machines that run around at about 130 miles per hour. Great sport we all agree. We work into those through easier flying types, meanwhile learning to loop, roll, spin, Immelmann, stall, etc. It's the most interesting sport that ever was invented, I believe. When one is up a few thousand feet the sense of dizziness experienced when looking down from a high building is absent—everything is peaceful and quiet. Rows of tidy houses with red tile roofs and a batch of chimney pots, from

THE INDEX FOR VOLUME 23 OF THE AMERICAN FORESTRY MAGAZINE IS NOW READY AND WILL BE SENT TO ANY OF OUR MEMBERS ON REQUEST.