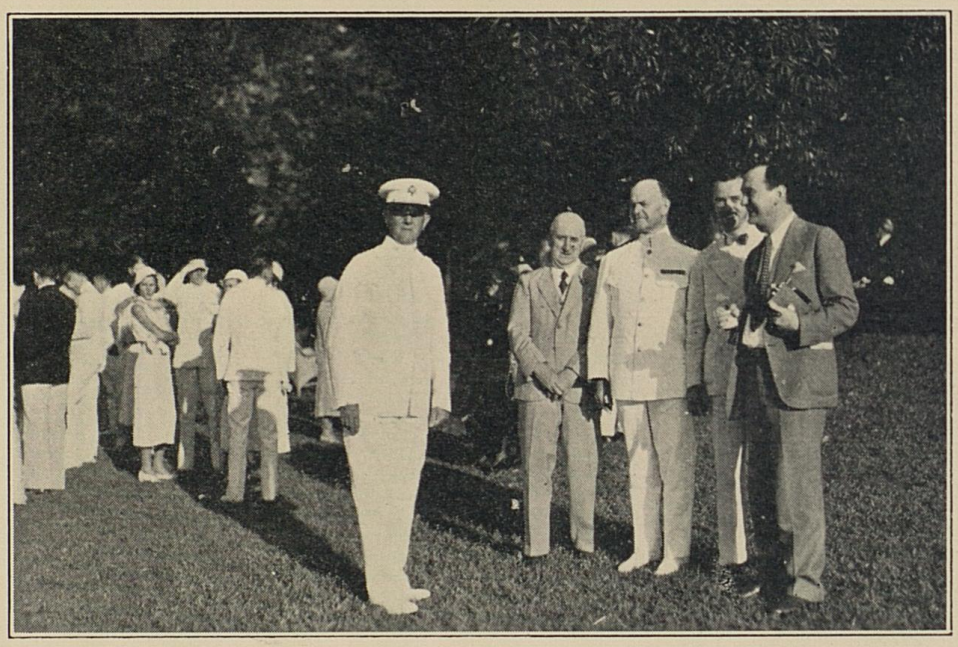
The Quarterly Bulletin of The Frontier Nursing Service, Inc.

VOL. VII SPRING, 1932 NO. 4

SALUTING THE COLORS
Quarry Heights, Panama Canal Zone

Photographed by M. V. Britannic Photographer



MAJOR GENERAL PRESTON BROWN, H. M. B. MINISTER SIR JOSIAH CROSBY, ADMIRAL SMITH

MARCH 6, 1932

Photographed by U. S. Army Photographer

THE QUARTERLY BULLETIN OF
THE FRONTIER NURSING SERVICE, Inc.

Published quarterly by the Frontier Nursing Service, Lexington, Ky.

SUBSCRIPTION PRICE $1.00 PER YEAR

VOLUME VII. SPRING, 1932 NUMBER 4

"Entered as second class matter June 30, 1926, at the Post Office at Lexington, Ky., under the Act of March 3, 1879."

Dr. Charles F. Thwing, President Emeritus of Western Reserve University, has given his permission for us to reprint these exquisite verses from the little memorial to his wife, Mary Dunning Thwing, a member, and a most devoted one, of the Cleveland Committee of the Frontier Nursing Service.

ADVENTURE

Though you sail the wide world over
  With adventure for your guide,
And fly before a cooling wind
  Over a foaming tide;
When the ship of your desire
  Drops her sails, at close of day,
You will want a friendly harbor
  In a peaceful, quiet bay.

Though you fly on wings of fancy
  Over countries rich and strange,
Over sunlit rivers flowing
  Down from lofty mountain range,
When the dark comes and you falter
  On the wings of your desire,
You will want to turn back homeward
  To your hearthstone's evening fire.

A PRAYER

Open Thou mine eyes that I may see
The beauty of the world Thou'st given me;
Open Thou my heart that I may feel
Thy loving care about me, strong and real;
Open Thou my mind that I may know
Thy friendly people as they come and go;
Open Thou my soul that I may give
Love, labor, faith, while Thou help'st me live.

THE MOUNTAIN CRUISE

At midnight, February 26th, the Britannic sailed from New York on its "Mountain Cruise" to the West Indies, with a group of passengers more homogeneous, more enthusiastic than is often found on a similar voyage. As the big ship settled down into its stretch for the first stop at Nassau little clusters of people, friends of the Frontier Nursing Service and of each other, got acquainted and began to enjoy the innumerable pleasures of a happy life at sea. Mrs. Charles S. Shoemaker, with fourteen of her Pittsburgh friends, was on board; Mrs. S. C. Henning, Mrs. A. J. A. Alexander, the Misses Norton, and Mrs. Francis R. Beattie, and a whole troup of other eager Kentuckians, settled cozily down with Mrs. Warren Thorpe and the other New York friends. Mr. John Mead Howells and his son, Jack; Mr. J. L. Goodwin and Mr. H. Goodwin, and Mr. J. Hamilton Scranton; and others from New York and New England; Mr. Kendall of Chicago; Mr. and Mrs. S. L. Mead of Philadelphia; Miss Marjorie Walsh of Cincinnati; Mrs. Sherman L. Depew, Mr. and Mrs. Henry T. Ewald, Mr. and Mrs. Clarence Booth, and Mrs. Herbert I. Lord of Detroit; and many, many others too numerous to name—from Maine to North Carolina,—including a bevy of pretty girls, all joined in the sports and the dancing and the long hours of deck chair leisure that filled in the first two days at sea.

At Nassau everybody tumbled into launches and hurried ashore—some for the surf bathing, some for the shops and the quaint streets and buildings of the old Bahaman town. By that time everybody had made friends and the enjoyment was unmarred by a single untoward incident.

The next stop was Haiti, where we had a most unusual welcome. The U. S. Marines, led by Colonel Jeter Horton, boarded the ship while the air service circled above in welcome. The passengers broke up into parties of exploration through Port-

au-Prince and the lovely hillside country where there is enough of the quaint to satisfy any enthusiast. Some were received by the President of the Republic; Colonel and Mrs. Horton entertained their personal friends at lunch. For the young people there was swimming; and shopping, as always, took up the time of many. All did what they liked and all enjoyed themselves.

After another sail through tropic seas dotted with coral isles, with almost everybody on deck most of the time, playing tennis, swimming in the outdoor pools, dancing by moonlight, we came to Jamaica and there the only regret was that we had only one day. The unparalleled loveliness of the drives, the fascination of the shops, the clubs and sea bathing were all so entrancing that it was almost impossible for the boat to collect her passengers and get away. We all voted that on our next cruise we wanted two days at Jamaica so that we could motor across the island to the coast on the opposite side.

After this we cruised down into the hottest part—in fact, the only hot part of the voyage—to within ten degrees of the equator, on the old South American coast, to visit the historic and lovely town of Cartagena. Again everybody tumbled into launches, the men in white and the women in the thinnest frocks they possessed, with the largest hats and carrying parasols. One was heard to remark that unquestionably the dungeons were the most comfortable places in Cartagena and that she envied rather than pitied the prisoners in the early, gory days of the old town. Various groups sank into the Cathedral with restful sighs that a spot so cool had been erected by early worshippers. Others sought out the places dedicated to American iced drinks. All felt that only heavily pigmented consuls should ever be assigned for even a year's duty in such posts. As the launches got back to the ship there was a rush for the ice water coolers and calls to the deck stewards for iced tea. As we steamed away in a cooling evening breeze there was a universal feeling of satisfaction that in the matter of tropics we had seen the real thing. All the rest of the voyage was extraordinarily cool, with a lovely play of sea breezes, wraps on deck at night, and more comfort in the daytime ashore than

any of us were accustomed to in our own summer weather. With more bathing and tennis and dancing we cruised over to Colon and there the biggest time of all awaited us.

Before the sun was properly up in the Heavens a cluster of seaplanes came flying over the canal to circle above the ship. Later, Major General Preston Brown, in command of the Canal Zone, with his aides, came aboard to greet Captain Summers and the passengers. To everybody was given an invitation from General and Mrs. Brown to attend a reception at headquarters at Quarry Heights that afternoon, and a special permit to visit the fortified islands. By the hundreds we started across the isthmus, some in seaplanes, some the first stretch by motor and then train and then by boat through the famous Culebra Cut. Motors met the crowd again and we came into full view of the Pacific.

The most wonderful day followed for everybody. The various groups lunched at the clubs and hotels while General and Mrs. Brown entertained the older friends of the Frontier Nursing Service at luncheon at their own house. The next hours were spent in the fascinating shops of Panama, motoring to the Old Panama ruins and, as the first group of a ship's passengers so privileged, inspecting the island fortifications. We all met again at 4 o'clock at Quarry Heights for General and Mrs. Brown's reception. The house, the broad verandas, the lawn —all had been turned into a sort of fairyland where a splendid band welcomed us with music and a group of the most charming people were asked to meet us. Among them were the American Minister, Mr. Burgess; the British Minister, Sir Josiah Crosby; Admiral and Mrs. Smith; and various representatives of the Diplomatic Corps, Army and Navy, the Public Health Service and those fortunate civilians who elect to live in one of the world's most beautiful and healthful regions. For the young people from the ship, there was dancing on the tennis courts, with plenty of army officers to cut in. The most satisfying refreshments, especially designed for the climate, took away the fatigue of even the most strenuous shopper of perfumes and laces. The conversation ranged from everything light and pleasant back to the romantic days of the buccaneers and the early

pathfinders through the jungle dividing at its narrowest point the world's great oceans.

At the last, just before we started drifting back for our return journey across the isthmus, as the sun was setting, came the lowering of the flag at headquarters and the salute of the colors. The occasion was one to capture the imagination, and raise the loyalty of Americans to its highest pitch. While the band played The Star Spangled Banner we stood and watched the flag slowly being lowered for the night. All day we had watched it flying above an achievement for which Americans may well be thankful and proud. Here was a stupendous job, which had been done without graft. The man who did it might have drawn a hundred thousand any time as a consulting fee in engineering, but he served for eleven years on the salary of a U. S. Major General and did his work without any compensation other than in the doing of it. The memory of General Goethals quietly working on year after year for no financial reward, sitting under a shade tree every Sunday in his old slouch hat to listen to and adjust anybody's complaints,—backed by General Gorgas, working after the same measure, against mosquitoes more terrible than any jungle beast for the extermination of human beings—the memory of this man and his public health ally and of what they did, without graft, restored the respect of all of us in the capacity of Americans for unselfish public service. We turned from the revolting memories of our graft-ridden gang-infested cities to this majestic link between great oceans—not only the biggest national thing we have done but the biggest international—through which the ships of the world, on equal terms, were sailing. As we watched the flag being lowered and listened to the anthem, it was possible to remember that "America First" may not always mean Americans first at the hog-trough, but Americans first in unselfish public service for the well-being of the world.

By train or seaplane, as the taste lay, we returned to the Britannic at Colon and cruised out under the starry tropic skies towards Havana. It was on this part of the trip that the passengers gave their concert for the benefit of the Seaman's Charities—a concert altogether amusing, in which even the children

took part—and where the writer achieved her lifelong ambition to speak for the sailors' widows and children. To her joy, the collection was more than double any taken on that ship for the year. We also had a costume ball, with prizes afterwards for costumes of note. In passing let it be said that the prize for the most original man's costume went to Mr. Paul J. Gulesian of Boston for appearing as a shower bath—a particularly effective impersonation for the tropics. The prize for the most original girl's costume went to two of the Pittsburgh girls, who achieved a triumph as cocoanuts.

We had two days in Havana, where it was cold enough for wraps, even in the middle of the day, and where everybody did the accustomed things which are too well-known to enumerate. At least 250 passengers enjoyed the night life, and the grateful thanks of the entire cruise were tendered to the cruise director, Mr. Cureau (variously called Mr. Curaçao and Mr. Benedictine) for getting them safely back to the ship by 5 a. m.

From Havana we headed for home, cruising out of one of the world's loveliest harbors in the glory of a setting sun.

The "Mountain Cruise" to the West Indies was a pronounced social success from first to last. The ship's officers and personnel were everything obliging and delightful. Nothing could exceed the good humor and good breeding of the passengers. Not a single noisy or vulgar person had found his way aboard. Old timers, who had taken West Indies cruises for years said that they had never enjoyed one so much. The Frontier Nursing Service feels that its first venture into the nautical field has justified itself a thousandfold. Because of the difficult financial winter the boat was only half full and, of course, the rates were reduced to meet the times, so that the financial return represented the gain of only a few thousand dollars; but in spite of the depression and the prognostications of many, who said that we would lose money, we did clear those few thousands, and at the same time mastered the technique of putting over a huge undertaking with immense satisfaction to all concerned. Various steamship lines are now approaching us for our next year's cruise and we know that we can raise

a definite proportion of each year's budget by making the West Indies Cruise an annual affair, in which there is no possibility of loss and, under brighter conditions, a substantial remuneration. Our one aim, to make the cruise just a royal good time for everyone so that all would want to go again, has been achieved. Will those who contemplate a cruise for next year write us, with suggestive itineraries on the basis of 16 days, including 6 ports? We know that the Canal, Jamaica and Havana are always desired, but we can meet any variety wished in the smaller ports of call.

The grateful thanks of all are tendered to the officers and personnel, including the cruise director, of the M. V. Britannic, for their wonderful courtesy and cooperation, and to the management of the International Mercantile Marine.

An article on the Frontier Nursing Service, by Ernest Poole, written after a week's travel through our territory, will appear in the June issue of Good Housekeeping Magazine.

We are always grateful for your old school books, maps, bird charts, etc., which we pass on to the little one-room rural school teacher. It is not infrequent to find in the mountains a class of 20 children learning from one tattered textbook because they cannot afford to buy books.

A COURIER LOOKS AT LIFE

Wendover has been in a turmoil of excitement with three midwifery calls all at once, coming, of course, when the thermometer was down to 10 degrees above zero and a good old-fashioned snowstorm was setting in. It all started on Monday night at about nine o'clock when Morgan Logan walked way over from Muncie's Creek, an hour's horseback ride, to get Dougall, the one nurse at Wendover Center. We all knew that she and the Service doctor (Dr. Kooser) were worried over the case because Susie Logan had pneumonia, a complication which was rather serious, especially during such weather and in a house that Dougall had repeatedly called one of the poorest in the district. She was off and away on "Dixie" in no time and we all went to bed feeling sorry for her but glad the call hadn't come in the middle of the night.

I slept with one ear cocked, for down stairs in the Clinic was Bertha, an expectant mother who was under special care because of having had four children born dead, for in Dougall's absence I was alone in the main house and the only one Bertha could call. . . . . Sure enough! Commotion on the stairs wakened me and I heard, "Miss Dougall! Miss Dougall!"

Though I was awake enough to distinguish a man's voice, I leaped out of bed, shouting, "Is it Bertha? Is is Bertha?"

And Jahugh, the man in charge of the place, answered, "It's a call for Jason Leland's wife."

As prearranged, I ran out in the snow to knock at Minnie's door in the Ruth Draper log cabin. When she got it unlocked and heard me say "Jason Leland," she said breathlessly, "Oh! the twins! Dougall thinks they'll be twins!"

By that time we were at the Garden House and soon all the secretaries were running about in bath robes, taking turns ringing the telephone to get a relief nurse from the Hyden

Hospital, five miles away, and dashing up in the attic to find a layette for two! In an hour Betty Lester was at the gate calling out a cheery "Hello!" while the 'Old Gray Mare' snortled impatiently in the cold air. Marion and Agnes handed over the precious garments and, like a shot, horse and rider were off. Several minutes later we saw a lantern down in the road, and there was Jason Leland, who had ridden on towards Hyden to meet Betty part way. He was now plodding along on his mule, left way behind by the dashing Betty. We heaved a sigh and went shivering back to bed, too excited to sleep.

At breakfast and during the morning the tense atmosphere was felt by us all. By noon, Elise was told she could ride up to the Lelands to see how things were progressing, and I was detailed to go to Susie Logan's with sandwiches and coffee for Dougall. Just as I was about to leave, in rode a boy on 'Dixie' with a note from Dougall, saying poor 'Dixie' was out all night in the blizzard and "Could someone bring up another horse, a little food, and my knitting?" We got everything together in saddlebags and, with my head well wrapped in a muffler, I started out on old 'Darky' who with his deliberate pace kept well in check 'Royal Bill' ridden by the boy, who was thrilled to ride such a big, powerful horse. The wind stung our faces and ice crackled under our horses' hoofs as we went up Muncie's Creek.

We pulled up by what looked like an adorable little log cabin with a porch along the side, perched on the hill-side. Dougall appeared around the corner of the house and beamed at the sight of us.

"Oh! I am glad you've come. Hitch 'Darky' here and come in."

"How's Susie?" I whispered.

"Her general condition is better, but there has been no progress since I arrived though she *is* in labor. It's going to be a long time."

The boy led 'Royal Bill' away to the neighbor's stable. Later on when Dougall inquired after 'Royal Bill's' welfare

in the neighbor's barn, the man said he was all right, only the stall having been built for a mule, 'Royal Bill' had to "scrunch down a bit." We walked across the porch where to my surprise I saw a stove littered with ashes and one or two greasy pans; at one side was a half-completed room that would be the kitchen eventually. Dougall quietly opened the door of the other room, and two or three steps over the creaking floor brought us to the blazing fire that was all I could see in the darkness. There was the sound of heavy breathing from a bed that I was gradually beginning to see at one side of the fireplace. A pale face emerged from under a heap of coverings.

"Susie, here is Miss Trowbridge, who has come to see you."

Susie stirred and as I moved over to the bed, she smiled wanly and said, "Glad to see you. Won't you set down?" Never forgetful of hospitality, these mountain people, even under the worst conditions.

"Are you feeling better, Susie?" asked Dougall, as she and I sat down on either side of the fire on two rickety chairs made of hickory. A huge lard can turned upside down served as a chair for Morgan who came in with more wood. He and the four children had just moved to a neighbor's house but had been here with Dougall the night before. I looked at the unoccupied bed on the other side of the room and pictured numerous children lying cross-wise on the mattress. But how had they kept warm when all the coverings were on the mother's bed?

Dougall made Susie comfortable and finally I got her to sit down to eat the sandwiches I had brought. By that time I decided to stay on and wait with Dougall, so I ate a bite too, carefully saving enough for breakfast. Susie had had an egg and milk brought over by a neighbor. There, below the window that had an old sweater stretched across it instead of glass, was a shelf holding a couple of sacks of meal, a Mason jar of cold coffee and some cornbread on a cracked plate. But-

termilk tasted good to Susie and so from time to time I gave her a sip of that in a chipped enamel bowl which had to be washed and put back to serve as a dipper for the lard pail filled with water. There was no cup to be seen. The one spoon was kept busy being dipped into salts, soda, and chloral bromide with intermittent washings in the battered hand basin. On the table where Dougall's midwifery supplies were neatly spread out, the set of kidney pans looked cheerfully white.

We settled down to the evening—Dougall pulled out her knitting and I 'Punch' which I had brought along by mistake in a bunch of newspapers. As we talked we kept turning in our chairs, like meat on a spit roasting one side at a time. I looked at the unoccupied bed and thought it appeared less comfortable than my warm place by the fire. All this time we kept an eye on Susie who was dozing, though her breathing was difficult. When Dougall waited on her she would only complain of her side, and ask to have the flat iron heated again. This we did on the open fire, wrapped it in a piece of flannel, and put it back at her feet. Her face looked lined and worn but showed no evidence of the pains we were expecting.

Dougall suddenly said, "I think I will lie down for a bit." And she stretched herself out on the home-made bed with its gunny-sack mattress filled with corn shucks. Knowing this was her second night out, I thought the only sporting thing to do was to play the part of hot water bottle. We put newspapers over the mattress and used the rubber midwifery sheet as a covering. Again the same system as at the fire—warm one side and freeze the other, then when the frozen side was thoroughly congealed, turn with much tearing of newspapers and jabbing of springs and repeat the process on the other side. The rubber sheet formed a splendid wind-break for the gusts of wind and snow that blew in from the hole in the ceiling right over us. We lay there listening to Susie's rhythmic moaning and Darky's continual snorting outside. As the snowflakes blew onto the bed and tickled my face I pulled my

beret on tighter, gloves still on, and thought of the song, "O Wert Thou in the Cauld, Cauld Blast!"

So, between ups and downs, we passed the night, with still no change in Susie. When we dozed off, a log would roll off the fire into the middle of the room and up we would both jump; or Susie would startle us with a cough and we would jump again to wait on her. Between times we would stand or sit by the fire. I nearly stepped on a brooding hen in a dark corner and once, clambering back into bed, I nearly stepped on another. Dougall was kept busy throwing the cat and two kittens out of the window only to see them mysteriously turn up again under the bed. Once, in a moment of great activity after one of the many trips outside to bring in wood, I swept the floor with a hand-made broom and nearly pumped my head on a great hunk of pork suspended in the corner.

We were just about all in from anxiety and lack of sleep and from continually jumping up throughout the night, when dawn finally came. We finished the sandwiches while Susie ate a poached egg. Still solicitous about her guests, she asked us if we would like to cook ourselves a little meat and heat up the coffee in the Mason jar. Susie seemed much better. Because of Dougall's constant care in carrying out Dr. Kooser's orders, for over thirty-six hours, her chest condition was much improved but there were still no labor pains! At about 10:00 a. m. we decided that I should go for a relief nurse. Dougall scribbled a note to Betty Lester whom she thought to be at Wendover relieving on her district. Poor old 'Darky' was shivering after spending a night out in the snow-storm with his blankets continually falling off the minute after we had put them carefully on. The world was white as 'Darky' and I started for Wendover. It was still snowing, and was colder than ever.

Half way home another horse and rider appeared around a twist of the river and there was Lucile with more provisions and with the good news that McConnell, the relief nurse, was on the way. Soon I met McConnell (who is a new nurse) with Minnie showing her the way to the Logans. Later in the day

when Dougall returned with all three of them, she said Susie's baby came just as they arrived at the cabin!

Betty Lester's case had proven a difficult one though not twins. She and Elise had passed a night similar to ours. In the early hours of the morning, not long before Dougall was writing Betty, thinking her at Wendover, Betty was writing to Dougall, thinking, of course, she was back at Wendover! In her note which Jason had to carry on foot those many miles to Wendover, because the roads were too slick for his mule, she sent an S. O. S. for Dr. Kooser, who was many more icy miles away at the Hyden Hospital. John Lester Morgan ("John" for Dr. Kooser and "Lester" for Betty!) was safely born at 10:40 that morning.

That afternoon as we were all sitting around the fire in the cozy Wendover living room, comparing notes on the two cases, we heard, "Miss Dougall." We were stunned. Another call! But there was McConnell, fresh as a daisy, ready for the fray.

As might be expected, the coming of her baby under such circumstances didn't improve Susie's general condition and for several days she kept us all still anxious. With Dr. Kooser in attendance and Dougall's daily visits, she gained strength and was soon out of danger.

The care given to her mother seemed to inspire Susie's fourteen year old daughter with a desire to improve the home conditions. Each day Dougall noticed some little change in the cabin, and a week or so later when I stopped in, I hardly recognized that room. Everything was clean and neat. New clothing had been sent in by mountain friends, and new bed covers from the Wendover supplies sent in by friends from outside the mountains. In place of the rickety bed was one that had formerly been used in the Wendover clinic. Susie looked like a new person. Later in the spring, Morgan came to Wendover to plough in order to pay the midwifery fee.

KATHERINE TROWBRIDGE,
Frontier Nursing Service Courier
from Chicago.

TAKING THE ROAD OUT OF THE RIVER*

A meeting of citizens and landowners of Clay County interested in a better road along Red Bird River from the mouth of Flat Creek to the mouth of Elk, was held at Atwood Center, Friday, February 19th, 1932, with 20 people present. The purpose of the meeting was to draw up a petition to present to Judge Lytell *to take the road out of the river,* as it has become dangerous and often impassable since the recent heavy storms.

Miss Edith Marsh was made Chairman of the meeting and a prolonged discussion was held concerning the advantages of such a road; whether it should be on the right or the left hand side and many of those present offered to give the necessary land through their property and also to give free labor on the road. The following petition was drawn up:

To J. M. Lytell,
County Judge of Clay County,

> We, the undersigned citizens and landowners of Clay County hereby petition you for a road change; from the mouth of Flat Creek to the mouth of Elk, *taking the road out of the river.*

This petition was signed by all those present and was to be circulated among the residents in this vicinity.

A motion was made by Mr. Max Bowling that a committee of three be appointed by the Chairman of the meeting to decide on the right of way, to find whether the right of

*All of our friends everywhere, we know, will be interested in this expression on the part of the citizens living between Flat Creek and Elk Creek of a very natural desire to get their road out of the river—which is no place for any road. As the road now stands, all who travel in rough weather do so at the imminent peril of their lives. We shall be happy in a subsequent number of this bulletin to give the outcome of this energetic effort on the part of these citizens to achieve a safe highway.

way will be donated, the amount of free labor to be given and the approximate amount of the cost of the road. This motion was seconded by Mr. F. G. Gilbert and carried unanimously.

The Chairman asked for suggestions and the following names were presented: Rev. H. M. Porterfield of Jacks Creek, Mr. T. L. Adams of Big Creek and Mr. C. Queen of the Fordson Coal Co. These three men were appointed on this committee and all those present agreed to abide by their decision.

The Chairman was instructed to send a copy of these minutes to Judge Lytell with the petition, and the meeting adjourned.

CLEVER COUNTRY

By Caroline Gardner

Illustrated $1.50

Fleming H. Revell Company, Publishers

New York City

What some of the reviewers are saying of this book—

"An unpretentious little book that turns out to be a most engaging narrative of the Kentucky Appalachians." Saturday Review of Literature.

"A vivid, dramatic narrative. . . Mrs. Gardner has sensed with peculiar appreciation and understanding the life and spirit of the mountain people and transferred them with sympathetic and clear portrayal to her pages. . . . " New York Times.

"A zest for adventure, an interest in people and a vigorous sense of humor made Mrs. Gardner an ideal visitor . . . the author has the gift of expression as well as insight and there could hardly be a more sympathetic and comprehending picture

of the mountaineer. . . ." Anne Eaton, in the New York Times.

"The work of the nursing service is shown in its human rather than in its statistical aspects. Its nurses deal with human beings rather than cases—the young mountain wife who died in childbirth because she would not hurt the feelings of her aunt, the local midwife, by having a doctor; the consumptive mother who died in a desolate hut while her emaciated children wept nearby on a pile of rags; the woman suffering from acute appendicitis who was carried five miles in two hours on a stretcher by neighbors that she might be put on a train for a hospital. The courage and heroism of the nurses and couriers in the Frontier Nursing Service is reflected in the story as well as is the pride and integrity of the mountain folk." Kansas City Journal-Post.

"Here is an unusual book. . . . It has humor and tragedy, smiles and tears, and . . . the high art of the book is the little thread of romance that is discernible here and there thru the book." Daily Capital, Topeka, Kansas.

". . . Into the story . . . have been woven romance, adventure, humor, (Mrs. Gardner's) experiences, warm, human and interesting. . . . are told in simple narrative style and hold the interest from page 1 to page 159." Evening Post, Chicago.

". . . Fascinating, combining as it does a romance as new as aviation with the glamour of the old Kentucky hills." Herald, Lexington, Kentucky.

"To one who first saw the light of day from between two mountains in Southeastern Kentucky; . . . who knows the thrill of the 'Head of Hurricane,' the grandeur of 'Thousand Sticks,' Caroline Gardner's CLEVER COUNTRY is indeed a clever description." Leader, Lexington, Kentucky.

At All Booksellers

Or

The Frontier Nursing Service, Wendover, Kentucky.

The Frontier Nursing Service asked Miss Julia Lee and Mr. Richard D. Stevens, graduates of the Yale School of Forestry, to make a survey of the forest resources in its section and outline a plan whereby these forests could be developed in perpetuity as an economic outlet for this section of the Appalachian Mountains. We take pleasure in printing their report, and are glad to advise that we can supply reprints at five cents each (in postage stamps) in any quantities desired.

A FOREST SURVEY

of Leslie County and the Red Bird River Section of Clay County, Kentucky

By

JULIA LEE

and

RICHARD D. STEVENS

1931

CONTENTS

INTRODUCTION

Leslie and Clay counties are situated in the southeastern corner of Kentucky. This region is very hilly and rugged; transportation is difficult; and it is, therefore, largely cut off from the outside world. Owing to its isolation one may find here conditions typical of the frontier, with its primitive life and reckless use and waste of natural resources. It is a frontier life, however, without the vigor characteristic of the pioneers. Bad social conditions have caused that spirit temporarily to weaken. To improve these conditions one must offer to the inhabitants increased opportunities of wage earning. The most obvious way of accomplishing this is by developing the region through the wise utilization of the natural resources present. The two chief resources in this part of Kentucky are coal and wood. This report deals with the opportunities for developing the forests of the two counties by the introduction of properly managed lumber industries and by the encouragement of the inhabitants to care for their woods in a more systematic manner than in the past.

The stage of development of the region is agricultural. Hillsides are cleared and crops are planted on them. No effort is made to keep the fields in good condition by terracing and fertilization. After several years, therefore, the top soil is washed off or exhausted of its supplies of mineral nutrients and the fields have to be deserted. They are allowed to grow up to brush and to whatever tree growth can find its way in. New fields are cleared and the process is repeated. This kind of agriculture naturally does not produce very lucrative results. In order to earn money the people cut wood in the winter and float it down the river. Only the wood which will float readily and that nearest the streams can be taken, as the creeks are the sole practical transportation routes. The result of this slipshod system of living is dissipation and destruction of the soil and forests. The only parts of the region which have escaped this fate are the ridges and gaps, difficult of access and far removed from the streams. Elsewhere the

forests, although not utterly destroyed, are poorly stocked both as regards quality and quantity. The growth of the trees left standing is slow, and reproduction of only the less valuable species takes place. In general also the less valuable species seed themselves in the abandoned fields where their growth is scrubby due to bad soil conditions. Little effort is made to insure full stocking or the establishment of the more valuable species of trees on this land; so it remains practically worthless. It may even be a menace to the country, because with inadequate stocking erosion is almost certain to occur, and earth and rocks are swept on to the lands and roads below.

Another result of this lack of system in the development of the land is that no adequate means of transportation are provided to get out the timber, and no regular or well developed markets. The existing timber markets take only the most valuable species and of those only the largest trees. There is no outlet whatever for the small material, the less valuable species, and the by-products.

Now it must be realized that in this region forests are essential from two points of view: (1) as a protection to the land; and (2) as a means of support for the people. If the forest cover is removed the valuable soil will in great measure be washed down to the sea, and the region will become an arid desert, similar to the mountains of central Spain, with no cover of vegetation to hold and act as a reservoir for the rains.

If the forests are only partly removed, but their character lowered in quality, it is not the land that will suffer so much as the people. The only ready source of their income will vanish or be greatly reduced, and they will be forced either to move away or to sink into a still lower condition of living than that which already obtains. If conditions are allowed to remain as they are, this will inevitably happen. The land is now carrying more people than it can readily support, because the forests can no longer carry their share of the burden. In order to eke out the small livelihood wrung from the farms the men are forced to go down to the railroads or the coal mines where the pay is small, the hours long, and the work only intermittent. In times

of economic depression these means of livelihood fail and the men have to return to the land and exist on starvation rations until business is again on the up-grade. During this period they become weakened physically and thus are less able to make adequate advances in the next period of plenty.

Some unified plan for the improvement of its forests is, therefore, needed to arrest the retrogression of the region and to raise the social status of the inhabitants. Any such plan would have to be based on the following facts:

1. That the land is in general unsuited for agriculture except on a very small scale.

2. That the greater part of the land must be kept under a continuous forest cover to prevent erosion.

3. That transportation must be developed.

4. That mills must be built locally to utilize the products from the forest and to provide a steady part-time employment for the inhabitants.

5. That with the development of transportation and mills a permanent market must be found for the products and by-products.

The most widespread interest in developing the forest resources of Kentucky does not, however, lie on the commercial side. Such a development would not differ materially from that in any other region. Here the social side of the matter would be the dominant interest. The building up of the forest resources of Kentucky presents an experiment in sociology. The problem of showing that the welfare of the inhabitants of a region depends on the wise and conservative use of the resources of that region is one that has been neglected. There is ample evidence that this region of Kentucky examples the reserve. The misuse and mismanagement of the forests here have resulted in the stagnation of the region and the misery and poverty of the people.

If an industry were started to use the forests the experiment could be carried on to the mutual advantage of the owner

of the business and of the inhabitants. The owner would profit by the returns from a commercial enterprise, and at the same time would make a worthy contribution to sociological experimentation. The inhabitants would profit by the increased opportunities of earning money, and thus would be able to raise their standard of loving.

DESCRIPTION

1. PHYSIOGRAPHY:

The southeastern part of Kentucky is known as the region of the mountains, but it is in reality a part of the Allegheny Plateau Province and is composed of hills rarely over 1500 feet in height above sea level. These hills are rugged with very steep sides and sharp ridges. The valleys are narrow and winding. There is little land suitable for intensive agriculture, although with the widening out of the rivers there are a few flat fields. For the main part farming is carried out on the precipitous sides of the hills. These are not terraced in any way and consequently there is considerable erosion. Evidence of this is the fact that the rivers are constantly muddy, and after a heavy rain they present a very turbid appearance. The fields frequently have small gullies and ditches as a result of the run-off of the rain.

Normally the rivers are small and shallow. With a sudden rain, however, they rise very quickly. If this rise is as much as four or five feet it is known as a "tide." These "tides" may occur at any time, as the rainfall is fairly evenly distributed throughout the year, but they are more frequent in the spring months.

2. THE FOREST:

There are from eight hundred to nine hundred square miles in Leslie and Clay counties. Of this land about eighty per cent is at present covered with forests. The remainder is agricultural land and abandoned fields.

The forest of this region consists mainly of hardwood trees with comparatively few conifers. The more common of the

of economic depression these means of livelihood fail and the men have to return to the land and exist on starvation rations until business is again on the up-grade. During this period they become weakened physically and thus are less able to make adequate advances in the next period of plenty.

Some unified plan for the improvement of its forests is, therefore, needed to arrest the retrogression of the region and to raise the social status of the inhabitants. Any such plan would have to be based on the following facts:

1. That the land is in general unsuited for agriculture except on a very small scale.

2. That the greater part of the land must be kept under a continuous forest cover to prevent erosion.

3. That transportation must be developed.

4. That mills must be built locally to utilize the products from the forest and to provide a steady part-time employment for the inhabitants.

5. That with the development of transportation and mills a permanent market must be found for the products and by-products.

The most widespread interest in developing the forest resources of Kentucky does not, however, lie on the commercial side. Such a development would not differ materially from that in any other region. Here the social side of the matter would be the dominant interest. The building up of the forest resources of Kentucky presents an experiment in sociology. The problem of showing that the welfare of the inhabitants of a region depends on the wise and conservative use of the resources of that region is one that has been neglected. There is ample evidence that this region of Kentucky examples the reserve. The misuse and mismanagement of the forests here have resulted in the stagnation of the region and the misery and poverty of the people.

If an industry were started to use the forests the experiment could be carried on to the mutual advantage of the owner

of the business and of the inhabitants. The owner would profit by the returns from a commercial enterprise, and at the same time would make a worthy contribution to sociological experimentation. The inhabitants would profit by the increased opportunities of earning money, and thus would be able to raise their standard of loving.

DESCRIPTION

1. PHYSIOGRAPHY:

The southeastern part of Kentucky is known as the region of the mountains, but it is in reality a part of the Allegheny Plateau Province and is composed of hills rarely over 1500 feet in height above sea level. These hills are rugged with very steep sides and sharp ridges. The valleys are narrow and winding. There is little land suitable for intensive agriculture, although with the widening out of the rivers there are a few flat fields. For the main part farming is carried out on the precipitous sides of the hills. These are not terraced in any way and consequently there is considerable erosion. Evidence of this is the fact that the rivers are constantly muddy, and after a heavy rain they present a very turbid appearance. The fields frequently have small gullies and ditches as a result of the run-off of the rain.

Normally the rivers are small and shallow. With a sudden rain, however, they rise very quickly. If this rise is as much as four or five feet it is known as a "tide." These "tides" may occur at any time, as the rainfall is fairly evenly distributed throughout the year, but they are more frequent in the spring months.

2. THE FOREST:

There are from eight hundred to nine hundred square miles in Leslie and Clay counties. Of this land about eighty per cent is at present covered with forests. The remainder is agricultural land and abandoned fields.

The forest of this region consists mainly of hardwood trees with comparatively few conifers. The more common of the

built between the larger towns and county seats. In general, however, creek bottoms and trails form the main routes of travel and they are unsuitable for the transportation of lumber. The main method of moving timber to the market has been and still is by "tides" in the rivers. The logs are fastened together in rafts of varying sizes (10 to 50 logs) and are left in the river until heavy rains cause a rise sufficient to float them. This results in much waste, as the "tides" are uncertain in their occurrence and duration. Rafts are often left in the creeks for a year or more before they can be floated down. After a year of such exposure a raft brings about one-third of the original price and a longer time renders it nearly worthless. The amount of valuable lumber wasted because of the lack of "tides" assumes immense proportions during a bad year. In fact it is only in the most favorable years that all of the rafts can be taken to market.

The labor supply is well scattered throughout the area. There are many small farms distributed along the creeks and forks at fairly regular intervals. The families are large, and plentiful supplies of labor can be drawn from the immediate vicinity of an operation. According to reports of operators now cutting, the men make excellent forest workers. The present wages paid on lumber operations vary from one dollar to two and a quarter dollars a day with the men finding themselves. Payment by piece work, a system sometimes used, is more satisfactory. The highest wages are paid by a firm which has established a permanent sawmill in the region.

In summing up the present lumbering conditions the following results are noted:

1. Much valuable timber is wasted.

2. The soil is deteriorated through erosion.

3. A fire hazard is created.

4. Composition of the future stands and regeneration are disregarded.

5. The region is deprived of the benefits to be obtained by a wise development of one of its most important resources.

GENERAL RECOMMENDATIONS

For the development and improvement of the timber resources of the region the following recommendations are made:

1. The establishment of suitable means of transportation.

2. The establishment of permanent wood-using industries.

3. The application of forestry principles to lumbering.

4. The encouragement of small landowners in the principles of forestry.

1. TRANSPORTATION:

Transportation facilities in this section present one of the largest problems. The topography is rough and there are few existing roads of any value. A redeeming feature is that the section is surrounded by railroads and highways and the distances to suitable outlets are not great.

For an industry whose capitalization and output are large enough, a standard gauge railroad is the best means of transportation. The cost would probably be between $15,000 and $20,000 per mile. A narrow-gauge railroad would be somewhat cheaper to install, but the added cost of transferring loads from the narrow to the standard cars would make its operating costs high.

A small industry could not afford to build a railroad, so it must rely on other means of transportation, probably trucks and truck-roads. Teams should not be considered in moving the products to the railroad or market because of the slowness with which they work.

The investment in transportation must depend on the amount of lumber to be taken out, the method of financing, and the possibility of using the route for other purposes. It is a problem which each operator must study for himself.

A rough sketch of the different points of outlet is included here. From the upper ends of Red Bird River, Middle Fork,

Beech Fork, or Greasy Fork, the route should connect with the railroad of the Bringardner Lumber Company near Beverly on upper Red Bird River. The greatest distance to be traversed would be from Greasy Fork, and this would not be more than ten miles at most. It might be possible to cross Pine Mountain from the more remote points and join the railroad at Harlan and thereby greatly reduce the distance.

From the lower Red Bird River the best outlet is probably also through Beverly. The grade and the chance for building would be comparatively easy and the distance would be not more than fifteen miles. An alternative would be to strike the railroad at Manchester over Elk Creek, or in a roundabout route up Goose Creek. The grade would be more favorable in the latter case, but the distance would be no longer.

From lower Middle Fork the best outlet would be a truck-road connecting with the State highway at Hyden and thence to the railroad at Hazard. The distance to the highway would not exceed five miles. Further down this fork it might be possible to connect with the railroad at Chavies or Krypton. There is a passable road at present from Buckhorn on Middle Fork to Chavies. The distance here would not exceed seven miles.

2. INDUSTRY:

Proximity to an abundance of raw material, low rent and tax rates, and an adequate labor supply, all combine to make this a desirable locality for a timber-using industry.

In a general survey it is impossible to go deeply into the many problems of the establishment of a business.

A small mill or factory could be established with a capitalization of about $25,000, although a much larger industry could be supported readily. The size must be based on the size of the property, the yearly cut, and the product to be taken out.

The power should be obtained by the burning of the refuse of sawdust, shavings, or slabs. The flow of water is too uneven to be considered as a regular source of power. There is

an abundance of coal, but its use would be less economical than that of the mill refuse.

The factory should manufacture its own end-product if possible, thus reducing manufacturing, handling, and transportation costs. The location should be determined by the accessibility to the forests and to the railroad or market. Because of the great weight and bulk, the transportation of the logs to the mill is an important factor to be considered. The water supply is so irregular that it should not be a determining factor in the location of the mill.

The variety of species present in this region makes it possible to manufacture nearly any hardwood product. The industry established should be able to utilize more than a single species. Two main classes of industry present themselves: chemical utilization, and sawed lumber with its products.

The first class offers many possibilities. The investment may at times be larger, but the wood can be more closely utilized. If new products are to be developed, it is in this field that research can be more profitably carried on. Use must be found for the dying and dead chestnut which, although still sound because of its durable qualities, will steadily deteriorate.

The second class includes the older and better developed products. A few of the possible industries might be mentioned here, but the field must be studied thoroughly before one is chosen as a new project. Furniture can fully utilize all of the valuable species at their full market value, as well as most of the inferior species.

When the region becomes developed, considerable fruit will probably be raised throughout the area. This will require the establishment of an industry for the manufacture of fruit and vegetable boxes and baskets. The manufacture of woodenware and novelties permits great variety in the use of species and close utilization.

The market situation in this locality is good. Kentucky is surrounded by densely populated regions. This tends to make the shipping distances relatively short as compared with many

other timber-producing regions. Kentucky is a wood-importing state. This fact shows a lack of coordination between the use of its resources and its demands, because in the mountains about 90 per cent of the land is fit only for forest production. With practical forest management the growth on the forest lands of the state should make it a timber exporter. Its natural advantages are being wasted at the present time.

The hardwood market in the eastern states should never be affected by shipments from other regions, as is the case with softwoods. The market is poor at the present time, due to the general depression and to the great over-production of lumber during the last few years. The chief sufferers from this depression are the small operators, who started operations during times of high prices and depended for profits on a quick turnover and a short job. A large stable industry would, on the other hand, encourage steady lumber production and a stable market, as has been proved in other countries.

3. FORESTRY:

For the actual woods work only a brief statement regarding the methods employed at present is worthwhile. On the small jobs the logs are taken to the mill by road; on the large operations spur tracks from the main railroad are laid up the valleys. The methods for transporting the trees from the stump to the trams or the railroads differ. One of the best appears to be snaking a string of several logs down the slopes by a team of mules or horses.

The best method of cutting for use in this kind of a forest is the selection system. It not only improves the existing stands, but provides as well for future stands. In applying this system the following suggestions should at first be followed.

1. Mature and over-mature trees of all species should be removed.

2. A diameter limit should be decided on for each species. The more valuable the species, the higher should be the limit. Thus for yellow poplar, black walnut, and the white oaks the diameter limit of cutting should not be lower than 14 inches,

whereas for the maples and hickories it could be put as low as 10 inches. This method of cutting rapidly increases the value of the stand.

3. Defective trees should be cut to a smaller diameter limit than sound trees, or else removed entirely from the land.

4. All dead trees should be removed as soon as possible.

5. Trees grown from seed should usually be favored over sprouts, except in the case of yellow poplar, because they are more apt to be sound trees. Yellow poplar is such a fast-growing tree, reaching merchantable size in 30 to 35 years, that it is unlikely to suffer from decay.

After the industry is established these rules can be changed. It will then be possible to determine the most efficient size of tree for the factory to handle. The diameter limit must never be adhered to absolutely, but must be changed to adjust spacings in the forest as well as to regulate its composition and improve its quality.

The selection system has the advantage of (1) being readily adjusted to different conditions. At a certain period the lumber from a given species may be more valuable than at another and the percentage of that species in the cut can be easily increased or decreased as the case may be. Likewise a certain product may increase in value and the quantity of lumber cut for that product may be increased. (2) The inferior species may be worked in with the valuable ones and the value of this stand increased thereby. (3) The defective trees may be removed early in the cut.

Natural regeneration will be relied on mainly for the future stands. Planting is expensive in many cases and should be used only on eroding hillsides or in areas where natural reproduction is too slow in entering. It costs much less to care for young plants which are already on the site than to set in new ones and then care for them. The only work that may be necessary will be to clear out inferior and brushy individuals where

there is danger that they will crowd out the desired seedlings.

Thinning is another operation which may or may not be essential. It should never be carried out when the product obtained will not at least pay the cost of removal. Often poles or such products may be desired which can profitably be thinned out. A thick stand results in straight clear logs although the diameter growth may be reduced.

The average forest should be cut over every 25 years, 1-25th of the whole to be cut each year. When the land is cut over again at the end of this period the trees below the diameter limit during the previous operation will have become merchantable. Each succeeding cut will be superior in quality to the previous one until the forest becomes adjusted in composition and spacing. When this condition is attained the annual cut will be regulated with the annual growth as a basis.

It will be possible to use scattered labor in this region, as is done in Norway. This system depends on a scattered and regular distribution of the population through the forest, a condition which already exists here. The area to be cut over each year is divided, and a part of it is turned over to each of the laborers. In this way most of the men are able to live at home while working. The work is done under the direction of supervisors appointed for each area, and is paid for by the 1000 board feet, which allows for elasticity in carrying it out. In connection with this system small camps may be established for additional men who do not live in the vicinity. One of the advantages of such an arrangement is that large camps are avoided, and consequently the work need not be concentrated on a small area. Concentration of labor in the forest always results in injury to the seedlings and saplings growing there.

4. SMALL LANDOWNERS:

Much could also be done by small landowners to improve the quality of their forest land. This could be carried out with little extra expense or effort on their part by judicious cutting for their own needs. As fast as possible they should remove

the dead chestnut, using it for poles and fence posts and in all places on the farm where wood of an enduring quality is of value. For fire wood and in all places where wood of an inferior quality may be used they should cut the defective trees and the poorer species, such as beech, birch and soft maple. They should encourage the regeneration of valuable trees in the fields which they have abandoned by slashing down the bushes and scrub trees, which choke out and deform the good seedlings and saplings. This requires very little time and greatly increases the value of the young stand.

Planting should be undertaken in abandoned fields which have not regenerated naturally. In small operations this adds little to the expense of the farm, as trees may be obtained at cost from the state nurseries and the work may be done in the early spring before it is time to start the crops. In the richer land it would be advisable to plant black walnut. This tree is valuable for two reasons. First, there is a good market for the nuts, the shipping of which because of their durable nature can be easily effected under the worst transportation conditions. Secondly, black walnut is the most valuable tree grown in this part of the country. In 1928, for instance, it brought $168 per thousand board feet, more than four times the value of yellow poplar, the next most valuable species. In other locations it would be well to plant yellow poplar, because this tree is the most readily disposed of. It is light in weight, and so can easily be floated out on the rivers. It is the only soft wood of any consequence that grows readily in this part of the state and is therefore most valuable for building purposes. White oak would also be a desirable tree to plant, because, although slow-growing, the lumber is always in demand.

The chief objection which the small landowner has to improving his forest is that there is so little market for the products. This situation could possibly be remedied by introducing some sort of home industry into the community. In order to do this it would be necessary for the farmers in each community to band together in a cooperative organization so that they might market their goods jointly. If this were effected, they could use the wood on their land for the manufacture of simple furni-

ture, which could be made during the winter months. The cost of manufacture would be very small, owing to the readily accessible raw material and the cheapness of the labor. An example of this kind of organization is the Wooton Home Industries at Wooton, Kentucky.

SUMMARY AND CONCLUSIONS

The social and economic conditions in Clay and Leslie Counties, Kentucky, are extremely bad. This is due to the neglect of the natural resources, the lack of proper transportation facilities, and the natural isolation of the region. The occupations of the inhabitants are mainly agriculture and lumbering. At the present time both the farms and the forests have lost much of their original value owing to unwise policies of management. At least 90 per cent of the area can be classed only as forest-producing land. Forests should be developed because they present such a large permanent resource as compared with the temporary resource of coal, which, once mined, can never be replaced. Forest industries can give employment to the inhabitants, thereby improving the social conditions. Forests can prevent the extensive erosion now prevalent throughout the region.

The stands of timber are in poor condition at the present time. The rate of growth is far below normal; the stands are crowded with inferior, nearly valueless trees; and the virgin forests contain a large percentage of defective trees. This has been caused by the poor lumbering methods in use in the past and at present.

The only practicable method of improving these conditions is by the application of the principles of scientific forestry to the forests. Many of the large landowners are in a position to develop their forests at a profit, but proper management must be employed.

The following conclusions may be drawn from our study of this region:

1. The forest resource should be developed if it is to be of any future value.

2. Recommendations for the accomplishment of this object are:

a. The opening of transportation routes.

b. The establishment of permanent wood-using industries.

c. The application of principles of scientific forestry to the management of the woodlands.

d. The encouragement of the farmers in the improvement of their woodlots.

Respectfully submitted,

(Signed) JULIA LEE,

Master of Science in Forestry,

Yale University.

(Signed) RICHARD D. STEVENS,

Master of Forestry, Yale University.

FIELD NOTES

The engagement of Miss Josephine Yandell, of Greenwich, Connecticut, to Mr. James C. Henning of Louisville, Kentucky, is of the deepest interest to the Frontier Nursing Service. In fact, the Service helped the romance along when both young people were in the mountains together. Miss Yandell spent an entire summer with us as a courier. Mr. Henning has for some time been a member of our Louisville Committee, and his mother has been Vice-chairman of the Frontier Nursing Service since its inception. The wedding is announced for May 14th and will take place at Greenwich. We are glad to know that they will make their home in Louisville.

Miss Katherine Trowbridge, of Lake Forest, Illinois, has just left us after spending more than two months in our late winter courier service. As our first Chicago courier she is so good that we look forward with enthusiasm to the next representative of the Windy City.

Miss Louise Taylor, of Hartford, Connecticut, is a courier with us again, this being her second visit within the year.

Miss Ruth Chase, of Milton, Massachusetts, sister of Mary Chase, one of our ablest couriers of 1931, is spending the spring of 1932 in the Service. It is fun to see the sisters of the old couriers coming down to us, and someday we will have their daughters. The courier service is now booked for a year ahead and we even have applications for 1937 and 1938 from men

who have enrolled their young daughters to come just after they are 18, and are "raising" them in good horsemanship.

Miss Sybil Johnson, R. N., who has been the nurse under Dr. Harlan S. Heim at Beverly, carrying on our work of affiliation with the Evangelical Settlement at the head of Red Bird River in Bell County, is leaving for home for a furlough of six months. Miss Bessie Waller has been transferred from the Possum Bend Center at Conference to take her place at Beverly. There is always a list of applicants for the post with Dr. Heim, who is universally respected and loved in the nursing service. Under the terms of our affiliation, we lend Dr. Heim a nurse-midwife to carry his normal deliveries and he gives us clinical service and answers calls in our two districts nearest him.

Miss Ellen Halsall, R. N., Superintendent of the Hyden Hospital, is taking her first real furlough of several months in five years. She is spending this delightful holiday in England.

Members of the Frontier Nursing Service staff who took the Britannic West Indies Cruise on their own were: Miss Zaydee DeJonge, Executive Secretary in New England; Miss Mary Randolph Matthews, Executive Secretary in Cincinnati; Miss Wilma Duvall, personal secretary to the Director.

Citizens of Hyden got together en masse this winter, donated enough free labor and their teams to reconstruct the road leading up to the hospital, making it passable for patients and nurses. This is the place to tell that the innumerable stretcher cases carried up the hill to the hospital are always

borne by neighbors and friends as a gratuitous form of service to the wounded and sick, no matter who they are or from where they come. Thus we have the parable of the Good Samaritan in action every month of the year.

The Frontier Nursing Service has been instrumental this winter in putting over two forms of usefulness for the benefit of all of us in the mountain territory. First, we were instrumental with the State Highway Commission in getting through appropriations to continue route No. 80 and get the work under way this spring on the Hyden to Manchester pike.

Second, we induced the Department of Agriculture to adopt a more lenient policy towards the hundreds of citizens unable to pay their government loans at the present falling prices of grain.

When Ruth Chase, courier from Milton, Mass., went with the Wendover nurse to a delivery in a cabin where the walls had papers pasted over them to keep the wind from coming through the cracks, to her amazement she was confronted by a picture of her brother in the New York Times.

THE FRONTIER NURSING SERVICE, Inc.

Executive Committee

Chairman
Mrs. S. Thruston Ballard, Louisville, Ky.

Vice-Chairman
Mrs. S. C. Henning, Louisville, Ky.

Treasurer
Mr. C. N. Manning, Security Trust Company, Lexington, Ky.

Recording Secretary
Mrs. W. H. Coffman, Georgetown, Ky.

Corresponding Secretary
Mrs. Joseph Carter, Versailles, Ky.

Director
Mrs. Mary Breckinridge, Wendover, Ky.

Mrs. A. J. A. Alexander, Spring Station, Ky.
Mr. Percy N. Booth, Louisville, Ky.
Dr. Scott Breckinridge, Lexington, Ky.
Mrs. Archibald Douglas, New York, N. Y.
Dr. Josephine Hunt, Lexington, Ky.
Mr. E. S. Jouett, Louisville, Ky.
Mr. Harry French Knight, St. Louis, Mo.
Mrs. Charles S. Shoemaker, Pittsburgh, Pa.
Mr. Bethel B. Veech, Louisville, Ky.

NATIONAL BOARD OF TRUSTEES

Mrs. Peter Lee Atherton, Louisville, Ky.
Mrs. Helen Draper Ayer, Boston, Mass.
Mr. M. C. Begley, Hyden, Ky.
Mrs. Waller Borden, Chicago, Ill.
Miss Marvin Breckinridge, Washington, D. C.
Mrs. E. A. Codman, Boston, Mass.
Mrs. Albert H. Cordes, Cincinnati, Ohio
Mr. Attilla Cox, Louisville, Ky.
Mr. Louis I. Dublin, New York, N. Y.
Mr. E. W. Edwards, Cincinnati, Ohio.
Mrs. Henry Ford, Dearborn, Mich.
Mr. A. R. Glancy, Detroit, Mich.
Mrs. Frank Victor Hammar, St. Louis, Mo.
Mrs. Leonard C. Hanna, Cleveland, Ohio.
Mrs. Perry W. Harvey, Cleveland, Ohio
Mr. Walter Hoskins, Hyden, Ky.
Mrs. George Hunt, Lexington, Ky.
Dr. William J. Hutchins, Berea, Ky.
Mr. James M. Hutton, Cincinnati, Ohio.
Mr. Charles Jackson, Boston, Mass.
Mrs. Preston Johnston, Lexington, Ky.
Dr. Arthur T. McCormack, Louisville, Ky.
Mr. Tracy W. McGregor, Detroit, Mich.
Mr. Frank McVey, Lexington, Ky.
Mrs. Frank McVey, Lexington, Ky.
Mrs. Langdon Marvin, New York, N. Y.
Miss Anne Morgan, New York, N. Y.
Miss Linda Neville, Lexington, Ky.
Miss Mattie Norton, Louisville, Ky.
Mr. Gustavus D. Pope, Detroit, Mich.
Mrs. John W. Price, Jr., Louisville, Ky.
Mrs. Douglas Robinson, New York, N. Y.
Mr. E. O. Robinson, Cold Springs, Ky.
Miss Helen Rochester Rogers, Rochester, N. Y.
Dr. Preston P. Satterwhite, New York, N. Y.
Mrs. Warren Thorpe, New York, N. Y.
Mrs. Frederic W. Upham, Chicago, Ill.
Mrs. Richard Weil, New York, N. Y.
Mr. C.-E. A. Winslow, New Haven, Conn.
Miss Ella Woodyard, New York, N. Y.

HONORARY TRUSTEES

Sir Leslie and Lady MacKenzie, Scotland

NATIONAL MEDICAL COUNCIL

Dr. Irvin Abell, Louisville, Ky.
Dr. Fred L. Adair, Chicago, Ill.
Dr. R. L. Collins, Hazard, Ky.
Dr. L. E. Daniels, Detroit, Mich.
Dr. Robert L. DeNormandie, Boston, Mass.
Dr. Haven Emerson, New York, N. Y.
Dr. J. A. Flexner, Louisville, Ky.
Dr. Henry J. Gerstenberger, Cleveland Ohio.
Dr. Ransom S. Hooker, New York, N. Y.
Dr. Walter C. Klotz, New York, N. Y.
Dr. George W. Kosmak, New York, N. Y.
Dr. J. R. McCord, Atlanta, Ga.
Dr. Arthur T. McCormack, Louisville, Ky.
Dr. A. Graeme Mitchell, Cincinnati, Ohio.
Dr. F. S. Mowry, Cleveland, Ohio.
Dr. Barnett Owen, Louisville, Ky.
Dr. Frederick J. Taussig, St. Louis, Mo.
Dr. Paul Titus, Pittsburgh, Pa.
Dr. Borden S. Veeder, St. Louis, Mo.
Dr. Benjamin P. Watson, New York, N. Y.
Dr. William H. Welch, Baltimore, Md.

Inclusive of

MEDICAL ADVISORY COMMITTEE

Dr. Scott Breckinridge, Lexington, Ky.
Dr. Marmaduke Brown, Lexington, Ky.
Dr. Waller Bullock, Lexington, Ky.
Dr. Josephine Hunt, Lexington, Ky.
Dr. S. B. Marks, Lexington, Ky.
Dr. Francis Massie, Lexington, Ky.
Dr. J. F. Owen, Lexington, Ky.
Dr. John Scott, Lexington, Ky.
Dr. F. Carlton Thomas, Lexington, Ky.

NATIONAL NURSING COUNCIL

Miss Hazel Corbin, R. N., New York, N. Y.
Miss Mary Gardner, R. N., Providence, R. I.
Miss Annie W. Goodrich, R, N., New Haven, Conn.
Miss Lillian Hudson, R. N., New York, N. Y.
Miss Flora E. Keen, R. N., Louisville, Ky.
Miss Clara B. Noyes, R. N., Washington, D. C.
Miss Elizabeth Pierce, R. N., Cincinnati, Ohio
Miss Ruth Riley, R. N., Fayetteville, Ark.
Miss Winifred Rand, R. N., Detroit, Mich.
Miss Mary M. Roberts, R. N., New York, N. Y.
Miss Emilie Robson, R. N., St. Louis, Mo.
Major Julia C. Stimson, R. N., Washington, D. C.
Miss Marion Williamson, R. N., Louisville, Ky.

DIRECTIONS FOR SHIPPING

We are constantly asked where to send supplies of clothing, food, toys, layettes, books, etc. These should always be addressed to the Frontier Nursing Service and sent either by parcel post to Hyden, Leslie County, Kentucky, or by freight or express to Hazard, Kentucky, with notice of shipment to Hyden.

If the donor wishes his particular supplies to go to a special center or to be used for a special purpose and will send a letter to that effect his wishes will be complied with. Otherwise, the supplies will be transported by wagon over the 700 square miles in several counties covered by the Frontier Nursing Service wherever the need for them is greatest.

Everything sent is needed and will be most gratefully received.

FORM OF BEQUEST

For the convenience of those who may be willing to remember this institution in their wills, this form of bequest is suggested:

> "I hereby devise the sum of ..... dollars (or property properly described) to the Frontier Nursing Service, a corporation organized under the laws of the State of Kentucky."
>
> .....
>
> .....

It is preferred that gifts be made without restriction, since the Trustees thereby have a broader latitude in making the best possible use of them. Of course, however, they are also welcome where a particular use is prescribed.

To facilitate the making of gifts of this sort, it is suggested that if they come by will there be added to the form shown above some such language as the following: "This devise is to be used (here describe the purpose.)"

Suggestions for special bequest:

$50,000 will endow a field of the work in perpetuity.

$12,000 will endow a Frontier hospital bed.

$ 5,000 will endow a baby's crib.

$10,000 will build and equip a Frontier center for the work of two nurses.

$15,000 additional will provide for the upkeep, insurance, repairs and depreciation on this center, *so that*

$25,000 will build and maintain in perpetuity a center.

A number of these centers have been given and equipped, and two are already endowed.

Any of the foregoing may be in the form of a memorial in such name as the donor may prescribe, as, for example, the Jane Grey Memorial Frontier Nurse, the Philip Sidney Frontier Hospital Bed, the Raleigh Center, the Baby Elizabeth Crib.

Any sum of money may be left as a part of the Frontier Nursing Service Endowment Fund the income from which will be used for the work of the Service in the manner judged best by its Trustees, and the principal of which will carry the donor's name unless otherwise designated.

FRONTIER NURSING SERVICE, Inc.

Its motto:

> "He shall gather the lambs with his arm
> and carry them in his bosom, and shall
> gently lead those that are with young."

Its object:

"To safeguard the lives and health of mothers and children by providing and preparing trained nurse-midwives for rural areas in Kentucky and elsewhere, where there is inadequate medical service; to give skilled care to women in childbirth; to give nursing care to the sick of both sexes and all ages; to establish, own, maintain and operate hospitals, clinics, nursing centers, and midwifery training schools for graduate nurses; to educate the rural population in the laws of health, and parents in baby hygiene and child care; to provide expert social service; to obtain medical, dental and surgical services for those who need them at a price they can afford to pay; to ameliorate economic conditions inimical to health and growth, and to conduct research towards that end; to do any and all other things in any way incident to, or connected with, these objects, and, in pursuit of them, to cooperate with individuals and with organizations, whether private, state or federal; and through the fulfillment of these aims to advance the cause of health, social welfare and economic independence in rural districts with the help of their own leading citizens."

ON THE TERRACE AT QUARRY HEIGHTS

MAJOR GENERAL AND MRS. PRESTON BROWN'S RECEPTION TO THE FRONTIER NURSING SERVICE CRUISE

Beginning fourth from left, front row: Mrs. Henning, Mrs. Breckinridge, Mrs. Brown, Governor Burgess, Mrs. Beattie, Mrs. Dorrance, Miss Norton.