

In the administration of the forest reserves it must be clearly borne in mind that all land is to be devoted to its most productive use for the permanent good of the whole people. . . . Where conflicting interests must be reconciled, the question will always be decided from the standpoint of the greatest good of the greatest number in the long run.

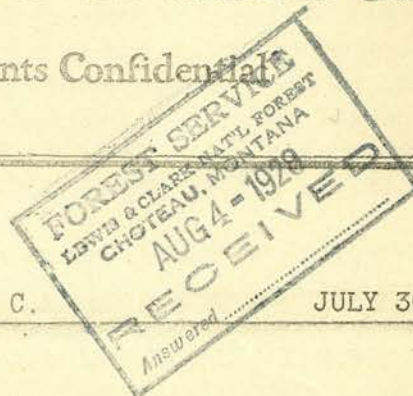
James Wilson, Secretary of Agriculture

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BARNES STILL IN FOREST SERVICE

By E. A. Sherman.

I am not sure that the Forester's announcement that Will C. Barnes has a "new job" and Mr. Potter's last week's reminiscences of the ideal of his cow-punching days have made it clear that the "new job" does not separate Mr. Barnes from the Forest Service.

Although beginning July 1 he took over the duties of the clerk of the National Geographic Board — a new position which will be as difficult and important as its first incumbent chooses to make it — nevertheless he remains on the Forest Service roll until such time as the Bureau of the Budget and Congress can provide funds specifically for that place.

Therefore, the name of Will C. Barnes will still appear in the list of Forest Service people who are numbered in our "Who's Who" in Washington. He has not "left the Forest Service" by a long shot. Figuratively speaking, he never will. The day he cleaned up his desk in Room 811 of the Atlantic Building preparatory to taking his seat at a much nobbier looking desk in the Department of the Interior Building he dropped in on the Acting Forester and said: "Any time you want me don't hesitate to call on me just the same as though I were still here. If anything comes up in Grazing during Rachford's

absence in the field, or at any other time, that I can help out on just give me a ring and I will be glad to come over and do what I can." That is just like Barnes and it is going to be mighty helpful too, for his 21 years' fund of grazing lore and history will frequently furnish clarifying data which would otherwise be unobtainable.

Barnes probably more than any other one individual in our organization, brought to the Washington office the spirit of the West — its freedom, freshness, tolerance. This doubtless has been his greatest contribution to our organization, even more important than his intimate knowledge of range conditions or the livestock business and his wide acquaintance with stockmen.

At all times and under all conditions he has had a cheerful smile for everyone from the newest messenger to the most dignified member of the Cabinet. We have all personally been rather proud of Mr. and Mrs. Will C. Barnes, whose versatility and charm have made them the most widely known and most popular representatives of the Forest Service in Washington. As the official Santa Claus, dispensing gifts from the Forest Service tree every Christmas with hearty good cheer, "Will C". has been an almost indispensable institution.

As a representative of the spirit of the West, Barnes' appeal does not lie in Tom Mix stuff or two-gun traditions. It lies more in his sympathy and understanding of the West, particularly its human problems

and appeals. He knew the stockman's problem from A to Z, as witness his "Story of the Range". But his interest went farther than the range and the livestock business and their related problems. In his earlier years as a cow-man he spent an evening in camp with a one-armed geologist, and forever after took a deep personal interest in the geology of the country. (His campfire companion that night was Major Powell, later the first director of the United States Geological Survey).

His studies also embraced the archaeology, anthropology, and history of the South west. When to these deversified interests you add the elements of a deep love for music, combined with considerable skill as a musician and keen appreciation of art, you realize that his strength and charm lie in his many-sidedness, also in the fact that living in the West his character seems to have instinctively absorbed what was good and rejected what was bad.

His "Tales from the X-Bar Horse Camp" seem personal. They deal with simple human things, such as the little Mexican boy who alone and in peril saves his flock of sheep from a forest fire. There is no clanking of sabers, no brandishing of six guns, no attempts at the heroic, nothing grandiose. So it has been with the author himself as a Forest official. He has been plain and direct; has not assumed an air of superior wisdom; has been one of us always, ready to give and take, and ready to play the game. The same traits are certain to win and hold the affection of his fellow members on the National Geographic Board just as they have done in the Forest Service.

RADIO COMMUNICATION - PERHAPS

By D. L. Beatty, D. 1.

The Forest Service is embarking on a cruise in an uncharted radio field which promises interesting adventure and if successful a definite step ahead in fire control.

The objective is to perfect a radio communication system to supplement the present

telephone system, which would provide communication between crews camped at some distance from telephone lines and a central point (probably a lookout station or Ranger headquarters) located on a phone line. This plan would require the development of a sturdy low-power radio code, or combined phone and code transmitting set and a receiving set which could be readily transported on a pack animal and quickly set up, using convenient trees for antenna support. It would be extremely desirable to use a radio telephone at the central station so that if code must be used by the portable stations reply and instructions may be given by voice. Probably a 50 watt phone set with motor generator unit, battery driven, with gasoline charging plant would fill the bill.

The development of a low power radio code transmitting and receiving set light and sturdy enough to include in a fireman's pack, which would enable him to communicate with headquarters when in need of help or food supplies and for instructions when he was not within a reasonable distance of a telephone, would also be a great aid in forest protection. It would permit the use of the radio compass to give a fireman, at any point in the woods, his location and the location and approximate distance of a fire he was unable to find, in relation to his position.

The feasibility of working out such light equipment which would be reasonably dependable for transmitting signals in timbered areas more than 5 or 6 miles appears doubtful.

During the summer of 1919, Mr. R. B. Adams, Telephone Engineer, conducted some radio experimental work using the U. S. Signal Corps 67A radio telephone sets which were manufactured by the Western Electric Company. Two of these sets worked quite successfully over an air line distance of 12 miles. Considerable difficulty was experienced in packing storage batteries to one of the stations which was located in the back country. These sets were operated at fixed stations. The following year two fifty watt telephone transmitting sets were obtained through the Navy Department and operated

between Buffalo Hump, Idaho, and Warren, Idaho, an air line distance of about 40 miles, from early in July until September.

During the last few months a very searching inquiry has been made concerning the development of portable low power radio transmitting equipment suitable for horse transportation and concerning the use of radio in regions of rough topography and heavy timber. This inquiry has covered both the extreme western and eastern parts of the country, and radio amateurs, heads of laboratories, army and navy experts, and Dr. Dellinger, Dr. Jolliffe, and other members of the Bureau of Standards were consulted.

It has been found that very little work has been done with low power portable equipment and nothing of any value done to indicate what success may be expected in the use of low power equipment in heavily timbered mountain country. Many authorities believe that it will be impossible to transmit signals any worthwhile distance with the power available using an antenna hung between green trees in heavily timbered areas. At the higher frequencies it could be expected that there would be a very great absorption of radio energy by green timber. To expect any measure of success it would be necessary to use a wave length, to which the bulk of the timber (every tree has a natural frequency) in the region would not readily respond. So called "shadows" due to rough topography will probably result in many "dead spots" and may very definitely limit the locations from which a radio signal could be expected to reach the receiving station. It may be expected that a radio signal will travel much farther along a stream than across dry land, the topographic conditions being the same. Static which is usually very bad in the mountains presents another problem and is at its worst when radio communication is needed most. Mineral zones can be expected to give trouble.

The men in the Bureau of Standards think that the difficulties outlined may not prove so great as accepted theory would indicate and in view of the great value of radio communication to the Forest Service be-

lieve there is sufficient chance of success to warrant careful investigation.

Any one who is not familiar with radio power requirements is inclined to think radio communication a simple problem, because voice and music from broadcast stations located at great distances from them may be received clearly with very simple equipment. With unlimited power the problem is fairly simple. However, with the present development of electrical power supply which may readily be transported by pack animals, the power available is only in the neighborhood of five or six watts. Most of the broadcast stations are now using several hundred and in some instances several thousand watts. Dry "B" batteries or hand generators provide the best power sources for the truly portable outfit. Storage batteries with the necessary gasoline charging plants are out of the question. The latter type of plant is, however, suitable for fixed stations and a power development of 50 or 75 watts is entirely feasible. With low power it is usually best to use code as, for example, a five watt set with a dependable voice range of four or five miles has an equally dependable code range under the same conditions of 50 miles or more.

The next step is to determine what happens to a low power radio signal handicapped at the very start by over-shadowing green timber and encountering on its way more green trees to rob its energy and high ridges to bar its progress. Stuart Ballantine, an eminent authority on radio, states: "Probably the most prevalent source of dielectric loss in amateur antennae is the proximity of trees, large bushes, etc. * * * even if 50 feet away trees are deleterious and to be avoided if possible."

It is planned to do the preliminary checking, first, in areas where green trees offer the only problem; next in barren mountains to determine the effect of "shadows"; the mixed conditions, mineral zones, etc., following later if the preliminary work proves successful.

Various wave lengths must be tried in every test as well as amount and character

of power within feasible limitations. The use of various transmitting tubes must be checked, also different antenna and counterpoise systems.

To accomplish this work it will be necessary to secure very flexible radio phone and telegraph transmitting and receiving sets to equip two portable stations. Light cars can be used for transportation at least for the preliminary work. Suitable radio equipment cannot be found on the market, so it will be necessary to have sets designed and built to meet our requirements, which, of course, will result in a material delay in beginning actual field tests. It is hoped, however, to have the complete outfit in the field ready to go by the middle of August. The work will be started in the western portion of District One.

WHAT AND WHY IS NEWS?

By C. E. Randall, Washington

The extraordinary or unusual. Humdrum routine whets the appetite for every break in the monotony of regularity. That is why the extraordinary or unusual has news value. Hundreds of thousands of clerks perform their duties day in and day out with more or less honesty and efficiency, but when one suddenly clears out with the firm's cash-on-hand and makes for parts unknown, that is news. The outstanding example of this class of news in the daily prints is the crime news - crime is still classed as a violation of the usual order.

But crime news is not the only type of news to be found under this classification. Accidents and unexpected occurrences, because they break in on the usual course of events, are matters of news. A notable achievement in any field of activity is news, because it rises above the level. A heroic action, a marked success, a record broken or equalled, the discovery of a new method of accomplishing some useful purpose, or of preventing some evil effect, a new invention, a reform, the completion of some important

undertaking, the finding of something unusual, are all sufficient departures from the ordinary to attract attention.

Freak discoveries or happenings always attract the reader's interest. Supervisor Horton gives an excellent example in pointing out the news value of the lightning fire at Spirit Lake last summer which was started by a bolt from a cloudless sky. Horton also stresses the importance of timeliness, but more of that later. This bolt from the blue, however, would have made as good a "freak" story as could be wished for, and of course it would have been a very convenient news hook on which to hang some more important information pro bono publico on lightning fires in general, their causes, and cure.

In the Forest Service, we have many opportunities for furnishing news of the extraordinary or unusual class. The report of any forest fire is news - of local or national interest, depending on its size and spectacular character. In some parts of these enlightened United States, it is true, forest fires may be of such common occurrence that the lack of them would be the unusual element necessary to make news. In either case, the fire story carries with it the suggestion of the undesirable nature of forest fires, and it is the underlying, often unexpressed, suggestion that we look to in our PR stories for the greatest benefit in creating the right sentiment in the great American public.

The successful suppression of a fire also is news. Although it perhaps does not represent as spectacular an achievement as the crossing of the Atlantic by airplane, it is an achievement, and as such is interesting to the public.

We have other achievements of news value to offer. The development of an unusually effective organization or method for fire detection or suppression, the successful bringing-back of a depleted range, the establishment of a new system in any line of our forestry work, and the demonstration of its success, - all these things have news in-

terest. The completion of a new road, a new lookout tower or fire line, especially if it has been constructed under difficulties, represents success. Every one likes to read about successful achievements and the persons who accomplish them. Often the reader sees in them the possibilities of his own successful accomplishment.

In the Forest Service, we can frequently report new records in our various lines of work. A record number of fires or a record for the small number of fires in a given season, a record time in getting to a fire, a record in planting, a record number of visitors to a Forest, all are good news. All our records do not have to be world-beaters to be interesting. A record for the current year, or for a given locality is news, at least locally.

Among our Forest Service men undoubtedly we have many heroes unhonored and unsung. Any act of courage, of ingenuity, or of unusual efficiency, will make news. Surely any Forest officer will be willing to put by his blushing modesty for the good of the cause when a story about his deeds can carry the message of forestry to good effect. And "hero stories" are especially strong in suggestive possibilities.

While we do not wish to capitalize on the misfortunes of our Forest workers, an accident is always news, especially an unusual accident. And there are fortunate as well as unfortunate accidents. A rainstorm at the critical moment in a bad fire situation is a fortunate accident which might deserve notice.

In their explorations and surveys, the field men frequently discover freaks of nature or things of unusual interest. A cow with triplets can usually get her picture in the paper. A toad in the cornerstone of a Texas building kept the news wires hot for days. If a Forest officer finds a tree grown into the shape of a pretzel or a rock that resembles his mother-in-law, it will make just as interesting news.

The Forest Service also can have its crime news. For more reasons than one, cases of incendiarism or fire trespass should be

given full publicity. Our law enforcement work is full of news possibilities.

UP TO THE MINUTE

By F. V. Horton, Columbia

The use of modern methods in forest fire suppression was vividly demonstrated on May 20-21 near the Hemlock Ranger Station, Columbia National Forest, when an early spring storm set five lightning fires in an area of extremely high hazard.

The chronology of the whole episode is interesting. On May 19 a telegram from the Weather Bureau at Seattle stated that the relative humidity would be at the danger point the following day, and, since that day would be Sunday and the usual number of fishermen and campers could be expected, a patrol was organized for the Wind River and Dry Creek drainages. No fires were started. Late Sunday night another telegram from the Weather Bureau stated that lightning storms in the mountains might be expected. Early Monday morning Gael Simson, of the Northwest Experiment Station, advised Ranger Huffman that from his studies of static as indicated by the static recorder, a lightning storm was due about 3 p.m. Ranger Huffman reviewed his organization and decided that the road and trail crews were properly distributed. At 1:30 p. m. the storm broke and out of ten strikes, five actual fires were established in snags.

A crew of two men with a truck and portable boring machine was conducting an experiment on boring and blasting snags. This crew saw one fire start and immediately made a run to it, finding a 58-inch snag a-fire in the top. In spite of falling sparks, they bored the snag and shot it down in 27 minutes. In the meantime, Road Superintendent Bottcher had sized up the situation and rushed a fire pump to the job, where it was used most effectively. altogether, nine snags were shot down on this fire and thoroughly drenched by means of the pump. The pump was then

switched to another fire which was immediately put under control. In the meantime, the other fires were quickly covered by the road crews and by men from the Price sawmill.

By Monday night all the fires but one were out and it was fully under control.

IT PAYS

By Wm. S. Brown, Modoc

In 1927 the Modoc National Forest conducted an essay contest among the children of Modoc County, on the subject "Why I believe in Fire Prevention." It created so much interest that the educators individually and at their annual convention insisted that the contest be made an annual event.

This year the Supervisor evolved an intelligence test consisting of 40 questions covering various phases of conservation and Forest Service work. A slogan on fire prevention was also a part of the contest. The essay itself counted 50 per cent, the intelligence test 40 per cent and the slogan 10 per cent in the final ratings.

Three first and three second prizes were offered for pupils of the fifth and sixth grades, seventh and eighth grades and High School respectively. Teachers themselves rated the papers, only the papers of the prize winners in each class being sent to the Supervisor. The final prize winners were selected by the Supervisor and his assistant and the County Superintendent of Schools. The contest ended during American Forest Week and the questions in the intelligence test were made the basis of talks by Forest officers at schools throughout the country. The first prize was a three days' trip to the Lava Beds National Monument, the second prize a one day's trip to the Happy Camp Lookout.

Teachers all over the county are enthusiastically in favor of this method of inculcating in the minds of the young the principles of forestry and conservation, and last fall the "Forest Service Essay Contest" had a special place on the program of the

annual Teachers Institute.

Some of the essays this year were real masterpieces and so close were several contestants in the finals that it was necessary to award special first and second Tangible results are already evident. prizes in each group.

Fire prevention and forestry problems in general are the subject of discussion in the homes and so many adults asked permission to take the intelligence test that special papers had to be typed for their convenience. In this test, the average correctness of the answers for the fifth and sixth grades was 75 per cent; for the seventh and eighth grades, 77 per cent; and for High School contestants, 84 per cent. Many of the contestants in all grades made a better rating than the average for a group of business and professional men.

One young fellow of 19, now an Assistant Scoutmaster, who only a year ago was rather ashamed of his lack of knowledge of forestry subjects, topped the list with a perfect rating in the intelligence test, both for accuracy and time. One of the wealthiest farmers in the county who has been antagonistic to the Service for years, but whose daughter won first prize, unexpectedly came into the Supervisor's office and praised the work among the school children in no uncertain terms. Another grazing permittee, rather curt of speech and a leader in a community of light burning advocates, surprised us all by stopping a couple of Forest officers on the road and crisply remarking, "You are doing a fine work - keep it up. You can't change the ideas of us old timers, but the younger generation must get a different view of things for the good of the country."

Craving editorial indulgence, here are a few slogans from among the many hundreds submitted:

"Keep California Green."

"Quench Fires-Conserve Forests"

"Your forest, my forest, don't burn it."

"Don't fish for fire - it bites without bait."

"A tree saved is a future friend"

"Be sure your fire is dead - then bury it."

"A spark, a breeze, burned down trees"

"Dead camp fires or dead forests"

"A country without trees is hopeless,
Put out your fire."

YE EDITOR DISCOVERS

Large fires had been burning for several days on the Lassen, Tahoe, Sequoia, and Santa Barbara, according to a wire received from District 5 on July 17. Twelve thousand acres of brush and timber had been burned and 700 men employed. Two small fires had also been reported on the Angeles and one on the Modoc. All the fires were under control except the Lassen fire, which had burned over 6,000 acres. The estimated expenditure on these fires to the above date was \$15,000.

The Associated Press also reported on the above date a 6,000 acre fire on the outskirts of Sierra, one near Tahoe, and two in San Joaquin Valley that had burned 85,000 acres of grass and brush.

A wire received from District 6 on July 18 reported three fires which had burned over 3500 acres south of Lake Quinault, 1500 acres in the Quinault Indian Reservation, and 1500 acres in the Olympic Forest. Most of this acreage was cut-over reproduction. Four hundred men were employed by two logging companies. The cause of the fires is given as "lumbering." The damage is undetermined.

Because of the growing interest in American conifers abroad for all sorts of purposes, there is growing also the desire of foreign foresters to have seed of our species for trial and experiment. Already some 15 countries have requested seed from the Forest Service officially, and the task of supplying it is enormous. The requests for most of the seed show that there is a keen appreciation of the need for getting

seed of the best trees and from climatic regions similar to those under which the seed is to be planted. Other requests ask only that we give complete data on the kind of trees from which the seed is procured as well as information regarding locality. As the demands are large, anyone collecting a small quantity of seed can send it to the Office of Forest Experiment Stations with the knowledge that it will find its way to some foreign land. Data on the source of seed should come with each packet of 4 ounces or more of seed.

The use of charcoal gas, as a substitute for gasoline in motive power production, is featured at the Versailles Forestry Exposition, which began June 15, 1928. Statistics have not been gathered to show the extent to which charcoal motor fuel is employed in France, but it is rapidly increasing. Many motor vehicles in Paris now use the fuel and in the Department of Loir-et-Cher, motor-cars are operated exclusively with the gasoline substitute. It is claimed that one kilogram of charcoal mixture, obtainable at one franc (\$.04), produces motive force equal to that resulting from one litre of gasoline. It is one half as expensive as the latter.

According to telegraphic statements received by Finance and Accounts, the total expenditures of Highway money fiscal year 1928 exceeded the allowable \$4,500,000 by approximately \$59,000. This is probably due to not having carried out completely procedure approved by the Bureau of Public Roads in Washington and sent out as instructions to the field. The total Forest Road Development expenditures will probably be slightly less than the authorized \$3,000,000. It is greatly regretted that the total was not kept within the \$7,500,000. Nevertheless it is generally recognized that coming as close as we did was a noteworthy accomplishment. Mr. Allen of the Bureau of the Budget

recognizes it as such and we therefore believe that there will not be unfavorable criticism by the Budget Bureau because of the excess.

RANGE DETERIORATION

By M. M. Lewis, Siskiyou

Quite a little time has been spent on our grazing records the past year, which has brought out a great many interesting points. One thing more, our grazing business on the Siskiyou isn't very large, but it has some possibilities, which will demand a certain amount of time and study. One of the points of most interest is that our records show less feed and larger brush fields in the districts and localities which in the past have been the heaviest burned. If any one should get the idea that burning over the country makes grass, he is certainly on the wrong track. A fire will stimulate a growth of weeds and browse for a year or so, but in the long run the more valuable forage species will give way to the more inferior and hardier species, which in most cases have little or no value for grazing. I believe that in time, if we can keep the fires out, we shall have considerable feed coming in under stands of open timber which are now in the seedling or sapling stage, with a ground cover of brush. As soon as the brush begins to shade out, plant life will begin to make its appearance, and as the process of natural thinning of the tree growth develops, timber feed will begin to thrive as it once did.

Fires are not alone responsible for range deterioration. Range abuse has contributed largely to our present range conditions. The average range user, probably as you and I would be under similar conditions, has but little interest in building up range for someone to use a hundred years from now. Consequently range management looks like a pretty far-fetched proposition to the average small user, such as we have on this Forest.

However, it is one of our jobs to perpetuate the grazing industry and it is up to us to formulate plans to produce the desired results. So long as we have any demand for grazing and continue to approve applications for grazing permits, we should have something to sell in the way of forage, and we must be able to give the best possible pasture that we can develop through proper range management.

ON THE SALT WATER FORESTS OF ALASKA

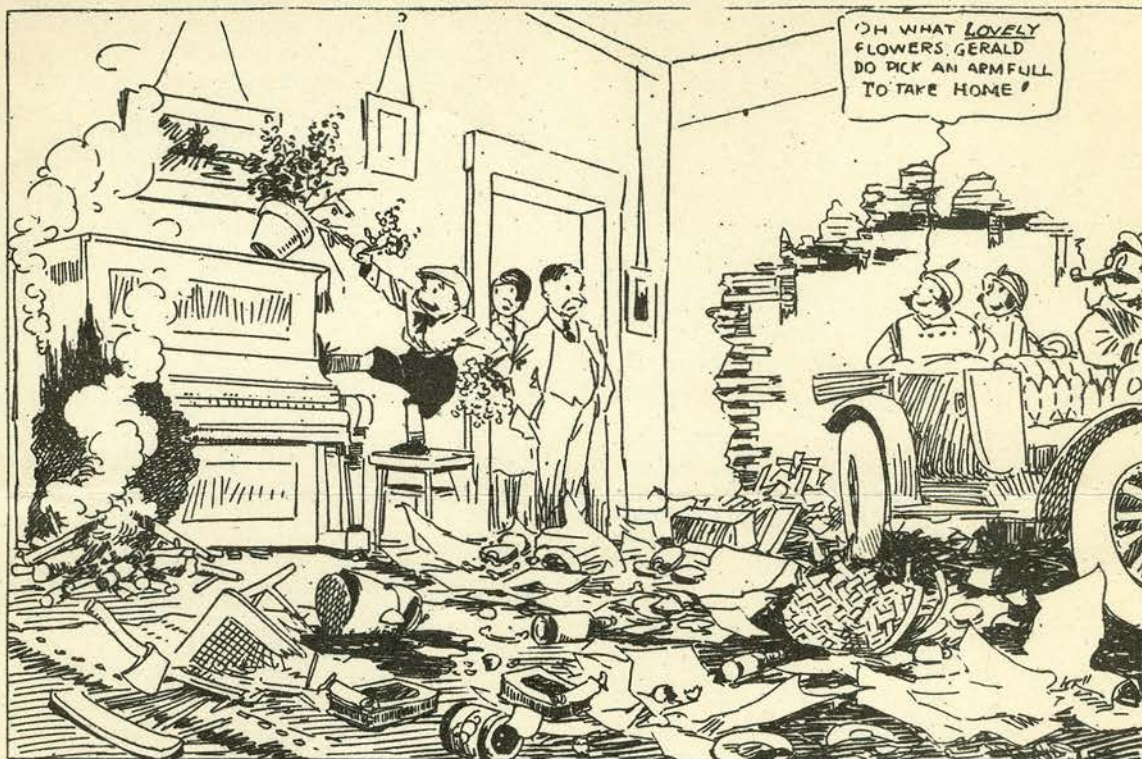
Ranger Archbold of the Tongass sends in a tale of suffering and unparalleled hardship on the salt water forests of Alaska. He says, -

"Anderson left his camp on March 8th, in his little gas boat to accompany me in cruising and surveying the sale area on the mainland in Blake Channel. When he left the area and got back to within several miles of his camp at Brownson Id. he ran into scum ice which so cut up the bow of his boat that it began to leak badly. He managed to beach the boat and calk it up but darkness overtook him and he decided to stay the night. So he bailed the water out of his boat and started a fire in the stove. Then being wet he started to change clothes. This proved a mistake for the gas fumes from the bilge ignited and the boat became a mass of flames.

Anderson didn't loiter while leaving the boat. He was sans clothing to some extent and entirely without boots. The tide was in, it was snowing and growing colder, and he was some three miles from the camp. There was nothing for him to do but wade through three feet of snow in his socks over sharp edged boulders and a beach fringe of crab apple, alder, devils club, and scrub cedar. Anderson says he was in pretty bad condition when he crawled into camp at 3 A.M. but after a few hours near the stove he thawed out and suffered no after effects."

- District 8

IF WE TREATED OUR HOMES AS WE DO OUR WOODS



WHAT A LUCKY THING FOLKS NEVER TOOK TO HOLDING PICNICS IN PEOPLE'S HOUSES.



MORAL: TAKE YOUR INDOOR MANNERS WITH YOU WHEN YOU GO OUT DOORS

GENERAL FEDERATION OF WOMEN'S CLUBS

Conservation of Forests and Natural Scenery

Mrs. Frances E. Whitley, Chairman, Webster City, Iowa