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R E V I E W - R A N G E R

ISSUED

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OGDEN, UTAH.

U. S. FOREST SERVICE - DISTRICT NO. IV.

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EDITORIAL PAGE

Credit should have been given to Grazing Examiner Mark Anderson for the article on "Grazing Reconnaissance" which appeared in our last issue. Through an oversight credit for the article was omitted and we are glad to give it now.

We believe that this issue of your magazine is the best yet, and if true, it is due solely to the growing interest which is being manifested in the publication by the men in the field. We had several good contributions this month, and in view of the fact that things are beginning to open up out in the field and interesting affairs of all kinds taking place, next month we ought to have twice as many equally good offerings.

Congratulations are extended to the editors of the District 2 "Bulletin". It will keep the rest of us "humpin" to travel in the same class with this new monthly.

For the above reason, readers of the Inter-mountain Review Ranger are again urged and exhorted to help make this publication as good as some of our Exchanges.

Ye Editor.

The ideal of the Forester is to secure for his forest a normal growth based on a normal representation of age classes - what he calls a "Normal Forest". In the Inter-mountain region we are a long ways from this ideal, - where we do have forests they are usually culled over, or in the isolated districts, virgin forests where the trees are generally mature and growth is offset by decay. These conditions cannot be remedied by a working plan unless circumstances are such that the plan can be put into effect. A virgin forest cannot be improved unless cuttings can be made to remove the ripe timber and create a more healthful condition in the remaining stand. There must be an actual demand for a working plan before it will be of value. In many instances we have made plans and prescribed regular annual cuts where little or no utilization was possible. There are, however, many Forests in this District where the demand for forest products is close to the capacity of the forest to produce them. In such cases a working plan can be made useful. Not with the same degree of refinement as in more favored forest regions, but the annual production for the working unit may be sustained. On other forests an inventory of the timber, together with a set of carefully considered marking rules is all that can be attained at the present time, the marking rules to be followed when sales. Where working plans are made they should be prepared for the forest and not for the District Office. They should be made sufficiently in advance of current operations to insure continuity of action and yet tie in with current work. A forest working plan should be made sufficiently flexible to take care of new conditions as they arise, such as a demand for a new class of material, cordwood for paper pulp or ties and mining props, or the application of new silvicultural principles. Many a new Supervisor or Ranger has taken over a Forest or district and found himself embarrassed as to proper procedure in timber sales and free use, the marking of timber and brush disposal. What did his predecessor have in mind? Why did he have the brush scattered instead of piled and burned? What is the stand on Bear Gulch? What was the result of planting in the spring compared with similar work in the fall? Why were those trees left along a new road? These and a dozen other questions could have been answered in a real working plan for the area. Crystallize your best ideas into a plan for the forest area of which you have charge. Let it refer to current activities and you will have a working plan that will work.

Clinton G. Smith

Assistant District Forester.

THE MOVEMENT OF SAP - By Deputy Supervisor Charles D. Simpson.

Various mistaken ideas are held by many people regarding the movement of sap in the trunks of trees. We, as Forest officers, are supposed to be familiar with tree growth in all its phases, yet how many of us really know whether the sap goes up or goes down or both, or when or where this movement takes place?

Without delving too deeply into the mysteries of science regarding the forces at work which cause the movement of liquids in a trunk, we can learn that there are three distinct movements. One is the movement of water, holding mineral salts in solution, from the root hairs, through the roots and stem in turn, to the leaves. This upward movement takes place during the entire growing season, and is greatest during the day and during the summer season when evaporation from the leaves is greatest. It takes place very largely in the vessels and thin walled tracheids, just inside of the bark, and only very slightly in the thick walled wood fibers.

Then the process of food making (largely starch) takes place in the cells of the leaves, but food made and stored in the leaves of a tree does not tend to increase the tree's D.B.H. unless another movement takes place. Thus glucose is formed in the leaf by the chemical addition of a molecule of water to each molecule of starch. The second movement occurs when the glucose is moved downward through a different set of tubes, also located in the thin walled outer portions of the trunk, to the cambium layer where growth takes place. In addition to the part used in growth, some of the sugar solution is stored away for future use, in the form of starch, by the removal of the molecule of water. This deposit is made in the pith and the pith rays of the trunk. Enough of this food material is stored to start new growth and continue it until a supply of food can be furnished by the new leaves. In the spring this stored material is again taken up in solution in the form of glucose (sugar sap) and moves upward from all parts of the trunk to the ends of the twigs and enables the buds to burst and the leaves, twigs, and flowers to grow out to their full size.

Thus the sap which drips from a wounded stem or twig, or which is obtained by tapping a sugar maple, is the food material stored the year before, and not the water containing salts in solution, which has been recently absorbed by the roots. If we were to boil down the latter, instead of producing maple syrup, we would have left perhaps a residue containing iron, potash, soda, sulphur, and lime. This also explains why the sugar making period lasts for only one to four weeks, beginning before the buds swell noticeably and ending as soon as the stored food is exhausted, while the movement of soil water from the roots to the leaves and that of glucose from the leaves to the cambium goes on throughout the entire growing season.

HEADQUARTERS ITEMS

THE FORESTER'S VISIT

Mr. Graves spent the period from March 7 to 12, preceding the Lands Meeting in Salt Lake, at the Ogden Office, and also a few days after the conclusion of the above meeting.

On the evening of Saturday, March 10, he gave a very interesting informal talk before an open meeting of the local section of the Society of American Foresters. The past, present, and future problems of the Service were briefly touched upon, together with the part our organization must play in the development and upbuilding of the West.

There was a goodly attendance at the meeting, and each man present came away with renewed enthusiasm for the daily tasks and a higher conception of his own particular duties and responsibilities. One of the best features of Mr. Graves' talk was his statement to the effect that he is making every effort to so shape his plans that he may be able to spend a greater proportion of his time in personal contact with the men in the field.

Among the men from other Districts and Washington who took advantage of the opportunity offered by the Lands Meeting in Salt Lake to pay us a call were former District Forester Sherman, former Associate District Forester Franklin W. Reed, and Assistant District Foresters Fenn and Stahl, in charge of the Offices of Lands in Districts 1 and 2 respectively.

FELIX MOORE RESIGNS

Felix T. Moore, Chief of Maintenance in the Ogden Office, concluded a term of service in the Department covering over 25 years, when his resignation became effective on March 15. Felix had had his eye on a promising art and novelty store up town for some time, and finally decided it looked good enough to break loose from the Service of the Government and go to it. His host of friends in the Service will most certainly pull for his success in the new field. Mr. Scott took over the desk in Operation on the 16th.

COST KEEPING PLAN PERFECTED

Forest Clerk John N. Kinney spent two weeks in the Ogden office crystallizing the proposed new plan for handling our Activity Cost Keeping work. It is our belief that Kinney's plan,

if adopted, would solve many of our present difficulties in this connection.

GRAZING TRESPASS BUSINESS HEAVY

The volume of grazing trespass business during the eight months between July 1 and March 1 has been unusually large. On July 1, there were 9 wilful and 16 innocent cases pending. Since that date 61 new cases have been considered, of which 16 were wilful and 45 innocent. Four wilful and 55 innocent cases have been settled, involving the payment of \$2,324.88 in damages, leaving 17 wilful and 9 innocent cases pending. Only one case was closed without action for lack of sufficient evidence.

NEW STATUS RECORDS

This office has received the new Status Forms 123(a), which are to replace the 999's, and as prompt action as possible will be taken to transcribe the old records on to the new forms.

GAME WINTER IN GOOD SHAPE

Recent reports from Jackson's Hole are to the effect that the big game animals will pass through the winter with probably less than normal loss.

GOOD NEWS

A telegram from Washington on March 7 states that the Appropriation Bill was signed March 4. The Bill provides for increased compensation of 10% in salaries of all employees up to \$1,200, and an increase of 5% in salaries of all employees from \$1,200 to \$1,800 inclusive. All permanent employees on both the Statutory and Miscellaneous Rolls are included, the increase to become effective July 1.

MORE STOCK PERMITTED

The grazing of 3,244,950 sheep, 489,750 cattle and horses, and 1,800 swine has been authorized on the National Forests in District 4 during the season of 1917. Compared with the season of 1916, this is an increase of 28,550 cattle and horses, and a decrease of 20,200 sheep.

CONTRACT FOR BIG BRIDGE AWARDED

Contracts for the metal parts of the South Fork of Salmon River pack bridge have been awarded to the American Steel

and Wire Company and the Ogden Iron Works Company for June 1 delivery at Lakeport (McCall), Idaho. This bridge, which is to be built about 1 mile above the mouth of South Fork, is designed for a 156 foot span and will be a duplicate of the Shoup pack bridge built on the Salmon Forest in 1914.

RANGER BUCHANAN REINSTATED

Mr. S. A. Buchanan, formerly Forest Ranger on the Minidoka National Forest, is being recommended for restoration to the rolls, effective April 1. His permanent assignment to a Forest has not been definitely decided upon, but temporarily he is being assigned to the Minidoka.

KORSTIAN RETURNS

Mr. Korstian, who has been in Washington for the past two months, returned to the District Office on March 12.

GAME PROTECTION AGREEMENT RENEWED

The new cooperative agreement between the District Forester and the Wyoming State Game Warden has been mailed to the Supervisors of the Wyoming, Targhee-Palisade, and Teton Forests. The agreement was renewed upon the specific request of the State Game Warden, who stated that many of his best cases last year were reported by the Forest officers.

FOREST FINANCES

The total net receipts of all the National Forests during the fiscal year 1916 amount to \$2,823,540.71; the average receipts per acre were .018; the average cost per acre was .02.

The net receipts for District 4 for the same period were \$460,319.79; the average receipts per acre .0165; and the average cost per acre .021.

WOODLOT EXTENSION WORK

Information has been received from the Forester that two specialists in Forestry have been appointed in the States' Relations Service who are to carry on woodlot extension work. Mr. W. B. Mattoon of the Washington Office of Forest Investigations has charge of the work in the Southern States, and Mr. A.

F. Hawes, former State Forester of Vermont, is to be in charge of the work in the northern and western states. The filling of these two places does not mean that the men in this District who have applied for this work are necessarily eliminated from any further chance at such work as may develop under the Smith-Lever Act.

FISCAL REGULATIONS AMENDED

Memorandum No. 190 dated February 27, 1917, has been received, which amends the fiscal regulations in a number of particulars. It is presumed that copies will soon be received for forwarding to the Supervisors. One of the amendments is to Paragraph 90 (j), which states that subvouchers will be required for meals procured in the same city, town, or place for an extended period of a week or more, unless it be shown that they were paid for at the time obtained and not in a lump sum at the end of the period.

WANT THE BULL LAW ENFORCED

Seven local livestock associations, representing 585 of the 983 permittees on the Fillmore, have submitted joint recommendations for the enforcement of the State bull law on the entire Forest effective July 1, 1917. The law provides that only pure bred registered bulls of the beef type may be turned on the range. Twenty-one thousand cattle are grazed under permit on the Fillmore.

FISCAL AGENT BACK

District Fiscal Agent Brunner is back, having spent the past six weeks in Washington, D. C., on detail to that office.

WITH US AGAIN

Assistant District Forester Clinton G. Smith has returned from a three months' trip in the East. Mr. Smith gave a series of lectures before the Forestry students at Yale, and spent four weeks in the Washington Office on detail.

DECISION IN POWER CASES

The Supreme Court has rendered its decision in the case of the Utah Power and Light Company, Beaver River Power Company, and L. L. Nunn, having power plants on National Forest land, in

favor of the United States. In accordance with the decision, the companies must either remove the plants from National Forest land or public domain, or take out permits and render compensation for past use.

A VISITOR FROM D-1

Mr. J. F. Preston, Assistant District Forester in charge of Silviculture at Missoula, paid the office a call on March 26. Mr. Preston is returning to Missoula from Washington where he has been on detail.

FORMER RANGER CALLS

Mr. Fred Bache, formerly a Ranger on the Minidoka, was an office visitor. Mr. Bache has been for some years foreman for the Pacific Land & Livestock Company, a subsidiary company of the Miller and Lux outfit which grazes some 400,000 head of cattle and about one million sheep in Oregon, California, Nevada, and Idaho. Mr. Bache has immediate charge of about 5,000 head of stock in Idaho.

READ THIS ONE CAREFULLY

An opinion recently rendered by the Solicitor in the case of a Ranger who sought reimbursement for \$40 worth of personal tools destroyed while they were being used on official work, emphasizes the fact that no reimbursement of losses of this nature can be made unless there has previously been a specific contract of hire providing either for a payment for the use of the Ranger's personal property for official purposes or else providing that the Government can reimburse the Ranger at a fixed rate in the event that the property is lost or damaged or destroyed. Forest officers who voluntarily donate the use of their personal property for Government purposes should bear this decision in mind.

SICK LEAVE DEFINED

A recent letter from the Forester defining the conditions under which sick leave may be granted states that in the light of the present regulations it is clear that unless the condition of the employee is such as to incapacitate him for the performance of official duties, sick leave to cover absence on this account can not be granted. If there is real incapacity for duty this fact should be substantiated by a physician's certificate or by affidavit if the disability does not exceed two days.

SPECIAL REQUEST

Field men are earnestly requested to immediately fill out and return the personal statement cards recently sent out in connection with the Forester's National Defense plans.

GOOD WORK

Ranger James H. DeLong of the Fillmore recently made an arrest for illegal trapping of beaver. The local Justice of the Peace imposed a fine of \$100.00.

VALUABLE FORAGE DISCOVERED?

Ranger Elmer C. Ross, in connection with his studies in the Rangers' Correspondence Course, reports the following plants as valuable for cattle feed: Bunch grass, brome grass, alfalfa, and all kinds of graden truck, especially if there is a fence about it.

THE GOOD INDIAN SAYS "WHITE-A-MAN DAMN FOOL,
BUILD UP HEAP BIG FIRE AND SIT AWAY BACK,
INJUN BUILD LITTLE FIRE AND SIT UP CLOSE".
BE A GOOD INJUN.

RANGERS' CORRESPONDENCE COURSE

The 1916-17 term of the Correspondence Course terminated on April 1. This office is more than pleased with the splendid interest taken in the work and the excellent record you have made. The fact that one hundred and eleven men, in addition to carrying on their regular duties have taken up this extra work, studied the texts and submitted examination papers for criticism is indeed one to be proud of. 346 papers were received, or more than three papers per man, while 41 men completed the course for which they enrolled and many more are well along on their courses and will be able to finish early next term.

While we are glad to report so large an amount of work accomplished, the quality of the work has also been of a very high character and this has been and should be our aim, rather than mere quantity of work accomplished. We appreciate the painstaking effort put forth by you in an endeavor to accomplish as much as conditions would permit and sincerely hope that you feel that you have been repaid in proportion to your efforts.

The five men completing two courses are Chas. C. Shaw, Challis; C. M. Mangun, Waiser; Jack Ogden, Boise; W. H. Campbell, Cache and John W. Davis, Wyoming. Of these, Chas. C. Shaw leads both in number of papers and grade, having submitted 9 papers with an average rating of 95.6. C. M. Mangun is second in number of papers with eight, while Jack Ogden is second in grade with 95% minus.

Of 41 men completing one course Chas. Demolisy, Jr., Ashley; Bert Mahoney, Mindoka and Thos. V. Pearson, Wyoming tied for first place, each submitting 4 papers with an average rating of 99%. Ellis B. Snow and C. M. Mangun both of Waiser tie for second with 98 for one course. John B. Barr and Edgar Hapke of Waiser, L. L. Hammer, Wyoming, Jas. W. Robins, Powell, follow with 97. The Wyoming Forest averaged 5 papers per man enrolled, the Waiser and Challis each 4, the Mindoka 3.6, Sevier 3.5, Nevada 3.4 and Cache 3.1.

26 men completed the Preliminary Course.

3	"	"	Botany Course.
12	"	"	Grazing
2	"	"	Forestry
2	"	"	Surveying & Improvement Course.
1	man	"	Selective Course.

The table on the following page shows accomplishments by Forests.

Forest	Number Enrolled	Number Active	No. Com- pleting 1 Course	No. Com- pleting 2 Courses	No. of Papers Submit.
Ashley	5	4	2	-	13
Boise	9	8	3	1	23
Cache	8	6	5	1	25
Caribou	6	3	-	-	5
Challis	3	2	1	1	12
Dixie	3	2	-	-	2
Fillmore	4	3	-	-	7
Fishlake	8	5	-	-	9
Humboldt-Ruby-S.R.	8	4	2	-	14
Idaho	3	1	-	-	2
Kaibab	0	0	-	-	0
La Sal	6	4	-	-	4
Lemhi	4	2	-	-	3
Manti	8	7	-	-	16
Minidoka	5	5	2	-	18
Nevada	5	4	3	-	17
Palisade	5	3	1	-	10
Payette	3	2	1	-	7
Powell	3	2	1	-	9
Salmon	10	7	3	-	28
Sawtooth	6	5	2	-	17
Sevier	4	4	2	-	14
Targhee	7	3	1	-	4
Teton	6	3	1	-	9
Toiyabe	4	2	-	-	3
Uinta	6	4	-	-	10
Wasatch	7	5	1	-	10
Weiser	8	7	6	1	32
Wyoming	3	3	3	1	15
District Office	3	1	1	-	5
Total	160	111	41	5	346

GLEANNED FROM THE FOREST NEWS LETTERS

CACHE:

The shortage of hay locally has been greatly aggravated by the unprecedented weather conditions, and is especially acute in Cache and Malad Valleys on account of the poor crops last season. The Commercial Boosters' Club at Logan took up the matter on March 21 with a view to assisting local stockmen to secure hay to keep their stock alive. They were successful in getting some hay immediately and promise of more, so that it is believed that the crisis is passed and that stockmen will be able to pull through, although the cost of feed is almost prohibitive. 30,000 cattle and horses are owned in Cache Valley.

Under date of March 16 special authority was requested from the District Forester to allow permittees on this Forest who were entirely out of feed to run stock on the bare side hills within the Forest. This authority was given and a number of permittees have already availed themselves of this provision, which will assist in tiding them over the extreme shortage of feed.

CHALLIS:

The Rangers report the snowfall in the hills above normal. Hay is getting very scarce. Part of the cattle are usually turned out before this time, but it will be close to the middle of April before they can be turned out this year. It is not thought that there will be much loss among the stock in this vicinity.

On March 16 three deer came down to within 400 yards of the office and grazed there several hours.

DIXIE:

During March the Dixie office was visited by "Uncle Jim" Owens, for several years warden of the Grand Canyon National Game Preserve, and widely known as the greatest lion hunter of his time. He expects to hunt on the Dixie this month, which is good news to the local stockmen since lions are rather numerous in some sections. Uncle Jim with his two assistants bagged 53 lions during the past year on and in the vicinity of the Kaibab Forest.

Even in Dixie, spring has been slow in coming, and the local stockmen estimate that their spring range is fully one month late. Feed is scarce and all range stock are thin as a result of the protracted freezing season.

GLEANED FROM THE FOREST NEWS LETTERS

FISHLAKE:

Hay - \$25 per ton. Oats - \$2.50 per cwt. The highest prices ever known in the history of Sevier County.

On three divisions of this Forest, a majority of the permittees using the range have, through their associations, expressed their willingness to contribute two-thirds of the money necessary to completely eradicate the larkspur on a number of the areas covered last year by Grazing Examiner Aldous of the Washington Office.

HUMBOLDT:

Tentative arrangements have been made for the transfer of Ranger Warren C. Taylor from the Boise Forest to the Humboldt, to fill a vacancy at Mountain City.

Owing to the extraordinary duration of the present winter and the very short hay crop of last year, the grazing season on the Santa Rosa Division will open this year on April 16, instead of May 1 as is customary.

IDAHO:

Earl C. Sanford assumes charge of the Idaho Forest on April 1, as Forest Supervisor, replacing Forest Supervisor H. C. Williams, whose resignation is effective March 31. We understand that "Bert" resigned to take a whirl at the mining game, and here's hoping he makes it go big.

KAIBAB:

Just for a change - Notwithstanding the severe winter just past, range stock both on the Forest and desert are looking surprisingly well, and much better than at this time last season.

LEMHI:

The stockmen in Pahsimeroi Valley had a coyote drive during the month in which 30 riders participated and 3 coyotes were killed. The lack of success was attributed to climatic conditions, the weather suddenly turning cold, forming a heavy crust on the snow which made fast traveling impossible for saddle horses. These stockmen are trying to prevent the spread of Rabies into their territory and have petitioned the Biological Survey to appoint a trapper to work in that section.

Hay is selling from \$25 to \$30 per ton and is very scarce at that. Reliable reports have reached this office that the stockmen on Antelope were forced to put crews to work chopping willows to prevent stock from starving.

GLEANED FROM THE FOREST NEWS LETTERS

MANTI

Snow surveys at the Utah Experiment Station show a depth of 56 inches, while at the Alpine station on the summit there is a depth of 40 inches. This is about normal for the winter season, and the usual amount of water may be expected for this summer's irrigation.

A flat rate reduction of 10% has been applied on all permits for cattle and horses in excess of the protective limit number on eight districts of the Manti to provide range for new Class A applicants and to award small increases to Class A permittees. This is the first reduction applied on this Forest since its organization to provide increases for Class A permittees and new applicants.

MINIDOKA

Bids have been sent out for the furnishing of about \$225 worth of tools and equipment for fire prevention and suppression. The Howard-Cooper Corporation of Portland have been instructed to make up a sample fire tool can, in accordance with specifications furnished from this office. If the can proves satisfactory, it is planned to order at least twenty of them for this year.

PAYETTE

On March 13, Ranger Parker reported coyotes killing a number of young deer on the winter range along the South Fork of the Payette River. The snow had crusted and would not hold up the deer where it would the coyotes. Rangers Parker and Strawn were sent out to thoroughly poison the range between Gallagher and Deadwood, keeping back from the road at least a quarter of a mile.

March 1, Deputy Game Warden Thorpe visited the Emmett office in reference to the killing of a deer near Banks, reported by Ranger Miller. The deer had evidently been shot, somewhere in the South Fork Canyon, and made its way to the river opposite Banks, where it fell on the ice, and was unable to rise. After lying there for several days, it was killed by one of the settlers, in order to end its suffering, there being no hopes of its recovery.

CLEANED FROM THE FOREST NEWS LETTERS

POWELL

Ranger Griffin resigned during the month to take up private work.

The first stock association on the Powell was organized and recognized during the month. Considerable local interest was aroused by the bill before the Legislature requiring that nothing but registered bulls be allowed on the range, and stock men generally opposed it and were glad it failed of passage. This attitude of the stockmen was due very largely to the fact that it is hard to get registered bulls away out here, and to the further fact that they believe breeders of registered animals are holding them up as to price.

SAWTOOTH:

Eighteen lives were lost in the slides which resulted from the heavy snowfall during the latter part of February. Since then considerably more snow has fallen, extending the usual feeding season and causing a serious hay shortage.

The Hailey Red Cross has agreed to furnish three additional medicine chests and first aid directions, making a total of four on the Forest. Appropriate signs are being made, calling attention to the fact that these medicines are for the use and benefit of the public.

SEVIER:

On March 17 Forest officers caused the arrest of Blain H. Sevy, Earl Tebbs, Otto Lynn and Earl Deuel for shooting ducks. These men were hunting without license and were violating both the State and Federal Game Laws. The men were hunting along the river below Panguitch. They went out in a car belonging to Mayor Thos. Sevy of Panguitch. The officers met them as they were coming out of the field and attempted to stop them. They resisted arrest by running away from the local officers, who gave chase and overtook them as they were entering the Sevy yard. The car was carefully searched and when no ducks were found the officers drove back to the edge of town where the hunters had been momentarily out of their sight. Here they found a sack containing 16 ducks which had been thrown into the creek as the car went over the Bridge. The men all pled guilty and were fined \$7 each, which sum included costs, by a local J of the P. No doubt with such a severe?? penalty, violations of the game laws will be scarce in the future.

GLEANED FROM THE FOREST NEWS LETTERS

TOIYABE

On the evening of March 5, while in Belmont, Supervisor Blakeslee received word from Ranger Cahill that he had under arrest a Basque sheepman by the name of Gracian Eyroz, for wilful grazing trespass, and that he was en route with him to Tonopah, Nevada, for the purpose of taking him before the U.S. Commissioner. Supervisor Blakeslee proceeded from Belmont to Tonopah. Upon his arrival he found Rangers Cahill and McGowan there with the prisoner and learned that the Commissioner was absent from the City and would not return before March 16. On March 6, after securing instructions from the U. S. District Attorney at Reno, the prisoner was taken to Battle Mountain where, on March 8, he appeared before the U. S. Commissioner and was placed under \$500 bond to appear at Carson City, Nevada, at the May term of the Federal Court. In other words, in this country of "magnificent distances", Justice is somewhat spraddled out.

BOISE:

The Boise letter came in late, which explains why we had to disrupt the alphabet and insert the following item here.

At the request of one of the members of the Board of the Carnegie Library at Boise, Supervisor Grandjean has prepared a list of the birds found on the Boise Forest. It is known that over 148 different species of birds inhabit the Boise and the mountain regions near it. A paper on the subject is to be read to the Childrens Club and before the Audobon Society, organizations which are studying the birds of this region.

FILLMORE:

Supervisor Raphael and Rangers DeLong and Woodbury have recently purchased Ford automobiles. This makes four officers on this Forest who now own autos, Deputy Supervisor Robins having had a Dodge car for several months.

SALMON:

Dana Parkinson, formerly Deputy Supervisor on the Boise, assumes charge of the Salmon Forest as Forest Supervisor on April 1. Supervisor Pearson has resigned, effective March 31, to engage in private work. The Salmon also has a new Clerk, John A. O'Connell having recently been assigned to the Forest to replace John W. Siegel, who was transferred to District 6 at his own request.

FROM OUR EXCHANGES

FOREST RECEIPTS INCREASING

At the regular meeting of the Service Committee held in Washington on March 8, Mr. Fagan presented to the Committee a statement showing the total receipts from all sources to the end of February, 1917, which is as follows:

Total Receipts to end of February, 1917 - - - -	\$	1,343,363.54
Same Period in 1916 - - - - -		<u>1,183,100.33</u>
Increase - - - - -	\$	160,263.21
Decreases in Districts 2 and 4 - Total - - - -	\$	45,252.54
Receipts for the month of February, 1917 - - - -	\$	130,709.54
For the same month in 1916 - - - - -		<u>126,446.30</u>
Increase - - - - -	\$	4,263.24

STOLEN FROM THE DISTRICT 2 BULLETIN

Our contemporary in Denver, by the way, grabbed this from the American Magazine, which publication got it from J. Ogden Armour. Anyway, it is about the best stuff we have seen in a long time, and is well worthy of consideration by every man in our Service or any other.

"If you would like to be a power among men, cultivate enthusiasm. People will like you better for it; you will escape the dull routine of a mechanical existence, and you will make headway wherever you are. It cannot be otherwise, for this is the law of human life. Put your soul into your work and not only will you find it pleasanter every hour of the day, but people will believe in you just as they believe in electricity when they get in touch with a dynamo.

And remember this: There is no secret about this "Gift" of enthusiasm. It is the sure reward of deep, honest thought and hard persistent labor.

ANOTHER FROM DISTRICT 2

"When the Service is criticized do we gladly and heroically rise to its defense? Do we guard against discussing any of its shortcomings with our friends and neighbors? Are we proud to be a working unit of the United States Forest Service? Do we believe in the Service? Does the ultimate end of the Service appeal to our reason, our sense of justice and right, and does it stir us to consistent, continuous effort to accomplish our best?

Or - is our work of the days and weeks and months just the specific duties outlined for the period?

FROM OUR EXCHANGES

DISTRICT 5's WEEKLY BULLETIN

Frequent inquiries are made concerning what varieties of clover should be sown in pastures on ranches located at a comparatively high elevation. The following notes from Professor Kennedy of the University of California may be valuable in this connection.

Four varieties of clover are available for planting at an elevation of about 6,000 feet above sea level. These are the common red clover, little white Dutch Clover, sweet white clover and alsike clover. Common red clover only lasts a few years when cut for hay. Alsike clover lasts about eight years if not allowed to seed. Little white Dutch clover makes the best pasturage but does not grow tall enough to cut for hay. White sweet clover only lasts two years and will grow with a comparatively small amount of moisture. About 15 pounds of seed of any of the above species should be sown per acre. Some of these varieties can be obtained from any of the larger western seed houses.

ANOTHER

It is reported that Jim Jones made eleven applications for and received pea seed from his Congressman. Upon the 12th application the latter made the comment that Jim must be raising a large acreage. Jim replied that he was reducing the H. C. of L., by making soup from the samples. All seeds have been distributed this year, so there appears to be no chance for Forest officers.

DEVON CATTLE ON THE NEVADA FOREST.

CONTRIBUTED.

Ranger C. P. Thompson reports that some Devon bulls were introduced on the Snake Division of the Nevada Forest in 1915 and crossed on grade Hereford and Durham cows. 80% of the calves from 400 cows of all colors were pure red. They are reported to be very prolific and are great rustlers on rough mountain ranges, hardy and adapt themselves to all conditions. The Devon is a dual-purpose breed, the cows being fair milkers, and at the same time a good quality of beef is produced, while the steers are unexcelled as work oxen. While it is expected that the true beef breeds will always be more popular as range animals than the dual-purpose breeds, this experiment is interesting and worth following up.

CONTRIBUTIONS

AS THEY FIGURE IT OUT ON THE MANTI

There are grazed under permit on this Forest 150,400 sheep. Out of this number there are 62,000 ewes that enter the Forest May 10 to lamb. It requires 1.4 surface acres of low range per ewe from May 10 to July 1. The average annual lamb crop is 50,840 lambs.

On July 1 when the sheep are transferred from their spring range to their summer range, the average age per lamb is approximately 33 days. Their weight at this date is from 19.5 to 22.5 pounds.

During the summer season the lambs increase in weight on an average of 49 pounds per lamb, making a total weight per lamb of 68 to 72 pounds. It requires 1.7 surface acres to summer one ewe and her lamb.

At the prices which are likely to prevail this fall, the value of one surface acre in lamb and ewe weight is about as follows: A lamb gains 49 pounds and the ewe gains approximately 21 pounds from July 1 to October 15. Lambs have already been contracted for at 10¢ per pound, and it is believed that the ewes will bring about 7½¢ per pound. From these prices it is figured that the value of the weight of the lamb will be \$4.90 while the increase weight on the ewe will be \$1.57, or a total money value of \$6.47 for 1.7 acres. One acre, then, would be worth \$3.80 in forage and sheep weight.

PROGRESSIVE STEPS ON THE FILLMORE - By Ranger George P. Low.

A very profitable meeting of all the officers of the Fillmore Forest was held in Supervisor Raphael's office at Richfield on February 8. A plan of work was perfected covering the months from April to December, inclusive, by which it is anticipated that a great deal of the so-called "lost motion" can be eliminated. All phases of the administrative work were thoroughly discussed by months, and a uniform plan, so far as practicable, was drawn up in such a way that all field officers will be working on the same activity in their respective districts at the same time. The object of this was to make it possible for neighboring officers to cooperate in doing special work. The plan contemplates considerable improvement work and interior boundary survey.

The grazing allotments for this year were handled entirely by the Ranger force, with Supervisor Raphael as referee. All of the boys expressed their appreciation of this opportunity and consider that such a method is the best if an equitable distribution of privileges is to be made. Often there are irregularities and special conditions surrounding a case that might receive undue or unjust consideration were it not for the personal familiarity of the Ranger on the division concerned.

CONTRIBUTIONS

A SUGGESTION - - - - - By Ranger Allan Williams - Challis.

I would like to make inquiry through the Inter-mountain Review-Ranger regarding the following.

Whether or not the same conditions obtain on other Forests as on the Challis in regard to distances along trails. We do not know the distance by actual measurement of any of our trails. We have placed numerous signs, giving the distance to certain points, but the distance is guessed at by the one making the sign, and I do not know of a case where anyone else agreed with the distance guessed. Chaining the distances would be a slow process, and would require at least three men to make any headway.

I have in mind a simple implement which I think would be practical for getting the distance accurate, and can be handled by one man. The front wheel of a bicycle, with a cyclometer attached, could be pushed or pulled over the trail. With a long handle attached this could be done from a gentle saddle horse. Bicycles are a scarce article in this country, but on the outside where they are plentiful, I think something of this kind could be fixed up at a very small cost."

WHY IS BEEFSTEAK SO HIGH? By Ranger Joseph Barnett - Uinta.

The 8th of May, 1916, I weighed or caused to be weighed, 5 head of two-year old steers, and at this time the steers weighed 4,180 pounds, or an average per steer of 836 pounds. Their approximate value was \$50 to \$55 per head, or a total value of \$250 or \$275.

On May 10, 1916, the steers entered the Forest, District 7 of the Uinta, and grazed there from five to six months. On November 17, the stock were weighed again, tipping the scales at 5,410, or an average of 1,082 pounds each, making an average gain of 246 pounds per head for the summer grazing season, at a total cost to the permittee of \$.76 for the weight gained while on the Forest. The price for beef last fall being 6½¢ on foot, the value of these cattle was \$67.62 per head, or a total of \$338.10, making the value of the gain about \$15.00 per head, at a cost of \$.76.

The stock were again weighed February 26, 1917, and sold at 9¢ per pound on foot, after they had been in the feed yard 88 days. Their total gain from May 10, 1916 to February 26, 1917, was 384 pounds per head. Each pound put on in the feed yards cost a little better than 16¢ per pound, but the 246 pounds put on during the summer at a very low cost, out of the total 384 pounds gained enabled the owner to clear a good profit.

CONTRIBUTIONS

CONTINUING AN ARGUMENT STARTED SOME TIME AGO -

By Charles L. Thorpe, Ranger - Manti.

THAT KNOWING CLERK

He waited until the hour eleven
To discuss a Ranger's chance for Heaven.
How dare a footman so lowly speak
Of one whose home is the loftiest peak
Whose environ, the majestic pine
Inspires only thoughts and acts sublime,
That unmistakably train for a place divine
In that garden of flowers and perpetual sunshine.

In reports perhaps some words he'll misspell,
Always ready a good story to tell.
His route lies over mountain and dell,
Hale, hearty, strong and well.
Above suspicion he does dwell
With no fear or thought of H-11
You Clerk study and know the Ranger -
To Heaven he surely is no stranger.

(The author's idea is all right, and we won't say anything about his execution. Further the Clerk who is responsible for this outburst requested and secured a transfer to another District. He must have felt this coming. - Editor.)

A SELF-EXPLANATORY SAMPLE FORM FROM THE WEISER

S
Weiser - Sales

Dear Sir:

Your timber sale agreement dated _____, 191
expires on _____, 191. Up to the present time only
_____ of the timber has been cut. If you desire to se-
cure the balance you should arrange to have it cut and ready for
measuring and the brush properly disposed of before the contract
period expires.

If you are prevented from removing the material by con-
ditions over which you have no control, you may, upon application,
be granted an extension of time within which to secure it. If an
extension of time is desired you should submit application for it
at least ten days before the expiration of your timbersale con-
tract. In this application give your reasons for not being able
to remove the timber within the time specified in the sale agree-
ment, and also state the additional time needed for removing the
balance of the timber.

Very truly yours,

Forest Ranger.

CONTRIBUTIONS

THE SAWTOOTH ADOPTS AN IDEA FROM DISTRICT 5. - Supervisor Benedict.

Some time ago I received a souvenir post-card from the Sierra National Forest, consisting of a piece of wood, about 3 x 5 inches and one-eighth inch in thickness, taken from a Big-tree. On the back was stamped the following:

"Compliments of the Sierra National Forest"
Big Tree (Sequoia Washingtoniana)
From the Fresno Grove, Madera County.
This tree was a seedling when Alfred the Great was in Power and was a Tree eight Feet in Diameter when Columbus Discovered America".

While, of course, our local trees are more "babes in the woods" compared with the Big Trees, the idea may be used to some advantage. One of the stock questions of Sawtooth tourists is "What kind of tree is that?", and in order to answer the question and at the same time to effect a psychological reaction on the minds of the average careless campers, a new series of signs are now being prepared. Nothing is being said about fire protection, but the facts given are designed to check carelessness with fire by giving an idea of the long period required to produce a merchantable tree or forest. Incidents in American History are used, the following being a sample, it being necessary, of course, to determine in advance ages for each tree upon which a sign is placed:

"Douglas Fir (Pseudotsuga taxifolia)
The most widely distributed tree species on the Sawtooth. This tree was a seedling when Washington was President, 1789-1797, it being 125 years old in 1917".

Other signs are also being made describing the distinguishing characteristics of firs, pines and spruces."

SPEAKING OF SIGNS. - SOME NEW ONES

Ranger Lemuel Steele, Jr.

"When the wind is high and the grass is dry,
And you feel the need of victuals,
Best dig a hole in which to make
The fire to boil your kittles".

There is only one place hotter than a timber fire; take a tip and put your fire out.