

through the cork and into the cortex of the host, the endophytic stage of infection is initiated. Infection can only take place in the younger parts of the branch, usually in those parts less than three years old, and not through the thicker cork of older parts. All evidence gathered by Weir and others tends to prove this fact.³ The exceptions are those relatively rare cases when a tree is infected in older parts through wounds. Thus a tree is never too old for infection to take place in its younger parts.

The endophytic root system spreads in thin branching filaments throughout the cortex of the host, occasionally penetrating the phloem and cambium. The filaments force their way between the soft thin-walled cells of the cortex. There is no evidence to show that they ever actually enter or pass through the cells. Those filaments penetrating the phloem and cambium usually contact a medullary ray and form the radial sinkers. All present evidence supports the view that the sinkers do not penetrate the wood, but that they develop in conjunction with the tracheids and ray cells of the host, the wood growing around the sinkers, enclosing them as it would a mechanical obstruction. At first the filaments are small but later increase in diameter. The radial sinkers, as seen in the cross-section of the infected stem, appear wedge-shaped, broadening as they become older. In the mature cortical strand and radial sinker, special conduction tissue in the form of lignified tracheids with spiral-like thickenings, are distinguished. In the cortical strand, tracheids appear as a central core, while in the mature radial sinker they are generally found in a peripheral position contacting host tracheids. The formation of tracheids seems to occur at the time of budding, or the development of the young aerial shoot. The aerial shoots, coming from enlarged cortical strands, push out through the bark, grow to maturity, flower and fruit and then die. A time interval of from three to four years seems to elapse from first infection to fruiting.

On examination of an old infected branch, the following external condition would probably be found: The first and second year's growth, counting back from the tip, apparently would be free of infection. On the third year's growth, knob-like bumps, the young aerial shoots, protrude a short distance through the bark. On the fourth year's growth are found old fully-developed aerial shoots that have flowered or fruited the past season. On the fifth and succeeding years' growths the cup-shaped points of attachment of old aerial shoots, with here and there a mature plant or a young shoot, are visible. The cup-shaped remains of old aerial shoots are rarely found back of the original hypertrophy or swelling. The above would imply that the spread of infection is always toward the tip of the branch. In general this seems to be the case, since evidence of habitual spread in the opposite direction is lacking. With this description of the ramifications of the parasite within the tissues of the host, the reader can better appreciate its external effects.

To be brief, infection upsets the natural metabolic processes of the tree. It causes a localization of food materials in the infected parts, usually branches. The first visible indication is a hypertrophy or fusiform swelling of the branch near the point of original infection. This stage is followed, almost invariably, in the case of Douglas fir, by a stimulus toward

excessive branching or brooming. The flow of food to infected parts and the consequent formation of huge brooms and abnormal branches result in the gradual starvation of the rest of the tree. Starvation results in decreased diameter and height growth of the stem, in a thinning of the foliage of uninfected branches, and in the decreased size of needles, terminal, and lateral buds.⁴ Sometimes trunk burls are caused by infection of the leader or terminal shoot; or in older parts, by infection of wounds; and also by mechanical injury indirectly traced to the presence of the parasite. Overdeveloped broomed branches of unusual weight produce abnormal stress at the point of attachment. This stress is accentuated during heavy snowfall or high winds, often causing breakage. Damage to Douglas fir from this cause is slight compared with that sustained by larch.²

In addition to retarding growth in volume, reducing the quality of timber, and decreasing the longevity of the host, infection also impairs the quantity and quality of seed production. While the authors have not experimented along this line, work done by Korstian and Weir substantiates this fact.^{1 3}

The school forest, located in Pattee Canyon about seven miles from the campus, offers a fruitful field for study of the Douglas fir mistletoe. In certain parts, infections are so thick that the question is not how many trees are infected, but how many trees are uninfected. It was obvious that here was the place to do the work, since the tract is used as an experimental forest by the School of Forestry and will be under continual observation. This factor is of particular importance, since a study of control measures for mistletoe must of necessity be a long time job.

The timber on the area chosen for the mistletoe study is practically pure second-growth Douglas fir about forty years old. The scattered trees which were left at the time of original cutting are now almost invariably heavily infected with mistletoe.

One of the original plans was to thin a small plot of all visibly infected trees, leaving the remaining trees to be observed in later years. This plan was carried out on a much larger scale than was originally intended, due to the fact that Professor Clark, with the aid of labor supplied by the Reconstruction Finance Corporation, initiated a thinning experiment on a rather extensive scale. In order to take advantage of this work, a mistletoe plot of about three acres was laid out within one of the large thinning plots. Previous to the thinning, every visibly infected tree on this smaller plot was stump blazed and numbered. Thus, when the thinning is done there will be left a record of the location of each infected tree on the plot. A total of 521 infected trees was found, and there is the possibility that a few infections might have been overlooked. No further work has been done on this plot to date, but the outstanding fact which showed up in the marking of these trees was the very heavy localization of infection in three spots, each of which had as its center a heavily-infected old tree of the original stand. When the thinning is done it will be possible, as a result of these stump blazes, to map in the location of infected second-growth with relation to the old trees, and show definitely the relation which existed. Indications are that infections of the

second growth had come from one of the original trees. In order to determine if this were true, ten of the young trees near one of the older ones were cut down and the number of annual rings at each point of infection on each tree was counted. Of a total of sixteen infected limbs on these ten trees, none were found to be less than nineteen years old at the point of infection; three were thirty years old, and the rest ranged from twenty to twenty-six years of age. These results are only approximate, since the work was done with the thermometer hovering around zero, and a ring count on a small, slow growing branch is an uncertain operation even under the most favorable conditions. However, they did serve as an indication that for some reason no infections have taken place recently. Weis⁵, in his work on several species of *Razoumofskya*, shows that infection apparently cannot take place on parts of the tree older than six years, and is much more likely to take place on parts less than four years old. Observations in Pattee Canyon indicate that infections on young stems do not become visible until the third year. Thus, allowing the maximum age of possible infection, six years, as determined by Weir, and allowing that it takes three years for the aerial parts to become visible, we have a maximum age of nine years at which mistletoe infections can become visible, if infections can take place every year. Our results showed that the youngest infected branch was nineteen years old at the point of infection, thus indicating that during the last ten years no infections have taken place.

Due to the fact that this plot was to be thinned it was impossible to carry on this study of age of infection at this particular location. An area about three chains north of the thinning plot was selected, where the second growth surrounding old infected trees was heavily infected, and the work of determining the age of each infection was started. So far nineteen trees have been cut and studied. This is not a large enough number to make it possible to draw any definite conclusions, but the results obtained to date are rather interesting.

On these nineteen trees, fifty-five infections were found. Of the fifty-five infections, the youngest limb at the point of infection was twelve years old. Only four infections were on limbs under fifteen years old. There were twenty-one infections on limbs from fifteen to twenty years old, twenty-three infections on limbs from twenty-one to twenty-five years old, and seven infections on limbs from twenty-six to thirty years old.

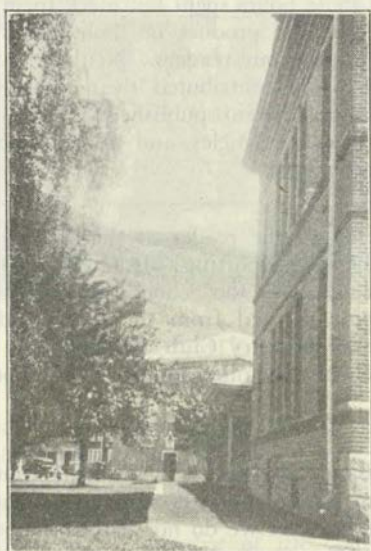
This shows that 80 per cent of all the infections on these nineteen trees occurred at points on limbs which ranged from fifteen to twenty-five years old. This may be due to any one of several factors. As the work is carried on, an attempt will be made to account for this ten-year period of heavy infection, as well as to determine, if possible, what part of the present infection originated from the old tree.

(1) Korstian, C. F., The Western Yellow Pine Mistletoe, U. S. D. A. Bulletin 1112.
(2) Weir, James R., Larch Mistletoe: Some Economic Considerations of Its Injurious Effects, U. S. D. A. Bulletin 317.

(3) Weir, James R., Mistletoe Injury to Conifers in the Northwest, U. S. D. A. Bulletin 360.

(4) Weir, James R., Effects of Mistletoe on Young Conifers, Journal of Agricultural Research Vol. XII, No. 11, 1918.

(5) Weir, James R., Experimental Investigations on the Genus *Razoumofskya*, Botanical Gazette Vol. 66, July, 1918.



Editorial Comment *and* School Notes

THE EDITOR'S PAGE

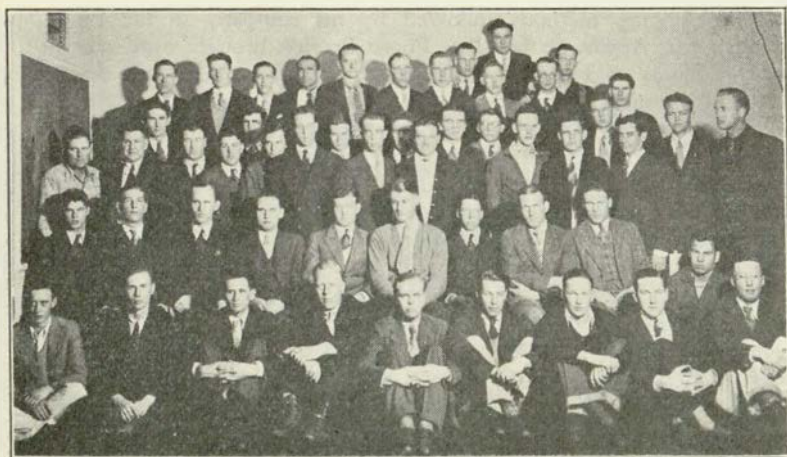
This issue of the *Forestry Kaimin* marks the nineteenth year of its publication. To those of us who have been directly associated with it, the *Kaimin* has meant many hours of toil and often sacrifice of studies. We have never regretted those hours spent but mark them as valuable achievement, hoping only that the product of those hours might bring forth something of value to you, our readers. Neither have we been alone in our work but others have contributed their time willingly and gladly toward making write-ups herein published. To those who gave their aid, to the writers of feature articles, and to our generous advertisers, we offer our sincere appreciation.

It may be of interest to the reader of this *Kaimin* to know that the publication is entirely self-supporting. It receives no financial aid from either its sponsor, the Club, or the School. It is published solely through the medium of income derived from the space sold to advertisers. It is distributed free to all Forestry Club members and alumni, prospective students, Forestry Schools, members of the U. S. Forest Service, and to many others.

No class of professional students will graduate from their school with better morale than our class of Forestry students. Though the future does not appear in roseate hue, yet we do not harbor doubts or fears. We ask no favor of others than an equal chance. With our largest source of employment cut off temporarily, we still maintain that our profession is the best to follow. Our hope of forestry in the future is unsullied. As conditions improve, we feel that our professional position will be more secure. This period of retrenchment, while working a hardship upon us now, cannot but have its wholesome effect upon the practice of forestry. Numerous graduates are returning for more training — and it is serious training — which will bear worthwhile results in producing better trained, more capable men, and weed out the unfit and the floating debris.

It may be also of interest to know that the word *Kaimin* comes from the Selish Indian language, and means "anything written."

The hard-headed business men are always trying to take the joy out of life. They are present in our profession and, as such, are always attempting to evaluate everything in dollars and cents. They forget that other values are equally important. If it were not for the appeal of the romantic and the æsthetic few of those in the profession would have entered the field. While it is granted that the business must pay, may we never forget that there are many returns that cannot be placed on a cash income basis. After all, much of our reward for service rendered is not paid for in legal tender. Much of our enthusiasm is derived from the enjoyment of Nature's benefits, without which the job might join the drab, commonplace and the uninteresting.



The Forestry Club

By JOE WAGNER, '34

The Foresters' library will soon see the end of another successful year in the history of the Forestry club of the University of Montana. This year's membership, as usual, coming from nearly every state in the union, has shown a wealth of ideas that has been of value to the club.

"Dad" De Jarnette, charter member of the club, was present at the first meeting in the fall. "Dad" brought with him a keg of cider as a special treat for the boys.

The first activity of the club, during the fall quarter, was the Fall Hike at which the freshmen foresters and their guests were initiated into the beauty of the forest. The Fall Dance was held later in the quarter. To this dance, in keeping with the tradition, only foresters and their guests were invited.

In the winter quarter, the club reached its peak of activities with the giving of the Foresters' Ball. Joint meetings with the Home Economics club and the Press club were enjoyed.

For the spring quarter, the plans are being made for the annual Spring Picnic given in honor of the Seniors who leave shortly thereafter for their trip to the Pacific Coast.

The above activities of the club were mostly social activities. Regarding the club's more serious business, several changes were made. The graduates now have a member on the Executive Board; Dorr Skeels, former professor, was made a life member; a professor was placed in charge of the basketball team instead of a student; and a show case was started in the library for the purpose of collecting and keeping all the favors and programs of the past and all future Balls. The album has been continued and photographs are solicited for that purpose.

At several of the meetings, the club has been favored with some excellent talks. Mr. Harold gave a very interesting talk on the lumber industry

and the logging methods followed by his company in the Philippine Islands. Mr. Apgar, of the U. S. Forest Service, brought over some of the portable radios used in the Forest Service and gave a very clear description of their use and possibilities in the future for the protection forces as a supplement to the telephone communication. K. D. Swan, of the Forest Service, showed us some pictures that he had taken on his trip to the Southwest during last fall. Of particular interest were his colored slides of the Rainbow Bridge.

With these various activities of the club, it is easy to see why it is of such interest to its members; and why the foresters as a group are noted on the campus for their spirit and co-operation in tackling any project they undertake to do.

The officers of the club were: President, Lawrence Neff; Vice-President, Robert Holgren; Secretary, Joe Wagner, and Treasurer, Mark Lawrence.

Ode to a Sleeping Bag

By RICHARD GALLUP, '35

Oh! bag of green, with rag between,
And buttons up the side;
You hurt my spleen, no sleep I glean
When on your bumps I ride.

A bed of rocks and dirty socks,
A mattress made of thistles,
'Twere better yet if I should sit
On a bed that's made of bristles.

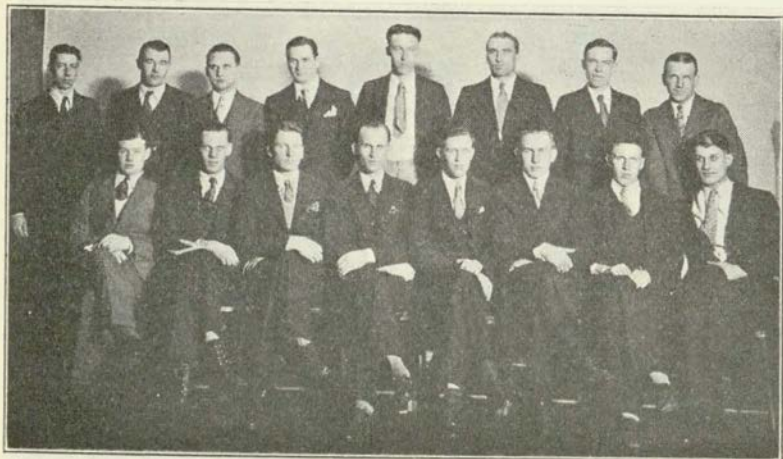
You're pretty small and I am tall,
Or something, from the trickles
Of freezing air, my rear so bare
With cold does fairly prickle.

And all night long I sing a song
Of hate for your damn wrinkles;
It seems to me I've come to be
A mass of aching krinkles.

Your under side does slip and slide
Till I am on the canvas;
While over me in the hours wee,
There comes a regular sandblast.

Your pretty small and I am tall,
I never can turn over,
For if I do you're sure to screw
Me out of half my cover.

So if in time I commit a crime
And burn you good and plenty,
I will not cry, or even sigh
But wish I could burn twenty.



The Druids

Montana Forestry School Honorary Club

This marks the ninth year since the organization of the Druids. Since its inception it has been an active cog in the Forestry School machinery. It is really the "power behind the throne" of the Forestry Club, as it is composed of most of the older and upperclass men who take a whole-hearted interest in the club.

At present there are thirty-one active members, of whom six were initiated in the fall quarter. The new members are William Davis and Joseph Wagner of Missoula, John Hinman of Rapelje, Richard Gallup of Sunburst, Rufus Hall of Two Dot, and Marion McCarty of Wilkinsburg, Pennsylvania. The attendance at meetings averages about twenty-five with the inactive members.

Walter Pool, corresponding secretary of the Druids, has been publishing the Druid News Letter about once a month. He has developed this circular to the point where it is now the most active medium of correspondence we have between the alumni and the school. He is the school's authority upon alumni and alumnus news.

This year the club has missed the presence of Dean T. C. Spaulding and Dr. C. A. Schenck. Due to the "depression" neither has been with the group. Dr. Schenck was unable to leave Darmstadt, and the Dean is with the government relief work with headquarters at Helena.

Also due to the "depression," the former initiation grounds of the Druids will be abandoned and a new site chosen. The brushy entanglements about the old site have been thinned out by a crew from the relief station in Missoula under the supervision of Prof. Fay Clark. An attempt will be made to make the new grounds a permanent one for the initiation of future Druids.

The officers of the club were: President, Joel Frykman; Vice-President, Fred Benson; Secretary, Richard Whitaker; Treasurer, Lawrence Neff, and Corresponding Secretary, Walter Pool.

*Neff**Benson**Davis**Pool**Curtiss**Evenson**Whitaker**Malsen**White**Frykman*

SENIORS

By ARNE FOSDAL, '34

BENSON, FRED, American Falls, Idaho—Range Management. Activities: University of Southern Idaho 1; Forestry Club 2, 3, 4; Druids 3, 4, Vice-President 4; Foresters' Ball Committee 3, 4; Forestry Kaimin Staff 3, 4; "M" Club Welterweight Wrestling Champion 3, 4; Phi Sigma 3, 4, Vice-President 4. Summer work: Lookout, Cabinet National Forest, 1930; Lookout, Glacier Park, 1931; Fire Guard, 1932.

CURTISS, FRANK C., "*Jack*," Galata—Forest Administration. Activities: Sigma Alpha Epsilon; Forestry Club; "M" Club Tournament 1, 2, 3, 4; Freshman Track 1; Varsity Track 2, 3; Cross-country Team 1; Treasurer Junior Class 3; Silent Sentinel 4, 5; Bear Paw 2; Hi-Jinx Committee 3. Summer work: Mapping, St. Joe National Forest, 1932.

DAVIS, WILLIAM L., "*Bill*," Missoula—Forest Administration. Activities: Forestry Club 1, 2, 3, 4, 5; Druids 5; Foresters' Ball Committee 3, 4, 5; Forestry Kaimin Business Manager 5. Summer work: Lolo National Forest, six seasons.

EVENSON, MILLARD C., "*Bull*," Whitefish—Logging Engineering. Activities: Forestry Club 1, 2, 3, 4; Druids 3, 4; Foresters' Ball Committee 2, 3, Chief Push 4; Forestry Rifle Club 1, 2, 3; Forestry Hockey Team 3; Skating Rink Committee 3; Spring Hike Committee 3; Football 1; Bear Paw 2; Student Union Building Committee 3, 4; Interscholastic Committee 3; Barb Council 2, 3, 4; Silent Sentinel 4; Assistant Boss, Aber Day 3. Summer work: Blackfeet National Forest, four seasons; Flathead National Forest, two seasons.

FRYKMAN, JOEL, Missoula—Logging Engineering. Activities: Hibbing Junior College (Hibbing, Minnesota) 1, 2; Forestry Club 3, 4, 5, Executive Board 5; Foresters' Ball Committee 3, 4, 5; Druids 4, 5, President 5; Forestry Kaimin Staff, Circulation Manager 4, Managing Editor 5; Phi Sigma 4, 5; Men's Glee Club 4. Summer work: Flathead National Forest, four seasons; Field Assistant, Forest Products Office, 1932.

MATSEN, ROBERT, "*Bob*," Oregon, Wisconsin—Range Management. Activities: University of Wisconsin 1, 2; Forestry Club 3, 4; Rifle Team 3, 4, Coach 3; Skating Rink Committee 4. Summer work: Trail Traverse, St. Joe National Forest, 1930; Blister Rust, Clearwater National Forest, 1931; Wisconsin Economic Land Inventory, 1931; Bureau of Public Roads, Glacier Park, 1932.

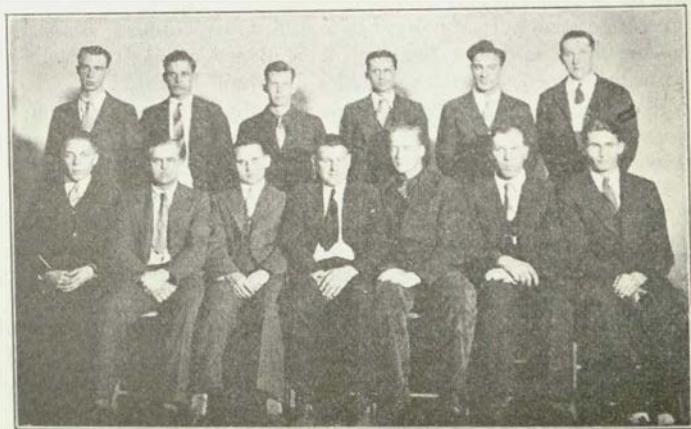
NEFF, LAWRENCE P., "*Larry*," Missoula—Logging Engineering. Activities: Alpha Tau Omega; Forestry Club 1, 2, 3, 4, 5, President 5; Druids 3, 4, 5, Treasurer 5; Foresters' Ball Committee 1, 2, 3, 4, 5; Varsity Track Manager 4. Summer work: Coeur d'Alene National Forest.

POOL, WALTER E., "*Walt*," Torrington, Wyoming—Range Management. Activities: Forestry Club 1, 2, 3, 4, 5, Secretary 3, 4; Druids 3, 4, 5, Editor News Letter 5; Foresters' Ball Committee 2, 3, 4, 5; Rifle Club 1, 2; Forestry Kaimin Staff 3; Truck Driver 5; Independent Council 4, 5; Publications Board 5. Summer work: Selway National Forest, four seasons.

WHITAKER, RICHARD E., "*Dick*," Missoula—Logging Engineering.

Activities: Forestry Club 1, 2, 3, 4; Druids 3, 4, Secretary 4; Forestry Loan Fund Committee 3, 4; Forestry Kaimin Staff 3, 4, Editor 4. Summer work: Kaniksu National Forest.

WHITE, JACK C., Missoula—Range Management. Activities: Forestry Club 1, 2, 3, 4, 5; Druids 3, 4, 5; Forestry Kaimin Staff 2; Varsity Track 2, 3, 4; "M" Club 4, 5; Forestry Basketball Team 1, 2, 3, 4, 5, Manager 4; Independent Intramural Team, Horseshoes 4; Basketball Manager 5; Class Treasurer 4. Summer work: Powell Ranger District, Lolo National Forest, three seasons.



The Rifle Club

By ED RAUMA, '35

The Rifle Club started this year with as much pep and enthusiasm as has characterized the meetings of previous years. A number of the old members were back again and a good number of new men showed up, making a successful season possible.

Twenty-two calibre rifles were used during the fall and winter quarters at the indoor range of the Chamber of Commerce building. The heavier calibre rifles will be used outdoors during the spring quarter. Next year we will have the use of the R. O. T. C. range at the University. This range is now under construction. We were unfortunate this year in that Captain Rogers, who has coached the club in the past, was unable to help us, since his time was taken up on the R. O. T. C. range.

Matches were held with the Forest Service team in the prone, sitting, kneeling, and standing positions. Most of the men were lacking in experience but we made a good showing. The men representing the school were Ahrenholz, Brierly, Brooks, Guntermann, Hague, Hardin, Jensen, Landall, Rauma and Welton. We did not compete with outside clubs as much as desired but hope to next year with better facilities for practice on the new range.



The Foresters' Ball Committee

The Foresters' Ball

By JACK HINMAN, '34

The boys of the Forestry School began to think of Paul Bunyan's big blow-out long before the snow had begun to fly. You see, Paul is a sort of god-father to the foresters and asks only one thing in return: that is that they put on a shindig big enough, wild enough, and entertaining enough to suit even that crusty old cruiser. Do they do it? And how!

The Forestry club began to plan, long before the finals for the fall quarter had begun to trouble the brains of its members. Millard (Bull) Evenson was appointed Chief Push with Bob Holgren and Jack Hinman assistants. "Bull" started right off the bat by getting his various committee heads appointed and their work outlined so that they could go ahead.

Things were going smoothly when the Christmas vacation rolled around. When the club again assembled, it found that the cedar boughs had been hauled in from Hays Creek by the boys who had spent their vacation in town.

Work now began in earnest. Everyone worked at his appointed task with a will, with Hugo Wildschut finding it hard to keep all the orders for signs and advertising filled. Hancock and Harrison completed their head-scratching and decided on the tickets. Of course, they had to write Paul to see when he could be able to attend. They had to wait, for nearly

a week, for the mail to reach Paul's camp in the wilderness and for the answer to return. Thanks to Doc Schreiber, Paul's choice of a date was accepted and the big night planned for February 10.

Renewed activity showed in all quarters. The trees had to be taken out of Pattee canyon and all other details attended to. Dick Whitaker and Lloyd Hague got the trees out in good shape and Walt Pool herded them down to the gym in the big truck.

Joe Wagner and Mark Lawrence, who love to eat, spent hours in discussion and debate about the food. Finally, they remembered the enormous pie they had seen Paul eat on a previous occasion and ordered pie.

The tickets came in about the first of February and the boys distributed them in a hurry. The number of tickets was limited to four hundred. It kept Jack White busy checking up on the tickets. When the "income" column finally crawled up to and past the "outgo" column he lost his glum look and began to smile.

The gang was enthusiastic and began to decorate the gym Thursday afternoon. In spite of the cold, the boughs were brought in, thawed out, and the ceiling covered before they decided to call it a day. Friday morning, the whole crowd showed up and things went off with a bang. Trees were brought in and erected all around the walls until the whole inside of the gym was lined with evergreen. You have to hand it to Bill Davis and John Isaacson for the speedy and efficient work on the decorations. It looked as if a young logging operation had been started over at one side of the room but by the work of Stephens and Landall this soon turned into a band stand resembling a log cabin.

Earl Welton slept through several classes and the outcome was a "Ranger's Dream" unparalleled in history. This dream was made a reality in the room across from the band stand. Here rustic benches and a camp fire near a sparkling fountain made a wonderful cozy place among the trees. All this, bathed in moonlight with a few sparkling stars overhead, completed the romantic setting.

Dusty Sparrow and Ed Rauma were the proprietors of the Diamond Dot saloon. Early in the day, they had everything in shape with the brass rail and bar shining and were ready for business. The walls were decorated with suitable pictures.

About nine o'clock, the crowd began to jam through the branding chute where Jensen stamped each one with a diamond dot brand. The programs were handed out and the crowd swarmed out on the floor. After a few moments of astonishment and awe, each one filled out his program, located the landmarks where he expected to trade dances, and then proceeded to have the time of his life.

Evidently Hi Clarke knew the type of music enjoyed by mountaineers, cowboys, Indians, gamblers and woodsmen because everyone soon was in full swing and dancing merrily. Babe, the Blue Ox, hauled a load of logs out over a high lead system to announce the dances.

Paul couldn't be found anywhere although his tracks—and believe-it-or-not, a woman's—were found right up to the door. It is suspicioned that the first place that Paul visited was the "Ranger's Dream" and that he was

FORESTERS' BALL



so enchanted that he remained there. He has had a bad case of Economic rheumatism all winter so probably he didn't feel like dancing.

A loud clamoring, made by a triangle and a bull fiddle, announced Babe, who came tearing along with his load of logs and told the dancers when the eats were ready for those holding the first series of tickets.

The library and the big assembly room in the Forestry building were converted into a logging camp chuck-house and Meisinger's orchestra furnished music for the diners. As fast as one crowd was ready to leave another showed up and kept the boys busy handing out sandwiches, coffee, pie and ice cream.

Everyone danced, dreamed, or imbibed near-beer and cider until the final dance was called. By one o'clock the bartenders were weary; the stars in the "Ranger's Dream" blinked faintly from amazement as well as drowsiness; and Babe began to tire of the load. The twentieth dance was finished and the crowd pushed and jostled its way out of the doors. Another Foresters' Ball was over, having lived up to all of its predecessors.

Saturday morning, a tired but happy crew of foresters cleaned out the big gym. By noon there was no trace of the vast amount of decorations that had graced the inside. It shows the fine co-operation of the members of the club when they were willing to turn out "the morning after the night before" and make the final phase of the big event a definite success.

Help!

By MARK LAWRENCE, '34

Frank, a Clearwater alternate ranger, and his pal, Art, left the head of Cedar Creek one morning early in May. They were headed for the Cedars Ranger Station on the North Fork of the Clearwater. As they climbed slowly up the divide, the going got tougher and soon the trail was many feet under the snow. The summit was reached only after crawling up the last steep pitch. Before and below them lay snow covered Idaho toward which they made the long descent into Wisdom Gulch.

Night found them at a lonely cabin miles from the ranger station. They kicked the snow from the door and entered. The savory odor of bacon and coffee filled the air and soon they partook of food with appetites that knew little satisfaction. The meal was soon finished and bedtime came before they realized. They had no more than blown out the candles when they heard rats running. However, deep, heavy slumber came quickly, and they heard no more.

Suddenly, Art was aroused by a frantic yelling. As he sat up, he heard rats run and Frank shout beside him. "Help, Oh God! I'm a gonner!" "What's the matter, Frank?" he called excitedly.

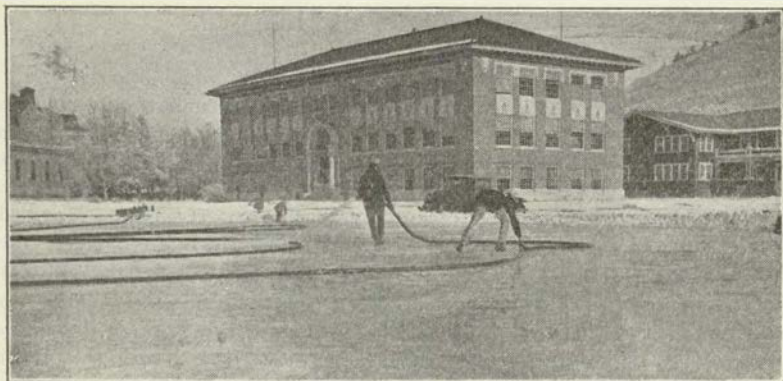
Frank groaned and suddenly he laughed.

"I dreamed I was going through a sausage grinder," he replied.

Art fumbled around and scratched a match. Suddenly in the dim light, Frank held out his hand.

"Look," he said.

A small stream of blood trickled from one of his fingers where a rat had bitten him.



The Skating Rink

By VIRGIL STEPHENS, '34

A year ago the Forestry School started the slickest spot on the campus—the Skating Rink. It was the first successful rink built on the campus, thus showing that the Montana School of Forestry is following in Paul Bunyan's track by doing big things like Paul did in bygone days.

This year's rink was built in the same place as last year's, on the R. O. T. C. parade grounds. The new "Sixty-five Cat" furnished power for the big Russell blade to level up the field and grade banks to hold the water used in flooding. Flooding began about December 7 and continued until the middle of February. There was good skating until the 20th of February.

Maintenance was carried on by the Forestry School students. The work of cleaning the rink of the frequent snows was accomplished by the use of the school truck and a small road grader. This at times was a pretty cool job but was compensated for by the thrill of playing "crack the whip" on the corners with truck and grader.

The rink was a source of much recreation during the winter months. It was the meeting place of several parties as well as the practice rink for different hickey teams. The Forestry Club hockey team was very successful against other teams with which it was matched.

The Forestry School rink is no longer a myth—it's the real thing.

An Englishman and his American friend were spending their first night in the woods. An owl in a nearby tree began his night song.

"What's that?" asked the Englishman.

"An owl," was the reply.

"I know it's an 'owl, but what's he 'owling about?"

Found in a freshman Botany write-up—The place on the stem where the leaf drops off is called the nude. The space between these places is called the internode.

Foresters' Fall Hike

By BOB HOLGREN, '34

In the midst of our prize-winning depression, various other economic evils and bad weather, the Foresters held their annual Fall Hike. The weather was cool and moist but this did not dampen the ardor of the boys for this event. About ninety brawny foresters, and what women who were not weather-shy, braved the elements on the night of October 15, regardless of the consequences, and went up Marshall gulch for a good time. Means of transportation were various and unique but all arrived eventually.

Firelight, rain, and good cheer occupied the time until the program got under way. Fay Clark accompanied his boisterous trio through the course of several vocal refrains. The applause was sufficient so that they could leave the limelight with heads high. Next, Fay inveigled the assembled throng into rendering the night hideous with their combined contributions to the musical cause. Vic Miller, then, conducted us into the realms of make-believe on the back of a wild story of long ago. He was closely followed by Earl Welton, who taxed the imaginations with his believe-it-or-not tales. He was a hard one to stop, continually bobbing up with something new. Doc Severy related an account of several of the hardships and good fortunes of an old friend of his named Bunyan. He started with an apology for his story-telling ability, but soon convinced the crowd that this had been entirely uncalled for. He then introduced Dr. Hitchcock, our new botany professor, who gave a performance so whole-heartedly that Dr. Severy hastened to assure us that that was not the standard of the botany department.

The fireside program was then supplanted by different contests, starting with tree climbing. Many of Uncle Sam's specialists in this line competed for the honors. The object of the contest this year was to climb the tree, tie on a necktie well enough to suit a fashion leader, and descend. Cal Guntermann forced his way up through the rain, donned his neck-choker, and made the descent in good enough time to be declared the winner.

The team of sawyers composed of Howard Welton and Elmer Cyr cut their share of the wood in fifteen seconds and then took a "five". The married women's saw crew proved the advantage of married life by beating all comers of their sex. Minnesota's honor was upheld by its native son, Joel Frykman, in the chopping contest, his mighty strokes bisecting the timber with the best form and time.

At this time, the odors from the cook fire materialized in the bellow of the chief cook to "come and get 'er". Appetites were good but the pile of grub was even bigger, so that no one "beefed" about anything. Eleven-thirty marked the end of the eighteenth annual Fall Hike so the crowd broke up to go their various ways. No one complained and everyone appeared to enjoy himself so that we will probably try again, next year, to put on another Hike "bigger and better" than the last.

Voice over telephone—"Hello, hello, is this Professor Cook?"

Professor Cook—"Yes!"

Voice—"Say, how much rope does it take to tie in a meander corner?"



Standing—Hoye, Cooney, Hawes, Woolfolk, Love, Shields, Fobes and Ibenthal.
Kneeling—Compton (*Journalism*), Larson, Chapin, Spaulding, Stillings, Renshaw.

Senior Spring Trip

By FRED COMPTON (*Journalism*), '33

"Where's Hoye and Renshaw?" said the Dean after he had finished calling the roll of the senior foresters who were patiently waiting for "Skipper" Shields to finish loading the big truck, which was standing in readiness to carry them on the third annual 4,000-mile trek to the sunnier climes of the Pacific.

"They're counting the keys on 'Scoop's' typewriter," yelled our Centerwall, "to make sure there ain't none missing." "What's 'Scoop' doing?" replied the Dean. "He's just trying to keep Spaulding and Stillings from fighting," answered Centerwall. "Scoop" is the journalist who, in monkeying around the Forestry School, was lucky enough to rate a berth in the truck for the big trip.

"Well, when I say a bright and early start on April 30, that is just what I mean . . . bright and early; O.K., let's highball," said the Dean, and the three-car caravan rumbled on down University avenue. "Westward ho!" yelled Cooney, to an open window in North third east.

Faculty members who were in charge of the trip were Dean T. C. Spaulding, director of the tour, Professor J. H. Ramskill and Professor I. W. Cook. Other members of the party were Wilber Chapin, Bruce Centerwall, Robert Cooney, Eugene Fobes, Evans Hawes, Oliver Hoye, William Ibenthal, Stanford Larson, Iver Love, James Renshaw, Joe Woolfolk, John Shields, Alfred Spaulding, Warren Stillings, A. E. Young and Scoop.

The first night was spent at the Forest Experiment Station north of

Priest River, Idaho, where John Thompson, '26, accompanied the party on a tour of inspection. The party visited the various sites where experiments were being made on the inflammability of the forest floor.

The next day the barnstorming foresters continued on to Spokane where they planned to visit the Great Northern tie-dipping plant at Hillyard, but the operations had ceased out of respect to the depression. After leaving Spokane the following morning for Seattle, Hawes and Chapin entered a solemn pact never to engage in poker. Poker playing is hard on meal tickets.

The trip to Seattle was unique. Half the caravan lost its way when the truck took the Wenatchee cut-off instead of the Ellensburg highway. Larson still insists that they were only routing a new way to the Pacific. The enormous Weyerhaeuser mills, docks and a ferry trip to Port Townsend and Port Angeles occupied the next two days.

Three days were spent in Portland and the men took a side trip to Longview — through the big three-unit mill of the Weyerhaeusers — and the loggers visited the Wind River Experiment Station while the grazers toured the Hood Loop to watch the natives revel in the salmon run.

At Corvallis, the Montana foresters were royally entertained by the O. S. C. woodsmen at the "Arboretum". From here it was a long hop of 318 miles to Crescent City, and "California, here we come."

In northern California the caravan rolled over the broad Pacific highway which skirted the irregular coast. It was the first time that most of the men had seen the shimmering Pacific and the giant redwoods, with crowns towering high above in the heavy fog banks.

San Francisco! The home of the St. Francis Hotel, Coffee Dan's, Chinatown, famous old Market street, Golden Gate park and the Ferry building. It is surely the city of romance. For two and a half days these touring Montanans made 'Frisco their home. As the huge ferry boat silently slipped out into the bay and the famous skyline faded in the distance, the Montana boys were sorry that their visit had been so short.

The trip north was intensely interesting. After leaving the cool of the bay country, the atmosphere was oppressive. At Willows, California, the first stop out of San Francisco, the thermometer registered 97 degrees at 6 o'clock in the evening and Professor Cook declared that Paul Bunyan never saw mosquitoes like those at Willows.

From Willows the party visited Crater lake. The road winding to the summit was walled in by enormous snowdrifts, some of them reaching a height of more than twenty feet, a marked change from the torrid temperatures oppressing the Sacramento valley.

At Bend, Oregon, the party split, the grazers going to Baker and the loggers to Walla Walla, both sections finally meeting in Spokane on the evening of May 20.

While sliding down the east slope of the Camel's Hump, the Dean remarked, "Well, boys, we are on our side of the hill now and we will be home in a few hours. Did you enjoy the trip?" There was a chorus of "yesses".

It was a wonderful trip which will outshine all other college pleasures. Then came commencement . . . and the grand finale.



Glacier Park Looking Toward Logan Pass

Junior Spring Camp

By BILL DAVIS, '33

The spring of '32 was wet, but not wet enough to dampen the ardor of the Junior class. We spent a week sloshing through the water at Swan Lake and liked it.

The weather on the day we left belied what was to follow. The sun was shining in its customary Montana style. Everybody was in high spirits, figuratively of course, as we landed at the heating plant to gas up. Riding with Professor Skeels were Nugent and Holgren in the mother-in-law seat and Lawrence and a representative of the royalty named Vlasoff in the front. Fosdal was willing to take a chance so he rode in that sorry imitation of an automobile belonging to Evenson. "Eve" drove—it won't respond to anyone else. Benson, Frykman and Dobrinz rode with Jack "Cannonball" White. They are thrill fiends and like to tear along at that break-neck twenty-mile an hour rate. The careful gentlemen riding with Davis were John Y. W. Curtiss, Richard "Romeo" Gallup, Dudley "Entomologist" Brown, and Marion McCarty, the bookkeeper.

From Missoula to Polson we traveled on Highway 93, the way that leads to Glacier Park. The state and federal governments have worked on this road until they have made a real highway out of it—comfortable curves, easy grades, and a smooth crushed-rock surface. It follows up through the Flathead Indian Reservation past the bison range, through the old mission, St. Ignatius, on to Polson. On the outskirts of Polson the road takes off to the right and follows the east shore of Flathead lake to Big Fork. This stretch of road is narrow and crooked. The car full of careful fellows forgot it was crooked, but through some kind act of Providence got through without landing in the lake. Evenson stopped

by the wayside to fish, so he says, but we didn't see any of the catch. Maybe Arne Fosdal ate them raw.

By the time we hit Big Fork the crew had bunched up pretty well. "Cannonball" was taking the narrow, rocky stretch above the cascading Swan river, that runs through Big Fork, at the hazardous speed of fifteen miles an hour. With the help of the expert advice of John Y. W. Curtiss, the crew of careful fellows passed "Cannonball" just as he got over the hill. Professor Skeels was the last to see them go around a curve, almost taking the wayside school house with them. Incidentally, they arrived at Swan Lake first to grab the suburban cabin farthest away from the mess hall. Professor Skeels took the little cabin next in line. It has been the "White House" for the Prof. for some time. Next to the White House was the Senate Chamber, and nearest to the eats was Monte Carlo. The boys wanted it called Monte Carlo because the whole outfit moved in there whenever they felt the gambling urge. The only joke was that nobody played for money.

After our arrival the rain came—and what a rain. We had beautiful Swan Lake in front of us (the cabins are built in a row along the beach) and a small lake behind each dwelling. Not only that, there were several more lakes coming down—but that didn't bother the boys. They acted like a bunch of Oregon foresters. Professor Skeels had us making growth studies in the mixed stand on the side-hill back of the cabins. Any stranger watching unobserved from the brush would have thought that the whole group was there to learn something the way we made counts and took d.b.h. measurements. Afterwards we convened in the Senate Chamber, which had been properly furnished by Bob Holgren, with a desk, a huge gavel and a glass of water, which the professor smelled of and sat down again. We applied Von Mantel's formula and several other tricks to the data we had gathered and then adjourned.

Every day Professor Skeels lectured for an hour or two on subjects connected with what we had studied that day. In the application of silvicultural knowledge he had no peer.

The class spent one day in a previously logged white pine stand. The purpose of this study was to learn what not to do in the matter of brush disposal. It had been broadcast-burned after logging and those trees that had not been killed in the process were found to be heavily infected with fungi. Hemlock and white fir were taking over the area.

Later, we made a small cruise of a few acres of mixed timber on the flats near the road. This plot had been logged several decades ago. Stump counts were taken, and increment borings made to get an idea of the growth and stocking on the area since logging.

One day John Y. W. decided to take a Finnish bath at the N. P. cruiser's camp up the lake about two hundred yards. He tried to get all the "Missionaries" to go, but we knew better. That brave Scandinavian, Frykman, and his pal Dobrinz tried it, though. The object is to sweat and then jump in the lake. If anyone had told them to do it they would have been insulted. It was a Finnish bath, all right; that finished it for them.

Another time, Holgren, Dobrinz, Vlasoff, Frykman, Fosdal and Law-

SIDE



SHOTS



Junior



Trip



Products



Trip

rence decided they didn't get enough of it in the summer so they took a hike to Six Mile Lookout in the rain. The clouds parted long enough for Fosdal to get a picture but that's all. In the meantime, Dud Brown was learning entomology for no reason at all. McCarty was egging him on to catch a moth flying around the center room of the Mission. Most of us missed this rare sight, but "Mac" described it to us with embellishments. Gallup was there, but being asleep he missed it. He had spent much of the night before playing hearts in more ways than one.

Benson had some fun one day at the Kelly ranch across the lake. There was a little bridge leading to an island the boys wanted to see. The rest of the fellows ignorantly clambered through the water running over the low bridge and got their feet wet. But not so Benson. He was smart. He made a running jump and lit. On a dry spot? No, flat on his face in the water. He spent the rest of his sight-seeing trip fishing for a perfectly good Lanpher field hat that floated provokingly away.

Davis took a long swim of about two minutes in the lake. It was pretty hard to decide which was the colder, the air or the lake, so he decided upon the cabin. McCarty and Dud tried it later but not for long. That is the day that Count Vlasoff and Holgren found a snake and at about the same time saw "Romeo" Gallup and little Juliet rowing placidly and unconsciously on the lake. The cruel count and his henchman felt an urge for the sadistic thrill of hearing a lady's screams and seeing her fly to the arms of her lover. They tried it. The snake got almost the same result as that famous ancestor of his in the Garden of Eden. Satisfied, the cruel count and his henchman moved on to new evils.

To satisfy our sporting instinct we organized a regatta. A course was laid out across the lake. The three crews that finally decided to make a show of themselves were Bob Holgren and Arne Fosdal with Mark Lawrence at the rudder; Ed Dobrinz and Joel Frykman — Vlasoff steering; and, to furnish the comedy, Fred Benson and Jack White with "Bull" Evenson piloting.

The superior rowing of Fosdal and Holgren (according to Fosdal) put them in the lead which they maintained to the finish. Dobrinz and Frykman were not far behind. White and Benson maintain that if Evenson had done more steering and less rowing they would have made a better showing. The poor oarsmen, due to Evenson's erratic efforts, had to row several miles farther than the others to get over the same course. For a while, we were afraid they had lost their bearings and never would return, but they finally landed without being towed in.

Each day like this, whetted our appetites, and they were taken care of amply. The Larsons put on holiday meals every day — music a la cafe, waitress and food. Ah! the memory of it. Professor Skeels probably didn't appreciate the so-called wise cracks that flowed so freely but he sat quietly while we went into paroxysms. McCarty had difficulty in drinking his coffee. He probably didn't get away with a whole cupful while he was up there. Those little trips to Big Fork sharpened his sense of humor (?).

The climax was the ride to Glacier park — up through the old Half Moon burn, which spoiled so much beautiful scenery at the lower part

of Lake McDonald; through the thick stands of cedar, past the clear, mountain-reflecting lake, over a highway that is a tribute to the engineers who built it, to the snow-blocked end of the Going-to-the-Sun highway.

On the way up we saw bear and deer, and mountain goats on the high cliffs. We lined up for a chance at the one pair of field glasses when the goats were sighted. At the big curve in the road, we stopped because snowbanks blocked our way. We ate lunch there. Mark Lawrence had a camera with a time stop on the bulb which allowed him to take a picture of the group and get in it himself. The result was a picture of Mark's elbow with the junior class in the background.

After a week of the most fun the class ever had as a body and a display of good fellowship that has bound the group together for the rest of their days in the Forestry School, the junior class bid the Larsons goodbye. We will never forget that camp. Those were the days.

The Red God's Call

"I'm tired of the rustle and hustle,
I'm sick of the racket and din,
I want to cut loose from the bustle,
Get out where the hills begin.
I long to get up in the open,
'Mongst the cedar and tall tamarack;
I want to make camp on a lake shore;
In an old tumble-down lumber shack.
I'm tired of the pomp and the grandeur,
I'm sick of the falseness and bluff;
I want to get up where the country
Is virgin and wooded and rough.
I long to awake in the morning,
And pull on an old flannel shirt,
And corduroy pants that are mended
And moccasins covered with dirt.
I care not a puss where the place is,
Nor how far away it may be,
So long as it's up in the open
Where I can unleash and be free.
Where the odor of cedar and hemlock
Will greet me when'er I awake,
And the moon casts its shadows at nightfall
Of the pine on the wind rippled lake.
Just give me my pipe and tobacco,
Some flour and bacon, and then
Turn me foot-loose in the forest,
Far from the pathways of men."

—Selected.

One of the new students from sunny California wants to know which is the warmest, snowshoes or moccasins.