

Forest History Foundation, Inc.
St. Paul, Minnesota

ORAL HISTORY INTERVIEW

with

P. J. Rutledge
Eureka, California
March, 1953

by John Larson

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The first settlements on Humboldt Bay were made in April and May of 1850. Naturally these new communities needed lumber very badly and Martin White started the saw mill on the water front between M and L Streets in 1850, probably about November. There was a mill built down at Bucksport about the same time. I have a record of that mill being there in March, 1851. The mill at Bucksport was built in this way: they had taken a steamer, an old side paddle wheel steamer, run her ashore, took the paddles off and replaced them with pulleys, and run belting from the pulleys to the machinery on shore. The steamer itself was used as a boarding house and bunk house for the crew.

White's mill, I think, was a standard mill, but the Ryan & Duff mill that was built on the water front in 1852 was operated in the same way; the old steamer Santa Clara had been run up into the mud, jammed ashore as far as possible, and the wheels replaced by pulleys and belting just as I told you about the mill at Bucksport. William Carson, an early pioneer, arrived in Humboldt County early in 1850 but afterwards went to Trinity County but came back and entered into an agreement with Martin White to furnish him with logs. It is stated on good authority that William Carson and his partner, Jerry Whitmore, cut the first redwood trees for lumber in the redwood region, at a place now known as Pigeon Point. The site of Eureka was pretty well timbered, but it is my opinion that it was mostly whitewoods, spruce, douglas fir, and white fir. Old pictures taken on the site of Eureka do not indicate that there was very much redwood there. With that introduction I think I will tell you about the methods of getting the logs out of the woods.

The redwood logs were far different to the timber that the easterners and the people from eastern Canada and eastern United States were used to logging. They had to adopt other means of getting it out. The first method was to use jack-screws to move the logs from the side hill. You understand that the redwood grew here in very hilly country, almost mountainous country. Well, they used jack-screws to move those logs from the side hill down into the main gulches onto a creek or to someplace where they could build a truck road to move the logs. They slid and rolled those logs from the side hill. One time I was at a picnic some years ago up at Korvell and an old time logger by the name of Charlie Hitchings and I strolled down to the river and on the other side of the river there was a very steep mountain side. Charlie pointed to it and said, "In 1878 I was jack-screwing logs off that." Well, later they used animal power, mostly horses, to move these logs. They would set rigging and use horses to move these logs down to the main gulches. These logs were moved down to the creeks and branches of the

rivers, and later in winter when the rains provided plenty of water they were floated down to the tidewater on Humboldt Bay. Many times they built dams across these creeks and when they were ready to float these logs out they would open the dams and the held-back water would drive the logs down the streams. I have seen many pictures of those logs piled tier upon tier right in the creek bed.

Later on they commenced to build truck roads into the woods. Those trucks were very crude, very strong rigs and sturdy but very crude. The wheels were made of sections of douglas fir logs bound with heavy steel tires and with a steel tube in the center of the wheel, and the axel was generally about a four inch square piece of steel or iron that was turned to go into the hub. A common method that was used later on was moving logs by pole roads. Those pole roads were built of poles about ten inches in diameter, and they were layed on other poles that layed crosswise as ties on a railroad, and these poles were fastened together with a knotch joint and the trucks that were used to run on these pole roads were generally four wheeled and the wheels were concave so as to fit over the poles. They were hauled usually by four, sometimes six horse teams. One or two good-sized logs would make a load. They were hauled down to a creek that entered into the bay. Such methods as that were used for moving the logs to tidewater until 1881. Prior to 1881 logs had been moved by manpower or animal power, as I have explained.

In August of 1881, the Dolbeer and Carson Lumber Company of Eureka, California, began using a steam donkey engine in their operation at Salmon Creek in Humboldt County. The machine was the invention of John Dolbeer, a member of the company who had been an engineer and a machinist before engaging in lumbering. Patent number 256553 was issued to him in April, 1882, for his steam logging machine. The first machine proved so useful in moving the large redwood logs that a second machine was immediately built and early in 1882 was put into service at Bayside that same year. The first Dolbeer donkey was what was known as a side spool donkey. The main shaft was fitted at the ends of the shaft with what is sometimes called a gypsy. Here in the redwoods we call them spools, and by taking several turns - oh, six, seven, eight turns - of the manila line around this spool the spool tender by exerting a slight tension on the line would furnish the method of pulling the logs.

There would be a railroad, probably, or one of those old pole roads would be built up a main gulch. Then from that gulch, or from the main road, there would be what was called a skid road built up a side gulch, and from that side gulch chutes were built up the side hills. Those chutes were just simply troughs excavated by swampers on the side hill. Those early donkeys were not very powerful and took considerable rigging. The rigging crews would set blocks - six, sometimes eight blocks - to move those logs. The lines used were mostly manila, later steel cable was used. The logs would be rolled and pulled into the chutes. One of the crew was called a chute tender. His job was to run along the chutes and sprinkle water with a can.

He became very expert. He would pick up a quantity of water from water tubs placed along the side of the chute and sprinkle this water over the chute almost in the form of rain. At the head of the chute the crew would place the becket on the end of the line at one end of the log and the donkey would be speeded up. The spool tender would take in the line and give a log a start and down the chute it came to what was called the skid road. By the way, that skid road is sort of a misnomer. Many people think that those skid roads were skidded from top to bottom. Well, that was not so. They were only skidded in the places where the grade was lighter, the level places. Other places along the road there was just the earth.

To go back to bringing the log down the main road: the log would slide down the chute to this so-called skid road. They usually selected a large log, if they had an opportunity to pick, for the first log. Then they continued to shoot other logs down until they'd shot down six, seven, eight, maybe ten, or twelve logs depending on their size. These logs were coupled together with coupling chains and dogs, an ox team would be hitched to the string, and the logs were hauled by this ox team on the skid road to a railroad, sometimes to a creek, sometimes to a truck, that is, the old style truck that I tried to describe. The chutes that I have spoken of were extended. For instance, if there was one tree laying on the side hill close to the main chute, a branch chute would be built over close, probably right along side the tree. The logs were rolled into that chute one at a time, of course, and shot down as I have described. They would reach back from the main chute a hundred, sometimes more than a hundred feet, with these branch chutes. The main chute would be extended up the side hill further and further, until all the timber in that particular region, probably to the top of the hill, had been removed. Then a new chute would be built further up and when the timber was removed from the side hill with these chutes, if you'll just imagine - a tree or maybe a gridiron built on the side hill - the main chute and all these little branch chutes running out from it. Then after they had logged off a piece of timber that way, a stand of timber maybe several hundred feet wide, a new chute would be built further up into the timber leading down to the skid road. Of course, at times the skid road would be extended also. That fairly covers the methods of getting the logs in those old pioneer days.

It might be well to touch on the difficulties that those early loggers had. They didn't have long cross cut saws in those days. The trees were cut down entirely with axes. One time when the Dolbeer & Carson Lumber Company was preparing to build, or extend, the railroad up the north fork of Elk River, William Henry, an old-time logger who was foreman for the company, and the company's engineer, and Mr. Harry Hill, the railroad superintendent, and myself did considerable cruising, up through the old logging works. The timber had been taken out seventy-five years previously by those pioneer loggers, and it was necessary to extend the railroad through these old cut-over works. Mr. Henry was an old-time pioneer logger himself and he pointed out several times the stumps of those old trees and called our attention to the fact that they had been chopped down entirely with axes. He said

that indicated they were cut before 1878 as about that time they introduced the long cross cut saw. I heard Mr. William Carson describe how they cut those huge redwood trees into logs. They had to do it with an axe. They used an axe with a handle four feet long. If you were going to cut a log, you would probably start in the natural way, and your cut would be something like the shape of an hour glass, chipping out sort of a "v" shaped cut into the log. That wasn't the way they did it. They chopped down a few inches into the tree and then about two foot away they would chop down another notch into the tree and then they would slab out a piece. They continued that way until they got through the tree, and when they were through those logs were pretty near as even as if they had been cut with a cross cut saw.

In those days logging could only be carried on in dry weather. In other words, in summer. The timber had been felled the previous winter - perhaps two winters previously. You see, the woods were shut down in the winter time and the logging crews were used as choppers. That is, any of the logging crews that wanted to work through the winter were put on as choppers. The downed trees had been peeled, but not sawed into logs. A fire had been started at a favorable time to burn off the bark and brush and much of the debris on the ground. Then they were ready to start logging. The donkey crews would start working up hill from the skid road; the logs on the ground adjoining the road would be pulled or rolled into the road. After getting away from the road the logs would be pulled or rolled into the chutes and shot to the main road. Those chutes, as I have explained, were troughs excavated in the side of the hill. They were kept slick by water thrown by the chute tender. After the logs were shot to the main road, they were coupled together by the use of dog chains, in strings of eight or more, depending on size, road conditions, and size of the ox team. The ox team was then hitched to the load and dragged it to the railroad landing. There it was loaded on the cars, frequently by the use of jack-screws. Those ox teams would frequently consist of twelve or fourteen head of animals.

Before logs were put in chutes they had to have "rides" prepared on them. They were "sniped" up in the end. In other words, there was a portion of the log that was prepared, something on the order of a sled runner. Otherwise, if they weren't sniped up on the end, rounded up, when they were dragged by the donkey across the hill side, and when they were shot down the chute, they would tear up the earth and probably be retarded in their slide so they were sniped. Large redwood logs are usually very irregular in circumference. The sniper would select that arc of the circumference from which the log would be least likely to roll in its travel down the chute and along the main road. Then with broad axe and adz he would smooth the surface; removing all lumps and irregularities and rounding up the end of the log that would be the front end in its journey. With the small donkey and chute method of logging the procedure was to constantly extend the chute and its branches to the logs. For instance, if a string of logs from one tree lay

parallel or nearly parallel with the incline of the hill, which they usually did, (you see, the effort was always to throw a redwood tree up hill, not down hill, then it would not smash up so badly) then a branch chute would be built close along side the string and the logs rolled but a few feet into the chute.

The introduction of the steam donkey gave impetus to the lumber industry and was an important factor in its development. It was then possible for an operator to make plans for a definite amount of logs and be reasonably sure that they would be attained. It was also possible to get logs in large amounts without depending on rainfall and streamflow.

There never was anywhere a heartier or more intelligent and skillful group of workmen than were those employed as rigging crews on the small donkeys. The work was strenuous; climbing around on those steep hillsides, carrying the heavy grabs, blocks and chains, and pulling the rigging into place required great strength and staying power. First manila rope was used; later steel cable. It was common practice to operate two donkeys to a skid road. One on each side of the hill sloping to the road, sometimes both on the same side - one further up the gulch than the other. There was always great rivalry between the crews as to which could get out the greater quantity of logs. The ox teams would take away the loads alternately, from each side. If one crew could get out logs so fast that the team took two loads consecutively from their side, that crew would do much bragging and boasting that night. You would hear them saying, "We have their hides nailed to the barn tonight. They'll have to go some to stay with us." Some great records were made. What is considered the top record was made by Howard Jordan's crew in 1914. That crew working in a gulch, tributary to Lindsay Creek, a short distance above Fieldbrook in the operation of Dolbeer-Carson Lumber Company, got out 22,400,000 feet of logs in ninety working days. That was a daily average of 249,000.

About 1891, David Evans designed and put into operation at Freshwater what was known as the bull donkey. Those took the place of the oxen on the skid road. David Evans was general manager of the Excelsior Redwood Company at the time. The bull donkey was larger and much more powerful than the Dolbeer donkey. It had three drums on which the working lines were wound. The lines were the haul or main line, the trip or pullback line, and the straw line.

The method of setting up the rigging was something like this: the straw line would be led by hand to the end of the road or to a point to which the road would ultimately be built, then back to the donkey across country and in a more or less direct line, at the same time being drawn through lead blocks. Then the trip line would be attached to the end of the straw line. The straw line drum on the donkey rotated winding in the straw line and

pulling out the trip line through the lead blocks and down the road to the donkey. Then the haul line would be 1-1/4 or 1-3/8 inches in diameter would be attached to the end of the trip line. The trip line drum would then be rotated pulling that line and leading the haul line up along the road to the starting point for logging. Then things were all set for logging. The result was an endless cable up the road and back across country to the donkey. Each time that a load of logs was brought in to the landing by the bull donkey, the trip line came in with the load. And then when the logs were uncoupled from the line, the pullback drum was started and would pull the main line back up to the place where another string of logs was to be attached. Of course, those roads were not all straight; they followed the contour of the gulch or draw and had many curves. To keep the road line from leaving the road and leading out across country, lead rollers were set up on the curves.

I forgot to mention that those skid roads were lined on each side with heavy logs, full length trees almost, to make a sort of guide rail along the side of the road. They were also hollowed out slightly in the center so that the logs would ride the center. These roads curved about, and if there wasn't some way to make the line follow the road, the line would start out in a straight line and pull the logs right out of the skid road. So to guide the line, keep it in the road, there were these lead rollers or guide rollers set up on the curves. Those rollers were in sets. Some perpendicular and some horizontal.

The first bull donkey was not the compact unit that afterwards came into general use. The boiler was the horizontal return tubular type mounted in a brick setting. The two large drums for the haul line and the pull-back line, with the engines and gearing that drove them, were mounted on massive timber frames, the whole machine being housed in a building nearly as large as a small saw mill. The trip line which was hung in blocks was strung in a direct line across country as I explained. The haul line, a steel cable usually one and one quarter inches in diameter was attached to the trip line, the two forming an endless steel cable from the donkey to the head of the road and back to the donkey.

After the introduction of the crude bull donkey, there quickly followed the next development which was the powerful machines, having drums, gears, engines and large vertical boiler, all compactly set on skids. From these in turn were developed the three, four and five drum machines that later came into use. All these methods have been largely superseded by still more modern methods. Most of us are familiar today with the track-laying tractor and the huge arch. In this method the tractor has at least one drum mounted firmly at the rear of the machine and also attached to it is a structure mounted on caterpillar treads, with a huge steel boom reaching out on an incline. At the end of this boom there are lead blocks, and the line from the drum leads through these lead blocks and is attached to the chokers on one, two, three, sometimes four or five logs, depending on the size of the log. Then the drum is actuated and winds up the line pulling the logs up to the arch, so that one

end, the forward end, of the log is in the air, and only a small portion of the outer end of the log drags on the ground.

I was fifteen years of age in 1889 when I went into the woods. My job was what was called a water-buck. That was, of course, in the days before gasoline pumps were invented. I've spoken about the water that was used on the chutes. The water was also used on the skid roads. Along the chutes, and along the skidroads, tubs were set. Those tubs were made from oil barrels sawed in two, and they were staggered one on the right hand side of the road or the chute, and one over on the left, then back to the right again, and over to the left. And the water-bucks had a horse, sometimes a mule, with a pack saddle on it. And on each side of that pack saddle there was a canvas sack hung. These sacks - my recollection is - would probably hold each about fifteen gallons of water.

We would lead the pack animal to a spring or the creek or someplace where there was an opportunity to get water and we would fill those canvas sacks. If we filled the one sack on the one side entirely full, it would tip the saddle over. So we would fill one of the sacks on the one side halfway up, then the old horse or mule was trained so that he would turn about, then we would completely fill the sack on the other side. Then the animal would turn back again, we would finish filling the first, and we would start up the hill to these tubs. The bottom of the sack was heavy sole leather and there was a peg in the bottom of the sack, a wooden peg. And the animal would be led up; they got trained so after a while they would walk up to the tub, and we would pull this peg out and allow a quantity of water to flow into the tub, then we would cross over to the other side of the road or chute and pull the peg from the sack on that side of the animal and put some water in that tub. And as we proceeded up the road or the chute, we distributed the water into the tubs.

The water for the donkey up on the hill was furnished the same way by the water-bucks. I had a very long chute. The chute that I was working on that year must have been nearly a mile long. It was over three quarters of a mile anyway. And you can imagine that only a boy, and a pretty husky boy at that, could stand that kind of work. It kept me busy, just as busy as I could move all day long to keep the supply of water. Up and down these hills all day - and it was about eleven hours a day that we worked. We had a twelve hour day but part of the twelve hours was taken in going out from the camp to the operations and then in the evening coming back again. But anyhow, us water-bucks went up and down those hills all day long - up with a load of water and down for another load and up again.

Further back, I touched on the matter of the water-slingers, the men that sprinkled the water on the chutes and on the skid roads. Especially on the skid roads, it was a very important job because the ground or the chute had to be kept a little wet - not muddy exactly - but a little wet so that the load of logs would slide easily on it. In time, you understand, those roads,

or the earth, became packed almost as hard as cement from the logs constantly going over them. Well, this water-slinger would go along just ahead of the team and he would snatch up a quantity of water out of a tub; his can was a five gallon coal oil can with one end of it cut out and the handle, instead of being in the middle of the can, was off to one side. He would snatch up this quantity of water and throw it in such a way that it was almost like rain falling on the road. He was a high paid employee. I have known instances of where that water slinger on the main road would get more than the foreman of the camp. Then there was times in other places that instead of throwing water on the road, he would have to sift fine earth, dry earth. This was for the reason that there'd be an extremely steep place and, to keep the logs from running over the ox team, he would sprinkle dry earth along that portion of the road.

The first summer that I worked in the woods, the skid road there came to one place where there was a very sharp drop. The creek alongside of the road had a natural falls of about ten feet. The road having such an abrupt drop, they hadn't been able to grade it back; they didn't have bulldozers in those days and grading had to be done by men with picks and shovels. So at that point in the road there was a very abrupt drop, and with the best the road tender or water-slinger could do, the load would sometimes run. One occasion the load ran up onto the team and wounded or killed three of the oxen - wounded them bad enough that if they weren't killed outright, they had to be destroyed.

In the older days they were putting the logs into creeks as I explained earlier. You understand, a redwood tree, especially in the lower portions of it, contains a great deal of water. I have seen much much redwood lumber that would have two or more pounds of water to one pound of dry wood. In other words, 20% moisture content as we called it. Well, when they put those redwood logs into the creek, it wouldn't do to put in those sinker butts. So they would adopt different methods. Sometimes they would cut the tree down fairly close to the ground - oh, six, seven, eight feet off the ground - and then cut off the butt log of twelve, fourteen, sixteen feet long and leave it laying there, to be worked up afterwards, say into split posts and ties and grape stakes and such things. Other times other operators, instead of cutting close to the ground, would go up as much as sixteen to twenty feet and leave that long stump. But whether they were going up high, or going up a normal distance, it was necessary to build stagings for the choppers to work.

These stagings are pretty hard to describe without a drawing, but they were made something in this way. A notch extending into the tree for, oh maybe five or six inches, would be chopped into the tree in four places around the tree. Then pieces of pine, two by four with a steel cleat on the end

arranged in such a way that it formed a sort of a grab so it wouldn't slip out again would be driven into these dog holes in the side of the tree. And on these drivers, as they were called, slabs or planks would be thrown to form a staging for the men to stand on.

After the staging was built, the choppers put in the undercut with double bitted axes. That undercut extended into the tree pretty near half way. Then they went to the opposite side of the tree with long cross cut saws and cut the remainder of the tree. First they made the "lay" for the tree. The "lay" meant preparing a bed for the tree to fall in, because those valuable redwood trees, those large trees, had to be handled without smashing them up. Sometimes a set of choppers would spend more time preparing the lay for the tree than they did in actually chopping the tree down. That meant cutting down knolls, filling up hollows, rolling out of the way old chunks and pieces of fallen trees and such to prepare the way.

To make the tree fall into that lay as they sawed in what was called the backcut, they used wedges to keep wedging the tree up and tipping it in such a way that it would fall into the lay. They had what was called a gun, a sort of bipod that they took sites on. They would put one leg of this gun over to one side of the undercut and the other leg on the opposite side of the undercut, and the head chopper sighting with this apparatus would know whether he had his tree leaning for the lay. If it wasn't, he would change the line of the undercut. Anyhow, by wedging and sawing they tipped the tree over. Those early choppers were very accurate in getting their tree into their lay.

The first mill saws, going way back to 1850 and 1860 and in there, the only saws they had for cutting logs - redwood logs or pine logs or any other logs - anywhere was the sash saw. A sash saw was a saw set in a frame. It was a single strip of steel; it might be likened to a modern cross cut saw except that the teeth were far different. The teeth were made for ripping instead of for cross cutting. Well, anyhow, this sash saw, this strip of steel, was set in a rigid frame fastened top and bottom and the frame was something like a sash. I suppose that is why it was called a sash saw. This saw was operated up and down. The log was run through that. It had to be run through each time for each cut. Well, that was rather slow. For instance, I told you about Martin White building the first mill in Eureka. History says that Martin White's output was 4,000 feet a day. So you see, they were very slow.

The next development was the circular saw. Circular saws didn't come into use until long after 1860. They were invented a little before that but not used generally until much later. The circular saw was used for a number of years. For sawing the large timber like we have in the West, they used double circulars. That was one circular above another, so that they could cut logs five and six feet in diameter, larger logs were split in the woods. The logs were placed on carriages and then the log was driven

back and forth through the saw on these carriages. The band saw was invented or at least it commenced to come into use along about 1889. It was very crude and inefficient for a number of years, but finally by 1893 or 1895 the mills here in the redwood commenced to introduce those band mills. They had a great deal of trouble with them; there had to be a great many bugs ironed out before it became efficient. They were generally introduced and in the late years the big band has been the sole method used in the saw mills in the redwoods region. Some of these band saws, that is the saw itself, is as wide as eighteen inches - fourteen, sixteen, eighteen inches wide. The wheels they run on are nine, ten foot in diameter.

I was born in New Brunswick in eastern Canada. My family moved to Eureka and arrived there on October 7, 1883. At that time I was about nine and a half years of age. I have lived nearly seventy years here. I was always sort of a nosey kid, and my uncle was a foreman for the Excelsior Redwood Company in one of its operations, so I had an opportunity to nose around through the redwood operations when I was very young. I think I wasn't much past ten years of age when I commenced to ride on the logging trains of the old Excelsior Redwood Company going into Freshwater and to be in the woods and see the operations. As I have stated earlier, I went to work in the woods when I was fifteen years of age.

In 1898 I went to work for the Dolbeer and Carson Lumber Company and was with that company thirty-eight years. After being with the company a number of years, I was made mill foreman, later I was made Plant Superintendent, then General Superintendent in charge of all operations.