

U. S. GEOLOGICAL SURVEY.

MADISON VALLEY, M.T. }
September 1st, 1872. }

Editor Montanian:

The following is a brief summary of what the survey under my charge has accomplished up to the present time, and what it proposes to accomplish before the end of the season:

Two large and well equipped parties have been in the field at work since about the first of July. The largest party made Ogden the point of departure. It was under the direction of Mr. James Stevenson, my principal assistant. There are attached to this party a geologist, topographer, astronomer and meteorologist, with the necessary assistants for each. There is also a botanist, who has already collected over 1,200 species of plants through that interesting and new region, the Snake River Valley. Dr. Josiah Curtis acted as surgeon and microscopist. The party surveyed a route from Ogden to Fort Hall, Idaho, where full preparations were made for a pack train with supplies for a given time. The party passed up the west side of the Snake River Valley, forced their way across the mountains, made a careful survey of the Teton Range, then passed up the valley of Henry's Fork, entered the Madison Valley through the Targee Pass, and reached the Geyser Basin of the Madison August 14th.

The party under my charge traveled by stage to Fort Ellis, and there spent about three weeks preparing the outfit, then started up the Yellowstone Valley, over about the same route of last year. The party consisted of about thirty persons, among them a chief topographer, astronomer, meteorologist, mineralogist, with their assistants, and a number of others who act as collectors. A careful examination of the Yellowstone Valley was made, and a map in contour lines of 100 feet each constructed. Both parties met in the Geyser Basin on the same day, within a few hours of each other. The two parties numbered about seventy persons. The results of the explorations up to that time proved on examination to be most satisfactory, and not less important to science than of practical value to the country. The opening up of that great Snake River Valley will prove one of the most important events in American explorations for the year 1872. The barometrical elevations show most feasible routes for railroads, connecting the entire northwest with the Pacific railroads. It opens up to settlement a vast territory of the finest land in the West. A railroad up the Snake River Valley from Utah, which is now in contemplation, will bring into market 2,500 square miles of pine timber, and an unlimited quantity of arable and pastoral land. The ascent of the Great Teton will be recorded as one of the events of the season. Mr. James Stevenson and Hon. N. P. Langford are undoubtedly the only white men that ever reached its summit. Mr. Stevenson planted the American flag on its summit, and measured its height with an aneroid barometer. It was also measured by triangulations from below. The height was ascertained to be about 13,400 feet. The next important discovery made by this party, was the four remarkable passes at the head of Henry's Fork. These passes represent the four points of the compass, and are all within a few miles of each other. Henry's Lake is located in the centre. The Targee, or East Pass, is about 6,500 feet elevation, and forms one of the great gateways to the Madison Valley, and the resources of the Madison and Yellowstone. Henry's, or South Pass, is about 6,000 feet, and opens into the Snake valley. Red Rock, or West Pass, 6,300 feet, connects the great valley of the Jefferson branch, while the Madison, or South Pass, opens into the lower Madison. All these passes are so smooth and low that one may ride over them in a carriage at full speed. There is probably not a more interesting geographical point on the American continent where there are within an area of a few miles four such remarkable passes, linking the Pacific and the Atlantic slopes. There is not the slightest obstruction to a railroad over either of these Passes. Emigrants are already following our track of exploration, and within two years the country will be filled with settlers. The railroad company that secures the right of way through this country soon will hold the key to the development of a State. Observations for latitude and longitude have been made by both parties every night when possible. As nearly all the nights have been clear and the weather fine, these observations have been very

numerous, and their value in the location of important points, as well as correcting the old maps, has been great. The Tetons were thirty miles out of place. They were found to be within the boundary of Wyoming Territory, and not in Idaho at all. All these observations will be continued until the 1st of November without interruption. Each party is supplied with three of Green's best Cistern Barometers, with plenty of Aneroids, and Thermometers of various kinds. Especial regard is paid to the climate and to elevations for railroad routes. Particular attention is paid to all results of a practical character, on the principle that the money that enables us to make these explorations comes from the people, and should return, as far as possible, to them, in a shape which will be available to them. The party under Mr. Stevenson is now on its way down the east side of the Snake River Valley. Having carefully surveyed the sources of that river every branch will be carefully located. The party will reach Fort Hall about the 15th of October. It will then survey a parallel belt back to Salt Lake City, thus connecting all our work in the north-west, with the Pacific railroad. The party under my charge will complete the survey of the Madison River, and its branches, then the Gallatin to its sources, then pass over the mountains into the valley of the Yellowstone, down to the snowy range, to the mouth of Shields River, then to the Three Forks of the Missouri, and then down that river to Helena, where our labors will probably close, about the 1st of November. The latitude and longitude of Fort Ellis has been quite carefully fixed by an extended series of observations, by Mr. Gannett with a Transit, and similar observations will be made at Virginia City and Helena.

Besides the two large parties mentioned above, there have been a number of smaller ones operating in various portions of the west under the auspices of this survey. Professor Cyrus Thomas has spent the season in the northwest collecting agricultural statistics and all other information of a practical character. He has been ordered to visit Dakota and Minnesota, and to push his way as far northward into the Red River country as possible. The public may look for a continuation of his agricultural reports as well as papers on insects, etc.

Prof. E. D. Cope, one of our most distinguished scientists, fitted out quite an extensive party at Fort Bridger, at the expense of the survey. He will remain three months in the field. In the first two weeks of his examinations he reported the discovery of over fifty new species of extinct vertebrates, new to science. He will close his season's work by an examination of the celebrated Kansas bone deposits. The results of his labors will be immense to geology, paleontology, and to natural history generally.

Prof. Joseph Leidy, the eminent comparative anatomist of Philadelphia, is also exploring the west for fossil vertebrates. He is also making a study of the minute forms of life, under the microscope, and will present a report on the minute Fauna and Flora of the districts he visits.

Mr. F. B. Meek, accompanied by Mr. H. M. Bannister, of the Smithsonian Institution, has spent about two months along the Pacific railroad, for the purpose of making a critical examination of disputed or obscure points in the geology of that interesting region. Their success has been most satisfactory and a most valuable report may be expected.

Prof. Leo Lesquereux, our great authority on the coal formations, and the fossil plants found with them, has spent most of the summer, assisted by his son, in the West. He first went to Denver, stopping for a time along the Kansas Pacific Railway, thence along the base of the mountains to Santa Fe, New Mexico. He then explored the coal beds around Denver, and proceeded to Cheyenne and made a most critical investigation of the coal formations from Cheyenne to Ogden, along the Union Pacific R. R. Vast numbers of fossil plants, new to science, were discovered, all of which will be described in the forthcoming Annual Report next winter.

The special examination had for their prime objects the determining by the most overwhelming evidence the relations of the great group of Tertiary beds of the West with the Cretaceous. It is the purpose of this survey to take nothing for granted, to accept no statement without indubitable proof, and from year to year a certain amount of force will be concentrated on all the obscure

points in Western geology. The amount of new material in all departments of research, to be illustrated in the quarto series of volumes connected with the Survey, which has been added this present year, surpasses all previous years.

Very respectfully your obdt servant,
F. V. HAYDEN.

— The Montanian.

RULES OF THE THIRD DISTRICT COURT.

The following rules for conducting business in the Third District Court were adopted yesterday, subject to amendment hereafter by the court, if necessary:

CALENDERS.

RULE 1.—One week preceding the commencement of each term, the clerk shall prepare two calendars, one to be known as the "Law and Motion Calendar," the second, the "General Calendar." Causes in which the United States is a party shall have preference over all other causes on either calendar. Causes shall be placed on the General Calendar and the Equity Calendar in the order of their date of issue and numbered consecutively. The General Calendar shall be printed by the clerk, for the use of the court and bar, and furnished by the clerk at a price sufficient to cover the expense of printing.

LAW AND MOTION CALENDAR.

RULE 2.—The Law and Motion Calendar shall contain all causes in which demurrers, motions for judgment on special verdicts, motions for new trial, and all other motions in the progress of a cause, are pending. The clerk shall enter upon this calendar all demurrers and motions as they shall be filed during the term. Causes will be entered on this calendar in the order of the filing of the demurrer or motion. This calendar will be called on the second day of the term, and from day to day thereafter during the first week of the term, until disposed of. Saturdays of each week during the term will be devoted exclusively, when necessary, to the consideration of causes upon this calendar, and no motions will be heard except upon Saturdays, unless by the special order or direction of the court.

GENERAL CALENDAR.

RULE 3.—The General Calendar shall contain all causes in which issues of fact shall have been joined; the clerk shall also add thereto, from time to time, all causes in which issues shall be joined during the term. The General Calendar will be called on the first day of each term and all causes will then be set for trial for some particular day, continued for the term or otherwise disposed of. Applications for setting a cause for a certain day and to correct the calendar, must be made on the first call of the calendar. Causes not answered to by either party will be continued for the term, or, in the discretion of the court, dismissed for want of prosecution. Causes placed upon the calendar subsequent to the opening of the term, may be set down for trial on motion of either party on not less than two days' notice to the opposite party.

WHEN JURY CAUSES WILL BE TRIED.

RULE 4.—Trials by jury will commence after the law and motion calendar has been dispensed of, at the beginning of the term; but no more than ten jury causes shall be set on any one day. No trials by jury shall be commenced on Saturday, unless for special reasons the court so order in a particular case.

EQUITY CALENDAR.

RULE 5.—After the calling of the General Calendar, the clerk shall make up a calendar of equity causes and other causes in which a jury has been waived, or shall not be required. Causes on this calendar will be taken up for trial when the General Calendar shall have been disposed of; but no more than ten causes will be taken up for trial on any one day. Issues of fact in equity causes shall be tried by the court, unless issues shall have been settled therein during the first two weeks of the term, or the court, for good cause shown, should otherwise order.

A trial by jury may be waived and a cause reserved for trial by the court without a jury, at any time during the term before, or at the time, said cause is reached in its order upon the calendar.

DISPOSITION OF CAUSES.

RULE 6.—When a cause shall be regularly called, if the plaintiff or moving party shall fail to proceed, the defendant or opposing party may, unless

the court for sufficient causes shown, shall otherwise order, take a dismissal of the action or motion, or apply for such relief as he may be entitled to; or the cause may be passed to the foot of the calendar.

DEMURRERS.

RULE 7.—In all cases in which demurrers to the complaint shall be overruled, the defendant shall be allowed five days after the entry of the order overruling the demurrer, to answer; and the cause shall thereupon be placed upon the General Calendar for that term. When a demurrer to the complaint has been overruled for want of an appearance of the party demurring, or where, in the opinion of the court, the demurrer was frivolous, or interposed for delay, leave will not be given to the party to answer except upon condition that such party files and serves an affidavit of merits, within five days, or such further time as may be allowed by the court or judge thereof, after notice to the adverse party of the demurrer being overruled, and on payment of such costs as may have been imposed.

ORDER OF BUSINESS ON MOTION DAYS.

RULE 8.—On motion days, the order of business, unless otherwise directed by the court, shall be as follows:

1st, Rendering decisions in such matters before submitted as are ready for decision.

2d, Hearing causes on the Law and Motion Calendars.

Attorneys having motions will hand to the court at any time during the week prior to the adjournment of court on Friday, a memorandum containing the title of the cause in which the motion will be made, and the name of the attorney moving. Causes will be placed on the calendar in the order in which they are received by the clerk. No motions will be heard except those on the calendars, until the calendars are disposed of.

BEAVER COUNTY. — "Stranger" writes from Shenandoah City, Beaver County, to the *Ely Record*, Sept. 5th, as follows:

"William Duncan, a miner of Spruce District, 22 miles west of Shenandoah City, was shot and killed September 2, by his partner, Sam'l Handy, in self-defence. The parties had been interested in some mining claims in Spruce District, in regard to which they had a settlement on Monday last, as Handy intended to leave the District for the present. Duncan disliked the idea of Handy taking his departure, showed fight and went for his pistol, and so did Handy. Duncan shot first, and, missing his man, was shot and killed by Handy. Handy is a man well known and generally liked in this community. He regrets the act, but was forced to protect his life. What little is known of Duncan is not to his credit. The authorities of Beaver City have charge of the affair.

"James Cain, for the murder of Ellison, is in secure confinement in Beaver City, awaiting his trial, which will be some time this month. Beaver City authorities are gratified that the miners of Shenandoah City delivered the murderer into the hands of the law, and promise to give Cain his deserts. That is what we want, and as long as we find justice is done there need be no fear of interference. Ellison leaves a widow in the east.

"W. H. Lighthall, our worthy Recorder, was appointed Justice of the Peace by the County Court of Beaver, Sep. 5. His fellow-citizens elected him some days previous to this office and could not have made a better selection.

"Gilmer & Salisbury a few days ago transferred their station at Beaver (4 miles below Shenandoah), to 12 miles below, and 10 miles from Shenandoah, and have called it River-side Station, from which point the stage takes the new road, passing Rocky and San Francisco District, and crossing the Wha-wha ranch. The new road is about 60 miles shorter. Since this change the distributing postoffice for Beaver county has been located at Shenandoah. Previous to this change the distributing office was at Beaver, when our mail was not received for three or four days. At present every afternoon two stages arrive in Shenandoah, one from River-side Station and the other from Beaver, passing Minersville."

To find how useless a woman can be, go to Saratoga and Long Branch. To learn how useful she actually is, visit rural homes where contentment reigns. It is a mistake to bring up girls in the belief that they have nothing to do in life but to dress, and dance, and talk scandal. Most of us acknowledge this, and yet we go on repeating the mistake.

DEED.

In the 17th Ward of this city, Sept. 10th, SARAH AN. HAYS, aged 57, daughter of George and Elizabeth Moore, of Philadelphia, Pa. Philadelphia Ledger, please copy.