

Astronomical.

How our World looks from other Worlds.

There is no consideration better calculated to exhibit to us how entirely insignificant our earth is as a part of the universe, than that which leads us to realize how our globe would appear to one of its own inhabitants if he could be transported to one after another of the heavenly bodies. The journey of our imaginary celestial traveler need not extend to the fixed stars, for from them the earth is not visible at all. The nearest fixed star is 226,400 times more distant from us than is the sun. Figures convey no idea of this vast interval, for no one can conceive of a trillion, much less of 24 trillions, of miles. A spider thread on that star would blot out the space between sun and earth. Our luminary would appear as a small brilliant dot, our earth, even if it were not lost in the solar effluence, would be absolutely and mathematically invisible. And this on the nearest fixed star, if we proceeded further into the star depths our sun itself would dwindle smaller and smaller and disappear long before the stars were reached which now form the limits of our imperfect observations. If any fixed star is inhabited, the inhabitants are not merely ignorant of our earth but of all the other planets of the solar system, all might be swept away by some vast cataclysm and the rest of the universe would be none the wiser.

Restricting ourselves, however, to the planets of the sun's family, it is probable there are more familiar with our earth's characteristics than we are with theirs; the other three or the people who live on them if we make that violent assumption, probably see no more of us than do the dwellers on the fixed stars. The excursion we have suggested therefore being restricted to the planets, the starting point will be on Mercury, which moves around the sun at an average distance of 42 millions of miles, its year 88 days and each of its seasons three weeks. Since the earth travels on an exterior orbit to that of Mercury just as Mars and Jupiter move in orbits exterior to our own, the best epoch for its observation from Mercury is when that planet, the earth and the sun are in a right line. Then the earth's side nearest Mercury is illuminated and our globe appears as a large brilliant star.

From Venus, the earth presents a far more splendid appearance. Every 584 days it approximates most closely to that planet and is only 180 millions of miles distant. Then it appears as a large bluish white and dazzling star, eclipsing every other in the firmament.

From the Moon, the earth seems a colossal orb. Sun and planets all pass behind it. It has phases like the moon itself; and in beautiful accord with the needs of the lunar day (equal to fifteen terrestrial days) the earth is full at midnight, in quadrature at sunrise, new at noon, and in quadrature at sunset. At full earth, the lunar inhabitant can see the seas and continents, the poles white with snow and the cloud banks floating in the air. A light vapour surrounds the earth which, refracting the light of the millions of stars, make it seem as if our globe were bathed in a pale halo. Probably the view of full earth from the moon when our planet seems fourteen times as large as the sun is one of the grandest celestial spectacles that exist in all the universe.

Continuing our voyage through space, we next reach Mars, 168 millions of miles from the sun. The period when the earth is best visible to the Martian inhabitant is just opposite to the similar period in the cases of Mercury and Venus. Since the earth revolves around the sun in an orbit within that of Mars, its greatest proximity to the latter occurs when between Mars, and the sun. But then it turns its shaded hemisphere to Mars and is therefore invisible. It is necessary then to find, before and after this position, situations in which the earth shows to Mars a portion of its hemisphere illuminated by the sun. The further it is separated from Mars, the greater will be the phase, but on the other hand the smaller will be the disk. There is however a moment of maximum brilliancy which occurs near quadrature. Then the earth appears to the martial eyes as

a bright star and through a telescope as a large crescent. In fact there is an accurate reproduction of the behavior of Venus as regards the earth. As Venus is our morning and evening star, so are we the morning and evening star to Mars. The Martial inhabitant sees the earth as a larger star than Jupiter appears to us, while the brilliancy is such as to render the earth visible in daytime.

To the inhabitants then of Mercury, Venus, the moon, and Mars, the earth stands chief of the heavenly bodies. To those of Jupiter, however, it becomes suddenly of almost total insignificance. The orbit of Jupiter is 576 millions of miles from the sun. Hence the earth in revolving around the sun never appears further from it than 12 degrees. The earth is therefore not visible during the Jovian night, for there the twilight continues some time after sunset, and when twilight has ended, the earth itself has set. Moreover at the only moments when it might be visible from Jupiter the earth is in quadrature, and only half illuminated, and besides, it is too small to be seen by the naked eye. Astronomers on Jupiter could only discover the existence of the earth by telescopes, and at a suitable epoch, as for instance in the east just before sunrise or in the west just after sunset, and then only for a few minutes. They would class our globe as an insignificant little satellite of the sun lost in his fiery beams. Happily for our astronomical reputation on Jupiter, there are circumstances when if we are not visible as a brilliant star we may at least be seen. Some Jovian astronomer hunting for sun-spots might see a little black dot crossing the solar face, that would be a terrestrial transit, and our earth would be the telescopic speck.

The world of Saturn surrounded by its mysterious rings moves at a distance from the sun nine and a half times greater than that separating the sun and earth; or 1,059 millions of miles. From this magnificent planet our globe is a mere point which swings from one side of the sun to the other, thirty times during the Saturnian year, and never distant from the sun more than 6 degrees. The sun itself seems ten times smaller than it does to us. At midnight the sun, fully illuminating the vast rings, causes a brilliant ring-light night. The satellites which move around this strange world vary by their motions and rapidly changing phases the marvellous spectacle. The inhabitants of Saturn however know nothing of our earth, and even if by the construction of colossal telescopes they discovered us, they never could tell whether we were an independent orb or were fastened to the sun. The best name they would apply to us would be "minute blemish" on the solar disk. From Uranus, nineteen times the earth's distance from the sun, or 2,130 million of miles, the earth's annual orbit is simply a little circle, of 3 degrees on each side of the sun. The sun itself, nineteen times smaller than it appears to us, transmits to the Uranian inhabitants seventy times less light and heat. Even during its transits the earth is not perceptible to people on that world. From Neptune, the most distant planet of our system, three thousand million miles away from the sun, the sun seems a huge star, of diameter thirty times less than that seen by us. Here the earth is absolutely invisible; no conceivable instrument could make it seen. Thus, out of the millions of stars which spangle the heavens, out of the vast infinity of worlds there are only five, at most six, to inhabitants on which, if any there be, the existence of this world of ours can be known.—Scientific American.

THE ATMOSPHERE OF MARS.—Mr. R. S. Newall, F.R.S., at the observatory, Gateshead, England, states that on August 23, during the total eclipse of the moon, he observed that Mars is surrounded by a whitish envelope, the diameter being about twenty times that of the planet. He saw it again on Sept. 7 and 19 distinctly. It has a well-defined edge, and is densest nearest to Mars. Small stars were seen through it. Although Mars is farther and farther from us, it will be very brilliant through the November evenings, as it has higher declination and comes to the meridian between 7 and 8 P. M.

Night is the mother of thought.

Correspondence.

For the Christian Messenger.

From Lower California.

ALAMEDA STREET, LOS ANGELES, CAL., October 23, 1877.

Dear Editor,—

The Ninth Session of the Los Angeles Baptist Association was held with the Downey City Church, on the 6th, 7th, 8th and 9th days of Sept., 1877. Although the new Baptist Chapel was large, it was deemed not capacious enough to accommodate the very large congregations likely to assemble in such a central place as Downey City, it being the center of the Los Angeles Valley, and surrounded by towns and villages in every direction; so the brethren had very wisely provided a booth in the midst of a cotton grove, in the suburbs of the city, where some thousands could be, and were, accommodated, not only during the session of the Association, but for six weeks after, day and evening—the meetings being protracted. They are still in progress, having removed to the city chapel, the weather being fine, yet rather cool for the grove. To use an Americanism, the Association was run as a basket meeting, ample provisions being provided, and tables bountifully spread from day to day for every one who desired to partake without money or price. This location is celebrated for camp-meetings, being situated between the old and new San Gabriel Rivers—plenty of water and provender for the hundreds of horses present, the grass abundant, every one bringing his own tether, as the no-fence law prevails all through this country, which is a great advantage to lazy farmers. A herder, or a shepherd, on horseback, is the fence, generally speaking.

The introductory sermon was preached by Rev. G. W. Allen, from Isaiah lii, 1, "Awake, awake, put on thy strength," &c. The usual routine of business gone through was of a local character, not interesting to strangers at a distance. Suffice it to say the session was marked by a great deal of harmony, when this fact is taken into the account, that the discordant elements from both north and south were present. Southern California, and especially this valley, was the great asylum for the South during the late demoralising war. This has sown the seed of discord in not only the Baptist churches, but all others, and is likely to be a bone of contention until the old fossils are dead and buried. But this session was certainly an exception to the general rule. The discussion on the Temperance Report caused a little sharp-shooting, it embracing the Tobacco question also. Rev's. Worrall, D. D., Scott, Hobbs, Allen and Fisk spoke on the subject. The question was, Whether a member who becomes addicted to tipping should repent in or out of the church? Some questions were proposed to the Moderator, such as, How often may a man steal in order to be called a thief? or, How frequently must a man get drunk before he is a drunkard? The meetings were not discontinued, but run as a protracted meeting for five weeks, every day and evening; and many enquirers came forward, about forty, more or less, at some of the meetings, mostly all young men. A number of ministers remained, your humble servant also.

The old Downey Church, the largest in the Association, was greatly revived. Sixteen were baptized at one time, and next Lord's day there are to be from twenty to thirty more; and the work goes on still. Sixteen were immersed at San Jose; this is a village in the County, on the railroad, of which I have spoken before.

"The morning light is breaking, The darkness disappears.

Our Methodist friends have been holding a camp-meeting at Gospel Swamp, a little distance from ours, but with what results I do not know. The Methodist South Church prevails at Downey City, and the Methodist North Church in Los Angeles City. There is no fraternizing between them any more than there is between the Methodists and Baptists. They have both separate organizations in the city, and ministers and colleges. The Disciples are building a college in Downey City.

Dr. Worrall (Baptist), late Professor at the Baptist College, Vaccovill, is

about to erect a college here in Los Angeles. So Southern California will be well supplied.

The drouth in California has been very severe. Thousands of sheep have died, and the Bee Ranches are in trouble; the bees have to be fed to keep them at all. The crops in Southern California are not so short as was expected, except the wheat crop. Deacon Lankersheim, our old friend, instead of raising one hundred thousand bushels, as last year, has not any; and his 13,000 sheep had to be sent away to parts unknown to me. The system of irrigation supply here the lack of rain, and if the water was utilized properly, the whole valley could be watered. There are over 400 Artesian wells at Westminster, in this valley; and the town of Artesia has several. Mr. W. Gillette brought to this town yesterday a mammoth sweet potato grown in his place at Artesia, weighing 16 lbs. 6 oz. It measured two feet eleven inches, one way, and two feet six the other. He raised last year as high as twelve tons of potatoes to the acre, without a particle of irrigation or manure. Artesia is certainly coming out very strong agriculturally. It is contiguous to Gospel Swamp, where they raise some "pumpkins that are pumpkins" W. Hobbs.

Thanksgiving Day.

Thanksgiving Day will be observed throughout our country on Thursday, the 22nd inst. Christians of all denominations will on that day assemble to worship God and to render thanks for His abundant goodness. They will come to the Lord's house with gifts and offerings. Not by words only but by deeds will they express their gratitude.

There are in Halifax a number of charitable institutions dependent in whole or in part on public support; and in whose prosperity the country at large is more or less deeply interested. There are

- 1. The Institution for the Deaf and Dumb,
2. The Asylum for the Blind,
3. The Protestant Orphans' Home,
4. The Inebriates' Asylum,
5. The Infants' Home.

All these institutions are doing Christianlike work, and the Evangelical Alliance ventures to recommend that on Thanksgiving Day a collection be taken for one or more, or for all the five. Some will naturally prefer one object and some another: there is room for choice, and the preferences of each contributor should be duly respected. The Institution for the Deaf and Dumb can point to a record of some twenty years of successful work. The dumb have been taught to speak, and scores have been taught to think and to work and to lead Christian lives. What this institution is doing for the children of silence the Asylum for the Blind is doing for another class not less unfortunate. In this School for the Blind the pupils are taught to read and write, and also to practise some industry by which they can earn an honest livelihood.—The Orphans' Home furnishes a refuge and a place of training for the orphan children of Protestant parents,—none being admitted under two years of age. The children are in due time sent to homes in the country, or otherwise provided for.—The Inebriates' Asylum is intended to help the unfortunate drunkard to escape from his terrible bondage. Already it can point to one and another rescued from destruction by its means. The latest born of our public charities, the Infants' Home, is intended specially for the help of helpless infancy. Babies of all ages under two years are admitted, when their condition would otherwise be utter destitution or a speedy death. Though not yet quite three years in operation, over 150 babes,—some of them fatherless and motherless—some have shared its tender care; and nearly a score of them are growing up, far from scenes of misery and vice, in happy country homes.

The Evangelical Alliance venture to recommend that on Thanksgiving Day, the churches throughout the whole country should remember the unfortunate and the helpless, and show by actual deeds a depth of sympathy which words cannot convey. Is it too much to hope that year after year on Thanksgiving Day institutions such as we have

named will be kindly remembered and thus their capacity for usefulness be greatly enlarged?

It will of course be understood that the Evangelical Alliance does not presume to dictate as to the disposal of their gifts by the charitable on Thanksgiving Day: we only venture to recommend as above,—and we do so in the firm belief that the measure we propose is calculated to be of great and lasting benefit.

Churches acting upon the above recommendation may send their collections to the Treasurer of any of the institutions named, or to either of the undersigned.

By order of the Evangelical Alliance. S. L. SHANNON, President. ROBERT MURRAY, Secretary Halifax, Nov. 5th, 1877.

For the Christian Messenger. St. Margaret's Bay.

Dear Editor,—

I noticed in your paper recently a report of the improvements in building, &c. In passing along the other side of that Bay not long ago, I was led to notice the improvements there, and I would like to refer your readers to a few of them, but especially to those in which the public may be interested. The temperance traveller who goes from Chester, &c. to Halifax must be pleased with the hotel accommodation that is being provided. Mr. E. Hubley, of the fourteen mile house, has put up one of the finest buildings on that road, and in fact there are few better in the city. From what we know of Mr. Hubley there can be no doubt of its being a strictly temperance hotel.

Twenty-one miles from Halifax is the Inkerman House, formerly noted for its "grog" and "Sabbath-breaking." But the old house has changed proprietors, and is now occupied by Geo. Dauphinee, Esq., who has fitted it up in good shape. We felt ready to thank God when we saw in bold letters the words "Temperance House." When Mr. Dauphinee says that, we know it is not a fraud, and we hope the temperance public will give him a liberal patronage.

Quite near to Mr. Dauphinee's is a new Baptist meeting house, built and opened within the last year, but of which I saw no mention in your "Denominational Report" last week. It appears to us the house is well worthy of notice, and the brethren at Margaret's Bay deserve credit for their noble effort in building such a house. Yours in haste, TRAVELLER.

Nov. 5, 1877.

In Memoriam.

DEACON WILLIAM BROWN.

Another standard-bearer in the North Baptist Church has fallen. Deacon Wm. Brown has been taken from the church on earth to join the General Assembly and Church of the first-born which are written in heaven. Our departed brother was born in the North of Ireland, and emigrated to this country in the year 1815—a lad of fifteen years. For upwards of fifty years he was in the service of Her Majesty—as warden in the Naval Hospital. He was a faithful and efficient public servant, and won the confidence and approval of the different Admirals of this station. By industry, economy and prudent management, he was able to secure for himself and family sufficient to enable him to retire from active service. For many years he was a member of the Methodist denomination, but through reading his Bible he became convinced that the only baptism taught there was that of believers. Against his convictions he struggled for a long time; but the path of duty was made so clear and plain that he felt he could no longer live in disobedience, and he was accordingly baptized in the year 1852 by the Rev. John Miller and united with the North Baptist Church. Of him it may truly be said that he loved the church, her interests were dear to his heart. For her he toiled and prayed. In him the pastor invariably found a faithful friend. He was chosen to fill the honorable office of deacon, and as such he served the church faithfully and well. Like a sentinel he stood at his post. Whoever else might be absent from the prayer and conference room, the pastor knew that he might expect to see