

services, although the churches within their bounds number 288. In all, in the six synods named there are 384 churches of the two leading Presbyterian denominations in which Gaelic is preached besides many others connected with other denominations, and in the majority of the large towns of Scotland there are also Gaelic churches.

Fatality of the House of Stuart.

In Scotland we can produce, in the royal line of Stuart, a race as steadily unfortunate as ever were recorded in history. Their misfortunes have continued with unabated succession during 390 years.

Robert III. broke his heart because his eldest son Robert was starved to death, and his youngest son James was made a captive.

James I. after having beheaded three of his nearest kindred, was assassinated by his uncle, who was tortured to death for it.

James II. was slain by the bursting of a piece of ordnance.

James III. when flying from the field of battle, was thrown from his horse, and murdered in a cottage into which he had been carried for assistance.

James IV. fell at Flodden Field.

James V. died of grief for the wilful ruin of his army at Solway Moss.

Henry Stuart, Lord Darnly, was assassinated, and then blown up in his palace.

Mary Stuart was beheaded in England.

James I. of England and VI. of Scotland, died, not without suspicion of being poisoned by Lord Buckingham.

Charles I. was beheaded at Whitehall.

Charles II. was exiled for many years.

James II. lost his crown and died in banishment.

Anne, after a reign which, though glorious was rendered unhappy by party disputes, died of a broken heart, occasioned by the quarrels of her favorite servants.

The posterity of James have remained wanderers in foreign lands.

The year 88 has also been, for several centuries, fatal to the royal house of Stuart:—James III. on June the 11th, 1488, lost a battle to his subjects, by whom he was pursued and assassinated. Mary, Queen of Scots, was beheaded the 8th of February, 1588. James II. of England abdicated the throne of Great Britain on the 12 of December, 1688; and in the year 1788 the last legitimate male of the Stuart family expired.

Strange News from the Australian Skies.

More than a year ago a discovery was announced by an astronomer in the southern hemisphere which seemed so strange and so perplexing, that Sir John Herschel, commenting on it, remarked "that no phenomenon in astronomy had yet turned up presenting anything like the same interest, or calculated to raise so many and such momentous points for inquiry and speculation." One of those mysterious nebulous masses which astronomers had been in the habit of regarding as galaxies, resembling in extent and magnificence the sidereal scheme to which the sun belongs, seemed to be undergoing a most astounding series of changes. During the winter months when Orion shines with full glory, the famous nebula which clings around his pendant sword presents to our northern observers an object similar to the nebula in question. Every one has heard of the strange interest which attaches to this Orion nebula, of the mysterious far-reaching arms which extend from it, the dark central vacancy, and the brilliant array of stars which the six-foot mirror of Lord Rosse has brought into view in the very heart of the nebula. But in the southern skies there is an object of the same class even more glorious and more mysterious. In the richest part of the southern heavens, a part so rich, indeed, that, according to the argument of a well-known astronomer, the splendour of the constellations comprised in it illumines the heavens as a new moon would, there lies the great nebula known among astronomers as "the Nebula in Argo." The Orion nebula can only be seen on the darkest nights, but the great Argo nebula shines as brilliantly as a third-magnitude star, and is scarcely obliterated even by the effulgence of the full moon. It is, in fact, the most splendid nebula in the whole heavens. Yet, this glorious object, whose contemplation has led our most thoughtful astronomers to form new ideas of the grandeur of the universe, whose dimensions seemed immeasurable by any unit of length men could devise, the whole of this magnificent nebula is drifting about like a cloud before a shifting wind.

For the news which seemed so surprising to Sir John Herschel has just been confirmed by the revelations of a new telescope of enormous power. The news had come, first of all, from a small telescope,—only five inches, indeed, in aperture; and it seemed quite possible that the weakness of this instrument (compared with the 19-inc. reflector used by Sir John Herschel during his survey of the southern heavens) might have led to an erroneous impression of change. But now the new four-foot mirror is at work among the southern stars. Surpassed only by the Rosse reflector and matched only by the fine reflector with which Lassell is surveying the heavens at Malta, the great Melbourne reflector is about to place our knowledge of the Southern heavens nearly on the same footing as what we possess respecting the Northern stars. And if the work to be done by this great reflector in after years is shadowed forth by its first great exploit, we may well look eagerly forward for the discoveries it will effect.

Sir John Herschel had said, a year and more ago, that the strange inquiries suggested by the news then lately received about the Argo nebula "must be settled." We cannot do better than use the *ipsisima verba* of the great astronomer:—"The question," he said, "is not one of the minute variations of subordinate features, which may or may not be attributable to differences of optical power in the instruments used by different observers, as in the case of the Orion nebula, but of a total change of form and character—a complete subversion of all the greater and most striking features—accompanied with an amount of relative movement between the star and the nebula, and of the brighter portions of the latter *inter se*, which reminds us more of the capricious changes of form and place in a cloud drifted by the wind, than of anything heretofore witnessed in the sidereal heavens.

Urged on, doubtless, by the importance thus attached to the question by the greatest astronomer of the day, Mr. Le Sueur turned the newly-mounted reflector to the great nebula. The result is now before us. There seems no longer the least room to doubt that the nebula has changed in the most marvellous manner since Sir John Herschel, a third of a century ago, mapped its most striking features. The stars which are strewn over the nebula, and which have been spoken of by Sir John Herschel as probably much nearer to us, have remained unchanged in position, and with one exception have not changed much in relative brilliancy. So that M. Le Sueur has been led to form the opinion that the nebula is much nearer to us than the stars,—a view clearly tending to diminish our ideas of the real dimensions of the nebula, and so rendering the observed changes somewhat less astounding than they otherwise would be. Forbearing to speculate, as, indeed, we have no means of forming an opinion, about the physical causes to which these marvellous changes may be due, let us consider a little the conclusion to which Mr. Le Sueur has been drawn.

Because the stars seen with the nebula have remained unchanged while the nebula itself has shifted about so strangely, the opinion is suggested, says Mr. Le Sueur, that the nebula and the stars are in no way associated. And certainly one would expect to find the changes of the nebula accompanied by very remarkable changes in the star-group, if there were any bond of association between one and the other. Changes more remarkable perhaps than have been noticed in any other part of the sidereal heavens might be looked for.

What, however, if this were actually the case, despite the fixity observed among the stars examined by Le Sueur? We have spoken of one exception to the constancy of these stars in brightness, what if that exception should be more than sufficient of itself to compensate for the fixity of the other stars?

The star that has changed is the famous Eta Argus, the most wonderful star in the whole heavens, and only surpassed in interest by one object,—the nebula in the midst of which it is situated.—*Spectator*.

The Tides.

The cause of the tides is to be found in the action of the sun and the moon. We know that the moon is governed, so to speak, by the sun, which is her centre of gravitation. We know, too, that the moon is similarly controlled by the earth. The obedience of the terrestrial globe to the attraction of the sun specially manifests itself by its movement of translation following the ecliptic. But we can understand that if the terrestrial masses clothed in its solid crust, preserves in this movement its almost exact configuration—thanks to the cohesion of the molecules which compose it—the same cannot be the case with the liquid, and, consequently, very mobile stratum, which partially covers its surface; in other words, we can understand that the solar attraction makes itself felt in a particular manner by the ocean. And,