XXVI.—*Memoir of General Sir Thomas Makdougall Brisbane, G.C.B., &c., President of the Royal Society of Edinburgh.* By ALEXANDER BRYSON, Esq., P.R.S.S.A.

(Read 4th January 1861.)

Sir THOMAS BRISBANE was born at Brisbane House, Largs, on the 23d July 1773. He was descended from the Brisbanes of Bishopton, one of whom, according to Hailes, “held the office of Chancellor of the kingdom of Scotland in 1332.” They possessed a large tract of country, extending from Erskine Ferry to Largs; and had this estate been still in their possession (consisting, as it did then, of Bishopton, Greenock, Ardgowan, Skelmorlie, Largs, and Brisbane), its revenues would have been princely; but Sir THOMAS only inherited the smaller portion of the possessions of his ancestors, Largs and Brisbane.

The father of Sir THOMAS served under the Duke of Cumberland at Culloden in the rank of a Captain, as Aide-de-camp to the Earl of Home, along with the Duke of Argyll. He died in 1812 at the age of 92, distinguished not less by his bravery than by his scholarship. It is worthy of remark, that the father of our late president and the grandfather of the distinguished nobleman who now occupies the chair were at the same battle, and of equal military rank in 1746. Sir THOMAS’S mother was a daughter of Sir WILLIAM BRUCE, Baronet, of Stenhouse, and was thus a descendant in a direct line from ROBERT the BRUCE.

In youth, Sir THOMAS was educated under tutors at home, and then at the University of Edinburgh, from whence he went to an academy at Kensington, where, in mathematics and astronomy, he maintained a high position. Sir THOMAS entered the army as an ensign in the 38th infantry in 1789, although his commission is dated in 1782 (a practice common at that time), he being then only in his ninth year. He was thus at his death the oldest officer in the British army, having held his commission for seventy-eight years, and been in actual service for seventy-one. In 1790, he joined the 38th Regiment in Ireland, where he formed an intimate acquaintance with the future Duke of Wellington, then a lieutenant in a regiment of cavalry. Both of the young heroes were at this period distinguished only by their love of field sports.

When the war broke out in 1793, Sir THOMAS raised an independent company in Glasgow, and joined the 53d Regiment, then quartered in Edinburgh. The 53d formed part of the army of the Duke of York, and served in Holland under

that prince. Captain BRISBANE, then in his 20th year, took part in all the affairs of the Flanders campaign, from St Amand to Nimeguen. In his reminiscences, he has left a spirited account of the affair at St Amand which is worthy of quotation, more especially as it was so often the theme of his after-dinner talk. It was his first battle, and he remembered it best. He says, "The first action of the war took place in the wood of St Amand, from which it became necessary to dislodge the enemy, who were there in large force, their object being to invest Valenciennes, and lay siege to it. The Prince of Cobourg commanded the Austrian army, which consisted of about 80,000 men, finely equipped and appointed, and in a high state of discipline. On the 23d May the enemy, who were strongly entrenched for the purpose of covering Valenciennes, were attacked by the whole of the allied army at day-break, and after a severe action, were completely routed. Several of the enemy's regiments of cavalry made a full charge, but another part of them gave way before the allied army, and the enemy shortly afterwards fled. This engagement presented perhaps one of the grandest spectacles that ever was exhibited in war. The fog, at 3 o'clock in the morning, was so dense, before the action began, that it was impossible to see from the right to the left of the regiment. All at once the fog cleared away like the rising of the curtain of a theatre, and the armies were close in the presence of each other, when the action instantly began. The conflict did not terminate till 9 o'clock at night; and although we gained possession of the enemy's works, the firing did not cease till the darkness of night descended."

Sir THOMAS was wont to remark, that his first and his last military appearance was on the same field. At Valenciennes, in 1793, he fleshed his maiden sword, and there he sheathed it with the army of occupation in 1816. At the engagement at Lille he lost in killed and wounded, twenty-two men out of the thirty-three whom he had brought into action, he himself being also wounded. Of this disastrous campaign, Sir THOMAS remarks, "This was the severest winter I have ever seen in Europe. The troops were literally frozen to the ground every morning, and in one of those severe nights 800 men were frozen to death, and both the Rhine and the Waal were so completely ice-bound, that the 24-pounders, each of which could not be less than three tons in weight, passed with the greatest facility. The former was covered with a layer of ice six feet deep. The British army was ordered to march from Holland into Hanover, where we embarked in the spring of 1795, on the Weser river, for England, at which we landed and marched to Norwich."

From Norwich, Sir THOMAS went with the army to Southampton, in the autumn of 1795, where a large army was forming under Sir RALPH ABERCROMBY, to attack the West India Islands. They sailed in the month of October, but were driven back by severe gales, and did not leave port until November. During this voyage an incident occurred which confirmed Sir THOMAS's love

of astronomy. The transport in which he and his regiment were embarked, was the 'William and Mary,' a Newcastle collier, which had separated from the fleet. Sir THOMAS says, "After our vessel had sailed alone for some weeks, the mate came to my cabin one morning at 4 o'clock and awoke me, to say that they had made the land; but he was afraid it was the main continent. I immediately got upon deck and found the ship among the breakers; and the captain on seeing the danger, said,—'Lord have mercy on us, for we are all gone.' I said that is all very well, but let us do everything we can to save the ship. He ordered the helm to be put hard down; but so completely were the seamen paralysed by their awful situation, that not one of them would touch a rope. With the assistance of the officers, I, with my own hands, eased off the main-boom to allow the ship to pay off, and the sail to draw upon the other tack. Most providentially the wind came from the coast, and filled the sails, and though we were from four till ten in the morning in this critical juncture, yet we found ourselves at length off the bank.

"Reflecting that I might often, in the course of my life and services, be exposed to similar errors, I was determined to make myself acquainted with navigation and nautical astronomy; and for that purpose, I got the best books and instruments, and in time became so well acquainted with these sciences, that when I was returning home I was enabled to work the ship's way; and having since crossed the tropics eleven times, and circumnavigated the globe, I have found the greatest possible advantage from my knowledge of lunar observations and calculations of the longitude. In proof of which, in sailing from Port Jackson to Cape Horn in 1825, a distance of about 8000 miles, I predicted our making the land to within a few minutes. We steered our course to Cape Frio on the Brazil coast, and when I expected it to be near, on account of my observation and reckoning, I got upon deck at 4 o'clock in the morning, to tell the captain to shorten sail, as we had not a run till day-light, upon which he replied, that by his reckoning he was not within 500 miles of it; but when daybreak appeared we were within one league of it, and anchored that evening in Rio de Janeiro. In the course of our passage, we touched at Madeira, and took in supplies. For in one of the severe gales, our ship was struck by a sea which laid her on her beam-ends, carried away all her boats and bulwarks, and the whole of our stock, so that we were literally compelled to live on the salt provisions for six weeks." Of this occurrence Colonel Mansel, who was under Sir THOMAS'S command thus writes,—“On the 12th or 13th of December at midnight, a heavy sea struck us which laid the bark on her beam-ends, carried away our long boat, which was strongly lashed to the deck, and all our live stock we had laid in for our passage to the West Indies, where we arrived on the 29th of February, having lived all that time on salt beef and pork, with lobsouse for an occasional change. We could not light a fire in our small bark for a whole fortnight, and we lived mostly upon raw ham and

biscuit, washed down by a moderate quantity of good old-port; and upon these occasions, I well remember Major BRISBANE's ejaculation,—

“ I sheath my sword for lack of argument,”

setting aside the knife he had been using, such being the happy temperament of his mind.”

At the taking of St Lucia, Sir THOMAS was ordered to attack a fort deemed almost impregnable. On his march up he was met by a brother officer, who remarked, “ It cannot be taken,” when he gallantly replied, “ It can,—I have the order in my pocket;” and he and his men took it. His health having suffered from the climate of the West Indies, his friends purchased for him the lieutenant-colonelcy of the 69th regiment, which had recently come from the West Indies, and was not likely soon to return. In his reminiscences he says, “ I instantly embarked for England, and landed at Portsmouth in 1799, when I waited upon General Whitelock to know where the 69th regiment was stationed. He informed me that it had sailed three weeks before for Jamaica. Finding, from a four years' residence and hard service in the West Indies, that my health had suffered, I was recommended to go to Cheltenham, and in the following year, being 1800, I joined the 69th at Jamaica, and took the command of it, and continued with it until the regiment was ordered home. As soon as I arrived, I called the officers together, and addressed them. I told them that they were well acquainted with the cause that had brought them to this colony, and that I expected the support of every officer in the corps. I warned them that, if this was not promptly and fully afforded, I should report them to the commander-in-chief, to have them removed out of the regiment or out of the service. Fortunately I had no occasion for such a proceeding. On taking the command of the regiment, which was lying at Kingston, I found the men in a very demoralized and unhealthy state from two causes: first, the want of proper discipline and arrangements for their comfort; and second, the soldiers being allowed to lay out nearly all their money on intoxicating drinks in place of vegetables and other things needful for their health and comfort. By a little attention to discipline and the messes of the men, I very soon effected a wonderful change in the health and character of the troops; so much so, that two military hospitals, which had previously been filled with sick, were both shut up, and when we embarked for England only one man was unable to be removed.”

For this signal service Sir George Nugent, governor of Jamaica, thanked Sir THOMAS in these terms:—

PEN, 27th June 1802.

DEAR SIR,—When I made a very favourable report to His Royal Highness, the Duke of York, of the state of the 69th regiment since you took command of

it, I merely did you justice; for I must beg leave to repeat, that I never saw so rapid an improvement on any *corps* during so short a period. I really consider the 69th regiment in every respect as good a *corps* as any in the service; and I did not think it possible they could become so from the very bad state they were in, while under the command of the late lieutenant-colonel and senior captain."

A brother officer who served under Sir THOMAS in the West Indies, and who survives him, relates the following incident, which occurred during their passage home:—"Unfortunately," says he, "we embarked on board an unsound ship, and on our passage from St Vincent to St Kitts she foundered; but before she went down, a boat from the convoy ship arrived to save the lives on board; and as Colonel BRISBANE was in the act of stepping in from the sinking ship, with his nautical instruments in his hands, the lieutenant in charge stopped him, and said his captain had given him peremptory orders to take no baggage of any sort whatever; he therefore could not allow these things to be put into the boat. Colonel BRISBANE immediately retraced his steps, desiring the lieutenant to give his respects to the captain, and to tell him that 'before I part with these things I hold in my hands, I will go down with the ship.' Honest Jack immediately replied, 'Step in, sir.'"

On arriving in England with the 69th regiment, he was stationed at Colchester; and so excellent had been the discipline of the regiment, that the mayor stated that the 69th was the only one which had left that place for a long period without even a single soldier having been brought before a magistrate for any irregularity.

In 1804, when the 69th regiment was ordered to India, Sir THOMAS retired on half-pay, as another campaign in a hot climate was deemed dangerous. During this period he occupied himself in erecting an observatory on his patrimonial estate at Brisbane, and furnishing it with instruments. This observatory is situated in Latitude $55^{\circ} 49' 6''$ north, and in Longitude $4^{\circ} 52'$ west. It contained a transit instrument of $4\frac{1}{2}$ feet focal length, and an altitude and azimuth instrument by the celebrated Troughton; also a mural circle and equatorial instrument, a sidereal and two assistant clocks. With the exception of the observatory on Garnet Hill at Glasgow, it was, at the period of its erection, the only one in Scotland, and was much more complete in its equipment. A plate above the entrance bears the inscription, "Ad Scientiam Astronomicam colendam extruxit T. BRISBANE, Anno Domini 1808."

In 1810 he was appointed assistant adjutant-general to the staff at Canterbury, which he held until he obtained the command of a brigade under the Duke of Wellington, whom he joined at Coimbra in 1812. Sir THOMAS was received with the utmost kindness by the Duke, who said he had two brigades vacant for him,—one in the third and the other in the 7th division; the former commanded by his old friend Sir Thomas Picton, under whom he had served in the West

Indies, and the other under the Earl of Dalhousie. He selected the third division, which he joined at Leo Mill, where he remained until they passed the Douro, to attack the enemy at Vittoria, where they were collected in great force. Of this battle, Sir THOMAS says, "When we got on the height overlooking the town and plain, I examined closely for the French army, but could see no force, and therefore was under the impression that there was to be no action. In this, however, I was very soon undeceived, by a heavy fire commencing from Lord Hill's division, in the wood on our right, on the morning of the 21st June 1813; and, after a considerable period of hard fighting, we saw the enemy give way. I was then ordered to pass the bridge of Cadova with my brigade; and so completely did we take the enemy by surprise, that I passed a large body of French cavalry with the tails of their horses turned towards my brigade.

"We pursued, and seized a strong position from which we drove the enemy, and opened our fire, and continued in pursuit of them through the village of Pontaslin, where the enemy were strongly posted, with formidable artillery. The remainder of the division joined us in the attack, and we soon drove back the enemy, taking from them twenty-eight pieces of artillery, and pressing them under the walls of Vittoria, where they were attacked by the whole army and completely routed.

"So signal was the defeat, that King Joseph's carriages, plate, and wines, and everything belonging to him, fell into our hands; and that same evening I ate off His Majesty's plate and partook of his wine. Had I allowed my men to follow, and pick up the boxes of money which could have been gathered, they might have enriched themselves to a great extent. As it was, I waylaid the stragglers, and made them disgorge their plunder; and next morning I had three such piles of dollars as enabled me to divide five dollars to every soldier belonging to the brigade. This day's action cost the division severely, as we lost 90 officers and 1800 men. My Aide-de-camp, Captain Hay, was severely wounded in the knee by a grape-shot. The enemy were so completely routed that they fled to Bayonne, with the loss of their artillery, camp equipage, and equipments, and without even a single gun."

It was on the evening of this eventful day that Sir THOMAS, standing on a commanding eminence, and while sheathing his sword, remarked to a companion, "Ah, what a glorious place for an observatory!"

Sir THOMAS highly distinguished himself at the battle of the Nive, where the two brigades under his command had 700 killed and wounded. For his conduct in this action he received the thanks of Parliament. He was also present at the battles of Orthes and Toulouse. In speaking of the latter, he relates the following curious anecdote:—"A very singular occurrence happened to myself in this engagement. While standing on the banks of the canal, exposed to a heavy fire from the enemy's artillery and musketry, a cannon shot took off my cocked hat, spun

me round with irresistible force, and knocked me flat on the ground. I was so confused with the violence of the concussion, that I deemed it prudent to send for the officer next in command to be near me, and to take the command of the brigade in case of necessity. While in this state of confusion, I was shot through the left arm by a musket ball, when the blood flowing profusely from the wound immediately relieved my head, and restored me to my senses. This is perhaps a rare instance where a musket ball has proved beneficial to an individual, and even rendered him medical assistance when absolutely requisite."

At the abdication of Napoleon, and when Wellington broke up his army on the Garonne, after the battle of Toulouse, Sir THOMAS was ordered to take the command of a brigade and embark for North America. The embarkation took place at Bordeaux, on board line-of-battle ships, and he arrived at Quebec and proceeded to Montreal, where he did good service in covering the retreat of Sir George Prevost in the affair of Plattsburgh. This he accomplished, without loss of life, by the destruction of the bridge across the Dead Creek. On his assuming the command of the advance, Sir THOMAS found every possible atrocity committed on both sides. The sentries were attacked and isolated individuals murdered. This mode of warfare, so opposite to what had characterized the Duke of Wellington's army, was speedily ended by Sir THOMAS intimating to the American commander, General M'Comb, that the same system should be followed as in European wars. General M'Comb returned a polite reply, and the tomahawk and scalping knife were henceforth laid aside.

The late Colonel Campbell, who accompanied Sir THOMAS from Bordeaux to Quebec, has left a memorandum of the voyage, so characteristic of the General, that it deserves quotation:—"Being curious," says the Colonel, "in matters connected with the navigation of the ship, I occasionally begged to be shown the spot where we were supposed to be, by the officers required to keep reckonings, when I found that the difference of sixty or many more miles in longitude amongst them seemed to be looked upon as trifles; and the bounds or retrograde movements which some of them caused His Majesty's ship to take over the ocean were quite amazing. I had, however, the pleasure of accompanying Sir THOMAS on this voyage, and he was not a little amazed when I told him how gaily, as well as apparently heedlessly, they were all dashing across the Atlantic.

"To a man they looked upon Sir THOMAS BRISBANE'S *attempts* to keep a reckoning as truly absurd, and only laughed when they saw him taking lunars by means of an excellent repeating circle and other instruments, which it was very odd that a *soldier-officer* should possess or know how to use; but from him I always knew within a mile or two our true place upon the globe. On approaching the banks of Newfoundland, as we were comforting ourselves as

well as we could, after the dinner had been removed, upon a fashionable and limited allowance of Bourdeaux wine, before coffee was as usual announced, a master's mate walked into the cabin, followed by a seaman carrying the deep-sea lead. 'Soundings, Sir, at — fathoms,' the seaman holding up at the same time the greased end in order to show some sand or gravel adhering to it. 'Have the goodness, sir, to desire Mr — to heave the ship to, and sound again at 8 o'clock.' 'What think you of this, General?' said the captain, addressing Sir THOMAS; 'I believe you told us that we would not have soundings before to-morrow at the soonest.' 'I only lament,' replied Sir THOMAS, 'that a country like Great Britain should not furnish her ships-of-war with better charts; for, according to that—pointing to a large Admiralty one—we ought only, if the ship maintains her present rate of sailing and course, to be in soundings on the edge of the bank at 8 o'clock to-morrow morning, but I am aware that some of your officers have the ship already high and dry in Newfoundland.' The captain who, like the rest, only laughed at the idea of a soldier-officer making observations, finding that his intended good joke had not taken, upon some pretence or other left the cabin for a few minutes, but having returned to it, he resumed his seat as if nothing had occurred: in walked once more the master's mate. 'I beg pardon, Sir, but I find there has been a mistake; for in some way or other the arming of the lead has been allowed to touch the deck, and a little sand having stuck to it, we were led to conclude that we had struck soundings; the ship was, however, hove to at 8 P.M., midnight, and 4 A.M., but still no soundings. Eight A.M. approached, and we were all on deck.' 'Well, Sir THOMAS, what say you now, how many fathoms?' Sir THOMAS, who, in spite of the prevailing fogs, had, in the course of the night, been able to get a squint, as he usually called it, at some of the heavenly bodies, whilst I noted the time for him by his chronometer, without the least hesitation he mentioned even the number of fathoms, which, to their surprise, were struck accordingly. It may be supposed that no remarks were made, nor any more jokes attempted, but the ship remained hove to, and many a fine cod fish soon thumped the decks with their broad tails, as if to prove that there was no mistake on the part of the *soldier-officer*.

"A ship-of-war was sometime after made out to the westward. She as usual showed her number; it was the — sloop-of-war cruising off the coast of Newfoundland; her captain not long after came on board; he had only left the land the night before, and being asked whereabouts we were, he replied that we were then off French Mistaken Point; but Sir THOMAS BRISBANE, without hesitation, affirmed that we were off English Mistaken Point; and, at the same time observed, that if the captain would only stand on a little further, and, as the fog usually disperses as the land is approached, the point could be easily ascertained. This was accordingly done, and Sir THOMAS, after crossing the Atlantic, was

found to be more correct than the captain of the sloop-of-war, who had only stood out from the land the previous night; indeed, he could not have been a mile out of his reckoning."

On Napoleon's escape from Elba in 1815, the brigade which Sir THOMAS commanded was recalled, and he arrived off the coast of France with twelve regiments of the line just as Waterloo was won. On landing at Portsmouth, he received orders to put himself and his army under the command of the Duke of Wellington, and he joined his Grace at Paris. When he arrived, Wellington directed him to draw up his brigade in two lines of 5000 men each; and his Grace on looking down the lines, exclaimed, "Had I had these men at Waterloo, I should not have wanted the assistance of Prussians."

In 1816, Sir THOMAS was elected corresponding member of the Institute of France, in a manner worthy of the Institute and himself. It was reported to him that a detachment of the Allies were threatening the observatory and the buildings of the Institute; he at once ordered them to desist and sent them to quarters. At the next meeting of the Institute, ALEXIS BOUVARD, the celebrated astronomer, proposed that Sir THOMAS's name should be added to their roll; and although five others were candidates for this distinguished honour, their names were withdrawn, and he was unanimously elected.

In the following year, His Majesty conferred on him, through the Duke of Wellington, the title of Knight of the Cross of Hanover.

While in France with the Army of Occupation, though at leisure he was not idle, for he busied himself in calculating tables for the reduction of English weights and measures to those of France, and *vice versa*. He also computed tables for determining the apparent time from altitudes of the sun and stars. So important were these tables in the estimation of the Duke of Wellington, that he had them printed at the head-quarters of the army. This work is perhaps unique in being printed at and published by the press of an army. It is marked as having been printed by Sergeant BUCHAN of the 3d Foot Guards, at the head-quarters of the army in France in 1818. This work is also interesting, as containing a series of tables calculated by our late President, for the purpose of simplifying the determination of the time with accuracy, from observations of altitudes of the sun taken on the same side of the meridian. Although Sir THOMAS joined this Society in 1811, this was the first paper he contributed to our records, and it was an important one. It was read on the 2d February 1818, and was published in the 8th volume of the Transactions.

For the determination of the time by the sextant, it was usual to make a double set of observations of equal altitudes, before and after meridian. This method was liable to the objection—in our climate a serious one—that it was rarely possible to obtain observations free from clouds at equal intervals, before and after noon; and also, that the coefficient for refraction, caused by differences of

temperature was increased ; and as this correction was frequently overlooked, the results were generally inaccurate. To obviate these, Sir THOMAS proposed to observe simple altitudes of the sun's lower limb at eleven successive intervals, commencing two hours before noon, and near the prime vertical. For this purpose, he employed a 10-inch sextant by TROUGHTON, divided on platina to 10'', with a mercury artificial horizon, or a surface of oil, protected from currents of air by a Troughton's angular roof. Having set his sextant to an even 10' or 20' greater than the sun's altitude, he waited the contact, and noted the time by the chronometer. If it was necessary to take the time after the meridian, he set his sextant 10' or 20' less than the sun's altitude ; and having noted the barometer and thermometer to obtain the correction for mean refraction, he found by these means his time as accurately as if deduced from observations of equal altitudes. For the convenience of observers using this method, he compiled the tables published at the head-quarters of the Army of Occupation in France, to which I have alluded.

He continued with the army in France until 1818, when he was appointed to the command of the southern district of Ireland.

In 1819 Sir THOMAS married Anna Maria, heiress of Sir Henry Hay Makdougall, who survives him. The fruit of this marriage was two sons and two daughters, all of whom predeceased their honoured father.

In 1821 Sir THOMAS was, on the recommendation of the Duke of Wellington, appointed Governor of New South Wales, the arduous duties of which he administered during four years. This appointment was alike honourable to the Duke and Sir THOMAS. The latter used to tell that while the two heroes were walking arm and arm one day in Paris, Sir THOMAS remarked, that he would gladly accept the Governorship of New South Wales, as he was tired of inaction. The Duke remarked that he would write to Lord Bathurst, the Colonial Secretary, on the subject. Not many days after the Duke met him, and with a hearty laugh said, " Do you know, Sir THOMAS, what Lord Bathurst writes me this morning?—that he wants one that will govern not the heavens but the earth, in New South Wales." Sir THOMAS replied warmly, " Your Grace can testify, that during all the years which I have had the honour to serve under you in the Peninsula, whether I have ever suffered my scientific predilection to interfere with my military duties?" " Certainly not, certainly not !" replied the great captain ; " I shall write his Lordship that, on the contrary, you were never in one instance absent or late, and that, in addition, you kept the time of the army."

While Sir THOMAS was Governor of New South Wales he marked his administration by many wise reforms. He relieved the press from a rigid censorship, improved the condition of the convicts, and made their reformation more probable by giving them the blessing of hope, by shortening the periods of servitude. When he arrived in the colony, he found only 25,000 acres cleared, and after a

residence of four years, he had more than doubled the amount. At his own expense, he introduced good breeds of horses, and promoted the cultivation of the vine, sugar-cane, cotton, and tobacco. One grand feature of his administration was the entire toleration and protection which he gave to all Christians.

At Parramatta, fourteen miles from Sydney, he erected an observatory, which has been fitly styled the Greenwich of the Southern Hemisphere. It was furnished with the best instruments by TROUGHTON and REICHENBACH. Some idea may be formed of the labours which, besides his duties as Governor, he voluntarily undertook, when it is stated, that he and his assistants, HERR RÜMKE, and Mr DUNLOP, fixed the position and catalogued 7385 stars, hitherto little known to astronomers. For this magnificent work, "The Brisbane Catalogue of Stars," he received perhaps the highest honour of his life,—certain it is he felt it so. The glory of the many battles he had won, or helped to win, had been rewarded by knighthood and a baronetcy, with stars and medals; but the gold medal awarded him by the Royal Astronomical Society outshone, in his estimation, all his other honours.

The address delivered by the President of the Society, Sir J. F. HERSCHEL, on that occasion, is so highly honourable to Sir JOHN, and so complimentary to Sir THOMAS, that I make no apology for its quotation:—"In pursuance of the award of your Council which you have just heard, I have now to call your attention to the subject of the honorary marks of this Society's approbation, which it is part of our business at this meeting to bestow. The selection of objects on which such distinction may most deservingly and most usefully be conferred has been, in this instance, of much interest and some difficulty, not from a paucity of claims, but from their variety and magnitude. On all sides, both abroad and at home, the spirit of astronomical research and discovery has been diligently alive. The great work which has been commenced on the continent, for the determination of the places of all the stars of our hemisphere in zones, has been continued with a patient ardour to which no words can do justice. The heavens have been ransacked for double stars, and the results of the search developing a most rich and unlooked for harvest of striking discoveries, being the first fruits of the great telescope of FRAUENHOFER, have been consigned to immortality, in a work which does honour to its age and nation, and which has already been brilliantly rewarded in another quarter. The ingenuity of one of our own countrymen has placed new, simple, and powerful means in the hands of observers for verifying the stability of their instruments, and determining their fluctuations; and in every quarter, to go no further in this detail, an activity worthy of the high ends and dignity of our science has been remarkably displayed.

* Transactions Royal Astronomical Society, vol. iii. p. 399.

“Among so many important labours, however, some of which are awaiting their final completion, or receiving the last touches of their authors, the attention of your Council has been fixed by the imposing mass of valuable observations which has emanated, during a series of years, from the observatory at Parramatta, established by the late governor of the colony of New South Wales, Sir THOMAS MAKDOUGALL BRISBANE, one of our vice-presidents, long distinguished among us by his ardent love of astronomy, and an intimate familiarity both with its theory and practice.

“Nothing can be more interesting in the eyes of a European astronomer, especially to those whose field of research, like our own, is limited by a considerable northern latitude, than the southern hemisphere, where a new heaven as well as a new earth is offered to his speculation, and where the distance, the novelty and the grandeur of the scenes thus laid open to human inquiry, lend a character almost romantic to their pursuit. A celestial surface equal to a fourth part of the whole area of the heavens, which is here for ever concealed from our sight, or whose extreme borders, at least, if visible, are only feebly seen through the smoky vapours of our horizon, affords to our antipodes the splendid prospect of constellations different from ours, and excelling them in brilliancy and richness. The vivid beauty of the southern cross has been sung by poets, and celebrated by the pen of the most accomplished of civilised travellers; and the shadowy lustre of the Magellanic clouds has supplied imagery for the dim and doubtful mythology of the most barbarous nations upon earth. But it is the task of the astronomer to open up these treasures of the southern sky, and display to mankind their secret and intimate relations.

“Apart, however, from speculative considerations, a perfect knowledge of the astronomy of the southern hemisphere is becoming daily an object of greater practical interest, now that civilization and intercourse are rapidly spreading through those distant regions, that our own colonies are rising into importance, and that the vast countries of South America are gradually assuming a station in the list of nations corresponding with their extent and natural advantages. It is no longer possible to remain content with the limited and inaccurate knowledge we have hitherto possessed of southern stars, now that we have a new geography to create, and latitudes and longitudes without end to determine by their aid. The advantages, too, to be obtained, even for the perfect and refined astronomy of the north, by placing nearly a diameter of the globe between the stations of observatories, and taking up the objects common to both hemispheres in a point of view and under circumstances so every way opposite to those which exist here, have been strongly pointed out by a venerable and illustrious member of this Society, in an elaborate paper published in its Memoirs, and would alone suffice to justify a high degree of interest as due to every well-conducted series of observations from that quarter.

“The observations of HALLEY at St Helena had made known the places of a moderate number of the brighter southern stars ; but the only catalogue of any extent and accuracy which existed previous to the establishment of the observatories at the Cape and Parramatta, was that of LACAILLE, who spent three years at the Cape of Good Hope and the Isles of France and Bourbon, and though with very inadequate instrumental means, yet, by dint of the most indefatigable industry, succeeded in observing and registering upwards of 10,000 stars.

“But by far the greater part of these observations have never been reduced ; a selection only from them of 1942 of the principal ones, not amounting to a fifth of their whole number, having been formed into a catalogue and published by this meritorious astronomer. It must be admitted, however, that the degree of accuracy stated by LACAILLE himself to have been probably attained by him is hardly such as to make us now very deeply regret their want of reduction, especially as the observations themselves are printed with every requisite for that purpose when required. Still, however, from his method of observing, which was with a fixed telescope and rhomboidal network, his observations have what may be termed a dormant value, as they most probably give correct differences for each night's work ; and when a catalogue of standard southern stars shall be completed, LACAILLE'S observations will become available by regarding these as Zero points, and referring all the rest to them.

“Such was nearly, with little improvement, the state of the astronomy of the southern hemisphere when Sir THOMAS BRISBANE was appointed governor of the colony of New South Wales. The intention of our Government to found an observatory on the largest scale at the Cape of Good Hope was indeed already fixed ; and the observer, a member of this Society, supplied with instruments sufficient for the purpose of constructing a preliminary catalogue, occupied himself with the necessary observations, while awaiting the arrival of those ultimately destined to adorn that establishment, and the building of his observatory. The appropriate catalogue so constructed and reduced, containing all the southern stars observed by LACAILLE, down to the fifth magnitude, is already printed by the Royal Society in their Transactions.

“Sir THOMAS BRISBANE'S attachment to astronomy had ever been a prevailing principle of his mind, and one which, even amidst the distractions of a military life of no ordinary degree of activity and adventure, he found means to indulge, and which never deserted him, however the calls of his country might demand his services in a different and more splendid career. His appointment to the important office of governor of New South Wales, however, put it in his power to execute to their fullest extent, and under the most favourable circumstances, plans of astronomical investigation which to a private individual would have been utterly impracticable. The opportunity was embraced with eagerness. The best instruments, consisting of an excellent transit of $5\frac{1}{2}$ feet focal

length, by TROUGHTON; a mural circle of 2 feet in diameter, the workmanship also of TROUGHTON, and said to have been the model on which that of Greenwich was constructed, and which had long been in his possession; and a fine 16-inch repeating circle of REICHENBACH, were destined for this service, and two gentlemen engaged as assistants at considerable salaries,—the one a foreigner of high estimation as a mathematician and calculator, the other Mr DUNLOP, of whom I shall have occasion to say much more. It ought to be mentioned that this noble equipage was furnished entirely from Sir THOMAS'S private fortune, and maintained wholly at his own expense.

“Immediately on his arrival in the colony in 1821, and so soon as an observatory could be erected and the instruments established, the work of observation commenced, and continued, with little interruption, under the immediate superintendence and direction of Sir THOMAS BRISBANE himself, who, though the pressing and important duties of his high office would of necessity seldom admit of his devoting any material proportion of his time to actual observation, yet frequently took a personal share in the labours of the observatory as a relaxation from higher duties; and, in particular, a great portion of the transits were made by himself. The first fruits of this enterprise were the observations of the December solstice of 1821, which were published in the astronomical notices of SCHUMACHER; in which work also appear those of both the solstices of 1822, and a number of detached and occasional observations, which reached Europe at different times by a variety of channels, and found their way into that valuable collection.

“The solstices of 1823 were communicated by Sir THOMAS BRISBANE to this Society in a letter to our late worthy President, together with a considerably extensive series of observations of principal stars, chiefly those visible in both hemispheres, and which have undergone a careful reduction and close scrutiny in the hands of Dr BRINKLEY, the details of which, as well as the original observations, are printed in the first part of the second volume of the Memoirs of this Society, and which justify in the eyes of that experienced observer, as they must in those of every practical astronomer, a decided opinion of the great care and skill with which they have been made.

“A great number of occasional observations, such as eclipses, occultations and observations of the planets Venus and Uranus near their conjunctions and oppositions, and of comets from the same source, are also printed in the same volume. One of the most remarkable single results we owe to the establishment of Sir THOMAS BRISBANE'S observatory, consists in the re-discovery of the comet of ENCKE in its predicted place, on the 2d of June 1822.

“The history of this extraordinary body is well known to all who hear me, and as its re-discovery at Parramatta by Mr RÜMKER has already been on a former occasion distinctly noticed and rewarded by this Society, there is no occasion that I should here enlarge on it; and yet I cannot help pausing a

moment to figure the delight its celebrated discoverer must have experienced to find the calculations on whose exactness he had pledged himself thus verified beyond the gaze of European eyes, and this strange visitant, gliding, as if anxious to elude pursuit, into its primitive obscurity, thus arrested on the very eve of its escape, and held up to mankind a trophy at once of the certainty of our theories and the progress of our civilization.

“Observations of the length of the pendulum were not neglected by Sir THOMAS BRISBANE; and the determination of this important element at Parramatta forms the subject of a highly interesting and valuable communication to the Royal Society, and printed by them in their Transactions for 1823, and discussed by Captain KATER, with his usual ease and exactness.

“The remainder, and indeed the great mass of the observations made with the mural circle and transit instrument, have at different periods been communicated to the Royal Society, and are, for the present, deposited in its archives.

“Forming our judgment only upon those of which an account has been publicly read at meetings of that illustrious body, but which are understood to constitute only a comparatively small part of the whole, they form one of the most interesting and important series which has ever been made, and must ever be regarded as marking a decided era in the history of southern astronomy.

“It is for this long catalogue of observations, whether scattered through the journals of Europe, printed in our own memoirs, or deposited as a precious charge in the care of a body so capable of appreciating their merits, but still more for the noble and disinterested example set by him in the establishment of an observatory on such a scale, in so distant a station, and which would have equally merited the present notice had every observation perished on its voyage home, that your Council have thought Sir THOMAS M. BRISBANE deserving the distinction of a medal of this Society, which, as he is unable personally to attend this meeting, I will now deliver to his proxy, Mr SOUTH.

“Mr SOUTH, we request you to transmit to Sir THOMAS BRISBANE this medal, accompanied with the strongest expressions of our admiration of the patriotic and princely support he has given to astronomy in regions so remote. It will be a source of honest pride to him while he lives, to reflect that the first brilliant trait of Australian history marks the era of his government, and that his name will be identified with the future glories of that colony, in ages yet to come, as the founder of her science. It is a distinction truly worthy of a British governor. The colonial acquisitions of other countries have been but too frequently wrested from unoffending inhabitants, and the first pages of their history blackened by ferocious conquests and tyrannical violence. The treasuries of gold and silver they have yielded—the fruits of rapine—have proved the bane of those who gathered them; and in return, ignorance and bigotry have been the boons bestowed on them by their parent nations. Here, however, is a brighter prospect.

Our first triumphs in those fair climes have been the peaceful ones of science; and the treasures they have transmitted to us are imperishable records of useful knowledge, speedily to be returned with interest to the improvement of their condition, and their elevation in the scale of nations."

Since this beautiful address was delivered by Sir JOHN HERSCHEL, the observations made at Parramatta of ENCKE'S comet have formed the basis—and a solid one—for the most sublime speculations of the astronomers of our time. This remarkable body performs its revolution round the sun in $3\frac{1}{2}$ years, and has been observed to complete its rotation in a constantly decreasing period, verging year by year nearer to the sun. From this fact, astronomers have concluded, that all the planets are moving in a thin, attenuated, but yet resisting medium, and that our earth, and all its associates, are winding through a long spiral orbit towards the sun, and must fall at last into its burning atmosphere.

On his return from Australia, Sir THOMAS resided chiefly at Makerstoun, where he established an astronomical observatory surpassing any other in Scotland at the time; the equatorial alone, by TROUGHTON and SIMS, having cost him upwards of £600.

When the British Association undertook the question of the laws of the earth's magnetism, Sir THOMAS joined most zealously in the cause; and had it not been for his almost princely munificence, Scotland would have been left unrepresented in the great congress of magnetic inquiry. In 1841 he established his magnetic observatory at Makerstoun, certainly not inferior to any in Europe. With the assistance of a very able staff of assistants, of whom Mr ALLAN BROWN (now astronomer to the Rajah of Travancore) was director, he sent forth three large volumes of Observations, which were published at the joint expense of this Society and Sir THOMAS, and for which he was awarded the highest honour in their gift, the Keith Medal. Principal FORBES has well said of these works, that "they form probably the greatest contribution made to science by Sir THOMAS BRISBANE—hardly even excepting the establishment of the Australian observatory. They have a double interest for us, as being a unique contribution to the science of his native country; and he was liberally anxious that the Royal Society should be so far associated with him in this truly patriotic work."

Whilst resident at Makerstoun he was offered the command of the troops in Canada, and shortly afterwards the chief command in India, but the advice of his medical friends constrained him to decline both of these honourable preferments. On the death of Sir WALTER SCOTT in 1833, he was elected President of this Society, and showed his high appreciation of the honour by the deep interest he always took in its welfare, and lastly, by founding the Brisbane Biennial Medal for scientific merit.

To the Royal Society of Arts he also presented a similar token of his zeal for practical science.

During the latter years of his life he resided on his patrimonial estate at Brisbane, devoting his whole time to science and philanthropy. For the education of the young he always displayed a deep solicitude; and the Brisbane Academy at Largs, which he endowed, will ever be a monument of his enlightened zeal and munificence.

He died at Brisbane on the 27th January 1860, in the same room in which he was born eighty-seven years before, regretted and beloved by all who esteem bravery and science, and the best graces of the Christian character.