

of these islands excited the zeal of enthusiasts, and the cupidity of speculators, and a plan was set on foot to colonize them. The Virginia company sold their right to the islands to one hundred and twenty of their own members, who erected themselves into a distinct corporation, under the name of the "Somers Island Society;" and Mr. Richard More was sent out, in 1612, as governor, with sixty men, to found a colony: and this leads me to the second branch of this research.

THE THREE KINGS OF BERMUDA, AND THEIR TREASURE OF AMBERGRIS.

At the time that Sir George Somers was preparing to launch his cedar-built bark, and sail for Virginia, there were three culprits among his men, who had been guilty of capital offences. One of them was shot; the others, named Christopher Carter and Edward Waters, escaped. Waters, indeed, made a very narrow escape, for he had actually been tied to a tree to be executed, but cut the rope with a knife, which he had concealed about his person, and fled to the woods, where he was joined by Carter. These two worthies kept themselves concealed in the secret parts of the island, until the departure of the two vessels. When Sir George Somers revisited the island in quest of supplies for the Virginia colony, these culprits hovered about the landing-place, and succeeded in persuading another seaman, named Edward Chard, to join them, giving him the most seductive pictures of the ease and abundance in which they revelled.

When the bark that bore Sir George's body to England had faded from the watery horizon, these three vagabonds walked forth in their majesty and might, the lords and sole inhabitants of these islands. For a time their little commonwealth went on prosperously and happily. They built a house, sowed corn, and the seeds of various fruits; and having plenty of hogs, wild fowl, and fish of all kinds, with turtle in abundance, carried on their tripartite sovereignty with great harmony and much feasting. All kingdoms, however, are doomed to revolution, convulsion, or decay; and so it fared with the empire of the three kings of Bermuda, albeit they were monarchs without subjects. In an evil hour, in their search after turtle, among the fissures of the rocks, they came upon a great treasure of ambergris, which had been cast on shore by the ocean. Beside a number of pieces of smaller dimensions, there was one great mass, the largest that had ever been known, weighing eighty pounds, and which of itself, according to the market value of ambergris in those days, was worth about nine or ten thousand pounds!

From that moment, the happiness and harmony of the three kings of Bermuda were gone for ever. While poor devils, with nothing to share but the common blessings of the island, which administered to present enjoyment, and had nothing of convertible value, they were loving and united: but here was actual wealth, which would make them rich men, whenever they could transport it to a market.

Adieu the delights of the island! They now became flat and insipid. Each pictured to himself the consequence he might now aspire to, in civilized life, could he once get there with this mass of ambergris. No longer a poor Jack Tar, frolicking in the low taverns of Wapping, he might roll through London in his coach, and perchance arrive, like Whittington, at the dignity of Lord Mayor.

With riches came envy and covetousness. Each was now for assuming the supreme power, and getting the monopoly of the ambergris. A civil war at length broke out: Chard and Waters defied each other to mortal combat, and the kingdom of the Bermudas was on the point of being deluged with royal blood. Fortunately, Carter took no part in the bloody feud. Ambition might have made him view it with secret exultation; for if either or both of his brother potentates were slain in the conflict, he would be a gainer in purs and ambergris. But he dreaded to be left alone in this uninhabited island, and to find himself the monarch of a solitude: so he secretly purloined and hid the weapons of the belligerent rivals, who, having no means of carrying on the war, gradually cooled down into a sullen armistice.

The arrival of Governor More, with an overpowering force of sixty men, put an end to the empire. He took possession of the kingdom, in the name of the Somers Island Company, and forthwith proceeded to make a settlement. The three kings tacitly relinquished their sway, but stood up stoutly for their treasure. It was determined, however, that they had been fitted out at the expense, and employed in the service, of the Virginia Company; that they had found the ambergris while in the service of that company, and on that company's land; that the ambergris, therefore, belonged to that company, or rather to the Somers Island Company, in consequence of their recent purchase of the island, and all their appurtenances. Having thus legally established their right, and being moreover able to back it by might, the company laid the lion's paw upon the spoil; and nothing more remains on historic record of the Three Kings of Bermuda, and their treasure of ambergris.

The reader will now determine whether I am more extravagant than most of the commentators on Shakspeare, in my surmise that the story of Sir George Somers' shipwreck, and the subsequent occurrences that took place on the uninhabited island, may have furnished the bard with some of the elements of his drama of the

Tempest. The tidings of the shipwreck, and of the incidents connected with it, reached England not long before the production of this drama, and made a great sensation there. A narrative of the whole matter, from which most of the foregoing particulars are extracted, was published at the time in London, in a pamphlet form, and could not fail to be eagerly perused by Shakspeare, and to make a vivid impression on his fancy. His expression, in the Tempest, of "the still vext Bermoothes," accords exactly with the storm-beaten character of those islands. The enchantments, too, with which he has clothed the island of Prospero, may they not be traced to the wild and superstitious notions entertained about the Bermudas? I have already cited two passages from a pamphlet published at the time, showing that they were esteemed "a most prodigious and enchanted place," and the "habitation of divells;" and another pamphlet, published shortly afterward, observes: "And whereas it is reported that this land of the Bermuda, with the islands about, (which are many, at least an hundred,) are enchanted, and kept with evil and wicked spirits, it is a most idle and false report."*

The description, too, given in the same pamphlet, of the real beauty and fertility of the Bermudas, and of their serene and happy climate, so opposite to the dangerous and inhospitable character with which they had been stigmatized, accords with the eulogium of Sebastian on the island of Prospero:

"Though this island seem to be desert, uninhabitable, and almost inaccessible, it must needs be of subtle, tender, and delicate temperament. The air breathes upon us here most sweetly. Here is every thing advantageous to life. How lush and lusty the grass looks! how green!"

I think, too, in the exulting consciousness of ease, security, and abundance, felt by the late tempest-tossed mariners, while revelling in the plenteousness of the island, and their inclination to remain there, released from the labours, the cares, and the artificial restraints of civilized life, I can see something of the golden commonwealth of honest Gonzalo:

"Had I plantation of this isle, my lord,
And were the king of it, what would I do?
I' the commonwealth I would by contraries
Execute all things: for no kind of traffic
Would I admit; no name of magistrate;
Letters should not be known; riches, poverty,
And use of service, none; contract, succession,
Bourn, bound of land, tilth, vineyard, none:
No use of metal, corn, or wine, or oil:
No occupation; all men idle, all

All things in common, nature should produce,
Without sweat or endeavour: Treason, felony,
Sword, pike, knife, gun, or need of any engine,
Would I not have; but nature should bring forth,
Of its own kind, all foison, all abundance,
To feed my innocent people."

But above all, in the three fugitive vagabonds who remained in possession of the island of Bermuda, on the departure of their comrades, and in their quarrel about supremacy, on the finding of their treasure, I see typified Sebastian, Trinculo, and their worthy companion Caliban:

"Trinculo, the king and all our company being drowned, we will inherit here."

"Monster, I will kill this man; his daughter and I will be king and queen, (save our graces!) and Trinculo and thyself shall be viceroys."

I do not mean to hold up the incidents and characters in the narrative and in the play as parallel, or as being strikingly similar: neither would I insinuate that the narrative suggested the play; I would only suppose that Shakspeare, being occupied about that time on the drama of the Tempest, the main story of which, I believe, is of Italian origin, had many of the fanciful ideas of it suggested to his mind by the shipwreck of Sir George Somers on the "still vext Bermoothes," and by the popular superstitions connected with these islands, and suddenly put in circulation by that event.

* "Newes from the Bermudas:" 1612.

COMETS.

BY WILLIAM MITCHELL, OF NANTUCKET.

There is perhaps no department of astronomical science, connected with the solar system, of a nature more interesting than that of Comets, and certainly no one which has so nearly defied the researches and the reasonings of the astronomer. Aside from these bodies, if such they may be called, the greater and the lesser lights have been subjected to rigorous weight and measure, and the solar system is emphatically the beaten way of the astronomer. Comets, however, have presented difficulties so insuperable, that in later times the subject seems to have been nearly abandoned in despair. Impressed forcibly in my youth by the beautiful appearance of the comet of 1807, and, at a riper age, with those of 1811, 1819, 1825, and 1835, visible to the naked eye, and with others, seen at various periods by telescopic aid, I have been led frequently to reflect on the probable nature and physical properties of these erratic objects, and especially on that distinguishing appendage, which by common consent is denominated the tail. In looking over the history of comets, and noting the explanation of the trains, (with which they are for the most part attended) as given by many

distinguished astronomers, at periods very remote from each other, I am constrained to acknowledge, high as the authority unquestionably is, that no one has afforded to my mind the slightest satisfaction. Notwithstanding the great number of writers on this subject, and the diversity of opinions that have been promulgated, there appears to have been only two prevailing theories. The more ancient of these supposed the tails to be formed by the lighter parts being thrown off by the resistance of the ether through which the comet passed. The modern and the more generally prevailing theory is, that these particles are driven off by the impulsive force of the sun's rays. In each of these theories, the tails are supposed to consist of matter. With regard to the former theory, the simple fact that the tail precedes the comet in its course through a portion of its elliptical journey, is a sufficient refutation; and to afford weight or plausibility to the latter, it is necessary to assume that the sun "blows heat and cold with the same breath—in other words, that it attracts and repels with the same *modus operandi*. If we have no evidence of a repulsive force in the sun, to say nothing of a force sufficient to repel the lighter particles of these bodies to a distance from the head of the comet, equal to and sometimes exceeding a hundred million of miles, this theory, to say the least of it, is laboured and unsatisfactory. The length of these trains is far from being exaggerated. Referring to my minutes of the late return of Halley's comet, I find that, at one period, the tail, by direct vision, subtended an angle of twenty degrees, and on some occasions, by oblique vision, more than forty degrees. The tail of the comet of 1689 is said to exceed sixty-eight degrees, and that of the comet of 1680, ninety degrees. Making a proper allowance for the faintness of the extremity of the tail, and the obstruction of the view by the atmosphere of the earth, it is by no means unsafe to conclude that many of them extend some hundreds of millions of miles from the nucleus of the comet.

In view, then, of the last mentioned theory, it is by no means a matter of surprise that Newton, and with him LaPlace and Sir J. Herschel, should entertain the opinion that the more remote particles could never be recalled by the gravitation of the nucleus, and that portions of the tails were at each revolution scattered in space, and hence that comets were continually wasting.

Arago, in speaking of the then anticipated return of Halley's comet in 1835, makes the following remarks:—"It appears probable, that in describing their immense orbits, comets, at each revolution, dissipate in space all the matter which, when they are near the perihelion, is detached from the envelope forming the tail; it is therefore very possible that in time some of them may be entirely dissipated." But these views were not confirmed by the appearance of Halley's comet in 1835, and Arago has with a very becoming candour acknowledged this fact. "If the reader," says he, "will take the trouble to compare what I record of the comet of 1835, with the circumstances of its former apparition, he certainly will not find in this collection of phenomena, the proof that Halley's comet is gradually diminishing. I will even say that if, in a matter so delicate, observations made at very different periods of the year will authorise any positive deduction, that which would most distinctly result from the two passages of 1759 and 1835, would be that the comet had increased in size during that interval. I ought to seize with more eagerness this occasion to combat an error extensively accredited, (a belief in the constant wasting away of comets) because I believe I have somewhat contributed to its dissemination."

The truth is, as I apprehended, that the data on which this conjecture was based, are probably false, and the tails of comets, if the subject is properly investigated, will not be found to consist of matter at all that has the least connection with the comet, but formed by the sun's rays slightly refracted by the nucleus in traversing the envelope of the comet, and uniting in an infinite number of points, beyond it, throwing a stronger than ordinary light on the ethereal medium, near to or more remote from the comet, as the ray from its relative position and direction is more or less refracted.

It is not important to the truth of this hypothesis whether the nucleus be a solid mass or not, so that it be more dense than the surrounding nebulousity, nor yet that the tail be projected in an exact line with the radius vector of the sun and comet, so that it should be nearly so. It is, however, important to its truth, that an ethereal medium should exist, otherwise the reflection of these points would be impossible; also, that the comet should assume the tail as it approaches the sun, and that it should progressively increase in length and brilliancy, the light of the sun increasing in the proportion of the square of the diminution of the distance; again, that the tail should have a cylindrical and hollow appearance, the rays of light being at least partially obstructed by the nucleus, moreover, that the tail should be curved, by the necessary effect of aberration. I apprehend it will be acknowledged that the weight of testimony is decidedly favourable to the fact that the nuclei of comets, though they generally resemble planets in form and brilliancy, may not be solid or opaque, inasmuch as some are unquestionably transparent, and the quantity of matter in all is exceedingly inconsiderable.

Pfesssor Struve saw a star of the eleventh magnitude through the Encke comet; Sir William Herschel noticed one of the sixth magnitude through the centre of the comet of 1795; and his illustrious son, in a memoir communicated to the Royal Astronomical Society, mentions that he saw a cluster of stars of the sixteenth magnitude very near the centre of Biela's comet. Notwithstand-