MORRELL'S VOYAGE
TO THE AFRICAN
GUANO ISLANDS.

WITH A PREFACE,
BY LIEUT. P. PETRIE, R.N.
MORRELL'S NARRATIVE
OF A VOYAGE TO THE
SOUTH AND WEST COAST OF AFRICA:
CONTAINING
THE INFORMATION FROM WHENCE ORIGINATED
THE PRESENT TRADE IN
GUANO,
FOUND ON CERTAIN ISLANDS ON THAT COAST.

WITH
A PREFATORY ADVERTISEMENT

BY LIEUT. PETRIE, R.N.

AND AN APPENDIX,
COMPRISING
NOTICES OF THE NATURAL AND CHEMICAL HISTORY OF
GUANO, ANALYSES OF NUMEROUS SAMPLES, AND
TABLES OF THE RELATIVE VALUE
OF BOTH THE AFRICAN AND PERUVIAN KINDS.

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PREFATORY ADVERTISEMENT.

With the view of satisfying public curiosity, and in the hope that it will be beneficial to the interests of the commerce and agriculture of the country, I have been led to republish Morrell's third voyage, in which is contained, amongst other highly interesting matters, the information which gave rise to the all-absorbing trade in Guano, to the islands on the South and West Coast of Africa.

Morrell's work, consisting of the narrative of four voyages, has for some years been in my possession. Mr. Wm. Scott, an apprentice of mine, and relative, who had been an officer with him, first directed my attention to his enterprising character, and to the many interesting, often wonderful, but no less true statements found in his book. Having myself examined, in the course of a two years' voyage, many of the places in the Pacific, described by him, I can testify both as to the general faithfulness and value of his observations.

Like many other enterprising and patriotic men, he seems to have been but indifferently treated by his country. He was considered an enthusiast, and his plans for opening a trade to Africa, after finishing this voyage, were designated chimerical.
Chagrined with the reception which his proposals met, in the language of disappointment he exclaims "I have been fated to sustain an unequal combat with the giants of prejudice and the hyras of malice and jealousy."

The natural and chemical history of Guano, with some observations on its application as manure, has been added in the form of an Appendix, in which are contained observations that will be found, it is thought, useful to the navigator, the merchant, and the agriculturist, as pointing out to the attention of the two former, those physical agencies without which there can be no amount of deposit of Guano in any part of the globe,—and to the attention of the latter, in what consists its real value as a fertilizer.

P. PETRIE, LIEUT. R. N.

London, May, 1844.
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CHAPTER I.


Having taken the command of the schooner Antarctic, of New York, 172 tons burthen, built expressly for the voyage, I went on board on Wednesday, 25th of June, 1828, at 1 p.m. I found the pilot lying off-and-on; we immediately proceeded down the bay, with a light breeze from south-south-west, and fair weather. At 6 p.m., we discharged the pilot, and at 8, we took our departure from Sandy Hook Light, bearing N.W., distant five leagues, wind as before.

I thus commenced another voyage to distant regions, with a fine new substantial vessel, and a strong healthy crew of twenty-three active men, in whose faces the love of enterprise, and the hope of bettering their circumstances, had kindled the most animating smiles of cheerfulness. We were embarked on what was then expected to be a two years' voyage on the coast of Africa, in the South Seas, and in the South Pacific Ocean.

But however animated and cheerful men may appear on such occasions, could we look into the secret recesses of their bosoms, we should there find some acute feelings of the most touching character. As their native land recedes from view, and becomes finally lost in the distant horizon, a feeling of desolation steals over the heart, which even the most active duties will not immediately dissipate. Country, family, friends, are all far behind; while the thick veil which conceals the future is impervious to every thing but the rays of hope. In all human probability, there are some individuals in every outward-
bound ship's company, who have gazed upon their
native land for the last time; and the heart of each
instinctively asks, "Lord, is it I?" But were we even
permitted to look so far into the future as to obtain sa-
tisfactory assurance of our own safe return, another
question would immediately follow, of equally intense
interest; What ties of affection will be severed by death
during our absence?

"For sailors, though they have their jokes,
Still think and feel like other folks."

Many of my crew were fine, active, noble-spirited
young men, of respectable families and connexions in
the city of New York. They duly felt and appreciated
the tender ties of affection and kindred. They had pa-
rents, brothers, sisters,—and some of them attachments
of a still more interesting character; and when I caught
their eager countenances turned to the fast-receding
heights of Neversink, I respected the sentiment too
much to throw any unnecessary check across its current.
I felt that there was a chord in my own bosom that
vibrated in unison with theirs.

Among my new recruits was a very interesting young
man, named William Ogden, whose age was a few
months short of one-and-twenty. He shipped only the
day before we sailed, and under circumstances, as I af-
terwards learned, somewhat peculiar. He was a son of
the late Benjamin Ogden, surgeon-dentist, and brother
of the present Dr. Benjamin Ogden, of the city of New
York. His amiable qualities soon gained and secured
him the good-will of every man on board; and I became
imperceptibly so strongly attached to him that he seemed
to me like a brother. But as I shall frequently have
occasion to speak of him in the course of this voyage,
I shall now leave him for the present, and attend to the
tracing of our course from Sandy Hook lighthouse, to
the Cape Verd Islands.

We stretched far to the east, along the parallels of
37° and 36° north latitude, with variable winds and
changeable weather, for more than a week, without the
occurrence of anything worthy of record. Our object
was to make the Cape Verd Islands by the most direct
course the winds and weather would admit of, as we were there to procure salt and other necessaries for the voyage.

_July 4th._—On Friday, the 4th of July, we were in latitude 36° 0' N., long. 47° 30' W. This being the anniversary of our national independence, we celebrated it in the usual nautical style, by displaying our stars and stripes, firing a federal salute, and making a few temperate libations to the goddess of Liberty. On the following day I completed the thirty-third year of my age.

_July 16th._—On Wednesday, the 16th, we took the north-east trade-winds in lat. 28° 30' N., long. 31° 0' W. which continued from north-east to east, attended with fair weather, for several days. We crossed the tropic of Cancer on the 18th, in long. 29° 0' W.

_July 20th._—On Sunday the 20th, being in lat. 20° N. the sun was vertical at 12, m., the declination and our latitude differing but two miles. At this time, in taking an observation, the sun nearly swept the horizon at all points of the compass, and no perpendicular object produced a shadow. The thermometer at this time stood at 89°, and the temperature of the water was 80°.

It has been justly observed that “a vertical sun is as much a miracle to an extra-tropical inhabitant, as snow and ice to an inter-tropical one.” It is certainly a wonderful sight, and yet it has become so familiar to mariners that they seldom notice it at all, and scarcely ever in their journals. To be surrounded by solar beams, descending perpendicularly upon your head,—to be enveloped in a shroud of sunshine, clothed in a mantle of light, without a shadow or a visible sun until you change your position,—is a phenomenon of much sublimity to a philosophic observer.

"Your form no darkling shadow throws
Upon the vessel's deck."

_July 22nd._—On Tuesday, the 22nd, at 1, p. m., we passed close under the north side of the island of St. Antonio,—the most northern and western of the Cape Verd Islands. The centre of this island is in latitude 17° 4' N., long. 25° 23' W.; and in clear weather it
may be seen from a ship's deck at the distance of 25 leagues. This is not often the case, however, as hazy and cloudy weather generally prevails among these islands.

Although the general appellation of "Cape Verd Islands" is familiar to readers of all classes, I find that there are great numbers of people who are totally ignorant of their history, and even of their location. For the information of such, I shall drop a few words before I proceed any further with my journal.

The broadest part of that vast section of the globe called Africa, extends from Cape Guardafui, on the east, to Cape Verd, on the west,—a distance of nearly four thousand six hundred miles! Cape Verd points due west into the Atlantic Ocean, in lat. 14° 44' N., about 145 miles north-west of the mouth of the river Gambia, and is of course the most westerly land of Africa. Cape Verd projects from that part of Africa called Senegambia, renowned for its inexhaustible fertility of soil, as well as for the ferocious perversity of the natives. Whether this cape has derived its name from its natural verdure, or, as some pretend, from a green marine vegetable that abounds in those waters, I cannot presume to determine; at all events, it has given its name to a group of islands lying about one hundred leagues westward of the coast, in the Atlantic Ocean, between the fourteenth and eighteenth degrees of north latitude.

These islands were first discovered by the Portuguese, in the year 1446. They are said to have been known to the ancients under the name of Gorgades; but not visited by the moderns till they were discovered, in the year just mentioned, by Anthony Noel, a Genoese in the service of Portugal, and received their general name from their situation opposite Cape Verd. They are ten in number, besides islets and rocks, lying nearly in a semicircle. Their names are St. Antonio, St. Vincent, St. Lucia, Branco, Raza, St. Nicholas, Sal, Bonavista, Mayo, St. Jago, Fuego, and Brava. Of all these, St. Jago is the principal.

These islands are generally mountainous; some of them are barren and uninhabited; others are very pro-
ductive. Notwithstanding the droughts to which they are subject, their natural produce in cotton, indigo, fruits, salt, goat-skins, and turtle-oil, might give them a considerable value under a more intelligent government. Their actual population is estimated at forty-two thousand souls. The air is hot and insalubrious, rain being very rare; but a north-east breeze commonly rises before four o'clock, p. m.

The marine vegetable before alluded to, from which some say these islands derive their name, is called by the Portuguese mar de sargasso, or sea-lentils; it resembles water-cresses in appearance, and produces a berry somewhat like the gooseberry. In some places it is so abundant as to impede the progress of vessels in their course. To the north of these islands, according to the best authorities, "the waters of the ocean disappear under a thick bed of sea-weed, which, like a floating meadow, extends as far as the twenty-fifth parallel, and occupies a space of sixty thousand square leagues; from which ships disengage themselves with difficulty. Other masses of sea-weed are also seen in parts of the sea more to the north-west, between the tropic of Cancer and the Azores." Columbus, in his first voyage, passed through this marine meadow, to the no small alarm of his timid companions.

As these islands lie several hundred miles west from the continent, they are not subject to such intense heat as is experienced on the coast of Senegambia in the same latitude; which is caused by the east trade-winds arriving on this coast, after having swept over the burning surface of Africa in all its breadth, of more than 4000 miles. In thus passing over the sultry continent, the air acquires a great capacity for imbibing moisture, and consequently, in continuing its progress westward over the ocean to the Verd Islands, it becomes, in the dry season, saturated to the highest point, so that the least diminution of temperature causes it to deposit abundant vapour. Not only the highest peak of St. Antonio, which has an elevation of more than 7000 feet, but also the whole central ridge of hills on all the islands, down to 2000 feet, are generally enveloped in clouds,
from ten o'clock in the morning until late in the evening. This humidity clothes the hills with thick pasture grass, giving to the country a feature entirely unlooked for, in so low a latitude.

St. Antonio, being the most northern and western of the Cape Verdo Islands, is often adopted as the point from which ships take their departure when bound to different parts of the East Indies. Indeed, before the late improvements in nautical science, the perfection of chronometers, and the use of lunar observations, it was highly necessary to make this or some other island of the group, in order to correct the ship's reckoning. At present, however, the making of land for this purpose is not considered essential, where the master has good instruments on board, and understands the use of them. Still, St. Antonio may be passed in sight, the island being to the eastward of the ship, without any apprehensions of delay from calms or light winds, if the vessel does not come within twenty miles of the land.

Ships bound from Europe to the Cape of Good Hope, or by that route to the East Indies, generally take their departure from one of the Cape Verdo Islands, and then steer south-west, stretching over towards the coast of Brazil so as to cross the Equator between the meridians of 28° and 30° west longitude. This apparently round-about course is adopted to avoid the tedious calms and adverse currents which continually prevail on the coast of Guinea. For south of the Cape de Verdo Islands, "even along the meridians of these very islands, that part of the ocean must be traversed, so fatal to navigators, where long calms detain the ship under a sky charged with electric clouds, pouring down by turns torrents of rain and fire. This sea of thunder, being a focus of mortal diseases, is avoided as much as possible both in approaching the coast of Africa and in seeking those of America."* Though this western course involves the greatest distance, it always proves to be the shortest in the end, as they who adopt it never lack westerly winds to waft them to the Cape of Good Hope.

The island of St. Antonio is about twenty-two miles in length and twelve wide, stretching from north-east

* Malte-Brun.
to south-west, and abounding with high mountains, whose tops are constantly covered with snow, and are generally hid in the clouds; some say they are equal in elevation to the Peak of Teneriffe. In approaching this island there are no dangers to be avoided; the water is bold all round it, and it may be circumnavigated with perfect safety, a cable's length from the shore.

There are several good anchoring-places on the south and west sides of this island, where wood and water may be had with despatch. The town and custom-house, however, are on its northern extremity, just within a narrow point of land that extends off to the north-west, and affords smooth landing for boats all the year round. Here may be procured, in great abundance, black cattle, sheep, goats, hogs, and poultry, by giving one day's notice, together with vegetables and fruits of the finest growth and flavour, in any quantity, and at very moderate prices.

The population of this island is estimated at about five hundred persons, chiefly negroes, under the protection of the Portuguese. The soil is good, well watered, and produces the indigo-plant, the dragon-tree, orange and lemon trees, palms, melons, bacoas, pomegranates, and the sugar-cane. The potato and the melon are particularly excellent, and much sought after by mariners. Topazes are found in abundance in one of the mountains, and Frizier assures us that there are mines of gold and silver in the island. From the mountains descend streams of excellent water, which render the land very fruitful.

Sixteen miles south-east of the island just described, is that of St. Vincent's, separated from it by a clear and navigable channel. It is about thirteen miles in length from east to west, and eight in breadth, being about thirty in circumference. The land is generally elevated, except towards the north-west, where it is low and sandy. On this side of the island, looking towards St. Antonio, is a fine capacious bay or road, called Porto Grande, with a rock in its centre rising from the water like a tower. This bay, which is about five miles broad at its mouth, stretches far inland, where it is surrounded
by high mountains on every side, sheltering it from all
winds, and rendering it one of the safest harbours in all
the Cape Verd Islands. But it is not the most easy of
access, in consequence of the impetuous winds which
frequently blow off the mountains along the coast, so as
to endanger ships before they can secure a berth within
this peaceful haven. There are several other bays on
the south, south-west, and west sides of the island,
where good anchorage may be obtained; and these are
generally selected by the Portuguese for landing their
hides. Good fresh water may be procured on this
island, by digging a little depth into the soil of the
valley; but the hills are totally destitute of it. Its bays
abound with excellent fish, and refreshments of various
kinds may be procured with but little difficulty. Here
also vessels may be supplied with fuel of a good quality.

Ten miles east-by-south of St. Vincent's is the island
of St. Lucia, not more than eight miles in length from
north-west to south-east, and about three in width. On
the east side is a harbour, defended by two small islands,
which affords good shelter and anchorage, and on the
south-west side are the ruins of a village, and a well of
fresh water. The land is considerably elevated, and
quite barren. There are some rocky islets lying off its
north-west end, but no dangers that extend more than
one mile from the shore.

Seventeen miles east-by-south from St. Lucia is the
island of St. Nicholas, which is the most pleasant of
the whole group. It is of irregular shape, with several
concave sides and promontories projecting to almost
every point of the compass. Its extreme length from
east to west is about twenty-seven miles, and its mean
breadth for two-thirds of that distance, counting from
its eastern point, does not exceed five miles; but here
its southern side suddenly projects to the south, making
the distance from its extreme north to its extreme south
point not less than fifteen miles.

This island, with its three neighbours just described,
together with two islets called Branco and Raza, con-
stitute a cluster by themselves in the north-west, while
the others in the east, south-east, and south, form the
segment of a circle, of which St. Nicholas is the centre. Branco and Raza are small barren islets, destitute of water and inhabitants. They are situated between St. Lucia and St. Nicholas, and there is no danger in sailing around or between them, half a mile from the shore.

The island of St. Nicholas, from its peculiar shape, affords good and safe anchorage in several places. On the south-west concave side of its western projection is Tarrafal Bay, and on the south-east concave side of the same is St. George's Bay. On the southern side of its eastern extension is Fresh-water Bay. There is also another bay on its north-western extremity called North-west Bay. The best and safest anchorage, however, is on the south-west and south-east sides of the island, in from ten to five fathoms of water, sand and coral bottom. Here refreshments may be had in abundance, and generally at a moderate price, but not on as favourable terms as they can be obtained at St. Antonio. It is difficult to procure water near the shore, but if a ship is in distress, it can be brought to the beach by the inhabitants on donkeys.

We touched at the south-east side of this island, where I landed, and after communicating with the proper authorities, I visited the interior, and made some cursory observations on the physical and moral condition of the country; the result of which was, that this island, were it in the possession of more industrious people, better governed, and properly cultivated by cheerful, active, and healthy freemen, instead of wretched, desponding, oppressed slaves, would become highly productive of such staple articles as are adapted to its soil and climate, and a lucrative commerce would soon be the consequence. But as it is at present, and as it is long likely to be, the objects of industry are limited by the absolute wants of the islanders, producing just sufficient for their own consumption, and no more.

The poor slaves are pining for freedom, and seize every opportunity of escaping on board the shipping which are continually stopping at the island. To guard against this loss of property, the strictest precautions are adopted by the planters, who do not allow the in-
habitants the use of boats of any description, which arrangement gives to the island the appearance of a deserted spot in the ocean.

As there is scarcely any thing exported from this island, excepting goat-skins and archilla-weed, its sources of revenue are, of course, extremely limited. What little money does enter is received either from ship-masters for refreshments, or from Portugal, in payment for the archilla-weed, or to defray the current expenses of the establishment. The latter item, however, cannot amount to a very considerable sum, if all are paid in proportion to the governor's salary, which he assured me was only four hundred dollars a year.

In this island nature has not been niggardly of her favours. With proper cultivation its soil will produce, in great abundance, cotton, indigo, sugar, coffee, tamarinds, cocoa-nuts, bananas, plantains, cassavi, maize, pine-apples, figs, lemons, oranges, papaw, custard-apples, guava, grapes, dates, &c. The sugar-cane is equal to that of the West Indies, and I have tasted and examined the sugar which they manufacture for their own use, and found it excellent. The indigo plant thrives perfectly well, and makes dye of the first-rate quality, with which they dye their cotton, and weave it into shawls for the women. I have drunk their coffee, sweetened with their own sugar, and found it to be equal to that of St. Domingo. They barely raise enough for home consumption; but with common skill and industry, the now uncultivated valleys might be covered with cotton shrubs and coffee-trees.

I saw many large tamarind-trees growing out of the fissures and crevices of almost naked rocks; and frequently beheld the cocoa-nut, banana, plantain, and papaw-tree, growing on the edge of springs and in almost barren ground, where there was not three inches of soil. Nourished principally by water, they only want a foothold to support them, and they are certain to flourish.

Most of these springs that I passed were surrounded by females, nearly as naked as was the fair Musidora when seen by her Damon, as "to the flood she rush'd."
There is little or nothing like cultivation seen anywhere, excepting in the glens or ravines which are watered by rills from the mountains. In the upper and wider parts of the valleys I met with plantations of Indian corn, cassavi, sugar-cane, and pine-apples. Cotton and indigo were also planted in some spots, but being neglected, a few plants only were to be seen, which run wild. On the sides of brooks and springs grow luxuriantly the fig, lemon, orange, papaw, custard-apple, guava, prickly-pear, and a few grape vines, besides the date, which grows in abundance in the sandy places. Here cocoanut-trees bear ripe fruit at the elevation of three hundred feet above the surface of the sea. On some spots of the elevated grassy hills, roots and vegetables are cultivated with great success. I was also informed that wheat succeeded very well when sown in the dry plains in the rainy season, as does rice in the lowest and wettest grounds. But as these islands are supplied with corn from America in return for salt and mules, the indolent inhabitants pay little attention to its cultivation.

During my interior excursion I strolled into the very heart of the country, where I saw the wretched negroes watching the plantations of their unfeeling oppressors, and tending a few cows and sheep. They received me with a civility bordering on servility, and in return I bought some fruit and vegetables of them, with part of their poultry, and all the eggs they had to dispose of. Their huts are of very simple construction, and still more simply furnished. The females of the household have a recess for their use, enclosed with the branches of the date-tree. Their bedsteads are constructed by driving four upright stakes into the clay floor, to which are attached transverse sticks for the bottom, the whole covered with a mat or blanket. A large wooden box also serves the double purpose of a table and couch. The rest of the furniture consists of a wooden mortar to pound their Indian corn, a clay pot to boil it in, some gourds for holding milk and water, and a few wooden spoons. This is a complete inventory of their domestic utensils.
Every domicile, however, can boast of at least two musical instruments, a fact that would be quoted as a strong symptom of luxury in the family of a New-England farmer. Music, it seems, can alleviate even the pangs caused by the galling fetters of slavery. The discordant clanking of their chains can be occasionally lost in the animating roll of the "doubling drum," accompanied by the lively tones of the guitar. Each of these instruments is found in the hut of every slave. The former is made of a hollow log, covered with a kind of parchment of their own make; and the latter is a rude sort of lyre with only three strings. But rude as these instruments are, they possess the magical power of charming the sable hearer into a total forgetfulness of his degradation and his sorrows. In dancing to their animating sounds he forgets that he is a slave, and is happier far than the heartless oppressor who lives in idleness by the sweat of the negro's face. It is thus that "Heaven tempers the wind to the shorn lamb," and pours consolation into the bitterest cup of human misery.

From the little opportunity I had of making observations and enquiries, I should infer that the island of St. Nicholas is not over-abundantly supplied with birds, either as to species or numbers. We saw several large birds of prey, one of which was a fishing eagle common to all these islands; another was ash-coloured, of a large size, seen only on the shore; and a third, which I shot on shore, nearly resembled the sparrow-hawk. The small birds, of which I shot specimens, were the following: a fine kingfisher, a common quail, a sparrow nearly resembling the American, a bird similar to the English lark, and a small singing-bird of unknown species. I also saw a guinea-fowl, but they were too wild to be shot.

The waters in the bays on every side of this island abound with fish, which may be caught with seines in almost "miraculous draughts." I saw nine species of fish that are common at this island, viz. black-fish, gray mullet, skipjacks, bonatoes, porgy, the young white shark, a kind of rock cod, and a fish that is not
common in this country, of a large size, between the drum-fish and the streaked bass. Although the inhabitants are the most rigid Catholics, they seem to make fish a very small portion of their general food. We caught an immense number; and, according to custom, received a broad hint to send the governor a mess, which we did, with many apologies for our ignorance of the etiquette proper on such occasions.

*July 23rd.*—We left St. Nicholas on Wednesday evening, the 23rd of July, at seven, p.m., with a fine breeze from north-by-east, and on the following morning, at four o’clock, were close in with the island of Sal, and anchored in Mordeira Bay, in six fathoms water, sandy bottom. This in my opinion is the best harbour among the whole group of the Cape Verd Islands. The anchorage is in lat. 16° 42' north, long. 22° 54' west.

The island of Sal, which lies about twenty leagues eastward of St. Nicholas, derives its name from its great number of salt-ponds, and the vast quantity of salt that is manufactured from their waters, which are continually replenished from the rising of the sea. This water, when properly exposed to the sun, crystallizes into a beautiful salt, which is the staple commodity of the island. If the manufacture were properly attended to, this single island would be sufficient to supply all the United States for a century to come.

This island is a little more than forty miles in circumference, and lies about three hundred miles from the coast of Africa. It is of an oblong shape, extending north and south, something less than twenty miles in length, and perhaps eight or ten in breadth. It forms the north-east point of the semicircular range before mentioned, and belongs to the governor of Bonavista, a wealthy Portuguese, named Don Martinez, who has been at vast expense in cutting a road through the mountain, from the salt-ponds on the east side of the island, to the bay or harbour of Mordeira on the west side, where ships may lie in perfect safety, and take on board their cargoes of salt, which is of the best quality produced among these islands.
The island is high and bold; rising in two peaks, which in clear weather may be seen from a ship's deck at the distance of fifteen leagues. The easternmost peak is the highest, and the land between them being low, they appear like two separate islands when seen at a distance from the north or south. On approaching it nearer we find that the irregularity of its shores produces many promontories, points, bays, &c., among which are the following:—North Point, which expresses its appropriate location; Martinez Point, a few miles south-east of the former; fifteen miles farther south is East Point; the south-eastern extremity of the island is called Wreck Point, near which the Erne was wrecked in 1819; a few miles farther west is South Point; farther north, on the western side, is Turtle Point; then comes Mordeira Bay, where we lay at anchor; north of this is a promontory called the Lion's Head, off which lies Bird Island; still farther north is Palmira Point and Bay; on the north-west is Manuel Point; and Horn Point projects about half-way between the latter and North Point, "the place of beginning."

July 24th.—At 6 o'clock in the morning, I started on an excursion over the mountain, in search of the agent to whom all applications must be made for purchasing salt. As respects business, however, my journey was fruitless, as the man had gone to Bonavista, an island farther south. But I did not regret the ride, as it afforded me an opportunity of becoming better acquainted with the interior of this barren country, and the following is the result of my observations:—

Towards the seashore the island presents the most forbidding aspect, every feature bearing the impress of hopeless sterility. Here some mighty convulsion of nature has piled matter upon matter, in what may be termed a "regular confusion." The two prominent forms are generally those of platforms, or table-lands, which are perpendicular as a wall on one side, and level with the neighbouring land on the other; with series of perfectly conical hillocks, diminishing in size by regular gradations. Over the interior of the island are scattered vast irregular masses, forming shapeless mountains,
and long serrated or indented outlines. The whole of
the elevated grounds which I passed over are covered
with loose blocks of stone, basalt, lava, and other vol-
canic productions; and the beds of the numerous
torrents, which were now entirely dry, exhibited a
covering of black basaltic sand. I have therefore no
doubt that this island, like all the rest on the western
coast of Africa, is of a submarine volcanic origin, and
mostly of the basaltic formation.

The only animals I saw, were a few goats, asses, and
ponies.

The only vegetation which this island produces, con-
sists of about a dozen kinds of shrubs, and a few melan-
choly date-trees, useful only for their long branches, as
their fruit never comes to perfection. The mimosa, or
sensitive-plant, is also found here, scattered thinly about
in certain places, apparently "out of its element." The
few vegetables that I met with were completely burnt
up for the want of moisture; as, with the exception of
a spring in the centre of the island, not a drop of fresh
water cheered my eye or cooled my lips, during this
sterile and fruitless excursion. I was glad to return to
the Antarctic, and get under way for Bonavista, which
we did at 1, p.m., with a fine breeze from north-east,
and fair weather.

At half-past 4, p.m., we came to anchor in English
Road, or Bonavista harbour, in three fathoms of water,
mud and clay bottom. This anchorage is in latitude
16° 10' north, long. 22° 53' west.
CHAPTER II.

Island of Bonavista—Town and Harbour—Interview with the Governor—The Art of Begging illustrated—View of the Island—Natural Productions—Sailing Directions—The Leton Rocks—Island of Mayo—St. Jago, or Santiago—Port Praya—Breakfast with the Captain-general—A walk with the Ladies—A Peep at the Country—View the Fortifications—Military Establishment—A Dinner-party—Bay and Anchorage—Volcano of Fogo, or Fuego—Island of Brava—Imaginary Dangers.

In approaching the island of Bonavista, or Buena-vista, it presents a beautiful appearance to the eye of the tasteful and scientific voyageur; and to this circumstance it owes its imposing appellation. It lies about nine leagues south of Sal, and a little more than seventy west from the coast of Africa. Its form is an irregular pentangular figure, with a diameter of about twenty miles. The surface of this island is low towards the sea, but the interior is considerably elevated and hilly, particularly towards its north-east extremity, where there is a lofty eminence, which, from its conical and truncated shape, appears to have once been a volcano. Towards the south-west there is another hill still more elevated, to the westward of which the land is quite high. The island is known at a distance by several white banks on its north side, where the shore is bold, and where a rapid river discharges itself into the sea.

The harbour in which we anchored is on the west side of the island, and is formed by a small island which shelters the northern extremity of the English Road, or bay. The anchorage is between this small island and the mainland of Bonavista, a little south of the town or village. In going in to the anchorage we doubled close round the south point of Small Island, within about two cables' length from the shore, leaving a single rock to the south of the vessel, at the distance of about two hundred fathoms. There is only eight
feet of water on this rock at low tide, and sea breaks on it in rough weather. There is a flag-staff on Small Island which we brought to bear north-north-west, and were then within the sunken rock before mentioned. Here we had the choice of anchorage in from seven to four fathoms of water; but as it is best to be as near the east side of the island and the town as possible, we anchored in three fathoms, as before stated. Vessels should never attempt to pass on the north side of Small Island, as there is a sand-spit runs from it to the main island, in a due east direction.

The town, which has a sandy foundation, consists of two rows of hovels, constructed of stone and mud. These are thatched with branches of the date-tree and a long coarse grass, and are chiefly inhabited by negroes, who have little about them that indicates comfort or economy. This description, however, does not include eight or ten houses, of a better sort, belonging to the governor and his subordinate officers. These are plastered and whitewashed, and present a decent cheerful appearance. There is also an edifice of a barn-like appearance, without spire or ornament, which they call a church. The only indications of domestic trade are two or three mean-looking shops, containing an "un-assorted assortment" of miscellaneous articles, among which I observed various kinds of American cotton goods, and English earthenware, together with hats, shoes, &c., of Portuguese fabric.

It was 5, p. m., when I went on shore, and a negro sentinel conducted me to the governor's residence. I found his excellency at dinner with a family circle, consisting of his wife, two daughters, several fat monks, and two or three officers. The honour of my visit was totally unexpected, as appeared by the ladies (brunettes of the half-caste) being in their deshabille, and making a precipitate retreat from my presence. Whether each fair one's "tunic" was of "the finest lawn," I had no opportunity of ascertaining; but I did ascertain that their lovely limbs were unrestrained by anything but chemise and petticoat; those are temptations, however, which seamen must learn to encounter with cool indif-
ference, or they would be in hot water too often. I made
some commonplace apology for my abrupt intrusion, as
the ladies retreated in evident confusion; but they soon
returned, richly attired, and performed the rites of
hospitality with an ease, grace, and dignity of deport-
ment that quite charmed me.

His excellency, who is no other than the wealthy
Portuguese alluded to in the last chapter, Don Martinez,
proprietor of the island of Sal and a considerable part
of Bonavista, speaks very good English, and was very
solicitous to render my situation agreeable. On learning
my business, he requested that I would allow him the
pleasure of procuring the salt for me, at the same time
taking no little pains to convince me that he was in-
fluenced by no interested motives in thus tendering his
services to me. To these asseverations I of course made
the requisite responses, and ordered one thousand bushels
of salt. This order the governor handed over to the
captain of the port, who wears the naval uniform of
Portugal, and is one of the most insinuating and perse-
vering beggars I ever met with. As a specimen of the
manner in which he pursues his vocation, take the
following; for I understand he never varies in the pro-
cess:—

Knowing the weak side of Jonathan, he commences
his attack by a full volley of encomiums on the American
nation, and especially on the liberality of her citizens,
and most particularly on the gentlemanly deportment
and noble generosity of her ship-masters. Before the
besieged can have time to recover from the shock of this
sudden and unexpected assault, the archery of black
laughing eyes are brought to the charge, and pour a
shower of poisoned darts into the very heart of the
fortress. In plain English, his wife desires him to ask
the generous captain if he could sell her daughters some
butter, as they were extremely fond of American butter,
and preferred it to that of every other nation. To be
sure, he had rebuked his better half for making such a
proposition, as American officers would be highly offended
at the bare idea of selling anything to a lady, they being
in the habit of making them presents or compliments.
If the citadel does not yet surrender, preparations are made for carrying it by storm, and for this purpose a reinforcement of infantry assail it with small-arms on several sides at once. His daughter Louisa is very partial to American cider; Isabella prefers porter; while Maria, the youngest, a bewitching little gipsy of sixteen, would give anything in the world for some American cheese and fruit; but their mother thought that no other part of the world produced such excellent flour as the United States. If the garrison still hold out, such flattering terms of accommodation are proposed as generally throw them off their guard; like the following:—

"Will you have the goodness to walk up to the house with me, captain, and see my daughters? they perform divinely on the guitar, and will be proud to amuse you this evening by playing and singing."

This *ruse de guerre* generally succeeds. The confiding garrison are drawn into an ambush, and compelled to surrender at discretion. Alas! that beauty should bait the hooks of avarice and cupidity. The holiest sentiment of our nature is thus made a vassal to the meanest.

In this place it may be proper to remark, that all the gentlemen here have obtained a sufficient knowledge of the English language to hold a sprightly conversation; and, indeed, there is scarcely a person of any respectability in the whole town who does not speak enough of this language for the purposes of bartering and begging.

After taking my leave of the governor and his family, I took a stroll through the town or village, which is built on a sandy plain at the east side of the bay. I soon learned that no refreshments could be had at this place, nor does the island ever furnish any except they are first brought from the other islands in small drogers, for which they charge a high price. It is likewise difficult to obtain fresh water here, excepting in small quantities, and that of a brackish flavour. No fuel suitable for nautical use can be had here at any price. Goat's flesh, milk, turtle, and fish are the principal food of the inhabitants; but they have none to spare.
The productions of Bonavista are salt, indigo, and cotton: the first is produced in great abundance on the north-west and eastern parts of the island, in natural pans or ponds, where it crystallizes in the sun. These receptacles for sea-water are in the low valleys near the sea-shore, and, in the whole process, nature receives very little aid from the hand of art. This salt, however, is not equal in quantity or quality to that which is produced on the island of Sal, a cargo of which will cost about six cents a bushel on board, while here at Bonavista it costs about six and a quarter cents; and in taking a small quantity, it comes somewhat higher. The inhabitants convey it to the vessel by means of asses, which travel in troops of fifteen each, every troop being under the charge of a negro.

The indigo, which grows without being cultivated, is gathered by inhabitants; they have not the art of separating the dye, and of making what is called the blue-stone in the southern section of the United States, but they satisfy themselves with bruising the green leaves in a wooden mortar. They next make it into a kind of paste, of which they form round balls that are dried for use. Here, the leaves of the plant are laid in vats full of water, and left to ferment. The liquor is then drawn off into another vat, and after having been well stirred up, it is drawn off, and what remains at the bottom is exposed to the air until it is thoroughly dry, when it is fit for use.

Though the cotton-tree grows naturally on the island of Bonavista, yet its culture is greatly neglected by the natives: they never think of collecting it till some vessel arrives to purchase it. But were it properly attended to, I believe they could every year furnish a cargo for a large ship; and I have been told that in some years, when it has failed in the other islands, it has been produced in great abundance in Bonavista.

But this island will never be distinguished for agricultural fecundity. The soil for the most part is sandy, barren, and uncultivated; and though enjoying the genial influence of a tropical sun, it must feel the more effective influence of industry and enterprise before it becomes
productive. The sweat which falls from the brow of slavery scalds and blights the verdure which the dew-drops of heaven have brought into existence.

The surface of the island is very uneven, comprising alternate hills and valleys; and at the sea-board it has low points running into the sea. The southern and eastern part of this island, in particular, is very low, and the shore is lined with reefs of coral, some of which lie three miles from the island to the eastward; and oftentimes in the night, when the weather is hazy, a ship might be on the reef before the land can be seen, on account of its being so very low on that side of the island. In 1831, my worthy friend Captain Weatherby, of Liverpool, lost a fine ship on the reef which lies off the east end of this island. He had his two daughters with him at the time. Her cargo was worth two hundred thousand dollars, destined for the Isle of France; but it was all lost.

Ships bound to the south, and passing to the eastward of Bonavista in the night, should never approach the island nearer than twenty miles, as the currents, which set about west, frequently run, after a fresh trade, at the rate of two miles an hour. In the month of July I have known the current to set in a west direction, between the Isle of Mayo and Bonavista, at the rate of two and a half miles an hour. I would therefore advise ship-masters, in all cases, to pass to the westward of the islands of Sal, Bonavista, Mayo, and the Leton Rocks, of which I shall speak presently.

A dangerous reef likewise lies off the western extremity of Bonavista, about three miles from the shore, covered by four feet of water. The sea breaks very heavy on the shoal part of this reef in rugged weather. There is a good passage, however, between the reef and the island, with six fathoms of water, over a white coral bottom, which has a frightful appearance to such navigators as are not acquainted with coral reefs. Large ships, however, should always pass outside of the reef, giving the breakers a berth of two hundred fathoms, when they will have ten fathoms of water, and a clear passage to the anchorage of Bonavista, giving the ree
that lies off the beach at Old Town a berth of one cable's length.

The Cape Verd Islands, with respect to climate and vegetation, are more like lands of the temperate than those of the tropical zones, although they are situated in the latter, nearly in the middle of the northern equinoctial belt. In the African country of Senegambia, which lies opposite, in the same latitude, the rains and the hottest seasons arrive together, and continue during the months of May, June, and July: but among these islands the rains do not set in until the middle of August, and continue, with few intermissions, until January.

When we arrived at Bonavista the dry season had commenced about six months; and as I have already stated, the hot winds from Africa, in crossing the water to the islands, become so highly charged with humidity that the least diminution of temperature causes an abundance of vapours to be deposited on the islands. It is this moisture that reduces the mean temperature at Bonavista so much below that on the African coast. The thermometer on board the Antarctic, at twelve, m., stood at 74°, and in Bonavista town it stood at 89°, on account of the wind blowing fresh from east-north-east.

At Goree, a small island of Africa, near Cape Verd, subject to the French, the thermometer ranges between 88° and 100° from May till November; while at Senegal it is at 113°, and sometimes 131°. During the whole year, the sun at midday is insupportable.

Ship-masters should be careful, while lying at Bonavista, to prevent their crews going on shore or sleeping on deck in the months of May, June, and July, as they are very liable to take the fever that is common among these islands at this season of the year. Officers also should make it a point of duty to see that their men avoid getting wet, as far as practicable, either from fresh or salt water, as such exposures are very apt to bring on the fever and ague.

July 26th.—Having taken in our salt and arranged my business with Don Martinez, without forgetting my friend the captain, together with his pretty wife and daughters, the word was given, "All hands, unmoor!"
This was on Saturday, the 26th, at nine o'clock, a. m., when we got under way with a fine breeze from north-north-east, and pleasant weather. We passed between the reef before mentioned and the west point of the island, with not less than six fathoms of water, and steered for the east point of St. Jago Island, with the intention of sighting the Leton Rocks.

July 27th.—At half-past twelve, p. m., on Sunday, we passed within a cable's length of that dangerous reef, on the western side of it, in ten fathoms of water, coral bottom. This reef is of an oblong shape, extending from north-north-east to south-south-west, about one hundred and fifty fathoms in length, and nearly half that in breadth. On the shoalest part of this reef the water is not more than five or six feet in depth, and it is very dangerous to approach in the night or in thick atmosphere, as the sea does not break upon it except in rough weather. When we passed it, there was scarcely a roller on the shoalest part, although we had a fine breeze from north-north-east. But the coral bottom on the reef can be seen half-a-mile from the mast-head, in clear weather, if it be not in the direction of the sun.

The true situation of this reef is in latitude 15° 49' N., long. 23° 15' W.; variation per azimuth 17° 35' westerly; and the current, five miles to the south of the rocks, was setting west-by-south, at the rate of eighteen miles in twenty-four hours. On passing these rocks at another time, I have found the current setting equally as strong in an east-north-east direction. It is therefore not surprising that the most skilful and cautious navigators are sometimes deceived by these rapid and incalculable changes of the current; or that Captain Swanton, late commander of the honourable East India Company's ship Lady Burgess, should run his vessel upon these rocks, which happened on the 19th of April, in the year 1806, at two o'clock, a. m., at which season of the year the currents are setting here, from eighteen to twenty-four miles, east-north-east.

It has been stated that there is another reef, lying to the northward of the Leton Rocks about five miles; but as I passed over the very spot in which it is said to
be, without seeing any appearance of shoal water, I am positive that there is no other danger near Bonavista and St. Jago than the reef of the Leton Rocks, which is sufficient of itself to keep every cautious mariner on his guard in passing it, as the force and direction of the currents are not to be depended on among these islands.

From Leton Rocks we steered south-by-west half-west, until near the island of Mayo, when we ran for the east end of St. Jago. Ships should not approach the north end of the island of Mayo in the night, unless they are certain of their situation, as there is a very dangerous coral reef lying north-north-east from the northern extremity of the island, about three miles off shore. In passing this reef in 1829, I saw the wreck of an English brig upon it. There is no other danger around this island, more than three hundred fathoms off shore. The land is pretty high at the centre, uneven, and full of hills. It has good anchorage on the south-west side, in what is called English Roads, in from five to ten fathoms of water, in front of the town.

The shore to the eastward of the town of Mayo is steep, bluff, and rocky; but to the westward a low white sandy beach extends to what is called Salt-pan’s Point, from which a spit of sand and coral stretches to the westward about two hundred fathoms. At a small distance farther off-shore there is a depth of fifty fathoms. Ships should not anchor in more than ten fathoms in front of the town of Mayo, as the bank runs off very steep from fifteen fathoms. The north point of this island lies in latitude 15° 21' N., long. 23° 9' W.

At eight, p. m., we came to an anchor in Port Praya, island of St. Jago, in four fathoms of water, sandy bottom. This island lies about seventy miles south-west-by-south from Bonavista, and ninety south-south-east from St. Nicholas. Its shape or figure on the charts resembles that of an oyster, lying nearly in the position of north-west and south-east, forty miles in length and about twenty in breadth. Port Praya, on its south-eastern end, is in latitude 14° 55' N., long 23° 31' W. Variation per azimuth 16° 48' westerly.

St. Jago, or Santiago, is the largest, the best cultiva-
ted, and the most fertile of the Cape Verd Islands. It abounds, however, with high, barren mountains, which may be seen in clear weather at a considerable distance. The south-east extremity of this island is a very low point, and presents that appearance in approaching it from the north or south. Three or four miles to the westward of this point is a bay, with a brown sandy beach; and at the head of this bay are two or three houses, and a grove of date-trees. This bay must not be mistaken for that of Port Praya, as its eastern point is surrounded by rocks extending two hundred fathoms into the sea, which does not always break upon it.

We passed this bay, and kept along the coast to the westward towards Port Praya, within one mile of the shore, in eight or ten fathoms of water, until the battery and flag-staff were plainly distinguished on the west point of the harbour, off which the sea always breaks at some distance. We then rounded the eastern point, within two cables' length, in from six to eight fathoms of water,—in doing which, the custom-house opened to view on the beach, and a grove of date-trees in the valley. Immediately afterward the town and fort presented themselves on the hill at the head of the bay. The eastern shore, which should be kept close on board, is high bluff land, which has the appearance of being parched and barren. We stood in for the town, and chose our anchorage as before stated.

*July 28th.*—On the following morning, which was Monday, the 28th, I went on shore to wait on the captain-general of the island, whose residence is at Port Praya, although Ribeira Grande, a town seven or eight miles farther west, is the capital of St. Jago. On entering the gateway of the town I was received by a negro, who conducted me to the palace of his excellency,—for such it might be called, when compared with the miserable hovels in its vicinity. Its external was white-washed, which gave it a tolerably decent appearance.

After being formally announced by a ragged sentinel, I was led up a ladder, into a large apartment, rough and unfinished. The rafters and floor were just as the materials came from the sawpit, without paint, or other
decoration, excepting some rude prints of the Virgin Mary, a few saints, &c. Here I found the general at breakfast, with half a dozen monks wrapped in frieze, with figures and countenances that indicated any thing but abstinence and penance. The general's lady was also present, together with three other Portuguese females of no ordinary personal attractions. They all spoke tolerably good Spanish, and in that language I was able to converse with them.

As the Antarctic was the first American which had touched here for some time, they had a thousand questions to ask respecting the United States, and the manners, customs, &c. of the people, especially the dress and amusements of the American ladies. Having gratified them in all these important particulars, and partaken of a cup of coffee with the ladies, agreeably to the custom of the place, I took a turn with them in the garden, which was more tastefully arranged than any thing of the kind I had seen in any other island of the group. We returned from our walk just in time for me to attend the market, where I intended to purchase the necessary fruit and vegetables. I therefore took leave of my new friends, who would not suffer me to depart until I had promised to dine with them, and repaired to the market; which proved to be quite destitute of such articles as I wanted. At the suggestion of one of the islanders, however, I made out a list of the productions I wished to purchase, and he engaged to have them all ready at the landing by sundown.

Having now some time on my hands before dinner, I thought I could not better dispose of it than in surveying the town, and the adjacent country, in order to acquire a more accurate idea of their trade, productions, &c.

The inhabitants of Praya are mostly negroes, "bond and free," amounting to about three thousand, of whom four hundred are militia on duty, or soldiers, as they are called. There are not more than forty whites in the town; and all the officers, except half a dozen, are mulattoes—even their chaplain is black. The population of the whole island I understood to be about twelve
thousand, generally black, or of a mixed colour, a few of the better rank excepted. The face of the country is irregular and mountainous; in some places quite sterile, but in general highly fertile and productive.

Cotton is the principal production of St. Jago; but maize, sugar, coffee, and the vine are cultivated with considerable success. Among its fruits are oranges, citrons, lemons, limes, tamarinds, pomegranates, pineapples, cocoa-nuts, custard-apples, quinces, grapes, plantains, musk and water-melons, guavas, papaws, bananas, pumpkins, and other tropical fruits. There are also some cedar-trees, with a pine which produces tar. The animals are beehves, horses, asses, mules, deer, goats, hogs, civet-cats, and a species of monkey, with a black face and long tail. Of the feathered tribes, there are domestic fowls, ducks, guinea-hens, parrots, parrots, pigeons, turtle-doves, crab-catchers, curlews; and in fact, birds of almost every description, some of which are very valuable for their plumage.

But notwithstanding the abundance which is, or might be, raised on this island, there is no commerce, and the price of refreshments for ships which stop here for supplies is far too high to be termed reasonable. For a bullock they charge from thirty to thirty-five dollars; for long-haired African sheep, four dollars a-piece; milch goats, three dollars; hogs of a middling size, five dollars; turkeys, one dollar and a half; fowls, four dollars a dozen. Fruit and vegetables, however, of all kinds, may be bought of the slaves at a moderate price. The cistern which supplies the shipping with water is at the bottom of the hill on which the castle is erected, and about a quarter of a mile from the beach. The water, however, is not of the best quality, being somewhat brackish to the taste, particularly in dry seasons, at which times there is often a scarcity of provisions and all the necessaries of life. Indeed, I was credibly informed that these periods of famine are sometimes so severe that great numbers of the poor wretched negro slaves perish for want. The governor derives his chief profit from the sales of cattle to the ships which touch here, in addition to a salary from the crown of two hundred dollars per month.
As I was crossing the parade-ground, on my way to visit the fortifications, I again encountered my fair friends, the ladies with whom I had breakfasted, and with whom I had promised to dine. On learning my purpose, they politely offered to accompany me, a proposition which I eagerly accepted. We accordingly left the promenade together, and proceeded to what is here denominated a fort, but which would become almost any other appellation equally well. Behind the ruins of a parapet-wall, which once faced the bay, are planted sixteen old iron cannon of different calibres. Besides this post, several high platform points that surround the bay are also defended in a similar manner, each of which is guarded by a negro family. There are no regular troops, neither European nor native, a few Portuguese officers excepted; so that the defence of these works must depend upon the militia, one of whom is seen standing as sentinel, at the distance of every dozen yards, throughout the town. These wretched men exactly correspond with the fortifications, both in dress and accoutrements. They are of all possible complexities that a painter's imagination can conceive, and if paraded according to shades, would furnish a practical illustration of the following paradoxical couplet:—

"Falsehood and truth, opposed, like black and white,
By unperceived gradations may unite."

With respect to their arms, scarcely one musket in ten can boast the convenient appendage of a lock, or at least one that will give fire; and about half their gunbarrels are actually lashed to their stocks by cords, thongs of eather, or wire! And as regards personal appearance, Falstaff's forces were a troop of dandies to them.

When vessels are about to sail, the governor requires them to notify him of the time, in order that he may make signals for the different batteries to let them pass. I could scarcely refrain from smiling when his excellency informed me that this was a necessary ceremony, and at the same time gravely assuring me that on my hoisting a flag at the fore, he would immediately give orders by signal for the batteries not to detain my vessel. I applauded the arrangement, and expressed
my acknowledgments for his politeness; although I was satisfied that with the crew of the Antarctic, I might land and spike every gun in the place, and then go to sea at our leisure. The bay of Port Praya, however, possesses the greatest capabilities of being strongly fortified against nautical assailants; and by a simple wall, erected in those places where the sides of the table-hill are not perpendicular, the town might be secured from a coup de main.

In the centre of the governor's citadel (the fortifications we were now examining) is the grave of a brave English officer, Captain Eveleigh; the spot being distinguished by a patch of pavement of round pebbles. This highly meritorious naval officer commanded his Britannic majesty's ship Acteon, rated as a sloop-of-war, and was slain in action with a French frigate.

From the town we descended by a zigzag path, to a valley on the left, which my fair cicerones called the Val de Trinidad, over which are scattered some clusters of date-trees, some mimosas, and other spontaneous vegetation. But the most successful attempts at cultivation are in the vicinity of the wells which supply the town and shipping with water. In the upper part of this valley is a negro hut, which is surrounded by a miserable plantation of cotton shrubs. Water alone is wanting to render the soil of this valley fruitful; and a sufficient quantity for the purpose of irrigation might be obtained by digging to a moderate depth. But even this trifling exertion is too great an undertaking to be attempted by the present generation of inhabitants, who must give place to a very different race of people before this or any other species of improvement can be effected. Though the mimosa grows to a large size, even in the most arid spots of the island, the inhabitants have never thought of planting them in the towns, where they would not only be ornamental, but extremely useful in moderating the excessive heat caused by the action of the sun on the ferruginous sands.

Our pedestrian excursion extended about two miles from town, to the upper part of the valley, where the governor's country house is situated. The youngest of
my fair companions informed me that this was her father's property, and that it was to be her marriage dower. I looked at the blushing maiden, and then at the premises. At the foot of the precipice, near the house, is a very beautiful garden, containing oranges, lemons, plantains, bananas, pine-apples, cocoanut-trees, and many other kinds of excellent fruit, and a variety of vegetables.

The interior of the island, I was informed, is much more fertile than those parts which are near the sea-shore; the valleys being well watered by little springs, some of which form small brooks and rills. Near the centre of the island, some of the valleys are covered with plantations of fruits and vegetables, and the hills are well clothed with grass, affording pasture for numerous herds of cattle and flocks of sheep.

We returned to the governor's house about four o'clock, when we found that dinner was waiting for us, and in a few minutes we were all seated at the table. The party was large, comprising seven ladies, which imparted a polished and refined to the conversation which seldom exists in a company where they are not present. After dinner the ladies entertained us with several songs, accompanied by the piano-forza and guitar; and about seven o'clock I took my leave, highly delighted with the recreations of the day, and the hospitality of my kind entertainers. On reaching the beach, I found that the refreshments I had ordered were all in readiness, and we lost no time in having them conveyed on board.

The beautiful bay of Port Praya is formed by two points which bear from each other about east and west, distant one mile and three-quarters, with water of a very equal depth. A small black island, with a flat top, is situated on the west side of the bay, and is called the Isle of Quails. From the south end of this island runs a rocky point, extending about a cable's length, in a south-west direction. There are also some rocks, which put off the west point of the bay, to the distance of about one hundred fathoms, and in sailing from this port in the night, it requires some care to avoid them, particularly when the wind is light and well to the eastward.
With respect to the anchorage, it may be proper to observe, that large ships should lay well out, and not more than two hundred fathoms from the east shore, in order to ensure their weathering the west point of the bay, in going to sea at night, should the wind be light, and far to the eastward. The wind generally hangs in that quarter during the months of November, December, and January; though it occasionally veers to the northward. The best situation for ships to lie in is with the flag-staff in the fort at the town bearing north-west; Point Tamaros, or the west extremity of the bay, south-west; and the eastern point, east-south-east, off the landing-place one mile, and off the east shore two cables' length. At this place the winds are generally from the north-east quarter, and frequently the weather is cloudy with squalls. It seldom rains in the dry season, but a heavy haze mostly prevails. When the weather is settled, there are often regular land and sea-breezes in the bay of Port Praya. The sea-breeze sets in near noon, and ends about five in the afternoon; after which time the north-east wind sets in towards evening, and continues during the night, and often until nine o'clock in the morning.

There is always some surf on the beach at the head of the bay; therefore, in taking fresh water, boats should lay at their grapnels, and raft the casks on shore, and alongside of the ship, taking care that they are perfectly tight and well bunged. When the surf is high, there is a good landing-place on a rocky point at the south-east side of the head of the harbour, where a pathway will be seen leading to the town. It is also necessary to be cautious in carrying sail in boats in the bay, as the puffs of wind from the highlands are very sudden and dangerous.

As soon as the refreshments were safely stowed on board, I hoisted the requisite signal on the fore, and got under way at nine, p. m., while the governor's pass-signal was as promptly displayed from the citadel. We steered to the south-west, with a fine breeze from north-east, and fair weather. At ten, p. m., we saw the burning volcano of Fogo, or Fuego, an island lying about thirty miles west-south-west of St. Jago.
This island is nearly circular, being about five leagues from east to west, and four leagues from north to south. On its eastern part is a high volcanic mountain, which is continually burning, at times ejecting flames and liquid sulphur. This island is very thinly inhabited; but it produces fruit, vegetables, cattle, sheep, and goats. Ships may obtain refreshments here from the town of Luz, which is built at the head of a tolerable good harbour, on the west side of the island.

Nine leagues to the westward of Fuego is the small but fertile island of Brava, which is about four leagues in circumference, and of moderate elevation. It is said to be the most fruitful of all the Cape Verd Islands. Porto Furneo is on the east side of the island, and is a good harbour for vessels under two hundred tons. It has a narrow entrance, and if large ships visit this port, they will be obliged to warp out, which may be done with great ease in the morning. But I should recommend Port Furneo, that lies on the south side of the island, or Porto Fajen-dago, on the west side, for ships to touch at for refreshments, wood, water, &c. as those places are both good harbours, and the best for obtaining fruit, vegetables, beef, pork, goats, wood, and water, of any in the whole group. Ships bound to this island, need apprehend no danger in approaching it on either side, more than one cable’s length from the shore. The inhabitants are industrious and obliging, and the ladies are sprightly, intelligent, and modest; and are particularly partial to Americans.

Before closing this chapter, and taking leave of the Cape Verd Islands, I think it proper to remark that some charts are marked with reefs that do not actually exist. It is my firm conviction that in passing between these islands and the African coast, nothing need be feared from the Porgas shoal, which is said to be about mid-channel. I am aware that caution is the parent of security, and that it is best to err on the safe side of the question. But I have examined the log-books of many ships which have passed over the spot which this shoal was supposed to occupy, and have become convinced that it does not exist.
The Bonetta shoal and rocks have also been reported as dangers carefully to be avoided by ships passing between Africa and the Cape Verds. They are said to lie forty-two leagues east-by-north from the north end of Bonavista; with shoal water on them, three miles in length north-east and south-west, and about half that breadth. This reef may also be put down as not existing, for I have crossed the situation assigned to it, and have examined the log-books of more than twenty ships who have vainly endeavoured to sight it.

There is likewise said to be a reef of rocks lying ten leagues to the north-east of Bonavista, of about the length of two cables, and of a breadth of half that distance, nearly even with the surface of the water. As most of the ships running for the islands of Sal or Bonavista first make them bearing from west to south-west, it is strange that the reef just mentioned has never been seen by any of them; and the fact that it has not, furnishes just reasons to doubt its existence.

We were now prepared to pursue our voyage to its ultimate point of destination. More than thirty days had elapsed since we left the port of New York, in which time we had crossed the wide Atlantic, and sighted every island and rock in the Cape Verd group, and landed on the most of them. The reader must think it high time that I said something concerning the merits of my vessel, in this her first essay on the element of her adoption. I will do so before I proceed any further; and the only reason which induced me to defer it until the present moment was to give the Antarctic a fair trial before I recorded my testimony of her character. It is this:—

A better sea-boat never floated upon blue water, smooth or rough, than the schooner Antarctic. She has equalled my wishes, and transcended my expectations. I shall strive hard to render her name immortal; and if I am ever fortunate enough to re-enter the circle from which she derives her name, it shall go hard with me but the flying-jib-boom of my vessel will point still nearer to the south pole than northern pine has ever yet done. But more of this hereafter.
We continued steering to the south, with fine breezes from the north-east, until Thursday, the 31st of July, at which time we lost the north-east trades, in lat. 9° 50' north, long. 20° 14' west; variation per azimuth 16° 11' westerly; the current setting west-south-west, thirteen miles in twenty-four hours. From the last-mentioned date to the 6th of August we had the winds from south-west to south-south-east, attended with much rain; we then took the south-east trade-wind from south-south-east, and fair weather, in lat. 1° 25' north, long. 21° 47' west; variation per azimuth, at 10, a. m., 14° 45' westerly; current setting to the north-west-by-west, fourteen miles in twenty-four hours.

August 7th.—On the following day, which was Thursday, we crossed the equator, in long. 22° 54' west, with a fine breeze from south-east to east-south-east, and fair weather. We were now just about half-way between the coast of Africa and that of Brazil; Sierra Leone bearing north-east, and Pernambuco south-west. It may here be proper to observe, that ships bound round the Cape of Good Hope should always pass ten or fifteen leagues to the westward of the Cape Verd Islands, if they need no refreshments; and endeavour to leave the north-east trades in between twenty-two and twenty-three degrees of west longitude. They should also endeavour to cross the equator in the same longitude at all seasons of the year; by attending to which they will invariably shorten their passage, and have the weather more regular.

August 18th.—After crossing the equator we continued standing to the southward, with a fine breeze from south-east to east-south-east, and fair weather, until Monday, when we lost the south-east trade-wind in lat. 28° 14' south, long. 29° 4' west. On the following day we took a light breeze from west-south-west. On Wednesday, the 20th, we were in lat. 30° 37' south; and at 1, p. m., our lat. was 30° 40' south, long. 29° 41' west, with the wind from west-south-west, and fair weather.

I now determined to sight the island of Saxenburgh, if such an island really existed within any reasonable distance of the spot in which it is said to be situated.
The location which has been assigned to it is about half-way between the eastern coast of South America and the Cape of Good Hope, in lat. 30° 43' south, and long. 19° 30' west. We made a due east course, keeping two men at the mast-head, day and night, until we were in long. 17° 21' west, without seeing any indications of land whatever. During the time of our making this run of eleven degrees, we were not three miles from the parallel of 30° 40', excepting about eight hours; when on Saturday, the 23rd of August, we were roused by the cheering cry from the mast-head of "Land, ho! land, ho! about six points off the starboard bow."

We now had the wind from west-by-south, which permitted us to haul up for it; but after running in that direction about four hours, at the rate of eight miles an hour, our tantalizing land took a sudden start, and rose about ten degrees above the horizon. Convinced that we could never come up to it in the ordinary course of navigation, we now tacked and stood to the northward. We had likewise seen land the day before, at 4, p. m., exactly in our wake, which appeared to be about twenty miles distant.

*August 24th.*—On Sunday we found ourselves in lat. 30° 41' south, long. 15° 57' west, and feeling satisfied that any further search for Saxenburgh Island would be a useless waste of time, we shaped our course for the south African coast, our first point of destination being Saldanha Bay, a little south of the parallel on which we were now running to the east. We crossed the meridian of Greenwich on the 28th, in latitude 30° 55' S.

The island of Saxenburgh is said to have been first seen by J. Lindeman, a Dutch navigator, who sailed from Monikendam, in 1670. On the 23d of August of that year, he discovered an island, as he supposed, bearing north-east-by-north, distant about six leagues. He described it very particularly, and accompanied his description with a view taken at sundown of the same day. He represents it as having a remarkable narrow peak, like a column, rising near the centre of the island, and he named his new discovery Saxenburgh, in honour of a German town of that name in the circle of Westphalia, twenty miles north-west of Hanover.
Captain Galloway, in the American ship Fanny, bound to Canton, in 1804, supposed that he saw this island at ten leagues' distance, and states that it was in sight four hours from the mast-head, without changing its appearance, which exhibited a peaked hill in the centre, and a bluff at the west end, situated in the latitude of 30° 43', but two degrees farther east than laid down in the chart.

This illusory island was again supposed to have been seen by Captain J. O. Head, in the ship True Briton, on a voyage to Calcutta, the 9th of March, 1816. The log-book of this ship states, that "at 8, a.m., fresh breezes from north-by-west, and dark cloudy weather, saw what we supposed to be an island, bearing east-south-east, distant six leagues, forming a high pinnacle at the southern end, and gradually decreasing in height to the north end. At 10, a.m., squally weather, the land having still the same appearance, as the clouds cleared off at intervals. At noon our latitude by observation 30° 42' south, long. 21° 40' west, by mean of three chronometers; the centre of the island bearing east-by-north-half-north per compass, twenty-four miles. At 2, a.m., cloudy weather with rain, lost sight of the land, which we concluded was the island of Saxenburgh, laid down by Captain Horsburgh as doubtful."

Captain James Horsburgh, F.R.S., who has had twenty-one years' experience as shipmaster in the India trade, says that he has, at two different times, endeavoured to gain sight of this doubtful island, by crossing the longitude of 19° west, at one time a few miles to the southward of its latitude; and at another time a little more northerly than the latitude assigned to it, without seeing any indications of land.

From my own observations, and those of the many celebrated English navigators who have endeavoured to sight this island of Saxenburgh, I am of opinion that such an island does not exist. Clouds, exactly like land in appearance, will sometimes remain stationary at the horizon in this part of the ocean, for a great length of time, and are easily mistaken for distant islands. The natural conclusion is, that those gentlemen who
have reported to have seen the island of Saxenburgh, must have been deceived by one of those stationary clouds which are common in this parallel.

*Sept. 4th.*—We continued our easterly course, with strong winds from west-north-west to south-south-east, and occasional foul weather, until we made the African coast, in lat. 33° 18' south, and on this morning, which was Thursday, at 6, a.m., we anchored in Saldanha Bay, in four fathoms of water, mud and clay bottom, entirely land-locked, and sheltered from all winds.
CHAPTER III.

The Cape of Good Hope—A Brief History and Description of the Colony—Saldanha Bay—St. Helen's Bay—Berg or Mountain River—The Vale of Drakenstien—Oliphant or Elephant River—Kouassi River—Cape Volta or Volcanic Productions—Projected Speculation—The Gariep or Orange River—Angras Juntas Bay—Whale Bay—Possession Island—Elizabeth Bay—A Peep at the Interior—Angra Pequena, or Santa Cruz—Ichaboe Island—Mercury Island—Inter-course with the Natives—Bird Island—Sandwich Harbour—Walwich Bay.

The southern extremity of Africa, since it became the seat of a European Colony, has formed an interesting subject for the investigation of travellers. It has been visited, and explored, and described, by many of the most inquisitive and scientific geographers of the age; and yet, with the exception of Cape Town and its vicinity, this country appears to be very imperfectly known. Very little additional information, however, can be expected from an humble individual like me, "who am not meet to be called" a geographer, and who merely resorts to foreign regions in the "beaten way" of business,—having an eye more to the interests of my employers than to the physical aspect or moral condition of the countries I visit. I shall therefore merely remind the reader of such prominent historical facts as will enable him to accompany me along the Coast, from the Cape to the 22nd degree of south latitude, without being compelled to exclaim, in the language of Jerry Hawthorn, "I'm at fault—can't follow."

The southern promontory of Africa, commonly called the Cape of Good Hope, is a peninsula, nearly ten leagues in length, composed of a vast mass of mountains and rocky land, between the latitudes of 33° 53' and 34° 22' S. It was discovered by Bartholomew Diaz, an eminent Portuguese navigator, in 1487, who named it Cabo Tormentoso, or the Stormy Cape, on account of the boisterous weather, the shattered state of his ships, and
the mutinous disposition of his crew,—all of which difficulties combined, compelled him to return to Portugal, without doubling the cape he had discovered. The king his master, however, gave it the name of "Good Hope," as he had now good reason to hope that around this newly-discovered point of Africa lay the long-wished for passage to India. This hope was realized by the more successful Vasco de Gama, who, ten years afterwards, doubled the Cape, and passed to the coast of Malabar.

After several unsuccessful attempts by the Portuguese to plant a colony here, the Dutch finally succeeded, in 1650, under the direction of Van Riebeeck, who, having concluded a treaty with the natives, took possession of the cape peninsula, and laid the foundation of the present town, by erecting a fort of wood and earth, and some other necessary buildings, which he called Kier de Kou,—a defence against all. It was in the genuine Dutch style, like the fortress which they erected for the defence of their American colony Fort Amsterdam, now the city of New York.

Van Riebeeck soon discovered the passion which the poor, weak, but peaceful and inoffensive Hottentots had conceived for spirituous liquors, first introduced among them by Christian navigators; and being a gentleman of some sagacity, he thought it good policy to turn their frailty to his own advantage. Thus, by giving these simple people a few casks of brandy, a little tobacco, iron, and some paltry trinkets, he obtained from them a part of their country, and many of their flocks and herds. The price of an ox was then a piece of an iron hoop, and the purchase of a whole district only cost a cask of brandy.

A hundred male members constituted the first colony of the Cape: these were afterwards joined by an equal number of females from the houses of industry in Holland, and also by a number of French refugees, who were compelled to leave their native country in 1681, on account of religious persecution. The population, from that period, rapidly increased; the wild beasts were extirpated, or driven to the interior, and the
Dutch continued to extend their encroachments over the richest districts of the country, for more than a century.

In 1795, during the French revolution, the English took possession of this colony, and retained it seven years; but delivered it up to the Batavian republic by the treaty of Amiens, in 1802. In 1806 it was again taken by the British, under whose dominion it still remains.

This extensive colony is bounded on the west and south by the ocean, on the north by the River Koussie and the country of the Bosjesman Hottentots, and on the east by the Great Fish River and the country of a savage race called the Caffres, who have given the colonists more trouble than all other obstacles combined. The settlement comprises an area of more than one hundred and twenty-eight thousand square miles, the greater part of which is covered with naked mountains, between the sloping declivities of which are extensive plains, destitute of running water, called Karroos. These plains, however, are not wholly deserts, as has been represented by inaccurate travellers; but are at certain seasons of the year clothed with verdure, and covered with flowers of beautiful tints and delightful fragrance.

The north end of the promontory forms Table Bay, on the south shore of which stands Cape Town, at the foot of Table Mountain, the latter presenting a bold and almost perpendicular front, rising three thousand five hundred and eighty feet above the level of the bay. On the west is the Lion's Mountain, so called from its bearing some resemblance to the shape of that animal; and on the east is the Devil's Berg. The majestic appearance of these heights, particularly that of Table Mountain, excites the admiration of every voyager who enters the bay. The town stands on a sloping hill, at the south-west corner of the bay, and is a regular, neatly-built place, and well supplied with water by a plentiful stream which issues from the Table Mountain. It contains about twelve hundred dwelling-houses, which are inhabited by a population of eighteen thousand five hundred persons, ten thousand of whom are blacks.
The principal rivers on the west coast of this colony are the Elephant and the Berg or Mountain River; the former runs in a northerly direction along the foot of the western chain of mountains, and falls into the Atlantic in latitude 31° 30' S.; the Berg or Mountain River has its source in the mountains which enclose the Vale of Drakenstein, and discharges itself into St. Helen's Bay. The principal bays on this coast are Table Bay, False Bay, St. Helen's Bay, and Saldanha Bay, where we now lay at anchor.

The entrance to this fine commodious harbour, which is through a ridge of granite hills, is not quite three miles broad. Its north point is in latitude 33° 3' S., long. 17° 49' E., a little more than seventy-five miles north of the southern extremity of the cape. This bay is about fifteen miles in length, in the direction of north and south, and affords at all seasons very excellent shelter and anchorage. Its northern arm is called Hoetjes Bay, on the north side of which there is good anchorage for ships of any size. There is also deep water on the west side of it, close to a granite pier formed by nature, where ships may lie in perfect safety in all seasons of the year; and if necessary they may heave down along-side of this pier without any risk. The only disadvantage in the northern arm of the bay is the scarcity of fresh water, which might be easily remedied by digging a few wells of moderate depth, from which fresh water could be obtained in any quantity, and of excellent quality. The southern arm of Saldanha Bay, of which I shall speak presently, furnishes good fresh water from a spring, which, if cleared and enlarged, would supply a fleet with this necessary article in a very short time.

In entering this well protected bay, attention should be paid to the following circumstances and localities:— On the north side of the entrance is a small island, called Mallagassen; and on the south side is another, in a bend of the land, near the shore, called Jutten. Two miles eastward of the first-mentioned island is a third, called Maseus. Each of these islands has a reef, which puts off from its shore about a cable's length.
As all three of them are low, and can be seen but a short distance, accuracy in the vessel's latitude is very requisite. The entrance is nearly three miles broad, and clear of dangers one cable's length from either of the islands first mentioned, between which it is necessary to pass. But the third island, Maseus, may be passed on either side at the distance of forty fathoms, though the widest passage, and the best for strangers, is on the south of it. We carried in from fifteen to ten fathoms of water, and chose our anchorage in four.

Ships going into this bay with the intention of anchoring in its southern arm must keep the south shore close on board; and after passing the inner point of the bay, haul round immediately to the south, and anchor in front of Riot Bay, in five or six fathoms of water, about half a mile from the shore, on the west side of the harbour. Here vessels may lie in perfect safety, sheltered from all winds; and if in want of fresh water, the casks may be rafted up the lagoon, on the flood-tide, and filled on the east side from the spring before mentioned, which is about half a mile below the guardhouse, or flag-staff. When the casks are filled, they can be rafted down to the ship in a short time by taking advantage of the ebb-tide. Firewood, however, is very scarce on the banks of the bay, but it can be purchased at a low rate of the neighbouring farmers, who will bring it to the ship.

At the entrance of the lagoon on the south side of Saldanha Bay are two small islands; within which, about two miles on the west side, is the East India Company's post; and about one mile farther up, on the east side, is the president's quarters. Here there is generally a justice of the peace and a small company of regular troops. Between this place and Cape Town there is a regular intercourse, and a mail, which arrives at each place twice a week.

Refreshments of various kinds may likewise be purchased of the farmers, who cultivate the soil on the east side of the bay,—rearing cattle, horses, sheep, and hogs for the Market at Cape Town. Fruits and vegetables may be had in abundance at a very moderate
price, and at a short notice. A plenty of excellent fish may be caught in almost any part of the bay, either with a seine or a hook and line. In fact, this is an excellent place for ships that require repairs, repose, or refreshments.

In running for Saldanha Bay in the night, or in thick weather, care should be taken not to fall in with the land to the north of Baven's Point, which is the north point of the bay; as there are many sunken rocks between this and St. Helen's Bay, some of which run from three to five miles to the westward, with bold water between them.

Sept. 10th.—After taking on board a sufficient quantity of fresh water, of an excellent quality, with a fine stock of refreshments of all kinds, we got under way on Wednesday, the 10th of September, and steered to the north, with a fine breeze from south-south-east, and fair weather, with the intention of examining the west coast of Africa, as far as the tropic of Capricorn. On the following morning, at 5, a.m., we were close in with St. Martin's Point, which lies in latitude 32° 42' S., long. 17° 45' E; variation per azimuth at 9, a.m., 27° 4' W. High water on full and change days at half-past two; rise, seven feet.

St. Martin's Point projects from the coast in a north-west direction, forming the west side of St. Helen's Bay, the northern point of which is Cape Deseada. The distance between these two points is nine leagues, and the bay is four leagues deep, running into the east and south-east, with regular soundings, from twenty to four fathoms, as you approach the head of the bay, or south shore. Here a ship will find good and safe anchorage half a mile from the beach, in six fathoms of water, mud and clay bottom, sheltered from all winds excepting from north to north-west. These winds, however, never come home to the bottom of this bay with sufficient force to injure a ship at any season of the year. In the summer months, when the southerly winds prevail, the water is entirely smooth in any part of the southern side of the bay. The best anchorage is about a mile from the southern shore, immediately in front of a house that
stands near the beach, about half-way up the bay, in five or six fathoms of water, clay bottom.

From the west point of the bay, along the south shore, to the head of the bay, extends a chain of rocks, running nearly half a mile from the land; outside of which there are no other dangers until you approach the head of the bay, where there is a sand-bank, lying in front of the Berg or Mountain River, about two miles off-shore, with only three feet of water on it at low tide. Ships in want of fresh water I would recommend to anchor near this bar, and send the casks into the river on the flood tide, to ascend the stream as far as the flood will carry them, which is about five miles. Here let them remain until nearly the last of the ebb, when the bungs may be knocked out, and the casks filled with very little trouble. This water will prove to be of a most excellent quality, and will keep sweet as long as any that was ever taken to sea. The next ebb-tide will take the full casks down to the ship just by keeping the boat ahead, and the whole process will be rather a pleasant recreation than an arduous duty. Of course care must be taken that the casks are perfectly clean, tight, and well bunged, to prevent the entrance of salt water.

I have filled fifty casks at this river at two different times, and although I had large crews, they were always healthy while using the water from the Berg River. There is a spring near the house before mentioned, on the south side of the bay, where twenty or thirty casks may be filled at any time; but the water is not good, as I found that about twenty-five of my crew were attacked with diarrhœa, after drinking of the water for twenty-four hours. But while I had the Berg River water on board, which was nearly eight months, there was not a sick man among a crew of thirty-five men, although for six months of the time the weather was very warm.

The farmers that reside on the banks of Berg River are principally Dutch, and very industrious. They pay their attention to raising grain, and rearing cattle, horses, and sheep for the Cape Town market. They also produce some wine of a good quality, and a small
quantity of brandy. Beef and mutton are very cheap here; as are also nearly all kinds of fruits that are common to tropical climates, as well as a great variety of vegetables. I have purchased fine fat bullocks that would weigh eight hundred, for four dollars each; sheep for one dollar; and as fine oranges and lemons as I ever saw, for half a dollar a hundred; and every thing else in proportion. Wood also may be had on the banks of Berg River, but not of large size. The Dutch farmers generally employ the Hottentots to work on their farms, and say that they are very trusty and inoffensive, but not very fond of hard work.

The wines that are made on the banks of Berg River are principally made in an extensive valley about fifty miles from the river’s mouth, called the vale of Drakenstein. This valley is a remarkably fertile tract of land, enjoys a most delightful climate, is well inhabited, and its soil is capable of every species of agriculture. Two-thirds of the wine which is brought to Cape Town, is supplied by the vineyards of Drakenstein alone. Great quantities of choice fruits are also raised here, and every month of the year the table may be supplied with various kinds, accompanied with six or eight different sorts of wines.

The celebrated Constantia wine is made on two farms, close under the mountains, about half-way between False Bay and Table Bay. One of these farms produces the white, and the other the red Constantia. Some of the wines that are made in the valley of Drakenstein are frequently sold to strangers for Constantia. But I should suppose that any one might easily detect the fraud. The Constantia wine is of an exquisite quality, which is scarcely susceptible of improvement; but the other varieties, which come under the general appellations of Cape wine and Cape Madeira, have an earthy taste, a diluted flavour of Muscadel, and in most instances, an undisguised taste of brandy.

In the light sandy grounds cotton succeeds well; coffee and sugar-cane might both be cultivated with success, if properly attended to; and indigo grows wild on the banks of the river. Hemp and flax are raised here,
the latter producing two crops a year. The tea-plant has been a long time in the colony, having been brought from China; but it is now totally neglected. Wheat, barley, and oats are successfully cultivated; but rice does not grow here.

The wild beasts common to this country are gradually retreating before the encroachments of man. The lordly lion retreats sullenly and indignantly before the image and likeness of his Maker, and is only seen at respectful distances. The deserts, however, in the vicinity of the Cape, resound with the howling of wolves and the bellowing of hyenas. The jackal of the Cape and the tiger-cat are also common. The beautiful white-faced antelope, or springer, is so common near Fish River, that herds of more than two thousand may sometimes be seen together. Gazelles, with their "exquisitely soft and expressive eyes," are numerous. Zebras are becoming very rare in the colony. The elephants have also forsaken the districts inhabited by Europeans. The two-horned rhinoceros shows itself still less; the ostrich is found in the deserts of the interior, and sometimes comes in troops to lay waste the fields of corn.

One of the most beautiful animals of this country is the gn eo, the head of which bears some resemblance to the African buffalo. He has an erect mane on the neck, and another under the neck, descending from the breast between the fore-legs. His shoulders and body are somewhat like those parts of the horse, while he has the elegant limbs of the antelope. Besides the animals already mentioned there are found here the wolf, panther, elk, buffalo, leopard, rhinoceros, wild dogs, baboons, hogs, hares, ant-bears or ground-hogs, porcupines, hedgehogs, and a variety of monkeys. Among the feathered tribes are eagles, vultures, kites, pelicans, flamingoes, spoonbills, cranes, ibises, wild geese and ducks, teals, snipes, quails, bustards, and partridges. Turtle-doves of many sorts, thrushes, humming-birds, and an immense variety of other small birds, of the most exquisitely beautiful plumage, are found in the woods; but I heard none of them sing. It is a common saying, however, that "in south Africa
flowers have no smell, birds no song, rivers no fish. But there is no rule without an exception; as fish are found in some of the rivers, and some of these beautiful birds may have delightful notes.

There are ostriches of two kinds that frequent the sandy plains of Karroo, in considerable numbers, and their eggs are less strong in taste than those of ducks or geese. The females are very sociable in their domestic concerns and family affairs. It is not unusual to find thirty-six eggs in a single nest, the joint stock of three females, who incubate together, attended by the fathers of the brood. Along the coast are various kinds of sea-fish, such as perchs, stone-breams, rock-fish, mackerel, soles, and skate; and abundance of muscles and oysters. A variety of serpents and other reptiles are found in the forests, together with scorpions and insects of various kinds. The sea-cow and the alligator are found in the Berg River.

From St. Martin's Point we steered to the north-east, until we were abreast of Cape Deseada, which is a low sandy beach in front of bluff sand-hills, about two hundred fathoms back. From hence our course was north-north-west, for about five leagues, when we were in front of Lambert's Cove, in which small vessels may lie in perfect safety, in three fathoms of water. The entrance is from the north, and it runs in to the south-south-east about half a mile. Several Dutch farmers reside in the vicinity of this harbour, and the adjacent plains are covered with black-cattle.

From Lambert's Cove we steered north-north-west, a little westerly, until we were abreast of Cape Dunkin, in lat. 31° 55' S., long. 18° 6' E. This cape is the south point of a small bay of the same name, within which ships may find partial anchorage, in from ten to six fathoms of water, sandy bottom. From thence we continued steering to the northward for the distance of four leagues, when we were close in with Elephant River, the entrance of which is in lat. 31° 37' S., long. 17° 59' E. This river is not navigable for vessels, nor even boats, unless the sea is very smooth, as there is a bar stretching across its entrance, with only two feet of
water on it; and as the westerly swell is constantly heaving in on this coast, there are generally heavy breakers on the bar. But within this bar there is plenty of water for a large ship, for the distance of two miles up the river, in front of a small village, where there are several Dutch farmers residing.

This river enters from the south, running in north-north-west about two miles; and then it turns to the east and east-south-east, carrying bold water for a long distance inland. If there could be a passage cut through the bar at the mouth of this river, it would be the finest harbour on the west coast of Africa. The inhabitants are principally engaged in rearing cattle, only cultivating sufficient grain for their own consumption. Fish may be caught in great abundance in the mouth of this river, within the bar. There are no dangers between Elephant River and St. Helen's Bay that lie more than two hundred fathoms from the shore. The soundings are regular. Ten miles from the land you will have forty fathoms of water; and it gradually becomes more shallow as you approach, until you are within one mile of the beach, when you will find ten fathoms of water, sandy bottom, with a few broken shells.

The land between Elephant River and St. Helen's Bay deserves a few descriptive remarks. Bluff sand-hills, moderately elevated, are seen from one hundred to three hundred yards back from the beach. About half a mile from the latter the sandy ground begins to terminate, and the soil to commence. Another half mile farther inland brings us to good soil, where the plains are as fine for grazing as any in the world. Between the beach and the sand-hills just mentioned, there is a fine road, running a great part of the distance between the two places. The whole coast along here exhibits unequivocal evidences of its once having been agitated by volcanic eruptions; such as lava, in irregular masses, with different strata distinctly defined. Pumice stones also are scattered over the country for many miles inland, forming irregular hills, &c., interspersed with lava, basalt, and other volcanic productions. In pulling along this shore with my boats, I had ample opportunities of examining these relics, and making these observations.
September 13th.—We continued exploring the coast in this manner, keeping the boats close in-shore in search of fur-seal on every mile of the coast, until Saturday, the 13th of September, when we fell in with a small island, in lat. 31° 32' S., long. 17° 56' E., about half a mile from the shore. Here, for the first time, our search was successful.

A small reef runs off from the west end of this island, to the distance of about a hundred fathoms.

From this island we followed the shore to the north-westward, passing Point Grazing, in lat. 31° 20' S., and four places which are said to be rivers, viz., Zwarte Darn River, in lat. 30° 45', not open; Greene River, in lat. 30° 33', not open; Zwarte Lintjie River, 30° 21', not open; and Kouissie River, in lat. 29° 54' S., long. 16° 57' E.; the latter was open, and may be passed in boats only at full sea. It is closed at times, however, in the dry season, by the shifting of the sand-hills in windy weather. This may well be called Salt River, as the salt water runs up it about fifteen miles, ten miles of which is very shallow. This is the northern boundary of the cape colony.

Many of the rivers which intersect this extensive colony are merely periodical torrents, which continue to flow during the rainy season, but which, during the summer, leave their deep-sunk beds almost completely dry; and the rivulets which are supplied by the mountain springs have scarcely escaped from their lofty sources, before they are either absorbed by the thirsty earth, or evaporated by the heated air. Even the permanent rivers, some of which contain sufficient water for the navigation of small craft, for several miles up the country, are all, except the Knysna, rendered inaccessible by a bar of sand or a reef of rocks across the mouth.

The land bordering on the sea-coast in this latitude is very sandy, and only fit for grazing fields; and for many miles into the interior it seems to be destitute of arable soil. Many kinds of skins, however, may be procured here, including those of the leopard, fox, bullock, &c., together with ostrich-feathers, and valua-
ble minerals from the head of Koussie River. Vast numbers of horned cattle are raised in the interior.

From the mouth of this river the coast tends north-north-west, a little westerly, twenty-eight leagues to Cape Voltas, in latitude 28° 24' S., long. 16° 28' E.; variation per azimuth 25° 55' westerly. There is a bank of soundings that puts off to the west of this cape, about thirty miles, at which distance there is forty fathoms of water; the depth becoming gradually and regularly reduced as we approach the shore. This bank extends southerly along the coast, quite to the Cape of Good Hope, varying from thirty to fifty miles off shore; and from Point St. Martin's to the last-named Cape there are many dangers, lying from two to five miles off shore. But north of St. Martin's to Cape Voltas, there are no dangers more than a quarter of a mile from the land.

The Socos Islands, laid down on the charts as lying in latitude 29° 35' S., long. 16° 34' E., said to be about twenty miles from the land, are not to be found. They have been represented as four in number, with several small islands between them and the continent. But I can assert positively that no such islands exist; neither is there any island of any description lying between St. Helen's Bay and Cape Voltas, more than half a mile from the main.

Cape Voltas is also very erroneously laid down, in latitude 29° 90' S., and long. 16° 31' E., with a deep bay running in on the north side of the Cape, twenty-five miles, in an east-south-east direction, with deep water all over the bay. Now, the true and correct situation of Cape Voltas is in latitude 28° 27' 30' S., long. 16° 17' E. The Cape is a high bluff point, projecting into the sea, and there are several rocks lying about half a mile to the west of it, beyond which there are no dangers. About one mile north of the cape there is a small bay, not more than two miles in length, and one and a half in width; within which the anchorage is not safe, as the ground is foul, and heavy rollers are continually heaving in from the westward, at all seasons of the year. Ships, however, which are in want of fire-
wood, may lie off and on, and obtain any quantity from
the head of the bay, where they will find a thousand
cords piled up on the beach, which come down the
Orange or Gariep River, the entrance to which is about
two leagues to the north of Cape Voltas.

The land around the Cape, and to the south as far
as Koussie River, is high on the seaboard, running back
into elevated mountains. The hill-sides are covered with
very good grass for grazing cattle, but the summits of
these eminences are one mass of volcanic productions.
I know not how far north of Table Bay Mr. Barrow
travelled, without discovering "a volcanic product;"
but I am positive that such relics might have been found
in great abundance as far south as Elephant River.
Mr. Barrow says, "There is neither a volcano nor a
volcanic product in the southern extremity of Africa,
at least in any of those parts where I have been; nor
any substances that seem to have undergone the action
of fire, except masses of iron-stone, found generally
among the boggy earth, in the neighbourhood of some
of the hot springs, and which appear like the scoriæ of
furnaces. Pieces of pumice-stone," he continues, "have
been picked up on the shore of Robben Island (or Seal
Island, in the mouth of Table Bay), and on the coast
near Algoa Bay, which must have been wafted thither
by the waves, as the whole basis of this island is a hard
and compact blue schistus, with veins of quartz running
through it; and, of the eastern coast, iron-stone and
granite."

If these remarks were intended to apply to the vicinity
of Cape Town, or even as far north as St. Helen's Bay,
a distance of more than a hundred miles from Table
Bay, I have nothing to offer in opposition. But north
of that, I must contend for volcanic remains.

It is said that there is no fresh water to be had on
this coast, north of Cape Voltas. But this is an error;
as any quantity can be had in Voltas Bay, in the rainy
season, without the trouble of searching for it under
ground. But by digging, fresh water may be had at
all seasons of the year, at a short distance from the
head of the bay, where the landing is very safe and conve-
nient, sheltered by two small islands lying close to the beach, inside of which the water is perfectly smooth. This is also a fine place to procure bullocks' hides, fox-skins, leopard-skins, ostrich feathers, and many other valuable articles.

For the lucrative business of "jerking beef," there is not a more eligible situation on the whole surface of the globe; as any number of bullocks, in the finest order, may be purchased at fifty cents each, delivered on the beach; and for ten months in the year there is little or no rain. By penetrating the interior forty or fifty miles from the coast, which may be done with perfect safety, and without the slightest personal risk, thousands of fine fat cattle may be purchased for as many toys, and the bargain consummated under the guns of your vessel. The natives are honest and inoffensive; being in a state of nature, and having never studied the arts of deceitful villainy which are practised so successfully by the children of civilization.

Should any citizen feel disposed to fit out a vessel for the coast of Africa, to procure a cargo of hides and other valuable articles, I will cheerfully communicate every necessary information on the subject; a subject which I have deeply investigated, and can speak of from practical knowledge. Such a voyage could not fail of being highly profitable to the owners and every one concerned. Had I not subsequently made more valuable discoveries in the Pacific, and were I not bound by every tie of humanity, as well as justice and honour, to restore my two captives to their native country, to which they are very anxious to return, I would myself be the first to penetrate the interior of Africa; with full confidence that in twelve months after I arrived on the coast, I could purchase, and have driven to the sea-coast, more than fifty thousand bullocks, besides the other valuable articles common to that section of the country.

This important discovery I laid before my owners, on my return to New York from this present voyage; but they thought me enthusiastic, the project chimerical, and refused to listen to it. I did not urge the subject, as I had a desire to seek for discoveries in another quar-
ter; which, as the sequel will show, proved to be a losing speculation for all concerned; to me in particular, as I not only lost my property, but also my friends—a very natural consequence. Had I been permitted to return to Africa, the Antarctic would by this time have become as famous

"As Jason's Argo, which conveyed to Greece
The wealthy purchase of the golden fleece."

nor should I have been fated to sustain an unequal combat with the giants of prejudice and the hydras of malice and jealousy.

September 18th.—After taking on board a sufficient quantity of wood in four hours, we left Cape Voltas, on Thursday the 18th, and steered to the north, with a fine breeze from the south, and fair weather. At 3, p. m., we reached the entrance of Gariep or Orange River, between which and Voltas Bay, on the sea-coast, the land is very low, sandy, barren, and desolate. It retains this appearance for some distance from the shore; but after running back six or eight miles, it begins to swell into hills, and still farther back it rises into lofty mountains, which stand each side of the river, on the banks of which are a few Hottentot villages. The wealth of the inhabitants consist of herds of cattle and flocks of sheep.

Orange River, though quite extensive in its course, is, in the latter part of the dry season, nearly closed at its entrance, and the water continues shallow four or five miles westward of the river's mouth. On this shoal the sea breaks every full and change of the moon, as there is a heavy swell setting in from the west at that time. There are many valuable minerals and precious stones found in and about this river, and I have found a few grains of gold-dust at the river's mouth. Copper and lead ore have been found here, and I have no doubt that there are many valuable mines in this part of the country. Notwithstanding the sterile aspect of the sea-board, twenty-five miles up the river the soil is good, and the country well wooded. A few miles further east are extensive plains, on which I have seen more than three thousand head of cattle, equal to any in the world. Here the soil is rich, and would produce any thing that
might be put into the ground. Some of the forests are of very handsome growth, and the different varieties of plants are very numerous. I have bought bullocks here for one pound of powder each, and ostrich feathers at a proportionately low price.

Persons wishing to have communication with this river must land at Voltas Bay; and walk to the banks of Orange, as there is no landing at or near its mouth, any season of the year, on account of the continual heavy surf that is always rolling in upon this coast from the westward. This river rises far in the interior, and may be said to commence at Campbell's Dorp, six hundred miles directly east from its mouth; being formed there by the confluence of another, called Yellow River, which rises among mountains nearly four hundred miles to the north-east of Campbell's Dorp, and eight hundred from the mouth of the Orange. Two or three other rivers also add their waters to the Orange.

Taking our leave of Orange River, we continued examining the coast to the north-north-west along a straight shore, clear of dangers, until we came to what is called Angras Juntas Bay, said to have an island at its entrance, and a bay or lagoon within the island, running six leagues north and south, completely sheltered from all winds. This I know is not the case, as I have examined every rod of this coast with my boats, in broad daylight, close to the outer edge of the surf on the beach. At the place called Angras Juntas there is a small bend in the land, running in to the eastward about a mile, the width of its mouth being a mile and a half. Here ships may find tolerable shelter, with southerly winds, and it is likewise a convenient place to have communication with the Hottentots, some of whom reside about five miles to the north-east of this bay. There is a small rock that stands to the south-west of the south point about two miles, with deep water all around it.

At the entrance of this bay there is fourteen fathoms of water, which gradually lessens to five fathoms, about half a mile from the bottom of the bay, sandy bottom. But the best anchorage is under the south shore, one-
fourth of a mile from the point to the south-west, in six fathoms, sandy ground. This place is situated in latitude 27° 47' S., long. 15° 50' E.

September 20th.—We continued steering to the north and west, critically examining every mile of the coast, until Saturday, the 20th, when we arrived at Whale Bay, which is in latitude 27° 23' S. This bay is unsafe for ships to anchor in, on account of the shoal water in every part of it; but they may anchor outside of two small islands which front the bay, lying half a mile from the shore, on which may be taken a few fur-seal, in the proper season. The landing on the south side of the bay is good, and an eligible place for trading with the Hottentots who inhabit a small village which stands in a pleasant valley, ten miles inland. They frequently stray down to this bay in search of shell-fish, and will dispose of bullocks, sheep, and ostrich feathers on very favourable terms. I can recommend these men for trusty guides for any person that may wish to take an excursion into the interior. The coast along here is nothing but one sandy desert, with the exception of a few rocky hills composed of volcanic substances.

From this place we followed the coast to Elizabeth Bay, which is fronted by Possession Island. The centre of the island is in latitude 26° 57' S., long. 15° 8' E. Between this place and Cape Voltas there are many small islets and reefs, lying half a mile from the shore; but there are no dangers at double that distance from the land; and ships, if becalmed, may anchor five miles from the coast, in from fifteen to twenty fathoms, sandy bottom. These soundings extend along the whole range of coast.

Possession Island is three miles in length, and near one mile in width; forming, on the east side, a concave curvature, in which ships will find good anchorage in from seven to four fathoms, sandy bottom, and smooth water. The landing is also good in front of the anchorage, near the centre of the island, half a mile from the beach. At this place, in the months of August, September, and October, any quantity of penguins' eggs may be collected; and fish of an excellent quality may be caught in great abundance about the shore.
On the surface of this island I saw the effects of a pestilence or plague, which had visited the amphibious inhabitants of the ocean with as much malignancy as the Asiatic cholera has the bipeds of the land. The whole island was literally covered with the carcasses of fur-seal, with their skins still on them. They appeared to have been dead about five years, and it was evident that they had all met their fate about the same period. I should judge, from the immense multitude of bones and carcasses, that not less than half a million had perished here at once, and that they had all fallen victims to some mysterious disease or plague.

There are a few sunken rocks lying off the south point of the island, about three-quarters of a mile, on which the sea generally breaks. There is also a reef running off the north-east end of the island, about three miles, on which the breakers are frequently very heavy. These reefs both incline to the eastward, which promotes the smoothness of the water in the harbour. Between the island and the continent, or rather between the extreme points of the reefs and the mainland, the channel is three miles wide, with from fifteen to ten fathoms of water, sandy bottom, and free from dangers. Ships intending to anchor at this island while the south winds are fresh, should approach the anchorage from the south, and leave it by the opposite passage.

A Hottentot village, of limited dimensions and population, is situated about twenty-five miles east-by-south from the bottom of Elizabeth Bay; and another, somewhat larger, will be found on an east-by-north course, fifteen miles farther inland, containing about seven hundred inhabitants. Between this village and the seacoast is a dreary sandy waste, destitute of water, soil, and vegetation; with the exception of a small valley, in which there are several fine springs, where cattle that are driven from the interior may renew their stock of fresh water. Forty miles on an east-by-south course from the landing, on the south part of the bay, are several small villages, inhabited by a very civil inoffensive race of Hottentots, who raise a considerable number of cattle and sheep. But seventy-five miles farther inland
the cattle and sheep are almost innumerable, and may be purchased at a very low rate; say twenty-five cents per bullock, and five cents for sheep; besides the skins of other animals, ostrich feathers, and ivory. At that distance the land is very fertile, and would produce anything put into the soil.

But the farther you advance into the interior, beyond one hundred and twenty miles, the larger and more numerous are the herds of cattle, which may be purchased for a still lower price, to be delivered and paid for on the sea-coast. There is no more danger in travelling into the interior of this part of Africa than there is in travelling from New-York to Boston; providing the travelling party take no arms with them, and no more wearing apparel than is absolutely necessary. On all my excursions into the interior of this country, I was careful to go unarmed, and dressed in nothing but a pair of duck trowsers and a duck frock. Thus presenting nothing to excite their cupidity, I was invariably treated by the natives with the greatest kindness and hospitality, as they would freely share with me their last morsel of food. I should not hesitate, therefore, to travel across the continent of Africa, if suitable encouragement were offered, as I am confident that the enterprise would be attended with no personal hazard so far as the natives are concerned.

_Sep. 24th._—Seventeen miles to the northward of Possession Island, is Angra Pequena Bay, where we arrived on Wednesday, the 24th. The westernmost point on the south side of this bay is in lat. 26° 39' S., long. 15° 7' 30" E. This is a high bluff point, rendered conspicuous by a marble cross erected on the summit in 1486, by Bartholomew Diaz, a Portugese navigator. This monument of his successful enterprise along the coast of Africa is still standing, after having braved the storms and heats of three centuries and a half. About four miles eastward of this cross is Angra Point, which has a small rocky reef, lying north-by-east, half a mile from the shore, between which and the point there are five fathoms of water. But I should always advise strangers to pass to the northward of this reef,
giving it a berth of half a mile. After passing the reef you will open a lagoon running in to the southward, between four and five miles, the entrance to which is one mile and a half wide; a clear passage with seven fathoms in the middle of it, becoming gradually more shallow as you approach the head of the lagoon or either shore. After advancing about three miles up this lagoon, you will find four fathoms of water, muddy bottom; and here is the best anchorage under the western shore, about a quarter of a mile from the beach.

Two miles east-by-north from Angra Point, and due east of the reef just mentioned, are two small islands, about one mile from the mainland, lying parallel with the coast, which runs here nearly north and south. Neither of these islands exceeds a mile in length; but the southern one shelters good anchorage in five fathoms of water, clay bottom. The best situation to anchor in on the east side of the south island is near its centre, about two cables’ length from its shore; leaving a single rock, that lies level with the surface of the water, and nearly mid-channel, about half a mile to the north of the passage. This harbour may be entered and left with perfect safety, either from the north or south end of the island; but I can recommend the southern passage as being the most easy, and entirely clear from dangers twenty fathoms from either shore. The anchorage under the northern island is unsafe, there being several sunken rocks between it and the mainland, which do not always show themselves.

These two islands have once been the resort of immense numbers of fur-seal, which were doubtless destroyed by the same plague which made such devastation among them on Possession Island, as their remains exhibited the same appearance in both cases. Shags and penguins had now taken entire possession of these two islands, in such numbers that ships might procure any quantity of their eggs in the months of September, October, and November; and have them entirely fresh, by clearing out the old from the nests, and gathering the new every morning. These islands present the appearance of volcanic productions of an ancient date, as
do also some of the mountains in the interior of the mainland.

Navigators who visit this coast for the purpose of opening a trade with the natives of the interior, should make Angra Pequena their principal rendezvous to the south. By travelling forty miles due east from the sea, they will come to fresh water, and will meet with Hottentots who are very friendly, and may be trusted. This excursion, however, thus far, is not pleasant, being over a barren sandy desert; but every mile you proceed farther the prospect brightens, the soil becomes rich and fertile, and the country abounds with all the productions of the climate. The inhabitants soon become numerous, and the grassy plains are covered with immense herds of fine cattle. The forests remote from the villages are the hunting grounds of the natives, where they kill or take various kinds of wild beasts for their valuable skins; such as leopards, lions, zebras, grey foxes, &c., together with birds of a beautiful plumage. Here are antelopes, sheep, and ostriches in abundance; elephants, jackals, ant-bears, porcupines, hedgehogs, baboons, apes, monkeys, &c. The country to the north-east of Angra Pequena abounds with ores and minerals, which, together with ivory, ostrich feathers, and other valuable articles, can be had low. The bay of Angra Pequena affords an immense quantity of excellent fish, of many different kinds, which may be caught either with a hook and line or a seine.

Navigators have reported, and it is so marked on maps and charts, that this region of the western coast of Africa is entirely destitute of fresh water; and that none is to be found between the sixteenth and thirty-first degrees of south latitude. This idea is founded in error; for I have found many places, while travelling along near the sea-shore on this coast, where fresh water may be had in any quantity by digging very shallow wells. To the north of Angra Pequena, about ten miles, there are many fine springs of excellent fresh water, about one mile from the sea-coast, where any quantity of the pure limpid element can be obtained for a dozen ships at a time. The naiads of these fountains
are female Hottentots, who, like the damsels of Padan-aram, are drawing water for their flocks. They, as well as the other sex, are very friendly, and will furnish a stranger with refreshments, and the most trusty guides, if he wishes to penetrate the interior. I have experienced their fidelity in many extensive excursions; and therefore speak from practical knowledge. Ten or twelve families are generally near each of these springs.

I can also refute another erroneous statement respecting this coast. It is said there is a dangerous shoal lying between three and four leagues to the west of Angra Pequena, in lat. 26° 35' S. But I can assert, with the greatest degree of confidence, that there is but one shoal on any part of this coast, south of Spencer's Bay, that lies more than four miles from the mainland; and this one lies north-north-west from Angra Pequena, or Santa Cruz, about fifteen miles.

October 2nd.—On Thursday we got under way, and steered to the south, to examine a few rocks which lie about one mile off-shore from the mainland, and nearly half way between Possession Island and Angra Pequena, or Santa Cruz. These rocks are small, but evidently of volcanic origin, and have fine anchorage between them and the mainland, in five fathoms of water, sandy bottom, sheltered from all winds. But their greatest attraction in our estimation, was their dense population of fur-seal, with which they were literally covered. We of course secured a few of these animals, or rather a few of their valuable jackets. In going into the anchorage just mentioned, you pass the north point of the ledge, leaving the rocks on your right hand half a cable's length distant, and then haul immediately round to the south, and anchor abreast of the middle of the ledge, about mid-channel.

October 6th.—From this anchorage we steered once more to the north, and passing Angra Pequena, arrived at Ichaboe Island on Monday, the 6th of October. This island, which is about one mile in circumference, lies eight leagues to the north and west of Angra Pequena, and not more than a mile and a half from the shore. On the east side of this island ships may anchor in per-
fect safety, in five fathoms of water, sand and clay bottom, about two cables' length from its shore. The safety and convenience of this anchorage are owing to the following circumstances;—A point of land from the continent extends three or four miles into the sea, to the south of the island; and from the extremity of this point a reef puts off in a north-west direction, until it nearly meets a reef that projects from the west side of the island. Another reef puts off from the north-east point of the island; consequently a bay is formed, in which a ship might lie all the year round, in perfect safety and smooth water. But in coming to this anchorage care should always be taken to pass round the north end of the island, giving its north-east point a berth of half a mile, which will avoid all dangers. In working into this harbour the shore on the main may be approached within two cables' length.

This is a fine place for making captive the great leviathan of the ocean, the right whale, great numbers of which strike on this part of the coast about the middle of June. They are in the habit of playing about the reefs of the island, and that which runs from the continental point before mentioned; and as the south wind generally prevails, there is no difficulty in getting the dead whale alongside of the ship. Scalefish may be caught at the anchorage with hook and line; or at the bottom of the bay with a seine, in great quantities. An abundance of crawfish may also be caught with a hoop-net, all around the island, within fifty fathoms of the shore.

Eggs also may be obtained here in great quantities. In the months of October and November this island is literally covered with jackass-penguins and gannets, which convene here for the purposes of laying and incubation. The nests of the gannets are formed like those of the albatross, but are not so much elevated; while the jackass-penguins lay their eggs in holes in the ground, from twelve to thirty inches in depth, which they guard with the strictest vigilance. I have seen them stand at the entrance of these holes and protect their eggs or young ones with the most resolute perse-
verance, until they were removed by superior physical strength. They frequently lay three or four eggs, but the gannet seldom lays more than two.

This island is formed of volcanic materials, and its shores are resorted to by multitudes of fur-seal; we took about one thousand of their skins in a few days. The surface of this island is covered with birds' manure to the depth of twenty-five feet.* The south-east part of the bay, on the mainland, directly opposite the island, is the finest place on this part of the coast for jerking beef, it being only four miles from a Hottentot village and the springs of fresh water before mentioned, which will supply any number of cattle. Here also I travelled into the interior to a considerable distance, and found that the farther I advanced to the north-east, the more numerous were the herds of cattle and flocks of sheep; while the skins of leopards, gray foxes, &c. could be obtained with the utmost facility; together with ivory, ostrich feathers, and other valuable products of the country.

October 20th.—Having taken as many fur-seal skins as was practicable, we weighed anchor on Monday, the 20th, and steered to the north, carefully examining the coast for fur-seal. I had now fully made up my mind that a series of voyages to this coast for jerking beef, and trading for other articles with the natives, would prove a most brilliant enterprise, and make fortunes for all concerned. So fully was I impressed with this idea, that I determined to propose it to my employers immedi-ately on my return, not doubting for a moment that they would view it in the same favourable light. In the last particular I found myself mistaken, as I have already mentioned. But it really appears astonishing to me that some men of capital do not see the golden

* GUANO.—Our Author was quite aware of both the name and nature of this substance; but as it possessed less interest than other objects of traffic with which he was surrounded, he does not enlarge upon the discovery. In his first voyage, when at St. Lobos on the Coast of Peru, the "bird manure" is again mentioned, under the Spanish name of guanar. "It is," says he, "probably the richest manure in the world," and is in sufficient quantity to load thousands of ships.
opportunity at a single glance, and seize on it with avidity. An investment of thirty thousand dollars only, if properly managed, would in two years produce a profit of from ten to fifteen hundred per cent.!

October 22nd.—On Wednesday, the 22nd of October, we anchored on the east side of Mercury Island, in four fathoms of water, about two cables' length from the island, which is situated in latitude 25° 42' S., long. 14° 58' E. It is one mile in circumference, of an oblong shape, lying north and south, and is three-quarters of a mile north from the south-west point of Spencer's Bay, and one mile and a half west from the north-east point of the same bay. Both passages are easy, and free from dangers; and the best anchorage is on the east side of the island, about one hundred and fifty fathoms from its shores, in five fathoms of water, sand and clay bottom. I would not advise ships to anchor to the south side of the bay, as a heavy westerly swell heaves into it, on the full and change of the moon; but let them anchor close under the island, and they will lie perfectly safe, in smooth water.

The south point of Spencer's Bay presents several high peaked rocks, nearly six hundred feet perpendicular, at the water's edge. Whales frequent this bay in considerable numbers, in the months of July and August. Seal of the fur kind also frequent the shores of Mercury Island, while its summit is thickly inhabited by penguins and gannets, during their laying and incubation season. The shores and surface of the island present many specimens of volcanic productions, as do also those of the continent in this vicinity, extending some distance into the country.

There is a Hottentot village about forty miles on an east-by-south course from the head of the bay, containing about two hundred and fifty inhabitants, and situated in a fertile valley, watered by several springs of excellent fresh water. There are also four refreshing springs between the village and the bay. The interior of the country abounds in cattle, sheep, deer, bucks, wolves, gray foxes, elephants, and ostriches, in greater numbers than it does farther south; which may be had for any
price you please to give, in the way of barter; for money would be of no more use to them than an equal weight of sand would be to us. Offer them such articles as their circumstances require, and they will trade in the most liberal and honest manner.

I am aware that most people have imbibed the mistaken idea that these natives are treacherous, and cruel, and blood-thirsty, and every thing that is bad. It is no such thing. I make the assertion on personal experience and practical knowledge. There is no more danger in travelling two or three hundred miles in the interior of this country for the purpose of purchasing cargoes, than there is in travelling among our own Indians in the state of New York; provided you take no temptations with you, and no other arms than a musket. Whatever you purchase of the natives is sold in good faith, to be paid for according to contract on the delivery of the articles at the beach, and not before. Under this arrangement, they could not defraud you, were they so disposed; and were there no other safeguard for your person, the prospect of this payment would be amply sufficient. But their natural dispositions are friendly and humane; and if you treat them with kindness, they will repay your favours more than ten to one. When they deliver the cattle and other articles at the beach, give them the articles in return for which they stipulated, and they are satisfied; but I would recommend a little extension of courtesy on these occasions, by presenting their chiefs a few tasteful trifles which may attract their attention. Whatever you bestow in this way, will not be thrown away, but returned to you sevenfold in some other shape, or on some other occasion.

While on this subject, with a special reference to the purchase of cattle and the jerking of beef, it may be well to mention that there are many salt-springs in the valleys at the head of Spencer's Bay, where salt might be manufactured in immense quantities, if properly attended to. But perhaps it would be full as cheap to bring the article from the Cape Verd Islands, to jerk your beef and cure your hides; which is necessary to prevent the invasion of bugs and other insects.
November 6th.—After taking about a thousand fur-seal skins from Mercury Island, and examining the interior of the country at a great distance inland, we got under way, on Thursday, the 6th of November, and steered to the north, for Bird Island, where we arrived on the following day.

This little island, which is not more than the fourth of a mile in circumference, is in latitude 24° 38′ S., long. 14° 22′ E., and about three leagues from the mainland. A reef of rocks runs off from it, in a south-west direction, about five miles, on which the sea breaks at times very heavily. A vast number of right whales frequent this reef in the months of July and August; and a ship may lie at anchor on the north side of the island, in ten fathoms of water, all the whaling season, in perfect safety, if she has chain cables. This island is resorted to by seal, gannets, and penguins; and we took here the skins of fourteen hundred fur-seal at one time, although the landing was very bad. The passage between the island and the continent is about nine miles in width, free from hidden dangers, with a depth of water from twenty to ten fathoms, near the mainland.

The Alligator Rocks, as laid down on the chart, I could not find, after two days spent in the search. I therefore conclude that there is no such reef, but that Bird Island has been seen in a haze, and mistaken for a danger that does not actually exist. The extreme haziness of the weather peculiar to this coast might very easily have deceived Captain Wood, of His Britannic majesty’s ship Garland, when he thought he had discovered a reef here, in 1798; for I have frequently been running along this coast, not more than one league from the land, when the sand-hills which line this part of the coast have appeared to be five or six leagues from the vessel.

I have no doubt that Bird Island is the effect of some mighty convulsion of nature, which has piled together in an irregular form, loose blocks of stone, basalt, lava, and other volcanic productions. The waters around its shores, however, abound with many kinds of excellent scale-fish, which may be caught with hook and line in
great quantities. A few turtle, also, may be found on a small sandy beach on the east side of the island.

November 15th.—This was William Ogden's birthday, and the termination of his minority. There was a melancholy interest that hung about this young man, not often noticed among the rough sons of Neptune. Though foremost in the discharge of active and hazardous duties, he seemed to shrink within himself the moment there was no further demand for his exertions. When rallied on his abstraction, he would by a sudden effort rouse himself to cheerfulness, and even gaiety; but a cloud would soon come over the sunshine of his countenance. Those who attributed these changes of weather to some affair of the heart were not a thousand leagues off their reckoning, as I afterwards ascertained.

November 16th.—On Sunday, the 16th of November, we left Bird Island, and continued our examination of the coast to the northward, with a gentle breeze from south-by-west, and fair weather.

November 18th.—On Tuesday, the 18th, we arrived at the mouth of what is called Sandwich Harbour, said to have three fathoms of water in its channel of entrance. Although we found only eleven feet at high-water in this channel, I have no doubt that there was a time, some years back, when its depth was full three fathoms, and that it has been filled up by drifts of sand, the movements of which along this coast forcibly reminded me of the snow-drifts of my native country; every fresh southerly wind forming new sand-hills, exactly as new snow-banks are formed at home, by a fine, clear, cold north-wester.

This lagoon runs into the southward, about two leagues, with seven, five, three, and two fathoms, nearly all over it. It is formed on the east by a high white bluff sand-hill; and on the west by a low sandy peninsula nearly level with the sea; with shoal water on the sea-board side for more than a mile to seaward. The entrance of the lagoon is very narrow, being not more than a quarter of a mile wide, and formed by two low sandy points, situated in latitude 23° 35' S., long. 14° 28' E. Variation per azimuth, in 1828, 23° 15' westerly.
Perhaps there is not a finer place on the whole coast than this for taking fish with seines. Many different kinds of fish resort to this lagoon; one of which bears a strong resemblance to our "streaked bass;" and is as fat and delicate-flavoured fish as our salmon. There are many other sorts, equally good, but of a smaller size. Many cargoes of fish might be taken from this lagoon in a short time; and they would sell for a good price at St. Helena, Cape of Good Hope, Isle of France, or the Isle of Bourbon. Green turtle also visit the sandy beaches for the usual purposes.

November 22nd.—We left Ponta dos Ilhoes, or Sandwich Harbour, on Thursday, the 20th, and steered to the northward, examining the coast in search of fur-seal; and on Saturday, the 22nd, we arrived at Walwich Bay, the west point of which is very low, and lies in latitude $22^\circ 53'$ S., long. $14^\circ 24'$ E. The entrance to the bay is one league broad, running to the south two leagues; one league and a half of which is navigable, and the depth of water in going in is from twelve fathoms to three, mud and clay bottom near the head of the bay.

The east side of this bay is formed by moderately elevated sand-hills, near the sea-shore, and the west side is formed by a very low sandy peninsula, not more than fifteen feet above the level of the sea at any place. The isthmus is very narrow, it being not more than twenty rods from the head of the bay to the sea-shore. The peninsula, however, is from one to three miles in width. In entering this bay, it is necessary to give the west point a good berth of nearly half a mile, on account of a sand-bank that runs off from it, in a north-north-east direction about a quarter of a mile, on which there is only six feet of water at low tide. After doubling this point, in advancing up the bay, it is proper to give the western shore a berth of one-fourth of a mile; taking care not to approach to it any nearer, as the water becomes shallow very suddenly, from five fathoms to two, and even to four feet, at low water. This is a mud bank, which stretches all along the western and southern shore of this bay; but the eastern shore is bold one cable's length from the beach, nearly to the head of the bay.
This bay and its vicinity, in the months of August and September, are visited by great numbers of right whales, which resort thither for the purpose of bringing forth their young. Fish also, of various kinds, and in great abundance, may be caught here with a seine; but it is difficult to haul the seine on shore in any part of the bay excepting the eastern shore, on account of the mud flats. Ships visiting this bay for the purpose of taking whales, in the months before named, should anchor about half a mile within the bay, under the western shore, in five fathoms of water, muddy bottom. In this situation they will be enabled to see whales from the mast-head, outside of the bay beyond the peninsula; and at the same time lie in safety, as northerly winds never blow here more than a royal breeze, and that for a few hours only. They will also gain much time, and save much labour, in getting the whales alongside the ship; as the wind blows nearly all the time from the south; and often, in the afternoon, a single-reef breeze. But it is generally calm at night, and in the fore-part of the day. The water is entirely smooth all over the bay, and consequently it is a safe as well as a spacious harbour at any season of the year.

The interior of the country to the eastward of this bay presents a dreary range of desert sandy mountains and valleys, entirely destitute of soil, or vegetation of any kind, for twenty or twenty-five miles inland, with the exception of a few valleys that lie to the east-south-east and south-east of the head of the bay, in which are a few Hottentot villages, with small herds of cattle and sheep, that feed on such coarse grass and shrubbery as they can pick up.

About three miles from the south-east part of the bay, on a south-east-by-east course, is a small village, where fresh water may be had from many springs in the valley. This water possesses a peculiar flavour, not unlike sassafras tea, but it is not the least brackish. The village contains about two hundred and fifty inhabitants, who often visit the bay for the purpose of fishing. I have frequently had them on board the vessel, and have purchased from them cattle and sheep, which were in fine
order. I uniformly found them to be a very friendly, harmless, inoffensive people, but very indolent and filthy, and somewhat given to thieving.

Their tents or wigwams resemble those I have seen near the Strait of Magellan, and are sufficiently capacious to accommodate two or three persons. A number of poles are stuck in the ground, in a circular form, the tops of which are fastened together in a point by a leather thong. Over the summit of this conic frame is thrown a bullock's hide, to which others are attached, until the simple habitation is completely protected from the weather. Their clothing is made of the skins of the gray fox, the deer, the leopard, &c., sewed together with the sinews of the animals, in the form of a blanket, which they throw over the shoulders, with the hair-side next to their bodies, being tied around the neck, and hanging down to the feet. Both sexes dress in the same manner, the female being distinguished only by the pro-
fusion of her ornaments: these consist of shells, bones, and minerals of different kinds, and are worn about the neck and wrists; but the men have nothing of the kind.

Though the sole wealth of this people consists of cattle and sheep, they derive much of their sustenance from the ocean. Their implements for fishing and hunting are the spear and bow; the former is made of a heavy hard wood, and is generally about sixteen feet in length: this wood resembles our yellow ebony, but the grain is not quite so fine. Their bows are made of the same kind of wood, and measure about five feet in length, being two inches wide in the centre. The arrows are of reed, about three feet long, and pointed with hard wood and flint. Both sexes are very expert with these weapons. I have frequently seen them shoot gulls on the wing at fifty yards distance; and they seldom fail of placing the arrow in the body of the bird. They are equally expert with the spear in catching fish, —frequently striking one of seven to ten pounds' weight at the distance of twenty-five to thirty yards. Their fishing excursions generally detain them from home three or four days: they salt all the fish which they take over and above what they consume on the
spot, which they always eat raw, and the small ones are devoured without even divesting them of their entrails. They procure their salt from the springs at the head of the bay.

In appeasing the cravings of hunger, these people are, in fact, horribly disgusting to a civilized person,—being actually fonder of the entrails of cattle and sheep than of any other part. On my killing some of these animals on the beach for the use of our crew, the natives devoured the entrails raw, before they were cold. I offered them some of the beef, but they refused it, and gave me to understand that the entrails were the best part of the creature in their estimation. In eating eggs, their fastidious delicacy is even more conspicuous; for they will not touch one until incubation is nearly perfected, protesting that fresh eggs are not fit for food. At their villages I observed they roasted their beef, as they did also the flesh of wild beasts. The entrails, however, were seldom cooked, as the luxurious epicures preferred them warm from the animal.

When they have been successful in taking a great number of oceanic birds, which is often the case in the laying season, they bury them in the sand, with their entrails in them, until they become quite green. This takes all the fishy taste from them, and they become very tender. They then take out the entrails, skin the birds, and dry their bodies in the sun, which will so effectually cure them in forty-eight hours, that they may be laid away for twelve months without receiving any injury. Indeed, such is the purity of the air on this part of the coast, that I have had a quarter of fresh beef, weighing two hundred-weight, hanging in the rigging until it became perfectly dry, without becoming tainted in the slightest degree, even next to the bone. What stronger evidence need be adduced to prove the excellence of this location for jerking beef? The atmosphere is pure, warm, and dry; and for ten months of the year there is scarcely a drop of rain. Very little falls during the other two months.
CHAPTER IV.

Excursion into the Interior—Description of the Natives—Face of the Country—Natural Productions—Sudden and transitory Vegetation—Droves of Elephants—Return to the Vessel—Sail from Walwich Bay—Arrive at Mercury Island—A most afflicting disaster, in the loss of Ogden—Tribute to his memory—Arrive at Point St. Helen—Wreck of the English Brig Columbine—An offer to save her Cargo rejected—Arrive at Table Bay—Description of the Place—Sailing Directions—Phenomenon of the Tablecloth—Sail from Table Bay, and again steer to the north.

As the season was not yet sufficiently advanced for the seals to come up in their usual numbers on the islands and rocks to the south of our present position, or between Walwich Bay and the Cape of Good Hope, I determined to improve the interim by making a deep excursion into the interior of the country, in order to acquire all the information that could be obtained respecting the feasibility of my favourite project. In pursuance of this object, I proceeded from the head of the bay, in the direction of east-south-east, to the distance of nearly one hundred and fifty miles; occasionally falling in with several different tribes of the natives, who all treated me with marked kindness and hospitality, evincing a willingness to share with me every thing they had. Some of their principal men volunteered to accompany me as guides and companions from one village to another, and furnished me with a tame bullock to ride on, after the fashion of the country. This animal was changed for a fresh one every fifteen or twenty miles.

From the many deserted villages which we passed, it would appear that these people shift their ground; and when the pasturage becomes exhausted in one valley, conduct their flocks and herds to another, by which means their cattle and sheep are kept in such excellent order for the market. Fifty miles from the sea shore, the land becomes very rich, and the grazing
fields or plains are covered with heavy grass, of a fine soft fibre. I think I speak within bounds in saying, that some of these valleys contain from five to ten thousand head of cattle, all perfectly tame, "sleek and well favoured," besides three times that number of sheep. And there are hundreds of valleys, between the fourteenth and twenty-fourth degrees of south latitude, containing immense wealth in other things, as well as herds of cattle, most of which may be purchased at a very low price, and paid for in the manufactures of our own country.

The face of the country here is much diversified, and abounds with limestone, without petrifactions; clay, slate, sandstone, quartz-rock, granite, &c. In the hills are vast bodies of limestone, lying in horizontal strata upon granite and slate. In the valleys, and on the summits of some of the hills, not more than fifty miles from the sea shore, are extensive beds of coral, the most elevated of which is at least seven or eight thousand feet above the level of the sea. On some of these summits the coral is entirely in its original state, standing exactly as it does in the coral beds which are seen beneath the the surface of the sea. I found this submarine production to be friable in various degrees; the extremities of some of the branches being from three to four feet above the sand, were easily reduced to powder; while those that were in the valleys, or near the surface of the sand, required some force to break them from the rocks in which they appeared to be rooted.

I have frequently seen coral on land, a mile or two from the sea-shore, but never so far from the ocean, or at so great an elevation, as in the present instance, nor in the same state of perfection. The question naturally arises, how came it here, unless this part of the continent once formed part of the ocean's bed? If so, at what period of time did it emerge from the watery element? Can philosophy answer these questions?

Perhaps every reader is not aware that coral is an animal production. It was formerly supposed to be of a vegetable nature, but is now found to be composed of what men of science term a "congeries of animals,
endued with the faculty of moving spontaneously.” Coral is, in fact, a mass of minute animals adhering together in the form of vegetable branches; taking root like plants, and growing up in stems. They are different from plants, however, inasmuch as they are furnished with sensation and spontaneous motion; and they differ from other animals in being destitute of blood-vessels, vertebrae, spinal marrow, and connecting muscles and limbs for locomotion. They are distinguished by the form of their branches, and are found in the ocean adhering to stones, bones, shells, &c. The islands in the South Sea are mostly coral rocks covered with earth. The coral animals begin their labours on the summits of submarine mountains, and work up to the surface.

The immense numbers of this class of zöophytes must exceed the furthest stretch of human imagination. Chains of coral reefs may be traced from the Sandwich Islands, in the Pacific Ocean, to the coast of Sumatra, a distance of nearly six thousand miles, with a depth and width correspondingly vast. This is one of the numerous subjects which a reflecting mind cannot contemplate without being lost and swallowed up in a vortex of wonder and astonishment! “How wonderful are Thy works! In wisdom Thou hast made them all!”

In this excursion I found copper, lead, and iron ores; and, from unequivocal indications, I have no doubt that gold and silver ore may be found in this part of the country; together with precious stones, spices, and valuable drugs. I also collected several large grains of gold-dust from broken quartz-rock, and among the gravel and sand produced by its fragments, from which I infer that considerable quantities of that precious article might be obtained through the assistance of the natives. I regretted very much that on this occasion I was not accompanied by some scientific gentleman, well versed in mineralogy, botany, &c. Those gentlemen, for instance, who sailed from New-York in the following year (1829), on board the brigs Seraph and Anawan, of that port, would have found an ample field for their scientific researches in this unfrequented part of Africa, as well as on the many unexplored islands which I
visited in my last voyage in the North and South Pacific Oceans.

In returning from the interior towards the sea-coast, I paid some attention to the nature and character of the soil, which in many instances I found to be a loam of sandy clay, often from ten to fourteen inches in depth, mixed with particles of ochre,—a sort of earth consisting of alumina and red oxide of iron. Such a soil, hardened by an African climate to the consistency of sun-baked bricks, would seem to promise but a sorry vegetation. But the germs of vegetable life are concealed and preserved under the surface of this almost impenetrable crust during those months in which the rains and dews of heaven are withheld from this region of the earth.

In the month of June, when the rains begin to fall, and soften this hard layer of loam, the fibres of the torpid plants receive the grateful moisture, and the resuscitated germs push aside the now yielding clay, and shoot forth in a thousand tender forms of vegetable life and beauty. In a few days the whole sterile waste is clothed in a soft and delicate robe of green, which soon becomes enamelled with blossoms of every hue, and of the most delightful fragrance. Millions of these delicate flowers ornament the hills and spangle the valleys, while the whole atmosphere is perfumed with paradisiacal odours. "The desert now blossoms as the rose," and "the parched heath becomes a garden of flowers." The Hottentots now descend from the mountains, and advance into the plains nearer the sea-coast, where they find an abundance of sustenance for their flocks and herds. Antelopes, ostriches, and other animals, also descend into the valleys, which greatly increases the beauty of the scene.

But, alas! when nature thus suddenly plays the prodigal, she soon exhausts her means, and becomes a niggard again. This beautiful scene is soon stripped of its glory. In the month of September or October, the flowers fade, and the leaves fall to the earth; and the incipient germs of future fertility, the property of another year, are safely locked up in their prison of clay, from
whence they will be again called forth by the benign influence of a periodical rain. At this dry season, when the grass is withered, the succulent plants alone furnish food for the herds and flocks, both wild and tame. The streams and rivulets soon dry up, but the springs in the valleys never cease to flow; and they supply the different kinds of animals with sufficient water to allay their thirst. But when vegetable life refuses to act in the valleys, they return to the mountains, with apparent reluctance; and some of them will remain in the valleys a long time, feeding upon succulent plants, which afford them both food and drink.

In crossing the sandy deserts, which extend from the sea-coast about forty miles inland, and about eight hundred miles north-west and south-east, we find that this parched and arid plain is intersected, in various directions, by the vacant beds of a number of small streams; which, though mostly dried up, can be easily traced and clearly distinguished by the dark green mimosas which grow along their banks, and which form the only instances or symptoms of vegetable life throughout the whole dreary waste. This is indeed a retirement fit for the diffident, unobtrusive sensitive-plant.

The natives of this part of the country are not like those to the south of this place, nor those to the north of the fourteenth degree of south latitude, who employ the principal part of their time in hunting the elephant, the antelope, and other peaceful animals, from the spoils of which they enrich themselves. But these natives never molest the elephant, nor any other animal, except for the purpose of providing themselves with necessary food and clothing. The consequence is, that, hunted from their native forests, at the north and south, the persecuted animals retreat to this unfrequented region for protection, and here they live in security, rapidly increasing in numbers. The quiet and peaceful elephant is here the monarch of the forest, and his race has become very numerous in the interior. From my Hottentot guides I learned that they roam in vast herds through the densely-wooded tracts of the country, disputing the right of sovereignty even with the African
lion. Matchless in size and strength, yet tranquil, peaceful, and majestic, they march in herds or troops, headed by the most ancient of their number, who acts as king, chief, or leader, to the party. They lead a social, almost a moral life; molesting neither man nor beast, unless first assailed by them.

Droves of elephants have frequently passed within one hundred yards of our party, without deigning to notice us any more than we should in passing so many ants on the road. In all collisions with these sagacious animals, man is always the first aggressor, to which act he is incited by cupidity alone. Their ivory tusks form the most valuable article of trade that Africa can boast, gold-dust excepted. It is generally supposed, from the prodigious strength of the elephant, his almost impenetrable hide, his rapid though clumsy movements, that he is a most desperate and perilous object of attack. But those Africans who make it a business to take them, succeed without much difficulty, by forming pits and snares of various descriptions, into which they are treacherously inveigled.

December 13th.—Having finished my excursion, and returned in safety to the vessel at Walwich Bay, examined the salt springs, and procured a supply of beef and mutton from the natives, we again found ourselves in readiness for sea, as it was now time to retrace our steps, and look for seals to the south. The reader will remember that from Saldanha Bay to our present anchorage, a distance of more than ten degrees of latitude, we had critically examined every mile of the coast; our boats being, at no time, more than one or two cables' length from the breakers, and all by daylight. I can therefore say, with confidence, that there are no other dangers along this part of the coast than what I have pointed out and described; and every navigator who follows these directions will be sure to keep his ship afloat. It will not be necessary, therefore, in passing over the same ground, to recapitulate the facts already stated.

December 15th.—On Monday, the 15th, we once more put to sea, and steered a southerly course for
Mercury Island, touching at Bird Island on the way, from which we took a few fur-seal skins. We continued plying to the southward, with the wind from south-south-west during the day, and south-south-east during the night, until we arrived at Mercury Island, on Monday, the 22nd. Here we commenced taking seal, and although the landing was very bad, I adhered to my usual custom of leading the gang; a custom which every shipmaster should adopt who is engaged in this business, as it never fails to promote the interest of all parties.

In scaling the rocks and precipices of an unsheltered shore, to attack a large body of these ferocious amphibia, some hazard is necessarily incurred, and some courage consequently required; and I have always found a vast difference in the result, whether I sent my men ahead with the words "Go on, men! Go on!" or led the van myself, with the more animating exclamation of "Come on, my lads! Come on!" The latter language seems to kindle the fire of enthusiasm in every bosom; to inspire them with new courage, and to endue them with redoubled vigour. They rush forward reckless of danger, placing the fullest confidence in the experience and cool intrepidity of their enterprising leader.

December 24th.—On Wednesday, the 24th, I landed with a party of twenty-three picked men, with the intention of taking a large body of fur-seal, which were assembled on the west side of the island. The sea was tolerably smooth, and the men in fine spirits, with the prospect before them of surprising and destroying an unsuspecting army, which would yield them such valuable spoils.

Our schooner lay at anchor on the east side of the island, in four fathoms of water, about two cables' length from the shore. While manning the boats and pulling for the shore, the men were made acquainted with my intended plan of attack, and received their orders accordingly. I have already intimated that there is no spot on any side of this little island where a landing can be effected with ease and facility. But to minds resolved, no difficulties appear too formidable to be surmounted.
As our boat left the vessel's side, several of the men were guessing, and proposing trifling bets, on the probable number of seals which were to yield us their jackets on this occasion; at the same time dropping some jocose remarks on the confusion which our unexpected appearance would cause among the amphibious members of the defenceless community whose social arrangements and domestic enjoyments we were about to annihilate.

"Poor fellows!" exclaimed young Ogden, arousing from a brief fit of musing abstraction; "what ties of affection are soon to be severed for ever!—whole families nearly cut to pieces, and the survivors plunged in misery! Those that escape will find to-morrow a melancholy Christmas."

"Ours will be the more merry for our success," replied his friend Oscar Studivan. "Besides, it will teach these gentry a useful lesson on extravagance in dress. If they wore hair instead of fur, as some of their humbler neighbours do, we should never molest them." Ogden made no reply, but seemed absorbed in some other subject.

"To-morrow will be a merry day among the genuine Knickerbockers of New York," resumed the last speaker. "How runs your favourite quotation about Christmas holidays?" Ogden replied,

"Whatever pains assailed, or griefs oppress'd,
Christmas and New-year always saw me blest."

They were proceeding with some further remarks to the same effect, when I interposed with a caution of silence, and orders to stand ready for landing, when no man was to speak above a whisper. This arrangement is always necessary, as the seal are ever on the alert, and on hearing the least noise, are apt to fly to the ocean for safety.

It was now about eight o'clock in the morning. The tide was low, and the sea tolerably smooth; so that we effected a landing without much difficulty. Having secured the boats, we all silently crept along the north shore of the island, which is only a mile in circumference, and in a few minutes came in sight of our intended
victims, who were lying well up on the summits of the steep rocks. I led the way, closely followed by my six confidential companions, viz.—Messrs. Lewis, Johnson, Terry, Ogden, Studivan, and Valentine Lewis. The seal soon scented the approach of an enemy, as we plainly perceived by their suddenly manifesting symptoms of alarm. No time was now to be lost; but an instantaneous rush was necessary, in order to commence the attack before they could recover from their confusion.

"Come on, my lads!" I exclaimed, in a cheerful but half-suppressed voice; "come on, and let every blow tell." The rush of my little party was simultaneous; every nerve and muscle was exerted, and we had reached the opposite side of the rookery, killing several seal in our way, when we found that the other party under the command of Mr. Burton, had been stopped in "mid-course" about the centre of the rookery, by the immense number of seal that began to pour down the steep rocks and precipices, like an irresistible torrent, bearing down their assailants, and taking several of the men nearly into the ocean along with them. On seeing their danger, however, we "flew to the rescue," and soon relieved them by turning the tide of war in another direction. Several hundred fur-seal were left lifeless on the shore and rocks.

As the rollers now began to set in with a considerable degree of violence, I ordered the men to commence skinning those which lay nearest to the water's edge first. They applied themselves to the task with alacrity; but had hardly secured the jackets of more than fifty seal, when a wave of enormous size came rolling in to the shore, with such velocity as to take off and engulf in its bosom Messrs. West, Burton, and Ogden. Ten or twelve others, with myself, very narrowly escaped the same disaster.

"Man the boat!" I exclaimed, and the order was echoed by a dozen voices at once; and the alacrity of obedience was such, that the men descended a rocky cliff of about two hundred feet in height, apparently without a step. In a moment they were in the boat, and near the struggling trio who were contending for
existence against the ruthless billows. They first pulled for Mr. West; but as he found no great inconvenience from swimming, he ordered them to assist Ogden and Burton, who, he said, were nearly exhausted, which proved to be the case; for before the boat could reach Mr. Burton, who was just on the point of going down, they saw poor Ogden sink to rise no more. After taking Mr. Burton into the boat, they pulled around for some time over the place where Mr. Ogden was last seen, but all to no purpose. That graceful, manly frame was destined to find a resting-place in some coral cavern of the ocean, while his amiable and aspiring spirit soared to the realms of everlasting bliss.

Thus perished, in the bloom of his earthly existence, a young man who, had he lived, would doubtless have proved an honour, not only to his family, but to his country, and human nature; a young man whose highly cultivated and accomplished mind was endowed with every manly grace, whose heart was the seat of every manly virtue; the hope of a widowed mother—the idol of amiable and affectionate sisters—the pride of brothers who contemplated with proud satisfaction the budding promises of his future usefulness. I knew him well. His integrity was inflexible, and for strict veracity I have never met with his parallel; for he looked upon an untruth, even of the most trifling nature, as an offence against honour and virtue, which no circumstance could extenuate. He was temperate in all things—moderate on all occasions, except in his eagerness to encounter danger. He never shrank from his duty, on the most trying occasions, except that of being required to listen to the language of well-merited praise. In short, he was the exemplary son of a pious mother; and that includes the highest and brightest encomium of which human language is susceptible. Alas! for those who loved him! Theirs is the loss—his an eternal gain.

As a trifling tribute of affection and respect to the memory of one so universally beloved, the colours of the Antarctic were immediately displayed at half-mast, and minute guns were fired over his watery grave. A
manly tear glistened in every eye, and the gloom of mourning sat upon every brow. Nothing was omitted on this occasion that nautical usage or military etiquette has consecrated to such melancholy purposes.

Mr. Burton suffered much from the bruises which he received from the rocks against which the roller threw him; and this I presume was also the case with the unfortunate Ogden, for I knew him to be an expert swimmer.

December 25th.—I now determined on leaving Mercury Island immediately, for I could no longer endure the melancholy scene; we therefore got under way on Thursday, the 25th,—the day on which we had promised ourselves a merry Christmas, but which had risen upon us as a day of mourning,—and steered to the south and west, with the wind from south-by-east, and fair weather. The morrow did indeed prove to be "a melancholy Christmas," as Ogden unconsciously predicted. Every returning anniversary will remind his friends of their irreparable loss.

We continued plying to the southward, taking advantage of the land-breezes by night and the sea-breezes by day, stretching along the coast, and carefully examining every rock and island on which fur-seals were likely to be found, for more than three months, when we found ourselves once more in the thirty-second degree of south latitude.

April 19th, 1829.—On Sunday, the 19th April, we arrived at Point St. Helena, where we found the English brig Columbine, Captain Stewart, in a situation that precluded the hope of the vessel's ultimate safety. She was on shore, and her valuable cargo in imminent danger of being totally lost. Captain S. had sailed from England, bound for Van Dieman's Land, by the way of the Cape of Good Hope. Lieut. Mitchell of the royal navy was on board as passenger. Him I took on board the Antarctic, and proceeded to Table Bay with all possible expedition, to obtain permission to save the brig's cargo, and become entitled to the salvage, which would have amounted to at least twenty-five thousand dollars.

My proposition was rejected on account of the Antar-
artic being American bottom; though Lieutenant Mitchell and Messrs. Nisbet and Dixon, three as worthy men as any country can boast of, exerted all their influence with the government in my favour. Several other highly respectable merchants also interceded for me; but Sir Lowery Cole refused to accede to the proposition. The only reason assigned for this refusal was, that he had enemies, and the moment that he varied from the strict letter of the British laws, he should be censured for taking such a responsibility on his own shoulders. The consequence was, that property was lost to the amount of about seventy-five thousand dollars' value, the whole of which I might have saved, if I could have obtained permission from the government, the Antarctic being the only vessel then in port that was calculated for such an undertaking. It was lost.

*April 21st.*—We arrived at Table Bay on Tuesday, the 21st, and anchored abreast of Cape Town, in four fathoms of water, muddy bottom, about half a mile from the landing-place, which is at a kind of bridge or jetty, which runs out to the eastward about two hundred yards, and has from eight to ten feet of water at its outer end. Large cranes are erected on this landing for the convenience of discharging cargoes from boats. Ships may fill their water here with a great deal of facility, as it is conducted from springs under the high land to the end of the jetty by leaden and iron pipes, to each of which is fitted a leathern hose to conduct the water into the boats, where the casks may be filled with the greatest ease and expedition, even if the sea should be quite rough.

In addition to what I have already said of Cape Town in a preceding chapter, I can now state from my own observations, that it is handsomely built, the houses in general being from two to four stories in height, built of stone, whitewashed, and disposed in straight and parallel streets. Several beautiful squares give the whole town an open, airy, and picturesque appearance.

To the north-west of the town are three strong batteries, which command the anchorage, and on the east
side is the citadel. Half a mile still farther east is a small fort, with a line of redoubts. This bay is an excellent place for all kinds of refreshments. Bullocks, sheep, hogs, and poultry, may be had at a moderate price, with various kinds of vegetables and fruits. Fuel, however, is scarce and dear. The air here is generally cool in the night, although the sandy soil is greatly heated by the sun during the day, and this causes land-breezes from Table Bay to come off in hot gusts during the evening.

The southern or outer point of Table Bay is called Green Point, on which a lighthouse was erected in 1825, four years previous to the date of this part of my journal. It is about two miles north-west of the town, and is situated in latitude 33° 53' 30" S., long. 18° 19' 20" E. Five miles to the northward of this lighthouse, is Robben or Penguin Island, which is two miles in length from north to south. The west and south sides are surrounded by sunken rocks and breakers; but there are no dangers more than two cables' length from the island, with the exception of a sunken rock that lies one mile south of the southerly point, commonly called the Whale.

Ships may anchor off the eastern side of Robben Island, in five or six fathoms of water, sandy bottom, half a mile from the shore, where they will be completely sheltered from the westerly swell, and lie in more safety in the winter season than they will in Table Bay. Ships bound into this bay, coming from the north, and passing between Robben Island and the main, should keep the light on Green Point bearing about south-west-by south, until they are past the island, in passing which the least depth of water will be six fathoms. After passing the island you may steer a direct course for the anchorage, when you will have twelve, ten, eight, and at the anchorage six fathoms of water, sand and muddy bottom. Arrowsmith's map is correct for this port.

But on going into Table Bay when coming from the north, I would always advise ships to pass to the west of Robben Island, taking care to keep the lighthouse on Green Point to the eastward of south-by-east from
the ship, until within one mile of the point, when you
may steer east-by-south, until the lighthouse bears
south-west-by-west, when you may steer for the anchor-
age, and moor in from five to four fathoms of water, in
the summer season; but in the winter, ships should
never anchor in less than six and a half fathoms, as the
northerly gales send a very heavy swell into this bay,
which often breaks in four fathoms.

Small vessels, in entering Table Bay, may keep the
right-hand shore close on board, as there are no dangers
more than one hundred and fifty fathoms from the shore
that will bring a ship up. In entering this bay about
noon, or a little after, I would advise ship-masters in-
variably to take one or two reefs in the topsails before
they come up with Green Point, as it is generally the
case, in the summer months, that before coming up with
this point, ships may carry all sail; and the moment
they open the bay, they will find a single or double
reef, and often, in the afternoon, a close-reef breeze.
Thus, by using this precaution, ships will not be in
danger of losing their spars, or splitting their sails; and
after opening the bay, if they should not find too much
wind, in the flaws, they can soon turn out one or two
reefs, and set the top-gallant-sails.

It may be well to remark, that an eddy, or counter
current commonly sets from the north into Table Bay,
between Robben Island and the mainland; while, at the
same time, the regular current is setting to the north, a
short distance in the offing. Ships bound into the bay
should therefore be careful to make the land to the
south of latitude 33° 55', if the wind be southerly. By
not attending to this, and making proper allowances for
the currents, they have often fallen in with the land to
the north of Dassen Island, and even as far north as
Point St. Helena, where some of them have left their
ribs on the sunken rocks which line the coast between
St. Helen's and Saldanah bays. Thus by falling in
south of the port, in the summer months, they will have
the advantage of a fair wind and a favourable current;
whereas by falling in north of the port, it may take
them a day or two, under the most favourable circum-
stances, to gain the anchorage.
It is unsafe for ships to lie in this port between the months of May and October; for the north-north-west and north-west winds then set in, and often blow with great violence, so that unless a ship has very good ground-tackling, she will almost inevitably go on shore. North-west winds happen at all seasons of the year, more or less, but never with any force between October and May. One of the most violent north-west gales that ever happened at Cape Town, was in July, 1822, when a great number of vessels went on shore, and about seventy houses and stores were destroyed. Fortunately, no lives were lost.

I have found as well as others, that the variable state of atmospheric refraction in this bay is so great as to render it difficult, and sometimes impossible, to obtain accurate altitudes of the heavenly bodies on shipboard. Objects are often reflected double, and I have several times gazed at ships apparently sailing in the air. The best plan is to take the chronometers on shore, and correct them by altitudes taken with an artificial horizon.

Another phenomenon which deserves to be mentioned in this place, is, a fleecy vapour occasionally spread over the Table Mountain, and is a certain prognostic of a hard gale. This is called the tablecloth by Englishmen, but the French call it la perruque or the wig. It commences by a little white or fleecy cloud, which remains for some time stationary over the summit of the Lion’s Rump. It then gradually increases until it covers the whole Table, when it becomes a dark grey in the middle, while its edges still remain white. After continuing for some time, it slowly mingles with the atmosphere, until it finally disappears without rain or mist.

A strong south-east wind commences immediately after the mountain is completely covered, which often blows in squalls excessively hard, and generally continues for two or three days. It blows very hard through the gap which separates the Table from the Devil’s Berg, driving the white clouds in rolling fleeces like wool along the sides of the mountains. Ships are frequently parted from their moorings, or bring their anchors home, and are driven out of the bay with all their anchors ahead.
But the moment they are outside of the bay, they find nothing more than a single or double-reef breeze.

I should advise navigators who enter Table Bay with the intention of remaining any length of time, to anchor well under the western shore, and to strike top-gallant yards and masts; always placing the two best anchors to the south-south-east, and giving the ship the whole length of both cables, which will cause the anchors to bed themselves, and better ensure the ship's holding on, or not dragging.

As regards a geological description of this portion of South Africa, the reader can expect nothing from my pen, in addition to the many elaborate strictures already before the public, by such scientific voyagers and travellers as Barry, Patterson, Campbell, Colebrook, Collin, Kolben, Sparman, Le Vaillant, Thunberg, Valentia, Peuchet, Semple, Perceval, and a host of others. These writers have all carefully examined and particularly described the mountains, rocks, minerals, vegetables, animals, &c., of the Cape of Good Hope, and to their works I refer the reader; to a synopsis in the Edinburgh Encyclopedia, under this article; and to M. Malte Brun's System of Geography.

April 25th.—We left Table Bay on Saturday, the 25th, and shaped our course to the north, for Angra Pequena, with a fresh wind from south-south-east, and hazy weather. In the morning previous to our departure, the table-cloth was spread on the mountain, and I had an opportunity of seeing the mist collect and arrange itself about the summit of the Table Mountain.

But this phenomenon presents itself only when a strong, bold, south-east wind may be expected, which must condense the aqueous vapour rising from the warm current, and carry it towards the land. During the short stay I made at the Cape, this was the only opportunity I had of observing this vapour advancing from the ocean. It came rapidly over the surface of the sea, which it entirely concealed, while the air above was perfectly clear. It came on with much force and velocity, soon reached the land, and gradually enveloped the coast. It then ascended the mountain, where it
remained apparently stationary, almost entirely covering the Table Mountain with one vast sheet of white fleecy clouds; alternately increasing and decreasing on the side of the mountain that overhangs Cape Town, and often descending nearly half-way down the mountain, as if in mockery of human curiosity and imbecility.

I was surprised to see this table-cloth, or sheet of clouds, remaining stationary on the mountain after the south-east wind had set in with great violence, until I recollected the vast height of this eminence, (which is estimated at more than thirty-six hundred feet above the level of the sea,) its precipitous sides, and the extensive surface of its top. Nor is it strange that it should rarely descend (except when the wind blows almost an hurricane), if we take into consideration the situation of the ground beneath,—sheltered, warm, and the site of a large town, from which a current of hot air must be constantly ascending.

When we got under way, which was at one, P. M., the wind came down the mountains into the bay in tremendous gusts; and blew with such violence, that after tripping the anchor, and sheeting home the fore-topsail, with the yard on the cap, the Antartic was going at the rate of eleven miles an hour. But, as we left the bay behind us, the wind became more moderate; so that when we were in the passage between Robben Island and the main, we had all sail on the schooner, which was then going at the rate of thirteen and a half miles an hour.
CHAPTER V.

Robben or Penguin Island—Dassen or Coney Island—Arrive at Angra Pequena—Sand-winds, and a moving column of Sand—Intercourse with the Natives—The Guinea-worm—A Horde of Makasses, or Makosse—Ogden’s Harbour—Cape Frio, or Cold Cape—Great Fish Bay—A Tribe of the Cimbebas—Excursion into the Interior—Port Alexander—St. Philip Benguela—St. Philip’s Bonnet—Province, Bay, and Town of Benguela—Anchorage, Landing, Soil, Climate, Productions, Water, &c.—Animals, Vegetables, and Minerals—Description of the Coast—Sailing Directions.

In leaving Table Bay with a strong south-east wind, if bound for a northern port, I would advise all navigators to pass between Robben or Penguin Island and the mainland. In entering this bay from the same quarter, I have already advised a different course, and adduced my reasons. It was reported that Robben Island had been sunk by an earthquake on the 7th day of December, 1809. It appears, however, that this report had not quite so good a foundation as the island itself, which still retains its former situation, with all its old characteristics.

This island has a sandy soil, with a ridge of moderately elevated land in its centre, running from north to south. On its eastern side there is now a small establishment for the whale-fishery. Some grapes and culinary vegetables are raised on the island, which can also boast of several springs of good water; it is of small dimensions, however, only about six miles in circumference. Penguins and quails resort hither in the propagating season, where they establish their nurseries; but do not get into the best of company, the island being occupied as a depot for convicts from Cape Town, who are employed in quarrying limestone, of which the base of the island is composed.

At half-past three, p. m., we passed between Dassen or Coney Island and the shore of the mainland. This island lies about ten leagues to the north and west of
Green Point lighthouse, and is situated in latitude 33° 27' S., long. 18° 2' E. It lies nearly eight leagues to the southward of the entrance to Saldanha Bay, and four miles from the main. It is about six miles in circumference, with little elevation, and a sandy surface. The shore is foul, and dangerous to approach on its south and west sides, as there are sunken rocks running off-shore to the distance of two or three miles, which will bring a ship up, and do not always show themselves; but on the north and east sides, the shore is bold, and clear of dangers, close to where good anchorage may be found, with southerly winds, in from fifteen to eight fathoms of water, sandy bottom. The passage between the island and the main is entirely clear of dangers, two cables' length from either shore.

This island was formerly the resort of fur-seal; but at present penguins and gannets "possess it merely," if we except the men who occasionally visit it for the purpose of robbing them of their eggs and feathers, for the Cape Market. Indeed, I was told by several respectable persons at Cape Town that the feathers of the penguin were considered superior to those of the goose.

April 30th.—We continued on our passage to the north, with strong southerly winds, and hazy weather, touching at different rocks which lay in our way, and taking from them a few fur-seal, until Thursday, the 30th of April, when we arrived at Angra Pequena, or Santa Cruz, where we anchored on the east side of Penguin Island, at four, a.m., in five fathoms of water, clay bottom.

At about ten, a.m., the sand-winds came off; and to my great satisfaction I had an opportunity of witnessing, for the first time in my life, one of those moving pillars of sand which been so frequently spoken of by the celebrated Mr. Adamson. It rose about five miles inland from the head of the bay, and moved in the direction of the wind towards the south-west, increasing in magnitude as it advanced, until it left the shore, when it began gradually to diminish as it crossed the bay.

This moving column of sand passed within a cable's
length of the Antarctic, at which time I should judge that it would measure fifteen or eighteen feet in circumference, of a conical form, and about two hundred feet in nearly a perpendicular height from the water, leaning a little to the south-west. Its heat, in passing the vessel, was sensibly felt, while it emitted a strong odour, not unlike that of sulphur, which was soon dissipated, however, by the strong gusts of wind which came off from the shore, raising the thermometer to 113°. The column finally fell into the water, nearly half-way between Penguin Island and Seal Island, the latter being about two hundred fathoms to the north of the former.

This startling phenomenon induced me to waver in my former opinion respecting the visitation of a plague or pestilence on the unfortunate seals, mentioned in a former chapter. Is it not more probable that they were overwhelmed and suffocated by one of these sand-spouts bursting upon them, accompanied by the sultry, stifling sand-winds which created it? Such a cause would be more than sufficient to produce the effect alluded to,—the simultaneous destruction of millions of these amphibious animals, assembled on the surface of the two islands at the head of this bay, which are literally covered with the decaying carcasses of the victims, with their skins still about them.

The effects of these sand-winds are sometimes very disastrous and fatally destructive, when occurring on the borders of the sandy deserts. In one of my inland excursions in this country I had the misfortune to encounter a tornado of this description, which impressed me with a full conviction of their wonderful effects. The wind raised the sand so as to completely fill the atmosphere, obscuring the sun at noonday, and concealing every thing from view at the distance of two hundred fathoms; while an oppressive, suffocating weight accompanied the masses of sand, through which we had to make our way, with extreme difficulty and labour. Our dogs, in the meantime, with their tongues hanging from their mouths, refused to face the clouds of sand, and a parching thirst, to which water afforded only a temporary relief, oppressed every individual of the
party: the fine light dust was inhaled at every breath. This storm lasted about six hours; but it was more than thrice that time before the atmosphere became tolerably clear of floating sand.

The immense piles of sand which line this sea-coast probably owe their existence to the easterly, or what is called the sand-wind, blowing so much stronger than the prevailing southerly winds; the former carrying the sand before it, and depositing it on the borders of the coast, burying beneath it, cliffs, rocks, and every thing but the highest hills.

We lay at Angra Pequena until the 5th of May, during which period we overhauled and put in order our sails and rigging, and re-salted the skins we had taken on this coast, being six thousand. This process was necessary to secure their preservation on the passage home. In the mean time I had repeated opportunities of intercourse with the natives, and gaining from them all the information I could respecting the interior of the country, with its animal and vegetable productions.

More than one of these degraded people were afflicted with that appalling complaint called the Guinea-worm, which, I was informed, is frequently found on this part of the coast, invading the feet and legs of the natives. It is a dangerous and disgusting animal, so small at first as scarcely to be perceptible to human vision, which penetrates the skin of the sufferer, and takes up its abode beneath it. Here it will remain for years, feeding on the juices of the system; and unless removed by excision, will increase to the enormous size of from eight to ten feet in length, and to the thickness of a violin's largest string. Its general place of abode is the calf of the leg, as affording the most nourishment; but if it has pitched on any other part of the body, the pains of the sufferer are always increased in proportion to the scarcity of flesh in its vicinity. In all cases where this troublesome inmate is not removed, its continued presence for a succession of years will inevitably result in convulsions and death.

Poor Africa seems to be cursed with many evils unknown to the rest of the human race in any section of
the globe:—reptiles of the most deadly venom, beasts of unparalleled ferocity, deserts of sand; and moral deserts a thousand times more dangerous and appalling. But her greatest curse of all is the white man's cupidity, tearing asunder the tenderest ties of human nature, and plunging villages and families into mourning and despair. The hyena, the tiger, the crocodile, are creatures existing by the will of Heaven—the man-stealer is a self-created monster of hell. The depredations of the former are the effects of hunger; those of the latter, avarice—the meanest passion that can enter the human breast.

The Hottentots in the interior of this part of the country are called Macasses, and though melancholy low in moral degradation, have often been misrepresented by those who affect to believe that a dark skin places the wearer without the pale of human charity. These people are harmless, quiet, mild, timid, and inoffensive; very affectionate towards each other, and susceptible of strong attachments. They appear to possess very little of the art, cunning, and ingenuity so conspicuous in most tribes of straight-haired savages, and their indolence seems to be a disease of which terror alone can cure them. Their animal propensities are somewhat swinish—lazy, gluttonous, and filthy; and yet I have reason to know that they can endure the cravings of hunger for a long time without complaining. When the want of food becomes troublesome, they seek consolation in sleep, a state of negative enjoyment very suitable to their natures. After all, however, they are much less indolent and stupid than the tribes within the limits of the colony of the Cape of Good Hope.

The external appearance of these Hottentots is of course far from being prepossessing. Their faces are very ugly, with high prominent cheek bones, and a narrow pointed chin; long and narrow eyes, which do not form an acute angle at the nose, like ours, but are rounded off like those of the Chinese. The natural complexion of their skin is a yellowish brown, very similar to that of a faded leaf. They have very regular teeth, of the purest white, and hair of a peculiar and singular description. When suffered to grow, it spon-
aneously twists into small curls, which hang down their necks. Their bodies are slender and well proportioned, with small hands and feet. They appear weak and imbecile when young, and prematurely grow old; very few of them reaching the age of seventy.

The females are not so tall as the males, and are more delicately formed. Their lively, smiling, good-humoured faces, combined with sprightly movements and conciliating manners, generally render them agreeable to strangers. A physical peculiarity in the formation of female Hottentots, is always a subject of curiosity and inquiry. No offence is taken, and the inquirer is readily furnished with ocular testimony of the fact. Their employments are pastoral, almost every female being a shepherdess, and much attached to their fleecy charge, to their cattle, and to their faithful dogs.

Their dress consists of the skins of animals, sewed together in the shape of a blanket, and thrown loosely over their shoulders; with an apron made of lamb-skin, about seven inches long, and five broad, fastened to the waist with a strip of the gray fox-skin with the fur inside. They adorn these aprons with such ornaments as shells, feathers, ivory, minerals, and any thing else which they think will heighten their charms in the eyes of a lover. The men paint their faces with red and yellow ochre, and often tattoo their skins in different parts.

Both sexes are very quick-sighted in discovering game, or any other object at a distance. The Hottentots are good hunters, and have a peculiar skill in taming wild animals; but what is very singular, though they resort to the sea-coast many times in the course of a year, they have not the least idea of building canoes, rafts, or balzases, for the purpose of fishing. In hunting, as in war, they use the bow and the spear; and the points of their arrows are poisoned, by a venom extracted from an insect of the spider class.

The females, like those of more civilized countries, often resort to charms and mysteries, to gain a fancied peep into futurity, especially relating to conjugal and maternal concerns. The desire for offspring seems to
be a universal sentiment in the female bosom; and these Hottentot ladies evince it in a singular manner. They catch a timid little animal of the lizard species, called the aselis, and stretch him till the skin cracks in several places. The number of these cracks indicates the number of children the operator is to have. The propensities of this harmless reptile are somewhat singular. When alarmed, it buries itself in the sand; and if thrown into the air, the moment it falls it disappears under the surface of the spot on which it descends. The chameleon is frequently found among the rocky cliffs in the vicinity of this harbour.

The country of these Macasses, or rather Makosses, has an extent of about thirty leagues, north and south, but double that distance east and west. Horned cattle constitute their riches; and they change their pasturage as often as circumstances require it. They are circumcised at the age of eighteen; but those travellers are mistaken who say they do not eat fish, which they take with spears in a very dexterous manner. They believe in magicians, in poisoners, and in an evil genius, who sends them rain, thunder, and storms. The sweet seeds of a plant which grows rapidly to the height of ten or twelve feet are used by them to make a sort of cake; another seed supplies them with an inebriating drink. Those who have two or three thousand head of cattle are not considered rich. Theft is punished by them very severely.

I am aware that in calling these people Hottentots, I differ from those travellers who bound the Hottentot country on the north by the river Orange. But I have ascertained beyond the possibility of a doubt, that those invariable peculiarities of personal formation which constitute the Hottentot proper are found in every tribe of natives south of the twentieth degree of south latitude. Among others, I mean that of the apron, with which the women are actually furnished by modest nature. Mr. Kolben’s authority on this point has been very unjustly doubted; but I can vouch for the fact, from actual observation, in innumerable instances. Other characteristic marks of this peculiar people are, the deep
brown or yellow brown colour, which covers their whole body, but does not tinge the white of their eyes; the hand and foot small, in proportion to the rest of the body; they are straight, well made, and tall; hair black and curled, with scarcely any beard. The Hottentot voice, also, is too peculiar to be mistaken, particularly that singular clacking sound, which every traveller has remarked.

This coast, to the north of the fourteenth degree of south latitude, is said to be rich in shells of great variety and peculiar beauty. But I think if the sea-coast which fronts these sandy deserts, was carefully examined by expert divers, a few fathoms without the surf, the largest collection of valuable shells would be produced ever witnessed in any part of the world. The quantity is inexhaustible; but the heavy surf that thunders along these shores, without cessation, at all seasons of the year, prevents these beautiful shells being gathered in a perfect state, unless by rakes, or divers without the surf.

May 8th.—On Tuesday, the 5th of May, we got under way and steered to the north, with a fine breeze from south-by-east, and fair weather. On Friday, the 8th, we passed Cape Cross, which is a projecting point, extending about one mile into the sea, and forming partial anchorage on its north side, in from twelve to seven fathoms of water, sand and coral bottom. The coast between this and Walwich Bay (Bay of Whales) is entirely free from dangers two cables' length from the beach, with from four to six fathoms of water, sand and coral bottom. The coast is distinguished by white sandhills, some of which are moderately elevated, and fall suddenly into the sea.

Cape Cross is in latitude 21° 53' S., long. 13° 41' E. Variation per azimuth 20° 15' westerly.

We still continued examining the coast to the north, by daylight, hanging to windward at night, and always starting in the morning from the place last examined. We found the coast to the north of Cape Cross low and sandy, running into elevated mountains at a short distance inland from the shore of St. Amboses, which is in latitude 20° 57' S., long. 13° 34' E. Here an ex-
tensive reef of coral and lava rocks runs off in a westerly direction, to the distance of about three miles; then turns to the north, and runs parallel with the coast for five miles; forming a beautiful harbour of smooth water, which, at the unanimous request of my crew, I named Ogden's harbour, in honour of the ill-fated William Ogden. At half-tide, this reef is on a level with the surface of the sea; and from its western side the water deepens so gradually, that at the distance of four miles there is not more than five fathoms, with foul ground.

This fine harbour, or lagoon, of course, opens to the north, and the depth of water around the northern end or point of the reef, and up the lagoon, is from seven to four fathoms, sand and coral bottom. In entering it, however, a ship must not come nearer than half a mile of the northern extremity of the reef; and after bringing the northern breakers to bear west-south-west, she may haul to the south, and work as far up the lagoon as is deemed requisite, with perfect safety, keeping the reef best on board. In this lagoon and its vicinity many cargoes of fine fish might be caught, in size and quality nearly equal to our salmon. They may be taken in any quantities, either with a seine or by a hook and line.

At the distance of about two leagues from the head of this lagoon, in an east-north-east direction, there is a small village, inhabited by about two hundred natives of the Cimbebas tribe; a dark curly-headed nation, differing but very little from the proper Hottentots. There are also many fine springs of water, of an excellent quality, in the valley where this village is situated; from which it may be inferred that this would be a fine place for a rendezvous to establish a trade with the interior of the country.

There can be no doubt that a vast field for commercial enterprise remains to be explored in this part of Africa. Between the northern boundary of the Cape district and the southern boundary of the Portuguese district, there is an immense waste of country, extending over about eight hundred miles of latitude, and more than twice that distance of longitude, almost entirely unknown to civilized man. I ardently hope and trust that my
country will be the first to engage in exploring this interesting region of the world, and open its boundless store of riches to her adventurous sons. I, for one, should glory in leading the way, being perfectly willing to encounter all the personal hazard which might attend a solitary pilgrimage across the continent for the purpose of opening a permanent and lucrative trade with the different tribes and nations. If the general government withhold its patronage from such a laudable undertaking, a joint-stock company of able capitalists would be all-sufficient for effecting the purpose, and would be morally certain of golden returns.

May 13th.—The coast between this place and Cape Frio, or Cold Cape, where we arrived on Wednesday, the 13th, is low and sandy, with moderately elevated hills a few miles inland. There are also many shoals and reefs, running into the sea, from one to two miles off-shore. In many places the depth of water does not exceed ten fathoms, over a bottom of sand and coral, five or six miles from the land. Cape Frio is in latitude 18° 22' S. long. 11° 59' E. Variation per azimuth 19° 54' westerly.

The land of Cape Frio is high, and continues so for six or seven leagues to the northward; but the shore is low and sandy, as it is to the southward. This cape, however, affords no shelter to ships. There is said to be a river called L'Angria Fria, or Cold Creek, a few miles to the north of the cape; but at the time of our passing this place there was no river open.

May 17th.—We continued steering to the north until Sunday the 17th of May, when we arrived at Great Fish Bay; and at eleven, a. m., anchored in three fathoms of water, near the shore, on the south-west side of the bay, sandy bottom. The north point of Tiger Peninsula, which forms the west side of the bay, is in latitude 16° 30' S., long. 11° 38' E. The coast between this bay and Cape Frio is a barren sandy desert, and entirely free from dangers one mile from the beach; but the bank of soundings extends a long way to the westward.

The River Nourse, which was said to have been dis-
covered in 1824, by L'Espiégle, was closed at the time we passed this part of the coast.

Fish Bay is formed on the west by Tiger Peninsula, which is very low, and seven leagues in length from north-by-west to south-by-east. The greatest breadth of the bay is at its entrance, which is more than two leagues. The peninsula is all sand, and the isthmus by which it is joined to the mainland is not more than one-quarter of a mile broad. The eastern shore of the bay is formed of high barren hills, of a brown sandy appearance. The depth of water at the entrance of the bay is sixteen fathoms, gradually decreasing as you advance to the south, towards the head of the bay, to fifteen, ten, seven, five, and three fathoms, sandy bottom near the head of the bay. There are no dangers in turning up this bay, if you give either shore a distance of two cables' length; and when once at the head of this spacious harbour, and at anchor in five or four fathoms of water, you may lie in perfect safety, with one anchor ahead, all the year round.

Ships in running along this coast will often judge themselves farther off-shore than they really are, on account of the light sandy colour of the coast, and the extreme haziness of the atmosphere that generally prevails. I would advise navigators, on all occasions, unless they wish to make a harbour, to give this coast a good berth, as there is a tremendous heavy swell thundering in upon it all the year round, from Cape Negro to the Cape of Good Hope. This remarkable swell, which incessantly sets in from the west-southwest, renders it very unpleasant for ships in calms, which often prevail in the night. I have frequently seen these rollers break in four fathoms of water; and they often threaten to break at the distance of three or four miles from the land, in seven and eight fathoms of water, near the full and change of the moon.

Fish Bay is one of the first places in the world for fishing with a seine, by which thousands of barrels of excellent fish may be caught in the course of a year. This might be made a first-rate business, by taking the fish to the Portuguese colonies, a little farther north,
and exchanging them for the products of the country; or they might be taken to St. Helena, or to the Brazil coast, where they would command a ready market and an excellent price.

May 18th.—On Monday, at one, p. m., we landed on the south-east side of the bay, with the intention of making an excursion into the country. We were met on the beach by a small party of the Cimbebas tribe, who gave us a very pressing invitation to accompany them to their village, which was about ten miles from the coast, in the direction of east-by-south. It is situated in a well-watered valley of three miles in length, and two in breadth, surrounded by moderately elevated hills. The springs which water it are never dried up by the longest droughts, as we were assured by the natives.

The villages of these people are neither large nor populous; never exceeding one hundred and fifty huts, and about four hundred inhabitants. The former are constructed of closely-woven mats of coarse grass, or of the fibres of some plant. The two sides generally correspond with each other, as do also the two ends, with the exception that there is a door or opening in one end, just large enough for the occupants to creep in and out. Each hut is covered with an arched or sloping roof, supported by upright posts fixed in the ground, thatched with matting. The materials are all so light that they can be removed at a very short notice, and without much trouble. I have seen them taken down and put together again in thirty-five minutes. The value of one of these huts is that of a sheep.

The habitations of the chiefs are constructed with much more labour, skill, and taste; and are consequently of proportionably greater value. One of these has eight or ten posts along the sides, and is covered with palm-leaves, sewed together in a zigzag manner, with a supple creeping plant. They are often enclosed with a circular fence of small stakes, stuck in the ground, so close together that a rabbit cannot pass between them.

The state of society, moral character, manners, habits, and customs of this people are in many respects similar
to those I have already described in this chapter; and
where they differ, the balance is in favour of the Hotten-
tots of the higher latitude. These Cimbebas are much
more disgustingly filthy than the others, both as to
clothes and food; but I do not believe them to be can-
nibals, as some voyagers have reported. They appear
to have no idea of female chastity, or the sanctity of
conjugal contracts; and the open barefaced manner in
which wives and daughters were offered to my seamen,
although I strictly forbade all intercourse, was too dis-
gusting to admit of palliation or excuse.

We were absent from the vessel more than a week,
penetrating many leagues into the interior, and collect-
ing much interesting information tending to confirm my
previous opinions of the unparalleled commercial ad-
vantages which must result from opening an avenue for
traffic in this part of Africa. Had it been my good
fortune to have been accompanied by one or more gen-
tlemen of science, the animal, vegetable, and mineral
kingdoms of this part of Africa are teeming with new
and rich materials, sufficient to have employed their
pens for a length of time. The crude notes which I
took myself would afford very little satisfaction to the
erudite reader; I shall therefore proceed with my nar-
rative, and refer him to those vivid descriptions which
other travellers have already laid before the public.

May 27th.—On Wednesday, at two, p. m., we re-
turned to the vessel, and at four, p. m., we were under
way, and stretching out of the bay to the north, with a
fine breeze from south-south-west, and fair weather.
We examined the coast, to Cape Negro, and the en-
trance of Port Alexander, which we found to be a safe
and commodious harbour for ships of any size, where
they may lie in perfect safety, at all seasons of the year.

Port Alexander is admirably adapted for inland com-
munications with the natives; and there could not be
a better place for jerking beef than the peninsula which
forms the west side of the harbour. This bay abounds
with fish of various kinds, which may be caught in any
quantities with a seine. Fresh water may be had on
the south side of the bay, by digging a few feet below
the surface of the earth. Ships that anchor here will find natives who are very shy; but with a little kind treatment their confidence is easily acquired, and will be followed by acts of courtesy and hospitality. Supplies of sheep and bullocks may be obtained of them at your own prices. Their first apprehension is that every stranger is an enemy and a man-stealer. Perish the traffic! The outer part of this bay is a fine place for ships to lie in the month of August, for the purpose of taking right whales.

The coast between Great Fish Bay and Port Alexander is clear of dangers one mile from the shore. Neither are there any dangers in the way of vessels entering the last-mentioned harbour; only give the sandy point of the northern part of the peninsula a berth of half a mile. The entrance of Port Alexander, or the north point of the peninsula, is in lat. 15° 45' S.

June 4th.—From this port we continued steering to the north, keeping the boats in-shore to examine the coast, until Thursday, the 4th day of June; when, at two, p. m., we came to an anchor in the port of St. Philip de Benguela, in four fathoms of water, sand and muddy bottom, about half a mile off-shore.

We had now reached the capital of an African kingdom, the seat of one of her "hundred thrones," the limits of whose territories have never been accurately defined by geographers. Though formerly governed by its own monarchs, the subsequent incursions of the barbarous Giagas laid waste the country; and the protection of the Portuguese, who have built several forts along the coast, has not been able to restore it to its former importance.

The kingdom of Benguela is generally supposed to be bounded on the north by Angola; on the east by the river Rimba; on the south by Mataman; and on the west by the Atlantic. Its coast begins at Cape Negro on the south, and extends to Cape Ledo on the north; that is, from lat. 15° 41' to 9° 20' S. Cape Negro forms its south-west extremity, and is distinguished by a lofty pillar of marble or alabaster, on which is displayed the armorial insignia of the Braganza
house. This beautiful column was erected by Bartho-
lomew Dias, in the year 1486; who the same year
erected a marble cross on Pedestal Point, at Angra
Pequena. The principal towns of this kingdom are the
following:—Old Benguela, situated upon a mountain;
St. Philip, or New Benguela, the capital, where we
now lay at anchor; Manikendo, and Kuschil.

St. Philip, the capital, is a place of considerable
trade, and next in consequence to St. Paul de Loando,
the capital of Angola. I am sorry to add that its prin-
cipal business had heretofore been a traffic in human
flesh—being frequented by the Brazilians for the pur-
chase of slaves, who are collected like cattle in the in-
terior, and driven down to the coast for sale. At the
period of our arrival there were no less than four Bra-
zilian brigs nearly loaded with these unhappy human
beings.

From Cape Negro a range of mountains extends
northward, giving existence to the springs of many fine
rivers; such as the Nika, St. Francisco, Moreno, Farsa,
Kuneni, and Canton-belle. The water of the last of
these rivers is of a strong saline quality, and is collected
into pits by the natives, for the purpose of manufactur-
ing salt. The mouth of this river, which is sheltered
from the winds, is about sixteen feet deep. On its
north the sea forms a gulf, which the Dutch call Good
Bay, on account of its being an excellent watering-place.

The natural productions of this province are similar
to those of Angola and Congo; while vegetables and
fruits of many different climates have been naturalized,
and flourish exuberantly. The country immediately
surrounding St. Philip abounds with oranges, pine-
apples, melons, plantains, bananas, palms, dates,
cocoa-nuts, guavas, figs, grapes, and a variety of other
fruits. The vine flourishes finely, forming natural
harbours and alleys to shelter you from the servid rays
of an African sun. Cassia and tamarinds also flourish;
and from the humidity of the soil, there are two fruit
seasons in the year.

In entering the port of St. Philip de Benguela, the
town and inland country present a beautiful appear-
ance. The houses of the town have all whitewashed walls and red roofs, which give them a very gay and picturesque appearance from the offing, and also from the anchorage. The shores around the bay are low and sandy, with the exception of the westernmost point, which is composed of white sandy cliffs. But when we look eastwardly to the inland country, the scenery is charming. Ranges of verdant hills, on which blooming Spring for ever smiles, gradually rise above each other, while wood-crowned mountains rear their majestic heads in the distance, and give a sublime finish to the beautiful picture.

The most remarkable feature presented to the view of the mariner, however, is the summit of an elevated bluff headland on the west point of the bay, called by the Portuguese Ponta do Chapeo; but known to seamen by the familiar term of St. Philip's Bonnet. It is a clump of trees, which grow so thick and close together that they seem to have been cut with a prunng-knife into the shape of a bauffetier's bonnet; and though they are very luxuriant, all the neighbourhood below is quite barren. The head which wears this bonnet is a point of land so much elevated that it can be seen, in clear weather, at the distance of twelve or fifteen leagues. It is composed of materials like those of the cliffs below—granite, sandstone, slate, &c.

St. Philip's Bonnet and the town of Benguela are nearly on the same parallel, at the distance of about six miles from each other; but the bay, from its extreme eastern and western points, is seven or eight miles broad, and three miles deep to the beach. Within the transit line of the two points, and more than half-way over to the east, the depth of water is seventeen fathoms, which gradually decreases to six fathoms, within one mile of the shore, mud and clay bottom, with the flag-staff and the church in a line, which is the best anchorage for ships. Smaller vessels, however, had better lie closer in-shore, in four fathoms of water.

At this place you will have the regular land and sea breezes for the greater part of the year round. The sea-breezes blow from west-by-north, to west-by-south,
when the land-winds blow from south-east to east-south-east, but very light. The former never come in with sufficient force to render it unpleasant for vessels of any class to ride at anchor, which they can do in perfect safety all the year round; but these winds often bring in a heavy westerly swell, which at times renders landing unsafe. The landing is near a large boat-house, on the beach in front of the town, at the water's edge; and passengers are generally carried by the natives from the boat to the beach, in order to prevent their getting wet.

The town of Benguela is irregularly built along the curve of the beach, perhaps three hundred yards from the water. It consists of about two hundred houses, mostly of one story and a half, with a population not exceeding twelve hundred souls, of which two hundred are Portuguese, who lead a very indolent kind of life. Immediately in front of the anchorage stands the fort of St. Philip, mounting thirty-six guns; to the westward of it, at the edge of the beach, is a small five-gun battery, and north of Fort St. Philip is a battery of eighteen guns. All these fortifications, however, are so much out of order, that were a ten-gun brig to open her fire upon the town for ten minutes, the inhabitants would fly without firing a gun.

No good water can be obtained here, except in the rainy season; at all other times it is extremely brackish, and very unwholesome. Neither can it be procured, such as it is, without considerable labour and difficulty; the fatigue of rolling the casks one-third of a mile, and then baling the water out of wells. Provisions, however, and refreshments of almost every kind are readily obtained. Bullocks, sheep, goats, hogs, poultry, fruit, and vegetables may be had in any quantities, and at very moderate prices. You may also, at almost any time of the year, find a ready market here for a quantity of domestic goods, at a liberal price; and purchase in exchange hides of different kinds, ivory, ostrich feathers, and gold-dust. The bay affords excellent fishing with a seine, and very fine sport with a hook and line.

This bay is sometimes called Cow's Bay (Bahia das Vacas), on account of the vast number of sea-cows
which used to frequent it in former times. The chief value of these animals is their ivory tusks, which, being harder than those of the elephant, and not so liable to turn yellow, are much more esteemed by dentists. Their hides are also valuable for harness leather, and the skins of the young ones make very handsome coverings for trunks.

The land in the bottom of the bay is double, high, ragged, and principally barren near the shore; but the valley immediately behind the town is rich in soil, and exceedingly fertile, yielding an abundance of fruit of different kinds, and of an excellent quality. A great quantity of corn and beans is raised near the Bay of Cows, and the inhabitants rear cattle of the best kind in great numbers. They also gather a kind of odoriferous wood called kakongo, which is held in high estimation. Mines of copper are said to exist in the vicinity of the bay, and the mountains are supposed to contain silver. The mountainous districts swarm with wild beasts of various kinds.

Most travellers agree in pronouncing the climate of Benguela extremely insalubrious to strangers; but this, in my opinion, is greatly owing to their not paying proper attention to diet and regimen. The late visitation of the cholera has taught the world a useful lesson on this subject; and we now know by experience that the great secret of preserving health is "moderation in all things;" temperance in eating, clothing, and exercise, as well as in drinking; abstinence from excesses of all kinds. By acting on this principle, every climate will be found comparatively salubrious, and its atmosphere may be inhaled with impunity. Far be it from me to invade the province of the medical faculty; but it is my deliberate opinion, founded on careful observation, and confirmed by experience, that more diseases are caused by bad water than by bad air; and I would advise all strangers who visit this particular part of the African coast, to be very cautious of drinking the water, unless it be procured at a considerable distance from the shore. A neglect of this caution is generally followed by a
severe and dangerous diarrhœa or flux, especially with those who eat freely of fruit, and make too liberal use of ardent spirits at the same time. But by taking their water from the inland mountain springs, and avoiding exposure to noonday suns and nocturnal damp, with sufficient employment to keep up a gentle perspiration, they will experience little inconvenience from the climate of Benguela.

The wild animals that inhabit the interior are often seen in the forests that border on this part of the coast; such as elephants, leopards, zebras, lions, foxes, hyenas, antelopes of many kinds, buffaloes, bullocks, sheep, goats, wild hogs, and a great variety of monkeys and other small animals. I have often seen the elephant, buffalo, and bullock near the beach of the sea-shore, between this place and Great Fish Bay. In the interior districts the variety of beasts, birds, serpents, and other reptiles, insects, and plants is truly wonderful, I had almost said infinite, and well worth the attention of naturalists. Some philosophers maintain that for every passion, propensity, disposition, desire, affection, or thought of the human mind, there is in outward nature a corresponding animal, vegetable, and mineral, good or bad; and that all things which exist in external nature are intended as outward manifestations of mental or moral attributes. If this be indeed the case, Africa must comprise a strange mixture of good and evil, truth and error, in the minds of her sable population, where heaven and hell must be commingled in chaotic confusion. But I must leave this subject to the learned; my province being to point out nautical dangers, and teach others how to shun them.

There are many fine anchoring places between Benguela and Port Alexander, of which I will mention the most conspicuous. Point Salinas, which lies in latitude 12° 53' S., long. 12° 51' E., is distinguished by salt-ponds, which are near the sea-shore. This point runs about four miles into the sea, with a reef running from it off-shore about one mile.

Between this and Point St Francisco the shores are
bold, having no dangers more than half a mile off-shore, until you come up with the *Friars*, which are three rocks, standing about two miles off-shore, a little to the north of the last mentioned point, between which and the *Friars* there is good anchorage. But off-shore from this point there is an extensive reef, running into the sea; with hidden dangers, on which the sea does not always break. In doubling this point, ships should give it a berth of two miles.

The river St Nicholas has a reef on the south of its entrance, which is in latitude 14° 20' S., with not more than ten feet of water on it, at a mile and a half off-shore. Five leagues farther south is a small bay, called by some Village Bay, in which there is good anchorage, in from ten to four fathoms of water, about one mile in a northerly direction from the south point of the bay, in sandy bottom. At this place I have seen elephants and other animals, besides numbers of the natives.

Still farther south, in latitude 15° 12', is Little Fish Bay, the entrance of which is two leagues broad, formed by Cape Euspa on the north and Browne's Point on the south. Here the water is deep; but as we advance into the bay, it suddenly becomes more shallow, until it is reduced to twenty fathoms; it then lessens gradually to six or eight fathoms.

Half a mile from the head of this bay, on its south shore, is a deep valley, which is covered with a forest of large timber, in the openings of which vegetation appeared very luxuriant. At the mouth of a small river which empties into the head of this bay, we saw elephants; and freely communicated with the natives, who were anxious to open a trade with us, by exchanging cattle, sheep, hogs, and vegetables, for cutlery of any kind, beads, and old clothes, particularly red flannel shirts.

The next conspicuous land to the south is Cape Negro, before mentioned, in latitude 15° 41' S., long. 11° 57' E., on which is erected the celebrated alabaster pillar, with the arms of Portugal; and eight miles south-west-by-south from this cape is the entrance to the port of Alexander, already described.
In speaking of the Bay of Cows, at Benguela, I ought to have added that a sand-bank puts off from the north point of the bay to the distance of one mile, which it is necessary to avoid, as there is always a swell rolling in upon it, with a considerable degree of violence. The south and west sides of the bay are entirely clear of dangers two cables' length from the shore.
CHAPTER VI.

Visit to a Slave Brig—Cruelty and Suffering—Slaves flogged to Death—Strength of conjugal Affection in an African—An affecting Scene—Beard the Tigers in their Den—Cowardice of Guilt—How to abolish the Slave-trade—English Colony of Sierra Leone—United States' Colony of Liberia—Sail from Benguela—Homeward-bound—Island of Ascension—The Fourth of July, and a vertical Sun—Arrive at New York—Kind reception by the Owners, and a still kinder one by somebody else.

I have already informed the reader, that when I entered the Bay of Benguela there were no less than four slave dealers from Brazil, waiting to complete their cargoes. One of these receptacles of human misery lay at anchor within fifty fathoms of the Antarctic; and I was so distressingly annoyed by the shrieks and groans of its hapless inmates, the wretched victims of unfeeling avarice, that I resolved to visit the vessel, and make an offer of such medical aid as might have a tendency to alleviate the anguish of the sufferers. With this determination I ordered a boat to be manned, and boarded the brig without ceremony.

I was received by the officers on deck with a certain degree of courtesy, not unmingled with surprise; which, when I made known the object of my visit, assumed an expression of derision or contempt. Firmly adhering to my original purpose, however, I insisted upon seeing, and, if necessary, administering to those sufferers whose audible complaints had so powerfully excited my sympathy. The captain gave orders that my demand should be complied with; and, gracious Heaven! what a horrible spectacle was presented to my view!

If the reader has ever been on board of a Hudson River market-sloop, loaded with calves and sheep for the city slaughter-houses, he may form some faint idea of this Brazilian slave-brig. A range of pens, or bins, occupied each side of the main-deck, from the cat-head
to the main-chains, in which were confined such a num-
ber of the slaves as were permitted to come upon deck
at one time. In a line with the main hatchway, on
each side, was erected a bulkhead, or partition, sepa-
rating the men from the women; while a narrow pas-
sage remained open to the gangway, abaft the sternmost
pen, or between that and the quarter-deck.
The slaves, perfectly naked, were stowed in rows,
fore and aft, in a sitting or crouching posture; and
most of the men had their faces between their knees,
either indulging in a moody silence, or mournfully chant-
ing, in a low voice, some plaintive song of their native
villages. The feelings of the females were of course
more clamorously expressed, in spite of all their tyrants'
exertions to keep them quiet. In passing along the
deck between these two ranges of despairing human
beings, I encountered such mute imploring glances,
such appealing looks of misery, such piteous suppli-
cating expressions of countenance, such torrents of
tears, that looked like pearls on ebony, as completely
and totally unmanned me. My own tears fell like rain,
and the poor negroes gazed on the strange phenomenon
of a white man's sympathy, with wonder, doubt, and
admiration. Even the females had not been allowed
a rag to cover their nakedness.

After having taken a cursory view of the whole
heart-sickening scene, my attention was attracted to
the after range of pens on the starboard side, which
contained about one-half the females then on deck.
Here, as on the opposite side of the deck, the two sexes
were separated by a partition or bulkhead eight feet in
height; near which were two women evidently wreti-
ing in the agonies of death. Partly from the officers, and
partly from their fellow-sufferers, I gathered the shame-
ful facts that these two dying wretches had been re-
duced to their present situation by repeated applications
of the lash, as a punishment for their piteous cries and
heart-rending wailings. This worse than savage brutality
had elicited those shrieks and groans which first arrested
my attention on board the Antarctic. They were wives
and mothers; their infants had been torn from their
breasts, and thrown upon the ground, either to perish with hunger among the grass, or to become the prey of beasts, or the victims of venomous reptiles—or, possibly, to be preserved and nourished by strangers. In the phrenzied paroxysms of maternal anguish, they had called for their infants—for their husbands—for their parents—for their brothers, sisters, and friends; and for this natural involuntary ebullition of feeling, their bodies had been cruelly lacerated with stripes, until nature sank exhausted, no more to revive. Their breasts were distended with the undrawn nutriment for the lack of which their helpless babes perhaps were perishing,—it was oozing in streams from their nipples, mingled with their own blood.

On learning these facts, indignation enabled me to suppress those softer feelings which were before nearly choking me; while the hardened barbarians around me wore sardonic smiles upon their faces. The captains of two vessels were present, and several officers. For the moment, I impiously wished to be armed with the lightnings of heaven, to punish the guilty, and terminate the sufferings of their victims on the spot. As this was not practicable, however, I gave vent to my feelings in a torrent of invective, pouring upon them volleys of vituperation. I cannot recollect what I said; but for some time I gave them broadside after broadside, without receiving a single shot in return. They received my fire in silent astonishment, suffering me to rake them fore and aft, until my magazine became exhausted, and I paused for lack of ammunition.

In the mean time, the two especial objects of my compassion were released from their sufferings by death; and just as the visiting captain had commenced some observation in excuse or palliation of their conduct, our attention was arrested by another object. One of the male captives, a well-made, good-looking man, of about twenty-five years of age, had contrived, all manacled as he was, to scale the bulkhead, from the top of which, being unable to use his arms, he fell into the females' apartment, where his head struck a ring-bolt with such force as to fracture his skull. It was the husband of
the youngest of the two women who had just breathed their last. For a few moments he lay senseless from the effects of the blow; but soon came to himself sufficiently to understand what was said to him. In the next moment he recognised the dead body of his wife, which he frantically strove to clasp in his manacled arms; and, with a yell of despair, endeavoured to awaken her with his caresses from the sleep of death, while the wound in his head was pouring forth a torrent of blood on the inanimate object of his piteous lamentations.

The captain of the brig now spoke, and ordered one of the officers to tear the poor fellow from the corpse of his wife, and to stow him on the other side of the deck. He raised his mute imploring eye to me, in which I read a speedy termination of his miseries, and an ardent desire to expire on the bosom of his wife. The officer advanced to seize him; but this was too much for me to witness. I sprang before the dying man, drew my dirk, and ordered the officer to desist on the peril of instant death.

"Hold!" I exclaimed, "you shall not molest him. Back! back! on your life! No man shall touch him, unless he cut his way through my body. You have butchered the wife of his bosom; he is now dying from the effects of your savage barbarity; and they shall not be separated, until his spirit is reunited to hers, in that blessed world where fiends of hell like you can never come. Back! or your blood shall mingle with the negroes'!"

The officer recoiled a few paces, while the others stood gazing at me and each other in mute amazement. I stood fixed in my purpose, however; and not one of the conscience-struck, guilt-appalled, cowardly wretches, nor the whole combined, could muster up sufficient courage to oppose my single arm. The dying captive's struggle was short. In a few minutes more he breathed his last, on the cold inanimate lips of her he loved more than he feared death. I then returned my dirk into its sheath, and again addressed the embarrassed officers:

"Step forward, inhuman monsters! and contemplate the effects of your savage barbarity—your triple mur-
der. Look there! on the remains of those three poor victims of your avarice and cruelty! Think too of their hapless infants; which, if not happily already gone to meet their parents in a better world, are fated never to enjoy a parent's tenderness in this. How will you answer for crimes like these before the God of justice? I do not marvel at your cowardice, for it is the inseparable concomitant of guilt like yours. I do not wonder that you turn pale at my just rebuke, and tremble there like culprits at the gangway. But how much more will you tremble when you are arraigned before the bar of Divine Justice, and hear that voice which brought the universe into existence pronounce the awful sentence—"Inasmuch as ye have not shown mercy to one of the least of these, ye have not done it unto me."

With these words I advanced to the gangway, and was about to depart, when the captain of the brig expressed a hope that I would not leave them in anger, but that I would walk below, and join them in a glass of wine. I promptly declined the proffered courtesy, assuring him that it gave me very unpleasant feelings to breathe the same air with men engaged in this abominable traffic; but were I to drink with them, I should feel guilty of an act of wanton impiety that had stained the untarnished lustre of the flag I sailed under.

They retorted, with a most provoking assurance, that great numbers of American vessels were at that moment engaged in the same traffic; vessels which they knew were owned by citizens of the United States, commanded by American captains, and manned by American and English seamen.

I made no reply, but stepped into my boat, and was soon on board the Antarctic, with food for reflection sufficient to last me during the passage from Africa to America. Nor was this the only revolting scene I was doomed to witness, connected with this infamous system of piracy, while I was detained at Benguela. Being on shore on Friday, the 5th of June, I saw about fifty of these unhappy beings handcuffed in pairs, and drove into town like so many yoke of cattle, by soldiers on
horseback. As the poor wretches passed me, I could see the traces of tears on almost every cheek, and from some eyes they were streaming in torrents. They had been driven so far, and with so little mercy, that many of them were quite lame, their foot-prints being marked with blood! But still, if any of them faltered or lagged a little behind the rest, their inhuman drivers would start them up again by severe cuts of the lash on their naked bodies, with as much unconcern as if they were driving so many bullocks to market.

How is this horrible traffic to be finally and totally abolished? This is a question of vital importance to the cause of humanity. The United States, in conjunction with England and France, have effected much; but much more yet remains to be done. The root, the source, the foundation of the evil is in the ignorance and superstition of the poor negroes themselves. Could they become only partially civilized, and sufficiently enlightened to see the beauty of the plainest moral precepts of our religion, they would no longer feel themselves obligated to obey the unjust mandates of a ruthless despot, who levies war on his neighbours, not for any real or imaginary injury received, but for the sole purpose of raising a revenue by the sale of his captives. This state of things can only be brought about by the labours of missionaries, patiently pursued for a series of years.

However severe the edicts which nations may pass against the slave-trade, they will never deter from engaging in it a certain class of reckless adventurers which are found in every country; whose motto is "Neck or Nothing." They are willing to run the risk of dying the death of pirates, in consideration of the immense emolument which attends a successful issue of the perilous enterprise. Like every species of smuggled goods, slaves will always find a ready market, and a price proportionately high to the hazard of introducing them; and so long as a door remains open for disposing of human beings, the progress of reform in this particular will be very slow.

It is comparatively of but little use to lock up the
mouths of the Senegal, the Gambia, the Zaire, the Coanza, and the Cameroons, or any other river of Africa, while the whole extent of coast remains open, and may be landed on at different seasons of the year. Nothing but a total unqualified prohibition of this soul-debasing traffic by every power in both hemispheres, particularly by those of South America, can afford any rational hope of its final abolition. And even then, there is too much reason to fear that men-stealers will still exist, and that planters will be found of natures sufficiently diabolical to reward them for their labours of barbarity.

England and the United States have set the world some glorious examples on this important subject. The colony of the former at Sierra Leone, and that of the latter at Liberia, on the west coast of Africa, are both in a flourishing condition; and their projectors and founders merit the prayers and blessings of philanthropists in every section of the globe. Sierra Leone lies between the seventh and tenth degrees of north latitude, and derived its name from mountains abounding with lions. This is the nearest point of the African coast to the most western point of South America, on the Brazilian coast, the distance from Pernambuco to Sierra Leone being only about five hundred leagues.

The English settlement of Sierra Leone was formed in the year 1787, for the express purpose of labouring to civilize the Africans. In 1825, four years previous to my visiting Benguela, it contained eighteen thousand inhabitants; of whom about twelve thousand consist of liberated Africans, who for the most part occupy the parishes in the mountains, where they inhabit villages, surrounded by tracts of cultivated ground, and containing schools for both sexes. In this quarter the English have made the greatest exertions to limit, if not to abolish, the trade in slaves; but, in the language of M. Malte Brun, "philanthropy, and penal statutes, and vigilance, have been found but feeble barriers, when opposed to the cupidity of unprincipled traders."

The British cruisers have been very active and successful in capturing many of the slave-ships which still swarm upon the African coast, as appears by the great
number of liberated slaves which are every year added to the colony. The landing of these cargoes, according to the writer just quoted, is often a very affecting scene. The poor creatures delivered from the hold of a slave-ship, faint and emaciated by harsh treatment and disease, when received with kindness and sympathy by the inhabitants, among whom perhaps they recognise a brother, a sister, or countryman, whom they had supposed long since dead, but whom they are astonished to see clothed and clean, are overwhelmed with feelings which they find it difficult to express. On their arrival, those of a proper age are married, and sent to the adjacent villages. A house and lot is appointed to each family; they are supported one year by government, at the expiration of which they are obliged to provide for themselves. The captured children are also sent to villages, where they are kept at school till married, which is always at an early age. At the head of each village is a missionary, who acts in the double capacity of minister and schoolmaster. The exertions of the African Institution, aided by the missionaries of the Church of England, have effected a remarkable improvement in the morals of the inhabitants, who are generally contented and industrious. They have opened several avenues of profitable trade with the natives of the interior, and their external commerce is rapidly increasing. But I regret to add, that the climate of Sierra Leone is extremely deleterious to the health of Europeans. No less than seven governors have died since 1824, and only three soldiers survive out of a whole regiment.

The United States' colony of Liberia, which, being of a more recent date, is yet in its infancy, is situated about two hundred and fifty miles south-east of Sierra Leone, at Cape Montserado, or Mesurado. Its history is briefly as follows:

"In December, 1821, the American Colonization Society effected the purchase of a tract of territory at Cape Mesurado, on which a settlement was made soon afterward. The colony at first was disturbed by the native blacks, who, in November, 1822, made two attacks upon it in large bodies, but were repulsed with
great loss. Since that period the colony has received continual accessions from the United States, and rapidly improving. Additional purchases have been made in the vicinity, particularly on St. Paul's River, north of the Mesurado, and Stockton Creek, which opens an inland communication between the two rivers.

"The first and principal settlement is at Monrovia, (so named in honour of President Monroe), on Cape Mesurado, which is fortified with a government-house and stores, churches and schools. Farming settlements are formed at Caldwell, on St. Paul's River, and on Stockton Creek. Several trading factories are established along the coast, over which the society have a qualified jurisdiction for one hundred and fifty miles from Cape Mount to Trade-Town. This jurisdiction secures to them the trade of the country, and precludes all Europeans from any possession within these limits. It also enables them to put a stop to the slave-trade."

The population of this colony is rapidly increasing, and probably now amounts to above fifteen hundred. The country abounds in cattle, goats, swine, and fowls, and in most of the fruits and productions of other tropical climates.

Cape Mesurado is an elevated promontory, almost perpendicular on the north side, but with a gradual declivity towards the sea on the south. The natives in the vicinity of this place have been noted as very superior to those farther eastward; being quiet, tractable, and hospitable, and honourable in their dealings. The negroes on the banks of the river Mesurado, it has been said, speak a corrupt dialect of Portuguese, and acknowledge themselves vassals to Portugal; but are not, as some have supposed, Europeans changed to negroes by the power of the climate.

Ivory is the staple commodity of exchange or barter. Teeth under the weight of twenty-two pounds are termed *schrivelloes*, and may be had comparatively cheap.

"It is highly probable," says Mr. Niles, "that we may build up a powerful people on the western coast of

* M. Malte Brun's System of Geography.
that benighted quarter of the world, who shall extend their settlements into the interior, as we ourselves have done (on this continent), and command the native tribes as we do; and thereby spread light and knowledge, civilization and religion, even along the yet unknown shores of the mysterious Niger, and totally break up at least the external trade in slaves; but without much, if any, sensible effect to decrease our own coloured population. However, it will be a great thing to have a spot provided to which our free blacks may proceed, with an assurance that their industry will be crowned with prosperity and peace, and where their children will have a country and a home; nor will it be less interesting because of the opportunity which it may continually offer to liberal and humane persons, who would gladly emancipate their slaves, if convinced that their condition would be benefited. We always approved of this project, for it is indeed a humane one, though we questioned its efficiency to accomplish the first grand purpose proposed."

In concluding an animated description of this flourishing colony, the Encyclopedia Americana uses the following language:—"Thus far the efforts of the American Colonization Society have been attended with great if not unexampled success. The men of colour who have migrated to Liberia have felt the influences of enterprise and freedom; and are improved alike in their condition and character. Those who were slaves have become masters; those who were once dependent have become independent; once the objects of charity, they are now benefactors; and the very individuals who, a few years ago, felt their spirits depressed in our land, and incapable of high efforts and great achievements, now stand forth, conscious of their dignity and power, sharing in all the privileges and honours of a respected, a free, and a Christian people."

A weekly newspaper, called the "Liberia Herald," is now printed at Monrovia, the capital of the colony, and appears to be very well conducted. A pretty brisk commerce is also carried on there; and in 1828 they exported seventy thousand dollars' worth of produce.
The climate is salubrious, and with a few exceptions, the colonists have uniformly enjoyed good health.

June 8th. — Our water-casks having been replenished from mountain streams, and safely stowed on board, and the schooner being now amply supplied with fresh meat, vegetables, fruit, and refreshments of every kind, besides a quantity of live stock, we found ourselves in readiness to set sail for home, "sweet home," many months sooner than we had anticipated. But the voyage had been prosperous beyond our expectations, and any further stay on the African coast would have been useless waste of time and money. We therefore got under way on Monday, the 8th of June, at 4, p. m., we left the anchorage at Beuguela, which is in latitude 12° 34' south, and long. 13° 17' east; variation per azimuth, 21° 30' westerly. We started with a fine breeze from south-west, and fair weather. At 11, p. m., we took the wind from south-by-west, and at 10 the next morning we had it from south-south-east. We crossed the meridian of Greenwich on Friday the 12th.

June 15th. — We continued on our course to the west with south-east winds until Monday, the 15th; when, at 11, a. m., we were close in with the island of Ascension, in lat. 7° 55' south, long. 14° 23' west; about six hundred miles north-west of the celebrated island of St. Helena, and twice that distance east of Pernambuco, in Brazil.

The island of Ascension was formerly described as "a barren uninhabited island in the South Atlantic Ocean, without soil or vegetation," and as "an impracticable heap of volcanic ashes." This description was once correct; but industry, skill, and perseverance have now rendered a more favourable one appropriate. The island is in fact a shattered volcano, the pulverized materials of which are rapidly becoming converted into a rich and fertile soil. It formerly belonged to the Portuguese, who discovered it in 1501; but in 1816, some English families from the island of St. Helena settled here, and it was taken possession of by the British government as a military station; and sixty transport ships provided the garrison of two hundred men with
supplies from the Cape of Good Hope. A fort was erected, roads constructed, gardens planted, houses built, &c.

This island is of triangular shape, about twenty miles in circumference; being eight miles from north to south, and five miles and a half from east to west. It may be seen from the mast-head in clear weather at the distance of ten leagues. On approaching it from the east, at the distance of six or eight leagues, its appearance is uneven and rugged, being an assemblage of hills, with a mountain overlooking them from the south. This is called Green Mountain, and is about eight hundred yards in height. The best anchorage in this island is in Turtle Cove, in eight or ten fathoms of water, with the flag-staff on Cross-Hill bearing south-east-half-east; Rat Corner, south-south-west; distant from the nearest shore about one mile. A heavy surf often interrupts the landing for several days together.

The whole island is of volcanic origin, and the surface is now partly covered with a reddish soil, while in some places there is a yellow earth resembling ochre. A fine black earth covers the bottoms of the valleys, which are now in a fine state of cultivation by the little military colony before alluded to. The island is composed of several conic hills, from two hundred and fifty to three hundred and fifty yards in height. Green Mountain has a double top, rising in two peaks, like the Grecian Parnassus. In almost every part of the island, as Mr. Purdy justly observes, are found prodigious quantities of rocks full of holes like a honeycomb; together with calcined stones, very light, and pumice-stones. “The rocks, lying upon each other in a very irregular way, and mostly on the declivity of hills, leave great chasms between them; and as they have very little solidity, an observer runs some risk who ventures without caution upon them.” “About the middle of the island, and between the hills, there are several little plains, which are divided into small spaces, so remarkably distributed that you would take them for so many pieces of land cleared of stones, and separated from each other by long walls.”
According to the statement of the officers of the English brig Slaney, who visited this island in February, 1827, Ascension was then (under the government of Lieutenant-colonel Nicholls) in a most flourishing state of progressive improvement as to its resources, both natural and artificial. "Roads are constructing from the several springs (sixteen in number) to convey water to the garrison; and hopes were entertained of being able to supply a squadron with that essential article in the course of a year, by means of iron pipes from the principal spring to a reservoir near the beach. Pasturage for cattle is making its appearance. Sheep, turkeys, guinea fowls, and live-stock of every description thrive well. Fruit, such as pines, Indian gooseberries, and plantains, have been successfully cultivated. Potatoes, onions, carrots, pease, French beans, and almost every esculent vegetable have been produced upon the island; and thus, from a desert cinder, nature has been courted successfully to yield most of her useful vegetable productions. Only two deaths from sickness have occurred at Ascension during the last two years (1825 and 1826); and when we consider that gales of wind are unknown to have visited the anchorage there, the value of the island as a rendezvous and a depot for stores and provisions, for a squadron of observation, destined to cruise either on the African or Brazilian coast hereafter, will obviously repay the liberal attention that has been bestowed upon it."

A short time after the visit of the brig Slaney, the William Harris, a transport, landed at the island a cargo of live-stock—horses, hares, rabbits, pheasants, poultry, partridges, &c., seeds of vegetables, agricultural implements, and a supply of necessaries for the garrison, who all enjoyed very excellent health. In return, she took a large quantity of fine turtle, with which the island abounds; and, according to Captain Lesley, it "furnishes the finest in creation," being "not only fat and large, but in the highest perfection for eating. Their weight, in general, is from one to seven hundred pounds. They are, of all I ever tasted, the fattest and finest; all others I ever saw before bear no comparison

...
with them." This description, I should suppose, would make any alderman’s mouth water.

From the island of Ascension we shaped our course west-north-west, with a strong breeze from the south-east, and fair weather. We crossed the equator on Sunday, the 21st of June, in long. 30° 47′ W., and on Tuesday the 23rd, we lost the south-east trade winds, in lat. 5° 42′ N., long. 32° 14′ W. From this day to the 26th we had light variable winds, and heavy falls of rain. On the last-mentioned date, at four, p. m., we took the north-east trade-winds, in lat. 10° 4′ N., long. 32° 51′ W. We had now a fine breeze from east-north-east to north-north-east, and fair weather for ten days.

July 4th.—On Saturday we celebrated the anniversary of our national independence in an appropriate manner, by displaying the stars and stripes, and firing a national salute at sunrise, noon, and sunset. This ceremony was rendered the more interesting by its being beneath a vertical sun, at twelve m.,—"a sun of glory, that threw no shadow on the scene." At this moment the sun’s declination and our latitude only differed one minute and thirty seconds. Temperature of the air 95°, of the water 83°. Heaven grant that the sun of our national glory and prosperity, which is rapidly ascending to the zenith, may there remain vertical, until time shall be no more.

July 7th.—On Tuesday the 7th, we lost the north-east trade-winds, in lat. 31° 0′ N., long. 63° 8′ W. We now continued steering to the north and west, with variable winds and occasional foul weather, for nearly another week, when the cheering cry from the masthead of "Land ho! land ho! over the larboard bow," announced the appearance of Mount Mitchell, or the highlands of Navesink, and many anxious bosoms throbbed quick in response to the welcome cry. In a short time after we were boarded by a pilot.

July 14th.—On Tuesday at four, p. m., we arrived at the quarantine ground, Staten Island; and at five, p. m., I landed at Whitehall, where I took a coach, and in a short time I had by the hand my worthy old friend Christian Bergh, Esq., who greeted me with a cordial
"welcome home," affectionately enquiring after the health of myself and crew. But not a question would he ask, not a word would he hear, respecting the success of our voyage, or on business of any description, until I had embraced my family, who, he informed me were in good health. This instance of kindness and delicacy, so different from the general conduct of "mercenary man," touched me sensibly.

While I was conversing with the old gentlemen, we were joined by his son Edwin Bergh, "a son every way worthy of such a sire." His greeting was equally cordial, equally delicate with that of his excellent father; neither of them would touch upon business until I had discharged duties of a more tender character. On taking my leave of these worthy men, I was met by their copartners in business, Jacob Westerfield and Robert Carnly, Esqrs., whose reception, to my increased surprise, was exactly similar to that of the Berghs. The pleasure of seeing me returned in safety, they said, was a theme sufficient for the remainder of that day; tomorrow would be time enough for business. They enquired after the health of the crew, and dropped several manly tears for the fate of young Ogden, one of them exclaiming, "Ah! who shall tell his widowed mother this! His sisters too—'twill break their hearts to hear the dreadful news."

I now took my leave, and in a few minutes more held a dear form in my arms which had been rendered senseless by the sudden joy arising from my unexpected appearance. But such revulsions of nature are seldom fatal.

"But recollection whispered yet a joy
'Twas her's to give, and from the trance she starts,
Puts in his arms their little infant boy,
Love's precious pledge, that closer binds their hearts."
APPENDIX.

NATURAL HISTORY.—Guano.—Etymology of the word.—Used by the Aborigines of Peru as Manure.—Derived from Sea-fowl.—Their Associations termed Rookeries.—Guano not always found where these exist.—Physical causes preventing its accumulation.—A certain geographical distribution to be looked for in making new discoveries of it.

CHEMICAL HISTORY.—The Composition of Guano, by whom first ascertained.—Its General Constituents.—Table of Minute Analyses by different Chemists.—Comparison of its Composition with the recent Dung of Sea-fowls.—The causes of its Composition varying.—Varieties, how distinguished.—Table of 13 samples examined as to commercial value.—The result by a different mode.—Chemical Analysis the only true guide to intrinsic value.

APPLICATION OF GUANO AS A MANURE.—Casual observation probably first led to its use.—Mode of applying it in Peru.—When first introduced into Britain.—Opening of the African Trade in it.—First Experiments with it.—Experiments in 1842.—Experiments in 1843.—The importance of its introduction at the present time to the British Farmer.

The Natural History of Guano.

The trade in Guano, which has been lately opened to the coast of Africa, has not only raised high hopes as to its beneficial effects in improving agriculture by affording an abundance of the richest manure, but on the commerce, and especially on the shipping interests of the country, it has already occasioned considerable improvement. Every thing relating to it, therefore, is a matter of importance, and even the natural history of the article is something more than a mere matter of curiosity. Its name, it would appear, is of Peruvian derivation, and had been called in the language of the natives Huano, signifying dung or manure; the Spaniards now name it Guano, or Guanar.

The aborigines on the coast of Peru seem to have used guano from time immemorial as manure; and at the time of the European discovery of the country, strict laws had been enacted by the Incas, to guard the islands in which it is found, and to punish with death even those who killed the sea-fowls from which it was derived. Much doubt was entertained for some time
after being brought to this country, with regard to the origin of guano; the Spaniards early questioned that which seemed to have been clear to the inhabitants of Peru; but chemical examination, and other evidence, leave it no longer undetermined, that the enormous accumulations of this matter on sea islands, in various localities, is nothing more than the droppings of the myriads of fowls which inhabit them for the purposes of rest and incubation.

Morrell has termed such associations of sea-fowl "Rookeries," which is the common appellation given to them by the South Sea navigators. His description of one on the Falkland islands is very graphic, and as it is instructive, it is here, in substance, introduced. Those islands extend north and south from lat. 50° 58' to 52° 46' S., and east and west from long. 57° 32' to 61° 29' W. The feathered tribes, he remarks, are very numerous on the lonely isles in the southern hemisphere, both in the South Seas and in the South Atlantic Ocean. Of penguins there are four kinds which resort to the Falkland Islands, viz. the King, the Macaroni, the Jackass, and the Rookery Penguin; but the most remarkable bird found on those shores, is the penguin’s intimate associate and most particular friend, the Albatross.

When a sufficient number of penguins, albatrosses, &c., are assembled on the shore, and a deliberate consultation on the subject has been held, they proceed to the execution of the grand purpose for which they left their favourite element. In the first place they select a level piece of ground, often comprising an extent of four or five acres, as near the water as practicable, always preferring that which is the least encumbered with stones.

As soon as they are satisfied on this point, they proceed to lay out their plan, which they commence by tracing a well defined parallelogram, of sufficient magnitude to accommodate the whole fraternity. One side of this square runs parallel with the water’s edge, and is always left open; the other three sides are differently arranged.
These industrious feathered labourers next proceed to clear all the ground within the square from obstructions of every kind, picking up the stones in their bills, and carefully depositing them outside of the lines before mentioned, until they sometimes create a little wall on three sides of the Rookery; within this range of stones and rubbish, they form a pathway, quite smooth, six or eight feet in width. This is for a general promenade by day, and for the sentinels to patrol by night. The whole area is then laid out in little squares of equal sizes, formed by narrow paths, which cross each other at right angles, and which are also made very smooth; at each intersection of these paths an albatross constructs her nest, while in the centre of each little square is a penguin’s nest, so that each albatross is surrounded by four penguins. In this regular manner the whole area is occupied by these feathered sojourners of different species, having at convenient distances accommodations for other kinds of oceanic birds, such as the shag, or green cormorant, and another which seamen call the nelly.

The penguin’s nest is merely a slight excavation in the earth, just deep enough to prevent the egg rolling from its primitive position, while the albatross throws up a little mound of earth, grass, and shells, eight or ten inches high, and about the size of a water-bucket, on the summit of which she forms her nest.

None of the nests in these Rookeries are ever left unoccupied for a single moment, until the eggs are hatched, and the young ones old enough to take care of themselves; male and female alternately relieving one another when in search of food. By this precaution they prevent their eggs being stolen by the other birds, which would be the case if left exposed, but which, nevertheless, must be often done, for it frequently happens that when the period of incubation is terminated, the young brood will consist of three or four different kinds of birds in one nest.

To stand at a distance and observe the movements of the birds in these Rookeries is not only amusing but edifying, and even affecting. The camp appears in
continual motion, all appear engaged in seeking pleasure, refreshment, or recreation; at the same time the air is almost darkened by an immense number of albatrosses and other birds, hovering over the Rookery like a dense cloud, some continually lighting and meeting their companions, while others are constantly rising and shaping their course for the sea.

Sea-fowls in incalculable flocks are observed to congregate for similar purposes everywhere, on the desolate and craggy shores and islands of both the Atlantic and Pacific Oceans; and, although the same species of birds are met with in many different latitudes, whose food is alike, and whose droppings can vary little in chemical character, whether this relates to their solubility, fluidity, or solidity, yet, as far as it has been discovered, there seem only very few situations where matter resembling guano, in any quantity, is found. The rocky islands and shores on the northern and western coast of Scotland, although they have been no doubt frequented for thousands of years by birds, in countless numbers, yet are really known not to have any such deposit upon them, neither does it exist on the lonely islands in the Gulf of St. Lawrence, nor on the rocky shores of North America, in higher latitudes, to which also vast flocks of sea-fowls migrate every season, to rear their young in fancied security, amidst an abundant supply of food, and where vessel-loads of their eggs are collected by visitors, by whom no report has as yet ever been made of the existence of guano. It must be inferred, from the acute and searching talent which Morrell shews for observation, that he would not have allowed the occurrence of guano on the Falkland Islands, or on others equally the resort of sea-fowl, to have escaped him, had it existed. He would have recorded the fact in his description of the South Sea Rookeries, and his far-seeing eye would not have failed to discover in mountains of this substance, monuments of production which, if not of a very pure nature, yet are of more real importance to mankind than what is so often recorded in the annals of other biped republics of higher intelligence, but of much less antiquity. It is
obvious therefore, that peculiar causes exist for the accumulation and preservation of the dung of those birds, in such enormous beds as cover some islands on the coast of Peru, Bolivia, and Africa; and we are not to look for these causes alone in the mere temperature of their climate. Many rocky islands and precipitous shores within the tropics, in full possession of the feathered tribes of the ocean, may have thus at least one physical cause existing without any such accumulation, and this could scarcely occur without being noted by the all-prying eye of man. In such climates, the heavy periodical rains, uncounteracted by other agency, must dissolve every thing which is soluble of whatever is deposited on the surface of the earth, and what is not so dissolved would be otherwise in all likelihood washed away; the same must occur in temperate and colder climates, where the constant alternations of wetness and dryness, and of heat and cold, must rapidly effect a thorough decomposition, and facilitate greatly the disappearance of all such matters.

If we take a survey of the localities in which Guano has hitherto been found in large quantities, we shall find causes in operation which will account for its accumulation.

The seaboard of Peru and Bolivia, from 3° to 22° south latitude, a space of about 1,480 miles in a direct line, is generally of a light sandy soil, never refreshed by a drop of rain, and although the dews are heavy, they seem of little consequence to vegetation. On this coast are the numerous islands upon which take place the large deposits of guano; on the islands of Chincha and Pacquica, according to good authority, the beds are of great depth, and the quality exceedingly good, but from the coast of Chili, where rain frequently falls, the guano is inferior. Morrell, who seems to have visited the most of those islands on the coast of Peru, makes mention of two islands named Lobos Afuero, and Lobos de Terra; the latter is in lat. 6° 34' S., and long. 80° 45' W., and has a safe and convenient harbour on the north side, "they are covered," says he, "with the dung of aquatic birds, sufficient to load
thousands of ships, having been accumulating for untold ages. It is called guanar by the Spaniards, and is probably the richest manure in the world."

If we now turn to the coast of Africa we shall find, from the same author, that Ichaboe Island is covered to the depth of twenty-five feet with guano, and is within one mile and a half from the main, and 41 miles to the northward of Possession Island, which is in latitude 26° 57' S., long. 15° 8' E.

The south and west coast, from about lat. 16° to 27° south, is a dreary sandy waste, generally destitute of water. The desert in the neighbourhood of Angra Pequina extends into the interior about 40 miles, which being traversed, a country is reached inhabited by an inoffensive and civil race of Hottentots, possessing, as you advance farther, innumerable flocks of cattle, where the land becomes fine and fertile.

About 800 miles of this sea-coast, Morrell says, running north-west and south-east, almost every mile of which was examined by him, presents a range of sandy deserts, upon an average nearly 40 miles in breadth. During ten months of the year here, there is scarcely a drop of rain, and for the other two months very little falls. The atmosphere is pure, warm, and dry, to such a degree, that a quarter of fresh beef, weighing two hundred weight, hanging in the rigging, will become perfectly dry, without being tainted in the slightest degree, even to the bone.

Thus, to all appearances, there are identical agencies existing on the coasts of Peru and Africa, where guano is found of such superior quality, and in such wonderful abundance.

For the deposition and accumulation, then, of Guano, in any particular locality, it is essential that there should be a sea-coast on which there are numerous isolated rocky situations, where sea-fowl may collect unmolested to hatch their young, and seas in the vicinity supplying abundance of food; warmth of climate, little or no rain, and a perpetually dry atmosphere. Under a terrestrial and atmospheric combination of this sort, Dr. M. Hamilton calculates, that a million of birds will pro-
duce 15 tons of guano daily, from their droppings, subject to no further loss from evaporation. No mean quantity would thus in a very few years be accumulated in favourable situations, and many such, it is reasonable to suppose, are to be found in both hemispheres.

We can foresee that the stimulus given by the success which has already attended the voyages for African Guano, and the idea that the supplies will soon be exhausted, both on the coast of Peru and Africa, must naturally lead to the exploration of new regions, for an article apparently every year growing more and more in request. It will, however, only be by looking to those topographical bearings referred to, that any one can expect to make fresh discoveries of deposits of this substance, to an extent which will make them an object of commercial enterprise, or of a quality which will realize the hopes of the farmer.

*The Chemical History of Guano.*

The chemical composition of Guano seems to have been first ascertained from an analysis by Klaproth, of a sample furnished to him by Humboldt, which, so far as it goes, agrees with subsequent analyses, except that it contained a very large proportion of sand,—no less than 28 per cent. The next, by Fourcroy and Vauquelin, is much more complete, and accords with others since made. From them it appears that this substance is composed of the following constituents, as may be seen by inspection of the tables below:—Volatile substances, consisting of water and ammonia in the state of carbonate; substances soluble in water, namely, fixed alkaline sulphates, muriates, and phosphates,—and muriate, phosphate, and oxalate of ammonia; and substances insoluble in water, or nearly so, consisting of urate of ammonia, phosphate of magnesia and ammonia, and phosphate and oxalate of lime, a waxy or greasy substance, indefinite inorganic matter, partly soluble in alkaline solutions, partly insoluble, with sand (when in considerable quantities, evidently an accidental admixture). We are in want of sufficiently minute analyses of
recent droppings of sea-fowl, to institute an exact comparison, but the knowledge we have of this, and of the constitution of the urine of animals, is entirely confirmatory of the account of the origin of Guano, already adverted to. The analyses of the excretions of sea-fowl shew that they are principally composed of urate of ammonia with alkaline and earthy sulphates, muriates and phosphates, the differences in the proportions of these, and the existence of oxalates in guano, being due to the changes which it has undergone, after it has been deposited, which vary in their nature and extent according to the circumstances in which it has been placed, and which account for the very great varieties found in commerce, independent of the differences which may be supposed to exist in the composition of the excretions of sea-fowl in different localities.

The subjoined table exhibits the composition of several samples of Guano*:

<table>
<thead>
<tr>
<th>Nos.</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urate of ammonia</td>
<td>16:0</td>
<td>9:0</td>
<td>3:24</td>
<td>12:2</td>
<td>16:26</td>
<td>18:34</td>
</tr>
<tr>
<td>Oxalate of ammonia</td>
<td>10:6</td>
<td>13:35</td>
<td>17:73</td>
<td>16:26</td>
<td>18:34</td>
<td></td>
</tr>
<tr>
<td>Oxalate of lime</td>
<td>12:75</td>
<td>7:0</td>
<td>16:36</td>
<td>1:8</td>
<td>7:54</td>
<td>14:23</td>
</tr>
<tr>
<td>Phosphate of ammonia</td>
<td>6:0</td>
<td>6:45</td>
<td>6:9</td>
<td>5:26</td>
<td>14:91</td>
<td></td>
</tr>
<tr>
<td>Ditto and magnesia</td>
<td>2:6</td>
<td>4:2</td>
<td>11:63</td>
<td>2:59</td>
<td>2:35</td>
<td></td>
</tr>
<tr>
<td>Phosphate of lime</td>
<td>10:0</td>
<td>14:3</td>
<td>9:94</td>
<td>20:16</td>
<td>10:53</td>
<td>0:97</td>
</tr>
<tr>
<td>Muriate of ammonia</td>
<td>4:2</td>
<td>6:5</td>
<td>2:25</td>
<td>8:68</td>
<td>3:38</td>
<td></td>
</tr>
<tr>
<td>Common salt</td>
<td>0:05</td>
<td>0:1</td>
<td>0:4</td>
<td>0:8</td>
<td>0:8</td>
<td></td>
</tr>
<tr>
<td>Carbonate of ammonia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carbonate of lime</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sulphate of potash</td>
<td>5:5</td>
<td>4:28</td>
<td>4:0</td>
<td>21:2</td>
<td>3:01</td>
<td></td>
</tr>
<tr>
<td>Sulphate of soda</td>
<td>3:8</td>
<td>1:12</td>
<td>4:92</td>
<td>12:6</td>
<td>3:84</td>
<td></td>
</tr>
<tr>
<td>Sulphate of ammonia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Humate of ammonia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Substance resembling wax</td>
<td>0:8</td>
<td>0:75</td>
<td>0:02</td>
<td>1:6</td>
<td>0:2</td>
<td></td>
</tr>
<tr>
<td>Sand</td>
<td>32:0</td>
<td>4:7</td>
<td>5:9</td>
<td>1:68</td>
<td>0:2</td>
<td></td>
</tr>
<tr>
<td>Undefined organic matter</td>
<td>29:2</td>
<td>32:3</td>
<td>22:72</td>
<td>8:26</td>
<td>5:49</td>
<td>11:00</td>
</tr>
</tbody>
</table>

* 1st, Humboldt's specimen by Klaproth; 2nd, Yellow Guano, by Voelckel; 3rd, Brown Red, by Bertels; 4th, Brownish Yellow, by Oellacher; 5th, Peruvian Guano, from Messrs. W. Myers and Co., remarkable for the large quantity of fixed alkaline salts; and 6th, Ichaboe Guano, per Commerce, from
Analysis of the excrements of the Sea Eagle, by Coindet.

<table>
<thead>
<tr>
<th>SOLID EXCRETIONS</th>
<th>LIQUID EXCRETIONS DRIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonia</td>
<td>9:22</td>
</tr>
<tr>
<td>Uric Acid</td>
<td>84:65</td>
</tr>
<tr>
<td>Phosphate of Lime</td>
<td>6:13</td>
</tr>
<tr>
<td>Sum</td>
<td>100:0</td>
</tr>
<tr>
<td></td>
<td>100</td>
</tr>
</tbody>
</table>

In comparing the composition of the Guano with that of the recent dung, it will be observed, that a very large proportion of the uric acid has disappeared, and oxalic acid is found in its place; moreover, that the proportion of the organic matter to the inorganic, which may be represented by the phosphate of lime, is very greatly diminished, from which Professor Johnston deduces that "from one-fifth to one-seventh only of the original organic matter remains in the guano as it is imported into England." Ammonia has a continual tendency, from its volatility, to fly off and leave an acid that is fixed, particularly if the temperature be a little elevated, and the elements of uric acid, with a certain quantity of water, and a small proportion of oxygen, are exactly equivalent to the formation of oxalic acid and ammonia. So that in the known circumstances, namely, the presence of water and atmospheric air, with the elevated temperature of a warm climate, we have the causes sufficient to produce such a change, perfectly analogous to the various changes admitted by chemists to take place, in numerous instances of the spontaneous decomposition of organic substances.

The rapidity and extent of this decomposition will depend principally upon the relation of heat and moisture. In a cool climate, rain will wash the soluble constituents away, leaving principally phosphate of lime, and insoluble organic matter, which appears to have been the case in the samples, Nos. 8, and 9, in the subsequent table. When again there is sufficient water to keep it moist, along with a high temperature, the

Messrs. Lodge, Pritchard, and Co., remarkable for the large quantity of oxalates and the substitution of oxalate of lime for phosphate. The two last by Mr. Waldie, May, 1844.
decomposition must take place very rapidly; perhaps still more rapidly, where there are alternations of moisture and high temperature. The more complete the absence of moisture, the less decomposition can take place, which is best indicated by the amount of uric acid present. Very few samples of Guano at present to be met with, contain any notable quantity of uric acid; specimens containing this being generally Peruvian,—the extreme and uniform dryness of that portion of the American continent being well known.

The American Guano is distinguished into varieties, according to its colour,—white, brown, and grey; the white being, in all probability, found on the surface of the beds, is the most recent and valuable. It is questionable, however, if any dependence can be placed upon colour, except possibly to distinguish the very recent from the old; the peculiar urinous smell is, of the physical characters, together with its appearance, probably the best means of judging of its quality, but only to a person who has had the means of comparing their characters with its actual composition; so that chemical analysis is the only method of correctly ascertaining its value. It is to be observed that all the constituents of Guano (except a little sand), are available and valuable as manure; the principal, however, being the phosphates and the ammonia, being also the most expensive. Commercially, the per centage of ammonia is generally taken as the measure of its value; and, of any one constituent, it is probably the best to estimate it by. As a minute analysis is generally inapplicable for commercial purposes, a more cursory one is adopted, which consists in burning off the volatile and organic matter by heat, ascertaining the relative proportions of the ash soluble in water and acid; and estimating the water and ammonia of the organic portion. The following table is drawn up from such a mode of examination, made by Mr. Waldie, in the Laboratory of the Liverpool Apothecaries' Company, from samples furnished by various importers,—the Peruvian by Messrs. Myers and Co.; the sample marked 3, by Messrs. McLeod and Rae,—being from the first cargo imported from Ichaboe in 1843.
<table>
<thead>
<tr>
<th>Nos.</th>
<th>African</th>
<th>Iberian</th>
<th>American</th>
<th>Peruvian</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
<tr>
<td>9</td>
<td>8</td>
<td>10</td>
<td>11</td>
<td>12</td>
</tr>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent</td>
<td>18.1:24:4</td>
<td>39.1:11.8:0</td>
<td>49.8:12.8:5</td>
<td>21.4:0</td>
<td>14.0:0</td>
<td>9.5:0.8</td>
</tr>
<tr>
<td>Percent</td>
<td>39.1:4:3</td>
<td>8.6:6.6:1</td>
<td>7.6:4.8:1</td>
<td>30.5:1</td>
<td>17.0:1</td>
<td>8.7:0.6</td>
</tr>
</tbody>
</table>

Note: The table shows the percentage composition of different types of fertilizers, with columns for various regions and types of fertilizer materials, including sand, earthy phosphate, soluble salts, organic matter, and water and carbonate of ammonia. The percentages are given in a format that indicates the relative quantities of each component.
The results obtained by such a mode of examination are very different from those procured by separating the soluble matter first, by water, as in the following example:

<table>
<thead>
<tr>
<th></th>
<th>African</th>
<th>American</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insoluble earthy salts</td>
<td>24½</td>
<td>25½</td>
</tr>
<tr>
<td>Insoluble animal matter</td>
<td>13</td>
<td>15</td>
</tr>
<tr>
<td>Soluble salts of the fixed alkalies</td>
<td>30½</td>
<td>47½</td>
</tr>
<tr>
<td>and of ammonia</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Water and volatile matter</td>
<td>31½</td>
<td>12½</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Ammonia in salts . . . . . . 5½

By the first mode of examination, the soluble salts only of the fixed alkalies are exhibited; and these even changed, the ammoniacal salts being expelled by heat, and estimated amongst the organic matter. In the insoluble earthy salts, again, there appears a much larger quantity of phosphate of lime than exists in reality, as the oxalate of lime is decomposed by heat, and converted into phosphate, by the phosphoric acid of the soluble salts, for which reason this method indicates very little soluble phosphate. These changes are however of the less importance, as it is the phosphoric acid, not the oxalic, which it is most desirable to estimate; and by this method the whole of it is retained in combination with the lime.

There is one point to be attended to, in estimating the relative value of samples of Guano,—the nature of the animal matter; this, as in the Chincha, often consists in great part of uric acid, which contains 33½ per cent. of nitrogen, and is therefore capable of yielding by decomposition, 40½ per cent. of ammonia; so that any guano, which contains 10 per cent. of uric acid, is capable of yielding by decomposition, 4 per cent. ammonia, additional to what it contains ready formed. Even when little or no uric acid is present, the other indefinite animal matter is capable of yielding ammonia by its decomposition; and accordingly, to have the true value, it would be necessary to ascertain this. As a general
rule, this would be the best way of estimating the worth of any specimen. The ammonia ready formed affects vegetation immediately, the other comes into operation more slowly. It is, notwithstanding, desirable to know its constitution otherwise, as particular varieties could be most profitably applied to particular soils or crops.

Attempts have been made to estimate the relative value of Guano obtained from different sources. If the guano is pretty generally uniform in its composition in any particular locality, such an estimate could be formed on the average of a number of analyses of specimens from each place.

A circular of date 3rd April, 1844, has been published by Messrs. Carson and Kilgour, of Liverpool, with such an estimate, from which the following is extracted:

<table>
<thead>
<tr>
<th>Available Matter</th>
<th>Relative value per ton allowing for all charges</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>£</td>
</tr>
<tr>
<td>Genuine Peruvian</td>
<td>88</td>
</tr>
<tr>
<td>Ichaboe</td>
<td>77</td>
</tr>
<tr>
<td>Angra Pequena</td>
<td>69</td>
</tr>
<tr>
<td>Possession Island</td>
<td>61</td>
</tr>
<tr>
<td>Puerto Cabello</td>
<td>57</td>
</tr>
</tbody>
</table>

The confidence to be placed on such estimates, will depend entirely on the correctness of the grounds on which they are formed. It is not stated how the amount of available matter is ascertained; the only matters of no value are water and sand, all the other ingredients being more or less, directly or indirectly, useful as the source of the food of plants; so that it seems almost certain that the mere source of the Guano is an insufficient ground, and that chemical analysis is the only true guide to the agriculturists for its judicious and profitable application.

The Application of Guano as a Manure.

The introduction of any improvement in the arts, must have often been at first the result of mere casual observation. It happens in many instances, however,
that when discoveries have been made in this manner, the experience of a long series of years is required to bring them to such a high state of perfection, as that from science herself they could at last acquire but little or no aid in their practical application. It is thus sufficiently apparent, that chemistry has often only but served to explain the mode in which certain manures act in fertilizing the soil upon which they are put, and it can scarcely be doubted, (of those even which are more particularly of a chemical nature,) that accident originally led to their use. Still it must be admitted that it is by science alone, we can be carried rapidly forward in improvements; and that, by science only, practical knowledge can be well regulated and made more certain in the various steps of its operations.

There is nothing more easy to imagine than that the farmer must have had his attention early attracted to the effect of the excrements of domesticated birds in stimulating vegetation; accordingly various old writers on agricultural subjects record their use as a manure; nor would it be difficult to imagine that the South American Indian, visiting in his canoe the islands near his shores, in search of the sea-fowl which he saw flocking to them, might, with the cargo of the birds, and their eggs, more highly valued at the time, bring a quantity of the dung, which, when emptied on the arid and desert soil, make an oasis of the spot, and thus lead to its being artificially employed as soon as agriculture was in any degree attended to.

M. Mariano Rivero states, in a Memoir addressed to the Academy of Sciences of Paris, that Guano was much used by the ancient Peruvians, on the territories situated near the coast, from Tarapara to beyond Arequipa, and that it is found at present to be of great importance to Peru, as a manure, especially in volcanic sandy soils, which by its means are rendered extremely fertile. In the mountainous districts, the manner of employing it by the natives for maize or potatoes, is by putting a handful round the bottom of the stem of each plant; which is watered next day, otherwise the plant will be dried up; and in the valleys it is customary to remove the
soil from the stem, taking care, however, to guard the roots; a morsel of guano is then put into the hole, and it is covered up. It is necessary to water within a few hours. At Arequipa a field manured with guano will yield forty-five potatoes to one, being double the produce without such manure, and maize thirty-five to one.

Mr. Bland, in his letter to Mr. Johnson, describes the mode in which it is used in the same country. He does not believe that so small a quantity as one cwt. of Guano per acre, is sufficient for the soil of any part of the coast of Peru.

The first crop is maize, (Indian corn), which is sown in drills or trenches; in bunches (or hills, as they are called in North America), apart about two feet, consisting of three or four plants.

When the plants are six or eight inches high, as much of the guano as can be easily held between the thumb and two fingers, is placed around each bunch, and then the whole irrigated immediately afterwards. Guano is again applied when the plant is about throwing out its fruits, to the extent of a handful to each bunch, and irrigation immediately follows. The next succeeding crops, potatoes and wheat, are produced without any further application of manure. He further states, in the valley of Chaucay, where the soil is capable of producing only fifteen to one of Indian Corn, by guano it is made to produce three hundred for one.

The first cargo of Peruvian Guano for the use of the British farmer, was imported in 1840, and since that time the importation of it has rapidly increased; but the trade in Guano, which has been opened last year to the south-west coast of Africa, bids fair to be augmented to a degree which quite baffles any calculation.

Up to the 24th of May, in this year alone, twelve ships have already arrived in Liverpool, whose united cargoes amount to 6,670 tons. A large number of ships are now loading, by last accounts, at Ichaboe, and many more are on their way with cargoes from that place, so that the market will, no doubt, be immediately supplied with abundance, at very moderate prices.
It is no longer questionable now, that on soils, however different in their nature, and over almost the whole breadth of the land, that Guano has proved itself, by numerous experiments, to be possessed of unexampled powers when compared by weight with other substances as a manure.

Amongst the earliest experiments made with Guano in this country, are those which were recorded by Professor Johnston, in his paper published in the journal of the Royal Agricultural Society of England, in 1841. In these experiments it had been tried with Swedish turnips by Mr. Pusey, with rape and turnip by Mr. Love, with barley and clover by Mr. Westcar, with wheat by Mr. Smith, and with Italian rye-grass by Mr. Skirving, in quantities varying from 200 lbs. to 3 cwt. per acre, and its effects in all cases were most striking.

In the trials here noticed, the Guano was used side by side with Poitevin's manure, bones, farm-yard dung, nitrate of soda, &c., and in all cases the proofs of superiority were in favour of the guano, with the exception of that of Mr. Pusey, who appears to have drilled it under, but in contact with the seed, and the plot nevertheless was only inferior to that on which dung was used. This partial failure may readily be accounted for, as in some others, by the mode of its application, and the little experience of its use at this time, which was in 1840. Mr. Gibson, of Woolmet, near Dalkeith, in the transactions of the Highland and Agricultural Society of Scotland, gives us to understand in 1842, that the Guano produced a better crop of turnips at the rate of 7½ cwt. per Scotch acre, than any of the other manures.

And as a manure for the same crop, Mr. Dudgeon, of Spylaw, near Kelso, in an able report, published in 1843, in the same journal, gives an account of his mode of proceeding in three trials with guano.

The first experiment was with the species of turnips called Dale's Hybrid, made in a field with a southern exposure, the soil of a good loam, and prepared, after a wheat stubble, by being previously ploughed in the ordinary way, into twenty-seven inch drills, which were
dunged as usual with well prepared farm-yard manure, except those intended for guano. The result was as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cwt. St.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two drills with Guano, at the rate of 5 cwt. per acre</td>
<td>25 5</td>
</tr>
<tr>
<td>Two ditto Dung, 18 yds.</td>
<td>18 7</td>
</tr>
<tr>
<td>Two ditto Guano, 4 cwt.</td>
<td>22 6</td>
</tr>
<tr>
<td>Two ditto Dung, 18 yds.</td>
<td>19 7</td>
</tr>
<tr>
<td>Two ditto Guano, 3 cwt.</td>
<td>20 6</td>
</tr>
<tr>
<td>Two ditto Dung, 18 yds.</td>
<td>19 2</td>
</tr>
</tbody>
</table>

The second experiment was with Dale's Hybrid and Skirving's purple-topped yellow turnip; the field was of a drier texture than that of number 1. Three cwt. of Guano was used, against sixteen bushels of bone dust, mixed with eight bushels of sifted coal ashes per acre, upon eight drills in all. The plants having been drawn about the end of November, were topped and rooted, and the result was:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cwt. St.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guano</td>
<td>23 2</td>
</tr>
<tr>
<td>Bone Dust and Ashes</td>
<td>19 2</td>
</tr>
</tbody>
</table>

The third experiment was with the white stone globe turnip, sown on the 22nd June; sixteen bushels of bone dust alone were used, against two cwt. of guano per acre; both the guano and bones were applied by the hand on the drill, before being finally made up, and the soil immediately followed. This crop was weighed on 22nd March, 1843, with the roots and tops, when the result was found to stand thus:

<table>
<thead>
<tr>
<th>Description</th>
<th>Cwt. St.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two drills Guano</td>
<td>31 4</td>
</tr>
<tr>
<td>Two ditto Bones</td>
<td>24 7</td>
</tr>
</tbody>
</table>

The following is an extract of a letter from Mr. Alexander Rattray, of Strathmore, Perthshire, dated May, 1844:

"Last year I had a turnip field of a fine easy black loam, in very good order, after a crop of oats; one part of the field was manured with about fourteen tons of well made farm-yard manure, and twelve bushels of bone dust, to the Scotch acre. then I took off about two acres for guano (Peruvian). I mixed 5 cwt. with 24 bushels of bone-dust, which was sown through a machine, in the
usual way that I sow the pure bones; I then went over the rest of the field with 24 bushels per acre. I was not at the trouble to pull any part of them off to try the difference of the weight of the crop, but I have no hesitation in saying, that the part sown with the Guano was the best. The year before last I tried it in the same way, only giving it 3 cwt. to the two acres. The weather, that season, was very dry for a long time, which I thought was against it, yet it was equal with the part sown with bones, but the portion manured from the farm-yard was decidedly the best on that occasion. I see that, when used on a turnip crop, the plants should be left further apart, as it grows more tops than the other manures, and without plenty of air amongst them in such cases they never bulb so well."

"This year I have sown some of it on oats, some on wheat, and some with potatoes, but I cannot say any thing yet as to the results; the weather, being so very dry ever since my seed-time began, has kept the guano from showing itself on any of the corn crops."

Mr. Paterson, an intelligent farmer, in Cumberland, communicates the following information, as the result of his experience in the use of guano:—

_Kilhow, Wigton, Cumberland, 24th May, 1844._

DEAR SIR,

In answering the questions put to me concerning Guano as a manure, I have compiled the following table, as the result of the experiments made with it by me:—

<table>
<thead>
<tr>
<th>Crops</th>
<th>Quantity and kind of Manure, per acre.</th>
<th>Species of Soil</th>
<th>Quantity of Produce per Acre</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swede Turnips</td>
<td>24 cwt. Guano</td>
<td>Loam</td>
<td>20 tons.</td>
</tr>
<tr>
<td>Ditto</td>
<td>20 cwt. Fold Manure</td>
<td>Do.</td>
<td>17 do.</td>
</tr>
<tr>
<td>Dale's Hybrid do.</td>
<td>2 cwt. Guano</td>
<td>Friable sort, inclining to gravel</td>
<td>16 do.</td>
</tr>
<tr>
<td>Ditto</td>
<td>16 cwt. Manure</td>
<td>Do.</td>
<td>16 do.</td>
</tr>
<tr>
<td>Oats after Turnips</td>
<td>1½ cwt Guano</td>
<td>Clayey Loam</td>
<td>55 imp. bush.</td>
</tr>
<tr>
<td>Ditto</td>
<td>without</td>
<td>Do.</td>
<td>43 do.</td>
</tr>
<tr>
<td>Ditto</td>
<td>10 cwt. Manure</td>
<td>Do.</td>
<td>24 do.</td>
</tr>
<tr>
<td>Ditto</td>
<td>nothing</td>
<td>Do.</td>
<td>200 do.</td>
</tr>
</tbody>
</table>
"The guano used in the above experiments was the best Peruvian, no African having been introduced here last year; but I have no doubt but that the African will answer equally well, from the appearance of it, this season. The manner in which I applied it to the oats and wheat was, to sow it with the hand, and then give it once over with the harrows. The grass seeds should be sown in the same manner, and in order that it may have immediate effect, it should be applied just before rain. The turnips I tried in two different ways—First, I put it in the same way as farm-yard manure, the drills not being just so deep; being afraid that by that method it was covered in too deep, I caused them to make the drills, with the double mould-board plough, so shallow that they did not meet at the top, and then sowing the guano in the hollow upon the top of the drill, it was drilled deeper so as to throw about two inches of soil upon the guano. The latter method brought away the young plants more rapidly at first, and when they were thinned they looked beautifully, but in thinning and hoeing, some of the guano was pushed away from them; after this the plants grew irregularly, those which had the guano left at their roots being luxuriant, and those which had little or none being poor. The former method did best at last, for although the plants were more tardy in their growth at first, when the roots found the guano they grew amazingly, and kept a good colour, proving in the end a very good crop. The crops in the foregoing table are not heavy, which was owing partly to the year not suitting the land, and partly to the land being yet only in a poor condition, having been exhausted by the former tenant. At present I have a field of wheat sown with guano alone, which looks extremely well. A few ridges were manured at the rate of 12 carts to the acre in one part of the field, which looks also well, but by no means so good as that sown with guano. The guano was sown upon at two different times, one cwt. in October, when the wheat was sown, and another cwt. in the end of March. Should the season prove fine, I expect it will be a heavy crop.

"ANDREW PATERSON."
Looking to the capital that is invested in the cultivation of the land, and the intelligence with which that is employed, it becomes manifest that here, as in all other of the arts and sciences, we are living in an age favourably placed for the most rapid improvement.

The different agricultural processes, in which especially the forming of compost is concerned, are not now blind and expensive experiments, which require years to prove their inutility. By chemistry we are now at once enabled to determine what would be the probable results, and thus avoid losses in time and money. One great object lately has been to condense the elements of the nourishment of plants, so that carriage and labour might be saved in the application of manure to the various crops. This was effected in a measure by the introduction of ground bones. "A farther movement," says Mr. Dudgeon, "has now, it would appear, been effected in this direction to a still greater extent by the use of guano, which in the amount or weight required, is, it may be safely said, as to bones, as one to four; and thus has been nearly realized something equivalent to that boast of science, which has been often quoted by practical men only to be spurned, 'that the day would come when a person should carry in his pocket manure sufficient for an acre of land;' for certainly there is a near approach to a fulfilment of this proud achievement, when an ordinary cart load of manure is discovered to be amply sufficient for a field of ten acres."

To a population whose density is 275 persons in the square mile, and where the surface of the country for the production of food cannot be much extended, while at the same time the increase of inhabitants is going on at the rate of fully 350,000 a year, the science which teaches us to grow two blades of grass where only one grew before, is above all the most important; and where commerce goes hand in hand with agriculture in effecting this great purpose, she adds but another solid blessing to the many which she in all ages has conferred on the great family of man.

FINIS.

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