

D. S. Hannow



Lucy Bradshaw

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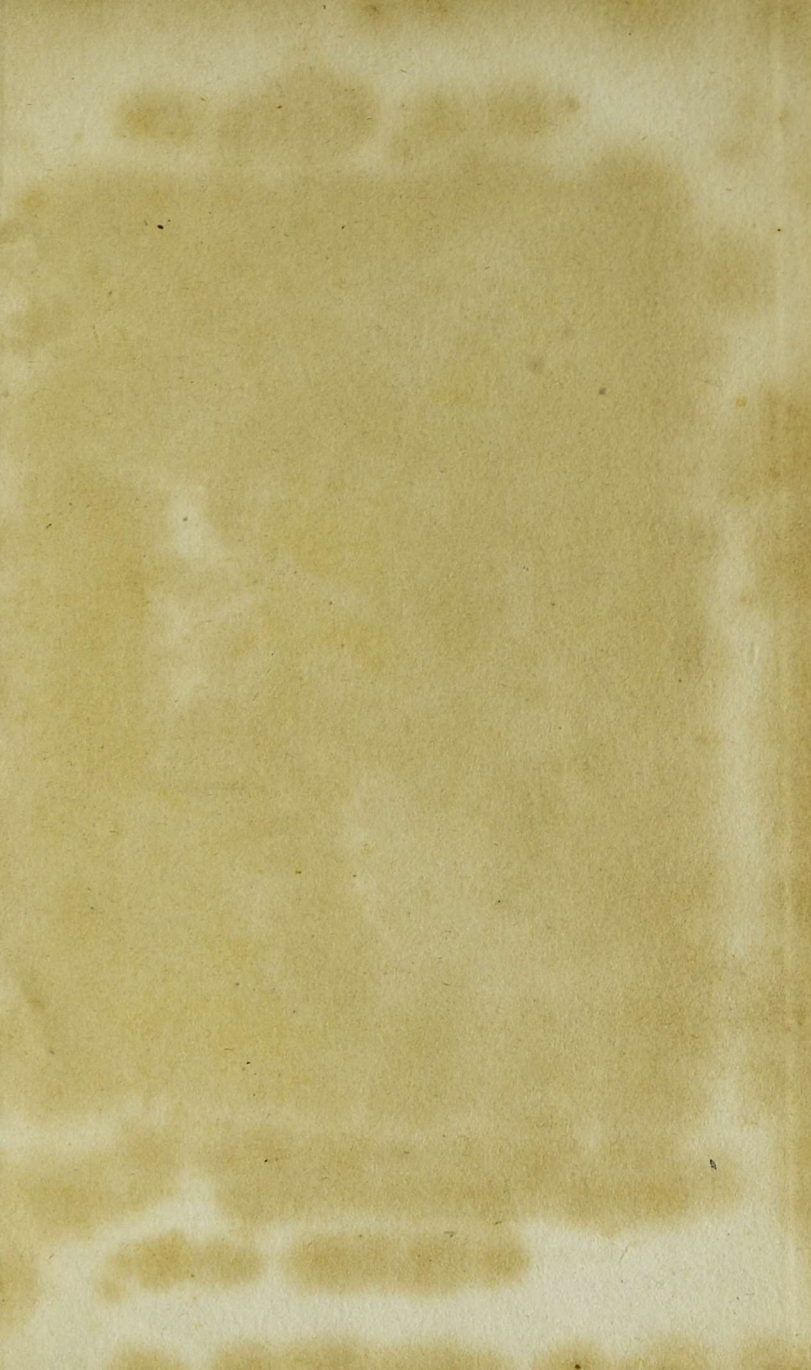
M. C. Bradshaw

1870

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THE
INDIA CABINET
Opened.

Printed by S. & R. BENTLEY,
Dorset-street, Fleet-street, London.



INDIA CABINET.



*"Three Shelves containing a choice collection of
natures ever varying productions nicely arranged."*

page 34.

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D. E. Hammond from her Mother. 1883.

THE
INDIA CABINET

Opened:

IN WHICH MANY

NATURAL CURIOSITIES

ARE RENDERED

A SOURCE OF AMUSEMENT

TO

Young Minds,

BY THE EXPLANATIONS OF

A MOTHER.

LONDON:

PRINTED FOR HARRIS AND SON,
CORNER OF ST. PAUL'S CHURCH-YARD.

1821.

THE UNIVERSITY OF CHICAGO

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THE
INDIA CABINET.

CHAPTER I.

IT will be a long time before we come to the India Cabinet. We must describe the country in which Ellen lived, and many other circumstances that will lead us to it.

In the first place, a *lake* is a sheet of water every where surrounded by land. The lakes of Westmoreland and Cumberland (two counties in the north of England) are celebrated for their beauty. Around them wild mountains rise one above another, pointing their blue heads

towards the sky; in other parts gentle hills are seen covered with waving woods, and spotted with villages, seats, and farms.

At the foot of a range of rocks is that called Coniston Mere, *mere* being another word for lake. It is of an oval form. Its banks are overhung with dark underwood, and a little island covered with shrubs rises in the middle of it.

At one end of this beautiful piece of water, in the hollow between two hills, stands the pretty village of Coniston, with scattered cottages, and its parish church, whose bells sound sweetly across the lake.

There is a slate-quarry among the mountains about this place. Many of the slates are so large as to be used for walls or fences, and in building; indeed some are so high that little huts are entirely formed of them. Very high rocks rise on

each side of the quarry, composed of slate and earth. The workmen are let down by a rope fastened securely round their bodies: with a sharp instrument they separate the slates from the rock, and put them into baskets provided for the purpose. Other cottages are rudely built of loose stones, covered with turf, which is overgrown with ferns and mosses.

But do not imagine, my little friends, that all the houses about the lakes resemble these.

No: there are many country-houses, villas, and pretty white-washed cottages, scattered among the woods and mountains. In a delightful spot near the village of which we have been speaking, stands Belmont Grove, the home of the little Ellen. A large and cheerful family had taken up their abode in this residence for a few summer months, that they might enjoy the scenery around

the lakes. Under the tuition of a kind elder sister, Ellen was instructed and rapidly improved. Gentle, affectionate, and lively, she was the darling of all who knew her—it is a thing of course to be beloved when we are good.

Attended by their nurse, the little ones would often ramble about the woods and hills, to search for wild flowers that grow among them, and bring them home in triumph to Isaline, whose knowledge of botany enabled her to tell them their names, and the classes to which they belonged. In some places, the mountains were gray with mosses, green with ferns, or white with lichens—a curious sort is common upon them, called the *geographical lichen*, because it bears a resemblance to the lines of a map; it is of a bright green, veined, and spotted with black.

One pleasant morning, the sun rose with unusual splendour, a few white clouds only were seen floating in the sky, the smoke gently ascended from the scattered cottages in the village, and the little birds warbled among the green boughs, when Ellen knocked at her sister's door, exclaiming,

“ Isaline ! Isaline ! are you ready ? Charles says the cart is coming down the lane.”

A large party was formed to spend the day upon one of the mountains, and as it was to be in a gipsy style, a cart was proposed as the most suitable mode of travelling. Indeed *two* carts were engaged for the purpose : and after an early breakfast, Ellen, her mother, and sister Isaline, mounted the one ; the other contained two nursemaids, little Frederic, Clara, Lucy, and Harriet ; a tea-kettle,

a basket of provisions and some bottles of and milk : for they intended to take tea in a wood at the foot of the hill overlooking the lake.

In this rustic way the happy party journeyed along. The novelty of the thing delighted the children ; Ellen, who had never rode in such a vehicle before, was amused with its jolting motion ; Frederic thought it was much more easy than the carriage he had been accustomed to ride in at home, and the three little ones laughed and talked without ceasing. At length, all life and merriment, they arrived at the destined spot, and were joined by their father and brother, who had followed them on horseback.

It was agreed that they should seek for a cottage, where the younger ones might remain under the care of Mary and their nurse, whilst the others climbed the broken sides of the mountain.

A fisherman's hut was presently found, and the civil people begged that the little ladies would please to walk in. Some rosy children were standing at a three-legged table eating potatoes: the mother was employed in making oaten cakes, which are used instead of bread by the peasantry in this country; her dough being laid on a large round board, she clapped it out with her hands till it covered the board, then slipt it off upon a round iron plate of the same size which was placed over a wood fire, and when the cake was crisp on the one side, as it soon became, being very thin, she turned it. The fisherman himself was mending his nets, but, the moment he saw the gentry (as he called them), he laid down his work and came forwards.

“Our hut is a poor place for such gentlefolks as you, madam,” said he, addressing Ellen's mother, “but you

are heartily welcome to any thing we have."

"Thank you, my good man," replied she, "but we are going to ascend this mountain; the little ones, however, shall remain about here." And as she spoke they accepted the goodnatured fisherman's invitation. Ellen looked with surprise at the thinly clothed children, whose cheeks glowed with the ruddy hue of health, and whose countenances expressed equal astonishment at the company they beheld, and they ran about the little room, clattering in their wooden shoes; for the poor people in this part of the world seldom wear any others.

The cottage was neat and clean. As we have said, a little table stood in the middle, and the rest of the furniture consisted of five or six deal chairs, and a cradle in which a pretty plump baby was fast asleep.

It was adjusted for the servants and children to dine in the cottage, whilst the elder ones were absent, and that on their return they should join them in the wood, where the kettle might be reared between some high poles, and, gipsy-like, they should take tea there.

“ You, my Ellen,” said her father, “ had better remain here. So long a ramble will fatigue you too much.”

“ Me, papa ! oh no ! do let me go with you, and you shall see that it will not tire me !” exclaimed the active girl.

Consent having been gained, Charles, Isaline, Ellen, and their father and mother, attended by a boy as guide, left the hut and began to ascend the mountain, which, like the sovereign of the place, erected high its pointed summit, and sunk with many irregular swellings into a rich plain waving with woods.

“What a delightful day it is, mamma!” exclaimed Ellen, “I am glad that I did not stay in that fisherman’s hut!”

“Perhaps you will not say so in the evening,” said her mother; “you will probably wish then that you had remained there.”

The boy who was taken as guide, now conducted our party along a green path up the side of a green hill. As they advanced higher and higher, the views around became more extensive, they seemed as if leaving the world behind them, and presently the road became so very steep that it was agreed that Ellen, Isaline, and their mother, should sit down upon a rude seat formed by a pile of loose stones with gray moss growing between them, and there enjoy the beauties of the boundless prospect—that is, one which extended as far as the eye

could reach, until the distance became dim and indistinct. The sea could just be seen, and instead of appearing like swelling waves just ready to burst over one, it looked, as Ellen said, like a very faint blue cloud.

As they sat on these stones they opened the basket, and after having refreshed themselves with cake and wine, Isaline took out her pencil and sketch-book, and began to draw a rough view of the opposite mountains, the lake below, and a village spire peeping above the trees, which altogether formed a beautiful landscape. Ellen, although she was not allowed to scramble higher, ran first on one side and then on the other, to collect different sorts of moss, with which the place was covered; and she was also delighted to find the stone-fern, or mountain parsley, a lovely plant in any situa-

tion, but appearing still lovelier here, because few flowers were to be found so high.

Charles, with his father and the guide, continued to ascend, unwilling to lose the extensive prospect which was soon to repay their trouble. The winding path was so steep that they were sometimes obliged to stop for a minute or two to take breath. The wildness of the scene was often increased by the roaring of torrents, which were seen falling from ledge to ledge, with their white foam glistening among the dark rocks and dashing into basons beneath. The lakes in the valleys looked like small pools, and they could now look down upon mountains which had before seemed high. They at length reached another pile of loose stones, which was erected on the summit, and formed a good seat. Here they were gratified with the wished-

for view. On one side, rock seemed to rise above rock, forming a chain which was almost lost in the clouds. On the other side were seen the Isle of Man, in the Irish Sea, lying like a faintly formed cloud on the bosom of the ocean, and above it Solway Frith, and a range of Scottish mountains, which appeared like lines of still darker clouds. Villages, spires, towns, and country-houses, were scattered in the valleys below; and when Charles and his father had gratified their curiosity, and had scratched their names, as is usual for those who ascend this mountain, upon one of the loose stones which formed the back of their rustic seat, they descended the steep slippery path, and found Isaline, Ellen, and their mother, still engaged in admiring the beauties around them.

“How extremely cold it was!” said Charles, “I should have been quite

glad, papa, to have warmed myself by a fire in the wood."

"Cold, Charles!" exclaimed Ellen. "Cold! now the sun is shining so brightly, and it is such a charming day."

"Yes, my love," said her father, "Charles is right. As we ascended the mountain, the air became thin and piercingly cold, though it is so warm a day in the valleys below us. Try if you cannot find out the cause."

"Indeed, papa, I do not know, and I have often wondered how it is that hail, which Charles says is frozen rain, should fall in the middle of a hot summer's day."

"The upper region of the air is so cold," said her father, "that even during the greatest heats, on the tops of some high mountains, the snow does not melt all the year round; this also is the cause of hail—clouds are vapours or exhalations raised from rivers, and when

condensed into drops they form rain, and fall to the ground by their own weight. In very cold weather, at least when the air at a great height is very cold, these drops are frozen as they fall, and form hail; and snow is formed by the freezing of a cloud before it falls."

"I understand now, papa," said Ellen, "and because the upper region of the air is so cold, the snow remains on high, very high mountains, without melting."

"Yes, my dear, although it be warm and delightful below. In Switzerland, the climate is genial and the country fertile, yet the tops of the Alps, the highest mountains in Europe, are covered with perpetual snow; and in some parts of South America, which is as hot as any part of our globe, the air on the tops of the mountains is so intensely cold, that the traveller passing over them is in danger of being frozen to death."

They continued talking until they arrived at the spot which they had left in the morning, where they found the little party seated upon the grass near the fisherman's cottage. The boys, who had been eating a dinner of potatoes, were become sociable, and were now showing their little treasures to the young gentlefolks.

One pretty curly-headed fellow had brought out a deal box of shells and pebbles, which he was displaying before the admiring eyes of Frederic.

“When we lived in the hut by the sea-shore,” said he, “we used often to find these things. One day I was climbing with my father over a great rock and looking for——”

The child saw Frederic's mother, blushed, and hesitated.

“Oh! mamma, dear mamma! I am glad you are come back!” exclaimed the

little Frederic. “ I want to know whether we shall go to the sea-side this summer, mamma. Do you think we shall ? ”

“ And why do you wish to go there so much ? ” said his mother.

“ That I may scramble among the rocks, and look for shells, and sea-weeds, and stones, as this little boy used to do—and make little nets to catch shrimps in, mamma—and search for little pink-trees like these—look, mamma ! ”

“ We must talk about the sea-side another time,” said his father—“ You must now part with your little friends—they are very good-natured for having amused you so nicely.”

So taking leave of the fisherman, slipping a handsome present into his wife’s hand, and giving a large slice of plum-cake to each rosy boy, they departed, followed by the blessings of this industri-

ous and grateful family. They crossed a stile and followed a winding path through a field, which brought them to the wood. A suitable place was presently found for the fire; it was in an open part, from whence a distinct view might be had of the lake. An old woodman, who was lopping some elm-trees at a distance, came forward, and, understanding their intention, very civilly erected three poles, which he fixed in the ground about four or five feet apart in a slanting direction, so that they met at top: a faggot was presently found, and the old man pointed to some trees which had lately been cut down, saying they would make good seats. These stumps had been stripped of their bark, and Ellen found that it was taken for the use of the tanner, who employs it in making leather; but, as she was beginning to enquire about the process it has to undergo, her attention was

taken off by the appearance of a number of birds skimming over the surface of the lake in every direction. In answer to her questions, Isaline told her that they were swallows, and that they were flying about in search of food.

“But what food,” asked Ellen, “can they possibly expect to find growing upon the pond?”

“Flies and insects,” replied her sister, “are their proper food; you have sometimes observed them sporting on the water.”

“And swallows,” said her mother, “are thought to be of great use, by destroying many millions of them, which would otherwise multiply so fast as to become quite disagreeable.”

“Can they catch them as they fly, mamma?”

“Yes, my love. Their mouths are made large, that they may take in their

prey the more easily; and indeed every part of the swallow is wonderfully adapted to its nature and manner of living. As in pursuit of insects it is necessary for them to be almost constantly on the wing, their bodies are very light and small, and the wings being long in proportion, they fly with great rapidity and ease. This is particularly needful, because they are birds of passage"—

“ Birds of passage, mamma?”

“ That is, they go to different countries, according to the season of the year. They come to England early in the spring, and assemble again in great numbers ‘ ere yellow autumn from our plains retires,’ and fly across the sea to some warmer climate.

“ Instinct teaches them to do so, to avoid the severity of the northern regions.

“ From the description I have given

you of the swallow, we may see that the great Being of whom you have so often heard, has adapted it to the state for which he designed it."

"And," said Ellen's father, "not only every bird, but every animal, every insect that sports in the scented gale, every floweret that blows, and every leaf we examine, may convince us they are formed by the finger of God. Nature is the first and best volume of instruction: it is always open to you, and will undoubtedly repay your attention by inspiring an early spirit of piety and devotion."

"What a great variety of birds there are, papa!" said Clara. "Do you remember the little wren that built its nest amongst the moss in the hermitage last summer?"

"I am sure that I do!" exclaimed Ellen. "Mamma said that instinct

taught the pretty creature to cover its nest with green moss, which being like the rest, was not so liable to be noticed."

"I recollect," said Isaline, "watching a little willow wren creep up the stems of the crown imperial, and sip the drops of honey as they hung from the petals."

"It must be the smallest of all birds!" said Ellen.

"Of all in England, my love," said her sister: "but the pretty little humming-bird is still less. Of all the birds that flutter in the garden, or paint the landscape, it is the most delightful to look upon, and the most inoffensive."

"Oh, Isaline!" exclaimed Ellen, "how much I should like to see the humming-bird! In what parts of the world is it found?"

"In South America, which, as you have been told to-day, is a very warm

country. There are six or seven varieties, from the size of the wren that built its nest in the hermitage, down to that of the humble-bee that is buzzing about the flowers by you. The Indians, charmed with the colours of these brilliant birds, gave them the name of rays, or hairs of the sun. They are seen in great numbers, and as frequent as butterflies in a summer's day, sporting in the fields of America, from one sweet flower to another, and extracting the honey with their little bills."

"Why that is something like the bee using its proboscis," said Ellen. "Will you now tell us about their nests?"

"They are very curious," continued Isaline, "They are suspended in the air, at the point of the twigs of an orange or a citron tree; sometimes even in houses if they can find a small and convenient twig for the purpose. One little bird is the

architect or builder of the nest, whilst the other roams abroad in search of cotton, fine moss, and the fibres of leaves or plants. It is not larger than half an apricot, and is of the same shape and warmly lined with cotton."

"How comfortable it must be!" exclaimed little Harriet, who had been attentively listening to her sister's account. "I should like to be a humming-bird!"

"But then you would not know what it is to be my little Harriet," said her mother, laughing—"girls are very different to birds: even supposing you could now sport from flower to flower, sipping honey from every blossom in the fields and gardens of South America, I guess you would soon wish to plume your wings and fly across the Atlantic again to your dear mamma—the state in which we are placed is the happiest for us all!"

“ There are never more than two eggs found in the nest,” continued Isaline; “ these are about the size of small peas, and as white as snow, with here and there a yellow speck. Mamma has a nest with eggs in it, and a little humming-bird too, in her cabinet.”

“ In the India Cabinet in your dressing room, mamma!” exclaimed the delighted Ellen. “ Is it really true, dear mamma? And will you allow me to see it?—when shall we return into Devonshire?—is the humming-bird stuffed?—where did it come from, mamma?”

“ It is impossible for me to reply to all your questions at once, my dear Ellen. But to the most important I will return an answer. There *is* a little humming-bird in my India Cabinet, and when we return home you shall see it—provided you have patience to wait till that time.”

“ When shall we return into Devonshire, mamma?”

“ In the course of three weeks probably” —

“ That is a long time to wait, mamma — three whole weeks!”

“ It will exercise your patience, my love: besides, you may enjoy many gratifications in that time, independently of seeing humming-birds.”

“ Oh, yes! that I may, and do, dear mother,” said Ellen, and away she ran to tell Charles all she had heard. Charles’s father had been telling him that the usual mode of producing fire among the savages is by the rapid friction of two pieces of wood till they produce flames—this saves the trouble of procuring flint and steel, and, as Charles remarked, must be very convenient to the Indians, who live an unsettled life; wandering from one place to another, sometimes erecting their huts, which are called wigwams, on the banks of rivers,

where they have plantations of corn and rice, at other times in the woods. Their huts are generally built of small logs, and covered with bark; though some are made of stakes, and leaves, and turf, in the shape of a soldier's tent; others of reeds surrounded with clay. The fire is in the middle of the wigwam, and the smoke passes through a hole left at the top. The furniture agrees with the simplicity of the house, for it often consists of nothing more than the skins of wild beasts spread over a hurdle of bamboo canes, upon which they sleep; two or three low wooden stools; some brass kettles and pots for dressing their food; and a few bowls and calabashes or drinking-cups, made of the skins of the wild gourd—a fruit resembling the melon.

The fire in the wood had led to this conversation, which was now interrupted by exclamations from many little voices.

“Come, come, come, papa! Come Charles and Ellen! The kettle boils—sings, as Mary says—and tea is quite ready!” The tea equipage was placed on the stumps of two or three of the trees which had been lately cut down, and the lively party, amused with the novelty of the scene, partook of a social meal under the delightful shade of the spreading foliage.

It was with some reluctance that they prepared to go home, when the servant, who had driven one of the carts, came to inform them that their rustic vehicles were waiting at the end of the lane.

The children had hung their straw hats on the bushes, and it took them some little time to adjust their different treasures. Each was provided with a basket. Ellen collected her plants, not forgetting the moss and mountain parsley,

which had been laid among some fern-leaves in a cool spot. Frederic was busy with the sea-shells which the curly-headed boy had given him, and with a dead kingfisher which Charles had found near the lake. Lucy thought herself rich in the possession of a large quantity of wild cherries, and Clara and Harriet had leaves, flowers, shells, and pebbles, as valuable to them as diamonds and precious stones would have been.

“And now, my little humming-bird,” said Harriet’s father as he lifted her into the cart, “a pleasant ride to you!” and Charles and he mounted their horses as the carts turned round the corner of the lane.

The sun was just sinking beneath the horizon, the distant mountains were tinged with its remaining rays, and the trees were tipped with a yellow lustre, when the juvenile party arrived at Belmont Grove.

CHAPTER II.

IN the course of a few weeks the whole family returned to their own seat in Devonshire. Some days were employed in making suitable arrangements after so long an absence; in visiting the friends who welcomed their arrival at home, &c. &c.

One morning Ellen went into her mother's dressing-room, and reminded her of her promise respecting the India Cabinet.

Her mother was writing, but when she had heard her little girl's request, she reached a book and put it into her hands, pointing to a seat, and telling her to amuse herself with it till she was ready to attend to her.

Ellen soon placed herself on an ottoman, by the side of her mother, and she found that this book consisted of blank leaves, which had been neatly ruled with red ink into separate divisions, somewhat in the way of a memorandum-book. In each division was a number,—No. 10—No. 16—No. 24—and so on, and in each blank space by each number was written, in black ink, the name of some mineral, spar, shell, &c. Ellen's mother told her, that every specimen contained in the cabinet was ticketed and numbered in the same manner, so as to correspond.

This plan was, as Ellen said, very convenient, because you might find the name of any thing at once, without referring at the time to other books—you might do that afterwards.

“What shall I look for first, mamma?” exclaimed the delighted girl as she turn-

ed over the pages—"The nautilus, No. 3—the 'paper nautilus,' mamma. No. 15—ashes—'volcanic ashes thrown up from Mount Vesuvius, and which fell on a vessel between twenty and thirty miles from the mountain'. Oh mamma! do you hear that? How could ashes be thrown thirty miles—do you believe it, mamma?"

"I will tell you when I am at liberty, my love: I wish you to amuse yourself whilst I am finishing my letter."

Ellen ceased to ask questions immediately; for she always wished to please her kind and indulgent mother, and was willing to restrain her own inclination, whenever she desired it. This endeavour to promote the pleasure and lessen the trouble of others, caused her to be beloved, and so it will every little girl.

Ellen continued to look over this entertaining book, and she read, "Labrador

spar,' spar from Labrador, I suppose—
'Coral from the red sea,' the Red Sea is
between Africa and Asia—'Iron ore,
from the island of Elba, near Corsica'—
Corsica! Corsica! Indeed I cannot tell
where Corsica is!" Ellen knew that her
mother would answer her if she asked,
but she was determined not to do so, be-
cause her mother had told her that she
was engaged. However, several maps
on rollers were hanging up in the next
room: there went Ellen, and after search-
ing a little time in the map of Europe,
she found Corsica, a large island in the
Mediterranean Sea, to the south of Ge-
noa, in Italy. This was much better
than having been told.

When Ellen returned to the dressing-
room, her mother was folding up her
letter.

"Now, may I talk to you, dear
mamma?" exclaimed she. "Now, can

you attend to me?—now can you tell me what mundic, antimony, and cinnabar, are, mamma?—where cocoa nuts, hickory nuts, and betle nuts, come from? and—oh, mamma! here is my favourite humming-bird at last! ‘No. 93, a humming-bird from Peru, with nest and eggs!’

Ellen's cheeks glowed with delight, and her eyes sparkled with joy, when her mother unlocked the folding doors of the India Cabinet, and displayed before her admiring daughter, three shelves, containing a choice collection of nature's ever varying productions, nicely arranged.

Suspended from a red coralline appeared the little nest, which Ellen had had the patience to wait a whole month to see, without even expressing a wish for the time to pass more swiftly than it did—a month is a long period at Ellen's time of life.

Now she was well repaid. The humming-bird itself was placed over the nest. The feathers on its wings and tail were black; but those on its body, and under its wings, were of a greenish brown, with a fine red cast or gloss, which neither silk nor velvet could imitate. It had a small crest on its head, green at the bottom, and, as it were, gilded at the top; and which sparkled in the sun like a little star in the middle of its forehead. Its little black eyes appeared like two shining points, and its bill was black, straight, slender, and about the length of a small pin.

The nest and eggs exactly agreed with Isaline's description.

"And do these charming little creatures sing, mamma?" asked Ellen.

"No, my love: the rapid motion of their wings brings out a humming sound, from whence they have their name; for

whatever divides the air swiftly must produce a murmur. I have sometimes told you that Nature divides her favours. Besides it is with birds nearly as it is with us. Talent and genius are commonly found under a modest garb; so we must not set too much value on external beauties."

Ellen's attention was taken from the humming-bird, by the appearance of what she called little branches of red sealing-wax—"but yet it must be *coral*," said she, "for it is so much like *the coral* Harriet wore round her neck when she was a baby. What is coral, mamma? No. 58, 'coral from the Red Sea'—that is all the book says about it, dear mamma."

"Every substance known on earth is divided into three classes, or *kingdoms*, as they are called," said her mother, "mineral, vegetable, and animal. The mineral kingdom contains such things as

have neither life nor feeling, as stones and metals: the vegetable kingdom comprehends such things as have life without feeling, as flowers, trees, shrubs, herbs, and grass: and the animal kingdom comprises every creature that has life and feeling."

"Then you, and I, and the humming-bird, all belong to *it!*" exclaimed Ellen.

"We do indeed," continued her mother, "as well as every beast, bird, fish, and insect upon the globe. Coral is generally found fastened to rocks. For many years people believed it to belong to the vegetable kingdom, but within the last hundred years they believe it to be produced by an insect: it has been discovered, that there are innumerable small cells in coral, which are inhabited by these insects; and it is supposed that the insects make these cells.

"The corals rise to such heights in

some seas, as to create islands inhabited by men. The Friendly Islands, in the Pacific Ocean, were thus raised by corals from the depth of that sea, and ships have often been lost on coral rocks."

"But, mamma, this coral of yours came from the Red Sea. In what manner was it procured? And how was it known that there was coral in that sea?"

"The eye can reach but a very short way into the depth of the ocean, my love; and that only when its surface is glassy and serene. In many seas, nothing is to be perceived but a bright sandy plain at bottom, extending for many hundred miles, without any interruption. But in others, particularly in the Red Sea, it is quite different; the whole body of this extensive bed of water is, literally speaking, a forest of submarine plants and corals. Here are also seen madrepores, sponges formed from the

juice deposited by the worm that inhabits them, sea mushrooms, mosses, and other marine productions.

“ In the spring, seven or eight men, whose business it is to procure coral, go in a boat. One of them throws a curious net, which is made of two pieces of wood and a leaden weight; a great quantity of hemp and strong cords are twisted securely about these beams of wood. The net is then let down into the sea; and when the coral is torn from the rocks and entangled in it, they draw it out by a rope, which is sometimes very hard work, and requires a great deal of strength.”

“ And here, mamma,” said Ellen, “ is a large piece of delicate white coral—I will not call it *trees of sealing-wax* any more—where did it come from?”

“ White coral is found principally on the shores of Ceylon,” replied her mother; “ a large mountainous island in the Indian Ocean, near Cape Comorin.”

“ Yes, mamma. I know where Ceylon is—I recollect Isaline once told me that the cinnamon-tree grows there ; and in “ Evenings at Home,” *Indur* became an elephant in the verdant woods of Ceylon.”

“ The white coral,” continued Ellen’s mother, “ lies in vast banks, which are uncovered at low water; and it is porous”—

“ Somewhat like sponge then, mamma.”

“ Yes: while young, it is formed upright, like little shrubs, and is then firm and solid, with a smooth outside; but little branches continually shoot out, and from those new branches spring others, till the whole becomes one confused bush of coral.”

“ Thank you, dear mamma!” said Ellen, “ I like this account of coral very much. What shall I ask you about next?”

“ Butterflies! those beautiful butterflies, placed upon that branch of sea weed! Where did they come from, mamma?”

“ One is called the yellow butterfly of Brazil, in South America—the other is the blue butterfly of China. Nature has clothed them in beauty; but here is a moth in a much plainer garb, which is a thousand times more valuable than all the brilliant butterflies of China and Brazil.”

“ Why is that dull-looking, drab-coloured moth so valuable, mamma?”

“ Because its egg produces a little caterpillar, to whose industry we owe one of the most beautiful materials we have for clothing.”

“ Oh, the silkworm, mamma! the silkworm! Isaline had silkworms once, but I had forgotten the moth.”

“ All the warm countries of the south of Europe and Asia,” continued her

mother, “ have groves of mulberry-trees, the leaves of which trees, being the food of this useful little insect, preserve and propagate it. The worm is hatched by the heat of the sun, from eggs laid by the moth. When it has attained its full growth, it winds itself in its web, attached to a leaf or a twig, and in this silken cradle is converted into a chrysalis. And what then?”

“ In a few days the chrysalis produces the moth, mamma—the *drab-coloured* moth, which lays eggs for other silkworms, flutters, and dies. What a curious and wonderful insect!”

“ The webs, after slight preparations, are spun into thread, by machinery in silk-mills, and then called *organize* or *thrown* silk. And the weaver converts the thread into various elegant fabrics.

“ I have heard that stockings have been actually made of the web of the *spider*.

Whatever man can possibly spin into thread, he contrives to weave into garments; and there is no bound to his materials, but in Nature."

"And indeed, mamma," exclaimed the little Ellen, "I think there is no bound, as you say, to Nature's productions."

"Well," said her mother, "what takes your attention next?"

"That large ivory ball, mamma!"

"That is the egg of the ostrich—a very large bird, which inhabits many solitary parts of Africa, as well as the large sandy deserts of Arabia."

"A bird's egg, mamma! Is it possible? Why, it is the size of Clara's head!"

"The ostrich is considered as the largest of birds; but its size deprives it of the power of flying; its weight is too great."—

“ Oh, I remember now, mamma, having read in one of my little books, that if the ostrich were standing in the parlour, and stretching its long neck, its head would almost touch the ceiling; and that it can run very fast indeed, faster than a horse can gallop; and that it spreads out its wings before the wind, which blows it, the ostrich, along, as it does the sails of a ship; but I do not think that my little book said any thing about its eggs; and that—”

“ Why so many *and thats*, my love?” said her mother: “ cannot you tell your tale without *and that*? Habits are more easily acquired than lost; and I should be sorry for my little girl to be unable to repeat any thing she had heard, because she was afraid of saying *and that*.”

Ellen tried again, and conquered the difficulty.

“ The beautiful feathers that grow on

the wings of the ostrich," continued her mother, "are slender and loosely put together, and their beards are long silky threads, separate from each other, so that they are incapable of making a body sufficiently close and compact to strike the air with the force required in flying; but, as you say, they answer the purpose of sails, and are of admirable use to it when pursued by the Arabs on their swift horses."

"Ah, mamma! The poor Arabs of the sandy deserts undergo a great deal of trouble to procure our beautiful plumes of ostrich feathers!"

"Now, Ellen, I must close the cabinet for to-day. It is time for you to walk out."

"Stay one moment, dear mamma! Do just tell me what these long, sharp quills are, mottled with black and white."

They are the quills of an animal

called the porcupine, a native of India, Persia, and all parts of Africa. The Indians, who are fond of finery, use them to adorn the many curious articles they make, some of which surpass ours in neatness and elegance; for this purpose, they dye them of various and beautiful colours, and split them into slips, with which they embroider their baskets, belts, and other ornaments. I have many in one of the drawers, which you shall see another day." And as Ellen's mother spoke, she turned the key of the India Cabinet.

The affectionate girl kissed her mother, reached her straw hat, and ran after Isaline, who was gathering roses from a damask rose-tree on the lawn.

CHAPTER III.

ELLEN took a basket that she also might gather roses; and during the time that she stood by her sister, she tried to give her an account of all she had seen and heard, and ended by saying, that her mother had promised to show her some belts and baskets made by the Indians, and embroidered “(because they like smart things) with black and white quills.—I should not like my frock or sash to be adorned with those sharp-pointed porcupine quills.”

“But you have not yet seen my favourite drawer,” said Isaline.

“Which is that? Which is that?” cried Ellen.

“ The drawer of shells:—shells constitute an extensive part of natural history; and for elegance of form, variety and beauty of colours, as well as delicacy of texture, excel the finest works of art.”

“ Next time I go into mamma’s dressing-room, I will beg her to let me look at them!” exclaimed Ellen. “ The study of plants is called Botany,—what is the study of shells called?”

“ *Conchology*. There are more than a thousand species of shells; and they are separated into three classes or divisions, as plants are into twenty-four classes.”

“ Will you tell me their names?” said Ellen.

“ Univalves, bivalves, and multivalves. Shells are also subdivided into many genera and species: you will be better able to understand their distinctions when you have examined my favourite drawer. The first class contains

those that are of one single piece, as a snail shell ; the second consists of those formed of two shells, connected by a hinge, as the oyster ; and the third of those which have more pieces than two."

" All this will be very easy to remember," said Ellen. " I hope we shall go to the sea-side next autumn, that we may ramble among the rocks, and seek for shells ourselves."

" Yes," said Isaline, " I hope that we shall, for any thing gained by our own industry is doubly valuable."

" When mamma was talking to me about coral," said Ellen, " she said it was supposed to be a vegetable by the people who lived many hundred years ago, and that it is now discovered to be the work of little insects ; but she did not tell me whether it belonged to the animal or vegetable kingdom."

" It belongs to the *zoophytes*," re-

turned Isaline, "an intermediate class, partaking both of the nature of an animal and a vegetable—or animals resembling flowers and springing from a vegetable stem."

"I am glad there is such a class," said Ellen, "for corals, and sponge, and corallines, may all be placed in it. I did not know where to put them before. Will you tell me what else it contains?"

"When we were at Weymouth," replied Isaline, "we found a zoophyte, called the sea-anemone. Its claws and tentacula were extended and disposed into regular circles, and tinged with a variety of bright, lively colours, very much like the petals of some elegantly fringed, and what are called radiated flowers, as the carnation or anemone, to which it bears so strong a resemblance that papa says some naturalists have supposed it to be a vegetable. These zoo-

phytes, firmly fixed to the rocks, have a mouth formed by their beautiful rays, which they possess the power of dilating or opening, and thus enclosing their prey in a net, as it were."

"Oh, how curious!" said Ellen.

"Several insects of the *mantis* genus (for the zoophytes are divided into fifteen orders)," continued Isaline, "are so similar to a cluster of leaves, in their form and colour, that they are called by the sailors who find them in the woods, walking leaves.

"The *polype* ranks as the first of plants and the last of animals; for some naturalists affirm that its propagation may be increased by cuttings, as plants are by slips and suckers. It is of a snail or jelly-like substance. It shrinks into a round green spot if disturbed; but in its natural form it is a long tube, and has a head and mouth from which eight or ten

long arms are projected, to seize worms and other insects."

"Zoophytes are a very convenient class," said Ellen: "I shall not be puzzled another time to find out what those substances are, which are half-animal and half-vegetable."

Ellen's attention was taken from this subject, by the appearance of the little ones, who were returning from a walk.

"We have been through the village," exclaimed Frederic, running towards his sisters, "and round by the farm-house on the hill, and so home through the meadows by the river-side."

"And here is a fine yellow flag-flower for you, dear Isaline!" cried Harriet—"It grew by the brook in papa's field, and Frederic and I put large stones across the brook, and gathered it, and brought it home for you to copy;—and here is a wild dog-rose; and a sprig of honeysuckle; and a great many more *beauties!*"

“Thank you, my little humming-bird,” said her sister, “you seem to have flown with some rapidity from flower to flower! We will go home together, and you, Ellen, shall copy this yellow water iris.”

As Isaline spoke, she took hold of Lucy's hand; and giving little Clara her basket of roses, the cheerful party crossed the lawn.

Every time that Ellen passed the door of her mother's dressing-room, she would peep in, just, as she said, to catch a glimpse of the India Cabinet; for since Isaline had told her about the shells, her desire to see them had not a little increased. It happened one morning, as Ellen was taking her accustomed peep, that her mother, who was in the room, called her, and told her that she might, if she pleased, once more look at the India Cabinet.

“Thank you, dear mamma!” said Ellen. “The shells—the drawer of shells this time, because shells are Isaline’s favourites, and perhaps they may become my favourites too, mamma.”

Her mother then unlocked the folding-doors; below the three shelves were six drawers; one of these drawers she opened, and Ellen, with an exclamation of delight, pointed to a large white shell, somewhat resembling the shape of a snail shell, and about eight inches across, and she read on the sheet of writing-paper upon which this shell was laid—

“Learn of the little *Nautilus* to sail,
Spread the thin oar, and catch the driving gale.”

“The name of *nautilus*,” said her mother, is derived from a Greek word, signifying both a fish and a sailor. It is supposed that men first took the idea

of sailing in vessels from what they observed practised by the little inhabitant of this shell."

"But where is the little inhabitant, mamma—the thin oar—and the sails?—I do not see them."

"Take hold of the shell, my love."

"It looks as though it were made of thin white paper, mamma—like the silver paper which Isaline puts over her drawings."

Ellen held the shell up to the light, and she could see that it was divided into a number of partitions, or separate cells—there were about forty, which formed a spiral line; and there was a hole in each cell, large enough for a pencil to pass through.

"The oars and sails belong to the fish itself, Ellen," said her mother, "and not to the shell. The nautilus has eight arms or legs. When it intends to sail,

it extends two of its arms on high above the water, and supports a membrane between them, which it throws out to serve as a sail; sometimes it sets up and spreads six of these little sails at once; while the two other arms hang out of the shell, to be used as oars, and with these it rows itself on in the water. When the sea is calm, numbers of these fish are often seen diverting themselves with sailing about in this manner, to catch the driving gale."

"Pretty little creatures!" exclaimed Ellen. "I wish I could see them, mamma, with all their sails up, sailing away!"

"As soon as a storm arises," continued her mother, "or any thing alarms them, they instantly furl their sails, pull their oars into the shell, and take in as much water as makes them a little heavier than the sea-water in which they

swim, and by that means sink to the bottom."

"How wonderful and how clever!" said the astonished Ellen, "but, mamma, how do they contrive to rise again?"

"They expel or push out this abundant water through a number of holes which they have in their arms; and the air in the cells, being lighter than the water around it, they can rise again and come to the surface of the sea when they please."

"How happy the little nautilus must be, mamma, guiding his elegant boat, furling and unfurling his sails, using his oars and rowing away over the wide sea!"

Ellen was next amused with a shell, somewhat resembling that of the muscle, called the *pinna marina*, to which a little tuft or tassel of fine silk was sticking. Her mother told her that the animal has

the power of spinning these threads, as the silkworm does, and that this silky substance is sometimes manufactured into gloves and stockings. Ellen then looked at the limpets, shells in the form of little pointed cones, and which are found sticking very firmly to rocks, chiefly on the English coast: at the gy-lindri, a brown shell with a thick border which turns over into a ledge on the back, like that of the helmet shell: at some rare and beautiful volutes: at the lucina, which is found on the shores of Botany Bay; and at the different species of cochlea, some of which being long and slender, resemble turbans. At length her eye caught some little white shells called cowries, which her mother told her are used by the natives of Africa as money, and that the women in that country ornament their hair with them, and make them into necklaces and bracelets.

“And now, my little Ellen,” continued she, “it is time for you to begin your lessons. Clara will be before-hand with you.”

Ellen begged that her mother would just open a little white paper packet which was lying in one corner of the lowest shelf.

“For I think, mamma,” said she, “that it must be the volcanic ashes, because it is marked No. 15.—Yes: it is,” continued she, looking at the book —“No. 15, ‘volcanic ashes thrown up from Mount Vesuvius’.”

To gratify her little daughter the kind mother opened the paper.

“What black, dirty looking dust, mamma! Is that all?” said Ellen in a tone of disappointment.

“What more did you expect, my dear—*ashes*, you know, are generally of this colour.”

“ But I thought they were something very curious.”

“ I will give you an account of Mount Vesuvius in the evening, my love, which I hope you will think sufficiently interesting to compensate for the disappointment you seem to have experienced.”

The evening came. Ellen, seated at a table by the side of Isaline, was trying to copy the yellow Iris—Frederic was drawing a picture of the fisherman's hut in Westmoreland—Clara, Lucy, and Harriet were quietly amusing themselves on the carpet; when the former with wishful eyes looked towards her mother.

“ Is mamma to read your eyes, Ellen ?” said Isaline. Ellen smiled. “ You know what I mean, mamma,” said she. “ Now we are so nicely settled, and so comfortable, will you, as you promised to do, tell us something about Mount Vesuvius ?—

In the first place, where is it?—and what is it?”

“ It is a celebrated burning or *volcanic* mountain, to the south of Italy. It generally happens in the course of a few years, that what is called an eruption takes place; streams of liquid fire issue from the crater, or hollow summit of the mountain, and flowing down its sides overwhelm and destroy the beautiful country through which they pass; showers of ashes and red-hot stones are thrown at the same time to a prodigious height, and a loud rumbling sound is heard within—vivid flashes of fire are seen, and the whole country becomes a scene of ruin and confusion.”

“ Is Italy a pleasant country, mamma?” said Frederic.

“ Yes, my love; particularly so. Its soft sloping hills and verdant meadows are covered with flowering shrubs. Tufts

of aloes, orange, and citron-trees, are interspersed with mulberry-groves, in which thousands of silkworms spin their golden webs—white cottages are scattered amidst bowers of aromatic shrubs and evergreens, which scent the air with their fragrance,—shepherd girls are seen dancing on the hills, and children engaged in collecting oranges, or gathering flowers—the sky is almost always blue, without a cloud,—the weather almost always delightful. In the midst of this scene of tranquillity and happiness, an eruption sometimes takes place, and destroys the labour of many years.”

“How much better are we off, mamma!” exclaimed Ellen; “we have nothing to fear from dreadful volcanoes.”

“An eruption of a volcanic mountain is so grand a phenomenon of nature,” said her mother, “that I think you will like to hear an account of one, which Isaline will be kind enough to translate for your amusement.”

“ Oh, yes, mamma ! yes, mamma ! ” re-echoed from many little voices.

“ But, *translate !* ” said Ellen. “ Then what language is it written in, mamma ? ”

“ It is written by a French gentleman, my love, who happened to be in Naples at the time of an eruption of Mount Vesuvius. ” ——

“ How far is Vesuvius from Naples ? And what is the name of the gentleman ? ”

“ Naples is only seven miles from the volcanic mountain ; and the gentleman is called *Monsieur C*——. I cannot tell you his real name. Now, Isaline, begin, my dear.”

(*Isaline reads.*)

“ Early in the spring, I was about to leave Naples, in order to go to Rome. I had just returned to the hotel where I lodged, about eleven o'clock at night,

when the people of the house came into my room to inform me that Vesuvius was beginning to throw up clouds of ashes, and that the flames which proceeded from it, announced an approaching eruption. The air was as hot as in the month of July, and as calm as on a fine summer's day." —

"I think, mamma," exclaimed Frederic, "that if *Monsieur C*—— had been wise, he would have set off immediately for Rome."

"He had too much curiosity to do so, my dear. He had long wished to be witness of an eruption, and his wish was now gratified."

(Isaline continues to translate.)

"I immediately went out on a terrace before the house. The air was filled with a shower of ashes. You might feel them falling, but you could not see them. They

descended gently and imperceptibly, and gradually covered the surface of the ground. They silenced the noise of the carriages, and covered the whole country around with a dark tint, as if it had been attired in mourning. The darkness was from time to time illumined by the flames, which darted in long flashes from the crater. Suddenly a luminous point appeared on the side of the mountain, about two hundred yards from the summit. It was a new crater, through which the red hot lava had just forced its way. At the same time a general exclamation burst from thousands of people, "There is the lava! There is the new crater! It has opened on this side! We are all lost!"

I went into the city to mingle with the crowd, and share in their alarm and their curiosity. The spectacle was extremely grand, I looked upon it with

a mixture of awe and astonishment. Anxiety was depicted in every countenance, and all eyes were turned towards the luminous point which was visibly enlarging every instant.

The showers of ashes ceased towards day-break, and the first rays of the morning sun destroyed the brilliance of the flames, which had appeared so vivid during the night. The return of day-light lessened the fears of the people—they retired to their own homes, forgetting that the same grand scene would be renewed the succeeding evening.

I also retired to rest; for it is only in darkness that the full magnificence of a volcano is displayed, and I was desirous of taking a nearer view of it the following night.

I set out towards Vesuvius about seven o'clock in the evening, in company with my young friend Louis.—As the

day declined, the flames of the volcano resumed their splendour, and, on reaching Portici, we were able to judge of the progress the lava had made during the day. It was no longer a bright luminous point, as on the preceding evening, but a broad stream, flowing slowly along, like a very slow river.

We took guides at Portici, where we left our carriage, or cabriolet, and mounted mules.”—

“ Mules, mamma ! Do you think that the mules upon which Monsieur C—— and Louis rode, were as sure-footed as the mules upon which papa and Charles used to ride up the steep slippery mountains of Westmoreland ? ”

“ No doubt, my love, or they would not have been able to ascend the still more slippery sides of Vesuvius. However, they were obliged to be sent back, as you will hear.”

(*Isaline translates.*)

“ We were provided with torches, but we stood in little need of them, for the sky was sufficiently illuminated by the flames. We ascended through vineyards to the hermitage of San Salvador, along a rugged path bestrewn with stones and cinders; but our mules being accustomed to it, pursued their way without difficulty, and left us at liberty to enjoy the grand and majestic scene around us.”—

The pencil had fallen from Ellen's hand—the yellow water iris lay^m beside her quite forgotten—she sat with a countenance full of surprise and astonishment, and her whole attention seemed placed among the ashes and lava of Mount Vesuvius. Charles had closed the book he held. Clara, Lucy, and Harriet, who had been building a tower of little boards upon the carpet, came from the other side of the room, and climbed upon Isaline's chair or Charles's knee.

Their kind sister continued reading—
“ ‘ This little hermitage stood in a cleft—it consisted of two chapels, (one of them was hewn out of the lava, from a former eruption,) also a little refectory, a kitchen, and a chamber ; the furniture was as simple as the habitation ; in the latter was a straw-bed, two chairs, and a table, with a crucifix on it. The hermit placed before us dates and oranges, brought from the valleys below. Here we sent back our mules to Portici, for they could no longer be of any use to us. Two of the guides alone remained, to direct us to the part of the mountain where the lava had taken its course. Before we set off, we remained for some time on a sort of terrace before the hermitage, contemplating the fiery clouds, which the volcano was spreading around it. At length we continued our way towards the torrent of lava, which

then threatened the unfortunate town of Torre del Greco."——

"Unfortunate! did the lava bury that town then, mamma? Why is it called unfortunate?" said Ellen.

"Torre del Greco escaped during the eruption which *Monsieur C——* describes, my love," replied her mother, "but it was destroyed by another, which took place three years afterwards."

"Don't you think, mamma," said Frederic, "that *Monsieur C——* had a great deal of courage? I admire him now—I wished at first that he had gone to Rome, to be out of the danger. I did not know then, that he would venture to go up the mountain."

"I admire him too, my little boy," returned his mother; "although he did not ascend the mountain in the hope of being of any great service to himself, or to any one else, yet it was a laudable

motive which induced him to do so. He was a traveller, and had visited the icy mountains of Switzerland covered with perpetual snow—he was now visiting one covered with burning cinders—he wished to see nature in all her variety of aspects, and for this reason he assumed courage enough to ascend Vesuvius.”

During this conversation, Isaline had been called out of the room to a little girl who was come to beg ‘a few roses and a few slips of myrtle;’ with which Isaline supplied her every week throughout the summer. Little Rachel lived with her grandmother, and earned a few pence now and then, by making nosegays of the flowers which grew in their cottage-garden, and, when Isaline’s roses and sprigs of myrtle were added, and all nicely arranged in a basket, taking them to sell at a neighbouring town. For Isaline was ever ready to assist the poor;

she visited them in their own cottages; carried them food and nourishment with her own hand; and was never so happy as in relieving their wants.

Whilst her sister was absent, Ellen peeped at the book which lay open on the table, and she tried to make out a little of the French.

“ I wish,” said she, “ that I could translate it as fast and as well as Isaline does. Here is something delightful coming, presently, I believe — something about *avec une dame*—with a lady—can that be true, mamma?—No lady could possibly climb this rugged, slippery path, which even *Monsieur* himself found difficult—and yet it must be so—*elle étoit une Anglaise—elle parla l’Anglaise*—an English woman, mamma! an English woman upon Mount Vesuvius! Can you believe it? *Florinda*, mamma! her name was *Florinda*!—I

wish Isaline would come, that we might know who this Florinda was! *Elle étoit jeune et belle, et pâle avec émotion*—oh, mamma! she was young and beautiful, and pale with emotion—I wish Isaline would come!”

“What! Ellen,” said her mother, “would you have poor little Rachel lose her flowers, because you wish to hear about a Florinda? Exercise your patience, my child. Remember the patience with which you waited a whole month to see the India Cabinet.”

“So I will, mamma—I will exercise my patience—if it were not for little Rachel, I should not at all like an interruption of such a delightful story—but it is not a story—it is true—is it not?”

“Quite true, my love.”

“Well,” said Ellen, looking again at the book, “here is a word, mamma, of

which I cannot tell the meaning,—*scoria*, mamma,—will you be my dictionary?—my own little red-morocco dictionary is up in the library.”

“That word is the same in English as in French, my dear,” said her mother. “*Scoria*, or *dross*, is that mass which is produced by melting metals and ores, and when cold it is brittle, rough and uneven, somewhat like broken glass, and of a dark colour. You may suppose that a volcanic mountain is covered with heaps of this scoria—what does *Monsieur C*— say about it?”

“*L’incendie fit des progrès rapides et*—oh, Isaline, are you come? Here is the book. *Monsieur C*— was going towards the torrent of lava.”

Ellen resumed her pencil, and Isaline read as follows:

“The fire made rapid progress, and we proceeded through cinders and scoria,

along obstructed paths; they at first led us across a wide valley, which separates the hermitage from the upper part of Vesuvius. This valley, where neither grass, tree, nor shrub was to be seen, extended along the side of the mountain, opposite to the eruption. It was dark and still, except that a lucid light was reflected upon it from the clouds. It was the vale of death, and eternal silence; but on this night its tranquillity was broken by the numerous parties whom curiosity had brought thither, and who were going and coming from the little hermitage to the crater.

“ After marching for an hour, we began to climb with difficulty over heaps of scoria. We were obliged to grope our way through passages unknown to the guides, for at each eruption the lava alters its course. We soon found ourselves in a region where every thing bore

the marks of fire. The air began to be scorching: the very stones were warm; and we beheld fiery clouds rolling over our heads, and leaving a tract of awful red in the sky."

"Indeed, mamma!" said Clara, "I should not like to have been in *Monsieur C*——'s place. How different is Vesuvius to the mountains we used to climb in Cumberland!"

"Hush!" said Ellen, "we are just come to Florinda!"

(Isaline continues.)

"We were within half a mile of the end of our journey, when, to our astonishment, we met with a lady, attended by two guides, who had been left behind on the mountain by her party. She was sitting on a rock, wrapped in a shawl, and was talking with great earnestness to her guides. By her accent I was convinced

that she was an Englishwoman, and I went up to her to offer her my assistance, and to ask her the cause of her agitation. She replied in French, with an eloquence inspired by the darkness and solemnity of the surrounding scene. She informed me that her husband and a party of friends had accompanied her as far as this place, but that the guides had persuaded him that it would be dangerous for her to proceed any farther. She had made many entreaties to be allowed to go on, but ineffectually; and had since used her best endeavours to prevail on her guides to take her forward, but without success. She was mortified, she said, to the last degree, at being thus prevented from witnessing a scene to which she had looked forward with so much earnestness.

“ I ventured to offer her the assistance of my arm, for the short distance which

remained. She accepted it with a readiness, arising merely from her anxious desire of being present at the magnificent spectacle displayed by Vesuvius; and we set off, notwithstanding the remonstrances of her guides.

“ She leaned on my arm, and we proceeded slowly, because we sunk into the ashes, and the scoria wounded her tender feet. Nevertheless, we were drawing nearer the torrent of lava, and the glare which it produced gave me an opportunity of observing my courageous companion.”

“ I scarcely like Florinda, mamma,” said Ellen, “ she had almost too much courage for a woman, — especially an Englishwoman !”

“ You do not know, my dear, but what her motive was as laudable and as good as *Monsieur C*——’s. Go on, Isaline.”

“ She was young and beautiful, but

pale with emotion, and seemed to share in the agitation and disorder of the scene.

“The ground and the air became hot as we drew nearer the mouth of the volcano, and gusts of smoke came rolling towards us. We endeavoured to avoid them, by getting out of the current of the wind; but the blast was so violent, that we were twice enveloped in these fiery clouds, and were near being suffocated. The soil gave way under our feet, and the fire appeared beneath the scoria, as it rolled down the precipices.

“At length, with some difficulty, we reached the end of our journey. The friends of my young female companion were already arrived, but their attention was so fully engaged by the sublimity of the objects around them, that they had not perceived our approach. We were therefore obliged to introduce ourselves

to them, and I was not without some uneasiness as to the reception we might meet with; but success ensured our welcome. We had proceeded safely thither; our imprudence was forgiven;—we had only to enjoy in silence the grand scene before us.

“ The lady’s husband called her Florinda; the only name by which I have ever known her. Should she read these letters, she will recollect this nocturnal scene upon the mountain, and know who the stranger was that conducted her to that ocean of fire.

“ We gazed in silence upon the burning torrent, as it rolled its waves before us. The red-hot liquid lava flowed over a high rock into a valley, and continued to flow, increasing in breadth, because, as it went on, it re-kindled the old scoria, so that the whole mountain seemed on fire.

“ The stream of lava, which was now some hundred feet broad, was gradually approaching the brink of another precipice, down which it threatened to fall before morning, and we determined to await the event. It kept slowly, but continually, drawing nearer; the scoria taking fire before it, and preparing its way. At length, the ignited torrent reached the edge of the rocks, and precipitated itself down them with a dreadful and tremendous noise. Clouds of smoke arose from the abyss, and were driven by the wind in all directions, while the lava continued to fall into the gulf.

* * * * *

The dawn now appeared in the horizon; the sun darted his morning beams; and the splendour of the night faded and disappeared before the radiance of day. The fire grew pale; the vapours became

white; and there remained nothing but the singular appearance of a mountain moving by its own efforts. It was time to retire, for the presence of the ignited matter, when veiled by the sun, is highly dangerous: the spectator may be consumed before he is aware of its approach.

“We therefore returned by the same course to the little hermitage of San Salvatore, where the venerable father again regaled us with pomegranates, grapes, and oranges. Thence we proceeded to the town of Portici, where our cabriolets were waiting for us. Here I bade adieu to the young and lovely Florinda, whom I have never since seen.”

“And here,” continued Isaline, as she closed the volume, “we must bid adieu to *Monsieur C*——.”

“What an interesting account, mamma,” said Charles; “I should like to have been Louis; I should not have

feared any danger when under the protection of his friend. I wish he had known what became of Florinda. Where do you think she is now, mother?"

"That I cannot tell,—I think *Monsieur C*——evinced kindness as well as courage in procuring for her the gratification she so much desired."

"Indeed he did, mamma! We are much obliged to dear Isaline for having entertained us so nicely."

"Will you read something more?" said Lucy.

"Not this evening, my love, because it is time for you to go to bed."

"Another evening, perhaps," said Ellen. "If it had not been for the India Cabinet, we should not have heard of *Monsieur C*——. If it had not been for the little wren that built its nest in our grotto, we should not have thought of the India Cabinet!"

CHAPTER IV.

A few days after the conversation about Mount Vesuvius, Ellen and her little sisters were rambling in a copse in search of wild strawberries. It was a delightful evening; the sun illumined the western hills, and the trees were tinged with a yellow lustre. Devonshire is a fine county. Chequered with villages, whose towers and spires peep above the trees in which they are embosomed; its soft sloping valleys are fringed with wood, and the wide tracts of champaign country are chiefly employed in arable land. Some fields were now waving with yellow corn, whilst in others the busy labourers were employed in carrying away the products of the harvest.

As the children were bending towards home, they were overtaken by Isaline, who was returning from the cottage of Rachel's grandmother.

They held their baskets in triumph to their sister, and begged her to partake of their strawberries.

The little humming-bird had flown from the rest, but she now reached them, loaded with horse-chesnuts, with which the path was thickly strewed.

“Do you think, Isaline,” exclaimed she, “that if I were to plant these chesnuts in my garden, they would produce chesnut-trees?”

“You may try the experiment, my good friend. The acorns your brother planted last year, are now become little oak-trees; and this time next year you may have little chesnut-trees from your chesnuts.”

“How wonderful it is, that from so

small a kernel such large trees can be produced!"

"Fruits, which afford us so many luxuries," continued Isaline, turning to Ellen, "are in fact nothing more than the covering, or natural production, which protects the seed of plants, and are called by botanists *pericarps*. Some pericarps are pulpy, as peaches, nectarines, and apples."

"Then the seed or kernel is contained in the middle—in the middle of the *pericarp*," said Ellen.

"Yes, my love; and some are enclosed in a hard pericarp, as nuts; some scaly, as the cones of fir-trees."

"How astonishing is the variety of the productions of Nature—

"No tree in all the grove but has its charms,
Though each its hue peculiar; paler some,
And of a wannish grey; the willow such,
And poplar, that with silver lines his leaf;

And ash, far stretching his umbrageous arm.
Of deeper green the elm ; and deeper still,
Lord of the woods, the long-surviving oak.
Some glossy-leaved, and shining in the sun ;
The maple, and the beech, of oily nuts
Prolific ; and the lime, at dewy eve
Diffusing odours : nor unnoticed pass
The sycamore, capricious in attire,
Now green, now tawny, and, ere autumn yet
Have changed the woods, in scarlet honours
bright.”

“ I like that,” said Ellen, “ because I understand it, and I like any poetry that I *can* understand. Will you repeat the line about the poplar ?”

“ And poplar, that with silver lines his leaf.”

“ What does it mean by the leaf being lined with silver ?” said Ellen.

“ The white poplar grows in woods and hedge-rows, and is very conspicuous from the whiteness of its foliage,—hence Cowper calls it silvery.

“Have you yet seen the drawer of nuts from different countries?”

“What! in mamma’s Cabinet! Is there one?” said Ellen.

“Yes,” replied her sister: “and it contains seeds or pods from many of the most curious trees in the world.”

“Let us hasten home, and perhaps we shall have time to examine this interesting drawer!” exclaimed Ellen.

The juvenile party soon ascended the hall steps. Harriet and Clara chose to find Charles, and ask his opinion about planting their chesnuts: Lucy begged to accompany Ellen into the dressing-room.

Isaline opened the doors of the India Cabinet, and the drawer next to the drawer of shells.

“Are these the foreign nuts?” exclaimed Ellen. “They are not so pretty as I had expected; however, if you will give us an account of the different trees

that produce them, it will amuse us as much as looking at them.

“ In the first place, what is this, about the size of a walnut, and whose outside is entirely black ? It is half open, and full—quite full, of beautiful white down, as soft as velvet.”

“ This is what is called cotton,” said Isaline. “ By means of a mill this down is separated from the husk, and it is then spun, and made into various beautiful articles. Your muslin frock is made of it.”

“ Indeed ! is my frock produced, really produced from the down contained in little pods like this ! What sort of tree is the cotton-tree, and where does it grow ?”

“ There are three species of cotton-tree : one creeps on the earth, like a cucumber ; the second is thick, like a bushy dwarf tree ; and the third is as tall as

the oak. All three, after having produced very beautiful flowers, are loaded with a fruit like that in your hand. The cotton of the plant that creeps on the ground is reckoned the best. It grows in the East Indies; in America; and particularly near Smyrna, a sea-port of Turkey in Asia, and one of the largest and richest cities in that part of the world.

“Who would suppose that our draperies of snowy white were manufactured from the down contained in these little pods?—and who that does know it, but can adore the wisdom that has so admirably adapted every thing to our use, and so wonderfully provided for us all we can desire?”

“I see,” said Ellen, after a pause, “that this drawer contains little pieces of wood, or bark, as well as nuts.”

“Yes,” returned Isaline, taking hold

of a specimen. "This is the bark of the quinquina tree, which grows in South America. It is highly esteemed in all parts of the world, where it is known, for its medicinal virtues."

"I know the taste well," said Ellen, "and so do you, Lucy. I wonder how any one could think that the bark of a tree would answer the purpose of a medicine."

"I have heard," said her sister, "that the virtues of the Peruvian bark were first discovered by a poor negro, who in the hot fit of an intermittent fever drank largely of the water of a pool, into which some of the quinquina trees had accidentally fallen, from the earth giving way around the pond."

"Then, I suppose," said Ellen, "that the negro observed that *that* water did him more good than any other."

"Yes," said Isaline, "he did. This

anecdote shews us we ought not to suffer any thing to escape our notice, and that the most trivial incident may furnish important knowledge, or be applied to some useful purpose.

“ Here is some cloth made from the Chinese or paper mulberry-tree.”

“ Why is it called the paper mulberry?” asked Ellen.

“ Because the Chinese make paper of it. And the inhabitants of Otaheite make cloth, like this, of its bark,” replied Isaline.

“ What! is this piece of strong beautiful cloth actually made of the bark of a tree! I should like to know how they manage to change bark into cloth.”

“ They take the stalks or trunk of the paper mulberry, which seldom grow very high, and are only about the thickness of your arm. They strip the bark, roll it up, and soften it in water: it is after-

wards beaten with a kind of mallet, and spread out to dry. When quite dry, these fibrous pieces are joined together by the glutinous or gummy juice of a berry, called *tooo*."

"Where is Otaheite, sister?"

"I think I must answer you as Sir William Jones's mother is said to have answered his questions, when he was a little boy—'*read and you will know.*'"

"You may beg papa to lend you Captain Cook's Voyages, and I will select passages for your amusement. Otaheite is one of the Society Islands in the South Pacific Ocean. It is almost covered with woods and forests, consisting of bread-fruit trees, palms, cocoa-nut trees, plantains, mulberries, sugar-canes, and many other beautiful shrubs and trees. The houses of the natives consist only of a roof, thatched with the long prickly leaves of the palm-nut tree, and sup-

ported by a few pillars of the bread-fruit tree. As a roof is sufficient to shelter the natives from rain and nightly dew, and as the climate of this delightful island is warm and sultry, the houses have seldom any walls, but are open on all sides, and various little birds sing among the evergreen shrubs which form, as it were, a fence around them."

"I will ask papa this very evening to lend me Cook's Voyages," said Ellen.

"Voyages and travels are a kind of reading particularly agreeable and useful," said Isaline. "Truth gives them their beauty."

"By referring to maps, as you read, you may obtain ideas of geography, and of the situation of countries, much more correctly than from systems or lessons learned by heart, and thus procure an extensive and various knowledge of na-

tural history—of facts, *not* fiction—which you may find of use every day of your life. For instance: in reading the account of the South Sea Islanders, we are led to compare their ingenious yet simple works, with the elegance and utility of the manufactures of the more polished nations of Europe and Asia, and are thus enabled to form an idea of the difference between the rough productions of the uncultivated mind, and those which are the result of science and art.”

“ Paper is sometimes made of rushes, also; is it not?” asked Ellen.

“ Yes, my dear. The rice paper upon which I was painting this morning was made of the pith or soft inner substance of the rush. The Egyptians used to write all their books upon paper made of a sort of rushes—but not little rushes like those which grow by the brook, at the bottom of the park.

“ The stem of the *papyrus* or paper-rush consists of thin leaves, laid, as it were, one over the other. It was of these, when unfolded, that they made their paper. They separated the leaves which embraced each other around the stem; flattened them, and then put one over the other, crosswise—so that one leaf lay breadth-wise, and the other length-wise.”

“ I understand,” said Ellen; “ the leaves were woven, somewhat like the matting on the seats in the hermitage.”

“ Yes: and the Egyptians stuck them together with the muddy water of the Nile, pressed them with very heavy weights, and polished them by rubbing them with a smooth stone.”

“ Why do you say *muddy* water?—is the water of the Nile particularly muddy?”

“ There is very little rain in Egypt, the sky is seldom cloudy ; but in the place of rain the ground is watered by the river Nile, which overflows its banks at a certain season of the year, and carries with its waters a rich mud—it was this mud that the people used in making their paper.”

“ And do you think,” said Ellen, that with all their muddy water—their flattening—their pressing—their polishing and rubbing, they could make nice white writing-paper, like ours.”

“ No : but it was better than none, and it shews the ingenuity of the Egyptians.”

“ What is this kidney-shaped nut ?” said Ellen.

“ It is the cashew-nut,” replied her sister : “ between the kernel and the shell is lodged a thick inflammable liquor, of such a caustic or hot nature, that if you

were to put it to your lips, blisters would immediately follow. The tree which produces it, grows in the West Indies.

“ Here is a specimen of the wood of the camphor-tree.”

“ What! does camphor, like that lump of camphor in mamma’s little tumbler, come from a tree?”

“ It does indeed, Ellen. From a wide-spreading tree, nearly as large as our oak, which grows chiefly in the island of Sumatra. The camphor is found in the crevices of the wood: the trees, when cut down, are divided, cut into little blocks, and these are split with wedges into smaller pieces, from the pores or interstices of which the camphor is extracted.”

“ How curious!” said Ellen. “ But will you tell me where Sumatra is? Is it not one of the range of islands in the Indian Ocean, called the East Indies?”

“Yes: it is in the Indian Ocean, and the most westerly of the Sunda Isles. A chain of high mountains runs through its whole extent. Between these ridges are extensive plains, but the hills are covered with woods of perpetual verdure. The forests present many wild and beautiful scenes; and romantic cascades, whitening with foam, dash down the sides of the mountains. Numerous curious shells and fossils are found on the sea-shore, which is defended from the swelling waves by a reef of coral rock—a natural fortification.”

“Formed,” exclaimed Ellen, “by the labour of millions and millions of minute insects!”

“Nature,” continued Isaline, “has favoured this island with many rich gifts. Rice is the principal food of the natives. Here is a stalk of it.”

“What! is this delicate grain, rice?”

it is very much like an ear of wheat, only more elegant. I suppose it is used by the natives of Sumatra, instead of corn."

"Yes, my dear. And here again we may admire the productions of Nature. There is scarcely any land upon which some kind of corn cannot grow. It is formed for any situation, either in the most sultry, or in the coldest climate. Some is suited to the wet parts of hot countries, as the Asiatic rice, which grows abundantly in the mud of the Ganges; and the maize, or Indian corn, in New England and many parts of America. In our own favoured island, wheat grows best in dry land; buck-wheat on rainy hills; oats, in moist places; rye, in sand; and barley on rocks.

"Corn is sufficient for all the wants of man. Can you tell me some of the purposes to which it is applied?"

"Straw," replied Ellen, "is used for

covering cottages, and serves as food for cattle; and with the grain or seed our food and drink are made.”

“The forests in Sumatra,” said Isaline, “are composed of a great variety of noble trees. The shrubby-stalked ebony tree”——

“Mamma says that the black legs of my little stool are made of ebony,” exclaimed Lucy.

“They are, my love; but it is now in less use amongst us than formerly,” continued her sister. “The iron wood, solid as marble, furnishes the native of Sumatra with his long spear and massy club. The wild pine is of the greatest use to the inhabitants of that delightful island; frost, snow, and hail, are there unknown, but thunder-storms of extraordinary violence are frequent, and the deep and capacious leaves of this tree retain water for a long time, not less for

the refreshment of the tree itself, than for the thirsty native of so warm a climate.”

“The palmyra also grows there, but is not so common as in the Birman Empire; the natives of that country are extremely fond of poetry and music. They write from right to left, and make their letters distinct not joined; their manuscripts are often very beautiful. Their books are generally made of the palmyra leaves, on which the letters are engraved with a sort of pencil called a stylus.

“But to return to Sumatra.

“A species of nettle grows there, the seed of which affords oil, and the stalk, when the bark is stripped off, is made into thread, which is wove into cloth—it is also used for fishing-nets.

“The *urceola elastica*, that yields our useful elastic gum, is also found in its forests.”

“ Our elastic gum ! ” exclaimed Ellen — “ Oh, I know what you mean — Indian rubber — like that which I use to rub out my flowers, when I do not trace them correctly — mamma gave me a piece the evening that I was drawing my yellow iris, and she told me that the meaning of *elastic* is, ‘ having the power of returning to the natural form, from which it has been drawn or distorted. ’ ”

“ Will you tell me what part of the tree the Indian rubber comes from ? ”

“ The stem of the plant which produces, it is woody, and somewhat resembles a vine ; it will climb over trees to a great extent. From wounds made in its bark, exudes a milky juice which possesses the properties of the real caoutchouc or Indian rubber, and which we as frequently use.

“ The sago-tree is of the palm kind, its pith is used as a nutritious food.

“ The pepper tree is a climbing plant, rising to the height of our house ; it is cultivated round poles, in the same manner as hops ; its leaves are of a deep glossy green ; it bears small white blossoms, which become bunches of red berries, resembling currants. When gathered, the berries are dried in the sun ; this process turns them black, and then being ground to powder, they are what we call pepper.

“ And I have now described the principal trees in Sumatra, though I had almost forgotten, that there

“ The giant palms lift high their tufted heads ;
And banyan wide, his graceful foliage spreads ;
Amidst his boughs the active monkey springs,
And chattering parrot claps his painted wings.”

“ I will lend you a book wherein you may read a description of the palm and the banyan tree.”

Ellen was much pleased with this account, and she wished that she could see the ‘parrot clap his painted wings ;’ but, as she was a reasonable child, she did not desire impossibilities. And she began talking on other subjects.

“ When we were walking this evening,” said she, “ we were amused with watching the labourers at work in the corn-fields : some were loading the wag-gons, and crying, ‘ Harvest home ! Harvest home !’ ”

“ Do you think that they reap rice in Sumatra, as they do corn here ? ”

“ The inhabitants of one village,” replied Isaline, “ are as it were one family, and they assist each other to gather in the fruits of the earth. Every man is furnished with a kind of sickle in the right-hand, and a small basket slung over the left shoulder, into which he lays the ears of rice after they are cut ; and when the

basket is full, the ears are removed into larger baskets, in which they are conveyed to the barn, where they are placed with great order and exactness.

“Rice is the favourite food of the people, and the only grain they have.

“The villages in Sumatra are mostly situated on rising ground, and surrounded with fruit-trees. The houses are built in a very simple style, with wood, and the roofs, like those of the huts in Otaheite, are covered with the leaves of a species of palm, laid one over the other.”

While Isaline was talking, little Lucy had taken a cocoa-nut in her hand.

“The cocoa, said her sister, answers many of the most useful purposes of life to the natives of a warm climate, particularly of the East and West Indies. Its bark is manufactured into cordage

and clothing, and its shell into useful vessels; its kernel affords a nourishing and pleasant food; its leaves are used for covering houses and are worked into baskets, and its boughs are of service to make props and rafters.

“And now, dear Ellen, I must close the Cabinet.”

“Well,” said Ellen, “this dull-looking drawer has given me much amusement!

“I have learned to-night that my muslin frock is manufactured from the cotton contained in a little pod;—that, what we call *bark*, is in reality the bark of the quinquina tree;—that the natives of Otaheite make paper of the stalks of the paper mulberry, which they join together with the juice of a berry called *tooö*;—that the ancient Egyptians made *their* paper of the paper rush or papyrus, which they smeared over with

muddy water;—that the river Nile overflows its banks once a-year, and this is the reason that the water is muddy, (but I suppose they liked it the better for being so.)”

“ I have learned too, that the cashew-nut would burn my lips—and—and—what else—oh, that camphor—the camphor in mamma’s little glass tumbler—is procured from a tree—the tree is cut down, and divided into little blocks, and then the camphor is *got out*——what is the word that you use, Isaline, instead of *got out* ?”

“ Extracted.”

“ Oh, yes, *extracted* ! The camphor is extracted from the wood of the camphor-tree. You have told me also, that there are many fine forests in Sumatra—that the ebony-tree grows there—the iron-wood tree—and the tree—I forget its name, whose leaves can hold water, which the people drink when they are

thirsty, and birds and insects too, I suppose—that Indian rubber is found in the woods of Sumatra, and is the juice or gum of a tree, called by a very long, hard name”——

“*Urceola elastica*,” said her sister.

“Ah! that is the word!” exclaimed the rosy Ellen.—“Then came the palmyra leaves, upon which the Birmanians write so beautifully—then, the harvest of rice, and every body so busy, with their little baskets slung across their shoulders—(I wonder whether the peasant girls in Sumatra glean the loose ears of rice, as the little girls here glean the loose ears of corn, that lie scattered about)—then came the villages in that delightful island—and last of all, the wonderful cocoa, which supplies the Indian with both food and clothing!

“How much I have learnt this even-

ing!——and yet, how many things have I still to learn!

“And now I will go to papa, and beg of him to lend me Captain Cook’s Voyages—the Voyages of Captain Cook!”

And away the lively and inquisitive Ellen was running, but Isaline stopped her, and said—“My dear, your memory has been employed enough for one day. If you can repeat to me, as accurately as you have now done, all that you have heard this evening, on the evening of this day week, you shall be gratified in having the books you desire.”

“*A whole week!*”

Ellen’s countenance flagged —— but brightening up, she exclaimed,

“A week will exercise my patience, as mamma says, and I shall show her, and you too, my dear Isaline, at the end of that time, that you have not taught your little Ellen in vain!”

CHAPTER V.

IN the grounds adjoining the house was a petrifying spring—that is, a spring in which if any thing be placed, it will become incrustated in stone.

The children were fond of amusing themselves about this brook, and of searching for little bits of stick or moss which were to be found in it.

They were employed one morning in this manner, when Ellen exclaimed,

“ Look, Clara, at this beautiful oak leaf; it is perfectly changed into a substance like stone—and yet the veins may still be seen—the form is exactly the

same as if it were green. I will show it to Isaline."

Ellen was returning in triumph up the shrubbery, when her father met her.

"Look, papa," exclaimed she, running towards him, "what I have found!"

"Will it not be worthy a place in the India Cabinet?" said he, regarding her with fondness. "Let us ask Isaline's opinion."

Isaline was coming towards them. Ellen held up her oak-leaf, and as soon as her sister saw it, she exclaimed,

"What a treasure! it will be quite an addition to mamma's collection! Let us go and look at the drawer of petrifications—you have not yet seen them, Ellen."

Ellen's eyes always sparkled with delight when the India Cabinet was named, and they did now with more lustre than

usual, when her father proposed that her dear oak-leaf should take a place in it.

“ Will you tell me, papa,” said she, as she walked along, holding her father’s hand, “ will you tell me what petrifications are?—I know that this change in my oak-leaf is called petrification—but I do not know the *cause* of it—I like to know the reasons of things.”

“ I will try to explain it to you my dear little girl—I wish to gratify your laudable curiosity.

“ *Petrifications* are bodies or substances, either animal or vegetable, frequently found at different depths beneath the surface of the earth, (and sometimes in springs) that appear in the exact form of the objects they represent.”

“ Well, but, papa, my oak-leaf, which before belonged to the vegetable kingdom, now belongs to the mineral kingdom,—does it not?”

“No, my dear. I am pleased with your conjecture, but although an inaccurate observer might suppose that the leaf was actually changed into stone, I can assure you it is not so. Naturalists have discovered, that the change called petrification, takes place by the pores or minute particles of matter, that compose bodies (this oak-leaf, for instance), being filled up gradually with stony particles deposited by the water, which also form a crust over the whole, taking the exact form of the outward or external figure.”

“I quite understand you now, papa. I know that the *process*—is that a good word to call it, papa?—the process of petrification is very, very slow, and gradual. Charles and I laid a piece of honeycomb in the spring in the park some months ago, and it is yet but partly incrustated.”

“Father,” said Charles, “I once broke

a piece of petrified wood in two—it was stone, or like stone, throughout, and not as you say, merely incrustated in it.”

“ When I said so, my love, I referred to Ellen’s leaf, or to any little thing you might find in the brook. But substances have sometimes been found under ground, where, having lain many ages, the solid parts have decayed, and the stony particles have filled up their vacancies, and they then wear the appearance, as Ellen says, of belonging to the mineral kingdom. This was the case with your bit of wood. Many petrifications of leaves, shell-fish, and the back-bones of other fishes, have been found in the earth, at a great distance from the sea, and even on the tops of the highest mountains.”

“ By what strange accident could they ever come there, papa?” exclaimed Ellen.

“ I consider them as a proof of the

truth of the universal deluge, when the waters covered the earth, and as they subsided, left a variety of marine animals and shells behind them; which in their process of decay became petrifications, and are now silent witnesses of that awful event."

"Papa," said Charles, after a pause, "I am particularly glad to hear you say so.—I never thought of their having been left by the flood before, neither did I thoroughly understand what was meant by petrification. You know we have a *Cornu-ammonis* by the spring in the garden; the gardener's boy told me one day that he believed it was a snake rolled up and turned into stone—but then he did not think of the manner in which it *was* changed from a snake into stone—I did think, but I could not tell—I can now."

"No wonder," exclaimed Ellen, "that William did not think about the process

it had undergone—he had no good papa, as you and I have, to teach him to trace events to their causes!”

“When we were at Matlock,” said Isaline, looking at her little sister, “we were much gratified with visiting the petrifying spring for which it is noted, and we brought home with us a nest and eggs, which had remained in it long enough to wear the appearance of stone. You will see them in the Cabinet.”

“How curious!” exclaimed Ellen—“I wish you would take me to see that spring, papa!”

“Many of mamma’s minerals, spars, and fossils, were found at Matlock,” continued Isaline; “for the productions of this sort in Derbyshire, and particularly about that delightful village, are numerous and valuable. The northern part of the county is usually termed the Peak, from its sharp pointed rocks and cliffs; and in the

caverns under some of these rocks, large pieces of spar, in the form of icicles, and some as clear as crystal, hang from the roof upon the crags that project, and look like the drapery of curtains. It is astonishing to see what elegant articles are formed of them.”

“Mamma says that the chimney ornaments in the drawing-room are made of Derbyshire spar,” said Ellen; “and the vases in the dining-room, and my little box — the little spar box you gave me, Isaline, and in which I put blossoms of London Pride.”——

“Blossoms of London Pride!” said Charles, laughing, “And why do you keep blossoms of London Pride in a little spar box?”

“Because,” replied his sister, rather gravely, “the lid of my little spar box has a magnifying glass fixed in it, and if ever you took the trouble to look at the

blossoms of London Pride, you would not laugh at *me* for doing so."

Charles knew that Ellen was fond of flowers, and he sometimes liked (as boys sometimes do) to amuse himself at his sister's expense; but he was very good-natured, and he said, "Well, Ellen, I will not laugh at you any longer—I did not know that the lid of your little spar box had a magnifying glass in it—I dare say you find some beauties in London Pride, which I do not."

"Now, Isaline, will you go on? We were talking about Derbyshire."

"Matlock," said Isaline, "is in a very romantic situation—it is built on the steep side of a rocky mountain, and the houses, placed one above another, are intermixed with shrubs which issue from the clefts of the rocks. We were there just as autumn had begun to tinge the trees with its soft lemon tints—the scarlet ber-

ries of the mountain-ash were displayed in full beauty, the larch-trees hung their long branches in disorder to the ground, the foliage of the pines whistled in the balmy air, whenever it was gently agitated; and all together formed a fine contrast to the bleak and naked summits of the mountain."

At length the juvenile party found themselves at home; but before Ellen repaired to the dressing-room, she ran into the library, and taking a blossom from the vase of flowers which stood upon the table, put it into her little box, and carried it to Charles.

"Now, my dear Charles," said she, "if you will take the trouble to peep through this glass, you, even you, will acknowledge that London Pride has beauties.—Look! how each little petal is dotted with pink spots—and then the stamens,—how exact!"——

“ I do acknowledge it, sister,” said Charles — “ it is extremely beautiful — perfectly elegant—formed with inimitable skill !”

“ And now,” exclaimed Ellen in a voice of exultation—“ now will you not agree with me in what papa says,

“ Not a tree,

A plant, a leaf, a blossom, but contains

A folio volume.—We may read, and read,

And read again; and still find something new,

Something to please and something to instruct.”—

Even in London pride !”

Charles kissed Ellen, and told her he loved her for her good-nature; and they went hand-in-hand to the dressing-room.

Isaline and her father were already there.

The drawer of petrifications was soon opened—nothing very brilliant appeared, but, as Ellen said, the specimens con-

tained in that drawer were no less valuable than those contained in some of the others, although they did not make such a show.

“ You know how much I was disappointed in looking at the volcanic ashes,” exclaimed she—“ I thought them dull, dirty-looking things, but mamma told me—and it is very true—that ashes are generally of a dirty gray colour;—if it had not been for those ashes, we should not have heard the long, entertaining account of the interesting Florinda, — of *Monsieur C*——, and of *Vesuvius*. did you ever hear it, papa?—the account of a young and beautiful English lady, who ascended Mount Vesuvius at the time of an eruption—what courage that lady must have had—the scoria wounded her feet: will you show me some scoria, papa? —— Oh, papa, here is the bird’s nest — the bird’s nest from Matlock—

how curious! moss, straw and sticks, all are incrusted in stony particles—it looks as though it were made of stone; nest, eggs, and all!” cried Ellen, quite forgetting the burning Vesuvius, and the “interesting Florinda.”

It took some time to examine this petrified nest, but when Ellen had looked at it as long as she thought proper, and had looked at some nuts, and shells, and bones, and at a mineralized Cornu ammonis, she begged her father to open the next drawer.

Before complying with her request — “Do you know, my little girl,” said he, “what the study of minerals is called?”

“No, papa.”

“The science of mineralogy.”

“All minerals, that is, all earths, soils, stones, and metals, are divided into four classes.”

“All the substances which form the

ground and earth are called minerals, papa; in short, things which are neither animal nor vegetable must be mineral — and these *things* are divided into four classes — I understand you so far, dear papa.”

“The first class,” continued her father, “contains those called *earthy* minerals, being such as are without taste or smell, as clay, spar, diamonds, rubies, crystals, emeralds, and sapphires.”

“Chalk, stone, and sand, too, papa:— they have neither smell nor taste.”

“Very true,” said her father. “The second class includes *saline* minerals, which are heavy, soft, and partly transparent.”

“What is the meaning of the word saline?”

“Of a salt or pungent taste.”

“Alum, salt-petre, salt itself, papa.”

“Well done, my Ellen!” said her father, and he stroked her rosy cheek.

“ The third class contains *inflammable* minerals,” continued he, “ such as are light, brittle, and never feel cold : by inflammable is meant capable of taking fire—capable of combustion.”

“ I have learnt in my ‘ Blair’s Catechism,’ ” said Ellen, “ that coal is a mineral substance dug out of the earth, and used for fires because very combustible—so, coal must be placed in the third class, which contains the inflammable minerals.”

“ The fourth class,” said her father, “ includes those which are composed chiefly of metals, and called *metallic* minerals ; they are heavy, cold, capable of making wire, malleable and capable of being heated and worked into different shapes, as gold and silver.”

“ Now, papa,” exclaimed Ellen, “ I have them all in order due.

Ist Class—Earthy minerals.

IIId Class—Saline minerals.

IIIId Class—Inflammable minerals.

IVth Class—Metallic minerals.”

“ When you are thoroughly acquainted with each of them,” said her father, “ you will understand mineralogy. From mineralogy we proceed to Chemistry, but we will leave that out of the question at present. This drawer,” continued he, opening it quite wide, “ contains specimens in each class.”

“ Oh, it is a beautiful drawer !” said Ellen.

“ And here,” cried she, with an exclamation of delight, “ here is the *geographical lichen*—the map-stone—with its green and black lines, just the same as ever—the map-stone we so often found in Cumberland—it makes me think of those wild mountains pointing their blue tops to the clouds. How much pleased I was when I first found it ! Do

you remember, Isaline, the happy day that we spent near the fisherman's hut, when we took tea in the wood, and talked about swallows, and about humming-birds, and wrens—about the little wren which creeps up the stems of the crown imperial? Will you show me a little wren sipping honey, dear Isaline?"

"Next summer, probably, I may, my love. It is now too late in the season—the crown imperials are over."

"Then I must have patience till another year," said Ellen, "for I cannot help it. I will look at this drawer—— Oh, papa! what a beautiful piece of marble! marble is an earthy mineral, but where does it come from, papa?"

"Marble is called a calcareous earth, and"——

"*Calcareous*, papa! will you be my dictionary?"

"Calcareous is derived from the word

calx, which is lime, in Latin ; and lime is procured from any calcareous earths, by burning them in a strong fire. Marble is the luxury of architecture ; it is brought from many countries. Great Britain produces some. The piece in your hand came from Italy. The little islands in the Archipelago, near Turkey, yield some fine sorts. That of Paros is noted for whiteness and purity, and the finest antique statues have been made of Parian marble.”

“ The Isle of Paros is also in the Archipelago : is it not, papa ? ”

“ Yes, my dear ; and so common is marble there, that the natives build their houses of it.”

“ One thing puzzles me, papa ; you told me just now that marble is calcareous, or that it may be burnt into lime — marble is generally dark-coloured, you

know, and sometimes black; how then can it be changed into white lime?"

"A violent heat will expel most of the colouring matter of marbles, and make them white."

"Thank you, papa."

"Father," said Charles, "chalk is also a kind of calcareous earth; is it not?"

"Yes, my dear; and limestones are also—indeed the name *limestone* is derived from its calcareous property."

"Look, papa!" exclaimed Ellen, "at this beautiful piece of spar, glittering like a diamond.—Where did it come from?"

"Not any great way off, my love."

"What! Is it Bristol-spar, papa? Did you bring it from Clifton, when you were there, Isaline? Did you find it among the rocks, yourself?"

"That piece came from Clifton," re-

plied her sister, " I did not find it myself, but I bought it of a poor boy, whom we found wandering in search of specimens to sell. These clear and brilliant stones are not uncommon among the rocks, particularly that called St. Vincent's rock; but the workmen who are employed about them, generally take care to secure any rare specimens."

"Workmen!" exclaimed Ellen. "Why are there workmen always about?"

"Because these rocks," replied her sister, "consist almost entirely of one of the calcareous earths of which we have been speaking — of exquisite lime-stone, and supply from an inexhaustible fund, every want of the neighbouring farmer and builder."

"I know," said Ellen, "that lime is of use to the farmers, for when I was walking with Charles one day in a ploughed field, we saw many little heaps

of it spread about the ground, and he told me it was for manure; but as to the builder, papa — a builder is a man who builds houses, and houses are made more commonly of bricks than stones—so, I cannot tell, papa, why *he* should want lime.”

“ Think again, Ellen.”

Ellen thought again, and she thought to some purpose, this time.

“ *Mortar!*” exclaimed she—“ the cement by which bricks and stones are held together is—must be—made of lime.”

“ Lime and sand, well mixed together,” said her father.

“ Well, papa, lime and sand mixed together, make mortar—so I find and acknowledge that lime-stone is of use—great use—to the builder.”

“ The workmen who dig it,” said Isaline, “ are let down over the steep precipices, by means of ropes; it is a dan-

gerous way of earning a livelihood. The stone is sometimes polished and made into chimney-pieces, but it is chiefly burnt for lime, for which purpose vast quantities of it are blown up with gunpowder. The effect of the explosion, re-echoed from cliff to cliff, is more grand and sublime, than you can easily imagine.

“As I said before, we bought this piece of spar of a little boy, whom we met wandering among the rocks; the countenance of this child was pleasing yet melancholy, and when he offered us the contents of his basket, his heart seemed overwhelmed with grief: on questioning him, we found that he had lost his father, who by a false step had been precipitated down seventy yards of almost perpendicular descent.”

“Poor little fellow!” said Ellen—
“how unhappy — how melancholy I

should look, if I had lost my dear papa !”

“ He lived with his mother at the foot of St. Vincent’s rock,” said Isaline, “ and we often visited their cottage : the little boy earned a few pence now and then, by selling pieces of spar, petrifications, metallic ores, mundic, and other fossils, with which the workmen supplied him, for they all seemed to take an interest in the welfare of the unfortunate Edwin.”

The tears came into Ellen’s eyes.

Her father observing the effect which Isaline’s recital had made, although he did not wish to check the tender tear that starts for others’ woes, endeavoured to engage his little Ellen’s attention again.

“ Now,” said he, “ let us pass on to the *argillaceous* earths — they are a second class, as it were, contained within

the first.—Charles, can you tell me what is meant by the word argillaceous?”

“*Argilla* is Latin for *clay*, papa — I suppose it means clayey.”

“It does. In general the argillaceous earths are of a soft texture, and will become sticky by being tempered with water.”

“Oh, yes, papa,” said Ellen, her looks brightening as she spoke, “I have seen the man at the brick-kiln in the village, making bricks, and he mixed the clay with water.”

“These earths,” said her father, “differ very much from each other in colour as well as in many other respects. Some are perfectly white as that of which tobacco-pipes are made. Others are brown, yellow, blue, and in short, of all hues, which they owe to mixtures of other earths or metals.”

“Are slates of the argillaceous class, papa?” said Ellen.

“ They are, my dear.”

“ And now we will talk about the third class of earths which contains those called *siliceous*—some of them will undoubtedly please you, my little Ellen. Let us, however, first apply to Charles for an explanation of the term *siliceous*.”

“ It is derived from the Latin word *silex*, papa, which signifies a flint-stone.”

“ I will tell you,” continued the kind father, “ the principal properties of these earths. They are all very hard. They mostly run into particular shapes, with sharp angles and points, and are transparent, upon which account they are sometimes called crystalline earths. They do not in the least soften with water, like clays; nor do they burn to lime as calcareous earths do. Flint, of course, belongs to the siliceous class, and sand, and pebbles, and precious stones, and—”

“ And this beautiful piece of Bristol spar, papa — and this fine specimen of Labrador spar.—No. 29, Labrador spar —which, when I hold it in one direction, is of a bright green colour—and now, in another, it is of a charming yellow; these — these — belong to the siliceous class of earthly minerals.—Do they not, papa ? ”

“ Yes, my dear, and all other spars and crystals. Allow me to open this drawer by you, and you shall have the gratification of looking at the precious stones.”

Ellen was delighted with the brilliant appearance of this drawer of treasures. Isaline pointed out the diamond, which is the most valuable and hardest of all jewels, and is found only in the East Indies and Brazil—the mineral beds of these countries being fraught with precious gems and ores. The red sparkling ruby next caught her attention, which

is sometimes found in Hungary. Then the emerald, a very bright and polished stone, always of a beautiful green, mostly found in the East Indies. Then the yellow and transparent topaz, the sky-blue-coloured sapphire, the purple amethyst, and the transparent stone called crystal, white like the diamond, but much inferior in lustre and hardness, and found principally in the island of Madagascar.

Ellen's lively eyes darted from one to another with astonishing rapidity; and her questions pronounced in a breath, were too numerous for Isaline to answer.

At length a mineral substance fixed her attention, it was of a whitish or silver colour, and a woolly texture, consisting of small threads or fibres.

She asked its name.

“It is called Asbestos,” said Charles,

“and a method has been found of working it into cloth and paper.”

“Oh, Charles, you are in play! How could any one possibly make cloth of stone?”

“It is nevertheless true,” continued her brother, “however much you may be inclined to doubt it,—I appeal to papa.”

“Charles is right,” said his father, “the fibres of this mineral may be manufactured into cloth, and it is endued with the wonderful property of resisting fire and remaining unconsumed in the most intense heat. This kind of linen was highly valued by the ancients, who used it in the making of shrouds for royal funerals, to wrap up the corpse, so that the ashes might be preserved distinct from those of the wood of which the funeral pile was composed.

* * * * *

And now, my little mineralogist, we have gone through the three great divisions of the first class of minerals, the *calcareous*, the *argillaceous*, and the *siliceous* earths. How inexhaustible is nature!”

At this moment the sound of a carriage was heard driving up the gravel walk ; company was announced, and as Ellen's father closed the doors of the India Cabinet, he said, “ Isaline, my dear, will you give your little sister some account of a salt-mine ? ”

CHAPTER VI.

BUT Isaline was called away also, and it was some days before Ellen could gain an interview with her sister in the dressing-room ; however, as she was going to

the nursery one morning to take little Harriet's wax-doll, she heard her voice, and hastened back immediately. The kind and good-natured Isaline was reading, but she guessed Ellen's wishes, and closed her book when she entered the room.

“ And why do you think, dear sister,” exclaimed the rosy girl, “ why do you think that papa wished you to give me a description of a salt-mine?”

“ Because he likes you to receive pleasure,—this was one reason; and another reason is, that there is no good specimen of a *saline* mineral in the cabinet, and he thought that such an account might compensate for the omission.”

“ But I thought,” said Ellen, “ that salt was obtained from sea-water.”

“ A great quantity of it is, my dear, although much of the salt we use is dug from pits, or mines in the earth.”

“ Indeed! will you tell me where these mines are, and in what manner the salt is procured?”

“ Immense mines of rock-salt have been discovered in England,” said Isaline, “ but I will give you an account of one at a village called Wielitsca, which will give you an idea of them, and serve for a description of salt-mines in general. It is at so prodigious a depth under ground, that the bright beams of the sun can never enter, yet the inhabitants know not what darkness is; lamps are kept always burning, the light of which shining upon the glittering salt, makes it appear a complete palace of diamonds.”

“ Inhabitants! Do the people then live under ground?”

“ Yes: the salt-mine is a kind of subterraneous republic; many of the miners are born and live all their days in it.

What astonishment must a traveller feel on arriving at the bottom of this wonderful place. The first thing that strikes him with surprise is an immense number of little huts, hollowed out of the salt, and upheld by huge pillars, cut with a chisel by the miners; (these prevent the roof from falling in, as it would otherwise do, and bury them all in its ruins); nor can he be less surprised at observing a clear rivulet of fresh water running through the midst of these glittering mountains, and supplying the people with a source of comfort and accommodation little to be expected in such a dreary region. The workmen he will find employed in hewing the rocks of salt, which from the flambeaux kept constantly burning, are white as crystals, or tinged with all the colours of the rainbow. As soon as the massive pieces are raised from the quarry by means of engines, they break

them into fragments proper to be thrown into the mill, where they are ground into a coarse powder, which serves the purposes of sea-salt."

"How glad I am, that I am not one of the miner's children, that I was not born in the mine of Wielitsca!" cried Ellen. "I could never have rambled upon the Cumberland mountains,—I could never have gathered wild roses and yellow flags for you to copy,—nor have seen the young lambs skipping about in the meadows early in the spring, nor have heard the little birds warble among the green boughs:—oh, Isaline,—how sorry I am, for those unfortunate children."

"They have never known your pleasures, my love, therefore they cannot regret the want of them!"

"Here is a poetical description of a town in a salt-mine: when you can repeat

it perfectly, you shall see the two remaining drawers of the India Cabinet."

Ellen had a retentive memory. The following morning, she repaired again to the dressing-room, with the paper in her hand.

Her father was reading a letter to her mother, when she entered: Ellen retreated.

"Do not be alarmed, my dear little girl, you may come in," said he, "I will finish my letter another time." And as Ellen's father spoke, he placed her on his knee, and she repeated to him clearly and distinctly the verse she had been learning.

"Thus, cavern'd round in Cracow's mighty mines,
With crystal walls, a gorgeous city shines;
Scoop'd in the briny rock long streets extend
Their hoary course, and glittering domes ascend;
Down the bright steeps, emerging into day,
Impetuous fountains burst their headlong way,

O'er milk-white vales in ivory channels spread,
And wandering seek their subterraneous bed.
Far gleaming o'er the town transparent fanes
Rear their white towers, and wave their golden
 vanes ;
Long lines of lustres pour their trembling rays,
And the bright vault returns the mingled blaze."

" And now, tell me," said her father,
" what are meant by ' Cracow's mighty
mines?'—what is meant by the ' briny
rock?'—and what are meant by ' trans-
parent fanes?'—and what is meant by

' Long lines of lustres pour their trembling rays?'"

Ellen had fortunately asked for a particular explanation from Isaline, of every word she did not understand. Children ought never to learn poetry, unless they have a kind mother or sister, to whom they can apply when under any difficulty, as Ellen did.

She smiled, and said, "The mines are called 'Cracow's mighty mines' because they are only a few miles from the city of Cracow; Wielitsca is but a village. 'The briny rock,'—briny means salt, papa, and as these rocks are composed of salt itself, they may well be called briny."

And now, 'transparent fanes?'"

"The meaning of the word fane is temple: 'transparent fanes,' the vaults or temples cut between the pillars of salt are what are meant by transparent fanes; transparent means clear, bright. Lamps are kept constantly burning among them, and the light from so many torches glittering against the salt rocks, is what is meant by a 'mingled blaze,' and 'long lines of lustres.'"

Ellen's father was convinced that his little girl understood the poetry she had been repeating; and he said, "I will

reward your attention, my love, by showing you the two remaining drawers of the Cabinet."

"This," continued he, opening one, "contains many specimens in the third and fourth classes. Let us find an inflammable mineral. Here is a piece of numia or mineral tallow, which was dug up on the coast of Finland: and here is a specimen of amber; amber is found in several countries of Europe, beneath the surface of the earth, among clay and sand, or on the sea-shore."

Ellen took this yellow transparent mass in her hand.

"It is capable of combustion," said her father, "as coal is, therefore it is an inflammable.

"And now we will proceed to the fourth and last class, the metallic minerals. How are they known?"

“ They are heavy and cold, papa.”

“ They are also distinguished by being opaque, ductile, and malleable.”

“ Oh, papa,” exclaimed Ellen, “ do you believe it possible for me to remember those hard words?”

“ I do believe it very possible, especially when you have heard what they mean.

“ Metals are brilliant, you know. Look at my watch : although gold is so bright it is not transparent ; the thinnest plate of metal that can be made will keep out the light as well as a stone wall.”

“ So far, so good, papa,—The piece of copper upon which Charles was trying to engrave one day, was as bright as a mirror, but not transparent ; I could not see through it, so it was *opaque*.”

“ When metals possess the property of spreading under the hammer, and are

thus capable of being worked into shape, they are called *malleable*. Look at this crown; it is not in the form it was when dug out of the mine; therefore silver is malleable.

“When metals can be worked into wire they are called *ductile*; when they can be melted, they are called *fusible*.”

“Well, now, papa,” exclaimed the intelligent Ellen, “to sum up the character of a metal, it is a *cold, heavy, opaque, malleable, ductile, and fusible* mineral! I did not expect to have been able to remember these words, but I understand what they mean, and remember them too.”

“Success is the reward of attention; you have repeated them admirably.”

“Metals are seldom found in the earth in a pure state, but mixed with other minerals, and they are then called

ores. These ores are commonly found in mountainous countries, chiefly in crevices of rocks, forming veins of ore. The cavities made in the earth in order to extract them are called mines.”

“ But, then, how is the real metal separated from the other earths, papa?”

“ By the force of fire.

“ Gold and silver are called *perfect* metals, because they lose nothing by the heat of the fire; other metals are called *imperfect*, because they decrease by heat, and can easily be dissolved or corroded by acid.”

“ What does the word *corrode* mean, papa?—And what is an *acid*?”

“ The word *corrode* signifies to eat away by degrees; and an acid is any thing sour or sharp.”

“ Gold is found chiefly in America, is it not, papa?”

“ Yes: in South America, in the East Indies, and on the coast of Africa. The sand of some rivers contains particles of gold; it is washed down along with the soil from mountains.

“ Silver is chiefly found in the mines of Potosi in Peru.

“ Here is a specimen of copper in its native state.”

“ Indeed, papa! exclaimed Ellen; “and where does copper come from?”

“ The best and purest is found in the Swedish mines, but the largest mine is that upon Paris mountain in the Isle of Anglesea.”

“ Anglesea?” said Ellen, “ the island north-west of Wales, which forms one of the Welsh counties.”

“ Paris mountain consists of copper ore, from which immense quantities are dug every year. There are three kinds

of copper; the common, the rose copper, and the virgin copper," said her father.

"And now, papa, will you tell me something about iron?—I have found a specimen of iron ore,—No. 61, 'iron ore from the isle of Elba, near Corsica.'—I know where Corsica is, papa, it is in the Mediterranean; but is the island of Elba particularly famous for iron? that is what I want to know."

"Yes: it is remarkable for mines of iron, as well as quarries of marble. Iron abounds in many of the European countries, and is the most useful of all the metals, and it is likewise the most common."

"Here is a specimen of lead ore. Lead abounds most in England; the best mines are in Cornwall, Devonshire, Derbyshire, Northumberland, and Durham."

“ I thought that Cornwall was famous for its *tin* mines, papa.”

“ So it is, my love ; they are supposed to be the most productive of any in Europe. Very fine tin is also found in the peninsula of Malacca, in the East Indies.—And now, my dear little girl,” continued her father, “ we have completed our examination of the six drawers. There are many specimens yet unnoticed certainly, but those will afford you amusement when you are older, when you have made some progress in the science of mineralogy.”

“ Oh, papa,” exclaimed Ellen, “ I wish I had all the pleasure to come over again——it is gone——gone for ever!”

“ What a melancholy tone!” said her mother; “ surely the remembrance of the pleasure you have received, and of the knowledge you have acquired, will re-

main, although the novelty of seeing the India Cabinet for the *first* time be gone off.

“ You may look at it again sometime, and as we propose going to the sea-side in the course of a week or two, you may perhaps have the opportunity of making some addition to it, in your rambles among the rocks.”

“ So I may, mamma. And every time that I take a peep at this Cabinet, it will bring to mind many agreeable things; and these things will make up—compensate as you say—for having lost its novelty.

“ It will make me think of the day we spent on the mountain, and drank tea in the wood, and talked about swallows.

‘ The swallow, that on rapid wing
Sweeps along in sportive ring.’

led to the conversation about the wren, mamma; the wren led to the humming-bird, the smallest of all the feathered tribe, mamma; the humming-bird led to your Cabinet: so you see I owe all my pleasure to that little humming-bird.

—“Oh, no!” continued Ellen, as if recollecting herself,—“I owe it to you, dear mamma, for allowing me to see it, and to you, dear papa, for having taught me so much; and to you, my dear Isaline, for having employed so much of your time in telling me what I did not know.”

“Well, my dear Ellen,” said her father, “if you have been taught to consider that the productions of Nature are without limit and without end; if you have been taught to perceive how much perfection is displayed in every pebble, in every shell, and in every leaf; if you have been taught to regard the wondrous

works of God with admiration and astonishment; then, we shall not regret the time that has been spent in showing you the India Cabinet.”

CHAPTER VII.

IN the course of a few days every thing was ready for the proposed journey.

The delightful village of Charmouth, as affording many gratifications for the lover of nature, was fixed upon for an autumnal residence. It occupies an elevated situation, and consequently commands many extensive and beautiful prospects both of the sea and land.

The wished-for day at length arrived; the juvenile group, gay, lively, full of health and spirits, assembled together;

and after an early breakfast, Isaline, Charles, Ellen, and their father and mother, ascended an open landau; another chaise conveyed the two nurse-maids and their young charges; for *carts* were not engaged upon *this* expedition.

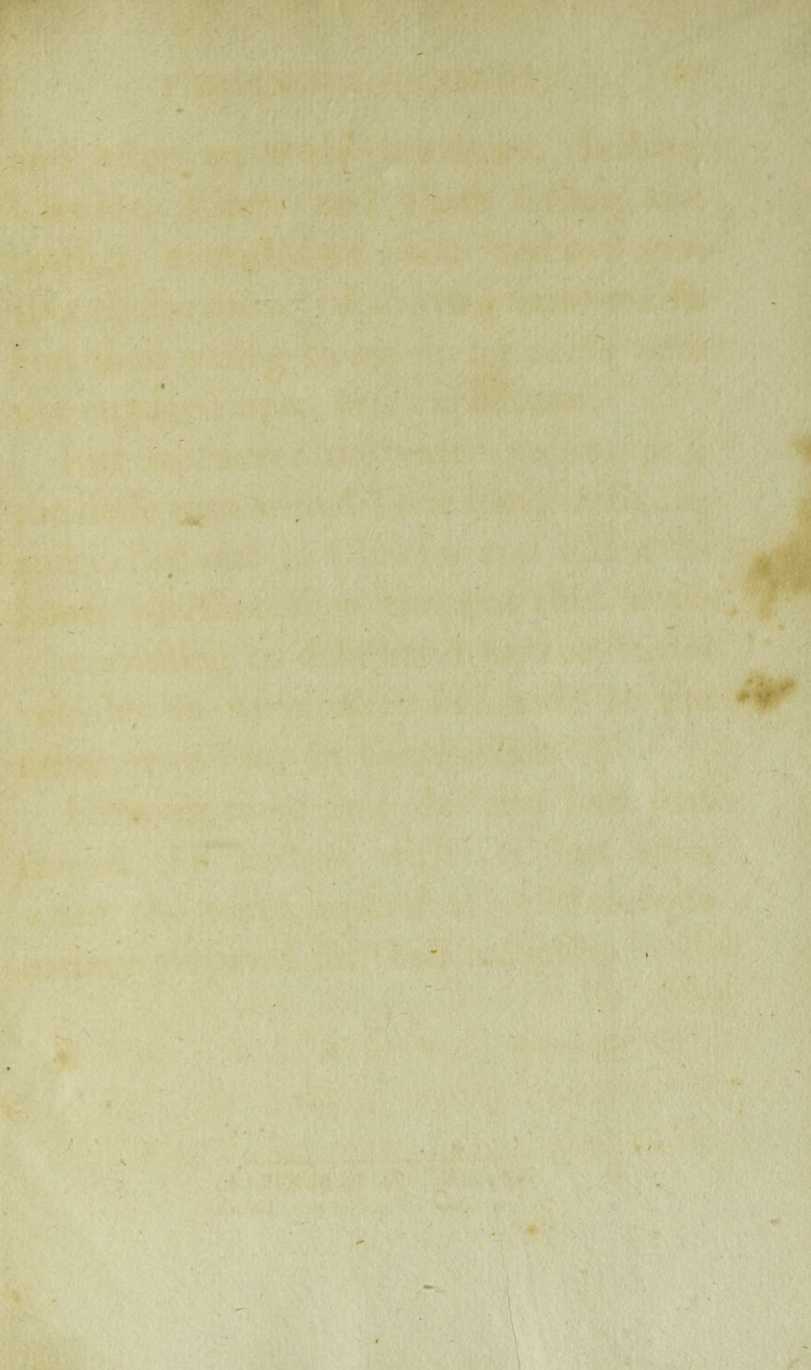
But whenever the carriages stopped, the little ones waved their handkerchiefs, and called out to Charles and Ellen to know whether they thought this mode of travelling as delightful as the rustic vehicles in which they had rode to the fisherman's hut, in Cumberland.

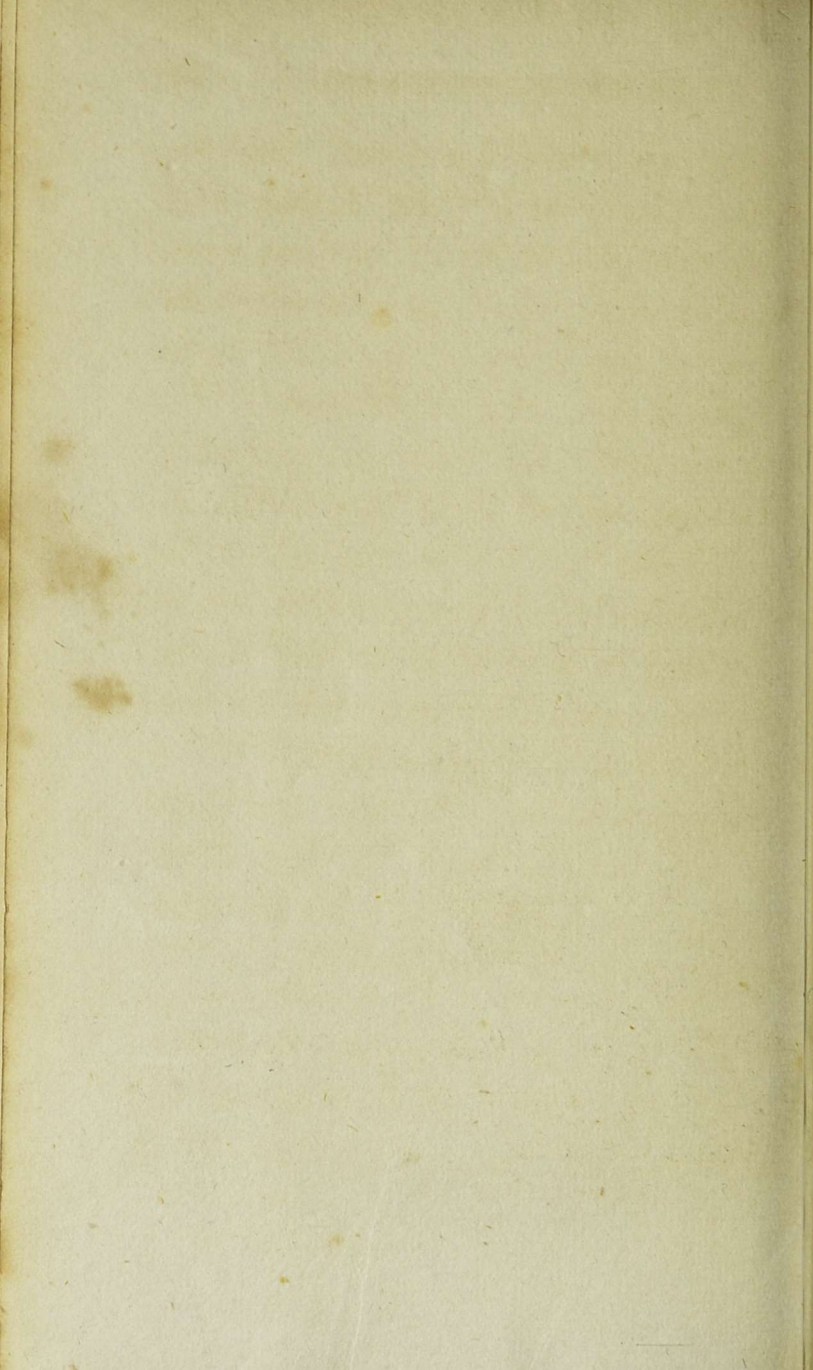
Evening came on; the sun had just tinged the horison with its last rays, when the party arrived at a picturesque cottage prepared for their reception.

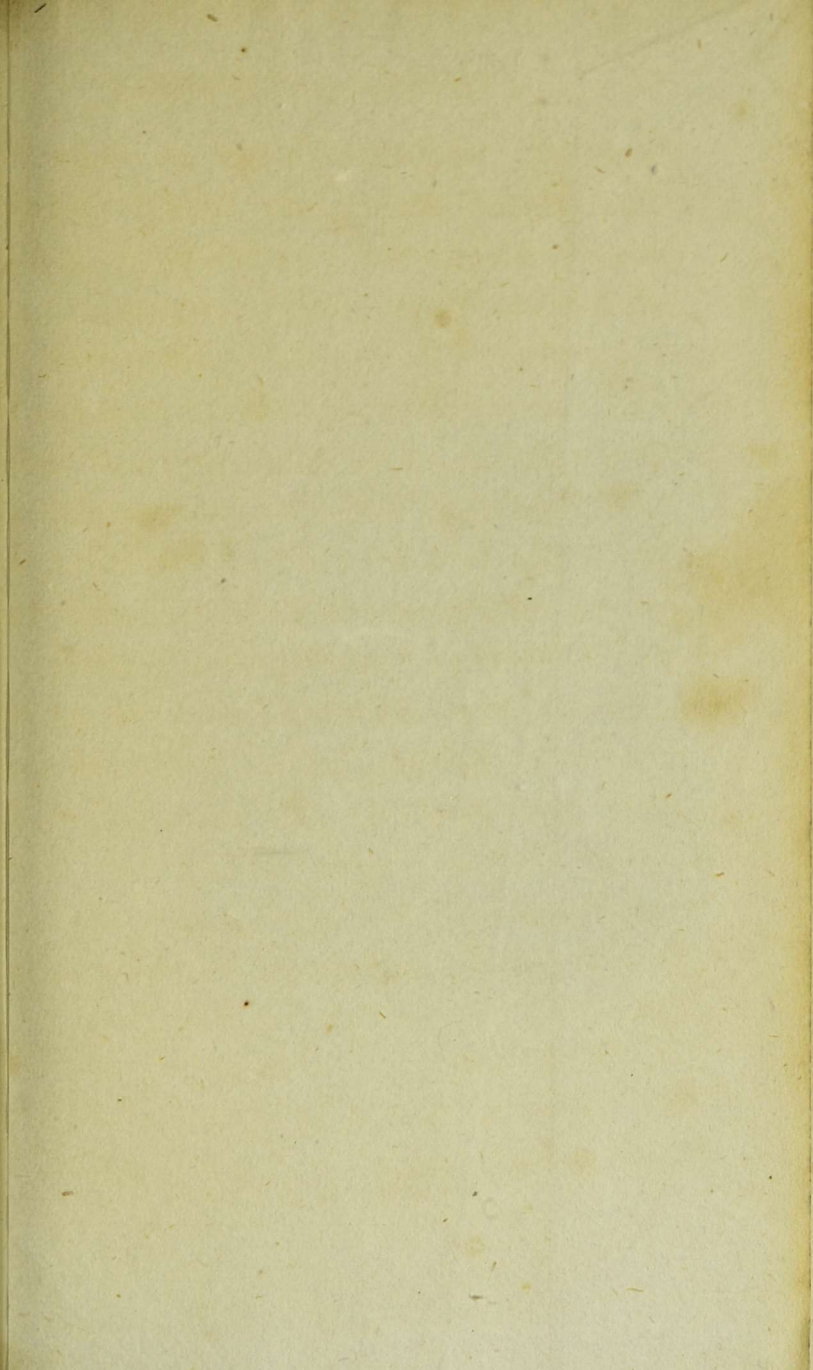
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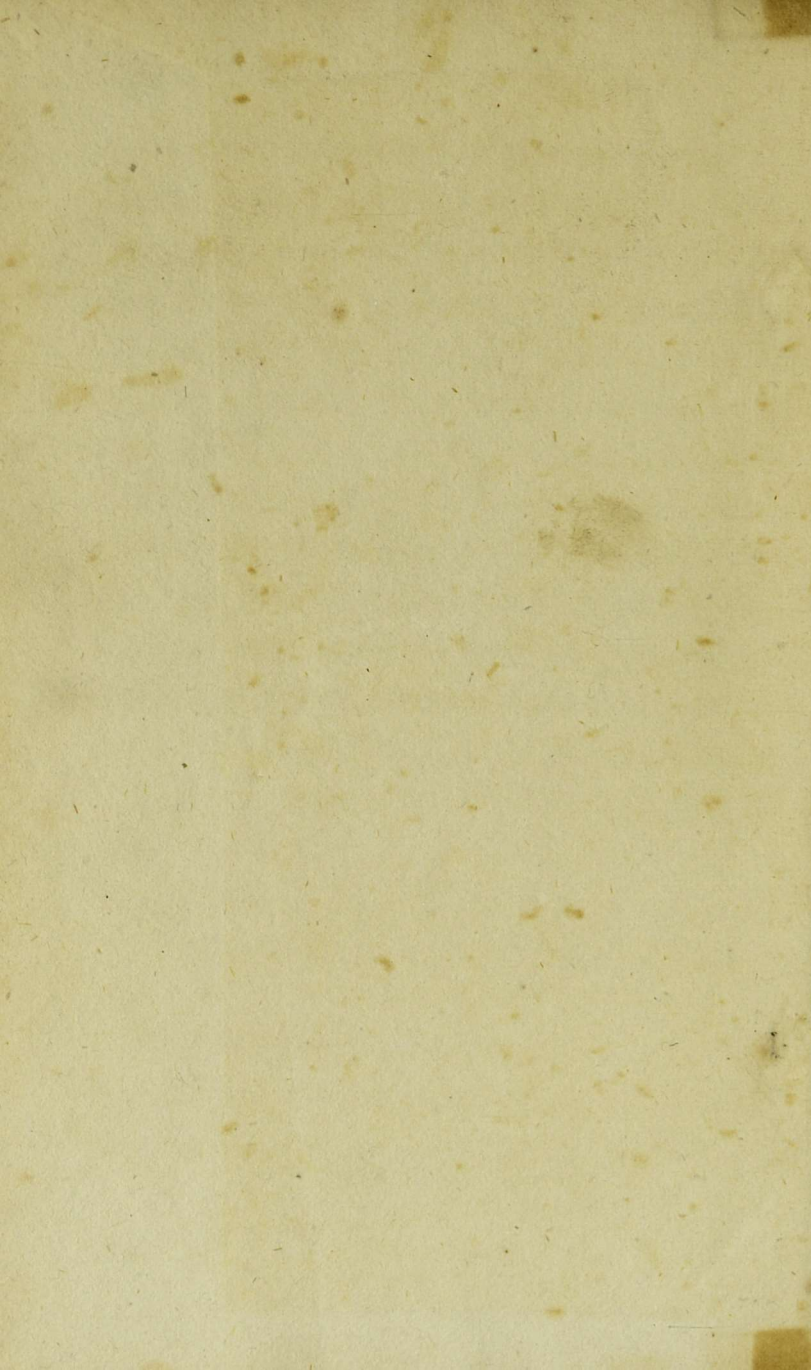
THE END.

and after a while, thinking, I believe,
Oscar, Ellen, and their father and
mother, ascended an open ladder, and
the chain conveyed the two travellers
and their young charges; but cuts were
not engaged upon this expedition.
But whenever the carriage stopped,
the little ones waved their hands,
and called out to Charles and Ellen to
know whether they thought the work
of travelling as well as the work
of walking in which they had taken to the
father and son in the carriage.
Evening came, but the sun had not
tinged the horizon with its last rays,
when the party entered at a distance
a large inn for their reception.







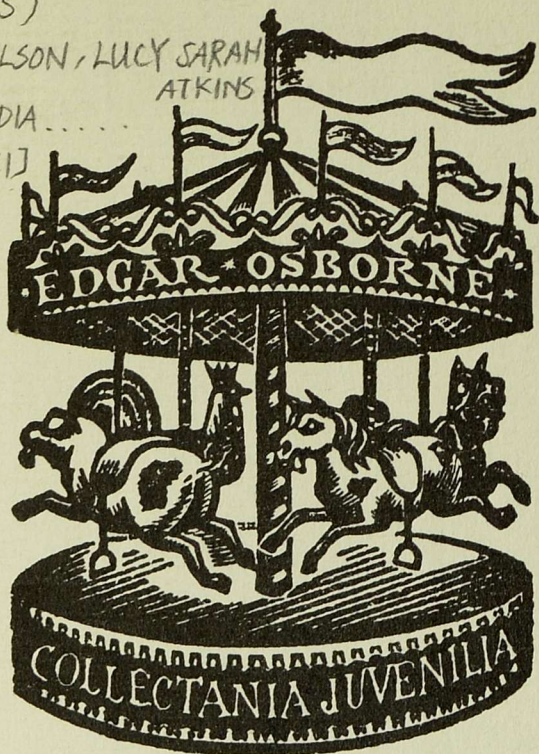


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WILSON, LUCY SARAH
ATKINS

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