



UNCLE BUNCLES

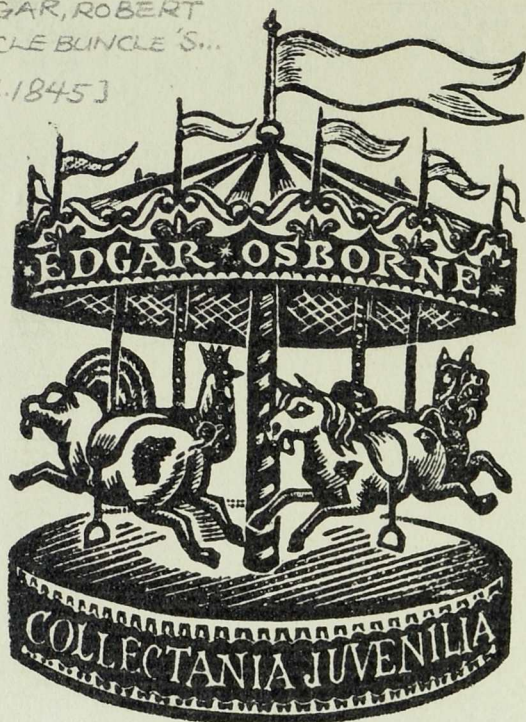
TRUE AND

INSTRUCTIVE STORIES

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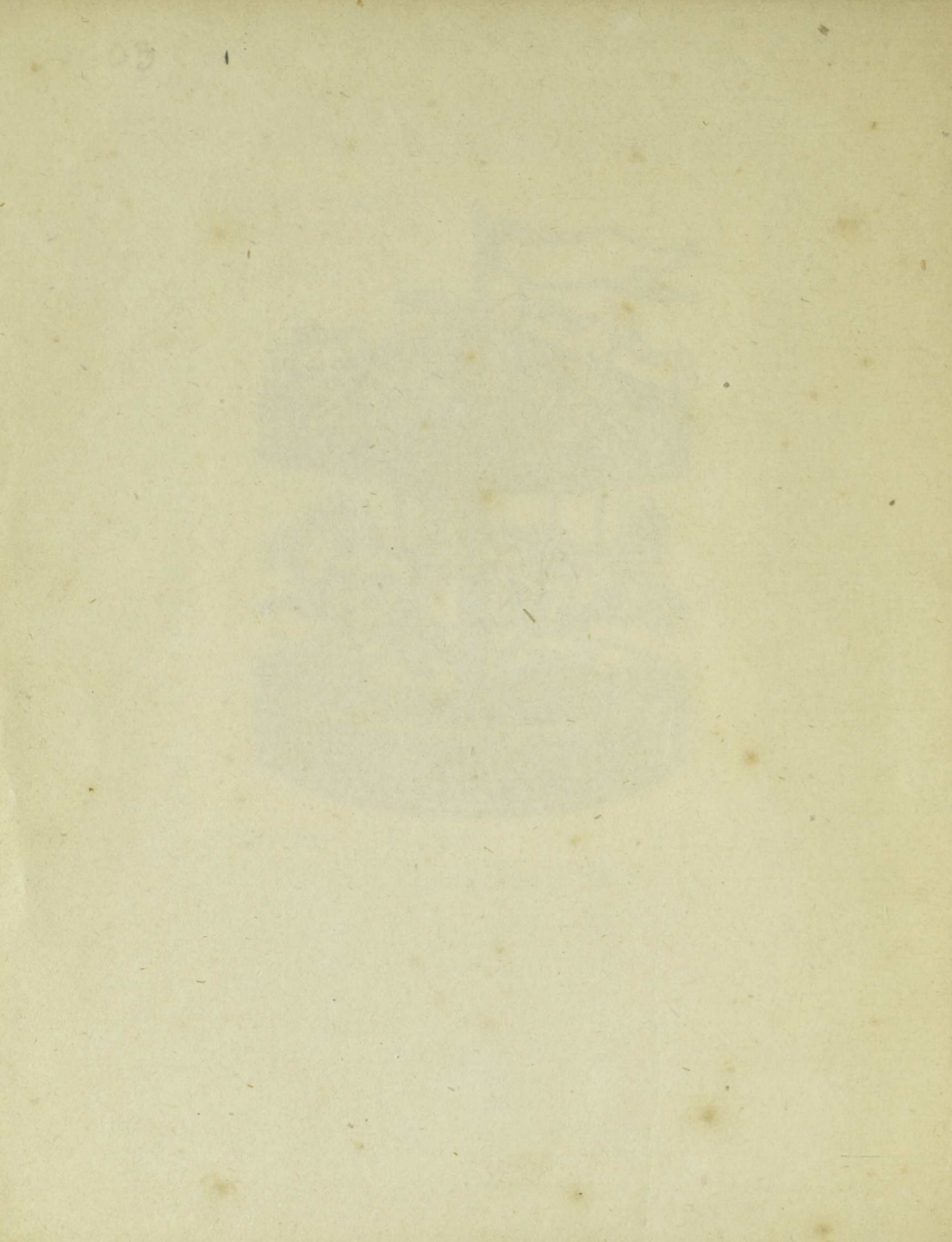
EDGAR, ROBERT
UNCLE BUNCLE 'S...

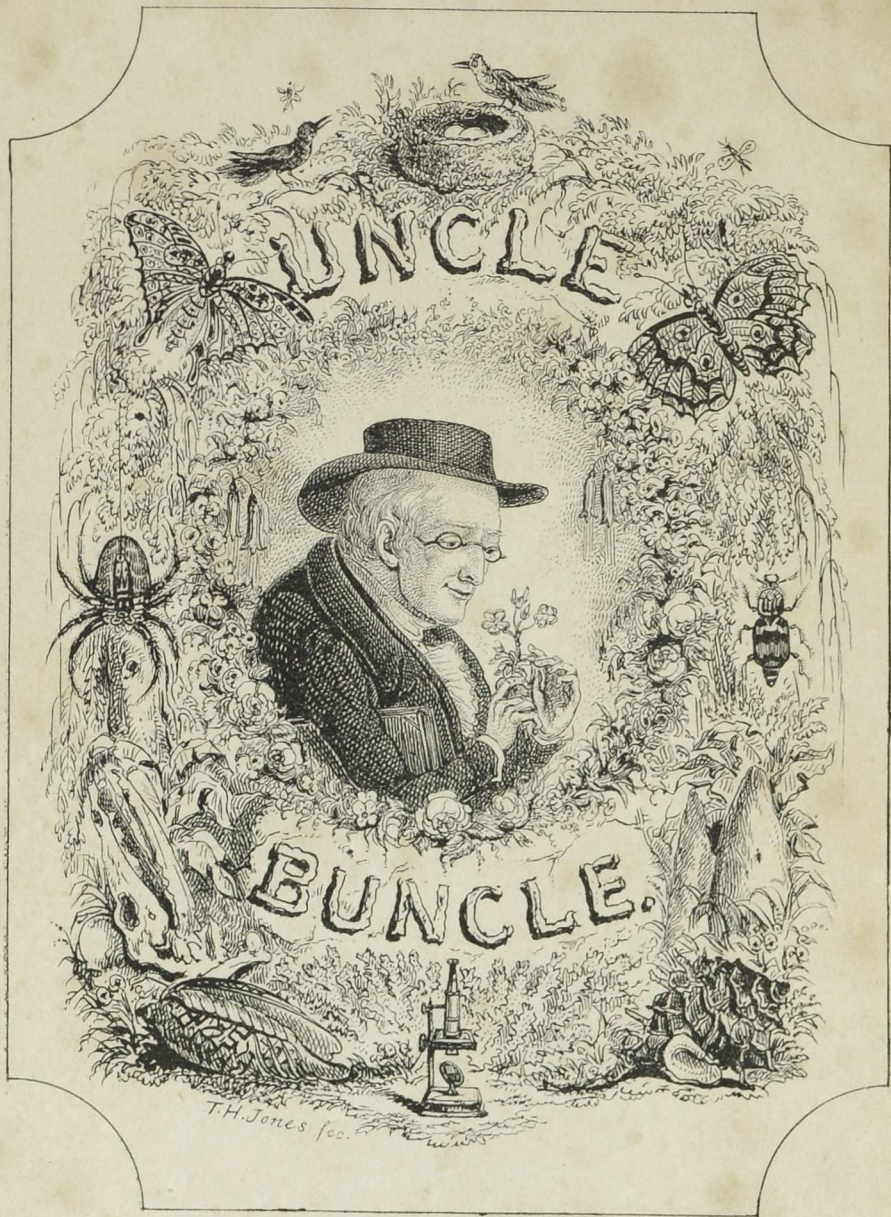
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T.H. Jones fec.

UNCLE BUNCLE'S

TRUE AND INSTRUCTIVE STORIES

ABOUT

Animals, Insects and Plants,

OR

AVERSION SUBDUED.

BY ROBERT EDGAR.

LONDON

DEAN AND MUNDAY,

THREADNEEDLE STREET.



UNCLE BUNCLE'S

TRUE AND INSTRUCTIVE STORIES

ABOUT THE MICROSCOPE, &c.

It was spring, and the evening was already advancing, when an elderly man, of genteel appearance, stepped over a style, and pursued his course through the meadow. In person he was thin, and of the middle height; but that which rendered him chiefly conspicuous, was a large hump between his shoulders.

The expression of his features, although intelligent, was rather severe; its gravity, perhaps, being increased by a pair of spectacles, which he always wore, on account of some defect in his sight. His pace was firm and quick; but his

course was wayward, as he turned continually out of the path, to examine the flowers with which the meadow was enamelled.

He soon entered a pleasant lane, the sides of which were bordered by a hedge now in full leaf. The banks were decked with a variety of wild flowers, to which his attention was soon busily directed. Whenever he met with a choice specimen, he stopped to gather it.

He would then examine it most minutely; the stem, the leaves, the cup, the blossom, every part underwent a most strict scrutiny, after which it was deposited between the leaves of a small book, which he evidently carried for the purpose of preserving specimens. And so he proceeded, like the ever-active bee, visiting every bank and flower in his way, until he reached the village.

Now the village, which was in the county of Dorsetshire, was upon the sea shore, and that part of the coast has long been noted for its

fossil remains; that is, for its curious specimens of animals and vegetables, changed, in the course of ages, by some mysterious process of nature, into stone. They are called fossil, from the circumstance of their being dug from the earth.

Entering the village, he first turned his steps towards a small shop, in the front of which, arranged upon a table, there appeared a choice collection of these fossils. The keeper of the shop was standing at the door, and on observing the approach of his visitor, made a low bow, and thus addressed him:—"Your most obedient, Mr Buncle: I was in hopes of seeing you during the day."

"Ha!" said Mr. Buncle, "then you have some fresh curiosity to show me?"

"I have often heard you express a wish," said the shopkeeper, "that you were in possession of a fine specimen of the *Chima Gigas*, or Great Clamp Shell; I have this day procured a noble specimen." Saying which, he led Mr. Buncle

into the shop, and displayed to his view, what in shape appeared to be an oyster-shell, but of a most extraordinary size, being several feet round, and weighing between two and three hundred pounds.

The reader may be informed that this enormous shell once contained a fish, similar in its shape to an oyster, and that it also possessed another shell which formed its lid, the shape of which was also similar to the flat shell of an oyster. Mr. Buncle was evidently a great lover of the works of nature. He expressed his delight at the sight of the shell in terms of the warmest enthusiasm, asking the shopkeeper how long he had possessed it, whence he had procured it, and at what price he would sell it; to all which questions the other replied, and answered the last in so satisfactory a manner, that Mr. Buncle purchased the shell without delay, and gave orders that it should be conveyed to his house in the morning.

This business having been concluded, Mr.



The Great Clamp Shell.

Buncle pursued his course through the village, not in the direction of his own home, but towards the house of his only sister, Mrs. Douglass, who resided in the neighbourhood.

Mrs. Douglass was making preparations for tea, and her eldest child, Walter, a boy of about nine years of age, was listlessly employed in one corner of the room, cutting out figures from a sheet of paper.

Mr. Douglass regarded his son with evident uneasiness. At length he remarked, addressing Mrs. Douglass, "I have seldom the satisfaction of noticing that Walter, in his hours of leisure, employs his time in any profitable pursuit. He is very quick in learning his lessons, and his teachers all seem gratified with his progress; but no sooner is he liberated from his studies, than instead of recreating his mind with reading, or any praiseworthy object of curiosity, he saunters about the house or the grounds, apparently without any object but that of killing time. He

is now reaching an intelligent age, but his knowledge seems to be chiefly confined to the mere routine of the school-room. I have frequently wished that your brother, Mr. Buncle, who is a man of such varied information, and whose attention is so unceasingly directed to subjects likely to attract the attention of youth, would take him oftener to his house, and endeavour to implant in his mind a taste for some study which, whilst it conveys instruction, affords also a rational amusement for a leisure hour."

Mrs. Douglass was fully sensible of the justness of these remarks, so that on the arrival of her brother, Mr. Buncle, shortly afterwards, the subject was discussed in his presence.

"I have frequently noticed that indolence in his disposition," said Mr. Buncle, "and it has been my practice, whenever I have had an opportunity, to direct his attention to some interesting fact, in the hope, that, afterwards, he would pursue the subject either by inquiries or a reference to his books "

“We have noticed your kindness in that particular,” said Mr. Douglass, “but it had occurred to me, that his attention is more likely to be fixed, in the first instance, by the actual view of any particular object of interest. Now you have in your house an abundance of subjects calculated to arouse the curiosity and awaken the interest of a boy whose education has not been neglected. You have a room full of philosophical instruments, maps, portfolios of drawings and engravings, books adorned with splendid plates, and an excellent museum of preserved specimens relating to natural history. If you are not averse to the trouble it may give you, you might show him over your rooms, and direct his attention to objects of interest. A description and an explanation might then be introduced with advantage.”

Mr. Buncle, without any hesitation, expressed his willingness to try the plan, and it was finally settled that on the day ensuing, he should begin to put the scheme into practice.

Walter was, therefore, invited by his uncle to pay him a visit on the following day, when, as it was purposed, two of his cousins, who were intelligent youths, and likely by their remarks to arouse his curiosity, would also be invited to meet him.

UNCLE BUNCLE'S COTTAGE.

On the slope of a hill which commanded a view of the sea coast, and distant about a mile from the residence of Mr. Douglass, stood one of these neat and ornamental buildings, which though containing nine or ten rooms, was still called by the humble title of a cottage. In the rear, and on the rise of the hill, might be seen a most luxuriant orchard, now in full bloom, whilst in front there extended a handsome lawn, and the sides of the ground were entirely appropriated to the growth of the rarest plants and flowers.

It was now eleven o'clock in the forenoon, and in the centre of the lawn, might be seen Mr. Buncle and his three little nephews, Walter Douglass, and the two young Turners, Thomas and John.

The great clamp shell, of which we have before spoken, had been just conveyed to the spot, adjacent to which an ornamental fountain was throwing up a column of water. The sun was shining with great brightness, and as the water descended into a brick basin which was sunk in the turf, its thousand drops were reflected to the view in all the varied colours of the rainbow.

"Do you observe," said Thomas Turner to his cousin Walter, "what beautiful colours are presented by these drops?"

"Yes, I notice them," said Walter, in his usual indifferent manner.

"Are you acquainted," said Thomas, "with the way in which those varied colours are produced?"

"Not I," said Walter, "I never gave the subject a thought; I suppose no one can explain the cause."

"Oh yes," said Thomas, "the cause may be easily explained; and Uncle Buncle, who is so kind and communicative upon every subject, explained the cause to John and me, a few days ago. The rays of light, in passing through the drops, are refracted, or bent out of their course, and so produce those beautiful colours, exactly in the same way that the light is reflected in the cut glass drops of a chandelier."

"I have often noticed the beautiful colours in the glass drops on our mantel-piece," observed Walter, "and may the same explanation be applied to both?"

"It may, or to the rainbow either," said Mr. Buncle, joining in the conversation.

"Indeed," said Walter, for the first time showing some curiosity.

"Yes," pursued Mr. Buncle, "you only see the

rainbow during the sunshine, when the sun's rays are reflected, or rather refracted, in the same manner as they are by the cut glass drops of the chandelier, or by the drops of water which are at present descending."

Walter seemed gratified with this information, and yet curious to know more, was about to put another question, when his uncle observed:

"I intend to have this clamp shell pierced in the centre, and placed as a basin to receive the water from the fountain."

Walter now edged up to Thomas, and said, "That is the largest shell I ever saw, and its shape resembles that of an oyster-shell; I wonder whether it ever contained a fish?"

"Certainly it did," responded Thomas.

"But I should like to know whether that fish was eatable," said Walter.

To this observation Thomas replied, by declaring his ignorance; but recommending his cousin to ask Mr. Buncle.

Walter with eagerness immediately put the question, and Mr. Buncle, delighted to find that his nephew's curiosity began to show itself, answered him readily by informing, him that the fish, being of a very large size, was probably too coarse for eating.

Mr. Buncle, now addressing Thomas, asked him whether he would like to look through his microscope, as the day being sunshiny the light was favourable for viewing the objects. Thomas and John were both delighted with the expectation of looking through the microscope, and Walter, quite ignorant of the nature of such an instrument, followed them into the house without feeling the slightest interest.

Mr. Buncle led his nephew to a large room, the sides of which were furnished with large shelves, whereon were arrayed a great number of bottles containing different liquids. These were for the performance of various experiments in chemistry. On a long table which stood in the centre, there



Uncle Buncle explains the Fountain.

appeared a large glass machine, several bottles, and other instruments, all used for electrical purposes. Walter had never seen an electrical machine before, and could not avoid uttering an exclamation of surprise, when his uncle giving the wheel of the machine a few turns, and applying his knuckles to the conductor, a stream of fire was seen to issue from it, and apparently to enter his uncle's knuckles, but without occasioning any pain.

To Thomas and John, this was no novelty, but Walter's curiosity was raised to the utmost pitch, and he could not restrain himself from putting to his uncle several questions upon the subject.

Mr. Buncle taking up a small head which bore the appearance of having once belonged to a doll, but from the top of which, hung a great quantity of hair, said, that on some future occasion he would cause the hair (by help of his machine) to stand out quite stiffly; and these little figures, said he, which are cut out of pith,

(pointing to some little figures of Punch and Harlequin, contained in a bottle), shall, by the help of the same machine, be made to dance merrily together upon a flat brass plate, without being set in motion by any hand.

Walter immediately exclaimed "Oh, uncle, I should like to see that."—"Your wish shall be gratified," said his uncle, "but on some future day. I will now take out my microscope." Say-which, he produced a mahogany case, from which he took that curious instrument.

"Do you know, Walter," said Mr. Buncle, "how and for what purpose this instrument is constructed?" On Walter's declaring he did not, Mr. Buncle proceeded: "The instrument consists of a long tube, or pipe of brass, into which, at different distances, are fitted small pieces of glass, thicker in the middle than at the edges, and so adjusted as to become moveable either upwards or downwards, as may suit the sight of the observer. When an object, as the wing of

a fly, or the down of a moth, is placed under the lower glass, and a strong light thrown upon it by the aid of this small piece of looking glass, the object, on being looked at through the microscope, appears magnified, or increased in size to a most enormous extent, so that its parts, which could not be seen by the naked eye, become quite apparent. Thus the mite taken from the decayed cheese, which appears to the naked eye to be but a mere particle of dust, when viewed through the microscope is seen to be an animal as perfect in its shape as a sheep or a pig, to which last animal it bears a great resemblance, having the same sort of head and being clothed in a similar manner with bristles. I have placed a mite, as you may observe, on this small slide, immediately under the lower end of the microscope."

"I see the object," said Walter, "is that a mite? it looks like a small particle of dust." "Now look through the top of the microscope," said his uncle. Walter did so, and exclaimed, "Oh, uncle, how

curious! I am so delighted that you have shown me this! Why, I can see his head, and his eyes, and his snout, just like a pig's, and his mouth, and his body, and his legs, and all in motion—this is wonderful! It looks almost as large as a mouse. John and Thomas, do come and look at it,” and Walter clapped his hands and danced with delight.

His cousins also viewed the object. Mr. Buncle observed, “you will hardly suppose, Walter, that the water which you are in the habit of drinking, sometimes contains animals, which inhabit and swim about it in the same manner as the fishes inhabit the sea.” “No, indeed,” said Walter, I should never have supposed what I never have seen, and what I should have thought I never could see.” “Well,” said his uncle, “I have placed, as you perceive, a small quantity of clear water in this shallow vessel.” “I see you have,” said Walter; “but you would not have me believe that there are any

ving creatures in it—then water seems as transparent as glass.”

His uncle placed the vessel under the microscope, and invited him to view it through that instrument. “Astonishing!” cried Walter, as he looked through the microscope; “the water contains a great many living creatures frisking and swimming in every direction! this is more surprising than the view of the mites: this is the greatest enjoyment I ever experienced. Oh I should like to have a microscope of my own!” Thomas and John having also taken a view of the water, Mr. Buncle then proceeded to select other objects for observation, among the rest the wing of a fly, which when magnified, appeared to be composed of a thick network, the fibres of which seemed as coarse as packthread.

Walter was in raptures with all he saw, and his uncle was as much delighted in finding that he had succeeded in raising his nephew’s curiosity.

Walter now asked his uncle a variety of ques-

tions, and all of such a nature as showed that he had a mind not only of an inquisitive, but a shrewd and intelligent, turn.

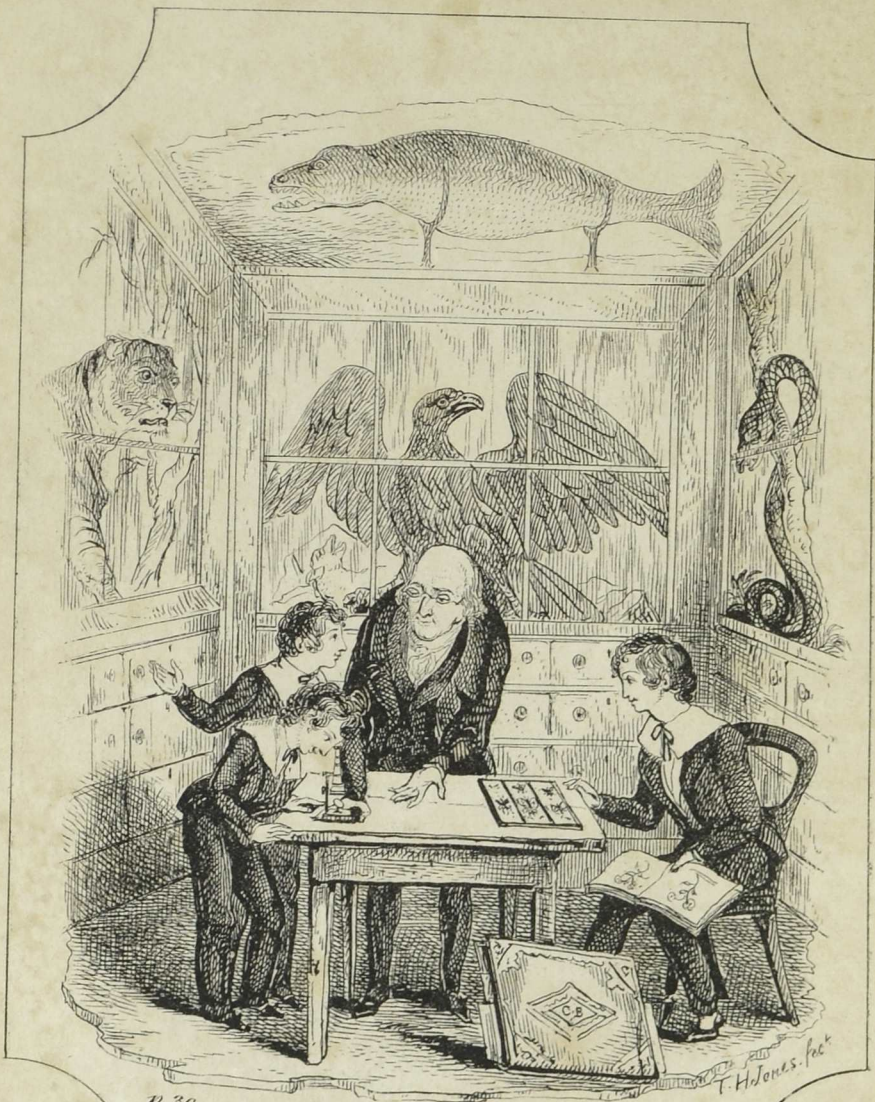
A full half hour was spent over the microscope, during which all its wonders were displayed, and Mr. Buncle then exhibited another instrument as curious in its properties as the microscope. "Do you know what this is called, Walter?" said his uncle, as he adjusted the instrument. "A spy-glass, uncle; is it not?" said Walter. "That may be a vulgar name for it," replied Mr. Buncle; "but its proper title is a telescope. Are you acquainted with its use?" "No," said Walter, "I never had the curiosity to inquire; I only know that people look through it." "It is composed," said his uncle, "somewhat like the microscope, of a tube or pipe, into which are fitted various glasses, and its use is to render objects, which by their distance appear indistinct, more plain and distinguishable than they otherwise appear to the naked eye. For example, if you look upon

the sea view from this window, you may see something very indistinctly in the distance.” “I do so,” said Walter: “there is something dark floating upon the sea, but at such a distance that I cannot make out its shape.” “Now look through the telescope,” said his uncle, adjusting that instrument so that it should point towards the object. “Oh! I see it now, plainly,” said Walter, “it is a ship; I can distinguish it quite clearly; the masts, the sails, the rigging, and even the sailors, are all distinctly seen, as though they were only at a short distance from the shore. What a curious and very useful instrument this is! I could amuse myself all day long in viewing different objects through it. If you remember, uncle, there is a windmill upon the top of Cleardon hill, several miles off. I can see the hill plainly with my naked eye, but I cannot see any trace of the windmill. If I look for it through the telescope, am I likely to find it?” “Nothing more likely,” said his uncle, “it happens to be an object which

I have frequently selected for view," and thus saying he directed the instrument toward the hill, and invited his nephew to look through it. "As I said of the microscope," shouted Walter, "astonishing! most astonishing! I can see the mill quite distinctly—the sails are moving round, and I can even see the miller; he is coming down the ladder with a sack of something upon his back! the sack, I suppose, contains the flour which has just been ground. Thank you, uncle, for this treat—Now let me look at something else."

But it was now the turn of John and Thomas, and when they had satisfied their curiosity, Mr. Buncle observed, "Do either of you see anything at the very bottom of the next hill?" But on looking through the telescope in that direction, Walter exclaimed, "Why, this is like magic—a cottage with its garden springs out to view! I can see the very roses and jasmines which are growing about the door! I can see a woman looking out of the window, two children playing in the





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Uncle Buncle's Museum.

front, and a man smoking his pipe at the cottage door!"

Other objects were afterwards selected for observation, and then Mr. Buncle removed the telescope, and produced a curious model, or small imitation of a steam carriage, and whilst his servant was preparing some boiling-hot water, and lighting a lamp in which spirits of wine was burnt instead of oil, he explained its construction and how the steam acted so as to move the wheels. The water was soon ready, and being poured into the boiler of the model, the spirit-lamp was placed under the boiler, and the water thus kept constantly boiling. The model was then placed upon the floor, and in a few seconds the action of the steam became apparent. The whole of the machinery was in action, and the wheels turning round with rapidity conveyed the carriage to the other end of the room. As it rolled along with as much ease as an omnibus on the road, Walter could not refrain from expressing his delight, and, with his uncle's

permission, turned the model in other directions, until it had passed up and down the room several times.

Dinner was now announced, but Walter's curiosity proved greater than his appetite. He ate very little and longed for the conclusion of the meal, as his uncle had promised to show him his museum between dinner and tea time. They had therefore no sooner risen from the table than Mr. Buncle conducted the party into another room, the sides of which exhibited to the view a great variety of stuffed animals, all contained in glass cases. Walter seemed acquainted with the names of the animals, having often read descriptions of them in his small edition of Goldsmith's Natural History. He communicated this fact to his uncle, who observed, "There is one defect in that small edition of Goldsmith's Natural History: there is but a very short account of the insect tribes given in it, so that its readers have a very

imperfect knowledge of the ingenuity displayed by nature on a small scale. I will proceed now to show you my collection of dried insects." Saying which, he unlocked a cabinet and produced a board of moths and butterflies, the latter shining with the most brilliant colours.

"Indeed, uncle," said Walter, "I have often admired the beautiful colours displayed by the humming bird; but Nature has painted these butterflies in colours equally beautiful. What is the name of that large and most gorgeous butterfly?" "That," said his uncle, directing his attention to the object pointed out, "is called the emperor, an insect which is difficult of attainment in its winged state, as it is seldom met with near the earth, but hovers over the loftiest trees." "They may well call him the Emperor," observed Walter, "for never had insect more beautiful robes. I cannot help thinking of the passage of Scripture, that 'Solomon arrayed in all his glory was never arrayed like one of these.'" "I am delighted to

find," observed his uncle, "that your memory serves you to make so apt a quotation."

Walter seemed proud in having thus merited his uncle's approbation.

Another board was now produced, in the centre of which there was a very large specimen of the moth tribe, so large indeed, that every other moth sank into insignificance when compared with it. "That," said Mr. Buncle, in answer to a question, "is a *Phalena Junio*, or moth of Juno. It is a native of many parts of Italy, Germany, and France, and measures, as you may perceive, in the extent of its wings, full six inches. The catrepillar, which is scarcely less beautiful, feeds upon the apple, pear, &c. This caterpillar, or larva, as it is called, when ready for its change, envelopes itself in an oval web with a pointed end, and transforms itself into a short large chrysalis, out of which afterwards proceeds the moth."

"I have heard," said Walter, "of the transformation which insects undergo; indeed, I used to

keep a few silk-worms myself, but I never understood clearly their change or transformation."

"The states through which the insect passes," replied his uncle, "are four, the egg, the *larva*, the *pupæ*, and the *imago*. On issuing from the egg, insects appear somewhat in the shape of a worm or grub, and whilst under this condition are denominated *larva*—*larva* being a Latin word signifying a mask, and adopted by the great Naturalist Linnæus, to point out the perfect animal, as concealed or masked under the semblance of a grub, or worm. After existing for a longer or shorter period, according to the species, it selects some secure retreat, and its skin once more separating, discloses an oblong body, which from its swathed appearance as resembling an infant in its first clothes, is denominated *pupæ*. In this state, the insect eats no food, and is incapable of moving about from place to place; when after remaining, some only a few hours, others a month, and others again one or more years, it

bursts the case which enclosed it, and emerges the perfect insect, or *imago*."

"Then, which is the chrysalis form?" said Walter. "I have often seen what is called a chrysalis hanging from one corner of a pane of glass." "The pupæ and the chrysalis are one and the same," said his uncle; "the pupæ, being sometimes tinged with a golden colour, were called by the Greeks, *crysalides*; and by the Romans, *aurelia*."

"There is no part of Natural History," said Walter, "so curious as that of the transformation of insects. I am very glad you explained it to me." "It is, indeed, a most curious subject," said his uncle, and I cannot refrain from reading to you a short passage from Kirby, in his excellent treatise on entomology."—Upon which he took a volume from the shelf, and turning to the passage, read as follows: "'If a naturalist were to announce to the world the discovery of an animal which for the first five years of its life existed in the form of a serpent; which then penetrating

into the earth, and, weaving a shroud of pure silk of the finest texture, contracted itself within this covering into a body without external mouth or limbs, and resembling, more than any thing else, an Egyptian mummy; which, lastly, after remaining in this state without food and without motion for three years longer, should, at the end of that period, burst its silken cerements (or grave clothes), struggle through its earthly covering, and start into day a winged bird; what, think you, would be the sensation excited by this strange piece of intelligence? and yet, I may add, this apparent wonder is actually realised in the transformation of insects.'

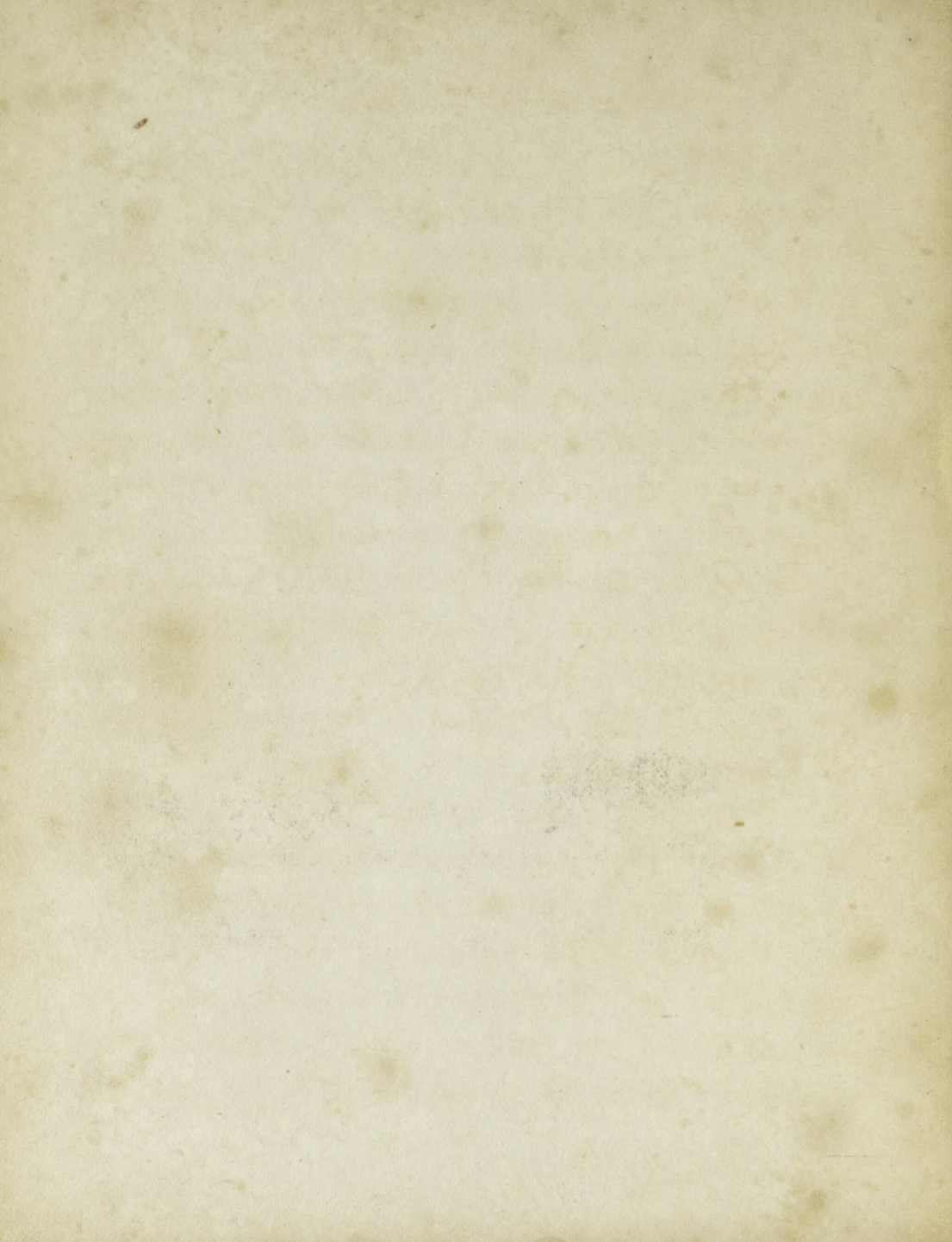
"I may here observe, that insects are not only of use to us in supplying us with drugs, dyes, and silks, but also as performing important services in the economy of Nature. The earth, so liable to defilement from the decay of animal and vegetable substances, requires an infinite number of public scavengers to keep it cleanly. These little

scavengers are principally to met with in the insect tribes; and here I must give you another short extract from the excellent treatise of Kirby and Spence." Saying which, he opened the first volume, and turning to that part which treats of the indirect benefits produced by insects, read as follows: "No sooner does life depart from the body of any creature, at least any of which, from its size, is likely to become a nuisance, than myriads of different sorts of insects attack it and in various ways. First comes the Histers, and pierce the skin; and next follows the Flesh-flies; some, that no time may be lost, as the *Musca Carnaria*, depositing upon it their young already hatched; others, covering it with millions of eggs, whence, in a day or two, proceed innumerable devourers.

"An idea of the dispatch made by these gluttons, may be gained from the consideration of their numbers, voracity, and rapid productions. The *Musca Carnaria* will produce 20,000 young; and the larva of many Flesh-flies, as Redi ascer-



Walters insult to Uncle Buncle.



tained, will, in twenty-four hours, devour so much food, and grow so quickly, as to increase their weight two hundred fold. Thus we see there is some ground for Linnæus's assertion, under *Musca Vomitoria*, that three of these flies will devour a horse as quickly as a lion. As soon as the various tribes of *Musca*, or flies, have opened the way and devoured the softer parts, a whole host of beetles, under various names, actively second their exertions; wasps and hornets also come in for their portion of the spoil, and even ants, which prowl every where, rival their giant competitors; so that in no very long time, especially in warm climates, the muscular covering is removed from the skeleton.'

"I will now give you an example of the curious properties of the Burying Beetles. A naturalist, named Gleditsch, placed a dead mole on the soft earth of his garden; and in two days he found it sunk to the depth of four fingers' breadth into the earth. It remained as he had placed it, and its

grave fitted exactly the length and breath of its body. On the next day, this grave was half filled up, and he drew the mole carefully out, and found, just under it, certain little holes in which were four beetles of this description. He afterwards took a glass vessel, and half filled it with moist earth, and in this he placed the four beetles with their young ones, and they proceeded immediately to conceal themselves. The glass, covered with a cloth, was then placed upon the open ground, and in the space of about fifty days the beetles had buried the bodies of four frogs, three small birds, two grass-hoppers, and one mole, besides a portion of a fish, and two small pieces of the lungs of an ox."

Walter, as well as his cousins, had listened attentively to this curious account, and the former earnestly entreated his uncle that he would give them some specimens of the *elater*, or skipper tribe, so called from their property of regaining their position when thrown on their backs. The

most curious is the night-shining skipper, which, as you see, is about an inch in length, of an oblong form, and of a brown colour, except the head, which is a little blackish. These insects produce so much light in the dark, that a person may read the smallest print by passing one of them under the lines; but when eight or ten are placed in a bottle, they will admit a sufficiency of light to allow of writing. The light proceeds principally from four parts,—from two little spots behind the eyes, and one under each wing. This insect is a native of South America in the West Indies.”

“The shining property reminds me of that of the glow-worm,” observed Walter; and Thomas remarked that he had read an account of the Lanthorn-Fly. The name of this fly attracted the attention and roused the curiosity of Walter, who asked his uncle whether he had a specimen of such an insect. “I have,” said Mr. Buncle, “and here it is. This insect is common in many parts of

South America, and is sometimes found three or inches in length. The account Madam Merian gives of it is amusing. I will turn to the passage, and give you her own words: 'The Indians', says Madam Merian, 'once brought me, before I knew they shone by night, a number of these Lanthorn-flies, which I shut up in a large wooden box. In the night they made such a noise, that I awoke in a fright, and ordered a light to be brought, not being able to guess whence the noise proceeded. As soon as I found it came from the box, I opened it, but was still more alarmed, and let it fall to the ground in my fright, at seeing a flame of fire issue from it, and as many animals as came out, so many different flames of fire appeared. When I found this to be the case, I recovered from my alarm and again collected the insects, much admiring their splendid appearance. The Indians, when on a journey, are said to fix two or three insects at the end of a stick, and the light given is said to be equal to that of a torch. This light

proceeds entirely from the hollow part or lantern of the head."

"I forget," said John, "the names of those curious insects," pointing to a board which his uncle had just drawn out,—“they bear so great a resemblance to leaves."

"I notice them," exclaimed Walter; "is it possible that those could ever have been alive? If I had passed one, I should have thought it a bright green leaf, which had just fallen from a tree."

"They belong," said his uncle, "to the Mantis tribe; and from their resemblance to leaves, are believed, by the Indians of South America, to have grown with the tree, or rather that they are leaves turned into insects."

"This is a specimen of the Orator, or Praying Mantis; and is an inhabitant of Europe, Asia, and Africa. It is chiefly remarkable for the singular position which it places itself into when waiting for its prey. On such an occasion he

rests himself on his two hinder legs, and erecting his fore paws together, strikes them together repeatedly; and in this posture it has so much the appearance of a person praying, that the ignorant people consider it as sacred, and never think of molesting it. So far, however, from being entitled to our respect for its meekness, it appears to be a most merciless and blood-thirsty insect.

“Rossel, a Naturalist, placed a great number of very young ones in a large glass, which he closed so as to prevent their escape. Several sorts of plants had been also placed in the glass, but these they neglected for the more gratifying pursuit of preying upon one another.

“After this, he introduced a few Ants, when they immediately showed as much cowardice as they had formerly betrayed cruelty; for as soon as they perceived the Ants, they endeavoured to escape in all directions. This was the natural fear of an enemy, for when he furnished them with house-

flies, they seized greedily hold of them with their paws and tore them to pieces. They were at this time in the larva, or grub state.

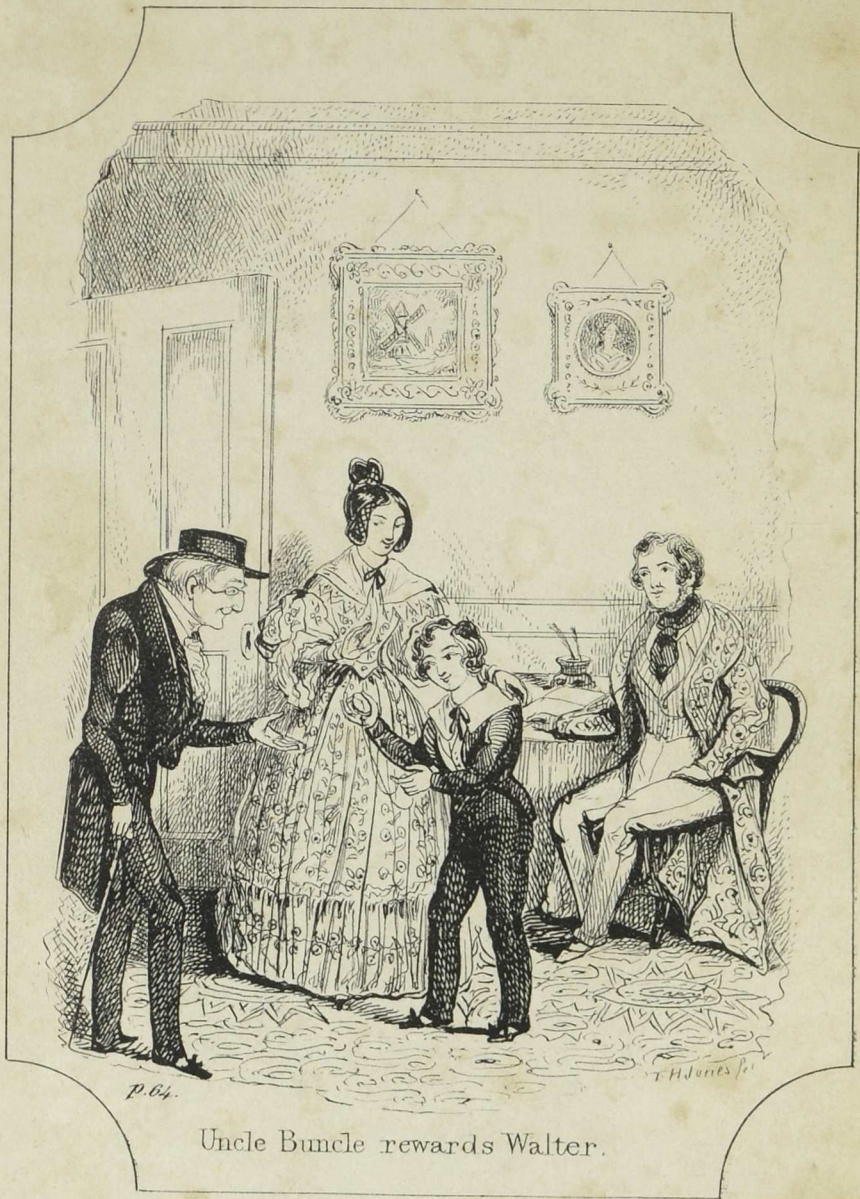
“He afterwards received several pairs in the winged state. These he separated, placing two together in the same glass; but they had no sooner beheld each other, than they threw up their heads, brandished their fore paws, and, after a short delay, the bolder of the two, throwing open his wing, made his first onset. Rossel observes, that they fought like two hussars, guarding and cutting with the edge of their fore claws as soldiers do with their sabres; and sometimes one of them, with a single stroke, will cut his enemy in half, or cleave his head from his body. The conquerer then devours his vanquished enemy. This I consider to be a very fine specimen; it is, as you may perceive, nearly three inches in length.

“That insect, Walter, which seems to attract your attention,” said the uncle, pointing to a fine

large grasshopper-like specimen, "is one which you occasionally read of in Scripture."—

"I think I know its name," said Thomas, "the Locust, is it not?"

"It is so," said Mr. Bunclé, "the Migratory Locust. Most of the southern parts of Asia and Africa are subject occasionally to a pest of such a nature that the fearful consequences of an earthquake or volcanic eruption sink into insignificance, when compared to it. I refer to the awful visitation of the Migratory Locust. When viewed in the cabinet, we could hardly suppose that an insect so harmless in its appearance was capable of doing any mischief; but when we hear of a whole body of them, five hundred miles in width, and of such density, or thickness, as to obscure the light of the sun, and prevent a person from discerning an object distinctly at twenty yards distance; and when we also consider that wherever the insect alights it destroys the vegetation of the spot it occupies, our wonder will



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Uncle Buncle rewards Walter.

cease. It is on record, that in the year 1478, thirty thousand persons in the Venetian Territory perished in a famine produced by the devastation of Locusts. It is also recorded in the "Philosophical Transactions," that in the year 1748, in the month of August, a swarm of Locusts entered Transylvania, several hundred fathoms wide, (at Vienna, the breadth was nearly three miles) and extended to so great a length, as to be four hours in passing over the red tower; and its density was so great, as entirely to intercept the light of the sun; and that when they flew near to the earth, persons could not see one another at the distance of twenty paces. Kirby, the eminent Naturalist relates that a friend of his, (Major Moor) informed him, that when at Poonah, (East Indies) he was witness to an immense army of Locusts, which visited the Mahratta country, and was supposed to come from Arabia. The same Naturalist, deriving his information from Hasselquist's Travels, tell us, that a certain brave Bashaw

of Tripoli, in Africa, finding all other efforts to destroy the Locusts, useless, determined to wage a regular war with them; and for this purpose, levied an army of forty thousand men, fully equipped, with orders to go and fight them." Mr. Buncle here made a pause.

Walter, had listened with great attention to this curious history, and when it was concluded, thanked his uncle for the trouble he had taken in relating it. Other insects, by the singularity of their forms, attracted the attention of the young party, and were as minutely described by their uncle.

He now directed them to notice several bottles, which were ranged on shelves, and which contained, as he told them, some of the choice specimens of the Zoophyte tribes.

On Walter's asking the meaning of the word Zoophyte, his uncle replied, that it was used to signify that sort of animal, which in its outward appearance bore resemblance to a plant.

“The Sea Anemone,” said he, “which you may have frequently met with on our coast, belongs to this tribe.

“I have met with the Sea Anemone,” said Walter, “and it was only the other day that I picked one from a rock which the tide had just abandoned. It was spread out like a flower, but closed its blossom the moment I touched it. It had a very thick fleshy appearance; but I had no idea that it was actually a living animal, I thought it was merely a plant which shrunk at the touch, like the sensitive leaf.”

“What you mistook for the blossom of the Anemone,” said his uncle, “consisted of an arrangement of tentacula, or arms and feelers, which the animal extends for the purpose of seizing its prey, which consists chiefly of shell-fish. The mouth is in the centre, whence the tentacula diverge, and receives the food from them, ejecting such shells and other indigestible substances as it is unable to dispose of otherwise.

A certain Frenchman, the Abbe Dicquemaire, performed several curious experiments upon Sea Anemones; most of which, however, as they principally consisted in cutting the animals to pieces, must be considered as cruel. I shall therefore pass them over; but as an evidence that the Sea Anemones possess life, he gave two of them, of different species, a slice of fish, so disposed, that each had a hold of one end. The yellow one, however, happened to seize the larger share. Each swallowed on by its respective end, till at length their mouths came in contact. The grey one seemed at first to get the better, but the other soon recovered its share, lost it again, and again recovered it. These alternate victories lasted for some hours, till at last the grey one losing its hold, the yellow one obtained the prize."

"I am glad you have told me they are living creatures," said Walter, "I shall be more careful how I remove them, in future."

"Their resemblance to flowers full blown,"

said his uncle, “is so striking, that they are often considered as such. Some of them are of a very large size, and of pleasing colours.

“The Zoophyte tribes are very extensive, and among them may be mentioned, as familiar examples, the different kinds of coral and sponge. There are also many substances floating upon the sea, which are generally regarded as sea-weeds, but many of them are actually Zoophytes; particularly that Marine kind, called Flustra; which, at first view, so much resembles a sea-weed, that it was described as such before its real nature was discovered. It has the appearance of a set of branched leaves, each composed of numerous cells, of a tough substance, open at the top, and affording a passage to the animal part, or head, which, in the fresh Zoophyte, protrudes through each cell; and the regular manner in which the cells are disposed, gives the plant-like appearance to the whole.”

Walter expressed his delight with all that he

had heard, declaring that his uncle had opened to his view new prospects of Natural History, the existence of which he had not been previously aware of: "For," said he, "the books which I have been in the habit of turning over, treated almost solely on beasts, birds, and fishes. But now I shall ask my papa, at the earliest opportunity to buy me some little work which treats upon insects. Pray, uncle, what is that particular science called?" His uncle replied, "the term used is Entomology," which Walter repeated several times over, that it might be fixed upon his memory.

After the tea had been dispatched, as an hour or two would remain, previous to the departure of the little party, Mr. Buncle took from his library several splendid works upon Botany, which he spread open upon the table, exhibiting the plates to the curious gaze of his nephews.

Walter's attention was now busily engaged, and the questions which he put, were so frequent, that his uncle was allowed very little respite from

answering. But the good-natured man felt a real delight, and never seemed weary of talking.

“That flower,” said he, “which you are just upon the point of turning unnoticed, is called the Catch-fly; perhaps you will guess why?”

“Because it catches flies, I suppose,” said Walter, “like a Spider; a sort of Zoophyte, as you call it, or, Spider plant.” Mr. Buncle could not repress a smile at this observation.

“You are right in one particular,” said he, “it does catch flies, but you are wrong in the other: for it is not a Zoophyte. It is merely a plant, and has this curious property relating to it. There is a secretion under the flower, of a viscous or sticky nature, like birdlime, which prevents various insects from plundering the honey, or devouring the fertilizing dust of the flower, called the pollen: when the insect therefore alights upon this juice, his legs and wings become entangled, and he is as fairly caught as any bird is by bird-lime. But in the *Dionda Muscipula*, or

Venus's Fly-trap, an engraving of which you see here, the depredations of insects, are still better provided against. The leaves are armed with long spikes and lie spread upon the ground round the stem. They are so sensitive, that when an insect crawls upon them, the leaf closes up and catches its prey, crushing it to death, and then again expands, ready to perform a similar office."

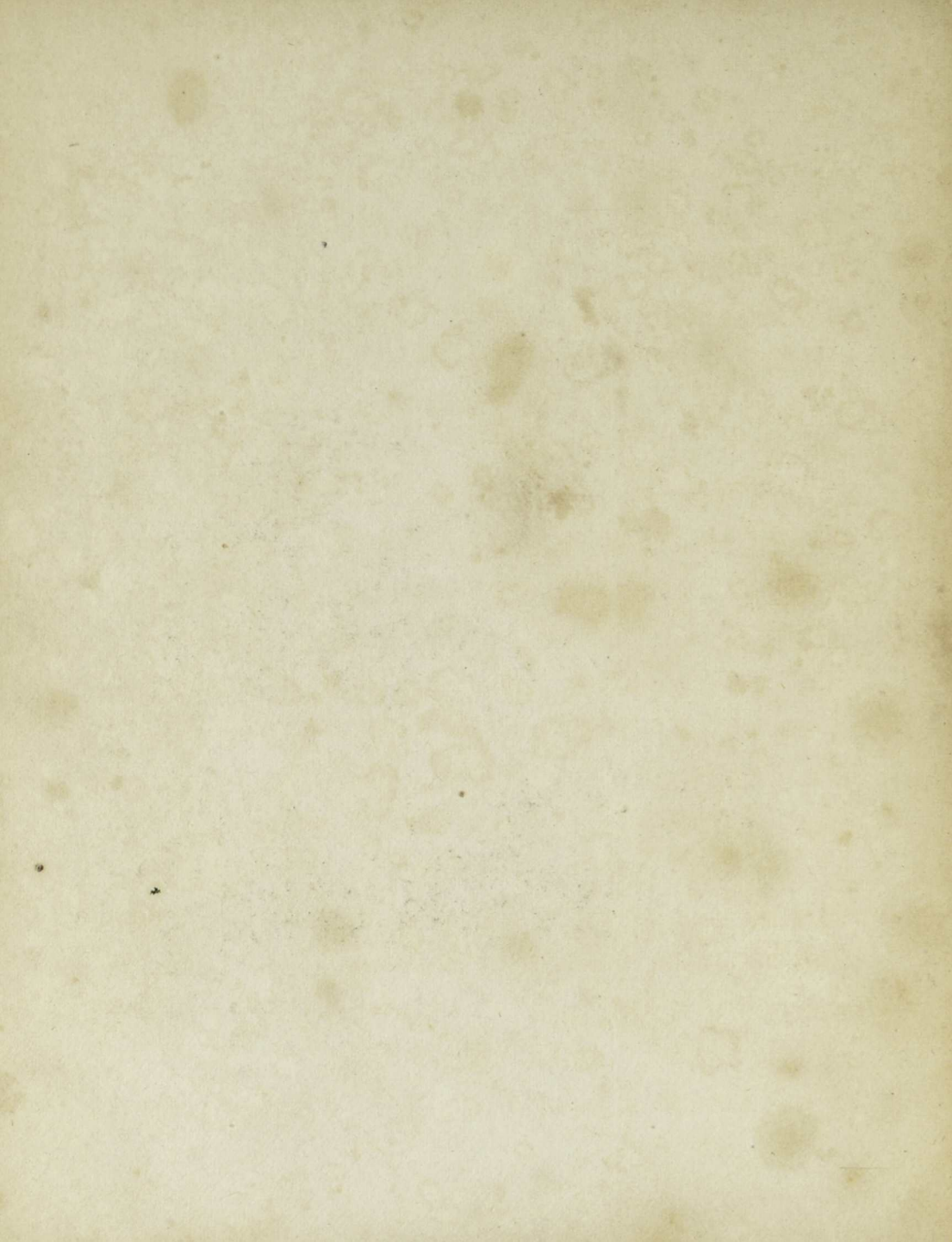
Thomas's attention was now fixed upon a plate which represented an enormous tree, the trunk of which was so large, that several persons appeared seated in the hollow interior.

"That," said Mr. Buncle, "is the great Chestnut-tree near Mount Etna; and is, perhaps, one of the most extraordinary trees in the whole world. It is called the 'Chestnut-tree of an Hundred Horses,' from the circumstance of Joan of Arragon having found shelter for her whole party of horsemen from a shower of rain, after having visited the Mount Etna. According to one account, this tree is one hundred and sixty feet round, and al-



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Chesnut Tree of a Hundred Horses.



though quite hollow within, the verdure of its branches is not injured: for this species of tree, like the willow, and some others, depends upon its bark for subsistence. The hollow of this enormous tree is so extensive that a house has been built in it, and the inhabitants have an oven within, where they dry Chestnuts, Almonds, &c."

Walter having listened to this account, now directed his uncle's notice to the engraving of a plant of a most curious structure, observing that it looked more like an animal than a plant.

"Yes," said Mr. Buncle, "in shape it very much resembles an animal, and is called the Tartarean Lamb. It grows in Tartary, and is esteemed one of the curiosities of the East, as at a distance it bears a likeness to the animal whose name it has received. Its body is covered with a brownish down, it has four stalks or stems, which appear as legs, and its head bears a resemblance to the head of a Lamb."

"If I was delighted with Entomology," said

Walter, "I am equally so with Botany. But here is a Sorrowful-tree, what an odd name."

"I will read you the description," said his uncle, and then proceeded: 'This remarkable tree, the *Arbor Tristis*, or Sorrowful-tree, grows in India, and is so called, because it never blossoms but in the night time, and continues to do so all the year round. As soon as the sun sets, there is not a blossom to be seen upon it, yet within half an hour, there appear innumerable flowers pleasing to the sight, and of a very fragrant smell; but as soon as the day approaches, and the sun begins to rise, they gradually close, and not one is to be seen upon the tree, which appears dead and withered until the evening again approaches, when it begins to blossom, as before.'

Walter had still a number of questions, and his uncle would have answered them for an hour or two longer, so pleased was he at having awakened his nephew's curiosity, when the servant entered to say that the young gentlemen were sent for.

“Then I suppose we must leave, uncle,” said Walter, “though I can assure you, I have received so much amusement, that I could remain for hours. I have, on former occasions, passed through your rooms, I may say, a hundred times, but though surrounded with so many curious objects, I regarded them all with perfect indifference, and consequently never asked you a single question about them. But now, somehow, from the amusement and instruction which you have afforded me this day, my curiosity has become excited, and I want to know what this or that curious machine is made for; the name and properties of this plant, and the name of that singular fish or reptile. But I am aware that I must defer my questions for the present, only let me hear when we shall have the pleasure of visiting you again. “I hope you will name an early day,” said Thomas. “And so do I, I’m sure,” observed John. And then all three intreated their uncle to let them come one day in the next week.

In conclusion, we beg to inform our readers, that Walter was several times afterwards invited by his uncle; and that every time he went, Mr. Buncle expressed himself pleased at his behaviour. He improved himself so much, that, in a few months, his schoolfellows and playmates all used to ask his opinion, whenever they met any thing difficult in their tasks, and in return for the kindness with which he gave his advice, allowed him to choose and preside over their games, when at play. And we may add, that he not only won the prizes at school, but that both his uncle and papa gave him many tokens of their pleasure, and on his twelfth birth-day, they rewarded him with a handsome gold watch.

FINIS.

