

FOURTH

SERIES.—No. 5.

WILLIAM SEATON

AND THE

Butterfly,

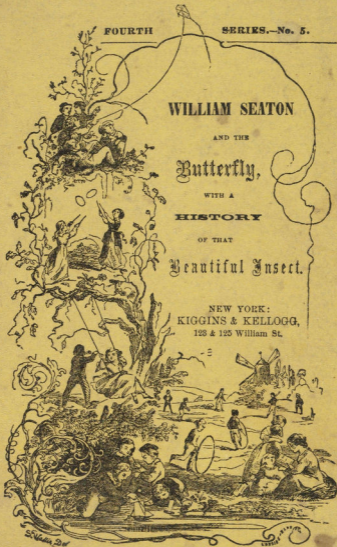
WITH A

HISTORY

OF THAT

Beautiful Insect.

NEW YORK:  
KIGGINS & KELLOGG,  
123 & 125 William St.



9

1881

WILLIAM SEATON

AND

THE BUTTERFLY,

WITH

A HISTORY OF THAT BEAUTIFUL INSECT.



NEW YORK:  
KIGGINS & KELLOGG,  
123 & 125 William St.



William Seaton's Cross-Route from School.

WILLIAM SEATON  
AND  
THE BUTTERFLY.

---

LITTLE WILLIAM SEATON was an ardent lover of nature, and young as he was, having hardly reached his tenth year, could "look through nature up to nature's God." The song of the free bird, its graceful movements, as on rapid wing it darted through the air, the insect's hum, the gurgling of the waterfall, were music to his ear. When Saturday came, and books and slate were thrown aside, and he was free from the school-room for the entire day, while other boys betook themselves to the diversions of the hoop, the ball, or the kite, young William was roaming over hill and dale, across the brook, or through the meadow; stopping occasionally to gather a wild flower, which, by its brilliant colors or grateful odor, would attract his notice, till at length, having gathered enough to form a beautiful nosegay, he would run home to present it to his mother. Mrs. Seaton was one of those practical, thoughtful parents, who avail themselves of every incident to turn it to their children's intellectual and moral improvement.

And she would, on such occasions take the nosegay he had brought her, and tell him the name, the properties, and the history of every flower—and impress upon his tender mind the goodness of that Being who had made the flowers to grow, to regale us with their fragrance, and to gratify the eye by their beautiful and varied tints; and more than all, that when prostrated by sickness, from plants and flowers were frequently extracted the medicinal properties which aided in restoring us to health again.

Mrs. Seaton was amply repaid for the judicious care she took in directing the unfolding of his young mind; for, though but a child, he seemed to possess the matured judgment and moral firmness of one many years his senior, which he sometimes evinced by reproving his companions, if they urged him to do any thing he thought not right. One day he had been of an errand, and was on his return, when he met little Henry Bowen, one of his schoolmates, who was looking with longing eyes at some fine grapes, that temptingly hung from an arbor-vine inside the garden-wall of Mr. Evering's residence, near which they stood. "Oh," said Henry, "see those beautiful grapes; let us climb over the wall and help ourselves to some of them." (Little Henry was not so much to blame, for he had never been taught that it was wrong to do so.) "No," answered William, with emphasis, "those grapes do not belong to us, and no consideration could induce me to take what is not my own. There is Mrs. Evering looking out of the window, and I have no doubt that, if we ask her, she will give us some of them." Mrs. Evering had, however, unknown to them, heard his reproof of Henry, and the noble sentiments he expressed, and calling them into the garden, she picked off some of the

finest clusters and gave them, at the same time telling them, that when the grapes were riper, to come again, and she would give them more. When Henry saw the generosity of Mrs. Evering, returning him good for his intended evil, he felt deeply grieved at himself, and resolved that he never would suffer his selfish appetite to tempt him to do wrong again.



Mrs. Evering giving William and Henry Grapes.

With all William's love of ranging through wood and field, he did not suffer it to draw him from his study, with the exception of a single occasion. It was a bright, sunshiny morning; he had been detained, and would have been late at school, and he begged his mother to let him stay at home all day. He had never asked the favor before, and his mother, in consideration of his uniformly close attention to his studies, gave him permission. Overjoyed at the indulgence, without hat or shoes, and with his morning frock buckled round him, he bounded away into

the pasture, with the impetuosity of a young colt just given the freedom of the field. But somehow he did not realize the usual pleasure of his rambles. The flowers did not look so bright, or delight him by their fragrance, as was their wont. The birds, too, did not sing so sweetly. Their song seemed to be one of reproach for his coming there, to idle and dissipate his time, when he ought to be at school. He began to feel very unhappy, when, as he walked along in thoughtful mood, he felt something cold touch his foot; he glanced down, and saw a large snake coiling and twisting itself on the grass before



William and the Snake.

him. He started with fright; he took but one look at it. Its head was turned toward him, and its small, piercing eyes, glaring at him, filled him with terror, and he turned toward home as fast as his feet could take him, feeling and resolving that he would never play truant again. And he adhered to his determination.



William was a kind-hearted boy. One day in winter he caught a rabbit, as it was lying asleep under a wall. He took it home and constructed a pen to keep it in. But the poor rabbit seemed so unhappy in its captivity, that William's heart reproached him for keeping it in prison, and when he had had it a few days, he resolved to give it its liberty again. He took it from the cage, and as he opened his arms and gave it freedom, and the graceful little animal glided from him, his bosom swelled with a consciousness of right that amply repaid him for the sacrifice he had made.



William giving his Rabbit its Liberty.

William was one day on his way home from school, taking his favorite route across a field, when the bright colors of a beautiful butterfly, as on winnowing wing it danced through the summer air, attracted his attention. After gazing at it a few mo-



William chasing the Butterfly.

ments, he became so fascinated with its brilliant appearance, that he determined to possess it. He watched it till he saw it alight, when rushing toward it, just as he thought he had it within his grasp, away it flew to the top of a steep rock that jugged out from the side of an adjoining bluff. With the agility of a cat, William sprang upon the rock, losing his hat, and almost blistering his hands in the effort. But he cared not for that, so intent was he upon the object of his hopes. But here again he was disappointed; for no sooner was he up, than away flew the butterfly, sailing through the air, apparently perfectly regardless of his wishes in relation to it. In this way, for a full hour, it eluded his pursuit. But at length his perseverance was rewarded with success; for as it alighted momentarily upon a flower near the earth, he slowly and warily (for his thus far fruitless pursuit taught him the necessity of caution), approached it, and throwing himself his length upon the ground, he cast his hat over it, and made it his prisoner.



William capturing the Butterfly.

Overjoyed at his success, he hastened home with his prize, and burst into the parlor, where his mother sat reading, exclaiming: "Oh, mother, mother, see what a beautiful butterfly I have caught!" Mrs. Seaton looked up and smiled at the expression of delight that lighted up her son's countenance; while his manner and appearance indicated that the capture had not been made without a severe pursuit on his part. To please her son, Mrs. Seaton got a large tumbler, and turning it bottom upward, assisted him in putting his attractive prisoner under it, on the table; and then—on William's promising, after keeping it an hour or two, for the gratification of looking at it, to give his handsome captive its liberty—in accordance with her usual custom, availed herself of the opportunity to relate to him the history of the butterfly, at a time when, he being more interested in hearing it, it would make a deeper impression upon his mind, and he would be less likely to forget it. And, for the amusement and instruction of other little students in natural history, we give her interesting description.



## HISTORY OF THE BUTTERFLY.

You know, my son, what a caterpillar is. There are few, indeed, even of your tender years, who are not perfectly familiar with the caterpillars often so destructive to the vegetables of the kitchen garden. You would hardly believe, William, that this beautiful butterfly with which you were so fascinated as it sailed through the balmy atmosphere, from flower to flower, with its brilliant colors glittering in the summer sun, had ever been a crawling and voracious worm, and then a torpid being, enveloped like a mummy in a case, whence it sprung forth in newness of life, light-winged and graceful in every movement, and arrayed in beauty. To look at the leaf-eating caterpillar, and contrast it with what it will be, when, on broad wings it traverses garden and meadow, extracting from the flowers their nectar for food, excites involuntary emotions of wonder, so striking is the contrast.

The caterpillars of the butterfly-tribe have hard horny jaws. They are furnished with legs of two kinds: the first three pairs are *true*, or persistent, being the commencement of the legs of the perfect insect; these are horny. The other legs, termed *pro-legs*, are soft, short, and conical; they vary in number in different species; the larva or caterpillar of the common cabbage butterfly has five pairs: these feet are furnished with a set of minute, slender, horny hooks, alternately longer and shorter, by means of which the animal is enabled to lay a very firm hold on the leaves of plants or other objects, and also to move along with tolerable dispatch. In

some caterpillars there are only two pairs of these limbs.

Many caterpillars are covered with long stiff hairs, others with short harsh fur or bristles; some are furnished with tufts: others are naked.

A very important organ possessed by the larvæ of butterflies and moths is the spinneret for the production of silken threads, by means of which some merely suspend themselves during the pupa stage, while others envelop themselves as in a shroud. Many caterpillars, moreover, weave tents of network or houses for themselves in hawthorn, apple and pear trees, in which, on returning from their foraging excursions, they cluster by hundreds. The spinneret is seated beneath the horny lower lip, and the first two legs; and appears in the form of a conical protuberance, whence two long tortuous tubes extend down the body of the larva: these tubes separate the silk from the juices of the body in the form of a gummy fluid, which, as it is drawn through the aperture of the spinneret, hardens into a thread: such is the silk of the silkworm.

On its exclusion from the egg, the caterpillar is of very small size; its growth, however, soon commences, and is as rapid as its appetite is voracious. As, however, it is clothed in an outer skin which is not extensible, this investment, like the armor of the lobster, must be repeatedly changed. Beneath the old outer skin, which soon begins to be loosened, a new one is formed; a rent takes place from the swelling out of the animal, down the back of the old skin, and this rent gradually increases till the animal, with a brighter skin, frees itself from its discarded weeds, and appears of larger dimensions. During this process, which is often repeated, the caterpillar is slug-

gish and inactive, and refuses food: but when the process is over, it recovers its former voracity. During all this time the caterpillar is laying up an accumulation of fat to serve the wants of the system during the time of its torpid state, which it is now preparing for. Beneath the last outer skin assumed, the vital energies of the system have developed wings, horns, a slender proboscis, and all the parts of a perfect butterfly, or moth that is to be. This last skin is, however, yet to be cast off, and another is formed to clothe the pupa or chrysalis (as the torpid state of the butterfly is often termed), which in its turn is to be broken open for the exit of the perfect insect. Previously, however, to the pupa state being assumed, it secures itself, by means of its silk, in a position varying according to the species. Suppose it merely suspends itself by the tail: in this case the first care of the caterpillar is to cover the spot to which it is about to suspend itself with successive layers of silken threads, which readily adhere, till at last a little silken cone is produced, into which the caterpillar pushes its hinder pair of pro-legs, which become entangled, and so fixed, amid the threads; it then permits itself to hang down with the head lowest. In a short time it begins to bend its back, bringing the head near the attached feet; and, after continuing for some time in this attitude, it straightens itself, and repeats the same action. In about twenty-four hours the outer skin begins to split down the back, and the fissure is enlarged by the swelling and pressure of the chrysalis, till at length the head and lower portion of the suspended being become disengaged, the skin shrivelling up into a bundle surrounding the tail. This, however, has to be thrown off, and at the same time the chrysalis has to avoid disengaging itself from its mooring of

silken threads from which it hangs; for, you will remember, it was by its hind-legs that it attached itself. To effect this, instinct-guided, it seizes on a portion of this shrivelled skin between two segments of its body, holding it as with a pair of pincers, and thus, destitute of limbs, supports itself till it withdraws the tail from the old useless skin which sheathed it: it then, still clinging, elongates the rings of its tail as much as possible, and seizes a higher portion of the skin, and in this manner, climbing backward, as it were, upon its old skin, it repeats the manœuvre till the extremity of the tail presses the silk, to which it immediately adheres by means of a number of hooks provided for the purpose. Still this cast-off skin encumbers it, and hangs in contact with it; curving its tail in such a manner as partly to embrace the shrivelled skin, it whirls rapidly round, jerking violently, and at length succeeds in disengaging it from its fastenings and throwing it to the ground. Other caterpillars attach themselves closely to the wall or other objects by bands of silk round the body, as well as by a little cone of silk at their extremity; and some envelop themselves completely. In a short time the chrysalis hardens (for at first it is very soft), and shows through the outer case the wings, horns, eyes, and legs of the perfect insect. It now passes into a sort of torpid state, till the time arrives for the exit of the perfect butterfly from its case.

The duration of the pupa or chrysalis stage of existence varies in different species, and even in the same, being retarded by cold and abbreviated by warmth—a wise provision, as it respects the safety of the matured insect. The butterfly, when ready for exclusion, bursts the skin of the chrysalis, now to be thrown off, which covers the thorax, and



emerges, feeble and languid, with wings crumpled up into small bundles. Soon, however, the body acquires strength; the fluids circulate through the nervures of the wings: these gradually unfold, and the creature quivers them, as it feels its growing powers: at length, in the perfection of strength and beauty, it leaves its sordid mummy-case behind—soars aloft, seeks the flowers of the garden, and commences a new existence.

Such, my dear son, is the sketch of the progress of the caterpillar from the egg to the butterfly; from

“The worm, a thing that crept  
On the bare earth—then wrought a tomb and slept,”

to the hovering spirit of beauty.

The rest of the story is soon told; bright things must fade: the butterfly enjoys a brief summer, deposits its eggs on the plants which instinct teaches it are the appropriate nourishment of the future caterpillar, and passes out of existence.

And here, William, in this book of engravings, is a beautiful group of these interesting children of summer.

This is called the pearl-bordered likeness. It is also called the heath fritillary. This species is not



uncommon in more southern parts. It appears in June, and is found in the open glades of woods, and about heathy commons. It is subject to several variations of coloring, a circumstance which has led to some confusion of names. The ordinary coloring is orange above, with undulatory lines of black. The fore wings beneath are pale yellowish, with a few transverse lines of black at the forward margin. The hinder wings below, with several black-edged spots near the base, and a curved band of whitish across the centre, and edged with narrow lines of black; the fringed margin of the wing is yellowish.



Here is another called the small heath butterfly, and sometimes the golden heath-eye. This species is common throughout short-grassed hills, upland pastures, and dry heathy grounds, and appearing in June; a second flight occurs in September. The wings above are of a pale orange-yellow, with a fringe of long white hairs; underneath, the fore wings are clouded with ash color, and have near the tip an eyelike spot of black with a white centre. The hinder wings below are clouded with greenish brown and gray, with two or three indistinct ocellated spots.



This is the Glanville fritillary. Its color above is orange-red, marbled and spotted above with black and yellowish; a row of black points runs parallel with the back margin of the hinder wings. The color of the wings is paler below than above.



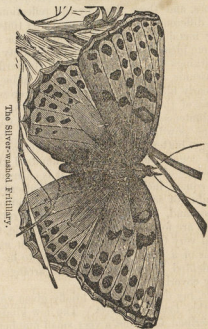
This is the small fritillary. It is a species which is somewhat rare. Its wings are dark brown, the forward pair having three cross bars of irregular pale yellow spots, the marginal series being dotted in the centre with black. The hinder wings are almost similarly variegated. Underneath the wings are pale brownish yellow, the forward pair having light spots interspersed with black in the centre, and a row of light spots, with a dusky mark in the centre of each, along the margin; the hinder wings are similarly ornamented, but have two bands of oval spots of a whitish tint, those forming the outer row being edged with black.



The next of this group is the common copper butterfly. In every part of our land, and on the European continent, this pretty butterfly is tolerably abundant. It is light, quick, and active, in its movements; and makes its appearance in June, July, and August. The forward wings, which are not indented at the edge, are of a rich copper color, spotted with black, and broadly margined with the same. The hinder wings are brownish black, with a copper band posteriorly, spotted along the margin with black. Under surface of the wings paler. This species is subject to considerable variations of color.

Here is a butterfly like the one which you have a captive. It is called the silver-washed fritillary. This beautiful butterfly is generally spread over our country, appearing in June about the sides of woods, and flitting on rapid wings. The upper surface of the wings, as you will observe, is of a bright orange-brown, with three rows of black marginal spots, and with several black marks near the centre. The forward wings are paler beneath, and the hinder wings beneath are brassy green, with four cross stripes of silvery white. The wings are ample.

The varied colors of the wings of butterflies are produced by the minute plumes or scales with which they are covered, and which, beneath a microscope, present very beautiful objects. These scales are of different forms, and variously arranged, but mostly



The Silver-washed Fritillary.

lying one over another with more or less regularity. They are inserted into the membrane by a short footstalk or root, but their attachment is comparatively slight, whence they are brushed off by a touch. Not only are they often richly colored, but they are marked with indented lines, and often crossed by finer ones, and these lines by the reflection of the light at different angles produce varying tints of brilliant or metallic effulgence. You will be able to form some idea of the almost endless variety of form and markings which the scales of butterflies and moths assume, when I tell you that an eminent naturalist nearly filled six large plates with crowded delineations of the scales of species of moth. Such is their minuteness, that they appear to the naked eye like a fine powder, and their numbers on the wings of a large butterfly almost defy calculation. Leeuwenhoel counted upward of four hundred thousand on the wings of a silk-moth, and it is calculated that in one square inch of surface of a butterfly's wing the number of scales will amount to about one hundred thousand. When these scales are rubbed off, the wings are found to consist of an elastic, transparent, and very thin membrane; and when examined by means of a microscope, it is found to be marked with indented lines, exhibiting the arrangement of the scaly covering.

I have, my dear son, thus briefly given you a history of this beautiful insect. The few kinds that I have described form but a very small number of the numerous varieties; for naturalists have given descriptions of about seven hundred and fifty different classes of the butterfly. And now, I must exact the fulfilment of your promise to set your little prisoner at liberty, and I will repeat to you some

beautiful lines of poetry very appropriate to the occasion:—

ON GIVING THE BUTTERFLY ITS LIBERTY.

Poor harmless insect, thither fly,  
And life's short hour enjoy:  
'Tis all thou hast, and why should I  
That little all destroy?

Why should my tyrant will suspend,  
A life by wisdom given,  
Or sooner bid thy being end  
Than was designed by Heaven.

Lost to the joys which reason knows,  
Ephemeron and frail,  
'Tis thine to wander where the rose  
Perfumes the cooling gale.

To bask upon the sunny bed,  
The damask flower to kiss,  
To range along the bending shade,  
Is all thy little bliss.

Then flutter still thy silken wings,  
In rich embroidery dressed,  
And sport upon the gale that flings  
Sweet odors from his vest.



## ADVENTURES OF A BUTTERFLY.

AS RELATED BY ITSELF.

I WAS never disturbed in my calm retreat upon a green leaf, until one evening a little boy carried me away. I thought at first he intended to destroy me, but I soon perceived that he did not. The only thing I could boast of was a handsome coat, for people say, that we worms are not always mild tempered. The little boy mounted on a horse, behind another boy, who was holding him by the reins. From their

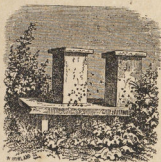


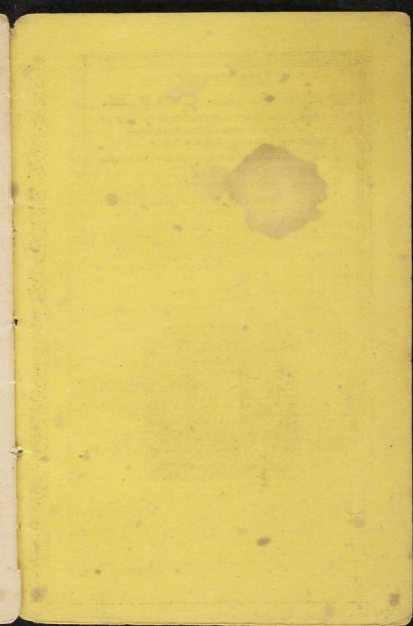
conversation I ascertained that they were amusing themselves in riding in this way together, when he saw me, and got off the horse to get me. I felt every moment as if I should fall, but luckily for myself, I did not. As soon as he got home, he showed me to his sister, who had collected many of my species. I was carried into a small room, with a window in it and placed in a box half filled with leaves; they



then left me. I did not try to escape, as I thought I should be well taken care of. The next morning I had fresh leaves given me, and I again heard my little master and mistress conversing about me. There were a great many other worms, but of much inferior rank to myself, and I soon found I was in the hands of young naturalists, of whom I had often heard my older and more experienced brothers speak. I soon felt that I was near my chrysalis state, and that I must suspend myself in the air by silken threads. My master came up to see me, and brought with him his fellow-horseman. They appeared delighted to observe that I had suspended myself, and said they would wish to see me change my skin. They waited a long time, but being wearied, left me. They soon returned, and were surprised to see that I was a chrysalis. My mistress then pinched me, to be convinced that I was alive; but I had wisdom enough to suppress my feelings, and not stir. Beautiful colors soon began to appear upon my surface, and I heard many exclamations of surprise and admiration. One August morning, I burst the case which enclosed me, and appeared in all the gay colors of a butterfly. I must confess that I viewed myself with a great deal of self-complacency. I was at liberty to soar around the small room for an hour, and at the end of that time, saw my mistress coming up the stairs with a great deal of coarse gauze under her arm. She put me between two shelves, and nailed the millinet over them, so that I could not escape. She then brought in another butterfly, which she placed in the same cage with myself. Though his wings were not handsome, yet I condescended to speak to him. He was quite astonished to see so great a personage as myself honor him so much,

which I should not have done had I seen a companion equal in rank to myself. But I am now so near my end, that I believe I cannot spend the rest of my short life better than in flying about, though I think I hear somebody whisper, "Mr. Butterfly, you should imitate the busy bee, and improve each passing hour, rather than to fly idly about, so vain of your brilliant colors. But your pride will be very short-lived—your summer-life will soon be over; and while the industrious bee will in winter enjoy the fruits of its summer toil, you will pass into oblivion and never be seen or thought of more."





# REDFIELD'S TOY BOOKS,

*Beautifully Illustrated from Designs by Chapman.*

## **First Series—Price One Cent.**

1. Tom Thumb's Picture Alphabet, in Rhyme.
2. Rhymes for the Nursery.
3. Pretty Rhymes about Birds and Animals, for little Boys and Girls.
4. Life on the Farm, in Amusing Rhyme.
5. The Story-Book for Good Little Girls.
6. The Beacon, or Warnings to Thoughtless Boys.
7. The Picture Book, with Stories in Easy Words for Little Readers.
8. The Little Sketch-Book, of Useful Objects Illustrated.
9. History of Domestic Animals.
10. The Museum of Birds.
11. The Little Keepsake, a Poetic Gift for Children.
12. The Book of the Sea, for the Instruction of Little Sailors.

## **Second Series—Price Two Cents.**

1. The A B C in Verse, for Young Learners.
2. Figures in Verse and Simple Rhymes, for Little Learners.
3. Riddles for the Nursery.
4. The Child's Story-Book.
5. The Christmas Dream of Little Charles.
6. The Basket of Strawberries.
7. Story for the Fourth of July, an Epitome of American History.
8. The Two Friends and Kind Little James.
9. The Wagon-Boy, or Trust in Providence.
10. Paulina and Her Pets.
11. Simple Poems for Infant Minds.
12. Little Poems for Little Children.

## **Third Series—Price Four Cents.**

1. The Alphabet in Rhyme.
2. The Multiplication Table in Rhyme, for Young Arithmeticians.
3. The Practical Joke, or the Christmas Story of Uncle Ned.
4. Little George, or Temptation Resisted.
5. The Young Arithmetician, or the Reward of Perseverance.
6. The Traveller's Story, or the Village Bar-Room.
7. The Sagacity and Intelligence of the Horse.
8. The Young Sailor, or the Sea-Life of Tom Bowline.
9. The Selfish Girl, a Tale of Truth.
10. Manual or Finger Alphabet, used by the Deaf and Dumb.
11. The Story-Book in Verse.
12. The Flower-Vase, or Poems for the Young.

## **Fourth Series—Price Six Cents.**

1. The Book of Fables in Prose and Verse.
2. The Little Casket, filled with Pleasant Stories.
3. Home Pastimes, or Enigmas, Charades, Conundrums, etc.
4. The Juvenile Sunday-Book, adapted to the Improvement of the Young.
5. William Seaton and the Butterfly, with its Interesting History.
6. The Young Girl's Book of Healthful Amusements and Exercises.
7. Théodore Carlton, or Perseverance against Ill-Fortune.
8. The Aviary, or Book of Birds.
9. The Jungle, or Book of Wild Animals.
10. Sagacity and Fidelity of the Dog, with Pleasing Anecdotes.
11. Water Birds.
12. The Romance of Indian History.