



SWALLOW TAILS  
AND SKIPPERS

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SWALLOW-TAILS AND SKIPPERS





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1. Swallow-tail. 2. Red Admiral. 3 & 3a. Grizzled Skipper. 4. Dingy Skipper.  
 5 & 5a. Small Skipper. 6. Large Skipper. 6a. (Female) Large Skipper.



# SWALLOW-TAILS

AND

# SKIPPEERS

BY

DARLEY DALE

AUTHOR OF 'THE GREAT AUK'S EGGS,' ETC.

= *Trochilus a. thasia* Dale

*With a Coloured Frontispiece*

BY

MISS LUCY FRANCIS

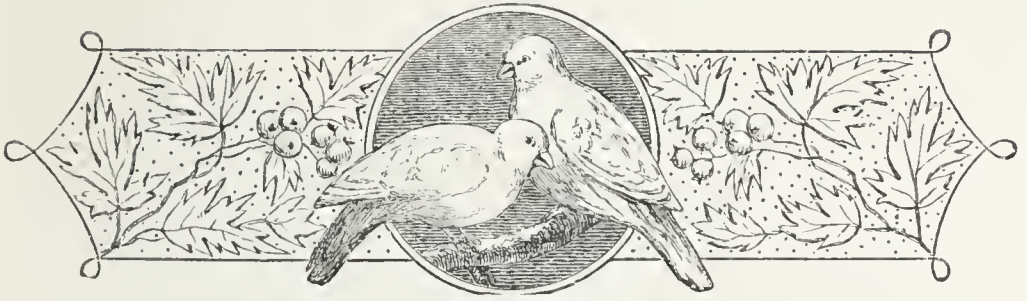
LONDON

THE RELIGIOUS TRACT SOCIETY

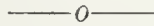
56 PATERNOSTER ROW, 65 ST. PAUL'S CHURCHYARD  
AND 164 PICCADILLY

1886





## SWALLOW-TAILS AND SKIPPERS.



### CHAPTER I.

‘Child of the sun, pursue thy rapturous flight,  
Mingling with her thou lov’st in fields of light.

Yet wert thou once a worm, a thing that crept  
On the base earth, then wrought a tomb and slept.  
And such is man ; soon from his cell of clay  
To burst a seraph in the blaze of day.’—ROGERS.



MRS. PALMER'S was a private school, the numbers were limited to twenty, and it was the boast of Mrs. Palmer, who was a young and pretty woman, that the boys were as happy at school as they were at home ; in fact, she looked upon them as her family, for she had no children of her own, and always spoke of her

husband's pupils as 'my boys.' Needless to say that the boys all but worshipped her, and to be in disgrace with her, when such a rare occurrence did take place, was a far more terrible misfortune than the severest punishment Mr. Palmer ever inflicted. The Palmers lived at Brighton, in a large house facing the sea, at the extreme end of Kemp Town : the schoolroom was built out at the back of the house, with which it was connected by means of a long covered passage ; there was a gymnasium and a tennis-court, and these occupied the space which was intended for a garden. Mrs. Palmer, however, contented herself with a conservatory, and never grudged the boys the piece of ground, though she dearly loved flowers, having lived in the country until her marriage.

The boys were assembled in the schoolroom half-an-hour before preparation-time one evening at the end of April. It was the first day of the summer term, and those who had been away for the Easter holidays had only just returned. The noise and hubbub, when they found themselves all together again, and without the restraining influence of any master, were tremendous.

Suddenly a tall handsome boy of fourteen, evidently the dux of the school, who had been leaning against the chimney-piece, shouted out, 'Silence! Just listen here, boys.' As he spoke he held up a small notice-board his eyes had lighted on, and read as follows :

'Mrs. Palmer, wishing to encourage the study of natural history, has kindly promised a prize of books, to the value of five pounds, to be awarded to the boy who shall produce the best collection of British butterflies at the end of the midsummer term next year. The butterflies must be *bonâ fide* collected by some boy in this school, no bought specimens will be admitted, and the manner in which they are arranged and labelled will be taken into consideration in awarding the prize. The prize books will be limited to works on Natural History, but beyond this restriction the winner will be allowed to select what he pleases.'

'Three cheers for Mrs. Palmer! hip, hip, hurrah!' was the unanimous response to this announcement; and when the excitement had to some extent subsided, there arose a general appeal to Lionel Neville, the first speaker, to read the notice again.

Neville threw his thick, wavy hair off his brow with a shake of his head, a trick he had, and, handing the notice to a quiet little boy in the background, said, 'Let Martin read it this time; he is more likely to win it than any of us. Here, Martin.'

'Except you, Dux; it is safe to be you or Martin,' was the general answer as Martin advanced to the front.

They were certainly a great contrast, these two, Martin and Neville. In age Neville had the advantage by one year only, though, as he was a tall, fine lad for his age, while Martin was small and delicate, he looked to be the senior by several years. Neville was handsome, with dark, flashing eyes, and a bright, happy expression, which seemed to say he took life rather easily. He had an easy manner, and would have been equally at home in a crowded drawing-room among his elders, as he was here in the little circle where he was the acknowledged king. Martin, on the contrary, was shy and retiring, with a nervous manner; he was pale and delicate-looking, and, a casual observer would have said, plain, but this would have been unjust, for he

already possessed that highest kind of beauty which is only seen in perfection late in life, when culture and study have increased it,—the beauty of intellect. His whole face was lighted up with pleasure now as he re-read the notice to the eager throng of listeners.

‘Are you going in for it, Dux?’ asked a round-cheeked, merry-faced boy named Strickland, the pickle of the school.

‘Rather! I know nothing about butterflies, no more than I do of Sanskrit, but I shall certainly have a try, for the fun of the thing; some of you little fellows who have no chance yourselves will help me, I daresay,’ said Neville.

Enthusiastic proffers of help from at least a dozen small boys.

‘Easy, my friends!’ cried Strickland; ‘just wait a moment. I have a proposition to make, but first let me ask a question. Is there any aspiring youth here who knows a butterfly from a moth? When I say knows, I mean, of course, knows the scientific difference between them. Now don’t all speak at once, but those who do hold up their hands.’

One little brown hand, belonging to Willy Martin, was the solitary answer to this appeal.

‘I thought as much; but before I go any further in placing my resolution before this meeting, perhaps Martin will kindly enlighten your ignorance. Observe, I say *your* ignorance; needless to add, I know all about the matter myself.’

Derisive cheers and shouts of ‘Tell us, then.’

‘My natural modesty and retiring disposition prevent me, but Martin will, I am sure, throw a glimmer of light on your darkened understandings, and then to my proposal. Now, Martin, what is the scientific difference between a moth and a butterfly?’

‘There are several’—began Martin.

‘Gently, Martin, break it to them by degrees; they’ll never bear it all at once,’ said Strickland.

‘Be quiet, Strick, I want to hear what Martin has to say,’ said Neville.

‘First there are the antennæ, in butterflies’—

‘Speak English, Martin; no one here knows what antennæ are except you and I,’ said the incorrigible Strickland.

‘Don’t be an idiot, Strick; we all know the



antennæ are the feelers on the animal's head. What about them, Martin ?'

'Well, the antennæ of butterflies always have a little knob at the end, those of moths have not; and moths can fold them up and hide them under their wings when they are asleep, but butterflies can't. Then butterflies always fly by day, never by night, and very rarely in rainy weather, whereas most moths are nocturnal in their habits; butterflies turn their wings upwards when they are resting, and moths turn theirs downwards and fold them round their bodies. I don't remember any more differences just now,' said Martin.

'Quite enough, my dear fellow, for our feeble minds. I happen to know one other myself, though: butterflies have waists, and moths have not; of course I could put that fact into scientific language if I chose, but no one would understand me if I did. Now for my idea. I propose that, as there is only one prize, and it is morally certain Dux or Martin will win it, it is useless for any of us to try; so I vote we divide into two parties, and let each side do its utmost for its chief; there'll be plenty to do, you know, collecting

butterflies and eaterpillars. What do you all say to my plan?’

They all had so much to say, and said it so noisily, that it was some minutes before it was clearly understood that the plan was thoroughly approved of; after which it was decided Neville and Martin should in turns choose their partisans, and this they proceeded at once to do, Neville allowing Martin to have first choice. Martin at once chose Striekland as his lieutenant; knowing his propensity for practical joking, he preferred to have him as a friend rather than as an opponent.

The boys were now divided into two gangs of ten each, and stood on opposite sides of the room; when Neville stepped into the midst, and proposed that every boy should now promise faithfully two things.

‘First, that he will renounce the’— began Striekland.

‘Silence, Striek! don’t be profane.’

‘I beg your pardon; my religious mind at once reverted to the Catechism when you spoke of promises.’

‘Nonsense! do be serious. I want every fellow

now to promise that he will bring every butterfly and caterpillar or chrysalis he finds to his chief. Of course I take it for granted we are all going to do our best to find all we can. And in the next place to promise he will willingly undertake any work which may assist his chief in winning the prize.'

The required promises were duly made, and Neville, who hated trouble of any kind, then asked lazily what was to be done next.

'I should suggest we get some literature on the subject. I have White's *Selborne*; can any one beat that?' said Strickland.

'I have one very good book on butterflies,' said Martin.

'Happy thought, Strick! of course we must have books. I'll write to my people to-night, and tell them to send me at once the best books out on butterflies, with coloured illustrations. You can identify the creatures at a glance then. I can't be bothered to wade through a volume every time some youngster brings me a specimen. By the way, you boys on my side, I shall expect you always to know the name of everything you bring

me; it will be splendid practice for you, and will save me a heap of trouble. You'll have to get some cheap editions of your own. I shan't allow any one not in the first to touch my best books when they come. Martin and his first-class fellows may have the use of them.'

'Thank you, Dux; that is just like you; but I'll invest in a regular good one for our side, if Willy likes,' said Jack Strickland.

'I can't afford to get one; but mine is a very good book; it tells us everything we shall want to know, only it has no coloured pictures; but it is awfully good of Dux to lend us his,' said Martin.

'Yes; but we'll have one of our own. Those other fellows are sure to be wanting Neville's just when we do. Besides, I suppose that will be the only investment we shall have to make?'

'The first, but not the only one; the first use of the books will be to tell us what else we shall want. There are heaps of things I can think of: cabinets to keep the creatures in, a tray to put the collection in for the prize, boxes for the caterpillars'—began Neville.

'All those I shall make for myself. That will

be one of the things I shall want you to help me in,' said Martin.

'Then there are butterfly-nets to catch them in, poisons to poison them with, and, I expect, a regular paraphernalia for mounting them with; isn't there, Martin?'

'They advertise a host of things, but very few are absolutely necessary: for instance, cork saddles are capital things to set the butterflies out on; but strips of cardboard, which you can cut yourself, do nearly as well. The setting-bristle any one can make; it is only a cat's whisker, mounted by a small pin on a piece of cork; it is a necessary thing for pushing the insect into its place while setting out; the proper pins, too, are necessities, but not expensive ones. Luckily for me, an ordinary darning-needle makes a very good setting-needle; and as for nets, you can spend as much money as you like on them, Dux; but I have an old one upstairs somewhere which I expect will do for me. I shall go in more for caterpillars. You get much more perfect specimens if you rear them yourself than by catching the butterfly, which is almost sure to get damaged in taking.'

‘But, my dear fellow, you might rear a hundred caterpillars, and only one, perhaps, be worth keeping,’ objected Strickland.

‘No, you might not, if you knew what the caterpillars were ; and I should try and find out before I decided to rear them ; they vary as much as the butterflies.’

‘How did you come to know all this, Martin ? You are quite up in butterflyology already.’

‘No, I am not. I learnt the little I know from an uncle of mine, who has a very good collection. Look here, Dux ; don’t you think it would be a good plan if we each call our party after a family of butterflies ?’

This suggestion met with universal approval, and led to a warm discussion on the merits of the different names, the generality being in favour of Red and White Admirals ; but Martin would not agree to this, because the Red Admiral is only a species, not a family. ‘What do you say to Ringlets and Hairstreaks ?’

‘All very well if we had three parties ; but Ringlets divorced from Tortoiseshells would be a very ragged lot,’ said Strickland.

‘I can’t think of any more families. Oh yes, there are the Skippers; that is a very good name. We’ll be the Skippers; that is decided. Now then, Dux, old fellow, what is your side to be called?’ said Martin.

‘Apollos or Peacocks, either suits me,’ said Neville.

‘They are only species; and Apollo is not British, according to Newman. I have it, Neville; what do you say to Swallow-tails? You are the only one of us who lives up to them. Will you be the Swallow-tails?’

‘Bravo, Martin! adopted *nem. con.*, at least I advise no one to contradict it, for it is striking seven; we shall have Newman here directly. We will have another meeting to-morrow to make some more arrangements. Here comes Newman.’

Mr. Newman was the tutor, a quiet, studious man, who had never succeeded in making the boys love him, and who took but little interest in them or their pursuits, so long as they prepared their lessons carefully; and with his entrance the butterflies were forgotten, and the attention of the boys turned to Latin and Euclid.

Another meeting was held the next day, but they agreed little more could be done until Neville's books arrived at the end of the week, after a brief study of which on Saturday afternoon, he ordered all the Swallow-tails to be in readiness to accompany him on a hunting expedition for caterpillars and butterflies on the following Wednesday, their first half-holiday.

Meanwhile, on Sunday evening, he and Martin were invited to supper with Mr. and Mrs. Palmer; it was a regular institution for two or three boys to be invited to supper on Sunday; and from the fact of Mrs. Palmer choosing the two head boys the first Sunday, they concluded she had something to say to them about her prize, and they were right; for when Mr. Palmer had retired, as he always did after supper, leaving the boys to the chat they enjoyed as much as any part of the entertainment, Mrs. Palmer immediately introduced the subject.

'Well, boys, so I hear you have divided the school into two parties, and have already settled that my prize is to be won by one of you?'

'Yes, I hope you don't object to the plan, Mrs. Palmer, but they all said directly none of them had



a chance against us, and already our sides take as much interest in the prize as if each boy was working for himself.'

'No, I don't object; on the contrary, I think it is rather a good plan; it is certainly good for the other boys, for it is very unselfish of them to work for you two instead of for themselves, and I am sure the rivalry between you and Willy will be amicable.'

'Oh yes! Willy and I are too old friends to be jealous even of such a splendid prize as this.'

'What made you choose butterflies, Mrs. Palmer?' asked Willy.

'Well, several things, Willy; I know a little about them myself,—a very little, not half so much as you do very likely, so please don't put me through my facings. Then they are such beautiful creatures, these "nurslings of a day," that I thought it would do all you boys good to learn to love their beauty; for I never think boys have such an innate love of beauty as girls, and they are too full of cricket and football to pause to think of the exquisite loveliness of a little butterfly; they would almost think it beneath their dignity to do so.'

'Yes, I believe we should; we should call it frivo-

lous and girlish, and girls are such idiots—I don't mean women, you know, Mrs. Palmer,' said Neville.

'I know, Leo,' said Mrs. Palmer, smiling, for she was still only a girl in years. 'But I had another reason for choosing butterflies, for, while the pursuit of any branch of Natural History cannot fail, I think, to teach us more of the goodness and lovingkindness of God,—and to know Him better is the real end of all knowledge which is worth having,—there are so many special lessons to be learnt from butterflies. The doctrine of the resurrection of the body is so beautifully shadowed forth in the life of the butterfly: first the caterpillar, whose sole thought seems to be how to get food, the type of our grovelling life on earth; then the intermediate state of the chrysalis, or pupa, when the creature is swathed in its own silky web and lies dormant, and, to all appearance, dead—this corresponds with the sleep of death; and lastly, the perfect state of the imago, when the winged creature, decked in its brilliant colours, bursts the case which held it imprisoned, and soars aloft, joyous and beautiful, no longer to be careful and troubled about its daily food, as when a caterpillar,

but now an emblem of perfect joy, and of the human soul when it rises from the dead, happy and glorious in its perfect life. The analogy might be drawn out at much greater length than this; for instance, as I daresay you know, the caterpillar is subject to many changes, certainly troublesome and probably painful to it. These changes are types of our troubles in this life of change; its incessant eating, and its absorbing care for its own caterpillar life, are only too like our anxiety and interest in the things of this world. Then the apparent death-like state of the chrysalis is very significant of that intermediate state of which we know so little; in fact, all that we really know is that the soul is alive, though the body be dead. Then the glorious beauty of the perfect butterfly speaks to us of that glorious body which, we are told, shall be ours hereafter. I have often thought, too, that the compound eye of the butterfly, with its seventeen hundred lenses, each of which, naturalists think, has the properties of a single eye, is a beautiful emblem of the illumination of mind we may hope to enjoy when "we shall know even as we are known;" for, as light has ever been considered the

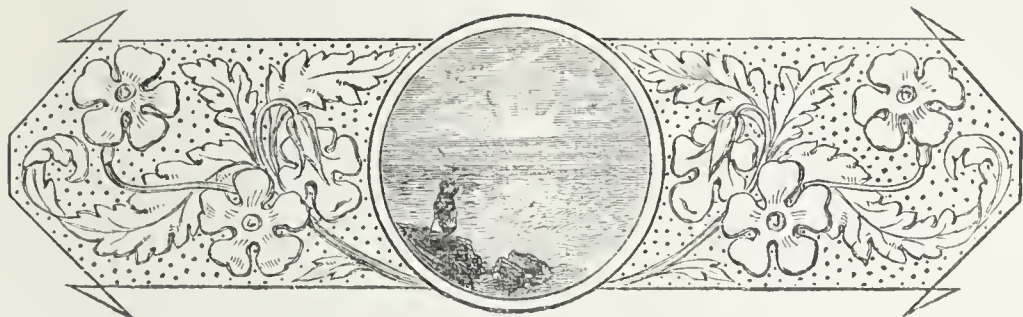
type of knowledge, so is bodily vision an emblem of mental perception, and one of the great joys of heaven will, I think, be our increased mental powers,—an eternal joy, for they will be ever growing, a joy of which we have a faint foretaste here when we feel we have made real intellectual progress. But I am reading you a lecture, which I think I may truly say is not usually a fault of mine. What are you thinking of, Willy?’

‘I was wondering why the Greeks had the same word, Psyche, for the soul and for a butterfly?’

‘Because even they saw the analogy between the two: you know they often carved a butterfly flying away on their tombstones, evidently meaning it for a symbol of the soul flying to its home. But it is getting late, and I have not said half I had to say to you. Whose side is Temple, the new boy, on?’

‘Mine,’ said Neville. ‘He seems a sharp little fellow enough.’

‘So he is, I believe; he has a very good character, but he is terribly careless. I hope you’ll look after him, Leo, or he will get into trouble with Mr. Newman, I fear. There is the prayer-bell, we must go.’



## CHAPTER II.

‘The lovely toy so fiercely sought  
Has lost its charm by being caught,  
For every touch that wooed its stay  
Has brushed its brightest hues away.’—BYRON.



BEFORE the next half-holiday parcels of various shapes and sizes arrived for Neville; butterfly-nets, umbrella-nets for sweeping, collecting-boxes for larvæ, cages, lanterns, and phials, cork saddles, pins and braces enough to set out a museumful of butterflies, bottles containing chloroform, carbolic acid, benzole, and various other preparations supposed to be useful in killing or preserving specimens, and, lastly, a very handsome cabinet, which, as Jack Strickland said, quite took one's breath away, and made one feel like the Queen of Sheba when she

saw all King Solomon's treasures. Mr. Palmer confiscated one or two of the poisons, promising to let Neville have them when required, and at the same time comforting the Skippers, whose hearts were rather failing them, by saying he thought the Swallow-tails were beginning at the wrong end in buying a cabinet before they had any butterflies to put in it.

'Dux, my boy, there is a very old proverb which says, "First catch your hare, and then cook it:" that is the plan we Skippers mean to go upon,' said Strickland, as Neville distributed some of his paraphernalia to his flock on starting for their first butterfly-hunt.

'All right, Strick! you go and catch your hare this afternoon, and we'll see what our side can do.'

'If you don't bring home a cabinetful of butterflies and pails of caterpillars with all those nets and contrivances, it will be a shame, that is all I have to say. Here we have only two nets and some pill-boxes.'

'Never mind, Strick, we have some sticks and an umbrella or two, they do as well for beating for larvæ as those nets of Dux's. But now, before we

start, if all the Skippers are here, I want to give you a few hints. And first, please remember our principal object to-day is caterpillars, not butterflies, though, of course, if we come across any rare ones, we may as well try and secure them, but it is no use wasting time chasing Common Skippers or Common Blues; it will be far better to get them—because, of course, we must have specimens of every kind we can get—in the larva state. Now, what I want you to do is to open an umbrella under a bush, and then shake the caterpillars gently into it,—your pocket-handkerchief is big enough to spread under a small plant; then pick out the caterpillars and put them into your boxes, but mind always put a leaf of the bush you found the larvæ on into the box with them; you may put as many caterpillars into the box as it will hold comfortably until we get home, but mind, never mix the larvæ of different bushes. Do you all understand that clearly?’ said the head of the Skippers.

‘Yes, yes!’ shouted the boys, who were all impatient to be off.

‘All right. Well, now, I want two of the little boys, Wood and Trevor will do, to get a stock of

all the leaves we find any larvæ on, because, you know, they are very dainty creatures to feed; for instance, the Fritillaries, which feed on the wild violet, won't look at a cabbage leaf. You may come across some chrysalides; of course, if you do you'll box them. I shall take a magnifying-glass, and see if I can't find some eggs. And now let us be off,' said Martin, whose pale face was flushed with excitement in anticipation of the sport he promised himself.

'Isn't it rather hopeless work looking for butterflies' eggs? they are such tiny things, Willy,' asked Strickland.

'It would be unless you knew exactly where to look for them, but I think I do, and anyhow I am sure to come across some with this glass, in beating bushes. By the way, Strick, I want you to help me to make some braces for setting out any butterflies we may catch; I can't afford to buy saddles and braces, like Dux.'

'To be sure I will! if I don't bring you a saddle and braces which will lick Dux's into fits, my name is not Strickland,' said Jack, as the boys started to take the train to a place a few miles out of Brighton.



It was in the early summer, and on the long days the boys were allowed to be out till eight ; Mr. Newman went with them, but when they reached their destination he left them to their own devices, only telling them they were all to be at the station again at a certain time, whereupon the Skippers took themselves off in one direction, and the Swallow-tails disappeared in the opposite. Their time was limited to three hours, and it was wonderful how quickly it fled, now that they had an absorbing interest in their walk ; indeed, the Skippers were only just back in time to catch the train, when they were bundled by the tutor into a compartment by themselves, and when they reached Brighton they were obliged to walk in twos, so they could not compare notes till they got home.

‘ Well, Dux, what luck ? ’ asked Strickland.

‘ Splendid. I caught a Red Admiral as my first prize.’

‘ Draw it mild, Dux ! Red Admirals don’t come out till August, do they, Willy ? ’ said Strickland.

‘ This year’s don’t, but they hibernate as butterflies, so very likely Dux is right. May I see it ? ’

‘ Yes, here he is. Lupton Minor, run and get me

my British Butterfly book ; I am sure it is a Red Admiral.'

'Oh yes, it is, Dux, and a beauty too. I wonder he is included in the Angle-wings, for only the fore-wings are angled.'

'Angled! I call them scalloped; but I angled very well to catch him so neatly—he is not injured at all; that chloroform concern of mine is capital. Now I must mount him.'

'You ought to get another if you can, Dux; the under side of Atalanta is so beautiful, such pretty colours, grey and pink and brown. What else have you got?'

'Two Peacocks, some Tortoiseshells, and some little blue and white and brown things, which I have told my first-class Swallow-tails to look out, and keep any that are worth having. Oh, I forgot! we have found a White Admiral.'

'Bravo, Dux! why, that is the best of all, it is so rare; it is rather damaged, though, I see; that is the worst of taking them in the butterfly state.'

'Yes, but my plan is to catch every one you see; you can't tell at a distance what they are, and you may hit on a very rare one, and perhaps catch it

without injuring; anyhow, a damaged specimen is better than none. But now let us see your lot.'

'We have only a few butterflies, but we have plenty of caterpillars, a few chrysalides, some eggs, and a stock of food for the caterpillars, so we have not done so badly, though it does not look much by the side of your spoil.'

'Did any of you young Swallow-tails think to bring home some leaves for the caterpillars?' asked Neville.

But it appeared no one had done so, except one little fellow, who had brought home some mulberry leaves it is to be feared he had poached from a garden, under the impression that all caterpillars should be fed like silkworms, an idea his chief seemed to share.

'Bravo, little Gordon! you go and feed them now before supper.'

'But, Dux, surely you know caterpillars won't eat just anything; they each have a special food, that is the wonderful part of it; every species of butterfly lays its eggs on the particular bush or tree or grass that its caterpillar likes best, and they won't thrive on any other. If your caterpillars are not

put on their native leaves they won't live, I am afraid.'

'Thunder and lightning, Willy! why didn't you tell me that? However, my caterpillars must take their chance, I can't humour their fads and fancies; they must eat what they can get or starve, as we have to do when we don't like our grub here, which, I am bound to say, is very seldom. How did you kill your specimens, Willy?'

'Gave them a nip with my finger and thumb just under the wings; you can do it through the net, and death is instantaneous if you do it properly. Your butterflies would have travelled home better, Dux, if you had pinned them into one of your cork-lined boxes; one pin is sufficient, it keeps them firm, and they don't shake about and lose the scales of their wings.'

'What do you mean by the scales, please, Martin?' asked a small boy, who was looking on, all eyes and ears.

'You call it the fluff or bloom, I daresay, but if you were to put it under a microscope you would see the wing of a butterfly is covered with little tiny scales set in rows overlapping each other,

so that one row throws a shadow over the next, and in this way the beautiful shading of the wings is obtained; the outside scales are longer, more like feathers or plumes. All the colours of the wings are in these scales; if you rub them off nothing but a thin membrane stretched over veins, like a fly's wing, remains; see here, in this damaged specimen,' said Willy, gently removing the scales off a butterfly to show the truth of his words.

'If you please, Martin, Strickland says if you'll come into the class-room, he has got the braces and saddles ready, and he'll help you to set out our specimens,' interrupted a Skipper.

'May I come and take a lesson, Willy, before I do mine?' asked Neville; and on Martin's assent they went to the class-room, where they found Strickland gravely seated at a table before a donkey saddle he had been at great pains to borrow; a pile of braces, borrowed from Skippers and Swallow-tails indiscriminately, lay by his side, and on the top of the saddle was perched a tiny little green Hair-streak, at which Strickland was gazing intently. A roar of laughter from the group of boys who had followed their chiefs into the room made him look

up and ask, with a great assumption of innocence, what amused them all so much.

‘What an idiot you are, Jack! I do wish you would be serious. You might have made straps enough to set all we found to-day, instead of wasting your time in this way. But it does not matter, Dux; I have some braces, I’ll show you how I do the four-strap setting, if Strickland will clear this lumber away; I may have time before the supper-bell rings.’

So saying,—while Jack pretended to grumble that it was very hard he never did anything right, and all his trouble was wasted, and how was he to know a saddle meant two little pieces of cork bevelled at the edges, and gummed on to cardboard, with a space between for the butterfly’s body—he would not like to ride on that saddle; or how was he to know that little wedge-shaped pieces of cardboard were called braces,—Willy deftly mounted a butterfly. He first fastened a pair of braces on to a slip of wood with mounting-pins, then he placed the butterfly over these, so that one brace came lengthwise under each wing; this done, he thrust a pin through the thorax of the insect, slanting it with the head

forwards, two more pins kept the antennæ in position, the wings were now arranged with setting-needle and bristle, and the second pair of braces or straps were applied over the wings, and nearer the outer edge than the under ones.

‘There now, I shall add all we have worth keeping to this piece of wood, and keep them in a well-ventilated box till they are thoroughly dry, then I can transfer them to the box I mean to show them in,’ said Willy.

‘Box! why, we have a splendid cabinet for ours!’ cried the Swallow-tails.

‘But you can’t mount them like Martin,’ shouted the Skippers.

‘I am not so sure about that, now Willy has shown me how to do it,’ said Dux.

‘Yes, it is all very fine of Martin; but if he is going to put your side up to all the tips, and you have the advantage of a splendid plant into the bargain, whereas all our machinery is some pill-boxes and a few slips of cardboard and wood, I should like to know how we are to have a chance of the prize,’ grumbled Strickland, half in earnest.

After supper Martin arranged his caterpillars in

boxes, giving them a supply of the leaves on which they were found; but Neville was tired with his exertions, and contented himself with ordering the new boy Temple and little Gordon to put their collection all together on the mulberry leaves, and leave them to their fate. Martin also told off two Skippers, whose duties were to be to feed the caterpillars; but he took good care to inspect them himself every night and morning, not trusting to the memories of his subordinates. As might have been supposed, by the end of the week all Neville's caterpillars, with the exception of one or two which were less fanciful than the others, sickened and died; while Martin's thrived and grew to admiration on their natural diet.

‘Pampered creatures! do you know what any of them are? I daresay they'll turn out common things, not worth the trouble of keeping,’ said Neville.

‘We must have common butterflies to make the collection complete, but I hope some of mine may turn out prizes; for instance, all these in this box are Fritillaries of some kind, for they were found on wild violets or plants of that order. See, these are violet leaves.’



‘It seems to me you want to know botany if you take up butterflies. I am sure I have not the faintest idea what some of your animals are feeding on. What’s this plant now?’

‘Lotus, or bird’s-foot trefoil; these are probably the caterpillars of Red-horns. They all feed on trefoils and clovers and plants of the leguminous order—pea and bean tribe, that is. Some may be Skippers; they like various kinds of food.’

‘Why, some of your creatures are actually feeding on grass! What are they?’

‘Oh, Satyrs, or perhaps Skippers; they both prefer grasses. I have only a few of those at present, some I got myself. I must get some of my Skippers to search the grass for their namesakes to-morrow afternoon.’

‘Martin, what plant do the Swallow-tails prefer? We want to get a specimen of one if possible,’ asked Gordon-major.

‘Milk-parsley, I believe, is the only plant you are likely to find *Machaon* on; but it is so rare in this county I doubt your finding it; if you do, you can feed the caterpillar on carrot leaves, so my book says. I am going to set the Skippers to beat the shallows for Purple Emperors to-morrow.’

‘Do be quiet, Willy. I declare you don’t deserve to win the prize, when you will make the Swallow-tails a present of our only capital—information,’ put in Strickland.

‘My dear Strick, don’t pretend to be so selfish. You know Dux would willingly share his plant with us if I would let him.’

‘Yes; but as you won’t, I think it is unfair of me to learn all your tips, which you have had the trouble of finding out; however, as neither I nor any of my crew know what a sallow is, it does not much matter in this case. Henceforth, Martin, unless you’ll accept some cases or cork saddles in payment, I won’t listen to your information, tempting as it is.’

‘Stuff, Dux! I like telling you the little I know, and, after all, Mrs. Palmer’s object is to teach us entomology; besides, I really wish to make all I require for my collection myself. I am not well off, and it is far better for me to learn to do the best I can with as few appliances as possible. You must know the sallow, Dux; it is a willow, the Great Goat willow, bearing catkins in the spring, and the fruit is all covered with down in the autumn.

Another caterpillar I am going to search for to-morrow is the Duke of Burgundy; he belongs to the Dryads, and they are to be found on primrose or cowslip leaves. Hairstreaks are to be found on brambles, oaks, or elms; the Fritillaries on any of the germanders or violets, the Whites on cabbages, vetches, or wild mignonette, the Blues on the rest-harrow, and the White Admiral on a variety of plants.'

'That is right, Martin. Have it all out; you have been through all the families now except one, the Angle-wings,' said Strickland.

'Well, they are to be found on hemp-wort, elm-wort, and hops; but there is the school bell. I'll tell you more about caterpillars to-morrow, Dux, when we come back from our hunt, if you like,' said Martin.





### CHAPTER III.

Turn, turn, thy hasty foot aside,  
Nor crush that helpless worm ;  
The frame thy scornful thoughts deride  
From G received its form.



SAY the White Admirals are a distinct family, the only genus we have in England,' cried Martin.

'And I don't care what you say, I am certain Red and White Admirals both belong to the Anglewings. I don't profess to know much, but that little I do know ; and if any one dares to contradict me, I'll knock him down !' said Neville, working himself into a passion.

To his amazement a lady's voice behind him answered gravely, 'You are quite mistaken ; White Admirals are a distinct family ;' and, turning round,

he saw pretty Mrs. Palmer standing in the doorway.

Neville coloured violently, partly with anger, partly with shame at having been caught losing his temper by Mrs. Palmer; but the truth was, he had been put out in the morning because he did not know his Latin, and Martin construed a passage correctly he failed in. Mr. Palmer had reproved him for not working, which did not tend to improve his temper; and this afternoon, perhaps because it was very warm, the Swallow-tails had been lazy in beating for caterpillars, and had allowed two or three butterflies to escape them, which, with a little trouble, they might have caught.

The Skippers, on the contrary, had been very active; and when Martin announced that he had found a White Admiral caterpillar, this was the last straw, and Dux replied angrily, 'It was nothing to make such a fuss about, as all Admirals were common enough.' Martin had then explained that Red and White Admirals did not belong to the same family, whereupon the above result.

Neville would have made his escape if he could have done so, but Mrs. Palmer blocked the doorway,

and Martin, seeing who it was, begged her to come in and look at the afternoon's spoils.

'With pleasure, if Dux will show me his too,' said Mrs. Palmer; and Neville was obliged to comply *volens volens*.

'I think Willy is right about the White Admiral,' she continued, taking up a piece of honeysuckle on which a large fat caterpillar, covered with branching spines, was voraciously feeding. 'And a very clever caterpillar he is too. He has been asleep all through the winter in the cleverest cradle of his own making. You know the leaves of the honeysuckle fall off during the winter; well, the caterpillar, young and small as he is in the autumn, knows this too, and he also knows that if the leaves on which he is feeding were to fall to the ground, he would perish, so what do you think he does? He spins a number of fine silken threads round and round the leaf-stalk and twig on which it is growing; then, having first of all eaten about three-quarters of the leaf, with the part which remains, and some of his own silk, he makes himself a tiny cradle in which to pass the winter. In due course the time for the leaves to fall arrives, but the caterpillar's

cradle only falls as far as the silken net allows it, and there he hangs swinging in his cot snugly and safely all through snow and frost, rain and wind, until April, when he wakes, and eats for two months. This one will, I think, begin to spin in a day or two, he seems full-grown.'

'Oh, please stay and tell us more about caterpillars, Mrs. Palmer,' said Willy Martin.

'Yes, do, please; it'll be fair enough if we all hear,' said Strickland.

'I am not sure that I know as much as you big boys do, so you must forgive me if I tell you stale news. In the first place, all the caterpillars of butterflies are made up of thirteen rings, called in science segments; the head is the first ring, and has two antennæ or horns, two feelers, two jaws, and twelve tiny eyes, as you can see with the help of a microscope; the other rings are made up of legs, claspers, and spiracles.'

'What are spiracles? Don't all speak at once,' interrupted Strickland.

'They are oval holes through which the caterpillar breathes, I think,' said Martin.

'Right, Willy. As you must have noticed

already, caterpillars vary very much in shape, but entomologists divide them into two great classes, Exposers and Concealers. The Exposers are naked chrysalides; the Concealers, which are very scarce in this country, envelop themselves in a cocoon of silk before they change. The Exposers, again, are divided into Suspenders and Girted. The Suspenders hang themselves up by the tail only, with the head downwards; the Girted are hung by the tail and also by a rope of silk slung round the middle of the body.'

'But you can't tell whether they are Suspenders or Girted till they change to chrysalides, can you?' asked Strickland.

'Oh yes, you can, because all the Suspenders are either covered with spines or are shaped like a slug, while the Girted are either like wood-lice or like cylinders. The most remarkable in appearance is the Purple Emperor, which you may find enthroned on an oak tree; he is a slug-shaped Suspender, with two very long horns and a coronet on his forehead, but my favourites are those fluffy, spiny fellows like the Peacock, Painted Lady, Red Admiral, and the Silver Fritillaries. I don't like



those little short, fat creatures, too like wood-lice for my taste, the caterpillars of the Blues, Hairstreaks, and Coppers. I see you have some, Dux; certainly, if you rear all these, you will have a capital collection, but you are sure to lose some. The worst enemy of all, in the natural state, is the ichneumon-fly, which lays its eggs in the soft body of the caterpillar without killing the poor little creature. When the eggs are hatched, the tiny larvæ feed on the caterpillar until they turn into chrysalides; and then one fine morning out fly a host of these insects, instead of a butterfly, whose caterpillar is dead before this. However, this is not so likely to happen to your caterpillars as starvation, through forgetfulness on your part to feed them.'

Of course all the boys protested this was not likely to occur; but in the sequel Mrs. Palmer turned out to be right.

'If you keep them till they turn to chrysalides, you may be rewarded by seeing some of them change, and the way in which they do it is very wonderful, so elaborate are their preparations; but when we think that the creature is taught by the

Creator how to perform this change, our wonder is changed to adoration of God for the loving care which He bestows on so insignificant a thing as a mere caterpillar, which we often heedlessly tread under our feet. One great reason why I chose a branch of Natural History as the subject of my prize was because, in studying the habits of any of God's creatures, we are constantly led up to the thought of God Himself; we find Him in His works.'

'Mrs. Palmer, how shall we know when the caterpillars are going to change?' asked a small boy.

'In the first place, a caterpillar leaves off eating; and, in the next, it is very restless, and wanders about, as if seeking a safe place in which to perform the act of transformation; then it spins a little silken pillow, and clings to this with its last claspers for a day or two, till the chrysalis is formed, when it slowly emerges from the caterpillar skin, which slips down to the bottom of the chrysalis. The next step is to climb up to the silk pillow, which, as the chrysalis is smaller than the caterpillar, is above it; this it does by

means of its tail, which is armed with little hooks or feelers, with which it clings to the silken threads and swings itself up, till it hangs safely on its silken pillow. It then very often tries to get rid of its old caterpillar skin, by twisting itself round and round, so as to break the threads which hold the skin, after which it remains quiet, perhaps through the winter, but at any rate for some days (a fortnight in the spring, seven days in the summer), until it emerges as a butterfly from its prison-house.'

'I can make chrysalides whirl round by tickling them,' said little Gordon.

'Don't let me catch you playing any tricks on my caterpillars when they have changed, or I'll tickle you, I promise you, young man,' said Dux.

'Little Gordon is right in his facts, though, Neville; some chrysalides can be induced to perform that feat by irritation at any stage, but for the most part they lie quiescent and apparently lifeless. They are very unattractive, indeed, repulsive, in this stage, which answers to the intermediate state with us; but to change from a poor crawling caterpillar, even though it be such a handsome creature as some of those are which you call Woolly Bears, to

a beautiful butterfly with its jewelled wings, is well worth the penalty of being a chrysalis.'

'I wonder if the butterfly remembers its caterpillar life,' said Jack Strickland.

'I think not; but what is more important is the fact that we shall certainly remember our earthly life when we are changed.'

'Do you know why old naturalists used to call the chrysalis the *aurelia* stage, Mrs. Palmer?' asked Martin.

'What is the Latin for gold, Willy? I will answer your question by asking another.'

'*Aurum*, and *chrysos* is the Greek for gold; of course I might have guessed that they meant the same thing; but why do they call a chrysalis a golden stage?'

'I believe because the Vanessas and Fritillaries and some others are gilded. There is another word used now very often—pupa, which means tied up, or swathed, because the creature is bound up in its pupa state, its different parts being packed up in the neatest possible way; its antennæ folded down by its wings, which are very small, on each side of the body. But I have been giving you

quite a lecture on butterflies; now, before I go, I want you to show me your cabinets and all your paraphernalia, will you?’

‘Neville will; I have nothing to show,’ said Willy.

But when Mrs. Palmer had seen Neville’s things, she made Willy bring out his, and although, as he explained, it was too early to judge of them in their present unfinished condition, still they were all so neatly executed, that her admiration of them was as sincere as that she bestowed on Neville’s bought appliances. Willy’s cardboard braces were almost as good as Neville’s, and his setting-board, made of a strip of wood lined with two rows of cork, answered all the purpose of cork saddles; while the case he had made to keep his specimens in after they were dried was really very ingenious. It was simply a shallow deal box with a close-fitting lid, the bottom of which was lined with small square pieces of cork gummed on in straight rows; these had been cut out of old corks begged from the housekeeper, sheet cork being dear; to these pieces of cork a few butterflies were already fixed, and here they were to remain for the present at any rate, though Willy intended if

possible to construct a more permanent case before the prize was awarded.

‘I wonder how many of the sixty-five true British butterflies you will succeed in getting?’

‘Oh, all, I should hope!’ said Dux.

‘If we get fifty between us, I shall think we have done well; we shan’t be able to do much more in the collecting way this term, for the examinations will be coming on.’

‘And you must not neglect your work, or Mr. Palmer will want me to withdraw my promise; he rather complains now that this butterfly craze, as he calls it, absorbs too much of your time and thoughts, and I believe Mr. Newman will never quite forgive me for offering such a bait.’

The boys were loud in their complaints of the tutor’s wish to throw cold water on their plan; but there was some excuse for him, for, as he complained, he was constantly finding tiny caterpillars crawling on the jackets of small boys who had, in the ardour of their exertions, put the eggs to hatch in their breast pockets. Then the dormitories were never tidy since it was permitted to keep caterpillars in various stages of growth in them; while the water-

jugs were always full of the various plants the different caterpillars lived on, and Mr. Newman was as anxious as Swallow-tails and Skippers for the caterpillars to reach the pupa stage, when they would require less attention and could be relegated to the lower regions.

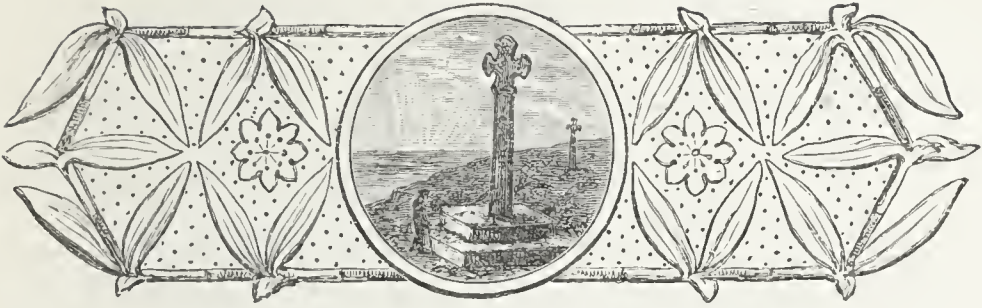
But to his disgust he found the chrysalides absorbed more of the boys' attention than the caterpillars, after a week, when they might be expected, in the hot weather they were having, to emerge. The interest then in watching for the eventful change was great, and the excitement when it actually took place intense, and the disputes which often arose as to the name of the new-born butterfly were loud and long, only settled by an appeal from Willy to one of Dux's books. No sooner was the unhappy butterfly fairly alive than it received its *coup de grâce* from some little finger and thumb, whose owner doubtless delighted in the operation, and this annoyed the tutor, who declared butterfly-hunting was one thing,—fair sport perhaps it might be called,—but raising insects for the mere pleasure of killing them as soon as they were born was quite another. Perhaps he never was so glad to

see the close of a term as one day in the end of July, when Swallow-tails and Skippers, with their caterpillars and chrysalides, took themselves home for the holidays ; while the butterflies duly mounted were left under lock and key in Mrs. Palmer's care till their owners returned.

The cats shared Mr. Newman's joy at the departure of the boys, for they had had a very bad time that term, their whiskers being in great request for setting-bristles ; an instrument most of the boys, great and small alike, took great pleasure in making, and considered it an indispensable part of their butterfly paraphernalia.







## CHAPTER IV.

‘Why, lovely insect, dost thou stand  
And wave thy quiv’ring wing,  
As half afraid thou wert aloft  
On fields of air to spring?  
But now has reached thy slender form  
A sunbeam warm and bright,  
And instant thou hast upward sprung  
Towards the source of light.  
Thus in the portals of the tomb  
The trembling soul shall stand,  
Till beams of faith and mercy point  
Its way to the promised land.’



NEVILLE'S parents lived near Monmouth, at a place called Bicknor Court, which is actually in the county of Gloucestershire, though close to the border-land between the two counties. It is one of the prettiest parts of England, for the lovely Wye winds through the valleys at the foot of the richly-wooded hills;

while beyond the Gloucestershire hills the Welsh mountains, range after range, stand out against the distant horizon. Nothing seems wanting to complete the beauty of the landscape; wood, water, hill, and dale all combine to make a piece of mountain scenery, which, although on a smaller scale, is equal in beauty to many parts of Scotland. It had been arranged before the boys left Brighton that Martin should spend the latter part of the holidays at Bickmor Court, and accordingly he arrived there in the middle of August, and found Neville all excitement about a large picnic to the Forest of Dean, which was to take place the next day.

‘Perhaps we may find some butterflies, Dux; so I shall take my net. I brought a box or two with me, in case I had any luck, but my mother is taking care of my chrysalides; nearly all mine have turned, except the White Admiral which I lost, and a few I expect will not come out till next spring. How are yours getting on?’

‘I don’t know. I gave mine to Gordon to look after, as I could not be bothered with them in the holidays; but I have been out butterfly-hunting

two or three times, and have found several Duke of Burgundys and Marbled Whites, and some rather good Hairstreaks.'

'I expect this is a good place for butterflies. I mean to have plenty of hunts while I am here.

'Yes; I knew you would want to, so I waited till you came. By the way, I believe the Purple Emperor has been found in Dean Forest; we may come across him to-morrow.'

And so they did; but the wary monarch was, as usual, taking such high flights from his favourite seat on the uppermost branches of a mighty oak, that Neville, after looking at him for a few minutes in disgust at his soaring habits, turned away, and would have abandoned all thought of him but for Willy, who, to comfort himself, suggested that perhaps it was not the Iris after all.

'The grapes are sour, Leo,' laughed Colonel Neville. 'It is Iris, sure enough; the question is how to catch him. Now if I only had a dead stoat or a weasel we would bring him down fast enough. He is not very nice in his feeding for a butterfly; dirty puddles and small birds or stoats, well advanced in decomposition, are some of his favourite dishes.

Perhaps I could get some bait at the Speech House; it is worth trying.'

Accordingly Willy went back to the Speech House, and presently returned in high glee with a piece of rabbit skin and the wing of a dead thrush, which he nailed to the trunk of the oak; and then, with his net by his side, sat down at a little distance to watch the effect. In ten minutes' time not one but three Purple Emperors were regaling themselves on these tit-bits, and, watching his opportunity, Willy slipped forward, and with a dexterous movement swept all three prizes into his net. He then nipped one after the other through the thorax as quickly as possible, lest through fluttering about in the net they should rub any of the scales off their beautiful wings.

All these had the purple lustre from which the monarch takes his title over the groundwork of their wings, which proclaimed them to be males,—in the females this ground colour is rusty black; the seven white spots on the fore-wing and the band which crosses the hind-wings obliquely, extending into the fore, were pure white, without the yellow tinge which is another mark of the

female; the under side was very different to the upper, the black here shaded to pale grey; the antennæ were very long and gradually clubbed, which gave them an aristocratic air of refinement, and is probably the butterfly's sign that 'blue blood' is in his veins. They were evidently not intended to walk like mere ordinary plebeian butterflies, for their fore-feet had no claws, and were quite unfitted for walking.

'Well done, Willy! I have always heard that Iris is one of the most difficult butterflies to net. You managed that very neatly,' said Colonel Neville, as Willy secured his prey in a box he had brought with him.

'You shall have one, Dux, if you'll accept it; perhaps you may get another here between this and the time we are to send in our collections.'

'One is enough for me, thanks; but do you think I ought to ought to take it, father?'

'Well, Willy won't want more than two for himself, will you?'

'Oh no; but I wish we could get another, Dux, for you; you see the under side varies so, that we ought to have two specimens; I mean to try for

duplicates of all mine, so as to mount one flat and one with the wings set up showing the under side.'

'Are there any more of this family to look for, Willy?'

'No; the Emperors are a family all by themselves, and I believe Iris is the only British species.'

'Oh, well, we have done with the Apaturidæ then, thank goodness! I am as glad when we have finished a family as I am when I have had a tooth out.'

'I am afraid, Leo, you are not a very ardent entomologist,' said Colonel Neville.

'No, I am not; I don't care for the trouble, I own, but I should like to win the prize very much, all the same; five pounds' worth of books is not to be despised, especially when the giver is as pretty and nice as Mrs. Palmer. Perhaps this is a good hunting-ground, Willy; we may as well make hay while the sun shines, so, if you like, we'll have some butterfly hunts in the next few days.'

This they did, and on the whole had very fine sport, for, as money was no object to the Nevilles, the boys went by the train to another part of the country every day. One of their best bags was

made in the neighbourhood of Stroud, where they found several Marbled Whites, which they caught in rough pastures. Neville had previously found some of these, but Martin was glad to get some specimens of both male and female, and Leo had not noticed that the black and white wings of the latter differed from the males' by being thickly covered round the wings with gold dust. They also found one or two Comma Butterflies that day : these are the most angle-winged of the Angle-wings, and are reddish-brown in colour, with two little white comma-like marks on the under-surface of their hind-wings. Willy thought they were hybernating specimens, as it was too early in the year to find those hatched in the preceding spring. The Chalk-hill Blue and the Pale Clouded Yellow were also among the spoil.

The next day they went to Clifton, and there Willy, after a long, tiring search, was rewarded by finding on a piece of cow-parsnip two of the yellowish-green chrysalides of the Swallow-tail Butterfly ; these were girted and attached by the tail to the plant, their eared heads drooping downwards. These Willy expected to hatch the following May, and he was very glad to have found them in

this stage, as, from their power of emitting a very powerful scent in the caterpillar stage, they are interesting to watch ; moreover, he was anxious to obtain perfect specimens of this handsome butterfly.

On the whole, the boys were well satisfied with their sport in Gloucestershire, and if their helpers had only helped as well in other parts of England, the collection ought to be growing apace ; but of this they were not very hopeful. However, a letter from Strickland, who was spending his holidays at his home in Norfolk, reassured them, at least as far as he was concerned ; still, the style of the epistle was so characteristic of the writer that they had great difficulty in deciding how much of it was truth and how much fiction.

It ran as follows :—

‘ BURNHAM RECTORY, GREAT YARMOUTH.

‘ MY DEAR FELLOWS,—When shall we three meet again ? Alas ! only too soon, for time flies like butterflies in the holidays. How about the holiday task ? That Martin is slaving away at his, I know ; just pinch him for me, Dux. While as for you, you idle son of a gunner (the Colonel was in the



R.A., I think), I am just as sure yours is not begun. "It is as forward as Strick's anyway," I hear you say; but gently, my boys, gently; dear, good, industrious Strick's is done, essay composed, written, and neatly copied by—his sister. Go up top, Strick. I mean to, my boys, I mean to. Nice sister mine, quite a kid too, and very much at the service of her darling brother. Wouldn't I let her know it if she weren't? I'd cut her hair for her, and buy her cayenne-pepper sweets, and amuse her pet cat by the half-hour making setting-bristles, if she didn't do my holiday task for me; and she knows it. Always manage your womenkind, or your womenkind will manage you; that is one of my dad's maxims, and I follow it, as I do all his excellent advice. Ahem! good, obedient, pious boy that Strick. Bravo, Strick! Swallow-tails and Skippers, Admirals Red and White, Ringlets and Tortoiseshells. I declare I have written two pages, and only once mentioned butterflies, the real object of my letter. Now to business. What sport, my friends, what sport? This child has done his little best, and with rather good results, I flatter myself. Is it Painted Ladies you want? come to Yarmouth; here

in the season they are as common as flies, and much, oh, much *dearer!* though the cabbies put it on pretty considerably, I can tell you. Or is it Peacocks? here they are male and female, sunning themselves on the jetty. Talking of Peacocks reminds me of a splendid joke I accidentally played on my Pater the other day. One of the Skippers sent me a post-card to say he had just sent me a brace of splendid Peacocks, and he hoped they would arrive undamaged. The Pater reads the card, and when I come down I find him raging against me, my friend, and the Peacocks. Did I suppose I should be allowed to keep peacocks in his garden? didn't I know they played ducks and drakes with the flowers? Useless for me meekly to urge I knew my Peacocks would not injure so much as a blossom; I was ordered to hold my tongue and not talk such twaddle. I was to let him know the instant the birds (brutes he called them) arrived, and he would send them back immediately; they should not set foot in his garden. I could not resist saying they would prefer flying to walking, whereupon I was told to leave the room, as the head of the family

hadn't patience to listen to such folly; peacocks flying about his garden indeed! and I to speak of it as if they were sparrows; didn't believe I knew what a peacock was. For the sake of peace I left the table, inwardly chuckling, and when an hour later the parcel post arrived with my Peacocks, I went into his study, and, holding out the box, said, "Here are the Peacocks, father." His face was a study, but he ended in a fit of laughter. Served him right for reading my post-card. But to business again. Greenhorns here predominate over Red-horns. I can secure an unlimited supply of the former; as for Ringlets, I could obtain every variety if I only had the courage to ask for them. I am on intimate terms with several Skippers, one Grizzled Skipper in particular takes me out for a sail occasionally. I met two Admirals at a musical party the other day. The Camberwell Beauty is lodging in our parish, and I hear there is a Duke at the Grand Hotel; no doubt it is Burgundy. I often get the Blues when I think how soon the holidays will be over, and I enclose some inverted Commas—" .” By-bye.

‘JACK STRICKLAND.’

‘Now who on earth is to know what Jack has really done? How much of his letter is true, I wonder?’ cried Martin when they finished Jack’s effusion.

‘Precious little; if he has kept the Peacocks that is about all he has done, I expect we shall find when we get back to school.’

A week later the boys were all assembled again at Mr. Palmer’s, entertaining each other the first day with an account of the way in which they had spent their holidays, and even the Butterflies were forgotten that first evening.





## CHAPTER V.

‘From every chink  
And secret corner, where they slept away  
The wintry storms ; or rising from their tombs  
To higher life ; by myriads forth at once  
Swarming they pour ; of all the varied hues  
Their beauty-beaming parent can disclose.’—THOMSON.

**J**ACK was very mysterious as to his butterfly collection ; he assured Skippers and Swallow-tails he had made a splendid one in the holidays, but he would not let any one see it until it was all properly arranged, and then, he said, it would be so good that he should exhibit it one half-holiday at a penny a peep, for the benefit of Mrs. Palmer’s missionary-box. No entreaties could induce Jack to show one single specimen, or even to whisper the name of any, until a certain Saturday afternoon, when, having per-

suaded Mr. Newman to let him have the classroom for his exhibition, he locked himself up, to arrange his specimens. By this time, though Skippers and Swallow-tails all agreed it was a hoax, their curiosity was so excited by Jack's tempting and judicious hints that they all gladly paid the penny entrance-fee.

The collection was laid out on the long table in partitions made of books and slates, the name of each specimen was written beneath it, and the whole were arranged in classes.

First of all came the pretty bell-shaped wild flower labelled duly, Common Fritillary; the next was another flower of the same plant washed over with silver paint, and called Silver-washed Fritillary; then a likeness of the Queen of Spain cut out of one of the illustrated papers, labelled Her Majesty Argynius Lathonia, Queen of Spain; then followed another piece of Fritillary, daubed all over with hair-oil, and labelled Greasy Fritillary; next a blank sheet of paper with an enormous comma painted on it; then a small piece of tortoiseshell, labelled Small Tortoiseshell, then a large tortoiseshell card-case, labelled Large Tortoise-

shell; next a photograph of a very pretty girl headed Camberwell Beauty; then the most attractive object in the exhibition, a stuffed peacock in a screen, which took up a large piece of the table, and had been borrowed from Mrs. Palmer's drawing-room,—this was labelled simply Vanessa Io, its common name being so obvious it was unnecessary to repeat it; then came a print of an Admiral of the Fleet in cocked hat and naval uniform, painted a brilliant vermilion, and, needless to add, named the Red Admiral; further on was another copy of the same print painted white on a green ground, to do duty for the White Admiral. This gentleman was framed and very ostentatiously placed by himself, while a notice was appended to him stating he was the only member of his family in this country. Dividing the Admirals was a coloured photograph of an actress, labelled Painted Lady; then came a likeness of the Emperor of Germany coloured purple by Jack; then a piece of marbled stairecloth labelled Marbled White; then some ringlets made out of tow, and coloured and duly labelled, Small Ringlet, Brown Ringlet, etc. Then a small fish, with difficulty obtained in the Brighton fish-market,

labelled rightly the Grayling; then some pieces of heath, called Large and Small Heath; a copper kettle labelled Large Copper, a penny labelled Common Copper, a farthing called Small Copper, followed the Heaths: these, with a piece of brimstone for the Brimstone Butterfly, a dress-coat for the Swallow-tailed, some blank sheets of white paper for the Whites, and some grasshoppers secured by a silk thread to represent the Skippers, were the most remarkable features of the show; and the roars of laughter the collection produced amply repaid Jack Strickland for the time and trouble he had wasted on it.

Even Mr. Palmer honoured the exhibition with his presence, and enjoyed it as much as any of the boys. The only person who did not quite approve of it was Willy Martin. He thought butterflies much too serious a subject for his aide-de-camp to joke about, and was also disappointed to find Jack had been so idle during the holidays.

‘Idle, my dear Skipper! I assure you the amount of thought I have given to this work of art is more than I give to’—



‘Your studies throughout the term, eh, Strickland?’ interrupted Mr. Palmer.

‘Yes, sir. At times I was buoyed up with the hope that Mrs. Palmer might bestow the prize upon me in consideration of the talent displayed here, although it is before the time.’

‘I am sorry for your disappointment then, so is Martin apparently.’

‘No, sir; I am sorry Strick has nothing else to show, only this rubbish, after leading me to think he had added to the collection in the holidays.’

‘So I have, Martin, honour bright. I have taken up a new branch of the subject, and a very interesting one it is: I have been going in for butterflies’ eggs this vacation; it is not such exciting sport as bird-nesting perhaps, and I should be sorry to breakfast off them, but it is great fun all the same when you go in for it in a scientific way, not in the hap-hazard fashion adopted by some of you little fellows who have been hatching all manner of eggs into grubs as useless as yourselves. By the same token, some of my best eggs are Swallow-tails; there is a place on one of the Broads near Yarmouth where they abound, so one day I

watched a lady Swallow-tail who I knew by her busy air had some important business on hand. Presently my lady settled on a piece of milk-parsley and laid some eggs. I did not disturb her, but I marked the spot, and when she had disappeared I secured the plant with some little pale green oval eggs on it. I took the milk-parsley home bodily and planted it in my own garden, well out of my Pater's sight. In a day or two they changed to blue, then to black, and in about a week the caterpillars began to be hatched, then I thought it time to secure them, so I took them up to my room and gave my sister charge of them.'

'And where are they now, pray?'

'Upstairs safe and sound, and beauties they are too, splendid colours, but greedy little wretches; the first thing they did was to eat their own egg-shells the moment they were hatched. I brought a good supply of food for them, and they ought to turn soon.'

'They are very late; Swallow-tails often lay in May,' said Martin.

'Yes, they are; but all the better, for they'll remain in the chrysalis state all through the

winter. By the way, Martin, did you know, if you touch these caterpillars they can throw out a strong smell of fennel from one of their horns? it is such a lark, I often stir mine up on purpose.'

'Proper science that, eh, Martin? Like old Strick, though; I never thought he could be serious for long,' said Dux.

'I like that, when I am teaching you all; I have gone in for it thoroughly, I tell you.'

'Oh, all right! tell us some more then.'

'Well, perhaps none of you know that if the butterfly is in a great hurry to lay her eggs, and can't find the particular plant her caterpillars like, she chooses the nearest she can find to it; and to be sure the eggs remain on the plant she glues them to it.'

'The Marbled White does not; she drops her eggs anywhere among the grass,' interrupted Martin.

'Another fact I have observed is, butterflies seldom live long after laying their eggs. Then my father has a microscope, so I got him to examine some eggs for me, and we found the shell is very like the skin which lines a bird's egg, and

the inside very like the white of one, but it had no yolk. But the most curious thing was, no two eggs of a different species were alike when under the microscope; some are round, some oval, others pear-shaped, some are like a miniature melon, fluted just in the same way too; some are quite smooth, some covered all over with little specks; a few have a tiny lid at the top for the convenience of the young eaterpillar on his entrance into the world.'

'Oh, come, draw it mild, Striek! You don't suppose we think you saw all these eggs under your Pater's microscope.'

'I did not say I did. I saw a good many though, and he told me the rest. I daresay you won't believe it, but some of these eggs, about the size of a pin's head, are most exquisitely ornamented.'

'Yes, I believe it, I have seen them under a microscope; the Queen of Spain egg is like a tiny white wicker basket. One of the wonderful things about these eggs is, no amount of heat or cold will kill them, for numbers live all through our hardest winters. Do you know, Striek, your Swallow-tailed chrysalides are awfully pretty to watch in the

spring, when they are beginning to change; the colours of the butterfly show through the chrysalis for some days, and later on the pattern of the upper wings does the same, and when he does come out, he is as much out of his element as Dux was the first day he put on his swallow-tails.'

'There is evidently something in the name, if men and Swallow-tail butterflies all make their *début* into society as if they were ashamed of themselves,' said Dux.

'Men! I do like that, don't you, Strick? I can tell you the cause of the butterfly's shyness, though; his wings are so small when he first comes out from his shell, that they can't support his body. I know you will all say I am fudging, but it is as true as steel, that you can see the wings grow, and in an hour they are full-size.'

'Well, we have heard enough about Swallow-tails. Just tell us a little about Skippers and their eggs, Martin; we may as well try to find some,' said Gordon.

'Yes, tell us about ourselves, Martin,' cried the Skippers.

'To begin with, we are Concealers, that is, the

chrysalis is enclosed in silk. The egg of the Grizzled Skipper is laid on brambles, but it is such a common butterfly, you need not trouble after the eggs. The Small Skipper lays on the grass, and the caterpillar passes the winter there. The Lulworth is the rarest of the Skippers; I don't suppose we shall get one, as none of us come from Dorsetshire or Devonshire, and those are the only counties, except perhaps Warwickshire, where it is found. But the principal thing I want my Skippers to do this term and next, is to look for hibernating species of caterpillars, chrysalides, and butterflies, and help me to get on with the case I am making for the prize, and to prepare braces and boxes for setting all the specimens we hope to get in the spring.'

'I mean to go in for caterpillars next year; I have come to the conclusion you get much better specimens if you rear them yourself than you do if you catch the butterfly ever so carefully, so you Swallow-tails can look out for hibernating caterpillars,' said Dux.

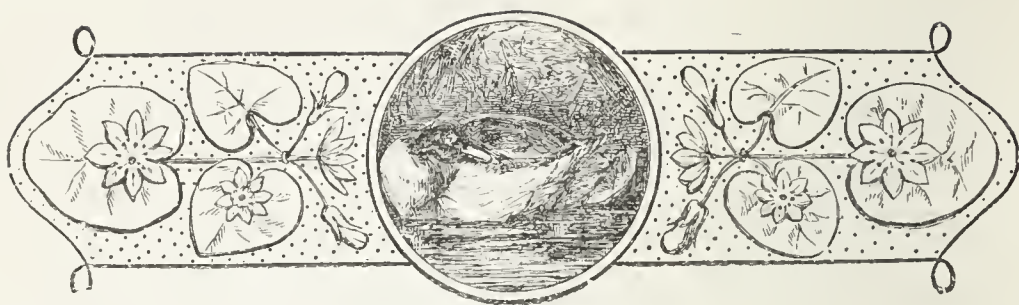
'Yes, that is all very fine, but where are we to look?' said Gordon.

‘Yes, tell us that please, Martin,’ cried a chorus of Skippers and Swallow-tails.

‘So I will, when I have found out the most likely places, but not to-day; any more butterfly-ology on the top of Strick’s intellectual treat, which he gave us in his exhibition, would be too much for your minds; moreover, I hope we are going in for some football before the afternoon is wasted.’

This suggestion met with universal approval, Jack Strickland excepted, and he tried in vain to induce some of the others to remain and help him to clear away his exhibition.





## CHAPTER VI.

‘Observe the insect race, ordained to keep  
The lazy Sabbath of a half-year’s sleep.  
Entombed beneath the filmy web they lie,  
And wait the influence of a kinder sky.’

MRS. BARBAULD.

**F**OR the next few weeks football was all the rage, and absorbed so much of the boys’ leisure, that, except Willy Martin, they were all too much occupied to think of their butterflies, whether living, dead, or hybernating. However, one day a boy named Jennings had his arm broken by a kick, whereupon Mr. Palmer put a stop to football for the rest of the term, to the indignation of the boys and the delight of Mrs. Palmer, who openly told the boys if she were her husband, they should never play such a horribly dangerous game.



‘A nice slow term we shall have, all through that little muff breaking his arm: no football, and of course there is no cricket and no swimming in the winter, no anything but Euclid and Cæsar, Cæsar and Euclid, day after day, varied by arithmetic and algebra!’ grumbled Neville one wet half-holiday, after the football had been stopped.

‘Poor old Dux, it is hard lines. Can’t we do anything in the lepidopteral line?—fine word that, Dux, make a note of it, my boy, to vary the monotony. How about hybernation, Martin? Have you found anything to tell us about that?’ said Strickland.

‘Yes, plenty, and as we are all here I’ll tell you all I know, if you like, and next half-holiday we’ll ask to go into the country and have a hunt.’

‘All right! fire away, Willy. I don’t feel very keen about anything except football just now,’ said Neville.

‘To hybernate, as you all know, I suppose, means to pass the winter. Well, all butterflies live through a winter in some state, because

the life of a butterfly from beginning to end lasts a year.'

'I thought a butterfly lived only for a day till we took up the subject,' interrupted Strickland.

'When I say a year, I mean from the time the egg was laid to the time the young butterfly lays its own eggs and dies. Well, some pass the winter in the egg-state,—eight do,—but we need not bother about them; it would be silly to look for hibernating butterflies' eggs. Twenty-five hibernate in the caterpillar state, ten in the chrysalis state, and ten in the butterfly state. Of course I am speaking only of British species.'

'Of course, but where on earth do they hibernate? That is what I want to know,' said Strickland.

'I am coming to that, but first let me tell you that any given species of butterfly always hibernates in the same stage; for instance, Io hibernates as a butterfly, so all the future generations of Peacocks will hibernate as butterflies; the Grayling hibernates as a caterpillar, and all its descendants will do the same. The caterpillars hibernate on their

own peculiar plants, so that when they wake up they may find a good breakfast ready to hand after their long night; the chrysalides hang themselves up on railings, fences, outhouses, or on hedge-mustard, reeds, vetches, or other plants; and butterflies choose all manner of places, from a church to a pigsty, though they seem greatly to prefer a pigsty. A hollow oak tree is a favourite place for Peacocks; indeed, any hollow trees seem to suit all hybernating butterflies, also barns, stables, any building where they are not likely to be disturbed, will do for them. Unless you are on the look-out very sharply, it is very difficult to find them, for they choose places as near as possible the colour of their wings when folded up back to back, which is the attitude in which they pass the winter, and that colour in nearly all the hybernators is some shade of brown.'

'Do you mean to say a butterfly will stop for six or seven months in a barn or a pigsty without moving?'

'Well, if an unusually warm day occurs, they will come out of their holes, and perhaps even fly a little distance, but they soon find their way

back to their hiding-places, unless they are caught or meet with some accident. As a rule, if we wait till the spring, and then find a hybernator who has lived through the winter, his wings are almost sure to have lost some of their beauty, but I fancy if we could catch them napping now, at the beginning of the winter, they would be all right.'

'Tell us which are the ten hybernators, then we shall have some idea if they are worth the trouble of looking for in pigstys and barns,' said Neville.

'C. album, Antiopa, Io'—began Martin.

'English names, please, or the little ones will be all at sea,' interrupted Strickland, with a comical grin.

'The Comma Butterfly, Camberwell Beauty, Peacock, Brimstone, Clouded Sulphur, Clouded Yellow, Large Tortoiseshell, Small Tortoiseshell, Painted Lady, and Red Admiral. Now, the Comma does not like the sea, so it is not known in this county, therefore we need not look for that; nor need we trouble about Antiopa, which is very rare, and generally taken in Kent; we might by

chance find some Large Tortoiseshells; *Edusa* we are not likely to get in Sussex; all the others we may have the luck to pop upon. I have heard of eight or nine Peacocks being found in one stump of an oak.'

'I have heard of diamonds being found, but I never yet met the man who found them; so, my dear Skippers, if you like to hunt pigstys and churches for hybernating butterflies, you can, but the Swallow-tails will, I think, wait till the spring before they resume their lepidopteral labours, as Strick calls them.'

'Well, Dux, at any rate you will be spared the error most beginners fall into of supposing all hybernators are double-brooded, and you will know the hybernated Brimstones, which appear occasionally in the winter and in the spring, are not the children of the autumn species---another popular delusion. But I shall search for hybernating caterpillars and chrysalides chiefly, because the butterflies are never so fresh as those which are hatched in the spring.'

'Let us hear which pass the winter in the chrysalis state.'

‘The Swallow-tail; he braces himself up among the reeds near his favourite hog’s fennel. The Wood White is a very beautiful chrysalis, slender, and of a lovely pale green colour with some pink rings round it; it fastens itself up by the tail, with the thread round the body; this is a good one to try for, because as a butterfly it is rarely, if ever, seen to settle. The Large White—by the way, Dux, did you know some butterflies migrate like birds, actually cross the Channel?’

‘No; I don’t believe it,’ said Neville, who was still hankering after football, and not in the best of humours.

‘It is true, though; the Large White is one of the migrators, the Small White and the Green-veined White, are the others which have been seen arriving on the beach in numbers; they alight on and rise from the sea as easily as on land, generally choosing a calm day for the passage. These three Whites all hybernate as chrysalides, the Large and Small on cabbages or wild mignonette, and, as they are the commonest and most mischievous of all our butterflies, the more

we clear away of their ehrysalides the better. The Green-veined White has nearly as bad a name as the Large and Small, but Newman says he is not half so'—

'White as he is painted,' interrupted Strickland.

'Just so, and he is to be found on the water-cress or hedge-garlic or some of the erueifera; those who don't know what are the eruciferous plants must find out for themselves.'

'Of course we can't expect Martin to be professor of botany as well as of natural history; as it is, I think Palmer ought to give him a salary. Shall we memorialize him on the subject?' asked Strickland.

'Be quiet, Strick, unless you have heard enough about hybernating for to-day,' said Willy.

'Yes, do listen, Strick; it is a nice easy way of getting information, and, since we have nothing else to do, no football, no anything, we may as well hear all Willy has to tell us,' echoed Dux.

'That is very little, my stock of information is nearly exhausted. The Green-chequered White is

one we have as good a chance of finding here as anywhere, for Sussex is its favourite county, Kent and Sussex opposite the coast of France. There are really two broods of this in the year, and it is the second brood which passes the winter in the chrysalis state, tying itself up by a belt round the middle of its body, and also by its feelers to the wild mignonette. The chrysalis is pale brown, spotted black. Then Orange-tip, which is another 'White'—

'Thanks for that news,—orange is white! Go on, my boy, go on; if you told us black was white, we should all meekly bow our heads in dignified silence,' interrupted Strick, as he bowed his own in a very undignified fashion, to avoid the book Dux threw at him.

'Orange-tip is also to be found on any of the cruciferous plants all over the kingdom; it is a very queer-shaped chrysalis, pointed at both ends, dingy green in colour. The Duke of Burgundy is to be found in the chrysalis state on the under side of primrose and cowslip leaves during the winter; he is pretty common, saving his grace'—



‘That is what we all wish to do,’ said the not-to-be-silenced Strickland.

‘And the chrysalis is a very delicate yellowish-brown covered with hairs.’

‘His grace evidently shirks shaving in the winter—finds it too cold, like Dux and me, hence these beards.’

‘I’ll have you out of the room, my boy, if you don’t take care. Go on, Martin, don’t pay any attention to poor Strick’s feeble witticisms,’ cried Dux, as Strickland sat stroking his chin.

‘Azure Blue, which is common in the south of England, has been known to hibernates as a chrysalis, so there is no harm in searching holly-trees, which, with the ivy, are its favourite food; and lastly, the Grizzled Skipper, which passes the winter on the bramble or the wild raspberry in the chrysalis state. And that is all I have to tell you to-day.’

‘By the way, Martin, how do hibernating caterpillars manage to get on when there are no leaves for them to eat during the winter?’

‘Most of them have to fast, and make up for lost time in the spring. That reminds me that the

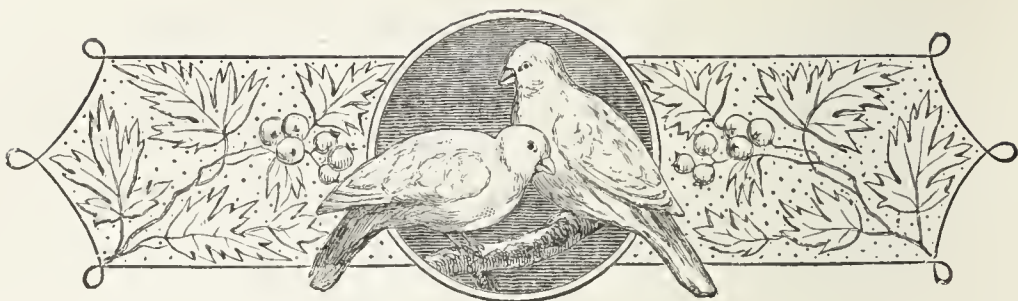
caterpillars of the Black-veined White are very curious creatures; they are gregarious, and live in small communities, spinning themselves a summer tent for the warm weather, and a heavier one under which they pass the winter packed close together. In the spring they separate for ever, and each goes his own sweet way, to feed on the hawthorn. The Glanville Fritillary also makes a ten tin which to hybernate, but its tent is shaped like a ball, and blades of grass are woven in to make it more substantial; sometimes not more than a dozen, and sometimes as many as fifty or sixty, are found inside these tents, which are made on the narrow-leaved plantain.'

'I shall certainly have a look for these caterpillars, if it is only to see their tents,' said Neville.

'You won't find the Glanville Fritillary, it is only known in three counties, Hampshire, Kent, and Wiltshire; but I believe there are a great many caterpillars which make some kind of shelter for themselves; for instance, the Heath Fritillary makes a little house by drawing down two or three of the scabious leaves on which it feeds, and joining

them together with a web ; it then eats the leaves and moves on to make another house. In the winter it spins a web to shelter it ; and now I am off ;' and Martin, tired of teaching, went to amuse himself.





## CHAPTER VII.

'A beautiful creature,  
That is gentle by nature,  
From flower to flower let him fly,  
Beneath the summer sky,  
'Tis all that he wishes to do.'

WORDSWORTH.



THE butterfly mania lay dormant, like some of the butterflies and caterpillars during the winter months, in spite of Martin's lecture on hybernation. True, he and some of the Skippers made some excursions and secured some specimens of hybernating butterflies, chrysalides, and caterpillars, but the Swallow-tails were content to follow the lead of their chief, and rest from their labours. In the spring, however, the quest for butterflies in every guise was renewed with even more ardour than it had been prosecuted

with the previous year, and as the time for the rival collections to be given in drew nearer, the excitement began to get very great.

One morning in May, Mr. Newman appeared to be troubled with a very bad cold while hearing the younger boys their lessons; at last, after a deal of sniffing he could stand it no longer, but broke out,—

‘What on earth is this extraordinary smell? it is enough to poison us all. Do any of you boys notice it? I daresay not; boys have no noses.’

To his surprise, however, there was an almost unanimous cry from the class that they all noticed it, though no one could account for it.

‘Please, sir, it is up in our dormitory too, and I believe it comes from some of the caterpillars,’ said little Gordon.

‘Of course, no doubt of it; one of you has some caterpillars in his pockets, I suppose. Any one who has, will have the kindness to produce them at once, or I’ll search the whole class. Now turn out your pockets, and put the contents here on my desk. Miller, you are the top of the class, you begin.’

Accordingly little Miller obeyed, and five boys

one after the other produced a heterogeneous mass of string, knives, bulls-eyes, marbles, catapults, dirty pocket-handkerchiefs, and, in some cases, a few infant caterpillars in process of hatching, at all of which Mr. Newman looked in profound disgust, but contemptuously allowed the owners to retain their possessions. At last a boy named Murray advanced and produced a pill-box, in which, even before he had removed the lid, it was evident the offending object lay. Holding his handkerchief to his nose, the irate tutor peeped into the box and beheld a very large smooth caterpillar of a reddish-brown colour, which emitted a very strong and offensive odour.

‘Pray where did you get this disgusting grub from?’

‘Off a willow-tree, sir; I think it is a very rare butterfly, so I am keeping it for Neville.’

‘Rare indeed! the rarer the better for the olfactory nerves of humanity. Go and fetch Martin; he may know what it is, and if valuable it may be kept in some outhouse. Pray have you any more specimens upstairs?’

‘No, sir; I carry this about because the other fellows won’t have it in the box with the rest of the

caterpillars,' said Murray apologetically, as he went to fetch Martin.

'Now, Martin, do you want this abominable insect? if not, let it be thrown away at once, it scents the school.'

Martin glanced at the caterpillar and answered,—

'No, sir, it is the larva of the Goat-Moth; we don't collect moths for the prize, only butterflies. You won't lose the smell, Murray, for days, if you ever do; it clings to the ground and the wood these moths bore in for years.'

'This is pleasant. Now, Murray, go and bury that thing as deep as you can in the yard, then change all your clothes, and give those you have on to the servants to be purified and fumigated before you put them on again,' said Mr. Newman, after which Murray retired amid the suppressed laughter of the rest of the class.

But this was only the beginning of Murray's troubles with regard to caterpillars, for he and Gordon had charge of Neville's, and it was their duty to search for the proper food every half-holiday, and to feed the caterpillars every morning. If the supply ran short in the week, as had

happened once or twice, one or other of them had to ask leave and go on a foraging expedition between or after school hours. A week or two after the episode of the Goat-Moth, little Gordon was ill for a few days, and Murray, whose ardour had somewhat relaxed, forgot to feed the caterpillars, which, by Mr. Newman's orders, had been turned out of the dormitory and transferred to a cupboard in one of the class-rooms. So one Saturday afternoon, when Murray went to the cupboard to see how his caterpillars were off for food, to his horror he found one boxful dead from starvation. Now Neville was known to have a very passionate temper, though he did not often indulge it, but Murray, who was a timid little boy, felt he had given provocation too strong for his chief to resist, for the loss would, in all probability, spoil Neville's chance of the prize, as there were one or two rather rare specimens in the box, and how to break the news to Dux he did not know. He could not consult little Gordon, for he was in quarantine for a few days, lest the sore throat from which he was suffering should develop into anything more serious. At last he decided to take Martin



into his confidence, perhaps he could suggest some way of repairing the loss ; but just as he was going to seek Martin for the purpose, Dux came bustling in, a sudden fit having seized him to examine his caterpillars himself.

‘ Here, Murray, you have charge of my caterpillars, just go and fetch them here ; I want to see how they are getting on.’

The caterpillars were in the cupboard of the room Neville was in, but Murray, not daring to confess the accident which had befallen them, went out on pretence of getting them, but in reality to get out of Dux’s way till the storm had blown over, resolving to take refuge among the Skippers, for he knew all the Swallow-tails would be too indignant with him for his carelessness to stand between him and Neville. The Skippers might screen him, and Martin, who was very good-natured, would very likely help him to repair some of the mischief he had done by transferring some of his own caterpillars to him, or, at least, telling him where he was likely to find the kinds he had suffered to perish.

He found Martin and Strickland busy making part of the case in which the butterflies were to be

finally arranged, in an outhouse, and in fear and trembling he made his confession.

‘Abominably careless of you too, Murray; I’d lick you well if you were a Skipper,’ said Strickland.

‘I expect Neville will be awfully savage; you had better keep out of his way for a while. What caterpillars are they?’ said Martin.

‘Violets,’ said Murray meekly.

‘Violets! what on earth do you mean?’

‘I mean they live on wild violets and wild heartsease, and it is a long way to go for the leaves, and Gordon is ill, and I forgot to look at them, and they are dead; all the other boxes are alive.’

‘Live boxes and violet caterpillars! your language is involved, young man. Are they rare ones, Martin, do you think?’ said Strickland.

‘Fritillaries chiefly, I suppose, and I believe Dux told me he had one or two good ones, but I doubt if he will know what his loss is; how many were there?’

‘Twelve; there were one or two Queens of Spain, I think. Do tell me where to find some more, Martin, please; I am awfully sorry, but if I can only find some of them again, perhaps Dux won’t lose the prize.’

‘Hullo! here comes Dux; I can hear him storming; he is in one of his baits, you had better get out of the way, Murray,’ said Strickland.

‘Where am I to go? he is coming across the yard,’ said Murray, looking vainly round for a chance of escape.

‘Get behind here; I won’t let him touch you,’ said Martin kindly, for he knew when Neville was in a rage he was not likely to have much mercy.

Murray stepped behind Martin into the corner he had pointed out, just as Neville, armed with the first stick he had caught up, and a very formidable-looking one it was, burst into the building pale with fury.

‘Martin, have you seen that little wretch Murray? I’ll break every bone in his skin when I find him! He has killed all my caterpillars. Oh, there he is! if I don’t half kill him my name isn’t— How now, Strickland! what do you mean by standing in my way?’

‘Gently, Dux, gently! a little gentle chastisement won’t hurt the boy, but I am not going to look on and see you beat a little delicate fellow like Murray with that blunderbuss.’

‘ You are not going to look on ! what do you mean ? How dare you talk to me like this ? I’ll lick you as well as Murray if you don’t move out of my way ; ’ and as he spoke Neville attempted to push past Strickland, almost knocking him over in the attempt, but Martin caught hold of his arm and held him back.

‘ Wait a bit, Neville ; you’ll be sorry for it, if you attack Murray while you are in a white heat.’

‘ Two to one, are you ? I believe it is a planned thing ; you have bribed Murray to kill my caterpillars. I’ll fight you both, and settle him afterwards,’ said Dux, struggling with Martin and Strickland, who were trying to hold him.

Meanwhile some other boys had found their way to the outhouse on hearing the noise, and Dux, hearing them, called out, ‘ Swallow-tails to the rescue ! ’

‘ Two can play at that game ; Skippers to the rescue ! ’ cried Strickland, and in a few minutes every boy in the school except little Gordon, and Murray, the cause of the fray, was engaged in the battle. Fighting and struggling, they soon got out into the yard, where there was more scope for action, and for

ten minutes the battle raged fiercely. Sometimes in single combats, sometimes mass against mass, the boys struggled together in wild confusion, shouting with rage and pain, wrestling, and using their fists very freely, for their blood was up, and none of them were responsible for their actions.

In the midst of this *melée* a window was thrown open, and Mrs. Palmer, putting her head out, called out entreating them to stop; but they were all much too excited to pay any attention, if in the noise they heard her voice; whereupon, greatly to her regret, Mrs. Palmer, who was afraid the boys would hurt each other seriously, for already some noses were bleeding, went to her husband and sent him to the scene of action.

‘Boys, what is the meaning of this? Stop this moment! do you hear me? Stop, I say!’ cried Mr. Palmer; but even he had to speak several times before the struggling mass separated, and even then one or two rushed forward on to their opponents again and again before he at length succeeded in stopping the fight.

At last there they stood, panting and perspiring, two or three with black eyes, some with noses and

lips bleeding, all very much dishevelled, with burning cheeks, and glaring angrily at each other, still too angry to feel ashamed of themselves.

‘Murray, come here; you appear to be a spectator only, tell me the meaning of all this,’ said Mr. Palmer.

‘Please, sir, it is all my fault,’ said Murray, looking very much inclined to cry, though he had secretly been longing to take part in the fray, if he could only have decided which side to take, but his conscience would not let him go against the Skippers, who were protecting him, and of course he could not fight against his own side.

For in truth the rivalry between Skippers and Swallowtails had been waxing very great lately, and there had been a good deal of bitterness, especially this term, as the prize was to be awarded at the end of it; so perhaps all the boys had readily seized this opportunity of avenging their imaginary wrongs.

‘No, sir, it is the Skippers’ fault; there has been a vile plot’—began Neville.

‘Be quiet, Neville! I am not addressing you,’ said Mr. Palmer sternly. ‘Now, Murray, tell me

how this fight originated,' he continued, while Neville bit his lip and raged inwardly, though he dared not speak again, while Murray told his tale.

'Oh, it is a fight about this butterfly prize! Very well, I shall know how to deal with that. And apparently Neville, Martin, and Strickland were the authors of it; is this so?'

'Yes, sir,' answered the three culprits.

'I shall know how to deal with them also. You three will come to my study at twelve o'clock to-morrow; the rest of the school will remain in the big schoolroom till tea-time, and employ their half-holiday in writing out some Students' Hume: the first and second classes will write two hundred lines each, the juniors one hundred, and they will be brought to me to-morrow morning after prayers, when I shall have more to say to you all on this subject. Those who are hurt go indoors and wash yourselves; the others go at once to the schoolroom. Murray, you will do the same imposition as the other juniors. There is to be perfect silence until tea-time; I shall stay with you, to see that it is observed.' So saying, Mr. Palmer followed the boys

into the schoolroom, where they sat down to their impositions in solemn silence.

As a rule, Mr. Palmer was very lenient with the boys, but if he did take it into his head to be severe, the occasions were generally remembered for some time to come. Fighting was strictly forbidden, so the present offence was a very great one, and, as the boys all knew, Neville, Strickland, and Martin were in for a flogging, for that was the meaning of the appointment at twelve in Mr. Palmer's study. That was unpleasant enough for the trio at any rate, but in addition to this the boys all felt pretty sure, from Mr. Palmer's manner and remarks, that he intended to withdraw the promised butterfly prize, which was the severest punishment next to expulsion he could have hit upon, and this silence which he had imposed upon them prevented them from talking the matter over and seeing if anything could be done to avert such a calamity.

In the confusion and excitement both master and boys had forgotten it was a Saturday, so a gleam of hope burst in upon them when Mr. Palmer, remembering it, announced,—



‘I forgot this is Saturday; I shall therefore require the impositions to-night. Neville, Strickland, and Martin will, however, come to my study on Monday morning at twelve.’

This was a respite; perhaps on Sunday Mrs Palmer might be persuaded to intercede for them.





## CHAPTER VIII.

‘ Other creatures all day long  
Roam idle, unemployed, and less need rest.  
Man hath his daily work of body or mind.’

MILTON.



THE impositions did not take so long as Mr. Palmer had anticipated, and as one boy after the other advanced to his desk with his lines written out, he was told he could go into the playground until tea-time, otherwise the boys would have had no exercise on their half-holiday. No one, however, seemed disposed for a game. The Swallow-tails kept aloof from the Skippers until Dux should appear and set an example of how to treat his enemies by his own conduct; but he was doing his lines in a very leisurely manner, until, seeing he was likely to be

left *tête-à-tête* with Mr. Palmer, he hurried over the remainder to avoid such an unpleasantness, and then sauntered into the playground, feeling very miserable.

In the first place, the coming interview at noon on Monday was not pleasant food for reflection; then he felt sure, from Mr. Palmer's manner, he intended to withdraw the prize for the butterflies, so that all the labour of the past twelve months was wasted, so far as the prize was concerned, and this was a bitter disappointment not only to Neville, but, as he knew, to the whole school, and, as he also knew, he was the chief cause of the punishment—another depressing thought. Then again, after an outbreak of temper such as this, Neville was always in a subdued frame of mind; he was ashamed of himself for having indulged in it, and aware that he had been very unjust in his accusations against Martin and Strickland. And, after all, what a stupid little thing it was that had caused all this trouble: the loss of a dozen caterpillars, which, since the prize was to be withdrawn, was of no consequence. But as the Swallow-tails crowded round their chief and asked

him if he thought there was any chance of Mr. Palmer's allowing the prize to be given, notwithstanding the breach of discipline they had all been guilty of, Neville made a sudden resolution.

'Yes,' he said, 'there is one chance; I'll go and try it.'

So saying, he returned to the schoolroom, as anxious now for a private interview with his master as a few minutes before he had been to avoid one. On reaching the schoolroom, he found Mr. Palmer talking very gravely to little Murray, who, by the pleading expression on his pale little tear-stained face, seemed to have been interceding for the others.

'No, Murray; it was very careless of you, no doubt, but the fighting was no fault of yours. You may go. Now, Neville, what have you come back for?' said Mr. Palmer, changing his tone as he turned to Neville.

'To speak to you, sir, please. I came to say the fight was entirely my fault, and to ask you to let Strickland and Martin off, and allow my collection of butterflies to be given to one of the Swallow-tails.

The whole school will be so disappointed if the prize is withdrawn.'

'The whole school was engaged in the fight,' said Mr. Palmer coldly.

'Yes, sir, but I began it; Martin and Strickland were obliged to fight after what I said to them.'

'Well, I will consider their case, but I don't see my way to make any promises with regard to the prize. After such gross insubordination and such a wilful breach of the rules of the school, I should think your own consciences must tell you all you deserve to lose the prize. Go out now till tea, which will be an hour later than usual.'

Neville retired, feeling very miserable. Never had Mr. Palmer spoken so coldly and sternly to him before, and though he longed to say something to thaw this icy manner, yet he could not bring himself to express more regret than he had done, particularly as it would look as if he were spelling to be let off his flogging on Monday, and he was much too proud to do that, so he went back to the playground with a heavy heart.

'It was no use; I am afraid he has made up his mind to stop Mrs. Palmer's prize.'

General cries of indignation from all the Swallow-tails, in which the Skippers joined, their common trouble bringing them together, interrupted Neville.

‘Have you asked him not to stop the prize, then, Dux? That is just like you, old fellow! Shake hands,’ said Strickland, coming forward, whereupon Neville readily shook hands with him and Martin, at which signal general peace was restored, and Skippers and Swallow-tails, once more united, now held a council as to what measures could be taken to avert the dreaded calamity.

The universal opinion was that their sole hope lay with Mrs. Palmer; if she could be persuaded to take their part, perhaps she might succeed in inducing Mr. Palmer to overlook the offence; but unfortunately fighting was a thing she had a great horror of, and, as they knew, she would require a great deal of conciliating before she would be inclined to smile upon them again.

‘How are we to get hold of her? that is the question. It is my turn to have supper there to-morrow,—mine and Gordon’s,—but I don’t believe we shall be asked now,’ said Strickland.

‘If you please, Strickland, Mr. Palmer told me

I was to go to supper to-morrow,' said little Murray meekly.

'Well, now, Murray, look here. I know you are awfully sorry about those caterpillars of mine, but if you'll do this you'll never hear another word about them. You ask Mrs. Palmer if she'll let Martin and me come and see her after supper to-morrow, and we'll see if we can get her round. You'll have to ask very nicely, or she won't grant us an interview, for we are in her black books, but you do your best, will you?' said Dux in a tone which assured little Murray his carelessness was forgiven.

'By the way, Dux, if you'll accept them, I have some Fritillaries you may have; I have more than I want. We will have a look at them after tea,' said Martin.

'Thanks, but I am afraid it'll be no good; I feel sure Mrs. Palmer's prize will be stopped, and all our labour will have been wasted.'

'Oh no, it won't be wasted, even if the prize be stopped, because we shall have learnt a good deal about butterflies, and have laid the foundation of a good collection into the bargain. I shall go on col-

lecting, prize or no prize; it takes years to get a good collection, for there are so many things to contend against, even when you have obtained your specimens.'

'They may be starved, like mine,' said Neville.

'Or mites or mildew may destroy your butterflies, which is worse. I wonder what enemies butterflies and caterpillars have in a natural state; do you know, Martin?' asked a Skipper.

'Wind is an enemy to butterflies; many of them suffer from high winds, especially the Blues, whose delicate plumage is easily damaged. Then Purple Emperors fight each other,—two males never meet without engaging in a duel; and of course bad weather is often fatal to them. But really they have more enemies in the caterpillar stage, for not only do birds prey on them, but other insects also: first, there is the ichneumon fly, which lays its eggs in the infant caterpillar, and the grubs feed on it without killing it outright, so the poor thing dies a lingering death. Some of the Fritillaries are destroyed by two necrophagous beetles'—

'Hold hard! what does necrophagous mean? anything to do with necropolis?'



‘Same root; it means burying; these beetles bury themselves in the ground. Then there is a large ground spider which destroys the Glanville Fritillary when it comes to the butterfly stage; it lies in wait for it, and, when the butterfly alights on or near the ground, makes a dart at it, seizes it by the neck, and either spider or butterfly, but generally the butterfly, perishes before they will relax their hold. Then, though you can hardly call it an enemy, one of the dangers of caterpillar-life is moulting, a process which has to be gone through four or five times, as the skin becomes too tight for the body, and, unless the caterpillar is in good health at the time, he perishes in the process, and is found hanging by his claspers to the web he spins for the occasion, dead as a door-nail.’

‘I believe if we were going to be hanged on Monday, Martin would go on lecturing on butterflies; for my part, I sincerely wish there weren’t such things—a frame of mind I shall continue in until after noon on Monday,’ said Strickland.

But Dux didn’t tell either him or Martin that he had interceded for them, and successfully, as

he hoped; on this point he maintained silence, knowing that if Strickland and Martin knew what he had done, they would go and beg him off also, and in that case Mr. Palmer might justly say he had spoken six words for them and half-a-dozen for himself.

When Sunday evening came, Dux and Martin were anxiously looking out for a summons to the drawing-room, if little Murray only succeeded in obtaining an interview for them; but for some while after supper they waited in vain. At last, to their delight, Murray came rushing into the schoolroom to say Dux, Martin, and Strickland could all go and see Mrs. Palmer if they liked, before they went to bed.

‘Dux, I hope you won’t mind, but Mrs. Palmer asked me to tell her all about the fight, how it began, and everything, so I did; I told her it was all my fault. She is so sorry about it,’ whispered Murray as Neville passed him.

‘Well, boys, come and sit down, and tell me all about your troubles. I am so sorry about it; I hoped my prize would have been nothing but a pleasure to you all, instead of which it seems to

have brought discord between two old friends who never quarrelled before,' said Mrs. Palmer when they came into her presence.

'I don't think we ever shall again. It was all so sudden, we were in the middle of a fight before we knew where we were,' said Martin.

'Yes, but you should try and think before you rush at each other like infuriated animals, and behave in a way I am sure you are very much ashamed of, now you think it all calmly over. Mr. Palmer and I are both very sorry it has occurred; it was such a terrible breach of the rules, and you know nothing makes Mr. Palmer so angry as disobedience; he always says it is one of the things he cannot allow to pass unpunished, and of course he is right, for there would be no discipline at all in the school otherwise. But I didn't send for you to lecture you; little Murray told me you had something to say to me; what is it?'

'We wanted to tell you how sorry we are about it, and to ask you to beg Mr. Palmer not to withdraw your prize, because that will punish the whole school,' said Neville.

'But how if I withdraw the prize myself?'

‘Oh, Mrs. Palmer, please don’t! do overlook it this once,’ said Strickland.

‘We will never allow another fight, we promise,’ said Martin.

‘I am sure you are too kind to withdraw the prize, it would be such a disappointment to us all,’ said Dux.

‘I am not sure that it wouldn’t be the kinder course; however, I don’t mean to adopt it. But tell me, did Mr. Palmer say positively he would withdraw my prize?’

‘He threatened to; I don’t think he did positively say he would.’

‘Then perhaps I may prevail upon him to forgive you; under ordinary circumstances I should not dare to interfere, but, as the prize is mine, I think this is a privileged occasion; at any rate, I will try. But I don’t think he will allow me to tell you the result of my efforts; he will probably prefer to make that known to you himself on Monday. I hope I may succeed, for it would be quite as great a punishment to me as to any of you, if I am not allowed to give the prize. But there is the bell for prayers. Good-night!’

And the three boys shook hands in turn with Mrs. Palmer, considerably relieved to find their peace was made with her, though, as Strickland lamented with a comic expression of sadness, there was a very disagreeable quarter of an hour in store for them at the best.





## CHAPTER IX.

'If I were thou, O butterfly,  
And poised my purple wing to spy,  
The sweetest flowers that live and die,  
I would not waste my strength on those,  
As thou.'

MRS. BROWNING.



MONDAY morning was never a favourite time with the boys: Mr. Newman was always in a bad temper, and Mr. Palmer was generally apt to be what the boys called fussy on Monday; but on this particular Monday he was unusually grave and stern, while Neville, Martin, and Strickland were in a state of depression and unpleasant excitement, which increased as twelve o'clock approached, and the rest of the school was almost as anxious, judging, from the head-master's

manner, that the prize was to be withdrawn. The only person who seemed happy was Mr. Newman, and he was in very good cue, cracking jokes which in the opinion of the boys were very ill-timed, and, to his secret annoyance, they studiously refrained from laughing at them.

At last, to the relief of all, twelve o'clock struck, and at a signal from Mr. Palmer all rose to their feet.

'I need not detain you, Mr. Newman,' was the preface to his remarks; and when, to the delight of the boys, that gentleman had reluctantly taken the hint and left the room, Mr. Palmer continued,—

'Now, boys, you have all been guilty of a great breach of rules, but I am willing to believe that, flagrant as it was, it was not a deliberate, wilful act; you were, I think, carried away by excitement, and without thinking you plunged one after the other headlong into that disgraceful fight, which to my sorrow and your shame I witnessed on Saturday. Am I right in thinking so?'

'Yes, sir,' from all the boys.

'And are you all sorry for your conduct?'

'Yes, sir.'

‘And thoroughly ashamed of yourselves? Answer, please.’

‘Yes, sir,’ in more subdued tones.

‘Very well, then, as Mrs. Palmer has been pleading very eloquently for you, I forgive you; but you must thank her, for I had fully made up my mind to withdraw the prize. And now, mind, I shall expect, in return for my clemency, that you all do your duties more zealously than ever for the rest of the term, and pay special attention to the rules of the school. You have turned what was intended as an act of kindness into an occasion of sinning; don’t abuse Mrs. Palmer’s kindness a second time, but try to show your gratitude by your good conduct. Neville, go to my study; Strickland, come to me when Neville comes out; Martin, remain here for the present, till I send for you; the rest go into the playground.’

Strickland and Martin resumed their seats in silence, too absorbed in their own immediate fate to share in the joy and relief of the other boys on hearing the prize was not to be withheld, while Neville, with flushed cheeks and pursed-up lips, walked haughtily out of the schoolroom to the



study, which Mr. Palmer entered by a private door from the schoolroom, a shorter way, so that he was seated at his writing-table when Neville entered by the other door.

Now, Neville had never been flogged, so he did not know what the method of proceeding was; Strickland, who could have enlightened him from his own personal experiences, had he chosen, having declined to do so; therefore he was somewhat surprised when Mr. Palmer, having signed to him to come close to him, turned himself round in his chair and asked,—

‘Well, Neville, do you know any reason why I should not proceed to execute my threat?’

‘No, sir, I know of none,’ said Neville proudly in a low voice.

‘Happily for you, I do. Didn’t I tell you all just now I forgave you? I don’t generally do things by halves; but, my dear boy, I sent for you now to warn you to try and conquer that passionate temper of yours, which will otherwise bring you great trouble if you allow it to get the mastery over you. I know as well as you, perhaps better, how hard it is to curb, and you know we can’t do it in

our own strength, but there is One who is always ready to help us if we will only ask Him to do so; promise me that you will before you go to rest to-night.'

Neville bent his head in a gesture of assent, not trusting himself to speak, for there was a lump in his throat which refused to be swallowed, and he was exerting all his self-control to keep back the tears which would fill his eyes, for his was one of those natures easily touched by kindness, but hardened by severity; and as Mr. Palmer watched him, he congratulated himself on his wisdom in having decided not to resort to corporal punishment.

He rose and put his arm round Neville's neck, saying as he did so, 'God bless you, Leo!' at which those tiresome tears would overstep their boundary.

'You may go, my boy. Send Strickland here,' said Mr. Palmer aloud; and when Leo was gone he added in an undertone, 'I might have flogged for ever before I had drawn one tear from him; Strickland can't be reached by any other means, young scamp.'

The young scamp in question now came in, in fear and trembling, for the flushed face Neville had

just shown for a moment when he summoned him, had told Strickland he was, as he expressed it, 'in for it pretty smartly this time.'

'Well, Strickland, how long is it since I last had you in here for a like purpose?'

'About two months, sir.'

'I must try and make more impression upon you to-day. I am going to try a new method. I am going—Now what do you think I purpose doing?'

'I don't know, sir;' wondering what new instrument of torture was to be employed.

'I am going to forgive you.'

There was dead silence after this announcement, Jack not daring to hope he was to be let off even now.

'Well, Jack, what have you to say now?'

'Do you mean you are going to let me off entirely, sir?'

'Yes. Dux has been pleading for you and Martin, added to which I wish to try this new system on you. Now, have you anything to say to me?'

'Thank you, sir, and I'll try and keep out of scrapes for the future.'

‘Then you may go, and send Martin here.’

Martin, who was a delicate boy, was suffering from a nervous headache, brought on by the various excitements of the morning, and was lying with his head on his arms over one of the desks, when Strickland threw open the door and turned head over heels into the middle of the room.

‘Go on, my boy! your turn next; don’t keep him waiting,’ he exclaimed, as he walked round to Martin on his hands, with his heels in the air.

‘Really, Strick, I believe if you were going to be hanged you’d turn a somersault on the gallows,’ said Martin with a ghastly smile, as he obeyed his summons.

His interview was a very brief one, for it was the first time he had ever been guilty of any serious offence, so Mr. Palmer contented himself with telling the boy this was, he hoped and thought, the first and last time he should ever have to reprimand him; and then, finding he had a bad nervous headache, from which he suffered occasionally, he sent him to Mrs. Palmer to be nursed. Under her skilful treatment his headache got better,

and, after a *tête-à-tête* dinner with her, went away entirely, so that he was well enough to get his caterpillars and show her.

‘Do you know, Mrs. Palmer, I believe insects have tempers. I am sure wasps and bees have, and caterpillars have too, though I did not know it till I kept them. Did you?’

‘No, indeed, I didn’t, Willy. What kind of temper predominates?’

‘Oh, sulky! There are several of them which turn sulky when you annoy them; they curl themselves up and remain perfectly motionless, sometimes feigning death, like the Marbled White, which in the natural state drops to the ground when annoyed, and remains as still as death till it thinks the danger is past, or, I suppose, as caterpillars can’t think, I ought to say, till instinct tells it so. The Northern Brown has a similar trick, only he won’t drop to the ground unless you make him, but holds on by his clasps tighter than ever; when you make him let go, he drops and curls himself into a crescent and lies motionless. The Marsh Ringlet drops off its food-plant if annoyed, and lies what I call sulking for a long while after; the

Duke of Burgundy does the same, so does the Chalk-hill Blue.'

'This is the Chalk-hill Blue caterpillar, isn't it?' asked Mrs. Palmer, pointing to a pinkish brown caterpillar, with light brown hairs, and a black spot just above its brown head.

'No, that is the Large Blue; I have several, see, I am very proud of those, for I reared them from eggs. I got Dux to bring me back some wild thyme from Rodborough Common, near his home, and, as I expected, with a glass I found some eggs. I wasn't sure that they were the Large Blue at first, but I am now that they have made their final moult. I am so glad we found the eggs, for it is hardly worth taking as a butterfly, its plumage is so delicate and so easily damaged. I am rearing some of these for Dux.'

I am glad you are doing that, Willy; the more you help each other the better I shall be pleased; I want the rivalry between you two candidates to be as amicable as possible. What is this pretty green caterpillar, shaped like a wood-louse, with a black head, and covered with delicate hairs?'

'The Black Hairstreak; that is another of my

nurslings. I found the eggs glued to the twig of an elm-tree near here, in the winter; it was the merest fluke my finding them, though I knew they had been found there. I caught a butterfly on that identical tree last summer, probably the parent of my eggs, which are white and round like a ball flattened at the top.'

'What is that fat creature with a black face, grey and reddish-brown body, black legs, red clasps, and a white mark down the middle of the back?'

'A Comma; I got that from one of my Skippers who lives in York, where it is common; the eggs are laid on the hop-plants and red-currant bushes, and it is one of those which hibernate as a butterfly, so there is a dispute among lepidopterists as to whether it is double-brooded or not. I believe it is myself, for this is very early for one of the autumn brood to have reached this stage; it is very capricious, but common in most hop-growing countries.'

'I see you have several Peacocks; how do you manage to provide them with their strange food?' said Mrs. Palmer, pointing to some black velvety

caterpillars, cylindrical in shape, and covered with tiny white warts and black spines, which were feeding on stinging-nettles.

‘I generally *cater* for them myself,—Strick would make a joke on that if he were here,—for I can’t make my Skippers believe if you grasp a nettle firmly it won’t sting. I can’t make out, though, how the caterpillars escape being stung, for they crawl all over the nettle.’

‘Perhaps they possess some antidote, or perhaps their own spines protect them.’

‘I never thought of that; they are certainly fonder of nettles than most people, for if you shake them off they climb up again immediately. I found these this month (June); they will be changing early in July; they will spin a little silken cushion to the lid of their box, and then hang themselves up by the hindermost clasps.’

‘They change their colour, too, don’t they?’

‘Yes; the chrysalis is apple-green. They generally forsake their nettles for their transformation scene. The Red Admiral is also found on nettles; but they remain there for the chrysalis stage, gnawing a branch nearly through, so that it



hangs down, and then hanging themselves upon the withering branch. I think there are some here with the Peacocks. Yes; there they are,—greenish bodies, pink underneath, black legs and heads, but their colouring varies; they make very pretty chrysalides,—a rich grey, mottled with black and golden spots. But aren't you tired of my caterpillars? I don't want all these for the prize; but I am keeping them to watch their changes and habits.'

'Quite right, Willy, that is the way to learn; an ounce of experience is worth pounds of book lore. Show me some more. Have you any Painted Ladies?'

'Yes; let me see. Oh, here they are on the thistle. They are very odd creatures: they make themselves a sort of tent by knitting the leaves together with a web; but they soon weary of that, and, moving higher up the plant, construct a fresh one. I believe you never find two caterpillars on the same plant, so they appear to be restless, unsociable insects.'

'They are not very beautiful either,—brown, with yellow stripes; and how thorny they are, too! What is the chrysalis like?'

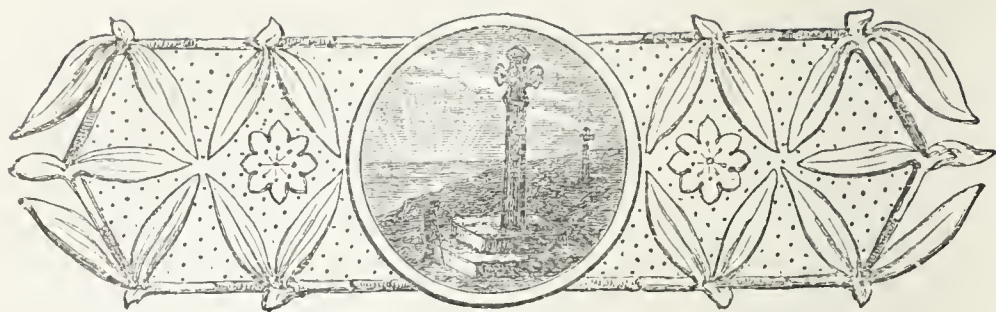
‘Brown or grey, with silver spots. My Purple Emperors have changed already into chrysalides; here they are,’ said Willy, showing some green chrysalides, shaped something like a shell, and suspended to a silken pad spun on the lid of the box in which they were confined. ‘I found them on the willow soon after they were hatched last summer. They were little dark brown things then, but they soon changed their skin, and at the same time their horns appeared. They were exactly the colour of the willow leaf after this change. Then they fastened themselves tightly to the leaf-stalk, so that when the leaf fell in autumn they did not fall with it; and then they went to sleep for the winter. Isn’t it odd that they should act in captivity just as they do in a state of nature? But I suppose instinct is stronger than their reasoning powers. When they are annoyed they double up their bodies in a very peculiar way, looking very ugly and sulky; and I really think that is all I have to show you, except my case and collection for the prize, and that I would rather not show till the day comes.’

‘Certainly not; I would not look at it now,

great as my curiosity is ; but I have not very long to wait, only another month, and that will pass very quickly, to you boys at any rate ; for I suppose you will soon be busy at the examinations ?’

‘Not just yet ; they don’t begin for another fortnight. But it is nearly two o’clock. By the time I have put my treasures away the school bell will ring ; it is our drawing lesson, and I don’t wish to miss it,’ said Willy, as he gathered up his trays and boxes.





## CHAPTER X.

‘We are kindly things.  
Witness these hearts embroidered on our wings.’—HOON.

**T**HAT peace should follow war, a calm succeed a storm, is one of the laws of nature; and the time immediately succeeding the battle of Swallow-tails and Skippers was no exception to this rule. All were most amicably disposed towards each other; a truce to all rivalries seemed to have been established; and the boys worked together in their leisure hours in a far more generous spirit than they had done before the row. One slight *contretemps* occurred which vexed Martin considerably, particularly as it was too late to remedy the evil.

He was engaged in mounting some specimens

one day, while Leo looked on admiringly, when suddenly one of the Skippers came in and threw a large card on the table. Something on it caught Leo's eye; and, taking it up, he said, in a surprised tone, 'Holloa, Martin! what is this?'

'What is what?' said Martin, pausing with his setting-bristle in his hand, as he reluctantly looked up from his work. 'That card? why, that is a list of all the food-plants, localities, dates, and description of all the different caterpillars, which I drew up for my Skippers last year.'

'I wish I had known. I might have done something of the kind, or got Gordon to do so, for the benefit of my Swallow-tails. It must have been a great help.'

'Of course it was; by it they knew where and when to look for eggs, caterpillars and chrysalides, too, in most cases; but your Swallow-tails have been using it, I believe.'

'I am sure they have not. I don't believe one of them knows of its existence.'

'We'll soon see. Let us call a meeting at once. I gave my Skippers strict orders to let all the Swallow-tails see it. I should like to know if they

did, for I have been under the impression all the school were using it; and, to tell the truth, I was rather proud of it. I knew you would not take the trouble to draw up one. Call the fellows in while I finish, will you?’

Dux protested that it did not in the least matter; but, seeing Willie seemed bent on knowing the truth, though he was sure himself no Swallow-tail’s eye had rested on the document, he at last called all the rest of the boys in from the playground.

‘Now, Swallow-tails, have you ever seen this card?’ said Dux, when the boys were quiet.

‘What is it?’

‘A table of when and where to find all the British caterpillars,’ explained Willie.

‘No; never!’ was the unanimous answer.

‘Now, Skippers, what is the meaning of this? Did I tell you to let the Swallow-tails have the use of this table, or not? Please to answer.’

‘Yes, you told us to.’

‘Then why have you disobeyed my orders?’

‘Because we didn’t think it fair to you,’ said Strickland; ‘and I am sure Dux will agree with me it was not.’

‘Yes, I do; but I think you should have told me; so that I might at least have tried to make a table for the Swallow-tails,’ said Dux.

‘Certainly. Of course they should!’ cried the Swallow-tails, glancing with admiration at the table now given on pages 130 to 137.

It certainly was a most complete guide to caterpillar knowledge, as will be seen by a glance, and must have taken Willy a long time to draw up; for he had compiled it carefully from a large edition of Newman’s *British Butterflies*, reducing it to simple language for the comprehension of his Skippers.

‘And of course I thought they had done so, when I specially told them to do so. However, to punish you, Skippers, for your meanness, I don’t allow the table to be shown for the prize—not if Dux makes one on the same or a better system, as I sincerely hope he will,’ said Willy, his pale cheeks growing pink with annoyance.

‘I certainly shan’t take the trouble to do anything of the kind so late as this,’ said Dux.

‘If you like to cut your own throat by not showing it, you must do so. It was my fault,

## TABLE OF WHERE, HOW, AND WHEN, TO FIND

Species of Caterpillar.	Food-plant on which Eggs, Caterpillars, and probably Chrysalides, may be found.	Locality.
Silver-washed Fritillary ( <i>Argynnis Paphia</i> ).	Dog-violet; sweet violet.	Woods in every county.
Dark Green Fritillary ( <i>Argynnis Aglaia</i> ).	Dog-violet.	Hill-sides; sand-hills by sea-side.
Niobe ( <i>Argynnis Niobe</i> ).	Wild heart's-ease.	Very rare; but has been taken in New Forest.
High-brown Fritillary ( <i>Argynnis Adippe</i> ).	Dog-violet.	Woods and hill-sides.
Queen of Spain ( <i>Argynnis Lathonia</i> ).	Wild heart's-ease; dog-violet; sweet violet; saintfoin.	Clover-fields near the sea; rare.
Pearl-bordered Fritillary ( <i>Argynnis Euprosyne</i> ).	Dog-violet.	Woods; very common, but seldom found on food-plant.
Small Pearl-bordered Fritillary ( <i>Argynnis Selene</i> ).	Dog-violet.	Less common than Euprosyne; woods.
Greasy Fritillary ( <i>Melitæa Artemis</i> ).	Devil's bit scabious.	Damp meadows.
Glanville Fritillary ( <i>Melitæa Cinxia</i> ).	Narrow-leaved plantain.	Very rare; cliffs.
Heath Fritillary ( <i>Melitæa Athalia</i> ).	Wood-sage; germander speedwell; narrow and broad-leaved plantain.	Open woods; very local.
Comma Butterfly ( <i>Grapta C— album</i> ).	Hop; red-currant; elm.	Local; apparently prefers inland counties.
Small Tortoiseshell ( <i>Vanessa Urtica</i> ).	Stinging-nettle.	Nettle-beds everywhere.



CATERPILLARS OF BRITISH BUTTERFLIES.

Time of Caterpillar's Life.	Colour of Caterpillar.	Shape of Caterpillar.
August to following June. Hybernates as caterpillar.	Black; spiny; yellow lines on back.	Cylindrical.
From August to June. Hybernates at roots of plants.	Dark purplish - grey; orange blotch below spiracles.	Cylindrical.
Unknown.	Brownish - black, with long-branched white spines.	Cylindrical.
August to June.	Pinkish - brown, with black spots and white stripe down back. Thorny.	Cylindrical.
Hybernates very small; spring best time to search.	Brown, striped with white; yellowish spines.	Cylindrical.
June to following May.	Black, with white dots and stripes.	Cylindrical.
July to following May.	Dark brown; spiny.	Cylindrical.
June to following April. Hybernates under tent.	Velvety - black, with white spots; black bristles.	Cylindrical.
August to May. Hybernates under tent.	Head red; body black, with bands of white dots; warts, spiny.	Cylindrical.
August to May or June.	Black, with white dots; orange and white spines.	Cylindrical.
July and August.	Grey and reddish-brown, with broad white stripe down back.	Stout, obese, head horned.
Double-brooded. May, June, July, August.	Black and grey, with yellow dots and stripes.	Cylindrical.

Species of Caterpillar.	Food-plant on which Eggs, Caterpillars, and probably Chrysalides, may be found.	Locality.
Large Tortoiseshell ( <i>Vanessa Polyehloros</i> ).	Trees, <i>e.g.</i> elm, aspen, sallow, cherry, pear.	Midland and eastern counties.
Camberwell Beauty ( <i>Vanessa Antiopa</i> ).	Nettle; white willow; birch.	Very uncertain; neighbourhood of London frequently.
Peacock ( <i>Vanessa Io</i> ).	Stinging-nettle.	Very common everywhere.
Red Admiral ( <i>Pyrameis Atalanta</i> ).	Stinging-nettle.	Universal in England.
Painted Lady ( <i>Pyrameis Cardui</i> ).	Field thistle.	Irregular, but cosmopolitan.
White Admiral ( <i>Limenitis Sibylla</i> ).	Honeysuckle.	Rare.
Purple Emperor ( <i>Apatura Iris</i> ).	Great goat-willow.	Oak woods in midland, eastern, and southern counties.
Marbled White ( <i>Melanagria Galathea</i> ).	Any grass or low-growing herbage.	Rough ground; and seldom in northern counties.
Small Ringlet ( <i>Erebia Epiphron</i> ).	Small rushes; meadow grass; sheep's fescue grass; mat grass.	Very local.
Northern Brown ( <i>Erebia Medea</i> ).	Grasses; chiefly brown bent grass.	Rare.
Speckled Wood ( <i>Pyrrarga Egeria</i> ).	Various grasses.	Common; every county.
The Wall ( <i>Pyrrarga Megera</i> ).	Cock's-foot grass.	Common throughout England.
The Grayling ( <i>Satyrus Semele</i> ).	Grasses; couch grass.	Waste ground; poor pastures; common.
Meadow Brown ( <i>Epinephele Janira</i> ).	Grasses.	Any meadow; most common.
The Large Heath ( <i>Epinephele Tithonus</i> ).	Grasses.	Hedge-banks.
The Ringlet ( <i>Epinephele Hyperanthus</i> ).	Grasses; couch grass in particular.	Common, but local.

Time of Caterpillar's Life.	Colour of Caterpillar.	Shape of Caterpillar.
June.	Head black ; body pale brown, with black stripes.	Cylindrical ; yellow spines, covered with warts.
Early spring and again in early autumn.	Black, with dull red stripe.	Cylindrical ; long branched spines.
June, July.	Black, with white warts.	Cylindrical ; hairy ; warts, spines.
June, July, August.	Head black ; body greyish - green, yellow stripes ; varies very much.	Cylindrical ; spiny.
June.	Black, sometimes spotted with white ; legs and claspers red.	Cylindrical ; branched whitish spines.
August to end of May ; hibernates.	Green ; narrow white stripes ; reddish spines.	Cylindrical ; bristly spines.
April, May, June.	Bright green ; seven oblique yellowish - white stripes on sides.	Stout body ; horned head ; tapering tail ; smooth.
Winter and spring.	Head, legs, and claspers dull red ; body dull green, with yellowish stripes.	Cylindrical, but tapering ; velvety surface.
Autumn and spring.	Pale green, with darker lines and white lines.	Cylindrical, tapering.
September, October to next June.	Yellowish-brown ; warts, with narrow black stripe.	Thick in centre, tapering at both ends.
In winter hibernating till end of March.	Dull brownish - green, with white stripes.	Thick in centre, tapering at both ends.
First brood hibernating winter ; second brood in June.	Apple-green.	Same as above ; tiny warts, each with a bristle.
Autumn, winter, and spring.	Yellowish - drab, with black and greenish stripes.	Same as above, with very tapering tail.
Autumn, winter, and spring.	Apple - green ; white hairs.	Same as above ; warts.
June.	Grey-green body ; pale brown head.	Same as above ; short bristles.
May and June ; but feeds at night.	Pale yellowish-brown.	Same as above ; bristly.

Species of Caterpillar.	Food-plant on which Eggs, Caterpillars, and probably Chrysalides, may be found.	Locality.
Marsh Ringlet ( <i>Cænonympha Davus</i> ).	Beak-rush.	Rare; moors in northern counties more often.
Small Heath ( <i>Cænonympha Pamphilus</i> ).	Grasses; knot grass; mat grass.	Heaths and rough meadows; common.
Duke of Burgundy ( <i>Nemobius Lucina</i> ).	Cowslip; primrose.	Woods, wide range.
Green Hairstreak ( <i>Thecla Rubi</i> ).	Yellow cistus or rock-rose; crowberry; bramble.	Very generally distributed.
Purple Hairstreak ( <i>Thecla Quercus</i> ).	Oak.	Woods; common.
Dark Hairstreak ( <i>Thecla Pruni</i> ).	Blackthorn.	Northamptonshire, Derbyshire, Monmouthshire, Huntingdon, Suffolk.
Black Hairstreak ( <i>Thecla W—album</i> ).	Elm; wych elm.	Abundant, but not common.
Brown Hairstreak ( <i>Thecla Betulæ</i> ).	Blackthorn.	Lanes; hedges.
Common Copper ( <i>Polyommatus Phlæas</i> ).	Dock; several species.	Common.
Silver-studded Blue ( <i>Lycæna Ægon</i> ).	Bird's-foot trefoil.	Capricious; woods; chalk-downs of Kent.
Brown Argus ( <i>Polyommatus Agestis</i> ).	Hemlock storksbill.	Common.
Scotch Brown Argus ( <i>Lycæna Artaxerxes</i> ).	Common cistus.	Scotland.
Common Blue ( <i>Lycæna Icarus</i> ).	Rest-harrow.	Fields; waste ground; common everywhere.
Clifden Blue ( <i>Lycæna Adonis</i> ).	Leguminous plants, vetches, etc.	Chalk districts.
Chalk-hill Blue ( <i>Lycæna Corydon</i> ).	Trefoil; kidney vetch, etc.	Chalk districts.
Mazarine Blue ( <i>Lycæna Acis</i> ).	Unknown.	Old pastures.
Small Blue ( <i>Lycæna Alsus</i> ).	Vetches.	Not uncommon.
Azure Blue ( <i>Lycæna Argiolus</i> ).	Holly; ivy.	South of England.

Time of Caterpillar's Life.	Colour of Caterpillar.	Shape of Caterpillar.
June, July, August.	Apple-green.	Cylindrical ; smooth.
July ; often later also.	Pale apple-green, with wide darker stripes.	Tapering cylinder ; pointed tail.
June, July, August.	Drabbish - white, with darker stripes.	Wood-louse shape.
June and July ; hibernates as chrysalis.	Black head ; green body.	Wood-louse shape.
June.	Dull olive-green, with pinkish marks.	Shell-like.
May, June.	Pale green.	Wood-louse shape.
June.	Head black ; body pea-green ; hairy ; yellow bars.	Wood-louse shape.
May, June.	Head brown ; body apple-green, narrow white stripes.	Same as above.
From May to September ; treble-brooded.	Green ; white warts ; brown bristles.	Same as above.
June and early July.	Yellow - green ; white lines.	Shell-like.
April, May, July, August.	Pale green ; purplish stripe down back.	Wood-louse shape.
June.	Black head ; body green ; pink stripes.	Same as above.
May, June, July.	Head black ; body green.	Shell-like.
April, May.	Green.	Uncertain.
May, June.	Dull green ; yellow spots ; head dark brown.	Wood-louse shaped.
May, June.	Unknown.	Unknown.
May.	Head black ; body green.	Wood-louse shaped.
First brood when holly flowers, second when ivy flowers.	Greenish-yellow ; head and legs black.	Same as above.

Species of Caterpillar.	Food-plant on which Eggs, Caterpillars, and probably Chrysalides, may be found.	Locality.
Large Blue ( <i>Lycena Arion</i> ).	Wild thyme probably.	South Devon, Gloucestershire, Northamptonshire, etc.
Pale Clouded Yellow ( <i>Colias Hyale</i> ).	Clover ; trefoil.	Chalky districts near the sea.
Clouded Yellow ( <i>Colias Edusa</i> ).	Clovers.	Clover and lucerne fields.
Brimstone ( <i>Rhodocera Rhamni</i> ).	Buckthorn.	Woods and fences.
Swallow-tail ( <i>Papilio Machaon</i> ).	Milk-parsley.	Norfolk, Cambridgeshire, Huntingdonshire.
Wood White ( <i>Leucophasia Sinapis</i> ).	Tufted-vetch; bird's-foot trefoil ; bitter vetch.	Woods, lanes, hedges.
Orange-tip ( <i>Anthocharis Cardamines</i> )	Hedge garlic; cresses ; lady's smock.	Meadows, lanes ; very common.
Green Chequered White ( <i>Pieris Daplidice</i> ).	Wild mignonette.	Rough ground near coast in Kent and Sussex chiefly.
Green-veined White ( <i>Pieris Napi</i> ).	Hedge garlic ; water-cress ; wintercress.	Plentiful in most parts of England.
Small White ( <i>Pieris Rapa</i> ).	Cabbage, mignonette, and other cruciferae.	Gardens in all parts.
Large White ( <i>Pieris Brassica</i> ).	Cabbage, cresses, etc.	Gardens ; the most common British species.
Black-veined White ( <i>Aporia Cratagi</i> ).	White-thorn.	Rarer than the other whites.
Grizzled Skipper ( <i>Hesperia Malva</i> ).	Common bramble.	Hedge-rows everywhere.
Dingy Skipper ( <i>Hesperia Tages</i> ).	Bird's-foot trefoil.	Chalk-banks.
Chequered Skipper ( <i>Hesperia Paniseus</i> ).	Broad-leaved plantain.	Midland counties.
Large Skipper ( <i>Hesperia Sylvanus</i> ).	Grasses.	Common.
Silver-spotted Skipper ( <i>Hesperia Comma</i> ).	Bird's-foot trefoil.	Chalk districts.
Lulworth Skipper ( <i>Hesperia Actæon</i> ).	Wood small-reed.	Devonshire, Dorsetshire.
Small Skipper ( <i>Hesperia Linea</i> ).	Grasses.	Swamps, reedy places.

Time of Caterpillar's Life.	Colour of Caterpillar.	Shape of Caterpillar.
May, June.	Pinkish ; black marks behind head, which is brown.	Uneertain.
Unknown.	Olive-green, with black dots.	Cylindrical.
July to October.	Grass - green ; narrow white side-stripes.	Same as above, with tiny black warts.
May, June.	Green, with tiny black warts ; white bristles.	Tapering at both ends.
Summer.	Beautiful green ; black rings spotted red ; very handsome.	Cylindrical.
August, September.	Beautiful green, with darker stripe down back.	Cylindrical ; small.
June, July.	Dull green ; white side-stripe.	Cylindrical ; bristles.
April, May, August.	Dull blue, with four yellow stripes.	Cylindrical ; warts.
May, June, August, September.	Dull green ; yellow ring round spiracles.	Cylindrical.
April, May, July, August.	Dark dull green ; yellow spots ; black warts.	Cylindrical.
April, May, July, August.	Green, with three yellow stripes.	Cylindrical ; with black pointed warts.
April, May.	Grey sides ; black back ; two red stripes.	Cylindrical, covered with white hairs.
April.	Black head ; brown or green body.	Shuttle-shaped.
April.	Pale green ; yellow stripes ; black spots.	Cylindrical.
May.	Brown ; two yellow stripes down back ; black head.	Cylindrical.
April, July.	Large brown head ; green body ; white spots.	Cylindrical.
June, July.	Large black head ; olive-green body.	Cylindrical.
June, July.	Pale green, with yellow lines ; two white spots.	Cylindrical.
July to following June.	Green, with six white stripes.	Shuttle-shaped.

Willy, so you can pitch into me to your heart's content; but I suppose the Skippers can go. My back is broad enough to bear the blame,' said Strickland; but he found Willy was seriously annoyed; and, if it had not been for Leo's intervention, there would probably have been a quarrel between Jack and his chief.

Leo, however, had had enough of quarrelling; and by dint of assuring Martin he quite exonerated him from all suspicion of stealing a march on him peace was again established.







## CHAPTER XI.

‘In all the liveries decked of summer’s pride,  
With spots of gold and purple, azure and green.’

MILTON.

‘**W**ILLY, will you lend me your caterpillar table?’ said Dux, a day or two after he first saw it; and on Willy’s handing him the list he took it there and then to Mrs. Palmer to show it to her.

‘Isn’t it a capital idea? I wanted you to see it because Willy won’t show it up with our collections, now he finds the Skippers kept it a secret. You see by a glance they can tell where and when to look for any caterpillar, and what the creature is like when they have found it.’

‘Yes, indeed, it seems to me an excellent table;

it could be used in egg-hunting too, for, of course, the eggs are to be found on the same plants as the caterpillars, only earlier in the year.'

'Yes, it would do for eggs, only the best way to find them is to watch the butterfly laying them, for they are such tiny things you can't always find them without a glass. I haven't patience to do much in the egg-hunting line, but Willy has reared a great many of his from eggs. By the way, Mrs. Palmer, can you tell me how to remove grease from my butterflies? I find some of them are so greasy.'

'I know how to prevent them from getting greasy, and as "prevention is better than cure," perhaps that may help you, particularly as I dare-say it is not too late in this case to use the preventive method now. If the insects are not thoroughly dry, just cut the body open near the tail, and remove all the inside, then fill it up with cotton-wool; it is a job which requires a good deal of nicety, but I believe you will not be troubled with grease if you do it.'

‘But I am afraid most of my greasy insects are last year’s. Can’t you soak them in some spirit which will absorb the grease?’

‘If it is only the bodies, you can, because you can break them off, and soak them in benzole or rectified spirits of naphtha, which will, I believe, remove the grease. How has Martin managed his?’

‘I think he stuffed all his in the first instance; trust him for taking every possible precaution. I wish you could see his cabinet, Mrs. Palmer, I would much rather have made his than have bought mine.’

‘Dux, you don’t know how glad I am to find you speaking so nicely of Willy; I am so pleased that you have risen above all petty jealousy, though I felt certain you would. I can tell you, I am longing to see the collections as much as you are to show them; however, we have only a week longer to wait,’ said Mrs. Palmer, as Leo was summoned to the school-room.

As he said, Martin’s case really was worth seeing, if a series of drawers can be called a case,

for at present that was what his cabinet consisted of. These drawers he had made as he wanted them, out of mahogany-wood. previously well seasoned; it had cost more in the first instance, but Willy judged rightly that the additional expense was worth incurring, for mahogany is by far the best wood for the purpose, while cedar is the worst, as it contains resinous matter, which after a little while exudes and spoils the butterflies; after mahogany, common deal is as good as any wood for cabinets, provided it be thoroughly well seasoned.

Willy had got his pattern drawer from Leo's cabinet, and had made his from it; the glass lids he had had made by a joiner, as they were required to fit very tightly, and to have separate frames, to exclude mites and dust; the drawers were lined at the bottom with cork, over which plain white paper was pasted. Altogether, Willy had made twelve of these drawers, but the cabinet in which to fit them was beyond his powers, and he meant to wait until he could afford to have one made by a good cabinet-maker, as it would then last his life.

The butterflies were then arranged in perpendicular columns, in families, in the following order:—

1. Silver-spotted Fritillaries (*Argynnidae*).
2. Gregarious Fritillaries (*Melitidae*).
3. Angle-wings (*Vanessidae*).
4. White Admirals (*Neptidae*).
5. Emperors (*Apaturidae*).
6. Satyrs (*Satyridae*).
7. Dryads (*Erycinidae*).
8. Argus Butterflies (*Lycanidae*).
9. Red-horns (*Rhodoceridae*).
10. Swallow-tails (*Papilionidae*).
11. Whites (*Pieridae*)
12. Skippers (*Hesperidae*).

The names of each family were neatly gummed in the corner of each drawer, and beneath each butterfly its English name and its Latin specific and generic names were written on labels gummed to the bottom of the drawer. Where he had been fortunate enough to secure several specimens of the same species, Willy had given one of each set, and also showed the under surface of both, for in most butterflies the

under surface varies very much from the upper.

In a separate drawer he had a collection of eggs and chrysalides, though these were not half so complete as the butterflies; for, in the first place, they were not included in the conditions of competition, and, moreover, if he had butterflies enough to fill his twelve drawers before the prize was awarded, there would be no room for the eggs and chrysalides, which would then be relegated to a deal box.

The eggs, which were mounted on coloured note-paper, to show their delicate pale green, or white or pale yellow colour, had been killed by dipping them in boiling water. The chrysalides had been preserved in the same manner, though, as many of them had lost their glazed appearance after death, Willy had varnished them and then gummed them on to paper, with their names written beneath them.

Leo's collection was arranged on very much the same plan as Martin's, only in his case the places for the names of species, genus, and family, were all ruled by the cabinetmaker; and, while Willy had arranged his according to Newman's method of

classification, Dux had followed another system, perhaps a better one. Martin had chosen Newman's because he had the book, and knew it to be a very good one, if not the best, and it certainly possessed one advantage—it was very simple.

Both Dux and Martin were very busy putting the finishing touches to their collection, the last few days which intervened before the prize was to be decided, and up to the very night before the prize was given additions were made, one or two chrysalides which had been anxiously watched coming off just in the nick of time. Moreover, a few new specimens were brought in every day by Swallow-tails and Skippers, whose exertions, now that the eventful day was so close, were redoubled.

'How many different species have you, Dux?' asked Martin the night before the collections were to be handed in.

'Forty-one; how many have you?'

'Forty; pretty close, isn't it?'

'Why, I thought you'd ever so many more than I have, Willy; you must have made a mistake!' cried Dux.

'No, he hasn't; we have only thirty different

species; and as I suppose that will decide the matter, we may as well hide our diminished heads; not that I ever expected to win,' said Strickland.

'Forty and forty-one out of sixty-six known British species; I don't think it is so bad,' said Willy. 'How many specimens have you altogether, Dux?'

'A hundred and one or two; and you?'

'Oh, we beat you there; we have close upon a hundred and fifty, haven't we, Strick?'

'A hundred and forty-nine. What do you consider your rarest specimen, Dux?'

'Well, I don't know, Purple Emperor and the Queen of Spain are pretty rare, aren't they?'

'We have both those. Pea-pod Argus is one of our best. I wonder what you have that we have not?'

'Well, I have the White Admiral; have you?' said Dux.

'No, I lost my caterpillar one; haven't you one to spare, Dux?' said Strickland.

'Rather not; I like your calmness, Strick! it is so likely I should cut my own throat so neatly as to hand my White Admiral over to you, when in all



probability, if I have a chance at all, the White Admiral is it. No, thank you.'

'Of course he won't do that, Strick. Now look here, Dux, Mr. Palmer says we may lock our collections up in this room after we have finished them, and keep the key till to-morrow, when Mrs. Palmer and two friends of hers who are to be the judges are to be admitted. Will you take care of the key, or shall I?'

'I don't care, you can if you like,' said Dux carelessly.

'No, let Dux keep it, Willy; he is head boy, and then, if anything does happen—spontaneous combustion or any little games of the kind on the part of the butterflies—why, he is responsible, and we are out of it.'

'All right, he shall keep it, then, only don't you forget to lock the door, Leo; we don't want all the Swallow-tails and Skippers in here admiring and perhaps disarranging things just as we have finished.'

'Trust me not to forget, I know what the young fry are too well. Have you fellows finished?'

'Yes, I don't see what more we can do. I wish

we could have afforded a cabinet for the drawers but it can't be helped; after all, there is one advantage, they are easier to examine spread out on the table than yours are in the case,' said Martin, looking with pardonable pride on his row of drawers with the beautiful insects all neatly spread out under the glass lids.

'Yes, they are; however, I'll give you the benefit of that advantage, I shan't range my drawers out on the other end of the table. I have nearly finished now; I shall be with you fellows directly,' added Dux, as the other boys left the room.

After they were gone he fidgeted about at his cabinet, first opening one drawer and peeping at it, then shutting it up and pulling out another, apparently in a most undecided frame of mind. Then he got up and went to the table and looked at Martin's collection, finally stopping before the drawer headed 'Emperors; ' here was a blank space left in the left-hand side for 'White Admirals,' as the label in the corner indicated. The empty space seemed to contain some charm for Leo, he stood so long gazing at it. At last he rose abruptly from the table on which he had been leaning, and went to his own

cabinet, where he pulled open the drawer containing his White Admirals, for he had two specimens, though he had not told the Skippers so.

Both were exactly alike, but one was mounted to display the upper side, the other to show the under surface, which varies very much in this species, and is very beautiful. Here again Leo made a long pause; at last he came to a decision suddenly, and, muttering half aloud, 'I'll do it,' he very carefully removed the reversed White Admiral from his own cabinet and transferred it successfully to Martin's, mounting it there with the upper surface uppermost, like his own remaining specimen. It was a delicate operation, and required very nice manipulation to effect the move without damaging any of the butterflies, and Leo's fingers trembled with excitement and nervousness. When he had finished he found all that remained to be done was to write the Latin and English names underneath; this he hesitated to do, first for fear of touching any of the other specimens, and secondly, because his own handwriting was so unlike Martin's that it would be at once recognised, and would probably lead to a discussion which would reveal what he

had done; so he decided to leave the specimen unlabelled, in the hope it would be considered an oversight, if the judges observed it. And then, with a purer joy than winning the prize which he felt he had just renounced would have brought him, Leo carefully locked the door and left the room.





## CHAPTER XII.

‘We be the handmaids of the spring,  
In sign whereof, May, the quaint broideress,  
Hath wrought her samplers on our gauzy wing.’

Hoon.



LEO'S first action the next morning was to hand the key of the room in which the collections were to Mr. Palmer, fearing lest Martin might otherwise go in to take a farewell look at his treasures, and, finding the White Admiral in his case, refuse to accept it.

‘The judges are coming at twelve, and the decision will be announced at one o'clock before dinner, so let the school be assembled in the big schoolroom a little before one. You can go out at

twelve as usual,' said Mr. Palmer to Dux when he took the key.

The result of the examinations and the other prizes were not to be made known till the following day, Mr. Palmer declaring that the interest in the butterfly prize was so absorbing, the boys would not care about the other prizes till this was settled. And although school was held as usual, it was an understood thing that very little real work was done on what was practically the last day, for on the following, as soon as the prize-giving was over, the boys went to their several homes for the summer holidays. On this occasion both Swallow-tails and Skippers were much too full of butterflies to have any attention to bestow on such matters as Latin grammar and arithmetic, and perhaps the masters were as glad as the boys when twelve o'clock struck and the latter were dismissed. Needless to say, they were all back in their places again long before one o'clock, when the result was to be made known. Shortly before the appointed time, Mr. and Mrs. Palmer, with the two gentlemen who had acted as judges, entered the schoolroom

amid the vociferous cheers of the boys. As soon as order was restored, Mr. Palmer rose to address the school.

‘Well, boys,’ he began, ‘I am glad to tell you that we are all delighted with the result of your labours in the branch of science we have had before us to-day. I can only say, if your other studies were prosecuted with the same zeal, I should indeed be a proud man; however, perhaps that is too much to expect. At any rate, my friends here agree with me that the collections of butterflies we have been examining, and which have been made within two years, do you all very great credit, and I may remark in parenthesis that your plan of dividing into two parties was a first-rate one; by this means you have produced two really valuable collections instead of twenty inferior ones. Union is strength, you know, and you have proved the truth of the proverb. I may also say that, with one single exception, to which I will not allude more fully, as it is one you and I equally regret,—with that one exception, I think I may safely say the struggle for the prize has been carried on with such

good-feeling and good-temper, such an absence, particularly among the principals, of all petty jealousy, as to make me feel very proud of my boys, and very thankful that they have so well attended to the moral and religious instruction I have done my best to impart. And now, to come to the point at which I know you are all anxious I should arrive, namely, the decision as to the prize, I may tell you we have had some difficulty in deciding, for, though the Skippers have more specimens on the whole than the Swallow-tails, yet the number of species each party has collected is exactly the same, forty-one'—

Here there was such a hubbub among the boys that Mr. Palmer could not proceed, and finally Willy stepped forward, in spite of Leo's efforts to detain him.

'Well, Martin, what is it?'

'Please, sir, the Skippers have only forty, one less than the Swallow-tails.'

'No, no, no, it is all right; you counted yours wrong. You forgot to label one, a White Admiral, I



think it was,' said Mr. Palmer impatiently, for he was no fonder of being interrupted in the midst of a speech than other orators.

But this was too much for the other Skippers; they exclaimed with one voice,—

‘We hadn’t a White Admiral, sir.’

‘Well, never mind what it was. Silence, please, and don’t interrupt again; it might have been a Red Admiral. At any rate, the number of different species collected by both parties is forty-one, and, this being the case, we have decided that, though there is really very little to choose, for the Swallow-tails have one or two very rare specimens among their collection, the prize must be given to the Skippers, that is, to Willy Martin, whose ingenuity in making his own cabinet deserves very great credit. Willy, come here, and Mrs. Palmer will give you the five sovereigns, to be spent in buying books on Natural History.’

Willy came forward, looking very nervous and unhappy, and, instead of putting out his hand to receive the money, stammered out,—

‘Please, sir, I know there is some mistake. I had

only forty different species; we counted them over and over again, and we certainly hadn't a White Admiral.'

'Oh yes! both collections possess a White Admiral,' exclaimed the judges simultaneously.

'May Willy fetch his drawer with the White Admiral in, then perhaps he will believe us?' said Mrs. Palmer to her husband; and on his assent Willy quickly left the room, returning with the drawer and a mystified expression on his face.

'Well, Martin, who is right?' asked Mr. Palmer.

'I don't know, sir, there is a White Admiral sure enough, but it is not ours, and I am certain it was not there last night when I left my collection.'

'This is very odd! why, no one had access to the room but you and Neville. Neville, do you know how this White Admiral came here? It was hardly obliging enough to fly in at the window and impale itself, I apprehend. Can you explain the mystery?'

‘I put it there, sir; I had two,’ said Neville reluctantly.

This announcement caused quite a commotion; the boys whispered and chattered like so many magpies, while their elders held a brief consultation in subdued tones, when suddenly the rather awkward pause was broken by the incorrigible Strickland shouting, ‘Three cheers for old Dux!’ which were given most lustily, Mr. Palmer and the judges joining in.

‘Leo, you have placed us in rather a dilemma by your generous action, but Mrs. Palmer has suggested a way out of it: she proposes to give two prizes, the original one of five pounds to Willy Martin, and a gold butterfly mounted as a pin to Neville. Martin, come forward again and take your prize; Neville shall have his pin before he leaves. And now, I have no more to say to you except this, that such actions as the one you rightly cheered so heartily just now are far more eloquent than volumes of sermons, and my earnest wish and prayer for you all is, that you may all strive to go and do likewise.’

With this Mr. Palmer concluded his speech, and with his speech ends this little book, which, if it supplies some information on the habits and history of butterflies, with a few of the lessons to be derived from their study, will have fulfilled its object.

THE END.

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